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**Health informatics — Point-of-care
medical device communication —
Part 10101:
Nomenclature**

*Informatique de santé — Communication entre dispositifs médicaux sur le
site des soins —
Partie 10101: Nomenclature*



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**Health informatics — Point-of-care
medical device communication —
Part 10101:
Nomenclature**

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Abstract: Within the context of the ISO/IEEE 11073 family of standards for point-of-care (POC) medical device communication (MCD), this standard provides the nomenclature that supports both the domain information model and service model components of the standards family, as well as the semantic content exchanged with medical devices. The nomenclature is specialized for patient vital signs information representation and medical device informatics, with major areas including concepts for electrocardiograph (ECG), haemodynamics, respiration, blood gas, urine, fluid-related metrics, and neurology, as well as specialized units of measurement, general device events, alarms, and body sites. The standard defines both the architecture and major components of the nomenclature, along with extensive definitions for each conceptual area.

Keywords: codes, information model, medical device communication, nomenclature, ontology, patient, point-of-care, POC, semantics, service model, terminology

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Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75% of the member bodies casting a vote.

A pilot project between ISO and the IEEE has been formed to develop and maintain a group of ISO/IEEE standards in the field of medical devices as approved by Council resolution 43/2000. Under this pilot project, IEEE is responsible for the development and maintenance of these standards with participation and input from ISO member bodies.

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ISO/IEEE 11073-10101:2004(E) was prepared by IEEE 1073 Committee of the IEEE Engineering in Medicine and Biology Society.

IEEE Introduction

This introduction is not part of ISO/IEEE 11073-10101:2004(E), Health informatics — Point-of-care medical device communication — Part 10101: Nomenclature.

ISO/IEEE 11073 standards enable communication between medical devices and external computer systems. They provide automatic and detailed electronic data capture of patient vital signs information and device operational data. The primary goals are to:

- Provide real-time plug-and-play interoperability for patient-connected medical devices
- Facilitate the efficient exchange of vital signs and medical device data, acquired at the point-of-care, in all health care environments

“Real-time” means that data from multiple devices can be retrieved, time correlated, and displayed or processed in fractions of a second. “Plug-and-play” means that all the clinician has to do is make the connection — the systems automatically detect, configure, and communicate without any other human interaction.

“Efficient exchange of medical device data” means that information that is captured at the point-of-care (e.g., patient vital signs data) can be archived, retrieved, and processed by many different types of applications without extensive software and equipment support, and without needless loss of information. The standards are especially targeted at acute and continuing care devices, such as patient monitors, ventilators, infusion pumps, ECG devices, etc. They comprise a family of standards that can be layered together to provide connectivity optimized for the specific devices being interfaced.

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Interpretations

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Health informatics — Point-of-care medical device communication — Part 10101: Nomenclature

1. Scope

The scope of this standard is nomenclature architecture for point-of-care (POC) medical device communication (MDC). It consists of three parts: the body of the standard, which defines the overall architecture of the organization and relationships among nomenclature components; normative Annex A and Annex B, which provide specifications of semantics and syntaxes, respectively; and informative Annex C, the bibliography.

This standard is intended for use within the context of IEEE Std 1073,¹ which sets out the relationship between this and other documents in the POC MDC series.

2. Conformance

There are no particular implementation conformance requirements defined in this standard, but some requirements for nomenclature representation are established in this standard to guide specification of semantics and syntax in other parts of the overall standard.

3. Normative references

The following normative documents contain provisions that, through reference in this text, constitute provisions of ISO/IEEE 11073-10101. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on ISO/IEEE 11073-10101 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid international standards.

¹Information on references can be found in Clause 3.

CEN ENV 12611, Medical Informatics — Categorical structure of systems of concepts — Medical Devices.²

IEEE Std 1073™, IEEE Standard for Medical Device Communications—Overview and Framework.³

ISO/IEC 8824 (all parts), Information technology — Abstract Syntax Notation One (ASN.1).⁴

ISO/IEC 8825 (all parts), Information technology —ASN.1 encoding rules.

ISO/IEC 9596-1, Information technology — Open systems interconnection — Common Management Information Protocol — Part 1: Specification.

ISO/IEEE 11073-10201, Health informatics — Point-of-care medical device communication — Part 10201: Domain information model (referred to hereinafter as the “DIM”).

ISO/IEEE 11073-20101, Health informatics — Point-of-care medical device communication — Part 20101: Application profiles – Base standard.

4. Terms and definitions

For the purposes of this standard, the following terms and definitions apply. *The Authoritative Dictionary of IEEE Standards Terms*, Seventh Edition, [B10]⁵ should be referenced for terms not defined in this clause.

4.1 corollary: a semantic and a syntactical representation that are correlated by a unique code.

4.2 -tuple: a component of a relation; e.g., a 2-tuple has two relational components.

4.3 unique: nonredundant.

5. Symbols (and abbreviated terms)

API	application program interface
ASN.1	Abstract Syntax Notation One (ISO/IEC 8824)
BAEP	brainstem acoustic evoked potential
BCC	bedside communication controller
BER	basic encoding rules (ISO/IEC 8825-1).
CMDISE	communication medical device information service element (CEN ENV 13735 [B5])
CMIP	Common Management Information Protocol (ISO/IEC 9596-1)
CMIP*	Common Management Information Protocol using ISO/IEEE 11073 MDDL/MDER
CNS	central nervous system

²CEN publications are available from the European Committee for Standardization (CEN), 36, rue de Stassart, B-1050 Brussels, Belgium (<http://www.cenorm.be>).

³IEEE publications are available from the Institute of Electrical and Electronics Engineers, Inc., 445 Hoes Lane, Piscataway, NJ 08854, USA (<http://www.standards.ieee.org/>).

⁴ISO/IEC documents can be obtained from the ISO office, 1 rue de Varembe, Case Postale 56, CH-1211, Genève 20, Switzerland/Suisse (<http://www.iso.ch/>) and from the IEC office, 3 rue de Varembe, Case Postale 131, CH-1211, Genève 20, Switzerland/Suisse (<http://www.iec.ch/>). ISO/IEC publications are also available in the United States from the Sales Department, American National Standards Institute, 25 West 43rd Street, 4th Floor, New York, NY 10036, USA (<http://www.ansi.org/>).

⁵The numbers in brackets correspond to the numbers of the bibliography in Annex C.

CSF	cerebrospinal fluid
CVS	cardiovascular system
DCC	device communication controller
DIM	domain information model, as defined in vital signs information representation (VITAL), interoperability of patient-connected medical devices (INTERMED), and medical device data language (MDDL) (ISO/IEEE 11073-10201 ⁶)
ECG	electrocardiogram or electrocardiograph
ECoG	electrocochleograph
EEG	electroencephalogram or electroencephalograph
EMG	electromyogram or electromyograph
EOG	electrooculogram
ERG	electroretinogram or electroretinograph
FEF	file exchange format (CEN/TC251/PT-40 [B7])
FFT	fast Fourier transform
FSM	finite state machine
HL7 ^{®7}	Health Level Seven
ICU	intensive care unit
ID	identifier
INTERMED	interoperability of patient-connected medical devices (CEN ENV 13735 [B5])
LLAEP	long latency acoustic evoked potential
MDAP	medical device application profile (The acronym <i>MDAP</i> may be substituted for the phrase <i>ISO/IEEE 11073-20000 family of standards.</i>)
MDC	medical device communication
MDDL	medical device data language (The acronym <i>MDDL</i> may be substituted for the phrase <i>ISO/IEEE 11073-10000 family of standards.</i>)
MDER	medical device encoding rules, as defined in medical device application profile (MDAP)
MDIB	medical data information base, as defined in ISO/IEEE 11073-10201
MDS	medical device system, an abstraction for a medical device (ISO/IEEE 11073-10201)
MIB	management information base
MLAEP	middle latency acoustic evoked potential
NCS	nerve conductens study
NOS	not otherwise specified
OO	object-oriented
OID	object identifier
PCA	patient-controlled analgesia
PDU	protocol data unit (also referred to as a <i>message</i> ; by convention, the term <i>PDU</i> s is used in text to indicate multiplicity)
PFC	physiological function code, which represents a physiological concept such as heart rate, blood pressure, etc.
POC	point of care or point-of-care
SCADA	supervisory control and data acquisition
SCO	service and control object

⁶The DIM was originally defined in CEN ENV 13734 [B4] and CEN ENV 13735 [B5], which are now superseded by ISO/IEEE 11073-10201.

⁷HL7 is a registered trademark of Health Level Seven, Inc. (www.hl7.org).

SCP-ECG	Standard Communications Protocol for Computer-Assisted Electrocardiography (CEN ENV 1064 [B1])
SEP	somatosensory evoked potential (also <i>systolic ejection period</i> in the context of haemodynamic monitoring measurements)
SNOMED ^{®8}	Systematized Nomenclature of Medicine
VEP	visual evoked potential
VMD	virtual medical device; an abstraction of a medical device modality; e.g., a <i>vital signs monitor medical device system (MDS)</i> might comprise electrocardiogram (ECG), blood pressure, temperature, and other related VMDs (ISO/IEEE 11073-10201)
VMO	virtual medical object (ISO/IEEE 11073-10201)
VMS	virtual medical system (ISO/IEEE 11073-10201)
VITAL	vital signs information representation (CEN ENV 13734 [B4])
0x<value>	hexadecimal encoding; e.g., the notation 0x0001 implies a 16-bit code with a decimal value of 1

6. Application

Nomenclature in this standard is primarily intended to be used in protocol data units (PDUs) as values of fields, typically object-oriented attributes, which specify particular alternatives among a related semantic set. The following are the most common field types.

- *Managed object class ID*, e.g., MDS [medical device system], VMS [virtual medical system], VMD [virtual medical device], VMO [virtual medical object], Channel, Metric, Alert, Scanner, SCO [service and control object], etc.
- *Event type ID*, e.g., a numerical observation type of event report.
- *Attribute ID*: various attributes in the domain information model (DIM)
 - *Type ID*: in general, a concept not covered by a class definition per se, but by a well-known or commonly used type of a class, e.g., a VMD (e.g., ventilator, gas analyzer), Metric object class physiological function code (PFC) (e.g., heart rate, cerebral perfusion pressure), or the body site of a measurement (e.g., left toe).
 - *State*: mode, status or finite state machine (FSM) state, e.g., associated.
 - *Dimension*: unit of measurement, e.g., deciliters per hour [dl/h].
 - *Indication*: alarm, e.g., asystole, INOP (e.g., malfunction), or advisory (e.g., check calibration).
- *Action type ID*, e.g., activate.
- *External nomenclature ID*, e.g., Systematized Nomenclature for Medicine (SNOMED).

Technically, information is initially defined in an abstract syntax, e.g., Abstract Syntax Notation One (ASN.1) or medical device data language (MDDL), and then mapped to and interchanged through a transfer syntax, e.g., basic encoding rules (BER) or medical device encoding rules (MDER), typically for efficiency in the form of integers. However, abstract syntax languages are generally unsuitable for high-precision human understanding, especially of medical terms. As a result, both semantic and syntactical definitions are needed; as covered in Clause 7 and Clause 8.

7. Semantics

Clause 7 establishes specification guidelines. Refer to Annex A for the detailed specification.

⁸SNOMED is a registered trademark of the College of American Pathologists; Norfield, IL; (800) 323-4040 (<http://www.cap.org>).

7.1 Attribution

Nomenclature semantics are represented as a set of attributes, as shown in Table 1.

Table 1—Nomenclature attributes

Attribute	Description/Definition	Purpose	Interpretability	Presence
Systematic, or DIM name	An organization of differentiating, relational descriptors; see Table 2 and Table 3	Formal or semiformal but human-readable derivation	Shall be unambiguous	Mandatory
Common term	A brief description of the name	Human-readable identification or efficient lookup	Should be unambiguous	Optional
Acronym	An abbreviated form of the name	Mnemonic or parametric abbreviation	Should be unambiguous	Optional
Description/Definition	A long, or sentence, form of the name	Human-readable and as understandable as possible	Shall be unambiguous with the exception of synonyms	Mandatory
Reference ID	A symbolic, programmatic form of the term	Development of application program interfaces (APIs)	Shall be unambiguous	Mandatory
Code	[Alpha]numeric identifier	Human- and machine-readable and efficiently processable by machines	Shall be unique, but context-sensitive parts are permitted; see 7.2	Mandatory
Others	As appropriate for the semantic and as specified in the detailed tables in Annex A. For example, a Reference ID, or corollary to the programmatic form, may be used in some cases to facilitate table lookup.			

Refer to Table 2 for an example pertaining to medical device typology and to Table 3 for a partial derivation of the systematic name used for this partition. As is shown in Table 3, the systematic name is an <n>-tuple of a base concept and a series of differentiating criteria, and the value of the systematic name is a string separated by ”|” delimiters. [A null indicates not otherwise specified (NOS).]

Table 2—Attribution example

Systematic name	Common term	Description/Definition	Code
Analyzer			
Analyzer <type>	Generic analyzer	Instrument that analyzes acquired patient information	4100
Analyzer Concentration [Sat] Blood <type>	SpO ₂ monitor	Instrument that derives the % of arterial O ₂ and pulse rate parameters (blood flow)	4104

7.2 Coding

Several coding methods are used to promote interoperability.

Table 3—Systematic name derivation—medical device type example

Base concept	Differentiating criteria		
	1 st <Device>	2 nd <has target>	3 rd <type>
Analyzer, Filter, Calculator, ...	Concentration, Electrical Potential, Flow, ...	Airway, Blood, Body, ...	Nonspecific, MDS, VMD, Channel

7.2.1 Context-sensitivity

For processing efficiency, especially bandwidth conservation, some nomenclature codes are defined as fixed-length integer 2-tuples, consisting of a code block number and a term code (within the code block). Provided that the code block context can be properly mapped, e.g., by implicit syntactical parsing, the processor requires only the term code to correlate the semantic, in which case the term code is context-sensitive with respect to the code block, whereas the 2-tuple is context-free.

For additional processing efficiency, code block numbers and term codes are mapped to 16-bit and 32-bit words, as follows.

$$[context-free] \text{ Nomenclature Code} == (\text{Code Block number} * 2^{**16}) + [context-sensitive] \text{ Term Code,}$$

where

Term Code has the range 2^{**16} .

For example, the context-free nomenclature code for a term in code block number 1 whose term code=4100 is equal to $((1 * 2^{**16}) + 4100) = 65536 + 4100 = 69636$ (which uniquely identifies the SpO₂ monitor term in Table 2).

Refer to Figure 1 for an illustration of the relationship between code block number and term codes.

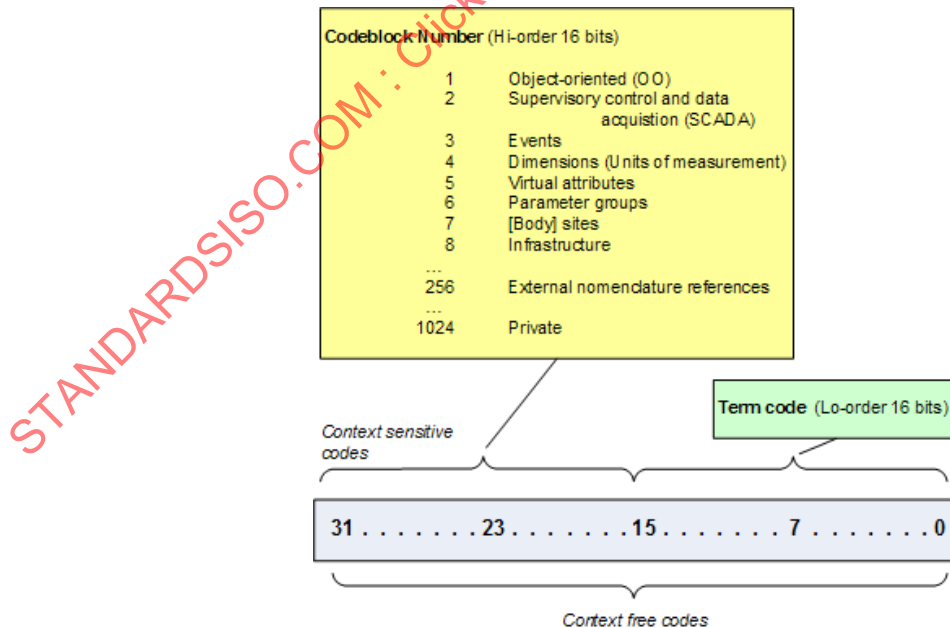


Figure 1—Context-sensitive coding illustration

Code interpretation may also be context-sensitive with respect to nomenclature versions; however, nomenclature revision coding is outside of the scope of this standard and should be provided by application PDUs during device association.

7.2.2 Grouping

Term codes may be grouped into code ranges as follows:

- A partition is a group of semantics that are assigned to a contiguous term code range within a code block and that have a categorical relationship. For example, object classes, attributes, and notifications are partitions of the object-oriented code block. Partitions are prefixed as high-order bit masks that are computed by offset, typically in multiples of binary orders of magnitude, e.g., 0x1000, 0x2000, etc.
 - Code blocks or partitions may be designated as public and private. Syntactical conformance shall be mandatory for all code blocks and partitions, but semantic conformance for private code blocks or partitions shall not be mandatory. By convention, each code block should allocate private partitions consistently; the range 0xF000–0xFFFF is recommended.
- A discriminator is a group of related semantics assigned to a contiguous code range that have a regular relationship, e.g., maximum/minimum/mean or systolic/diastolic/mean. Discriminators are embedded as low-order bit code that are computed by relative offset to a base term.

For example, Table 1 is an example of a 2-bit device <type> discriminator, in which the relative offsets 0–3 correspond, respectively, with the following semantics:

- NOS, offset=0),
- MDS class [offset=1],
- VMD class [offset=2], and
- Channel class [offset=3], respectively.

8. Syntax

Nomenclature codes are intended to be mapped to machine-processable forms using various protocols (e.g., ISO/IEEE 11073-20101) and program (e.g., C++) presentation forms. However, because it is impractical to do all mappings, this standard shall provide mappings to a set of nominal forms, as follows:

- Transfer: numeric form suitable for use in transfer syntaxes; refer to 8.1.
- Programmatic: symbolic form suitable for use in programming languages; refer to 8.2.

8.1 Transfer

8.1.1 Types

There are several types of transfer forms:

- a) *Global* corresponds with Common Management Information Protocol (CMIP) *globalForm*, i.e., is an ISO ASN.1 object identifier (OID). This form is bandwidth-intensive; therefore, complete abstract and transfer syntaxes may not be explicitly enumerated.
- b) *Local* corresponds with CMIP *localForm*, i.e., is an unsigned integer. Various canonical forms are defined as follows:
 - 1) *Fixed-length* is intended to minimize bandwidth and takes two forms, as follows:
 - i) *Short*: a context-sensitive code; refer to 7.2.1. It is intended that the short form be used in real-time or monitoring applications with appropriate association controls, as defined in

medical device application profile (MDAP) and interoperability of patient-connected medical devices (INTERMED) profiles.

- ii) *Long*: a context-free code; refer to 7.2.1. It is intended that this form be used to export nomenclatures through a gateway or persistent medium.
- 2) *Variable-length* is intended to provide an efficient form for use with fully compliant CMIP-based syntaxes, using BER integers. Short and long forms may be presented analogous with the fixed-length form described in this subclause.

8.1.2 Notation

Refer to Figure 2, which lists ISO ASN.1 OID assignments for this standard.

An arc in the "iso(1) ... fixedForm(0)" branch indicates that the blockCode-termCode scheme defined in this standard is to be used during the association; refer to Clause 7 and Figure 1 for bit maps.

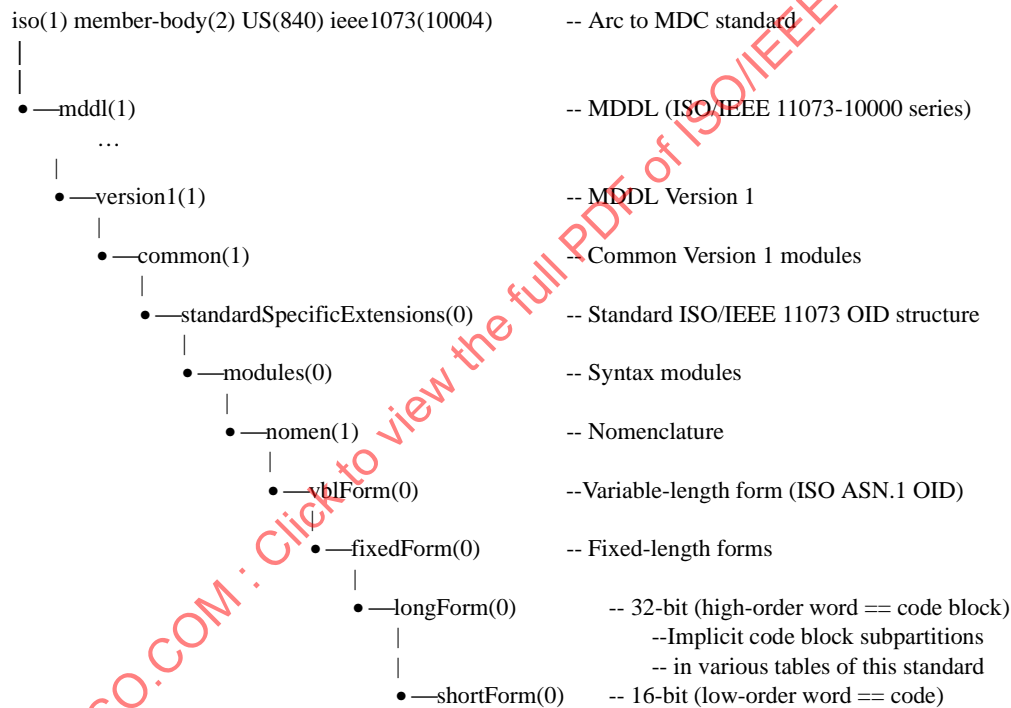


Figure 2—ISO ASN.1 OID assignments

8.2 Programmatic

Programmatic, or symbolic, form is intended to be used to develop APIs in a way that applications can reuse different implementations with minimum impact on symbol mapping.

8.2.1 Attribution

The term code is used as a reference in correlating semantic and syntactical definitions through the use of additional attributes, as follows:

- *Title, or Reference ID*: a symbolic, programmatic form of the term. The form is correlated to the context-free code (i.e., titles are by definition context-free with respect to all other titles); all terms are prefixed with “MDC_” for consistency.
- *AutoCode*: a numerical value associated with the term. The value is used as a generic identifier; the AutoCode is assigned at the time the term is created and remains assigned to that term independent of term code revisions. The AutoCode is not normative, but may be used for editorial, indexing purposes when context-sensitive components (i.e., Code Block and Term Code) are remapped.

8.2.2 Notation

While there are many program bases that could be used, the C[++] language is used as a canonical basis in this standard.

Notation conventions for the C[++] programming language are as follows:

```
#define    MDC_<TERM>    <Term Code>    /* <Acronym> <Auto Code> */
```

where

#define denotes a static assignment, e.g., of the value <c> to the symbol <MDC_term>.

MDC_<TERM> is the nomenclature symbol (or title); the title is all uppercase.

- The prefix MDC_ is used for all terms in this standard.
- Partitions may be identified by common prefixes, e.g., _DEV or _LEAD.
- Discriminators are identified by regular suffixes, e.g., _MDS, _VMD, or _CHAN; see the example that follows.

<Term Code> is a decimal number in the range specified during association, e.g., 0–65535 for 16-bit, context-sensitive coding.

<Acronym> (may be absent) is an abbreviation.

<Auto Code> is the generic record number of the term.

The last components are enclosed in the syntax /* *//, which represents a comment.

For example, the SpO₂ Analyzer <types> in Table 2 are represented programmatically as follows:

#define	Term Title (or Reference ID)	Term Code	Auto Code
#define	MDC_DEV_ANALY_SAT_O2	4104 /*	2474 */
#define	MDC_DEV_ANALY_SAT_O2_MDS	4105 /*	4962 */
#define	MDC_DEV_ANALY_SAT_O2_VMD	4106 /*	5095 */
#define	MDC_DEV_ANALY_SAT_O2_CHAN	4107 /*	5227 */

The derived term titles post-fix <null>, _MDS, _VMD, and _CHAN, respectively. The <#define>, <Term Title>, and <Term Code> symbols are normative, while the comment < /* ... */> and the AutoCode embedded in it are informative.

As these term codes are assigned to code block number 1, the context-free nomenclature codes are 1*65536+[4104 + [0,1,2,3]] → 69640, ..., 69643.

9. Extensibility

Terms defined in Annex B shall not be normative unless a semantic corollary is specified in this standard. However, terms in Annex B may be reorganized for presentation, e.g., into sequential code order, as appropriate to facilitate application programming.

10. Version exporting

The syntax *ISO MDC* <ver>, where <ver> is the version ID as shown in Figure 2, should be used when nomenclatures of this standard are used in registered external data communications standards, e.g., Health Level Seven (HL7).

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Annex A

(normative)

Nomenclature semantics

A.1 Overview of nomenclature for vital signs—semantics

A.1.1 Introduction

Annex A presents the medical data information base (MDIB), i.e., the set of objects and object instantiations occurring in any device of the communicating system as described in the DIM (see ISO/IEEE 11073-10201). This common data dictionary is the prerequisite for interoperability of medical devices and device systems.

All subclauses in this annex that correspond to the code blocks in A.2.3 contain explanatory parts to support the understanding of this approach in the design of the data dictionary. After these explanations, a code table is presented. This structuring is designed to ease and promote maintenance. The authors are well aware that despite their strong efforts for completion during development of this standard, application-specific supplements are to be expected. Comments and proposals for improvement are most welcome.

Because the number of different object-oriented modelling elements resulting from the DIM is limited, no specific nomenclature has been designed for these elements. They are listed in the tables in A.3. Regarding the demographics, there are so few that they do not deserve semantic analysis and systematic names. They are listed in several tables in A.3.2.9.

Communication infrastructure is presented in A.4 due to its close relation to the Communication Package of the DIM. A set of tables gives the terms and corresponding code values for communication infrastructure objects and attributes. Objects in these tables (e.g., the Device Interface object, the MibElement [management information base element] object) and their attributes are not part of the MDIB.

The nomenclature, i.e., the systematic names, for the terms concerning devices, metrics (measurements and enumerations), alerts, etc., is presented in A.5 through A.10.

For the nomenclature of vital signs devices, for metrics (measurements and enumerations), for body sites, for alerts, etc., systematic names have been constructed following the methodology described in the European standard CEN ENV 12264 [B2]. The systematic name is constructed by means of generative patterns and consists of the base concept and two or three descriptors forming with the semantic links the differentiating criteria. Each differentiating criterion is built by means of a semantic link and an associated category (see Clause 7). The constituents of the systematic name are separated by vertical bars. Unused fields are left blank and identified by double bars.

In order to avoid a long list of similar terms, a variable field was employed in some terms. For instance, the signal from an electrocardiogram (ECG) obtained from different leads should be identified as ECG | I, ECG | II, ECG | III, etc. The corresponding term used in Table A.7.1.2 is *ECG <lead>* where *<lead>* stands for a general lead that has to be specified according to a separate code table.

The tables for metrics/enumerations in A.7 are mainly organized according to the target system (e.g., body compartment, body part, body function), following some anatomical systematics.

The tables in A.5 through A.10 show basically six columns: Systematic name, Common term, Acronym, Description/Definition, Reference ID, and Code. The common term is the name that is in common use in medicine and well-known to medical professionals. The same is true for the acronym except that it refers to the corresponding English abbreviations. Description/Definition gives a description, as precise as possible, to ensure the correct understanding. It is to be used as basic information for developing the systematic name.

A.2 Code assignment to the MDIB elements

A.2.1 Overview

Before embarking on the development of the vital signs nomenclature, an investigation was made to discover whether existing nomenclatures met the needs of POC MDC. A similar investigation had been instigated by the IEEE 1073 Working Group, and in both cases no appropriate nomenclature had been found. As a result, the CEN and IEEE teams collaborated on a vital signs nomenclature and coding system, which forms the bulk of this standard.

This standard is meant to be temporary, in that other efforts to incorporate the terms from this standard into a more global medical nomenclature effort may happen, either by incorporating the tables and codes from this standard directly into the larger nomenclature (using some referencing scheme to establish context) or by simply incorporating the terms and recoding them. In the meantime, the vital signs nomenclature and coding system in this standard should be used as a default.

A.2.2 Basic rules

The coding of the vital signs nomenclature is based on a number of basic rules:

- a) The codes should fit within 16 bits in order to minimize the resulting message lengths. Because the vital signs nomenclature is used for communication with some very small and cost-constrained devices, it was important to try to accommodate their needs to the extent possible and practical.
- b) As a result of the requirement to keep the codes less than 16 bits, the code space was separated into a number of context-sensitive, orthogonal spaces. As a result, the same code can mean different things depending on its context, an arrangement that is not appropriate in a more general coding effort, but works well in the context of this standard. In the general case, a prefix can be used to distinguish between similar codes; however, that practice will tend to double the size of each code.

- c) Each code space has a block of 4096 entries allocated for private use. The current nomenclature is not complete, and in addition, new relevant terms are created all the time. Therefore, space has been reserved for private codes that should be used until they are accepted as public and placed into the appropriate table.
- d) Reviewing the coding, one may find tables where the codes increment regularly, while others seem to be allocated randomly. These irregularities are generally side effects of how the codes were allocated and whether historically some term codes had already been allocated (e.g., by the original IEEE 1073 working group). In general, the codes are not meant to have any context, and it is dangerous to base implementations on any perceived order or range.
- e) In some cases, it may seem that codes are missing or were skipped. This situation may be due to the following:
 - 1) Nomenclature and resulting codes may have been used in early versions of the standard, but were not required in the CEN ENV 13735 [B5] vital signs nomenclature.
 - 2) Buffer space may have been allocated for future use.
- f) In many cases, the codes will jump by a step of 2, 4, etc. This practice is done to account for entries that have discriminators, which result in an offset from a base number to fully describe them. The use of these discriminators and resulting offsets is described in more detail for each coding space (see A.2.3).

A.2.3 Coding spaces

As previously mentioned, the coding space is separated into orthogonal independent spaces. Each space can use the full 16-bit (65 536 entry) coding space available. The spaces are as follows:

- Block A: Object-oriented elements
Device nomenclature
- Block B: Units of measurement
- Block C: Metrics
- Block D: Body sites
- Block E: Alerts
- Block F: External nomenclatures
- Block G: Communication infrastructure
- Block H: Reserved for file exchange format (FEF)

Of these coding spaces, the most densely populated is the metrics space (Block C), which contains many physiological measurement instantiations.

A.2.3.1 Block A

Block A is populated with the object-oriented elements and device nomenclature codes as follows:

Description	Current
Object-Oriented	0000–3343
Devices ^a	4000–4511
Private	61440–65535

^aEach device code is separated by a count of 4 to allocate space for the four different classes of device. These classes are defined as follows:

- 0 = Generic device
- 1 = MDS
- 2 = VMD
- 3 = Channel

A.2.3.2 Block B

Block B is populated with the units of measurement codes as follows:

Description	Current
Units of measurement ^a	00000–06047
Private	61440–65535

^aEach unit of measurement code is separated by a count of 32 to allocate space for the various orders of magnitude. These orders of magnitude are defined as follows (refer to Table A.6.1 for the complete list):

- | | | |
|-----------------------|-----------------------|------------------------------|
| 0 = 10 ⁰ | 1 = 10 ¹ | 2 = 10 ² |
| 3 = 10 ³ | | 16 = 10 ⁻¹ |
| 17 = 10 ⁻² | 18 = 10 ⁻³ | 19 = 10 ⁻⁴ , etc. |

A.2.3.3 Block C

Block C is populated with the metrics nomenclature codes as follows:

Description	Current
ECG metrics	
ECG leads	00000–00255
ECG measurements ^a	00256–16383
ECG diagnostic patterns	16384–17656
Haemodynamic metrics	
Haemodynamic ^b	18432–19368
Respiratory metrics	
Respiratory ^c	20480–21360
Ventilation modes	53280–53281
Blood gas, urine, etc., metrics	
Blood gas, urine, etc.	28676–28988
Fluid-related metrics	
Fluid output ^c	26624–26684
Pump data ^c	26688–26876
Substance/Type	53396–53408
Neurological metrics	
Neurological ^c	22528–23016
Neurological patterns ^d	23560–25160
Neurological stimulation	53504–53553
Miscellaneous measurements	
Miscellaneous ^c	57348–57672
Private	61440–65535

^aMost of the ECG measurement codes are offset by 8 bits (256 counts) to allocate space for up to 256 different ECG lead discriminators. These are defined as follows (refer to A.7.1 for the complete list):

- 0 = ECG lead unspecified
- 1 = ECG Lead I
- 2 = ECG Lead II
- 3 = ECG Lead V1
-
- 61 = ECG Lead III
- 62 = ECG Lead aVR, etc.

^bMost of the haemodynamic measurement codes are offset by 2 bits (4 counts) to allocate space for the following discriminators:

- 0 = Base measurement
- 1 = Systolic
- 2 = Diastolic
- 3 = Mean

^cThese codes are offset by 2 bits (4 counts) to allocate space for the following discriminators:

- 0 = Base measurement
- 1 = Maximum
- 2 = Minimum
- 3 = Mean

^dThe neurological pattern codes are offset by 3 bits (8 counts) to allocate space for the following discriminators:

- 0 = Base pattern
- 1 = Number of occurrences of the base
- 2 = Rate of counted events
- 3 = Maximum rate of counted events
- 4 = Minimum rate of counted events
- 5 = Mean rate of counted events

A.2.3.4 Block D

Block D is populated with the body sites codes as follows:

Description	Current
Body sites ^a	0000–1810
Neuro nerves	0000–0246
Neuro muscles	0248–0994
Electroencephalogram (EEG)	0996–1318
Electrooculogram (EOG)	1320–1402
Neuro monitoring	1404–1422
Cardio	1424–1506
Coronary arteries	1812–1840
Miscellaneous sites	1508–1810
Private	61440–65535

^aExcept for entries that include specific discriminators, the codes are offset by 2 bits (4 counts) to allocate space for the following discriminators:

- 0 = Orientation - nominal
- 1 = Orientation - left
- 2 = Orientation - right

A.2.3.5 Block E

Block E is populated with alert/event codes as follows:

Description	Current
Alerts/Events ^a	0000–6600
Device events	0000–0596
Pattern events	3072–3294
Status events	6144–6730
Private	61440–65535

^aExcept for entries that include specific discriminators, the codes are offset by 1 bit (2 counts) to allocate space for the following discriminators:

- 0 = Refers to metric
- 1 = Refers to object

A.2.3.6 Block F

Block F is populated with external nomenclature codes as follows:

Description	Current
External nomenclatures ^a	0000–1600
Private	61440–65535

^aThe codes are offset by 6 bits (64 counts) to allocate space for the various new revisions of one external nomenclature.

A.2.3.7 Block G

Block G is populated with communication infrastructure codes as follows:

Description	Current
Infrastructure	0000–8194
Private	61440–65535

A.2.3.8 Block H

Block H is reserved for FEF codes as follows:

Description	Reserved
FEF	0000–61439
Private	61440–65535

A.3 Data dictionary and codes for object-oriented modeling elements (Block A)

A.3.1 Introduction

The purpose of this inventory is to provide a schematic presentation and identification scheme for all types of object-oriented modeling elements used in the DIM (see ISO/IEEE 11073-10201). These elements build up the different parts (subject areas or “packages”) of the DIM that refer to separate application areas.

- a) The tables in A.3 are ordered following the order of subject areas in the DIM:
 - 1) General (or Top object in the DIM)
 - 2) Medical Package
 - 3) Alert Package
 - 4) System Package
 - 5) Control Package
 - 6) Extended Services Package
 - 7) Communication Package
 - 8) Archival Package
 - 9) Patient Package

For the communication infrastructure (Block G) objects and attributes that are closely related to the Communication Package, but use a different code block (see A.2.3.7), a separate set of tables is provided in A.4.

- b) For each of the subject areas, a set of five separate tables for the different types of object-oriented modeling elements used in the DIM is provided:
 - 1) Object class items
 - 2) Attributes
 - 3) Attribute groups
 - 4) Behavior (methods)
 - 5) Notifications
- c) In order to enhance readability and usability of the tables, the scheme

**Table A.3.x.x—Object-oriented modeling elements:
[subject area]—[object-oriented modeling element type]**

is applied strictly in numbering the tables (even accepting that some tables remain empty).

Thus, to give an example, in Table A.3.9.2. for the Patient Package (subject area 9), the attributes (object-oriented modeling element type 2) are given.

- d) The name of the object-oriented modeling element item as introduced in the DIM appears in the first column, DIM name, of each table. The second column, Reference ID, provides equivalent systematic acronyms that allow direct mapping onto the MDIB database, which is also used for ISO/IEEE 11073 standardization activities in this field. The content of the third column in the object class item tables differs from all other tables (see next two paragraphs). The fourth column, Code, contains the corresponding codes from this database for each item, as far as exist at publication of this standard.

For the object class item tables (A.3.*.1), the third column, Derived from, refers to the inheritance relation between each item and the object class item from which it is derived. The virtual object class item at the top of the inheritance hierarchy is denoted *Top*.

For all other tables (A.3.*.2–A.3.*.5), the third column, Belongs to object, indicates the assignment of attribute groups, attributes, notifications, or methods to corresponding object class items.

- e) For structural reasons related to the DIM, attributes or attribute groups are in some cases used with different objects that are not derived from each other by inheritance. This situation leads to duplicated terms that may cause problems when automated queries require unique matches, especially for table updates or changes. Therefore, duplicated or multiple terms are generally marked by an asterisk (*). Only the first occurrence of such a term is regarded as a code and reference ID definition and is marked by **bold letters** for the DIM name, the referenced object in the third column, and the code, as shown in the following example:

Start-Time *	MDC_ATTR_TIME_START	Metric and derived objects, Session Archive, Session Test, Session Notes	2538
---------------------	---------------------	--	-------------

In addition to the asterisk on the DIM name, all further occurrences of the term explicitly refer to this first occurrence (by the expression: "see: <referenced object>/<subject area>" in the first column). The referenced object in the third column again is in **bold letters**, and the code value is set in parentheses (<code>), as shown in the following example:

Start-Time * (see: Metric/ Medical Package)	MDC_ATTR_TIME_START	Metric and derived objects, Session Archive, Session Test, Session Notes	(2538)
---	---------------------	--	--------

This scheme is intended to be appropriate for the work with both the DIM and the MDIB.

A.3.2 Object-oriented modeling elements: inventory tables

A.3.2.1 General

Table A.3.1.1—Object-oriented modeling elements—general—object class items

DIM name	Reference ID	Derived from	Code
Top	MDC_MOC_TOP		70

Table A.3.1.2—Object-oriented modeling elements—general—attributes

DIM name	Reference ID	Belongs to object	Code
Class	MDC_ATTR_CLASS	Top and derived objects	2491
Name-Binding	MDC_ATTR_NAME_BINDING	Top and derived objects	2510
Locale	MDC_ATTR_LOCALE	Top and derived objects	2600

Table A.3.1.3—Object-oriented modeling elements—general—attribute groups

DIM name	Reference ID	Belongs to object	Code
This table has no content. Following the construction and ordering scheme (see item c in A.3.1), empty tables are not left out in order to enhance readability and usability of A.3.			

Table A.3.1.4—Object-oriented modeling elements—general—behavior

DIM name	Reference ID	Belongs to object	Code
This table has no content. Following the construction and ordering scheme (see item c in A.3.1), empty tables are not left out in order to enhance readability and usability of A.3.			

Table A.3.1.5—Object-oriented modeling elements—general—notifications

DIM name	Reference ID	Belongs to object	Code
Attribute-Update	MDC_NOTI_ATTR_UPDT	Top and derived objects	3330

A.3.2.2 Medical Package**Table A.3.2.1—Object-oriented modeling elements—Medical Package—object class items**

DIM name	Reference ID	Derived from	Code
VMO	MDC_MOC_VMO	Top	1
VMD	MDC_MOC_VMO_VMD	VMO	2
Channel	MDC_MOC_VMO_CHAN	VMO	3
Metric	MDC_MOC_VMO_METRIC	VMO	4
Numeric	MDC_MOC_VMO_METRIC_NU	Metric	6
Sample Array	MDC_MOC_VMO_METRIC_SA	Metric	7
Real Time Sample Array	MDC_MOC_VMO_METRIC_SA_RT	Sample Array	9
Time Sample Array	MDC_MOC_VMO_METRIC_SA_T	Sample Array	10
Distribution Sample Array	MDC_MOC_VMO_METRIC_SA_D	Sample Array	8
Enumeration	MDC_MOC_VMO_METRIC_ENUM	Metric	5
PM-Store	MDC_MOC_VMO_PMSTORE	VMO	61
PM-Segment	MDC_MOC_PM_SEGMENT	Top	62
Complex Metric	MDC_MOC_VMO_METRIC_CMPLX	Metric	79

**Table A.3.2.2—Object-oriented modeling elements—
Medical Package—attributes**

DIM name	Reference ID	Derived from	Code
Type	MDC_ATTR_ID_TYPE	VMO and derived objects	2351
Handle *	MDC_ATTR_ID_HANDLE	VMO and derived objects, VMS and derived objects, Log and derived objects, Battery, Scanner and derived objects, Discriminator, Multipatient Archive, Patient Archive, Session Archive, Session Test, Session Notes, Physician, Patient Demographics	2337
Label	MDC_ATTR_ID_LABEL_STRING	VMO and derived objects	2343
Ext-Obj-Relations *	MDC_ATTR_EXT_OBJ_RELATION	VMO and derived objects, VMS and derived objects	2499
Vmd-Status	MDC_ATTR_VMD_STAT	VMD and derived objects	2466
Vmd-Model *	MDC_ATTR_ID_MODEL	VMD and derived objects, VMS and derived objects	2344
Instance-Number *	MDC_ATTR_ID_INSTNO	VMD and derived objects, PM-Segment, Operation and derived objects, Scanner and derived objects	2338
Production-Specification *	MDC_ATTR_ID_PROD_SPECN	VMD and derived objects, VMS and derived objects, Battery	2349
Compatibility-Id *	MDC_ATTR_ID_COMPAT	VMD and derived objects, VMS and derived objects	2336
Parameter-Group	MDC_ATTR_ID_PARAM_GRP	VMD and derived objects, Channel	2346
Position	MDC_ATTR_ID_POSN	VMD and derived objects	2348
Operating-Hours	MDC_ATTR_TIME_PD_OP_HRS	VMD and derived objects	2444
Operation-Cycles	MDC_ATTR_CYC_OP	VMD and derived objects	2325
Measurement-Principle	MDC_ATTR_MSMT_PRINCIPLE	VMD and derived objects, Channel	2560
Channel-Id	MDC_ATTR_CHAN_ID	Channel	2318
Channel-Status	MDC_ATTR_CHAN_STAT	Channel	2320
Physical-Channel-Number	MDC_ATTR_CHAN_NUM_PHYS	Channel	2319
Logical-Channel-Number	MDC_ATTR_CHAN_NUM_LOGICAL	Channel	2606
Color	MDC_ATTR_COLOR	Channel, Metric and derived objects	2321
Metric-Specification	MDC_ATTR_METRIC_SPECN	Metric and derived objects	2367
Max-Delay-Time	MDC_ATTR_DELAY_TIME_MAX	Metric and derived objects	2583
Metric-Status	MDC_ATTR_METRIC_STAT	Metric and derived objects	2368

**Table A.3.2.2—Object-oriented modeling elements—
Medical Package—attributes (continued)**

DIM name	Reference ID	Derived from	Code
Measurement-Status	MDC_ATTR_MSMT_STAT	Metric and derived objects	2375
Metric-Id	MDC_ATTR_ID_TYPE_METRIC_STA T	Metric and derived objects, PM-Segment	2353
Metric-Id-Ext	MDC_ATTR_ID_MSMT_EXT	Metric and derived objects, PM-Store	2502
Unit-Code *	MDC_ATTR_UNIT_CODE	Metric and derived objects, Set Value Operation, Limit Alert Operation	2454
Unit-Label-String	MDC_ATTR_UNIT_LABEL_STRING	Metric and derived objects	2457
Vmo-Source-List	MDC_ATTR_VMO_LIST_SRC	Metric and derived objects	2467
Metric-Source-List	MDC_ATTR_METRIC_LIST_SRC	Metric and derived objects	2366
Msmt-Site-List	MDC_ATTR_SITE_LIST_MSMT MDC_ATTR_SITE_LIST_MSMT_EXT	Metric and derived objects	2430 2551
Body-Site-List	MDC_ATTR_SITE_LIST_BODY MDC_ATTR_SITE_LIST_BODY_EXT	Metric and derived objects	2429 2550
Metric-Calibration	MDC_ATTR_METRIC_CALIB	Metric and derived objects	2362
Measure-Mode	MDC_ATTR_MODE_MSMT	Metric and derived objects	2373
Measure-Period	MDC_ATTR_TIME_PD_MSMT	Metric and derived objects	2443
Averaging-Period	MDC_ATTR_TIME_PD_AVG	Metric and derived objects	2535
Start-Time *	MDC_ATTR_TIME_START	Metric and derived objects, Session Archive, Session Test, Session Notes	2538
Stop-Time *	MDC_ATTR_TIME_STOP	Metric and derived objects, Session Archive, Session Test, Session Notes	2539
Metric-Info-Label-String	MDC_ATTR_METRIC_INFO_LABEL_ STR	Metric and derived objects	2365
Substance	MDC_ATTR_ID_SUBSTANCE	Metric and derived objects	2542
Substance-Label-String	MDC_ATTR_ID_SUBSTANCE_LABEL_ STRING	Metric and derived objects	2508
Nu-Observed-Value	MDC_ATTR_NU_VAL_OBS	Numeric and derived objects	2384
Compound-Nu-Observed-Value	MDC_ATTR_NU_CMPD_VAL_OBS	Numeric and derived objects	2379
Absolute-Time-Stamp	MDC_ATTR_TIME_STAMP_ABS	Numeric, Time Sample Array, Distribution Sample Array, Enumeration and derived objects	2448
Relative-Time-Stamp	MDC_ATTR_TIME_STAMP_REL	Numeric, Time Sample Array, Distribution Sample Array, Enumeration and derived objects	2449

**Table A.3.2.2—Object-oriented modeling elements—
Medical Package—attributes (continued)**

DIM name	Reference ID	Derived from	Code
HiRes-Time-Stamp	MDC_ATTR_TIME_STAMP_REL_HI_RES	Numeric and derived objects, Time Sample Array, Distribution Sample Array, Enumeration and derived objects	2537
Nu-Measure-Range	MDC_ATTR_NU_RANGE_MSMT	Numeric and derived objects	2382
Nu-Physiological-Range	MDC_ATTR_NU_RANGE_PHYSIO	Numeric and derived objects	2383
Nu-Measure-Resolution	MDC_ATTR_NU_MSMT_RES	Numeric and derived objects	2381
Display-Resolution	MDC_ATTR_DISP_RES	Numeric and derived objects	2327
Accuracy	MDC_ATTR_NU_ACCUR_MSMT	Numeric and derived objects	2378
Sa-Observed-Value	MDC_ATTR_SA_VAL_OBS	Sample Array and derived objects	2414
Compound-Sa-Observed-Value	MDC_ATTR_SA_CMPD_VAL_OBS	Sample Array and derived objects	2407
Sa-Specification	MDC_ATTR_SA_SPECN	Sample Array and derived objects	2413
Sa-Marker-List	MDC_ATTR_SA_MARKER_LIST_I8 MDC_ATTR_SA_MARKER_LIST_I16 MDC_ATTR_SA_MARKER_LIST_I32	Sample Array and derived objects	2603 2582 2604
	MDC_ATTR_SA_FIXED_VAL_SPECN	(Synonym)	2582
Dsa-Marker-List	MDC_ATTR_DSA_MARKER_LIST	Sample Array and derived objects	2605
Compression	MDC_ATTR_COMPRES	Sample Array and derived objects	2322
Scale-and-Range-Specification	MDC_ATTR_SCALE_SPECN_I8	Sample Array and derived objects	2417
	MDC_ATTR_SCALE_SPECN_I16		2415
	MDC_ATTR_SCALE_SPECN_I32		2416
Sa-Physiological-Range	MDC_ATTR_SA_RANGE_PHYS_I8	Sample Array and derived objects	2412
	MDC_ATTR_SA_RANGE_PHYS_I16		2410
	MDC_ATTR_SA_RANGE_PHYS_I32		2411
Visual-Grid	MDC_ATTR_GRID_VIS_I8	Sample Array and derived objects	2332
	MDC_ATTR_GRID_VIS_I16		2330
	MDC_ATTR_GRID_VIS_I32		2331
Sa-Calibration-Data	MDC_ATTR_SA_CALIB_I8	Sample Array and derived objects	2406
	MDC_ATTR_SA_CALIB_I16		2404
	MDC_ATTR_SA_CALIB_I32		2405
Filter-Specification	MDC_ATTR_FILTER_SPECN	Sample Array and derived objects	2329
Filter-Label-String	MDC_ATTR_FILTER_LABEL_STRING	Sample Array and derived objects	2626
Sa-Signal-Frequency	MDC_ATTR_SA_FREQ_SIG	Sample Array and derived objects	2408
Sa-Measure-Resolution	MDC_ATTR_SA_MSMT_RES	Sample Array and derived objects	2409

**Table A.3.2.2—Object-oriented modeling elements—
Medical Package—attributes (continued)**

DIM name	Reference ID	Derived from	Code
Sample-Period	MDC_ATTR_TIME_PD_SAMP	Real Time Sample Array, Time Sample Array, PM-Store	2445
Sweep-Speed	MDC_ATTR_SPD_SWEEP_DEFAULT	Real Time Sample Array, Time Sample Array	2431
Tsa-Marker-List	MDC_ATTR_TSA_MARKER_LIST	Time Sample Array	2452
Distribution-Range-Specification	MDC_ATTR_RANGE_DISTRIB	Distribution Sample Array	2403
x-Unit-Code	MDC_ATTR_UNIT_CODE_X	Distribution Sample Array	2455
x-Unit-Label-String	MDC_ATTR_UNIT_LABEL_STRING_X	Distribution Sample Array	2458
Enum-Observed-Value	MDC_ATTR_VAL_ENUM_OBS	Enumeration	2462
Compound-Enum-Observed-Value	MDC_ATTR_VAL_ENUM_OBS_CMPD	Enumeration	2463
Enum-Measure-Range	MDC_ATTR_ENUM_RANGE_MSMT	Enumeration	2561
Enum-Measure-Range-Bit-String	MDC_ATTR_ENUM_RANGE_MSMT_BIT_STRING	Enumeration	2568
Enum-Measure-Range-Labels	MDC_ATTR_ENUM_RANGE_MSMT_LABELS	Enumeration	2627
Enum-Additional-Data	MDC_ATTR_ENUM_ADD_DATA	Enumeration	2498
Metric-Class	MDC_ATTR_METRIC_CLASS	PM-Store	2363
Store-Sample-Algorithm	MDC_ATTR_METRIC_STORE_SAMPLE_ALG	PM-Store	2371
Storage-Format	MDC_ATTR_METRIC_STORE_FORMAT	PM-Store	2370
Store-Capacity-Count	MDC_ATTR_METRIC_STORE_CAPACITY_CNT	PM-Store	2369
Store-Usage-Count	MDC_ATTR_METRIC_STORE_USAGE_CNT	PM-Store	2372
Operational-State *	MDC_ATTR_OP_STAT	PM-Store , Operation and derived objects, Scanner and derived objects, Discriminator	2387
Number-of-Segments	MDC_ATTR_NUM_SEG	PM-Store	2385
Vmo-Global-Reference	MDC_ATTR_VMO_REF_GLB	PM-Segment	2469
Segment-Start-Abs-Time	MDC_ATTR_TIME_START_SEG	PM-Segment	2450
Segment-End-Abs-Time	MDC_ATTR_TIME_END_SEG	PM-Segment	2442
Segment-Usage-Count	MDC_ATTR_SEG_USAGE_CNT	PM-Segment	2427
Segment-Data	MDC_ATTR_SEG_DATA_GEN MDC_ATTR_SEG_DATA_NU_OPT MDC_ATTR_SEG_DATA_RTSA_OPT	PM-Segment	2424 2425 2426

**Table A.3.2.2—Object-oriented modeling elements—
Medical Package—attributes (continued)**

DIM name	Reference ID	Derived from	Code
Average-Reporting-Delay	MDC_ATTR_REPORTING_DELAY_AVG	Real Time Sample Array	2616
Sample-Time-Sync	MDC_ATTR_SAMPLE_TIME_SYNC	Real Time Sample Array	2617
HiRes-Sample-Time-Sync	MDC_ATTR_SAMPLE_TIME_SYNC_HIRES	Real Time Sample Array	2618
Cmplx-Metric-Info	MDC_attr_cmplx_info	Complex Metric	2619
Cmplx-Observed-Value	MDC_attr_cmplx_val_obs	Complex Metric	2620
Cmplx-Dyn-Attr	MDC_attr_cmplx_dyn_attr	Complex Metric	2621
Cmplx-Static-Attr	MDC_attr_cmplx_static_attr	Complex Metric	2622
Cmplx-Recursion-Depth	MDC_attr_cmplx_recursion_depth	Complex Metric	2623

**Table A.3.2.3—Object-oriented modeling elements—
Medical Package—attribute groups**

DIM name	Reference ID	Belongs to object	Code
VMO Static Context Group *	MDC_ATTR_GRP_VMO_STATIC	VMO and derived objects, SCO and derived objects	2065
VMO Dynamic Context Group *	MDC_ATTR_GRP_VMO_DYN	VMO and derived objects, SCO and derived objects	2064
Relationship Attribute Group *	MDC_ATTR_GRP_RELATION	VMO and derived objects, VMS and derived objects	2072
VMD Application Attribute Group	MDC_ATTR_GRP_VMD_APPL	VMD and derived objects	2062
VMD Production Attribute Group	MDC_ATTR_GRP_VMD_PROD	VMD and derived objects	2063
Metric Observed Value Group	MDC_ATTR_GRP_METRIC_VAL_OBS	Metric and derived objects	2051
PM-Store Attribute Group	MDC_ATTR_GRP_PMSTORE	Persistent Metric Store	2054

Table A.3.2.4—Object-oriented modeling elements—Medical Package—behavior

DIM name	Reference ID	Belongs to object	Code
Clear-Segments	MDC_ACT_SEG_CLR	PM-Store	3084
Get-Segments	MDC_ACT_SEG_GET	PM-Store	3085
Get-Segment-Info	MDC_ACT_SEG_GET_INFO	PM-Store	3086

Table A.3.2.5—Object-oriented modeling elements—Medical Package—notifications

DIM name	Reference ID	Belongs to object	Code
This table has no content. Following the construction and ordering scheme (see item c in A.3.1), empty tables are not left out in order to enhance readability and usability of A.3.			

A.3.2.3 Alert Package**Table A.3.3.1—Object-oriented modeling elements—Alert Package—object class items**

DIM name	Reference ID	Derived from	Code
Alert	MDC_MOC_VMO_AL	VMO	52
Alert Status	MDC_MOC_VMO_AL_STAT	VMO	53
Alert Monitor	MDC_MOC_VMO_AL_MON	VMO	54

Table A.3.3.2—Object-oriented modeling elements—Alert Package—attributes

DIM name	Reference ID	Belongs to object	Code
Alert-Condition	MDC_ATTR_AL_COND	Alert	2476
Limit-Specification	MDC_ATTR_AL_LIMIT	Alert	2477
Vmo-Reference *	MDC_ATTR_VMO_REF	Alert, SCO, Operation and derived objects	2468
Alert-Capab-List	MDC_ATTR_AL_STAT_AL_C_LIST	Alert Status	2312
Tech-Alert-List	MDC_ATTR_AL_STAT_T_AL_LIST	Alert Status	2315
Physio-Alert-List	MDC_ATTR_AL_STAT_P_AL_LIST	Alert Status	2314
Limit-Spec-List	MDC_ATTR_AL_LIMIT_SPEC_LIST	Alert Status, Alert Monitor	2305
Device-Alert-Condition	MDC_ATTR_DEV_AL_COND	Alert Monitor	2326
Device-P-Alarm-List	MDC_ATTR_AL_MON_P_AL_LIST	Alert Monitor	2306
Device-T-Alarm-List	MDC_ATTR_AL_MON_T_AL_LIST	Alert Monitor	2308
Device-Sup-Alarm-List	MDC_ATTR_AL_MON_S_AL_LIST	Alert Monitor	2307
Suspension-Period	MDC_ATTR_TIME_PD_AL_SUSP	Alert Monitor	2446

Table A.3.3.3—Object-oriented modeling elements—Alert Package—attribute groups

DIM name	Reference ID	Belongs to object	Code
VMO Static Context Group * (see: VMO/ Medical Package)	MDC_ATTR_GRP_VMO_STATIC	VMO and derived objects, SCO and derived objects	(2065)
VMO Dynamic Context Group * (see: VMO/ Medical Package)	MDC_ATTR_GRP_VMO_DYN	VMO and derived objects, SCO and derived objects	(2064)
Alert Group	MDC_ATTR_GRP_AL	Alert	2067
Alert Status Group	MDC_ATTR_GRP_AL_STAT	Alert Status	2050
Alert Monitor Group	MDC_ATTR_GRP_AL_MON	Alert Monitor	2049

Table A.3.3.4—Object-oriented modeling elements—Alert Package—behavior

DIM name	Reference ID	Belongs to object	Code
This table has no content. Following the construction and ordering scheme (see item c in A.3.1), empty tables are not left out in order to enhance readability and usability of A.3.			

Table A.3.3.5—Object-oriented modeling elements—Alert Package—notifications

DIM name	Reference ID	Belongs to object	Code
This table has no content. Following the construction and ordering scheme (see item c in A.3.1), empty tables are not left out in order to enhance readability and usability of A.3.			

A.3.2.4 System Package

Table A.3.4.1—Object-oriented modeling elements—System Package—object class items

DIM name	Reference ID	Derived from	Code
VMS	MDC_MOC_VMS	Top	32
MDS	MDC_MOC_VMS_MDS	VMS	33
Simple MDS	MDC_MOC_VMS_MDS_SIMP	MDS	37
Hydra MDS	MDC_MOC_VMS_MDS_HYD	MDS	36
Composite Single Bed MDS	MDC_MOC_VMS_MDS_COMPOS_SINGLE_BED	MDS	35
Composite Multiple Bed MDS	MDC_MOC_VMS_MDS_COMPOS_MULTI_BED	MDS	34
Log	MDC_MOC_LOG	Top	38
Event Log	MDC_MOC_LOG_EVENT	Log	72
Battery	MDC_MOC_BATT	Top	41
Clock	MDC_MOC_CLOCK	Top	78

**Table A.3.4.2—Object-oriented modeling elements—
System Package—attributes**

DIM name	Reference ID	Belongs to object	Code
Handle * (see: VMO/ Medical Package)	MDC_ATTR_ID_HANDLE	VMO and derived objects, VMS and derived objects, Log and derived objects, Battery, Scanner and derived objects, Discriminator, Multipatient Archive, Patient Archive, Session Archive, Session Test, Session Notes, Physician, Patient Demographics	(2337)
System-Type	MDC_ATTR_SYS_TYPE	VMS and derived objects	2438
System-Model * (see: VMD Model/ VMD/ Medical Package)	MDC_ATTR_ID_MODEL	VMD and derived objects, VMS and derived objects	(2344)
System-Id *	MDC_ATTR_SYS_ID	VMS and derived objects, Multipatient Archive, Patient Archive	2436
Compatibility-Id * (see: VMD/ Medical Package)	MDC_ATTR_ID_COMPAT	VMD and derived objects, VMS and derived objects	(2336)
Nomenclature-Version	MDC_ATTR_NOM_VERS	VMS and derived objects	2376
System-Capability	MDC_ATTR_SYS_CAPAB	VMS and derived objects	2435
System-Specification	MDC_ATTR_SYS_SPECN	VMS and derived objects	2437
Production-Specification * (see: VMD/ Medical Package)	MDC_ATTR_ID_PROD_SPECN	VMD and derived objects, VMS and derived objects, Battery	(2349)
Ext-Obj-Relations * (see: VMO/ Medical Package)	MDC_ATTR_EXT_OBJ_RELATION	VMO and derived objects, VMS and derived objects	(2499)
Mds-Status	MDC_ATTR_VMS_MDS_STAT	MDS and derived objects	2471
Bed-Label	MDC_ATTR_ID_BED_LABEL	MDS and derived objects	2334
Soft-Id	MDC_ATTR_ID_SOFT	MDS and derived objects	2350
Operating-Mode	MDC_ATTR_MODE_OP	MDS and derived objects	2374
Application-Area	MDC_ATTR_AREA_APPL	MDS and derived objects	2317
Patient-Type *	MDC_ATTR_PT_TYPE	MDS and derived objects, Patient Demographics	2402
Date-and-Time	MDC_ATTR_TIME_ABS	MDS and derived objects	2439
Relative-Time	MDC_ATTR_TIME_REL	MDS and derived objects	2447
HiRes-Relative-Time	MDC_ATTR_TIME_REL_HI_RES	MDS and derived objects	2536
Time Capabilities	MDC_ATTR_TIME_SUPPORT	Clock	2607
Time Status	MDC_ATTR_DATE_TIME_STATUS	Clock	2608
Date and Time in ISO Format	MDC_ATTR_TIME_ABS_ISO	Clock	2609

**Table A.3.4.2—Object-oriented modeling elements—
System Package—attributes (continued)**

DIM name	Reference ID	Belongs to object	Code
List of External (different format) Time Stamps	MDC_ATTR_TIME_STAMP_LIST_EXT	Clock	2610
Attribute for synchronization between Abs and Rel Times	MDC_ATTR_TIME_ABS_REL_SYNC	Clock	2611
Time Zone	MDC_ATTR_TIME_ZONE	Clock	2612
Info for daylight savings time transition	MDC_ATTR_TIME_DAYLIGHT_SAVINGS_TRANS	Clock	2613
Cumulative leap seconds	MDC_ATTR_CUM_LEAP_SECONDS	Clock	2614
Time stamp for next leap second	MDC_ATTR_NEXT_LEAP_SECOND	Clock	2615
Power-Status	MDC_ATTR_POWER_STAT	MDS and derived objects	2389
Altitude	MDC_ATTR_ALTITUDE	MDS and derived objects	2316
Battery-Level ("charge")	MDC_ATTR_VAL_BATT_CHARGE	MDS and derived objects	2460
Remaining-Battery-Time *	MDC_ATTR_TIME_BATT_REMAIN	MDS and derived objects, Battery	2440
Line-Frequency	MDC_ATTR_LINE_FREQ	MDS and derived objects	2357
Association-Invoke-Id	MDC_ATTR_ID_ASSOC_NO	MDS and derived objects	2333
Current-Log-Entries	MDC_ATTR_LOG_ENTRIES_CURR	Log and derived objects	2360
Max-Log-Entries	MDC_ATTR_LOG_ENTRIES_MAX	Log and derived objects	2361
Event-Log-Entry-List	MDC_ATTR_EVENT_LOG_ENTRY_LIST	Event Log	2564
Event-Log-Info	MDC_ATTR_EVENT_LOG_INFO	EventLog	2591
Log-Change-Count	MDC_ATTR_LOG_CHANGE_COUNT	Log and derived objects	2592
Battery-Status	MDC_ATTR_BATT_STAT	Battery	2484
Capacity-Remaining	MDC_ATTR_CAPAC_BATT_REMAIN	Battery	2488
Capacity-Full-Charge	MDC_ATTR_CAPAC_BATT_FULL	Battery	2487
Capacity-Specified	MDC_ATTR_CAPAC_BATT_SPECN	Battery	2489
Voltage	MDC_ATTR_BATT_VOLTAGE	Battery	2485
Voltage-Specified	MDC_ATTR_BATT_VOLTAGE_SPECN	Battery	2486
Current	MDC_ATTR_BATT_CURR	Battery	2483
Battery-Temperature	MDC_ATTR_TEMP_BATT	Battery	2534
Charge-Cycles	MDC_ATTR_BATT_CHARGE_CYCLES	Battery	2482

Table A.3.4.3—Object-oriented modeling elements—System Package—attribute groups

DIM name	Reference ID	Belongs to object	Code
System Identification Attribute Group	MDC_ATTR_GRP_SYS_ID	VMS and derived objects	2059
System Application Attribute Group	MDC_ATTR_GRP_SYS_APPL	VMS and derived objects	2058
System Production Attribute Group	MDC_ATTR_GRP_SYS_PROD	VMS and derived objects	2060
Relationship Attribute Group * (see: VMO/ Medical Package)	MDC_ATTR_GRP_RELATION	VMO and derived objects, VMS and derived objects	(2072)
Clock Attribute Group	MDC_ATTR_GRP_CLOCK	Clock	2078
Battery Attribute Group	MDC_ATTR_GRP_BATT	Battery	2069

Table A.3.4.4—Object-oriented modeling elements—System Package—behavior

DIM name	Reference ID	Belongs to object	Code
Mds-Set-Status	MDC_ACT_SET_MDS_STATE	MDS and derived objects	3087
Clear-Log	MDC_ACT_CLR_LOG	Log and derived objects	3075
Get-Event-Log-Entries	MDC_ACT_GET_EVENT_LOG_ENTRIES	EventLog	3092
Set-Time	MDC_ACT_SET_TIME	Clock	3095
Set-Time-Zone	MDC_ACT_SET_TIME_ZONE	Clock	3096
Set-Leap-Seconds	MDC_ACT_SET_LEAP_SECONDS	Clock	3097
Set-ISO-Time	MDC_ACT_SET_TIME_ISO	Clock	3098

Table A.3.4.5—Object-oriented modeling elements—System Package—notifications

DIM name	Reference ID	Belongs to object	Code
System-Error	MDC_NOTI_SYS_ERR	MDS and derived objects	3349
Mds-Create-Notification	MDC_NOTI_MDS_CREAT	MDS and derived objects	3334
Mds-Attribute-Update	MDC_NOTI_MDS_ATTR_UPDT	MDS and derived objects	3333
Date-Time Changed	MDC_NOTE_DATE_TIME_CHANGED	Clock	3355

A.3.2.5 Control Package

Table A.3.5.1—Object-oriented modeling elements—Control Package—object class items

DIM name	Reference ID	Derived from	Code
SCO	MDC_MOC_CNTRL_SCO	Top	43
Operation	MDC_MOC_CNTRL_OP	Top	44
Select Item Operation	MDC_MOC_CNTRL_OP_SEL_IT	Operation	45
Set Value Operation	MDC_MOC_CNTRL_OP_SEL_VAL	Operation	47
Set String Operation	MDC_MOC_CNTRL_OP_SET_STRIN G	Operation	73
Toggle Flag Operation	MDC_MOC_CNTRL_OP_TOG	Operation	49
Activate Operation	MDC_MOC_CNTRL_OP_ACTIV	Operation	50
Limit Alert Operation	MDC_MOC_CNTRL_OP_LIM	Operation	51
Set Range Operation	MDC_MOC_CNTRL_OP_SET_ RANGE	Operation	80

Table A.3.5.2—Object-oriented modeling elements—Control Package—attributes

DIM name	Reference ID	Belongs to object	Code
Sco-Capability	MDC_ATTR_SCO_CAPAB	SCO	2422
Sco-Help-Text-String	MDC_ATTR_SCO_HELP_TEXT_STRIN G	SCO	2549
Vmo-Reference * (see: Alert/ Alert Package)	MDC_ATTR_VMO_REF	Alert, SCO, Operation and derived objects	(2468)
Activity-Indicator	MDC_ATTR_INDIC_ACTIV	SCO	2355
Lock-State	MDC_ATTR_STAT_LOCK	SCO	2432
Invoke-Cookie	MDC_ATTR_ID_INVOK_COOKIE	SCO	2339
Instance-Number * (see: VMD/ Medical Package)	MDC_ATTR_ID_INSTNO	VMD and derived objects, PM-Segment, Operation and derived objects, Scanner and derived objects	(2338)
Operation-Spec	MDC_ATTR_OP_SPEC	Operation and derived objects	2386
Operation-Text-String	MDC_ATTR_OP_TEXT_STRING	Operation and derived objects	2514
Operation-Text-String-Dynamic	MDC_ATTR_OP_TEXT_STRING_DY N	Operation and derived objects	2602
Operational-State * (see: PM-Store/ Medical Package)	MDC_ATTR_OP_STAT	PM-Store, Operation and derived objects, Scanner and derived objects, Discriminator	(2387)
Selected-Item-Index	MDC_ATTR_INDEX_SEL	Select Item Operation	2354

**Table A.3.5.2—Object-oriented modeling elements—
Control Package—attributes (continued)**

DIM name	Reference ID	Belongs to object	Code
Nom-Partition	MDC_ATTR_ID_NOM_PARTITION	Select Item Operation	2345
Select-List	MDC_ATTR_LIST_SEL	Select Item Operation	2358
Current-Value	MDC_ATTR_VAL_CURR	Set Value Operation	2461
Set-Value-Range	MDC_ATTR_VAL_RANGE	Set Value Operation, Limit Alert Operation	2464
Step-Width	MDC_ATTR_VAL_STEP_WIDTH	Set Value Operation	2465
Unit-Code * (see: Metric/ Medical Package)	MDC_ATTR_UNIT_CODE	Metric and derived objects, Set Value Operation, Limit Alert Operation	(2454)
Current-String	MDC_ATTR_STRING_CURR	Set String Operation	2565
Set-String-Spec	MDC_ATTR_SET_STRING_SPEC	Set String Operation	2567
Toggle-State	MDC_ATTR_STAT_OP_TOG	Toggle Flag Operation	2433
Toggle-Label-Strings	MDC_ATTR_TOG_LABELS_STRING	Toggle Flag Operation	2540
Alert-Op-Capability	MDC_ATTR_AL_OP_CAPAB	Limit Alert Operation	2309
Alert-Op-State	MDC_ATTR_AL_OP_STAT	Limit Alert Operation	2310
Limit Alert Operation	MDC_ATTR_LIMIT_CURR	Limit Alert Operation	2356
Alert-Op-Text-String	MDC_ATTR_AL_OP_TEXT	Limit Alert Operation	2311
Metric-Id ("Physio ID")	MDC_ATTR_ID_PHYSIO	Limit Alert Operation	2347
Current-Range	MDC_ATTR_RANGE_CURR	Set Range Operation	2624
Range-Op-Text	MDC_ATTR_RANGE_OP_TEXT STRING	Set Range Operation	2625

Table A.3.5.3—Object-oriented modeling elements—Control Package—attribute groups

DIM name	Reference ID	Belongs to object	Code
VMO Static Context Group * (see VMO/ Medical Package)	MDC_ATTR_GRP_VMO_STATIC	VMO and derived objects, SCO and derived objects	(2065)
VMO Dynamic Context Group * (see VMO/ Medical Package)	MDC_ATTR_GRP_VMO_DYN	VMO and derived objects, SCO and derived objects	(2064)
Operation Static Context Group	MDC_ATTR_GRP_OP_STATIC_CTXT	Operation and derived objects	2053
Operation Dynamic Context Group	MDC_ATTR_GRP_OP_DYN_CTXT	Operation and derived objects	2052
SCO Transaction Group	MDC_ATTR_GRP_SCO_ TRANSACTION	SCO, Operation and derived objects	2057

Table A.3.5.4—Object-oriented modeling elements—Control Package—behavior

DIM name	Reference ID	Belongs to object	Code
Operation-Invoke	MDC_ACT_SCO_OP_INVOK	SCO	3083
Get-Ctxt-Help	MDC_ACT_GET_CTXT_HELP	SCO	3077

Table A.3.5.5—Object-oriented modeling elements—Control Package—notifications

DIM name	Reference ID	Belongs to object	Code
Sco-Operating-Request	MDC_NOTI_SCO_OP_REQ	SCO	3347
Sco-Operation-Invoke-Error	MDC_NOTI_SCO_OP_INVOK_ERR	SCO	3346

A.3.2.6 Extended Services Package

**Table A.3.6.1—Object-oriented modeling elements—
Extended Services Package—object class items**

DIM name	Reference ID	Derived from	Code
Scanner	MDC_MOC_SCAN	Top	16
Configurable Scanner	MDC_MOC_SCAN_CFG	Scanner	17
Episodic Configurable Scanner	MDC_MOC_SCAN_CFG_EPI	Configurable Scanner	18
Periodic Configurable Scanner	MDC_MOC_SCAN_CFG_PERI	Configurable Scanner	19
Fast Periodic Configurable Scanner	MDC_MOC_SCAN_CFG_PERI_FAST	Periodic Configurable Scanner	20
Unconfigurable Scanner	MDC_MOC_SCAN_UCFG	Scanner	21
Context Scanner	MDC_MOC_SCAN_UCFG_CTXT	Unconfigurable Scanner	23
Alert Scanner	MDC_MOC_SCAN_UCFG_ALSTAT	Unconfigurable Scanner	22
Operating Scanner	MDC_MOC_SCAN_UCFG_OP	Unconfigurable Scanner	24
Discriminator	MDC_MOC_DISCRIM	Top	66

**Table A.3.6.2—Object-oriented modeling elements—
Extended Services Package—attributes**

DIM name	Reference ID	Belongs to object	Code
Handle * (see: VMO/ Medical Package)	MDC_ATTR_ID_HANDLE	VMO and derived objects, VMS and derived objects, Log and derived objects, Battery, Scanner and derived objects, Discriminator, Multipatient Archive, Patient Archive, Session Archive, Session Test, Session Notes, Physician, Patient Demographics	(2337)
Instance-Number * (see: VMD/ Medical Package)	MDC_ATTR_ID_INSTNO	VMD and derived objects, PM-Segment, Operation and derived objects, Scanner and derived objects	(2338)
Operational-State * (see: PM-Store/ Medical Package)	MDC_ATTR_OP_STAT	PM-Store , Operation and derived objects, Scanner and derived objects, Discriminator	(2387)
Scan-List	MDC_ATTR_SCAN_LIST	Configurable Scanner and derived objects	2420
Confirm-Mode	MDC_ATTR_CONFIRM_MODE	Configurable Scanner and derived objects	2323
Confirm-Timeout	MDC_ATTR_CONFIRM_TIMEOUT	Configurable Scanner and derived objects, Unconfigurable Scanner and derived objects	2324
Transmit-Window	MDC_ATTR_TX_WIND	Configurable Scanner and derived objects, Unconfigurable Scanner and derived objects	2453
Scan-Config-Limit	MDC_ATTR_SCAN_CFG_LIMIT	Configurable Scanner and derived objects	2558
Scan-Extensibility	MDC_ATTR_SCAN_EXTEND	Periodic Configurable Scanner and derived objects	2419
Reporting-Interval	MDC_ATTR_SCAN_REP_PD	Periodic Configurable Scanner and derived objects, Alert Scanner	2421
Context-Mode	MDC_ATTR_SCAN_CTXT_MODE	Context Scanner	2418
Discriminator-Construct	MDC_ATTR_DISCRIM_CONSTRUCT	Discriminator	2497

**Table A.3.6.3—Object-oriented modeling elements—
Extended Services Package—attribute groups**

DIM name	Reference ID	Belongs to object	Code
Scanner Attribute Group	MDC_ATTR_GRP_SCAN	Scanner and derived objects	2056
Discriminator Attribute Group	MDC_ATTR_GRP_DISCRIM	Discriminator	2070

Table A.3.6.4—Object-oriented modeling elements—Extended Services Package—behavior

DIM name	Reference ID	Belongs to object	Code
Refresh-Episodic-Data	MDC_ACT_REFR_EPI_DATA	Episodic Configurable Scanner and derived objects	3080
Refresh-Context	MDC_ACT_REFR_CTXT	Context Scanner	3079
Refresh-Operation-Context	MDC_ACT_REFR_OP_CTXT	Operating Scanner	3082
Refresh-Operation-Attributes	MDC_ACT_REFR_OP_ATTR	Operating Scanner	3081

**Table A.3.6.5—Object-oriented modeling elements—
Extended Services Package—notifications**

DIM name	Reference ID	Belongs to object	Code
Unbuf-Scan-Report	MDC_NOTI_UNBUF_SCAN_RPT	Episodic Configurable Scanner and derived objects	3350
Buf-Scan-Report	MDC_NOTI_BUF_SCAN_RPT	Periodic Configurable Scanner and derived objects	3331
Fast-Buf-Scan-Report	MDC_NOTI_FAST_BUF_SCAN_RPT	Fast Periodic Configurable Scanner	3332
Object-Create-Notification	MDC_NOTI_OBJ_CREAT	Context Scanner, Operating Scanner	3336
Object-Delete-Notification	MDC_NOTI_OBJ_DEL	Context Scanner, Operating Scanner	3338
Alert-Scan-Report	MDC_NOTI_AL_STAT_SCAN_RPT	Alert Scanner	3329
Oper-Create-Notification	MDC_NOTI_OP_CREAT	Operating Scanner	3340
Oper-Delete-Notification	MDC_NOTI_OP_DEL	Operating Scanner	3341
Oper-Attribute-Update	MDC_NOTI_OP_ATTR_UPDT	Operating Scanner	3339

A.3.2.7 Communication Package

**Table A.3.7.1—Object-oriented modeling elements—
Communication Package—object class items**

DIM name	Reference ID	Derived from	Code
Communication Controller	MDC_MOC_CC	Top	28
DCC [device communication controller]	MDC_MOC_DCC	Communication Controller	76
BCC [bedside communication controller]	MDC_MOC_BCC	Communication Controller	77

Table A.3.7.2—Object-oriented modeling elements—Communication Package—attributes

DIM name	Reference ID	Belongs to object	Code
Handle * (see: VMO/ Medical Package)	MDC_ATTR_ID_HANDLE	VMO and derived objects, VMS and derived objects, Log and derived objects, Battery, Scanner and derived objects, Discriminator, Communication Controller Multipatient Archive, Patient Archive, Session Archive, Session Test, Session Notes, Physician, Patient Demographics	(2337)
Capability	MDC_ATTR_CC_CAPAB	Communication Controller	2593
CC-Type	MDC_ATTR_CC_TYPE	Communication Controller	2594
Number-Of-Difs	MDC_ATTR_CC_NUM_DIFS	Communication Controller	2595
This-Connection-Dif-Index	MDC_ATTR_CC_THIS_DIF_INDEX	Communication Controller	2596
Cc-Ext-Mgmt-Proto-Id	MDC_ATTR_CC_EXT_MNG_PROT	Communication Controller	2597

**Table A.3.7.3—Object-oriented modeling elements—
Communication Package—attribute groups**

DIM name	Reference ID	Belongs to object	Code
Communication Controller Attribute Group	MDC_ATTR_GRP_CC	Communication Controller	2077

Table A.3.7.4—Object-oriented modeling elements—Communication Package—behavior

DIM name	Reference ID	Belongs to object	Code
Clear-Segments	MDC_ACT_GET_MIB_DATA	Communication Controller	3093
Poll Clear-Segments	MDC_ACT_POLL_MDIB_DATA	Communication Controller	3094

Table A.3.7.5—Object-oriented modeling elements—Communication Package—notifications

DIM name	Reference ID	Belongs to object	Code
This table has no content. Following the construction and ordering scheme (see item c in A.3.1), empty tables are not left out in order to enhance readability and usability of A.3.			

A.3.2.8 Archival Package**Table A.3.8.1—Object-oriented modeling elements—Archival Package—object class items**

DIM name	Reference ID	Derived from	Code
Multipatient Archive	MDC_MOC_ARCHIVE_MULTI_PT	Top	63
Patient Archive	MDC_MOC_ARCHIVE_PT	Top	64
Session Archive	MDC_MOC_ARCHIVE_SESSION	Top	65
Physician	MDC_MOC_PHYSICIAN	Top	67
Session Test	MDC_MOC_SESSION_TEST	Top	69
Session Notes	MDC_MOC_SESSION_NOTES	Top	68

Table A.3.8.2—Object-oriented modeling elements—Archival Package—attributes

DIM name	Reference ID	Belongs to object	Code
Handle * (see: VMO/ Medical Package)	MDC_ATTR_ID_HANDLE	VMO and derived objects, VMS and derived objects, Log and derived objects, Battery, Scanner and derived objects, Discriminator, Multipatient Archive, Patient Archive, Session Archive, Session Test, Session Notes, Physician, Patient Demographics	(2337)
System-Id * (see: VMS/ System Package)	MDC_ATTR_SYS_ID	VMS and derived objects, Multipatient Archive Patient Archive	(2436)
Location	MDC_ATTR_LOCATION	Multipatient Archive	2509

**Table A.3.8.2—Object-oriented modeling elements—
Archival Package—attributes (continued)**

DIM name	Reference ID	Belongs to object	Code
Study-Name	MDC_ATTR_NAME_STUDY	Multipatient Archive	2531
Version	MDC_ATTR_ARCHIVE_VERS	Multipatient Archive	2480
System-Name	MDC_ATTR_NAME_SYS	Patient Archive	2543
Processing-History	MDC_ATTR_PROC_HIST	Patient Archive	2517
Protection	MDC_ATTR_PROTECTION	Patient Archive, Session Archive, Session Test, Session Notes	2519
S-Archive-Id	MDC_ATTR_ID_SESS_ARCHIVE	Session Archive	2507
S-Archive-Name	MDC_ATTR_NAME_SESS_ARCHIVE	Session Archive	2513
S-Archive-Comments	MDC_ATTR_SESS_ARCHIVE_COMMENTS	Session Archive	2530
Start-Time * (see: Metric/ Medical Package)	MDC_ATTR_TIME_START	Metric and derived objects, Session Archive, Session Test, Session Notes	(2538)
Stop-Time * (see: Metric/ Medical Package)	MDC_ATTR_TIME_STOP	Metric and derived objects, Session Archive, Session Test, Session Notes	(2539)
Physician-Id	MDC_ATTR_ID_Physician	Physician	2503
Authorization-Level	MDC_ATTR_Auth_Level	Physician	2481
Name	MDC_ATTR_PHYSICIAN_NAME	Physician	2544
Given-Name	MDC_ATTR_PHYSICIAN_NAME_GIVEN	Physician	2546
Family-Name	MDC_ATTR_PHYSICIAN_NAME_FAMILY	Physician	2545
Middle-Name	MDC_ATTR_PHYSICIAN_NAME_MIDDLE	Physician	2547
Title-Name	MDC_ATTR_PHYSICIAN_NAME_TITLE	Physician	2548
St-Archive-Id	MDC_ATTR_ID_SESS_TEST_ARCHIVE	Session Test	2506
St-Archive-Name	MDC_ATTR_NAME_SESS_TEST_ARCHIVE	Session Test	2512
St-Archive-Comments	MDC_ATTR_SESS_TEST_ARCHIVE_COMMENTS	Session Test	2529
Sn-Id	MDC_ATTR_ID_SESS_NOTES_ARCHIVE	Session Notes	2505
Sn-Name	MDC_ATTR_NAME_SESS_NOTES_ARCHIVE	Session Notes	2511
Sn-Comments	MDC_ATTR_SESS_NOTES_ARCHIVE_COMMENTS	Session Notes	2528
Findings	MDC_ATTR_Findings	Session Notes	2500

**Table A.3.8.2—Object-oriented modeling elements—
Archival Package—attributes (continued)**

DIM name	Reference ID	Belongs to object	Code
Diagnostic-Codes	MDC_ATTR_CODE_DIAGNOSTIC	Session Notes, Patient Demographics	2492
Diagnosis-Description	MDC_ATTR_DESC_Diagnostic	Session Notes	2494
Procedure-Codes *	MDC_ATTR_Code_Procedure	Session Notes, Patient Demographics	2493
Procedure-Description *	MDC_ATTR_DESC_PROCEDURE	Session Notes, Patient Demographics	2495

Table A.3.8.3—Object-oriented modeling elements—Archival Package—attribute groups

DIM name	Reference ID	Belongs to object	Code
Archival Attribute Group	MDC_ATTR_GRP_ARCHIVE	Multipatient Archive, Patient Archive, Session Archive, Session Test, Session Notes	2068
Physician Attribute Group	MDC_ATTR_GRP_PHYSICIAN	Physician	2071

Table A.3.8.4—Object-oriented modeling elements—Archival Package—behavior

DIM name	Reference ID	Belongs to object	Code
This table has no content. Following the construction and ordering scheme (see item c in A.3.1), empty tables are not left out in order to enhance readability and usability of A.3.			

Table A.3.8.5—Object-oriented modeling elements—Archival Package—notifications

DIM name	Reference ID	Belongs to object	Code
This table has no content. Following the construction and ordering scheme (see item c in A.3.1), empty tables are not left out in order to enhance readability and usability of A.3.			

A.3.2.9 Patient Package**Table A.3.9.1—Object-oriented modeling elements—Patient Package—object class items**

DIM name	Reference ID	Derived from	Code
Patient Demographics	MDC_MOC_PT_DEMOG	Top	42

**Table A.3.9.2—Object-oriented modeling elements—
Patient Package—attributes**

DIM name	Reference ID	Belongs to object	Code
Handle * (see: VMO/ Medical Package)	MDC_ATTR_ID_HANDLE	VMO and derived objects, VMS and derived objects, Log and derived objects, Battery, Scanner and derived objects, Discriminator, Multipatient Archive, Patient Archive, Session Archive, Session Test, Session Notes, Physician, Patient Demographics	(2337)
Pat-Demo-State	MDC_ATTR_PT_DEMOG_ST	Patient Demographics	2391
Patient-Id	MDC_ATTR_PT_ID	Patient Demographics	2394
Name	MDC_ATTR_PT_NAME	Patient Demographics	2395
Given-Name	MDC_ATTR_PT_NAME_GIVEN	Patient Demographics	2397
Family-Name	MDC_ATTR_PT_NAME_FAMILY	Patient Demographics	2396
Middle-Name	MDC_ATTR_PT_NAME_MIDDLE	Patient Demographics	2399
Birth-Name	MDC_ATTR_PT_NAME_BIRTH	Patient Demographics	2398
Title-Name	MDC_ATTR_PT_NAME_TITLE	Patient Demographics	2400
Sex	MDC_ATTR_PT_SEX	Patient Demographics	2401
Race	MDC_ATTR_PT_RACE	Patient Demographics	2526
Patient-Type * (see: MDS/ System Package)	MDC_ATTR_PT_TYPE	MDS and derived objects, Patient Demographics	(2402)
Date-Of-Birth	MDC_ATTR_PT_DOB	Patient Demographics	2392
Patient-General-Info	MDC_ATTR_PT_GEN_INFO	Patient Demographics	2393
Patient-Age	MDC_ATTR_Pt_Age	Patient Demographics	2520
Gestational-Age	MDC_ATTR_Pt_Age_Gest	Patient Demographics	2521
Patient-Height	MDC_ATTR_Pt_Height	Patient Demographics	2524
Patient-Weight	MDC_ATTR_Pt_Weight	Patient Demographics	2527
Patient-Birth-Length	MDC_ATTR_Pt_Birth_Length	Patient Demographics	2522
Patient-Birth-Weight	MDC_ATTR_Pt_Birth_Weight	Patient Demographics	2523
Mother-Patient-Id	MDC_ATTR_ID_PT_Mother	Patient Demographics	2504
Mother-Name	MDC_ATTR_Pt_Name_Mother	Patient Demographics	2525
Patient-Head-Circumference	MDC_ATTR_CIRCUM_HEAD	Patient Demographics	2490
Patient-Bsa	MDC_ATTR_PT_BSA	Patient Demographics	2390
Bed-Id	MDC_ATTR_ID_BED	Patient Demographics	2501
Diagnostic-Info	MDC_ATTR_Diagnostic_Info	Patient Demographics	2496

**Table A.3.9.2—Object-oriented modeling elements—
Patient Package—attributes (continued)**

DIM name	Reference ID	Belongs to object	Code
Diagnostic-Codes	MDC_ATTR_CODE_DIAGNOSTIC	Session Notes, Patient Demographics	2492
Admitting-Physician	MDC_ATTR_Physician_Admit	Patient Demographics	2515
Attending-Physician	MDC_ATTR_Physician_ATTEND	Patient Demographics	2516
Date-Of-Procedure	MDC_ATTR_Procedure_DATE	Patient Demographics	2518
Procedure-Codes * (see: Session Notes/ Archival Package)	MDC_ATTR_Code_Procedure	Session Notes, Patient Demographics	(2493)
Procedure-Description * (see: Session Notes/ Archival Package)	MDC_ATTR_DESC_Procedure	Session Notes, Patient Demographics	(2495)
Anesthetist	MDC_ATTR_Anaesthetist	Patient Demographics	2479
Surgeon	MDC_ATTR_Surgeon	Patient Demographics	2532
Patient-Lean-Body-Mass	MDC_ATTR_PT_LBM	Patient Demographics	2601

Table A.3.9.3—Object-oriented modeling elements—Patient Package—attribute groups

DIM name	Reference ID	Belongs to object	Code
Patient Demographics Attribute Group	MDC_ATTR_GRP_PT_DEMOG	Patient Demographics	2055

Table A.3.9.4—Object-oriented modeling elements—Patient Package—behavior

DIM name	Reference ID	Belongs to object	Code
Discharge-Patient	MDC_ACT_DISCH_PT	Patient Demographics	3076
Admit-Patient	MDC_ACT_ADMIT_PT	Patient Demographics	3074
Pre-Admit-Patient	MDC_ACT_PRE_ADMIT_PT	Patient Demographics	3078

Table A.3.9.5—Object-oriented modeling elements—Patient Package—notifications

DIM name	Reference ID	Belongs to object	Code
Patient-Demographics-Modified	MDC_NOTI_PT_DEMOG_MOD	Patient Demographics	3342
Patient-Demographics-State-Change	MDC_NOTI_PT_DEMOG_ST_MOD	Patient Demographics	3343

A.4 Data dictionary and codes for communication infrastructure (Block G)

The communication infrastructure tables are closely related to the Communication Package of the DIM. Therefore, this clause follows A.3, which discusses the object-oriented modeling elements code block (Block A), although that code block (which includes the communication controller object class) and the separate communication infrastructure code block (Block G) are not consecutive (see A.2.3).

Terms and corresponding code values in these tables are used to describe properties of the Device Interface (object) for profile identification and model extensions. However, communication infrastructure objects are not part of the MDIB. Hence, they are not accessible by communication medical device information service element (CMDISE) services, but can be retrieved only by the special Communication Controller object method.

For consistency, the usual scheme introduced in A.3.1 was adopted, resulting in a set of five tables:

- 1) Object class items
- 2) Attributes
- 3) Attribute groups
- 4) Behavior (methods)
- 5) Notifications

These tables are supplemented by three additional tables:

- 6) Profile support attributes
- 7) Optional package identifiers
- 8) System specification components

A.4.1 Communication infrastructure: inventory tables

Table A.4.1—Communication infrastructure—object class items

DIM name	Reference ID	Derived from	Code
Device Interface	MDC_CC_DIF	Top	513
MibElement	MDC_CC_MIB_ELEM	Top	1025
Device Interface MibElement	MDC_CC_MIB_ELEM_DIF	MibElement	1026
General Communication Statistics MibElement	MDC_CC_MIB_ELEM_GEN_COMM_STATS	MibElement	1027
11073-30100 Port Configuration MibElement	MDC_CC_MIB_ELEM_1073_3_1_PORT_CFG	MibElement	1028
11073-30100 Link Access MibElement	MDC_CC_MIB_ELEM_1073_3_1_LINK_ACC	MibElement	1029
11073-30100 Current Performance MibElement	MDC_CC_MIB_ELEM_1073_3_1_PERF_CURR	MibElement	1030
11073-30100 Physical Configuration MibElement	MDC_CC_MIB_ELEM_1073_3_1_CONFIG_PHYS	MibElement	1031
11073-30100 Fault Threshold MibElement	MDC_CC_MIB_ELEM_1073_3_1_FAULT_THRES	MibElement	1932
11073-30200 Configuration MibElement	MDC_CC_MIB_ELEM_1073_3_2_CONFIG	MibElement	1033

Table A.4.2—Communication infrastructure—attributes

DIM name	Reference ID	Belongs to object	Code
Mib-Ext-Oid	MDC_CC_MIB_DATA_EXT_OID	MibElement	2048
Dif-Id	MDC_CC_MIB_DATA_DIF_ID	Device Interface MibElement	2049
Port-State	MDC_CC_MIB_DATA_DIF_PORT_ST	Device Interface MibElement	2050
Dif-Type	MDC_CC_MIB_DATA_DIF_TYPE	Device Interface MibElement	2051
Active-Profile	MDC_CC_MIB_DATA_PROFILE_ID	Device Interface MibElement	2052
Supported-Profiles	MDC_CC_MIB_DATA_SUPP_PROFILES	Device Interface MibElement	2053
MTU	MDC_CC_MIB_DATA_MTU	Device Interface MibElement	2054
Link-Speed	MDC_CC_MIB_DATA_LINK_SPEED	Device Interface MibElement	2055
Mib-Element-List	MDC_CC_MIB_DATA_MIB_ELEMENT_LIST	Device Interface MibElement	2056
Packets In	MDC_CC_MIB_DATA_PACK_IN	General Communication Statistics MibElement	2057
Packets Out	MDC_CC_MIB_DATA_PACK_OUT	General Communication Statistics MibElement	2058
Octets In	MDC_CC_MIB_DATA_OCT_IN	General Communication Statistics MibElement	2059
Octets Out	MDC_CC_MIB_DATA_OCT_OUT	General Communication Statistics MibElement	2060
Discarded-Packets-In	MDC_CC_MIB_DATA_DISC_PACKET_IN	General Communication Statistics MibElement	2061
Discarded-Packets-Out	MDC_CC_MIB_DATA_DISC_PACKET_OUT	General Communication Statistics MibElement	2062
Unknown-Protocol-Packets-In	MDC_CC_MIB_DATA_UNK_PROT_PACKET_IN	General Communication Statistics MibElement	2063
Queue-Len-In	MDC_CC_MIB_DATA_QUEUE_LEN_IN	General Communication Statistics MibElement	2064
Queue-Len-Out	MDC_CC_MIB_DATA_QUEUE_LEN_OUT	General Communication Statistics MibElement	2065
Dif-Admin-Status	MDC_CC_MIB_DATA_DIF_STATE	General Communication Statistics MibElement	2066
Dif-Oper-Status	MDC_CC_MIB_DATA_CUR_DIF_STATE	General Communication Statistics MibElement	2067
Dif-Last-Change	MDC_CC_MIB_DATA_TIME_DIF_LAST_CHANGE	General Communication Statistics MibElement	2068
Errors-In	MDC_CC_MIB_DATA_ERRS_IN	General Communication Statistics MibElement	2069
Errors-Out	MDC_CC_MIB_DATA_ERRS_OUT	General Communication Statistics MibElement	2070
Generic-Mode	MDC_CC_MIB_DATA_COMM_MODE	General Communication Statistics MibElement	2071
Average Speed	MDC_CC_MIB_DATA_AVG_SPEED	General Communication Statistics MibElement	2072

Table A.4.2—Communication infrastructure—attributes (continued)

DIM name	Reference ID	Belongs to object	Code
Maximum Speed	MDC_CC_MIB_DATA_MAX_SPEED	General Communication Statistics MibElement	2073
Max-Tx-Length	MDC_CC_MIB_DATA_MAX_TX_LEN	11073-30100 Port Configuration MibElement	2074
Max-Rx-Length	MDC_CC_MIB_DATA_MAX_RX_LEN	11073-30100 Port Configuration MibElement	2075
Max-Polling-Period	MDC_CC_MIB_DATA_POLL_PERIOD	11073-30100 Port Configuration MibElement	2076
Total-Bit-Rate-Capacity	MDC_CC_MIB_DATA_TOT_BIT_RATE	11073-30100 Port Configuration MibElement	2077
Port-Id	MDC_CC_MIB_DATA_ID_PORT	11073-30100 Port Configuration MibElement	2078
Link-Access-Time	MDC_CC_MIB_DATA_LINK_TIME	11073-30100 Link Access MibElement	2079
Link-Access-Status	MDC_CC_MIB_DATA_LINK_STAT	11073-30100 Link Access MibElement	2080
Mgt-Access-Time	MDC_CC_MIB_DATA_MGM_TIME	11073-30100 Link Access MibElement	2081
Mgt-Access-Status	MDC_CC_MIB_DATA_MGM_STAT	11073-30100 Link Access MibElement	2082
Frames-Sent	MDC_CC_MIB_DATA_FRAMES_SENT	11073-30100 Current Performance MibElement	2083
Frames-Received	MDC_CC_MIB_DATA_FRAMES_RECV	11073-30100 Current Performance MibElement	2084
U-Frames-Sent	MDC_CC_MIB_DATA_U_FRAMES_SENT	11073-30100 Current Performance MibElement	2085
U-Frames-Received	MDC_CC_MIB_DATA_U_FRAMES_RECV	11073-30100 Current Performance MibElement	2086
UI-Frames-Sent	MDC_CC_MIB_DATA_UI_FRAMES_SENT	11073-30100 Current Performance MibElement	2087
UI-Frames-Received	MDC_CC_MIB_DATA_UI_FRAMES_RECV	11073-30100 Current Performance MibElement	2088
I-Frames-Sent	MDC_CC_MIB_DATA_I_FRAMES_SENT	11073-30100 Current Performance MibElement	2089
I-Frames-Received	MDC_CC_MIB_DATA_I_FRAMES_RECV	11073-30100 Current Performance MibElement	2090
Data-Bytes-Sent	MDC_CC_MIB_DATA_BYTES_SENT	11073-30100 Current Performance MibElement	2091
Data-Bytes-Received	MDC_CC_MIB_DATA_BYTES_RECV	11073-30100 Current Performance MibElement	2092
Int-Bytes-Sent	MDC_CC_MIB_DATA_INT_BYTES_SENT	11073-30100 Current Performance MibElement	2093
Int-Bytes-Received	MDC_CC_MIB_DATA_INT_BYTES_RECV	11073-30100 Current Performance MibElement	2094
Frames-Out-Aborted	MDC_CC_MIB_DATA_FRAMES_OUT_ABRT	11073-30100 Current Performance MibElement	2095

Table A.4.2—Communication infrastructure—attributes (continued)

DIM name	Reference ID	Belongs to object	Code
Phys-Capab	MDC_CC_MIB_DATA_PHYS_CAPAB	11073-30100 Physical Configuration MibElement	2096
Max-Current-Rating	MDC_CC_MIB_DATA_MAX_CURREN T_RATING	11073-30100 Physical Configuration MibElement	2097
Frames-Sent	MDC_CC_MIB_DATA_FRAMES_SEN T_LIM	11073-30100 Fault Threshold MibElement	2098
Frames-Received	MDC_CC_MIB_DATA_FRAMES_REC V_LIM	11073-30100 Fault Threshold MibElement	2099
U-Frames-Sent	MDC_CC_MIB_DATA_U_FRAMES_S ENT_LIM	11073-30100 Fault Threshold MibElement	2100
U-Frames-Received	MDC_CC_MIB_DATA_U_FRAMES_R ECV_LIM	11073-30100 Fault Threshold MibElement	2101
UI-Frames-Sent	MDC_CC_MIB_DATA_UI_FRAMES_S ENT_LIM	11073-30100 Fault Threshold MibElement	2102
UI-Frames-Received	MDC_CC_MIB_DATA_UI_FRAMES_R ECV_LIM	11073-30100 Fault Threshold MibElement	2103
I-Frames-Sent	MDC_CC_MIB_DATA_I_FRAMES_SE NT_LIM	11073-30100 Fault Threshold MibElement	2104
I-Frames-Received	MDC_CC_MIB_DATA_I_FRAMES_RE CV_LIM	11073-30100 Fault Threshold MibElement	2105
Data-Bytes-Sent	MDC_CC_MIB_DATA_BYTES_SENT _LIM	11073-30100 Fault Threshold MibElement	2106
Data-Bytes-Received	MDC_CC_MIB_DATA_BYTES_RECV _LIM	11073-30100 Fault Threshold MibElement	2107
Int-Bytes-Sent	MDC_CC_MIB_DATA_INT_BYTES_S ENT_LIM	11073-30100 Fault Threshold MibElement	2108
Int-Bytes-Received	MDC_CC_MIB_DATA_INT_BYTES_R ECV_LIM	11073-30100 Fault Threshold MibElement	2109
Frames-Out-Aborted	MDC_CC_MIB_DATA_FRAMES_OUT _ABRT_LIM	11073-30100 Fault Threshold MibElement	2110
Baud-Rate	MDC_CC_MIB_DATA_BAUD_RATE	11073-30200 Configuration MibElement	2111
Maximum-Turn-Around Time	MDC_CC_MIB_DATA_MAX_TURN_A ROUND_TIME	11073-30200 Configuration MibElement	2112
Data-Size	MDC_CC_MIB_DATA_DATA_SIZE	11073-30200 Configuration MibElement	2113
Window-Size	MDC_CC_MIB_DATA_WINDOW_SIZ E	11073-30200 Configuration MibElement	2114
Additional-BOF	MDC_CC_MIB_DATA_ADDIT_BOF	11073-30200 Configuration MibElement	2115
Link disconnect time	MDC_CC_MIB_DATA_LINK_DISCON _TIME	11073-30200 Configuration MibElement	2116
Link threshold time	MDC_CC_MIB_DATA_LINK_THRSHL D_TIME	11073-30200 Configuration MibElement	2117
DIF-Port-Number	MDC_CC_MIB_DATA_DIF_PORT_NO	11073-30200 Configuration MibElement	2318

Table A.4.3—Communication infrastructure—attribute groups

DIM name	Reference ID	Belongs to object	Code
This table has no content. Following the construction and ordering scheme (see item c in A.3.1), empty tables are not left out in order to enhance readability and usability of A.3.			

Table A.4.4—Communication infrastructure—behavior

DIM name	Reference ID	Belongs to object	Code
This table has no content. Following the construction and ordering scheme (see item c in A.3.1), empty tables are not left out in order to enhance readability and usability of A.3.			

Table A.4.5—Communication infrastructure—notifications

DIM name	Reference ID	Belongs to object	Code
This table has no content. Following the construction and ordering scheme (see item c in A.3.1), empty tables are not left out in order to enhance readability and usability of A.3.			

Table A.4.6—Communication infrastructure—profile support attributes

DIM name	Reference ID	Belongs to object	Code
Poll-Profile-Support	MDC_POLL_PROFILE_SUPPORT	P.1073 Association User Information Field	1
Baseline-Profile-Support	MDC_BASELINE_PROFILE_SUPPORT	P.1073 Association User Information Field	2

Table A.4.7—Communication infrastructure—optional package identifiers

DIM name	Reference ID	Belongs to object	Code
Pat-Demog-Opt-Pack-Agt	MDC_PT_DEMOGR_OPTION_AGT	P.1073 Association User Information Field	8194
Pat-Demog-Opt-Pack-Mgr	MDC_PT_DEMOGR_OPTION_MGR	P.1073 Association User Information Field	8193
Rem-Cntrl-Opt-Pack-Agt	MDC_REM_CNTRL_OPTION_AGT	P.1073 Association User Information Field	8196
Rem-Cntrl-Opt-Pack-Mgr	MDC_REM_CNTRL_OPTION_MGR	P.1073 Association User Information Field	8197

Table A.4.8—Communication infrastructure—system specification components

DIM name	Reference ID	Belongs to object	Code
MedDevSpec-Std-Support	MDC_MED_DEV_SPEC_STD_SUPPORT	MDS and derived objects	257
Mdib-Object-Support	MDC_MDIB_OBJ_SUPPORT	MDS and derived objects	258

A.5 Nomenclature, data dictionary, and codes for vital signs devices (Block A)

A.5.1 Introduction

The purpose of the device nomenclature is to support an identification scheme for the Channel, VMD, and MDS objects of the DIM.

The following system provides enough information to support the data from the Metric and Channel objects, without replicating this information. For example, in the case of an airway gas analyzer, such a device may be measuring one, two, or more gases. The exact gases measured can be divined from the Metric object of the DIM that this device will be generating, i.e., O₂, CO₂, N₂O, etc. To include this level of detail in the device nomenclature is redundant.

The nomenclature has been developed so that it would be robust enough to handle the advent of new types of medical devices and so that it would be relatively easy to fit such devices within the scheme. As a result, the proposal is based around the relatively stable concepts of human organization and physical measurement modes. Forming the systematic names is done following the recommendations of the CEN TC251 Project Team 015 work that has been referenced (see CEN ENV 12611).

Each instrument is partitioned into representative subsystems, and each subsystem is associated with the human subsystem to which it is applied and with the basic type of measurement or therapy it is applying. Attributes are also associated with the VMD and MDS objects and can be found in the DIM.

NOTE—The device identifications produced by this nomenclature are to be used as an aid for determination of the type of device generating the data. However, the nomenclature is not specific enough to guarantee that each name maps to one and only one device type.⁹

The categorial structure described in CEN ENV 12611 was used to write the rules for systematic names of the subset of medical devices useful in the context of this standard (i.e., limited to devices that acquire, interpret, monitor, or influence vital signs).

According to requirements from A.1.2 of CEN ENV 12611, five compound base concepts are defined here (see A.5.2), as shown in the following example:

Analyzer: <device> that *performs*: **Analysis**

The <property> measured or affected by the device (considered in general as specification of the <body component> in 6.1 of CEN ENV 12611) in the context of the present standard can be made systematically explicit and thus will be represented here autonomously in the systematic names (see A.5.3).

⁹Notes in text, tables, and figures are given for information only, and do not contain requirements needed to implement the standard.

Finally, three more differentiating criteria were considered suitable for independent representation and processing. Therefore, they are considered as autonomous attributes in the object model, i.e., not as a part of the systematic name of the device.

The two specifications "*has specification: <invasiveness>*" and "*has specification: <continuity>*" and the criterion "*is based in: <technical principle>*" are made according to CEN ENV 12611.

A.5.2 Base concepts

The target category is *device*. The different devices applied within the scenarios forming the basis of the DIM have different functionality. Accordingly, the following base concepts have been identified:

- **Analyzer (Analysis)** (devices [or the subsystems of more complex devices] that manipulate or interpret acquired data in order to produce derivative results.)
- **Calculator** (devices [or the subsystems of more complex devices] whose primary function is to perform calculations upon raw or derived data)
- **Filter** (physical particle or chemical filters)
- **Generator** (devices [or the subsystems of more complex devices] that generate physical quantities such as heat, moisture, electrical activity, etc.)
- **Meter** (devices [or the subsystems of more complex devices] that perform mensuration or measurement functions on physical properties such as current, electrical potential, flow, etc.)
- **Monitor** (devices [or the subsystems of more complex devices] that both acquire data and analyze it. Such a device is typically composed of a number of virtual devices [VMDs] that perform the more basic tasks of data acquisition or data analysis. As an example, a patient multiparameter monitor would fall into this device class. This descriptor probably includes most real devices.)
- **Pump** (devices [or the subsystems of more complex devices] that transfer a liquid or gas from a source or container [to a patient, in the medical device context])
- **Regulator** (devices [or the subsystems of more complex devices] that maintain or control the flow or parametric balance of gases, liquids, electrical current, or other physiological analogues)
- **Stimulator** (devices [or the subsystems of more complex devices] that generate physical quantities such as heat, moisture, electrical activity, etc.)
- **System** (instruments that consist of transductive, analytical, and therapeutic components. An anesthesia system and most ventilators would fall into this device class.)

A.5.3 First set of differentiating criteria

The first semantic link is based on the concept *performs* (typically afferent functions, particularly measurement, but also efferent functions such as regulation). The devices are, therefore, classified into a number of possible categories based on the functionality they perform.

A.5.3.1 Semantic link "*has measured property:*"

Applicable descriptors include the following:

- **Concentration**
- **ElectricalPotential**
- **Flow**
- **Multi-Parameter**
- **Negative**
- **Oxy**

- **Pressure**
- **Rate**
- **Resistance**
- **Temperature**
- **Volume**

A.5.4 Second set of differentiating criteria

Measurements are typically focused or targeted on body subsystems. This category is secondary to function because devices typically can measure or effectuate at multiple sites (singly or in parallel). Within each class of device, the secondary semantic link refers to the primary body system that the device is monitoring or affecting. It was felt that the medical/physiological classification of the human systems has been, and will be, a relatively stable concept.

A.5.4.1 Semantic link "*has target*:"

Applicable descriptors include the following:

- **Airway**
- **Blood**
- **Body**
- **Brain**
- **Gas**
- **Heart**
- **Infusion**
- **Intra-Aorta**
- **Lung**
- **Multi-Gas**
- **Muscle**
- **Physiologic** (for devices that are very general and not body-system-specific)
- **Renal**
- **Resp**
- **Skin/Tissue**
- **Urine**

A.5.5 Third set of differentiating criteria

Within this standard, there are a number of different contexts for the device nomenclature. The device type criterion allows specification using a context-free approach.

This criterion is represented in Table A.5.1 as <type>, where <type> represents a tuple that can have one of four possible values. In other words, each device requires four codes.

NOTE—This criterion is applicable to each device in Table A.5.1, although in some cases it may not make practical sense. For example, one can conceive of a temperature meter MDS, a temperature meter VMD, and a temperature meter channel. At the same time, it probably does not make sense to create an anesthesia machine channel, although the nomenclature approach does not specifically disallow this option.

A.5.5.1 Semantic link "*device type*:"

Applicable descriptors include the following:

- **Channel**
- **MDS**
- **Non-Specific**
- **VMD**

A.5.6 Attributes

In developing the nomenclature, it becomes clear that additional information that is common to most device types should be included to better define the device.

In this case, the attribute relates to the type of technology used by the instrument to make the measurement or apply a therapy. Applicable optional attributes of the VMD include the following:

- **Acoustic**
- **Chemical**
- **Electrical**
- **Impedance**
- **Magnetic**
- **Nuclear**
- **Optical**
- **Thermal**

A.5.7 Code table

See Table A.5.1 for the nomenclature and codes for vital signs devices.

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Table A.5.1—Nomenclature and codes for vital signs devices

Systematic name	Common term	Description/Definition	Reference ID	Code
Analyzer	Generic analyzer	Instrument that analyzes acquired patient information.	MDC_DEV_ANALY	4100
Analyzer Concentration [Sat] Blood <type>	SpO ₂ monitor	Instrument that derives the % of arterial O ₂ and pulse rate parameters (blood flow).	MDC_DEV_ANALY_SAT_O2	4104
Analyzer Concentration Airway [Gas] <type>	Multigas identifier	Instrument for the direct measurement of the concentration of airway chemicals, e.g., CO ₂ , O ₂ , anesthetic agent.	MDC_DEV_ANALY_CONC_GAS_IDENT	4108
Analyzer Concentration Multi-Gas <type>	Multigas analyzer	Instrument that derives airway gas parameters, e.g., EtCO ₂ , iO ₂ .	MDC_DEV_ANALY_CONC_GAS_MULTIPARAM	4112
Analyzer Concentration Urine <type>	Urine chemistry analyzer	Instrument that derives urine chemistry parameters.	MDC_DEV_ANALY_URINE_CHEM	4116
Analyzer ElectricalPotential Brain <type>	EEG analyzer	Instrument that derives brain activity parameters.	MDC_DEV_ANALY_ELEC_POTL_BRAIN	4120
Analyzer ElectricalPotential Heart <type>	Heart activity analyzer	Instrument that derives heart/haemo activity parameters, e.g., cardiach, arrhythmia monitor, ST analyzer, R-R.	MDC_DEV_ANALY_ELEC_POTL_HEART_ACTIV	4124
Analyzer Flow Airway <type>	Airway flow analyzer	Instrument that derives airway flow parameters.	MDC_DEV_ANALY_FLOW_AWAY	4128
Analyzer Flow Blood <type>	Heart output device	Instrument that derives heart output from direct measurement of blood flow.	MDC_DEV_ANALY_CARD_OUTPUT	4132
Analyzer Flow Lung <type>	Lung flow analyzer	Instrument that derives lung flow parameters.	MDC_DEV_ANALY_FLOW_LUNG	4136
Analyzer Flow Urine <type>	Urine flow analyzer	Instrument that derives urine flow rate.	MDC_DEV_ANALY_FLOW_URINE	4140
Analyzer Multi-Parameter Airway <type>	Spirometer	Instrument for analysis and derivation of airway parameters.	MDC_DEV_ANALY_AWAY_MULTIPARAM	4144
Analyzer Multi-Parameter Blood <type>	Blood chemistry analyzer	Instrument for analysis and derivation of blood chemistry parameters.	MDC_DEV_ANALY_BLD_CHEM_MULTIPARAM	4148

Table A.5.1—Nomenclature and codes for vital signs devices (continued)

Systematic name	Common term	Description/Definition	Reference ID	Code
Analyzer Multi-Parameter Lung <type>	Lung analyzer	Instrument for analysis and derivation of lung function parameters.	MDC_DEV_ANALY_LUNG	4152
Analyzer Multi-Parameter Muscle <type>	Muscle analyzer	Instrument for analysis and derivation of muscle parameters.	MDC_DEV_ANALY_MUSCL	4156
Analyzer Multi-Parameter Physiologic <type>	Patient analyzer	Instrument that analyses and derives data from multiple or unspecified body systems.	MDC_DEV_ANALY_PT_PHYSIO	4160
Analyzer Multi-Parameter Skin <type>	Skin analyzer	Instrument for analysis and derivation of skin-related parameters.	MDC_DEV_ANALY_SKIN_MULT_PARAM	4164
Analyzer Pressure Airway <type>	Spirometry analyzer	Instrument that derives airway parameters.	MDC_DEV_ANALY_PRESS_AWAY	4168
Analyzer Pressure Blood <type>	Blood pressure analyzer	Instrument that derives blood pressure parameters, i.e., systolic, diastolic, mean.	MDC_DEV_ANALY_PRESS_BLD	4172
Analyzer Pressure Brain <type>	Intracranial pressure analyzer	Instrument that derives intracranial pressure parameters.	MDC_DEV_ANALY_PRESS_BRAIN_INTRACRAN	4176
Analyzer Pressure Lung <type>	Lung pressure analyzer	Instrument that derives lung pressure parameters.	MDC_DEV_ANALY_PRESS_LUNG	4180
Analyzer Rate Lung <type>	Lung rate analyzer	Instrument that derives the lung breathing rate.	MDC_DEV_ANALY_RESP_RATE	4184
Analyzer Resistance Lung <type>	Lung resistance analyzer	Instrument that derives the resistance (compliance) of the lungs	MDC_DEV_ANALY_RES_LUNG	4188
Analyzer Temperature Blood <type>	Heart output analyzer	Instrument that derives heart output parameters from blood temperature.	MDC_DEV_ANALY_TEMP_HEART_OUTPUT	4192
Analyzer Volume Heart <type>	Heart volume analyzer	Instrument for the derivation of the size of the heart.	MDC_DEV_ANALY_VOL_HEART	4196
Analyzer Volume Lung <type>	Lung volume analyzer	Instrument that derives lung volume parameters.	MDC_DEV_ANALY_VOL_LUNG	4200
Calculator				
Calculator <type>	Generic calculator	Instrument that creates derived parameters	MDC_DEV_CALC	4204

Table A.5.1—Nomenclature and codes for vital signs devices (continued)

Systematic name	Common term	Description/Definition	Reference ID	Code
Calculator Multi-Parameter Heart <type>	Haemodynamics calculator	Instrument that derives haemodynamics parameters	MDC_DEV_CALC_HEMO	4208
Calculator Multi-Parameter Kidney <type>	Renal function calculator	Instrument that derives renal function parameters.	MDC_DEV_CALC_RENAL	4212
Filter				
Filter Concentration <type>	Generic filter	Instrument that filters out one or more chemicals.	MDC_DEV_FILTER_CONC	4216
Filter Concentration Airway [Gas] <type>	CO ₂ scrubber	Instrument for removing components from the chemistry of delivered air.	MDC_DEV_FILTER_CONC_AWAY	4220
Generator				
Generator <type>	Generic generator	Instrument that generates heat, electricity, etc.	MDC_DEV_GEN	4224
Generator Concentration Airway <type>	Vaporizer	Instrument for adding components to the chemistry of delivered air.	MDC_DEV_GEN_CONC_AWAY	4228
Generator ElectricalPotential [Defib] Heart <type>	Defibrillator (simple)	Instrument for delivering a controlled Heart electrical potential.	MDC_DEV_GEN_ELEC_POTL_HEART_DEFIB	4232
Generator ElectricalPotential Muscle <type>	Muscle generator	Instrument for delivering a controlled electrical potential to the musculature.	MDC_DEV_GEN_ELEC_POTL_MUSCL	4236
Generator ElectricalPotential Skin <type>	Skin generator	Instrument for delivering a controlled electrical potential to the skin.	MDC_DEV_GEN_ELEC_POTL_SKIN	4240
Generator Multi-Parameter Brain <type>	Evoked potential system	Instrument that derives brain activity parameters via stimulation.	MDC_DEV_GEN_EVOK_POTL_BRAIN_MULTI_PARAM	4244
Generator Rate Heart <type>	Pacemaker	Instrument for controlling the rate of Heart contractions.	MDC_DEV_GEN_RATE_HEART	4248
Generator Temperature Muscle <type>	Diathermy device	Instrument for delivering a controlled temperature to the musculature.	MDC_DEV_GEN_TEMP_MUSCL	4252
Meter				
Meter <type>	Generic meter	Instrument for the direct measurement of physiological parameters.	MDC_DEV_METER	4256

Table A.5.1—Nomenclature and codes for vital signs devices (continued)

Systematic name	Common term	Description/Definition	Reference ID	Code
Meter ElectricalPotential Heart <type>	ECG	Instrument for the direct measurement of heart electrical activity.	MDC_DEV_ECG	4260
Meter Concentration Skin [Gas] <type>	Transcutaneous gas meter	Instrument for the measurement of the level and concentration of gases in the tissue.	MDC_DEV_METER_CONC_SKIN_GAS	4264
Meter Concentration Urine <type>	Urine chemistry transducer	Instrument for the direct measurement of urine chemistry.	MDC_DEV_METER_CONC_URINE	4268
Meter ElectricalPotential Brain <type>	Electrobraingraph	Instrument for the direct measurement of the level of brain electrical activity.	MDC_DEV_EEG	4272
Meter ElectricalPotential Muscle <type>	Electromyograph	Instrument for the direct measurement of muscle electrical activity.	MDC_DEV_EMG	4276
Meter Flow Airway <type>	Pneumotacograph	Instrument for the direct measurement of the level of air flow.	MDC_DEV_METER_FLOW_AWAY	4280
Meter Flow Blood <type>	Blood flow meter	Instrument for the direct measurement of the level of blood flow.	MDC_DEV_METER_FLOW_BLD	4284
Meter Flow Heart <type>	Heart output transducer	Instrument for the direct measurement of the level of heart blood flow.	MDC_DEV_METER_FLOW_CARD	4288
Meter Flow Lung <type>	Lung flow meter	Instrument for the direct measurement of the level of lung air flow.	MDC_DEV_METER_FLOW_LUNG	4292
Meter Flow Urine <type>	Urine output transducer	Instrument for the direct measurement of the level of urinary flow.	MDC_DEV_METER_FLOW_URINE	4296
Meter Multi-Parameter Physiologic <type>		Instrument that acquires data through direct measurement from multiple or unspecified body systems.	MDC_DEV_METER_PHYSIO_MULTI_PARAM	4300
Meter Multi-Parameter Skin <type>	Skin transducer	Instrument for direct measurement of skin parameters	MDC_DEV_METER_SKIN_MULTI_PARAM	4304
Meter Multi-Parameter Blood <type>	Blood chemistry meter	Instrument for the direct measurement of the level and concentration of chemicals, gases and electrolytes in the blood.	MDC_DEV_METER_BLD_CHEM	4308
Meter Pressure Airway [Gas] <type>	Air pressure meter	Instrument for the direct measurement of the level of delivered air pressure.	MDC_DEV_METER_PRESS_AIR	4312

Table A.5.1—Nomenclature and codes for vital signs devices (continued)

Systematic name	Common term	Description/Definition	Reference ID	Code
Meter Pressure Blood <type>	Blood pressure strain gauge	Instrument for the direct measurement of the level of blood pressure	MDC_DEV_METER_PRESS_BLD	4316
Meter Pressure Brain <type>	Intracranial pressure meter	Instrument for the direct measurement of the level of cranial pressure.	MDC_DEV_METER_PRESS_INTRA_CRAN	4320
Meter Pressure Heart <type>	Heart pressure transducer	Instrument for the direct measurement of the level of heart blood pressures.	MDC_DEV_METER_PRESS_HEART	4324
Meter Pressure Lung <type>	Lung pressure meter	Instrument for the direct measurement of the level of lung air pressure.	MDC_DEV_METER_PRESS_LUNG	4328
Meter Resistance Airway <type>	Air resistance meter	Instrument for the direct measurement of the level of airway resistance.	MDC_DEV_METER_RES_AIR	4332
Meter Resistance Lung <type>	Lung resistance meter	Instrument for the direct measurement of the level of lung resistance.	MDC_DEV_METER_RES_LUNG	4336
Meter Resistance Muscle <type>	Dynamometer	Instrument for the direct measurement of the level of muscle strength.	MDC_DEV_METER_STRENGTH_MUSCL	4340
Meter Temperature Airway <type>	Air temperature meter	Instrument for the measurement of the level of delivered air temperature.	MDC_DEV_METER_TEMP_AIR	4344
Meter Temperature Blood <type>	Catheter tip temp. probe	Instrument for the direct measurement of the level of blood temperature.	MDC_DEV_METER_TEMP_BLD	4348
Meter Temperature Brain <type>	Brain temp. meter	Instrument for the direct measurement of the level of brain temperature.	MDC_DEV_METER_TEMP_BRAIN	4352
Meter Temperature Heart <type>	Heart temp. transducer	Instrument for the direct measurement of the level of heart temperatures.	MDC_DEV_METER_TEMP_HEART	4356
Meter Temperature Lung <type>	Lung temperature meter	Instrument for the direct measurement of the level of lung temperature.	MDC_DEV_METER_TEMP_LUNG	4360
Meter Temperature Physiologic <type>	Temperature probe	Instrument that measures temperature from multiple or unspecified body systems.	MDC_DEV_METER_TEMP	4364
Meter Temperature Renal <type>	Renal temperature transducer	Instrument for the direct measurement of the level of renal temperature.	MDC_DEV_METER_TEMP_RENAL	4368

Table A.5.1—Nomenclature and codes for vital signs devices (continued)

Systematic name	Common term	Description/Definition	Reference ID	Code
Meter Temperature Skin <type>	Skin temperature meter	Instrument for the direct measurement of the level of skin temperature.	MDC_DEV_METER_TEMP_SKIN	4372
Meter Volume Airway [Gas] <type>	Airway volume meter	Instrument for the direct measurement of the level of delivered air volume.	MDC_DEV_METER_VOL_AIR	4376
Meter Volume Heart <type>	Heart volume transducer	Instrument for the direct measurement of the size of the heart.	MDC_DEV_METER_VOL_HEART	4380
Meter Volume Muscle <type>	Muscle volume meter	Instrument for the direct measurement of the level of muscle bulk.	MDC_DEV_METER_VOL_MUSCL	4384
Monitor				
Monitor <type>	Generic monitor	Instrument for the direct measurement and analysis of patient information	MDC_DEV_MON	4388
Monitor Concentration Urine <type>	Urine chemistry monitor	Instrument for the direct measurement and analysis of urine chemistry.	MDC_DEV_MON_URINE_CHEM	4392
Monitor Multi-Parameter Blood <type>	Blood chemistry monitor	Instrument for acquisition, analysis, and derivation of blood chemistry parameters	MDC_DEV_MON_BLD_CHEM_MULTI_PARAM	4396
Monitor Multi-Parameter Brain <type>	Brain function monitor	Instrument that implements brain transduction and analysis.	MDC_DEV_MON_BRAIN_FUNC	4400
Monitor Multi-Parameter Heart <type>	Haemodynamic monitor	Instrument for acquisition, analysis, and derivation of Heart parameters.	MDC_DEV_MON_HEART_MULTI_PARAM	4404
Monitor Multi-Parameter Lung <type>	Lung function monitor	Instrument for acquisition and analysis of Lung function parameters.	MDC_DEV_MON_LUNG_FUNC	4408
Monitor Multi-Parameter Muscle <type>	Muscle monitor	Instrument that implements a combination of muscle transduction, analysis, and therapy.	MDC_DEV_MON_MUSCL	4412
Monitor Multi-Parameter Physiologic <type>	Patient monitoring system	Instrument for direct measurement and analysis of multiple body system parameters	MDC_DEV_MON_PT_PHYSIO_MULTI_PARAM	4416
Monitor Multi-Parameter Renal <type>	Renal function monitor	Instrument for renal data acquisition and analysis.	MDC_DEV_MON_RENAL_FUNC_MULTI_PARAM	4420
Monitor Multi-Parameter Skin <type>	Skin monitor	Instrument for direct measurement and analysis of skin-related parameters.	MDC_DEV_MON_SKIN_MULTI_PARAM	4424

Table A.5.1—Nomenclature and codes for vital signs devices (continued)

Systematic name	Common term	Description/Definition	Reference ID	Code
Monitor Multi-Parameter Physiologic <type>		Instrument that acquires and analyses patient data from multiple or unspecified body systems.	MDC_DEV_MON_PHYSIO_MULTI_PARAM	4428
Pump				
Pump <type>	Generic pump	Instrument that delivers fluid to the patient.	MDC_DEV_PUMP	4432
Pump Concentration [Oxy] Blood <type>	Heart/lung machine	Instrument that implements blood transduction, analysis, and therapy.	MDC_DEV_PUMP_HEART_LUNG	4436
Pump Flow Heart <type>	Left ventricular assist device	Instrument for modifying the flow of blood from the heart.	MDC_DEV_PUMP_FLOW_HEART	4440
Pump Pressure Blood [Intra-Aortic] <type>	Intra-aortic balloon pump	Instrument for improving blood pressure.	MDC_DEV_PUMP_PRESS_BLD_INTRAAORT	4444
Pump Volume Blood [Infusion] <type>	Infusor	Instrument for delivering a controlled volume of liquids to the blood.	MDC_DEV_PUMP_INFUS	4448
Regulator				
Regulator <type>	Generic regulator	Instrument that controls specific aspects of a patient's physiological function.	MDC_DEV_REGUL	4452
Regulator Flow Airway, Resp <type>	Ventilator (flow)	Instrument for delivering a controlled flow of airway gas. (i.e., respirator)	MDC_DEV_REGUL_FLOW_AWAY_VENT	4456
Regulator Multi-Parameter Blood <type>	Dialysis machine	Instrument for modifying the chemistry of blood.	MDC_DEV_REGUL_BLD_CHEM	4460
Regulator Multi-Parameter Lung <type>	Patient ventilation system	Instrument for data acquisition, analysis and therapy for the Lung system.	MDC_DEV_SYS_PT_VENT	4464
Regulator Pressure [Negative] Lung <type>	Decompression chamber	Instrument for sustaining the lungs in a controlled pressure.	MDC_DEV_REGUL_DECOMPRESS	4468
Regulator Pressure Lung <type>	Respirator	Instrument for delivering a controlled flow/volume of airway gas.	MDC_DEV_REGUL_PRESS_LUNG	4472
Regulator Rate Lung <type>	Ventilator (rate)	Instrument for controlling the rate of breathing.	MDC_DEV_REGUL_RATE_VENT	4476
Regulator Temperature Blood <type>	Blood warmer	Instrument for delivering a controlled temperature of blood.	MDC_DEV_REGUL_TEMP_BLD	4480

Table A.5.1—Nomenclature and codes for vital signs devices (continued)

Systematic name	Common term	Description/Definition	Reference ID	Code
Regulator Temperature Body <type>	Heater, incubator	Instrument for modifying the temperature of the skin.	MDC_DEV_REGUL_TEMP_SKIN	4484
Regulator Volume Airway <type>	Ventilator (volume)	Instrument for delivering a controlled volume of airway gas.	MDC_DEV_REGUL_VOL_VENT	4488
System				
System <type>	Generic medical system	Instrument that consists of multiple device modalities.	MDC_DEV_SYS_MULTI_MODAL	4492
System Multi-Parameter Brain <type>	Neurology system	Instrument that implements brain transduction, analysis, and therapy.	MDC_DEV_SYS_BRAIN_MULTI_PARAM	4496
System Multi-Parameter Heart <type>	Cardiology system	Instrument for Heart transduction, analysis, and therapy.	MDC_DEV_SYS_CARD_MULTI_PARAM	4500
System Multi-Parameter Lung <type>	Anesthesia system	Instrument that implements a combination of transduction, analysis, and/or therapy on multiple body systems.	MDC_DEV_SYS_ANESTH	4504
System Multi-Parameter Physiologic <type>		Instrument that acquires, analyses, and provides therapy from and to multiple or unspecified body systems	MDC_DEV_SYS_PHYSIO_MULTI_PARAM	4508

A.6 Terminology and codes for units of measurement (Block B)

A.6.1 Introduction

Clause A.6 presents a simple list (see Table A.6.3) for the coding of units of measurement. The units are primarily based on CEN ENV 12435 [B3]. Wherever possible, that document has been used to describe units; however, in some circumstances, different units are stated primarily because of their common usage in vital signs measurement.

The codes defined in this clause are used in the *unit-code* attributes of objects defined in the DIM. For performance reasons, this attribute is not able to represent units of measurement from base units by defining a construction formula. The attribute can contain a single code only.

For describing units of measurements that are not defined in Table A.6.3, the *Unspecified* term is added to the table. If this term is used, the actual unit of measurement must be communicated via a textual attribute (i.e., *unit-label-string* attribute). This attribute allows manufacturers to make use of unusual, unlisted, or new measurements that require specific terms not included in the current list. The textual representation of the unit of measurement should contain the SI term for the unit, if available.

Because of current clinical practice, a number of alternative units of measurement are defined in this clause that are allowed to represent the same quantity. However, it is strongly encouraged to use the appropriate SI units.

Some nonmetric units are also included (e.g., pound, yard). Although usage of these units is deprecated to that of their metric equivalent, they are included in this nomenclature to support devices that do not internally support metric units or that do not have the computing capability to make the necessary conversions whenever the nonmetric values are communicated. Additionally, a device that is displaying nonmetric units to the operator may want to communicate exactly the same representation to minimize the chances of differences that could result from making multiple conversions.

The list is not intended to be exhaustive and will be supplemented over time.

A.6.2 Orders of magnitude discriminator

For certain units of measurement outlined in Table A.6.3, it is possible to specify the order of magnitude to construct additional more suitable units of measurements.

In the coding scheme, a code offset can be added to the base code of the unit where this option is explicitly allowed in Table A.6.3 as indicated by the notation <magnitude>.

EXAMPLE: The base code value for *meter* as defined in Table A.6.3 is 1280. The code offset for *milli* (10^{-3}) as defined in Table A.6.1 is 18. Therefore, the code for *millimeter* is 1298 (1280 + 18).

Note that steps of a factor of 1000 are preferred for the order of magnitude discriminators.

The order of magnitude discriminators are defined in Table A.6.1.

Table A.6.1—Table of decimal factors

Name	Magnitude	Code offset
yotta	10^{+24}	10
zetta	10^{+21}	9
exa	10^{+18}	8
peta	10^{+15}	7
tera	10^{+12}	6
giga	10^{+9}	5
mega	10^{+6}	4
kilo	10^{+3}	3
hecto	10^{+2}	2
deca	10^{+1}	1
	10^{+0}	0
deci	10^{-1}	16
centi	10^{-2}	17
milli	10^{-3}	18
micro	10^{-6}	19
nano	10^{-9}	20
pico	10^{-12}	21
femto	10^{-15}	22
atto	10^{-18}	23
zepto	10^{-21}	24
yocto	10^{-24}	25

A.6.3 Units outside of SI

Certain units of measurement are in such wide use that even though they are not SI units, they are acceptable for use in specific applications. For the field of interest, i.e., vital signs, the non-SI units listed in Table A.6.2 are relevant (a complete listing of the codes is specified in Table A.6.3).

A.6.4 Units of measurement

See Table A.6.3 for the units of measurement for vital signs.

Table A.6.2—Non-SI units

Unit of measurement	Symbol	Authority ^a
liter	l	CGPM
year	y	
month	moth	
week	wk	
day	d	EU, CGPM
hour	h	EU, CGPM
minute	min	EU, CGPM
international unit	i.u.	WHO
millimeter-mercury	mmHg	EU
centimeter of water	cm H ₂ O	
dyne	dyn	CGPM

^a CGPM General Conference on Weights and Measures
 WHO World Health Organization
 EU European Union

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Table A.6.3—Vital signs units of measurement

Dimension	Unit of measurement	Symbol (not normative)	Reference ID	Code (base code)
Unspecified	<Unspecified>	?		0
Dimension- less				
	<dimensionless>	-	MDC_DIM_DIMLESS	512
	Decibel	dB	MDC_DIM_DECIBEL	6432
	10 ⁻² (percent)	%	MDC_DIM_PERCENT	544
	10 ⁻³ (part(s) per 10 ⁻³)		MDC_DIM_PARTS_PER_10_TO_MINUS_3	576
	10 ⁻⁶ (part(s) per 10 ⁻⁶)		MDC_DIM_PARTS_PER_10_TO_MINUS_6	608
	10 ⁻⁹ (part(s) per 10 ⁻⁹)		MDC_DIM_PARTS_PER_10_TO_MINUS_9	640
	10 ⁻¹² (part(s) per 10 ⁻¹²)		MDC_DIM_PARTS_PER_10_TO_MINUS_12	672
	10 ⁻¹⁸ (part(s) per 10 ⁻¹⁸)		MDC_DIM_PARTS_PER_10_TO_MINUS_18	704
- angles	angle degree	degree	MDC_DIM_ANG_DEG	736
	angle radian	Rad	MDC_DIM_ANG_RAD	768
- mass fraction	<magnitude> gram(s) per gram	g g ⁻¹	MDC_DIM_X_G_PER_G	800
	<magnitude> gram(s) per kilogram	g kg ⁻¹	MDC_DIM_G_PER_KG	832
	<magnitude> gram(s) per milligram	g mg ⁻¹	MDC_DIM_X_G_PER_MG	6464
- relative quantity	<magnitude> mole(s) per mole	mol mol ⁻¹	MDC_DIM_X_MOLE_PER_MOLE	864
- volume fraction	<magnitude> liter(s) per liter	l l ⁻¹	MDC_DIM_X_L_PER_L	896
	cubic <magnitude> meter(s) per cubic meter	m m ⁻³	MDC_DIM_CUBIC_X_M_PER_M_CUBE	928
	cubic <magnitude> meter(s) per cubic centimeter	m cm ⁻³	MDC_DIM_CUBIC_X_M_PER_CM_CUBE	960

Table A.6.3—Vital signs units of measurement (continued)

Dimension	Unit of measurement	Symbol (not normative)	Reference ID	Code (base code)
	volume percent	vol %	MDC_DIM_VOL_PERCENT	6240
- special vital signs counts	pH	pH	MDC_DIM_PH	992
	drop	drop	MDC_DIM_DROP	1024
	red blood cell(s)	RBC	MDC_DIM_RBC	1056
	beat	beat	MDC_DIM_BEAT	1088
	breath	breath	MDC_DIM_BREATH	1120
	cell	cell	MDC_DIM_CELL	1152
	cough	cough	MDC_DIM_COUGH	1184
	sigh	sigh	MDC_DIM_SIGH	1216
	percent of packed cell volume	%PCV	MDC_DIM_PCT_PCV	1248
L (length)				
	<magnitude> meter(s)	m [km, mm, etc.]	MDC_DIM_X_M	1280
	<magnitude> yard	yd	MDC_DIM_X_YARD	1312
	<magnitude> foot	ft	MDC_DIM_X_FOOT	1344
	<magnitude> inch	in	MDC_DIM_X_INCH	1376
L (areic volume)				
	<magnitude> liter(s) per square meter	lm-2	MDC_DIM_X_L_PER_M_SQ	1408
L ⁻¹				
	per <magnitude> meter	m ⁻¹ [cm ⁻¹ , mm ⁻¹]	MDC_DIM_PER_X_M	1440
L ⁻¹ T ⁻¹				
	<magnitude> meter per minute	[cm, mm]min ⁻¹	MDC_DIM_X_M_PER_MIN	6560

Table A.6.3—Vital signs units of measurement (continued)

Dimension	Unit of measurement	Symbol (not normative)	Reference ID	Code (base code)
L ² (area)	square <magnitude> meter(s)	m ²	MDC_DIM_SQ_X_M	1472
	square <magnitude> inch	in ²	MDC_DIM_SQ_X_INCH	1504
L ⁻²	per square <magnitude> meter	m ⁻²	MDC_DIM_PER_SQ_X_M	1536
	per square <magnitude> inch			
L ³ (volume)	cubic <magnitude> meter(s)	m ³ [cm ³ , mm ³]	MDC_DIM_CUBIC_X_M	1568
	<magnitude> liter(s)	l [ml]	MDC_DIM_X_L	1600
	<magnitude> liter(s) per breath	l breath ⁻¹	MDC_DIM_X_L_PER_BREATH	1632
	<magnitude> liter(s) per beat	l beat ⁻¹	MDC_DIM_X_L_PER_BEAT	6112
	per cubic <magnitude> meter	m ⁻³ [cm ⁻³ , mm ⁻³]	MDC_DIM_PER_CUBIC_X_M	1664
A (acceleration)	per <magnitude> liter	l ⁻¹ [ml ⁻¹]	MDC_DIM_PER_X_L	1696
	<magnitude> meter(s) per seconds squared	m/sec ²	MDC_DIM_X_M_PER_SEC_SQ	6624
M (mass)	radians per seconds squared ^a	rad/sec ²	MDC_DIM_X_RAD_PER_SEC_SQ	6656
	<magnitude> gram	g [kg, mg]	MDC_DIM_X_G	1728
	<magnitude> pound	lb	MDC_DIM_X_LB	1760
	<magnitude> ounce	oz	MDC_DIM_X_OZ	1792

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Table A.6.3—Vital signs units of measurement (continued)

Dimension	Unit of measurement	Symbol (not normative)	Reference ID	Code (base code)
M ⁻¹	per <magnitude> gram	g ⁻¹ [kg ⁻¹ , mg ⁻¹]	MDC_DIM_PER_X_G	1824
	<magnitude> gram meter	g m [kg m]	MDC_DIM_X_G_M	1856
ML ⁻¹	<magnitude> gram(s) meter per square meter	g m m ⁻² [kg m m ⁻²]	MDC_DIM_X_G_M_PER_M_SQ	1888
	<magnitude> gram meter squared	kg m ²	MDC_DIM_X_G_M_SQ	1920
ML ⁻²	kilogram(s) per square meter	kg m ⁻²	MDC_DIM_KG_PER_M_SQ	1952
	<magnitude> gram(s) per cubic meter	g m ⁻³ [kg m ⁻³]	MDC_DIM_X_G_PER_M_CUBE	1984
ML ⁻³ (concentration of mass)	<magnitude> gram(s) per cubic centimeter	g cm ⁻³	MDC_DIM_X_G_PER_CM_CUBE	2016
	<magnitude> gram(s) per liter	g l ⁻¹	MDC_DIM_X_G_PER_L	2048
T (time)	<magnitude> gram(s) per centiliter	g cl ⁻³	MDC_DIM_X_G_PER_CL	2080
	<magnitude> gram(s) per deciliter	g dl ⁻³	MDC_DIM_X_G_PER_DL	2112
	<magnitude> gram(s) per milliliter	g ml ⁻³	MDC_DIM_X_G_PER_ML	2144
	<magnitude> second	s [ms, us, ns]	MDC_DIM_SEC	2176

Table A.6.3—Vital signs units of measurement (continued)

Dimension	Unit of measurement	Symbol (not normative)	Reference ID	Code (base code)
	minute	min	MDC_DIM_MIN	2208
	hour	h	MDC_DIM_HR	2240
	day	d	MDC_DIM_DAY	2272
	weeks	weeks	MDC_DIM_WEEKS	2304
	months	mth	MDC_DIM_MON	2336
	year	y	MDC_DIM_YR	2368
	time of day - hh:mm:ss	TOD	MDC_DIM_TOD	2400
	date - yyyy-mm-dd	date	MDC_DIM_DATE	2432
T⁻¹ (rate, frequency)				
	per <magnitude> second	s ⁻¹	MDC_DIM_PER_X_SEC	2464
	hertz	Hz	MDC_DIM_HZ	2496
	per minute	min ⁻¹	MDC_DIM_PER_MIN	2528
	per hour	h ⁻¹	MDC_DIM_PER_HR	2560
	per day	d ⁻¹	MDC_DIM_PER_DAY	2592
	per week	week ⁻¹	MDC_DIM_PER_WK	2624
	per month	mth ⁻¹	MDC_DIM_PER_MO	2656
	per year	y ⁻¹	MDC_DIM_PER_YR	2688
- special vital signs rates	beat per minute	bpm	MDC_DIM_BEAT_PER_MIN	2720
	beat per minute per <magnitude> liter	bpm l ⁻¹	MDC_DIM_BEAT_PER_MIN_PER_X_L	6496
	puls per minute	puls min ⁻¹	MDC_DIM_PULS_PER_MIN	2752

Table A.6.3—Vital signs units of measurement (continued)

Dimension	Unit of measurement	Symbol (not normative)	Reference ID	Code (base code)
	respirations per minute	resp min ⁻¹	MDC_DIM_RESP_PER_MIN	2784
LT ⁻¹ (velocity)				
	<magnitude> meter(s) per second	m s ⁻¹	MDC_DIM_X_M_PER_SEC	2816
	radians per second	rad/s	MDC_DIM_X_RAD_PER_SEC	6688
LT ⁻¹ (areic volume rate)				
	<magnitude> liter(s) per minute per square meter	l min ⁻¹ m ⁻²	MDC_DIM_X_L_PER_MIN_PER_M_SQ	2848
	square <magnitude> meter(s) per second	m ² s ⁻¹ [cm ² s ⁻¹]	MDC_DIM_SQ_X_M_PER_SEC	2880
L ³ T ⁻¹ (volume flow rate)				
	cubic <magnitude> meter(s) per second	m ³ s ⁻¹	MDC_DIM_CUBIC_X_M_PER_SEC	2912
	cubic <magnitude> meter(s) per minute	m ³ min ⁻¹	MDC_DIM_CUBIC_X_M_PER_MIN	2944
	cubic <magnitude> meter(s) per hour	m ³ h ⁻¹	MDC_DIM_CUBIC_X_M_PER_HR	2976
	cubic <magnitude> meter(s) per day	m ³ d ⁻¹	MDC_DIM_CUBIC_X_M_PER_DAY	3008
	<magnitude> liter(s) per second	l s ⁻¹	MDC_DIM_X_L_PER_SEC	3040
	<magnitude> liter(s) per minute	l min ⁻¹	MDC_DIM_X_L_PER_MIN	3072
	<magnitude> liter(s) per hour	l h ⁻¹	MDC_DIM_X_L_PER_HR	3104
	<magnitude> liter(s) per day	l d ⁻¹	MDC_DIM_X_L_PER_DAY	3136
L ³ M ⁻¹ (volume content)				
	<magnitude> liter(s) per kilogram	l kg ⁻¹	MDC_DIM_X_L_PER_KG	3168
	cubic <magnitude> meter(s) per kilogram	m ³ d ⁻¹	MDC_DIM_CUBIC_X_L_PER_KG	3200

Table A.6.3—Vital signs units of measurement (continued)

Dimension	Unit of measurement	Symbol (not normative)	Reference ID	Code (base code)
$L^2M^{-1}T$ (permeability)	<magnitude> meter per Pascal second	$m Pa^{-1}s^{-1}$	MDC_DIM_X_M_PER_PASCAL_SEC	3232
	<magnitude> liter per min. per millimeter of mercury	$l min^{-1} mmHG^{-1}$	MDC_DIM_X_L_PER_MIN_PER_ML_HG	3264
MT^{-1} (mass flow rate)	<magnitude> gram(s) per second	$g s^{-1}$	MDC_DIM_X_G_PER_SEC	3296
	<magnitude> gram(s) per minute	$g m^{-1}$	MDC_DIM_X_G_PER_MIN	3328
	<magnitude> gram(s) per hour	$g h^{-1}$	MDC_DIM_X_G_PER_HR	3360
	<magnitude> gram(s) per day	$g d^{-1}$	MDC_DIM_X_G_PER_DAY	3392
	$MT^{-1}M^{-1}$ (mass fraction rate, dosage)	<magnitude> gram(s) per kilogram per second	$g kg^{-1} s^{-1}$	MDC_DIM_X_G_PER_KG_PER_SEC
	<magnitude> gram(s) per kilogram per minute	$g kg^{-1} m^{-1}$	MDC_DIM_X_G_PER_KG_PER_MIN	3456
	<magnitude> gram(s) per kilogram per hour	$g kg^{-1} h^{-1}$	MDC_DIM_X_G_PER_KG_PER_HR	3488
	<magnitude> gram(s) per kilogram per day	$g kg^{-1} d^{-1}$	MDC_DIM_X_G_PER_KG_PER_DAY	3520
$L^{-3}MT^{-1}$ (mass concentration rate)	<magnitude> gram (s) per liter per second	$g l^{-1} s^{-1}$	MDC_DIM_X_G_PER_L_PER_SEC	3552
	<magnitude> gram(s) per liter per minute	$g l^{-1} m^{-1}$	MDC_DIM_X_G_PER_L_PER_MIN	3584
	<magnitude> gram(s) per liter per hour	$g l^{-1} h^{-1}$	MDC_DIM_X_G_PER_L_PER_HR	3616

Table A.6.3—Vital signs units of measurement (continued)

Dimension	Unit of measurement	Symbol (not normative)	Reference ID	Code (base code)
$L^{-1}MT^{-1}$ (dynamic viscosity)	<magnitude> gram(s) per liter per day	$g\ l^{-1}\ d^{-1}$	MDC_DIM_X_G_PER_L_PER_DAY	3648
	<magnitude> gram(s) per meter per second	$g\ m^{-1}\ s^{-1}$	MDC_DIM_X_G_PER_M_PER_SEC	3680
LMT^{-1} (momentum, impulse)	<magnitude> gram meter(s) per second	$gm\ s^{-1}$	MDC_DIM_X_G_M_PER_SEC	3712
	<magnitude> Newton second(s)	Ns	MDC_DIM_X_NEWTON_SEC	3744
LMT^{-2} (force)	<magnitude> Newton	N	MDC_DIM_X_NEWTON	3776
	<magnitude> dyne	dyn	MDC_DIM_X_DYNE	3808
$L^{-1}MT^{-2}$ (pressure)	<magnitude> Pascal	Pa	MDC_DIM_X_PASCAL	3840
	millimeter(s) of mercury	mmHg	MDC_DIM_MMHG	3872
	centimeter of water	cm H ₂ O	MDC_DIM_CM_H2O	3904
	<magnitude> bar	bar	MDC_DIM_X_BAR	3936
	<magnitude> pounds per square inch	psi	MDC_DIM_PSI	6592
	L^2MT^{-2} (energy)	<magnitude> joule(s)	J	MDC_DIM_X_JOULES
<magnitude> electronvolt(s)		eV	MDC_DIM_EVOLT	4000
L^2MT^{-3} (power)	<magnitude> watt(s)	W	MDC_DIM_X_WATT	4032

Table A.6.3—Vital signs units of measurement (continued)

Dimension	Unit of measurement	Symbol (not normative)	Reference ID	Code (base code)
$L^{-4}MT^{-1}$ (hydraulic impedance)	<magnitude> Pascal second per cubic meter	$Pa \cdot s \cdot m^{-3}$	MDC_DIM_X_PASCAL_SEC_PER_M_CUBE	4064
	<magnitude> Pascal second per liter	$Pa \cdot s \cdot l^{-1}$	MDC_DIM_X_PASCAL_SEC_PER_L	4096
	<magnitude> dyne second per cm^5	$dyn \cdot s \cdot cm^{-5}$	MDC_DIM_X_DYNE_PER_SEC_PER_CM5	4128
$L^4M^{-1}T^2$ (compliance)	<magnitude> liter per centimeter of water	$l \cdot (cmH_2O)^{-1}$	MDC_DIM_X_L_PER_CM_H2O	5888
	<magnitude> liter per millimeter of mercury	$l \cdot (mmHg)^{-1}$	MDC_DIM_X_L_PER_MM_HG	6272
	<magnitude> liter per Pascal	$l \cdot Pa^{-1}$	MDC_DIM_X_L_PER_MM_PA	6304
$L^{-4}M^1T^{-2}$ (elastance)	centimeter of water per <magnitude> liter	$cmH_2O \cdot l^{-1}$	MDC_DIM_CM_H2O_PER_L	6144
	millimeter of mercury per <magnitude> liter	$mmHg \cdot l^{-1}$	MDC_DIM_MM_HG_PER_X_L	6336
	Pascal per <magnitude> liter	$Pa \cdot l^{-1}$	MDC_DIM_PA_PER_X_L	6368
	per <magnitude> liter per minute	$l^{-1} \cdot min^{-1}$	MDC_DIM_PER_X_L_PER_MIN	6528
I (electrical current)	<magnitude> ampere(s)	A	MDC_DIM_X_AMPS	4160
	IT (electrical charge)	<magnitude> coulomb(s)	MDC_DIM_X_COULOMB	4192
IL^{-1} (magnetic field strength)	<magnitude> ampere(s) hour	Ah	MDC_DIM_X_AMP_HR	6080

Table A.6.3—Vital signs units of measurement (continued)

Dimension	Unit of measurement	Symbol (not normative)	Reference ID	Code (base code)
	<magnitude> ampere(s) per meter	A m ⁻¹	MDC_DIM_X_AMPS_PER_M	4224
ML ² T ⁻³ (electric potential)	<magnitude> volt(s)	V	MDC_DIM_X_VOLT	4256
ML ² T ⁻³ (electric resistance)	<magnitude> ohm(s)	W	MDC_DIM_X_OHM	4288
ML ³ T ⁻³ (electrical resistivity)	<magnitude> ohm meter(s)	Ωm	MDC_DIM_X_OHM_M	4320
I ² T ⁴ M ⁻¹ L ⁻² (electrical capacitance)	<magnitude> farad(s)	F	MDC_DIM_X_FARAD	4352
Θ (temperature)	Kelvin	K	MDC_DIM_KELVIN	4384
	degree Celsius	°C	MDC_DIM_DEGC	6048
	degree Fahrenheit	°F	MDC_DIM_FAHR	4416
Θ ³ M ⁻¹ L ⁻² (thermal resistance)	Kelvin(s) per <magnitude> watt	K W ⁻¹	MDC_DIM_KELVIN_PER_X_WATT	4448
J (luminous intensity)	<magnitude> candela(s)	cd	MDC_DIM_X_CANDELA	4480
Luminance	<magnitude> lumen(s) per square meters	lumen/m ²	MDC_DIM_X_LUMEN_PER_M_SQ	6720

Table A.6.3—Vital signs units of measurement (continued)

Dimension	Unit of measurement	Symbol (not normative)	Reference ID	Code (base code)
N (amount of substance)	<magnitude> osmole(s)	osmole	MDC_DIM_X_OSM	4512
	<magnitude> mole(s)	mol	MDC_DIM_X_MOLE	4544
	<magnitude> equivalent	eq	MDC_DIM_X_EQUIV	4576
NL ⁻³ (concentration)	<magnitude> osmoles per liter	osmol l ⁻¹	MDC_DIM_X_OSM_PER_L	4608
	<magnitude> mole(s) per cubic centimeter	mol cm ⁻³	MDC_DIM_X_MOLE_PER_CM_CUBE	4640
	<magnitude> mole(s) per cubic meter	mol m ⁻³	MDC_DIM_X_MOLE_PER_M_CUBE	4672
	<magnitude> mole(s) per liter	mol l ⁻¹	MDC_DIM_X_MOLE_PER_L	4704
	<magnitude> mole(s) per milliliter	mol ml ⁻¹	MDC_DIM_X_MOLE_PER_ML	4736
	<magnitude> equivalents per cubic centimeter	eq cm ⁻³	MDC_DIM_X_EQUIV_PER_CM_CUBE	4768
	<magnitude> equivalents per cubic meter	eq m ⁻³	MDC_DIM_X_EQUIV_PER_M_CUBE	4800
	<magnitude> equivalents per liter	eq l ⁻¹	MDC_DIM_X_EQUIV_PER_L	4832
	<magnitude> equivalents per milliliter	eq ml ⁻¹	MDC_DIM_X_EQUIV_PER_ML	4864
	NM ⁻¹ (substance content)	<magnitude> osmoles per kilogram	osmol kg ⁻¹	MDC_DIM_X_OSM_PER_KG
<magnitude> mole(s) per kilogram		mol kg ⁻¹	MDC_DIM_X_MOLE_PER_KG	4928
NT ⁻¹ (substance rate)	<magnitude> mole(s) per second	mol s ⁻¹	MDC_DIM_X_MOLE_PER_SEC	4960

Table A.6.3—Vital signs units of measurement (continued)

Dimension	Unit of measurement	Symbol (not normative)	Reference ID	Code (base code)
	<magnitude> mole(s) per minute	mol min ⁻¹	MDC_DIM_X_MOLE_PER_MIN	4992
	<magnitude> mole(s) per hour	mol h ⁻¹	MDC_DIM_X_MOLE_PER_HR	5024
	<magnitude> mole(s) per day	mol d ⁻¹	MDC_DIM_X_MOLE_PER_DAY	5056
	<magnitude> equivalents per second	eq s ⁻¹	MDC_DIM_X_EQUIV_PER_SEC	5088
	<magnitude> equivalents per minute	eq min ⁻¹	MDC_DIM_X_EQUIV_PER_MIN	5120
	<magnitude> equivalents per hour	eq h ⁻¹	MDC_DIM_X_EQUIV_PER_HR	5152
	<magnitude> equivalents per day	eq d ⁻¹	MDC_DIM_X_EQUIV_PER_DAY	5184
NT ⁻¹ M ⁻¹ (subst. fraction rate, dosage)				
	<magnitude> mole(s) per kilogram per second	mol kg ⁻¹ s ⁻¹	MDC_DIM_X_MOLE_PER_KG_PER_SEC	5216
	<magnitude> mole(s) per kilogram per minute	mol kg ⁻¹ min ⁻¹	MDC_DIM_X_MOLE_PER_KG_PER_MIN	5248
	<magnitude> mole(s) per kilogram per hour	mol kg ⁻¹ h ⁻¹	MDC_DIM_X_MOLE_PER_KG_PER_HR	5280
	<magnitude> mole(s) per kilogram per day	mol kg ⁻¹ d ⁻¹	MDC_DIM_X_MOLE_PER_KG_PER_DAY	5312
	<magnitude> equivalents per kilogram per second	eq kg ⁻¹ s ⁻¹	MDC_DIM_X_EQUIV_PER_KG_PER_SEC	5344
	<magnitude> equivalents per kilogram per minute	eq kg ⁻¹ min ⁻¹	MDC_DIM_X_EQUIV_PER_KG_PER_MIN	5376
	<magnitude> equivalents per kilogram per hour	eq kg ⁻¹ h ⁻¹	MDC_DIM_X_EQUIV_PER_KG_PER_HR	5408
	<magnitude> equivalents per kilogram per day	eq kg ⁻¹ d ⁻¹	MDC_DIM_X_EQUIV_PER_KG_PER_DAY	5440
International unit				

Table A.6.3—Vital signs units of measurement (continued)

Dimension	Unit of measurement	Symbol (not normative)	Reference ID	Code (base code)
	<magnitude> international unit	i.u.	MDC_DIM_X_INTL_UNIT	5472
- concentration	<magnitude> international units per cubic centimeter	i.u. cm ⁻³	MDC_DIM_X_INTL_UNIT_PER_CM_CUBE	5504
	<magnitude> international units per cubic meter	i.u. m ⁻³	MDC_DIM_X_INTL_UNIT_PER_M_CUBE	5536
	<magnitude> international units per liter	i.u. l ⁻¹	MDC_DIM_X_INTL_UNIT_PER_L	5568
	<magnitude> international units per milliliter	i.u. ml ⁻¹	MDC_DIM_X_INTL_UNIT_PER_ML	5600
- mass flow rate	<magnitude> international units per second	i.u. s ⁻¹	MDC_DIM_X_INTL_UNIT_PER_SEC	5632
	<magnitude> international units per minute	i.u. min ⁻¹	MDC_DIM_X_INTL_UNIT_PER_MIN	5664
	<magnitude> international units per hour	i.u. h ⁻¹	MDC_DIM_X_INTL_UNIT_PER_HR	5696
	<magnitude> international units per day	i.u. d ⁻¹	MDC_DIM_X_INTL_UNIT_PER_DAY	5728
- dosage	<magnitude> int. units per kilogram per second	i.u. kg ⁻¹ s ⁻¹	MDC_DIM_X_INTL_UNIT_PER_KG_PER_SEC	5760
	<magnitude> int. units per kilogram per minute	i.u. kg ⁻¹ min ⁻¹	MDC_DIM_X_INTL_UNIT_PER_KG_PER_MIN	5792
	<magnitude> int. units per kilogram per hour	i.u. kg ⁻¹ h ⁻¹	MDC_DIM_X_INTL_UNIT_PER_KG_PER_HR	5824
	<magnitude> int. units per kilogram per day	i.u. kg ⁻¹ d ⁻¹	MDC_DIM_X_INTL_UNIT_PER_KG_PER_DAY	5856
Units for specific measurements				
- Lung resistance	centimeter of water per liter per second	cmH ₂ O l ⁻¹ s ⁻¹	MDC_DIM_CM_H2O_PER_L_PER_SEC	5920
- HF transport coefficient	<magnitude> liter squared per second	l ² s ⁻¹	MDC_DIM_X_L_SQ_PER_SEC	5952
- ratio of pO ₂ to FIO ₂	centimeter of water per percent	cmH ₂ O % ⁻¹	MDC_DIM_CM_H2O_PER_PERCENT	5984

Table A.6.3—Vital signs units of measurement (continued)

Dimension	Unit of measurement	Symbol (not normative)	Reference ID	Code (base code)
- ratio of paO_2 to FIO_2	millimeter(s) of mercury per percent	mmHg % ⁻¹	MDC_DIM_MM_HG_PER_PERCENT	6176
- ratio of paO_2 to FIO_2	<magnitude> Pascal per percent	Pa % ⁻¹	MDC_DIM_X_PA_PER_PERCENT	6208
- Pulmonary/Systemic vascular resistance index	dyne seconds per square meter per centimeter to the power of 5	dyne s m ⁻² cm ⁻⁵	MDC_DIM_DYNE_SEC_PER_M_SQ_PER_CM_5	6016

^aAngular acceleration.

A.7 Nomenclature, data dictionary, and codes for metrics (measurements and enumerations) (Block C)

A.7.1 Nomenclature for ECG measurements

A.7.1.1 Introduction

Subclause A.7.1 presents a nomenclature for the systematic names related to ECG measurements. Two types of items are presented in Table A.7.1.2. One group of items makes sense as a measurement individually for each ECG lead. These items include the ECG lead as a discriminator directly coded in the code, and a site attribute is not used. The project team decided for that solution after long discussion because of real-time requirements in ECG monitoring applications. Table A.7.1.1 is compatible with the Standard Communications Protocol for Computer-Assisted Electrocardiography (SCP-ECG) standard (see CEN EN 1064 [B1]) and is shown within the first differentiating criteria.

The second group of items is used without a lead discriminator. Items in this group make sense only as a global measurement, e.g., a measurement that has to be made using several leads or should be the same in all leads.

Nevertheless, the site attribute exists, and Table A.7.1.1 is included in Block D (the body sites codes).¹⁰ To use the base code only and add the ECG lead in a site attribute is a question of profiling. However, in a monitoring or real-time situation, codes that include the lead discriminator shall be used. A code space between the ECG per-lead measurements and ECG global measurements is reserved for a block of diagnostic measurements, which may be defined without a lead discriminator and which require a site attribute for leads.

It may be also possible that such a profile needs more ECG measurements. A code space between the ECG per-lead measurements and ECG global measurements is reserved for a block of diagnostic measurements, which will be defined without a lead discriminator and which require a site attribute for leads.

A.7.1.1.1 ECG measurement—examples for different ECG configurations

Figure A.7.1.1 through Figure A.7.1.6 illustrate the basic ECG signal and specific waveforms that may occur during atrial depolarization (P wave), ventricular depolarization (QRS complex), and ventricular repolarization (ST-T wave). The figures depict waveforms that are referred to in ECG books and for which quantities per ECG lead or from a set of leads are to be determined in computer analysis.

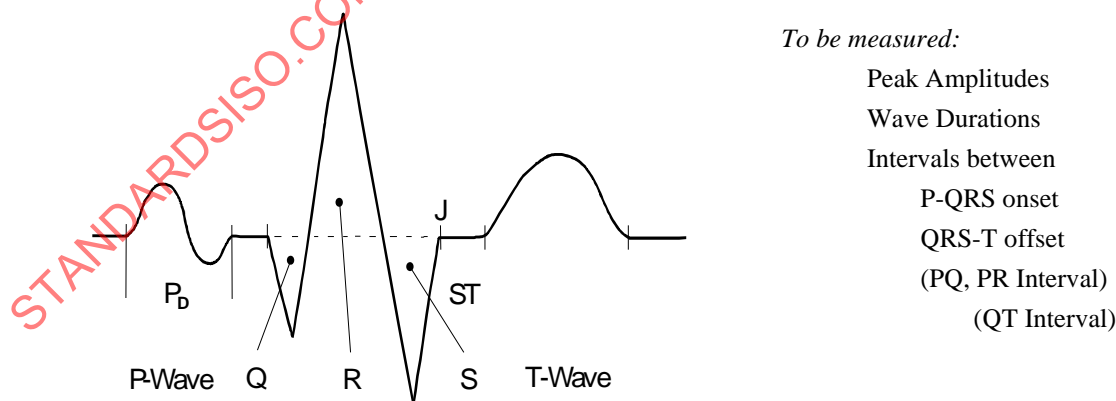
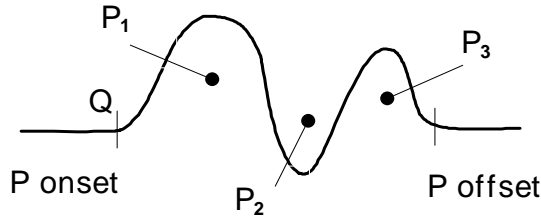


Figure A.7.1.1—Basic form

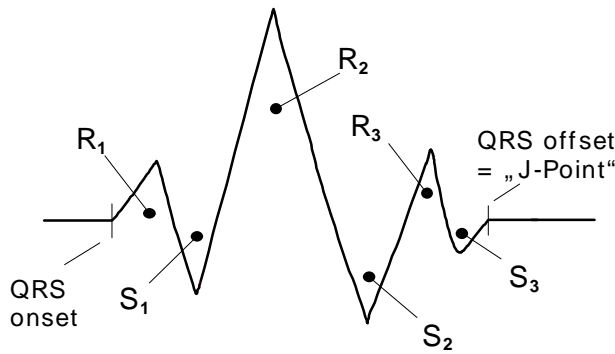
¹⁰Provision for including lead discriminators in the body sites partition is deferred to a future revision of this standard and is not currently supported.



To be measured:

- Peak Amplitudes
- P Duration
- Time of Peak Amplitudes after P onset
- Area

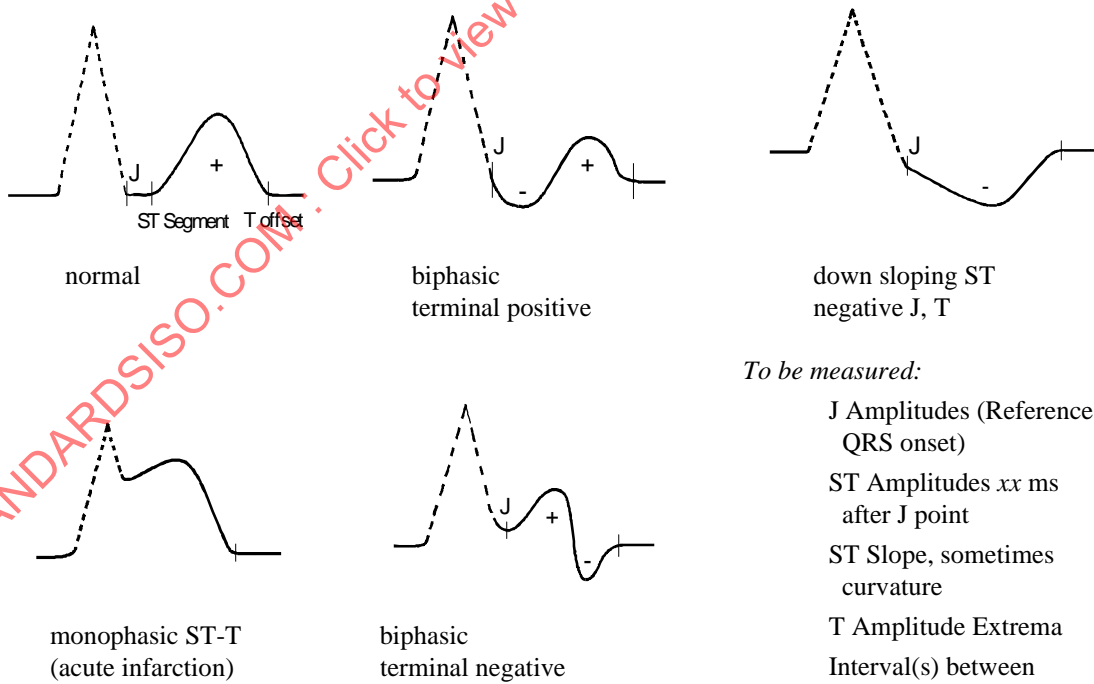
Figure A.7.1.2—Multiform P Wave, 3 Extrema



To be measured:

- Peak Amplitudes
- Total QRS Duration ("globally," per lead)
- Duration of Waves
- Time of MAX Amplitude
- Interval QRS onset – Last Positive Peak (VAT)
- Areas/Integrals

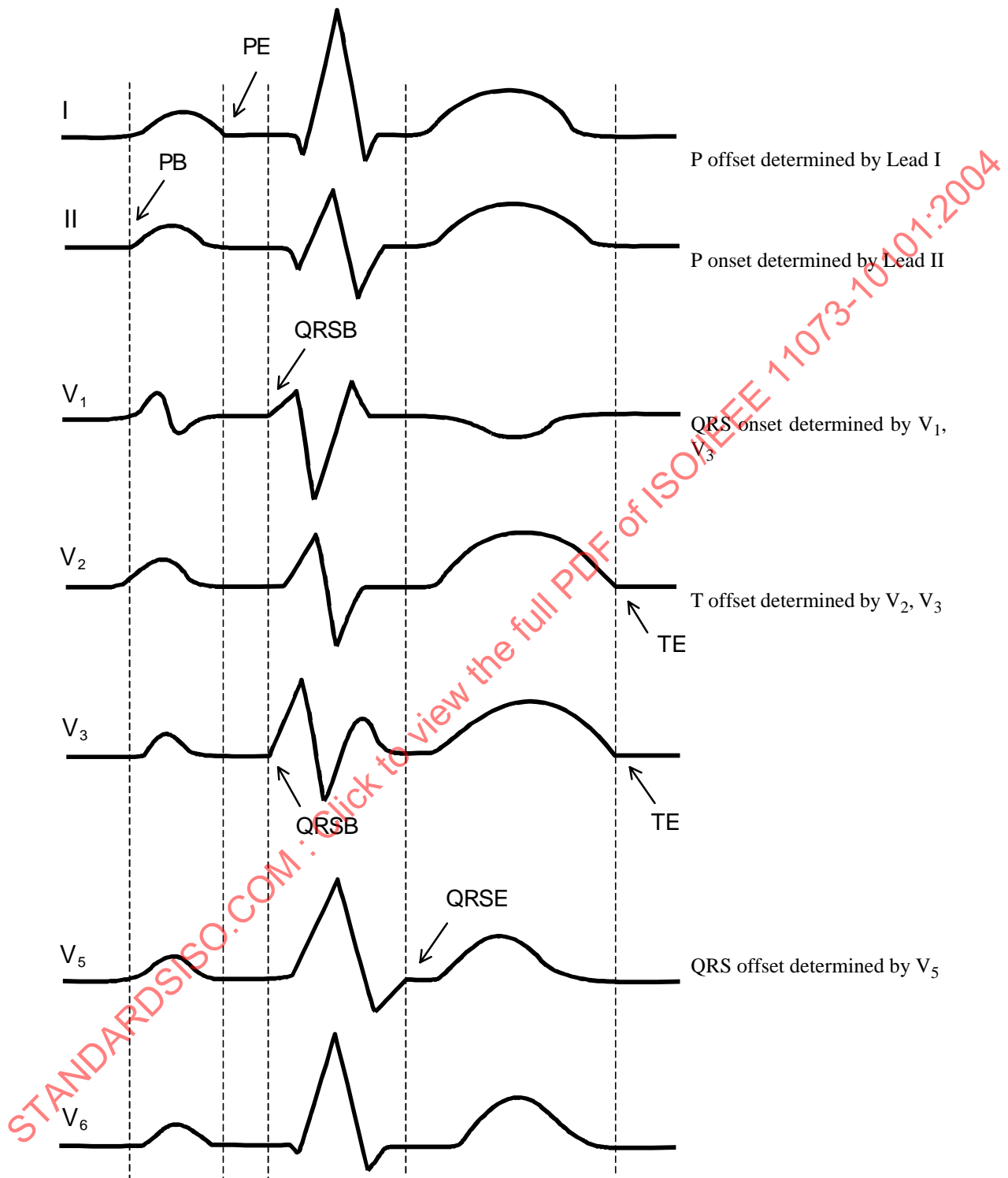
Figure A.7.1.3—Multiform QRS



To be measured:

- J Amplitudes (Reference: QRS onset)
- ST Amplitudes xx ms after J point
- ST Slope, sometimes curvature
- T Amplitude Extrema
- Interval(s) between J-Point and ± Extrema

Figure A.7.1.4—ST-T morphologies



NOTE: Figure A.7.1.5 provides an example for global measurements based on several simultaneously acquired ECG leads.

Figure A.7.1.5—Example for measurement of ventricular activation time at different QRS

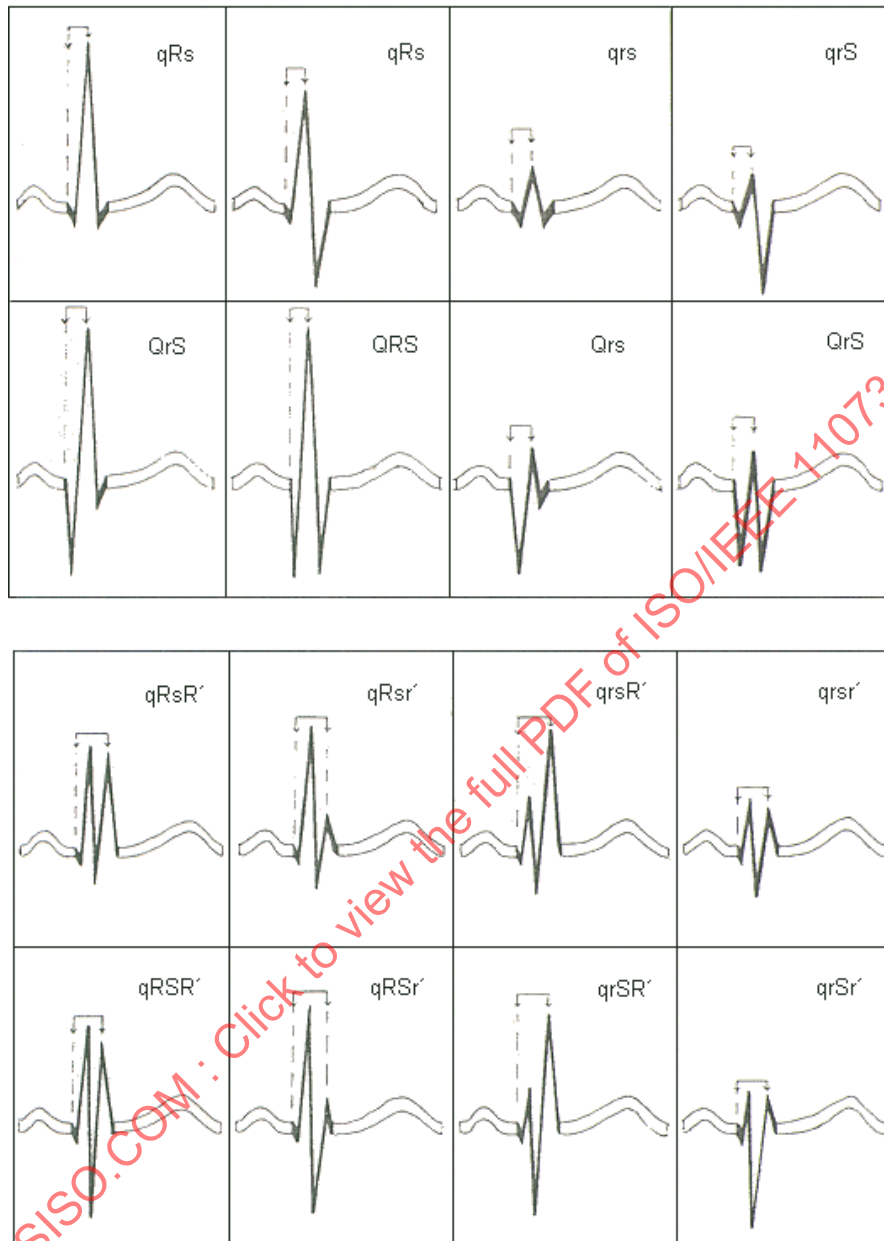


Figure A.7.1.6—Ventricular activation time

A.7.1.2 Base concepts

Applicable descriptors are as follows:

- **Angle** (the orientation of the electrical axis of a specific wave of ECG, i.e., of the QRS complex)
- **Duration** (a certain time interval, i.e., the time interval between two consecutive R waves of ECG)
- **ElectricalPotential** (the physical quantity under observation. In Table A.7.1.2, it refers to the signal [ECG] that represents the electrical activity of the heart as recorded on the body surface by a standard ECG)

- **Integral** (the correspondent mathematical function of the integral with two boundaries over the time)
- **Magnitude** (the quantity of a wave amplitude or the length of a vector)
- **Rate** (the frequency of occurrence of ECG beats)
- **Ratio** (the quotient of two measurements)
- **Slope** (the correspondent mathematical function of the first derivation over the time)
- **Type** (the morphology type of electrical activation)

A.7.1.3 First set of differentiating criteria

Four semantic links are applied for the first set of differentiating criteria. More than one semantic link and one descriptor are possible.

A.7.1.3.1 Semantic link "has origin:"

Applicable descriptors are as follows:

- **ECG** (the origin of the measurement is the signal ECG)
- **ECG <lead>** (the origin of the measurement is the signal ECG as obtained with the specific <lead> position)

Table A.7.1.1 lists the ECG <lead> descriptors that are standardized and have been assigned a numerical code within the SCP-ECG (see CEN EN 1064 [B1]).

Table A.7.1.1—List of standardized ECG <lead> descriptors

Lead	Reference ID	SCP-Code
Unspecified lead	MDC_ECG_LEAD_CONFIG	0
I	MDC_ECG_LEAD_I	1
II	MDC_ECG_LEAD_II	2
V1	MDC_ECG_LEAD_V1	3
V2	MDC_ECG_LEAD_V2	4
V3	MDC_ECG_LEAD_V3	5
V4	MDC_ECG_LEAD_V4	6
V5	MDC_ECG_LEAD_V5	7
V6	MDC_ECG_LEAD_V6	8
V7	MDC_ECG_LEAD_V7	9
V2R	MDC_ECG_LEAD_V2R	10
V3R	MDC_ECG_LEAD_V3R	11
V4R	MDC_ECG_LEAD_V4R	12
V5R	MDC_ECG_LEAD_V5R	13
V6R	MDC_ECG_LEAD_V6R	14
V7R	MDC_ECG_LEAD_V7R	15
X	MDC_ECG_LEAD_VX	16

Table A.7.1.1—List of standardized ECG <lead> descriptors (continued)

Lead	Reference ID	SCP-Code
Y	MDC_ECG_LEAD_VY	17
Z	MDC_ECG_LEAD_VZ	18
CC5	MDC_ECG_LEAD_CC5	19
CM5	MDC_ECG_LEAD_CM5	20
Left Arm	MDC_ECG_LEAD_LA	21
Right Arm	MDC_ECG_LEAD_RA	22
Left Leg	MDC_ECG_LEAD_LL	23
I	MDC_ECG_LEAD_fI	24
E	MDC_ECG_LEAD_fE	25
C	MDC_ECG_LEAD_fC	26
A	MDC_ECG_LEAD_fA	27
M	MDC_ECG_LEAD_fM	28
F	MDC_ECG_LEAD_fF	29
H	MDC_ECG_LEAD_fH	30
III	MDC_ECG_LEAD_III	61
aVR	MDC_ECG_LEAD_AVR	62
aVL	MDC_ECG_LEAD_AVL	63
aVF	MDC_ECG_LEAD_AVF	64
-aVR	MDC_ECG_LEAD_AVRneg	65
Reserved for future expansion		66–99
Application specific		100–255

A.7.1.3.2 Semantic link "has method:"

Applicable descriptors are as follows:

- **Area** (the integral calculated using absolute (positive) values only. The area is always a positive value.)
- **Azimuth** (the method for computing the electrical axis of a specific ECG wave that considers a vector view using Frank ECG leads [X to left arm, Y to feet, Z to back, clockwise coordinate system.] The azimuth is the angle of the EKG vector in the transversal plane, 0 to 180 degrees from sinister to dexter. => $\arctan(Z/X)$. Positive angle if anterior, negative if posterior. The azimuth of the largest vector [e.g., of the P-wave, QRS-complex, and T-wave] is often used.)
- **Elevation** (the method for computing the electrical axis of a specific ECG wave that considers a vector view using Frank ECG leads. Elevation is the angle of the ECG vector from vertical axis 0 to 180 degrees from distal to cranium. It is computed over the horizontal plane. => $\arctan(Y/\sqrt{Z^2 + X^2})$. The elevation of the largest vector (e.g., of the P-wave, QRS-complex, and T-wave) is often used.)
- **Frontal** (the method for computing the electrical axis of a specific ECG wave that considers a frontal plane view using Einthoven leads)

- **FrontalPlane** (the method for computing the electrical axis of a specific ECG wave that considers a vector view using Frank ECG leads and frontal plane projection [X and Y])
- **HorizontalPlane** (the method for computing the electrical axis of a specific ECG wave that considers a vector view using Frank ECG leads and horizontal plane projection [X and Z])
- **SagittalPlane** (the method for computing the electrical axis of a specific ECG wave that considers a vector view using Frank ECG leads and sagittal plane projection [Y and Z])
- **Vector** (the method for computing the electrical axis of a specific ECG wave that considers a vector view using Frank ECG leads)

A.7.1.3.3 Semantic link "*is computed as:*"

Applicable descriptors for the computational instruction for desired ECG wave points are as follows:

- **FirstExtremum**
- **SecondExtremum**
- **ThirdExtremum**

Applicable descriptors for the computing criterion of the measurement, i.e., the amplitude of the R wave computed as the maximum of the ECG signal with respect to the baseline, are as follows:

- **Maximum**
- **Minimum**

The descriptor for the largest vector of the P wave, QRS complex, and T wave is as follows:

- **MaximumVector**

The descriptor for a measurement period in ST segment is as follows:

- **QRS_offset_+20ms_to_QRS_offset_+60ms**

The descriptor for QTc, often related to a heart rate of 60 beats per minute by using the Bazett formula, is as follows:

- **QTc** (i.e., QT corrected)

$$\left(\frac{QT}{\sqrt{\frac{60}{\text{heart rate}}}} \right)$$

A.7.1.3.4 Semantic link "*has time criterion:*"

The semantic link "*has time criterion:*" refers to the temporal criterion involved in the measurement, i.e., the time of occurrence of a specific event (e.g., the R wave) or the time interval between two events (e.g., two consecutive R waves).

Applicable descriptors are as follows:

- **Beats** (an ECG beat)
- **J** (point)
- **J20** (point)
- **J40** (point)
- **J60** (point)
- **J80** (point)
- **P** (wave)

- **PQ** (interval)
- **PQSegment**
- **PP** (interval)
- **PR** (interval)
- **Q** (wave)
- **QRS** (complex)
- **QT** (interval)
- **R** (wave)
- **R1**
- **R2**
- **R3**
- **RR** (interval)
- **S** (wave)
- **S1**
- **S2**
- **S3**
- **ST** (segment)
- **T** (wave)
- **VentricularActivation**

A.7.1.4 Second set of differentiating criteria

One semantic link is applied for this set of differentiating criteria.

A.7.1.4.1 Semantic link "*concerns*:"

The descriptor is as follows:

- **Heart**

A.7.1.5 Third set of differentiating criteria

The fourth field holds the information about the context, i.e., the functional or organic system for which the term is relevant.

A.7.1.5.1 Semantic link "*has context*:"

The descriptor is as follows:

- **CVS** (cardiovascular system)

A.7.1.6 Code table

See Table A.7.1.2 for the nomenclature and codes for ECG measurements.

Table A.7.1.2—Nomenclature and codes for ECG measurements

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Angle ECG, J20, Azimuth Heart CVS			Azimuth of the vector at 20 ms after the end of QRS complex of ECG	MDC_ECG_ANGLE_J20_AZIM	16248
Angle ECG, J80, Azimuth Heart CVS			Azimuth of the vector at 80 ms after the end of QRS complex of ECG	MDC_ECG_ANGLE_J80_AZIM	16284
Angle ECG, J80, Elevation Heart CVS			Elevation of the vector at 80 ms after the end of QRS complex of ECG	MDC_ECG_ANGLE_J80_ELEV	16288
Angle ECG, Jxx, Azimuth Heart CVS			Azimuth of the vector at xx ms after the end of QRS complex of ECG	MDC_ECG_ANGLE_Jxx_AZIM	16296
Angle ECG, Jxx, Elevation Heart CVS			Elevation of the vector at xx ms after the end of QRS complex of ECG	MDC_ECG_ANGLE_Jxx_ELEV	16300
Angle ECG, J, Azimuth Heart CVS			Azimuth of the vector at the end of QRS complex (junctional point or J point)	MDC_ECG_ANGLE_J_AZIM	16236
Angle ECG, J, Elevation Heart CVS			Elevation of the vector at the end of QRS complex (junctional point or J point)	MDC_ECG_ANGLE_J_ELEV	16240
Angle ECG, J20, Elevation Heart CVS			Elevation of the vector at 20 ms after the end of QRS complex of ECG	MDC_ECG_ANGLE_J20_ELEV	16252
Angle ECG, J40, Azimuth Heart CVS			Azimuth of the vector at 40 ms after the end of QRS complex of ECG	MDC_ECG_ANGLE_J40_AZIM	16260
Angle ECG, J40, Elevation Heart CVS			Elevation of the vector at 40 ms after the end of QRS complex of ECG	MDC_ECG_ANGLE_J40_ELEV	16264
Angle ECG, J60, Azimuth Heart CVS			Azimuth of the vector at 60 ms after the end of QRS complex of ECG	MDC_ECG_ANGLE_J60_AZIM	16272
Angle ECG, J60, Elevation Heart CVS			Elevation of the vector at 60 ms after the end of QRS complex of	MDC_ECG_ANGLE_J60_ELEV	16276
Angle ECG, P, Azimuth, MaximumVector Heart CVS			Azimuth angle of the electrical axis of the P wave of ECG	MDC_ECG_ANGLE_P_AZIM	16204
Angle ECG, P, Elevation, MaximumVector Heart CVS			Elevation angle of the electrical axis of the P wave of ECG	MDC_ECG_ANGLE_P_ELEV	16216

Table A.7.1.2—Nomenclature and codes for ECG measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Angle ECG, P, Frontal Heart CVS	P-wave axis	Paxis	Angle of the electrical axis of the P wave of ECG (in frontal plane)	MDC_ECG_ANGLE_P_FRONT	16128
Angle ECG, QRS, Azimuth, MaximumVector Heart CVS			Azimuth of the electrical axis of the QRS complex of ECG	MDC_ECG_ANGLE_QRS_AZIM	16208
Angle ECG, QRS, Elevation, MaximumVector Heart CVS			Elevation of the electrical axis of the QRS complex of ECG	MDC_ECG_ANGLE_QRS_ELEV	16220
Angle ECG, QRS, Frontal Heart CVS	QRS axis	QRSaxis	Angle of the electrical axis of the QRS complex of ECG (in frontal plane)	MDC_ECG_ANGLE_QRS_FRON T	16132
Angle ECG, T, Azimuth, MaximumVector Heart CVS			Elevation of the electrical axis of the T wave of ECG	MDC_ECG_ANGLE_T_ELEV	16224
Angle ECG, T, Elevation, MaximumVector Heart CVS			Azimuth of the electrical axis of the T wave of ECG	MDC_ECG_ANGLE_T_AZIM	16212
Angle ECG, T, Frontal Heart CVS	T wave axis	Taxis	Angle of the electrical axis of the T wave of ECG (in frontal plane)	MDC_ECG_ANGLE_T_FRONT	16136
Duration ECG <lead>, P Heart CVS	P duration		Duration of the P wave of ECG in <lead>	MDC_ECG_TIME_PD_P	6656*
Duration ECG <lead>, P, End Heart CVS		Poff	Time point of end of P wave in a specified <lead>	MDC_ECG_TIME_END_P	5888*
Duration ECG <lead>, P, FirstExtremum Heart CVS			Duration of the interval between P onset and the first extremum of the P wave of ECG in specified <lead>	MDC_ECG_TIME_PD_P1	4608*
Duration ECG <lead>, P, SecondExtremum Heart CVS			Duration of the interval between P onset and the second extremum of the P wave of ECG in specified <lead>	MDC_ECG_TIME_PD_P2	4864*
Duration ECG <lead>, P, Start Heart CVS		Pon	Time point of start of P wave in a specified <lead>	MDC_ECG_TIME_START_P	9472*
Duration ECG <lead>, P, ThirdExtremum Heart CVS			Duration of the interval between P onset and the third extremum of the P wave of ECG in specified <lead>	MDC_ECG_TIME_PD_P3	5120*
Duration ECG <lead>, PR Heart CVS	P-R interval	PR	Duration of the interval between P offset and QRS onset of ECG in <lead>	MDC_ECG_TIME_PD_PR	7168*

Table A.7.1.2—Nomenclature and codes for ECG measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Duration ECG <lead>, Q Heart CVS	Q-wave duration		Duration of the Q wave of ECG in <lead>	MDC_ECG_TIME_PD_Q	7680*
Duration ECG <lead>, QRS Heart CVS	QRS duration		Duration of the QRS complex of ECG in <lead>	MDC_ECG_TIME_PD_QRS	7936*
Duration ECG <lead>, QRS, End Heart CVS		QRSoff	Time point of end of QRS complex in a specified <lead>	MDC_ECG_TIME_END_QRS	6144*
Duration ECG <lead>, QRS, Start Heart CVS		QRSon	Time point of start of QRS complex in a specified <lead>	MDC_ECG_TIME_START_QRS	9728*
Duration ECG <lead>, QT Heart CVS	Q-T interval	QT	Duration of the interval between the QRS onset and T wave offset of ECG in <lead> (used for QT dispersion)	MDC_ECG_TIME_PD_QT	8192*
Duration ECG <lead>, QTc Heart CVS	Q-T c	QTc	Duration of the interval between the QRS onset and T wave offset, related to heart rate 60 beats per minute of ECG in <lead>, Bazett formula	MDC_ECG_TIME_PD_QT_CORR	8448*
Duration ECG <lead>, R1 Heart CVS	R1 wave duration	R1	Duration of the R1 wave of ECG in <lead>	MDC_ECG_TIME_PD_R_1	11264*
Duration ECG <lead>, R2 Heart CVS	R2 wave duration	R2	Duration of the R2 wave of ECG in <lead>	MDC_ECG_TIME_PD_R_2	11520*
Duration ECG <lead>, R3 Heart CVS	R3 wave duration	R3	Duration of the R3 wave of ECG in <lead>	MDC_ECG_TIME_PD_R_3	11776*
Duration ECG <lead>, S1 Heart CVS	S1 wave duration	S1	Duration of the S1 wave of ECG in <lead>	MDC_ECG_TIME_PD_S_1	12032*
Duration ECG <lead>, S2 Heart CVS	S2 wave duration	S2	Duration of the S2 wave of ECG in <lead>	MDC_ECG_TIME_PD_S_2	12288*
Duration ECG <lead>, S3 Heart CVS	S3 wave duration	S3	Duration of the S3 wave of ECG in <lead>	MDC_ECG_TIME_PD_S_3	12544*
Duration ECG <lead>, T, End Heart CVS		Toff	Time point of end of T wave in a specified <lead>	MDC_ECG_TIME_END_QRS	6400*
Duration ECG <lead>, T, Start Heart CVS		Ton	Time point of start of T wave in a specified <lead>	MDC_ECG_TIME_START_T	9984*

Table A.7.1.2—Nomenclature and codes for ECG measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Duration ECG <lead> VentricularActivation Heart CVS	Ventricular Activation Time	VAT	Ventricular activation time	MDC_ECG_TIME_PD_VENT_AC TIV	11008*
Duration ECG, P Heart CVS	P duration		Duration of the P wave of ECG (global)	MDC_ECG_TIME_PD_P_GL	16184
Duration ECG, PP Heart CVS	P-P interval	PP	Duration of the interval between two consecutive P waves of ECG (global)	MDC_ECG_TIME_PD_PP_GL	16140
Duration ECG, PQ Heart CVS	P-Q interval, P-R interval	PQint, PRint	Duration of the interval between P onset and QRS onset of ECG (global)	MDC_ECG_TIME_PD_PQ	16144
Duration ECG, PQSegment Heart CVS	P-Q segment	PQseg	Duration of the interval between P offset and QRS onset of ECG (global) (synonymously to PR interval - American)	MDC_ECG_TIME_PD_PQ_SEG	16148
Duration ECG, QRS Heart CVS	QRS duration		Duration of the QRS complex of ECG (global)	MDC_ECG_TIME_PD_QRS_GL	16156
Duration ECG, QT Heart CVS	Q-T interval	QT	Duration of the interval between the QRS onset and T wave offset of ECG (global)	MDC_ECG_TIME_PD_QT_GL	16160
Duration ECG, QTc Heart CVS	Q-T c	QTc	Duration of the interval between the QRS onset and T wave offset, related to heart rate 60 beats per minute of ECG (global), Bazett formula	MDC_ECG_TIME_PD_QTc	16164
Duration ECG, RR Heart CVS	R-R interval	RR	Duration of the interval between two consecutive QRS complexes	MDC_ECG_TIME_PD_RR_GL	16168
Duration ECG, ST, Jxx Heart CVS	Time of ST _{Jxx}	Tjxx	Definition of reference time point xx ms after the end of QRS complex in ECG for potential measurements in ST segment.	MDC_ECG_TIME_ST_Jxx	16304
ElectricalPotential ECG <lead> Heart CVS	ECG <Lead code>	ECG-<lead>	ECG as recorded according to <lead> in specified position (time series)	MDC_ECG_ELEC_POTL	256*
ElectricalPotential ECG <lead>, J Heart CVS		ST-J	Amplitude at the end of QRS complex (junctional point or J point) of ECG in specified <lead>	MDC_ECG_AMPL_J	1024*
ElectricalPotential ECG <lead>, J20 Heart CVS		ST-J20	Amplitude at 20 ms after the end of QRS complex of ECG in specified <lead>	MDC_ECG_ELEC_POTL_ST_20	14848*
ElectricalPotential ECG <lead>, J40 Heart CVS		ST-J40	Amplitude at 40 ms after the end of QRS complex of ECG in specified <lead>	MDC_ECG_ELEC_POTL_ST_40	15104*

Table A.7.1.2—Nomenclature and codes for ECG measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
ElectricalPotential ECG <lead>, J60 Heart CVS		ST-J60	Amplitude at 60 ms after the end of QRS complex of ECG in specified <lead>	MDC_ECG_ELEC_POTL_ST_60	14336*
ElectricalPotential ECG <lead>, J80 Heart CVS		ST-J80	Amplitude at 80 ms after the end of QRS complex of ECG in specified <lead>	MDC_ECG_ELEC_POTL_ST_80	14592*
ElectricalPotential ECG <lead>, P, FirstExtremum Heart CVS	Maximum P wave amplitude	Pmax	Amplitude level of first extremum of the P wave of ECG in specified <lead> (mostly maximum of P, depends on morphology)	MDC_ECG_AMPL_P_MAX	1280*
ElectricalPotential ECG <lead>, P, SecondExtremum Heart CVS	Minimum P wave amplitude	Pmin	Amplitude level of the second extremum of the P wave of ECG in specified <lead> (often minimum of P, depends on morphology)	MDC_ECG_AMPL_P_MIN	1536*
ElectricalPotential ECG <lead>, P, ThirdExtremum Heart CVS		P3	Amplitude level of the third extremum of the P wave of ECG in specified <lead>	MDC_ECG_AMPL_P3	3072*
ElectricalPotential ECG <lead>, Q Heart CVS	Q wave amplitude		Amplitude of the Q wave of ECG in specified <lead>	MDC_ECG_AMPL_Q	1792*
ElectricalPotential ECG <lead>, R, Maximum Heart CVS		Rmax	Maximum amplitude of R wave of ECG in specified <lead>	MDC_ECG_AMPL_R	2048*
ElectricalPotential ECG <lead>, R1 Heart CVS	R1 wave amplitude		Amplitude of the R1 wave of ECG in specified <lead>	MDC_ECG_ELEC_POTL_R_1	12800*
ElectricalPotential ECG <lead>, R2 Heart CVS	R2 wave amplitude		Amplitude of the R2 wave of ECG in specified <lead>	MDC_ECG_ELEC_POTL_R_2	13056*
ElectricalPotential ECG <lead>, R3 Heart CVS	R3 wave amplitude		Amplitude of the R3 wave of ECG in specified <lead>	MDC_ECG_ELEC_POTL_R_3	13312*
ElectricalPotential ECG <lead>, S, Maximum Heart CVS		Smax	Maximum amplitude of S wave of ECG in specified <lead>	MDC_ECG_AMPL_S	2304*
ElectricalPotential ECG <lead>, S1 Heart CVS	S1 wave amplitude		Amplitude of the S1 wave of ECG in specified <lead>	MDC_ECG_ELEC_POTL_S_1	13568*
ElectricalPotential ECG <lead>, S2 Heart CVS	S2 wave amplitude		Amplitude of the S2 wave of ECG in specified <lead>	MDC_ECG_ELEC_POTL_S_2	13824*
ElectricalPotential ECG <lead>, S3 Heart CVS	S3 wave amplitude		Amplitude of the S3 wave of ECG in specified <lead>	MDC_ECG_ELEC_POTL_S_3	14080*

Table A.7.1.2—Nomenclature and codes for ECG measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
ElectricalPotential ECG <lead>, T, Maximum Heart CVS	Positive T wave amplitude	Tmax	Amplitude of the T positive wave of ECG in specified <lead>	MDC_ECG_AMPL_T_MAX	2560*
ElectricalPotential ECG <lead>, T, Minimum Heart CVS	Negative T wave amplitude	Tmin	Amplitude of the T negative wave of ECG in specified <lead>	MDC_ECG_AMPL_T_MIN	2816*
ElectricalPotential ECG, lead set Heart CVS	ECG, Lead set	ECG	ECG as recorded from a set of leads (time sample array is unspecified lead as an composite element of specified or unspecified leads)	MDC_ECG_ELEC_POTL	256
ElectricalPotential ECG<lead>, ST Heart CVS	STxx Amplitude	ST-Jxx	Amplitude of the ST segment at xx ms after the end of QRS complex of ECG in specified <leads>. The time point xx is defined globally by item with code XXXXXX	MDC_ECG_TIME_ST_Jxx	768*
Integral ECG <lead>, P Heart CVS	P wave integral	Pintegral	Integral of the P wave of ECG in specified <lead> (mVolt x millisecond)	MDC_ECG_INTEGRAL_P	6912*
Integral ECG <lead>, P, Area Heart CVS	P wave area	Parea	Area of the P wave of ECG in specified <lead> (mVolt x millisecond) by integrating absolute values.	MDC_ECG_AREA_P	3840*
Integral ECG <lead>, Q Heart CVS	Q wave integral	Qintegral	Integral of the Q wave of ECG in specified <lead> (mVolt x millisecond)	MDC_ECG_INTEGRAL_Q	7424*
Integral ECG <lead>, Q, Area Heart CVS	Q wave area	Qarea	Area of the Q wave of ECG in specified <lead> (mVolt x millisecond) by integrating absolute values.	MDC_ECG_AREA_Q	3328*
Integral ECG <lead>, QRS Heart CVS	QRS integral	QRS-integral	Integral of the QRS complex of ECG in specified <lead> (mVolt x millisecond)	MDC_ECG_INTEGRAL_QRS	8704*
Integral ECG <lead>, QRS, Area Heart CVS	QRS area	QRSarea	Area of the QRS complex of ECG in specified <lead> (mVolt x millisecond) by integrating absolute values.	MDC_ECG_AREA_QRS	4096*
Integral ECG <lead>, ST Heart CVS	ST-T integral	ST-Tintegral	Integral of the ST-T segment computed between J point and the beginning of the T wave of ECG in specified <lead> (mVolt x millisecond)	MDC_ECG_INTEGRAL_ST	9216*
Integral ECG <lead>, ST, Area Heart CVS	ST-T area	ST-Tarea	Area of the ST-T segment computed between J point and the beginning of the T wave of ECG in specified <lead> (mVolt x millisecond) by integrating absolute values.	MDC_ECG_AREA_ST	4352*

Table A.7.1.2—Nomenclature and codes for ECG measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Integral ECG <lead>, T Heart CVS	T-wave integral	Tintegral	Integral of the T wave of ECG in specified <lead> (mVolt x millisecond)	MDC_ECG_INTEGRAL_T	8960*
Integral ECG <lead>, T, Area Heart CVS	T wave area	Tarea	Area of the T wave of ECG in specified <lead> (mVolt x millisecond) by integrating absolute values.	MDC_ECG_AREA_T	3584*
Magnitude ECG, J, Vector Heart CVS			Magnitude of the vector at the end of QRS complex (junctional point or J point) of ECG in specified <lead>	MDC_ECG_MAG_J_VECT	16232
Magnitude ECG, J20, Vector Heart CVS			Magnitude of the vector at 20 ms after the end of QRS complex of ECG in specified <lead>	MDC_ECG_MAG_J20_VECT	16244
Magnitude ECG, J40, Vector Heart CVS			Magnitude of the vector at 40 ms after the end of QRS complex of ECG in specified <lead>	MDC_ECG_MAG_J40_VECT	16256
Magnitude ECG, J60, Vector Heart CVS			Magnitude of the vector at 60 ms after the end of QRS complex of ECG in specified <lead>	MDC_ECG_MAG_J60_VECT	16268
Magnitude ECG, J80, Vector Heart CVS			Magnitude of the vector at 80 ms after the end of QRS complex of ECG in specified <lead>	MDC_ECG_MAG_J80_VECT	16280
Magnitude ECG, Jxx, Vector Heart CVS			Magnitude of the vector at xx ms after the end of QRS complex of ECG in specified <lead>	MDC_ECG_MAG_Jxx_VECT	16292
Magnitude ECG, P, Frontal Heart CVS			Length of the vector of the P wave of ECG (in frontal plane)	MDC_ECG_MAG_P_FRONT	16172
Magnitude ECG, P, MaximumVector Heart CVS			Magnitude at the maximum vector of the P wave of ECG computed as square root of squared scalar magnitudes of X, Y, Z	MDC_ECG_MAG_P_VECT	16192
Magnitude ECG, P, MaximumVector, FrontalPlane Heart CVS			Magnitude at the maximum vector of the P wave of ECG in frontal plane computed as square root of squared scalar magnitudes of X, Y	MDC_ECG_MAG_P_VECT_FRONT	16308
Magnitude ECG, P, MaximumVector, HorizontalPlane Heart CVS			Magnitude at the maximum vector of the P wave of ECG in horizontal plane computed as square root of squared scalar magnitudes of X, Z	MDC_ECG_MAG_P_VECT_HORIZ	16312
Magnitude ECG, P, MaximumVector, SagittalPlane Heart CVS			Magnitude at the maximum vector of the P wave of ECG in sagittal plane computed as square root of squared scalar magnitudes of Y, Z	MDC_ECG_MAG_P_VECT_SAGI	16316

Table A.7.1.2—Nomenclature and codes for ECG measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Magnitude ECG, QRS, Frontal Heart CVS			Length of the vector of the QRS complex of ECG (in frontal plane)	MDC_ECG_MAG_QRS_FRONT	16176
Magnitude ECG, QRS, MaximumVector Heart CVS			Magnitude at the maximum vector of the QRS complex of ECG computed as square root of squared scalar magnitudes of X, Y, Z	MDC_ECG_MAG_QRS_VECT	16196
Magnitude ECG, QRS, MaximumVector, FrontalPlane Heart CVS			Magnitude at the maximum vector of the QRS complex of ECG in frontal plane computed as square root of squared scalar magnitudes of X, Y	MDC_ECG_MAG_QRS_VECT_FRONT	16320
Magnitude ECG, QRS, MaximumVector, HorizontalPlane Heart CVS			Magnitude at the maximum vector of the QRS complex of ECG in horizontal plane computed as square root of squared scalar magnitudes of X, Z	MDC_ECG_MAG_QRS_VECT_HORIZ	16324
Magnitude ECG, QRS, MaximumVector, SagittalPlane Heart CVS			Magnitude at the maximum vector of the QRS complex of ECG in sagittal plane computed as square root of squared scalar magnitudes of Y, Z	MDC_ECG_MAG_QRS_VECT_SAGI	16328
Magnitude ECG, T, Frontal Heart CVS			Length of the vector of the T wave of ECG (in frontal plane)	MDC_ECG_MAG_T_FRONT	16180
Magnitude ECG, T, MaximumVector Heart CVS			Magnitude of the maximum vector of the T wave of ECG computed as square root of squared scalar magnitudes of X, Y, Z	MDC_ECG_MAG_T_VECT	16200
Magnitude ECG, T, MaximumVector, FrontalPlane Heart CVS			Magnitude at the maximum vector of the T wave of ECG in frontal plane computed as square root of squared scalar magnitudes of X, Y	MDC_ECG_MAG_T_VECT_FRONT	16332
Magnitude ECG, T, MaximumVector, HorizontalPlane Heart CVS			Magnitude at the maximum vector of the T wave of ECG in horizontal plane computed as square root of squared scalar magnitudes of X, Z	MDC_ECG_MAG_T_VECT_HORIZ	16336
Magnitude ECG, T, MaximumVector, SagittalPlane Heart CVS			Magnitude at the maximum vector of the T wave of ECG in sagittal plane computed as square root of squared scalar magnitudes of Y, Z	MDC_ECG_MAG_T_VECT_SAGI	16340
Rate Beats Heart CVS	Heart rate	HR	Rate of cardiac beats	MDC_ECG_HEART_RATE	16770

Table A.7.1.1.2—Nomenclature and codes for ECG measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Slope ECG <lead>, QRS_offset_+_20ms_to_QRS_offset_+_60ms Heart CVS			Slope of ST-segment between QRS offset plus 20 ms and QRS offset plus 60 ms of ECG in specified <lead>	MDC_ECG_SLOPE_ST	5376*
Type ECG, QRS Heart CVS	QRS type	QRStyp	Type of QRS complex of ECG observed.	MDC_ECG_QRS_TYPE	16188

The "*" is the notation on the code for measurements that use the discriminator for a specified lead in code.

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A.7.2 Nomenclature for ECG enumerations

A.7.2.1 Introduction

Table A.7.2.1 holds systematic names concerning ECG diagnostics, derived from ECG signals by an ECG machine, an intelligent heart rate monitor, or a physician, who marks his/her diagnostics during visual inspection of the signal. These diagnostics are based on specific patterns observed in the physiologic signal.

A.7.2.2 Base concept

In this special case, only one descriptor is applicable:

- **Pattern** (the pattern recognized in a measurement)

A.7.2.3 First set of differentiating criteria

The second field of the systematic name refers to the measurement features.

A.7.2.3.1 Semantic link "*concerns*:"

Applicable descriptors are as follows:

- **Extrasystoles**
- **Rhythm**

A.7.2.3.2 Semantic link "*has origin*:"

Applicable descriptors are as follows:

- **Atrial**
- **IntraVentricular**
- **Junctional**
- **Sinus**
- **SupraVentricular**
- **Unknown**
- **Ventricular**

A.7.2.3.3 Semantic link "*has diagnostic type*:"

Applicable descriptors for the type of an ECG diagnosis are as follows:

- **Arrhythmia**
- **Asystoly**
- **AV_Block**
- **Bigeminus**
- **Bradycardia**
- **BundleBranchBlock**
- **ConductionDefect**
- **Contraction**
- **Fibrillation**
- **Flutter**
- **Hypertrophy**

- **Infarct**
- **InfarctHypertrophy**
- **LeftAnteriorHemiBlock**
- **P_dextro_Atriale**
- **P_sinistro_Atriale**
- **RepolarizationDisturbance**
- **Tachycardia**
- **TrifascularBlock**
- **Trigeminus**
- **WPW**

A.7.2.3.4 Semantic link "*has direction*:"

Applicable descriptors are as follows:

- **Anterior**
- **Inferior**
- **Lateral**
- **Left**
- **Right**

A.7.2.3.5 Semantic link "*has grade*:"

Applicable descriptors are as follows:

- **2:1**
- **3:1**
- **4:1**
- **Complete**
- **Frequent**
- **Grade1**
- **Grade2**
- **Grade3**
- **Incomplete**
- **Paroxysmal**
- **Possibly**
- **Probably**
- **Regular**
- **Run**

A.7.2.3.6 Semantic link "*has specification*:"

Applicable descriptors are as follows:

- **Absolute**
- **Escape**
- **Intermittent**
- **JunctionalEscape**

- **MIX**
- **M_Form**
- **Multiformed**
- **Normal**
- **Pathological**
- **PQ<100ms**
- **Premature**
- **R-on-T**
- **Respiratory**
- **Type_A**
- **Type_B**
- **WithCompensatoryPause**

A.7.2.4 Second set of differentiating criteria

The third field of the systematic name describes the target of measurement. Applicable descriptors are as follows:

- **ECG** (the physiologic signal)
- **Heart** (the organ)

A.7.2.5 Third set of differentiating criteria

The fourth field holds the information about the context, i.e., the functional or organic system for which the term is relevant.

A.7.2.5.1 Semantic link "*pertains to*:"

The following descriptor is used:

- **CVS**

A.7.2.6 Code table

See Table A.7.2.1 for the nomenclature and codes for ECG enumerations.

Table A.7.2.1—Nomenclature and codes for ECG enumerations

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern Arrhythmia ECG, Heart CVS			Irregular rhythm	MDC_ECG_ARRHY	17424
Pattern Arrhythmia, Absolute ECG, Heart CVS			Goes always with atrial rhythm	MDC_ECG_ARRHY_ABS	17448
Pattern Arrhythmia, PQ<100ms ECG, Heart CVS			Irregular atrial escape rhythm	MDC_ECG_ARRHY_PQ_100	17432
Pattern Arrhythmia, Respiratory ECG, Heart CVS		SAR resp	Sinus arrhythmia, respiratory	MDC_ECG_RESP_ARRHY	17456
Pattern Arrhythmia, Sinus ECG, Heart CVS		SAR	Sinus rhythm	MDC_ECG_SINUS_ARRHY	17440
Pattern Atrial, ConductionDefect ECG, Heart CVS			Atrial conduction defect	MDC_ECG_ARRHY	17240
Pattern Bigeminus, Atrial ECG, Heart CVS				MDC_ECG_ATR_BIGEM	17504
Pattern Bigeminus, Intermittent ECG, Heart CVS				MDC_ECG_BIGEM_INTERMIT	17496
Pattern Bigeminus, Intermittent, Atrial ECG, Heart CVS				MDC_ECG_ATR_BIGEM_INTERMIT	17512
Pattern BundleBranchBlock, Intermittent ECG, Heart CVS	Intermittent BBB	IBBB	Intermittent bundle branch block	MDC_ECG_BB_RHY_INTERMIT	16417
Pattern BundleBranchBlock, Left, Complete ECG, Heart CVS		LBBB	Left bundle branch block	MDC_ECG_LBB_BLK_COMP	17256
Pattern BundleBranchBlock, Left, Incomplete ECG, Heart CVS		ILBBB	Incomplete bundle branch block	MDC_ECG_LBB_BLK_INCOMP	17264
Pattern BundleBranchBlock, Right, Complete ECG, Heart CVS		RBBB	Right bundle branch block	MDC_ECG_RBB_BLK_COMP	17272
Pattern BundleBranchBlock, Right, Incomplete ECG, Heart CVS		IRBBB	Incomplete right bundle branch block	MDC_ECG_RBB_BLK_INCOMP	17280

Table A.7.2.1—Nomenclature and codes for ECG enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern Escape, Atrial, PQ<100ms ECG, Heart CVS				MDC_ECG_ATR_PQ_PQ_100	17416
Pattern Extrasystoles, Contraction, Atrial, Premature ECG, Heart CVS		PAC	Premature supraventricular contractions	MDC_ECG_ATR_P_C	16664
Pattern Extrasystoles, Contraction, SupraVentricular, Premature, Frequent ECG, Heart CVS		FSPVC	Frequent SPVCs	MDC_ECG_SV_P_C_FREQ	17136
Pattern Extrasystoles, Contraction, SupraVentricular, Premature, Run ECG, Heart CVS		RUN'S	Several consecutive supraventricular extrasystoles	MDC_ECG_SV_P_C_RUN	17032
Pattern Extrasystoles, Contraction, Ventricular, Premature, Frequent ECG, Heart CVS		FPVC	Frequent PVCs	MDC_ECG_V_P_C_FREQ	17000
Pattern Extrasystoles, Contraction, Ventricular, Premature, Multiformed ECG, Heart CVS		MFPVC	Multiformed PVCs (polyformed)	MDC_ECG_MULTIFORM	17016
Pattern Extrasystoles, Contraction, Ventricular, Premature, R-on-T ECG, Heart CVS		RTPVC	PVC R-on-T	MDC_ECG_V_P_C_RonT	17056
Pattern Extrasystoles, Contraction, Ventricular, Premature, Run ECG, Heart CVS		RUN V	Several consecutive premature ventricular contractions	MDC_ECG_V_P_C_RUN	17040
Pattern Extrasystoles, Ventricular, WithCompensatoryPause ECG, Heart CVS				MDC_ECG_VENT_EXTRASYST_W_PAUSE	17536
Pattern Extrasystoles, JunctionalEscape ECG, Heart CVS		JEB	Junctional escape beats	MDC_ECG_JUNC_ESC_BEATS	16816
Pattern Extrasystoles, Ventricular, Bigemini ECG, Heart CVS	VENT BIGEMINY		Alternate normal beats and ventricular premature beats	MDC_ECG_V_BIGEM	16952
Pattern Hypertrophy ECG, Heart CVS		HYP	Hypertrophy	MDC_ECG_HYPER	17632

Table A.7.2.1—Nomenclature and codes for ECG enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern Hypertrophy, Ventricular ECG, Heart CVS		HYP-Vent	Ventricular hypertrophy	MDC_ECG_VENT_HYPERTROPHY	17576
Pattern Hypertrophy, Ventricular, Left ECG, Heart CVS		LVH	Left ventricular hypertrophy	MDC_ECG_VENT_HYPERTROPHY_LEFT	17568
Pattern Hypertrophy, Ventricular, Right ECG, Heart CVS		RVH	Right ventricular hypertrophy	MDC_ECG_VENT_HYPERTROPHY_RIGHT	17560
Pattern Infarct ECG, Heart CVS		INF	Infarction	MDC_ECG_INFARCT	17640
Pattern Infarct, Anterior ECG, Heart CVS		AMI	Anterior infarction	MDC_ECG_INFARCT_ANT	17584
Pattern Infarct, Inferior ECG, Heart CVS		IMI	Inferior infarction	MDC_ECG_INFARCT_INT	17592
Pattern Infarct, Lateral ECG, Heart CVS		LMI	Lateral infarction	MDC_ECG_INFARCT_LAT	17648
Pattern Infarct, MIX ECG, Heart CVS		INFMIX		MDC_ECG_INFARCT_MIX	17600
Pattern InfarctHypertrophy ECG, Heart CVS		INF/HYP	Infarction and hypertrophy	MDC_ECG_INFARCT_HYPER	17624
Pattern IntraVentricular, ConductionDefect ECG, Heart CVS		IVCD	Intraventricular conduction defect	MDC_ECG_INTRA_VENT_CONDUC_DEFECT	17248
Pattern LeftAnteriorHemiBlock ECG, Heart CVS		LAH		MDC_ECG_BLK_ANT_L_HEMI	17296
Pattern M_Form ECG, Heart CVS				MDC_ECG_MULTIFORM	17016
Pattern Normal ECG, Heart CVS		NOR	Normal	MDC_ECG_NORMAL	17552
Pattern P_dextro_Atriale ECG, Heart CVS		RAE	Right atrial enlargement	MDC_ECG_P_DEXT_ATR	17232
Pattern P_sinistro_Atriale ECG, Heart CVS		LAE	Left atrial enlargement	MDC_ECG_P_SINIS_ATR	17224

Table A.7.2.1—Nomenclature and codes for ECG enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern Pathological ECG, Heart CVS		ABNOR		MDC_ECG_PATHOL	17608
Pattern Regular ECG, Heart CVS			Δ RR < 10% of RR mean	MDC_ECG_REG	17392
Pattern RepolarizationDisturbance ECG, Heart CVS			Repolarization abnormalities	MDC_ECG_REPOLARIZ_DISTURB	17616
Pattern Rhythm, Asystoly ECG, Heart CVS	Asystoly		No QRS-complex found in predefined time period	MDC_ECG_ASYSTOLE	16456
Pattern Rhythm, Atrial, Tachycardia ECG, Heart CVS	ATACH		Atrial tachycardia	MDC_ECG_ATR_TACHY	16688
Pattern Rhythm, AV_Block, 2:1 ECG, Heart CVS	2:1BLK		2:1 AV block	MDC_ECG_AV_HEART_BLK_DEG_2_1	16744
Pattern Rhythm, AV_Block, 3:1 ECG, Heart CVS	3:1BLK		3:1 AV block	MDC_ECG_AV_HEART_BLK_DEG_3_1	17200
Pattern Rhythm, AV_Block, 4:1 ECG, Heart CVS	4:1BLK		4:1 AV block	MDC_ECG_AV_HEART_BLK_DEG_4_1	17208
Pattern Rhythm, AV_Block, Grade1 ECG, Heart CVS	1AVBLK	AV1st	AV block 1.°	MDC_ECG_AV_HEART_BLK_DEG_1	16728
Pattern Rhythm, AV_Block, Grade2 ECG, Heart CVS	2AVBLK	AV2nd	AV block 2.°	MDC_ECG_AV_HEART_BLK_DEG_2	16736
Pattern Rhythm, AV_Block, Grade3 ECG, Heart CVS	3AVBLK	AV3rd	AV block 3.°	MDC_ECG_AV_HEART_BLK_DEG_3	17192
Pattern Rhythm, Bradycardia ECG, Heart CVS		BRADY	Bradycardia, (heart rate < 50 bpm)	MDC_ECG_BRADY	16448
Pattern Rhythm, Bradycardia, Sinus ECG, Heart CVS		SBRAD	Sinus bradycardia, (regular heart rate, sinus rhythm < 50 bpm)	MDC_ECG_SINUS_BRADY	16888
Pattern Rhythm, Fibrillation, Atrial ECG, Heart CVS		AFIB	Atrial fibrillation	MDC_ECG_ATR_FIB	16648
Pattern Rhythm, Fibrillation, Ventricular ECG, Heart CVS		VFIB	Ventricular fibrillation	MDC_ECG_V_FIB	16960

Table A.7.2.1—Nomenclature and codes for ECG enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern Rhythm, Flutter, Atrial ECG, Heart CVS		AFLT	Atrial flutter	MDC_ECG_ATR_FLUT	16656
Pattern Rhythm, JunctionalEscape ECG, Heart CVS		JESCR	Junctional escape rhythm	MDC_ECG_JUNC_RHY	16391
Pattern Rhythm, Sinus ECG, Heart CVS		SR	Sinus rhythm	MDC_ECG_SINUS_RHY	16402
Pattern Rhythm, Tachycardia, Junctional ECG, Heart CVS		JTACH	Junctional tachycardia	MDC_ECG_JUNC_TACHY	16824
Pattern Rhythm, Tachycardia, Paroxysmal, SupraVentricular ECG, Heart CVS		PSVT	Paroxysmal supraventricular tachycardia	MDC_ECG_SV_TACHY_PAROX	17184
Pattern Rhythm, Tachycardia, Sinus ECG, Heart CVS		STACH	Sinus tachycardia (regular heart rate, sinus rhythm < 100 bpm)	MDC_ECG_SINUS_TACHY	16896
Pattern Rhythm, Tachycardia, Ventricular ECG, Heart CVS		VTACH	Ventricular tachycardia	MDC_ECG_V_TACHY	17088
Pattern Rhythm, Unknown ECG, Heart CVS	Unknown rhythm			MDC_ECG_RHY_UNK	16400
Pattern TrifascularBlock ECG, Heart CVS		TFBB	Trifascular block	MDC_ECG_BLK_TRIFASC	17288
Pattern Trigeminus ECG, Heart CVS				MDC_ECG_TRIGEM	17520
Pattern Trigeminus, Intermittent ECG, Heart CVS				MDC_ECG_TRIGEM_INTERMIT	17528
Pattern WPW, Type_A ECG, Heart CVS	WPW_A	WPW_A	Wolf-Parkinson-White Syndrom type A (certain)	MDC_ECG_WPW_A	17304
Pattern WPW, Type_A, Probably ECG, Heart CVS			Wolf-Parkinson-White Syndrom type A (probably)	MDC_ECG_WPW_A_PROB	17312
Pattern WPW, Type_A, Possibly ECG, Heart CVS			Wolf-Parkinson-White Syndrom type A (possibly)	MDC_ECG_WPW_A_POSSIB	17320

Table A.7.2.1—Nomenclature and codes for ECG enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern WPW, Type_B ECG, Heart CVS	WPW_B	WPW_B	Wolf-Parkinson-White Syndrom type B (certain)	MDC_ECG_WPW_B	17328
Pattern WPW, Type_B, Possibly ECG, Heart CVS	WPW_B possibly		Wolf-Parkinson-White Syndrom type B (possibly)	MDC_ECG_WPW_B_POSSIB	17344
Pattern WPW, Type_B, Probably ECG, Heart CVS	WPW_B probably		Wolf-Parkinson-White Syndrom type B (probably)	MDC_ECG_WPW_B_PROB	17336
Pattern WPW, Type_unknown ECG, Heart CVS	WPW	WPW	Wolf-Parkinson-White Syndrom type unknown (certain)	MDC_ECG_WPW_UNK	17352
Pattern WPW, Type_unknown, Possibly ECG, Heart CVS	WPW_possibly		Wolf-Parkinson-White Syndrom type unknown (possibly)	MDC_ECG_WPW_UNK_POSSIB	17368
Pattern WPW, Type_unknown, Probably ECG, Heart CVS	WPW_probably		Wolf-Parkinson-White Syndrom type unknown (probably)	MDC_ECG_WPW_UNK_PROB	17360

A.7.3 Nomenclature, data dictionary, and codes for haemodynamic monitoring measurements

A.7.3.1 Introduction

Subclause A.7.3 presents a nomenclature for the systematic names related to haemodynamic measurements.

A.7.3.2 Base concepts

Applicable descriptors are as follows:

- **Duration** (a certain time interval, i.e., the time interval between opening and closing of aortic valve)
- **Gradient**
- **Index** (a mathematical formula with many terms)
- **Pressure** (the pressure of blood in different circulatory compartments and in different time phases with respect to the cardiac cycle)
- **Rate** (the frequency of occurrence of events, i.e., of blood pulses)
- **Resistance** (the resistance to the blood flow in different vascular compartments)
- **Temperature** (the temperature of substances)
- **Volume** (the quantity of blood pumped by the heart)
- **Work** (the activity of the heart in pumping blood)

A.7.3.3 First set of differentiating criteria

Four semantic links are applied for the first set of differentiating criteria. More than one semantic link and one descriptor are possible.

A.7.3.3.1 Semantic link "*is computed as*:"

Applicable descriptors are as follows:

- **Derivative**
- **Difference(SystemicAndPulmonary)**
- **DividedByPressure**
- **MaxNegative**
- **MaxPositive**
- **Mean**
- **MeanDiastolic**
- **MeanSystolic**
- **Relaxation**

A.7.3.3.2 Semantic link "*has method*:"

Applicable descriptors are as follows:

- **Continuous**
- **Discontinuous**
- **Invasive**
- **Noninvasive**
- **Plethysmography**
- **Wedge**

A.7.3.3.3 Semantic link "*has time criterion*:"

Applicable descriptors are as follows:

- **BeginDiastolic**
- **Diastolic**
- **DiastolicFilling**
- **EndDiastolic**
- **EndSystolic**
- **OneBeat**
- **PerMinute**
- **Systolic**
- **SystolicEjection**

A.7.3.3.4 Semantic link "*is derived from*:"

Applicable descriptors are as follows:

- **BloodPressure**
- **Pressure**

A.7.3.4 Second set of differentiating criteria

One semantic link is applied for this set of differentiating criteria.

A.7.3.4.1 Semantic link "*concerns*:"

Possible descriptors are as follows:

- **Blood**
- **ConsumedOxygen**
- **Flow**
- **Heart**
- **Injectate**
- **Perfusion**
- **Pulse**
- **Volume**
- **Work**

A.7.3.5 Third set of differentiating criteria

Two semantic links are applied for this set of differentiating criteria. More than one semantic link and one descriptor are possible.

A.7.3.5.1 Semantic link "*pertains to*:"

Possible descriptors are as follows:

- **AnteriorDescending**
- **Aorta**
- **AorticValve**
- **Artery**

- **Atrium**
- **Blood**
- **CentralVein**
- **CircumflexBranch**
- **ConusArtery**
- **CoronaryArtery**
- **Heart**
- **LeftAtrium**
- **LeftSide**
- **LeftVentricle**
- **MarginalBranch**
- **LeftCoronaryArtery**
- **PeripheralFemoralArtery**
- **PeripheralVenousBranch**
- **PosteriorDescending**
- **PulmonaryArtery**
- **PulmonaryBlood**
- **PulmonaryCapillary**
- **RightAtrium**
- **RightCoronaryArtery**
- **RightSide**
- **RightVentricle**
- **SystemicBlood**
- **UmbilicalArtery**
- **UmbilicalVein**
- **Vein**
- **Ventricle**

A.7.3.5.2 Semantic link "*has context*:"

The descriptor is as follows:

- **CVS**

A.7.3.6 Code table

See Table A.7.3.1 for the nomenclature and codes for haemodynamic monitoring measurements.

Table A.7.3.1—Nomenclature and codes for haemodynamic monitoring measurements

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Duration DiastolicFilling Blood AorticValve, LeftVentricle, Heart, CVS	Diastolic filling period	DFP	Period between closing and opening aortic valve	MDC_TIME_PD_VENT_L_AORT_VALV_DIA_FILL	19452
Duration SystolicEjection Blood AorticValve, LeftVentricle, Heart, CVS	Systolic ejection period	SEP	Period between opening and closing aortic valve	MDC_TIME_PD_VENT_L_AORT_VALV	19448
Gradient BloodPressure AorticValve Heart, CVS	Aortic valve pressure gradient	AVPGr	Blood pressure gradient across aortic valve	MDC_GRAD_PRESS_BLD_AORT	19488
Gradient BloodPressure, MaxPositive AorticValve Heart, CVS	Maximum aortic valve pressure gradient	AVPGr-Max	Peak blood pressure gradient across aortic valve during SEP	MDC_GRAD_PRESS_BLD_AORT_POS_MAX	19493
Gradient BloodPressure, Mean AorticValve Heart, CVS	Mean aortic valve pressure gradient	AVPGr-Mean	Mean blood pressure gradient across aortic valve during SEP	MDC_GRAD_PRESS_BLD_AORT_MEAN	19491
Gradient BloodPressure MitralValve Heart, CVS	Mitral valve pressure gradient	MVPGr	Blood pressure gradient across mitral valve	MDC_GRAD_PRESS_BLD_MITRAL	19464
Gradient BloodPressure, MaxPositive MitralValve Heart, CVS	Maximum mitral valve pressure gradient	MVPGr-Max	Peak blood pressure gradient across mitral valve during DFP	MDC_GRAD_PRESS_BLD_MITRAL_POS_MAX	19469
Gradient BloodPressure, Mean MitralValve Heart, CVS	Mean mitral valve pressure gradient	MVPGr-Mean	Mean blood pressure gradient across mitral valve during DFP	MDC_GRAD_PRESS_BLD_MITRAL_MEAN	19467
Gradient BloodPressure PulmonaryValve Heart, CVS	Pulmonary valve pressure gradient	PVPGr	Blood pressure gradient across pulmonary valve	MDC_GRAD_PRESS_BLD_PULM	19480
Gradient BloodPressure, MaxPositive PulmonaryValve Heart, CVS	Maximum pulmonary valve pressure gradient	PVPGr-Max	Peak blood pressure gradient across pulmonary valve	MDC_GRAD_PRESS_BLD_PULM_POS_MAX	19485
Gradient BloodPressure, Mean PulmonaryValve Heart, CVS	Mean pulmonary valve pressure gradient	PVPGr-Mean	Mean blood pressure gradient across pulmonary valve	MDC_GRAD_PRESS_BLD_PULM_MEAN	19483

Table A.7.3.1—Nomenclature and codes for haemodynamic monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Gradient BloodPressure TricuspidValve Heart, CVS	Tricuspid valve pressure gradient	TVPGr	Blood pressure gradient across tricuspid valve	MDC_GRAD_PRESS_BLD_TRICUSP	19472
Gradient BloodPressure, MaxPositive TricuspidValve Heart, CVS	Maximum tricuspid valve pressure gradient	TVPGr_Max	Peak blood pressure gradient across tricuspid valve	MDC_GRAD_PRESS_BLD_TRICUSP_POS_MAX	19477
Gradient BloodPressure, Mean TricuspidValve Heart, CVS	Mean tricuspid valve pressure gradient	TVPGr-Mean	Mean blood pressure gradient across tricuspid valve	MDC_GRAD_PRESS_BLD_TRICUSP_MEAN	19475
Index Work LeftVentricle, CVS	Left ventricular stroke indexed	LVSWI	Work of left ventricle of the heart in one cardiac cycle and related to body surface area (LVSW/BSA)	MDC_WK_LV_STROKE_INDEX	18692
Index Work RightVentricle, CVS	Right ventricular stroke indexed	RVSWI	Work of right ventricle of the heart in one cardiac cycle and related to body surface area (RVSW/BSA)	MDC_PVT_WK_RV_STROKE_INDEX	18696
Index PerMinute Perfusion Blood, CVS	Perfusion index		Tissue perfusion computed as milliliters per minute of blood flow per gram of tissue	MDC_BLD_PERF_INDEX	19416
Index PerMinute Volume Blood, LeftVentricle, CVS	Cardiac index	CI	Quantity of blood pumped by the left ventricle into the aorta per minute and divided by the body surface area (CO/BSA)	MDC_OUTPUT_CARD_INDEX	18700
Index Pressure, Derivative, DividedByPressure, MaxPositive LeftVentricle, Heart, CVS	Contractility index	LV_peak_VCE	Contractility index, maximum value of derivative of left ventricular pressure divided by pressure.	MDC_INDEX_PRESS_VENT_L_DERIV_POS_MAX_DIV_P	19436
Index Pressure, Derivative, MaxNegative LeftVentricle, Heart, CVS		LV_MaxNegative_dp/dt	Maximal negative value of derivative of left ventricular pressure	MDC_INDEX_PRESS_VENT_L_DERIV_NEG_MAX	19440
Index Pressure, Derivative, MaxPositive LeftVentricle, Heart, CVS		LV_MaxPositive_dp/dt	Maximal positive value of derivative of left ventricular pressure	MDC_INDEX_PRESS_VENT_L_DERIV_POS	19432
Index Pressure, Relaxation LeftVentricle, Heart, CVS	Left ventricular relaxation constant	LV_Relaxation_Constant	Mono exponential fit of left ventricular pressure from closing aorta valve until begin diastolic pressure	MDC_INDEX_PRESS_VENT_L_RELAX	19444
Pressure Blood Aorta, CVS	Aortic pressure	AP	Pressure of the blood in the aorta	MDC_PRESS_BLD_AORT	18956

Table A.7.3.1—Nomenclature and codes for haemodynamic monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pressure Blood Artery, CVS	Arterial pressure	ABP	Pressure of the blood in an artery	MDC_PRESS_BLD_ART	18960
Pressure Blood Atrium, CVS	Atrial pressure		Pressure of the blood in an atrium of the heart	MDC_PRESS_BLD_ATR	18988
Pressure Blood CentralVein, CVS	Central venous pressure	CVP	Pressure of the blood in the thoracic venae cavae	MDC_PRESS_BLD_VEN_CENT	19012
Pressure Blood CircumflexBranch, LeftCoronaryArtery, Heart, CVS	Left circumflex branch coronary arterial pressure		Pressure in the left coronary artery, circumflex branch	MDC_PRESS_BLD_CORON_ART_L_CIRC	19052
Pressure Blood ConusArtery, CoronaryArtery, Heart, CVS	Right conus artery pressure		Pressure in the coronary artery, conus artery	MDC_PRESS_BLD_CORON_ART_CONUS	19064
Pressure Blood CVS	Blood pressure	BP	Pressure of the blood	MDC_PRESS_BLD	18944
Pressure Blood LeftAtrium, CVS	Left atrial pressure	LAP	Pressure of the blood in the left atrium of the heart	MDC_PRESS_BLD_ATR_LEFT	18992
Pressure Blood LeftVentricle, CVS	Left ventricular pressure	LV	Pressure of the blood in the left ventricle of the heart	MDC_PRESS_BLD_VENT_LEFT	19028
Pressure Blood MarginalBranch, RightCoronaryArtery, Heart, CVS	Right marginal branch arterial pressure		Pressure in the right coronary artery, marginal branch	MDC_PRESS_BLD_CORON_ART_R_MARG	19068
Pressure Blood PosteriorDescending, RightCoronaryArtery, Heart, CVS	Right posterior descending branch coronary arterial pressure		Pressure in right coronary artery, posterior descending branch	MDC_PRESS_BLD_CORON_ART_R_POST_DESCEND	19060
Pressure Blood PulmonaryArtery, CVS	Pulmonary arterial pressure	PAP	Pressure of the blood in the pulmonary artery	MDC_PRESS_BLD_ART_PULM	18972
Pressure Blood PulmonaryCapillary, CVS	Pulmonary capillary blood pressure	PCP	Pressure of the blood in the pulmonary capillaries	MDC_PRESS_BLD_PULM_CAP	19004
Pressure Blood RightAtrium, CVS	Right atrial pressure	RAP	Pressure of the blood in the right atrium of the heart	MDC_PRESS_BLD_ATR_RIGHT	18996
Pressure Blood RightVentricle, CVS	Right ventricular pressure	RV	Pressure of the blood in the right ventricle of the heart	MDC_PRESS_BLD_VENT_RIGHT	19032

Table A.7.3.1—Nomenclature and codes for haemodynamic monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pressure Blood RightCoronaryArtery, Heart, CVS	Right coronary arterial pressure		Pressure in the right coronary artery, NOS	MDC_PRESS_BLD_CORON_ART_R	19056
Pressure Blood UmbilicalArtery, CVS	Umbilical pressure	UP	Pressure of the blood in the umbilical arteries of a fetus	MDC_PRESS_BLD_ART_UMB	18984
Pressure Blood UmbilicalVein, CVS	Umbilical venous blood pressure	UVP	Pressure of the blood in the umbilical veins of a fetus	MDC_PRESS_BLD_VEN_UMB	19016
Pressure Blood Vein, CVS	Venous pressure	VP	Pressure of the blood in body veins	MDC_PRESS_BLD_VEN	19008
Pressure Blood Ventricle, CVS	Ventricular pressure		Pressure of the blood in a ventricle of the heart	MDC_PRESS_BLD_VENT	19020
Pressure Blood AnteriorDescending, LeftCoronaryArtery, Heart, CVS	Left anterior descending branch coronary arterial pressure		Pressure in the left coronary artery, anterior descending branch	MDC_PRESS_BLD_CORON_ART_L_ANT_DESCEND	19048
Pressure Blood CoronaryArtery, Heart, CVS	Coronary arterial pressure		Pressure in the coronary artery, NOS	MDC_PRESS_BLD_CORON_ART	19040
Pressure Blood LeftCoronaryArtery, Heart, CVS	Left coronary arterial pressure		Pressure in the left coronary artery, NOS	MDC_PRESS_BLD_CORON_ART_L	19044
Pressure BeginDiastolic Blood LeftVentricle, Heart, CVS	Begin-diastolic left ventricular pressure		Begin-diastolic pressure of the blood in the left ventricle of the heart	MDC_PRESS_BLD_VENT_LEFT_BEGIN_DIA	19074
Pressure Diastolic Blood AnteriorDescending, LeftCoronaryArtery, Heart, CVS	Diastolic left anterior descending branch coronary arterial pressure		Diastolic pressure in the left coronary artery, anterior descending branch	MDC_PRESS_BLD_CORON_ART_L_ANT_DESCEND_DIA	19050
Pressure Diastolic Blood Aorta, CVS	Diastolic aortic pressure		Diastolic pressure of the blood in the aorta	MDC_PRESS_BLD_AORT_DIA	18958
Pressure Diastolic Blood Artery, CVS	Diastolic arterial pressure		Diastolic pressure of the blood in an artery	MDC_PRESS_BLD_CORON_ART_R_POST_DESCEND_DIA	18962

Table A.7.3.1—Nomenclature and codes for haemodynamic monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pressure Diastolic Blood Central Vein, CVS	Diastolic central venous pressure		Diastolic pressure of the blood in the thoracic venae cavae	MDC_PRESS_BLD_VEN_CENT_DIA	19014
Pressure Diastolic Blood Circumflex Branch, Left Coronary Artery, Heart, CVS	Diastolic left circumflex branch coronary arterial pressure		Diastolic pressure in the left coronary artery, circumflex branch	MDC_PRESS_BLD_CORON_ART_L_CIRC_DIA	19054
Pressure Diastolic Blood Conus Artery, Coronary Artery, Heart, CVS	Diastolic right conus artery pressure		Diastolic pressure in the coronary artery, conus artery	MDC_PRESS_BLD_CORON_ART_CONUS_DIA	19066
Pressure Diastolic Blood Coronary Artery, Heart, CVS	Diastolic coronary arterial pressure		Diastolic pressure in the coronary artery, NOS	MDC_PRESS_BLD_CORON_ART_DIA	19042
Pressure Diastolic Blood CVS	Diastolic blood pressure		Pressure of the blood at the diastolic phase	MDC_PRESS_BLD_DIA	18946
Pressure Diastolic Blood Left Atrium, CVS	Diastolic left atrial pressure		Diastolic pressure of the blood in the left atrium of the heart	MDC_PRESS_BLD_ATR_LEFT_DIA	18994
Pressure Diastolic Blood Left Ventricle, CVS	Diastolic left ventricular pressure		Diastolic pressure of the blood in the left ventricle of the heart	MDC_PRESS_BLD_VENT_LEFT_DIA	19030
Pressure Diastolic Blood Left Coronary Artery, Heart, CVS	Diastolic left coronary arterial pressure		Diastolic pressure in the left coronary artery, NOS	MDC_PRESS_BLD_CORON_ART_L_DIA	19046
Pressure Diastolic Blood Marginal Branch, Right Coronary Artery, Heart, CVS	Diastolic right marginal branch arterial pressure		Diastolic pressure in the right coronary artery, marginal branch	MDC_PRESS_BLD_CORON_ART_R_MARG_DIA	19070
Pressure Diastolic Blood Posterior Descending, Right Coronary Artery, Heart, CVS	Diastolic right posterior descending branch coronary arterial pressure		Diastolic pressure in the right coronary artery, posterior descending branch	MDC_PRESS_BLD_CORON_ART_R_POST_DESCEND_DIA	19062
Pressure Diastolic Blood Pulmonary Artery, CVS	Diastolic pulmonary arterial pressure		Diastolic pressure of the blood in the pulmonary artery	MDC_PRESS_BLD_ART_PULM_DIA	18974

Table A.7.3.1—Nomenclature and codes for haemodynamic monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pressure Diastolic Blood PulmonaryCapillary, CVS	Diastolic pulmonary capillary pressure		Diastolic pressure of the blood in the pulmonary capillaries	MDC_PRESS_BLD_PULM_CAP_DIA	19006
Pressure Diastolic Blood RightAtrium, CVS	Diastolic right atrial pressure		Diastolic pressure of the blood in the right atrium of the heart	MDC_PRESS_BLD_ATR_RIGHT_DIA	18998
Pressure Diastolic Blood RightVentricle, CVS	Diastolic right ventricular pressure		Diastolic pressure of the blood in the right ventricle of the heart	MDC_PRESS_BLD_VENT_RIGHT_DIA	19034
Pressure Diastolic Blood RightCoronaryArtery, Heart, CVS	Diastolic right coronary arterial pressure		Diastolic pressure in the right coronary artery, NOS	MDC_PRESS_BLD_CORON_ART_R_DIA	19058
Pressure Diastolic Blood UmbilicalArtery, CVS	Diastolic umbilical arterial pressure		Diastolic pressure of the blood in the umbilical arteries of a fetus	MDC_PRESS_BLD_ART_UMB_DIA	18986
Pressure Diastolic Blood UmbilicalVein, CVS	Diastolic umbilical venous pressure		Diastolic pressure of the blood in the umbilical veins of a fetus	MDC_PRESS_BLD_VEN_UMB_DIA	19018
Pressure EndDiastolic Blood LeftVentricle, CVS	End-diastolic left ventricular pressure		End-diastolic pressure of the blood in the left ventricle of the heart	MDC_PRESS_BLD_VENT_LEFT_END_DIA	19430
Pressure Mean Blood AnteriorDescending, LeftCoronaryArtery, Heart, CVS	Mean left anterior descending branch coronary arterial pressure		Mean pressure in the left coronary artery, anterior descending branch	MDC_PRESS_BLD_CORON_ART_L_ANT_DESCEND_MEAN	19051
Pressure Mean Blood Aorta, CVS	Mean aortic pressure		Mean pressure of the blood in the aorta	MDC_PRESS_BLD_AORT_MEAN	18959
Pressure Mean Blood Artery, CVS	Mean arterial pressure		Mean pressure of the blood in an artery	MDC_PRESS_BLD_ART_MEAN	18963
Pressure Mean Blood CentralVein, CVS	Mean central venous pressure		Mean pressure of the blood in the thoracic venae cavae	MDC_PRESS_BLD_VEN_CENT_MEAN	19015

Table A.7.3.1—Nomenclature and codes for haemodynamic monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pressure Mean Blood CircumflexBranch, LeftCoronaryArtery, Heart, CVS	Mean left circumflex branch coronary arterial pressure		Mean pressure in the left coronary artery, circumflex branch	MDC_PRESS_BLD_CORON_ART_L_CIRC_MEAN	19055
Pressure Mean Blood ConusArtery, CoronaryArtery, Heart, CVS	Mean right conus artery pressure		Mean pressure in the coronary artery, conus artery	MDC_PRESS_BLD_CORON_ART_CONUS_MEAN	19067
Pressure Mean Blood CoronaryArtery, Heart, CVS	Mean coronary arterial pressure		Mean pressure in the coronary artery, NOS	MDC_PRESS_BLD_CORON_ART_MEAN	19043
Pressure Mean Blood CVS	Mean blood pressure		Pressure of the blood as computed by averaging on one cycle	MDC_PRESS_BLD_MEAN	18947
Pressure Mean Blood LeftAtrium, CVS	Mean left atrial pressure		Mean pressure of the blood in the left atrium of the heart	MDC_PRESS_BLD_ATR_LEFT_MEAN	18995
Pressure Mean Blood LeftVentricle, CVS	Mean left ventricular pressure		Mean pressure of the blood in the left ventricle of the heart	MDC_PRESS_BLD_VENT_LEFT_MEAN	19031
Pressure Mean Blood LeftCoronaryArtery, Heart, CVS	Mean left coronary arterial pressure		Mean pressure in the left coronary artery, NOS	MDC_PRESS_BLD_CORON_ART_L_MEAN	19047
Pressure Mean Blood MarginalBranch, RightCoronaryArtery, Heart, CVS	Mean right marginal branch arterial pressure		Mean pressure in the right coronary artery, marginal branch	MDC_PRESS_BLD_CORON_ART_R_MARG_MEAN	19071
Pressure Mean Blood PulmonaryArtery, CVS	Mean pulmonary arterial pressure		Mean pressure of the blood in the pulmonary artery	MDC_PRESS_BLD_ART_PULM_MEAN	18975
Pressure Mean Blood PulmonaryCapillary, CVS	Mean pulmonary capillary pressure		Mean pressure of the blood in the pulmonary capillaries	MDC_PRESS_BLD_PULM_CAP_MEAN	19007
Pressure Mean Blood RightAtrium, CVS	Mean right atrial pressure		Mean pressure of the blood in the right atrium of the heart	MDC_PRESS_BLD_ATR_RIGHT_MEAN	18999

Table A.7.3.1—Nomenclature and codes for haemodynamic monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pressure Mean Blood RightVentricle, CVS	Mean right ventricular pressure		Mean pressure of the blood in the right ventricle of the heart	MDC_PRESS_BLD_VENT_RIGHT_MEAN	19035
Pressure Mean Blood RightCoronaryArtery, Heart, CVS	Mean right coronary arterial pressure		Mean pressure in the right coronary artery, NOS	MDC_PRESS_BLD_CORON_ART_R_MEAN	19059
Pressure Mean Blood UmbilicalArtery, CVS	Mean umbilical arterial pressure		Mean pressure of the blood in the umbilical arteries of a fetus	MDC_PRESS_BLD_ART_UMB_MEAN	18987
Pressure Mean Blood UmbilicalVein, CVS	Mean umbilical venous pressure		Mean pressure of the blood in the umbilical veins of a fetus	MDC_PRESS_BLD_VEN_UMB_MEAN	19019
Pressure Mean Blood PosteriorDescending, RightCoronaryArtery, Heart, CVS	Mean right posterior descending branch coronary arterial pressure		Mean pressure in the right coronary artery, posterior descending branch	MDC_PRESS_BLD_CORON_ART_R_POST_DESCEND_MEAN	19063
Pressure MeanDiastolic Blood LeftVentricle, Heart, CVS	Left ventricle mean-diastolic pressure		Mean pressure in the left ventricle during diastolic phase	MDC_PRESS_BLD_VENT_LEFT_DIA_MEAN	19082
Pressure MeanSystolic Blood LeftVentricle, Heart, CVS	Left ventricle mean-systolic pressure		Mean pressure in left ventricle during systolic phase	MDC_PRESS_BLD_VENT_LEFT_SYS_MEAN	19077
Pressure Noninvasive, Diastolic Blood CVS	Noninvasive diastolic blood pressure		Pressure of the blood, obtained noninvasively (i.e., fingertip), at the diastolic phase	MDC_PRESS_BLD_NONINV_DIA	18950
Pressure Noninvasive, Mean Blood CVS	Noninvasive mean blood pressure		Pressure of the blood, obtained noninvasively (i.e., fingertip), as computed by averaging on one cycle	MDC_PRESS_BLD_NONINV_MEAN	18951
Pressure Noninvasive, Continuous Blood CVS	Continuous, noninvasive blood pressure		Pressure of the blood recorded continuously and noninvasively (i.e., fingertip)	MDC_PRESS_BLD_NONINV_GTS	18952

Table A.7.3.1—Nomenclature and codes for haemodynamic monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pressure Noninvasive, Continuous, Diastolic Blood CVS	Continuous, noninvasive diastolic blood pressure		Pressure of the blood, obtained continuously and noninvasively (i.e., fingertip), at the diastolic phase	MDC_PRESS_BLD_NONINV_DIA_CTS	18954
Pressure Noninvasive, Continuous, Mean Blood CVS	Continuous, noninvasive mean blood pressure		Pressure of the blood, obtained continuously and noninvasively (i.e., fingertip), as computed by averaging on one cycle	MDC_PRESS_BLD_NONINV_MEAN_CTS	18955
Pressure Noninvasive, Continuous, Systolic Blood CVS	Continuous, noninvasive systolic blood pressure		Pressure of the blood, obtained continuously and noninvasively (i.e., fingertip), at the systolic phase	MDC_PRESS_BLD_NONINV_SYS_CTS	18953
Pressure Noninvasive, Discontinuous, Diastolic Blood CVS	Discontinuous, noninvasive diastolic blood pressure		Pressure of the blood at the diastolic phase, measured discontinuously and noninvasively (cuff)	MDC_PRESS_CUFF_DIA	19230
Pressure Noninvasive, Discontinuous, Mean Blood CVS	Discontinuous, noninvasive mean blood pressure		Pressure of the blood computed as mean value between systolic and diastolic pressures, measured discontinuously and noninvasively (cuff)	MDC_PRESS_CUFF_MEAN	19231
Pressure Noninvasive, Discontinuous, Systolic Blood CVS	Discontinuous, noninvasive systolic blood pressure		Pressure of the blood at the systolic phase, measured discontinuously and noninvasively (cuff)	MDC_PRESS_CUFF_SYS	19229
Pressure Noninvasive, Systolic Blood CVS	Noninvasive systolic blood pressure		Pressure of the blood, obtained noninvasively (i.e., fingertip), at the systolic phase	MDC_PRESS_BLD_NONINV_SYS	18949
Pressure Systolic Blood Anterior/Descending, Left Coronary Artery, Heart, CVS	Systolic left anterior descending branch coronary arterial pressure		Systolic pressure in the left coronary artery, anterior descending branch	MDC_PRESS_BLD_CORON_ART_L_ANT_DESCEND_SYS	19049
Pressure Systolic Blood Aorta, CVS	Systolic aortic pressure		Systolic pressure of the blood in the aorta	MDC_PRESS_BLD_AORT_SYS	18957

Table A.7.3.1—Nomenclature and codes for haemodynamic monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pressure Systolic Blood Artery, CVS	Systolic arterial pressure		Systolic pressure of the blood in an artery	MDC_PRESS_BLD_ART_SYS	18961
Pressure Systolic Blood CentralVein, CVS	Systolic central venous pressure		Systolic pressure of the blood in the thoracic venae cavae	MDC_PRESS_BLD_VEN_CENT_SYS	19013
Pressure Systolic Blood CircumflexBranch, LeftCoronaryArtery, Heart, CVS	Systolic left circumflex branch coronary arterial pressure		Systolic pressure in the left coronary artery, circumflex branch	MDC_PRESS_BLD_CORON_ART_L_CIRC_SYS	19053
Pressure Systolic Blood ConusArtery, CoronaryArtery, Heart, CVS	Systolic right conus artery pressure		Systolic pressure in the coronary artery, conus artery	MDC_PRESS_BLD_CORON_ART_CONUS_SYS	19065
Pressure Systolic Blood CoronaryArtery, Heart, CVS	Systolic coronary arterial pressure		Systolic pressure in the coronary artery, NOS	MDC_PRESS_BLD_CORON_ART_SYS	19041
Pressure Systolic Blood CVS	Systolic blood pressure		Pressure of the blood at the systolic phase	MDC_PRESS_BLD_SYS	18945
Pressure Systolic Blood LeftAtrium, CVS	Systolic left atrial pressure		Systolic pressure of the blood in the left atrium of the heart	MDC_PRESS_BLD_ATR_LEFT_SYS	18993
Pressure Systolic Blood LeftVentricle, CVS	Systolic left ventricular pressure		Systolic pressure of the blood in the left ventricle of the heart	MDC_PRESS_BLD_VENT_LEFT_SYS	19029
Pressure Systolic Blood LeftCoronaryArtery, Heart, CVS	Systolic left coronary arterial pressure		Systolic pressure in left coronary artery, NOS	MDC_PRESS_BLD_CORON_ART_L_SYS	19045
Pressure Systolic Blood MarginalBranch, RightCoronaryArtery, Heart, CVS	Systolic right marginal branch arterial pressure		Systolic pressure in the right coronary artery, marginal branch	MDC_PRESS_BLD_CORON_ART_R_MARG_SYS	19069
Pressure Systolic Blood PosteriorDescending, RightCoronaryArtery, Heart, CVS	Systolic right posterior descending branch coronary arterial pressure		Systolic pressure in the right coronary artery, posterior descending branch	MDC_PRESS_BLD_CORON_ART_R_POST_DESCEND_SYS	19061

Table A.7.3.1—Nomenclature and codes for haemodynamic monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pressure Systolic Blood PulmonaryArtery, CVS	Systolic pulmonary arterial pressure		Systolic pressure of the blood in the pulmonary artery	MDC_PRESS_BLD_ART_PULM_SYS	18973
Pressure Systolic Blood PulmonaryCapillary, CVS	Systolic pulmonary capillary pressure		Systolic pressure of the blood in the pulmonary capillaries	MDC_PRESS_BLD_PULM_CAP_SYS	19005
Pressure Systolic Blood RightAtrium, CVS	Systolic right atrial pressure		Systolic pressure of the blood in the right atrium of the heart	MDC_PRESS_BLD_ATR_RIGHT_SYS	18997
Pressure Systolic Blood RightVentricle, CVS	Systolic right ventricular pressure		Systolic pressure of the blood in the right ventricle of the heart	MDC_PRESS_BLD_VENT_RIGHT_SYS	19033
Pressure Systolic Blood RightCoronaryArtery, Heart, CVS	Systolic right coronary arterial pressure		Systolic pressure in the right coronary artery, NOS	MDC_PRESS_BLD_CORON_ART_R_SYS	19057
Pressure Systolic Blood UmbilicalArtery, CVS	Systolic umbilical arterial pressure		Systolic pressure of the blood in the umbilical arteries of a fetus	MDC_PRESS_BLD_ART_UMB_SYS	18985
Pressure Systolic Blood UmbilicalVein, CVS	Systolic umbilical venous pressure		Systolic pressure of the blood in the umbilical veins of a fetus	MDC_PRESS_BLD_VEN_UMB_SYS	19017
Pressure Wedge Blood PulmonaryArtery, CVS	Pulmonary artery wedge pressure	PAW	Pressure of the blood measured by a catheter wedged into a small branch of the pulmonary artery	MDC_PRESS_BLD_ART_PULM_OCCL	18980
Rate Pulse Blood, CVS	Pulse rate	PR	Rate of blood pulse in an artery	MDC_PULS_RATE	18442
Rate Invasive Pulse Blood, CVS	Invasive pulse rate	PRI	Rate of blood pulse in an artery, measured invasively	MDC_BLD_PULS_RATE_INV	18450
Rate Noninvasive Pulse Blood, CVS	Noninvasive pulse rate	PRNI	Rate of blood pulse in an artery, measured not invasively	MDC_PULS_RATE_NON_INV	18474
Rate Plethysmography Pulse Blood, CVS	Pulse rate	PRpl	Rate of blood pulse as obtained by plethysmography	MDC_PLETH_PULS_RATE	18466

Table A.7.3.1—Nomenclature and codes for haemodynamic monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Resistance Flow PulmonaryBlood, CVS	Pulmonary vascular resistance	PVR	Resistance to blood flow in the pulmonary vessels	MDC_RES_VASC_PULM	19236
Resistance Flow SystemicBlood, CVS	Systemic vascular resistance	SVR	Resistance to blood flow in the systemic circulation	MDC_RES_VASC_SYS	19240
Resistance Flow Blood, CVS	Vascular resistance	TVR	Resistance to blood flow within circulation	MDC_RES_VASC	19232
Resistance Difference(SystemicAndPulmonary) Flow Blood, CVS	Systemic vascular resistance indexed	SVRI	Difference between systemic and pulmonary resistance	MDC_RES_VASC_SYS_INDEX	18688
Temperature Injectate Heart, CVS	Temperature of injectate	TI	Temperature of an indicator injectate (cold indicator) used to calculate cardiac output	MDC_TEMP_INJ	19304
Volume EndDiastolic Blood LeftVentricle, Heart, CVS	Left ventricular enddiastolic volume		Volume of the left ventricle at the end of diastolic phase (maximum volume)	MDC_VOL_VENT_L_END_DIA	19456
Volume EndSystolic Blood LeftVentricle, Heart, CVS	Left ventricular end systolic volume		Volume of the left ventricle at the end of systolic phase (minimum volume)	MDC_VOL_VENT_L_END_SYS	19460
Volume OneBeat Blood CVS	Stroke volume	SV	Volume of blood ejected per beat	MDC_VOL_BLD_STROKE	19332
Volume OneBeat Blood LeftVentricle, CVS	Left ventricular stroke volume	LVSV	Volume of blood ejected from the left ventricle per beat	MDC_VOL_BLD_VENT_LEFT_STROKE	19336
Volume PerMinute Blood LeftVentricle, CVS	Cardiac output	CO	Quantity of blood pumped by the left ventricle into the aorta per minute	MDC_OUTPUT_CARD	19204
Volume PerMinute Blood PeripheralFemoralArtery, CVS	Peripheral arterial cardiac output		Blood flow [output] in a peripheral femoral artery	MDC_OUTPUT_CARD_ART_BRANCH	19208
Volume PerMinute Blood PeripheralVenousBranch, CVS	Peripheral venous cardiac output		Blood flow [output] in a peripheral venous branch	MDC_OUTPUT_CARD_VEN_BRANCH	19212

Table A.7.3.1—Nomenclature and codes for haemodynamic monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Volume PerMinute ConsumedOxygen Blood, CVS	Oxygen consumption	VO2	Oxygen consumption of the body	MDC_SAT_O2_CONSUMP	19200
Volume PerMinute, Continuous Blood LeftVentricle, CVS	Continuous cardiac output		Quantity of blood pumped by the left ventricle into the aorta per minute, obtained as continuous measurement	MDC_OUTPUT_CARD_CTS	19420
Volume PerMinute, Discontinuous Blood LeftVentricle, CVS	Discontinuous cardiac output		Quantity of blood pumped by the left ventricle into the aorta per minute, obtained as not continuous measurement	MDC_OUTPUT_CARD_NONCTS	19424
Volume Plethysmography Blood, CVS	Plethysmography		Change in the size of a part as modified by the circulation of the blood in it	MDC_PLETH_VOL_BLD	19224
Work Heart CVS	Cardiac work	CW	Cardiac work	MDC_WK_CARD	19340
Work Heart LeftVentricle, CVS	Ventricular work	VSW	Work of the left ventricle of the heart	MDC_WK_LV	19368
Work Heart RightVentricle, CVS	Right ventricular work	RVW	Work of the right ventricle of the heart	MDC_WK_RV	19360
Work OneBeat Heart LeftSide, CVS	Left side ventricular stroke	LCW	Ventricular stroke - work of left side of the heart in one cardiac cycle	MDC_WK_CARD_LEFT	19344
Work OneBeat Heart LeftVentricle, CVS	Ventricular stroke	LVSW	Work of left ventricle of the heart in one cardiac cycle	MDC_WK_LV_STROKE	19356
Work OneBeat Heart RightSide, CVS	Right side ventricular stroke	RCW	Ventricular stroke - work of right side of the heart in one cardiac cycle	MDC_WK_CARD_RIGHT	19348
Work OneBeat Heart RightVentricle, CVS	Right ventricular stroke	RVSW	Work of right ventricle of the heart in one cardiac cycle	MDC_WK_RV_STROKE	19364

A.7.4 Nomenclature, data dictionary, and codes for respiratory measurements

A.7.4.1 Introduction

Subclause A.7.4 presents a nomenclature for systematic names in respiratory monitoring. Table A.7.4.1 contains the systematic names concerning respiration and mechanical ventilation. It is related to the semantic link "*has target:*" in the nomenclature for vital signs devices and the descriptors Airway and Lung (see A.5.4.1). All of the tables in A.7.4 contain terms that may be used in attributes in the Metric object of the DIM. The acronyms in all the tables are informative and not intended to be normative.

All measurements related to respiration are included in A.7.4; however, where samples are analyzed in a side room or laboratory (e.g., adjacent to an intensive care unit [ICU] or cathlab), they are listed in the nomenclature for bedside blood, urine and fluid chemistry in Table A.7.5.1.

A.7.4.2 Base concepts

The base concepts for the description of the measurements are physical properties. The following descriptors are applicable:

- **Compliance** (the elastic properties of the lung)
- **Concentration** (the chemical components of the gas. The gases both delivered to the patient and resulting from the patient's metabolism are described. Derived values are mean values and values at distinct time points, e.g., EndtidalCO₂)
- **Duration** (a certain time interval, e.g., the inspiration phase)
- **Electrical Impedance** (an electrical measurement, describing changes in electrical properties of the thorax by volume of gas in lungs and fluid volume and distribution in thorax)
- **Flow** (the velocity of the gas exchange, e.g., in the airway)
- **Index** (one of two concepts comprising calculated and derived data. Simple quotients are called *ratio* and complicated calculations, *index*.)
- **Mode** (the type of respiratory ventilation, i.e., spontaneous and/or mechanically controlled, that is in use for the patient)
- **Number** (used for counted events)
- **Pressure** (directly related to physical measurement of pressure)
- **Rate** (the frequency of occurrence of events, etc., based on a certain time frame: second, minute, hour, etc.)
- **Ratio** (one of two concepts comprising calculated and derived data. Simple quotients are called *ratio* and complicated calculations, *index*.)
- **Resistance** (the resistance in the flow of gas in the airway)
- **Volume** (all types of volumes e.g., TidalVolume, MinuteVolume, etc.)

A.7.4.3 First set of differentiating criteria

The second field of the systematic name in Table A.7.4.1 refers to the measurement features. Six semantic links apply for the first set of differentiating criteria; more than one descriptor is possible. They specify different measurement features, e.g., <kind of property>, <kind of quantity>.

A.7.4.3.1 Semantic link "*has method:*"

Descriptors for the method of measurement are as follows:

- **Dynamic**
- **Occlusion**

- **Static**

Descriptors for the method of measurement for respiratory rate are as follows:

- **Pressure**
- **Transthoracic**

Descriptors for the type of breathing or mechanical ventilation are as follows:

- **PositivePressure**
- **PressureSupport**
- **Spontaneous**

Descriptors for specification of respiration or ventilation mode are as follows:

- **Applied**
- **Intrinsic**
- **Positive**
- **PositiveEndexpiratory**

The descriptor for defining that the assistance by external means is continuous in time is as follows:

- **Continuous**

The descriptor for defining that the assistance by external means is discontinuous in time is as follows:

- **Intermittent**

The descriptor for defining that the assistance by external means is synchronized to spontaneous breathing is as follows:

- **Synchronized**

A.7.4.3.2 Semantic link "*has specification*:"

The descriptor for defining the time interval for calculation or integrating a value is as follows:

- **OneMinute**

The descriptor for defining the type of concentration measurement is as follows:

- **PartialPressure**

A.7.4.3.3 Semantic link "*pertains to*:"

Descriptors for volumes used for calculating the ratio are as follows:

- **DeadspaceVolume**
- **TidalVolume**

Descriptors for time intervals for computation of time ratios are as follows:

- **Duration(ExpirationPhase)**
- **Duration(InspirationPhase)**

Descriptors for components of gas in the process or calculation are as follows:

- **Flow(AlveolarVentilation)**
- **Flow(Expired CO₂)**

- **Flow(O₂used)**
- **Flow(Perfusion)**

A.7.4.3.4 Semantic link "*has time criterion*:"

Descriptors for phases or certain time points in the respiration or ventilation process are as follows:

- **Endexpiratory**
- **EndTidal**
- **Expiration**
- **ExpirationPhase**
- **Inspiration**
- **InspirationPhase**
- **Pause**
- **Plateau**
- **SinceStartInspiration**

A.7.4.3.5 Semantic link "*has origin*:"

Descriptors for defining the origin of a derived value are as follows:

- **Airway**
- **CO₂**
- **Flow**
- **NOS**
- **Pressure**
- **Volume**

A.7.4.3.6 Semantic link "*is computed as*:"

Descriptors for calculations to derive values from waveforms are as follows:

- **Maximum**
- **Mean**
- **Minimum**

Descriptors for the difference of values in inspiration and expiration phase as calculated, in this case used for concentration differences, are as follows:

- **Difference(Inspiration, Expiration)**
- **Difference(PartialPressureInspiration, PartialPressureExpiration)**

Descriptors for the calculation necessary for index are as follows:

- **Ratio(FlowDifference, PressureDifference)**

A.7.4.4 Second set of differentiating criteria

The third field of systematic name in Table A.7.4.1 describes the target of measurement. More than one descriptor is possible. It holds information about body compartments, body parts, or body functions or refers to their state. Because mechanical ventilation is included in the application field, Table A.7.4.1 contains terms concerning ventilator functionality as well.

A.7.4.4.1 Semantic link "concerns:"

Descriptors for defining the part or site in body are as follows:

- **Alveolar**
- **Alveoli**
- **Airway**
- **Esophageal**
- **InterPleural**
- **Lung**
- **LungStructure**
- **Pleura**
- **RespiratoryTract**
- **Transthoracic**

One descriptor exists for the type of functional disorder, the absence of breath, which is an important event or alarm. Duration is normally measured.

- **Apnea**

Descriptors for defining body function are as follows:

- **Breath**
- **GasTransport**

The descriptor for defining that the pattern of respiration is spontaneous and controlled by the patient is as follows:

- **BreathingMode**

Descriptors for the functional properties of the lung and the respiratory tract are as follows:

- **DeadSpace**
- **Tidal**
- **TidalVolume**
- **Trapped**
- **VitalCapacity**

Descriptors for compartment, respired gas and components are as follows. For the most common gas and anesthetic vapor concentrations, separate terms have been included.

- **CO₂**
- **Desflurane**
- **Enflurane**
- **Gas**
- **Halothane**
- **Isoflurane**
- **NO₂**
- **N₂O**
- **O₂**
- **Sevoflurane**
- **Substance**

The descriptor for the loss of gas by a leak in ventilator itself, tubing, connections, etc., is as follows:

- **Leakage**

Descriptors for the functional settings of the ventilator are as follows:

- **Sigh**
- **SighMultiple**
- **TriggerSensitivity**
- **VentilationMode**

The descriptor for defining that the pattern of respiration is controlled or modified by a ventilator is as follows:

- **Ventilation**

A.7.4.5 Third set of differentiating criteria

The fourth field holds information about the context, i.e., the functional or organic system for which the term is relevant. All terms in this field belong to respiration/ventilation.

A.7.4.5.1 Semantic link "*has context*:"

Only one of the following descriptors that further specify the general context of respiration may be selected:

- **Airway**
- **Breathing**
- **LungStructure**
- **RespiratoryProcess**
- **RespiratoryTract**

The descriptor for defining measurements in mechanical ventilation and ventilator settings is as follows:

- **Ventilator**

A.7.4.6 Code table

See Table A.7.4.1 for the nomenclature and codes for respiratory measurements.

Table A.7.4.1—Nomenclature and codes for respiratory measurements

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Compliance Alveoli LungStructure	Compliance of respiratory system	C TH+L	Change of tidal volume per unit change of airway pressure	MDC_COMPL_LUNG	20616
Compliance Dynamic Alveoli, Pleura LungStructure	Thoracic compliance	C TH	Change of tidal volume per unit change of trans thoracic pressure	MDC_COMPL_LUNG_DYN	20620
Compliance Static Alveoli, Pleura LungStructure	Lung compliance, static	C L	Change of tidal volume per unit change in esophageal pressure measured statically at expiration end	MDC_COMPL_LUNG_STATIC	20624
Concentration O ₂ , Gas Airway	Concentration airway O ₂	%O ₂	Concentration of oxygen in airway gas	MDC_CONC_AWAY_O2	20836
Concentration CO ₂ , Gas Airway	Concentration airway CO ₂	%CO ₂	Concentration of carbon dioxide in airway gas	MDC_CONC_AWAY_CO2	20628
Concentration N ₂ , Gas Airway	Concentration airway N ₂	% N ₂	Concentration of nitrogen in airway gas	MDC_CONC_AWAY_N2	21372
Concentration Agent, Gas Airway	Concentration airway agent	%Agent	Concentration of agent in airway gas	MDC_CONC_AWAY_AGENT	21384
Concentration Desflurane, Gas Airway	Concentration airway desflurane	%Des-flurane	Concentration of desflurane in airway gas	MDC_CONC_AWAY_DESFL	20952
Concentration Enflurane, Gas Airway	Concentration airway enflurane	%En-flurane	Concentration of enflurane in airway gas	MDC_CONC_AWAY_ENFL	20956
Concentration Halothane, Gas Airway	Concentration airway halothane	%Halo-thane	Concentration of halothane in airway gas	MDC_CONC_AWAY_HALOTH	20960
Concentration Sevoflurane, Gas Airway	Concentration airway sevoflurane	%Sevo-flurane	Concentration of sevoflurane in airway gas	MDC_CONC_AWAY_SEVOFL	20964
Concentration Isoflurane, Gas Airway	Concentration airway isoflurane	%Iso-flurane	Concentration of isoflurane in airway gas	MDC_CONC_AWAY_ISOFL	20968

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Concentration NO ₂ , Gas Airway	Concentration airway NO ₂	%Nitrogen Dioxide	Concentration of nitrogen dioxide in airway gas	MDC_CONC_AWAY_NO2	20972
Concentration N ₂ O, Gas Airway	Concentration airway N ₂ O	%Nitrous Oxide	Concentration of nitrous oxide in airway gas	MDC_CONC_AWAY_N2O	20976
Concentration CO ₂ , Gas Ventilator	Concentration CO ₂ (ventilator)		Concentration of carbon dioxide in airway gas during mechanical ventilation	MDC_VENT_CONC_AWAY_CO2	20820
Concentration O ₂ , Gas Ventilator	Concentration oxygen (ventilator)	FIO ₂	Concentration of oxygen in airway during mechanical ventilation	MDC_VENT_CONC_AWAY_O2	20648
Concentration Desflurane, Gas Ventilator	Concentration desflurane (ventilator)		Concentration of desflurane in airway gas during mechanical ventilation	MDC_VENT_CONC_DESFL	20980
Concentration Enflurane, Gas Ventilator	Concentration enflurane (ventilator)		Concentration of enflurane in airway gas during mechanical ventilation	MDC_VENT_CONC_ENFL	20984
Concentration Halothane, Gas Ventilator	Concentration halothane (ventilator)		Concentration of halothane in airway gas during mechanical ventilation	MDC_VENT_CONC_HALOTH	20988
Concentration Sevoflurane, Gas Ventilator	Concentration sevoflurane (ventilator)		Concentration of sevoflurane in airway gas during mechanical ventilation	MDC_VENT_CONC_SEVOFL	20992
Concentration Isoflurane, Gas Ventilator	Concentration isoflurane (ventilator)		Concentration of isoflurane in airway gas during mechanical ventilation	MDC_VENT_CONC_ISOFL	20996
Concentration NO ₂ , Gas Ventilator	Concentration NO ₂ (ventilator)		Concentration of nitrogen dioxide in airway gas during mechanical ventilation	MDC_VENT_CONC_NO2	21000
Concentration N ₂ O, Gas Ventilator	Concentration N ₂ O (ventilator)		Concentration of nitrous oxide in airway gas during mechanical ventilation	MDC_VENT_CONC_N2O	21004

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Concentration Difference (Inspiration, Expiration) Substance, Gas Ventilator	Diff. inspired and expired substance conc. (ventilator)		Difference in substance concentration between inspiration and expiration during mechanical ventilation	MDC_VENT_CONC_SUBST_DELTA	21008
Concentration Difference (Inspiration, Expiration) O ₂ , Gas Ventilator	Diff. inspired and expired oxygen conc. (ventilator)	FI-EO2	Difference in oxygen concentration between inspiration and expiration during mechanical ventilation	MDC_VENT_CONC_AWAY_O2_DELTA	20840
Concentration Difference Partial Pressure (Inspiration, Expiration) O ₂ , Gas Airway	Respir. O ₂ pressure difference	PI-EO2	Difference between inspiratory and expiratory partial pressures of oxygen in airway gas	MDC_AWAY_O2_DELTA	20672
Concentration End Tidal Agent, Gas Airway	Concentration airway agent end tidal		Concentration of agent in airway gas measured at the end of expiration	MDC_CONC_AWAY_AGENT_ET	21388
Concentration End Tidal Desflurane, Gas Airway	Concentration airway desflurane end tidal		Concentration of desflurane in airway gas measured at the end of expiration	MDC_CONC_AWAY_DESFL_ET	21012
Concentration End Tidal Enflurane, Gas Airway	Concentration airway enflurane end tidal		Concentration of enflurane in airway gas measured at the end of expiration	MDC_CONC_AWAY_ENFL_ET	21016
Concentration End Tidal Halothane, Gas Airway	Concentration airway halothane end tidal		Concentration of halothane in airway gas measured at the end of expiration	MDC_CONC_AWAY_HALOTH_ET	21020
Concentration End Tidal Sevoflurane, Gas Airway	Concentration airway sevoflurane end tidal		Concentration of sevoflurane in airway gas measured at the end of expiration	MDC_CONC_AWAY_SEVOFL_ET	21024
Concentration End Tidal Isoflurane, Gas Airway	Concentration airway isoflurane end tidal		Concentration of isoflurane in airway gas measured at the end of expiration	MDC_CONC_AWAY_ISOFL_ET	21028

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Concentration EndTidal NO ₂ , Gas Airway	Concentration airway nitrogen dioxide end tidal		Concentration of nitrogen dioxide in airway gas measured at the end of expiration	MDC_CONC_AWAY_NO2_ET	21032
Concentration EndTidal N ₂ O, Gas Airway	Concentration airway nitrous oxide end tidal		Concentration of nitrous oxide in airway gas measured at the end of expiration	MDC_CONC_AWAY_N2O_ET	21036
Concentration EndTidal N ₂ , Gas Airway	Concentration airway N ₂ end tidal	%N ₂ ET	Concentration of nitrogen in airway gas measured at the end of expiration	MDC_CONC_AWAY_N2_ET	21376
Concentration EndTidal CO ₂ , Gas Airway	Concentration airway O ₂ end tidal	%O ₂ ET	Concentration of oxygen in airway gas measured at the end of expiration	MDC_CONC_AWAY_O2_ET	21368
Concentration EndTidal O ₂ , Gas Airway	Concentration airway CO ₂ end tidal	%CO ₂ ET	Concentration of carbon dioxide in airway gas measured at the end of expiration	MDC_CONC_AWAY_CO2_ET	20636
Concentration EndTidal CO ₂ , Gas Ventilator	Concentration CO ₂ end tidal (ventilator)		Concentration of carbon dioxide in airway gas measured at the end of expiration during mechanical ventilation	MDC_VENT_CONC_AWAY_CO2_ET	20824
Concentration Expiration Desflurane, Gas Airway	Concentration airway desflurane expiratory		Concentration of desflurane in airway gas measured during expiration	MDC_CONC_AWAY_DESFL_EXP	21040
Concentration Expiration Enflurane, Gas Airway	Concentration airway enflurane expiratory		Concentration of enflurane in airway gas measured during expiration	MDC_CONC_AWAY_ENFL_EXP	21044
Concentration Expiration Halothane, Gas Airway	Concentration airway halothane expiratory		Concentration of halothane in airway gas measured during expiration	MDC_CONC_AWAY_HALOTH_EXP	21048
Concentration Expiration Sevoflurane, Gas Airway	Concentration airway sevoflurane expiratory		Concentration of sevoflurane in airway gas measured during expiration	MDC_CONC_AWAY_SEVOFL_EXP	21052

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Concentration Expiration Isoflurane, Gas Airway	Concentration airway isoflurane expiratory		Concentration of isoflurane in airway gas measured during expiration	MDC_CONC_AWAY_ISOFL_EXP	21056
Concentration Expiration NO ₂ , Gas Airway	Concentration airway nitrogen dioxide expiratory		Concentration of nitrogen dioxide in airway gas measured during expiration	MDC_CONC_AWAY_NO2_EXP	21060
Concentration Expiration N ₂ O, Gas Airway	Concentration airway nitrous oxide expiratory		Concentration of nitrous oxide in airway gas measured during expiration	MDC_CONC_AWAY_N2O_EXP	21064
Concentration Expiration CO ₂ , Gas Airway	Concentration airway CO ₂ expiratory	%CO ₂ exp	Concentration of carbon dioxide in airway gas measured during expiration	MDC_CONC_AWAY_CO2_EXP	20640
Concentration Expiration Desflurane, Gas Ventilator	Concentration airway desflurane expiratory (ventilator)		Concentration of desflurane in airway gas measured during expiration during mechanical ventilation	MDC_VENT_CONC_DESFL_EXP	21068
Concentration Expiration Enflurane, Gas Ventilator	Concentration airway enflurane expiratory (ventilator)		Concentration of enflurane in airway gas measured during expiration during mechanical ventilation	MDC_VENT_CONC_ENFL_EXP	21072
Concentration Expiration Halothane, Gas Ventilator	Concentration airway halothane expiratory (ventilator)		Concentration of halothane in airway gas measured during expiration during mechanical ventilation	MDC_VENT_CONC_HALOTH_EXP	21076
Concentration Expiration Sevoflurane, Gas Ventilator	Concentration airway sevoflurane expiratory (ventilator)		Concentration of sevoflurane in airway gas measured during expiration during mechanical ventilation	MDC_VENT_CONC_SEVOFL_EXP	21080

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Concentration Expiration Isoflurane, Gas Ventilator	Concentration airway isoflurane expiratory (ventilator)		Concentration of isoflurane in airway gas measured during expiration during mechanical ventilation	MDC_VENT_CONC_ISOFL_EXP	21084
Concentration Expiration NO ₂ , Gas Ventilator	Concentration airway nitrogen dioxide expiratory (ventilator)		Concentration of nitrogen dioxide in airway gas measured during expiration during mechanical ventilation	MDC_VENT_CONC_NO2_EXP	21088
Concentration Expiration N ₂ O, Gas Ventilator	Concentration airway nitrous oxide expiratory (ventilator)		Concentration of nitrous oxide in airway gas measured during expiration during mechanical ventilation	MDC_VENT_CONC_N2O_EXP	21092
Concentration Expiration CO ₂ , Gas Ventilator	Concentration CO ₂ expiratory (ventilator)		Concentration of carbon dioxide in airway gas measured in expiration during mechanical ventilation	MDC_VENT_CONC_AWAY_CO2_EXP	20828
Concentration Expiration O ₂ , Gas Ventilator	Concentration oxygen expiratory (ventilator)	FEO2	Concentration of oxygen in airway in expiration during mechanical ventilation	MDC_VENT_CONC_AWAY_O2_EXP	20844
Concentration Inspiration Agent, Gas Airway	Concentration airway agent inspiration		Concentration of agent in airway gas measured in inspiration	MDC_CONC_AWAY_AGENT_INSP	21392
Concentration Inspiration Desflurane, Gas Airway	Concentration airway desflurane inspiratory		Concentration of desflurane in airway gas measured in inspiration	MDC_CONC_AWAY_DESFL_INSP	21096
Concentration Inspiration Enflurane, Gas Airway	Concentration airway enflurane inspiratory		Concentration of enflurane in airway gas measured in inspiration	MDC_CONC_AWAY_ENFL_INSP	21100

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Concentration Inspiration Halothane, Gas Airway	Concentration airway halothane inspiratory		Concentration of halothane in airway gas measured in inspiration	MDC_CONC_AWAY_HALOTH_INSP	21104
Concentration Inspiration Sevoflurane, Gas Airway	Concentration airway sevoflurane inspiratory		Concentration of sevoflurane in airway gas measured in inspiration	MDC_CONC_AWAY_SEVOFL_INSP	21108
Concentration Inspiration Isoflurane, Gas Airway	Concentration airway isoflurane inspiratory		Concentration of isoflurane in airway gas measured in inspiration	MDC_CONC_AWAY_ISOFL_INSP	21112
Concentration Inspiration NO ₂ , Gas Airway	Concentration airway nitrogen dioxide inspiratory		Concentration of nitrogen dioxide in airway gas measured in inspiration	MDC_CONC_AWAY_NO2_INSP	21116
Concentration Inspiration N ₂ O, Gas Airway	Concentration airway nitrous oxide inspiratory		Concentration of nitrous oxide in airway gas measured in inspiration	MDC_CONC_AWAY_N2O_INSP	21120
Concentration Inspiration N ₂ , Gas Airway	Concentration airway N ₂ inspiratory		Concentration of nitrogen in airway gas measured in inspiration	MDC_CONC_AWAY_N2_INSP	21380
Concentration Inspiration O ₂ , Gas Airway	Concentration airway O ₂ inspiratory	%O ₂ ins	Concentration of oxygen in airway gas measured in inspiration	MDC_CONC_AWAY_O2_INSP	21124
Concentration Inspiration CO ₂ , Gas Airway	Concentration airway CO ₂ inspiratory	%CO ₂ ins	Concentration of carbon dioxide in airway gas measured in inspiration	MDC_CONC_AWAY_CO2_INSP	20644
Concentration Inspiration Desflurane, Gas Ventilator	Concentration airway desflurane inspiratory (ventilator)		Concentration of desflurane in airway gas measured in inspiration during mechanical ventilation	MDC_VENT_CONC_DESFL_INSP	21128

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Concentration Inspiration Enflurane, Gas Ventilator	Concentration airway enflurane inspiratory (ventilator)		Concentration of enflurane in airway gas measured in inspiration during mechanical ventilation	MDC_VENT_CONC_ENFL_INSP	21132
Concentration Inspiration Halothane, Gas Ventilator	Concentration airway halothane inspiratory (ventilator)		Concentration of halothane in airway gas measured in inspiration during mechanical ventilation	MDC_VENT_CONC_HALOTH_INSP	21136
Concentration Inspiration Sevoflurane, Gas Ventilator	Concentration airway sevoflurane inspiratory (ventilator)		Concentration of sevoflurane in airway gas measured in inspiration during mechanical ventilation	MDC_VENT_CONC_SEVOFL_INSP	21140
Concentration Inspiration Isoflurane, Gas Ventilator	Concentration airway isoflurane inspiratory (ventilator)		Concentration of isoflurane in airway gas measured in inspiration during mechanical ventilation	MDC_VENT_CONC_ISOFL_INSP	21144
Concentration Inspiration NO ₂ , Gas Ventilator	Concentration airway nitrogen dioxide inspiratory (ventilator)		Concentration of nitrogen dioxide in airway gas measured in inspiration during mechanical ventilation	MDC_VENT_CONC_NO2_INSP	21148
Concentration Inspiration N ₂ O, Gas Ventilator	Concentration airway nitrous oxide inspiratory (ventilator)		Concentration of nitrous oxide in airway gas measured in inspiration during mechanical ventilation	MDC_VENT_CONC_N2O_INSP	21152
Concentration Inspiration CO ₂ , Gas Ventilator	Concentration CO ₂ inspiratory (ventilator)		Concentration of carbon dioxide in airway gas measured in inspiration during mechanical ventilation	MDC_VENT_CONC_AWAY_CO2_INSP	20832
Concentration Inspiration O ₂ , Gas Ventilator	Ventilation inspired oxygen concentration	FIO2	Concentration of oxygen in inspiration during mechanical ventilation	MDC_VENT_CONC_AWAY_O2_INSP	20848

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Concentration Partial Pressure Desflurane, Gas Airway	Partial pressure airway desflurane		Measured partial pressure of desflurane in airway gas	MDC_AWAY_DESFL	21160
Concentration Partial Pressure Enflurane, Gas Airway	Partial pressure airway enflurane		Measured partial pressure of enflurane in airway gas	MDC_AWAY_ENFL	21168
Concentration Partial Pressure Halothane, Gas Airway	Partial pressure airway halothane		Measured partial pressure of halothane in airway gas	MDC_AWAY_HALOTH	21172
Concentration Partial Pressure Sevoflurane, Gas Airway	Partial pressure airway sevoflurane		Measured partial pressure of sevoflurane in airway gas	MDC_AWAY_SEVOFL	21176
Concentration Partial Pressure Isoflurane, Gas Airway	Partial pressure airway isoflurane		Measured partial pressure of isoflurane in airway gas	MDC_AWAY_ISOFL	21180
Concentration Partial Pressure NO ₂ , Gas Airway	Partial pressure airway nitrogen dioxide		Measured partial pressure of nitrogen dioxide in airway gas	MDC_AWAY_NO2	21184
Concentration Partial Pressure N ₂ O, Gas Airway	Partial pressure airway nitrous oxide		Measured partial pressure of nitrous oxide in airway gas	MDC_AWAY_N2O	21188
Concentration Partial Pressure O ₂ , Gas Airway	Respir. O ₂ partial pressure	PO ₂	Partial pressure of oxygen in airway gas	MDC_AWAY_O2	20668
Concentration Partial Pressure CO ₂ , Gas Airway	Partial pressure CO ₂	PCO ₂	Partial pressure of carbon dioxide in airway gas	MDC_AWAY_CO2	20652
Concentration Partial Pressure Desflurane, Gas Ventilator	Partial pressure ventilator desflurane		Partial pressure of desflurane in airway gas measured during mechanical ventilation	MDC_VENT_AWAY_DESFL	21192
Concentration Partial Pressure Enflurane, Gas Ventilator	Partial pressure ventilator enflurane		Partial pressure of enflurane in airway gas measured during mechanical ventilation	MDC_VENT_ENFL	21196

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Concentration PartialPressure Halothane, Gas Ventilator	Partial pressure ventilator halothane		Partial pressure of halothane in airway gas measured during mechanical ventilation	MDC_VENT_HALOTH	21200
Concentration PartialPressure Sevoflurane, Gas Ventilator	Partial pressure ventilator sevoflurane		Partial pressure of sevoflurane in airway gas measured during mechanical ventilation	MDC_VENT_SEVOFL	21204
Concentration PartialPressure Isoflurane, Gas Ventilator	Partial pressure ventilator isoflurane		Partial pressure of isoflurane in airway gas measured during mechanical ventilation	MDC_VENT_ISOFL	21208
Concentration PartialPressure NO ₂ , Gas Ventilator	Partial pressure ventilator nitrogen dioxide		Partial pressure of nitrogen dioxide in airway gas measured during mechanical ventilation	MDC_VENT_NO2	21212
Concentration PartialPressure N ₂ O, Gas Ventilator	Partial pressure ventilator nitrous oxide		Partial pressure of nitrous oxide in airway gas measured during mechanical ventilation	MDC_VENT_N2O	21216
Concentration PartialPressure CO ₂ , Gas Ventilator	CO ₂ partial pressure (ventilator)	PCO ₂	Partial pressure of carbon dioxide in airway gas during mechanical ventilation	MDC_VENT_AWAY_CO2	20852
Concentration PartialPressure O ₂ , Gas Ventilator	O ₂ partial pressure (ventilator)	PO ₂	Partial pressure of oxygen in airway gas during mechanical ventilation	MDC_VENT_AWAY_O2	21220
Concentration PartialPressure, EndTidal CO ₂ , Gas Airway	EndTidal CO ₂ partial pressure	PET CO ₂	Partial pressure of carbon dioxide in airway gas measured at end of expiration	MDC_AWAY_CO2_ET	20856
Concentration PartialPressure, EndTidal CO ₂ , Gas Ventilator	EndTidal CO ₂ partial pressure (ventilator)	PET CO ₂	Partial pressure of carbon dioxide in airway gas at end expiration measured during mechanical ventilation	MDC_VENT_AWAY_CO2_ET	20856
Concentration PartialPressure, Expiration Desflurane, Gas Airway	Expiratory partial pressure airway desflurane		Partial pressure of desflurane in airway gas measured during expiration	MDC_AWAY_DESFL_EXP	21224

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Concentration PartialPressure, Expiration Enflurane, Gas Airway	Expiratory partial pressure airway enflurane		Partial pressure of enflurane in airway gas measured during expiration	MDC_AWAY_ENFL_EXP	21228
Concentration PartialPressure, Expiration Halothane, Gas Airway	Expiratory partial pressure airway halothane		Partial pressure of halothane in airway gas measured during expiration	MDC_AWAY_HALOTH_EXP	21232
Concentration PartialPressure, Expiration Sevoflurane, Gas Airway	Expiratory partial pressure airway sevoflurane		Partial pressure of sevoflurane in airway gas measured during expiration	MDC_AWAY_SEVOFL_EXP	21236
Concentration PartialPressure, Expiration Isoflurane, Gas Airway	Expiratory partial pressure airway isoflurane		Partial pressure of isoflurane in airway gas measured during expiration	MDC_AWAY_ISOFL_EXP	21240
Concentration PartialPressure, Expiration NO ₂ , Gas Airway	Expiratory partial pressure airway nitrogen dioxide		Partial pressure of nitrogen dioxide in airway gas measured during expiration	MDC_AWAY_NO2_EXP	21244
Concentration PartialPressure, Expiration N ₂ O, Gas Airway	Expiratory partial pressure airway nitrous oxide		Partial pressure of nitrous oxide in airway gas measured during expiration	MDC_AWAY_N2O_EXP	21248
Concentration PartialPressure, Expiration CO ₂ , Gas Airway	Expiratory CO ₂ partial pressure	PECO ₂	Partial pressure of carbon dioxide in airway gas measured during expiration	MDC_AWAY_CO2_EXP	20660
Concentration PartialPressure, Expiration O ₂ , Gas Airway	Respir. expired O ₂ pressure	PEO ₂	Partial pressure of oxygen in airway gas measured during expiration	MDC_AWAY_O2_EXP	20676
Concentration PartialPressure, Expiration Desflurane, Gas Ventilator	Expiratory partial pressure ventilator desflurane		Partial pressure of desflurane in airway gas measured during mechanical ventilation expiration	MDC_VENT_DESFL_EXP	21252

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Concentration PartialPressure, Expiration Enflurane, Gas Ventilator	Expiratory partial pressure ventilator enflurane		Partial pressure of enflurane in airway gas measured during mechanical ventilation expiration	MDC_VENT_ENFL_EXP	21256
Concentration PartialPressure, Expiration Halothane, Gas Ventilator	Expiratory partial pressure ventilator halothane		Partial pressure of halothane in airway gas measured during mechanical ventilation expiration	MDC_VENT_HALOTH_EXP	21260
Concentration PartialPressure, Expiration Sevoflurane, Gas Ventilator	Expiratory partial pressure ventilator sevoflurane		Partial pressure of sevoflurane in airway gas measured during mechanical ventilation expiration	MDC_VENT_SEVOFL_EXP	21264
Concentration PartialPressure, Expiration Isoflurane, Gas Ventilator	Expiratory partial pressure ventilator isoflurane		Partial pressure of isoflurane in airway gas measured during mechanical ventilation expiration	MDC_VENT_ISOFL_EXP	21268
Concentration PartialPressure, Expiration NO ₂ , Gas Ventilator	Expiratory partial pressure ventilator nitrogen dioxide		Partial pressure of nitrogen dioxide in airway gas measured during mechanical ventilation expiration	MDC_VENT_NO2_EXP	21272
Concentration PartialPressure, Expiration N ₂ O, Gas Ventilator	Expiratory partial pressure ventilator nitrous oxide		Partial pressure of nitrous oxide in airway gas measured during mechanical ventilation expiration	MDC_VENT_N2O_EXP	21276
Concentration PartialPressure, Expiration O ₂ , Gas Ventilator	Expiratory O ₂ partial pressure (ventilator)		Partial pressure of oxygen in airway gas during mechanical ventilation expiration	MDC_VENT_AWAY_O2_EXP	21280
Concentration PartialPressure, Expiration CO ₂ , Gas Ventilator	Expiratory CO ₂ partial pressure (ventilator)	PECO ₂	Partial pressure of carbon dioxide in airway gas during mechanical ventilation expiration	MDC_VENT_AWAY_CO2_EXP	20860
Concentration PartialPressure, Inspiration Desflurane, Gas Airway	Inspiratory partial pressure airway desflurane		Partial pressure of desflurane in airway gas measured during inspiration	MDC_AWAY_DESFL_INSP	21284

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Concentration PartialPressure, Inspiration Enflurane, Gas Airway	Inspiratory partial pressure airway enflurane		Partial pressure of enflurane in airway gas measured during inspiration	MDC_AWAY_ENFL_INSP	21288
Concentration PartialPressure, Inspiration Halothane, Gas Airway	Inspiratory partial pressure airway halothane		Partial pressure of halothane in airway gas measured during inspiration	MDC_AWAY_HALOTH_INSP	21292
Concentration PartialPressure, Inspiration Sevoflurane, Gas Airway	Inspiratory partial pressure airway sevoflurane		Partial pressure of sevoflurane in airway gas measured during inspiration	MDC_AWAY_SEVOFL_INSP	21296
Concentration PartialPressure, Inspiration Isoflurane, Gas Airway	Inspiratory partial pressure airway isoflurane		Partial pressure of isoflurane in airway gas measured during inspiration	MDC_AWAY_ISOFL_INSP	21300
Concentration PartialPressure, Inspiration NO ₂ , Gas Airway	Inspiratory partial pressure airway nitrogen dioxide		Partial pressure of nitrogen dioxide in airway gas measured during inspiration	MDC_AWAY_NO2_INSP	21304
Concentration PartialPressure, Inspiration N ₂ O, Gas Airway	Inspiratory partial pressure airway nitrous oxide		Partial pressure of nitrous oxide in airway gas measured during inspiration	MDC_AWAY_N2O_INSP	21308
Concentration PartialPressure, Inspiration O ₂ , Gas Airway	Inspiratory O ₂ partial pressure		Partial pressure of oxygen in airway gas measured in inspiration	MDC_AWAY_O2_INSP	20680
Concentration PartialPressure, Inspiration CO ₂ , Gas Airway	Inspiratory CO ₂ partial pressure	PICO ₂	Partial pressure of carbon dioxide in airway gas measured in inspiration	MDC_AWAY_CO2_INSP	20664
Concentration PartialPressure, Inspiration Desflurane, Gas Ventilator	Inspiratory partial pressure ventilator desflurane		Partial pressure of desflurane in airway gas measured during mechanical ventilation in inspiration	MDC_VENT_DESFL_INSP	21312

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Concentration PartialPressure, Inspiration Enflurane, Gas Ventilator	Inspiratory partial pressure ventilator enflurane		Partial pressure of enflurane in airway gas measured during mechanical ventilation in inspiration	MDC_VENT_ENFL_INSP	21316
Concentration PartialPressure, Inspiration Halothane, Gas Ventilator	Inspiratory partial pressure ventilator halothane		Partial pressure of halothane in airway gas measured during mechanical ventilation in inspiration	MDC_VENT_HALOTH_INSP	21320
Concentration PartialPressure, Inspiration Sevoflurane, Gas Ventilator	Inspiratory partial pressure ventilator sevoflurane		Partial pressure of sevoflurane in airway gas measured during mechanical ventilation in inspiration	MDC_VENT_SEVOFL_INSP	21324
Concentration PartialPressure, Inspiration Isoflurane, Gas Ventilator	Inspiratory partial pressure ventilator isoflurane		Partial pressure of isoflurane in airway gas measured during mechanical ventilation in inspiration	MDC_VENT_ISOFL_INSP	21328
Concentration PartialPressure, Inspiration NO ₂ , Gas Ventilator	Inspiratory partial pressure ventilator nitrogen dioxide		Partial pressure of nitrogen dioxide in airway gas measured during mechanical ventilation in inspiration	MDC_VENT_NO2_INSP	21332
Concentration PartialPressure, Inspiration N ₂ O, Gas Ventilator	Inspiratory partial pressure ventilator nitrous oxide		Partial pressure of nitrous oxide in airway gas measured during mechanical ventilation in inspiration	MDC_VENT_N2O_INSP	21336
Concentration PartialPressure, Inspiration CO ₂ , Gas Ventilator	Inspiratory CO ₂ partial pressure (ventilator)	PICO ₂	Partial pressure of carbon dioxide in airway gas in inspiration during mechanical ventilation	MDC_VENT_AWAY_CO2_INSP	20864
Concentration PartialPressure, Inspiration O ₂ , Gas Ventilator	Inspiratory O ₂ partial pressure (ventilator)	PIO ₂	Partial pressure of oxygen in airway gas measured in inspiration during mechanical ventilation	MDC_VENT_AWAY_O2_INSP	21340
Duration Apnea Breathing	Apnea duration	A	Duration of apnea - no flow measured	MDC_TIME_PD_APNEA	20784
Duration Apnea, Central Breathing	Central apnea duration	CA	Duration of apnea - no flow and no respiratory effort	MDC_TIME_PD_APNEA_CENT	20788

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Duration Apnea, Mixed Breathing Ventilator	Mixed apnea duration	MA	Duration of apnea with central and obstructive components	MDC_TIME_PD_APNEA_MIX	20792
Duration Apnea, Obstructive Breathing	Obstructive apnea duration	OA	Duration of apnea due to airway obstruction	MDC_TIME_PD_APNEA_OBSTRUC	20780
Duration Positive Pressure Gas Ventilator	Positive pressure duration		Duration of positive pressure phase in positive pressure ventilation modes	MDC_VENT_TIME_PD_PPV	21344
Electrical Impedance Transthoracic Respiration Breathing	Transthoracic impedance	Z ₀	Transthoracic measurement of electrical impedance (influenced by respiration and other factors)	MDC_IMPED_TTHOR	20708
Flow CO ₂ , Gas Breathing	CO ₂ production	\dot{V}_{CO_2}	Production of carbon dioxide, measured by expired carbon dioxide in airway	MDC_FLOW_CO2_PROD_RESP	20704
Flow O ₂ , Gas Breathing	O ₂ consumption	\dot{V}_{O_2}	Consumption of oxygen added here for convenience; see also Table A.7.3.1	MDC_FLOW_O2_CONSUMP	21348
Flow Gas Breathing	Airway flow	\dot{V}	Gas flow in airway during spontaneous respiration	MDC_FLOW_AWAY	20692
Flow Gas Ventilator	Ventilation flow	\dot{V}	Gas flow in airway during mechanical ventilation	MDC_VENT_FLOW	20868
Flow Expiration Gas Breathing	Expiratory airway respir. Flow	\dot{V}_E	Expiratory gas flow during spontaneous expiration	MDC_FLOW_AWAY_EXP	20696
Flow Expiration Gas Ventilator	Ventilation expiratory flow	\dot{V}_E	Expiratory gas flow during mechanical ventilation	MDC_VENT_FLOW_EXP	20872
Flow Expiration, Maximum Gas Breathing	Expiratory maximum airway respir. Flow	$\dot{V}_E \text{ max}$	Maximum expiratory gas flow during spontaneous respiration	MDC_FLOW_AWAY_EXP_MAX	20697
Flow Expiration, Maximum Gas Ventilator	Ventilation expiratory maximum flow	$\dot{V}_E \text{ max}$	Maximum expiratory gas flow during mechanical ventilation	MDC_VENT_FLOW_EXP_MAX	20873

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Flow Inspiration Gas Breathing	Inspiratory airway respir. flow	\dot{V}_I	Inspiratory gas flow in airway during spontaneous respiration	MDC_FLOW_AWAY_INSP	20700
Flow Inspiration Gas Ventilator	Ventilation inspiratory flow	\dot{V}_I	Inspiratory gas flow in airway during mechanical ventilation	MDC_VENT_FLOW_INSP	20876
Flow Inspiration, Maximum Gas Breathing	Inspiratory maximum airway respir. flow	$\dot{V}_I \text{ max}$	Maximum inspiratory gas flow during spontaneous respiration	MDC_FLOW_AWAY_INSP_MAX	20701
Flow Inspiration, Maximum Gas Ventilator	Ventilation inspiratory maximum flow	$\dot{V}_I \text{ max}$	Maximum inspiratory gas flow during mechanical ventilation	MDC_VENT_FLOW_INSP_MAX	20877
Flow OneMinute Gas Breathing	Respir. minute volume	\dot{V}	Total volume of gas breathed in 1 min during spontaneous respiration	MDC_VOL_MINUTE_AWAY	20808
Flow OneMinute Gas Ventilator	Ventilation minute volume	\dot{V}	Total volume of gas delivered by ventilator during mechanical ventilation	MDC_VENT_VOL_MINUTE_AWAY	20936
Flow OneMinute, Expiration Gas Ventilator	Ventilation expiratory minute volume	\dot{V}_E	Total volume of gas breathed out in 1 min during mechanical ventilation	MDC_VENT_VOL_MINUTE_EXP	20928
Flow OneMinute, Expiration Gas, Breathing	Expiratory respir. minute volume	\dot{V}_E	Total volume of gas breathed out in 1 min during spontaneous respiration	MDC_VOL_MINUTE_AWAY_EXP	20812
Flow OneMinute, Inspiration Gas Breathing	Inspiratory respir. minute volume	\dot{V}_I	Total volume of gas breathed in 1 min during spontaneous respiration	MDC_VOL_MINUTE_AWAY_INSP	20816
Flow OneMinute, Inspiration Gas Ventilator	Ventilation inspiratory minute volume	\dot{V}_I	Total volume of gas breathed in 1 min during mechanical ventilation	MDC_VENT_VOL_MINUTE_AWAY_INSP	20944
Flow OneMinute, Mandatory Gas Ventilator	Mandatory respir. minute volume	MIMV	Minimum volume of gas to be delivered in 1 min during mechanical and spontaneous respiration - ventilator setting	MDC_VENT_VOL_MINUTE_AWAY_MAND	20940

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Index Ratio (FlowDifference, PressureDifference) Gas Transport LungStructure	Gas transport coefficient	D	Coefficient relating partial pressures of gas between alveoli and pulmonary capillaries	MDC_COEF_GAS_TRAN	20948
Mode VentilationMode Ventilator	Ventilation mode		Selected mode of ventilator	MDC_VENT_MODE	53280
Mode BreathingMode Respiration	Respiration mode		Selected mode of respirator	MDC_VENT_MODE_RESP_SPONT	53281
Pressure Esophageal Respiration Breathing	Esophageal pressure	POES	Pressure measured in esophagus	MDC_PRESS_ESOPH	20748
Pressure Gas Airway	Respir. airway pressure	PAW	Pressure of gas in airway	MDC_PRESS_AWAY	20720
Pressure Gas Ventilator	Ventilation Pressure	PAW	Pressure in airway applied by mechanical ventilation	MDC_VENT_PRESS_AWAY	20900
Pressure InterPleural Respiration Breathing	InterPleural respir. pressure	PPL	Pressure in interpleural space during breathing	MDC_PRESS_INTERPL	20752
Pressure Continuous, Positive Gas Airway	CPAP pressure	CPAP	Continuous pressure in airway during spontaneous respiration	MDC_PRESS_AWAY_CTS_POS	20724
Pressure Expiratory, Applied Gas Ventilator	Positive end expiratory pressure, applied	PEEP	Positive end expiratory pressure applied to the airway during mechanical ventilation	MDC_PRESS_AWAY_END_EXP_POS	20732
Pressure Expiratory, Intrinsic Gas Airway	Intrinsic positive end expiratory pressure (Auto PEEP)	PEEP	Physiologically generated positive airway pressure	MDC_PRESS_AWAY_END_EXP_POS_INTRINSIC	20736
Pressure Expiration Gas Airway	Expiratory airway pressure	PE	Pressure of gas in airway during expiration	MDC_PRESS_AWAY_EXP	20740
Pressure Expiration, Maximum Gas Airway	Maximum expiratory airway pressure	PE max	Maximum pressure of gas in airway during expiration	MDC_PRESS_AWAY_EXP_MAX	20741

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pressure Expiration, Minimum Gas Airway	Minimum expiratory airway pressure	PE min	Minimum pressure of gas in airway during expiration.	MDC_PRESS_AWAY_EXP_MIN	20742
Pressure Inspiration Gas Airway	Inspiratory airway pressure	PI	Pressure of gas in airway during inspiration	MDC_PRESS_AWAY_INSP	20744
Pressure Inspiration, Maximum Gas Airway	Maximum inspiratory airway pressure (peak inspiratory pressure)	PIP	Maximum pressure of gas in airway during inspiration	MDC_PRESS_AWAY_INSP_MAX	20745
Pressure Inspiration, Mean Gas Airway	Mean inspiratory airway pressure	PI mean	Mean pressure of gas in airway during inspiration	MDC_PRESS_AWAY_INSP_MEAN	20747
Pressure Inspiration, Minimum Gas Airway	Minimum inspiratory airway pressure	PI min	Minimum pressure of gas in airway during inspiration	MDC_PRESS_AWAY_INSP_MIN	20746
Pressure Maximum Gas Ventilator	Maximum ventilation pressure	PAW max	Maximum pressure of gas in airway during mechanical ventilation	MDC_VENT_PRESS_MAX	20885
Pressure Minimum Gas Ventilator	Minimum ventilation pressure	PAW min	Minimum pressure of gas in airway during mechanical ventilation	MDC_VENT_PRESS_MIN	20886
Pressure Occlusion, Airway Gas Ventilator	Ventilation occlusion pressure		Pressure developed by the patient in airway when occluded briefly	MDC_VENT_PRESS_OCCL	20892
Pressure Pause Gas Airway	Pause respir. pressure		Pressure in airway during pause between expiration and inspiration	MDC_PRESS_RESP_PAUSE	20716
Pressure Plateau Gas Airway	Plateau respir. pressure		Pressure in airway in plateau phase during mechanical ventilation	MDC_PRESS_RESP_PLAT	20712
Pressure Plateau Gas Ventilator	Ventilation plateau pressure		Pressure in airway in plateau phase during mechanical ventilation - (ventilator setting)	MDC_VENT_PRESS_RESP_PLAT	21352

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pressure PositiveEndexpiratory Gas Ventilator	Intrinsic PEEP pressure		Intrinsic PEEP press. in continuous positive pressure ventilation	MDC_PRESS_AWAY_END_EXP_ POS_INTRINSIC	20736
Pressure TriggerSensitivity Ventilator	Ventilator trigger sensitivity		Sensitivity of trigger in ventilator; a pressure value	MDC_VENT_PRESS_TRIG_ SENS	21356
Rate NOS Breath Breathing	Respiration rate	RR	Rate of breathing; method not specified	MDC_RESP_RATE	20490
Rate Airway Breath Breathing	Respiration rate	RR	Rate of breathing; method: direct airway flow measurement	MDC_AWAY_RESP_RATE	20498
Rate CO ₂ Breath Breathing	Respiration rate	RR	Rate of breathing; method: carbon dioxide -sensor	MDC_CO2_RESP_RATE	20522
Rate Transthoracic Breath Breathing	Respiration rate	RR	Rate of breathing; method: transthoracic impedance	MDC_TTHOR_RESP_RATE	20506
Rate Pressure Breath Breathing	Respiration rate	RR	Rate of breathing; method: pressure measurement, e.g., central venous pressure	MDC_PRESS_RESP_RATE	20530
Rate NOS Breath Ventilator	Ventilation rate		Rate of mechanical ventilation; method: not specified	MDC_VENT_RESP_RATE	20514
Rate CO ₂ Breath Ventilator	Ventilation rate		Rate of mechanical ventilation; method: carbon dioxide -concentration measurement	MDC_VENT_CO2_RESP_RATE	20538
Rate Pressure Breath Ventilator	Ventilation rate		Rate of mechanical ventilation; method: pressure measurement	MDC_VENT_PRESS_RESP_ RATE	20546
Rate Volume, Flow Breath Ventilator	Ventilation rate		Rate of mechanical ventilation; method: volume/flow relation (comment: pediatric)	MDC_VENT_FLOW_RESP_RATE	20554
Rate Sigh Ventilator	Ventilation sigh number		Number of sighs delivered per minute during mechanical ventilation	MDC_VENT_SIGH_RATE	20562
Rate SighMultiple Ventilator	Ventilation multiple sigh number		Number of multiple sighs delivered per minute during mechanical ventilation	MDC_VENT_SIGH_MULT_RATE	20570
Ratio DeadspaceVolume, TidalVolume RespiratoryTract Breathing	Dead space tidal volume ratio	VD/VT	Ratio of dead space in respiratory tract to tidal volume	MDC_RATIO_AWAY_DEADSP_ TIDAL	20764

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Ratio DeadSpaceVolume, TidalVolume RespiratoryTract Ventilator	Ventilation relative dead space	VD/VT	Ratio of dead space to tidal volume during mechanical ventilation.	MDC_VENT_VOL_AWAY_DEAD SP_REL	20916
Ratio Duration(InspirationPhase), Duration(ExpirationPhase) Gas Breathing	Ratio inspiration expiration time	TI/TE	Ratio of durations of inspiratory and expiratory phases	MDC_RATIO_IE	20760
Ratio Flow(AlveolarVentilation), Flow(Perfusion) LungStructure Breathing	Ventilation-perfusion index	\dot{V}_Q	Ratio of alveolar ventilation and gas component to pulmonary capillary blood flow	MDC_VENT_FLOW_RATIO_PERF_ALV_INDEX	20880
Ratio Flow(ExpiredCO ₂), Flow(O ₂ used) Gas RespiratoryProcess	Respiratory quotient	RQ	Ratio of carbon dioxide expired to oxygen used	MDC_QUO_RESP	20756
Resistance Airway Breathing	Respir. resistance	RAW	Resistance to gas flow within the airway	MDC_RES_AWAY	20768
Resistance Expiration Airway Breathing	Expiratory resist. resistance	REAW	Resistance to gas flow in airway during expiration	MDC_RES_AWAY_EXP	20772
Resistance Inspiration Airway Breathing	Inspiratory resist. resistance	RIAW	Resistance to gas flow within the airway during inspiration	MDC_RES_AWAY_INSP	20776
Volume DeadSpace Ventilator	Ventilation dead space	VD	Volume of gas in airway per breath during mechanical ventilation not involved in respiratory exchange	MDC_VENT_VOL_AWAY_DEADSP	20912
Volume Leakage Ventilation Ventilator	Leakage volume		Volume of gas lost per minute by leakage in ventilation system, tubing, connectors, etc.	MDC_VENT_VOL_LEAK	21360
Volume Lung, Alveolar RespiratoryTract	Alveolar ventilation	AV	Volume of gas exchanged per breath in alveolas; difference between tidal volume and dead space	MDC_VENT_VOL_LUNG_ALV	21364
Volume Lung, DeadSpace RespiratoryTract	Airway dead space	VD	Volume of gas in airway per breath not involved in respiratory exchange	MDC_VOL_AWAY_DEADSP	20800
Volume Lung, Tidal Breathing	Respir. tidal volume	VT	Volume of gas inspired during each breath	MDC_VOL_AWAY_TIDAL	20796

Table A.7.4.1—Nomenclature and codes for respiratory measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Volume Lung, Tidal Ventilator	Ventilation tidal volume	VT	Volume of gas in each breath generated by ventilator	MDC_VENT_VOL_TIDAL	20908
Volume Lung, Trapped Ventilator	Trapped volume	CV	Volume of gas remaining in lung at end of expiration	MDC_VENT_VOL_LUNG_TRAPD	20920
Volume Lung, VitalCapacity LungStructure	Vital capacity	VC	Difference in volume between maximum inspiration and maximum expiration	MDC_CAPAC_VITAL	20608
Volume SinceStartInspiration Gas Breathing	Volume since start inspiration	V	Ventilated gas volume since start of inspiration (waveform)	MDC_VOL_GAS_INSP_SINCE_START	20804

A.7.4.7 Specification of modes for respirators and ventilators

Different types of ventilators exist, which use different physical principles in artificial ventilation of the lungs, e.g., different types of high-frequency ventilators besides the standard ventilators. Standard ventilators can be used in different modes also. In Table A.7.4.1, there is an enumeration observation element, Mode | | VentilationMode | Ventilator, which can communicate a value of type Bit String denoting the ventilation mode in use. Table A.7.4.2 defines these values for the different ventilation modes. Two terms are used to describe spontaneous breathing without a ventilator. These values are used with Mode | | Breathing | Respiration.

A.7.4.8 Base concept

The base concept is as follows:

- **Mode**

A.7.4.9 First set of differentiating criteria

The second field in the systematic name refers to measurement features. Two semantic links apply.

A.7.4.9.1 Semantic link "*has method*:"

Descriptors for the type of breathing or mechanical ventilation are as follows:

- **AirwayPressureRelease**
- **Biphasic**
- **ExtrathoracicNegativePressure**
- **HighFrequency**
- **HighFrequencyJet**
- **HighFrequencyOscillation**
- **InspiratoryAssist**
- **InverseRatio**
- **Mandatory**
- **MandatoryMinimumVolume**
- **PressureSupport**
- **PositiveEndExpiratoryPressure**
- **PositivePressure**
- **ProportionalAssist**
- **Spontaneous**

A.7.4.9.2 Semantic link "*has time criterion*:"

Applicable descriptors are as follows:

- **Continuous** (the assistance by external means is continuous in time)
- **Intermittent** (the assistance by external means is discontinuous in time)
- **Synchronized** (the assistance by external means is synchronized to spontaneous breathing)

A.7.4.10 Second set of differentiating criteria

The third field in the systematic name describes the target of measurement. Mechanical ventilation and spontaneous breathing are described.

A.7.4.10.1 Semantic link "concerns:"

Applicable are the following descriptors:

- **Breathing**
- **Ventilation**

A.7.4.11 Third set of differentiating criteria

The fourth field holds information about the context. In this case, it is information about the working mode of the ventilator itself or spontaneous respiration.

A.7.4.11.1 Semantic link "has context:"

The following descriptors are applicable:

- **Respiration**
- **Ventilator**

A.7.4.12 Bit string table

See Table A.7.4.2 for the bit strings for ventilator modes.

The following type definitions apply:

```
--
--Ventilation Mode Indication Bits
--
VentilationMode ::= BITS-32 {
    vent-mode-spont(0),
    vent-mode-cpap(1),
    vent-mode-bipap(2),
    vent-mode-ippw(3),
    vent-mode-cmv(4),
    vent-mode-irv(5),
    vent-mode-imv(6),
    vent-mode-simv(7),
    vent-mode-insp-assist(8),
    vent-mode-press-release(9),
    vent-mode-psv(10),
    vent-mode-mmv(11),
    vent-mode-prop-assist(12),
    vent-mode-hfv(13),
    vent-mode-hfjv(14),
    vent-mode-hfo(15),
    vent-mode-peep(31)
}
```

Table A.7.4.2—Ventilator modes bit string

Systematic name	Common term	Acronym	Description/Definition	Bit string
Mode Spontaneous Breathing Respiration	Spontaneous respiration		Spontaneous respiration without mechanical help	vent-mode-spont
Mode Spontaneous, Continuous, PositivePressure Breathing Respiration	CPAP	CPAP	Spontaneous respiration with continuous positive airway pressure	vent-mode-cpap
Mode Spontaneous, Biphasic, PositivePressure Breathing Ventilator	BIPAP	BIPAP	Spontaneous respiration with biphasic positive airway pressure	vent-mode-bipap
Mode Intermittent, PositivePressure Ventilator	IPPV	IPPV	Intermittent positive pressure ventilation	vent-mode-ippv
Mode Intermittent, PositivePressure, PositiveEndExpiratoryPressure Ventilator	PEEP	PEEP	Positive end-expiratory pressure applied during intermittent positive pressure ventilation	vent-mode-peep
Mode Continuous, Mandatory Ventilator	CMV	CMV	Continuous mandatory ventilation	vent-mode-cmv
Mode Continuous, Mandatory, PositiveEndExpiratoryPressure Ventilator	CMV +PEEP	CMV +PEEP	Continuous mandatory ventilation with positive end-expiratory pressure	vent-mode-cmv + vent-mode-peep
Mode InverseRatio Ventilator Ventilator	IRV	IRV	Intermittent positive pressure ventilation with longer inspiratory than expiratory phases	vent-mode-irv
Mode InverseRatio, PositiveEndExpiratoryPressure Ventilator	IRV +PEEP	IRV +PEEP	Inverse ratio ventilation with positive end-expiratory pressure	vent-mode-irv + vent-mode-peep
Mode Intermittent, Mandatory Ventilator	IMV	IMV	Intermittent positive pressure ventilation with pauses between breaths to permit spontaneous respiration	vent-mode-imv
Mode Intermittent, Mandatory, PositiveEndExpiratoryPressure Ventilator	IMV +PEEP	IMV +PEEP	Intermittent mandatory ventilation with positive end-expiratory pressure	vent-mode-imv + vent-mode-peep
Mode Intermittent, Mandatory, Synchronized Ventilator Ventilator	SIMV	SIMV	Synchronized intermittent mandatory ventilation	vent-mode-simv

Table A.7.4.4.—Ventilator modes bit string (continued)

Systematic name	Common term	Acronym	Description/Definition	Bit string
Mode Intermittent, Mandatory, Synchronized, PositiveEndExpiratoryPressure Ventilation Ventilator	SIMV +PEEP	SIMV +PEEP	Synchronized intermittent mandatory ventilation with positive end-expiratory pressure	vent-mode-simv + vent-mode-peep
Mode InspiratoryAssist Ventilation Ventilator	Inspiratory assist		Assisted ventilation during the inspiratory phase	vent-mode-insp-assist
Mode InspiratoryAssist, PositiveEndExpiratoryPressure Ventilation Ventilator	Inspiratory assist + PEEP		Inspiratory assist ventilation with positive end-expiratory pressure	vent-mode-insp-assist + vent-mode-peep
Mode AirwayPressureRelease Ventilation Ventilator	Airway pressure release ventilation		Ventilation in which airway pressure is maintained at a nominal value and intermittently released to permit expiration	vent-mode-press-release
Mode AirwayPressureRelease, PositiveEndExpiratoryPressure Ventilation Ventilator	Airway pressure release ventilation + PEEP		Airway pressure release ventilation with positive end-expiratory pressure	vent-mode-press-release + vent-mode-peep
Mode PressureSupport Ventilation Ventilator	PSV	PSV	Assisted ventilation with increased airway pressure following initiation of the inspiratory phase; increased pressure may be maintained at the end of expiration.	vent-mode-psv
Mode PressureSupport, PositiveEndExpiratoryPressure Ventilation Ventilator	PSV + PEEP	PSV + PEEP	Pressure support ventilation with positive end-expiratory pressure	vent-mode-psv + vent-mode-peep
Mode MandatoryMinimumVolume Ventilation Ventilator	MMV	MMV	Intermittent positive pressure ventilation set to guarantee delivery of a mandatory minute volume	vent-mode-mmv
Mode MandatoryMinimumVolume, PositiveEndExpiratoryPressure Ventilation Ventilator	MMV + PEEP	MMV + PEEP	Mandatory minimum volume with positive end-expiratory pressure	vent-mode-mmv + vent-mode-peep
Mode ProportionalAssist Ventilation Ventilator	Proportional Assist Ventilation		Spontaneous respiration in which the patient's breathing is assisted by increasing airway pressure in proportion to the patient's inspiratory effort	vent-mode-prop-assist

Table A.7.4.2—Ventilator modes bit string (continued)

Systematic name	Common term	Acronym	Description/Definition	Bit string
Mode Proportional Assist, Positive End Expiratory Pressure Ventilation Ventilator	Proportional Assist Ventilation + PEEP		Proportional assist ventilation with positive end-expiratory pressure	vent-mode-prop-assist + vent-mode-peep
Mode High Frequency Ventilation Ventilator	High Frequency Ventilation	HFV	Ventilation at rates greater than 60 breaths/min using high-frequency jet ventilation or high-frequency oscillation	vent-mode-hfv
Mode High Frequency Jet Ventilation Ventilator	High Frequency Jet Ventilation	HFJV	Jet ventilation at frequencies between 60 and 240 cycles/min	vent-mode-hfjv
Mode High Frequency Oscillation Ventilation Ventilator	High Frequency Oscillation	HFO	Ventilation at frequencies between 480 and 2400 cycles/min	vent-mode-hfo
Mode Extrathoracic Negative Pressure Ventilation Ventilator	Extrathoracic Negative Pressure Ventilation		Extrathoracic negative pressure ventilation using iron-lung or cuirasse ventilators	vent-mode-extrathoracic-neg-press

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A.7.4.13 Specification for correction of gas measurements

Atmospheric pressure, temperature, and air humidity influence the results of measurements, e.g., of volumes and partial pressures of gases. It is necessary to know about the circumstances of measurement and about a possible numerical correction of measurement results for comparison of successive measurements. Table A.7.4.3 defines text strings for the attribute Metric-Info-LabelString in the Metric object of the DIM.

A.7.4.14 Base concept

One base concept is applicable:

- **Qualifier**

A.7.4.14.1 First set of differentiating criteria

The second field in the systematic name refers to the measurement features.

A.7.4.14.2 Semantic link: "*has specification:*"

Applicable descriptors are as follows:

- **ATPS**
- **BTPS**
- **STPD**

A.7.4.15 Second set of differentiating criteria

The third field of the systematic name describes the target of measurement. No semantic link and descriptor is applicable.

A.7.4.16 Third set of differentiating criteria

The third field of the systematic name describes the target of measurement.

A.7.4.16.1 Semantic link "*concerns:*"

One descriptor is applicable:

- **GasMeasurement**

A.7.4.17 GasMeasurement corrections table

See Table A.7.4.3 for the correction of gas measurements.

Table A.7.4.3—Correction of gas measurements

Systematic name	Common term	Acronym	Description/Definition	Text for Metric-Info-LabelString
Qualifier BTPS GasMeasurement	Body temperature, pressure, saturated	BTPS	The device communicates a volume or partial pressure of a gas corrected to body temperature and normal pressure in water-saturated atmosphere.	BTPS
Qualifier ATPS GasMeasurement	Ambient temperature, pressure, saturated	ATPS	The device communicates a volume or partial pressure of a gas uncorrected, measured at ambient temperature and pressure in water-saturated atmosphere.	ATPS
Qualifier STPD GasMeasurement	Standard temperature pressure, dry	STPD	The device communicates a volume or partial pressure of a gas corrected to standard temperature and normal pressure in dry atmosphere.	STPD

A.7.5 Nomenclature, data dictionary, and codes for common blood-gas, blood, urine, and other fluid chemistry measurements

A.7.5.1 Introduction

Subclause A.7.5 presents additions to the nomenclature scheme for commonly measured biochemical properties of blood, urine, and other body fluids. The purpose of the addition of Table A.7.5.1 is to try to encompass the patient-connected devices within the ICU setting that may measure, in real time, certain blood-gas, urinary, or other fluid chemical components. In addition, Table A.7.5.1 may be used for an ICU blood-gas analyzer, which connects into an ICU bedside information system. Certain terms may occur in other nomenclature tables, e.g., Table A.7.3.1 (haemodynamic) or Table A.7.6.1 (fluids).

A.7.5.2 Base concepts

The base concepts are supposed to represent the more general measurement type. Applicable descriptors are as follows:

- **Concentration** (the concentration of chemical components of substances)
- **Duration** (a time duration)
- **Index** (a mathematical formula with many terms)
- **Osmolality** (the osmolality of a component or substance)
- **Ratio** (e.g., specific gravity)

A.7.5.3 First set of differentiating criteria

Three semantic links are applied for the first set of differentiating criteria.

A.7.5.3.1 Semantic link "*specific measurement type*:"

The first semantic link represents the more specific measurement type. Applicable descriptors are as follows:

- **BaseExcess** (the concentration of a base in blood [unit: millimol per liter])
- **Coagulation**

- **Saturation**
- **SpecificGravity**
- **Total**

A.7.5.3.2 Semantic link "*specific substance*:"

The second semantic link specifies the substance measured. Applicable descriptors are as follows:

- **Ca** (calcium ion)
- **Chloride**
- **CoHb** (carboxy-haemoglobin)
- **Glucose**
- **H+** (hydrogen ion)
- **Hb** (haemoglobin)
- **hCO₃** (bicarbonate)
- **HCT** (haematocrit)
- **K** (potassium ion)
- **MetHb** (met-haemoglobin)
- **Na** (sodium ion)
- **O₂Hb** (oxy-haemoglobin)
- **Oxygen**
- **pCO₂** (carbon dioxide)
- **pO₂** (oxygen)
- **Urea**

A.7.5.3.3 Semantic link "*is computed as*:"

The third semantic link further specifies how the term is calculated. It is applied to measurements involving H⁺. For example, pH is a logarithmic derivation of the hydrogen ion concentration expressed by linear H⁺ (i.e., $\text{pH} = \log_{10}(\text{H}^+) - 1$). Applicable descriptors are as follows:

- **Linear**
- **Logarithmic**

A.7.5.4 Second set of differentiating criteria

These criteria represent the particular body compartment, i.e., the fluid type from which the sample was taken or where the transducer is located.

A.7.5.4.1 Semantic link "*concerns fluid type*:"

Possible descriptors are the following:

- **ArterialBlood**
- **Aspirate**
- **CSF** (cerebrospinal fluid)
- **Drainage**
- **Esophageal** (fluid)
- **Gastric** (fluid)
- **General** (fluid)

- Plasma
- PulmonaryArterialBlood
- PulmonaryVenousBlood
- Serum
- Urine
- VenousBlood

A.7.5.5 Third set of differentiating criteria

These criteria represent the general functional system, in order to differentiate these tables from others.

A.7.5.5.1 Semantic link "*pertains to system*:"

Possible descriptors are the following:

- BloodChemistry
- FluidChemistry
- UrineChemistry

A.7.5.6 Code table

See Table A.7.5.1 for the nomenclature and codes for common blood-gas, blood, urine, and other fluid chemistry measurements.

Table A.7.5.1—Nomenclature and codes for common blood-gas, blood, urine, and other fluid chemistry measurements

Systematic name	Common term	Reference ID	Code
Concentration Saturation, Oxygen ArterialBlood BloodChemistry	Arterial oxygen saturation	MDC_SAT_O2_ART	19252
Concentration Saturation, Oxygen VenousBlood BloodChemistry	Venous oxygen saturation	MDC_SAT_O2_VEN	19260
Concentration Saturation, Oxygen PulmonaryArterialBlood BloodChemistry	Pulmonary artery oxygen saturation	MDC_SAT_O2_ART_PULM	19372
Concentration Total, H+, Logarithmic ArterialBlood FluidChemistry	Arterial blood fluid pH	MDC_CONC_PH_ART	28676
Concentration Total, H+, Linear ArterialBlood FluidChemistry	Arterial blood fluid H+	MDC_CONC_H_ION_ART	29068
Concentration Total, pCO ₂ ArterialBlood FluidChemistry	Arterial blood pCO ₂	MDC_CONC_PCO2_ART	28680
Concentration Total, pO ₂ ArterialBlood FluidChemistry	Arterial blood pO ₂	MDC_CONC_PO2_ART	28684
Concentration Total, hCO ₃ ArterialBlood FluidChemistry	Arterial blood bicarbonate ion concentration	MDC_CONC_HCO3_ART	28688
Concentration Total, Hb ArterialBlood FluidChemistry	Arterial blood haemoglobin concentration	MDC_CONC_HB_ART	28692
Concentration Total, O ₂ Hb ArterialBlood FluidChemistry	Arterial blood oxy-haemoglobin concentration	MDC_CONC_HB_O2_ART	28696

Table A.7.5.1—Nomenclature and codes for common blood-gas, blood, urine, and other fluid chemistry measurements (continued)

Systematic name	Common term	Reference ID	Code
Concentration Total, MetHb ArterialBlood FluidChemistry	Arterial blood met-haemoglobin concentration	MDC_CONC_HB_MET_ART	28700
Concentration Total, CoHb ArterialBlood FluidChemistry	Arterial blood carboxy-haemoglobin concentration	MDC_CONC_HB_CO_ART	28704
Concentration Total, HCT ArterialBlood FluidChemistry	Arterial blood haematocrit concentration	MDC_CONC_HCT_ART	28996
Concentration Total, Na ArterialBlood FluidChemistry	Arterial blood sodium ion concentration	MDC_CONC_NA_ART	28708
Concentration Total, K ArterialBlood FluidChemistry	Arterial blood potassium ion concentration	MDC_CONC_K_ART	28712
Concentration Total, Chloride ArterialBlood FluidChemistry	Arterial blood chloride ion concentration	MDC_CONC_CHLOR_ART	29000
Concentration Total, Glucose ArterialBlood FluidChemistry	Arterial blood glucose concentration	MDC_CONC_GLU_ART	28716
Concentration Total, Ca ArterialBlood FluidChemistry	Arterial blood calcium ion concentration	MDC_CONC_CA_ART	28720
Concentration Total, Urea ArterialBlood FluidChemistry	Arterial blood urea concentration	MDC_CONC_UREA_ART	29008
Concentration Total, H+, Logarithmic VenousBlood FluidChemistry	Venous blood fluid pH	MDC_CONC_PH_VEN	28724
Concentration Total, H+, Linear VenousBlood FluidChemistry	Venous blood fluid H+	MDC_CONC_H_ION_VEN	29072
Concentration Total, pCO ₂ VenousBlood FluidChemistry	Venous blood pCO ₂	MDC_CONC_PCO2_VEN	28728
Concentration Total, pO ₂ VenousBlood FluidChemistry	Venous blood pO ₂	MDC_CONC_PO2_VEN	28732
Concentration Total, hCO ₃ VenousBlood FluidChemistry	Venous blood bicarbonate ion concentration	MDC_CONC_HCO3_VEN	28736
Concentration Total, Hb VenousBlood FluidChemistry	Venous blood haemoglobin concentration	MDC_CONC_HB_VEN	28740
Concentration Total, O ₂ Hb VenousBlood FluidChemistry	Venous blood oxy-haemoglobin concentration	MDC_CONC_HB_O2_VEN	28744
Concentration Total, MetHb VenousBlood FluidChemistry	Venous blood met-haemoglobin concentration	MDC_CONC_HB_MET_VEN	28748
Concentration Total, CoHb VenousBlood FluidChemistry	Venous blood carboxy-haemoglobin concentration	MDC_CONC_HB_CO_VEN	28752
Concentration Total, HCT VenousBlood FluidChemistry	Venous blood haematocrit concentration	MDC_CONC_HCT_VEN	29012
Concentration Total, Na VenousBlood FluidChemistry	Venous blood sodium ion concentration	MDC_CONC_NA_VEN	28756
Concentration Total, K VenousBlood FluidChemistry	Venous blood potassium ion concentration	MDC_CONC_K_VEN	28760
Concentration Total, Chloride VenousBlood FluidChemistry	Venous blood chloride ion concentration	MDC_CONC_CHLOR_VEN	29016

Table A.7.5.1—Nomenclature and codes for common blood-gas, blood, urine, and other fluid chemistry measurements (continued)

Systematic name	Common term	Reference ID	Code
Concentration Total, Glucose VenousBlood FluidChemistry	Venous blood glucose concentration	MDC_CONC_GLU_VEN	28764
Concentration Total, Ca VenousBlood FluidChemistry	Venous blood calcium ion concentration	MDC_CONC_CA_VEN	28768
Concentration Total, Urea VenousBlood FluidChemistry	Venous blood urea concentration	MDC_CONC_UREA_VEN	29020
Concentration Total, H+, Logarithmic Urine FluidChemistry	Urine fluid pH	MDC_CONC_PH_URINE	28772
Concentration Total, H+, Linear Urine FluidChemistry	Urine fluid H+	MDC_CONC_H_ION_URINE	29076
Concentration Total, hCO ₃ Urine FluidChemistry	Urine bicarbonate ion concentration	MDC_CONC_HCO3_URINE	28776
Concentration Total, Na Urine FluidChemistry	Urine sodium ion concentration	MDC_CONC_NA_URINE	28780
Concentration Total, K Urine FluidChemistry	Urine potassium ion concentration	MDC_CONC_K_URINE	28784
Concentration Total, Glucose Urine FluidChemistry	Urine glucose concentration	MDC_CONC_GLU_URINE	28788
Concentration Total, Ca Urine FluidChemistry	Urine calcium ion concentration	MDC_CONC_CA_URINE	28792
Concentration Total, Urea Urine FluidChemistry	Urine urea concentration	MDC_CONC_UREA_URINE	28796
Concentration Total, H+, Logarithmic Aspirate FluidChemistry	Aspirate fluid pH	MDC_CONC_PH_ASPIR	28800
Concentration Total, H+, Linear Aspirate FluidChemistry	Aspirate fluid H+	MDC_CONC_H_ION_ASPIR	29080
Concentration Total, hCO ₃ Aspirate FluidChemistry	Aspirate bicarbonate ion concentration	MDC_CONC_HCO3_ASPIR	28804
Concentration Total, Na Aspirate FluidChemistry	Aspirate sodium ion concentration	MDC_CONC_NA_ASPIR	28808
Concentration Total, K Aspirate FluidChemistry	Aspirate potassium ion concentration	MDC_CONC_K_ASPIR	28812
Concentration Total, Glucose Aspirate FluidChemistry	Aspirate glucose concentration	MDC_CONC_GLU_ASPIR	28816
Concentration Total, Ca Aspirate FluidChemistry	Aspirate calcium ion concentration	MDC_CONC_CA_ASPIR	28820
Concentration Total, H+, Logarithmic Drainage FluidChemistry	Drainage fluid pH	MDC_CONC_PH_DRAIN	28824
Concentration Total, H+, Linear Drainage FluidChemistry	Drainage fluid H+	MDC_CONC_H_ION_DRAIN	29084
Concentration Total, hCO ₃ Drainage FluidChemistry	Drainage bicarbonate ion concentration	MDC_CONC_HCO3_DRAIN	28828
Concentration Total, Na Drainage FluidChemistry	Drainage sodium ion concentration	MDC_CONC_NA_DRAIN	28832

Table A.7.5.1—Nomenclature and codes for common blood-gas, blood, urine, and other fluid chemistry measurements (continued)

Systematic name	Common term	Reference ID	Code
Concentration Total, K Drainage FluidChemistry	Drainage potassium ion concentration	MDC_CONC_K_DRAIN	28836
Concentration Total, Glucose Drainage FluidChemistry	Drainage glucose concentration	MDC_CONC_GLU_DRAIN	28840
Concentration Total, Ca Drainage FluidChemistry	Drainage calcium ion concentration	MDC_CONC_CA_DRAIN	28844
Concentration Total, H+, Logarithmic Plasma FluidChemistry	Plasma fluid pH	MDC_CONC_PH_PLASMA	28848
Concentration Total, H+, Linear Plasma FluidChemistry	Plasma fluid H+	MDC_CONC_H_ION_PLASMA	29088
Concentration Total, pCO ₂ Plasma FluidChemistry	Plasma pCO ₂	MDC_CONC_PCO2_PLASMA	28852
Concentration Total, hCO ₃ Plasma FluidChemistry	Plasma bicarbonate ion concentration	MDC_CONC_HCO3_PLASMA	28856
Concentration Total, Na Plasma FluidChemistry	Plasma sodium ion concentration	MDC_CONC_NA_PLASMA	28860
Concentration Total, K Plasma FluidChemistry	Plasma potassium ion concentration	MDC_CONC_K_PLASMA	28864
Concentration Total, Chloride Plasma FluidChemistry	Plasma chloride ion concentration	MDC_CONC_CHLOR_PLASMA	29024
Concentration Total, Glucose Plasma FluidChemistry	Plasma glucose concentration	MDC_CONC_GLU_PLASMA	28868
Concentration Total, Ca Plasma FluidChemistry	Plasma calcium ion concentration	MDC_CONC_CA_PLASMA	28872
Concentration Total, Urea Plasma FluidChemistry	Plasma urea concentration		29028
Concentration Total, H+, Logarithmic Serum FluidChemistry	Serum fluid pH	MDC_CONC_PH_SERUM	28876
Concentration Total, H+, Linear Serum FluidChemistry	Serum fluid H+	MDC_CONC_H_ION_SERUM	29092
Concentration Total, pCO ₂ Serum FluidChemistry	Serum pCO ₂	MDC_CONC_PCO2_SERUM	28880
Concentration Total, hCO ₃ Serum FluidChemistry	Serum bicarbonate ion concentration	MDC_CONC_HCO3_SERUM	28884
Concentration Total, Na Serum FluidChemistry	Serum sodium ion concentration	MDC_CONC_NA_SERUM	28888
Concentration Total, K Serum FluidChemistry	Serum potassium ion concentration	MDC_CONC_K_SERUM	28892
Concentration Total, Glucose Serum FluidChemistry	Serum glucose concentration	MDC_CONC_GLU_SERUM	28896
Concentration Total, Ca Serum FluidChemistry	Serum calcium ion concentration	MDC_CONC_CA_SERUM	28900
Concentration Total, H+, Logarithmic CSF FluidChemistry	Cerebro-spinal fluid pH	MDC_CONC_PH_CSF	28904

Table A.7.5.1—Nomenclature and codes for common blood-gas, blood, urine, and other fluid chemistry measurements (continued)

Systematic name	Common term	Reference ID	Code
Concentration Total, H+, Linear CSF FluidChemistry	Cerebro-spinal fluid H+	MDC_CONC_H_ION_CSF	29096
Concentration Total, pCO ₂ CSF FluidChemistry	Cerebro-spinal fluid pCO ₂	MDC_CONC_PCO2_CSF	28908
Concentration Total, hCO ₃ CSF FluidChemistry	Cerebro-spinal fluid bicarbonate ion concentration	MDC_CONC_HCO3_CSF	28912
Concentration Total, Na CSF FluidChemistry	Cerebro-spinal fluid sodium ion concentration	MDC_CONC_NA_CSF	28916
Concentration Total, K CSF FluidChemistry	Cerebro-spinal fluid potassium ion concentration	MDC_CONC_K_CSF	28920
Concentration Total, Glucose CSF FluidChemistry	Cerebro-spinal fluid glucose concentration	MDC_CONC_GLU_CSF	28924
Concentration Total, Ca CSF FluidChemistry	Cerebro-spinal fluid calcium ion concentration	MDC_CONC_CA_CSF	28928
Concentration Total, H+, Logarithmic General FluidChemistry	General fluid pH	MDC_CONC_PH_GEN	28932
Concentration Total, H+, Linear General FluidChemistry	General fluid H+	MDC_CONC_H_ION_GEN	29100
Concentration Total, pCO ₂ General FluidChemistry	General fluid pCO ₂	MDC_CONC_PCO2_GEN	28992
Concentration Total, pO ₂ General FluidChemistry	General fluid pO ₂	MDC_CONC_PO2_GEN	29044
Concentration Total, hCO ₃ General FluidChemistry	General bicarbonate ion concentration	MDC_CONC_HCO3_GEN	28936
Concentration Total, Hb General FluidChemistry	General fluid Hb	MDC_CONC_HB_GEN	29048
Concentration Total, O ₂ Hb General FluidChemistry	General fluid O ₂ Hb	MDC_CONC_HB_O2_GEN	29004
Concentration Total, MetHb General FluidChemistry	General fluid MetHb	MDC_CONC_HB_MET_GEN	29052
Concentration Total, CoHb General FluidChemistry	General fluid CoHb	MDC_CONC_HB_CO_GEN	29056
Concentration Total, HCT General FluidChemistry	General fluid HCT	MDC_CONC_HCT_GEN	29060
Concentration Total, Na General FluidChemistry	General sodium ion concentration	MDC_CONC_NA_GEN	28940
Concentration Total, K General FluidChemistry	General potassium ion concentration	MDC_CONC_K_GEN	28944
Concentration Total, Chloride General FluidChemistry	General chloride ion concentration	MDC_CONC_CHLOR_GEN	29032
Concentration Total, Glucose General FluidChemistry	General glucose concentration	MDC_CONC_GLU_GEN	28948
Concentration Total, Ca General FluidChemistry	General calcium ion concentration	MDC_CONC_CA_GEN	28952

Table A.7.5.1—Nomenclature and codes for common blood-gas, blood, urine, and other fluid chemistry measurements (continued)

Systematic name	Common term	Reference ID	Code
Concentration Total, Urea General FluidChemistry	General	MDC_CONC_UREA_GEN	29064
Concentration Total, H+, Logarithmic Gastric FluidChemistry	Gastric pH	MDC_CONC_PH_GASTRIC	28956
Concentration Total, H+, Linear Gastric FluidChemistry	Gastric H+	MDC_CONC_H_ION_GASTRIC	29104
Concentration Total, H+, Logarithmic Esophageal FluidChemistry	Esophageal Ph	MDC_CONC_PH_ESOPH	28960
Concentration Total, H+, Linear Esophageal FluidChemistry	Esophageal H+	MDC_CONC_H_ION_ESOPH	29108
Duration Coagulation Plasma BloodChemistry	Plasma coagulation time	MDC_TIME_PD_PLASMA	28984
Duration Coagulation Serum BloodChemistry	Serum coagulation time	MDC_TIME_PD_SERUM	28988
Index BaseExcess ArterialBlood BloodChemistry	Calculated base excess of arterial blood	MDC_BASE_EXCESS_ART_INDEX	29036
Index BaseExcess VenousBlood BloodChemistry	Calculated base excess of venous blood	MDC_BASE_EXCESS_VEN_INDEX	29040
Osmolality Total Serum BloodChemistry	Serum osmolality	MDC_OSMOL_SERUM	28964
Osmolality Total Urine UrineChemistry	Urinary osmolality	MDC_OSMOL_URINE	28968
Ratio SpecificGravity Urine UrineChemistry	Urine specific gravity	MDC_SPEC_GRAV_URINE	28972
Ratio Coagulation Plasma BloodChemistry	Plasma coagulation ratio	MDC_RATIO_PLASMA_COAG	28976
Ratio Coagulation Serum BloodChemistry	Serum coagulation ratio	MDC_RATIO_SERUM_COAG	28980

A.7.6 Nomenclature, data dictionary, and codes for fluid output measurements

A.7.6.1 Introduction

Subclause A.7.6 presents a nomenclature for the systematic names for fluid output measurements.

A.7.6.2 Base concepts

The base concepts are more or less physical properties. The following descriptors are applicable:

- **Flow** (the flow of fluid into collecting bag, bottle, etc.)
- **Volume** (collected in bag, bottle, etc., or accumulated over a certain time)

A.7.6.3 First set of differentiating criteria

The second field of the systematic name refers to the measurement features. More than one semantic link and one descriptor are possible.

A.7.6.3.1 Semantic link "*has time criterion*:"

Applicable descriptors are as follows:

- **BalancePeriod** (defining that the measurements are accumulated over a certain time period)
- **Collected** (a measurement referring to the volume in the collecting receptacle in use at that moment)
- **Instantaneous** (i.e., the flow measurement is reported as measured in that moment)

A.7.6.3.2 Semantic link "*is computed as*"

Applicable descriptors are as follows:

- **Difference(Infused, Collected)** (i.e., the volume is calculated as a difference of the volume given to the patient and the volume collected from the patient)
- **MeanPreviousHour** (i.e., the value is computed as a mean value for the previous hour)

A.7.6.4 Second set of differentiating criteria

The third field of the systematic name describes the target of measurement. In this case, parts of the pumping system are possible as well as the fluid and drug applied to the patient.

A.7.6.4.1 Semantic link "*concerns*:"

The descriptors for this semantic link define the fluid collected or type of fluid balance. Different types of drainage are possible, e.g., from stomach, ventricles in brain (for reduction of intracranial pressure). The type or site of drainage must be defined separately. Applicable descriptors are as follows:

- **Blood**
- **Drainage**
- **Urine**

Additional descriptors are applicable, as follows:

- **Crystalloid** (fluid balance, which does not include blood infusion and blood drainage)
- **Total** (fluid balance of all fluids, including blood)

A.7.6.5 Third set of differentiating criteria

The fourth field holds the information about the context, i.e., the functional or organic system for which the term is relevant. In this case, all terms belong to fluids collected from the patient.

A.7.6.5.1 Semantic link "*pertains to*:"

There is only one descriptor:

- **Fluid** (collected from the patient, e.g., blood in drainage, urine output)

A.7.6.6 Code table

See Table A.7.6.1 for the nomenclature and codes for fluid-output measurements.

Table A.7.6.1—Nomenclature and codes for fluid-output measurements

Systematic name	Common term	Description/Definition	Reference ID	Code
Flow Instantaneous Fluid	Instantaneous fluid rate	Instantaneous fluid output rate, estimated ml/h (comment: site attribute according to Table A.8.6.1 (general neurological sites) and Table A.8.8.1 (miscellaneous body sites) optional)	MDC_FLOW_FLUID_DRAIN_PREV_HR	26820
Flow Instantaneous Drainage Fluid	Instantaneous drainage rate	Instantaneous drainage output rate, estimated ml/h (comment: site attribute according to Table A.8.6.1 (general neurological sites) and Table A.8.8.1 (miscellaneous body sites) optional)	MDC_FLOW_FLUID_DRAIN_INSTANT	26632
Flow Instantaneous Urine Fluid	Instantaneous urine rate	Instantaneous urine output rate, estimated ml/h (comment: site attribute according to Table A.8.8.1 (miscellaneous body sites) optional)	MDC_FLOW_URINE_INSTANT	26636
Flow MeanPreviousHour Drainage Fluid	Previous hour drainage rate	Averaged value of drainage output rate, last hour (comment: site attribute according to Table A.8.6.1 (general neurological sites) and Table A.8.8.1 (miscellaneous body sites) optional)	MDC_FLOW_FLUID_DRAIN_PREV_HR	26640
Flow MeanPreviousHour Urine Fluid	Previous hour urine rate	Averaged value of urine output rate, last hour (comment: site attribute according to Table A.8.8.1 (miscellaneous body sites) optional)	MDC_FLOW_URINE_PREV_HR	26644
Flow MeanPreviousHour Fluid	Previous hour fluid rate	Averaged value of fluid output rate, last hour (comment: site attribute according to Table A.8.6.1 (general neurological sites) and Table A.8.8.1 (miscellaneous body sites) optional)	MDC_FLOW_FLUID_PREV_HR	26648
Volume BalancePeriod Fluid	Accumulated fluid volume	Accumulation of fluid volumes collected in several bags (comment: site attribute according to Table A.8.6.1 (general neurological sites) and Table A.8.8.1 (miscellaneous body sites) optional)	MDC_VOL_FLUID_BAL_PD	26652
Volume BalancePeriod Drainage Fluid	Accumulated drainage volume	Accumulation of drainage fluid volumes collected in several bags (comment: site attribute according to Table A.8.6.1 (general neurological sites) and Table A.8.8.1 (miscellaneous body sites) optional)	MDC_VOL_FLUID_DRAIN	26656
Volume BalancePeriod Urine Fluid	Accumulated urine volume	Accumulation of urine volumes collected in several bags for a balance period (comment: site attribute according to Table A.8.8.1 (miscellaneous body sites) optional)	MDC_VOL_URINE_BAL_PD	26660

Table A.7.6.1—Nomenclature and codes for fluid-output measurements (continued)

Systematic name	Common term	Description/Definition	Reference ID	Code
Volume Collected Fluid	Fluid volume in bag	Fluid volume collected in bag (comment: site attribute according to Table A.8.6.1 (general neurological sites) and Table A.8.8.1 (miscellaneous body sites) optional)	MDC_VOL_FLUID_COL	26664
Volume Collected Drainage Fluid	Drainage volume in bag	Drainage fluid volume collected in bag (comment: site attribute according to Table A.8.6.1 (general neurological sites) and Table A.8.8.1 (miscellaneous body sites) optional)	MDC_VOL_FLUID_DRAIN_COL	26668
Volume Collected Urine Fluid	Urine volume in bag	Urine collected in bag (comment: site attribute according to table "Miscellaneous body sites..." optional)	MDC_VOL_URINE_COL	26672
Volume Difference(Infused, Collected), BalancePeriod Blood Fluid	Blood balance	Difference between transfused blood and blood collected in drainage calculated for a balance period	MDC_VOL_DIFF_BLD_BAL_PD	26676
Volume Difference(Infused, Collected), BalancePeriod Crystalloid Fluid	Crystalloid balance	Difference of patient's fluid uptake (infusion and os, but no blood) and fluid loss by urine output, stomach secretion, intestine (but not drainage) calculated for a balance period	MDC_VOL_DIFF_BLD_BAL_PD_CRYST	26680
Volume Difference(Infused, Collected), BalancePeriod Total Fluid	Total fluid balance	Difference between sum of all fluids (including blood and plasma) given to patient and sum of fluids collected in urinary and drainage bags calculated for a balance period	MDC_VOL_DIFF_FLUID_BAL_PD_TOT	26684

A.7.7 Nomenclature, data dictionary, and codes for pumps

A.7.7.1 Nomenclature for pump data

Subclause A.7.7 presents a nomenclature for the systematic names for pump data. For better understanding, some examples of the use of pumps are described, and some remarks on applications are made.

A.7.7.1.1 Examples of pump use in anesthesia and intensive care covered by this nomenclature

Pumps are used in anesthesia and intensive care to deliver fluid and drugs to the patient in a controlled and easily manageable way. The pump guarantees a continuous flow, individually programmable and independent of level and pressure differences between fluid reservoir and patient's body. The pump can be started and stopped and delivery rate changed on demand, thus allowing an individual profile for fluid delivery. In most cases, the fluid is only a means of bringing drugs to the patient's body. In this case, the flow necessary is calculated from the concentration of drug in the fluid and the amount of drug to be delivered in a given time. There are different ways pumps are used. The examples in A.7.7.1.1.1 and A.7.7.1.1.2 describe which type of pump use is covered by this nomenclature.

These examples do not explicitly distinguish manual pump control and data logging by computer on one side, from pump control and data logging by computer on the other side. Closed-loop control of the pump by computer applications and especially safety issues are not addressed explicitly as well. The intention of describing these examples is restricted to identification of data elements that have to be available in the nomenclature.

A.7.7.1.1.1 Constant fluid rate and pump start/stop example

The first example is a model in which the fluid rate (flow) is set and held constant for a certain time. After that time, the flow rate may change to a new value or the pump may be stopped. The fluid rate and the time of constant flow may be selected by pump panel or controlled by an application program inside the smart device or external to the computer. This model allows a computer to log complicated fluid- or drug-delivery profiles, either manually controlled or controlled by an application integrated in the pump, which is set up and started manually. If the pump is under computer control, bolus delivery and infusion profiles are controlled by changes of fluid rate after appropriate time increments and by starting and stopping the pump. Only a few simple data elements are necessary for logging fluid rate and events caused by changes in status, e.g., pump started, pump stopped. Setting fluid rate and changing pump status must be possible for control purposes.

A manually controlled pump reports the delivery of a bolus, e.g., by reporting the continuous fluid rate, then a high flow rate for some time, and then the continuous flow rate again. An event is generated with every change of flow rate, as well as start and stop of the pump. The delivered volume is calculated by a data-logging application from the time elapsed between these events and the flow rate used in this interval. Application of a bolus may be controlled by a computer as well as by changing the flow rate to a new high value and changing the rate back to the former value after the time for delivery of the intended bolus volume has elapsed.

This model can be enhanced by introducing the volume delivered by the pump. Pumps normally calculate the delivered volume themselves for direct display to the user and are able to report it. Some pumps are able to accumulate the volume delivered from several bottles or syringes successively. If the "Volume to be infused" setting is used, the pump stops automatically after that volume is infused. This setting can be used with manual setup or under computer control.

The delivered dose of a drug may be calculated by the logging application from delivered volume and concentration of drug in fluid. As an alternative, a pump-controlling application can calculate the volume to be

infused and hence the fluid rate and time of delivery of that rate from drug concentration, drug amount to deliver, and drug rate desired by the user. There are pumps that handle these calculations themselves and are able also to calculate drug concentration in use from solvent volume and mass of drug added to it. In both instances, the data elements have to be entered manually. Data elements to communicate these values are included in the nomenclature.

In principle all data-logging and many control applications can be covered by this example using only a few nomenclature elements.

A.7.7.1.1.2 Patient-controlled analgesia (PCA) and bolus delivery example

A second example knows two different states or rates in fluid delivery. Under normal conditions, the fluid and hence drug are delivered using a moderate (continuous) dose rate. This rate can be set directly or calculated by the pump from drug concentration and desired drug delivery rate. A second state in flow exists. In PCA mode, e.g., used after operations for pain therapy to reduce the dose of analgesic drug to the lowest value acceptable by the patient, the patient has the possibility to demand a certain pre-set amount of drug by pressing a button if the pain becomes unacceptable for him or her. For safety reasons, the interval between these demands for bolus and the maximum amount of drug deliverable is also limited. For that reason, a demand for bolus may be accepted or rejected by the device. Good (accepted) demands and bad (not accepted) demands are reported as events, and the number of good demands and total demands may be counted and reported.

Bolus is also used generally with syringe pumps. An anesthetist may choose a continuous fluid or drug delivery rate and pre-define parameters for a bolus, which he or she can apply under special conditions by conveniently pressing one button only. Application of such bolus is reported by an event and changes of flow rate, which is raised and reduced to the old value after some time. The Bolus data elements must be available in the nomenclature to be able to communicate the pre-set bolus parameters. In many cases the bolus flow rate is the highest flow rate available at the pump. In some cases the delivery rate of the drug must be limited using a certain setting of bolus fluid rate. To check the maximum flow rate deliverable by that pump, a nomenclature element must be available.

A.7.7.1.1.3 Verification of identity of a physical and a logical pump

In most cases, not only a single pump but many pumps are connected to a patient. The pumps may be connected to the computer logging the data or controlling the pumps by interface cables. The application program in the computer system is logically connected to the pumps and uses a certain logical name for a pump to handle the connection. The user inserts the syringe to a physical syringe pump. To be sure that the logical pump, handled in the application program and holding a certain drug, is identical to the physical pump, to which the user inserted the syringe, several possibilities exist. One possibility is to use disconnection and reconnection of the pump by the user to identify the pump. First, the user has to disconnect the interface cable from the pump; then the user has to insert the syringe; and then the user has to reconnect it. The application has to display disconnection and reconnection of a certain pump, and the user has to verify the correspondence of the physical and logical pump.

Other possibilities use special elements in communication and/or control elements at the pump. If the pump has an alphanumeric display, which is accessible by the computer, the computer can write the proposed name of the drug to the display of a logical pump. This name can be displayed at the physical pump, and the user can verify that the pump is the same pump in which he or she inserted or intended to insert the syringe with that drug. Verification may be negotiated directly with the application or by pressing a button on the device, generating an event passed to the application. In this case, the application can be sure that the user sends his or her response directly from the logical and physical device to be identified.

The user may also choose the name of the drug directly from a list in the pump. The drug name is directly visible on the pump's display and is communicated to the application program.

Another possibility is the integration of a bar-code reader into the pump. Such a reader allows the user to directly read the identification of the drug from the syringe or bottle. This method is most convenient for the user, who adheres a bar-code label onto the bottle or syringe. The pump can then directly read the identification of the drug and communicate it to the application.

In any case, data elements for drug identification are necessary.

A.7.7.1.2 Examples not intended to be covered by this version of the nomenclature

There are many special profiles for the delivery of drugs and hence many fluid delivery rates are possible. Several profiles will be implemented in smart pumps. Reporting the flow rates caused by these profiles is not a big problem, if the pump reports every change in delivery rate. The application can follow the profile by incremental calculation of delivered volume from delivery rate and duration of delivery for that incremental step. This version of the nomenclature is not intended to include elements for computer-controlled setup of such profiles in pumps.

A.7.7.2 Base concepts

The base concepts are more or less physical properties. The following descriptors are applicable:

- **Concentration** (the concentrations of drugs in a solvent)
- **Duration** (time intervals, e.g., application of drugs)
- **Flow** (the fluid volume delivered in a time unit to the patient; also used in the sense of flow of mass, describing the mass of drug delivered in a time unit to the patient by the fluid)
NOTE—*Flow* is used instead of *Rate*, which is used as a common term and familiar to medical users. *Rate* is used in this standard for frequency of events. However, *Rate* would be possible in this context for rates of drops.
- **Mass** (the mass of a drug dissolved in the fluid delivered to the patient)
- **Mode** (the operational mode of the pump (an enumeration observation element; see A.7.7.7))
- **Number** (used for counts, in this case, of boli of analgesic drugs in PCA)
- **Rate** (the frequency of occurrence of events, etc., based on a certain time frame: second, minute, hour, etc.)
- **Pressure** (necessary to deliver fluid to patient; shows impediment in patient line)
- **Status** (the operational state of the pump (an enumeration observation element; see A.7.7.13))
- **Substance** (the drug delivered to patient described by its generic name or brand)
- **Type** (used for the definition of syringe, infusion tubing, etc., annotations)
- **Volume** (all types of volumes of fluids and sizes of syringes)

A.7.7.3 First set of differentiating criteria

The second field of the systematic name refers to the measurement features. Three semantic links are applied to the first set of differentiating criteria. More than one semantic link and one descriptor are possible.

A.7.7.3.1 Semantic link "*has specification*:"

Descriptors for the demands of the patient for analgesic drug accepted by the pump in PCA are as follows. Total demand is the sum of accepted and rejected demands.

- **AcceptedDemand**
- **GoodDemand**
- **Requests**
- **TotalDemand**

Descriptors, i.e., actual measurement or setting, for the flow, volume, etc., that the pump delivers to the patient are as follows:

- **Delivered**
- **Delivery**

Descriptors for the technical specifications of flow or volumes that a pump can deliver and for the selected range, if more than one is possible, are as follows:

- **Maximum**
- **Minimum**
- **Range**
- **Resolution**

Descriptors for the total volume applied to the patient are as follows:

- **Total**
- **TotalDelivery**

Additional applicable descriptors are as follows:

- **BodyMass**
- **BSA** (a measure of body surface area to which a dosage is normalized)
- **Delay** (the time after which the pump enters Infusing state from Stand By state)
- **Diluent** (the solvent to which the drug(s) are added, if a mixture is infused to the patient. The diluent may be a solution itself, e.g., a solution of protein or NaCl. The diluent should be standardized in concentration and commercially available.)
- **Doses** (the single doses given in a multidose mode)
- **DrugName** (name of the solution or drug applied by the pump to the patient)
- **Interdoses** (the time interval between bolus dosing)
- **Loading** (the mass of a drug added to the solvent before loading the pump; used for drug concentration calculation)
- **Mass** (specifies that the flow describes the mass of a drug dissolved in the fluid and delivered to the patient in a time unit)
- **Normalized** (i.e., the doses of a drug or amount of liquid is normalized to the patient's body surface area)
- **Operational** (the operation mode of the device itself)
- **Proposed** (the name of the product proposed for infusion, as proposed by application. In most cases, several pumps are in use at the same patient. A certain pump may be selected for application of a specific drug by an application program. The application may transmit the drug name, for example, to the selected pump. The nurse inserts the syringe with the drug to the pump, which shows the proposed name and has to confirm the assignment.)
- **Remaining** (portion of fluid to be infused, left after some time from the whole volume to be infused)
- **Size** (the size of a syringe)
- **TBI** (to be infused, e.g., volume that shall be given to the patient)

A.7.7.3.2 Semantic link "*has method*:"

Descriptors used in this case to distinguish pressure directly measured by sensor from pressure indirectly calculated from motor current are as follows:

- **Calculated**

- **Measured**

Additional descriptors are as follows:

- **Bolus** (high flow for a short period instead of the low, continuous flow)
- **BolusLockOut** (time period during which bolus delivery to patient is prevented)
- **KVO** (keep-vein-open [rate], i.e., a very small flow for keeping a vein open, e.g., prevention of clotting of catheter)
- **PCA** (when a pump delivers analgesic drug on patient's demand, e.g., by pressing a button)
- **Standby** (when a pump is connected to patient and ready to use; no flow is delivered to patient)

A.7.7.4 Second set of differentiating criteria

The third field of the systematic name describes the target of measurement. In this case, parts of the pumping system are possible as well as the fluid and drug applied to the patient.

A.7.7.4.1 Semantic link "*concerns*:"

Applicable descriptors are as follows:

- **Device**
- **Drug** (therapeutic active part in the fluid applied to the patient)
- **Fluid** (the fluid itself applied to the patient, mostly including the drug)
- **Syringe** (a part of a syringe pump, carrying fluid and drug, and the active part of the pump, i.e., piston)
- **Tube** (the tube bringing fluid from the fluid reservoir to the patient. The type of tubing, diameter, and elasticity are important for the flow reached for a certain velocity of the pump, e.g., in peristaltic infusion pumps.)

A.7.7.5 Third set of differentiating criteria

The fourth field holds the information about the context, i.e., the functional or organic system for which the term is relevant. In this case, all terms belong to pumps used for therapeutical reasons.

A.7.7.5.1 Semantic link "*pertains to*:"

There is only one descriptor:

- **Pump** (the device pressing the fluid to the patient and controlling flow)

A.7.7.6 Code table

See Table A.7.7.1 for the nomenclature and codes for pump data.

Table A.7.7.1—Nomenclature and codes for pump data

Systematic name	Common term	Description/Definition	Reference ID	Code
Concentration Drug, Fluid Pump	Drug concentration	Concentration of drug in fluid delivered to patient (comment: optional site attribute according to Table A.8.8.1 (miscellaneous body sites))	MDC_CONC_DRUG	26688
Duration Bolus Fluid Pump	Bolus delivery duration	Time interval of high flow for bolus delivery (setting: anesthetists may use this predefined bolus for convenience instead of changing delivery rate and delivery time or volume each time) (comment: optional site attribute according to Table A.8.8.1 [miscellaneous body sites])	MDC_TIME_PD_BOLUS_DELIV	26828
Duration BolusLockOut Fluid Pump	Lock out interval	Time interval for prevention of bolus delivery	MDC_TIME_PD_FLUID_BOLUS_LOCKOUT	26696
Duration Delay Fluid Pump	Time delay programmed	The time delay for start of infusion scheduled to future (setting)	MDC_TIME_PD_DELAY	26832
Duration Delay, Remaining Fluid Pump	Time delay programmed remaining	The time delay remaining for start of infusion scheduled to future.	MDC_TIME_PD_DELAY_REMAIN	26836
Duration Delivery Fluid Pump	Fluid delivery time	Time elapsed since start of this step of flow rate; may be used as a setting together with delivery rate to deliver a certain volume (comment: optional site attribute according to Table A.8.8.1 [miscellaneous body sites])	MDC_TIME_PD_FLUID_DELIV_SINCE_START	26700
Duration Interdoses Fluid Pump	Interval between doses	The interval between doses in a multidosing mode or minimum interval between grants in PCA	MDC_TIME_PD_DELAY_INTERDOSES	26840
Duration Remaining Fluid Pump	Infusion time remaining	The time calculated by the pump until time (or volume) for this step of flow elapses	MDC_TIME_PD_REMAIN	26844
Duration Standby Fluid Pump	Standby time	Standby time, i.e., time during which the pump is connected to the patient, ready to be used; during which a message is expected from the application to prevent the pump from going on alarm; and during which no flow is delivered to patient	MDC_TIME_PD_FLUID_STANDBY	26704
Flow Bolus Fluid Pump	Fluid bolus rate	High volume (flow) rate for bolus delivery (setting: anesthetists may use this predefined bolus for convenience instead of changing delivery rate and delivery time or volume each time) (comment: optional site attribute according to Table A.8.8.1 [miscellaneous body sites])	MDC_FLOW_FLUID_BOLUS	26708

Table A.7.7.1—Nomenclature and codes for pump data (continued)

Systematic name	Common term	Description/Definition	Reference ID	Code
Flow Delivery Fluid Pump	Fluid delivery rate	Volume rate delivered by pump (comment: optional site attribute according to Table A.8.8.1 [miscellaneous body sites])	MDC_FLOW_FLUID_PUMP	26712
Flow Delivery, Maximum Fluid Pump	Maximum fluid delivery rate	Maximum fluid rate deliverable by the pump	MDC_FLOW_FLUID_MAX	26717
Flow Delivery, Minimum Fluid Pump	Minimum fluid delivery rate	Minimum fluid rate deliverable by the pump	MDC_FLOW_FLUID_DELIV_MIN	26722
Flow Delivery, Proposed Fluid Pump	Proposed delivery rate	Fluid delivery rate communicated to pump (must be accepted by user, see proposed drug name, pump verification) (comment: optional site attribute according to Table A.8.8.1 [miscellaneous body sites])	MDC_FLOW_FLUID_PUMP_PROP	26724
Flow KVO Fluid Pump	KVO rate	The default infusion rate for keep-vein-open rate (setting: anesthetists may use this predefined keep-vein-open rate for convenience instead of changing delivery rate explicitly)	MDC_FLOW_KVO	26848
Flow Mass, Bolus Drug, Fluid Pump	Bolus drug delivery rate	Drug delivery rate during bolus (setting: anesthetists may use this predefined bolus for convenience instead of changing delivery rate and delivery time or volume each time) (comment: optional site attribute according to Table A.8.8.1 [miscellaneous body sites])	MDC_FLOW_BOLUS_DRUG_DELIV	26728
Flow Mass, Delivery Drug, Fluid Pump	Drug delivery rate	Drug delivery rate to patient (comment: optional site attribute according to Table A.8.8.4 [miscellaneous body sites])	MDC_FLOW_DRUG_DELIV	26732
Flow Mass, Delivery, Normalized, BodyMass Drug, Fluid Pump	Dose rate	The dose rate normalized to body mass (weight) and time unit	MDC_RATE_DOSE	26852
Flow Mass, Delivery, Normalized, BSA Drug, Fluid Pump	Dose rate BSA	The dose rate normalized to body surface area and time unit	MDC_RATE_DOSE_BSA	26856
Flow Range Fluid Pump	Flow range	Selected flow range if a pump has more than one range for flow with different minimum, maximum, and resolution of flow	MDC_FLOW_FLUID_RANGE	26736
Flow Resolution Fluid Pump	Resolution of fluid delivery rate	Resolution of fluid rate deliverable by the pump	MDC_FLOW_FLUID_RES	26740

Table A.7.7.1—Nomenclature and codes for pump data (continued)

Systematic name	Common term	Description/Definition	Reference ID	Code
Mass Bolus Drug, Fluid Pump	Bolus dose, PCA dose	Dose of drug (setting) to deliver to the patient in a bolus with predefined parameters either on anesthetist's demand in bolus mode or patient's demand in PCA mode (comment: optional site attribute according to Table A.8.8.1 [miscellaneous body sites])	MDC_DOSE_DRUG_BOLUS	26744
Mass Delivered Drug, Fluid Pump	Delivered drug mass	Mass of drug delivered to the patient (comment: optional site attribute according to Table A.8.8.1 [miscellaneous body sites])	MDC_MASS_DRUG_DELIV	26748
Mass Loading Drug, Fluid Pump	Mass of loading dose	Mass of drug loaded to the fluid filled into pump reservoir (comment: optional site attribute according to Table A.8.8.1 [miscellaneous body sites])	MDC_MASS_DOSE_LOADING	26752
Mode Device Pump	Operational mode	The operational mode of the pump (see Table A.7.7.2)		53432
Number Doses Fluid Pump	Current dose number	The number of the current dose in a multidosing mode	MDC_NUM_DOSE_CURR	26860
Number Doses, Remaining Fluid Pump	Number of doses remaining	The number of doses in a multidosing mode remaining to be given to the patient	MDC_NUM_DOSE_REMAIN	26864
Number PCA, AcceptedDemand Device Pump	Number of good demand	Number of demands for drug bolus by patient, accepted by device in PCA	MDC_RATE_PCA_GOOD_DMD	26756
Number PCA, TotalDemand Device Pump	Number of total demand	Number of demands for drug bolus by patient, regardless of whether accepted by device in PCA	MDC_RATE_PCA_REQ	26760
Pressure Calculated Fluid Pump	Fluid pressure	Indirectly calculated fluid pressure generated by pump (comment: optional site attribute according to Table A.8.8.1 [miscellaneous body sites])	MDC_PRESS_FLUID_CALC	26768
Pressure Measured Fluid Pump	Fluid pressure	Actual measured fluid pressure generated by pump (comment: optional site attribute according to Table A.8.8.1 [miscellaneous body sites])	MDC_PRESS_FLUID_MEAS	26764
Rate PCA, GoodDemand Device Pump	Dose grants per hour	The number of granted requests for bolus by patient in PCA mode	MDC_RATE_DOSE_GRANT_PER_HR	26868
Rate PCA, Requests Device Pump	Dose requests per hour	The number of granted requests for bolus by patient in PCA mode	MDC_RATE_DOSE_REQ_PER_HR	26872
Status Operational Device Pump	Operational status of the pump	The operational status of the pump, e.g., Infusing, KVO, etc., (see Table A.7.7.3)	MDC_PUMP_STAT	53436

Table A.7.7.1—Nomenclature and codes for pump data (continued)

Systematic name	Common term	Description/Definition	Reference ID	Code
Substance Diluent Fluid Pump	Drug diluent	The name of the drug diluent used in the pump	MDC_SUBST_DILUENT	53412
Substance DrugName Fluid Pump	Drug name	Name of product infused (comment: optional site attribute according to Table A.8.8.1 [miscellaneous body sites])	MDC_DRUG_NAME_POINTER	53396
Substance DrugName, Proposed Fluid Pump	Proposed drug name	Name of product to be infused communicated to pump; user must confirm identity of product in syringe or bottle; pump verification (comment: optional site attribute according to Table A.8.8.1 [miscellaneous body sites])	MDC_DRUG_NAME_TYPE_PROP	53400
Type Syringe Pump	Syringe type	Syringe type, selected by user or recognized by syringe pump	MDC_SYRINGE_TYPE	53404
Type Tube Pump	Patient line type	Patient line type, selected by user or recognized by peristaltic pump	MDC_TUBE_TYPE	53408
Volume Bolus Fluid Pump	Bolus volume	Programmed bolus volume (setting: anesthetists may use this predefined bolus for convenience instead of changing delivery rate and delivery time or volume each time) (comment: optional site attribute according to Table A.8.8.1 [miscellaneous body sites])	MDC_VOL_FLUID_BOLUS	26788
Volume Delivered Fluid Pump	Infused volume	Fluid volume infused to the patient using this syringe or bottle (comment: optional site attribute according to Table A.8.8.1 [miscellaneous body sites])	MDC_VOL_FLUID_DELIV	26792
Volume Diluent Fluid Pump	Diluent volume	Volume of diluent (solvent) for drug used in this pump (for dose rate calculation)	MDC_VOL_FLUID_DILUENT	26796
Volume Remaining Fluid Pump	Volume remaining to be infused	Volume of fluid remaining to be infused in relation with the volume to be infused (comment: optional site attribute according to Table A.8.8.1 [miscellaneous body sites])	MDC_VOL_FLUID_TBI_REMAIN	26800
Volume Resolution Fluid Pump	Volume resolution	Resolution of the fluid volume deliverable by the pump	MDC_VOL_FLUID_RES	26804
Volume Size Syringe Pump	Syringe volume	Volume of syringe inserted to pump, user setting, or recognized by pump	MDC_VOL_SYRINGE	26808
Volume TBI Fluid Pump	Volume to be infused	Volume to be infused to the patient (comment: optional site attribute according to Table A.8.8.1 [miscellaneous body sites])	MDC_VOL_FLUID_TBI	26812

Table A.7.7.1—Nomenclature and codes for pump data (continued)

Systematic name	Common term	Description/Definition	Reference ID	Code
Volume Total Maintenance Pump	Volume infused actual total	The volume infused by the pump since the last reset	MDC_VOL_INFUS_ACTUAL_TOTAL	26876
Volume TotalDelivery Fluid Pump	Total delivered fluid volume	Total (accumulated) volume delivered to this patient by this pump (comment: optional site attribute according to Table A.8.8.1 [miscellaneous body sites])	MDC_VOL_FLUID_DELIV_TOTAL_SET	26816

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A.7.7.7 Specification of pump modes

Different types of pumps exist, and some pumps can be used in different modes. The enumeration observation element Mode | | Device | Pump in Table A.7.7.1 can communicate a value of type Bit String denoting the pump mode in use. Table A.7.7.2 defines these values for the different pump modes.

A.7.7.8 Base concept

The base concept is as follows:

- **Mode**

A.7.7.9 First set of differentiating criteria

The second field in the systematic name refers to measurement features.

A.7.7.9.1 Semantic link "*has specification:*"

Applicable descriptors are as follows:

- **Bolus**
- **Circadian**
- **ClosedLoop**
- **Delayed**
- **DrugDosing**
- **ManufacturerDefined**
- **MultiChannel**
- **MultiDosing**
- **MultiStep**
- **Nominal**
- **PCA**
- **RampAndTaper**
- **Titration**

A.7.7.10 Second set of differentiating criteria

The third field in the systematic name describes the target of measurement. The device itself or its functionality is described.

A.7.7.10.1 Semantic link "*concerns:*"

Applicable is one descriptor only:

- **Device**

A.7.7.11 Third set of differentiating criteria

The fourth field holds information about the context. In this case, it is information about the working mode of the pump itself.

A.7.7.11.1 Semantic link "has context:"

Only one descriptor is applicable:

- **Pump**

A.7.7.12 Bit string table

See Table A.7.7.2 for the bit string values for pump modes.

The following type definitions apply:

```
--  
--Pump Mode Indication Bits  
--  
PumpMode ::= BITS-32 {  
    pump-mode-nominal (0),  
    pump-mode-delayed (3),  
    pump-mode-multi-step (4),  
    pump-mode-titration (5),  
    pump-mode-bolus-dosing (6),  
    pump-mode-drug-dosing (7),  
    pump-mode-multi-dosing (8),  
    pump-mode-ramp-taper (9),  
    pump-mode-pca (10),  
    pump-mode-multi-channel (11),  
    pump-mode-closed-loop (12),  
    pump-mode-circadian (13),  
    pump-mode-manufacturer (31)  
}
```

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Table A.7.7.2—Pump modes bit string values
 (value to be communicated in enumeration observation element Mode | | Device | Pump)

Systematic name	Common term	Description/Definition	Bit string
Mode Nominal Device Pump	Nominal mode	The pump is in the nominal mode. It may be operated manually or computer-controlled and reports flow rates and status information.	pump-mode-nominal
Mode Delayed Device Pump	Delayed start mode	The pump is programmed to start infusing after a programmed delay interval or at a specific time of day.	pump-mode-delayed
Mode MultiStep Device Pump	Multistep mode	The pump is pre-programmed to several infusion rates and sequentially stepped through.	pump-mode-multi-step
Mode Titration Device Pump	Titration mode	The infusion rate is increased or decreased in order to keep some physiological parameter constant.	pump-mode-titration
Mode Bolus Device Pump	Bolus dosing mode	A pre-programmed bolus (small volume fast infusion) rate and time or bolus volume/dose exists, which can be delivered to reach some physiological effect.	pump-mode-bolus-dosing
Mode DrugDosing Device Pump	Drug-dosing mode	The infusion rate is chosen in drug units in relation to some physical parameter of the patient, mass (weight), or surface area	pump-mode-drug-dosing
Mode MultiDosing Device Pump	Multidosing mode	The pump is programmed to infuse doses of a drug (boli) in regular periods. Amount of drug, interval between doses (boli), and number of doses are pre-programmed.	pump-mode-multi-dosing
Mode RampAndTaper Device Pump	Ramp and taper mode	The pump is programmed to speed up infusing from an initial rate to a plateau rate during a defined ramp time duration or with a defined ramp steepness, stays in steady state at plateau rate for a programmed duration, and tapers down to a final rate with defined steepness or duration of taper-down.	pump-mode-ramp-taper
Mode PCA Device Pump	PCA mode	The pump starts with an initial bolus dose and switches to a continuous dose (maintenance level). The patient has the possibility to request additional bolus doses on demand. The pump can override the requests according to some rule, e.g., minimum interval between boli, maximum dose over some interval.	pump-mode-pca

**Table A.7.7.2—Pump modes bit string values
(value to be communicated in enumeration observation element Mode | | Device | Pump) (continued)**

Systematic name	Common term	Description/Definition	Bit string
Mode MultiChannel Device Pump	Multichannel therapy coordinated mode	This mode allows infusion of a group of drugs in specific sequence.	pump-mode-multi-channel
Mode ClosedLoop Device Pump	Automatic closed-loop mode	The infusion rate is automatically adjusted based on some external parameter or physiological effect.	pump-mode-closed-loop
Mode Circadian Device Pump	Circadian mode	The infusion rate is profiled based on a 24 h cycle.	pump-mode-circadian
Mode ManufacturerDefined Device Pump	Manufacturer-defined mode	Provision is made by this mode for new modes invented by manufacturers until the new mode is defined in the standard.	pump-mode-manufacturer

A.7.7.13 Specification of pump states

Pumps know some specific device states, different from most other devices. For that reason, the enumeration observation element Status | Operational | Device | Pump is introduced in Table A.7.7.1, which communicates in a value the status information about the pump. Table A.7.7.3 defines the states and the bit string values.

A.7.7.14 Base concept

The base concept is as follows:

- **Status**

A.7.7.15 First set of differentiating criteria

The second field in the systematic name refers to measurement features.

A.7.7.15.1 Semantic link "*has specification:*"

Applicable descriptors are as follows:

- **AcceptedDemand**
- **BolusDelivering**
- **Infusing**
- **KVO**
- **PCA**
- **RejectedDemand**
- **RumpUp**
- **TaperDown**

A.7.7.16 Second set of differentiating criteria

The third field in the systematic name describes the target of measurement. Different operational states of the pumps are described.

A.7.7.16.1 Semantic link "*concerns:*"

Applicable is one descriptor only:

- **OperationalStatus**

A.7.7.17 Third set of differentiating criteria

The fourth field holds information about the context. In this case, it is information about the operational state of the pump itself.

A.7.7.17.1 Semantic link "*has context:*"

The following descriptor is applicable:

- **Pump**

A.7.7.18 Bit string table

See Table A.7.7.3 for the bit string values for pump states.

The following type definitions apply:

```
--
PumpStatus ::= BITS-32 (
    pump-status-infusing (0) ,
    pump-status-kvo (1) ,
    pump-status-bolus (2) ,
    pump-status-pca-good (7) ,
    pump-status-pca-bad (8) ,
    pump-status-ramp-up (14) ,
    pump-status-taper-down (15)
)
}
```

Table A.7.3—Pump states bit string values (value to be communicated in EnumerationObservation with code: Status | Operational | Device | Pump)

Systematic name	Common term	Description/Definition	Bit string
Status BolusDelivering OperationalStatus Pump	Bolus delivering	The pump is delivering high flow rate after a demand, e.g., in PCA mode.	pump-status-bolus
Status Infusing OperationalStatus Pump	Infusing	The pump is infusing fluid with an individually set rate.	pump-status-infusing
Status KVO OperationalStatus Pump	Keep vein open rate	The pump is infusing fluid at a very low rate, to keep vessels open.	pump-status-kvo
Status PCA, AcceptedDemand Device Pump	PCA good demand	The patient's demand for a bolus in PCA mode is granted by the pump.	pump-status-pca-good
Status PCA, RejectedDemand Device Pump	PCA bad demand	The patient's demand for a bolus in PCA mode is rejected by the pump because of rejection criteria, e.g., interval between boli etc.	pump-status-pca-bad
Status RampUp OperationalStatus Pump	Ramp up	The pump is speeding up fluid rate linearly to reach a higher level in ramp and taper mode.	pump-status-ramp-up
Status TaperDown OperationalStatus Pump	Taper down	The pump is tapering down fluid rate linearly to reach a lower level in ramp and taper mode.	pump-status-taper-down

A.7.8 Nomenclature, data dictionary, and codes for neurological monitoring measurements

A.7.8.1 Introduction

Subclause A.7.8 presents a nomenclature for the systematic names in neurological monitoring.

A.7.8.2 Base concepts

The base concepts are physical properties. The following descriptors are applicable:

- **Circumference** (a length measurement)
- **Compliance** (the elastic properties of the brain and especially the capacity to deal with an uptake of fluid, e.g., during systolic phase or by a swelling of the brain with only small changes in pressure)
- **Diameter** (a length measurement)
- **Duration** (a time measurement used for interpeak intervals and reaction time)
- **ElectricalPotential** (electrical signals recorded on body surface or directly in tissue or fluids; used for all recordings like EEG, evoked potentials, etc., and derived amplitude measurements)
- **Flow** (the velocity of the fluid exchange; used for blood flow measurement in brain vessels, etc.)
- **Frequency** (used for derived values calculated from EEG-power-spectra)
- **Latency** (a time measurement used for events following a stimulus after a certain time, typically in the recording of evoked potentials)
- **MagneticField** (measurements of magnetic fields due to currents, e.g., in the brain)
- **Number** (used for counted events, e.g., arousals in sleep-EEG or specific events in epilepsy diagnosis)
- **Power** (calculated values, e.g., from EEG using the fast Fourier transform [FFT])
- **Pressure** (in fluids, tissue, etc.; used for measurements of intracranial pressure)
- **Score** (used for the Glasgow coma score and sleep stage; values used for describing the neurologic situation of the patient)

A.7.8.3 First set of differentiating criteria

The second field of systematic name in Table A.7.8.1 refers to the measurement features. Four semantic links are applied to build the first differentiating criterion.

A.7.8.3.1 Semantic link "*has method*:"

Applicable descriptors are as follows:

- **Acoustic** (type of stimulus; also the type of system tested by evoked potentials)
- **Evoked** (the method of measurement, i.e., evoked potentials)
- **Motoric** (type of stimulus; also the type of system tested by evoked potentials)
- **Magnetic** (type of stimulus; also the type of system tested by evoked potentials)
- **Somatosensory** (type of stimulus; also the type of system tested by evoked potentials)
- **Visual** (type of stimulus; also the type of system tested by evoked potentials)

A.7.8.3.2 Semantic link "*pertains to*:"

Applicable descriptors are as follows:

- **BERA** (used to specify values derived from brainstem evoked potential measurements)

- **EEG** (used to specify values derived from brainstem evoked potential measurements)
- **Epidural** (the place of measurement, e.g., intracranial pressure and EEG measurements)
- **InsideSkull** (the place of measurement, e.g., intracranial pressure and EEG measurements)
- **Subdural** (the place of measurement, e.g., intracranial pressure and EEG measurements)
- **Tissue** (the place of measurement, e.g., intracranial pressure and EEG measurements)
- **Ventricular** (the place of measurement, e.g., intracranial pressure and EEG measurements)
- **VEP** (visual evoked potential, used to specify values derived from brainstem evoked potential measurements)

A.7.8.3.3 Semantic link "*is computed as*:"

Descriptors for data derived from the EEG by FFT analysis and further processing are as follows:

- **AbsolutePower**
- **MedianPowerFrequency**
- **PeakPowerFrequency**
- **RelativePower** (relative [percent] power is calculated as a percentage of power in that band relative to total power)
- **SpectralEdgeFrequency**

Descriptors for the frequency band of EEG frequency range for which the power is calculated are as follows:

- **AlphaBand**
- **BetaBand**
- **DeltaBand**
- **GammaBand**
- **MeanDominantFrequency**
- **SigmaBand**
- **ThetaBand**

Descriptors for data derived from EEG by FFT analysis are as follows:

- **PowerSpectrum**
- **MeanFrequency**
- **TotalPower**

Additional descriptors are as follows:

- **Diastolic** (a calculation that derives the characteristic minimum value from a waveform related to the diastolic phase of arterial pressure)
- **Difference(MeanArterial, MeanIntracranial)** (the calculation and the original values necessary for determination of brain perfusion pressure)
- **GlasgowComaScore** (the neurological state of a patient)
- **InterPeak** (time measurements from peak to peak, called waves in acoustical evoked potential interpretation)
- **Mean** (a calculation that derives the characteristic mean value from a waveform)
- **Systolic** (a calculation that derives the characteristic maximum value from a waveform related to the systolic phase of arterial pressure)
- **Sleepstage** (value derived from EEG in sleep lab)
- **SubscoreEye**

- **SubscoreMotoric**
- **SubscoreVerbal**
- **Sum**

A.7.8.3.4 Semantic link "*has specification*:"

Descriptors for the peak in an evoked potential (i.e., Amplitude, Latency, InterPeak) are as follows:

- **Wave1**
- **Wave2**
- **Wave3**
- **Wave4**
- **Wave5**

Additional descriptors are as follows:

- **Amplitude** (a measure of, e.g., an electrical potential)
- **ReactionTime** (time to react to a stimulus, e.g., the pupils to light)
- **Wave1Wave3**
- **Wave1Wave5**
- **Wave3Wave5**

A.7.8.4 Second set of differentiating criteria

The third field of systematic name in Table A.7.8.1 describes the target of measurement. More than one descriptor is possible. It holds information about body compartments, body parts, or body functions or refers to their state.

A.7.8.4.1 Semantic link "*concerns*:"

Descriptors for defining the target from a compartment or body part view are as follows:

- **Blood**
- **Cerebral**
- **Intracranial**
- **Head**

Descriptors for functional subsystems are as follows:

- **BrainStem**
- **Cortex**
- **Eye**
- **Muscle**

Descriptors for further specifying the subsystem *eye* are as follows:

- **LeftEye**
- **RightEye**
- **Pupil**
- **Retina**

Additional descriptors are as follows:

- **Arousal** (short awakening of a patient, in sleep laboratory recognized from EEG)
- **CNS State** (used for terms that describe the state of the functional CNS in general or a state of the whole human being, e.g., sleeping [sleep lab])
- **Nystagmus** (a rapid movement of the eye; measurement of nervous activity)
- **Seizures**
- **Spikes**

A.7.8.5 Third set of differentiating criteria

The fourth field holds information about the context, i.e., the functional or organic system for which the term is relevant. Most terms in Table A.7.8.1 belong to the CNS. The muscular system is included because electromyogram (EMG) measurements are performed by neurologists as well. The terms may belong to more than one table. Circumference of the head (Circum Head), as an example, is used not only in neurology (e.g., in connection with the measurement of intracranial pressure for hydrocephalus diagnostic), but also as a general measure to characterize the body (e.g., in connection with pediatrics, especially the monitoring of the growth of the skull).

A.7.8.5.1 Semantic link "*has context*:"

Applicable descriptors are as follows:

- **Body** (i.e., parts of the body)
- **CNS**
- **MuscularSystem** (the muscular parts of the body)
- **Neurology** (the entire field of neurology)

A.7.8.6 Code table

See Table A.7.8.1 for the nomenclature and codes for neurological monitoring measurements.

Table A.7.8.1—Nomenclature and codes for neurological monitoring measurements

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Circumference Head Body, CNS	Circum head		Circumference of the head	MDC_CIRCUM_HEAD	22784
Compliance Head, Intracranial CNS	Intracranial compliance		Change of volume per unit change of intracranial pressure. Measurement is carried out by measuring the change of intracranial pressure following the drainage of a defined small amount of cerebrospinal fluid or filling a balloon positioned inside skull with a small amount of air or water.	MDC_COMPL_INTRA_CRAN	22788
Diameter Pupil CNS	Pupil diameter		Diameter of the pupil	MDC_DIAM_PUPIL	22792
Diameter Pupil, LeftEye CNS	Pupil diameter left eye		Diameter of the pupil, left eye	MDC_DIAM_PUPIL_LEFT	22796
Diameter Pupil, RightEye CNS	Pupil diameter right eye		Diameter of the pupil, right eye	MDC_DIAM_PUPIL_RIGHT	22800
Duration BERA, InterPeak, Wave1Wave3 BrainStem CNS	Interpeak latency Wave 1 to Wave 3 in brainstem evoked potential		Time interval between crest of Wave 1 and crest of Wave 3 in brainstem acoustical evoked potential	MDC_TIME_PD_BERA_INTERPK_WV_1_TO_3	22804
Duration BERA, InterPeak, Wave1Wave5 BrainStem CNS	Interpeak latency Wave 1 to Wave 5 in brainstem evoked potential		Time interval between crest of Wave 1 and crest of Wave 5 in brainstem acoustical evoked potential	MDC_TIME_PD_BERA_INTERPK_WV_1_TO_5	22808
Duration BERA, InterPeak, Wave3Wave5 BrainStem CNS	Interpeak latency Wave 3 to Wave 5 in brainstem evoked potential		Time interval between crest of Wave 3 and crest of Wave 5 in brainstem acoustical evoked potential	MDC_TIME_PD_BERA_INTERPK_WV_3_TO_5	22812
Duration ReactionTime Pupil CNS			Reaction of pupils to light	MDC_TIME_PD_PUPIL_REACT	22816
Duration ReactionTime Pupil, LeftEye CNS			Reaction of pupils to light, left eye	MDC_TIME_PD_PUPIL_REACT_LEFT	22820
Duration ReactionTime Pupil, RightEye CNS			Reaction of pupils to light, right eye	MDC_TIME_PD_PUPIL_REACT_RIGHT	22824

Table A.7.8.1—Nomenclature and codes for neurological monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
ElectricalPotential Cortex CNS	Electro-encephalogram	EEG	Electrical potential derived bipolarly between two electrodes, Position 1 and Position 2 at head surface. A list attribute is used. The electrode at Position 1 is Number 1 in the list. Position 2 can be a combined reference, e.g., linked ear. All connected electrode sites are listed beginning with Number 2 in the list. The attribute values must be taken from the Table A.8.4.1.	MDC_EEG_ELEC_POTL_CRTX	22828
ElectricalPotential Eye CNS	Electro-oculogram	EOG	Electrical potential derived bipolarly from electrode positions 1 and 2 in the neighborhood of eye. A list attribute is used. The attribute values must be taken from the Table A.8.5.1.	MDC_EOG_ELEC_POTL_EYE	22832
ElectricalPotential Eye, Nystagmus CNS	Electro-nystagmogram		Electrical potential of the eye derived differentially by electrode on Position 1 and Position 2. A list attribute is used. The attribute values must be taken from the Table A.8.5.1.	MDC_ENG_ELEC_POTL_EYE_NYSTAG	22836
ElectricalPotential Eye, Retina CNS	Electro-retinogram	ERG	Electrical potential of the eye derived bipolarly between electrodes placed on bulbus	MDC_ERG_ELEC_POTL_RETIN_A	22840
ElectricalPotential Muscle MuscularSystem	Electromyogram	EMG	Electrical Potential from muscle derived bipolarly between electrode Position 1 and Position 2 on skin surface or inside muscle. A list attribute is used. The attribute values must be taken from the Table A.8.3.1.	MDC_EMG_ELEC_POTL_MUSC	22844
ElectricalPotential BERA, Wave1, Amplitude BrainStem CNS	Amplitude Wave 1 brainstem evoked potential		Potential difference between crest and valley before or after crest of Wave 1 in brainstem acoustical evoked potential	MDC_ELEC_EVOK_POTL_BERA_AMPL_WV_1	22848
ElectricalPotential BERA, Wave2, Amplitude BrainStem CNS	Amplitude Wave 2 brainstem evoked potential		Potential difference between crest and valley before or after crest of Wave 2 in brainstem acoustical evoked potential	MDC_ELEC_EVOK_POTL_BERA_AMPL_WV_2	22852
ElectricalPotential BERA, Wave3, Amplitude BrainStem CNS	Amplitude Wave 3 brainstem evoked potential		Potential difference between crest and valley before or after crest of Wave 3 in brainstem acoustical evoked potential	MDC_ELEC_POTL_BERA_AMPL_WV_3	22856

Table A.7.8.1—Nomenclature and codes for neurological monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
ElectricalPotential BERA, Wave4, Amplitude BrainStem CNS	Amplitude Wave 4 brainstem evoked potential		Potential difference between crest and valley before or after crest of Wave 4 in brainstem acoustical evoked potential (comment: a list attribute is used for describing measurement and stimulation; values possible: left, right, NOS.)	MDC_ELEC_POTL_BERA_AMPL_WV_4	22860
ElectricalPotential BERA, Wave5, Amplitude BrainStem CNS	Amplitude Wave 5 brainstem evoked potential		Potential difference between crest and valley before or after crest of Wave 5 in brainstem acoustical evoked potential	MDC_ELEC_POTL_BERA_AMPL_WV_5	22864
ElectricalPotential Evoked Cortex CNS	Evoked potential	EVP	Electrical potential, response to stimulation and mostly averaging, not specified	MDC_ELEC_EVOK_POTL_CRTX	22868
ElectricalPotential Evoked, Acoustic BrainStem CNS	Brainstem acoustical evoked potential	BERA	Electrical potential, response to acoustical stimulus, method averaging, early potentials	MDC_ELEC_EVOK_POTL_BSTEM_ACOUSTIC	22872
ElectricalPotential Evoked, Acoustic Cortex CNS	Acoustical evoked potential	AEP	Electrical potential, response to acoustical stimulus, method averaging, medium and late potentials	MDC_ELEC_EVOK_POTL_CRTX_ACOUSTIC	22876
ElectricalPotential Evoked, Magnetic Cortex CNS	Magnetic evoked potential		Electrical potential, response to magnetic stimulus	MDC_ELEC_EVOK_POTL_CRTX_MAG	22880
ElectricalPotential Evoked, Motoric Cortex CNS	Motoric evoked potential	MEP	Electrical potential, response to magnetic stimulus, method averaging; measured between electrode Position 1 and Position 2 on skin surface or inside muscle. A list attribute is used. The attribute values must be taken from the Table A.8.3.1.	MDC_ELEC_EVOK_POTL_CRTX_MOTOR	22884
ElectricalPotential Evoked, Somatosensory Cortex CNS	Somatosensory evoked potential	SEP	Electrical potential, response to electrical stimulation and averaging. See also A.8.4.	MDC_ELEC_EVOK_POTL_CRTX_SOMATOSENS	22888
ElectricalPotential Evoked, Visual Cortex CNS	Visual evoked potential	VEP	Electrical potential, response to visual stimulus; method averaging	MDC_ELEC_EVOK_POTL_CRTX_VIS	22892
ElectricalPotential InsideSkull Cortex CNS	Electro-corticogram	ECOG	Electrical potential derived bipolarly between two electrodes, Position 1 and Position 2 (attribute, textual) on cortex. Lead 2 can be a combined reference, e.g., linked ear. No standard lead system is known so far.	MDC_ELEC_POTL_CRTX_INSKULL	22896

Table A.7.8.1—Nomenclature and codes for neurological monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
ElectricalPotential VEP, P100Amplitude Cortex CNS	Amplitude Wave P100 in visual evoked potential		Potential difference between crest and valley before or after crest of Wave P100 in visual evoked potential (comment: a list attribute is used for describing measurement and stimulation; values possible: left, right, NOS.)	MDC_ELEC_POTL_CRTX_AMPL _P100	22900
Flow Blood, Cerebral CNS	Cerebral blood flow		Transcranial cerebral blood flow	MDC_FLOW_BLD_CEREB	22904
Frequency EEG, PowerSpectrum, MeanDominantFrequency Cortex CNS	Mean dominant frequency of electro- encephalogram		Mean dominant frequency of Power spectrum of EEG measured between two electrodes, Position 1 and Position 2 at head surface. See also A.8.4.	MDC_EEG_FREQ_PWR_SPEC_ CRTX_DOM_MEAN	22908
Frequency EEG, PowerSpectrum, MedianPowerFrequency Cortex CNS	Median power frequency of electro- encephalogram		Median power frequency of power spectrum of EEG measured between two electrodes, Position 1 and Position 2 at head surface. See also A.8.4.	MDC_EEG_FREQ_PWR_SPEC_ CRTX_MEDIAN	22912
Frequency EEG, PowerSpectrum, PeakPowerFrequency Cortex CNS	Peak power frequency of electro- encephalogram		Peak power frequency of power spectrum of EEG measured between two electrodes, Position 1 and Position 2 at head surface. See also A.8.4.	MDC_EEG_FREQ_PWR_SPEC_ CRTX_PEAK	22916
Frequency EEG, PowerSpectrum, SpectralEdgeFrequency Cortex CNS	Spectral edge frequency of electro- encephalogram		Spectral edge frequency of power spectrum of EEG measured between two electrodes, Position 1 and Position 2 at head surface. See also A.8.4.	MDC_EEG_FREQ_PWR_SPEC_ CRTX_SPECTRAL_EDGE	22920
Latency BERA, Wave1 BrainStem CNS	Latency Wave 1 brainstem evoked potential		Time interval between stimulus and crest of Wave 1 in brainstem acoustical evoked potential	MDC_LATENCY_BSTEM_EVOK_ POTL_WV_1	22924
Latency BERA, Wave2 BrainStem CNS	Latency Wave 2 brainstem evoked potential		Time interval between stimulus and crest of Wave 2 in brainstem acoustical evoked potential	MDC_LATENCY_BSTEM_EVOK_ POTL_WV_2	22928
Latency BERA, Wave3 BrainStem CNS	Latency Wave 3 brainstem evoked potential		Time interval between stimulus and crest of Wave 3 in brainstem acoustical evoked potential	MDC_LATENCY_BSTEM_EVOK_ POTL_WV_3	22932

Table A.7.8.1—Nomenclature and codes for neurological monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Latency BERA, Wave4 BrainStem CNS	Latency Wave 4 brainstem evoked potential		Time interval between stimulus and crest of Wave 4 in brainstem acoustical evoked potential	MDC_LATENCY_BSTEM_EVOK_POTL_WV_4	22936
Latency BERA, Wave5 BrainStem CNS	Latency Wave 5 brainstem evoked potential		Time interval between stimulus and crest of Wave 5 in brainstem acoustical evoked potential	MDC_LATENCY_BSTEM_EVOK_POTL_WV_5	22940
Latency VEP, P100 Cortex CNS	Latency Wave P100 in visual evoked potential		Time interval between stimulus and crest of Wave P100 in visual evoked potential	MDC_LATENCY_VEP_WV_P100	22944
MagneticField Cortex CNS	Magneto-encephalogram	MEG	Magnetic field measured above surface of head, representing neurogenic activity in brain	MDC_MEG_MAGFLD	22948
Number EEG Arousal Neurology, CNS	Arousal		Arousal, short awakenings, as determined out of the EEG, EOG, and EMG	MDC_EEG_NUM_AROUS	22952
Number EEG Spikes Neurology, CNS	Spikes		Spikes, as determined out of the EEG	MDC_EEG_NUM_SPK	22956
Number EEG Seizures Neurology, CNS	Seizures		Seizures, as determined out of the EEG, EOG, and EMG	MDC_EEG_NUM_SEIZ	22960
Power EEG, PowerSpectrum Cortex CNS	Compressed spectral array of electro-encephalogram	CSA	Power spectrum of EEG measured between two electrodes, position 1 and 2 at head surface. A list attribute is used. See also A.8.4.	MDC_EEG_PWR_SPEC_CSA	22964
Power EEG, PowerSpectrum, TotalPower Cortex CNS	Total power of electro-encephalogram		Total power of spectrum of EEG measured between two electrodes, Position 1 and Position 2 at head surface. A list attribute is used. See also A.8.4.	MDC_EEG_PWR_SPEC_TOT	22968
Power EEG, PowerSpectrum, AlphaBand, AbsolutePower Cortex CNS	Absolute power of alpha band of electro-encephalogram		Absolute power of alpha band of power spectrum of EEG measured between two electrodes, Position 1 and Position 2 at head surface. A list attribute is used. See also A.8.4.	MDC_EEG_PWR_SPEC_ALPHA_ABS	22972
Power EEG, PowerSpectrum, BetaBand, AbsolutePower Cortex CNS	Absolute power of beta band of electro-encephalogram		Absolute power of beta band of power spectrum of EEG measured between two electrodes, Position 1 and Position 2 at head surface. A list attribute is used. See also A.8.4.	MDC_EEG_PWR_SPEC_BETA_ABS	22976

Table A.7.8.1—Nomenclature and codes for neurological monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Power EEG, PowerSpectrum, DeltaBand, AbsolutePower Cortex CNS	Absolute power of delta band of electro-encephalogram		Absolute power of delta band of power spectrum of EEG measured between two electrodes, Position 1 and Position 2 at head surface. A list attribute is used. See also A.8.4.	MDC_EEG_PWR_SPEC_DELTA_ABS	22980
Power EEG, PowerSpectrum, ThetaBand, AbsolutePower Cortex CNS	Absolute power of theta band of electro-encephalogram		Absolute power of theta band of power spectrum of EEG measured between two electrodes, Position 1 and Position 2 at head surface. A list attribute is used. See also A.8.4.	MDC_EEG_PWR_SPEC_THETA_ABS	22984
Power EEG, PowerSpectrum, SigmaBand, AbsolutePower Cortex CNS	Absolute power of sigma band of electro-encephalogram		Absolute power of sigma band of power spectrum of EEG measured between two electrodes, Position 1 and Position 2 at head surface. A list attribute is used. See also A.8.4.	MDC_EEG_PWR_SPEC_SIGMA_ABS	22988
Power EEG, PowerSpectrum, GammaBand, AbsolutePower Cortex CNS	Absolute power of gamma band of electro-encephalogram		Absolute power of gamma band of power spectrum of EEG measured between two electrodes, Position 1 and Position 2 at head surface. A list attribute is used. See also A.8.4.	MDC_EEG_PWR_SPEC_GAMMA_ABS	22992
Power EEG, PowerSpectrum, AlphaBand, RelativePower Cortex CNS	Relative power of alpha band of electro-encephalogram		Relative power of alpha band of power spectrum of EEG measured between two electrodes, Position 1 and Position 2 at head surface. A list attribute is used. See also A.8.4.	MDC_EEG_PWR_SPEC_ALPHA_REL	22996
Power EEG, PowerSpectrum, BetaBand, RelativePower Cortex CNS	Relative power of beta band of electro-encephalogram		Relative power of beta band of power spectrum of EEG measured between two electrodes, Position 1 and Position 2 at head surface. A list attribute is used. See also A.8.4.	MDC_EEG_PWR_SPEC_BETA_REL	23000
Power EEG, PowerSpectrum, DeltaBand, RelativePower Cortex CNS	Relative power of delta band of electro-encephalogram		Relative power of delta band of power spectrum of EEG measured between two electrodes, Position 1 and Position 2 at head surface. A list attribute is used. See also A.8.4.	MDC_EEG_PWR_SPEC_DELTA_REL	23004
Power EEG, PowerSpectrum, ThetaBand, RelativePower Cortex CNS	Relative power of theta band of electro-encephalogram		Relative power of theta band of power spectrum of EEG measured between two electrodes, Position 1 and Position 2 at head surface. A list attribute is used. See also A.8.4.	MDC_EEG_PWR_SPEC_THETA_REL	23008

Table A.7.8.1—Nomenclature and codes for neurological monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Power EEG, PowerSpectrum, SigmaBand, RelativePower Cortex CNS	Relative power of sigma band of electro-encephalogram		Relative power of sigma band of power spectrum of EEG measured between two electrodes, Position 1 and Position 2 at head surface. A list attribute is used. See also A.8.4.	MDC_EEG_PWR_SPEC_SIGMA_REL	23012
Power EEG, PowerSpectrum, GammaBand, RelativePower Cortex CNS	Relative power of gamma band of electro-encephalogram		Relative power of gamma band of power spectrum of EEG measured between two electrodes, Position 1 and Position 2 at head surface. A list attribute is used. See also A.8.4.	MDC_EEG_PWR_SPEC_GAMMA_REL	23016
Pressure Head, Intracranial CNS	Intracranial pressure	ICP	Pressure inside skull	MDC_PRESS_INTRA_CRAN	22536
Pressure Mean Head, Intracranial CNS	Mean intracranial pressure	ICPM	Mean pressure inside skull	MDC_PRESS_INTRA_CRAN_MEAN	22539
Pressure Systolic Head, Intracranial CNS	Systolic intracranial pressure	ICPS	Maximum pressure inside skull, caused by filling of vessels during systolic phase of blood pressure	MDC_PRESS_INTRA_CRAN_SYS	22537
Pressure Diastolic Head, Intracranial CNS	Diastolic intracranial pressure	ICPD	Minimum pressure inside skull, caused by emptying of vessels during diastolic phase of blood pressure	MDC_PRESS_INTRA_CRAN_DIA	22538
Pressure Difference(MeanArterial, MeanIntracranial) Head, Intracranial CNS	Cerebral perfusion pressure	CPP	Pressure difference between mean arterial pressure and mean pressure inside skull	MDC_PRESS_CEREB_PERF	22532
Pressure Epidural Head, Intracranial CNS	Epidural pressure	ICPE	Pressure inside skull outside dura	MDC_PRESS_INTRA_CRAN_EPIDURAL	22540
Pressure Epidural, Mean Head, Intracranial CNS	Mean epidural pressure	ICPEM	Mean pressure inside skull outside dura	MDC_PRESS_INTRA_CRAN_EPIDURAL_MEAN	22543
Pressure Epidural, Systolic Head, Intracranial CNS	Systolic epidural pressure	ICPES	Maximum pressure inside skull outside dura, caused by filling of vessels during systolic phase of blood pressure	MDC_PRESS_INTRA_CRAN_EPIDURAL_SYS	22541
Pressure Epidural, Diastolic Head, Intracranial CNS	Diastolic epidural pressure	ICPED	Minimum pressure inside skull outside dura, caused by emptying of vessels during diastolic phase of blood pressure	MDC_PRESS_INTRA_CRAN_EPIDURAL_DIA	22542

Table A.7.8.1—Nomenclature and codes for neurological monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pressure Subdural Head, Intracranial CNS	Subdural pressure	ICPS	Pressure inside skull inside dura	MDC_PRESS_INTRA_CRAN_SUBDURAL	22544
Pressure Subdural, Mean Head, Intracranial CNS	Mean subdural pressure	ICPSM	Mean pressure inside skull inside dura	MDC_PRESS_INTRA_CRAN_SUBDURAL_MEAN	22547
Pressure Subdural, Systolic Head, Intracranial CNS	Systolic subdural pressure	ICPSS	Maximum pressure inside skull inside dura, caused by filling of vessels during systolic phase of blood pressure	MDC_PRESS_INTRA_CRAN_SUBDURAL_SYS	22545
Pressure Subdural, Diastolic Head, Intracranial CNS	Diastolic subdural pressure	ICPSD	Minimum pressure inside skull inside dura, caused by emptying of vessels during diastolic phase of blood pressure	MDC_PRESS_INTRA_CRAN_SUBDURAL_DIA	22546
Pressure Tissue Head, Intracranial CNS	Intracranial tissue pressure	ICPT	Pressure inside skull inside brain tissue	MDC_PRESS_INTRA_CRAN_TISS	22548
Pressure Tissue, Mean Head, Intracranial CNS	Mean intracranial tissue pressure	ICPTM	Mean pressure inside skull inside brain tissue	MDC_PRESS_INTRA_CRAN_TISS_MEAN	22551
Pressure Systolic Head, Intracranial CNS	Systolic intracranial pressure	ICPTS	Maximum pressure inside skull inside brain tissue, caused by filling of vessels during systolic phase of blood pressure	MDC_PRESS_INTRA_CRAN_TISS_SYS	22549
Pressure Diastolic Head, Intracranial CNS	Diastolic intracranial pressure	ICPTD	Minimum pressure inside skull inside brain tissue, caused by emptying of vessels during diastolic phase of blood pressure	MDC_PRESS_INTRA_CRAN_TISS_DIA	22550
Pressure Ventricular Head, Intracranial CNS	Ventricular pressure	ICPV	Pressure inside skull inside ventricle	MDC_PRESS_INTRA_CRAN_VENT	22552
Pressure Ventricular, Mean Head, Intracranial CNS	Mean ventricular pressure	ICPVM	Mean pressure inside skull inside ventricle	MDC_PRESS_INTRA_CRAN_VENT_MEAN	22555
Pressure Ventricular, Systolic Head, Intracranial CNS	Systolic ventricular pressure	ICPVS	Maximum pressure inside skull inside ventricle, caused by filling of vessels during systolic phase of blood pressure	MDC_PRESS_INTRA_CRAN_VENT_SYS	22553
Pressure Ventricular, Diastolic Head, Intracranial CNS	Diastolic ventricular pressure	ICPVD	Minimum pressure inside skull inside ventricle, caused by emptying of vessels during diastolic phase of blood pressure	MDC_PRESS_INTRA_CRAN_VENT_DIA	22554

Table A.7.8.1—Nomenclature and codes for neurological monitoring measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Score GlasgowComaScore CNS State CNS	Glasgow coma score	GCS	Score that monitors the neurologic status and probable outcome of patient	MDC_SCORE_GLAS_COMA	22656
Score GlasgowComaScore, SubscoreEye CNS State CNS	Glasgow coma score, eye	GCSE	Subscore for visual reactions of score that monitors the neurologic status and probable outcome of patient	MDC_SCORE_EYE_SUBSC_GLAS_COMA	22658
Score GlasgowComaScore, SubscoreMotoric CNS State CNS	Glasgow coma score, motoric	GCMS	Subscore for motoric reactions of score that monitors the neurologic status and probable outcome of patient	MDC_SCORE_MOTOR_SUBSC_GLAS_COMA	22659
Score GlasgowComaScore, SubscoreVerbal CNS State CNS	Glasgow coma score, verbal	GCSSV	Subscore for verbal reactions of score that monitors the neurologic status and probable outcome of patient	MDC_SCORE_SUBSC_VERBAL_GLAS_COMA	22660
Score GlasgowComaScore, Sum CNS State CNS	Glasgow coma score	GCSS	Sum of subscores for score that monitors the neurologic status and probable outcome of patient	MDC_SCORE_SUBSC_SUM_GLAS_COMA	22657
Score Sleepstage, EEG CNS State CNS	Sleep stage		Sleep stage determined out of the EEG, EOG, and EMG; sleep depth	MDC_EEG_SCORE_SLEEPSTG	22664

A.7.9 Nomenclature, data dictionary, and codes for neurophysiologic enumerations

A.7.9.1 Introduction

Subclause A.7.9 presents a nomenclature for systematic names for enumeration in neurophysiologic monitoring. The systematic names are grouped in several tables (see Table A.7.9.1, Table A.7.10.1, Table A.8.2.1, and Table A.8.3.1). Table A.7.9.1 lists systematic names concerning neurophysiologic *patterns*, derived from EEG, EMG, etc., signals by a neurophysiologic measurement system or by a physician who marks his or her diagnostics during visual inspection of the signal. This nomenclature holds basic patterns only to describe the waveforms. The physician often has to qualify the patterns (e.g., frequency, amplitude) by a grading system. That system is not included in this nomenclature because a system for that purpose is available from ASTM.

A.7.9.2 Base concept

In this special case, only one descriptor is applicable:

- **Pattern** (the pattern recognized in a measurement)

A.7.9.3 First set of differentiating criteria

The second field of the systematic name refers to the measurement features.

A.7.9.3.1 Semantic link "*has origin:*"

Descriptors for EEG waveforms are as follows:

- **ArtifactualActivity**
- **Background**
- **Classification**
- **EvokedPotential**
- **ExternallyInfluenced**
- **ParoxysmalActivity**

The descriptor for EOG waveforms is as follows:

- **EyeMovement**

A.7.9.3.2 Semantic link "*has morphologic classification:*"

Descriptors for EEG sleep stages are as follows:

- **AlphaDeltaSleep**
- **REMSleep**
- **REMspindleSleep**
- **SleepStageI**
- **SleepStageII**
- **SleepStageIII**
- **SleepStageIV**
- **StageWake**
- **UnspecifiedSleepStage**
- **Unstageable**

A.7.9.3.3 Semantic link "has pattern type:"

Descriptors for EEG sleep activity or event type are as follows:

- **Arousal**
- **Awakening**
- **F_Wave**
- **K_Complex**
- **PostOccipitalSharpTransient**
- **SawToothWave**
- **SleepActivity**
- **SleepSpindle**
- **SleepStageShift**
- **V_Wave**

A.7.9.3.4 Semantic link "has activity type:"

Descriptors for EEG background activity are as follows:

- **AlphaActivity**
- **ArrhythmicDeltaActivity**
- **BetaActivity**
- **BisynchronousDeltaActivity**
- **BisynchronousThetaActivity**
- **DeltaActivity**
- **GammaActivity**
- **MuActivity**
- **SigmaActivity**
- **SlowFusedTransients**
- **ThetaActivity**
- **Unspecified**

Descriptors for EEG sharp or epileptiform activity are as follows:

- **14And6HzPositiveBursts**
- **LambdaWave**
- **PhantomSpikeAndWaveActivity**
- **SharpTransient**
- **SmallSharpSpike**
- **TriphasicWave**
- **UnspecifiedEpileptiformDischarge**
- **Wicket**
- **ZetaWave**

Descriptors for EEG epileptic or epileptogenic activity are as follows:

- **AtypicalSpikeAndWaveComplex**
- **BurstSuppression**
- **MultipleIndependentSpikesAndAsynchronousSlow**

- **MultipleSpikes**
- **RhythmicSharpWaves**
- **SharpAndSlowWaveComplex**
- **SharpWave**
- **Spike**
- **SpikeAndWaveComplex**
- **UnspecificIctalDischarge**

Descriptors for EEG periodic and quasiperiodic cerebral activity are as follows:

- **PeriodicBurstsWithSuppressions**
- **PeriodicComplexes**
- **PeriodicEpileptiformDischarges**
- **PeriodicSharpWaves**
- **PeriodicSuppressions**
- **PeriodicTriphasicWaves**
- **QuasiperiodicSharpWaves**
- **QuasiperiodicTriphasicWaves**
- **UnspecifiedPeriodicCerebralActivity**

Descriptors for eye-related activity in EEG are as follows:

- **Electroretinogram**
- **EyeBlink**
- **FastIrregularEyeMovements**
- **NystagmoidEyeMovements**
- **PhoticDrivingActivity**
- **PhotomyogenicActivity**
- **PhotoparadoxysmalActivity**
- **RapidEyeMovements**
- **SlowEyeMovements**
- **UnspecifiedEyeMovements**

Descriptors for myogenic noncerebral activity in EEG are as follows:

- **ExtraocularMuscleActivity**
- **FaciaSynkinesis**
- **HemifacialSpasms**
- **MyoclonicActivity**
- **Myokymia**
- **PalatalMyoclonus**
- **PeriodicMovementsOfSleep**
- **PerodicMovementsOfSleepWithArousals**
- **TremorActivity**
- **UnspecifiedMyogenicActivity**

Descriptors for artifactual activity in EEG are as follows:

- **ECG_Artifact**

- **ElectrodeInstrumentalArtifact**
- **ExternalInterferenceArtifact**
- **GlossokineticArtifact**
- **MovementArtifact**
- **PulseArtifact**
- **RespiratoryArtifact**
- **SwallowingChewingSuckingArtifact**
- **SweatOrGalvanicArtifact**
- **Unspecified**

A.7.9.3.5 Semantic link "*has waveform type*:"

Descriptors for standard EMG patterns are as follows:

- **AfterDischarges**
- **ComplexRepetitiveDischarges**
- **CrampDischarges**
- **Doublet**
- **EndPlateNoise**
- **EndPlateSpike**
- **FasciculationPotential**
- **FibrillationPotential**
- **InsertionalActivity**
- **MotorUnitPotential**
- **Multiplet**
- **MyokymicDischarges**
- **MyotonicDischarge**
- **PositiveSharpWave**
- **Triplet**
- **Unspecified**
- **UnspecifiedIterativeDischarges**
- **UnspecifiedPotentialUnderVoluntaryControl**

Descriptors for motor nerve conductens study (NCS) EMG patterns are as follows:

- **AxonReflex**
- **C_Reflex**
- **F_Wave**
- **H_Reflex**
- **SilentPeriod**
- **Unspecified**

Descriptors for sensory NCS waveforms are as follows:

- **ContralateralR2**
- **R1**
- **R2**
- **SNAP**

- **Unspecified**

Descriptors for brainstem acoustic evoked potential (BAEP) waveforms are as follows:

- **Peak_I**
- **Peak_II**
- **Peak_III**
- **Peak_IV**
- **Peak_V**
- **Peak_VI**
- **Unspecified**

Descriptors for middle latency acoustic evoked potential (MLAEP) waveforms are as follows:

- **N0_Peak**
- **Na_Peak**
- **Nb_Peak**
- **P0_Peak**
- **Pa_Peak**
- **Pb_Peak**
- **Unspecified**

Descriptors for long latency acoustic evoked potential (LLAEP) waveforms are as follows:

- **Nb_Peak**
- **N1_Peak**
- **N2_Peak**
- **P1_Peak**
- **P2_Peak**
- **P300_Peak**
- **Unspecified**

Descriptors for electrocochleograph (ECoG) waveforms are as follows:

- **CochlearMicroNerveActionPotential**
- **CochlearMicrophonic**
- **CochlearMicroSummatingPotential**
- **NerveActionPotential**
- **SummatingPotential**
- **SummatingPotentialNerveActionPotential**
- **Unspecified**

Descriptors for electroretinograph (ERG) waveforms are as follows:

- **A_Wave**
- **B_Wave**
- **C_Wave**
- **EarlyReceptorPotential**
- **Unspecified**

Descriptors for patterned VEP waveforms are as follows:

- **N75_Peak**
- **N145_Peak**
- **P50_Peak**
- **P100_Peak**
- **P175_Peak**
- **P300_Peak**
- **Unspecified**

Descriptors for diffuse light VEP waveforms are as follows:

- **N1_Peak**
- **N2_Peak**
- **N3_Peak**
- **P1_Peak**
- **P2_Peak**
- **P3_Peak**
- **Unspecified**

Descriptors for medianus or ulnaris somatosensory evoked potential (SEP) waveforms are as follows:

- **N9_Peak**
- **N11_Peak**
- **N13_Peak**
- **N20_Peak**
- **P30_Peak**
- **P300_Peak**
- **Unspecified**

Descriptors for peroneus SEP waveforms are as follows:

- **HighThoracic_Peak**
- **LowThoracic_Peak**
- **Lumbar_Peak**
- **N35_Peak**
- **P27_Peak**
- **P300_Peak**
- **Unspecified**

Descriptors for tibialis SEP waveforms are as follows:

- **Lumbar_Peak**
- **N45_Peak**
- **P37_Peak**
- **P300_Peak**
- **Popliteal_Peak**
- **Thoracic_Peak**
- **Unspecified**

Descriptors for SEP waveforms are as follows:

- **P300_Peak**
- **Peak_I**
- **Peak_II**
- **Peak_III**
- **Peak_IV**
- **Peak_V**
- **Unspecified**

Descriptors for waveforms in EOG signals caused by eye movement are as follows:

- **Blink**
- **Other**
- **Rapid**
- **Saccadic**
- **Slow**

A.7.9.3.6 Semantic link "*has status*:"

Descriptors for the status of the eyes are as follows:

- **Closing**
- **Opening**

A.7.9.4 Second set of differentiating criteria

The third field of the systematic name describes the target of measurement.

A.7.9.4.1 Semantic link "*has organ*:"

Descriptors for the organ are as follows:

- **CochlearNerve**
- **Cortex**
- **Ear**
- **Eye**
- **Muscle**
- **Nerve**
- **NonCortex**
- **Retina**

A.7.9.4.2 Semantic link "*has origin*:"

Descriptors for the origin of the signal, i.e., the head, the eyes, or a muscle, are as follows:

- **Artifact**
- **EEG**
- **EMG**
- **EOG**
- **StandardEMG**

Descriptors to specify nerve function are as follows:

- **Motoric**
- **Sensory**

A.7.9.4.3 Semantic link "*has method*:"

Descriptors for the method to provoke signals measured in the EEG are as follows:

- **BAEP**
- **Diffuse_Light_VEP**
- **LLAEP**
- **MedianusOrUlnarisSEP**
- **MLAEP**
- **OtherSEP**
- **Patterned_VEP**
- **PeroneusSEP**
- **TibialisSEP**

A.7.9.5 Third set of differentiating criteria

The fourth field holds the information about the context, i.e., the functional or organic system for which the term is relevant.

A.7.9.5.1 Semantic link "*pertains to*:"

The following descriptors are used:

- **CNS**
- **MuscularSystem**
- **PeripheralNervousSystem**

A.7.9.6 Code table

See Table A.7.9.1 for the nomenclature and codes for neurophysiologic enumerations.

Table A.7.9.1—Nomenclature and codes for neurophysiologic enumerations

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern Background, Unspecified Cortex, EEG CNS	Background activity		Background activity description, unspecified	MDC_EEG_BKGD_CRTX	23560
Pattern Background, BetaActivity Cortex, EEG CNS	Background activity beta		Background activity description, beta activity	MDC_EEG_BKGD_CRTX_ACTIV_BETA	23568
Pattern Background, SigmaActivity Cortex, EEG CNS	Background activity sigma		Background activity description, sigma activity	MDC_EEG_BKGD_CRTX_ACTIV_SIGMA	23576
Pattern Background, GammaActivity Cortex, EEG CNS	Background activity gamma		Background activity description, gamma activity	MDC_EEG_BKGD_CRTX_ACTIV_GAMMA	23584
Pattern Background, AlphaActivity Cortex, EEG CNS	Background activity alpha		Background activity description, alpha activity	MDC_EEG_BKGD_CRTX_ACTIV_ALPHA	23592
Pattern Background, MuActivity Cortex, EEG CNS	Background Mu activity		Background activity, mu activity	MDC_EEG_BKGD_CRTX_ACTIV_MU	23600
Pattern Background, ThetaActivity Cortex, EEG CNS	Background activity theta		Background activity, theta activity	MDC_EEG_BKGD_CRTX_ACTIV_THETA	23608
Pattern Background, BisynchronousThetaActivity Cortex, EEG CNS	Background activity bisynchronous theta		Background activity, bisynchronous theta activity	MDC_EEG_BKGD_CRTX_ACTIV_THETA_BISYNC	23616
Pattern Background, DeltaActivity Cortex, EEG CNS	Background activity delta		Background activity description, delta activity	MDC_EEG_BKGD_CRTX_ACTIV_DELTA	23624
Pattern Background, BisynchronousDeltaActivity Cortex, EEG CNS	Background activity bisynchronous delta		Background activity description, bisynchronous delta activity	MDC_EEG_BKGD_CRTX_ACTIV_DELTA_BISYNC	23632
Pattern Background, ArrhythmicDeltaActivity Cortex, EEG CNS	Background activity arrhythmic delta		Background activity description, arrhythmic delta activity	MDC_EEG_BKGD_CRTX_ACTIV_ARRHY_DELTA	23640
Pattern Background, SlowFusedTransients Cortex, EEG CNS	Background activity slow fused transients		Background activity description, slow fused transients	MDC_EEG_BKGD_CRTX_TRANS_FUSED_SLOW	23648

Table A.7.9.1—Nomenclature and codes for neurophysiologic enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern Classification, UnspecifiedSleepStage Cortex, EEG CNS	Sleep stage unspecified		Sleep state description, unspecified	MDC_EEG_CLS_CRTX_SLP_STG	23656
Pattern Classification, Unstageable Cortex, EEG CNS	Sleep stage unstageable		Sleep state description, unstageable, movement time	MDC_EEG_CLS_CRTX_UNSTGABLE	23664
Pattern Classification, StageWake, Cortex, EEG CNS	Sleep stage wake		Sleep state description, stage wake	MDC_EEG_CLS_CRTX_WAKE_STG	23672
Pattern Classification, REMsleep Cortex, EEG CNS	Sleep stage REM		Sleep state description, REM sleep	MDC_EEG_CLS_CRTX_SLP_REM	23680
Pattern Classification, REMspindleSleep Cortex, EEG CNS	Sleep stage REM with sleep spindle		Sleep state description, REM-spindle sleep	MDC_EEG_CLS_CRTX_SLP_REM_SPINDLE	23688
Pattern Classification, SleepStageI Cortex, EEG CNS	Sleep Stage I		Sleep state description, Stage I sleep	MDC_EEG_CLS_CRTX_SLP_STG_I	23696
Pattern Classification, SleepStageII Cortex, EEG CNS	Sleep Stage II		Sleep state description, Stage II sleep	MDC_EEG_CLS_CRTX_SLP_STG_II	23704
Pattern Classification, SleepStageIII Cortex, EEG CNS	Sleep Stage III		Sleep state description, Stage III sleep	MDC_EEG_CLS_CRTX_SLP_STG_III	23712
Pattern Classification, SleepStageIV Cortex, EEG CNS	Sleep stage IV		Sleep state description, Stage IV sleep	MDC_EEG_CLS_CRTX_SLP_STG_IV	23720
Pattern Classification, AlphaDeltaSleep Cortex, EEG CNS	Alphadelta Sleep		Sleep state description, alpha-delta sleep	MDC_EEG_CLS_CRTX_SLP_STG_ALPHA_DELTA	23728
Pattern Classification, SleepActivity Cortex, EEG CNS	Sleep activity and event		Sleep activity and event description, sleep activity	MDC_EEG_CLS_CRTX_SLP_ACTIV	23736
Pattern Classification, SleepSpindle Cortex, EEG CNS	Sleep spindle		Sleep activity and event description, sleep spindle	MDC_EEG_CLS_CRTX_SLP_SPINDLE	23744
Pattern Classification, V_Wave Cortex, EEG CNS	Sleep V wave		Sleep activity and event description, V waves	MDC_EEG_CLS_CRTX_VW_V	23752
Pattern Classification, F_Wave Cortex, EEG CNS	Sleep F wave		Sleep activity and event description, F waves	MDC_EEG_CLS_CRTX_VW_F	23760

Table A.7.9.1—Nomenclature and codes for neurophysiologic enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern Classification, K_Complex Cortex, EEG CNS	Sleep K complex		Sleep activity and event description, K complexes	MDC_EEG_CLS_CRTX_CMLPX_K	23768
Pattern Classification, PostOccipitalSharpTransient Cortex, EEG CNS	Sleep post occipital sharp transient		Sleep activity and event, postoccipital sharp transients	MDC_EEG_CLS_CRTX_POSTOCCIP_TRANS_SHARP	23776
Pattern Classification, SawToothWave Cortex, EEG CNS	Sleep sawtooth wave		Sleep activity and event description, sawtooth waves	MDC_EEG_CLS_CRTX_WV_SAW	23784
Pattern Classification, SleepStageShift Cortex, EEG CNS	Sleep stage shift		Sleep activity and event description, sleep stage shifts	MDC_EEG_CLS_CRTX_SLP_STG_SHIFT	23792
Pattern Classification, Arousal Cortex, EEG CNS	Sleep arousal		Sleep activity and event description, arousals	MDC_EEG_CLS_CRTX_AROUSAL	23800
Pattern Classification, Awakening Cortex, EEG CNS	Sleep awakening		Sleep activity and event description, awakenings	MDC_EEG_CLS_CRTX_AWAKENING	23808
Pattern ParoxysmalActivity, UnspecifiedEpileptiformDischarge Cortex, EEG CNS	Sharp appearing or epileptiform activity		Sharp appearing or epileptiform activity, unspecified epileptiform discharges	MDC_EEG_PAROX_CRTX_DISCHG_EPILEP	23816
Pattern ParoxysmalActivity, SharpTransient Cortex, EEG CNS	Sharp transient		Sharp appearing or epileptiform activity, sharp transients	MDC_EEG_PAROX_CRTX_TRANS_SHARP	23824
Pattern ParoxysmalActivity, Wicket Cortex, EEG CNS	Wicket		Sharp appearing or epileptiform activity, wickets	MDC_EEG_PAROX_CRTX_WICKET	23832
Pattern ParoxysmalActivity, SmallSharpSpike Cortex, EEG CNS	Small sharp spike		Sharp appearing or epileptiform, small sharp spikes	MDC_EEG_PAROX_CRTX_SPK_SHARP_SMALL	23840
Pattern ParoxysmalActivity, ZetaWave Cortex, EEG CNS	Zeta wave		Sharp appearing or epileptiform, zeta waves	MDC_EEG_PAROX_CRTX_WV_ZETA	23848
Pattern ParoxysmalActivity, TriphasicWave Cortex, EEG CNS	Triphasic wave		Sharp appearing or epileptiform activity, triphasic waves	MDC_EEG_PAROX_CRTX_WV_TRIPHAS	23856
Pattern ParoxysmalActivity, PhantomSpikeAndWaveActivity Cortex, EEG CNS	Phantom spike and wave activity		Sharp appearing or epileptiform activity, phantom spike and wave activity	MDC_EEG_PAROX_CRTX_SPK_AND_WV_PHANTOM	23864

Table A.7.9.1—Nomenclature and codes for neurophysiologic enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern ParoxysmalActivity, 14And6HzPositiveBursts Cortex, EEG CNS	14 and 6 Hz positive bursts		Sharp appearing or epileptiform activity, 14 and 6 Hz positive bursts	MDC_EEG_PAROX_CRTX_BURST_POS_14_AND_6HZ	23872
Pattern ParoxysmalActivity, LambdaWave Cortex, EEG CNS	Lambda wave		Sharp appearing or epileptiform activity	MDC_EEG_PAROX_CRTX_WV_LAMBDA	23880
Pattern ParoxysmalActivity, UnspecificIctalDischarge Cortex, EEG CNS	Epileptic or potentially epileptogenic activity		Epileptic or potentially epileptogenic activity identifiers, unspecific ictal discharges	MDC_EEG_PAROX_CRTX_DISCHG	23888
Pattern ParoxysmalActivity, SharpWave Cortex, EEG CNS	Epileptic or potentially epileptogenic sharp wave		Epileptic or potentially epileptogenic activity identifiers, sharp waves	MDC_EEG_PAROX_CRTX_WV_SHARP	23896
Pattern ParoxysmalActivity, Spike Cortex, EEG CNS	Epileptic or potentially epileptogenic spike		Epileptic or potentially epileptogenic activity identifiers, spikes	MDC_EEG_PAROX_CRTX_SPK	23904
Pattern ParoxysmalActivity, MultipleSpikes Cortex, EEG CNS	Multiple spike		Epileptic or potentially epileptogenic activity identifiers, multiple spikes	MDC_EEG_PAROX_CRTX_SPK_MULT	23912
Pattern ParoxysmalActivity, SpikeAndWaveComplex Cortex, EEG CNS	Spike and wave complex		Epileptic or potentially epileptogenic activity identifiers, spike and wave complexes	MDC_EEG_PAROX_CRTX_SPK_AND_WV_CMPLX	23920
Pattern ParoxysmalActivity, AtypicalSpikeAndWaveComplex Cortex, EEG CNS	Atypical spike and wave complex		Epileptic or potentially epileptogenic activity identifiers, atypical spike and wave complexes	MDC_EEG_PAROX_CRTX_SPK_AND_WV_CMPLX_ATYP	23928
Pattern ParoxysmalActivity, SharpAndSlowWaveComplex Cortex, EEG CNS	Sharp and slow wave complex		Epileptic or potentially epileptogenic activity identifiers, sharp and slow wave complexes	MDC_EEG_PAROX_CRTX_WV_CMPLX_SHARP_SLOW	23936
Pattern ParoxysmalActivity, RhythmicSharpWaves Cortex, EEG CNS	Rhythmic sharp waves		Epileptic or potentially epileptogenic activity identifiers, rhythmic sharp waves	MDC_EEG_PAROX_CRTX_WV_RHYTHMIC_MULT_SHARP	23944
Pattern ParoxysmalActivity, BurstSuppression Cortex, EEG CNS	Burst suppression		Epileptic or potentially epileptogenic activity identifiers, burst suppression	MDC_EEG_PAROX_CRTX_BURST_SUPPRN	23952

Table A.7.9.1—Nomenclature and codes for neurophysiologic enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern ParoxysmalActivity, MultipleIndependentSpikesAndAsynchronousSlow Cortex, EEG CNS	Multiple independent spikes and asynchronous slow waves		Epileptic or potentially epileptogenic activity identifiers, multiple independent spikes and asynchronous slow (hypsarhythmia)	MDC_EEG_PAROX_CRTX_SPK_MULT_AND_ASYNC_SLOW	23960
Pattern ParoxysmalActivity, UnspecifiedPeriodicCerebralActivity Cortex, EEG CNS	Periodic and quasiperiodic cerebral activity		Cont. moderate frequency periodic epileptiform discharges, unspecified periodic cerebral activity	MDC_EEG_PAROX_CRTX_CEREB_ACTIV_PERI	23968
Pattern ParoxysmalActivity, QuasiperiodicTriphasicWaves Cortex, EEG CNS	Quasiperiodic triphasic waves		Cont. moderate frequency periodic epileptiform discharges, quasiperiodic triphasic waves	MDC_EEG_PAROX_CRTX_WV_TRIPHAS_MULT_QUASIPERI	23976
Pattern ParoxysmalActivity, PeriodicTriphasicWaves Cortex, EEG CNS	Periodic triphasic waves		Cont. moderate frequency periodic epileptiform discharges, periodic triphasic waves	MDC_EEG_PAROX_CRTX_WV_TRIPHAS_MULT_PERI	23984
Pattern ParoxysmalActivity, PeriodicEpileptiformDischarges Cortex, EEG CNS	Periodic epileptiform discharges		Cont. moderate frequency periodic epileptiform discharges, periodic epileptiform discharges	MDC_EEG_PAROX_CRTX_DISCHG_EPILEP_MULT_PERI	23992
Pattern ParoxysmalActivity, PeriodicComplexes Cortex, EEG CNS	Periodic cerebral complexes		Cont. moderate frequency periodic epileptiform discharges, Periodic complexes	MDC_EEG_PAROX_CRTX_CMPLX_MULT_PERI	24000
Pattern ParoxysmalActivity, QuasiperiodicSharpWaves Cortex, EEG CNS	Quasiperiodic cerebral sharp waves		Cont. moderate frequency periodic epileptiform discharges, quasiperiodic sharp waves	MDC_EEG_PAROX_CRTX_WV_MULT_SHARP_QUASIPERI	24008
Pattern ParoxysmalActivity, PeriodicSharpWaves Cortex, EEG CNS	Periodic sharp waves		Cont. moderate frequency periodic epileptiform discharges, periodic sharp waves	MDC_EEG_PAROX_CRTX_WV_MULT_SHARP_PERI	24016
Pattern ParoxysmalActivity, PeriodicSuppressions Cortex, EEG CNS	Periodic suppressions		Cont. moderate frequency periodic epileptiform discharges, periodic suppressions	MDC_EEG_PAROX_CRTX_SUPPRN_MULT_PERI	24024
Pattern ParoxysmalActivity, PeriodicBurstsWithSuppressions Cortex, EEG CNS	Periodic bursts with suppressions		Cont. moderate frequency periodic epileptiform discharges, periodic bursts with suppressions	MDC_EEG_PAROX_CRTX_BURST_W_SUPPRN_MULT_PERI	24032

Table A.7.9.1—Nomenclature and codes for neurophysiologic enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern Externally/Influenced, UnspecifiedEyeMovements Cortex, EEG CNS	Eye-related activity		Eye-related activity in the EEG, unspecified eye movements	MDC_EEG_EXT_CRTX_EYE_MVMT_MULT	24040
Pattern Externally/Influenced, EyeBlink Cortex, EEG CNS	Eye blinks		Eye-related activity in the EEG, eye blinks	MDC_EEG_EXT_CRTX_EYE_BLINK	24048
Pattern Externally/Influenced, NystagmoidEyeMovements Cortex, EEG CNS	Nystagmoid eye movements		Eye-related activity in the EEG, nystagmoid eye movements	MDC_EEG_EXT_CRTX_EYE_MVMT_NYSTAG_MULT	24056
Pattern Externally/Influenced, SlowEyeMovements Cortex, EEG CNS	Slow eye movements		Eye-related activity in the EEG, slow eye movements	MDC_EEG_EXT_CRTX_EYE_MVMT_NYSTAG_MULT	24064
Pattern Externally/Influenced, FastIrregularEyeMovements Cortex, EEG CNS	Fast irregular eye movements		Eye-related activity in the EEG, fast irregular eye movements	MDC_EEG_EXT_CRTX_EYE_MVMT_MULT_FAST_IRREG	24072
Pattern Externally/Influenced, RapidEyeMovements Cortex, EEG CNS	Rapid eye movements		Eye-related activity in the EEG, rapid eye movements	MDC_EEG_EXT_CRTX_EYE_MVMT_MULT_RAPID	24080
Pattern Externally/Influenced, PhoticDrivingActivity Cortex, EEG CNS	Eye-related photodriving activity		Eye-related activity in the EEG, photic driving activity	MDC_EEG_EXT_CRTX_EYE_ACTIV_PHOTIC_DRV	24088
Pattern Externally/Influenced, PhotomyogenicActivity Cortex, EEG CNS	Eye-related photomyogenic activity		Eye-related activity in the EEG, photomyogenic activity	MDC_EEG_EXT_CRTX_EYE_ACTIV_PHOTOMYOGENIC	24096
Pattern Externally/Influenced, PhotoparadoxysmalActivity Cortex, EEG CNS	Eye-related photo-paradoxysmal activity		Eye-related activity in the EEG, photoparadoxysmal activity	MDC_EEG_EXT_CRTX_EYE_ACTIV_PHOTOPARADOX	24104
Pattern Externally/Influenced, Electroretinogram Cortex, EEG CNS	Eye-related activity electroretinogram		Eye-related activity, electroretinogram	MDC_EEG_EXT_CRTX_EYE_ERG	24112
Pattern Externally/Influenced, UnspecifiedMyogenicActivity NonCortex, EEG CNS	Myogenic noncerebral activity		Myogenic noncerebral activity, unspecified myogenic activity	MDC_EEG_EXT_ACTIV_MYOGENIC	24120

Table A.7.9.1—Nomenclature and codes for neurophysiologic enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern ExternallyInfluenced, PalatalMyoclonus NonCortex, EEG CNS	Myogenic palatal myoclonus		Myogenic noncerebral activity, palatal myoclonus	MDC_EEG_EXT_PALATAL_MYOCLO Nus	24128
Pattern ExternallyInfluenced, Myokymia NonCortex, EEG CNS	Myogenic noncerebral myokymia		Myogenic noncerebral activity, myokymia	MDC_EEG_EXT_MYOKYMIA	24136
Pattern ExternallyInfluenced, FacialSynkinesis NonCortex, EEG CNS	Myogenic noncerebral facial synkinesis		Myogenic noncerebral activity, facial synkinesis	MDC_EEG_EXT_FACIA_SYNKINESIS	24144
Pattern ExternallyInfluenced, HemifacialSpasms NonCortex, EEG CNS	Myogenic hemifacial spasms		Myogenic noncerebral activity, hemifacial spasms	MDC_EEG_EXT_HEMIFACIAL_SPASM	24152
Pattern ExternallyInfluenced, ExtraocularMuscleActivity NonCortex, EEG CNS	Extraocular muscle activity		Myogenic noncerebral activity, extraocular muscle activity	MDC_EEG_EXT_EXTRA_OCUL_MUSCL_ACTIV	24160
Pattern ExternallyInfluenced, TremorActivity NonCortex, EEG CNS	Myogenic tremor activity		Myogenic noncerebral activity, tremor activity	MDC_EEG_EXT_ACTIV_TREMOR	24168
Pattern ExternallyInfluenced, MyoclonicActivity NonCortex, EEG CNS	Myoclonic activity		Myogenic noncerebral activity, myoclonic activity	MDC_EEG_EXT_ACTIV_MYOCLO NIC	24176
Pattern ExternallyInfluenced, PeriodicMovementsOfSleep NonCortex, EEG CNS	Periodic movements of sleep		Myogenic noncerebral activity, periodic movements of sleep	MDC_EEG_EXT_SLP_MVMT_MULT_PERI	24184
Pattern ExternallyInfluenced, PeriodicMovementsOfSleepWithArousais NonCortex, EEG CNS	Periodic movements of sleep with arousais		Myogenic noncerebral activity, periodic movements of sleep with arousais	MDC_EEG_EXT_SLP_MVMT_W_AROUS_MULT_PERI	24192
Pattern ArtfactualActivity, Unspecified Artfifact, NonCortex, EEG CNS	Artfactual activity		Artfactual activity, unspecified artfifact	MDC_EEG_ARTIF	24200

Table A.7.9.1—Nomenclature and codes for neurophysiologic enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern ArtfactualActivity, ElectrodeInstrumentalArtifac Artifact, NonCortex, EEG CNS	Electrode instrumental artifactual activity		Artifactual activity, electrode/instrumental artifact	MDC_EEG_ARTIF_ELECTRODE_INSTRUM	24208
Pattern ArtfactualActivity, MovementArtifact Artifact, NonCortex, EEG CNS	Movement artifactual activity		Artifactual activity, movement artifact	MDC_EEG_ARTIF_MVMT	24216
Pattern ArtfactualActivity, SweatOrGalvanicArtifact Artifact, NonCortex, EEG CNS	Sweat of galvanic artifactual activity		Artifactual activity, sweat or galvanic artifact	MDC_EEG_ARTIF_SWREAT_OR_GALV	24224
Pattern ArtfactualActivity, PulseArtifact Artifact, NonCortex, EEG CNS	Pulse artifactual activity		Artifactual activity, pulse artifact	MDC_EEG_ARTIF_PULSE	24232
Pattern ArtfactualActivity, ECG_Artifact Artifact, NonCortex, EEG CNS	ECG artifactual activity		Artifactual activity, ECG artifact	MDC_EEG_ARTIF_EKG	24240
Pattern ArtfactualActivity, RespiratoryArtifact Artifact, NonCortex, EEG CNS	Respiratory artifactual activity		Artifactual activity, respiratory artifact	MDC_EEG_ARTIF_RESP	24248
Pattern ArtfactualActivity, GlossokineticArtifact Artifact, NonCortex, EEG CNS	Glossokinetic artifactual activity		Artifactual activity, glossokinetic artifact	MDC_EEG_ARTIF_GLOSSOKINETIC	24256
Pattern ArtfactualActivity, SwallowingChewingSuckingArtifact Artifact, NonCortex, EEG CNS	Swallowing and chewing Artifactual activity		Artifactual activity; swallowing, chewing, and sucking artifact	MDC_EEG_ARTIF_SWALLOW_ETC	24264
Pattern ArtfactualActivity, ExternalInterferenceArtifact Artifact, NonCortex, EEG CNS	External interference Artifactual activity		Artifactual activity, external interference artifact	MDC_EEG_ARTIF_EXT_INTERF	24272
Pattern EyeMovement, Blink Eye, EOG CNS	Eye blink	BL	Eye blink detected	MDC_EOG_EYE_MVMT_BLINK	24280

Table A.7.9.1—Nomenclature and codes for neurophysiologic enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern EyeMovement, Saccadic Eye, EOG CNS	Saccade	SAC	Saccadic eye movement detected from the EOG	MDC_EOG_EYE_MVMT_SACCADIC	24288
Pattern EyeMovement, Rapid Eye, EOG CNS	REM	REM	Rapid eye movement detected from the EOG	MDC_EOG_EYE_MVMT_RAPID	24296
Pattern EyeMovement, Slow Eye, EOG CNS	Slow eye movement	SEM	Slow eye movement detected from the EOG	MDC_EOG_EYE_MVMT_SLOW	24304
Pattern EyeMovement, Other Eye, EOG CNS	Other eye movement	OEM	Other type of eye movement detected from the EOG	MDC_EOG_EYE_MVMT_OTHER	24312
Pattern EyeMovement, Closing Eye, EOG CNS	Eyes closed	EC	Subject closes his/her eye (during sleep measurement)	MDC_EOG_EYE_MVMT_CLOSING	24320
Pattern EyeMovement, Opening Eye, EOG CNS	Eyes open	EO	Subject opens his/her eye (during sleep measurement)	MDC_EOG_EYE_MVMT_OPENING	24328
Pattern ParoxysmalActivity, Unspecified Muscle, StandardEMG MuscularSystem	EMG unspecified waveform		EMG waveform, unspecified	MDC_EMG_PAROX_MUSCL	24336
Pattern ParoxysmalActivity, UnspecifiedPotentialUnderVoluntaryControl Muscle, StandardEMG MuscularSystem	EMG waveform under voluntary control		EMG waveform, unspecified potential under voluntary control	MDC_EMG_PAROX_MUSCL_VOL_CTL	24344
Pattern ParoxysmalActivity, MotorUnitPotential Muscle, StandardEMG MuscularSystem	EMG motor unit potential		EMG waveform, motor unit potential	MDC_EMG_PAROX_MUSCL_MOTOR_UNIT_POTL	24352
Pattern ParoxysmalActivity, Doublet Muscle, StandardEMG MuscularSystem	EMG doublet waveform		EMG waveform, doublet	MDC_EMG_PAROX_MUSCL_DOUBLET	24360
Pattern ParoxysmalActivity, Triplet Muscle, StandardEMG MuscularSystem	EMG triplet waveform		EMG, triplet	MDC_EMG_PAROX_MUSCL_TRIPLET	24368
Pattern ParoxysmalActivity, Multiplet Muscle, StandardEMG MuscularSystem	EMG multiplet waveform		EMG waveform, multiplet	MDC_EMG_PAROX_MUSCL_MULTIPLET	24376

Table A.7.9.1—Nomenclature and codes for neurophysiologic enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern ParoxysmalActivity, InterstitialActivity Muscle, StandardEMG MuscularSystem	EMG interstitial activity		EMG waveform, insertional activity	MDC.EMG_PAROX_MUSCL_ACTIV_INSERTIONAL	24384
Pattern ParoxysmalActivity, EndPlateNoise Muscle, StandardEMG MuscularSystem	EMG endplate noise		EMG waveform, endplate noise	MDC.EMG_PAROX_MUSCL_NOISE_ENDPLATE	24392
Pattern ParoxysmalActivity, EndPlateSpike Muscle, StandardEMG MuscularSystem	EMG endplate spike		EMG waveform, endplate spike	MDC.EMG_PAROX_MUSCL_SPK_ENDPLATE	24400
Pattern ParoxysmalActivity, UnspecifiedIterativeDischarges Muscle, StandardEMG MuscularSystem	EMG unspecified iterative discharge		EMG waveform, unspecified iterative discharges	MDC.EMG_PAROX_MUSCL_DISCHG_ITER	24408
Pattern ParoxysmalActivity, FibrillationPotential Muscle, StandardEMG MuscularSystem	EMG fibrillation potential		EMG waveform, fibrillation potential	MDC.EMG_PAROX_MUSCL_FIBRIL_POTL	24416
Pattern ParoxysmalActivity, PositiveSharpWave Muscle, StandardEMG MuscularSystem	EMG positive sharp wave		EMG waveform, positive sharp wave	MDC.EMG_PAROX_MUSCL_WV_SHARP_POS	24424
Pattern ParoxysmalActivity, FasciculationPotential Muscle, StandardEMG MuscularSystem	EMG fasciculation potential		EMG waveform, fasciculation potential	MDC.EMG_PAROX_MUSCL_FASCIC_POTL	24432
Pattern ParoxysmalActivity, MyotonicDischarge Muscle, StandardEMG MuscularSystem	EMG myotonic discharge		EMG waveform, myotonic discharge	MDC.EMG_PAROX_MUSCL_DISCHG_MYOTONIC	24440
Pattern ParoxysmalActivity, ComplexRepetitiveDischarges Muscle, StandardEMG MuscularSystem	EMG complex repetitive discharge		EMG waveform, complex repetitive discharges	MDC.EMG_PAROX_MUSCL_DISCHG_MULT_CMPLX_REPET	24448
Pattern ParoxysmalActivity, MyokymicDischarges Muscle, StandardEMG MuscularSystem	EMG myokymic discharge		EMG waveform, myokymic discharges	MDC.EMG_PAROX_MUSCL_DISCHG_MYOKEMIC_MULT	24456

Table A.7.9.1—Nomenclature and codes for neurophysiologic enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern ParoxysmalActivity, CrampDischarges Muscle, StandardEMG MuscularSystem	EMG cramp discharge		EMG waveform, cramp discharges	MDC_EMG_PAROX_MUSCL_DISCHG_CRAMP_MULT	24464
Pattern ParoxysmalActivity, AfterDischarges Muscle, StandardEMG MuscularSystem	EMG waveform after discharge		EMG waveform, after discharges	MDC_EMG_PAROX_MUSCL_AFTER_DISCHG_MULT	24472
Pattern ParoxysmalActivity, Unspecified Nerve, Motoric, EMG PeripheralNervousSystem	Motor NCS unspecified waveform		Motor NCS waveform, unspecified	MDC_EMG_PAROX_NERV_MOTOR	24480
Pattern ParoxysmalActivity, F_Wave Nerve, Motoric, EMG PeripheralNervousSystem	Motor NCS F wave		Motor NCS waveform, F wave	MDC_EMG_PAROX_NERV_MOTOR_WV_F	24488
Pattern ParoxysmalActivity, H_Reflex Nerve, Motoric, EMG PeripheralNervousSystem	Motor NCS H reflex wave		Motor NCS waveform, H reflex	MDC_EMG_PAROX_NERV_MOTOR_REFLEX_H	24496
Pattern ParoxysmalActivity, C_Reflex Nerve, Motoric, EMG PeripheralNervousSystem	Motor NCS C reflex wave		Motor NCS waveform, C reflex	MDC_EMG_PAROX_NERV_MOTOR_REFLEX_C	24504
Pattern ParoxysmalActivity, SilentPeriod Nerve, Motoric, EMG PeripheralNervousSystem	Motor NCS silent period		Motor NCS, silent period	MDC_EMG_PAROX_NERV_MOTOR_SILENT_PERIOD	24512
Pattern ParoxysmalActivity, AxonReflex Nerve, Motoric, EMG PeripheralNervousSystem	Motor NCS waveform axon reflex		Motor NCS waveform, axon reflex	MDC_EMG_PAROX_NERV_MOTOR_AXON_REFLEX	24520
Pattern ParoxysmalActivity, Unspecified Nerve, Sensory, EMG PeripheralNervousSystem	Sensory NCS unspecified		Sensory NCS waveform, unspecified	MDC_EMG_PAROX_NERV_SENS	24528
Pattern ParoxysmalActivity, SNAP Nerve, Sensory, EMG PeripheralNervousSystem	Sensory NCS SNAP		Sensory NCS waveform, single nerve action potential SNAP	MDC_EMG_PAROX_NERV_SENS_SNAP	24536
Pattern ParoxysmalActivity, R1 Nerve, Sensory, EMG PeripheralNervousSystem	Sensory NCS R1		Sensory NCS waveform, R1	MDC_EMG_PAROX_NERV_SENS_R1	24544

Table A.7.9.1—Nomenclature and codes for neurophysiologic enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern ParoxysmalActivity, R2 Nerve, Sensory, EMG PeripheralNervousSystem	Sensory NCS R2		Sensory NCS waveform, R2	MDC_EMG_PAROX_NERV_ SENS_R2	24552
Pattern ParoxysmalActivity, ContralateralR2 Nerve, Sensory, EMG PeripheralNervousSystem	Sensory NCS contralateral R2		Sensory NCS, contralateral R2	MDC_EMG_PAROX_NERV_ SENS_R2_CONTRALAT	24560
Pattern EvokedPotential, Unspecified Cortex, BAEP CNS	BAEP unspecified		BAEP waveform, unspecified	MDC_EVOK_POTL_CRTX_BAEP	24568
Pattern EvokedPotential, Peak_I Cortex, BAEP CNS	BAEP Peak I		BAEP waveform, Peak I	MDC_EVOK_POTL_CRTX_BAEP _I_PK	24576
Pattern EvokedPotential, Peak_II Cortex, BAEP CNS	BAEP Peak II		BAEP waveform, Peak II	MDC_EVOK_POTL_CRTX_BAEP _II_PK	24584
Pattern EvokedPotential, Peak_III Cortex, BAEP CNS	BAEP Peak III		BAEP waveform, Peak III	MDC_EVOK_POTL_CRTX_BAEP _III_PK	24592
Pattern EvokedPotential, Peak_IV Cortex, BAEP CNS	BAEP Peak IV		BAEP waveform, Peak IV	MDC_EVOK_POTL_CRTX_BAEP _IV_PK	24600
Pattern EvokedPotential, Peak_V Cortex, BAEP CNS	BAEP Peak V		BAEP waveform, Peak V	MDC_EVOK_POTL_CRTX_BAEP _V_PK	24608
Pattern EvokedPotential, Peak_VI Cortex, BAEP CNS	BAEP Peak VI		BAEP waveform, Peak VI	MDC_EVOK_POTL_CRTX_BAEP _VI_PK	24616
Pattern EvokedPotential, Unspecified Cortex, MLAEP CNS	MLAEP unspecified waveform		MLAEP waveform, unspecified	MDC_EVOK_POTL_CRTX_ MLAEP	24624
Pattern EvokedPotential, N0_Peak Cortex, MLAEP CNS	MLAEP N0 peak		MLAEP waveform, N0 peak	MDC_EVOK_POTL_CRTX_ MLAEP_N0_PK	24632
Pattern EvokedPotential, P0_Peak Cortex, MLAEP CNS	MLAEP P0 peak		MLAEP waveform, P0 peak	MDC_EVOK_POTL_CRTX_ MLAEP_P0_PK	24640
Pattern EvokedPotential, Na_Peak Cortex, MLAEP CNS	MLAEP waveform Na peak		MLAEP, Na peak	MDC_EVOK_POTL_CRTX_ MLAEP_NA_PK	24648

Table A.7.9.1—Nomenclature and codes for neurophysiologic enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern EvokedPotential, Pa_Peak Cortex, MLAEP CNS	MLAEP waveform Pa peak		MLAEP waveform, Pa peak	MDC_EVOK_POTL_CRTX_MLAEP_PA_PK	24656
Pattern EvokedPotential, Nb_Peak Cortex, MLAEP CNS	MLAEP Nb waveform peak		MLAEP, Nb peak	MDC_EVOK_POTL_CRTX_MLAEP_NB_PK	24664
Pattern EvokedPotential, Pb_Peak Cortex, MLAEP CNS	MLAEP waveform Pb peak		MLAEP waveform, Pb peak	MDC_EVOK_POTL_CRTX_MLAEP_PB_PK	24672
Pattern EvokedPotential, unspecified Cortex, LLAEP CNS	LLAEP unspecified wave		LLAEP waveform, unspecified	MDC_EVOK_POTL_CRTX_LLAEP	24680
Pattern EvokedPotential, Nb_Peak Cortex, LLAEP CNS	LLAEP Nb peak		LLAEP waveform, Nb peak	MDC_EVOK_POTL_CRTX_LLAEP_NB_PK	24688
Pattern EvokedPotential, P1_Peak Cortex, LLAEP CNS	LLAEP P1 peak		LLAEP waveform, P1 peak	MDC_EVOK_POTL_CRTX_LLAEP_P1_PK	24696
Pattern EvokedPotential, N1_Peak Cortex, LLAEP CNS	LLAEP N1 peak		LLAEP waveform, N1 peak	MDC_EVOK_POTL_CRTX_LLAEP_N1_PK	24704
Pattern EvokedPotential, P2_Peak Cortex, LLAEP CNS	LLAEP P2 peak		LLAEP waveform, P2 peak	MDC_EVOK_POTL_CRTX_LLAEP_P2_PK	24712
Pattern EvokedPotential, N2_Peak Cortex, LLAEP CNS	LLAEP N2 peak		LLAEP waveform, N2 peak	MDC_EVOK_POTL_CRTX_LLAEP_N2_PK	24720
Pattern EvokedPotential, P300_Peak Cortex, LLAEP CNS	LLAEP P300 peak		LLAEP waveform, P300 Peak	MDC_EVOK_POTL_CRTX_LLAEP_P300_PK	24728
Pattern EvokedPotential, Unspecified Ear, CochlearNerve PeripheralNervousSystem	ECoG unspecified waveform		ECoG waveform, unspecified	MDC_EVOK_POTL_EAR_COCHL	24736
Pattern EvokedPotential, CochlearMicrophonic Ear, CochlearNerve PeripheralNervousSystem	ECoG waveform cochlear microphonic		ECoG waveform, cochlear microphonic	MDC_EVOK_POTL_EAR_COCHL_MICROPHONIC	24744

Table A.7.9.1—Nomenclature and codes for neurophysiologic enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern EvokedPotential, SummatingPotential Ear, CochlearNerve PeripheralNervousSystem	ECoG waveform summating potential		ECoG waveform, summating potential	MDC_EVOK_POTL_EAR_COCHL_SUM_POTL	24752
Pattern EvokedPotential, NerveActionPotential Ear, CochlearNerve PeripheralNervousSystem	ECoG waveform Nerve action potential		ECoG waveform, nerve action potential peak	MDC_EVOK_POTL_EAR_COCHL_NAP	24760
Pattern EvokedPotential, CochlearMicroSummatingPotential Ear, CochlearNerve PeripheralNervousSystem	ECoG waveform cochlear microsummating potential		ECoG waveform, cochlear microsummating potential	MDC_EVOK_POTL_EAR_COCHL_MICRO_SUM_POTL	24768
Pattern EvokedPotential, SummatingPotentialNerveActionPotential Ear, CochlearNerve PeripheralNervousSystem	ECoG waveform summating potential nerve action potential		ECoG waveform, summating potential nerve action potential	MDC_EVOK_POTL_EAR_COCHL_SUM_POTL_NAP	24776
Pattern EvokedPotential, CochlearMicroNerveActionPotential Ear, CochlearNerve PeripheralNervousSystem	ECoG waveform cochlear micronerve action potential		ECoG waveform, cochlear micronerve action potential	MDC_EVOK_POTL_EAR_COCHL_MICRO_NAP	24784
Pattern EvokedPotential, Unspecified Eye, Retina PeripheralNervousSystem	ERG unspecified waveform		ERG waveform, unspecified	MDC_EVOK_POTL_EYE_RETINA	24792
Pattern EvokedPotential, EarlyReceptorPotential Eye, Retina PeripheralNervousSystem	ERG waveform early receptor potential		ERG waveform, early receptor potential	MDC_EVOK_POTL_EYE_RETINA_RECEP_POTL_EARLY	24800
Pattern EvokedPotential, A_Wave Eye, Retina PeripheralNervousSystem	ERG waveform A wave		ERG waveform, A wave	MDC_EVOK_POTL_EYE_RETINA_WV_A	24808
Pattern EvokedPotential, B_Wave Eye, Retina PeripheralNervousSystem	ERG waveform B wave		ERG waveform, B wave	MDC_EVOK_POTL_EYE_RETINA_WV_B	24816

Table A.7.9.1—Nomenclature and codes for neurophysiologic enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern EvokedPotential, C_Wave Eye, Retina PeripheralNervousSystem	ERG waveform C-wave		ERG waveform, C wave	MDC_EVOK_POTL_EYE_ RETINA_WV_C	24824
Pattern EvokedPotential, Unspecified Cortex, Patterned_VEP CNS	Patterned VEP unspecified waveform		Patterned VEP waveform, unspecified	MDC_EVOK_POTL_CRTX_PATT _VEP	24832
Pattern EvokedPotential, P50_Peak Cortex, Patterned_VEP CNS	Patterned VEP waveform P50 peak		Patterned VEP waveform, P50 peak	MDC_EVOK_POTL_CRTX_PATT _VEP_P50_PK	24840
Pattern EvokedPotential, N75_Peak Cortex, Patterned_VEP CNS	Patterned VEP waveform N75 peak		Patterned VEP waveform, N75 peak	MDC_EVOK_POTL_CRTX_PATT _VEP_N75_PK	24848
Pattern EvokedPotential, P100_Peak Cortex, Patterned_VEP CNS	Patterned VEP waveform P100 peak		Patterned VEP waveform, P100 peak	MDC_EVOK_POTL_CRTX_PATT _VEP_P100_PK	24856
Pattern EvokedPotential, N145_Peak Cortex, Patterned_VEP CNS	Patterned VEP waveform N145 peak		Patterned VEP waveform, N145 peak	MDC_EVOK_POTL_CRTX_PATT _VEP_P145_PK	24864
Pattern EvokedPotential, P175_Peak Cortex, Patterned_VEP CNS	Patterned VEP waveform P175 peak		Patterned VEP waveform, P175 peak	MDC_EVOK_POTL_CRTX_PATT _VEP_P175_PK	24872
Pattern EvokedPotential, P300_Peak Cortex, Patterned_VEP CNS	Patterned VEP waveform P300 peak		Patterned VEP waveform, P300 peak	MDC_EVOK_POTL_CRTX_PATT _VEP_P300_PK	24880
Pattern EvokedPotential, Unspecified Cortex, Diffuse_Light_VEP CNS	Diffuse light VEP unspecified waveform		Patterned VEP waveform, unspecified	MDC_EVOK_POTL_CRTX_ DIFFUSE_LT_VEP	24888
Pattern EvokedPotential, N1_Peak Cortex, Diffuse_Light_VEP CNS	Diffuse light VEP waveform N1 peak		Patterned VEP waveform, N1 peak	MDC_EVOK_POTL_CRTX_ DIFFUSE_LT_VEP_N1_PK	24896
Pattern EvokedPotential, P1_Peak Cortex, Diffuse_Light_VEP CNS	Diffuse light VEP waveform P1 peak		Patterned VEP waveform, P1 peak	MDC_EVOK_POTL_CRTX_ DIFFUSE_LT_VEP_P1_PK	24904

Table A.7.9.1—Nomenclature and codes for neurophysiologic enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern EvokedPotential, N2_Peak Cortex, Diffuse_Light_VEP CNS	Diffuse light VEP waveform N2 peak		Patterned VEP waveform, N2 peak	MDC_EVOK_POTL_CRTX_DIFFUSE_LT_VEP_N2_PK	24912
Pattern EvokedPotential, P2_Peak Cortex, Diffuse_Light_VEP CNS	Diffuse light VEP waveform P2 peak		Patterned VEP waveform, P2 peak	MDC_EVOK_POTL_CRTX_DIFFUSE_LT_VEP_P2_PK	24920
Pattern EvokedPotential, N3_Peak Cortex, Diffuse_Light_VEP CNS	Diffuse light VEP waveform N3 peak		Patterned VEP waveform, N3 peak	MDC_EVOK_POTL_CRTX_DIFFUSE_LT_VEP_N3_PK	24928
Pattern EvokedPotential, P3_Peak Cortex, Diffuse_Light_VEP CNS	Diffuse light VEP waveform P3 peak		Patterned VEP waveform, P3 peak	MDC_EVOK_POTL_CRTX_DIFFUSE_LT_VEP_P3_PK	24936
Pattern EvokedPotential, Unspecified Nerve, Cortex, MedianusOrUlnarisSEP CNS, PeripheralNervousSystem	Medianus or ulnaris SEP unspecified waveform		Medianus or ulnaris SEP waveform, unspecified	MDC_EVOK_POTL_NERV_CRTX_MED_ULN_SEP	24944
Pattern EvokedPotential, N9_Peak Nerve, Cortex, MedianusOrUlnarisSEP CNS, PeripheralNervousSystem	Medianus or ulnaris SEP N9 peak		Medianus or ulnaris SEP waveform, N9 peak	MDC_EVOK_POTL_NERV_CRTX_MED_ULN_sep_N9_PK	24952
Pattern EvokedPotential, N11_Peak Nerve, Cortex, MedianusOrUlnarisSEP CNS, PeripheralNervousSystem	Medianus or ulnaris SEP N11 peak		Medianus or ulnaris SEP waveform, N11 peak	MDC_EVOK_POTL_NERV_CRTX_MED_ULN_SEP_N11_PK	24960
Pattern EvokedPotential, N13_Peak Nerve, Cortex, MedianusOrUlnarisSEP CNS, PeripheralNervousSystem	Medianus or ulnaris SEP N13 peak		Medianus or ulnaris SEP waveform, N13 peak	MDC_EVOK_POTL_NERV_CRTX_MED_ULN_SEP_N13_PK	24968
Pattern EvokedPotential, N20_Peak Nerve, Cortex, MedianusOrUlnarisSEP CNS, PeripheralNervousSystem	Medianus or ulnaris SEP N20 peak		Medianus or ulnaris SEP waveform, N20 peak	MDC_EVOK_POTL_NERV_CRTX_MED_ULN_SEP_N20_PK	24976
Pattern EvokedPotential, P30_Peak Nerve, Cortex, MedianusOrUlnarisSEP CNS, PeripheralNervousSystem	Medianus or ulnaris SEP P30 peak		Medianus or ulnaris SEP waveform, P30 peak	MDC_EVOK_POTL_NERV_CRTX_MED_ULN_SEP_P30_PK	24984

Table A.7.9.1—Nomenclature and codes for neurophysiologic enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern EvokedPotential, P300_Peak Nerve, Cortex, MedianusOrUlnarisSEP CNS, PeripheralNervousSystem	Medianus or ulnaris SEP P300 peak		Medianus or ulnaris SEP waveform, P300 peak	MDC_EVOK_POTL_NERV_CRTX_MED_ULN_SEP_P300_PK	24992
Pattern EvokedPotential, Unspecified Nerve, Cortex, PeroneusSEP CNS, PeripheralNervousSystem	Peroneus SEP waveform		Peroneus SEP waveform, unspecified	MDC_EVOK_POTL_NERV_CRTX_PER_SEP	25000
Pattern EvokedPotential, Lumbar_Peak Nerve, Cortex, PeroneusSEP CNS, PeripheralNervousSystem	Peroneus SEP lumbar peak		Peroneus SEP waveform, lumbar peak	MDC_EVOK_POTL_NERV_CRTX_PER_SEP_LUMBAR_PK	25008
Pattern EvokedPotential, LowThoracic_Peak Nerve, Cortex, PeroneusSEP CNS, PeripheralNervousSystem	Peroneus SEP low thoracic peak		Peroneus SEP waveform, low thoracic peak	MDC_EVOK_POTL_NERV_CRTX_PER_SEP_LO_THOR_PK	25016
Pattern EvokedPotential, HighThoracic_Peak Nerve, Cortex, PeroneusSEP CNS, PeripheralNervousSystem	Peroneus SEP high thoracic peak		Peroneus SEP waveform, high thoracic peak	MDC_EVOK_POTL_NERV_CRTX_PER_SEP_HI_THOR_PK	25024
Pattern EvokedPotential, P27_Peak Nerve, Cortex, PeroneusSEP CNS, PeripheralNervousSystem	Peroneus SEP P27 peak		Peroneus SEP waveform, P27 peak	MDC_EVOK_POTL_NERV_CRTX_PER_SEP_P27_PK	25032
Pattern EvokedPotential, N35_Peak Nerve, Cortex, PeroneusSEP CNS, PeripheralNervousSystem	Peroneus SEP N35 peak		Peroneus SEP waveform, N35 peak	MDC_EVOK_POTL_NERV_CRTX_PER_SEP_N35_PK	25040
Pattern EvokedPotential, P300_Peak Nerve, Cortex, PeroneusSEP CNS, PeripheralNervousSystem	Peroneus SEP P300 peak		Peroneus SEP waveform, P300 peak	MDC_EVOK_POTL_NERV_CRTX_PER_SEP_P300_PK	25048
Pattern EvokedPotential, Unspecified Nerve, Cortex, TibialisSEP CNS, PeripheralNervousSystem	Tibialis SEP waveform		Tibialis SEP waveform, unspecified	MDC_EVOK_POTL_NERV_CRTX_TIB_SEP	25056

Table A.7.9.1—Nomenclature and codes for neurophysiologic enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern EvokedPotential, Popliteal_Peak Nerve, Cortex, TibialisSEP CNS, PeripheralNervousSystem	Tibialis SEP popliteal peak		Tibialis SEP waveform, popliteal peak	MDC_EVOK_POTL_NERV_CRTX_TIB_SEP_POPLIT_PK	25064
Pattern EvokedPotential, Lumbar_Peak Nerve, Cortex, TibialisSEP CNS, PeripheralNervousSystem	Tibialis SEP lumbar peak		Tibialis SEP waveform, lumbar peak	MDC_EVOK_POTL_NERV_CRTX_TIB_SEP_LUMBAR_PK	25072
Pattern EvokedPotential, Thoracic_Peak Nerve, Cortex, TibialisSEP CNS, PeripheralNervousSystem	Tibialis SEP thoracic peak		Tibialis SEP waveform, thoracic peak	MDC_EVOK_POTL_NERV_CRTX_TIB_SEP_THOR_PK	25080
Pattern EvokedPotential, P37_Peak Nerve, Cortex, TibialisSEP CNS, PeripheralNervousSystem	Tibialis SEP P37 peak		Tibialis SEP waveform, P37 peak	MDC_EVOK_POTL_NERV_CRTX_TIB_SEP_P37_PK	25088
Pattern EvokedPotential, N45_Peak Nerve, Cortex, TibialisSEP CNS, PeripheralNervousSystem	Tibialis SEP N45 peak		Tibialis SEP waveform, N45 peak	MDC_EVOK_POTL_NERV_CRTX_TIB_SEP_N45_PK	25096
Pattern EvokedPotential, P300_Peak Nerve, Cortex, TibialisSEP CNS, PeripheralNervousSystem	Tibialis SEP P300 peak		Tibialis SEP waveform, P300 peak	MDC_EVOK_POTL_NERV_CRTX_TIB_SEP_P300_PK	25104
Pattern EvokedPotential, Unspecified Nerve, Cortex, OtherSEP CNS, PeripheralNervousSystem	Other SEP waveform		Other SEP waveform, unspecified	MDC_EVOK_POTL_NERV_CRTX_OTH_SEP	25112
Pattern EvokedPotential, Peak_I Nerve, Cortex, OtherSEP CNS, PeripheralNervousSystem	Other SEP Peak I		Other SEP waveform, Peak I	MDC_EVOK_POTL_NERV_CRTX_OTH_SEP_I_PK	25120
Pattern EvokedPotential, Peak_II Nerve, Cortex, OtherSEP CNS, PeripheralNervousSystem	Other SEP Peak II		Other SEP waveform, Peak II	MDC_EVOK_POTL_NERV_CRTX_OTH_SEP_II_PK	25128
Pattern EvokedPotential, Peak_III Nerve, Cortex, OtherSEP CNS, PeripheralNervousSystem	Other SEP Peak III		Other SEP waveform, Peak III	MDC_EVOK_POTL_NERV_CRTX_OTH_SEP_III_PK	25136

Table A.7.9.1—Nomenclature and codes for neurophysiologic enumerations (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Pattern EvokedPotential, Peak_IV Nerve, Cortex, OtherSEP CNS, PeripheralNervousSystem	Other SEP Peak IV		Other SEP waveform, Peak IV	MDC_EVOK_POTL_NERV_CRTX _OTH_SEP_IV_PK	25144
Pattern EvokedPotential, Peak_V Nerve, Cortex, OtherSEP CNS, PeripheralNervousSystem	Other SEP Peak V		Other SEP waveform, Peak V	MDC_EVOK_POTL_NERV_CRTX _OTH_SEP_V_PK	25152
Pattern EvokedPotential, P300_Peak Nerve, Cortex, OtherSEP CNS, PeripheralNervousSystem	Other SEP P300 peak		Other SEP waveform, P300 peak	MDC_EVOK_POTL_NERV_CRTX _OTH_SEP_P300_PK	25160

A.7.10 Nomenclature, data dictionary, and codes for stimulation modes

A.7.10.1 Introduction

Subclause A.7.10 presents a nomenclature for enumeration of stimulator devices used in neurophysiologic monitoring of evoked potentials and EMG measurements. A stimulus for acoustic evoked potential, for example, is described by the stimulus type, e.g., Click; the initial pressure change, e.g., Rarefaction; and the ear to which the stimulus is presented, e.g., LeftEar. A masking noise is presented to the contralateral ear normally. In most cases, four parameters are necessary to describe a visual stimulus. They are visual stimulus type, e.g., PatternReversal; pattern type, e.g., Checkerboard; visual field, e.g., Half; and eye to which the stimulus is presented, e.g., LeftEye.

A.7.10.2 Base concepts

Two base concepts are applicable:

- **Side** (the side, e.g., ear or eye, to which a stimulus is applied)
- **Type** (the type of stimulus used in a measurement)

A.7.10.3 First set of differentiating criteria

The second field of the systematic name refers to the measurement features.

A.7.10.3.1 Semantic link "*concerns:*"

Applicable descriptors include the following:

- **MaskingNoise**
- **Pattern**
- **Stimulus**
- **VisualField**

Descriptors for the sensory organ to which the stimulus is presented are as follows:

- **BothEars**
- **BothEyes**
- **LeftEar**
- **LeftEye**
- **RightEar**
- **RightEye**

A.7.10.3.2 Semantic link "*has acoustic stimulus type:*"

Descriptors for the type of acoustic stimulus are as follows:

- **Click**
- **FilteredClick**
- **GatedSine**
- **Pip**

A.7.10.3.3 Semantic link "*has pressure type*:"

Descriptors for the initial change in pressure in an acoustic stimulus are as follows:

- **Alternating**
- **Condensation**
- **Rarefaction**

A.7.10.3.4 Semantic link "*has visual stimulus type*:"

Descriptors for the change of intensity of the stimulus are as follows:

- **Flash**
- **PatternReversal**
- **Sinusoidally**

A.7.10.3.5 Semantic link "*has visual pattern type*:"

Descriptors for the type of pattern used for visual stimulation are as follows:

- **Bar**
- **CheckerBoard**
- **Complex**
- **DartBoard**
- **SineWave**
- **Windmill**

A.7.10.3.6 Semantic link "*has visual field type*:"

Descriptors for how much of the visual field is influenced by the stimulus are as follows:

- **Full**
- **Half**
- **Quadrant**

A.7.10.3.7 Semantic link "*has direction*:"

Descriptors for the orientation of the stimulating pattern are as follows:

- **Horizontally**
- **Vertically**

A.7.10.3.8 Semantic link "*has somatosensory stimulus type*:"

Descriptors for the type of stimulus used for somatosensory stimulation are as follows:

- **CurrentLimited**
- **Electrical**
- **NonElectrical**
- **Temperature**
- **Vibration**
- **Voltage**

A.7.10.3.9 Semantic link "*has transcranial stimulus type*:"

Descriptors for the way the motoric cortex is stimulated are as follows:

- **HighVoltage**
- **MagneticField**

A.7.10.3.10 Semantic link "*has position*:"

Descriptors for where the stimulus is applied are as follows:

- **Bilateral**
- **Bottom**
- **Left**
- **Right**
- **Top**
- **Unilateral**

A.7.10.4 Second set of differentiating criteria

The third field of the systematic name describes the target of measurement.

A.7.10.4.1 Semantic link "*concerns*:"

Descriptors for the peripheral or centrally located part of the nervous system to which the stimulus is applied are applicable, as follows.

- **Cochlea**
- **MotoricCortex**
- **Retina**
- **SensoryNerve**

A.7.10.5 Third set of differentiating criteria

The fourth field holds the information about the context, i.e., the functional or organic system for which the term is relevant.

A.7.10.5.1 Semantic link "*pertains to*:"

The following descriptor is used for a measurement that pertains to the CNS:

- **CNS**

A.7.10.6 Code table

See Table A.7.10.1 for the nomenclature and codes for neurophysiologic stimulation modes.

Table A.7.10.1—Nomenclature and codes for neurophysiologic stimulation modes

Systematic name	Common term	Description/Definition	Reference ID	Code
Type Stimulus, Click Cochlea CNS	Click	Click type stimulus during acoustic evoked potential measurements, short square pulse to ear phone	MDC_STIM_CLICK	53504
Type Stimulus, FilteredClick Cochlea CNS	Filtered click	Filtered click type stimulus during acoustic evoked potential measurements	MDC_STIM_CLICK_FILTER	53505
Type Stimulus, Pip Cochlea CNS	Pip	Pip type stimulus during acoustic evoked potential measurements, sinus wave with defined increase, plateau and decrease	MDC_STIM_PIP	53506
Type Stimulus, GatedSine Cochlea CNS	Gated sine wave	Gated sine type stimulus during acoustic evoked potential measurements, sinus wave switched on for a defined number of cycles	MDC_STIM_SINUSOID_GATE	53507
Side Stimulus, LeftEar Cochlea CNS	Left ear	Target of stimulus during acoustic evoked potential measurement: left ear	MDC_STIM_EAR_LEFT	53508
Side Stimulus, RightEar Cochlea CNS	Right ear	Target of stimulus during acoustic evoked potential measurement: right ear	MDC_STIM_EAR_RIGHT	53509
Side Stimulus, BothEars Cochlea CNS	Both ears	Target of stimulus during acoustic evoked potential measurement: both ears	MDC_STIM_EAR_BOTH	53510
Type MaskingNoise, LeftEar Cochlea CNS	AEP masking, noise, left ear	Masking noise, white noise, presented to contralateral ear to mask out stimulus conducted by bone during acoustic evoked potential measurement: presented to left ear	MDC_STIM_EAR_MASK_AEP_LEFT	53511
Type MaskingNoise, RightEar Cochlea CNS	AEP masking, noise, right ear	Masking noise, white noise, presented to contralateral ear to mask out stimulus conducted by bone during acoustic evoked potential measurement: presented to right ear	MDC_STIM_EAR_MASK_AEP_RIGHT	53512
Type MaskingNoise, BothEars Cochlea CNS	AEP masking, noise, both ears	Masking noise, white noise, presented to contralateral ear to mask out stimulus conducted by bone during acoustic evoked potential measurement: presented to both ears	MDC_STIM_EAR_MASK_AEP_BOTH	53513
Type Stimulus, Rarefaction Cochlea CNS	Rarefaction	Polarity of click stimulus presented to the ear during acoustic evoked potential measurement: rarefaction	MDC_STIM_RAREFAC	53514
Type Stimulus, Condensation Cochlea CNS	Condensation	Polarity of click stimulus presented to the ear during acoustic evoked potential measurement: condensation	MDC_STIM_CONDENS	53515
Type Stimulus, Alternating Cochlea CNS	Alternating	Polarity of click stimulus presented to the ear during acoustic evoked potential measurement: alternating	MDC_STIM_ALTERN	53516

Table A.7.10.1—Nomenclature and codes for neurophysiologic stimulation modes (continued)

Systematic name	Common term	Description/Definition	Reference ID	Code
Type VisualField, NOS Retina CNS	VEP visual field, unspecified	Target area of stimulus in visual field during VEP measurement: not specified	MDC_STIM_VIS_FLD	53517
Type VisualField, Full Retina CNS	Full field stimulation	Target area of stimulus in visual field during VEP measurement: full visual field	MDC_STIM_VIS_FLD_FULL	53518
Type VisualField, Left, Half Retina CNS	Left half field stimulation	Target area of stimulus in visual field during VEP measurement: left half of visual field	MDC_STIM_VIS_FLD_HALF_L	53519
Type VisualField, Right, Half Retina CNS	Right half field stimulation	Target area of stimulus in visual field during VEP measurement: right half of visual field	MDC_STIM_VIS_FLD_HALF_R	53520
Type VisualField, Top, Half Retina CNS	Top half field stimulation	Target area of stimulus in visual field during VEP measurement: top half of visual field	MDC_STIM_VIS_FLD_HALF_TOP	53521
Type VisualField, Bottom, Half Retina CNS	Bottom half field stimulation	Target area of stimulus in visual field during VEP measurement: bottom half of visual field	MDC_STIM_VIS_FLD_HALF_BOT	53522
Type VisualField, Left, Top, Quadrant Retina CNS	Left top quadrant field stimulation	Target area of stimulus in visual field during VEP measurement: left top quadrant of visual field	MDC_STIM_VIS_FLD_TOP_QUAD_L	53523
Type VisualField, Right, Top, Quadrant Retina CNS	Right top quadrant field stimulation	Target area of stimulus in visual field during VEP measurement: right top quadrant of visual field	MDC_STIM_VIS_FLD_TOP_QUAD_R	53524
Type VisualField, Left, Bottom, Quadrant Retina CNS	Left bottom quadrant field stimulation	Target area of stimulus in visual field during VEP measurement: left bottom quadrant of visual field	MDC_STIM_VIS_FLD_BOT_QUAD_L	53525
Type VisualField, Right, Bottom, Quadrant Retina CNS	Right bottom quadrant field stimulation	Target area of stimulus in visual field during VEP measurement: right bottom of visual field	MDC_STIM_VIS_FLD_BOT_QUAD_R	53526
Type Pattern, NOS Retina CNS	VEP pattern, unspecified	Pattern type used for stimulation of retina during VEP measurement: unspecified	MDC_STIM_PATT_VEP	53527
Type Pattern, CheckerBoard Retina CNS	Checkerboard	Pattern type used for stimulation of retina during VEP measurement: checkerboard	MDC_STIM_PATT_CHKBRD	53528
Type Pattern, Bar, Horizontally Retina CNS	Horizontally oriented bar	Pattern type used for stimulation of retina during VEP measurement: horizontally oriented bar	MDC_STIM_PATT_BAR_HORIZ	53529
Type Pattern, Bar, Vertically Retina CNS	Vertically oriented bar	Pattern type used for stimulation of retina during VEP measurement: vertically oriented bar	MDC_STIM_PATT_BAR_VERT	53530

Table A.7.10.1—Nomenclature and codes for neurophysiologic stimulation modes (continued)

Systematic name	Common term	Description/Definition	Reference ID	Code
Type Pattern, SineWave, Horizontally Retina CNS	Horizontally oriented sine wave	Pattern type used for stimulation of retina during VEP measurement: horizontally oriented sine wave	MDC_STIM_PATT_SINUSOID_HORIZ	53531
Type Pattern, SineWave, Vertically Retina CNS	Vertically oriented sine wave	Pattern type used for stimulation of retina during VEP measurement: vertically oriented sine wave	MDC_STIM_PATT_SINUSOID_VERT	53532
Type Pattern, Windmill Retina CNS	Windmill	Pattern type used for stimulation of retina during VEP measurement: windmill	MDC_STIM_PATT_WINDMILL	53533
Type Pattern, DartBoard Retina CNS	Dartboard	Pattern type used for stimulation of retina during VEP measurement: dartboard	MDC_STIM_PATT_DARTBRD	53534
Type Pattern, Complex Retina CNS	Complex pattern	Pattern type used for stimulation of retina during VEP measurement: complex pattern not otherwise specified	MDC_STIM_PATT_CMLPX	53535
Type Stimulus, NOS Retina CNS	VEP stimulus type, unspecified	Type of change in pattern used for stimulation of retina during VEP measurement: unspecified stimulus type	MDC_STIM_VEP	53536
Type Stimulus, PatternReversal Retina CNS	Pattern reversal	Type of change in pattern used for stimulation of retina during VEP measurement: pattern reversal	MDC_STIM_PATT_REVERSAL	53537
Type Stimulus, Sinusoidally Retina CNS	Sinusoidally stimulus	Type of change in pattern used for stimulation of retina during VEP measurement: sinusoidally	MDC_STIM_SINUSOID	53538
Type Stimulus, Flash Retina CNS	Flash stimulus	Type of stimulus used for stimulation of retina during VEP measurement: flash, rapid change in brightness without pattern	MDC_STIM_FLASH	53539
Side Stimulus, LeftEye Retina CNS	Left eye	Side of stimulation during VEP measurement: left eye	MDC_STIM_EYE_LEFT	53540
Side Stimulus, RightEye Retina CNS	Right eye	Side of stimulation during VEP measurement: right eye	MDC_STIM_EYE_RIGHT	53541
Side Stimulus, BothEyes Retina CNS	Both eyes	Side of stimulation during VEP measurement: both eyes	MDC_STIM_EYE_BOTH	53542
Type Stimulus, Electrical, NOS Nerve CNS	Electrical SEP stimulus	Type of electrical stimulus during SEP measurement: not specified	MDC_STIM_SEP_ELEC	53543
Type Stimulus, Electrical, CurrentLimited Nerve CNS	Current limited electrical SEP stimulus	Type of electrical stimulus during SEP measurement: current limited pulse	MDC_STIM_SEP_CURR_LIMITED	53544

Table A.7.10.1—Nomenclature and codes for neurophysiologic stimulation modes (continued)

Systematic name	Common term	Description/Definition	Reference ID	Code
Type Stimulus, Electrical, Voltage SensoryNerve CNS	Defined voltage type electrical SEP stimulus	Type of electrical stimulus during SEP measurement: constant voltage pulse	MDC_STIM_SEP_ELEC_VOLTAGE_DEF	53545
Type Stimulus, NonElectrical, NOS SensoryNerve CNS	Non electrical SEP stimulus	Type of non electrical stimulus during SEP measurement: not specified	MDC_STIM_SEP_NON_ELEC	53546
Type Stimulus, NonElectrical, Vibration SensoryNerve CNS	Vibration type SEP stimulus	Type of non electrical stimulus during SEP measurement: vibration of mechanical stimulator	MDC_STIM_SEP_VIB	53547
Type Stimulus, NonElectrical, Temperature SensoryNerve CNS	Temperature type SEP stimulus	Type of nonelectrical stimulus during SEP measurement: change of temperature of stimulator	MDC_STIM_SEP_TEMP	53548
Side Stimulus, Unilateral, Left SensoryNerve CNS	Left unilateral	Side of stimulation during SEP measurement: unilateral left	MDC_STIM_UNILAT_L	53549
Side Stimulus, Unilateral, Right SensoryNerve CNS	Right unilateral	Side of stimulation during SEP measurement: unilateral right	MDC_STIM_UNILAT_R	53550
Side Stimulus, Bilateral SensoryNerve CNS	Bilateral	Side of stimulation during SEP measurement: bilateral	MDC_STIM_BILAT	53551
Type Stimulus, MagneticField MotoricCortex CNS	Magnetic type MEP Stimulus	Type of stimulus used during motoric evoked potential measurement: magnetic field by condenser discharge to coil	MDC_STIM_MEP_MAG	53552
Type Stimulus, HighVoltage MotoricCortex CNS	High voltage type MEP stimulus	Type of stimulus used during motoric evoked potential measurement: high-voltage pulse applied outside skull	MDC_STIM_MEP_HI_VOLT	53553

A.7.11 Nomenclature, data dictionary, and codes for miscellaneous measurements

A.7.11.1 Introduction

Subclause A.7.11 presents a nomenclature for miscellaneous medical terms in vital signs monitoring. The purpose of this nomenclature is to support unique identification of medical data in communication. The terms are used in the Metric object of the DIM to identify the actual data.

A.7.11.2 Base concepts

Physical properties are used as base concepts. There is also a relation to the vital signs devices nomenclature (see Table A.5.1) where “Measures or affects physical property” is the second semantic link. The following base concepts are used:

- Area
- Ballistocardiogram
- Concentration
- ElectricalPotential
- Flow
- Length
- MagneticField
- Mass
- Pressure
- Temperature
- Tocogram

A.7.11.3 First set of differentiating criteria

This field holds the measurement features. More than one descriptor is possible. They specify the measurement.

A.7.11.3.1 Semantic link "*is computed as:*"

Descriptors for the value calculated from different temperature measurements are as follows:

- Difference
- Mean

A.7.11.3.2 Semantic link "*pertains:*"

Applicable descriptors are as follows:

- Acid

A.7.11.3.3 Semantic link "*has origin:*"

Descriptors for the type of filtered signal derived from balistographic measurement are as follows:

- Breathing
- Cardiaccycle
- Movement

The descriptor for specifying the channel of magnetic field measurement, which is manufacturer-specific, is as follows:

- **Site**

A.7.11.3.4 Semantic link "*has specification:*"

The descriptor to define a value is an actual measurement or computation (e.g., patient mass, patient high, BSA) is as follows:

- **Actual**

A.7.11.4 Second set of differentiating criteria

This field describes the target of measurement. More than one descriptor is possible. It holds information about body compartments, body parts, or body functions.

A.7.11.4.1 Semantic link "*concerns:*"

The following descriptors exist:

- **Blood**
- **BodySurface** (the area of patient body surface)
- **Core** (a site of temperature measurements)
- **Ear**
- **Esophagus**
- **Finger**
- **Gastric**
- **Oral** (the target from a compartment or body part view)
- **PeripheralVessels**
- **Rectal** (the target from a compartment or body part view)
- **Surface** (a site of temperature measurements)
- **Toe**

A.7.11.5 Third set of differentiating criteria

The fourth field holds information about the context, i.e., the functional or organic system for which the term is relevant.

A.7.11.5.1 Semantic link "*pertains to:*"

The following descriptors are used:

- **Body**
- **GastrointestinalSystem**
- **Heart**
- **Obstetrics**

A.7.11.6 Code table

See Table A.7.11.1 for the nomenclature and codes for miscellaneous measurements.

Table A.7.11.1—Nomenclature and codes for miscellaneous measurements

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Area Actual BodySurface Body	Patient body surface area		The actual body surface area of the patient, calculated from patient actual weight and patient actual length.	MDC_AREA_BODY_SURF_ACTUAL	57672
Ballistocardiogram Body	Ballisto-cardiogram	BCG	Ballistocardiogram, raw signal	MDC_BCG_SIG_BODY	57440
Ballistocardiogram Breathing Body	Breathing	BCG-R	Breathing obtained from the Ballistocardiogram	MDC_BCG_BREATHING	57444
Ballistocardiogram Cardiaccycle Body	Cardiac cycle	BCG-C	Cardiac cycle waveform obtained from the ballistocardiogram	MDC_BCG_CARD_CYC	57448
Ballistocardiogram Movement Body	Movement	BCG-M	Gross movement obtained from the ballistocardiogram	MDC_BCG_MVMT	57452
Concentration Acid Esophagus GastrointestinalSystem	Esophageal pH	PH	Esophageal acid concentration (e.g., measured on-line by a telemetry system)	MDC_CONC_ESOPH_ACID	57396
Concentration Acid Gastric GastrointestinalSystem	Gastric pH	PH	Gastric acid concentration (e.g., measured on-line by a telemetry system)	MDC_CONC_GASTRIC_ACID	57392
ElectricalPotential Gastric GastrointestinalSystem	Electro-gastrogram	EGG	Electrical activities of the stomach muscle	MDC_EGG_ELEC_POTL_GI	57456
Flow PeripheralVessels, Blood Body	Blood flow, Doppler		Doppler blood flow waveform	MDC_FLOW_BLD_DOPPLER	57600
Length Actual Body	Patient actual height		The actual height of the patient, especially for neonates, babies, and children during long-term therapy	MDC_LEN_BODY_ACTUAL	57668
MagneticField <Site 128> Heart	Magneto-cardiogram	MCG	Magnetic field measured for the heart (comment: because of lack of standardized lead systems, the leads are enumerated and the manufacturer system must be specified)	MDC_MCG_MAGFLD	57472
Mass Actual Body	Patient actual weight		The measurement of the mass of patient, e.g., by a scale in bed, e.g., during therapy	MDC_MASS_BODY_ACTUAL	57664
Pressure Gastric GastrointestinalSystem	Gastric pressure	Pgast	Gastric pressure waveform	MDC_PRESS_GI	57408

Table A.7.11.1—Nomenclature and codes for miscellaneous measurements (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Temperature Blood Body	Blood temperature	T	Blood temperature	MDC_TEMP_BLD	57364
Temperature Ear Body	Ear temperature	T	Ear temperature	MDC_TEMP_EAR	57356
Temperature Finger Body	Finger temperature	T	Finger temperature	MDC_TEMP_FINGER	57360
Temperature Oral Body	Oral temperature	T	Oral temperature	MDC_TEMP_ORAL	57352
Temperature Rectal Body	Rectal temperature	KKT	Rectal temperature	MDC_TEMP_RECT	57348
Temperature Difference Core, Surface Body	Temperature difference		Difference between two temperatures, usually core temperature and peripheral temperature	MDC_TEMP_DIFF	57368
Temperature Mean Surface Body	Mean surface temperature		Mean value of temperature measurements on defined body surface locations	MDC_TEMP_SURF_MEAN	57375
Temperature Toe Body	Toe surface temperature		Surface temperature measured at toe (reflects blood circulation)	MDC_TEMP_TOE	57376
Tocogram Obstetrics	Tocogram		Tocogram	MDC_ETG_OBST	57632

A.8 Nomenclature, data dictionary, and codes for body sites (Block D)

A.8.1 Introduction

Clause A.8 contains nomenclature for body sites. Sites are grouped in to different tables. The lists in the tables include sites that are commonly used, but are not exhaustive. SNOMED coding is shown for reference and convenience except in Table A.8.4.1, which refers to the international 10–20 system, and Table A.8.5.1 for EOG sites. Individual codes may be used for sites other than the sites listed. Cross-referencing to SNOMED is advocated.

Table A.8.5.1 relating to electrode placement for EOG signal monitoring is accompanied by a short explanatory section (A.8.5.1.1) as no standard site descriptions are available for this topic.

The process for building the systematic name was somewhat different from the process usually used, especially for Table A.8.2.1 and Table A.8.3.1, relating to the sites near peripheral nerves and to the sites near or in muscles, respectively. Usually a description/definition is necessary to choose the descriptors for the systematic name. To find correct and unequivocal anatomical definitions is very difficult in this area. Internationally accepted terms are published in *Nomina Anatomica* [B19], approved by the International Congress of Anatomists at Mexico City, 1980. These terms are in Latin and accepted by physicians worldwide. These terms are included in the description/definition. They are in use in non-English-speaking countries. The systematic name is based on this Latin name, and the parts of this name are used as descriptors in the first differentiating criteria. The English term is also given in brackets [] in the description/definition, as well as the SNOMED code. See the following example:

Example:

Description/Definition (Nomina Anatomica)	Nervi digitales palmares proprii
Description/Definition (SNOMED)	[Ulnar nerve, proper digital palmar nerves]
Table A.8.2.1 Description/Definition	Nervus ulnaris, Nervi digitales palmares proprii [Ulnar nerve, proper digital palmar nerves, T-X9177], not otherwise specified
SNOMED code:	T-X9177
Base concept	Nerve
Descriptors first differentiating criteria	Ulnaris, Digitales, Palmares, Proprii
Descriptors second differentiating criteria	Spinal, Cervical
Descriptors third differentiating criteria	Body
Systematic name	Nerve Ulnaris, Digitales, Palmares, Proprii Spinal, Cervical Body

The laterality, left or right, is expressed in many cases by a separate code in SNOMED. In the systematic name, laterality is included as an descriptor in the first set of differentiating criteria.

A.8.2 Sites for neurophysiological signal monitoring: locations near peripheral nerves

A.8.2.1 Base concepts

In this special case, only one descriptor is applicable:

- **Nerve** (the object of a measurement or stimulation)

A.8.2.2 First set of differentiating criteria

The second field of the systematic name refers to the measurement features. In this case, the descriptors are the parts of the Latin name in *Nomina Anatomica*. The following semantic links are applied to the first set of differentiating criteria. It is possible to have more than one semantic link and/or descriptor.

A.8.2.2.1 Semantic link "*belongs to anatomic structure*:"

Descriptors for head-related structures are as follows:

- Cochlearis
- Craniales
- Facialis
- Infraorbitalis
- Mandibularis
- Maxillaris
- Ophthalmicus
- Opticus
- Trochlearis
- Vestibulo
- Vestibularis

Descriptors for trunk-related structures are as follows:

- Axillaris
- Cervicales
- Dorsalis
- Iliohypogastricus
- Phrenicus
- Spinales
- Thoracicus

Descriptors for upper-extremity-related structures are as follows:

- Antebrachii
- Brachialis
- Ilio-Inguinalis
- Lumbales
- Lumbalis
- Lumbosacralis
- Palmares
- Palmaris
- Radialis
- Ulnaris

Descriptors for lower-extremity-related structures are as follows:

- Femoralis
- Femoris
- Fibularis[Peroneus]

- **Ischiadicus[Sciaticus]**
- **Plantaris**
- **Sacralis**
- **Suralis**
- **Tibialis**

The descriptor for finger-related and toe-related structures, i.e., to both upper and lower extremity, is as follows:

- **Digitales**

Descriptors for whole-body-related structures are as follows:

- **Cutaneus**
- **Musculocutaneus**

A.8.2.2.2 Semantic link "*has position*:"

Applicable descriptors include the following:

- **Glossopharyngeus**
- **Hypoglossus**
- **Lateralis**
- **Medialis**
- **Medianus**
- **Superficialis**
- **Supraorbitalis**
- **Subscapularis**

Descriptors for laterality are as follows:

- **Left**
- **Right**

A.8.2.2.3 Semantic link "*performs function*:"

Applicable descriptors are as follows:

- **Obturatorius**
- **Oculomotorius**

A.8.2.2.4 Semantic link "*has characteristics*:"

Applicable descriptors are as follows:

- **Abducens**
- **Accessorius**
- **Proprii**
- **Saphenus**
- **Trigeminus**
- **Vagus**

A.8.2.2.5 Semantic link "*has appearance*:"

Applicable descriptors are as follows:

- **Longus**
- **Plexus**

A.8.2.3 Second set of differentiating criteria

The third field of the systematic name describes the target of measurement. The descriptors are derived from grouping in *Nomina Anatomica*, which is different from the grouping in SNOMED.

A.8.2.3.1 Semantic link "*concerns*:"

Applicable descriptors are as follows:

- **Cervical**
- **Cranial**
- **Lumbar**
- **Sacral**
- **Spinal**
- **Thoracic**

A.8.2.4 Third set of differentiating criteria

The fourth field holds the information about the context, i.e., the functional or organic system for which the term is relevant.

A.8.2.4.1 Semantic link "*pertains to*:"

There is only one descriptor:

- **Body**

A.8.2.5 Code table

See Table A.8.2.1 for the nomenclature and codes for sites for neurophysiological signal monitoring of locations near peripheral nerves.

Table A.8.2.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near peripheral nerves

Systematic name	Description/Definition	Reference ID	Code
Nerve NOS Body	[Nerve, NOS, T-X9001]	MDC_NERV	4
Nerve Left Body	[Nerve, NOS, Left, T-X9001-LFT]	MDC_NERV_L	5
Nerve Right Body	[Nerve, NOS, Right, T-X9001-RGT]	MDC_NERV_R	6
Nerve NOS Cranial Body	NERVI CRANIALES [Cranial nerve, NOS, T-X8000]	MDC_NERV_CRAN	8
Nerve Left Cranial Body	NERVI CRANIALES, Left [Cranial nerve, NOS, Left, T-X8000-LFT]	MDC_NERV_CRAN_L	9
Nerve Right Cranial Body	NERVI CRANIALES, Right [Cranial nerve, NOS, Right, T-X8000-RGT]	MDC_NERV_CRAN_R	10
Nerve Opticus, NOS Cranial Body	NERVUS OPTICUS (II) [Optic nerve, NOS, T-X8040]	MDC_NERV_CRAN_OPTIC	12
Nerve Opticus, Left Cranial Body	NERVUS OPTICUS (II), Left [Optic nerve, NOS, Left, T-X8040-LFT]	MDC_NERV_CRAN_OPTIC_L	13
Nerve Opticus, Right Cranial Body	NERVUS OPTICUS (II), Right [Optic nerve, NOS, Right, T-X8040-RGT]	MDC_NERV_CRAN_OPTIC_R	14
Nerve Oculomotorius, NOS Cranial Body	NERVUS OCULOMOTORIUS (III) [Oculomotor nerve, NOS, T-X8070]	MDC_NERV_CRAN_OCULUMOTOR	16
Nerve Oculomotorius, Left Cranial Body	NERVUS OCULOMOTORIUS (III), Left [Oculomotor nerve, NOS, Left, T-X8070-LFT]	MDC_NERV_CRAN_OCULUMOTOR_L	17
Nerve Oculomotorius, Right Cranial Body	NERVUS OCULOMOTORIUS (III), Right [Oculomotor nerve, NOS, Right, T-X8070-RGT]	MDC_NERV_CRAN_OCULUMOTOR_R	18
Nerve Trochlearis, NOS Cranial Body	NERVUS TROCHLEARIS (IV) [Trochlear nerve, NOS, T-X8110]	MDC_NERV_CRAN_TROCHLEAR	20
Nerve Trochlearis, Left Cranial Body	NERVUS TROCHLEARIS (IV), Left [Trochlear nerve, NOS, Left, T-X8110-LFT]	MDC_NERV_CRAN_TROCHLEAR_L	21
Nerve Trochlearis, Right Cranial Body	NERVUS TROCHLEARIS (IV), Right [Trochlear nerve, NOS, Right, T-X8110-RGT]	MDC_NERV_CRAN_TROCHLEAR_R	22
Nerve Trigeminus, NOS Cranial Body	NERVUS TRIGEMINUS (V) [Trigeminal nerve, NOS, T-X8150]	MDC_NERV_CRAN_TRIGEMIN	24
Nerve Trigeminus, Left Cranial Body	NERVUS TRIGEMINUS (V), Left [Trigeminal nerve, NOS, Left, T-X8150-LFT]	MDC_NERV_CRAN_TRIGEMIN_L	25
Nerve Trigeminus, Right Cranial Body	NERVUS TRIGEMINUS (V), Right [Trigeminal nerve, NOS, Right, T-X8150-RGT]	MDC_NERV_CRAN_TRIGEMIN_R	26

Table A.8.2.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near peripheral nerves (continued)

Systematic name	Description/Definition	Reference ID	Code
Nerve Ophthalmic, NOS Cranial Body	Nervus ophthalmicus [Ophthalmic nerve, NOS, T-X8210]	MDC_NERV_CRAN_OPHTALMIC	28
Nerve Ophthalmic, Left Cranial Body	Nervus ophthalmicus, Left [Ophthalmic nerve, NOS, Left, T-X8210-LFT]	MDC_NERV_CRAN_OPHTALMIC_L	29
Nerve Ophthalmic, Right Cranial Body	Nervus ophthalmicus, Right [Ophthalmic nerve, NOS, Right, T-X8210-RGT]	MDC_NERV_CRAN_OPHTALMIC_R	30
Nerve Supraorbitalis, NOS Cranial Body	Nervus supraorbitalis [Supraorbital nerve, T-X8242]	MDC_NERV_CRAN_SUPRAORBITAL	32
Nerve Supraorbitalis, Left Cranial Body	Nervus supraorbitalis, Left [Supraorbital nerve, Left, T-X8242-LFT]	MDC_NERV_CRAN_SUPRAORBITAL_L	33
Nerve Supraorbitalis, Right Cranial Body	Nervus supraorbitalis, Right [Supraorbital nerve, Right, T-X8242-RGT]	MDC_NERV_CRAN_SUPRAORBITAL_R	34
Nerve Maxillaris, NOS Cranial Body	Nervus maxillaris [Maxillary nerve, T-X8260]	MDC_NERV_CRAN_MAXILLAR	36
Nerve Maxillaris, Left Cranial Body	Nervus maxillaris, Left [Maxillary nerve, Left, T-X8260-LFT]	MDC_NERV_CRAN_MAXILLAR_L	37
Nerve Maxillaris, Right Cranial Body	Nervus maxillaris, Right [Maxillary nerve, Right, T-X8260-RGT]	MDC_NERV_CRAN_MAXILLAR_R	38
Nerve Infraorbitalis, NOS Cranial Body	Nervus infraorbitalis [Infraorbital nerve, T-X8320]	MDC_NERV_CRAN_INFRAORBITAL	40
Nerve Infraorbitalis, Left Cranial Body	Nervus infraorbitalis, Left [Infraorbital nerve, Left, T-X8320-LFT]	MDC_NERV_CRAN_INFRAORBITAL_L	41
Nerve Infraorbitalis, Right Cranial Body	Nervus infraorbitalis, Right [Infraorbital nerve, Right, T-X8320-RGT]	MDC_NERV_CRAN_INFRAORBITAL_R	42
Nerve Mandibularis, NOS Cranial Body	Nervus mandibularis [Mandibular nerve, T-X8330]	MDC_NERV_CRAN_MANDIBULAR	44
Nerve Mandibularis, Left Cranial Body	Nervus mandibularis, Left [Mandibular nerve, Left, T-X8330-LFT]	MDC_NERV_CRAN_MANDIBULAR_L	45
Nerve Mandibularis, Right Cranial Body	Nervus mandibularis, Right [Mandibular nerve, Right, T-X8330-RGT]	MDC_NERV_CRAN_MANDIBULAR_R	46
Nerve Abducens, NOS Cranial Body	NERVUS ABDUCENS (VI) [Abducens nerve, NOS, T-X8130]	MDC_NERV_CRAN_ABDUCENS	48
Nerve Abducens, Left Cranial Body	NERVUS ABDUCENS (VI), Left [Abducens nerve, NOS, Left, T-X8130-LFT]	MDC_NERV_CRAN_ABDUCENS_L	49
Nerve Abducens, Right Cranial Body	NERVUS ABDUCENS (VI), Right [Abducens nerve, NOS, Right, T-X8130-RGT]	MDC_NERV_CRAN_ABDUCENS_R	50
Nerve Facialis, NOS Cranial Body	NERVUS FACIALIS (VII) [Facial nerve, NOS, T-X8410]	MDC_NERV_CRAN_FACIAL	52

Table A.8.2.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near peripheral nerves (continued)

Systematic name	Description/Definition	Reference ID	Code
Nerve Facialis, Left Cranial Body	NERVUS FACIALIS (VII), Left [Facial nerve, NOS, Left, T-X8410-LFT]	MDC_NERV_CRAN_FACIAL_L	53
Nerve Facialis, Right Cranial Body	NERVUS FACIALIS (VII), Right [Facial nerve, NOS, Right, T-X8410-RGT]	MDC_NERV_CRAN_FACIAL_R	54
Nerve Vestibulo, Cochlearis, NOS Cranial Body	NERVUS VESTIBULOCOCHLEARIS (VIII) [Acoustic nerve, NOS, T-X8500]	MDC_NERV_CRAN_VESTIB_COCHL	56
Nerve Vestibulo, Cochlearis, Left Cranial Body	NERVUS VESTIBULOCOCHLEARIS (VIII), Left [Acoustic nerve, NOS, Left, T-X8500-LFT]	MDC_NERV_CRAN_VESTIB_COCHL_L	57
Nerve Vestibulo, Cochlearis, Right Cranial Body	NERVUS VESTIBULOCOCHLEARIS (VIII), Right [Acoustic nerve, NOS, Right, T-X8500-RGT]	MDC_NERV_CRAN_VESTIB_COCHL_R	58
Nerve Vestibularis, NOS Cranial Body	Nervus vestibularis [Vestibular nerve, T-X8550]	MDC_NERV_CRAN_VESTIB	60
Nerve Vestibularis, Left Cranial Body	Nervus vestibularis, Left [Vestibular nerve, Left, T-X8550-LFT]	MDC_NERV_CRAN_VESTIB_L	61
Nerve Vestibularis, Right Cranial Body	Nervus vestibularis, Right [Vestibular nerve, Right, T-X8550-RGT]	MDC_NERV_CRAN_VESTIB_R	62
Nerve Cochlearis, NOS Cranial Body	Nervus cochlearis [Cochlear nerve, T-X8530]	MDC_NERV_CRAN_COCHL	64
Nerve Cochlearis, Left Cranial Body	Nervus cochlearis, Left [Cochlear nerve, Left, T-X8530-LFT]	MDC_NERV_CRAN_COCHL_L	65
Nerve Cochlearis, Right Cranial Body	Nervus cochlearis, Right [Cochlear nerve, Right, T-X8530-RGT]	MDC_NERV_CRAN_COCHL_R	66
Nerve Glossopharyngeus, NOS Cranial Body	NERVUS GLOSSOPHARINGEUS (IX) [Glossopharyngeal nerve, NOS, T-X8570]	MDC_NERV_CRAN_GLOSSOPHARYNG	68
Nerve Glossopharyngeus, Left Cranial Body	NERVUS GLOSSOPHARINGEUS (IX), Left [Glossopharyngeal nerve, NOS, Left, T-X8570-LFT]	MDC_NERV_CRAN_GLOSSOPHARYNG_L	69
Nerve Glossopharyngeus, Right Cranial Body	NERVUS GLOSSOPHARINGEUS (IX), Right [Glossopharyngeal nerve, NOS, Right, T-X8570-RGT]	MDC_NERV_CRAN_GLOSSOPHARYNG_R	70
Nerve Vagus, NOS Cranial Body	NERVUS VAGUS (X) [Vagus nerve, NOS, T-X8640]	MDC_NERV_CRAN_VAGUS	72
Nerve Vagus, Left Cranial Body	NERVUS VAGUS (X), Left [Vagus nerve, NOS, Left, T-X8640-LFT]	MDC_NERV_CRAN_VAGUS_L	73
Nerve Vagus, Right Cranial Body	NERVUS VAGUS (X), Right [Vagus nerve, NOS, Right, T-X8640-RGT]	MDC_NERV_CRAN_VAGUS_R	74

Table A.8.2.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near peripheral nerves (continued)

Systematic name	Description/Definition	Reference ID	Code
Nerve Accessorius, Radices, Craniales, NOS Cranial Body	Nervus accessorius (XI), Radices craniales [Accessory nerve, cranial portion, T-X8800]	MDC_NERV_CRAN_ACCESS_CRAN_RADIC	76
Nerve Accessorius, Radices, Craniales, Left Cranial Body	Nervus accessorius (XI), Radices craniales, Left [Accessory nerve, cranial portion, Left, T-X8800-LFT]	MDC_NERV_CRAN_ACCESS_CRAN_RADIC_L	77
Nerve Accessorius, Radices, Craniales, Right Cranial Body	Nervus accessorius (XI), Radices craniales, Right [Accessory nerve, cranial portion, Right, T-X8800-RGT]	MDC_NERV_CRAN_ACCESS_CRAN_RADIC_R	78
Nerve Accessorius, Radices, Spinales, NOS Cranial Body	Nervus accessorius (XI), Radices spinales [Accessory nerve, spinal portion, T-X8810]	MDC_NERV_CRAN_ACCESS_RADIC_SPINAL	80
Nerve Accessorius, Radices, Spinales, Left Cranial Body	Nervus accessorius (XI), Radices spinales, Left [Accessory nerve, spinal portion, Left, T-X8810-LFT]	MDC_NERV_CRAN_ACCESS_RADIC_SPINAL_L	81
Nerve Accessorius, Radices, Spinales, Right Cranial Body	Nervus accessorius (XI), Radices spinales, Right [Accessory nerve, spinal portion, Right, T-X8810-RGT]	MDC_NERV_CRAN_ACCESS_RADIC_SPINAL_R	82
Nerve Hypoglossus, NOS Cranial Body	NERVUS HYPOGLOSSUS (XII) [Hypoglossal nerve, NOS, T-X8820]	MDC_NERV_CRAN_HYPOGLOSS	84
Nerve Hypoglossus, Left Cranial Body	NERVUS HYPOGLOSSUS (XII), Left [Hypoglossal nerve, NOS, Left, T-X8820-LFT]	MDC_NERV_CRAN_HYPOGLOSS_L	85
Nerve Hypoglossus, Right Cranial Body	NERVUS HYPOGLOSSUS (XII), Right [Hypoglossal nerve, NOS, Right, T-X8820-RGT]	MDC_NERV_CRAN_HYPOGLOSS_R	86
Nerve NOS Spinal Body	NERVI SPINALES [Spinal nerve, NOS T-X9000]	MDC_NERV_SPIN	88
Nerve Left Spinal Body	NERVI SPINALES, Left [Spinal nerve, NOS, Left, T-X9000-LFT]	MDC_NERV_SPIN_L	89
Nerve Right Spinal Body	NERVI SPINALES, Right [Spinal nerve, NOS, Right, T-X9000-RGT]	MDC_NERV_SPIN_R	90
Nerve Cervicales, NOS Spinal, Cervical Body	NERVI CERVICALES [Cervical nerve, NOS, T-X9031]	MDC_NERV_SPIN_CERVIC	92
Nerve Cervicales, Left Spinal, Cervical Body	NERVI CERVICALES, Left [Cervical nerve, NOS, Left, T-X9031-LFT]	MDC_NERV_SPIN_CERVIC_L	93
Nerve Cervicales, Right Spinal, Cervical Body	NERVI CERVICALES, Right [Cervical nerve, NOS, Right, T-X9031-RGT]	MDC_NERV_SPIN_CERVIC_R	94

Table A.8.2.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near peripheral nerves (continued)

Systematic name	Description/Definition	Reference ID	Code
Nerve Phrenicus, NOS Spinal, Cervical Body	Nervus phrenicus [Phrenic nerve, T-X9081]	MDC_NERV_SPIN_PHRENIC	96
Nerve Phrenicus, Left Spinal, Cervical Body	Nervus phrenicus, Left [Phrenic nerve, Left, T-X9081-LFT]	MDC_NERV_SPIN_PHRENIC_L	97
Nerve Phrenicus, Right Spinal, Cervical Body	Nervus phrenicus, Right [Phrenic nerve, Right, T-X9081-RGT]	MDC_NERV_SPIN_PHRENIC_R	98
Nerve Plexus, Brachialis, NOS Spinal, Cervical Body	PLEXUS BRACHIALIS [Brachial plexus, NOS, T-X9090]	MDC_NERV_SPIN_BRACH_PLEX	100
Nerve Plexus, Brachialis, Left Spinal, Cervical Body	PLEXUS BRACHIALIS, Left [Brachial plexus, NOS, Left, T-X9090-LFT]	MDC_NERV_SPIN_BRACH_PLEX_L	101
Nerve Plexus, Brachialis, Right Spinal, Cervical Body	PLEXUS BRACHIALIS, Right [Brachial plexus, NOS, Right, T-X9090-RGT]	MDC_NERV_SPIN_BRACH_PLEX_R	102
Nerve Thoracicus, Longus, NOS Spinal, Cervical Body	Nervus thoracicus longus [Long thoracic nerve, T-X9130]	MDC_NERV_SPIN_THORACIC_LONG	104
Nerve Thoracicus, Longus, Left Spinal, Cervical Body	Nervus thoracicus longus, Left [Long thoracic nerve, Left, T-X9130-LFT]	MDC_NERV_SPIN_THORACIC_LONG_L	105
Nerve Thoracicus, Longus, Right Spinal, Cervical Body	Nervus thoracicus longus, Right [Long thoracic nerve, Right, T-X9130-RGT]	MDC_NERV_SPIN_THORACIC_LONG_R	106
Nerve Musculocutaneus, NOS Spinal, Cervical Body	Nervus musculocutaneus [Musculocutaneous nerve, T-X9140]	MDC_NERV_SPIN_MUSCULOCUT	108
Nerve Musculocutaneus, Left Spinal, Cervical Body	Nervus musculocutaneus, Left [Musculocutaneous nerve, Left, T-X9140-LFT]	MDC_NERV_SPIN_MUSCULOCUT_L	109
Nerve Musculocutaneus, Right Spinal, Cervical Body	Nervus musculocutaneus, Right [Musculocutaneous nerve, Right, T-X9140-RGT]	MDC_NERV_SPIN_MUSCULOCUT_R	110
Nerve Cutaneus, Antebrachii, Lateralis, NOS Spinal, Cervical Body	Nervus cutaneus antebrachii lateralis [Lateral antebrachial cutaneous nerve, T-X9142]	MDC_NERV_SPIN_CUT_ANTEBRACH_LAT	112
Nerve Cutaneus, Antebrachii, Lateralis, Left Spinal, Cervical Body	Nervus cutaneus antebrachii lateralis, Left [Lateral antebrachial cutaneous nerve, Left, T-X9142-LFT]	MDC_NERV_SPIN_CUT_ANTEBRACH_LAT_L	113

Table A.8.2.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near peripheral nerves (continued)

Systematic name	Description/Definition	Reference ID	Code
Nerve Cutaneus, Antebrachii, Lateralis, Right Spinal, Cervical Body	Nervus cutaneus antebrachii lateralis, Right [Lateral antebrachial cutaneous nerve, Right, T-X9142-RGT]	MDC_NERV_SPIN_CUT_ANTEBRACH_LAT_R	114
Nerve Cutaneus, Antebrachii, Medialis, NOS Spinal, Cervical Body	Nervus cutaneus antebrachii medialis [Medial antebrachial cutaneous nerve, T-X9160]	MDC_NERV_SPIN_CUT_ANTEBRACH_MED	116
Nerve Cutaneus, Antebrachii, Medialis, Left Spinal, Cervical Body	Nervus cutaneus antebrachii medialis, Left [Medial antebrachial cutaneous nerve, Left, T-X9160-LFT]	MDC_NERV_SPIN_CUT_ANTEBRACH_MED_L	117
Nerve Cutaneus, Antebrachii, Medialis, Right Spinal, Cervical Body	Nervus cutaneus antebrachii medialis, Right [Medial antebrachial cutaneous nerve, Right, T-X9160-RGT]	MDC_NERV_SPIN_CUT_ANTEBRACH_MED_R	118
Nerve Medianus, NOS Spinal, Cervical Body	Nervus medianus [Median nerve, NOS, T-X9180]	MDC_NERV_SPIN_MEDIAN	120
Nerve Medianus, Left Spinal, Cervical Body	Nervus medianus, Left [Median nerve, NOS, Left, T-X9180-LFT]	MDC_NERV_SPIN_MEDIAN_L	121
Nerve Medianus, Right Spinal, Cervical Body	Nervus medianus, Right [Median nerve, NOS, Right, T-X9180-RGT]	MDC_NERV_SPIN_MEDIAN_R	122
Nerve Medianus, Palmaris, NOS Spinal, Cervical Body	Ramus palmaris nervi mediani [Median nerve, palmar branch, T-X9185]	MDC_NERV_SPIN_MEDIAN_PALMAR	124
Nerve Medianus, Palmaris, Left Spinal, Cervical Body	Ramus palmaris nervi mediani, Left [Median nerve, palmar branch, Left, T-X9185-LFT]	MDC_NERV_SPIN_MEDIAN_PALMAR_L	125
Nerve Medianus, Palmaris, Right Spinal, Cervical Body	Ramus palmaris nervi mediani, Right [Median nerve, palmar branch, Right, T-X9185-RGT]	MDC_NERV_SPIN_MEDIAN_PALMAR_R	126
Nerve Medianus, Digitales, Palmares, Proprii, NOS Spinal, Cervical Body	Nervus medianus, Nervi digitales palmares proprii [Median nerve, proper digital palmar nerves, T-X9188]	MDC_NERV_SPIN_MEDIAN_PALMAR_DIGIT_PROPR	128
Nerve Medianus, Digitales, Palmares, Proprii, Left Spinal, Cervical Body	Nervus medianus, Nervi digitales palmares proprii, Left [Median nerve, proper digital palmar nerves, Left, T-X9188-LFT]	MDC_NERV_SPIN_MEDIAN_PALMAR_DIGIT_PROPR_L	129
Nerve Medianus, Digitales, Palmares, Proprii, Right Spinal, Cervical Body	Nervus medianus, Nervi digitales palmares proprii, Right [Median nerve, proper digital palmar nerves, Right, T-X9188-RGT]	MDC_NERV_SPIN_MEDIAN_PALMAR_DIGIT_PROPR_R	130
Nerve Ulnaris Spinal, Cervical, NOS Body	Nervus ulnaris [Ulnar nerve, NOS, T-X9170]	MDC_NERV_SPIN_ULNAR	132
Nerve Ulnaris Spinal, Cervical, Left Body	Nervus ulnaris, Left [Ulnar nerve, NOS, Left, T-X9170-LFT]	MDC_NERV_SPIN_ULNAR_L	133

Table A.8.2.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near peripheral nerves (continued)

Systematic name	Description/Definition	Reference ID	Code
Nerve Ulnaris Spinal, Cervical, Right Body	Nervus ulnaris, Right [Ulnar nerve, NOS, Right, T-X9170-RGT]	MDC_NERV_SPIN_ULNAR_R	134
Nerve Ulnaris, Ramus, Dorsalis, NOS Spinal, Cervical Body	Ramus dorsalis nervi ulnaris [Ulnar nerve, dorsal branch, T-X9172]	MDC_NERV_SPIN_ULNAR_RAM_DORSAL	136
Nerve Ulnaris, Ramus, Dorsalis, Left Spinal, Cervical Body	Ramus dorsalis nervi ulnaris, Left [Ulnar nerve, dorsal branch, Left, T-X9172-LFT]	MDC_NERV_SPIN_ULNAR_RAM_DORSAL_L	137
Nerve Ulnaris, Ramus, Dorsalis, Right Spinal, Cervical Body	Ramus dorsalis nervi ulnaris, Right [Ulnar nerve, dorsal branch, Right, T-X9172-RGT]	MDC_NERV_SPIN_ULNAR_RAM_DORSAL_R	138
Nerve Ulnaris, Ramus, Palmaris, NOS Spinal, Cervical Body	Ramus palmaris nervi ulnaris [Ulnar nerve, palmar branch, T-X9174]	MDC_NERV_SPIN_ULNAR_RAM_PALMAR	140
Nerve Ulnaris, Ramus, Palmaris, Left Spinal, Cervical Body	Ramus palmaris nervi ulnaris, Left [Ulnar nerve, palmar branch, Left, T-X9174-LFT]	MDC_NERV_SPIN_ULNAR_RAM_PALMAR_L	141
Nerve Ulnaris, Ramus, Palmaris, Right Spinal, Cervical Body	Ramus palmaris nervi ulnaris, Right [Ulnar nerve, palmar branch, Right, T-X9174-RGT]	MDC_NERV_SPIN_ULNAR_RAM_PALMAR_R	142
Nerve Ulnaris, Digitales, Palmares, Proprii, NOS Spinal, Cervical Body	Nervus ulnaris, Nervi digitales palmares proprii [Ulnar nerve, proper digital palmar nerves, T-X9177]	MDC_NERV_SPIN_ULNAR_PALMAR_DIGIT_PROPR	144
Nerve Ulnaris, Digitales, Palmares, Proprii, Left Spinal, Cervical Body	Nervus ulnaris, Nervi digitales palmares proprii, Left [Ulnar nerve, proper digital palmar nerves, Left, T-X9177-LFT]	MDC_NERV_SPIN_ULNAR_PALMAR_DIGIT_PROPR_L	145
Nerve Ulnaris, Digitales, Palmares, Proprii, Right Spinal, Cervical Body	Nervus ulnaris, Nervi digitales palmares proprii, Right [Ulnar nerve, proper digital palmar nerves, Right, T-X9177-RGT]	MDC_NERV_SPIN_ULNAR_PALMAR_DIGIT_PROPR_R	146
Nerve Radialis Spinal, Cervical, NOS Body	Nervus radialis [Radial nerve, NOS, T-X9190]	MDC_NERV_SPIN_RADIC	148
Nerve Radialis Spinal, Cervical, Left Body	Nervus radialis, Left [Radial nerve, NOS, Left, T-X9190-LFT]	MDC_NERV_SPIN_RADIC_L	149
Nerve Radialis Spinal, Cervical, Right Body	Nervus radialis, Right [Radial nerve, NOS, Right, T-X9190-RGT]	MDC_NERV_SPIN_RADIC_R	150
Nerve Radialis, Superficialis, NOS Spinal, Cervical Body	Nervus radialis Ramus superficialis [Radial nerve, superficial branch, T-X9197]	MDC_NERV_SPIN_RADIC_SUPERF	152

Table A.8.2.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near peripheral nerves (continued)

Systematic name	Description/Definition	Reference ID	Code
Nerve Radialis, Superficialis, Left Spinal, Cervical Body	Nervus radialis Ramus superficialis, Left [Radial nerve, superficial branch, Left, T-X9197-LFT]	MDC_NERV_SPIN_RADIC_SUPERF_L	153
Nerve Radialis, Superficialis, Right Spinal, Cervical Body	Nervus radialis Ramus superficialis, Right [Radial nerve, superficial branch, Right, T-X9197-RGT]	MDC_NERV_SPIN_RADIC_SUPERF_R	154
Nerve Subscapularis Spinal, Cervical, NOS Body	Nervi subscapulares [Suprascapular nerve, T-X9200]	MDC_NERV_SPIN_SUBSCAP	156
Nerve Subscapularis Spinal, Cervical, Left Body	Nervi subscapulares, Left [Suprascapular nerve, Left, T-X9200-LFT]	MDC_NERV_SPIN_SUBSCAP_L	157
Nerve Subscapularis Spinal, Cervical, Right Body	Nervi subscapulares, Right [Suprascapular nerve, Right, T-X9200-RGT]	MDC_NERV_SPIN_SUBSCAP_R	158
Nerve Axillaris, NOS Spinal, Cervical Body	Nervus axillaris [Axillary nerve, T-X9210]	MDC_NERV_SPIN_AXILLAR	160
Nerve Axillaris, Left Spinal, Cervical Body	Nervus axillaris, Left [Axillary nerve, Left, T-X9210-LFT]	MDC_NERV_SPIN_AXILLAR_L	161
Nerve Axillaris, Right Spinal, Cervical Body	Nervus axillaris, Right [Axillary nerve, Right, T-X9210-RGT]	MDC_NERV_SPIN_AXILLAR_R	162
Nerve Thoracicus, NOS Spinal, Chest Body	NERVI THORACICI [Thoracic nerve, NOS, T-X9230]	MDC_NERV_SPIN_THORACIC	164
Nerve Thoracicus, Left Spinal, Chest Body	NERVI THORACICI, Left [Thoracic nerve, NOS, Left, T-X9230-LFT]	MDC_NERV_SPIN_THORACIC_L	165
Nerve Thoracicus, Right Spinal, Chest Body	NERVI THORACICI, Right [Thoracic nerve, NOS, Right, T-X9230-RGT]	MDC_NERV_SPIN_THORACIC_R	166
Nerve Lumbales, NOS Spinal, Lumbar Body	NERVI LUMBALES [Lumbar nerve, NOS, T-X9300]	MDC_NERV_SPIN_LUMBAL	168
Nerve Lumbales, Left Spinal, Lumbar Body	NERVI LUMBALES, Left [Lumbar nerve, NOS, Left, T-X9300-LFT]	MDC_NERV_SPIN_LUMBAL_L	169
Nerve Lumbales, Right Spinal, Lumbar Body	NERVI LUMBALES, Right [Lumbar nerve, NOS, Right, T-X9300-RGT]	MDC_NERV_SPIN_LUMBAL_R	170
Nerve Plexus, Lumbosacralis, NOS Spinal, Sacral Body	PLEXUS LUMBOSACRALIS [Lumbosacral plexus, T-X9330]	MDC_NERV_SPIN_LUMBOSACRAL_PLEX	172

Table A.8.2.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near peripheral nerves (continued)

Systematic name	Description/Definition	Reference ID	Code
Nerve Plexus, Lumbosacralis, Left Spinal, Sacral Body	PLEXUS LUMBOSACRALIS, Left [Lumbosacral plexus, Left, T-X9330-LFT]	MDC_NERV_SPIN_LUMBOSACRAL_PLEX_L	173
Nerve Plexus, Lumbosacralis, Right Spinal, Sacral Body	PLEXUS LUMBOSACRALIS, Right [Lumbosacral plexus, Right, T-X9330-RGT]	MDC_NERV_SPIN_LUMBOSACRAL_PLEX_R	174
Nerve Plexus, Lumbalis, NOS Spinal, Sacral Body	Plexus lumbalis [Lumbar plexus, T-X9320]	MDC_NERV_SPIN_LUMBAL_PLEX	176
Nerve Plexus, Lumbalis, Left Spinal, Sacral Body	Plexus lumbalis, Left [Lumbar plexus, Left, T-X9320-LFT]	MDC_NERV_SPIN_LUMBAL_PLEX_L	177
Nerve Plexus, Lumbalis, Right Spinal, Sacral Body	Plexus lumbalis, Right [Lumbar plexus, Right, T-X9320-RGT]	MDC_NERV_SPIN_LUMBAL_PLEX_R	178
Nerve Iliohypogastricus, NOS Spinal, Sacral Body	Nervus iliohypogastricus [Iliohypogastric nerve, T-X9325]	MDC_NERV_SPIN_ILIOHYPOGASTRIC	180
Nerve Iliohypogastricus, Left Spinal, Sacral Body	Nervus iliohypogastricus, Left [Iliohypogastric nerve, Left, T-X9325-LFT]	MDC_NERV_SPIN_ILIOHYPOGASTRIC_L	181
Nerve Iliohypogastricus, Right Spinal, Sacral Body	Nervus iliohypogastricus, Right [Iliohypogastric nerve, Right, T-X9325-RGT]	MDC_NERV_SPIN_ILIOHYPOGASTRIC_R	182
Nerve Ilio-inguinalis, NOS Spinal, Sacral Body	Nervus ilio-inguinalis [Ilioinguinal nerve, T-X9340]	MDC_NERV_SPIN_ILIOINGUINAL	184
Nerve Ilio-inguinalis, Left Spinal, Sacral Body	Nervus ilio-inguinalis, Left [Ilioinguinal nerve, Left, T-X9340-LFT]	MDC_NERV_SPIN_ILIOINGUINAL_L	185
Nerve Ilio-inguinalis, Right Spinal, Sacral Body	Nervus ilio-inguinalis, Right [Ilioinguinal nerve, Right, T-X9340-RGT]	MDC_NERV_SPIN_ILIOINGUINAL_R	186
Nerve Cutaneus, Femoris, Lateralis, NOS Spinal, Sacral Body	Nervus cutaneus femoris lateralis [Lateral femoral cutaneous nerve, T-X9360]	MDC_NERV_SPIN_CUT_FEMORAL_LAT	188
Nerve Cutaneus, Femoris, Lateralis, Left Spinal, Sacral Body	Nervus cutaneus femoris lateralis, Left [Lateral femoral cutaneous nerve, Left, T-X9360-LFT]	MDC_NERV_SPIN_CUT_FEMORAL_LAT_L	189
Nerve Cutaneus, Femoris, Lateralis, Right Spinal, Sacral Body	Nervus cutaneus femoris lateralis, Right [Lateral femoral cutaneous nerve, Right, T-X9360-RGT]	MDC_NERV_SPIN_CUT_FEMORAL_LAT_R	190

Table A.8.2.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near peripheral nerves (continued)

Systematic name	Description/Definition	Reference ID	Code
Nerve Obturatorius, NOS Spinal, Sacral Body	Nervus obturatorius [Obturator nerve, NOS, T-X9370]	MDC_NERV_SPIN_OBTURATOR	192
Nerve Obturatorius, Left Spinal, Sacral Body	Nervus obturatorius, Left [Obturator nerve, NOS, Left, T-X9370-LFT]	MDC_NERV_SPIN_OBTURATOR_L	193
Nerve Obturatorius, Right Spinal, Sacral Body	Nervus obturatorius, Right [Obturator nerve, NOS, Right, T-X9370-RGT]	MDC_NERV_SPIN_OBTURATOR_R	194
Nerve Femoralis, NOS Spinal, Sacral Body	Nervus femoralis [Femoral nerve, T-X9380]	MDC_NERV_SPIN_FEMORAL	196
Nerve Femoralis, Left Spinal, Sacral Body	Nervus femoralis, Left [Femoral nerve, Left, T-X9380-LFT]	MDC_NERV_SPIN_FEMORAL_L	197
Nerve Femoralis, Right Spinal, Sacral Body	Nervus femoralis, Right [Femoral nerve, Right, T-X9380-RGT]	MDC_NERV_SPIN_FEMORAL_R	198
Nerve Saphenus, NOS Spinal, Sacral Body	Nervus saphenus [Saphenous nerve, T-X9383]	MDC_NERV_SPIN_SAPHEN	200
Nerve Saphenus, Left Spinal, Sacral Body	Nervus saphenus, Left [Saphenous nerve, Left, T-X9383-LFT]	MDC_NERV_SPIN_SAPHEN_L	201
Nerve Saphenus, Right Spinal, Sacral Body	Nervus saphenus, Right [Saphenous nerve, Right, T-X9383-RGT]	MDC_NERV_SPIN_SAPHEN_R	202
Nerve Sacralis, NOS Spinal, Sacral Body	Nervi sacrales at Nervus coccygeus [Sacral nerve, NOS, T-X9400]	MDC_NERV_SPIN_SACRAL	204
Nerve Sacralis, Left Spinal, Sacral Body	Nervi sacrales at Nervus coccygeus, Left [Sacral nerve, NOS, Left, T-X9400-LFT]	MDC_NERV_SPIN_SACRAL_L	205
Nerve Sacralis, Right Spinal, Sacral Body	Nervi sacrales at Nervus coccygeus, Right [Sacral nerve, NOS, Right, T-X9400-RGT]	MDC_NERV_SPIN_SACRAL_R	206
Nerve Plexus, Sacralis, NOS Spinal, Sacral Body	Plexus sacralis [Sacral plexus, T-X9410]	MDC_NERV_SPIN_PLEX	208
Nerve Plexus, Sacralis, Left Spinal, Sacral Body	Plexus sacralis, Left [Sacral plexus, Left, T-X9410-LFT]	MDC_NERV_SPIN_PLEX_L	209
Nerve Plexus, Sacralis, Right Spinal, Sacral Body	Plexus sacralis, Right [Sacral plexus, Right, T-X9410-RGT]	MDC_NERV_SPIN_PLEX_R	210

Table A.8.2.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near peripheral nerves (continued)

Systematic name	Description/Definition	Reference ID	Code
Nerve Ischiadicus, NOS Spinal, Sacral Body	Nervus ischiadicus [Sciatic nerve, T-X9440]	MDC_NERV_SPIN_ISCHIADIC	212
Nerve Ischiadicus, Left Spinal, Sacral Body	Nervus ischiadicus, Left [Sciatic nerve, Left, T-X9440-LFT]	MDC_NERV_SPIN_ISCHIADIC_L	213
Nerve Ischiadicus, Right Spinal, Sacral Body	Nervus ischiadicus, Right [Sciatic nerve, Right, T-X9440-RGT]	MDC_NERV_SPIN_ISCHIADIC_R	214
Nerve Fibularis, Communis, NOS Spinal, Sacral Body	Nervus fibularis communis [Common peroneal nerve, T-X9490]	MDC_NERV_SPIN_FIBULAR_COMMUN	216
Nerve Fibularis, Communis, Left Spinal, Sacral Body	Nervus fibularis communis, Left [Common peroneal nerve, Left, T-X9490-LFT]	MDC_NERV_SPIN_FIBULAR_COMMUN_L	217
Nerve Fibularis, Communis, Right Spinal, Sacral Body	Nervus fibularis communis, Right [Common peroneal nerve, Right, T-X9490-RGT]	MDC_NERV_SPIN_FIBULAR_COMMUN_R	218
Nerve Fibularis, NOS Spinal, Sacral Body	[Deep peroneal (fibular) nerve, T-X9500]	MDC_NERV_SPIN_FIBULAR	220
Nerve Fibularis, Left Spinal, Sacral Body	[Deep peroneal (fibular) nerve, Left, T-X9500-LFT]	MDC_NERV_SPIN_FIBULAR_L	221
Nerve Fibularis, Right Spinal, Sacral Body	[Deep peroneal (fibular) nerve, Right, T-X9500-RGT]	MDC_NERV_SPIN_FIBULAR_R	222
Nerve Fibularis, Superficialis, NOS Spinal, Sacral Body	Nervus fibularis superficialis [Superficial peroneal nerve, T-X9510]	MDC_NERV_SPIN_FIBULAR_SUPERF	224
Nerve Fibularis, Superficialis, Left Spinal, Sacral Body	Nervus fibularis superficialis, Left [Superficial peroneal nerve, Left, T-X9510-LFT]	MDC_NERV_SPIN_FIBULAR_SUPERF_L	225
Nerve Fibularis, Superficialis, Right Spinal, Sacral Body	Nervus fibularis superficialis, Right [Superficial peroneal nerve, Right, T-X9510-RGT]	MDC_NERV_SPIN_FIBULAR_SUPERF_R	226
Nerve Tibialis, NOS Spinal, Sacral Body	Nervus tibialis [Tibial nerve, NOS, T-X9450]	MDC_NERV_SPIN_TIBIAL	228
Nerve Tibialis, Left Spinal, Sacral Body	Nervus tibialis, Left [Tibial nerve, NOS, Left, T-X9450-LFT]	MDC_NERV_SPIN_TIBIAL_L	229
Nerve Tibialis, Right Spinal, Sacral Body	Nervus tibialis, Right [Tibial nerve, Right, NOS, T-X9450-RGT]	MDC_NERV_SPIN_TIBIAL_R	230
Nerve Suralis, NOS Spinal, Sacral Body	Nervus surealis [Sural nerve, T-X9470]	MDC_NERV_SPIN_SURAL	232
Nerve Suralis, Left Spinal, Sacral Body	Nervus surealis, Left [Sural nerve, Left, T-X9470-LFT]	MDC_NERV_SPIN_SURAL_L	233

Table A.8.2.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near peripheral nerves (continued)

Systematic name	Description/Definition	Reference ID	Code
Nerve Suralis, Right Spinal, Sacral Body	Nervus surrealis, Right [Sural nerve, Right, T-X9470-RGT]	MDC_NERV_SPIN_SURAL_R	234
Nerve Plantaris, Medialis, NOS Spinal, Sacral Body	Nervus plantaris medialis [Medial plantar nerve, T-X9483]	MDC_NERV_SPIN_PLANTAR_MEDIAL	236
Nerve Plantaris, Medialis, Left Spinal, Sacral Body	Nervus plantaris medialis, Left [Medial plantar nerve, Left, T-X9483-LFT]	MDC_NERV_SPIN_PLANTAR_MEDIAL_L	237
Nerve Plantaris, Medialis, Right Spinal, Sacral Body	Nervus plantaris medialis, Right [Medial plantar nerve, Right, T-X9483-RGT]	MDC_NERV_SPIN_PLANTAR_MEDIAL_R	238
Nerve Plantaris, Lateralis, NOS Spinal, Sacral Body	Nervus plantaris lateralis [Lateral plantar nerve, T-X9486]	MDC_NERV_SPIN_PLANTAR_LAT	240
Nerve Plantaris, Lateralis, Left Spinal, Sacral Body	Nervus plantaris lateralis, Left [Lateral plantar nerve, Left, T-X9486-LFT]	MDC_NERV_SPIN_PLANTAR_LAT_L	241
Nerve Plantaris, Lateralis, Right Spinal, Sacral Body	Nervus plantaris lateralis, Right [Lateral plantar nerve, Right, T-X9486-RGT]	MDC_NERV_SPIN_PLANTAR_LAT_R	242
Nerve Pudendus, NOS Spinal, Sacral Body	Nervus pudendus [Pudental nerve, T-X9550]	MDC_NERV_SPIN_PUDEND	244
Nerve Pudendus, Left Spinal, Sacral Body	Nervus pudendus, Left [Pudental nerve, Left, T-X9550-LFT]	MDC_NERV_SPIN_PUDEND_L	245
Nerve Pudendus, Right Spinal, Sacral Body	Nervus pudendus, Right [Pudental nerve, Right, T-X9550-RGT]	MDC_NERV_SPIN_PUDEND_R	246

A.8.3 Sites for neurophysiological signal monitoring: locations near muscles

A.8.3.1 Base concepts

In this special case, only one descriptor is applicable:

- **Muscle** (the position or object of a measurement)

A.8.3.2 First set of differentiating criteria

The second field of the systematic name refers to the measurement features. In this case, the descriptors are the parts of the Latin name in *Nomina Anatomica*. The following semantic links are applied to the first set of differentiating criteria. It is possible to have more than one semantic link and/or descriptor.

A.8.3.2.1 Semantic link "*relates to anatomic structure:*"

Descriptors for head-related structures are as follows:

- **Auricularis**
- **Capitis**
- **Cervicis**
- **Labii**
- **Laringis**
- **Linguae**
- **Mentalis**
- **Nasi**
- **Oculi**
- **Orbitalis**
- **Oris**
- **Zygomaticus**

Descriptors for trunk-related structures are as follows:

- **Abdominis**
- **Ani**
- **Coccigeus**
- **Dorsi**
- **Dorsales**
- **Hioasoas**
- **LowerBack**
- **Lumborum**
- **Pectoralis**
- **Puborectalis**
- **Scapulae**
- **Spinae**
- **Spinalis/**
- **Thoracis**
- **UpperBack**

Descriptors for upper-extremity-related structures are as follows:

- **Anconeus**
- **Brachialis**
- **Brachii**
- **Brachioradialis**
- **Carpi**
- **Coracobrachialis**
- **Digitii**
- **Digitorum**
- **Indicis**
- **Palmaris**
- **Pollicis**
- **Ulnaris**

Descriptors for lower-extremity-related structures are as follows:

- **Femoris**
- **Foot**
- **Gastrocnemius**
- **Gluteus**
- **Hallucis**
- **Leg**
- **Peroneus**
- **Plantae**
- **Plantares**
- **Plantaris**
- **Popliteus**
- **Surae**
- **Tibialis**

Descriptors for finger-related and toe-related structures, i.e., to upper and lower extremity, are as follows:

- **Digitii**
- **Digitorum**

Descriptors for skeletal-related structures, if not otherwise specified, are as follows:

- **Skeletal**

A.8.3.2.2 Semantic link "*has position*:"

Applicable descriptors include the following:

- **Alaeque**
- **Anguli**
- **Anterior**
- **Genioglossus**
- **Externi**
- **Externus**

- **Frontalis**
- **Inferior**
- **Inferioris**
- **Infraspinatus**
- **Intercostales**
- **Intermedius**
- **Internus**
- **Interossei**
- **Interspinales**
- **Interspinalis**
- **Laterale**
- **Lateralis**
- **Mediale**
- **Medialis**
- **Medius**
- **Obliquus**
- **Occipitofrontalis**
- **Opponens**
- **Posterior**
- **Profundus**
- **Sternocleidomastoideus**
- **Subclavius**
- **Subscapularis**
- **Superficialis**
- **Superior**
- **Superioris**
- **Temporalis**
- **Transversus**

Descriptors for laterality are as follows:

- **Left**
- **Right**

A.8.3.2.3 Semantic link "*performs function*:"

Applicable descriptors are as follows:

- **Abductor**
- **Adductor**
- **Buccinator**
- **Depressor**
- **Erector**
- **Extensor**
- **Flexor**
- **Levator**

- **Masseter**
- **Obturator**
- **Pronator**
- **Risorius**
- **Sphincter**
- **Supinator**
- **Tensor**

A.8.3.2.4 Semantic link "*has characteristics*:"

Applicable descriptors are as follows:

- **Lumbricales**
- **Semimembranosus**
- **Semispinalis**
- **Semitendinosus**

A.8.3.2.5 Semantic link "*has appearance*:"

Applicable descriptors are as follows:

- **Brevis**
- **Biceps**
- **Cricothyroideus**
- **Deltoideus**
- **Digastricus**
- **Fasciae**
- **Gemellus**
- **Gracilis**
- **Latae**
- **Latissimus**
- **Longum**
- **Longus**
- **Magnus**
- **Major**
- **Maximus**
- **Minimi**
- **Minimus**
- **Minor**
- **Multifidi**
- **Mylohyoideus**
- **Orbicularis**
- **Pectineus**
- **Piriformis**
- **Platysma**
- **Pterygoideus**
- **Quadratus**

- **Quadriceps**
- **Rectus**
- **Rhomboideus**
- **Sartorius**
- **Serratus**
- **Soleus**
- **Splenius**
- **Supraspinatus**
- **Teres**
- **Thyroarytenoideus**
- **Trapezius**
- **Triceps**
- **Vastus**
- **Venter**

A.8.3.3 Second set of differentiating criteria

The third field of the systematic name describes the target of measurement. The descriptors are derived from grouping in *Nomina Anatomica*, which is different from the grouping in SNOMED.

A.8.3.3.1 Semantic link "concerns:"

Applicable descriptors are as follows:

- **Back**
- **Head**
- **LowerExtremity**
- **Neck**
- **Trunk**
- **UpperExtremity**

A.8.3.4 Third set of differentiating criteria

The fourth field holds the information about the context, i.e., the functional or organ system for which the term is relevant.

A.8.3.4.1 Semantic link "pertains to:"

There is only one descriptor:

- Body**

A.8.3.5 Code table

See Table A.8.3.1 for the nomenclature and codes for sites for neurophysiological signal monitoring of locations near or in muscles.

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles

Systematic name	Description/Definition	Reference ID	Code
Muscle Skeletal, NOS Body	[Skeletal muscle, NOS, T-13000]	MDC_MUSC_SKELETAL	248
Muscle Skeletal, Left Body	[Skeletal muscle, NOS, Left, T-13000-LFT]	MDC_MUSC_SKELETAL_L	249
Muscle Skeletal, Right Body	[Skeletal muscle, NOS, Right, T-13000-RGT]	MDC_MUSC_SKELETAL_R	250
Muscle NOS Head Body	MUSCULI CAPITIS [Muscle of head, NOS, T-13100]	MDC_MUSC_HEAD	252
Muscle Left Head Body	MUSCULI CAPITIS, Left [Muscle of head, NOS, Left, T-13100-LFT]	MDC_MUSC_HEAD_L	253
Muscle Right Head Body	MUSCULI CAPITIS, Right [Muscle of head, NOS, Right, T-13100-RGT]	MDC_MUSC_HEAD_R	254
Muscle Eye, NOS Head Body	MUSCULI BULBI [Extrinsic ocular muscle, NOS, T-13170]	MDC_MUSC_HEAD_EYE	256
Muscle Eye, Left Head Body	MUSCULI BULBI, Left [Extrinsic ocular muscle, NOS, Left, T-13170-LFT]	MDC_MUSC_HEAD_EYE_L	257
Muscle Eye, Right Head Body	MUSCULI BULBI, Right [Extrinsic ocular muscle, NOS, Right, T-13170-RGT]	MDC_MUSC_HEAD_EYE_R	258
Muscle Rectus, Superior, NOS Head Body	Musculus rectus superior [Superior rectus muscle, T-13180]	MDC_MUSC_HEAD_RECT_SUP	260
Muscle Rectus, Superior, Left Head Body	Musculus rectus superior, Left [Superior rectus muscle, Left, T-13180-LFT]	MDC_MUSC_HEAD_RECT_SUP_L	261
Muscle Rectus, Superior, Right Head Body	Musculus rectus superior, Right [Superior rectus muscle, Right, T-13180-RGT]	MDC_MUSC_HEAD_RECT_SUP_R	262
Muscle Rectus, Inferior, NOS Head Body	Musculus rectus inferior [Inferior rectus muscle, T-13190]	MDC_MUSC_HEAD_RECT_INF	264
Muscle Rectus, Inferior, Left Head Body	Musculus rectus inferior, Left [Inferior rectus muscle, Left, T-13190-LFT]	MDC_MUSC_HEAD_RECT_INF_L	265
Muscle Rectus, Inferior, Right Head Body	Musculus rectus inferior, Right [Inferior rectus muscle, Right, T-13190-RGT]	MDC_MUSC_HEAD_RECT_INF_R	266
Muscle Rectus, Medialis, NOS Head Body	Musculus rectus medialis [Medial rectus muscle, T-13200]	MDC_MUSC_HEAD_RECT_MED	268
Muscle Rectus, Medialis, Left Head Body	Musculus rectus medialis, Left [Medial rectus muscle, Left, T-13200-LFT]	MDC_MUSC_HEAD_RECT_MED_L	269

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Rectus, Medialis, Right Head Body	Musculus rectus medialis, Right [Medial rectus muscle, Right, T-13200-RGT]	MDC_MUSC_HEAD_RECT_MED_R	270
Muscle Rectus, Lateralis, NOS Head Body	Musculus rectus lateralis [Lateral rectus muscle, T-13210]	MDC_MUSC_HEAD_RECT_LAT	272
Muscle Rectus, Lateralis, Left Head Body	Musculus rectus lateralis, Left [Lateral rectus muscle, Left, T-13210-LFT]	MDC_MUSC_HEAD_RECT_LAT_L	273
Muscle Rectus, Lateralis, Right Head Body	Musculus rectus lateralis, Right [Lateral rectus muscle, Right, T-13210-RGT]	MDC_MUSC_HEAD_RECT_LAT_R	274
Muscle Obliquus, Superior, NOS Head Body	Musculus obliquus superior [Superior oblique muscle, T-13220]	MDC_MUSC_HEAD_OBLIQ_SUP	276
Muscle Obliquus, Superior, Left Head Body	Musculus obliquus superior, Left [Superior oblique muscle, Left, T-13220-LFT]	MDC_MUSC_HEAD_OBLIQ_SUP_L	277
Muscle Obliquus, Superior, Right Head Body	Musculus obliquus superior, Right [Superior oblique muscle, Right, T-13220-RGT]	MDC_MUSC_HEAD_OBLIQ_SUP_R	278
Muscle Obliquus, Inferior, NOS Head Body	Musculus obliquus inferior [Inferior oblique muscle, T-13230]	MDC_MUSC_HEAD_OBLIQ_INF	280
Muscle Obliquus, Inferior, Left Head Body	Musculus obliquus inferior, Left [Inferior oblique muscle, Left, T-13230-LFT]	MDC_MUSC_HEAD_OBLIQ_INF_L	281
Muscle Obliquus, Inferior, Right Head Body	Musculus obliquus inferior, Right [Inferior oblique muscle, Right, T-13230-RGT]	MDC_MUSC_HEAD_OBLIQ_INF_R	282
Muscle NOS Head, Facial Body	MUSCULI FACIALES ET MASTICATOIRES [Facial muscle, NOS, T-13150]	MDC_MUSC_HEAD_FACIAL	284
Muscle Left Head, Facial Body	MUSCULI FACIALES ET MASTICATOIRES, Left [Facial muscle, NOS, Left, T-13150-LFT]	MDC_MUSC_HEAD_FACIAL_L	285
Muscle Right Head, Facial Body	MUSCULI FACIALES ET MASTICATOIRES, Right [Facial muscle, NOS, Right, T-13150-RGT]	MDC_MUSC_HEAD_FACIAL_R	286
Muscle Occipitofrontalis, Venter, Frontalis, NOS Head Body	Musculus occipitofrontalis, Venter frontalis [Occipitofrontalis muscle, frontal belly, T-13142]	MDC_MUSC_HEAD_OCCIPITOFRONT_VENTER	288

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Occipitofrontalis, Venter, Frontalis, Left Head Body	Musculus occipitofrontalis, Venter frontalis, Left [Occipitofrontalis muscle, frontal belly, Left, T-13142-LFT]	MDC_MUSC_HEAD_OCCIPITOFRONT_VENTER_L	289
Muscle Occipitofrontalis, Venter, Frontalis, Right Head Body	Musculus occipitofrontalis, Venter frontalis, Right [Occipitofrontalis muscle, frontal belly, Right, T-13142-RGT]	MDC_MUSC_HEAD_OCCIPITOFRONT_VENTER_R	290
Muscle Orbicularis, Oculi, NOS Head Body	Musculus orbicularis oculi [Orbicularis oculi muscle, NOS, T-13160]	MDC_MUSC_HEAD_ORBIC_OCUL	292
Muscle Orbicularis, Oculi, Left Head Body	Musculus orbicularis oculi, Left [Orbicularis oculi muscle, NOS, Left, T-13160-LFT]	MDC_MUSC_HEAD_ORBIC_OCUL_L	293
Muscle Orbicularis, Oculi, Right Head Body	Musculus orbicularis oculi, Right [Orbicularis oculi muscle, NOS, Right, T-13160-RGT]	MDC_MUSC_HEAD_ORBIC_OCUL_R	294
Muscle Orbicularis, Oculi, Pars, Orbitalis, NOS Head Body	Musculus orbicularis oculi, Pars orbitalis [Orbicularis oculi muscle, orbital part, T-13162]	MDC_MUSC_HEAD_ORBIC_OCUL_PARS_ORBIT	296
Muscle Orbicularis, Oculi, Pars, Orbitalis, Left Head Body	Musculus orbicularis oculi, Pars orbitalis, Left [Orbicularis oculi muscle, orbital part, Left, T-13162-LFT]	MDC_MUSC_HEAD_ORBIC_OCUL_PARS_ORBIT_L	297
Muscle Orbicularis, Oculi, Pars, Orbitalis, Right Head Body	Musculus orbicularis oculi, Pars orbitalis, Right [Orbicularis oculi muscle, orbital part, Right, T-13162-RGT]	MDC_MUSC_HEAD_ORBIC_OCUL_PARS_ORBIT_R	298
Muscle Auricularis, Posterior, NOS Head Body	Musculus auricularis posterior [Posterior auricularis muscle, T-13243]	MDC_MUSC_HEAD_AURIC_POST	300
Muscle Auricularis, Posterior, Left Head Body	Musculus auricularis posterior, Left [Posterior auricularis muscle, Left, T-13243-LFT]	MDC_MUSC_HEAD_AURIC_POST_L	301
Muscle Auricularis, Posterior, Right Head Body	Musculus auricularis posterior, Right [Posterior auricularis muscle, Right, T-13243-RGT]	MDC_MUSC_HEAD_AURIC_POST_R	302
Muscle Orbicularis, Oris, NOS Head Body	Musculus orbicularis oris [Orbicularis oris muscle, T-13290]	MDC_MUSC_HEAD_ORBIC_ORIS	304
Muscle Orbicularis, Oris, Left Head Body	Musculus orbicularis oris, Left [Orbicularis oris muscle, Left, T-13290-LFT]	MDC_MUSC_HEAD_ORBIC_ORIS_L	305
Muscle Orbicularis, Oris, Right Head Body	Musculus orbicularis oris, Right [Orbicularis oris muscle, Right, T-13290-RGT]	MDC_MUSC_HEAD_ORBIC_ORIS_R	306

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Depressor, Anguli, Oris, NOS Head, Facial Body	Musculus depressor anguli oris [Depressor anguli oris muscle, T-13151]	MDC_MUSC_HEAD_DEPRESSOR_ANGUL_ORIS	308
Muscle Depressor, Anguli, Oris, Left Head, Facial Body	Musculus depressor anguli oris, Left [Depressor anguli oris muscle, Left, T-13151-LFT]	MDC_MUSC_HEAD_DEPRESSOR_ANGUL_ORIS_L	309
Muscle Depressor, Anguli, Oris, Right Head, Facial Body	Musculus depressor anguli oris, Right [Depressor anguli oris muscle, Right, T-13151-RGT]	MDC_MUSC_HEAD_DEPRESSOR_ANGUL_ORIS_R	310
Muscle Risorius, NOS Head, Facial Body	Musculus risorius [Risorius muscle, T-13152]	MDC_MUSC_HEAD_RISOR	312
Muscle Risorius, Left Head, Facial Body	Musculus risorius, Left [Risorius muscle, Left, T-13152-LFT]	MDC_MUSC_HEAD_RISOR_L	313
Muscle Risorius, Right Head, Facial Body	Musculus risorius, Right [Risorius muscle, Right, T-13152-RGT]	MDC_MUSC_HEAD_RISOR_R	314
Muscle Zygomaticus, Major, NOS Head, Facial Body	Musculus zygomaticus major [Zygomaticus major muscle, T-13153]	MDC_MUSC_HEAD_ZYGOMATIC_MAJOR	316
Muscle Zygomaticus, Major, Left Head, Facial Body	Musculus zygomaticus major, Left [Zygomaticus major muscle, Left, T-13153-LFT]	MDC_MUSC_HEAD_ZYGOMATIC_MAJOR_L	317
Muscle Zygomaticus, Major, Right Head, Facial Body	Musculus zygomaticus major, Right [Zygomaticus major muscle, Right, T-13153-RGT]	MDC_MUSC_HEAD_ZYGOMATIC_MAJOR_R	318
Muscle Zygomaticus, Minor, NOS Head, Facial Body	Musculus zygomaticus minor [Zygomaticus minor muscle, T-13154]	MDC_MUSC_HEAD_ZYGOMATIC_MINOR	320
Muscle Zygomaticus, Minor, Left Head, Facial Body	Musculus zygomaticus minor, Left [Zygomaticus minor muscle, Left, T-13154-LFT]	MDC_MUSC_HEAD_ZYGOMATIC_MINOR_L	321
Muscle Zygomaticus, Minor, Right Head, Facial Body	Musculus zygomaticus minor, Right [Zygomaticus minor muscle, Right, T-13154-RGT]	MDC_MUSC_HEAD_ZYGOMATIC_MINOR_R	322
Muscle Levator, Labii, Superioris, NOS Head, Facial Body	Musculus levator labii superioris [Levator labii superioris muscle, T-13155]	MDC_MUSC_HEAD_LEVATOR_LAB_SUP	324
Muscle Levator, Labii, Superioris, Left Head, Facial Body	Musculus levator labii superioris, Left [Levator labii superioris muscle, Left, T-13155-LFT]	MDC_MUSC_HEAD_LEVATOR_LAB_SUP_L	325
Muscle Levator, Labii, Superioris, Right Head, Facial Body	Musculus levator labii superioris, Right [Levator labii superioris muscle, Right, T-13155-RGT]	MDC_MUSC_HEAD_LEVATOR_LAB_SUP_R	326

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Levator, Labii, Superioris, Alaeque, Nasi, NOS Head, Facial Body	Musculus levator labii superioris alaeque nasi [Levator labii superioris alaeque nasi muscle, T-13156]	MDC_MUSC_HEAD_LEVATOR_LAB_SUP_AL_NASI	328
Muscle Levator, Labii, Superioris, Alaeque, Nasi, Left Head, Facial Body	Musculus levator labii superioris alaeque nasi, Left [Levator labii superioris alaeque nasi muscle, Left, T-13156-LFT]	MDC_MUSC_HEAD_LEVATOR_LAB_SUP_AL_NASI_L	329
Muscle Levator, Labii, Superioris, Alaeque, Nasi, Right Head, Facial Body	Musculus levator labii superioris alaeque nasi, Right [Levator labii superioris alaeque nasi muscle, Right, T-13156-RGT]	MDC_MUSC_HEAD_LEVATOR_LAB_SUP_AL_NASI_R	330
Muscle Depressor, Labii, Inferioris, NOS Head, Facial Body	Musculus depressor labii inferioris [Depressor labii inferioris muscle, T-13157]	MDC_MUSC_HEAD_DEPRESSOR_LAB_INF	332
Muscle Depressor, Labii, Inferioris, Left Head, Facial Body	Musculus depressor labii inferioris, Left [Depressor labii inferioris muscle, Left, T-13157-LFT]	MDC_MUSC_HEAD_DEPRESSOR_LAB_INF_L	333
Muscle Depressor, Labii, Inferioris, Right Head, Facial Body	Musculus depressor labii inferioris, Right [Depressor labii inferioris muscle, Right, T-13157-RGT]	MDC_MUSC_HEAD_DEPRESSOR_LAB_INF_R	334
Muscle Levator, Anguli, Oris, NOS Head, Facial Body	Musculus levator anguli oris [Levator anguli oris muscle, T-13158]	MDC_MUSC_HEAD_LEVATOR_ANGUL_ORIS	336
Muscle Levator, Anguli, Oris, Left Head, Facial Body	Musculus levator anguli oris, Left [Levator anguli oris muscle, Left, T-13158-LFT]	MDC_MUSC_HEAD_LEVATOR_ANGUL_ORIS_L	337
Muscle Levator, Anguli, Oris, Right Head, Facial Body	Musculus levator anguli oris, Right [Levator anguli oris muscle, Right, T-13158-RGT]	MDC_MUSC_HEAD_LEVATOR_ANGUL_ORIS_R	338
Muscle Buccinator, NOS Head Body	Musculus buccinator [Buccinator muscle, T-13159]	MDC_MUSC_HEAD_BUCCINATOR	340
Muscle Buccinator, Left Head Body	Musculus buccinator, Left [Buccinator muscle, Left, T-13159-LFT]	MDC_MUSC_HEAD_BUCCINATOR_L	341
Muscle Buccinator, Right Head Body	Musculus buccinator, Right [Buccinator muscle, Right, T-13159-RGT]	MDC_MUSC_HEAD_BUCCINATOR_R	342
Muscle Mentalis, NOS Head Body	Musculus mentalis [Mentalis muscle, T-13250]	MDC_MUSC_HEAD_MENTAL	344
Muscle Mentalis, Left Head Body	Musculus mentalis, Left [Mentalis muscle, Left, T-13250-LFT]	MDC_MUSC_HEAD_MENTAL_L	345
Muscle Mentalis, Right Head Body	Musculus mentalis, Right [Mentalis muscle, Right, T-13250-RGT]	MDC_MUSC_HEAD_MENTAL_R	346
Muscle Masseter, NOS Head Body	Musculus masseter [Masseter muscle, T-13260]	MDC_MUSC_HEAD_MASSETER	348
Muscle Masseter, Left Head Body	Musculus masseter, Left [Masseter muscle, Left, T-13260-LFT]	MDC_MUSC_HEAD_MASSETER_L	349

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Masseter, Right Head Body	Musculus masseter, Right [Masseter muscle, Right, T-13260-RGT]	MDC_MUSC_HEAD_MASSETER_R	350
Muscle Temporalis, NOS Head Body	Musculus temporalis [Temporal muscle, T-13270]	MDC_MUSC_HEAD_TEMPOR	352
Muscle Temporalis, Left Head Body	Musculus temporalis, Left [Temporal muscle, Left, T-13270-LFT]	MDC_MUSC_HEAD_TEMPOR_L	353
Muscle Temporalis, Right Head Body	Musculus temporalis, Right [Temporal muscle, Right, T-13270-RGT]	MDC_MUSC_HEAD_TEMPOR_R	354
Muscle Pterygoideus, NOS Head Body	Musculus Pterygoideus [Pterygoid muscle, NOS, T-13280]	MDC_MUSC_HEAD_PTERYGOID	356
Muscle Pterygoideus, Left Head Body	Musculus Pterygoideus, Left [Pterygoid muscle, Left, T-13280-LFT]	MDC_MUSC_HEAD_PTERYGOID_L	357
Muscle Pterygoideus, Right Head Body	Musculus Pterygoideus, Right [Pterygoid muscle, Right, T-13280-RGT]	MDC_MUSC_HEAD_PTERYGOID_R	358
Muscle Pterygoideus, Lateralis, NOS Head Body	Musculus Pterygoideus lateralis [Lateral pterygoid muscle, T-13281]	MDC_MUSC_HEAD_PTERYGOID_LAT	360
Muscle Pterygoideus, Lateralis, Left Head Body	Musculus Pterygoideus lateralis, Left [Lateral pterygoid muscle, Left, T-13281-LFT]	MDC_MUSC_HEAD_PTERYGOID_LAT_L	361
Muscle Pterygoideus, Lateralis, Right Head Body	Musculus Pterygoideus lateralis, Right [Lateral pterygoid muscle, Right, T-13281-RGT]	MDC_MUSC_HEAD_PTERYGOID_LAT_R	362
Muscle Pterygoideus, Medialis, NOS Head Body	Musculus Pterygoideus, medialis [Medial pterygoid muscle, T-13282]	MDC_MUSC_HEAD_PTERYGOID_MED	364
Muscle Pterygoideus, Medialis, Left Head Body	Musculus Pterygoideus, medialis, Left [Medial pterygoid muscle, Left, T-13282-LFT]	MDC_MUSC_HEAD_PTERYGOID_MED_L	365
Muscle Pterygoideus, Medialis, Right Head Body	Musculus Pterygoideus, medialis, Right [Medial pterygoid muscle, Right, T-13282-RGT]	MDC_MUSC_HEAD_PTERYGOID_MED_R	366
Muscle Linguae, NOS Head Body	MUSCULI LINGUAE [Intrinsic lingual muscle, NOS, T-13510]	MDC_MUSC_HEAD_LING	368
Muscle Linguae, Left Head Body	MUSCULI LINGUAE, Left [Intrinsic lingual muscle, NOS, Left, T-13510-LFT]	MDC_MUSC_HEAD_LING_L	369
Muscle Linguae, Right Head Body	MUSCULI LINGUAE, Right [Intrinsic lingual muscle, NOS, Right, T-13510-RGT]	MDC_MUSC_HEAD_LING_R	370
Muscle Genioglossus, NOS Head Body	Musculus genioglossus [Genioglossus muscle, T-13520]	MDC_MUSC_HEAD_GENIOGLOSS	372

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Genioglossus, Left Head Body	Musculus genioglossus, Left [Genioglossus muscle, Left, T-13520-LFT]	MDC_MUSC_HEAD_GENIOGLOSS_L	373
Muscle Genioglossus, Right Head Body	Musculus genioglossus, Right [Genioglossus muscle, Right, T-13520-RGT]	MDC_MUSC_HEAD_GENIOGLOSS_R	374
Muscle Laryngis, NOS Head Body	MUSCULI LARINGIS [Laryngeal muscle, NOS, T-13490]	MDC_MUSC_HEAD_LARING	376
Muscle Laryngis, Left Head Body	MUSCULI LARINGIS, Left [Laryngeal muscle, NOS, Left, T-13490-LFT]	MDC_MUSC_HEAD_LARING_L	377
Muscle Laryngis, Right Head Body	MUSCULI LARINGIS, Right [Laryngeal muscle, NOS, Right, T-13490-RGT]	MDC_MUSC_HEAD_LARING_R	378
Muscle Cricothyroideus, NOS Head Body	Musculus cricothyroideus [Cricothyroid muscle, T-13492]	MDC_MUSC_HEAD_CRICOTHYROID	380
Muscle Cricothyroideus, Left Head Body	Musculus cricothyroideus, Left [Cricothyroid muscle, Left, T-13492-LFT]	MDC_MUSC_HEAD_CRICOTHYROID_L	381
Muscle Cricothyroideus, Right Head Body	Musculus cricothyroideus, Right [Cricothyroid muscle, Right, T-13492-RGT]	MDC_MUSC_HEAD_CRICOTHYROID_R	382
Muscle Thyroarytenoideus, NOS Head Body	Musculus thyroarytenoideus [Thyroarytenoid muscle, T-13497]	MDC_MUSC_HEAD_THYROARYTEROID	384
Muscle Thyroarytenoideus, Left Head Body	Musculus thyroarytenoideus, Left [Thyroarytenoid muscle, Left, T-13497-LFT]	MDC_MUSC_HEAD_THYROARYTEROID_L	385
Muscle Thyroarytenoideus, Right Head Body	Musculus thyroarytenoideus, Right [Thyroarytenoid muscle, Right, T-13497-RGT]	MDC_MUSC_HEAD_THYROARYTEROID_R	386
Muscle NOS Neck Body	MUSCULI COLLI [Muscle of neck, NOS, T-13300]	MDC_MUSC_NECK	388
Muscle Left Neck Body	MUSCULI COLLI, Left [Muscle of neck, NOS, Left, T-13300-LFT]	MDC_MUSC_NECK_L	389
Muscle Right Neck Body	MUSCULI COLLI, Right [Muscle of neck, NOS, Right, T-13300-RGT]	MDC_MUSC_NECK_R	390
Muscle Platysma, NOS Neck Body	Platysma [Platysma muscle, T-13480]	MDC_MUSC_NECK_PLATYSMA	392
Muscle Platysma, Left Neck Body	Platysma, Left [Platysma muscle, Left, T-13480-LFT]	MDC_MUSC_NECK_PLATYSMA_L	393
Muscle Platysma, Right Neck Body	Platysma, Right [Platysma muscle, Right, T-13480-RGT]	MDC_MUSC_NECK_PLATYSMA_R	394
Muscle Longus, Capitis, NOS Neck Body	Musculus capitis longus [Longus capitis muscle, T-13130]	MDC_MUSC_NECK_CAPT_LONG	396

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Longus, Capitis, Left Neck Body	Musculus capitis longus, Left [Longus capitis muscle, Left, T-13130-LFT]	MDC_MUSC_NECK_CAPT_LONG_L	397
Muscle Longus, Capitis, Right Neck Body	Musculus capitis longus, Right [Longus capitis muscle, Right, T-13130-RGT]	MDC_MUSC_NECK_CAPT_LONG_R	398
Muscle Sternocleidomastoideus, NOS Neck Body	Musculus Sternocleidomastoideus [Sternocleidomastoid muscle, T-13310]	MDC_MUSC_NECK_STERNOCLEIDOMASTOID	400
Muscle Sternocleidomastoideus, Left Neck Body	Musculus Sternocleidomastoideus, Left [Sternocleidomastoid muscle, Left, T-13310-LFT]	MDC_MUSC_NECK_STERNOCLEIDOMASTOID_L	401
Muscle Sternocleidomastoideus, Right Neck Body	Musculus Sternocleidomastoideus, Right [Sternocleidomastoid muscle, Right, T-13310-RGT]	MDC_MUSC_NECK_STERNOCLEIDOMASTOID_R	402
Muscle Digastricus, NOS Neck Body	Musculus digastricus [Digastric muscle, T-13330]	MDC_MUSC_NECK_DIGRASTRIC	404
Muscle Digastricus, Left Neck Body	Musculus digastricus, Left [Digastric muscle, Left, T-13330-LFT]	MDC_MUSC_NECK_DIGRASTRIC_L	405
Muscle Digastricus, Right Neck Body	Musculus digastricus, Right [Digastric muscle, Right, T-13330-RGT]	MDC_MUSC_NECK_DIGRASTRIC_R	406
Muscle Digastricus, Venter, Anterior, NOS Neck Body	Musculus digastricus, Venter anterior [Digastric muscle, anterior belly, T-13331]	MDC_MUSC_NECK_DIGRASTRIC_VENTER_ANT	408
Muscle Digastricus, Venter, Anterior, Left Neck Body	Musculus digastricus, Venter anterior, Left [Digastric muscle, anterior belly, Left, T-13331-LFT]	MDC_MUSC_NECK_DIGRASTRIC_VENTER_ANT_L	409
Muscle Digastricus, Venter, Anterior, Right Neck Body	Musculus digastricus, Venter anterior, Right [Digastric muscle, anterior belly, Right, T-13331-RGT]	MDC_MUSC_NECK_DIGRASTRIC_VENTER_ANT_R	410
Muscle Digastricus, Venter, Posterior, NOS Neck Body	Musculus digastricus, Venter posterior [Digastric muscle, posterior belly, T-13332]	MDC_MUSC_NECK_DIGRASTRIC_VENTER_POST	412
Muscle Digastricus, Venter, Posterior, Left Neck Body	Musculus digastricus, Venter posterior, Left [Digastric muscle, posterior belly, Left, T-13332-LFT]	MDC_MUSC_NECK_DIGRASTRIC_VENTER_POST_L	413
Muscle Digastricus, Venter, Posterior, Right Neck Body	Musculus digastricus, Venter posterior, Right [Digastric muscle, posterior belly, Right, T-13332-RGT]	MDC_MUSC_NECK_DIGRASTRIC_VENTER_POST_R	414
Muscle Mylohyoideus, NOS Neck Body	Musculus mylohyoideus [Mylohyoid muscle, T-13350, (submental EMG)]	MDC_MUSC_NECK_MYLOHYOID	416

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Mylohyoideus, Left Neck Body	Musculus mylohyoideus, Left [Mylohyoid muscle, Left, T-13350-LFT, (submental EMG)]	MDC_MUSC_NECK_MYLOHYOID_L	417
Muscle Mylohyoideus, Right Neck Body	Musculus mylohyoideus, Right [Mylohyoid muscle, Right, T-13350-RGT, (submental EMG)]	MDC_MUSC_NECK_MYLOHYOID_R	418
Muscle NOS Trunk Body	[Muscle of trunk, NOS, T-14000]	MDC_MUSC_TRUNK	420
Muscle Left Trunk Body	[Muscle of trunk, NOS, Left, T-14000-LFT]	MDC_MUSC_TRUNK_L	421
Muscle Right Trunk Body	[Muscle of trunk, NOS, Right, T-14000-RGT]	MDC_MUSC_TRUNK_R	422
Muscle NOS Back Body	MUSCULI DORSI [Muscle of back, NOS, T-14090]	MDC_MUSC_BACK	424
Muscle Left Back Body	MUSCULI DORSI, Left [Muscle of back, NOS, Left, T-14090-LFT]	MDC_MUSC_BACK_L	425
Muscle Right Back Body	MUSCULI DORSI, Right [Muscle of back, NOS, Right, T-14090-RGT]	MDC_MUSC_BACK_R	426
Muscle UpperBack, NOS Back Body	[Muscle of upper back, NOS, T-14170]	MDC_MUSC_BACK_UPPER	428
Muscle UpperBack, Left Back Body	[Muscle of upper back, NOS, Left, T-14170-LFT]	MDC_MUSC_BACK_UPPER_L	429
Muscle UpperBack, Right Back Body	[Muscle of upper back, NOS, Right, T-14170-RGT]	MDC_MUSC_BACK_UPPER_R	430
Muscle LowerBack, NOS Back Body	[Muscle of lower back, NOS, T-14091]	MDC_MUSC_BACK_LOWER	432
Muscle LowerBack, Left Back Body	[Muscle of lower back, NOS, Left, T-14091-LFT]	MDC_MUSC_BACK_LOWER_L	433
Muscle LowerBack, Right Back Body	[Muscle of lower back, NOS, Right, T-14091-RGT]	MDC_MUSC_BACK_LOWER_R	434
Muscle Trapezius, NOS Back Body	Musculus trapezius [Trapezius muscle, T-14171]	MDC_MUSC_BACK_TRAPEZ	436
Muscle Trapezius, Left Back Body	Musculus trapezius, Left [Trapezius muscle, Left, T-14171-LFT]	MDC_MUSC_BACK_TRAPEZ_L	437
Muscle Trapezius, Right Back Body	Musculus trapezius, Right [Trapezius muscle, Right, T-14171-RGT]	MDC_MUSC_BACK_TRAPEZ_R	438
Muscle Latissimus, Dorsi, NOS Back Body	Musculus latissimus dorsi [Latissimus dorsi muscle, T-14172]	MDC_MUSC_BACK_LASTISSIM_DORS	440
Muscle Latissimus, Dorsi, Left Back Body	Musculus latissimus dorsi, Left [Latissimus dorsi muscle, Left, T-14172-LFT]	MDC_MUSC_BACK_LASTISSIM_DORS_L	441

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Latissimus, Dorsi, Right Back Body	Musculus latissimus dorsi, Right [Latissimus dorsi muscle, Right, T-14172-RGT]	MDC_MUSC_BACK_LASTISSIM_DORS_R	442
Muscle Rhomboideus, Major, NOS Back Body	Musculus rhomboideus major [Rhomboid major muscle, T-14173]	MDC_MUSC_BACK_RHOMB_MAJOR	444
Muscle Rhomboideus, Major, Left Back Body	Musculus rhomboideus major, Left [Rhomboid major muscle, Left, T-14173-LFT]	MDC_MUSC_BACK_RHOMB_MAJOR_L	445
Muscle Rhomboideus, Major, Right Back Body	Musculus rhomboideus major, Right [Rhomboid major muscle, Right, T-14173-RGT]	MDC_MUSC_BACK_RHOMB_MAJOR_R	446
Muscle Rhomboideus, Minor, NOS Back Body	Musculus rhomboideus minor [Rhomboid minor muscle, T-14174]	MDC_MUSC_BACK_RHOMB_MINOR	448
Muscle Rhomboideus, Minor, Left Back Body	Musculus rhomboideus minor, Left [Rhomboid minor muscle, Left, T-14174-LFT]	MDC_MUSC_BACK_RHOMB_MINOR_L	449
Muscle Rhomboideus, Minor, Right Back Body	Musculus rhomboideus minor, Right [Rhomboid minor muscle, Right, T-14174-RGT]	MDC_MUSC_BACK_RHOMB_MINOR_R	450
Muscle Levator, Scapulae, NOS Back Body	Musculus levator scapulae [Levator scapulae muscle, T-14180]	MDC_MUSC_BACK_SCAP_LEVATOR	452
Muscle Levator, Scapulae, Left Back Body	Musculus levator scapulae, Left [Levator scapulae muscle, Left, T-14180-LFT]	MDC_MUSC_BACK_SCAP_LEVATOR_L	453
Muscle Levator, Scapulae, Right Back Body	Musculus levator scapulae, Right [Levator scapulae muscle, Right, T-14180-RGT]	MDC_MUSC_BACK_SCAP_LEVATOR_R	454
Muscle Serratus, Posterior, NOS Back Body	Musculus serratus posterior [Serratus posterior muscle, T-14190]	MDC_MUSC_BACK_SERRAT_POST	456
Muscle Serratus, Posterior, Left Back Body	Musculus serratus posterior, Left [Serratus posterior muscle, Left, T-14190-LFT]	MDC_MUSC_BACK_SERRAT_POST_L	457
Muscle Serratus, Posterior, Right Back Body	Musculus serratus posterior, Right [Serratus posterior muscle, Right, T-14190-RGT]	MDC_MUSC_BACK_SERRAT_POST_R	458
Muscle Splenius, Capitis, NOS Back Body	Musculus splenius capitis [Splenius capitis muscle, T-13101]	MDC_MUSC_BACK_SPLEN_CAPT	460

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Splenius, Capitis, Left Back Body	Musculus splenius capitis, Left [Splenius capitis muscle, Left, T-13101-LFT]	MDC_MUSC_BACK_SPLEN_CAPT_L	461
Muscle Splenius, Capitis, Right Back Body	Musculus splenius capitis, Right [Splenius capitis muscle, Right, T-13101-RGT]	MDC_MUSC_BACK_SPLEN_CAPT_R	462
Muscle Splenius, Cervicis, NOS Back Body	Musculus splenius cervicis [Splenius cervicis muscle, T-13301]	MDC_MUSC_BACK_SPLEN_CERVIC	464
Muscle Splenius, Cervicis, Left Back Body	Musculus splenius cervicis, Left [Splenius cervicis muscle, Left, T-13301-LFT]	MDC_MUSC_BACK_SPLEN_CERVIC_L	465
Muscle Splenius, Cervicis, Right Back Body	Musculus splenius cervicis, Right [Splenius cervicis muscle, Right, T-13301-RGT]	MDC_MUSC_BACK_SPLEN_CERVIC_R	466
Muscle Splenius, NOS Back Body	[Splenius muscle of trunk, T-14010]	MDC_MUSC_BACK_SPLEN	468
Muscle Splenius, Left Back Body	[Splenius muscle of trunk, Left, T-14010-LFT]	MDC_MUSC_BACK_SPLEN_L	469
Muscle Splenius, Right Back Body	[Splenius muscle of trunk, Right, T-14010-RGT]	MDC_MUSC_BACK_SPLEN_R	470
Muscle Erector, Spinae, NOS Back Body	MUSCULUS ERECTOR SPINAE [Erector spinae muscle, T-14020]	MDC_MUSC_BACK_SPINAL_ERECTOR	472
Muscle Erector, Spinae, Left Back Body	MUSCULUS ERECTOR SPINAE, Left [Erector spinae muscle, Left, T-14020-LFT]	MDC_MUSC_BACK_SPINAL_ERECTOR_L	473
Muscle Erector, Spinae, Right Back Body	MUSCULUS ERECTOR SPINAE, Right [Erector spinae muscle, Right, T-14020-RGT]	MDC_MUSC_BACK_SPINAL_ERECTOR_R	474
Muscle Spinalis, NOS Back Body	Musculus spinalis [Spinalis muscle, T-14050]	MDC_MUSC_BACK_SPINAL	476
Muscle Spinalis, Left Back Body	Musculus spinalis, Left [Spinalis muscle, Left, T-14050-LFT]	MDC_MUSC_BACK_SPINAL_L	477
Muscle Spinalis, Right Back Body	Musculus spinalis, Right [Spinalis muscle, Right, T-14050-RGT]	MDC_MUSC_BACK_SPINAL_R	478
Muscle Spinalis, Thoracis, NOS Back Body	Musculus spinalis thoracis [Spinalis thoracis muscle, T-14051]	MDC_MUSC_BACK_SPINAL_THORAC	480
Muscle Spinalis, Thoracis, Left Back Body	Musculus spinalis thoracis, Left [Spinalis thoracis muscle, Left, T-14051-LFT]	MDC_MUSC_BACK_SPINAL_THORAC_L	481
Muscle Spinalis, Thoracis, Right Back Body	Musculus spinalis thoracis, Right [Spinalis thoracis muscle, Right, T-14051-RGT]	MDC_MUSC_BACK_SPINAL_THORAC_R	482

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Spinalis, Cervicis, NOS Back Body	Musculus spinalis cervicis [Spinalis cervicis muscle, T-14052]	MDC_MUSC_BACK_SPINAL_CERVIC	484
Muscle Spinalis, Cervicis, Left Back Body	Musculus spinalis cervicis, Left [Spinalis cervicis muscle, Left, T-14052-LFT]	MDC_MUSC_BACK_SPINAL_CERVIC_L	485
Muscle Spinalis, Cervicis, Right Back Body	Musculus spinalis cervicis, Right [Spinalis cervicis muscle, Right, T-14052-RGT]	MDC_MUSC_BACK_SPINAL_CERVIC_R	486
Muscle Spinalis, Capitis, NOS Back Body	Musculus spinalis capitis [Spinalis capitis muscle, T-14053]	MDC_MUSC_BACK_SPINAL_CAPIT	488
Muscle Spinalis, Capitis, Left Back Body	Musculus spinalis capitis, Left [Spinalis capitis muscle, Left, T-14053-LFT]	MDC_MUSC_BACK_SPINAL_CAPIT_L	489
Muscle Spinalis, Capitis, Right Back Body	Musculus spinalis capitis, Right [Spinalis capitis muscle, Right, T-14053-RGT]	MDC_MUSC_BACK_SPINAL_CAPIT_R	490
Muscle Semispinalis, NOS Back Body	Musculus semispinalis [Semispinalis muscle, NOS, T-14061]	MDC_MUSC_BACK_SEMISPINAL	492
Muscle Semispinalis, Left Back Body	Musculus semispinalis, Left [Semispinalis muscle, NOS, Left, T-14061-LFT]	MDC_MUSC_BACK_SEMISPINAL_L	493
Muscle Semispinalis, Right Back Body	Musculus semispinalis, Right [Semispinalis muscle, NOS, Right, T-14061-RGT]	MDC_MUSC_BACK_SEMISPINAL_R	494
Muscle Semispinalis, Thoracis, NOS Back Body	Musculus semispinalis thoracis [Semispinalis thoracis muscle, T-14062]	MDC_MUSC_BACK_SEMISPINAL_THOR	496
Muscle Semispinalis, Thoracis, Left Back Body	Musculus semispinalis thoracis, Left [Semispinalis thoracis muscle, Left, T-14062-LFT]	MDC_MUSC_BACK_SEMISPINAL_THOR_L	497
Muscle Semispinalis, Thoracis, Right Back Body	Musculus semispinalis thoracis, Right [Semispinalis thoracis muscle, Right, T-14062-RGT]	MDC_MUSC_BACK_SEMISPINAL_THOR_R	498
Muscle Semispinalis, Cervicis, NOS Back Body	Musculus semispinalis cervicis [Semispinalis cervicis muscle, T-14063]	MDC_MUSC_BACK_SEMISPINAL_CERV	500
Muscle Semispinalis, Cervicis, Left Back Body	Musculus semispinalis cervicis, Left [Semispinalis cervicis muscle, Left, T-14063-LFT]	MDC_MUSC_BACK_SEMISPINAL_CERV_L	501
Muscle Semispinalis, Cervicis, Right Back Body	Musculus semispinalis cervicis, Right [Semispinalis cervicis muscle, Right, T-14063-RGT]	MDC_MUSC_BACK_SEMISPINAL_CERV_R	502

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Semispinalis, Capitis, NOS Back Body	Musculus semispinalis capitis [Semispinalis capitis muscle, T-14064]	MDC_MUSC_BACK_SEMISPINAL_CAPIT	504
Muscle Semispinalis, Capitis, Left Back Body	Musculus semispinalis capitis, Left [Semispinalis capitis muscle, Left, T-14064-LFT]	MDC_MUSC_BACK_SEMISPINAL_CAPIT_L	505
Muscle Semispinalis, Capitis, Right Back Body	Musculus semispinalis capitis, Right [Semispinalis capitis muscle, Right, T-14064-RGT]	MDC_MUSC_BACK_SEMISPINAL_CAPIT_R	506
Muscle Multifidi, NOS Back Body	Musculi multifidii [Multifidus muscle, T-14065]	MDC_MUSC_BACK_MULTIFID	508
Muscle Multifidi, Left Back Body	Musculi multifidii, Left [Multifidus muscle, Left, T-14065-LFT]	MDC_MUSC_BACK_MULTIFID_L	509
Muscle Multifidi, Right Back Body	Musculi multifidii, Right [Multifidus muscle, Right, T-14065-RGT]	MDC_MUSC_BACK_MULTIFID_R	510
Muscle Interspinales, NOS Back Body	MUSCULI INTERSPINALES [Interspinalis muscles, NOS, T-14070]	MDC_MUSC_BACK_INTERSPINAL	512
Muscle Interspinales, Left Back Body	MUSCULI INTERSPINALES, Left [Interspinalis muscles, NOS, Left, T-14070-LFT]	MDC_MUSC_BACK_INTERSPINAL_L	513
Muscle Interspinales, Right Back Body	MUSCULI INTERSPINALES, Right [Interspinalis muscles, NOS, Right, T-14070-RGT]	MDC_MUSC_BACK_INTERSPINAL_R	514
Muscle Interspinales, Cervicis, NOS Back Body	Musculi interspinales cervicis [Interspinalis cervicis muscle, T-14071]	MDC_MUSC_BACK_INTERSPINAL_CERVIC	516
Muscle Interspinales, Cervicis, Left Back Body	Musculi interspinales cervicis, Left [Interspinalis cervicis muscle, Left, T-14071-LFT]	MDC_MUSC_BACK_INTERSPINAL_CERVIC_L	517
Muscle Interspinales, Cervicis, Right Back Body	Musculi interspinales cervicis, Right [Interspinalis cervicis muscle, Right, T-14071-RGT]	MDC_MUSC_BACK_INTERSPINAL_CERVIC_R	518
Muscle Interspinalis, Thoracis, NOS Back Body	Musculi interspinales thoracis [Interspinalis thoracis muscle, T-14072]	MDC_MUSC_BACK_INTERSPINAL_THORAC	520
Muscle Interspinalis, Thoracis, Left Back Body	Musculi interspinales thoracis, Left [Interspinalis thoracis muscle, Left, T-14072-LFT]	MDC_MUSC_BACK_INTERSPINAL_THORAC_L	521
Muscle Interspinalis, Thoracis, Right Back Body	Musculi interspinales thoracis, Right [Interspinalis thoracis muscle, Right, T-14072-RGT]	MDC_MUSC_BACK_INTERSPINAL_THORAC_R	522
Muscle Interspinales, Lumborum, NOS Back Body	Musculi interspinales lumborum [Interspinalis lumborum muscle, T-14073]	MDC_MUSC_BACK_INTERSPINAL_LUMBOR	524

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Interspinales, Lumborum, Left Back Body	Musculi interspinales lumborum, Left [Interspinales lumborum muscle, Left, T-14073-LFT]	MDC_MUSC_BACK_INTERSPINAL_LUMBOR_L	525
Muscle Interspinales, Lumborum, Right Back Body	Musculi interspinales lumborum, Right [Interspinales lumborum muscle, Right, T-14073-RGT]	MDC_MUSC_BACK_INTERSPINAL_LUMBOR_R	526
Muscle NOS Thorax Body	MUSCULI THORACIS [Muscle of thorax, NOS, T-14100]	MDC_MUSC_THORAX	528
Muscle Left Thorax Body	MUSCULI THORACIS, Left [Muscle of thorax, NOS, Left, T-14100-LFT]	MDC_MUSC_THORAX_L	529
Muscle Right Thorax Body	MUSCULI THORACIS, Right [Muscle of thorax, NOS, Right, T-14100-RGT]	MDC_MUSC_THORAX_R	530
Muscle Pectoralis, Major, NOS Thorax Body	Musculus pectoralis major [Pectoralis major muscle, NOS, T-14110]	MDC_MUSC_THORAX_PECTORAL_MAJOR	532
Muscle Pectoralis, Major, Left Thorax Body	Musculus pectoralis major, Left [Pectoralis major muscle, Left, NOS, T-14110-LFT]	MDC_MUSC_THORAX_PECTORAL_MAJOR_L	533
Muscle Pectoralis, Major, Right Thorax Body	Musculus pectoralis major, Right [Pectoralis major muscle, Right, NOS, T-14110-RGT]	MDC_MUSC_THORAX_PECTORAL_MAJOR_R	534
Muscle Pectoralis, Minor, NOS Thorax Body	Musculus pectoralis minor [Pectoralis minor muscle, T-14120]	MDC_MUSC_THORAX_PECTORAL_MINOR	536
Muscle Pectoralis, Minor, Left Thorax Body	Musculus pectoralis minor, Left [Pectoralis minor muscle, Left, T-14120-LFT]	MDC_MUSC_THORAX_PECTORAL_MINOR_L	537
Muscle Pectoralis, Minor, Right Thorax Body	Musculus pectoralis minor, Right [Pectoralis minor muscle, Right, T-14120-RGT]	MDC_MUSC_THORAX_PECTORAL_MINOR_R	538
Muscle Subclavius, NOS Thorax Body	Musculus subclavius [Subclavius muscle, T-14130]	MDC_MUSC_THORAX_SUBCLAV	540
Muscle Subclavius, Left Thorax Body	Musculus subclavius, Left [Subclavius muscle, Left, T-14130-LFT]	MDC_MUSC_THORAX_SUBCLAV_L	541
Muscle Subclavius, Right Thorax Body	Musculus subclavius, Right [Subclavius muscle, Right, T-14130-RGT]	MDC_MUSC_THORAX_SUBCLAV_R	542
Muscle Serratus, Anterior, NOS Thorax Body	Musculus serratus anterior [Serratus anterior muscle, T-14140]	MDC_MUSC_THORAX_SERRAT_ANT	544

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Serratus, Anterior, Left Thorax Body	Musculus serratus anterior, Left [Serratus anterior muscle, Left, T-14140-LFT]	MDC_MUSC_THORAX_SERRAT_ANT_L	545
Muscle Serratus, Anterior, Right Thorax Body	Musculus serratus anterior, Right [Serratus anterior muscle, Right, T-14140-RGT]	MDC_MUSC_THORAX_SERRAT_ANT_R	546
Muscle Intercostales, NOS Thorax Body	Musculi intercostales [Intercostal muscle, NOS, T-14160]	MDC_MUSC_THORAX_INTERCOSTAL	548
Muscle Intercostales, Left Thorax Body	Musculi intercostales, Left [Intercostal muscle, NOS, Left, T-14160-LFT]	MDC_MUSC_THORAX_INTERCOSTAL_L	549
Muscle Intercostales, Right Thorax Body	Musculi intercostales, Right [Intercostal muscle, NOS, Right, T-14160-RGT]	MDC_MUSC_THORAX_INTERCOSTAL_R	550
Muscle NOS Thorax, Diaphragm Body	DIAPHRAGMA [Diaphragm, NOS, T-Y2400]	MDC_MUSC_THORAX_DIAPHRAGM	552
Muscle Left Thorax, Diaphragm Body	DIAPHRAGMA, Left [Diaphragm, NOS, Left, T-Y2400-LFT]	MDC_MUSC_THORAX_DIAPHRAGM_L	553
Muscle Right Thorax, Diaphragm Body	DIAPHRAGMA, Right [Diaphragm, NOS, Right, T-Y2400-RGT]	MDC_MUSC_THORAX_DIAPHRAGM_R	554
Muscle NOS Abdomen Body	MUSCULI ABDOMINIS [Muscle of abdomen, NOS, T-14200]	MDC_MUSC_ABDOM	556
Muscle Left Abdomen Body	MUSCULI ABDOMINIS, Left [Muscle of abdomen, NOS, Left, T-14200-LFT]	MDC_MUSC_ABDOM_L	557
Muscle Right Abdomen Body	MUSCULI ABDOMINIS, Right [Muscle of abdomen, NOS, Right, T-14200-RGT]	MDC_MUSC_ABDOM_R	558
Muscle Rectus, Abdominis, NOS Abdomen Body	Musculus rectus abdominis [Rectus abdominis muscle, T-14260]	MDC_MUSC_ABDOM_ABDOMIN	560
Muscle Rectus, Abdominis, Left Abdomen Body	Musculus rectus abdominis, Left [Rectus abdominis muscle, Left, T-14260-LFT]	MDC_MUSC_ABDOM_ABDOMIN_L	561
Muscle Rectus, Abdominis, Right Abdomen Body	Musculus rectus abdominis, Right [Rectus abdominis muscle, Right, T-14260-RGT]	MDC_MUSC_ABDOM_ABDOMIN_R	562
Muscle Obliquus, Externus, Abdominis, NOS Abdomen Body	Musculus obliquus externus abdominis [Obliquus externus abdominis muscle, T-14220]	MDC_MUSC_ABDOM_OBLIQ_EXT	564
Muscle Obliquus, Externus, Abdominis, Left Abdomen Body	Musculus obliquus externus abdominis, Left [Obliquus externus abdominis muscle, Left, T-14220-LFT]	MDC_MUSC_ABDOM_OBLIQ_EXT_L	565

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Obliquus, Externus, Abdominis, Right Abdomen Body	Musculus obliquus externus abdominis, Right [Obliquus externus abdominis muscle, Right, T-14220-RGT]	MDC_MUSC_ABDOM_OBLIQ_EXT_R	566
Muscle Obliquus, Internus, Abdominis, NOS Abdomen Body	Musculus obliquus internus abdominis [Obliquus internus abdominis muscle, T-14230]	MDC_MUSC_ABDOM_OBLIQ_INT	568
Muscle Obliquus, Internus, Abdominis, Left Abdomen Body	Musculus obliquus internus abdominis, Left [Obliquus internus abdominis muscle, Left, T-14230-LFT]	MDC_MUSC_ABDOM_OBLIQ_INT_L	569
Muscle Obliquus, Internus, Abdominis, Right Abdomen Body	Musculus obliquus internus abdominis, Right [Obliquus internus abdominis muscle, Right, T-14230-RGT]	MDC_MUSC_ABDOM_OBLIQ_INT_R	570
Muscle Transversus, Abdominis, NOS Abdomen Body	Musculus transversus abdominis [Transversus abdominis muscle, T-14250]	MDC_MUSC_ABDOM_ABDOM_TRANSVERS	572
Muscle Transversus, Abdominis, Left Abdomen Body	Musculus transversus abdominis, Left [Transversus abdominis muscle, Left, T-14250-LFT]	MDC_MUSC_ABDOM_ABDOM_TRANSVERS_L	573
Muscle Transversus, Abdominis, Right Abdomen Body	Musculus transversus abdominis, Right [Transversus abdominis muscle, Right, T-14250-RGT]	MDC_MUSC_ABDOM_ABDOM_TRANSVERS_R	574
Muscle Quadratus, Lumborum, NOS Abdomen Body	Musculus quadratus lumborum [Quadratus lumborum muscle, T-14270]	MDC_MUSC_ABDOM_LUMBOR_QUADRAT	576
Muscle Quadratus, Lumborum, Left Abdomen Body	Musculus quadratus lumborum, Left [Quadratus lumborum muscle, Left, T-14270-LFT]	MDC_MUSC_ABDOM_LUMBOR_QUADRAT_L	577
Muscle Quadratus, Lumborum, Right Abdomen Body	Musculus quadratus lumborum, Right [Quadratus lumborum muscle, Right, T-14270-RGT]	MDC_MUSC_ABDOM_LUMBOR_QUADRAT_R	578
Muscle NOS Abdomen, Pelvis Body	MUSCULI DIAPHRAGMATICI PELVIS [Muscle of perineum, NOS, T-14300]	MDC_MUSC_ABDOM_PELV	580
Muscle Left Abdomen, Pelvis Body	MUSCULI DIAPHRAGMATICI PELVIS, Left [Muscle of perineum, NOS, Left, T-14300-LFT]	MDC_MUSC_ABDOM_PELV_L	581
Muscle Right Abdomen, Pelvis Body	MUSCULI DIAPHRAGMATICI PELVIS, Right [Muscle of perineum, NOS, Right, T-14300-RGT]	MDC_MUSC_ABDOM_PELV_R	582
Muscle Puborectalis, NOS Abdomen Body	Musculus puborectalis [Puborectalis muscle, T-14313]	MDC_MUSC_ABDOM_PUBORECT	584

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Puborectalis, Left Abdomen Body LFT]	Musculus puborectalis, Left [Puborectalis muscle, Left, T-14313-LFT]	MDC_MUSC_ABDOM_PUBORECT_L	585
Muscle Puborectalis, Right Abdomen Body	Musculus puborectalis, Right [Puborectalis muscle, Right, T-14313-RGT]	MDC_MUSC_ABDOM_PUBORECT_R	586
Muscle Coccygeus, NOS Abdomen Body	Musculus coccygeus [Coccygeus muscle, T-14320]	MDC_MUSC_ABDOM_COCCYG	588
Muscle Coccygeus, Left Abdomen Body	Musculus coccygeus, Left [Coccygeus muscle, Left, T-14320-LFT]	MDC_MUSC_ABDOM_COCCYG_L	589
Muscle Coccygeus, Right Abdomen Body	Musculus coccygeus, Right [Coccygeus muscle, Right, T-14320-RGT]	MDC_MUSC_ABDOM_COCCYG_R	590
Muscle Sphincter, Ani Abdomen Body	Musculus sphincter ani [Sphincter ani muscle, NOS, T-14330]	MDC_MUSC_ABDOM_ANI_SPHINCTER	592
Muscle Sphincter, Ani, Externus Abdomen Body	Musculus sphincter ani externus [Sphincter ani externus muscle, T-14332]	MDC_MUSC_ABDOM_ANI_SPHINCTER_EXT	596
Muscle NOS UpperExtremity Body	MUSCULI MEMBRI SUPERIORIS [Muscle of upper extremity, NOS, T-13600]	MDC_MUSC_UPEXT	600
Muscle Left UpperExtremity Body	MUSCULI MEMBRI SUPERIORIS, Left [Muscle of upper extremity, NOS, Left, T-13600-LFT]	MDC_MUSC_UPEXT_L	601
Muscle Right UpperExtremity Body	MUSCULI MEMBRI SUPERIORIS, Right [Muscle of upper extremity, NOS, Right, T-13600-RGT]	MDC_MUSC_UPEXT_R	602
Muscle Deltoideus, NOS UpperExtremity Body	Musculus deltoideus [Deltoid muscle, T-13660]	MDC_MUSC_UPEXT_DELTOID	604
Muscle Deltoideus, Left UpperExtremity Body	Musculus deltoideus, Left [Deltoid muscle, Left, T-13660-LFT]	MDC_MUSC_UPEXT_DELTOID_L	605
Muscle Deltoideus, Right UpperExtremity Body	Musculus deltoideus, Right [Deltoid muscle, Right, T-13660-RGT]	MDC_MUSC_UPEXT_DELTOID_R	606
Muscle Supraspinatus, NOS UpperExtremity Body	Musculus supraspinatus [Supraspinatus muscle, T-13610]	MDC_MUSC_UPEXT_SUPRASPINAT	608
Muscle Supraspinatus, Left UpperExtremity Body	Musculus supraspinatus, Left [Supraspinatus muscle, Left, T-13610-LFT]	MDC_MUSC_UPEXT_SUPRASPINAT_L	609

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Supraspinatus, Right UpperExtremity Body	Musculus supraspinatus, Right [Supraspinatus muscle, Right, T-13610-RGT]	MDC_MUSC_UPEXT_SUPRASPINAT_R	610
Muscle Infraspinatus, NOS UpperExtremity Body	Musculus infraspinatus [Infraspinatus muscle, T-13620]	MDC_MUSC_UPEXT_INFRA SPINAT	612
Muscle Infraspinatus, Left UpperExtremity Body	Musculus infraspinatus, Left [Infraspinatus muscle, Left, T-13620-LFT]	MDC_MUSC_UPEXT_INFRA SPINAT_L	613
Muscle Infraspinatus, Right UpperExtremity Body	Musculus infraspinatus, Right [Infraspinatus muscle, Right, T-13620-RGT]	MDC_MUSC_UPEXT_INFRA SPINAT_R	614
Muscle Teres, Minor, NOS UpperExtremity Body	Musculus teres minor [Teres minor muscle, T-13630]	MDC_MUSC_UPEXT_TERES_MINOR	616
Muscle Teres, Minor, Left UpperExtremity Body	Musculus teres minor, Left [Teres minor muscle, Left, T-13630-LFT]	MDC_MUSC_UPEXT_TERES_MINOR_L	617
Muscle Teres, Minor, Right UpperExtremity Body	Musculus teres minor, Right [Teres minor muscle, Right, T-13630-RGT]	MDC_MUSC_UPEXT_TERES_MINOR_R	618
Muscle Teres, Major, NOS UpperExtremity Body	Musculus teres major [Teres major muscle, T-13640]	MDC_MUSC_UPEXT_TERES_MAJOR	620
Muscle Teres, Major, Left UpperExtremity Body	Musculus teres major, Left [Teres major muscle, Left, T-13640-LFT]	MDC_MUSC_UPEXT_TERES_MAJOR_L	621
Muscle Teres, Major, Right UpperExtremity Body	Musculus teres major, Right [Teres major muscle, Right, T-13640-RGT]	MDC_MUSC_UPEXT_TERES_MAJOR_R	622
Muscle Subscapularis, NOS UpperExtremity Body	Musculus subscapularis [Subscapularis muscle, T-13650]	MDC_MUSC_UPEXT_SUBSCAP	624
Muscle Subscapularis, Left UpperExtremity Body	Musculus subscapularis, Left [Subscapularis muscle, Left, T-13650-LFT]	MDC_MUSC_UPEXT_SUBSCAP_L	625
Muscle Subscapularis, Right UpperExtremity Body	Musculus subscapularis, Right [Subscapularis muscle, Right, T-13650-RGT]	MDC_MUSC_UPEXT_SUBSCAP_R	626
Muscle Biceps, Brachii, NOS UpperExtremity Body	Musculus biceps brachii [Biceps brachii muscle, T-13670]	MDC_MUSC_UPEXT_BRACHI_BICEPS	628

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Biceps, Brachii, Left UpperExtremity Body	Musculus biceps brachii, Left [Biceps brachii muscle, Left, T-13670-LFT]	MDC_MUSC_UPEXT_BRACHI_BICEPS_L	629
Muscle Biceps, Brachii, Right UpperExtremity Body	Musculus biceps brachii, Right [Biceps brachii muscle, Right, T-13670-RGT]	MDC_MUSC_UPEXT_BRACHI_BICEPS_R	630
Muscle Brachialis, NOS UpperExtremity Body	Musculus brachialis [Brachialis muscle, T-13680]	MDC_MUSC_UPEXT_BRACHIAL	632
Muscle Brachialis, Left UpperExtremity Body	Musculus brachialis, Left [Brachialis muscle, Left, T-13680-LFT]	MDC_MUSC_UPEXT_BRACHIAL_L	633
Muscle Brachialis, Right UpperExtremity Body	Musculus brachialis, Right [Brachialis muscle, Right, T-13680-RGT]	MDC_MUSC_UPEXT_BRACHIAL_R	634
Muscle Coracobrachialis, NOS UpperExtremity Body	Musculus coracobrachialis [Coracobrachialis muscle, T-13710]	MDC_MUSC_UPEXT_CORACOBACH	636
Muscle Coracobrachialis, Left UpperExtremity Body	Musculus coracobrachialis, Left [Coracobrachialis muscle, Left, T-13710-LFT]	MDC_MUSC_UPEXT_CORACOBACH_L	637
Muscle Coracobrachialis, Right UpperExtremity Body	Musculus coracobrachialis, Right [Coracobrachialis muscle, Right, T-13710-RGT]	MDC_MUSC_UPEXT_CORACOBACH_R	638
Muscle Triceps, Brachii, NOS UpperExtremity Body	Musculus triceps brachii [Triceps brachii muscle, T-13690]	MDC_MUSC_UPEXT_BRACH_TRICEPS	640
Muscle Triceps, Brachii, Left UpperExtremity Body	Musculus triceps brachii, Left [Triceps brachii muscle, Left, T-13690-LFT]	MDC_MUSC_UPEXT_BRACH_TRICEPS_L	641
Muscle Triceps, Brachii, Right UpperExtremity Body	Musculus triceps brachii, Right [Triceps brachii muscle, Right, T-13690-RGT]	MDC_MUSC_UPEXT_BRACH_TRICEPS_R	642
Muscle Triceps, Brachii, Caput, Longum, NOS UpperExtremity Body	Musculus triceps brachii, Caput longum [Triceps brachii muscle, long head, T-13691]	MDC_MUSC_UPEXT_BRACH_TRICEPS_CAP_LONG	644
Muscle Triceps, Brachii, Caput, Longum, Left UpperExtremity Body	Musculus triceps brachii, Caput longum, Left [Triceps brachii muscle, long head, Left, T-13691-LFT]	MDC_MUSC_UPEXT_BRACH_TRICEPS_CAP_LONG_L	645
Muscle Triceps, Brachii, Caput, Longum, Right UpperExtremity Body	Musculus triceps brachii, Caput longum, Right [Triceps brachii muscle, long head, Right, T-13691-RGT]	MDC_MUSC_UPEXT_BRACH_TRICEPS_CAP_LONG_R	646

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Triceps, Brachii, Caput, Laterale, NOS UpperExtremity Body	Musculus triceps brachii, Caput laterale [Triceps brachii muscle, lateral head, T-13692]	MDC_MUSC_UPEXT_BRACH_TRICEPS_CAP_LAT	648
Muscle Triceps, Brachii, Caput, Laterale, Left UpperExtremity Body	Musculus triceps brachii, Caput laterale, Left [Triceps brachii muscle, lateral head, Left, T-13692-LFT]	MDC_MUSC_UPEXT_BRACH_TRICEPS_CAP_LAT_L	649
Muscle Triceps, Brachii, Caput, Laterale, Right UpperExtremity Body	Musculus triceps brachii, Caput laterale, Right [Triceps brachii muscle, lateral head, Right, T-13692-RGT]	MDC_MUSC_UPEXT_BRACH_TRICEPS_CAP_LAT_R	650
Muscle Triceps, Brachii, Caput, Mediale, NOS UpperExtremity Body	Musculus triceps brachii, Caput mediale [Triceps brachii muscle, medial head, T-13693]	MDC_MUSC_UPEXT_BRACH_TRICEPS_CAP_MED	652
Muscle Triceps, Brachii, Caput, Mediale, Left UpperExtremity Body	Musculus triceps brachii, Caput mediale, Left [Triceps brachii muscle, medial head, Left, T-13693-LFT]	MDC_MUSC_UPEXT_BRACH_TRICEPS_CAP_MED_L	653
Muscle Triceps, Brachii, Caput, Mediale, Right UpperExtremity Body	Musculus triceps brachii, Caput mediale, Right [Triceps brachii muscle, medial head, Right, T-13693-RGT]	MDC_MUSC_UPEXT_BRACH_TRICEPS_CAP_MED_R	654
Muscle Anconeus, NOS UpperExtremity Body	Musculus anconeus [Anconeus muscle, T-13720]	MDC_MUSC_UPEXT_ANCON	656
Muscle Anconeus, Left UpperExtremity Body	Musculus anconeus, Left [Anconeus muscle, Left, T-13720-LFT]	MDC_MUSC_UPEXT_ANCON_L	657
Muscle Anconeus, Right UpperExtremity Body	Musculus anconeus, Right [Anconeus muscle, Right, T-13720-RGT]	MDC_MUSC_UPEXT_ANCON_R	658
Muscle Pronator, Teres, NOS UpperExtremity Body	Musculus pronator teres [Pronator teres muscle, T-13740]	MDC_MUSC_UPEXT_PRONATOR	660
Muscle Pronator, Teres, Left UpperExtremity Body	Musculus pronator teres, Left [Pronator teres muscle, Left, T-13740-LFT]	MDC_MUSC_UPEXT_PRONATOR_L	661
Muscle Pronator, Teres, Right UpperExtremity Body	Musculus pronator teres, Right [Pronator teres muscle, Right, T-13740-RGT]	MDC_MUSC_UPEXT_PRONATOR_R	662
Muscle Flexor, Carpi, Radialis, NOS UpperExtremity Body	Musculus flexor carpi radialis [Flexor carpi radialis muscle, T-13750]	MDC_MUSC_UPEXT_FLEX_CARPI_RADIAL	664
Muscle Flexor, Carpi, Radialis, Left UpperExtremity Body	Musculus flexor carpi radialis, Left [Flexor carpi radialis muscle, Left, T-13750-LFT]	MDC_MUSC_UPEXT_FLEX_CARPI_RADIAL_L	665

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Flexor, Carpi, Radialis, Right UpperExtremity Body	Musculus flexor carpi radialis, Right [Flexor carpi radialis muscle, Right, T-13750-RGT]	MDC_MUSC_UPEXT_FLEX_CARPI_RADIAL_R	666
Muscle Palmaris, Longus, NOS UpperExtremity Body	Musculus palmaris longus [Palmaris longus muscle, T-13760]	MDC_MUSC_UPEXT_PALMAR_LONG	668
Muscle Palmaris, Longus, Left UpperExtremity Body	Musculus palmaris longus, Left [Palmaris longus muscle, Left, T-13760-LFT]	MDC_MUSC_UPEXT_PALMAR_LONG_L	669
Muscle Palmaris, Longus, Right UpperExtremity Body	Musculus palmaris longus, Right [Palmaris longus muscle, Right, T-13760-RGT]	MDC_MUSC_UPEXT_PALMAR_LONG_R	670
Muscle Flexor, Carpi, Ulnaris, NOS UpperExtremity Body	Musculus flexor carpi ulnaris [Flexor carpi ulnaris muscle, T-13770]	MDC_MUSC_UPEXT_FLEX_CARPI_ULNAR	672
Muscle Flexor, Carpi, Ulnaris, Left UpperExtremity Body	Musculus flexor carpi ulnaris, Left [Flexor carpi ulnaris muscle, Left, T-13770-LFT]	MDC_MUSC_UPEXT_FLEX_CARPI_ULNAR_L	673
Muscle Flexor, Carpi, Ulnaris, Right UpperExtremity Body	Musculus flexor carpi ulnaris, Right [Flexor carpi ulnaris muscle, Right, T-13770-RGT]	MDC_MUSC_UPEXT_FLEX_CARPI_ULNAR_R	674
Muscle Flexor, Digtiorum, Superficialis, NOS UpperExtremity Body	Musculus flexor digitorum superficialis [Flexor digitorum superficialis muscle, T-13781]	MDC_MUSC_UPEXT_FLEX_DIGIT_SUPERF	676
Muscle Flexor, Digtiorum, Superficialis, Left UpperExtremity Body	Musculus flexor digitorum superficialis, Left [Flexor digitorum superficialis muscle, Left, T-13781-LFT]	MDC_MUSC_UPEXT_FLEX_DIGIT_SUPERF_L	677
Muscle Flexor, Digtiorum, Superficialis, Right UpperExtremity Body	Musculus flexor digitorum superficialis, Right [Flexor digitorum superficialis muscle, Right, T-13781-RGT]	MDC_MUSC_UPEXT_FLEX_DIGIT_SUPERF_R	678
Muscle Flexor, Digtiorum, Profundus, NOS UpperExtremity Body	Musculus flexor digitorum profundus [Flexor digitorum profundus muscle, T-13784]	MDC_MUSC_UPEXT_FLEX_DIGIT_PROFUND	680
Muscle Flexor, Digtiorum, Profundus, Left UpperExtremity Body	Musculus flexor digitorum profundus, Left [Flexor digitorum profundus muscle, Left, T-13784-LFT]	MDC_MUSC_UPEXT_FLEX_DIGIT_PROFUND_L	681
Muscle Flexor, Digtiorum, Profundus, Right UpperExtremity Body	Musculus flexor digitorum profundus, Right [Flexor digitorum profundus muscle, Right, T-13784-RGT]	MDC_MUSC_UPEXT_FLEX_DIGIT_PROFUND_R	682
Muscle Flexor, Pollicis, Longus, NOS UpperExtremity Body	Musculus flexor pollicis longus [Flexor pollicis longus muscle, T-13790]	MDC_MUSC_UPEXT_FLEX_POLLIC_LONG	684

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Flexor , Pollicis, Longus, Left UpperExtremity Body	Musculus flexor pollicis longus, Left [Flexor pollicis longus muscle, Left, T-13790-LFT]	MDC_MUSC_UPEXT_FLEX_POLLIC_LONG_L	685
Muscle Flexor , Pollicis, Longus, Right UpperExtremity Body	Musculus flexor pollicis longus, Right [Flexor pollicis longus muscle, Right, T-13790-RGT]	MDC_MUSC_UPEXT_FLEX_POLLIC_LONG_R	686
Muscle Pronator, Quadratus, NOS UpperExtremity Body	Musculus pronator quadratus [Pronator quadratus muscle, T-13810]	MDC_MUSC_UPEXT_PRONATOR_QUADRAT	688
Muscle Pronator, Quadratus, Left UpperExtremity Body	Musculus pronator quadratus, Left [Pronator quadratus muscle, Left, T-13810-LFT]	MDC_MUSC_UPEXT_PRONATOR_QUADRAT_L	689
Muscle Pronator, Quadratus, Right UpperExtremity Body	Musculus pronator quadratus, Right [Pronator quadratus muscle, Right, T-13810-RGT]	MDC_MUSC_UPEXT_PRONATOR_QUADRAT_R	690
Muscle Brachioradialis, NOS UpperExtremity Body	Musculus brachioradialis [Brachioradialis muscle, T-13820]	MDC_MUSC_UPEXT_BRACHIORADIAL	692
Muscle Brachioradialis, Left UpperExtremity Body	Musculus brachioradialis, Left [Brachioradialis muscle, Left, T-13820-LFT]	MDC_MUSC_UPEXT_BRACHIORADIAL_L	693
Muscle Brachioradialis, Right UpperExtremity Body	Musculus brachioradialis, Right [Brachioradialis muscle, Right, T-13820-RGT]	MDC_MUSC_UPEXT_BRACHIORADIAL_R	694
Muscle Extensor, Carpi, Radialis, Longus, NOS UpperExtremity Body	Musculus extensor carpi radialis longus [Extensor carpi radialis longus muscle, T-13831]	MDC_MUSC_UPEXT_EXTENS_CARP_RADIAL_LONG	696
Muscle Extensor, Carpi, Radialis, Longus, Left UpperExtremity Body	Musculus extensor carpi radialis longus, Left [Extensor carpi radialis longus muscle, Left, T-13831-LFT]	MDC_MUSC_UPEXT_EXTENS_CARP_RADIAL_LONG_L	697
Muscle Extensor, Carpi, Radialis, Longus, Right UpperExtremity Body	Musculus extensor carpi radialis longus, Right [Extensor carpi radialis longus muscle, Right, T-13831-RGT]	MDC_MUSC_UPEXT_EXTENS_CARP_RADIAL_LONG_R	698
Muscle Extensor, Carpi, Radialis, Brevis, NOS UpperExtremity Body	Musculus extensor carpi radialis brevis [Extensor carpi radialis brevis muscle, T-13832]	MDC_MUSC_UPEXT_EXTENS_CARP_RADIAL_BREV	700
Muscle Extensor, Carpi, Radialis, Brevis, Left UpperExtremity Body	Musculus extensor carpi radialis brevis, Left [Extensor carpi radialis brevis muscle, Left, T-13832-LFT]	MDC_MUSC_UPEXT_EXTENS_CARP_RADIAL_BREV_L	701
Muscle Extensor, Carpi, Radialis, Brevis, Right UpperExtremity Body	Musculus extensor carpi radialis brevis, Right [Extensor carpi radialis brevis muscle, Right, T-13832-RGT]	MDC_MUSC_UPEXT_EXTENS_CARP_RADIAL_BREV_R	702

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Extensor, Digitorum, NOS UpperExtremity Body	Musculus extensor digitorum [Extensor digitorum muscle, T-13840]	MDC_MUSC_UPEXT_EXTENS_DIGIT	704
Muscle Extensor, Digitorum, Left UpperExtremity Body	Musculus extensor digitorum, Left [Extensor digitorum muscle, Left, T-13840-LFT]	MDC_MUSC_UPEXT_EXTENS_DIGIT_L	705
Muscle Extensor, Digitorum, Right UpperExtremity Body	Musculus extensor digitorum, Right [Extensor digitorum muscle, Right, T-13840-RGT]	MDC_MUSC_UPEXT_EXTENS_DIGIT_R	706
Muscle Extensor, Digiti, Minimi, NOS UpperExtremity Body	Musculus extensor digiti minimi [Extensor digiti minimi muscle, T-13842]	MDC_MUSC_UPEXT_EXTENS_DIGIT_MIN	708
Muscle Extensor, Digiti, Minimi, Left UpperExtremity Body	Musculus extensor digiti minimi, Left [Extensor digiti minimi muscle, Left, T-13842-LFT]	MDC_MUSC_UPEXT_EXTENS_DIGIT_MIN_L	709
Muscle Extensor, Digiti, Minimi, Right UpperExtremity Body	Musculus extensor digiti minimi, Right [Extensor digiti minimi muscle, Right, T-13842-RGT]	MDC_MUSC_UPEXT_EXTENS_DIGIT_MIN_R	710
Muscle Extensor, Carpi, Ulnaris, NOS UpperExtremity Body	Musculus extensor carpi ulnaris [Extensor carpi ulnaris muscle, T-13850]	MDC_MUSC_UPEXT_EXTENS_CARP_ULNAR	712
Muscle Extensor, Carpi, Ulnaris, Left UpperExtremity Body	Musculus extensor carpi ulnaris, Left [Extensor carpi ulnaris muscle, Left, T-13850-LFT]	MDC_MUSC_UPEXT_EXTENS_CARP_ULNAR_L	713
Muscle Extensor, Carpi, Ulnaris, Right UpperExtremity Body	Musculus extensor carpi ulnaris, Right [Extensor carpi ulnaris muscle, Right, T-13850-RGT]	MDC_MUSC_UPEXT_EXTENS_CARP_ULNAR_R	714
Muscle Supinator, NOS UpperExtremity Body	Musculus supinator [Supinator muscle, T-13860]	MDC_MUSC_UPEXT_SUPINATOR	716
Muscle Supinator, Left UpperExtremity Body	Musculus supinator, Left [Supinator muscle, Left, T-13860-LFT]	MDC_MUSC_UPEXT_SUPINATOR_L	717
Muscle Supinator, Right UpperExtremity Body	Musculus supinator, Right [Supinator muscle, Right, T-13860-RGT]	MDC_MUSC_UPEXT_SUPINATOR_R	718
Muscle Abductor, Pollicis, Longus, NOS UpperExtremity Body	Musculus abductor pollicis longus [Abductor pollicis longus muscle, T-13881]	MDC_MUSC_UPEXT_ABDUC_POLLIC_LONG	720
Muscle Abductor, Pollicis, Longus, Left UpperExtremity Body	Musculus abductor pollicis longus, Left [Abductor pollicis longus muscle, Left, T-13881-LFT]	MDC_MUSC_UPEXT_ABDUC_POLLIC_LONG_L	721

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Abductor, Pollicis, Longus, Right UpperExtremity Body	Musculus abductor pollicis longus, Right [Abductor pollicis longus muscle, Right, T-13881-RGT]	MDC_MUSC_UPEXT_ABDUC_POLLIC_LONG_R	722
Muscle Extensor, Pollicis, Brevis, NOS UpperExtremity Body	Musculus extensor pollicis brevis [Extensor pollicis brevis muscle, T-13911]	MDC_MUSC_UPEXT_EXTENS_POLLIC_BREV	724
Muscle Extensor, Pollicis, Brevis, Left UpperExtremity Body	Musculus extensor pollicis brevis, Left [Extensor pollicis brevis muscle, Left, T-13911-LFT]	MDC_MUSC_UPEXT_EXTENS_POLLIC_BREV_L	725
Muscle Extensor, Pollicis, Brevis, Right UpperExtremity Body	Musculus extensor pollicis brevis, Right [Extensor pollicis brevis muscle, Right, T-13911-RGT]	MDC_MUSC_UPEXT_EXTENS_POLLIC_BREV_R	726
Muscle Extensor, Pollicis, Longus, NOS UpperExtremity Body	Musculus extensor pollicis longus [Extensor pollicis longus muscle, T-13912]	MDC_MUSC_UPEXT_EXTENS_POLLIC_LONG	728
Muscle Extensor, Pollicis, Longus, Left UpperExtremity Body	Musculus extensor pollicis longus, Left [Extensor pollicis longus muscle, Left, T-13912-LFT]	MDC_MUSC_UPEXT_EXTENS_POLLIC_LONG_L	729
Muscle Extensor, Pollicis, Longus, Right UpperExtremity Body	Musculus extensor pollicis longus, Right [Extensor pollicis longus muscle, Right, T-13912-RGT]	MDC_MUSC_UPEXT_EXTENS_POLLIC_LONG_R	730
Muscle Extensor, Indicis, NOS UpperExtremity Body	Musculus extensor indicis [Extensor indicis muscle, T-13913]	MDC_MUSC_UPEXT_EXTENS_INDIC	732
Muscle Extensor, Indicis, Left UpperExtremity Body	Musculus extensor indicis, Left [Extensor indicis muscle, Left, T-13913-LFT]	MDC_MUSC_UPEXT_EXTENS_INDIC_L	733
Muscle Extensor, Indicis, Right UpperExtremity Body	Musculus extensor indicis, Right [Extensor indicis muscle, Right, T-13913-RGT]	MDC_MUSC_UPEXT_EXTENS_INDIC_R	734
Muscle Palmaris, Brevis, NOS UpperExtremity Body	Musculus palmaris brevis [Palmaris brevis muscle, T-13870]	MDC_MUSC_UPEXT_PALMAR_BREV	736
Muscle Palmaris, Brevis, Left UpperExtremity Body	Musculus palmaris brevis, Left [Palmaris brevis muscle, Left, T-13870-LFT]	MDC_MUSC_UPEXT_PALMAR_BREV_L	737
Muscle Palmaris, Brevis, Right UpperExtremity Body	Musculus palmaris brevis, Right [Palmaris brevis muscle, Right, T-13870-RGT]	MDC_MUSC_UPEXT_PALMAR_BREV_R	738
Muscle Abductor, Pollicis, Brevis, NOS UpperExtremity Body	Musculus abductor pollicis brevis [Abductor pollicis brevis muscle, T-13882]	MDC_MUSC_UPEXT_ABDUC_POLLIC_BREV	740

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Abductor, Pollicis, Brevis, Left UpperExtremity Body	Musculus abductor pollicis brevis, Left [Abductor pollicis brevis muscle, Left, T-13882-LFT]	MDC_MUSC_UPEXT_ABDUC_POLLIC_BREV_L	741
Muscle Abductor, Pollicis, Brevis, Right UpperExtremity Body	Musculus abductor pollicis brevis, Right [Abductor pollicis brevis muscle, Right, T-13882-RGT]	MDC_MUSC_UPEXT_ABDUC_POLLIC_BREV_R	742
Muscle Flexor, Pollicis, Brevis, NOS UpperExtremity Body	Musculus flexor pollicis brevis [Flexor pollicis brevis muscle, T-13890]	MDC_MUSC_UPEXT_FLEX_POLLIC_BREV	744
Muscle Flexor, Pollicis, Brevis, Left UpperExtremity Body	Musculus flexor pollicis brevis, Left [Flexor pollicis brevis muscle, Left, T-13890-LFT]	MDC_MUSC_UPEXT_FLEX_POLLIC_BREV_L	745
Muscle Flexor, Pollicis, Brevis, Right UpperExtremity Body	Musculus flexor pollicis brevis, Right [Flexor pollicis brevis muscle, Right, T-13890-RGT]	MDC_MUSC_UPEXT_FLEX_POLLIC_BREV_R	746
Muscle Opponens, Pollicis, NOS UpperExtremity Body	Musculus opponens pollicis [Opponens pollicis muscle, T-13920]	MDC_MUSC_UPEXT_OPON_POLLIC	748
Muscle Opponens, Pollicis, Left UpperExtremity Body	Musculus opponens pollicis, Left [Opponens pollicis muscle, Left, T-13920-LFT]	MDC_MUSC_UPEXT_OPON_POLLIC_L	749
Muscle Opponens, Pollicis, Right UpperExtremity Body	Musculus opponens pollicis, Right [Opponens pollicis muscle, Right, T-13920-RGT]	MDC_MUSC_UPEXT_OPON_POLLIC_R	750
Muscle Adductor, Pollicis, NOS UpperExtremity Body	Musculus adductor pollicis [Adductor pollicis muscle, T-13930]	MDC_MUSC_UPEXT_ADDUC_POLLIC	752
Muscle Adductor, Pollicis, Left UpperExtremity Body	Musculus adductor pollicis, Left [Adductor pollicis muscle, Left, T-13930-LFT]	MDC_MUSC_UPEXT_ADDUC_POLLIC_L	753
Muscle Adductor, Pollicis, Right UpperExtremity Body	Musculus adductor pollicis, Right [Adductor pollicis muscle, Right, T-13930-RGT]	MDC_MUSC_UPEXT_ADDUC_POLLIC_R	754
Muscle Abductor, Digiti, Minimi, NOS UpperExtremity Body	Musculus abductor digiti minimi [Abductor digiti minimi muscle of hand, T-13940]	MDC_MUSC_UPEXT_ABDUC_DIGIT_MIN	756
Muscle Abductor, Digiti, Minimi, Left UpperExtremity Body	Musculus abductor digiti minimi, Left [Abductor digiti minimi muscle of hand, Left, T-13940-LFT]	MDC_MUSC_UPEXT_ABDUC_DIGIT_MIN_L	757
Muscle Abductor, Digiti, Minimi, Right UpperExtremity Body	Musculus abductor digiti minimi, Right [Abductor digiti minimi muscle of hand, Right, T-13940-RGT]	MDC_MUSC_UPEXT_ABDUC_DIGIT_MIN_R	758

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Flexor, Digiti, Minimi, Brevis, NOS UpperExtremity Body	Musculus flexor digiti minimi brevis [Flexor digiti minimi brevis muscle of hand, T-13950]	MDC_MUSC_UPEXT_FLEX_DIGIT_BREV_MIN	760
Muscle Flexor, Digiti, Minimi, Brevis, Left UpperExtremity Body	Musculus flexor digiti minimi brevis, Left [Flexor digiti minimi brevis muscle of hand, Left, T-13950-LFT]	MDC_MUSC_UPEXT_FLEX_DIGIT_BREV_MIN_L	761
Muscle Flexor, Digiti, Minimi, Brevis, Right UpperExtremity Body	Musculus flexor digiti minimi brevis, Right [Flexor digiti minimi brevis muscle of hand, Right, T-13950-RGT]	MDC_MUSC_UPEXT_FLEX_DIGIT_BREV_MIN_R	762
Muscle Opponens, Digiti, Minimi, NOS UpperExtremity Body	Musculus opponens digiti minimi [Opponens digiti minimi muscle of hand, T-13960]	MDC_MUSC_UPEXT_OPON_DIGIT_MIN	764
Muscle Opponens, Digiti, Minimi, Left UpperExtremity Body	Musculus opponens digiti minimi, Left [Opponens digiti minimi muscle of hand, Left, T-13960-LFT]	MDC_MUSC_UPEXT_OPON_DIGIT_MIN_L	765
Muscle Opponens, Digiti, Minimi, Right UpperExtremity Body	Musculus opponens digiti minimi, Right [Opponens digiti minimi muscle of hand, Right, T-13960-RGT]	MDC_MUSC_UPEXT_OPON_DIGIT_MIN_R	766
Muscle Lumbricales, NOS UpperExtremity Body	Musculi lumbricales [Lumbrical muscles of hand, T-13970]	MDC_MUSC_UPEXT_LUMBRICAL	768
Muscle Lumbricales, Left UpperExtremity Body	Musculi lumbricales, Left [Lumbrical muscles of hand, Left, T-13970-LFT]	MDC_MUSC_UPEXT_LUMBRICAL_L	769
Muscle Lumbricales, Right UpperExtremity Body	Musculi lumbricales, Right [Lumbrical muscles of hand, Right, T-13970-RGT]	MDC_MUSC_UPEXT_LUMBRICAL_R	770
Muscle Interossei, Dorsales, NOS UpperExtremity Body	Musculi interossei dorsales [Dorsal interosseous muscles of hand, T-13981]	MDC_MUSC_UPEXT_INTEROSS_DORSAL	772
Muscle Interossei, Dorsales, Left UpperExtremity Body	Musculi interossei dorsales, Left [Dorsal interosseous muscles of hand, Left, T-13981-LFT]	MDC_MUSC_UPEXT_INTEROSS_DORSAL_L	773
Muscle Interossei, Dorsales, Right UpperExtremity Body	Musculi interossei dorsales, Right [Dorsal interosseous muscles of hand, Right, T-13981-RGT]	MDC_MUSC_UPEXT_INTEROSS_DORSAL_R	774
Muscle Interossei, Palmares, NOS UpperExtremity Body	Musculi interossei palmares [Palmar interosseous muscles of hand, T-13982]	MDC_MUSC_UPEXT_INTEROSS_PALMAR	776
Muscle Interossei, Palmares, Left UpperExtremity Body	Musculi interossei palmares, Left [Palmar interosseous muscles of hand, Left, T-13982-LFT]	MDC_MUSC_UPEXT_INTEROSS_PALMAR_L	777

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Interossei, Palmares, Right UpperExtremity Body	Musculi interossei palmares, Right [Palmar interosseous muscles of hand, Right, T-13982-RGT]	MDC_MUSC_UPEXT_INTEROSS_PALMAR_R	778
Muscle Hip, Thigh, NOS LowerExtremity Body	[Muscle of hip and thigh, NOS, T-14400]	MDC_MUSC_LOEXT_HIP_THIGH	780
Muscle Hip, Thigh, Left LowerExtremity Body	[Muscle of hip and thigh, NOS, Left, T-14400-LFT]	MDC_MUSC_LOEXT_HIP_THIGH_L	781
Muscle Hip, Thigh, Right LowerExtremity Body	[Muscle of hip and thigh, NOS, Right, T-14400-RGT]	MDC_MUSC_LOEXT_HIP_THIGH_R	782
Muscle Leg, NOS LowerExtremity Body	[Muscle of leg, NOS, T-14700]	MDC_MUSC_LOEXT_LEG	784
Muscle Leg, Left LowerExtremity Body	[Muscle of leg, NOS, Left, T-14700-LFT]	MDC_MUSC_LOEXT_LEG_L	785
Muscle Leg, Right LowerExtremity Body	[Muscle of leg, NOS, Right, T-14700-RGT]	MDC_MUSC_LOEXT_LEG_R	786
Muscle Foot, NOS LowerExtremity Body	[Muscle of foot, NOS, T-14900]	MDC_MUSC_LOEXT_FOOT	788
Muscle Foot, Left LowerExtremity Body	[Muscle of foot, NOS, Left, T-14900-LFT]	MDC_MUSC_LOEXT_FOOT_L	789
Muscle Foot, Right LowerExtremity Body	[Muscle of foot, NOS, Right, T-14900-RGT]	MDC_MUSC_LOEXT_FOOT_R	790
Muscle Iliopsoas, NOS LowerExtremity Body	Musculus iliopsoas [Iliopsoas muscle, NOS, T-14410]	MDC_MUSC_LOEXT_ILIOPS	792
Muscle Iliopsoas, Left LowerExtremity Body	Musculus iliopsoas, Left [Iliopsoas muscle, NOS, Left, T-14410-LFT]	MDC_MUSC_LOEXT_ILIOPS_L	793
Muscle Iliopsoas, Right LowerExtremity Body	Musculus iliopsoas, Right [Iliopsoas muscle, NOS, Right, T-14410-RGT]	MDC_MUSC_LOEXT_ILIOPS_R	794
Muscle Gluteus, Maximus, NOS LowerExtremity Body	Musculus gluteus maximus [Gluteus maximus muscle, T-14430]	MDC_MUSC_LOEXT_GLUT_MAX	796
Muscle Gluteus, Maximus, Left LowerExtremity Body	Musculus gluteus maximus, Left [Gluteus maximus muscle, Left, T-14430-LFT]	MDC_MUSC_LOEXT_GLUT_MAX_L	797
Muscle Gluteus, Maximus, Right LowerExtremity Body	Musculus gluteus maximus, Right [Gluteus maximus muscle, Right, T-14430-RGT]	MDC_MUSC_LOEXT_GLUT_MAX_R	798
Muscle Gluteus, Medius, NOS LowerExtremity Body	Musculus gluteus medius [Gluteus medius muscle, T-14440]	MDC_MUSC_LOEXT_GLUT_MED	800

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Gluteus, Medius, Left LowerExtremity Body	Musculus gluteus medius, Left [Gluteus medius muscle, Left, T-14440-LFT]	MDC_MUSC_LOEXT_GLUT_MED_L	801
Muscle Gluteus, Medius, Right LowerExtremity Body	Musculus gluteus medius, Right [Gluteus medius muscle, Right, T-14440-RGT]	MDC_MUSC_LOEXT_GLUT_MED_R	802
Muscle Gluteus, Minimius, NOS LowerExtremity Body	Musculus gluteus minimus [Gluteus minimus muscle, T-14450]	MDC_MUSC_LOEXT_GLUT_MIN	804
Muscle Gluteus, Minimius, Left LowerExtremity Body	Musculus gluteus minimus, Left [Gluteus minimus muscle, Left, T-14450-LFT]	MDC_MUSC_LOEXT_GLUT_MIN_L	805
Muscle Gluteus, Minimius, Right LowerExtremity Body	Musculus gluteus minimus, Right [Gluteus minimus muscle, Right, T-14450-RGT]	MDC_MUSC_LOEXT_GLUT_MIN_R	806
Muscle Tensor, Fasciae, Latae, NOS LowerExtremity Body	Musculus tensor fasciae latae [Tensor fasciae latae muscle, T-14451]	MDC_MUSC_LOEXT_TENSOR_FASC_LAT	808
Muscle Tensor, Fasciae, Latae, Left LowerExtremity Body	Musculus tensor fasciae latae, Left [Tensor fasciae latae muscle, Left, T-14451-LFT]	MDC_MUSC_LOEXT_TENSOR_FASC_LAT_L	809
Muscle Tensor, Fasciae, Latae, Right LowerExtremity Body	Musculus tensor fasciae latae, Right [Tensor fasciae latae muscle, Right, T-14451-RGT]	MDC_MUSC_LOEXT_TENSOR_FASC_LAT_R	810
Muscle Piriformis, NOS LowerExtremity Body	Musculus piriformis [Piriform muscle, T-14460]	MDC_MUSC_LOEXT_PIRIFORM	812
Muscle Piriformis, Left LowerExtremity Body	Musculus piriformis, Left [Piriform muscle, Left, T-14460-LFT]	MDC_MUSC_LOEXT_PIRIFORM_L	813
Muscle Piriformis, Right LowerExtremity Body	Musculus piriformis, Right [Piriform muscle, Right, T-14460-RGT]	MDC_MUSC_LOEXT_PIRIFORM_R	814
Muscle Obturator, NOS LowerExtremity Body	Musculus obturator [Obturator muscle, NOS, T-14420]	MDC_MUSC_LOEXT_OBTURATOR	816
Muscle Obturator, Left LowerExtremity Body	Musculus obturator, Left [Obturator muscle, NOS, Left, T-14420-LFT]	MDC_MUSC_LOEXT_OBTURATOR_L	817
Muscle Obturator, Right LowerExtremity Body	Musculus obturator, Right [Obturator muscle, NOS, Right, T-14420-RGT]	MDC_MUSC_LOEXT_OBTURATOR_R	818

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Gemellus, NOS LowerExtremity Body	Musculus gmellus [Gemellus muscle, NOS, T-14470]	MDC_MUSC_LOEXT_GEMEL	820
Muscle Gemellus, Left LowerExtremity Body	Musculus gmellus, Left [Gemellus muscle, NOS, Left, T-14470-LFT]	MDC_MUSC_LOEXT_GEMEL_L	821
Muscle Gemellus, Right LowerExtremity Body	Musculus gmellus, Right [Gemellus muscle, NOS, Right, T-14470-RGT]	MDC_MUSC_LOEXT_GEMEL_R	822
Muscle Quadratus, Femoris, NOS LowerExtremity Body	Musculus quadratus femoris [Quadratus femoris muscle, T-14480]	MDC_MUSC_LOEXT_QUADRAT_FEMOR	824
Muscle Quadratus, Femoris, Left LowerExtremity Body	Musculus quadratus femoris, Left [Quadratus femoris muscle, Left, T-14480-LFT]	MDC_MUSC_LOEXT_QUADRAT_FEMOR_L	825
Muscle Quadratus, Femoris, Right LowerExtremity Body	Musculus quadratus femoris, Right [Quadratus femoris muscle, Right, T-14480-RGT]	MDC_MUSC_LOEXT_QUADRAT_FEMOR_R	826
Muscle Sartorius, NOS LowerExtremity Body	Musculus sartorius [Sartorius muscle, T-14490]	MDC_MUSC_LOEXT_SARTOR	828
Muscle Sartorius, Left LowerExtremity Body	Musculus sartorius, Left [Sartorius muscle, Left, T-14490-LFT]	MDC_MUSC_LOEXT_SARTOR_L	829
Muscle Sartorius, Right LowerExtremity Body	Musculus sartorius, Right [Sartorius muscle, Right, T-14490-RGT]	MDC_MUSC_LOEXT_SARTOR_R	830
Muscle Quadriceps, Femoris, NOS LowerExtremity Body	Musculus quadriceps femoris [Quadriceps femoris muscle, T-14550]	MDC_MUSC_LOEXT_QUADRICEPS_FEMOR	832
Muscle Quadriceps, Femoris, Left LowerExtremity Body	Musculus quadriceps femoris, Left [Quadriceps femoris muscle, Left, T-14550-LFT]	MDC_MUSC_LOEXT_QUADRICEPS_FEMOR_L	833
Muscle Quadriceps, Femoris, Right LowerExtremity Body	Musculus quadriceps femoris, Right [Quadriceps femoris muscle, Right, T-14550-RGT]	MDC_MUSC_LOEXT_QUADRICEPS_FEMOR_R	834
Muscle Rectus, Femoris, NOS LowerExtremity Body	Musculus rectus femoris [Rectus femoris muscle, T-14560]	MDC_MUSC_LOEXT_RECT_FEMOR	836
Muscle Rectus, Femoris, Left LowerExtremity Body	Musculus rectus femoris, Left [Rectus femoris muscle, Left, T-14560-LFT]	MDC_MUSC_LOEXT_RECT_FEMOR_L	837

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Rectus, Femoris, Right LowerExtremity Body	Musculus rectus femoris, Right [Rectus femoris muscle, Right, T-14560-RGT]	MDC_MUSC_LOEXT_RECT_FEMOR_R	838
Muscle Vastus, Lateralis, NOS LowerExtremity Body	Musculus vastus lateralis [Vastus lateralis muscle, T-14570]	MDC_MUSC_LOEXT_VAST_LAT	840
Muscle Vastus, Lateralis, Left LowerExtremity Body	Musculus vastus lateralis, Left [Vastus lateralis muscle, Left, T-14570-LFT]	MDC_MUSC_LOEXT_VAST_LAT_L	841
Muscle Vastus, Lateralis, Right LowerExtremity Body	Musculus vastus lateralis, Right [Vastus lateralis muscle, Right, T-14570-RGT]	MDC_MUSC_LOEXT_VAST_LAT_R	842
Muscle Vastus, Intermedius, NOS LowerExtremity Body	Musculus vastus intermedius [Vastus intermedius muscle, T-14620]	MDC_MUSC_LOEXT_VAST_INTERMED	844
Muscle Vastus, Intermedius, Left LowerExtremity Body	Musculus vastus intermedius, Left [Vastus intermedius muscle, Left, T-14620-LFT]	MDC_MUSC_LOEXT_VAST_INTERMED_L	845
Muscle Vastus, Intermedius, Right LowerExtremity Body	Musculus vastus intermedius, Right [Vastus intermedius muscle, Right, T-14620-RGT]	MDC_MUSC_LOEXT_VAST_INTERMED_R	846
Muscle Vastus, Medialis, NOS LowerExtremity Body	Musculus vastus medialis [Vastus medialis muscle, T-14580]	MDC_MUSC_LOEXT_VAST_MED	848
Muscle Vastus, Medialis, Left LowerExtremity Body	Musculus vastus medialis, Left [Vastus medialis muscle, Left, T-14580-LFT]	MDC_MUSC_LOEXT_VAST_MED_L	849
Muscle Vastus, Medialis, Right LowerExtremity Body	Musculus vastus medialis, Right [Vastus medialis muscle, T-14580]	MDC_MUSC_LOEXT_VAST_MED_R	850
Muscle Pectineus, NOS LowerExtremity Body	Musculus pectineus [Pectineus muscle, T-14610]	MDC_MUSC_LOEXT_PECTIN	852
Muscle Pectineus, Left LowerExtremity Body	Musculus pectineus, Left [Pectineus muscle, Left, T-14610-LFT]	MDC_MUSC_LOEXT_PECTIN_L	853
Muscle Pectineus, Right LowerExtremity Body	Musculus pectineus, Right [Pectineus muscle, T-14610]	MDC_MUSC_LOEXT_PECTIN_R	854
Muscle Adductor, Longus, NOS LowerExtremity Body	Musculus adductor longus [Adductor longus muscle, T-14520]	MDC_MUSC_LOEXT_ABDUC_LONG	856

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Adductor, Longus, Left LowerExtremity Body	Musculus adductor longus, Left [Adductor longus muscle, Left, T-14520-LFT]	MDC_MUSC_LOEXT_ABDUC_LONG_L	857
Muscle Adductor, Longus, Right LowerExtremity Body	Musculus adductor longus, Right [Adductor longus muscle, T-14520]	MDC_MUSC_LOEXT_ABDUC_LONG_R	858
Muscle Adductor, Brevis, NOS LowerExtremity Body	Musculus adductor brevis [Adductor brevis muscle, T-14510]	MDC_MUSC_LOEXT_ABDUC_BREV	860
Muscle Adductor, Brevis, Left LowerExtremity Body	Musculus adductor brevis, Left [Adductor brevis muscle, Left, T-14510-LFT]	MDC_MUSC_LOEXT_ABDUC_BREV_L	861
Muscle Adductor, Brevis, Right LowerExtremity Body	Musculus adductor brevis, Right [Adductor brevis muscle, T-14510]	MDC_MUSC_LOEXT_ABDUC_BREV_R	862
Muscle Adductor, Magnus, NOS LowerExtremity Body	Musculus adductor magnus [Adductor magnus muscle, T-14530]	MDC_MUSC_LOEXT_ABDUC_MAGN	864
Muscle Adductor, Magnus, Left LowerExtremity Body	Musculus adductor magnus, Left [Adductor magnus muscle, Left, T-14530-LFT]	MDC_MUSC_LOEXT_ABDUC_MAGN_L	865
Muscle Adductor, Magnus, Right LowerExtremity Body	Musculus adductor magnus, Right [Adductor magnus muscle, T-14530]	MDC_MUSC_LOEXT_ABDUC_MAGN_R	866
Muscle Gracilis, NOS LowerExtremity Body	Musculus gracilis [Gracilis muscle, T-14540]	MDC_MUSC_LOEXT_GRACIL	868
Muscle Gracilis, Left LowerExtremity Body	Musculus gracilis, Left [Gracilis muscle, Left, T-14540-LFT]	MDC_MUSC_LOEXT_GRACIL_L	869
Muscle Gracilis, Right LowerExtremity Body	Musculus gracilis, Right [Gracilis muscle, T-14540]	MDC_MUSC_LOEXT_GRACIL_R	870
Muscle Biceps, Femoris, NOS LowerExtremity Body	Musculus biceps femoris [Biceps femoris muscle, T-14630]	MDC_MUSC_LOEXT_BICEPS_FEMOR	872
Muscle Biceps, Femoris, Left LowerExtremity Body	Musculus biceps femoris, Left [Biceps femoris muscle, Left, T-14630-LFT]	MDC_MUSC_LOEXT_BICEPS_FEMOR_L	873
Muscle Biceps, Femoris, Right LowerExtremity Body	Musculus biceps femoris, Right [Biceps femoris muscle, T-14630]	MDC_MUSC_LOEXT_BICEPS_FEMOR_R	874

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Biceps, Femoris, Caput, Longum, NOS LowerExtremity Body	Musculus biceps femoris Caput longum [Biceps femoris muscle, long head, T-14631]	MDC_MUSC_LOEXT_BICEPS_FEMOR_LONG	876
Muscle Biceps, Femoris, Caput, Longum, Left LowerExtremity Body	Musculus biceps femoris Caput longum, Left [Biceps femoris muscle, long head, Left, T-14631-LFT]	MDC_MUSC_LOEXT_BICEPS_FEMOR_LONG_L	877
Muscle Biceps, Femoris, Caput, Longum, Right LowerExtremity Body	Musculus biceps femoris Caput longum, Right [Biceps femoris muscle, long head, Right, T-14631-RGT]	MDC_MUSC_LOEXT_BICEPS_FEMOR_LONG_R	878
Muscle Biceps, Femoris, Caput, Brevis, NOS LowerExtremity Body	Musculus biceps femoris Caput breve [Biceps femoris muscle, short head, T-14632]	MDC_MUSC_LOEXT_BICEPS_FEMOR_BREV	880
Muscle Biceps, Femoris, Caput, Brevis, Left LowerExtremity Body	Musculus biceps femoris Caput breve, Left [Biceps femoris muscle, short head, Left, T-14632-LFT]	MDC_MUSC_LOEXT_BICEPS_FEMOR_BREV_L	881
Muscle Biceps, Femoris, Caput, Brevis, Right LowerExtremity Body	Musculus biceps femoris Caput breve, Right [Biceps femoris muscle, short head, Right, T-14632-RGT]	MDC_MUSC_LOEXT_BICEPS_FEMOR_BREV_R	882
Muscle Semitendinosus, NOS LowerExtremity Body	Musculus semitendinosus [Semitendinosus muscle, T-14650]	MDC_MUSC_LOEXT_SEMITENDIN	884
Muscle Semitendinosus, Left LowerExtremity Body	Musculus semitendinosus, Left [Semitendinosus muscle, Left, T-14650-LFT]	MDC_MUSC_LOEXT_SEMITENDIN_L	885
Muscle Semitendinosus, Right LowerExtremity Body	Musculus semitendinosus, Right [Semitendinosus muscle, Right, T-14650-RGT]	MDC_MUSC_LOEXT_SEMITENDIN_R	886
Muscle Semimembranosus, NOS LowerExtremity Body	Musculus semimembranosus [Semimembranosus muscle, T-14640]	MDC_MUSC_LOEXT_SEMIMEMBRAN	888
Muscle Semimembranosus, Left LowerExtremity Body	Musculus semimembranosus, Left [Semimembranosus muscle, Left, T-14640-LFT]	MDC_MUSC_LOEXT_SEMIMEMBRAN_L	889
Muscle Semimembranosus, Right LowerExtremity Body	Musculus semimembranosus, Right [Semimembranosus muscle, Right, T-14640-RGT]	MDC_MUSC_LOEXT_SEMIMEMBRAN_R	890
Muscle Tibialis, Anterior, NOS LowerExtremity Body	Musculus tibialis anterior [Tibialis anterior muscle, T-14760]	MDC_MUSC_LOEXT_TIBIAL_ANT	892
Muscle Tibialis, Anterior, Left LowerExtremity Body	Musculus tibialis anterior, Left [Tibialis anterior muscle, Left, T-14760-LFT]	MDC_MUSC_LOEXT_TIBIAL_ANT_L	893

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Tibialis, Anterior, Right LowerExtremity Body	Musculus tibialis anterior, Right [Tibialis anterior muscle, Right, T-14760-RGT]	MDC_MUSC_LOEXT_TIBIAL_ANT_R	894
Muscle Extensor, Digitorum, Longus, NOS LowerExtremity Body	Musculus extensor digitorum longus [Extensor digitorum longus muscle, T-14780]	MDC_MUSC_LOEXT_EXTENS_DIGIT_LONG	896
Muscle Extensor, Digitorum, Longus, Left LowerExtremity Body	Musculus extensor digitorum longus, Left [Extensor digitorum longus muscle, Left, T-14780-LFT]	MDC_MUSC_LOEXT_EXTENS_DIGIT_LONG_L	897
Muscle Extensor, Digitorum, Longus, Right LowerExtremity Body	Musculus extensor digitorum longus, Right [Extensor digitorum longus muscle, Right, T-14780-RGT]	MDC_MUSC_LOEXT_EXTENS_DIGIT_LONG_R	898
Muscle Extensor, Hallucis, Longus, NOS LowerExtremity, Leg Body	Musculus extensor hallucis longus [Extensor hallucis longus muscle, T-14790]	MDC_MUSC_LOEXT_EXTENS_HALLUC_LONG	900
Muscle Extensor, Hallucis, Longus, Left LowerExtremity, Leg Body	Musculus extensor hallucis longus, Left [Extensor hallucis longus muscle, Left, T-14790-LFT]	MDC_MUSC_LOEXT_EXTENS_HALLUC_LONG_L	901
Muscle Extensor, Hallucis, Longus, Right LowerExtremity, Leg Body	Musculus extensor hallucis longus, Right [Extensor hallucis longus muscle, Right, T-14790-RGT]	MDC_MUSC_LOEXT_EXTENS_HALLUC_LONG_R	902
Muscle Peroneus, NOS LowerExtremity Body	[Peroneal muscle, NOS, T-14810]	MDC_MUSC_LOEXT_PERON	904
Muscle Peroneus, Left LowerExtremity Body	[Peroneal muscle, NOS, Left, T-14810-LFT]	MDC_MUSC_LOEXT_PERON_L	905
Muscle Peroneus, Right LowerExtremity Body	[Peroneal muscle, NOS, Right, T-14810-RGT]	MDC_MUSC_LOEXT_PERON_R	906
Muscle Peroneus, Longus, NOS LowerExtremity Body	Musculus peroneus longus [Peroneus longus muscle, T-14811]	MDC_MUSC_LOEXT_PERON_LONG	908
Muscle Peroneus, Longus, Left LowerExtremity Body	Musculus peroneus longus, Left [Peroneus longus muscle, Left, T-14811-LFT]	MDC_MUSC_LOEXT_PERON_LONG_L	909
Muscle Peroneus, Longus, Right LowerExtremity Body	Musculus peroneus longus, Right [Peroneus longus muscle, Right, T-14811-RGT]	MDC_MUSC_LOEXT_PERON_LONG_R	910
Muscle Peroneus, Brevis, NOS LowerExtremity Body	Musculus peroneus brevis [Peroneus brevis muscle, T-14812]	MDC_MUSC_LOEXT_PERON_BREV	912

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Peroneus, Brevis, Left LowerExtremity Body	Musculus peroneus brevis, Left [Peroneus brevis muscle, Left, T-14812-LFT]	MDC_MUSC_LOEXT_PERON_BREV_L	913
Muscle Peroneus, Brevis, Right LowerExtremity Body	Musculus peroneus brevis, Right [Peroneus brevis muscle, Right, T-14812-RGT]	MDC_MUSC_LOEXT_PERON_BREV_R	914
Muscle Triceps, Surae, NOS LowerExtremity Body	Musculus triceps surae [Triceps surae muscle, T-14720]	MDC_MUSC_LOEXT_TRICEPS_SUR	916
Muscle Triceps, Surae, Left LowerExtremity Body	Musculustriceps surae, Left [Triceps surae muscle, Left, T-14720-LFT]	MDC_MUSC_LOEXT_TRICEPS_SUR_L	917
Muscle Triceps, Surae, Right LowerExtremity Body	Musculustriceps surae, Right [Triceps surae muscle, Right, T-14720-RGT]	MDC_MUSC_LOEXT_TRICEPS_SUR_R	918
Muscle Gastrocnemius, NOS LowerExtremity Body	Musculus gastrocnemius [Gastrocnemius muscle, T-14730]	MDC_MUSC_LOEXT_GASTROCNEM	920
Muscle Gastrocnemius, Left LowerExtremity Body	Musculus gastrocnemius, Left [Gastrocnemius muscle, Left, T-14730-LFT]	MDC_MUSC_LOEXT_GASTROCNEM_L	921
Muscle Gastrocnemius, Right LowerExtremity Body	Musculus gastrocnemius, Right [Gastrocnemius muscle, Right, T-14730-RGT]	MDC_MUSC_LOEXT_GASTROCNEM_R	922
Muscle Gastrocnemius, Caput, Laterale, NOS LowerExtremity Body	Musculus gastrocnemius Caput laterale [Gastrocnemius muscle, lateral head, T-14731]	MDC_MUSC_LOEXT_GASTROCNEM_LAT	924
Muscle Gastrocnemius, Caput, Laterale, Left LowerExtremity Body	Musculus gastrocnemius Caput laterale, Left [Gastrocnemius muscle, lateral head, Left, T-14731-LFT]	MDC_MUSC_LOEXT_GASTROCNEM_LAT_L	925
Muscle Gastrocnemius, Caput, Laterale, Right LowerExtremity Body	Musculus gastrocnemius Caput laterale, Right [Gastrocnemius muscle, lateral head, Right, T-14731-RGT]	MDC_MUSC_LOEXT_GASTROCNEM_LAT_R	926
Muscle Gastrocnemius, Caput, Mediale, NOS LowerExtremity Body	Musculus gastrocnemius Caput mediale [Gastrocnemius muscle, medial head, T-14732]	MDC_MUSC_LOEXT_GASTROCNEM_MED	928
Muscle Gastrocnemius, Caput, Mediale, Left LowerExtremity Body	Musculus gastrocnemius Caput mediale, Left [Gastrocnemius muscle, medial head, Left, T-14732-LFT]	MDC_MUSC_LOEXT_GASTROCNEM_MED_L	929
Muscle Gastrocnemius, Caput, Mediale, Right LowerExtremity Body	Musculus gastrocnemius Caput mediale, Right [Gastrocnemius muscle, medial head, Right, T-14732-RGT]	MDC_MUSC_LOEXT_GASTROCNEM_MED_R	930

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Soleus, NOS LowerExtremity Body	Musculus soleus [Soleus muscle, T-14740]	MDC_MUSC_LOEXT_SOL	932
Muscle Soleus, Left LowerExtremity Body	Musculus soleus, Left [Soleus muscle, Left, T-14740-LFT]	MDC_MUSC_LOEXT_SOL_L	933
Muscle Soleus, Right LowerExtremity Body	Musculus soleus, Right [Soleus muscle, Right, T-14740-RGT]	MDC_MUSC_LOEXT_SOL_R	934
Muscle Plantaris, NOS LowerExtremity Body	Musculus plantaris [Plantaris muscle, T-14750]	MDC_MUSC_LOEXT_PLANTAR	936
Muscle Plantaris, Left LowerExtremity Body	Musculus plantaris, Left [Plantaris muscle, Left, T-14750-LFT]	MDC_MUSC_LOEXT_PLANTAR_L	937
Muscle Plantaris, Right LowerExtremity Body	Musculus plantaris, Right [Plantaris muscle, Right, T-14750-RGT]	MDC_MUSC_LOEXT_PLANTAR_R	938
Muscle Popliteus, NOS LowerExtremity Body	Musculus popliteus [Popliteal muscle, T-14710]	MDC_MUSC_LOEXT_POPLIT	940
Muscle Popliteus, Left LowerExtremity Body	Musculus popliteus, Left [Popliteal muscle, Left, T-14710-LFT]	MDC_MUSC_LOEXT_POPLIT_L	941
Muscle Popliteus, Right LowerExtremity Body	Musculus popliteus, Right [Popliteal muscle, Right, T-14710-RGT]	MDC_MUSC_LOEXT_POPLIT_R	942
Muscle Tibialis, Posterior, NOS LowerExtremity Body	Musculus tibialis posterior [Tibialis posterior muscle, T-14770]	MDC_MUSC_LOEXT_TIBIAL_POST	944
Muscle Tibialis, Posterior, Left LowerExtremity Body	Musculus tibialis posterior, Left [Tibialis posterior muscle, Left, T-14770-LFT]	MDC_MUSC_LOEXT_TIBIAL_POST_L	945
Muscle Tibialis, Posterior, Right LowerExtremity Body	Musculus tibialis posterior, Right [Tibialis posterior muscle, Right, T-14770-RGT]	MDC_MUSC_LOEXT_TIBIAL_POST_R	946
Muscle Flexor, Digitorum, Longus, NOS LowerExtremity Body	Musculus flexor digitorum longus [Flexor digitorum longus muscle, T-14820]	MDC_MUSC_LOEXT_FLEX_DIGIT_LONG	948
Muscle Flexor, Digitorum, Longus, Left LowerExtremity Body	Musculus flexor digitorum longus, Left [Flexor digitorum longus muscle, Left, T-14820-LFT]	MDC_MUSC_LOEXT_FLEX_DIGIT_LONG_L	949

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Flexor, Digtorium, Longus, Right LowerExtremity Body	Musculus flexor digitorum longus, Right [Flexor digitorum longus muscle, Right, T-14820-RGT]	MDC_MUSC_LOEXT_FLEX_DIGIT_LONG_R	950
Muscle Extensor, Hallucis, Brevis, NOS LowerExtremity, Leg Body	Musculus extensor hallucis brevis [Extensor hallucis brevis muscle, T-14791]	MDC_MUSC_LOEXT_EXTENS_HALLUC_BREV	952
Muscle Extensor, Hallucis, Brevis, Left LowerExtremity, Leg Body	Musculus extensor hallucis brevis, Left [Extensor hallucis brevis muscle, Left, T-14791-LFT]	MDC_MUSC_LOEXT_EXTENS_HALLUC_BREV_L	953
Muscle Extensor, Hallucis, Brevis, Right LowerExtremity, Leg Body	Musculus extensor hallucis brevis, Right [Extensor hallucis brevis muscle, Right, T-14791-RGT]	MDC_MUSC_LOEXT_EXTENS_HALLUC_BREV_R	954
Muscle Extensor, Digtorium, Brevis, NOS LowerExtremity Body	Musculus extensor digitorum brevis [Extensor digitorum brevis muscle, T-14781]	MDC_MUSC_LOEXT_EXTENS_DIGIT_BREV	956
Muscle Extensor, Digtorium, Brevis, Left LowerExtremity Body	Musculus extensor digitorum brevis, Left [Extensor digitorum brevis muscle, Left, T-14781-LFT]	MDC_MUSC_LOEXT_EXTENS_DIGIT_BREV_L	957
Muscle Extensor, Digtorium, Brevis, Right LowerExtremity Body	Musculus extensor digitorum brevis, Right [Extensor digitorum brevis muscle, Right, T-14781-RGT]	MDC_MUSC_LOEXT_EXTENS_DIGIT_BREV_R	958
Muscle Abductor, Hallucis, NOS LowerExtremity Body	Musculus abductor hallucis [Abductor hallucis muscle, T-14990]	MDC_MUSC_LOEXT_ABDUC_HALLUC	960
Muscle Abductor, Hallucis, Left LowerExtremity Body	Musculus abductor hallucis, Left [Abductor hallucis muscle, Left, T-14990-LFT]	MDC_MUSC_LOEXT_ABDUC_HALLUC_L	961
Muscle Abductor, Hallucis, Right LowerExtremity Body	Musculus abductor hallucis, Right [Abductor hallucis muscle, Right, T-14990-RGT]	MDC_MUSC_LOEXT_ABDUC_HALLUC_R	962
Muscle Flexor, Hallucis, Brevis, NOS LowerExtremity Body	Musculus flexor hallucis brevis [Flexor hallucis brevis muscle, T-14940]	MDC_MUSC_LOEXT_FLEX_HALLUC_BREV	964
Muscle Flexor, Hallucis, Brevis, Left LowerExtremity Body	Musculus flexor hallucis brevis, Left [Flexor hallucis brevis muscle, Left, T-14940-LFT]	MDC_MUSC_LOEXT_FLEX_HALLUC_BREV_L	965
Muscle Flexor, Hallucis, Brevis, Right LowerExtremity Body	Musculus flexor hallucis brevis, Right [Flexor hallucis brevis muscle, Right, T-14940-RGT]	MDC_MUSC_LOEXT_FLEX_HALLUC_BREV_R	966
Muscle Adductor, Hallucis, NOS LowerExtremity Body	Musculus adductor hallucis [Adductor hallucis muscle, T-14950]	MDC_MUSC_LOEXT_ADDUC_HALLUC	968

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Adductor, Hallucis, Left LowerExtremity Body	Musculus adductor hallucis, Left [Adductor hallucis muscle, Left, T-14950-LFT]	MDC_MUSC_LOEXT_ADDUC_HALLUC_L	969
Muscle Adductor, Hallucis, Right LowerExtremity Body	Musculus adductor hallucis [Adductor hallucis muscle, Right, T-14950-RGT]	MDC_MUSC_LOEXT_ADDUC_HALLUC_R	970
Muscle Abductor, Digiti, Minimi, NOS LowerExtremity Body	Musculus abductor digiti minimi [Abductor digiti minimi muscle of foot, T-14970]	MDC_MUSC_LOEXT_ABDUC_DIGIT_MIN	972
Muscle Abductor, Digiti, Minimi, Left LowerExtremity Body	Musculus abductor digiti minimi, Left [Abductor digiti minimi muscle of foot, Left, T-14910-LFT]	MDC_MUSC_LOEXT_ABDUC_DIGIT_MIN_L	973
Muscle Abductor, Digiti, Minimi, Right LowerExtremity Body	Musculus abductor digiti minimi [Abductor digiti minimi muscle of foot, Right, T-14910-RGT]	MDC_MUSC_LOEXT_ABDUC_DIGIT_MIN_R	974
Muscle Flexor, Digiti, Minimi, Brevis, NOS LowerExtremity Body	Musculus flexor digiti minimi brevis [Flexor digiti minimi brevis muscle of foot, T-14960]	MDC_MUSC_LOEXT_FLEX_DIGIT_BREV_MIN	976
Muscle Flexor, Digiti, Minimi, Brevis, Left LowerExtremity Body	Musculus flexor digiti minimi brevis, Left [Flexor digiti minimi brevis muscle of foot, Left, T-14960-LFT]	MDC_MUSC_LOEXT_FLEX_DIGIT_BREV_MIN_L	977
Muscle Flexor, Digiti, Minimi, Brevis, Right LowerExtremity Body	Musculus flexor digiti minimi brevis, Right [Flexor digiti minimi brevis muscle of foot, Right, T-14960-RGT]	MDC_MUSC_LOEXT_FLEX_DIGIT_BREV_MIN_R	978
Muscle Quadratus, Plantae, NOS LowerExtremity Body	Musculus quadratus plantae [Quadratus plantae muscle, T-14920]	MDC_MUSC_LOEXT_QUADRAT_PLANT	980
Muscle Quadratus, Plantae, Left LowerExtremity Body	Musculus quadratus plantae, Left [Quadratus plantae muscle, Left, T-14920-LFT]	MDC_MUSC_LOEXT_QUADRAT_PLANT_L	981
Muscle Quadratus, Plantae, Right LowerExtremity Body	Musculus quadratus plantae, Right [Quadratus plantae muscle, Right, T-14920-RGT]	MDC_MUSC_LOEXT_QUADRAT_PLANT_R	982
Muscle Lumbricales, NOS LowerExtremity Body	Musculi lumbricales [Lumbricales pedis muscle, T-14930]	MDC_MUSC_LOEXT_LUMBRICAL	984
Muscle Lumbricales, Left LowerExtremity Body	Musculi lumbricales, Left [Lumbricales pedis muscle, Left, T-14930-LFT]	MDC_MUSC_LOEXT_LUMBRICAL_L	985
Muscle Lumbricales, Right LowerExtremity Body	Musculi lumbricales, Right [Lumbricales pedis muscle, Right, T-14930-RGT]	MDC_MUSC_LOEXT_LUMBRICAL_R	986

Table A.8.3.1—Nomenclature and codes for sites for neurophysiological signal monitoring: locations near or in muscles (continued)

Systematic name	Description/Definition	Reference ID	Code
Muscle Interossei, Dorsales, NOS LowerExtremity Body	Musculus interossei dorsales [Interosseous dorsales muscles, T-14980]	MDC_MUSC_LOEXT_INTEROSS_DORSAL	988
Muscle Interossei, Dorsales, Left LowerExtremity Body	Musculus interossei dorsales, Left [Interosseous dorsales muscles, Left, T-14980-LFT]	MDC_MUSC_LOEXT_INTEROSS_DORSAL_L	989
Muscle Interossei, Dorsales, Right LowerExtremity Body	Musculus interossei dorsales, Right [Interosseous dorsales muscles, Right, T-14980-RGT]	MDC_MUSC_LOEXT_INTEROSS_DORSAL_R	990
Muscle Interossei, Plantares, NOS LowerExtremity Body	Musculus interossei plantares [Interosseous plantares muscles, T-14970]	MDC_MUSC_LOEXT_INTEROSS_PLANTAR	992
Muscle Interossei, Plantares, Left LowerExtremity Body	Musculus interossei plantares, Left [Interosseous plantares muscles, Left, T-14970-LFT]	MDC_MUSC_LOEXT_INTEROSS_PLANTAR_L	993
Muscle Interossei, Plantares, Right LowerExtremity Body	Musculus interossei plantares, Right [Interosseous plantares muscles, Right, T-14970-RGT]	MDC_MUSC_LOEXT_INTEROSS_PLANTAR_R	994

A.8.4 Sites for EEG-electrode placement on the head

A.8.4.1 Introduction

Subclause A.8.4 holds nomenclature for electrode positions in EEG measurements. The electrode placement is specified according to the well known and internationally accepted 10–20 system. The electrode positions are defined using two arcs over anatomically well-defined lines:

- The line between nasion and inion. Along this arc, the areas such as frontal, central, parietal, temporal, etc., are defined.
- The line between left ear and right ear. Along this arc, the positions are numbered: odd numbers describe positions on the left hemisphere; even numbers, right hemisphere. The letter z, e.g. in Pz, denotes medial positions, straight over the line between nasion and inion.

A.8.4.2 Base concept

In this special case, only one descriptor is applicable:

- **Head** (an electrode position on the head, especially according to 10–20 system)

A.8.4.3 First set of differentiating criteria

The second field of the systematic name refers to the position of the electrode on the skull. It is possible to have more than one semantic link and/or descriptor.

A.8.4.3.1 Semantic link "*belongs to area along line from nasion to inion:*"

Applicable descriptors are as follows:

- **Anterior**
- **Central**
- **Frontal**
- **Occipital**
- **Parietal**
- **Polar**

A.8.4.3.2 Semantic link "*belongs to lateral head:*"

Applicable descriptors are as follows:

- **Sphenoidal**
- **Temporal**

A.8.4.3.3 Semantic link "*belongs to neck:*"

The descriptor is as follows:

- **Pharyngeal**

A.8.4.3.4 Semantic link "*has position on left hemisphere:*"

Applicable descriptors are as follows:

- **1**
- **3**
- **5**

- 7
- 9

A.8.4.3.5 Semantic link "*has position on right hemisphere*:"

Applicable descriptors are as follows:

- 2
- 4
- 6
- 8
- 10

A.8.4.3.6 Semantic link "*belongs to hemisphere*:"

Applicable descriptors are as follows:

- **Left**
- **Right**

A.8.4.3.7 Semantic link "*belongs to parasagittal region*:"

The descriptor is as follows:

- **Midline**

A.8.4.3.8 Semantic link "*is anatomically positioned at*:"

Applicable descriptors are as follows:

- **Ear**
- **Inion**
- **Nasion**

A.8.4.4 Second set of differentiating criteria

The third field of the systematic name describes the target of measurement.

A.8.4.4.1 Semantic link "*concerns*:"

No descriptor is applicable.

A.8.4.5 Third set of differentiating criteria

The fourth field holds the information about the context, i.e., the functional or organ system for which the term is relevant.

A.8.4.5.1 Semantic link "*pertains to*:"

Only one descriptor exists:

- **CNS**

A.8.4.6 Code table

See Table A.8.4.1 for the nomenclature and codes for electrode sites for ECG according to the international 10–20 system.

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Table A.8.4.1—Nomenclature and codes for electrode sites for electroencephalography according to the international 10–20 system

Systematic name	Acronym	Description/Definition	Reference ID	Code
Head Nasion, Midline CNS	Nz	Nasion (theta 112.5, phi 90)	MDC_HEAD_NASION_MID	996
Head Frontal, Polar, Midline CNS	Fpz	Frontopolar (theta 90, phi 90)	MDC_HEAD_FRONT_POLAR_MID	1000
Head Anterior, Frontal, Midline CNS	AFz	Anterior frontal (theta 67.5, phi 90)	MDC_HEAD_FRONT_ANT_MID	1004
Head Frontal, Midline CNS	Fz	Frontal (theta 45, phi 90)	MDC_HEAD_FRONT_MID	1008
Head Frontal, Central, Midline CNS	FCz	Frontocentral (theta 22.5, phi 90)	MDC_HEAD_FRONT_CENT_MID	1012
Head Central, Midline CNS	Cz	Central (theta 0, phi 0)	MDC_HEAD_CENT_MID	1016
Head Central, Parietal, Media CNS	CPz	Centroparietal (theta 22.5, phi 270)	MDC_HEAD_PARIET_MEDIA	1020
Head Parietal, Midline CNS	Pz	Parietal (theta 45, phi 270)	MDC_HEAD_PARIET_MID	1024
Head Parietal, Occipital, Midline CNS	POz	Parieto-occipital (theta 67.5, phi 270)	MDC_HEAD_PARIET_OCCIP_MID	1028
Head Occipital, Midline CNS	Oz	Occipital (theta 90, phi 270)	MDC_HEAD_OCCIP_MID	1032
Head Inion, Midline CNS	Iz	Inion (theta 112.5, phi 270)	MDC_HEAD_INION_MID	1036
Head Frontal, Polar, Left CNS	Fp1	Frontopolar (theta 90, phi 108)	MDC_HEAD_FRONT_POLAR_L	1041
Head Frontal, Polar, Right CNS	Fp2	Frontopolar (theta 90, phi 72)	MDC_HEAD_FRONT_POLAR_R	1042
Head Frontal, Left, 1 CNS	F1	Frontal (theta 52.9, phi 112)	MDC_HEAD_FRONT_L_1	1049
Head Frontal, Right, 2 CNS	F2	Frontal (theta 52.9, phi 68)	MDC_HEAD_FRONT_R_2	1054
Head Frontal, Left, 3 CNS	F3	Frontal (theta 64, phi 129.1)	MDC_HEAD_FRONT_L_3	1057
Head Frontal, Right, 4 CNS	F4	Frontal (theta 64, phi 50.9)	MDC_HEAD_FRONT_R_4	1062
Head Frontal, Left, 5 CNS	F5	Frontal (theta 76.9, phi 136.9)	MDC_HEAD_FRONT_L_5	1065
Head Frontal, Right, 6 CNS	F6	Frontal (theta 76.9, phi 43.1)	MDC_HEAD_FRONT_R_6	1070
Head Frontal, Left, 7 CNS	F7	Frontal (theta 90, phi 144)	MDC_HEAD_FRONT_L_7	1073
Head Frontal, Right, 8 CNS	F8	Frontal (theta 90, phi 36)	MDC_HEAD_FRONT_R_8	1078
Head Frontal, Left, 9 CNS	F9	Frontal (theta 103.7, phi 149.4)	MDC_HEAD_FRONT_L_9	1081

Table A.8.4.1—Nomenclature and codes for electrode sites for electroencephalography according to the international 10–20 system (continued)

Systematic name	Acronym	Description/Definition	Reference ID	Code
Head Frontal, Right, 10 CNS	F10	Frontal (theta 103.7, phi 30.6)	MDC_HEAD_FRONT_R_10	1086
Head Frontal, Central, Left, 1 CNS	FC1	Frontocentral (theta 33.4, phi 132.7)	MDC_HEAD_FRONT_CENT_L_1	1089
Head Frontal, Central, Right, 2 CNS	FC2	Frontocentral (theta 33.4, phi 47.3)	MDC_HEAD_FRONT_CENT_R_2	1094
Head Frontal, Central, Left, 3 CNS	FC3	Frontocentral (theta 51.7, phi 151.3)	MDC_HEAD_FRONT_CENT_L_3	1097
Head Frontal, Central, Right, 4 CNS	FC4	Frontocentral (theta 51.7, phi 28.7)	MDC_HEAD_FRONT_CENT_R_4	1102
Head Frontal, Central, Left, 5 CNS	FC5	Frontocentral (theta 71, phi 157.9)	MDC_HEAD_FRONT_CENT_L_5	1105
Head Frontal, Central, Right, 6 CNS	FC6	Frontocentral (theta 71, phi 22.1)	MDC_HEAD_FRONT_CENT_R_6	1110
Head Frontal, Temporal, Left, 7 CNS	FT7	Frontotemporal (theta 90, phi 162)	MDC_HEAD_FRONT_TEMPOR_L_7	1113
Head Frontal, Temporal, Right, 8 CNS	FT8	Frontotemporal (theta 90, phi 18)	MDC_HEAD_FRONT_TEMPOR_R_8	1118
Head Frontal, Temporal, Left, 9 CNS	FT9	Frontotemporal (theta 108.7, phi 164.3)	MDC_HEAD_FRONT_TEMPOR_L_9	1121
Head Frontal, Temporal, Right, 10 CNS	FT10	Frontotemporal (theta 108.7, phi 15.7)	MDC_HEAD_FRONT_TEMPOR_R_10	1126
Head Central, Left, 1 CNS	C1	Central (theta 22.5, phi 180)	MDC_HEAD_CENT_L_1	1129
Head Central, Right, 2 CNS	C2	Central (theta 22.5, phi 0)	MDC_HEAD_CENT_R_2	1134
Head Central, Left, 3 CNS	C3	Central (theta 45, phi 180)	MDC_HEAD_CENT_L_3	1137
Head Central, Right, 4 CNS	C4	Central (theta 45, phi 0)	MDC_HEAD_CENT_R_4	1142
Head Central, Left, 5 CNS	C5	Central (theta 62.5, phi 180)	MDC_HEAD_CENT_L_5	1145
Head Central, Right, 6 CNS	C6	Central (theta 62.5, phi 0)	MDC_HEAD_CENT_R_6	1150
Head Central, Parietal, Left, 1 CNS	CP1	Centroparietal (theta 33.4, phi 227.3)	MDC_HEAD_PARIET_CENT_L_1	1153
Head Central, Parietal, Right, 2 CNS	CP2	Centroparietal (theta 33.4, phi 312.7)	MDC_HEAD_PARIET_CENT_R_2	1158
Head Central, Parietal, Left, 3 CNS	CP3	Centroparietal (theta 51.7, phi 208.7)	MDC_HEAD_PARIET_CENT_L_3	1161
Head Central, Parietal, Right, 4 CNS	CP4	Centroparietal (theta 51.7, phi 331.3)	MDC_HEAD_PARIET_CENT_R_4	1166
Head Central, Parietal, Left, 5 CNS	CP5	Centroparietal (theta 71, phi 202.1)	MDC_HEAD_PARIET_CENT_L_5	1169

Table A.8.4.1—Nomenclature and codes for electrode sites for electroencephalography according to the international 10–20 system (continued)

Systematic name	Acronym	Description/Definition	Reference ID	Code
Head Central, Parietal, Right, 6 CNS	CP6	Centroparietal (theta 71, phi 337.9)	MDC_HEAD_PARIET_CENT_R_6	1174
Head Parietal, Left, 1 CNS	P1	Parietal (theta 52.9, phi 248)	MDC_HEAD_PARIET_L_1	1177
Head Parietal, Right, 2 CNS	P2	Parietal (theta 52.9, phi 292)	MDC_HEAD_PARIET_R_2	1182
Head Parietal, Left, 3 CNS	P3	Parietal (theta 64, phi 230.9)	MDC_HEAD_PARIET_L_3	1185
Head Parietal, Right, 4 CNS	P4	Parietal (theta 64, phi 309.1)	MDC_HEAD_PARIET_R_4	1190
Head Parietal, Left, 5 CNS	P5	Parietal (theta 76.9, phi 223.1)	MDC_HEAD_PARIET_L_5	1193
Head Parietal, Right, 6 CNS	P6	Parietal (theta 76.9, phi 316.9)	MDC_HEAD_PARIET_R_6	1198
Head Parietal, Left, 9 CNS	P9	Parietal (theta 103.7, phi 210.6)	MDC_HEAD_PARIET_L_9	1201
Head Parietal, Right, 10 CNS	P10	Parietal (theta 103.7, phi 329.4)	MDC_HEAD_PARIET_R_10	1206
Head Occipital, Left CNS	O1	Occipital (theta 90, phi 252)	MDC_HEAD_OCCIP_L	1209
Head Occipital, Right CNS	O2	Occipital (theta 90, phi 288)	MDC_HEAD_OCCIP_R	1214
Head Anterior, Frontal, Left, 3 CNS	AF3	Anterior frontal (theta 76.8, phi 118)	MDC_HEAD_FRONT_ANT_L_3	1217
Head Anterior, Frontal, Right, 4 CNS	AF4	Anterior frontal (theta 76.8, phi 62)	MDC_HEAD_FRONT_ANT_R_4	1222
Head Anterior, Frontal, Left, 7 CNS	AF7	Anterior frontal (theta 90, phi 126)	MDC_HEAD_FRONT_ANT_L_7	1225
Head Anterior, Frontal, Right, 8 CNS	AF8	Anterior frontal (theta 90, phi 54)	MDC_HEAD_FRONT_ANT_R_8	1230
Head Parietal, Occipital, Left, 3 CNS	PO3	Parieto-occipital (theta 76.8, phi 242)	MDC_HEAD_PARIET_OCCIP_L_3	1233
Head Parietal, Occipital, Right, 4 CNS	PO4	Parieto-occipital (theta 76.8, phi 298)	MDC_HEAD_PARIET_OCCIP_R_4	1238
Head Parietal, Occipital, Left, 7 CNS	PO7	Parieto-occipital (theta 90, phi 234)	MDC_HEAD_PARIET_OCCIP_L_7	1241
Head Parietal, Occipital, Right, 8 CNS	PO8	Parieto-occipital (theta 90, phi 306)	MDC_HEAD_PARIET_OCCIP_R_8	1246
Head Temporal, Left, 3 CNS	T3	Temporal (theta 90, phi 180)	MDC_HEAD_TEMPOR_L_3	1249
Head Temporal, Right, 4 CNS	T4	Temporal (theta 90, phi 0)	MDC_HEAD_TEMPOR_R_4	1254
Head Temporal, Left, 5 CNS	T5	Temporal (theta 90, phi 216)	MDC_HEAD_TEMPOR_L_5	1257

Table A.8.4.1—Nomenclature and codes for electrode sites for electroencephalography according to the international 10–20 system (continued)

Systematic name	Acronym	Description/Definition	Reference ID	Code
Head Temporal, Right, 6 CNS	T6	Temporal (theta 90, phi 324)	MDC_HEAD_TEMPOR_R_6	1262
Head Temporal, Left, 9 CNS	T9	Temporal (theta 112.5, phi 180)	MDC_HEAD_TEMPOR_L_9	1265
Head Temporal, Right, 10 CNS	T10	Temporal (theta 112.5, phi 0)	MDC_HEAD_TEMPOR_R_10	1270
Head Temporal, Parietal, Left, 7 CNS	TP7	Temporoparietal (theta 90, phi 198)	MDC_HEAD_TEMPOR_PARIET_L_7	1273
Head Temporal, Parietal, Right, 8 CNS	TP8	Temporoparietal (theta 90, phi 342)	MDC_HEAD_TEMPOR_PARIET_R_8	1278
Head Temporal, Parietal, Left, 9 CNS	TP9	Temporoparietal (theta 108.7, phi 195.7)	MDC_HEAD_TEMPOR_PARIET_L_9	1281
Head Temporal, Parietal, Right, 10 CNS	TP10	Temporoparietal (theta 108.7, phi 344.3)	MDC_HEAD_TEMPOR_PARIET_R_10	1286
Head Ear, Left CNS	A1	Left ear (theta 120, phi 180)	MDC_HEAD_EAR_L	1289
Head Ear, Right CNS	A2	Right ear (theta 120, phi 0)	MDC_HEAD_EAR_R	1290
Head Temporal, Anterior, Left CNS	T1	Anterior temporal (theta 106, phi 162)	MDC_HEAD_TEMPOR_ANT_L	1297
Head Temporal, Anterior, Right CNS	T2	Anterior temporal (theta 106, phi 18)	MDC_HEAD_TEMPOR_ANT_R	1298
Head Pharyngeal, Left CNS	Pg1	Pharyngeal	MDC_HEAD_PHARYNGEAL_L	1305
Head Pharyngeal, Right CNS	Pg2	Pharyngeal	MDC_HEAD_PHARYNGEAL_R	1306
Head Sphenoidal, Left CNS	Sp1	Sphenoidal	MDC_HEAD_SPHENOIDAL_L	1313
Head Sphenoidal, Right CNS	Sp2	Sphenoidal	MDC_HEAD_SPHENOIDAL_R	1314

A.8.5 Sites for EOG signal monitoring

A.8.5.1 Introduction

Subclause A.8.5 presents a nomenclature for sites for EOG electrodes used mostly in neurophysiological monitoring. The list of electrode positions is necessary for the specification of other monitoring devices. The purpose of this nomenclature is to support unique identification of medical data in communication. The terms are used in the Metric object of the DIM to identify the actual data. The terms were extracted from different sources because there appears to be no previous applicable nomenclature for this purpose. Although the intention is not to standardize medicine, such standardization may result when the nomenclature is published.

A.8.5.1.1 Graphic representation of the EOG electrode positions

Because the suggested nomenclature includes electrode sites that are not necessarily commonly known, it is necessary to present the positions in graphical form in addition to textual description of the positions. See Figure A.8.5.1.

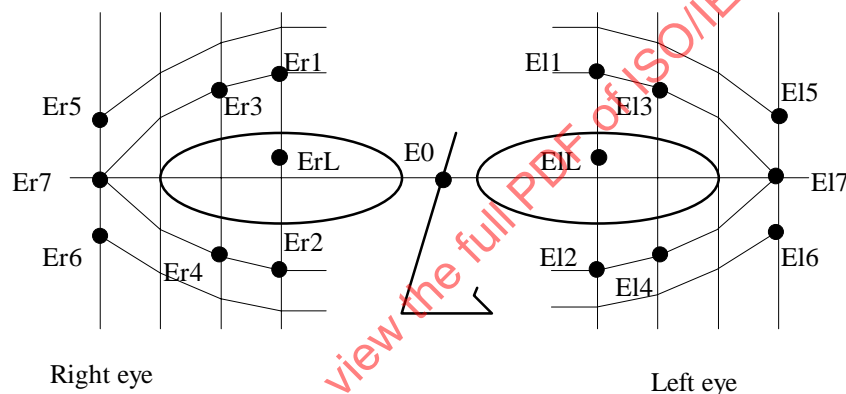


Figure A.8.5.1—Schematic diagram of the EOG electrode positions

The electrode between the eyes has been coded E0. The electrodes of the right eye have been coded with Er x , where E means eye, r means right, and x is a number between 1 and 7. In principle the odd numbers mean electrodes above the eye and the even numbers mean electrodes below the eye. The exception is electrode Er7, which is directly on the horizontal axis of the eyes. Correspondingly, the electrodes for the left eye have been coded with El x , where E means eye, l means left, and the number x describes the position in more detail. The electrode positions in the left eye are a mirror image of the positions of the right eye. The electrodes below the eyes are slightly nearer the eyes due to the physiology of the eyes, the eyelids, and the eyebrows.

It is also possible to place an electrode or a mechanical eye movement sensor on the eyelid. For these purposes, the list includes two entries: ErL for the right eyelid and E1L for the left eyelid.

If a different electrode placement is chosen, the codes shown in Figure A.8.5.1 are not used. In this case, the code is formed as follows: if the electrode is near the left eye, the code begins with El; and if it is nearer the right eye, the code begins with Er. If the electrode is above the horizontal axis of the eyes, the letter a is added to the code; and if it is below the horizontal axis, the letter b is added to the code. In medical studies, not all the above electrodes are used in a single measurement. However, the physician chooses the electrodes that appear most relevant and references the electrodes either to the positions in Table A.8.5.1 for EOG electrodes or to the positions given in Table A.8.4.1 for EEG electrodes.

A.8.5.1.2 Fields in the table

Table A.8.5.1 lists the codes for EOG electrode positions. See Häkkinen et al. [B8] for discussion of many of these electrode positions.

A.8.5.2 Base concept

In this special case, only one descriptor is applicable:

- **Eye** (the object or position of a measurement)

A.8.5.3 First set of differentiating criteria

The second field of the systematic name refers to the measurement features. It is possible to have more than one semantic link and or descriptor.

A.8.5.3.1 Semantic link "*is near to anatomical structure:*"

Applicable descriptors are as follows:

- **Canthus**
- **CanthusLateralis**
- **Eyelid**

A.8.5.3.2 Semantic link "*has position:*"

Applicable descriptors are as follows:

- **Above**
- **Below**
- **Between**
- **Center**
- **HorizontalAxis**
- **Left**
- **Outer**
- **Right**

A.8.5.4 Second set of differentiating criteria

The third field of the systematic name describes the target of measurement.

A.8.5.4.1 Semantic link "*concerns:*"

The descriptor is as follows:

- **Head**

A.8.5.5 Third set of differentiating criteria

The fourth field holds the information about the context, i.e., the functional or organ system for which the term is relevant.

A.8.5.5.1 Semantic link "*pertains to*:"

Only one descriptor is applicable:

— **Body**

A.8.5.6 Code table

See Table A.8.5.1 for the nomenclature and codes for sites for EOG signal monitoring.

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Table A.8.5.1—Nomenclature and codes for sites for EOG signal monitoring

Systematic name	Acronym	Description/Definition	Reference ID	Code
Eye HorizontalAxis, Between Head Body	E0	Electrode between the eyes, on the horizontal axis of the eyes.	MDC_EYE_AXIS_HORIZ	1320
Eye Center, Above, Left Head Body	Ei1	Electrode above the center of the left eye.	MDC_EYE_CENT_ABOVE_L	1325
Eye Center, Below, Left Head Body	Ei2	Electrode below the center of the left eye.	MDC_EYE_CENT_BELOW_L	1329
Eye CanthusLateralis, Above, Middle, Left Head Body	Ei3	Electrode 1 cm above the left eye on the eyebrow, in the middle between the center point of the eye and the lateral canthus.	MDC_EYE_CANTH_LAT_ABOVE_MID_L	1333
Eye CanthusLateralis, Below, Middle, Left Head Body	Ei4	Electrode directly below the left eye, in the middle between the center point of the eye and the lateral canthus.	MDC_EYE_CANTH_LAT_BELOW_MID_L	1337
Eye Canthus, Outer, Above, Left Head Body	Ei5	Electrode slightly above the outer canthus of the left eye in the position suggested by the sleep stage scoring manual.	MDC_EYE_CANTH_OUTER_ABOVE_L	1341
Eye Canthus, Outer, Below, Left Head Body	Ei6	Electrode slightly below the outer canthus of the left eye in the position suggested by the sleep stage scoring manual.	MDC_EYE_CANTH_OUTER_BELOW_L	1345
Eye Canthus, Outer, Center, Left Head Body	Ei7	Electrode on the outer canthus of the left eye on the horizontal line through the center of the eyes.	MDC_EYE_CANTH_OUTER_CENTER_L	1349
Eye Center, Above, Right Head Body	Er1	Electrode above the center of the right eye.	MDC_EYE_CENT_ABOVE_R	1354
Eye Center, Below, Right Head Body	Er2	Electrode below the center of the right eye.	MDC_EYE_CENT_BELOW_R	1358
Eye CanthusLateralis, Above, Middle, Right Head Body	Er3	Electrode 1 cm above the right eye on the eyebrow, in the middle between the center point of the eye and the lateral canthus.	MDC_EYE_CANTH_LAT_ABOVE_R	1362
Eye CanthusLateralis, Below, Middle, Right Head Body	Er4	Electrode directly below the right eye, in the middle between the center point of the eye and the lateral canthus.	MDC_EYE_CANTH_LAT_BELOW_R	1366
Eye Canthus, Outer, Above, Right Head Body	Er5	Electrode slightly above the outer canthus of the right eye in the position suggested by the sleep stage scoring manual.	MDC_EYE_CANTH_OUTER_ABOVE_R	1370

Table A.8.5.1—Nomenclature and codes for sites for EOG signal monitoring (continued)

Systematic name	Acronym	Description/Definition	Reference ID	Code
Eye Canthus, Outer, Below, Right Head Body	Er6	Electrode slightly below the outer canthus of the right eye in the position suggested by the sleep stage scoring manual.	MDC_EYE_CANTH_OUTER_BELOW_R	1374
Eye Canthus, Outer, Center, Right Head Body	Er7	Electrode on the outer canthus of the right eye on the horizontal line through the center of the eyes.	MDC_EYE_CANTH_OUTER_CENTER_R	1378
Eye Eyelid, Left Head Body	EIL	Electrode or other sensor on the left eyelid.	MDC_EYE_EYELID_L	1381
Eye Eyelid, Right Head Body	ErL	Electrode or other sensor on the right eyelid.	MDC_EYE_EYELID_R	1386
Eye Above, Left Head Body	Ela	Other electrode position near the left eye, above the horizontal axis of the eyes.	MDC_EYE_ABOVE_L	1389
Eye Below, Left Head Body	EIb	Other electrode position near the left eye, below the horizontal axis of the eyes.	MDC_EYE_BELOW_L	1393
Eye Above, Right Head Body	Era	Other electrode position near the right eye, above the horizontal axis of the eyes.	MDC_EYE_ABOVE_R	1398
Eye Below, Right Head Body	Erb	Other electrode position near the right eye, below the horizontal axis of the eyes.	MDC_EYE_BELOW_R	1402

A.8.6 Sites for general neurological monitoring measurements and drainage

A.8.6.1 Base concept

In this special case, only one descriptor is applicable:

- **Brain** (the object or position of a measurement)

A.8.6.2 First set of differentiating criteria

The second field of the systematic name refers to the measurement features. It is possible to have more than one semantic link and or descriptor.

A.8.6.2.1 Semantic link "*has position:*"

Applicable descriptors include the following:

- **Epidural**
- **Intraparenchymal**
- **Intraventricular**
- **Subarachnoidal**
- **Subdural**

Descriptors for laterality are as follows:

- **Left**
- **Right**

A.8.6.3 Second set of differentiating criteria

The third field of the systematic name describes the target of measurement.

A.8.6.3.1 Semantic link "*concerns:*"

The descriptor is as follows:

- **IntracranialPressure**

A.8.6.4 Third set of differentiating criteria

The fourth field holds the information about the context, i.e., the functional or organ system, for which the term is relevant.

A.8.6.4.1 Semantic link "*pertains to:*"

There is only one descriptor:

- **Body**

A.8.6.5 Code table

See Table A.8.6.1 for the nomenclature and codes for general neurological sites for monitoring measurements and drainage.

Table A.8.6.1—Nomenclature and codes for general neurological sites for monitoring measurements and drainage

Systematic name	Description/Definition	Reference ID	Code
Brain Epidural, NOS Body	Epidural [T-X1280] (e.g., for neurological measurements and drainage)	MDC_BRAIN_EPIDURAL	1404
Brain Epidural, Left Body	Epidural, Left [T-X1280-LFT] (e.g., for neurological measurements and drainage)	MDC_BRAIN_EPIDURAL_L	1405
Brain Epidural, Right Body	Epidural, Right [T-X1280-RGT] (e.g., for neurological measurements and drainage)	MDC_BRAIN_EPIDURAL_R	1406
Brain Subdural, NOS Body	Subdural [T-X1400] (e.g., for neurological measurements and drainage)	MDC_BRAIN_SUBDURAL	1408
Brain Subdural, Left Body	Subdural, Left [T-X1400-LFT] (e.g., for neurological measurements and drainage)	MDC_BRAIN_SUBDURAL_L	1409
Brain Subdural, Right Body	Subdural, Right [T-X1400-RGT] (e.g., for neurological measurements and drainage)	MDC_BRAIN_SUBDURAL_R	1410
Brain Subarachnoidal, NOS Body	Subarachnoid [T-X1502] (for neurological measurements and drainage)	MDC_BRAIN_SUBARACHNOIDAL	1412
Brain Subarachnoidal, Left Body	Subarachnoid, Left [T-X1502-LFT] (for neurological measurements and drainage)	MDC_BRAIN_SUBARACHNOIDAL_L	1413
Brain Subarachnoidal, Right Body	Subarachnoid, Right [T-X1502-RGT] (for neurological measurements and drainage)	MDC_BRAIN_SUBARACHNOIDAL_R	1414
Brain Intraventricular, NOS Body	Intraventricular [T-X1600] (e.g., for neurological measurements and drainage)	MDC_BRAIN_INTRAVENTRICULAR	1416
Brain Intraventricular, Left Body	Intraventricular, Left [T-X1600-LFT] (e.g., for neurological measurements and drainage)	MDC_BRAIN_INTRAVENTRICULAR_L	1417
Brain Intraventricular, Right Body	Intraventricular, Right [T-X1600-RGT] (e.g., for neurological measurements and drainage)	MDC_BRAIN_INTRAVENTRICULAR_R	1418
Brain Intraparenchymal, NOS Body	Intraparenchymal [T-X2000] (e.g., for neurological measurements)	MDC_BRAIN_INTRAPARENCHYMAL	1420
Brain Intraparenchymal, Left Body	Intraparenchymal, Left [T-X2000-LFT] (e.g., for neurological measurements)	MDC_BRAIN_INTRAPARENCHYMAL_L	1421
Brain Intraparenchymal, Right Body	Intraparenchymal, Right [T-X2000-RGT] (e.g., for neurological measurements)	MDC_BRAIN_INTRAPARENCHYMAL_R	1422

A.8.7 Sites for cardiovascular measurements

A.8.7.1 Base concepts

The following descriptors for the position of a measurement are applicable:

- Artery
- Heart
- Vein

A.8.7.2 First set of differentiating criteria

The second field of the systematic name refers to the measurement features. It is possible to have more than one semantic link and or one descriptor.

A.8.7.2.1 Semantic link "*relates to substructure:*"

Applicable descriptors are as follows:

- Atrium
- Ventricle

A.8.7.2.2 Semantic link "*relates to vessel:*"

Applicable descriptors are as follows:

- Axillaris
- Brachialis
- Cerebri
- Conus
- CoronaryArtery
- Dorsalis
- Femoralis
- Jugularis
- Media
- Profunda
- Pulmonalis
- Radialis
- Subclavia
- Temporalis
- Ulnaris
- Umbilicalis

A.8.7.2.3 Semantic link "*has position:*"

Applicable descriptors are as follows:

- Externa
- Interna
- Left
- Right

A.8.7.2.4 Semantic link "*specifies branch*:"

Applicable descriptors are as follows:

- **AnteriorDescendingBranch**
- **CircumflexBranch**
- **MarginalBranch**
- **PosteriorDescendingBranch**

A.8.7.3 Second set of differentiating criteria

The third field of the systematic name describes the target of measurement.

A.8.7.3.1 Semantic link "*concerns*:"

Only one descriptor is applicable:

- **CVS**

A.8.7.4 Third set of differentiating criteria

The fourth field holds the information about the context, i.e., the functional or organic system for which the term is relevant.

A.8.7.4.1 Semantic link "*pertains to*:"

There is only one descriptor applicable:

- **Body**

A.8.7.5 Code table

See Table A.8.7.1 for the nomenclature and codes for body sites for cardiovascular measurements.

Table A.8.7.1—Nomenclature and codes for body sites for cardiovascular measurements

Systematic name	Common term	Description/Definition	Reference ID	Code
Heart NOS CVS Body		Heart [T-32000]	MDC_HEART	1424
Heart Left CVS Body		Left side of Heart [T-32020]	MDC_HEART_L	1425
Heart Right CVS Body		Right side of Heart [T-32010]	MDC_HEART_R	1426
Heart Atrium, Left CVS Body		Left Atrium [T-32300]	MDC_HEART_ATR_L	1429
Heart Atrium, Right CVS Body		Right Atrium [T-32200]	MDC_HEART_ATR_R	1434
Heart Ventricle, Left CVS Body		Left Ventricle [T-32600]	MDC_HEART_VENT_L	1437
Heart Ventricle, Right CVS Body		Right Ventricle [T-32500]	MDC_HEART_VENT_R	1442
Artery NOS CVS Body		Artery [T-41000]	MDC_ART	1444
Artery Left CVS Body		Artery, Left [T-41000-LFT]	MDC_ART_L	1445
Artery Right CVS Body		Artery, Right [T-41000-RGT]	MDC_ART_R	1446
Artery Axillaris, NOS CVS Body		Axillary Artery [T-47100]	MDC_ART_AXILLAR	1448
Artery Axillaris, Left CVS Body		Axillary Artery, Left [T-47120]	MDC_ART_AXILLAR_L	1449
Artery Axillaris, Right CVS Body		Axillary Artery, Right [T-47110]	MDC_ART_AXILLAR_R	1450
Artery Brachialis, NOS CVS Body		Brachial Artery [T-47160]	MDC_ART_BRACHIAL	1452
Artery Brachialis, Left CVS Body		Brachial Artery, Left [T-47160-LFT]	MDC_ART_BRACHIAL_L	1453
Artery Brachialis, Right CVS Body		Brachial Artery, Right [T-47160-RGT]	MDC_ART_BRACHIAL_R	1454
Artery Dorsalis, Pedis, NOS CVS Body		Dorsalis Pedis Artery [T-47740]	MDC_ART_DORSAL	1456
Artery Dorsalis, Pedis, Left CVS Body		Dorsalis Pedis Artery, Left [T-47740-LFT]	MDC_ART_DORSAL_L	1457
Artery Dorsalis, Pedis, Right CVS Body		Dorsalis Pedis Artery, Right [T-47740-RGT]	MDC_ART_DORSAL_R	1458
Artery Femoralis, NOS CVS Body		Femoral Artery [T-47400]	MDC_ART_FEMORAL	1460
Artery Femoralis, Left CVS Body		Femoral Artery, Left [T-47420]	MDC_ART_FEMORAL_L	1461

Table A.8.7.1—Nomenclature and codes for body sites for cardiovascular measurements (continued)

Systematic name	Common term	Description/Definition	Reference ID	Code
Artery Femoralis, Right CVS Body		Femoral Artery, Right [T-47400-RGT]	MDC_ART_FEMORAL_R	1462
Artery Pulmonalis, NOS CVS Body		Pulmonary Artery [T-44000]	MDC_ART_PULMONAL	1464
Artery Pulmonalis, Left CVS Body		Pulmonary Artery, Left [T-44400]	MDC_ART_PULMONAL_L	1465
Artery Pulmonalis, Right CVS Body		Pulmonary Artery, Right [T-44200]	MDC_ART_PULMONAL_R	1466
Artery Radialis, NOS CVS Body		Radial Artery [T-47300]	MDC_ART_RADIAL	1468
Artery Radialis, Left CVS Body		Radial Artery, Left [T-47320]	MDC_ART_RADIAL_L	1469
Artery Radialis, Right CVS Body		Radial Artery, Right [T-47310]	MDC_ART_RADIAL_R	1470
Artery Temporalis, Superficialis, NOS CVS Body		Superficial Temporal Artery [T-45270]	MDC_ART_TEMPOR_SUPERF	1472
Artery Temporalis, Superficialis, Left CVS Body		Superficial Temporal Artery, Left [T-45270-LFT]	MDC_ART_TEMPOR_SUPERF_L	1473
Artery Temporalis, Superficialis, Right CVS Body		Superficial Temporal Artery, Right [T-45270-RGT]	MDC_ART_TEMPOR_SUPERF_R	1474
Artery Ulnaris, NOS CVS Body		Ulnar Artery [T-47200]	MDC_ART_ULNAR	1476
Artery Ulnaris, Left CVS Body		Ulnar Artery, Left [T-47220]	MDC_ART_ULNAR_L	1477
Artery Ulnaris, Right CVS Body		Ulnar Artery, Right [T-47210]	MDC_ART_ULNAR_R	1478
Artery Umbilicalis CVS Body		Umbilical Artery [T-88810]	MDC_ART_UMBILICAL	1480
Heart CoronaryArtery CVS Body	Coronary artery	Coronary artery, NOS (T-43000)	MDC_ART_CORON	1812
Heart CoronaryArtery, Left CVS Body	Left coronary artery	Left coronary artery, NOS (T-43100)	MDC_ART_CORON_L	1816
Heart CoronaryArtery, AnteriorDescendingBranch, Left CVS Body	Left coronary artery, anterior descending branch	Left coronary artery, anterior descending branch (T-43110)	MDC_ART_CORON_L_ANT_DESCEND	1820
Heart CoronaryArtery, CircumflexBranch, Left CVS Body	Left coronary artery, circumflex branch	Left coronary artery, circumflex branch (T-43120)	MDC_ART_CORON_L_CIRCUM	1824

Table A.8.7.1—Nomenclature and codes for body sites for cardiovascular measurements (continued)

Systematic name	Common term	Description/Definition	Reference ID	Code
Heart CoronaryArtery, Right CVS Body	Right coronary artery	Right coronary artery, NOS (T-43200)	MDC_ART_CORON_R	1828
Heart CoronaryArtery, PosteriorDescendingBranch, Right CVS Body	Right coronary artery, posterior descending branch	Right coronary artery, posterior descending branch (T-43210)	MDC_ART_CORON_R_POST_DESCEND	1832
Heart CoronaryArtery, Conus CVS Body	Conus artery	Conus artery (T-43220)	MDC_ART_CORON_CONUS	1836
Heart CoronaryArtery, MarginalBranch, Right CVS Body	Right coronary artery, marginal branch	Right coronary artery, marginal branch (T-43230)	MDC_ART_CORON_R_MARGIN	1840
Vein CVS Body	Vein	Vein, NOS [T-48000]	MDC_VEIN	1484
Vein Left CVS Body	Left vein	Vein, Left [T-48000-LFT]	MDC_VEIN_L	1485
Vein Right CVS Body	Right vein	Vein, Right [T-48000-RGT]	MDC_VEIN_R	1486
Vein Femoralis CVS Body	Femorals vein	Femorals vein, NOS [T-49410]	MDC_VEIN_FEMORAL	1488
Vein Femoralis, Left CVS Body	Left femoralis vein	Femorals vein, Left [T-49410-LFT]	MDC_VEIN_FEMORAL_L	1489
Vein Femoralis, Right CVS Body	Right femoralis vein	Femorals vein, Right [T-49410-RGT]	MDC_VEIN_FEMORAL_R	1490
Vein Jugularis, Externa CVS Body		External Jugular Vein [T-48160]	MDC_VEIN_JUGULAR_EXT	1492
Vein Jugularis, Externa, Left CVS Body		External Jugular Vein, Left [T-48160-LFT]	MDC_VEIN_JUGULAR_EXT_L	1493
Vein Jugularis, Externa, Right CVS Body		External Jugular Vein, Right [T-48160-RGT]	MDC_VEIN_JUGULAR_EXT_R	1494
Vein Jugularis, Interna, NOS CVS Body		Internal Jugular Vein [T-48170]	MDC_VEIN_JUGULAR_INT	1496
Vein Jugularis, Interna, Left CVS Body		Internal Jugular Vein, Left [T-48170-LFT]	MDC_VEIN_JUGULAR_INT_L	1497

Table A.8.7.1—Nomenclature and codes for body sites for cardiovascular measurements (continued)

Systematic name	Common term	Description/Definition	Reference ID	Code
Vein Jugularis, Interna, Right CVS Body		Internal Jugular Vein, Right [T-48170-RGT]	MDC_VEIN_JUGULAR_INT_R	1498
Vein Media, Profunda, Cerebri, NOS CVS Body		Median Cephalic Vein [T-49253]	MDC_VEIN_CEREBR_PROFUND_MED	1500
Vein Media, Profunda, Cerebri, Left CVS Body		Median Cephalic Vein, Left [T-49253-LFT]	MDC_VEIN_CEREBR_PROFUND_MED_L	1501
Vein Media, Profunda, Cerebri, Right CVS Body		Median Cephalic Vein, Right [T-49253-RGT]	MDC_VEIN_CEREBR_PROFUND_MED_R	1502
Vein Subclavia, NOS CVS Body		Subclavian Vein [T-48330]	MDC_VEIN_SUBCLAV	1504
Vein Subclavia, Left CVS Body		Subclavian Vein, Left [T-48330-LFT]	MDC_VEIN_SUBCLAV_L	1505
Vein Subclavia, Right CVS Body		Subclavian Vein, Right [T-48330-RGT]	MDC_VEIN_SUBCLAV_R	1506

A.8.8 Miscellaneous sites used in vital signs monitoring and measurement

A.8.8.1 Base concepts

The base concepts are supposed to describe the object or position of a measurement. Applicable descriptors are as follows:

- **Head**
- **LowerExtremity**
- **Trunk**
- **UpperExtremity**
- **Vein**

A.8.8.2 First set of differentiating criteria

The second field of the systematic name refers to the measurement features. It is possible to have more than one semantic link and or one descriptor.

A.8.8.2.1 Semantic link "*pertains to*:"

Descriptors for drainage and fluid output measurements are as follows:

- **AbdominalCavity**
- **Bladder**
- **ChestWall**
- **Head**
- **Neck**
- **Pelvis**
- **Pleura**
- **Ureter**

Descriptors for fluid therapy are as follows:

- **Cava**
- **HandBack**
- **Umbilicalis**

A.8.8.2.2 Semantic link "*is positioned*:"

Descriptors for subspecification of an area are as follows:

- **Apical**
- **Basal**
- **Inferior**
- **IntraOssery**
- **Left**
- **Peripheral**
- **Right**
- **Superior**

Descriptors for areas of head are as follows:

- **Cheek**
- **Chin**
- **Conjunctiva**
- **Ear**
- **Face**
- **Fore**
- **FrontalRegion**
- **Mouth**
- **Naris**
- **Nasopharynx**
- **Nose**
- **OccipitalRegion**
- **OrbitalRegion**
- **ParietalRegion**
- **TemporalRegion**
- **VertexRegion**

Descriptors for areas of trunk are as follows:

- **Abdomen**
- **AbdominalWall**
- **Back**
- **Buttock**
- **Diaphragm**
- **Hip**
- **InguinalRegion**
- **JugularBulb**
- **LumbarRegion**
- **Pelvis**
- **Perineum**
- **SacrococcygealRegion**
- **ScapularRegion**
- **Thorax**

Descriptors for areas of upper extremity are as follows:

- **AntecubitalRegion**
- **Axilla**
- **Elbow**
- **Finger**
- **Forearm**
- **Hand**
- **UpperArm**
- **Wrist**

Descriptors for areas of lower extremity are as follows:

- **Ankle**
- **Foot**
- **Heel**
- **Knee**
- **Leg**
- **PoplitealRegion**
- **Thigh**
- **Toe**

A.8.8.2.3 Semantic link "*has specification*:"

Descriptors specifying fingers are as follows:

- **Index**
- **Little**
- **Middle**
- **Ring**
- **Thumb**

Descriptors specifying toes are as follows:

- **Great**
- **Second**
- **Third**
- **Fourth**
- **Fifth**

Descriptors specifying the type of a measurement are as follows:

- **Intragastric**
- **Oesophagus**
- **Transesophageal**

A.8.8.3 Second set of differentiating criteria

The third field of the systematic name describes the target of measurement. No descriptor is applicable.

A.8.8.4 Third set of differentiating criteria

The fourth field holds the information about the context, i.e., the functional or organic system for which the term is relevant.

A.8.8.4.1 Semantic link "*pertains to*:"

The following descriptors are applicable:

- **Body**
- **Drainage**

A.8.8.5 Code table

See Table A.8.8.1 for the nomenclature and codes for miscellaneous body sites used in vital signs monitoring and measurement.

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Table A.8.1—Nomenclature and codes for miscellaneous body sites used in vital signs monitoring and measurement

Systematic name	Description/Definition	Reference ID	Code
Head Cheek, NOS Body	Head, Cheek [T-Y0300]	MDC_HEAD_CHEEK	1508
Head Cheek, Left Body	Head, Cheek, Left [T-Y0300-LFT]	MDC_HEAD_CHEEK_L	1509
Head Cheek, Right Body	Head, Cheek, Right [T-Y0300-RGT]	MDC_HEAD_CHEEK_R	1510
Head Chin Body	Head, Chin [T-Y0210]	MDC_HEAD_CHIN	1512
Head Conjunctiva, NOS Body	Conjunctiva [T-XX860] (e.g., for miscellaneous measurements, e.g., CO ₂)	MDC_HEAD_CONJUNCTIV	1516
Head Conjunctiva, Left Body	Conjunctiva, Left [T-XX860-LFT] (e.g., for miscellaneous measurements, e.g., CO ₂)	MDC_HEAD_CONJUNCTIV_L	1517
Head Conjunctiva, Right Body	Conjunctiva, Right [T-XX860-RGT] (e.g., for miscellaneous measurements, e.g., CO ₂)	MDC_HEAD_CONJUNCTIV_R	1518
Head Ear, NOS Body	Ear, NOS [T-XY000] (e.g., for oximetric measurement)	MDC_HEAD_EAR	1520
Head Ear, Left Body	Ear, NOS, Left [T-XY020] (e.g., for oximetric measurement)	MDC_HEAD_EAR_L	1521
Head Ear, Right Body	Ear, NOS, Right [T-XY010] (e.g., for oximetric measurement)	MDC_HEAD_EAR_R	1522
Head Face, NOS Body	Head, Face [T-Y0200]	MDC_HEAD_FACE	1524
Head Face, Left Body	Head, Face, Left [T-Y0202]	MDC_HEAD_FACE_L	1525
Head Face, Right Body	Head, Face, Right [T-Y0201]	MDC_HEAD_FACE_R	1526
Head Fore, NOS Body	Forehead, NOS [T-Y0110] (e.g., for oximetric measurement)	MDC_HEAD_FORE	1528
Head Fore, Left Body	Forehead, NOS, Left [T-Y0110-LFT] (e.g., for oximetric measurement)	MDC_HEAD_FORE_L	1529
Head Fore, Right Body	Forehead, NOS, Right [T-Y0110-RGT] (e.g., for oximetric measurement)	MDC_HEAD_FORE_R	1530
Head FrontalRegion, NOS Body	Head; Frontal region [T-Y0111]	MDC_HEAD_FRONT_REGION	1532
Head FrontalRegion, Left Body	Head; Frontal region, Left [T-Y0111-LFT]	MDC_HEAD_FRONT_REGION_L	1533
Head FrontalRegion, Right Body	Head; Frontal region, Right [T-Y0111-RGT]	MDC_HEAD_FRONT_REGION_R	1534

Table A.8.8.1—Nomenclature and codes for miscellaneous body sites used in vital signs monitoring and measurement (continued)

Systematic name	Description/Definition	Reference ID	Code
Head Head, Neck, NOS Body	Head and Neck, NOS [T-Y0000] (e.g., for surgical drainage)	MDC_HEAD_NECK	1536
Head Head, Neck, Left Body	Head and Neck, NOS, Left [T-Y0000-LFT] (e.g., for surgical drainage)	MDC_HEAD_NECK_L	1537
Head Head, Neck, Right Body	Head and Neck, NOS, Right [T-Y0000-RGT] (e.g., for surgical drainage)	MDC_HEAD_NECK_R	1538
Head Mouth Body	Head, Mouth; [T-51000]	MDC_HEAD_MOUTH	1540
Head Naris, NOS Body	Head, Naris (nostril) [T-21310]	MDC_HEAD_NARIS	1544
Head Naris, Left Body	Head, Naris (nostril), Left [T-21310-LFT]	MDC_HEAD_NARIS_L	1545
Head Naris, Right Body	Head, Naris (nostril), Right [T-21310-RGT]	MDC_HEAD_NARIS_R	1546
Head Nasopharynx Body	Head, Nasopharynx [T-23000]	MDC_HEAD_NASOPHARYNX	1548
Head Nose Body	Head, Nose, NOS [T-21000]	MDC_HEAD_NOSE	1552
Head OccipitalRegion, NOS Body	Head, Occipital region [T-Y0140]	MDC_HEAD_OCCIP_REGION	1556
Head OccipitalRegion, Left Body	Head, Occipital region, Left [T-Y0140-LFT]	MDC_HEAD_OCCIP_REGION_L	1557
Head OccipitalRegion, Right Body	Head, Occipital region, Right [T-Y0140-RGT]	MDC_HEAD_OCCIP_REGION_R	1558
Head OrbitalRegion, NOS Body	Head, Orbital region [T-Y0480]	MDC_HEAD_ORBITAL_REGION	1560
Head OrbitalRegion, Left Body	Head, Orbital region, Left [T-Y0480-LFT]	MDC_HEAD_ORBITAL_REGION_L	1561
Head OrbitalRegion, Right Body	Head, Orbital region, Right [T-Y0480-RGT]	MDC_HEAD_ORBITAL_REGION_R	1562
Head ParietalRegion, NOS Body	Head, Parietal region [T-Y0130]	MDC_HEAD_PARIET_REGION	1564
Head ParietalRegion, Left Body	Head, Parietal region, Left [T-Y0130-LFT]	MDC_HEAD_PARIET_REGION_L	1565
Head ParietalRegion, Right Body	Head, Parietal region, Right [T-Y0130-RGT]	MDC_HEAD_PARIET_REGION_R	1566
Head TemporalRegion, NOS Body	Head, Temporal region [T-Y0150]	MDC_HEAD_TEMPOR_REGION	1568
Head TemporalRegion, Left Body	Head, Temporal region, Left [T-Y0150-LFT]	MDC_HEAD_TEMPOR_REGION_L	1569
Head TemporalRegion, Right Body	Head, Temporal region, Right [T-Y0150-RGT]	MDC_HEAD_TEMPOR_REGION_R	1570

Table A.8.8.1—Nomenclature and codes for miscellaneous body sites used in vital signs monitoring and measurement (continued)

Systematic name	Description/Definition	Reference ID	Code
Head VertexRegion, NOS Body	Head, Vertex, (central) region [T-Y0120]	MDC_HEAD_VERTEX_REGION	1572
Head VertexRegion, Left Body	Head, Vertex, (central) region, Left [T-Y0120-LFT]	MDC_HEAD_VERTEX_REGION_L	1573
Head VertexRegion, Right Body	Head, Vertex, (central) region, Right [T-Y0120-RGT]	MDC_HEAD_VERTEX_REGION_R	1574
Head NOS Body	Head, NOS [T-Y0100]	MDC_HEAD	1576
Head Left Body	Head, NOS, Left [Head, left side, T-Y0102]	MDC_HEAD_L	1577
Head Right Body	Head, NOS, Right [Head, right side, T-Y0101]	MDC_HEAD_R	1578
LowerExtremity NOS Body	Lower extremity, NOS [T-Y9000]	MDC_LOEXT	1580
LowerExtremity Left Body	Lower extremity, NOS, Left [T-Y9000-LFT]	MDC_LOEXT_L	1581
LowerExtremity Right Body	Lower extremity, NOS, Right [T-Y9000-RGT]	MDC_LOEXT_R	1582
LowerExtremity Ankle, NOS Body	Lower extremity, Ankle [T-Y9500]	MDC_LOEXT_ANKLE	1584
LowerExtremity Ankle, Left Body	Lower extremity, Ankle, Left [Left ankle, T-Y9520]	MDC_LOEXT_ANKLE_L	1585
LowerExtremity Ankle, Right Body	Lower extremity, Ankle, Right [Right ankle, T-Y9510]	MDC_LOEXT_ANKLE_R	1586
LowerExtremity Foot, NOS Body	Lower extremity, Foot [T-Y9700]	MDC_LOEXT_FOOT	1588
LowerExtremity Foot, Left Body	Lower extremity, Foot, Left [Left foot, T-Y9720]	MDC_LOEXT_FOOT_L	1589
LowerExtremity Foot, Right Body	Lower extremity, Foot, Right [Right foot, T-Y9710]	MDC_LOEXT_FOOT_R	1590
LowerExtremity Heel, NOS Body	Lower extremity, Heel [T-Y9600]	MDC_LOEXT_HEEL	1592
LowerExtremity Heel, Left Body	Lower extremity, Heel, Left [T-Y9600-LFT]	MDC_LOEXT_HEEL_L	1593
LowerExtremity Heel, Right Body	Lower extremity, Heel, Right [T-Y9600-RGT]	MDC_LOEXT_HEEL_R	1594
LowerExtremity IntraOssery, NOS Child Body	Intraosserly (child) (e.g., for fluid therapy)	MDC_LOEXT_INTRAOSSERY_CHILD	1596
LowerExtremity IntraOssery, Left Child Body	Intraosserly, Left (child) (e.g., for fluid therapy)	MDC_LOEXT_INTRAOSSERY_CHILD_L	1597
LowerExtremity IntraOssery, Right Child Body	Intraosserly, Right (child) (e.g., for fluid therapy)	MDC_LOEXT_INTRAOSSERY_CHILD_R	1598

Table A.8.8.1—Nomenclature and codes for miscellaneous body sites used in vital signs monitoring and measurement (continued)

Systematic name	Description/Definition	Reference ID	Code
LowerExtremity Knee, NOS Body	Lower extremity, Knee [T-Y9200]	MDC_LOEXT_KNEE	1600
LowerExtremity Knee, Left Body	Lower extremity, Knee, Left [Left knee, T-Y9220]	MDC_LOEXT_KNEE_L	1601
LowerExtremity Knee, Right Body	Lower extremity, Knee, Right [Right knee, T-Y9210]	MDC_LOEXT_KNEE_R	1602
LowerExtremity Leg, NOS Body	Lower extremity, Leg [T-Y9400]	MDC_LOEXT_LEG	1604
LowerExtremity Leg, Left Body	Lower extremity, Leg, Left [Left leg, T-Y9420]	MDC_LOEXT_LEG_L	1605
LowerExtremity Leg, Right Body	Lower extremity, Leg, Right [Right leg, T-Y9410]	MDC_LOEXT_LEG_R	1606
LowerExtremity PoplitealRegion, NOS Body	Lower extremity, Popliteal region [T-Y9300]	MDC_LOEXT_POPLITEAL_REGION	1608
LowerExtremity PoplitealRegion, Left Body	Lower extremity, Popliteal region, Left [T-Y9300-LFT]	MDC_LOEXT_POPLITEAL_REGION_L	1609
LowerExtremity PoplitealRegion, Right Body	Lower extremity, Popliteal region, Right [T-Y9300-RGT]	MDC_LOEXT_POPLITEAL_REGION_R	1610
LowerExtremity Thigh, NOS Body	Lower extremity, Thigh [T-Y9100]	MDC_LOEXT_THIGH	1612
LowerExtremity Thigh, Left Body	Lower extremity, Thigh, Left [Left thigh, T-Y9120]	MDC_LOEXT_THIGH_L	1613
LowerExtremity Thigh, Right Body	Lower extremity, Thigh, Right [Right thigh, T-Y9110]	MDC_LOEXT_THIGH_R	1614
LowerExtremity Toe, NOS Body	Lower extremity, Toe [T-Y9800]	MDC_LOEXT_TOE	1616
LowerExtremity Toe, Left Body	Lower extremity, Toe, Left [T-Y9800-LFT]	MDC_LOEXT_TOE_L	1617
LowerExtremity Toe, Right Body	Lower extremity, Toe, Right [T-Y9800-RGT]	MDC_LOEXT_TOE_R	1618
LowerExtremity Toe, Fifth, NOS Body	Lower extremity, Fifth toe [T-Y9850]	MDC_LOEXT_TOE_FIFTH	1636
LowerExtremity Toe, Fifth, Left Body	Lower extremity, Fifth toe, Left [T-Y9850-LFT]	MDC_LOEXT_TOE_FIFTH_L	1637
LowerExtremity Toe, Fifth, Right Body	Lower extremity, Fifth toe, Right [T-Y9850-RGT]	MDC_LOEXT_TOE_FIFTH_R	1638
LowerExtremity Toe, Fourth, NOS Body	Lower extremity, Fourth toe [T-Y9840]	MDC_LOEXT_TOE_FOURTH	1632
LowerExtremity Toe, Fourth, Left Body	Lower extremity, Fourth toe, Left [T-Y9840-LFT]	MDC_LOEXT_TOE_FOURTH_L	1633
LowerExtremity Toe, Fourth, Right Body	Lower extremity, Fourth toe, Right [T-Y9840-RGT]	MDC_LOEXT_TOE_FOURTH_R	1634

Table A.8.8.1—Nomenclature and codes for miscellaneous body sites used in vital signs monitoring and measurement (continued)

Systematic name	Description/Definition	Reference ID	Code
LowerExtremity Toe, Great, NOS Body	Lower extremity, Great toe [T-Y9810]	MDC_LOEXT_TOE_GREAT	1620
LowerExtremity Toe, Great, Left Body	Lower extremity, Great toe, Left [T-Y9810-LFT]	MDC_LOEXT_TOE_GREAT_L	1621
LowerExtremity Toe, Great, Right Body	Lower extremity, Great toe, Right [T-Y9810-RGT]	MDC_LOEXT_TOE_GREAT_R	1622
LowerExtremity Toe, Second, NOS Body	Lower extremity, Second toe [T-Y9820]	MDC_LOEXT_TOE_SECOND	1624
LowerExtremity Toe, Second, Left Body	Lower extremity, Second toe, Left [T-Y9820-LFT]	MDC_LOEXT_TOE_SECOND_L	1625
LowerExtremity Toe, Second, Right Body	Lower extremity, Second toe, Right [T-Y9820-RGT]	MDC_LOEXT_TOE_SECOND_R	1626
LowerExtremity Toe, Third, NOS Body	Lower extremity, Third toe [T-Y9830]	MDC_LOEXT_TOE_THIRD	1628
LowerExtremity Toe, Third, Left Body	Lower extremity, Third toe, Left [T-Y9830-LFT]	MDC_LOEXT_TOE_THIRD_L	1629
LowerExtremity Toe, Third, Right Body	Lower extremity, Third toe, Right [T-Y9830-RGT]	MDC_LOEXT_TOE_THIRD_R	1630
Trunk NOS Body	Trunk, NOS [T-Y1000]	MDC_TRUNK	1640
Trunk Left Body	Trunk, NOS, Left [T-Y1000-LFT]	MDC_TRUNK_L	1641
Trunk Right Body	Trunk, NOS, Right [T-Y1000-RGT]	MDC_TRUNK_R	1642
Trunk Abdomen, NOS Body	Trunk, Abdomen, NOS [T-Y4100]	MDC_TRUNK_ABDOM	1644
Trunk Abdomen, Left Body	Trunk, Abdomen, NOS, Left [T-Y4100-LFT]	MDC_TRUNK_ABDOM_L	1645
Trunk Abdomen, Right Body	Trunk, Abdomen, NOS, Right [T-Y4100-RGT]	MDC_TRUNK_ABDOM_R	1646
Trunk AbdominalCavity, NOS Body	Abdominal Cavity [T-Y4500] (e.g., for surgical drainage)	MDC_TRUNK_ABDOM_CAVITY	1648
Trunk AbdominalCavity, Left Body	Abdominal Cavity, Left [T-Y4500-LFT] (e.g., for surgical drainage)	MDC_TRUNK_ABDOM_CAVITY_L	1649
Trunk AbdominalCavity, Right Body	Abdominal Cavity, Right [T-Y4500-RGT] (e.g., for surgical drainage)	MDC_TRUNK_ABDOM_CAVITY_R	1650
Trunk AbdominalWall, NOS Body	Trunk, Abdominal wall, NOS [T-Y4300]	MDC_TRUNK_ABDOM_WALL	1652
Trunk AbdominalWall, Left Body	Trunk, Abdominal wall, NOS, Left [T-Y4300-LFT]	MDC_TRUNK_ABDOM_WALL_L	1653
Trunk AbdominalWall, Right Body	Trunk, Abdominal wall, NOS, Right [T-Y4300-RGT]	MDC_TRUNK_ABDOM_WALL_R	1654
Trunk Back, NOS Body	Trunk, Back NOS [T-Y1100]	MDC_TRUNK_BACK	1656

Table A.8.8.1—Nomenclature and codes for miscellaneous body sites used in vital signs monitoring and measurement (continued)

Systematic name	Description/Definition	Reference ID	Code
Trunk Back, Left Body	Trunk, Back NOS, Left [T-Y1100-LFT]	MDC_TRUNK_BACK_L	1657
Trunk Back, Right Body	Trunk, Back NOS, Right [T-Y1100-RGT]	MDC_TRUNK_BACK_R	1658
Trunk Bladder Body	Bladder [T-74000] (e.g., for surgical drainage and contractility measurement)	MDC_TRUNK_BLADDER	1660
Trunk Breast, NOS Body	Trunk, Breast, NOS [T-04000]	MDC_TRUNK_BREAST	1664
Trunk Breast, Left Body	Trunk, Breast, NOS, Left [T-04000-LFT]	MDC_TRUNK_BREAST_L	1665
Trunk Breast, Right Body	Trunk, Breast, NOS, Right [T-04000-RGT]	MDC_TRUNK_BREAST_R	1666
Trunk Buttock, NOS Body	Trunk, Buttock, NOS [T-Y1600]	MDC_TRUNK_BUTTOCK	1668
Trunk Buttock, Left Body	Trunk, Buttock, NOS, Left [T-Y1600-LFT]	MDC_TRUNK_BUTTOCK_L	1669
Trunk Buttock, Right Body	Trunk, Buttock, NOS, Right [T-Y1600-RGT]	MDC_TRUNK_BUTTOCK_R	1670
Trunk Diaphragm, NOS Body	Trunk, Diaphragm, NOS [T-Y2400]	MDC_TRUNK_DIAPHRAGM	1672
Trunk Diaphragm, Left Body	Trunk, Diaphragm, NOS, Left [T-Y2400-LFT]	MDC_TRUNK_DIAPHRAGM_L	1673
Trunk Diaphragm, Right Body	Trunk, Diaphragm, NOS, Right [T-Y2400-RGT]	MDC_TRUNK_DIAPHRAGM_R	1674
Trunk Hip, NOS Body	Trunk, Hip, NOS [T-Y1500]	MDC_TRUNK_HIP	1676
Trunk Hip, Left Body	Trunk, Hip, NOS, Left [T-Y1500-LFT]	MDC_TRUNK_HIP_L	1677
Trunk Hip, Right Body	Trunk, Hip, NOS, Right [T-Y1500-RGT]	MDC_TRUNK_HIP_R	1678
Trunk InguinalRegion, NOS Body	Trunk, Inguinal region, NOS [T-Y7000]	MDC_TRUNK_INGUINAL_REGION	1680
Trunk InguinalRegion , Left Body	Trunk, Inguinal region, NOS, Left [T-Y7000-LFT]	MDC_TRUNK_INGUINAL_REGION_L	1681
Trunk InguinalRegion , Right Body	Trunk, Inguinal region, NOS, Right [T-Y7000-RGT]	MDC_TRUNK_INGUINAL_REGION_R	1682
Trunk Intragastric Body	Intragastric [T-6X320] (e.g., for miscellaneous measurements, e.g., pH)	MDC_TRUNK_INTRAGASTRIC	1684
Trunk LumbarRegion, NOS Body	Trunk, Lumbar region [T-Y1300]	MDC_TRUNK_LUMBAR_REGION	1688
Trunk LumbarRegion, Left Body	Trunk, Lumbar region, Left [T-Y1300-LFT]	MDC_TRUNK_LUMBAR_REGION_L	1689

Table A.8.8.1—Nomenclature and codes for miscellaneous body sites used in vital signs monitoring and measurement (continued)

Systematic name	Description/Definition	Reference ID	Code
Trunk LumbarRegion, Right Body	Trunk, Lumbar region, Right [T-Y1300-RGT]	MDC_TRUNK_LUMBAR_REGION_R	1690
Trunk Oesophagus Body	Oesophagus, NOS [T-62000] (e.g., for contractility measurement)	MDC_TRUNK_ESOPH	1692
Trunk Pelvis, NOS Body	Trunk, Pelvis, NOS [T-Y6000]	MDC_TRUNK_PELV	1696
Trunk Pelvis, Left Body	Trunk, Pelvis, NOS, Left [T-Y6000-LFT]	MDC_TRUNK_PELV_L	1697
Trunk Pelvis, Right Body	Trunk, Pelvis, NOS, Right [T-Y6000-RGT]	MDC_TRUNK_PELV_R	1698
Trunk Pelvis, NOS Body, Drainage	Pelvis [T-Y6224] (e.g., for surgical drainage)	MDC_TRUNK_PELV_SURG_DRNG	1700
Trunk Pelvis, Left Body, Drainage	Pelvis, Left [T-Y6224-LFT] (e.g., for surgical drainage)	MDC_TRUNK_PELV_SURG_DRNG_L	1701
Trunk Pelvis, Right Body, Drainage	Pelvis, Right [T-Y6224-RGT] (e.g., for surgical drainage)	MDC_TRUNK_PELV_SURG_DRNG_R	1702
Trunk Perineum, NOS Body	Trunk., Perineum, NOS [T-Y1700]	MDC_TRUNK_PERINEUM	1704
Trunk Perineum, Left Body	Trunk., Perineum, NOS, Left [T-Y1700-LFT]	MDC_TRUNK_PERINEUM_L	1705
Trunk Perineum, Right Body	Trunk., Perineum, NOS, Right [T-Y1700-RGT]	MDC_TRUNK_PERINEUM_R	1706
Trunk Pleura, ChestWall, Apical, NOS Body	Pleura and chestwall, apical [Pleura and chestwall, NOS, T-29950] (e.g., for surgical drainage)	MDC_TRUNK_PLEURA_CHESTWALL_APICAL	2040
Trunk Pleura, ChestWall, Apical, Left Body	Pleura and chestwall, apical, Left [Pleura and chestwall, Left, T-29950-LFT] (e.g., for surgical drainage)	MDC_TRUNK_PLEURA_CHESTWALL_APICAL_L	2041
Trunk Pleura, ChestWall, Apical, Right Body	Pleura and chestwall, apical, Right [Pleura and chestwall, Right, T-29950-RGT] (e.g., for surgical drainage)	MDC_TRUNK_PLEURA_CHESTWALL_APICAL_R	2042
Trunk Pleura, ChestWall, Basal, NOS Body	Pleura and chestwall, basal [Pleura and chestwall, NOS, T-29950] (e.g., for surgical drainage)	MDC_TRUNK_PLEURA_CHESTWALL_BASAL	2044
Trunk Pleura, ChestWall, Basal, Left Body	Pleura and chestwall, basal, Left [Pleura and chestwall, Left, T-29950-LFT] (e.g., for surgical drainage)	MDC_TRUNK_PLEURA_CHESTWALL_BASAL_L	2045
Trunk Pleura, ChestWall, Basal, Right Body	Pleura and chestwall, basal, Right [Pleura and chestwall, Right, T-29950-RGT] (e.g., for surgical drainage)	MDC_TRUNK_PLEURA_CHESTWALL_BASAL_R	2046
Trunk SacrococcygealRegion, NOS Body	Trunk, Sacrococcygeal region [T-Y1400]	MDC_TRUNK_SACROSOCYCG_REGION	1712
Trunk SacrococcygealRegion, Left Body	Trunk, Sacrococcygeal region [T-Y1400-LFT]	MDC_TRUNK_SACROSOCYCG_REGION_L	1713

Table A.8.8.1—Nomenclature and codes for miscellaneous body sites used in vital signs monitoring and measurement (continued)

Systematic name	Description/Definition	Reference ID	Code
Trunk SacrococcygealRegion, Right Body	Trunk, Sacrococcygeal region, Right [T-Y1400-RGT]	MDC_TRUNK_SACROSOCYGE_REGION_R	1714
Trunk ScapularRegion, NOS Body	Trunk, Scapular region of back [T-Y1200]	MDC_TRUNK_SCAP_REGION	1716
Trunk ScapularRegion, Left Body	Trunk, Scapular region of back, Left [T-Y1200-LFT]	MDC_TRUNK_SCAP_REGION_L	1717
Trunk ScapularRegion, Right Body	Trunk, Scapular region of back, Right [T-Y1200-RGT]	MDC_TRUNK_SCAP_REGION_R	1718
Trunk Thorax, NOS Body	Trunk, Thorax NOS [T-Y2100]	MDC_TRUNK_THORAX	1720
Trunk Thorax, Left Body	Trunk, Thorax, NOS, Left [Left Thorax, T-Y2120]	MDC_TRUNK_THORAX_L	1721
Trunk Thorax, Right Body	Trunk, Thorax, NOS, Right [Right Thorax, T-Y2110]	MDC_TRUNK_THORAX_R	1722
Trunk Transesophageal Body	Transesophageal [T-62200] (e.g., for miscellaneous measurements, e.g., Echo)	MDC_TRUNK_TRANSESOPH	1724
Trunk Ureter, NOS Body	Ureter [T-73000] (e.g., for surgical drainage)	MDC_TRUNK_URETER	1728
Trunk Ureter, Left Body	Ureter, Left [Left ureter, T-73020] (e.g., for surgical drainage)	MDC_TRUNK_URETER_L	1729
Trunk Ureter, Right Body	Ureter, Right [Right ureter, T-73010] (e.g., for surgical drainage)	MDC_TRUNK_URETER_R	1730
UpperExtremity NOS Body	Upper extremity, NOS [T-Y8000]	MDC_UPEXT	1732
UpperExtremity Left Body	Upper extremity, NOS, Left [T-Y8000-LFT]	MDC_UPEXT_L	1733
UpperExtremity Right Body	Upper extremity, NOS, Right [T-Y8000-RGT]	MDC_UPEXT_R	1734
UpperExtremity AntecubitalRegion, NOS Body	Upper extremity, Antecubital region [T-Y8400]	MDC_UPEXT_ANTECUBITAL_REGION	1736
UpperExtremity AntecubitalRegion, Left Body	Upper extremity, Antecubital region, Left [T-Y8400-LFT]	MDC_UPEXT_ANTECUBITAL_REGION_L	1737
UpperExtremity AntecubitalRegion, Right Body	Upper extremity, Antecubital region, Right [T-Y8400-RGT]	MDC_UPEXT_ANTECUBITAL_REGION_R	1738
UpperExtremity Axilla, NOS Body	Upper extremity, Axilla, NOS [T-Y8100]	MDC_UPEXT_AXILLA	1740
UpperExtremity Axilla, Left Body	Upper extremity, Axilla, NOS, Left [T-Y8100-LFT]	MDC_UPEXT_AXILLA_L	1741
UpperExtremity Axilla, Right Body	Upper extremity, Axilla, NOS, Right [T-Y8100-RGT]	MDC_UPEXT_AXILLA_R	1742

Table A.8.8.1—Nomenclature and codes for miscellaneous body sites used in vital signs monitoring and measurement (continued)

Systematic name	Description/Definition	Reference ID	Code
UpperExtremity Elbow, NOS Body	Upper extremity, Elbow, NOS [T-Y8300]	MDC_UPEXT_ELBOW	1744
UpperExtremity Elbow, Left Body	Upper extremity, Elbow, NOS, Left [Left elbow, T-Y8320]	MDC_UPEXT_ELBOW_L	1745
UpperExtremity Elbow, Right Body	Upper extremity, Elbow, NOS, Right [Right elbow, T-Y8310]	MDC_UPEXT_ELBOW_R	1746
UpperExtremity Finger, NOS Body	Upper extremity, Finger, NOS [T-Y8800] (e.g., for oximetric measurement)	MDC_UPEXT_FINGER	1748
UpperExtremity Finger, Left Body	Upper extremity, Finger, NOS, Left [T-Y8800-LFT] (e.g., for oximetric measurement)	MDC_UPEXT_FINGER_L	1749
UpperExtremity Finger, Right Body	Upper extremity, Finger, NOS, Right [T-Y8800-RGT] (e.g., for oximetric measurement)	MDC_UPEXT_FINGER_R	1750
UpperExtremity Finger, Index, NOS Body	Upper extremity, Index finger, NOS [T-Y8820]	MDC_UPEXT_FINGER_INDEX	1752
UpperExtremity Finger, Index, Left Body	Upper extremity, Index finger, NOS, Left [T-Y8820-LFT]	MDC_UPEXT_FINGER_INDEX_L	1753
UpperExtremity Finger, Index, Right Body	Upper extremity, Index finger, NOS, Right [Right, T-Y8820-RGT]	MDC_UPEXT_FINGER_INDEX_R	1754
UpperExtremity Finger, Little, NOS Body	Upper extremity, Little finger, NOS [T-Y8850]	MDC_UPEXT_FINGER_LITTLE	1756
UpperExtremity Finger, Little, Left Body	Upper extremity, Little finger, NOS, Left [T-Y8850-LFT]	MDC_UPEXT_FINGER_LITTLE_L	1757
UpperExtremity Finger, Little, Right Body	Upper extremity, Little finger, NOS, Right [T-Y8850-RGT]	MDC_UPEXT_FINGER_LITTLE_R	1758
UpperExtremity Finger, Middle, NOS Body	Upper extremity, Middle finger, NOS [T-Y8830]	MDC_UPEXT_FINGER_MIDDLE	1760
UpperExtremity Finger, Middle, Left Body	Upper extremity, Middle finger, NOS, Left [T-Y8830-LFT]	MDC_UPEXT_FINGER_MIDDLE_L	1761
UpperExtremity Finger, Middle, Right Body	Upper extremity, Middle finger, NOS, Right [T-Y8830-RGT]	MDC_UPEXT_FINGER_MIDDLE_R	1762
UpperExtremity Finger, Ring, NOS Body	Upper extremity, Ring finger, NOS [T-Y8840]	MDC_UPEXT_FINGER_RING	1764
UpperExtremity Finger, Ring, Left Body	Upper extremity, Ring finger, NOS, Left [T-Y8840-LFT]	MDC_UPEXT_FINGER_RING_L	1765
UpperExtremity Finger, Ring, Right Body	Upper extremity, Ring finger, NOS, Right [T-Y8840-RGT]	MDC_UPEXT_FINGER_RING_R	1766

Table A.8.8.1—Nomenclature and codes for miscellaneous body sites used in vital signs monitoring and measurement (continued)

Systematic name	Description/Definition	Reference ID	Code
UpperExtremity Forearm, NOS Body	Upper extremity, Forearm, NOS [T-Y8500]	MDC_UPEXT_FOREARM	1768
UpperExtremity Forearm, Left Body	Upper extremity, Forearm, NOS, Left [Left forearm, T-Y8520]	MDC_UPEXT_FOREARM_L	1769
UpperExtremity Forearm, Right Body	Upper extremity, Forearm, NOS, Right [Right forearm, T-Y8510]	MDC_UPEXT_FOREARM_R	1770
UpperExtremity Hand, NOS Body	Upper extremity, Hand, NOS [T-Y8700]	MDC_UPEXT_HAND	1772
UpperExtremity Hand, Left Body	Upper extremity, Hand, NOS, Left [Left hand, T-Y8720]	MDC_UPEXT_HAND_L	1773
UpperExtremity Hand, Right Body	Upper extremity, Hand, NOS, Right [Right hand, T-Y8710]	MDC_UPEXT_HAND_R	1774
UpperExtremity Finger, Thumb, NOS Body	Upper extremity, Thumb, NOS [T-Y8810]	MDC_UPEXT_THUMB	1776
UpperExtremity Finger, Thumb, Left Body	Upper extremity, Thumb, NOS, Left [T-Y8810-LFT]	MDC_UPEXT_THUMB_L	1777
UpperExtremity Finger, Thumb, Right Body	Upper extremity, Thumb, NOS, Right [T-Y8810-RGT]	MDC_UPEXT_THUMB_R	1778
UpperExtremity UpperArm, NOS Body	Upper extremity, Upper arm, NOS [T-Y8200]	MDC_UPEXT_ARM_UPPER	1780
UpperExtremity UpperArm, Left Body	Upper extremity, Upper arm, NOS, Left [Left upper arm, T-Y8220]	MDC_UPEXT_ARM_UPPER_L	1781
UpperExtremity UpperArm, Right Body	Upper extremity, Upper arm, NOS, Right [Right upper arm, T-Y8210]	MDC_UPEXT_ARM_UPPER_R	1782
UpperExtremity Wrist, NOS Body	Upper extremity, Wrist, NOS [T-Y8600]	MDC_UPEXT_WRIST	1784
UpperExtremity Wrist, Left Body	Upper extremity, Wrist, NOS, Left [Left wrist, T-Y8620]	MDC_UPEXT_WRIST_L	1785
UpperExtremity Wrist, Right Body	Upper extremity, Wrist, NOS, Right [Right wrist, T-Y8610]	MDC_UPEXT_WRIST_R	1786
Vein Bulb, Jugular, NOS Body	Internal jugular vein, superior bulb [T-48171] (e.g., for oximetric measurement)	MDC_VEIN_JUGULAR_BULB	1788
Vein Bulb, Jugular, Left Body	Internal jugular vein, superior bulb, Left [T-48171-LFT] (e.g., for oximetric measurement)	MDC_VEIN_JUGULAR_BULB_L	1789
Vein Bulb, Jugular, Right Body	Internal jugular vein, superior bulb, Right [T-48171-RGT] (e.g., for oximetric measurement)	MDC_VEIN_JUGULAR_BULB_R	1790
Vein Cava, Inferior Body	Vena cava inferior [T-48710] (e.g., for fluid therapy)	MDC_VEIN_CAVA_INF	1792

Table A.8.8.1—Nomenclature and codes for miscellaneous body sites used in vital signs monitoring and measurement (continued)

Systematic name	Description/Definition	Reference ID	Code
Vein Cava, Superior Body	Vena cava superior [T-48610] (e.g., for fluid therapy)	MDC_VEIN_CAVA_SUP	1796
Vein Hand, Back, NOS Body	Back of the hand (e.g., for fluid therapy)	MDC_VEIN_HAND_BACK	1800
Vein Hand, Back, Left Body	Back of the hand, Left (e.g., for fluid therapy)	MDC_VEIN_HAND_BACK_L	1801
Vein Hand, Back, Right Body	Back of the hand, Right (e.g., for fluid therapy)	MDC_VEIN_HAND_BACK_R	1802
Vein Peripheral, NOS Body	Peripheral venous vessel (e.g., for fluid therapy)	MDC_VEIN_PERIPHERAL	1804
Vein Peripheral, Left Body	Peripheral venous vessel, Left (e.g., for fluid therapy)	MDC_VEIN_PERIPHERAL_L	1805
Vein Peripheral, Right Body	Peripheral venous vessel, Right (e.g., for fluid therapy)	MDC_VEIN_PERIPHERAL_R	1806
Vein Umbilicalis, NOS Child Body	Vena umbilicalis [T-49062] (child) (e.g., for fluid therapy)	MDC_VEIN_UMBILICAL_CHILD	1808
Vein Umbilicalis, Left Child Body	Vena umbilicalis, Left [T-49062-LFT] (child) (e.g., for fluid therapy)	MDC_VEIN_UMBILICAL_CHILD_L	1809
Vein Umbilicalis, Right Child Body	Vena umbilicalis, Right [T-49062-RGT] (child) (e.g., for fluid therapy)	MDC_VEIN_UMBILICAL_CHILD_R	1810

A.8.9 Qualifiers of body site locations

A.8.9.1 Introduction

Subclause A.8.9 holds nomenclature for more precise specification of body sites. Items included in Table A.8.9.1 can be used in the attribute Body-Site-List in the Metric object of the DIM. These items are used alone in this attribute, in case the body site location is specified in the measurement item itself, e.g., Pressure | Systolic | Blood | LeftVentricle | CVS. The attribute Body-Site-List in the Metric object can also be filled by a body site location and a body site qualifier, if the location is not specified in the measurement itself.

A.8.9.2 Base concept

One base concept is applicable:

- **Qualifier**

A.8.9.3 First set of differentiating criteria

The second field of systematic name refers to the measurement features.

A.8.9.3.1 Semantic link "*has relative position:*"

Applicable descriptors are as follows:

- **Anterior**
- **Bilateral**
- **Deep**
- **Distal**
- **Inferior**
- **Intermediate**
- **Medial**
- **Midline**
- **Lateral**
- **Left**
- **Posterior**
- **Proximal**
- **Right**
- **Superficial**
- **Superior**

A.8.9.3.2 Semantic link: "*describes portion of muscle:*"

Applicable descriptors are as follows:

- **Belly**
- **Insertion**

A.8.9.3.3 Semantic link "*describes portion of nerve:*"

Applicable descriptors are as follows:

- **CNS_Connection**

- **Root**

A.8.9.3.4 Semantic link "*relates to*:"

The descriptor is as follows:

- **Site**

A.8.9.4 Second set of differentiating criteria

The third fields of the systematic name describes the target of measurement.

A.8.9.4.1 Semantic link "*concerns*:"

Applicable descriptors are as follows:

- **Arm**
- **Forearm**
- **Leg**
- **Muscle**
- **Nerve**
- **Thigh**

A.8.9.5 Third set of differentiating criteria

The fourth field holds the information about the context, i.e., the functional or organic system for which the term is relevant

A.8.9.5.1 Semantic link "*pertains to*:"

There is only one descriptor:

- **Body**

A.8.9.6 Code table

See Table A.8.9.1 for the nomenclature and codes for qualifiers of body site locations.

Table A.8.9.1—Nomenclature and codes for qualifiers of body site locations

Systematic name	Common term	Description/Definition	Reference ID	Code
Qualifier Site, Bilateral Body	Bilateral	Bilateral of an otherwise defined location	MDC_BS_QUAL_BILATERAL	8193
Qualifier Site, Left Body	Left	Left of an otherwise defined location	MDC_BS_QUAL_LEFT	8194
Qualifier Site, Midline Body	Midline	Midline of an otherwise defined location	MDC_BS_QUAL_MIDLINE	8195
Qualifier Site, Right Body	Right	Right of an otherwise defined location	MDC_BS_QUAL_RIGHT	8196
Qualifier Site, High Body	High	High of an otherwise defined location	MDC_BS_QUAL_HIGH	8197
Qualifier Site, Low Body	Low	Low of an otherwise defined location	MDC_BS_QUAL_LOW	8198
Qualifier Site, Mid Body	Mid	Mid of an otherwise defined location	MDC_BS_QUAL_MID	8199
Qualifier Site, Anterior Body	Anterior	Anterior of an otherwise defined location	MDC_BS_QUAL_ANTERIOR	8201
Qualifier Site, Inferior Body	Inferior	Inferior of an otherwise defined location	MDC_BS_QUAL_INFERIOR	8202
Qualifier Site, Posterior Body	Posterior	Posterior of an otherwise defined location	MDC_BS_QUAL_POSTERIOR	8203
Qualifier Site, Superior Body	Superior	Superior of an otherwise defined location	MDC_BS_QUAL_SUPERIOR	8204
Qualifier Site, Lateral Body	Lateral	Lateral of an otherwise defined location	MDC_BS_QUAL_LATERAL	8205
Qualifier Site, Medial Body	Medial	Medial of an otherwise defined location	MDC_BS_QUAL_MEDIAL	8206
Qualifier Site, Distal Body	Distal	Distal of an otherwise defined location	MDC_BS_QUAL_DISTAL	8207
Qualifier Site, Intermediate Body	Intermediate	Intermediate of an otherwise defined location	MDC_BS_QUAL_INTERMED	8208
Qualifier Site, Proximal Body	Proximal	Proximal of an otherwise defined location	MDC_BS_QUAL_PROXIMAL	8209
Qualifier Site, Deep Body	Deep	Deep	MDC_BS_QUAL_DEEP	8210
Qualifier Site Superficial Body	Superficial	Superficial	MDC_BS_QUAL_SUPERFICIAL	8211
Qualifier Site Belly, Muscle Body	Belly	Belly of muscle	MDC_BS_QUAL_MUSCLE_BELLY	8256
Qualifier Site Insertion, Muscle Body	Insertion	Insertion of muscle	MDC_BS_QUAL_MUSCLE_INSERTION	8257
Qualifier Site CNS_Connection, Nerve Body	CNS connection	CNS connection of nerve (CNS site, associated with a nerve, e.g., for evoked potentials caused by stimulation of that nerve)	MDC_BS_QUAL_NERVE_CNS_CONNECTION	8258

Table A.8.9.1—Nomenclature and codes for qualifiers of body site locations (continued)

Systematic name	Common term	Description/Definition	Reference ID	Code
Qualifier Site Root, Nerve Body	Root portion	Root portion of nerve	MDC_BS_QUAL_NERVE_ROOT	8259
Qualifier Site, Proximal Arm Body	Proximal arm portion	Proximal arm portion of nerve	MDC_BS_QUAL_NERVE_PROXIMAL_ARM	8260
Qualifier Site, Intermediate Arm Body	Intermediate arm portion	Intermediate arm portion of nerve	MDC_BS_QUAL_NERVE_INTERMED_ARM	8261
Qualifier Site, Distal Arm Body	Distal arm portion	Distal arm portion of nerve	MDC_BS_QUAL_NERVE_DISTAL_ARM	8262
Qualifier Site, Proximal Forearm Body	Proximal forearm portion	Proximal forearm portion of nerve	MDC_BS_QUAL_NERVE_PROXIMAL_FOREARM	8263
Qualifier Site, Intermediate Forearm Body	Intermediate forearm portion	Intermediate forearm portion of nerve	MDC_BS_QUAL_NERVE_INTERMED_FOREARM	8264
Qualifier Site, Distal Forearm Body	Distal forearm portion	Distal forearm portion of nerve	MDC_BS_QUAL_NERVE_DISTAL_FOREARM	8265
Qualifier Site, Proximal Thigh Body	Proximal thigh portion	Proximal thigh portion of nerve	MDC_BS_QUAL_NERVE_PROXIMAL_THIGH	8266
Qualifier Site, Intermediate Thigh Body	Intermediate thigh portion	Intermediate thigh portion of nerve	MDC_BS_QUAL_NERVE_INTEMED_THIGH	8267
Qualifier Site, Distal Thigh Body	Distal thigh portion	Distal thigh portion of nerve	MDC_BS_QUAL_NERVE_DISTAL_THIGH	8268
Qualifier Site, Proximal Leg Body	Proximal leg portion	Proximal leg portion of nerve	MDC_BS_QUAL_NERVE_PROXIMAL_LEG	8269
Qualifier Site, Intermediate Leg Body	Intermediate leg portion	Intermediate leg portion of nerve	MDC_BS_QUAL_NERVE_INTERMED_LEG	8270
Qualifier Site, Distal Leg Body	Distal leg portion	Distal leg portion of nerve	MDC_BS_QUAL_NERVE_DISTAL_LEG	8271

A.9 Nomenclature, data dictionary, and codes for alerts (Block E)

A.9.1 Introduction

Clause A.9 presents a nomenclature for systematic names for events in physiologic monitoring. Every item in the event tables (i.e., Table A.9.2.1 and Table A.9.3.1) is an event that may become an alert. In both cases (i.e., event or alert), the occurrence is handled by one of the objects in the Alert Package of the DIM, depending on the implementation. The systematic names are grouped in two tables:

- Table A.9.2.1 holds systematic names concerning patient-oriented events that are derived from physiologic signals, e.g., ECG, EEG. These events are triggered if specific diagnostic patterns are observed in the physiologic signal. These events are called *PatternEvent*. (See A.9.2.)
- Table A.9.3.1 holds systematic names concerning events that are more device-orientated. These events are fired if an error condition occurs in a device itself, in its environment, or in the resulting data. These events are called *ErrorEvent* or *LimitEvent* (if a limit is hurt). Another type of event, *SynchronizationEvent*, is used for synchronizing devices or processes. Yet another type of event, *Advisory*, is used for warnings and instructions to the user, e.g., "calibration necessary." (See A.9.3.)

A.9.2 Diagnostic pattern events

A.9.2.1 Base concepts

The following base concepts describe the condition in a measurement leading to an event:

- **LimitEvent**
- **Status**
- **PatternEvent**

A.9.2.2 First set of differentiating criteria

The second field of the systematic name refers to the measurement features.

A.9.2.2.1 Semantic link "concerns:"

Applicable descriptors are as follows:

- **Apnea**
- **AssistedSpontBreathing**
- **BreathSpontaneous**
- **Concentration**
- **Contraction**
- **Discharge**
- **Extrasystoles**
- **HighLimit**
- **MachineGeneratedBreath**
- **Oxygen**
- **Pacer**
- **Rate**
- **Rhythm**
- **Status**

- Volume
- VolumeExhale

A.9.2.2.2 Semantic link "*has origin*:"

Applicable descriptors are as follows:

- Atrial
- Junctional
- Sinus
- SupraVentricular
- Ventricular

A.9.2.2.3 Semantic link: "*has diagnostic type*:"

The following group describes the type of an ECG alert:

- Asystole
- AV_Block
- Bigeminus
- Bradycardia
- Couplet
- Fibrillation
- Flutter
- Irregular
- MissedBeat
- Multifomed
- Paroxysmal
- Premature
- R-on-T
- Tachycardia
- Trigemini

The following group describes the type of an EEG alert:

- ClinicalSeizure
- Epileptiform
- SharpSpikes
- SpikeAndWaves

A.9.2.2.4 Semantic link "*has specification*:"

Applicable descriptors are as follows:

- 2:1
- 3:1
- 4:1
- Desaturation
- Escalation
- Extreme

- **Frequent**
- **Grade1**
- **Grade2**
- **Grade3**
- **Paced**
- **Pair**
- **Sensed**
- **Run**

A.9.2.2.5 Semantic link "*has error condition*:"

Applicable descriptors are as follows:

- **Artifact**
- **Error**
- **NotCaptured**
- **NotConstant**
- **NotSensing**

A.9.2.3 Second set of differentiating criteria

The third field of the systematic name describes the target of measurement.

A.9.2.3.1 Semantic link "*concerns*:"

Descriptors for the organ are as follows:

- **Cortex**
- **Heart**

Descriptors for the physiologic signal are as follows:

- **ECG**
- **EEG**

A.9.2.4 Third set of differentiating criteria

The fourth field holds the information about the context, i.e., the functional or organic system for which the term is relevant.

A.9.2.4.1 Semantic link "*pertains to*:"

The following descriptors are possible:

- **CNS**
- **CVS**
- **Respiration**
- **Ventilator**

A.9.2.5 Code table

See Table A.9.2.1 for the nomenclature and codes for pattern events.

Table A.9.2.1—Nomenclature and codes for pattern events

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
ErrorEvent Heart, Rate, Irregular Heart, ECG CVS	Irregular heart rate		Error Event: Irregular heart rate (which means the beat detector finds a highly variable heart rate and cannot derive a consistent/stable value)	MDC_EVT_ECG_CARD_BEAT_RATE_IRREG	3158
LimitEvent Apnea Respiration	Apnea		No breathing within a pre-configured time span	MDC_EVT_APNEA	3072
LimitEvent Apnea, Pressure Respiration	Apnea		Apnea - pressure absent for 15 seconds	MDC_EVT_VENT_RESP_APNEA_15_SEC	3284
LimitEvent Apnea, VolumeExhale Respiration	Apnea		Apnea - no volume exhale for 30 seconds	MDC_EVT_VENT_RESP_APNEA_30_SEC	3292
LimitEvent AssistedSpontBreathing Respiration	ASB > x sec		Assisted spontaneous breathing longer than a predefined time span (PSW)	MDC_EVT_RESP_BREATHING_SPONT_ASSIST_PSW	3278
LimitEvent Bradycardia, Extreme Heart, ECG CVS	Extreme bradycardia		Limit Event: Extreme Bradycardia (escalated low HR limit, not a brady rhythm)	MDC_EVT_ECG_BRADY_EXTREME	3086
LimitEvent Concentration, Oxygen, Desaturation Respiration	Desaturation		Limit Event: Desaturation (escalated low oxygen alarm, used esp. in neonatal)	MDC_EVT_DESAT	3246
LimitEvent Extrasystoles, Contraction, Ventricular, Premature, HighLimit Heart, ECG CVS	PVC rate alarm		A specific limit alert on the PVC rate	MDC_EVT_ECG_V_P_C_RATE	3252
LimitEvent Rhythm, Asystole Heart, ECG CVS	Asystole		No QRS-complex found in predefined time period	MDC_EVT_ECG_ASYSTOLE	3076
LimitEvent Tachycardia, Extreme Heart, ECG CVS	Extreme tachycardia		Limit Event: Extreme Tachycardia (escalated high HR limit, not a tachy rhythm)	MDC_EVT_ECG_TACHY_EXTREME	3122
PatternEvent Heart, ECG CVS	Arrhythmia event		Unspecified ECG (arrhythmia) event	MDC_EVT_ECG_ARRHY	3266
PatternEvent Extrasystoles, Contraction, Atrial, Premature Heart, ECG CVS		PAC	Premature atrial contraction	MDC_EVT_ECG_ATR_P_C	3130
PatternEvent Discharge, ClinicalSeizure Cortex, EEG CNS	Clinical seizure discharge		Clinical seizure discharge in EEG	MDC_EVT_EEG_DISCHG_SEIZ_CLIN	3264
PatternEvent Discharge, Epileptiform Cortex, EEG CNS	Epileptiform discharges		Epileptiform discharges in EEG	MDC_EVT_EEG_DISCHG_EPILEPTIFORM	3268

Table A.9.2.1—Nomenclature and codes for pattern events (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
PatternEvent Extrasystoles, Contraction, Supraventricular, Premature Heart, ECG CVS		SPVC	Supraventricular extrasystole	MDC_EVT_ECG_SV_P_C	3190
PatternEvent Extrasystoles, Contraction, Supraventricular, Premature, Frequent Heart, ECG CVS		FSPVC	Frequent supraventricular extrasystoles	MDC_EVT_ECG_SV_P_C_FREQ	3290
PatternEvent Extrasystoles, Contraction, Supraventricular, Premature, Run Heart, ECG CVS		RUN S	Several consecutive supraventricular extrasystoles	MDC_EVT_ECG_SV_P_C_RUN	3248
PatternEvent Extrasystoles, Contraction, Ventricular, Premature Heart, ECG CVS		PVC	Premature ventricular contraction	MDC_EVT_ECG_V_P_C	3204
PatternEvent Extrasystoles, Contraction, Ventricular, Premature, Frequent Heart, ECG CVS		FPVC	Frequent premature ventricular contractions	MDC_EVT_ECG_V_P_C_FREQ	3274
PatternEvent Extrasystoles, Contraction, Ventricular, Premature, Multiformed Heart, ECG CVS		MFPVC	Multiformed premature ventricular contractions	MDC_EVT_ECG_V_P_C_MULTIFORM	3208
PatternEvent Extrasystoles, Contraction, Ventricular, Premature, R-on-T Heart, ECG CVS		RTPVC	Premature ventricular contraction, R-on-T	MDC_EVT_ECG_V_P_C_RonT	3206
PatternEvent Extrasystoles, Contraction, Ventricular, Premature, Run Heart, ECG CVS		RUN V	Several consecutive ventricular extrasystoles	MDC_EVT_ECG_V_P_C_RUN	3212
PatternEvent Extrasystoles, Contraction, Ventricular, Premature, Pair Heart, ECG CVS	Pair of PVCs		Pair of premature ventricular contractions	MDC_EVT_ECG_V_P_C_PAIR	3210
PatternEvent Extrasystoles, Contraction, Ventricular, Premature, Run, Escalation Heart, ECG CVS	Escalation of run of PVC		Ventricular rhythm: escalation of Run of PVC, not yet flutter	MDC_EVT_ECG_V_P_C_RHY	3220

Table A.9.2.1—Nomenclature and codes for pattern events (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
PatternEvent Extrasystoles, Ventricular, Bigeminus Heart, ECG CVS	Ventricular bigemini		Ventricular bigemini: a specific rhythm	MDC_EVT_ECG_BIGEM	3082
PatternEvent Extrasystoles, Ventricular, Trigemini Heart, ECG CVS	Ventricular trigemini		Ventricular trigemini: a specific rhythm	MDC_EVT_ECG_V_TRIGEM	3236
PatternEvent MissedBeat Heart, ECG CVS	Missed beat		Missed beat within some regular ECG rhythm	MDC_EVT_ECG_BEAT_MISSED	3078
PatternEvent Pacer, Artifact Heart, ECG CVS	Pacer artifact		Pacer artifact recognized	MDC_EVT_ECG_PACER_ARTIF_RECOG	3294
PatternEvent Pacer, Error Heart, ECG CVS	Not paced		No pacer detected	MDC_EVT_ECG_PACER_ABSENT	3286
PatternEvent Pacer, NotCaptured Heart, ECG CVS		PACENC	Pacer not captured (not recognized by heart)	MDC_EVT_ECG_PACING_NON_CAPT	3102
PatternEvent Pacer, NotSensing Heart, ECG CVS		PACENS	Pacer (device) not sensing	MDC_EVT_ECG_PACER_NOT_PACING	3182
PatternEvent Pacer, Sensed Heart, ECG CVS	Pacing event		Pacer pulse sensed by heart	MDC_EVT_ECG_PACED_BEAT	3096
PatternEvent Rhythm, Atrial, Tachycardia Heart, ECG CVS	ATACH		Atrial tachycardia	MDC_EVT_ECG_ATR_TACHY	3136
PatternEvent Rhythm, AV_Block, 2:1 Heart, ECG CVS	2:1BLK		2:1 AV block	MDC_EVT_ECG_AV_HEART_BLK_DEG_2_1	3280
PatternEvent Rhythm, AV_Block, 3:1 Heart, ECG CVS	3:1BLK		3:1 AV block	MDC_EVT_ECG_AV_HEART_BLK_DEG_3_1	3282
PatternEvent Rhythm, AV_Block, 4:1 Heart, ECG CVS	4:1BLK		4:1 AV block	MDC_EVT_ECG_AV_HEART_BLK_DEG_4_1	3288
PatternEvent Rhythm, AV_Block, Grade1 Heart, ECG CVS	1AVBLK		AV block 1°	MDC_EVT_ECG_AV_HEART_BLK_DEG_1	3146
PatternEvent Rhythm, AV_Block, Grade2 Heart, ECG CVS	2AVBLK		AV block 2°	MDC_EVT_ECG_AV_HEART_BLK_DEG_2	3148

Table A.9.2.1—Nomenclature and codes for pattern events (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
PatternEvent Rhythm, AV Block, Grade3 Heart, ECG CVS	3AVBLK		AV block 3.°	MDC_EVT_ECG_AV_HEART_BLK_DEG_3	3258
PatternEvent Rhythm, Bradycardia Heart, ECG CVS		BRADY	Bradycardia	MDC_EVT_ECG_SINUS_BRADY	3084
PatternEvent Rhythm, Couplet Heart, ECG CVS		CPLT	Couplet	MDC_EVT_ECG_RHY_CPLT	3272
PatternEvent Rhythm, Fibrillation, Atrial Heart, ECG CVS		AFIB	Atrial fibrillation	MDC_EVT_ECG_ATR_FIB	3128
PatternEvent Rhythm, Fibrillation, Ventricular Heart, ECG CVS		VFIB	Ventricular fibrillation	MDC_EVT_ECG_V_FIB	3198
PatternEvent Rhythm, Flutter, Atrial Heart, ECG CVS		AFLT	Atrial flutter	MDC_EVT_ECG_ATR_FLUT	3276
PatternEvent Rhythm, Irregular Heart, ECG CVS		IRREG	Irregular rhythm	MDC_EVT_ECG_RR_IRREG	3118
PatternEvent Rhythm, Junctional Heart, ECG CVS		JRHYT	Junctional rhythm	MDC_EVT_ECG_JUNC_RHY	3260
PatternEvent Rhythm, Tachycardia, Junctional Heart, ECG CVS		JTACH	Junctional tachycardia	MDC_EVT_ECG_JUNC_TACHY	3172
PatternEvent Rhythm, Tachycardia, Paroxysmal, Supraventricular Heart, ECG CVS		PSVT	Paroxysmal supraventricular tachycardia	MDC_EVT_ECG_JUNC_TACHY_PAROX	3174
PatternEvent Rhythm, Tachycardia, Sinus Heart, ECG CVS		STACH	Sinus tachycardia	MDC_EVT_ECG_SINUS_TACHY	3262
PatternEvent Rhythm, Tachycardia, Supraventricular Heart, ECG CVS	Supraventricular tachycardia		Supraventricular tachycardia	MDC_EVT_ECG_SV_TACHY	3192
PatternEvent Rhythm, Tachycardia, Ventricular Heart, ECG CVS		VTACH	Ventricular tachycardia	MDC_EVT_ECG_V_TACHY	3224
PatternEvent SharpSpikes Cortex, EEG CNS	Sharp spikes		Sharp spikes in EEG	MDC_EVT_EEG_SPK_SHARP	3270

Table A.9.2.1—Nomenclature and codes for pattern events (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
PatternEvent SpikeAndWaves Cortex, EEG CNS	Spikes and waves		Spikes and waves in EEG	MDC_EVT_EEG_SPK_AND_WV	3254
PatternEvent Volume, NotConstant Respiration	Vol inconst		Breathing volume not constant	MDC_EVT_RESP_VOL_BREATHING_IRREG	3256
Status BreathSpontaneous Ventilator	Spontaneous		Spontaneous breath of the patient, e.g., during weaning	MDC_EVT_STAT_VENT_BREATH_SPONT	20576
Status MachineGeneratedBreath Ventilator	Machine generated		Machine generated breath of the patient, e.g., during weaning	MDC_EVT_STAT_VENT_BREATH_MAND	20580
Status Pacer, Paced Heart, ECG CVS		Paced	Pacer operational and controlling heart rhythm	MDC_EVT_STAT_ECG_PACING	3098

A.9.3 Device-related and environment-related events

A.9.3.1 Base concepts

This group of base concepts describes the condition causing a device-related or environment-related event. The following descriptors are applicable:

- **Advisory**
- **ErrorEvent**
- **LimitEvent**
- **Status**
- **SynchronizationEvent**

A.9.3.2 First set of differentiating criteria

The second field of the systematic name refers to the measurement features.

A.9.3.2.1 Semantic link "*concerns device function:*"

Applicable descriptors are as follows:

- **Calibration**
- **DataAcquisition**
- **Measurement**
- **SignalProcessing**

A.9.3.2.2 Semantic link "*concerns communication:*"

Applicable descriptors are as follows:

- **DataSemantics**
- **DataSyntax**
- **Nomenclature**
- **Operation**
- **PreAlarm**
- **Protocol**
- **QualityOfService**
- **StateMachine**
- **Synchronization**
- **Syntax**
- **Tick**
- **Timing**
- **Version**

A.9.3.2.3 Semantic link "*concerns handling:*".

Applicable descriptors are as follows:

- **Configuration**
- **Position**
- **UserInput**

A.9.3.2.4 Semantic link "concerns material:"

Applicable descriptors are as follows:

- Air
- Agent
- CO₂
- Material
- O₂
- RecordingPaper

A.9.3.2.5 Semantic link "concerns measurement:"

Applicable descriptors are as follows:

- Inspiratory
- NIBP
- VolumeExhale
- Waveform

A.9.3.2.6 Semantic link "concerns environment:"

Applicable descriptors are as follows:

- AirSupply
- Door
- ElectricalPower
- GasSupply
- Humidity
- Lights
- Sound
- Temperature

A.9.3.2.7 Semantic link "concerns functional unit:"

Applicable descriptors are as follows:

- Airway
- Battery
- BreathingSystem
- CO₂Absorber
- CO₂Sensor
- CO₂Window
- Cooling
- Cuff
- Display
- DripCounter
- Enclosure
- ExpirationValve
- FlowSensor

- **GasMixer**
- **Lead**
- **Line**
- **Log**
- **Module**
- **PowerSupply**
- **Sensor**
- **SensorLine**
- **Syringe**
- **Transducer**
- **VaporIris**
- **Vaporizer**
- **WaterTrap**

A.9.3.2.8 Semantic link "*concerns physical property:*"

Applicable descriptors are as follows:

- **Concentration**
- **Flow**
- **Pressure**
- **Resistance**
- **Volume**

A.9.3.2.9 Semantic link "*concerns organ:*"

Applicable descriptors are as follows:

- **Heart**
- **Respiration**

A.9.3.2.10 Semantic link "*concerns signal:*"

The descriptor is as follows:

- **ECG**

A.9.3.2.11 Semantic link "*concerns operational mode:*"

Applicable descriptors are as follows:

- **Adult**
- **AssistedSpontaneousBreathing**
- **BatteryOperated**
- **Charging**
- **ComputerControlled**
- **Deflating**
- **Inflating**
- **Learning**
- **MainsOperated**

- **NotSelected**
- **Paediatric**
- **Running**
- **SighMode**
- **Standby**
- **Started**
- **Stopped**
- **TestMode**

A.9.3.2.12 Semantic link "*has specification*:"

Applicable descriptors are as follows:

- **Beep**
- **Blocked**
- **Closed**
- **DeliveryTime**
- **Inspiration**
- **Mode**
- **Off**
- **On**
- **Open**
- **PAW**
- **StandbyTimeElapsed**
- **TimeLimited**

A.9.3.2.13 Semantic link "*has error condition*:"

Several subgroups of descriptors exist. The following subgroup concerns measurement and data processing:

- **Artifact**
- **CalibrationNecessary**
- **CheckingNecessary**
- **Coincidence**
- **Disturbed**
- **GainAdjustmentRequired**
- **Interference**
- **LowSignal**
- **Noisy**
- **NoOscillation**
- **NoSignal**
- **NotCalibrated**
- **Overrange**
- **Range**
- **Rhythm**
- **Unanalyzable**
- **Weak**

The next subgroup of descriptors concerns processing resources and communication:

- **BufferOverflow**
- **Framing**
- **Inoperable**
- **Interrupted**
- **InvalidOperation**
- **MultipleReplyUnavailable**
- **Overflowed**
- **Parity**
- **ReceiverOverrun**
- **Recoverable**
- **ResourceUnavailable**
- **Unavailable**
- **Undefined**
- **Underflowed**
- **Unequal**
- **UnRecoverable**

The following subgroup of descriptors collects terms concerning mechanical parts, tubings, etc.:

- **Disconnection**
- **Empty**
- **Exhausted**
- **Impediment**
- **Infiltration**
- **InproperlyPlaced**
- **Leak**
- **Leakage**
- **Irregular**
- **IrregularPosition**
- **Motions**
- **Obstruction**
- **Occluded**
- **Occlusion**
- **Stuck**
- **Vented**
- **Vibration**

The following subgroup of descriptors concerns power supply:

- **BatteryLow**
- **ConditioningRequired**
- **NeedsReplacement**
- **ShortCircuit**

The following subgroup of descriptors holds general terms:

- **Abnormal**
- **Absent**
- **Contaminated**
- **Defect**
- **Depleted**
- **Disconnected**
- **Disturbance**
- **Erratic**
- **Failed**
- **Failure**
- **Fault**
- **Incorrect**
- **Invalid**
- **Lost**
- **Malfunction**
- **Unknown**

A.9.3.2.14 Semantic link "*has status*:"

Applicable descriptors are as follows:

- **Active**
- **Alarm**
- **Connected**
- **Detected**
- **Disabled**
- **PartiallyDisabled**
- **Silenced**
- **WarmUp**

A.9.3.2.15 Semantic link "*has limit specification*:"

Applicable descriptors are as follows:

- **Apnea**
- **AssistedSpontBreathing**
- **High**
- **HighLimit**
- **Low**
- **MaximumRate**
- **PressureLimited**
- **TachyApnea**
- **TotalVolume**
- **val>lim**
- **val<lim**
- **VolumeLimited**

— **VolumeNotConstant**

A.9.3.3 Second set of differentiating criteria

The third field of the systematic name describes the target of measurement.

A.9.3.3.1 Semantic link “concerns:”

Applicable descriptors are as follows:

- **Communication**
- **FunctionalDisturbance**
- **FunctionalStatus**
- **Handling**
- **Message**
- **Processing**
- **Room**
- **SignalQuality**

A.9.3.4 Third set of differentiating criteria

The fourth field holds the information about the context, i.e., the functional or organic system for which the term is relevant.

A.9.3.4.1 Semantic link "pertains to:"

Applicable descriptors are as follows:

- **CVS**
- **Device**
- **Environment**
- **Pump**
- **Ventilator**
- **Respiration**

A.9.3.5 Code table

See Table A.9.3.1 for the nomenclature and codes for device-related and environment-related events.

Table A.9.3.1—Nomenclature and codes for device-related and environment-related events

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Advisory Agent, Vaporiris, CalibrationNecessary FunctionalStatus Ventilator	Agent vapor iris calibration necessary		The mixing iris in agent vaporizer in an ventilator must be checked (anesthesia machine).	MDC_EVT_ADVIS_VENT_MIX_IRIS_CALIB	6726
Advisory AirSupply, CheckingNecessary FunctionalStatus Ventilator	Check air supply	FRESH GAS	Checking of ventilator air supply is necessary.	MDC_EVT_ADVIS_VENT_AIR_SUPP_CHK	6728
Advisory Battery, ConditioningRequired FunctionalStatus Device	Battery conditioning required		Advisory: Condition Battery (battery needs a special "condition" charge cycle for full capacity.)	MDC_EVT_ADVIS_BATT_COND	6676
Advisory Battery, NeedsReplacement FunctionalStatus Device	Battery needs replacement		Advisory: Replace Battery (a full charge is now a too small fraction of the original capacity, or this is not a rechargeable battery that is close to empty.)	MDC_EVT_ADVIS_BATT_REPLACE	6678
Advisory Calibration, CheckingNecessary FunctionalStatus Device	Calibration checking necessary		Advisory: Check Calibration/Zero (system is not sure if calibration data is still ok.)	MDC_EVT_ADVIS_CALIB_AND_ZERO_CHK	6664
Advisory CO ₂ , Failure FunctionalDisturbance Device	CO ₂ failure		Failure occurred in a carbon-dioxide-measuring device.	MDC_EVT_CO2_MSMT_FAIL	462
Advisory CO ₂ Sensor, Fault FunctionalDisturbance Device	CO ₂ sensor fault		Fault occurred in carbon dioxide sensor disc.	MDC_EVT_CO2_SENSOR_FAIL	464
Advisory CO ₂ Window, Occluded FunctionalDisturbance Device	CO ₂ window occluded		Carbon dioxide measurement window in a carbon-dioxide-measuring device is occluded.	MDC_EVT_CO2_WIND_OBSTRUC	216
Advisory ExpirationValve, CheckingNecessary FunctionalStatus Ventilator	Check expiration valve	EXP-VALVE	Checking of expiration valve is necessary.	MDC_EVT_ADVIS_VENT_EXP_VALVE_CHK	6730
Advisory Flow, CalibrationNecessary FunctionalStatus Ventilator	Flow calibration necessary		Flow calibration of ventilator is necessary.	MDC_EVT_ADVIS_VENT_FLOW_CALIB	6724
Advisory FlowSensor, CheckingNecessary FunctionalStatus Ventilator	Flow sensor checking necessary		Checking of flow sensor in a ventilator is necessary.	MDC_EVT_ADVIS_VENT_FLOW_SENSOR_CHK	6722

Table A.9.3.1—Nomenclature and codes for device-related and environment-related events (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Advisory GainAdjustmentRequired FunctionalStatus Device	Gain adjustment required		Advisory: Decrease Gain (system asks user to decrease the gain; this advisory is different from the overrange error, ErrorEvent, that already is in the nomenclature; it is an "advisory.")	MDC_EVT_ADVIS_GAIN_DECR	6704
Advisory Line, Flow, Resistance FunctionalDisturbance Pump	Resistance warning	FRW	Flow resistance warning	MDC_EVT_FLOW_FLUID_LINE_RES_WARN	582
Advisory Log, CheckingNecessary FunctionalStatus Device	Check system error log		Advisory: Check Log (a fatal system error was entered in a log object and should be read.)	MDC_EVT_ADVIS_STATUS_LOG_CHK	6698
Advisory PAW, CheckingNecessary FunctionalStatus Ventilator	PAW checking necessary		Checking of airway pressure in a ventilator is necessary.	MDC_EVT_ADVIS_VENT_PRESS_AWAY_CHK	6720
Advisory Sensor, CheckingNecessary FunctionalDisturbance Device	Check sensor		The sensor must be checked.	MDC_EVT_ADVIS_SENSOR_CHK	6696
Advisory Vaporizer, CheckingNecessary FunctionalStatus Ventilator	Vaporizer checking necessary	CHECK VAPOR	Vaporizer is not connected, not known or not allowed.	MDC_EVT_ADVIS_VAPORISER_CHK_DISCONN	6718
Advisory Volume, Syringe, PreAlarm Handling Pump	Syringe pre-alarm (x min)		Syringe needs to be replaced soon.	MDC_EVT_ADVIS_PUMP_SYRINGE_REPLACE_WARN	6712
Advisory WaterTrap, CheckingNecessary FunctionalStatus Ventilator	Water trap checking necessary	WATER TRAP	Checking of water trap in a ventilator is necessary.	MDC_EVT_ADVIS_VENT_WATER_TRAP_CHK	6716
ErrorEvent FunctionalDisturbance Device	Equipment error		Unspecified device error	MDC_EVT_EQU	28
ErrorEvent Handling Device	Handling problem		Not specified, unusual handling of a device, device component, cabling, or transducer	MDC_EVT_HANDL_ERR	152
ErrorEvent Processing Device	Processing error		Unspecified processing error	MDC_EVT_PROC_ERR	162
ErrorEvent Abnormal FunctionalDisturbance Device	Abnormal		Abnormal condition detected	MDC_EVT_ABNORM	2
ErrorEvent Absent Processing Device	Absent		Absent	MDC_EVT_ABSENT	4

Table A.9.3.1—Nomenclature and codes for device-related and environment-related events (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
ErrorEvent Agent, NotSelected FunctionalDisturbance Ventilator	Agent not selected	AGT NOT SEL		MDC_EVT_VENT_GAS_AGENT_NOT_SELECTED	516
ErrorEvent Agent, VaporIris, Inoperable FunctionalDisturbance Ventilator	Agent vapor iris inoperable	A-VAP ERR	Gaseous agent mixing iris is inoperable in a ventilator (anesthesia).	MDC_EVT_VENT_MIX_IRIS_INOP	528
ErrorEvent Airway, Temperature, HighLimit FunctionalDisturbance Ventilator	High airway temperature	AW-TEMP HIGH	Airway temperature is too high (ventilator).	MDC_EVT_VENT_TEMP_AWAY_HI	504
ErrorEvent Battery FunctionalDisturbance Device	Battery problem		Unspecified battery problem	MDC_EVT_BATT_PROB	198
ErrorEvent Battery, Low FunctionalDisturbance Device	Battery low or dead		Battery discharged or is defective.	MDC_EVT_BATT_LO	194
ErrorEvent BreathingSystem, Stopped FunctionalDisturbance Ventilation	Breath absent		Error-Event: Breath Absent (this is not apnea, but a technical ventilator event.)	MDC_EVT_BREATH_ABSENT	136
ErrorEvent BreathingSystem, Vented FunctionalDisturbance Ventilator	Breathing system vented		Breathing system is vented.	MDC_EVT_VENT_BREATHING_SYS_VENTED	532
ErrorEvent Calibration FunctionalDisturbance Device	Calibration error		Calibration is not successful.	MDC_EVT_CALIB_FAIL	138
ErrorEvent CO ₂ , SensorLine, Blocked FunctionalDisturbance Ventilator	Blocked CO ₂ sensor line	CO ₂ LINE BLK		MDC_EVT_VENT_CO2_SENSOR_LINE_OBSTRUC	536
ErrorEvent CO ₂ Absorber, Exhausted FunctionalDisturbance Ventilator	Exh. CO ₂ absorber		Exhausted carbon dioxide absorber	MDC_EVT_VENT_CO2_ABSORB_EXH	534
ErrorEvent Coincidence, Heart, Respiration SignalQuality Device	Pulserate coincidence		Heart rate and respiration rate are reported to be the same value.		3296
ErrorEvent Configuration Processing Device	Configuration error		Device configuration: combination is not valid.	MDC_EVT_CONFIG_ERR	142
ErrorEvent Contaminated FunctionalDisturbance Device	Contaminated		Contaminated	MDC_EVT_CONTAM	14

Table A.9.3.1—Nomenclature and codes for device-related and environment-related events (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
ErrorEvent Cooling, Inoperable FunctionalDisturbance Ventilator	Vent cooling INOP	COOLING INOP	Ventilator device temperature is too high.	MDC_EVT_VENT_TEMP_HI	540
ErrorEvent Cuff, Disconnected FunctionalDisturbance Device	Cuff disconnected	CUFF ERR	Cuff is disconnected or leaking, e.g., in NIBP.	MDC_EVT_NBP_CUFF_DISCONNECT_OR_LEAK	456
ErrorEvent Cuff, Motions FunctionalDisturbance Device	Motions detected	MOTIONS	Motions are detected, e.g., in NIBP measurement.	MDC_EVT_NBP_MOTION_DETEC	454
ErrorEvent DataAcquisition Communication Device	Data acquisition error		Unspecified problem in data acquisition	MDC_EVT_DATA_ACQN_ERR	482
ErrorEvent DataSemantics Communication Device	Erratic data		Subsystem has received false data packet.	MDC_EVT_MSG_SEMAN_ERR	470
ErrorEvent DataSyntax Communication, Message Device	Corrupt data		Subsystem has received false data packet.	MDC_EVT_MSG_CORRUPT	452
ErrorEvent Defect FunctionalDisturbance Device	Defect		Defect is detected in a device, sensor, etc.	MDC_EVT_DEFECT	16
ErrorEvent Disconnection FunctionalDisturbance Device	Disconnection		Disconnection, e.g., in sampling line	MDC_EVT_DISCONNECT	22
ErrorEvent Disconnection Handling Ventilator	Ventilator disconnected		Patient is disconnected from ventilator.	MDC_EVT_VENT_DISCONNECT	564
ErrorEvent Disconnection, <location> FunctionalDisturbance Ventilator	Disconnection		Disconnection of parts in a ventilator, e.g., disconnection in FGF hose	MDC_EVT_VENT_COMPONENT_DISCONNECT	542
ErrorEvent Disturbed SignalQuality Device	Disturbed		Signal is disturbed.	MDC_EVT_DISTURB	24
ErrorEvent ECG, Lead, Disconnected FunctionalDisturbance Device	ECG lead disconnected		Error Event: (ECG) Lead Disconnected (specialized form of the generic disconnect event. In case of ECG, some ECG devices reconstruct leads when a single lead of a multilead cable falls off. This needs a special user notification, because the situation might not be visible on the display waves. Reasoning: see above.)	MDC_EVT_LEAD_DISCONNECT	268
ErrorEvent ElectricalPower FunctionalDisturbance Device	Power problem		Electric power line: unspecified problem	MDC_EVT_ELEC_PWR_LINE_PROB	236

Table A.9.3.1—Nomenclature and codes for device-related and environment-related events (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
ErrorEvent Empty FunctionalDisturbance Device	Empty		A reservoir, etc., is empty	MDC_EVT_EMPTY	26
ErrorEvent Enclosure, Open Handling Device	Door open		A door or handle, which must be closed for operation, is open.	MDC_EVT_DOOR_POSN_ERR	476
ErrorEvent Erratic Processing Device	Erratic		Erratic condition is detected.	MDC_EVT_ERRATIC	32
ErrorEvent Exhausted FunctionalDisturbance Device	Exhausted		Exhausted	MDC_EVT_EXH	36
ErrorEvent Failed FunctionalDisturbance Device	Failed		An action, data transmission, etc., failed.	MDC_EVT_FAIL	38
ErrorEvent GasMixer, Inoperable FunctionalDisturbance Ventilator	Inoperable gas mixer		Gas mixer is inoperable.	MDC_EVT_VENT_GAS_MIXER_INOP	544
ErrorEvent GasSupply FunctionalDisturbance Ventilator	Med air/gas/vacuum problem		Problem with gas lines to/from breathing system	MDC_EVT_VENT_GAS_LINE_PROB	548
ErrorEvent Humidity, High Handling Environment	Humidity unacceptable		Too much humidity for accurate measurement	MDC_EVT_HUMID_EXCESS	490
ErrorEvent Incorrect Processing Device	Incorrect		Incorrect result of a calculation, e.g., CRC in data transmission, of a data structure, etc., detected	MDC_EVT_INCORRECT	46
ErrorEvent Inoperable FunctionalDisturbance Device	Inoperable	INOP	(Un)intentional inoperable condition	MDC_EVT_INOP	52
ErrorEvent Inoperable FunctionalDisturbance Ventilator	INOP		Example: gas mixer inoperable	MDC_EVT_VENT_INOP	550
ErrorEvent Interrupted Processing Device	Interrupted		A measurement, process, or data transmission was interrupted.	MDC_EVT_INTERRUPT	56
ErrorEvent InvalidOperation Handling Device	Invalid operation		Unspecified handling error	MDC_EVT_OP_INVALID	406
ErrorEvent Incompatible Processing Device	Incompatible		Incompatibility of nomenclature or processing component, etc.	MDC_EVT_INCOMPAT	600

Table A.9.3.1—Nomenclature and codes for device-related and environment-related events (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
ErrorEvent Irregular Processing Device	Irregular		Irregular rhythm or waveform in a signal, etc.	MDC_EVT_IRREG	58
ErrorEvent Leak FunctionalDisturbance Ventilator	Leak detected		Leak in breathing system	MDC_EVT_VENT_BREATHING_SYS_LEAK	552
ErrorEvent Leakage FunctionalDisturbance Device	Leakage		Leakage in a gas or fluid filled system detected	MDC_EVT_LEAK	60
ErrorEvent Line, Air FunctionalDisturbance Pump	Air in line		Air in fluid line	MDC_EVT_FLUID_LINE_AIR	592
ErrorEvent Line, DripCounter, Malfunction FunctionalDisturbance Pump	Drip alarm		Error in drip counting measurement	MDC_EVT_FLUID_LINE_DRIP_MALF	346
ErrorEvent Line, Flow, Disturbance FunctionalDisturbance Pump	Flow disturbance	FD	Flow disturbance	MDC_EVT_FLUID_LINE_DISTURB	244
ErrorEvent Line, Flow, Occlusion FunctionalDisturbance Pump	Occlusion		Occlusion of fluid line	MDC_EVT_FLUID_LINE_OCCL	332
ErrorEvent Line, FlowSensor, Malfunction FunctionalDisturbance Pump	Flow sensor problem	FSP	Flow sensor problem	MDC_EVT_SENSOR_PROB	312
ErrorEvent Line, Infiltration FunctionalDisturbance Pump	Line infiltration	INFIL	Infiltration of fluid line	MDC_EVT_FLUID_LINE_INFILT	246
ErrorEvent Lost Communication Device	Lost communication		Error Event: Communication Lost	MDC_EVT_COMM_LOST	140
ErrorEvent Lost Processing Device	Lost		Signal or synchronization, etc., was lost.	MDC_EVT_LOST	68
ErrorEvent Malfunction FunctionalDisturbance Device	Malfunction		Malfunction of a device, VMD, or sensor is detected.	MDC_EVT_MALF	70
ErrorEvent Material, Low Handling Device	Material supply low or out		Unspecified tools or agents (e.g., calibration fluids) are low.	MDC_EVT_MATERIAL_LOW_OR_OUT	408
ErrorEvent MaximumRate, Syringe, UserInput, HighLimit Handling Pump	User request error		User keyboard input is higher than available with syringe type (pump).	MDC_EVT_USER_INPUT_DATA_VAL_ERR_HI	568

Table A.9.3.1—Nomenclature and codes for device-related and environment-related events (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
ErrorEvent Measurement Processing Device	Error in analyzing metric		Unspecified error in processing of a biosignal	MDC_EVT_MSMT_ERR	354
ErrorEvent Measurement, Disconnected FunctionalDisturbance Device	Measurement unplugged		Error Event: Measurement Unplugged (e.g., in modular patient monitor. Reasoning: In contrast to the disconnect events below, this event indicates that a measurement module was manually (==voluntarily) removed. Dependent on the alarm configuration of a monitor (specifically, with latched alarms), this condition must be announced to the user; and the user must specifically acknowledge the situation.)	MDC_EVT_MSMT_DISCONN	352
ErrorEvent Measurement, Failed FunctionalDisturbance Device	Measurement failed		Error Event: Measurement Failed (e.g., a noninvasive blood pressure)	MDC_EVT_MSMT_FAIL	356
ErrorEvent Measurement, Interrupted FunctionalDisturbance Device	Measurement interrupted		Error Event: Measurement Interrupted (e.g., a noninvasive blood pressure) (there is a generic interrupted code for processing; however, this code does not have to do with processing. As an example of this code, the user might simply hit a stop button, and this action makes the measurement invalid.)	MDC_EVT_MSMT_INTERRUPT	362
ErrorEvent Measurement, Overrange Processing Device	Measurement range exceeded		Error Event: Measurement Range Exceeded, i.e., the signal is out of the physiological range that is specified in the Metric object.	MDC_EVT_MSMT_RANGE_OVER	364
ErrorEvent Measurement, Light, Interference FunctionalDisturbance Device	Light interference with measurement		Error Event: Light Interference (SpO ₂ measurement, special kind of interference)	MDC_EVT_LIGHT_INTERF	278
ErrorEvent NIBP, Cuff, ImproperlyPlaced SignalQuality Device	Cuff improperly placed	NIBP CUFF ERP		MDC_EVT_CUFF_POSN_ERR	430
ErrorEvent Noisy SignalQuality Device	Noisy		Signal is noisy.	MDC_EVT_NOISY	74
ErrorEvent Nomenclature Communication Device	Nomenclature error		A message contains wrong code.	MDC_EVT_MSG_NOM_ERR	402
ErrorEvent O ₂ , Inspiratory, Inoperable FunctionalDisturbance Ventilator	Inoperable inspiratory O ₂ measurement			MDC_EVT_VENT_PRESS_O2_INSP_INOP	546

Table A.9.3.1—Nomenclature and codes for device-related and environment-related events (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
ErrorEvent Obstruction FunctionalDisturbance Ventilator	Obstruction		Example: obstruction of the endotracheal tube	MDC_EVT_VENT_ENDOTRACH_TUBE_OBSTRUC	508
ErrorEvent Occlusion FunctionalDisturbance Ventilator	Occlusion		Example: occlusion of the endotracheal tube	MDC_EVT_VENT_ENDOTRACH_TUBE_OCCL	538
ErrorEvent Overflowed Processing Device	Overflowed		Overflow was detected in a measurement or calculation.	MDC_EVT_OVERFLOW	90
ErrorEvent Position, Module Handling Device	Component positioning problem		Irregular position of a plug-in device	MDC_EVT_POSN_PROB	160
ErrorEvent PowerSupply FunctionalDisturbance Device	Power problem		Problem in power supply	MDC_EVT_POWER_SUPPLY_PROB	458
ErrorEvent Protocol, Version Communication, Message Device	Version mismatch		Communication error: unknown software version	MDC_EVT_SW_VER_UNK	322
ErrorEvent QualityOfService Communication Device	Quality of service		Unspecified quality of service event	MDC_EVT_SVC_QUALITY	180
ErrorEvent RecordingPaper, Low Handling Device	Paper low or out		Problem with recording paper subdevice	MDC_EVT_ADVIS_REC_PAPER_REPLACE	6694
ErrorEvent ResourceUnavailable FunctionalDisturbance Device	Resource unavailable		A resource is not available.	MDC_EVT_FUNC_UNAVAIL	146
ErrorEvent MultipleReplyUnavailable FunctionalDisturbance Device	Multiple reply unavailable		The multiple reply remote operation function is not available (see Clause 6 in ISO/IEEE 11073-20101)	MDC_EVT_MULT_REPLY_UNAVAIL	602
ErrorEvent Sensor, Disconnected FunctionalDisturbance Device	Sensor disconnected		Sensor disconnection or fault	MDC_EVT_SENSOR_DISCONN	308
ErrorEvent ShortCircuit FunctionalDisturbance Device	Short circuit		A short circuit was detected in a VMD.	MDC_EVT_CKT_SHORT	208
ErrorEvent StateMachine, Recoverable Communication Device	State machine error, recoverable		Recoverable state machine error in communication	MDC_EVT_RECOV_ERR	130

Table A.9.3.1—Nomenclature and codes for device-related and environment-related events (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
ErrorEvent StateMachine, Unrecoverable Communication Device	State machine error, unrecoverable		Unrecoverable state machine error in communication	MDC_EVT_UNRECOV_ERR	134
ErrorEvent Stuck FunctionalDisturbance Ventilator	Stuck		Example: the expiratory valve is stuck.	MDC_EVT_VENT_EXP_VALVE_STUCK	522
ErrorEvent Synchronization, ReceiverOverrun Communication, Message Device	Real-time overrun		Communication timing error: receiver overrun	MDC_EVT_SYNCH_ERR_RCV_OVRUN	182
ErrorEvent Synchronization, Inoperable FunctionalDisturbance Ventilator	Vent sync INOP		Ventilator synchronization inoperable	MDC_EVT_VENT_SYNCH_INOP	518
ErrorEvent Synchronization, BufferOverflow Communication, Message Device	Buffer overflow		Communication timing error: buffer overflow	MDC_EVT_BUFF_OVERFLOW	502
ErrorEvent Synchronization, Framing Communication, Message Device	Framing error		Communication error: framing error	MDC_EVT_FRAM_ERR	472
ErrorEvent Synchronization, Parity Communication, Message Device	Parity error		Communication error: parity error	MDC_EVT_PARITY_ERR	474
ErrorEvent Syntax, Protocol Communication, Message Device	Unanalyzable data		Undefined communication message syntax	MDC_EVT_MSG_SYNTAX_UNDEF	478
ErrorEvent Temperature, High Room Environment	Temperature unacceptable high		Abnormal high environmental temperature	MDC_EVT_TEMP_ENVIRON_HI_ABNORM	488
ErrorEvent Temperature, HighLimit FunctionalDisturbance Ventilator	High ventilator temperature		Respirator device temperature is too high.	MDC_EVT_RESPIRATOR_TEMP_HI	514
ErrorEvent Temperature, Low Room Environment	Temperature unacceptable low		Abnormal low environmental temperature	MDC_EVT_TEMP_ENVIRON_LOW_ABNORM	486
ErrorEvent Timing Processing Device	Timing error		Unspecified timing error	MDC_EVT_TIMING	414

Table A.9.3.1—Nomenclature and codes for device-related and environment-related events (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
ErrorEvent Timing, Synchronization Processing Device	Synchronization error		Error in time synchronization	MDC_EVT_SYNCH_ERR	182
ErrorEvent Transducer FunctionalDisturbance Device	Transducer/electrode problem		Transducer malfunctioning	MDC_EVT_XDUOCR_MALF	338
ErrorEvent Transducer, Disconnected FunctionalDisturbance Device	Transducer disconnected		Error Event: Transducer Disconnected (specialized form of the generic disconnect event for measurements with intelligent exducer.	MDC_EVT_XDUOCR_DISCONN	336
ErrorEvent Unanalyzable SignalQuality Device	Signal cannot be analyzed		Error Event: Signal Cannot Be Analyzed (for any secondary derived measurement when the input signal is bad)	MDC_EVT_SIG_UNANALYZEABLE	384
ErrorEvent Unavailable Processing Device	Unavailable		Resource is unavailable.	MDC_EVT_UNAVAIL	110
ErrorEvent Undefined Processing Device	Undefined		Undefined	MDC_EVT_UNDEF	112
ErrorEvent Underflowed Processing Device	Underflowed		Underflow was detected in a measurement or calculation.	MDC_EVT_COMPUT_UNDERFLOW	418
ErrorEvent Unequal Processing Device	Unequal		Unequal	MDC_EVT_UNEQU	116
ErrorEvent Unknown Processing Device	Unknown		VMD or signal is unknown.	MDC_EVT_UNK	118
ErrorEvent Vibration, High FunctionalDisturbance Device	Excessive vibration		Vibration hinders adequate measurement.	MDC_EVT_VIB_PROB	188
ErrorEvent Volume, Measurement, Inoperable FunctionalDisturbance Ventilator	Inoperable volume measurement		The volume measurement in a ventilator is inoperable.	MDC_EVT_VENT_VOL_MSMT_INOP	512
ErrorEvent Volume, Syringe, Empty Handling Pump	Syringe empty		Syringe needs to be replaced immediately.	MDC_EVT_ADVIS_PUMP_SYRINGE_REPLACE_IMMED	6714
ErrorEvent VolumeNotConstant FunctionalDisturbance Ventilator	Vol inconst		Breathing volume is not constant.	MDC_EVT_VENT_VOL_BREATHING_IRREG	510

Table A.9.3.1—Nomenclature and codes for device-related and environment-related events (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
ErrorEvent Waveform, Artifact SignalQuality Device	Artifact		Artifact is detected in a waveform.	MDC_EVT_WAVE_ARTIF_ERR	432
ErrorEvent Waveform, Disturbance SignalQuality Device	Signal quality		Disturbed waveform: result may be erroneous.	MDC_EVT_WAVE_SIG_QUAL_ERR	434
ErrorEvent Waveform, GainAdjustmentRequired FunctionalDisturbance Device	Gain adjustment required		Signal voltage is out of range.	MDC_EVT_VOLTAGE_OUT_OF_RANGE	460
ErrorEvent Waveform, Interference SignalQuality Device	Signal interference		Interference in measurement	MDC_EVT_MSMT_INTERF_ERR	436
ErrorEvent Waveform, Invalid SignalQuality Device	Invalid signal		Shape/amplitude of waveform is abnormal.	MDC_EVT_WAVE_SHAPE_ABNORM	438
ErrorEvent Waveform, LowSignal Processing Device	Underrange error		Signal amplitude is too low for processing, e.g., waveform detection.	MDC_EVT_RANGE_UNDER	168
ErrorEvent Waveform, Noisy SignalQuality Device	Noisy signal		Noisy signal: result may be erroneous.	MDC_EVT_SIG_NOISY	440
ErrorEvent Waveform, NoOscillation SignalQuality Device	No oscillation		Oscillation in waveform is expected, but not found.	MDC_EVT_WAVE_OSCIL_ABSENT	442
ErrorEvent Waveform, NoSignal SignalQuality Device	No signal		Typically, a zero voltage signal	MDC_EVT_SIG_ABSENT	444
ErrorEvent Waveform, Overrange Processing Device	Overrange error		Signal amplitude is too high for processing.	MDC_EVT_RANGE_OVER	166
ErrorEvent Waveform, Range SignalQuality Device	Range error		Signal is out of range.	MDC_EVT_SIG_OUT_OF_RANGE	446
ErrorEvent Waveform, SignalProcessing SignalQuality Device	Signal processing error		Unspecified signal processing error	MDC_EVT_SIG_PROC_ERR	448
ErrorEvent Waveform, Weak SignalQuality Device	Weak signal		Signal gain low: probably erroneous data extraction	MDC_EVT_SIG_GAIN_LO	404
ErrorEvent Weak SignalQuality Device	Weak		Weak signal was detected.	MDC_EVT_WEAK	128

Table A.9.3.1—Nomenclature and codes for device-related and environment-related events (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
LimitEvent AssistedSpontBreathing Ventilator	ASB > x s		Assisted spontaneous breathing is longer than a predefined time span (PSW).		3278
LimitEvent DeliveryTime Handling Pump	Delivery time elapsed.		Configured time to deliver whole syringe/bottle is over.	MDC_EVT_PUMP_SYRINGE_DELIV_TIMEOUT	574
LimitEvent High Processing Device	High limit alert	HIGH	A metric exceeds a given threshold.	MDC_EVT_LIMIT_AL_HI	450
LimitEvent High, val>lim Processing Device	Value greater high limit		A metric exceeds a given threshold.	MDC_EVT_HI_VAL_GT_LIM	44
LimitEvent Low, val<lim Processing Device	Value smaller low limit		A metric falls short of a given threshold.	MDC_EVT_LO_VAL_LT_LIM	66
LimitEvent Low Processing Device	Low limit alert	LOW	A metric falls short of a given threshold.	MDC_EVT_LIMIT_AL_LO	554
LimitEvent O ₂ , Concentration, Low FunctionalDisturbance Ventilator	Low O ₂ concentration		Too low oxygen delivery (concentration)	MDC_EVT_VENT_CONC_O2_DELIV_LO	596
LimitEvent O ₂ , Flow, Low FunctionalDisturbance Ventilator	Low O ₂ flow		Too low oxygen delivery (flow)	MDC_EVT_VENT_FLOW_O2_DELIV_LO	594
LimitEvent Pressure, Impediment FunctionalDisturbance Pump	Flow impediment		Flow is hindered.	MDC_EVT_FLOW_OBSTRUC	576
LimitEvent Pressure, Line FunctionalDisturbance Pump	Pressure alarm		Too much pressure in line	MDC_EVT_PRESS_FLUID_LINE_EXCESS	558
LimitEvent StandbyTimeElapsed Handling Pump	Standby time elapsed		Timeout: device should be either operated or turned off.	MDC_EVT_TIMEOUT	584
LimitEvent TotalVolume Handling Pump	Total volume infused		Total volume infused (pump)	MDC_EVT_PUMP_VOL_TBL_COMP	586
LimitEvent Volume, Syringe, Low Handling Pump	End of volume to deliver		Syringe needs to be replaced soon.	MDC_EVT_ADVIS_PUMP_SYRINGE_REPLACE_IMMED	6714
Status FunctionalStatus Device	Functional status			MDC_EVT_STAT_DEV	6278
Status Active FunctionalStatus Device	Active		Active state of, e.g., device	MDC_EVT_STAT_ACTIVE	6198

Table A.9.3.1—Nomenclature and codes for device-related and environment-related events (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Status Agent, VaporIris, Disabled FunctionalStatus Ventilator	Agent vaporiris disabled	A-VAP OFF	The function of gaseous agent mixing irris in a ventilator (anesthesia machine) is disabled.	MDC_EVT_STAT_VENT_GAS_MIXER_FUNC_DISABL	6196
Status Alarm FunctionalStatus Device	Alarm	ALARM	Alarm state of, e.g., device or signal	MDC_EVT_STAT_AL	6216
Status Alarm, Off FunctionalStatus Device	Alarm off	ALARM OFF	Indication: Alarm Intentionally Off (disabled)	MDC_EVT_STAT_AL_OFF	6144
Status Alarm, Silenced FunctionalStatus Device	Alarm silenced		Alarm is silenced (speaker off).	MDC_EVT_STAT_AL_SILENCE	6214
Status Apnea, Alarm, Disabled FunctionalStatus Device	Apnea alarm disabled	APNEA ALARM OFF	Apnea alarm is disabled.	MDC_EVT_STAT_APNEA_AL_DISABL	6274
Status Battery, Charging FunctionalStatus Device	Battery charging		Battery is now being recharged.	MDC_EVT_STAT_BATT_CHARGING	6150
Status BatteryOperated FunctionalStatus Device	Battery operated		Device is battery operated.	MDC_EVT_STAT_DEV_BATT_OPERATED	6276
Status Beep, Off FunctionalStatus Device	Beep off		The beep is off (QRS).	MDC_EVT_STAT_QRS_BEEP_OFF	6272
Status Calibration, Running FunctionalStatus Device	Calibration in progress		Indication: Calibration in Progress, No Measurement Possible	MDC_EVT_STAT_CALIB_RUNNING	6154
Status Charging FunctionalStatus Device	Charging		Charging state of, e.g., battery	MDC_EVT_STAT_CHARGING	6212
Status CO ₂ , Alarm, Disabled FunctionalStatus Device	CO ₂ alarm disabled	CO ₂ ALARM OFF	Carbon dioxide alarm is disabled.	MDC_EVT_STAT_CO ₂ _AL_DISABL	6270
Status CO ₂ , NotCalibrated FunctionalStatus Device	CO ₂ not calibrated		Carbon dioxide is not calibrated.	MDC_EVT_STAT_CO ₂ _UNCALIB	6292
Status CO ₂ , WarmUp FunctionalStatus Device	CO ₂ warm-up	CO ₂ WARM UP	Carbon dioxide monitor in warm-up mode	MDC_EVT_STAT_CO ₂ _WARMING	6268

Table A.9.3.1—Nomenclature and codes for device-related and environment-related events (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Status ComputerControlled FunctionalStatus Device	Computer controlled		Device, e.g., pump, is in computer-controlled mode.	MDC_EVT_STAT_DEV_MODE_COMPUT_CNTRL	6286
Status Connected FunctionalStatus Device	Connected		Connected state of device, sensor, etc.	MDC_EVT_STAT_CONN	6252
Status Depleted FunctionalStatus Device	Depleted		A sensor, absorber, etc., is depleted.	MDC_EVT_STAT_DEPLET	6248
Status Detected Processing Device	Detected		Some signal or special condition was detected.	MDC_EVT_DETEC	20
Status Disconnected FunctionalStatus Device	Disconnected		Disconnection of a sensor, device, etc.	MDC_EVT_STAT_DISCONN	6256
Status Display, Stopped FunctionalStatus Device	Display stopped		The display is stopped.	MDC_EVT_STAT_DISP_STOP	102
Status Door, Closed Room Environment	Door closed		Door in the (sleep measurement) room is closed.	MDC_EVT_STAT_DOOR_CLOS	6244
Status Door, Open Room Environment	Door opened		Door in the (sleep measurement) room is opened.	MDC_EVT_STAT_DOOR_OPEN	6220
Status ECG, Alarm, Disabled Processing Device	ECG alarm disabled		Status: All ECG alarms are off (still need these in France to meet French homologation, despite MDD).	MDC_EVT_STAT_ECG_AL_ALL_OFF	6182
Status ECG, Alarm, PartiallyDisabled Processing Device	ECG alarm partially disabled		Status: Some ECG alarms are off (still need these in France to meet French homologation, despite MDD).	MDC_EVT_STAT_ECG_AL_SOME_OFF	6184
Status Lights, Off Room Environment	Lights off	Loff	Lights in the (sleep measurement) room are switched off.	MDC_EVT_LIGHTS_IN_ROOM_OFF	276
Status Lights, On Room Environment	Lights on	Lon	Lights in the (sleep measurement) room are switched on.	MDC_EVT_STAT_LIGHTS_IN_ROOM_ON	6260
Status MainsOperated FunctionalStatus Device	Mains operated		Device is mains-operated.	MDC_EVT_STAT_DEV_MAINS_OPERATED	6284
Status Mode, Adult FunctionalStatus Device	Adult mode		Device is in adult mode.	MDC_EVT_STAT_DEV_MODE_ADULT	6282
Status Mode, Paediatric FunctionalStatus Device	Paediatric mode		Device is in paediatric mode.	MDC_EVT_STAT_DEV_MODE_PEDIATRIC	6280

Table A.9.3.1—Nomenclature and codes for device-related and environment-related events (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Status NIBP, Cuff, Deflating FunctionalStatus Device	Cuff deflating		Noninvasive blood pressure device is deflating cuff and measuring blood pressure.	MDC_EVT_STAT_NBP_DEFL_AND_MEAS_BP	6250
Status NIBP, Cuff, Inflating FunctionalStatus Device	Cuff inflating		Noninvasive blood pressure device is inflating cuff to maximum cuff pressure.	MDC_EVT_STAT_NBP_INF_TO_MAX_CUFF_PRESS	6222
Status NotCalibrated FunctionalStatus Device	VMD not calibrated		VMD is not calibrated.	MDC_EVT_STAT_UNCALIB	6190
Status Off FunctionalStatus Device	Off	OFF	Device or VMD is in off condition.	MDC_EVT_STAT_OFF	6226
Status Running FunctionalStatus Device	Active/running		Indication: Device Active/Pump Running	MDC_EVT_STAT_RUNNING	6294
Status SighMode, Active FunctionalStatus Ventilator	Sigh mode active		Sigh mode is active.	MDC_EVT_STAT_MODE_SIGH_ACTIVE	6188
Status Sound, Off Room Environment	Sound off	Soff	Sound in the (sleep measurement) room is switched off.	MDC_EVT_STAT_SOUND_IN_ROOM_OFF	6258
Status Sound, On Room Environment	Sound on	Son	Sound in the (sleep measurement) room is switched on.	MDC_EVT_STAT_SOUND_IN_ROOM_ON	6264
Status Standby FunctionalStatus Device	Standby on	STANDBY	Indication: Device In Standby Mode	MDC_EVT_STAT_STANDBY	6228
Status TachyApnea, Alarm, Disabled FunctionalStatus Device	Tachyapnea alarm disabled		Tachyapnea alarm is disabled.	MDC_EVT_STAT_AL_TACHAPNEA_DISABL	6230
Status TachyApnea, Alarm, Disabled FunctionalStatus Ventilator	Tachyapnea alarm disabled		Tachyapnea alarm in a ventilator is disabled.	MDC_EVT_STAT_VENT_AL_TACHAPNEA_DISABL	6210
Status TestMode FunctionalStatus Device	In test mode		Device or VMD is in test mode.	MDC_EVT_STAT_MODE_TEST	6232
Status Volume, PressureLimited FunctionalStatus Ventilator	Respiratory volume pressure limited	PRESSURE LTD	Respiratory volume pressure is limited.	MDC_EVT_STAT_VENT_PRESS_RESP_VOL_LIMITED	6206
Status Volume, TimeLimited FunctionalStatus Ventilator	Respiratory volume time limited	TIME LTD	Respiratory volume time is limited.	MDC_EVT_STAT_VENT_TIME_RESP_VOL_LIMITED	6202

Table A.9.3.1—Nomenclature and codes for device-related and environment-related events (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Status Waveform, Learning FunctionalStatus Device	Waveform learning		Device or VMD learns waveform for recognition.	MDC_EVT_STAT_WAVE_LEARN	6234
SynchronizationEvent Processing Device	Sync	SYNC	Synchronization event for synchronization of different processes	MDC_EVT_SYNC	426
SynchronizationEvent Inspiration, Started Processing Ventilator	Inspiration started		Sync puls: Start of ventilator inspiratory cycle	MDC_EVT_VENT_CYC_INSP_START	466
SynchronizationEvent Tick Processing Device	Timer tick	TICK	Timer tick of real-time clock for synchronization of all processes	MDC_EVT_TIMER_SYNC_TICK	480

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A.10 Nomenclature, data dictionary, and codes for external nomenclatures and messaging standards (Block F)

A.10.1 Introduction

Diagnostics and procedures are not included in the scope of this standard and hence in the nomenclature in Annex A. On the other hand, such information may be necessary, especially in an archival scenario. In the Patient Package in the DIM, provision is made for using external nomenclature for diagnostic and procedural codes. Table A.10.1 defines codes for definition of such external references. It is an arbitrary list to be updated if necessary. The systematic name is for similarity to other tables only. A classification of the nomenclatures is not intended.

A.10.2 Base concepts

The base concept defines the type of the information, here a term in an external nomenclature:

- **Term**

A.10.3 First set of differentiating criteria

The second field of the systematic name refers in general to the measurement features. The name of the nomenclature is used as a descriptor in this field in most cases.

A.10.3.1 Semantic link "*has specification*:"

Applicable descriptors are as follows:

- **ARDEN**
- **ASTM_E1238**
- **ASTM_E1394-91**
- **ASTM_E1467-94**
- **CPT**
- **DRG**
- **DSM-III-R**
- **GALEN**
- **GRAIL**
- **HL7**
- **ICD-9**
- **ICD-10**
- **ICPM**
- **ICPM-GE**
- **LOINC**
- **MeSH**
- **Minnesota**
- **NANDA**
- **NIC**
- **NNN**
- **NOC**

- OPCS-4
- READ
- SCP
- SNOMED
- UMLS
- VESKA

A.10.4 Second set of differentiating criteria

The third field of the systematic name describes in general the target of measurement, here an area for which the external nomenclature is used.

A.10.4.1 Semantic link "*concerns*:"

More than one descriptor is possible, as follows:

- ClinicalInstruments
- ClinicalObservations
- Diagnoses
- ECG
- Inventions
- MentalDisorders
- Nursing
- Outcome
- Procedures
- RelatedGroups

A.10.5 Third set of differentiating criteria

The fourth field in the systematic name holds information about the context. In this case, the term specifies an external nomenclature.

A.10.5.1 Semantic link "*has context*:"

Only one descriptor is applicable:

- ExternalNomenclature

A.10.6 Code table

See Table A.10.1 for the nomenclature and codes for external nomenclatures and messaging standards.

Table A.10.1—Nomenclature and codes for external nomenclatures and messaging standards

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Term SNOMED ExternalNomenclature	SNOMED	SNOMED	Systematized Nomenclature of Medicine	MDC_EXT_NOM_SNOMED	1
Term UMLS ExternalNomenclature	Unified Medical Language System	UMLS	Unified Medical Language System, Version 1.6	MDC_EXT_NOM_UMLS	64
Term MeSH ExternalNomenclature	MeSH	MeSH	US National Library of Medicine—Medical Subject Headings	MDC_EXT_NOM_MeSH	128
Term LOINC ExternalNomenclature	LOINC code	LOINC	Logical Observation Identifier Names and Codes (LOINC)	MDC_EXT_NOM_LOINC	192
Term HL7 ExternalNomenclature	HL7	HL7	Health Level 7	MDC_EXT_NOM_HL7	256
Term READ ExternalNomenclature	READ code	READ	READ coded clinical terms, Read J.D.	MDC_EXT_NOM_READ	320
Term ICD-9 Diagnoses ExternalNomenclature	ICD-9	ICD-9	International Classification of Diseases—9th Clinical Modification	MDC_EXT_NOM_ICD_9	384
Term ICD-10 Diagnoses ExternalNomenclature	ICD-10	ICD-10	International Classification of Diseases and Health Related Problems, 10th Revision	MDC_EXT_NOM_ICD_10	385
Term NNN Diagnoses ExternalNomenclature		NNN	Neurologic-Neurosurgical-Neuropathologic Diagnosis Catalogue, Revision 1994 (Neurologisch-neurochirurgisch-neuropathologisches Diagnosenverzeichnis, Deutsche Gesellschaft für Neurologie, für Neurochirurgie, für Neuropathologie und Neuroanatomie)	MDC_EXT_NOM_NNN	448
Term Minnesota Diagnoses, ECG ExternalNomenclature	Minnesota code	MC	Minnesota ECG diagnosis code (Classification system for ECG), University of Minnesota, U.S.A.	MDC_EXT_NOM_MC	512
Term SCP Diagnoses, ECG ExternalNomenclature	SCP code	SCP	SCP-ECG	MDC_EXT_NOM_SCP	576
Term NIC Nursing, Interventions ExternalNomenclature	NIC	NIC	Nursing Interventions Classification—University of Iowa College of Nursing	MDC_EXT_NOM_NIC	640
Term NOC Nursing, Outcome ExternalNomenclature	NOC	NOC	Nursing Outcomes Classification—University of Iowa College of Nursing	MDC_EXT_NOM_NOC	704

Table A-10.1—Nomenclature and codes for external nomenclatures and messaging standards (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Term ICPM Procedures ExternalNomenclature	ICPM	ICPM	International Classification of Procedures in Medicine	MDC_EXT_NOM_ICPM	768
Term ICPM-GE Procedures ExternalNomenclature	ICPM-GE	ICPM-GE	International Classification of Procedures in Medicine, German Edition	MDC_EXT_NOM_ICPM_GE	832
Term VESKA Procedures ExternalNomenclature	VESKA procedure	VESKA	Procedure code of VESKA (Association of Swiss Hospitals, Vereinigung Schweizerischer Krankenhäuser)	MDC_EXT_NOM_VESKA	896
Term ASTM_E1394-91 ClinicalInstruments ExternalNomenclature	ASTM E1394	ASTM E1394-91	American Society of Testing and Materials, Standard Specification for ASTM E1394-91 Transferring Information Between Clinical Instruments and Computer Systems	MDC_EXT_NOM_ASTM_E1394_91	960
Term ASTM_E1238 ClinicalObservations ExternalNomenclature	ASTM E1238	ASTM E1238	American Society of Testing and Materials, Specification for Transferring Clinical Observations Between Independent Computer Systems	MDC_EXT_NOM_ASTM_E1238	1024
Term DSM-IIIR MentalDisorders ExternalNomenclature	DSM-IIIR	DSM-IIIR	Diagnostic and Statistical Manual of Mental Disorders, American Psychiatric Association	MDC_EXT_NOM_DSM_IIIR	1088
Term DRG Diagnoses, RelatedGroups ExternalNomenclature	Diagnosis-related groups	DRG	Diagnosis-related groups	MDC_EXT_NOM_DRG	1152
Term NANDA Diagnoses, Nursing ExternalNomenclature	NANDA	NANDA	North American Nursing Diagnosis Association nursing diagnosis taxonomy	MDC_EXT_NOM_NANDA	1216
Term GALEN ExternalNomenclature	GALEN	GALEN	Generalized Architecture for Languages, Encyclopedias, and Nomenclatures in Medicine, EC AIM Project	MDC_EXT_NOM_GALEN	1280
Term GRAIL ExternalNomenclature	GRAIL	GRAIL	GALEN Representation and Integration Language, EC AIM Project	MDC_EXT_NOM_GRAIL	1344
Term ASTM_E1467-94 Neurophysiology ExternalNomenclature	ASTM E1467	ASTM E1467-94	American Society of Testing and Materials, Standard Specification for E1467-94 Transferring Digital Neurophysiological Data Between Independent Computer Systems	MDC_EXT_NOM_ASTM_E1467_94	1408
Term CPT Procedures ExternalNomenclature	CPT	CPT	Physician's Current Procedural Terminology	MDC_EXT_NOM_CPT	1472

Table A-10.1—Nomenclature and codes for external nomenclatures and messaging standards (continued)

Systematic name	Common term	Acronym	Description/Definition	Reference ID	Code
Term OPCS-4 Procedures ExternalNomenclature	OPCS-4	OPCS-4	Classification of Surgical Operations and Procedures, 4th Revision, The Office of Population Censuses and Surveys, UK	MDC_EXT_NOM_OPCS_4	1536
Term ARDEN KnowledgeBase ExternalNomenclature	Arden Syntax	ASTM E1460-92	American Society of Testing and Materials, Standard Specification for ASTM E1460-92 Defining and Sharing Modular Health Knowledge Bases (Arden Syntax for Medical Logic Systems)	MDC_EXT_NOM_ASTM_E1460_92	1600

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Annex B

(normative)

Nomenclature syntax

B.1 General

Codes in this annex that correspond with the codes defined in Annex A take on the semantic of that annex. Semantics of other codes are reserved to this annex.

Syntax defined in this annex shall not be normative unless a semantic corollary is specified in this standard. However, terms in this annex may be reorganized for presentation, e.g., into sequential code order, as appropriate to facilitate application programming.

B.1.1 Notation

Listing entries are of the following form:

```
#define MDC_term e /*Mm a */
```

where

#define	is the programming language symbol for a constant definition;
#define MDC_term	is the nomenclature symbol, or title;
c	is the decimal number code, which is in the range 0–65 535 (i.e., 2^{16}); this code is communicated in PDUs in the appropriate encoding form, e.g., MDDL-OID, an INT-U16;
Mm	is the master record number in the MDDL nomenclature database; this code is immutable (i.e., does not change over time, although other components of the term may); and
a	is an acronym; this field may be blank.

The last components are enclosed in the syntax /* */ , which represents a comment.

B.1.2 Partition codes

This subclause lists partition (or code block) codes. Partition codes may be considered to be unique as the high-order 16 bits of a 32-bit integer code.

```
/* CodeBlock Definitions */
#define MDC_PART_UNSPEC 0 /* Unspecified */
#define MDC_PART_OBJ 1 /* Object Infrastr. */
#define MDC_PART_SCADA 2 /* SCADA(Physio IDs) */
#define MDC_PART_EVT 3 /* Event */
#define MDC_PART_DIM 4 /* Dimension */
```

```
#define MDC_PART_VATTR          5      /* Virtual Attribute      */
#define MDC_PART_PGRP          6      /* Parameter Group       */
#define MDC_PART_SITES         7      /* [Body] Site           */
#define MDC_PART_INFRA         8      /* Infrastructure         */
#define MDC_PART_FEF           9      /* File Exchange Format   */
#define MDC_PART_EXT_NOM       256    /* Ext. Nomenclature     */
#define MDC_PART_PVT           1024   /* Private                */
```

B.1.3 Discriminator ranges

This subclause lists discriminator range codes. Discriminators are organized so that codes for homologous discriminators are all located within the range specified. In this listing, the *Discrim Offset* indicates the common denominator of the discriminator (i.e., the numerical difference between discriminator codes), which in binary amounts to $\log_2(\text{DiscrimOffset})$; e.g., ECG Lead discriminator is $\log_2(256)=8$ bits).

```
/* Discriminator_Range_Definitions                                     */
/* Sup'y Control and Data Acq'n (SCADA)                               CodeBlock:      2      */
/* ECG Lead                                                           Discrim Offset: 256    */
#define MDC_DRANGE_ECG_LEAD_START          0
#define MDC_DRANGE_ECG_LEAD_END          16127
/* ECG Patterns                                                       Discrim Offset:   8      */
#define MDC_DRANGE_ECG_PATT_START         16448
#define MDC_DRANGE_ECG_PATT_END          17999
/* Pulsatile - Hemo                                                   Discrim Offset:   4      */
#define MDC_DRANGE_PULS_HEMO_START        18944
#define MDC_DRANGE_PULS_HEMO_END         19219
/* Pulsatile - Neuro                                                  Discrim Offset:   4      */
#define MDC_DRANGE_PULS_NEURO_START       22532
#define MDC_DRANGE_PULS_NEURO_END        22655
```

B.2 Object infrastructure

```
/* Partition: MOC/BASE
Description Object                                                    */
#define MDC_MOC_VMO              1      /*                      494  */
#define MDC_MOC_VMO_VMD         2      /*                      495  */
```

#define MDC_MOC_VMO_CHAN	3	/*	496	*/
#define MDC_MOC_VMO_METRIC	4	/*	497	*/
#define MDC_MOC_VMO_METRIC_ENUM	5	/*	503	*/
#define MDC_MOC_VMO_METRIC_NU	6	/*	498	*/
#define MDC_MOC_VMO_METRIC_SA	7	/*	499	*/
#define MDC_MOC_VMO_METRIC_SA_D	8	/*	500	*/
#define MDC_MOC_VMO_METRIC_SA_RT	9	/*	501	*/
#define MDC_MOC_VMO_METRIC_SA_T	10	/*	502	*/
#define MDC_MOC_SCAN	16	/*	507	*/
#define MDC_MOC_SCAN_CFG	17	/*	508	*/
#define MDC_MOC_SCAN_CFG_EPI	18	/*	511	*/
#define MDC_MOC_SCAN_CFG_PERI	19	/*	509	*/
#define MDC_MOC_SCAN_CFG_PERI_FAST	20	/*	510	*/
#define MDC_MOC_SCAN_UCFG	21	/*	512	*/
#define MDC_MOC_SCAN_UCFG_ALSTAT	22	/*	514	*/
#define MDC_MOC_SCAN_UCFG_CTXT	23	/*	513	*/
#define MDC_MOC_SCAN_UCFG_OP	24	/*	515	*/
#define MDC_MOC_CC	28	/*	516	*/
#define MDC_MOC_VMS	32	/*	538	*/
#define MDC_MOC_VMS_MDS	33	/*	518	*/
#define MDC_MOC_VMS_MDS_COMPOS_MULTI_BED	34	/*	522	*/
#define MDC_MOC_VMS_MDS_COMPOS_SINGLE_BED	35	/*	521	*/
#define MDC_MOC_VMS_MDS_HYD	36	/*	520	*/
#define MDC_MOC_VMS_MDS_SIMP	37	/*	519	*/
#define MDC_MOC_LOG	38	/*	537	*/
#define MDC_MOC_LOG_ERR	39	/*	523	*/
#define MDC_MOC_LOG_SERV	40	/*	524	*/
#define MDC_MOC_BATT	41	/*	525	*/
#define MDC_MOC_PT_DEMOG	42	/*	526	*/
#define MDC_MOC_CNTRL_SCO	43	/*	527	*/
#define MDC_MOC_CNTRL_OP	44	/*	528	*/
#define MDC_MOC_CNTRL_OP_SEL_IT	45	/*	529	*/
#define MDC_MOC_CNTRL_OP_SEL_IT_A	46	/*	530	*/

```

#define MDC_MOC_CNTRL_OP_SEL_VAL          47 /*          531 */
#define MDC_MOC_CNTRL_OP_SEL_VAL_A       48 /*          532 */
#define MDC_MOC_CNTRL_OP_TOG            49 /*          533 */
#define MDC_MOC_CNTRL_OP_ACTIV          50 /*          534 */
#define MDC_MOC_CNTRL_OP_LIM            51 /*          535 */
#define MDC_MOC_VMO_AL                  52 /*         1408 */
#define MDC_MOC_VMO_AL_STAT             53 /*          504 */
#define MDC_MOC_VMO_AL_MON              54 /*          505 */
#define MDC_MOC_VMO_PMSTORE             61 /*         1825 */
#define MDC_MOC_PM_SEGMENT              62 /*         1826 */
#define MDC_MOC_ARCHIVE_MULTI_PT       63 /*         2817 */
#define MDC_MOC_ARCHIVE_PT             64 /*         2818 */
#define MDC_MOC_ARCHIVE_SESSION        65 /*         2819 */
#define MDC_MOC_DISCRIM                 66 /*         2815 */
#define MDC_MOC_PHYSICIAN               67 /*         2820 */
#define MDC_MOC_SESSION_NOTES           68 /*         2822 */
#define MDC_MOC_SESSION_TEST            69 /*         2821 */
#define MDC_MOC_TOP                     70 /*         2814 */
#define MDC_MOC_LOG_EVENT               72 /*         3858 */
#define MDC_MOC_CNTRL_OP_SET_STRING     73 /*         3860 */
#define MDC_MOC_PRINTER                 74 /*         4498 */
#define MDC_MOC_PT_DEMOG_MGR            75 /*         4904 */
#define MDC_MOC_DCC                     76 /*         5469 */
#define MDC_MOC_BCC                     77 /*         5470 */
#define MDC_MOC_CLOCK                   78 /*          */
#define MDC_MOC_VMO_METRIC_CMLPX        79 /*          */
#define MDC_MOC_CNTRL_OP_SET_RANGE     80 /*          */

/* Partition: AL-STAT

Description Alert Object ID          */
#define MDC_ALSTAT_MDS                 1281 /*         2182 */
#define MDC_ALSTAT_VMD                 1282 /*         2181 */

```

/* Partition: PMS

Description	<i>Persistent Metric Store Object ID</i>			*/
#define	MDC_PMSTORE_PERI_SIMP	1537	/*	1803 */
#define	MDC_PMSTORE_PERI_CMPD	1538	/*	1813 */
#define	MDC_PMSTORE_PERI_CMPLX	1539	/*	1814 */
#define	MDC_PMSTORE_EPI_SIMP	1540	/*	1815 */
#define	MDC_PMSTORE_EPI_CMPD	1541	/*	1816 */
#define	MDC_PMSTORE_EPI_CMPLX	1542	/*	1817 */

/* Partition: ATTR/GROUP

Description	<i>Attribute Group</i>			*/
#define	MDC_ATTR_GRP_AL_MON	2049	/*	2603 */
#define	MDC_ATTR_GRP_AL_STAT	2050	/*	115 */
#define	MDC_ATTR_GRP_METRIC_VAL_OBS	2051	/*	114 */
#define	MDC_ATTR_GRP_OP_DYN_CTXT	2052	/*	152 */
#define	MDC_ATTR_GRP_OP_STATIC_CTXT	2053	/*	151 */
#define	MDC_ATTR_GRP_PMSTORE	2054	/*	1804 */
#define	MDC_ATTR_GRP_PT_DEMOG	2055	/*	1421 */
#define	MDC_ATTR_GRP_SCAN	2056	/*	117 */
#define	MDC_ATTR_GRP_SCO_TRANSACTION	2057	/*	2415 */
#define	MDC_ATTR_GRP_SYS_APPL	2058	/*	123 */
#define	MDC_ATTR_GRP_SYS_ID	2059	/*	122 */
#define	MDC_ATTR_GRP_SYS_PROD	2060	/*	124 */
#define	MDC_ATTR_GRP_VMD_APPL	2062	/*	120 */
#define	MDC_ATTR_GRP_VMD_PROD	2063	/*	121 */
#define	MDC_ATTR_GRP_VMO_DYN	2064	/*	119 */
#define	MDC_ATTR_GRP_VMO_STATIC	2065	/*	118 */
#define	MDC_ATTR_GRP_AL	2067	/*	2824 */
#define	MDC_ATTR_GRP_ARCHIVE	2068	/*	2827 */
#define	MDC_ATTR_GRP_BATT	2069	/*	2825 */
#define	MDC_ATTR_GRP_DISCRIM	2070	/*	2826 */

```

#define MDC_ATTR_GRP_PHYSICIAN          2071 /*          2828 */
#define MDC_ATTR_GRP_RELATION           2072 /*          2823 */
#define MDC_ATTR_GRP_T_PROFILE_MGMT     2073 /*          2923 */
#define MDC_ATTR_GRP_PRINTER            2074 /*          4511 */
#define MDC_ATTR_GRP_PDMO_STATIC        2075 /*          4911 */
#define MDC_ATTR_GRP_PDMO_DYN           2076 /*          4912 */
#define MDC_ATTR_GRP_CC                 2077 /*          5466 */
#define MDC_ATTR_GRP_CLOCK              2078 /*          */

/* Partition: ATTRs

Description Attribute                                     */

#define MDC_ATTR_AL_LIMIT_SPEC_LIST     2305 /*          110 */
#define MDC_ATTR_AL_MON_P_AL_LIST       2306 /*          2598 */
#define MDC_ATTR_AL_MON_S_AL_LIST       2307 /*          2600 */
#define MDC_ATTR_AL_MON_T_AL_LIST       2308 /*          2599 */
#define MDC_ATTR_AL_OP_CAPAB            2309 /*           92 */
#define MDC_ATTR_AL_OP_STAT             2310 /*           80 */
#define MDC_ATTR_AL_OP_TEXT             2311 /*         2421 */
#define MDC_ATTR_AL_STAT_AL_C_LIST      2312 /*          109 */
#define MDC_ATTR_AL_STAT_P_AL_LIST      2314 /*         1409 */
#define MDC_ATTR_AL_STAT_T_AL_LIST      2315 /*         1410 */
#define MDC_ATTR_ALTITUDE               2316 /*           71 */
#define MDC_ATTR_AREA_APPL              2317 /*          101 */
#define MDC_ATTR_CHAN_ID                2318 /*           15 */
#define MDC_ATTR_CHAN_NUM_PHYS          2319 /*           18 */
#define MDC_ATTR_CHAN_STAT              2320 /*           16 */
#define MDC_ATTR_COLOR                  2321 /*           17 */
#define MDC_ATTR_COMPRES                 2322 /*           41 */
#define MDC_ATTR_CONFIRM_MODE           2323 /*           83 */
#define MDC_ATTR_CONFIRM_TIMEOUT        2324 /*           93 */
#define MDC_ATTR_CYC_OP                 2325 /*           12 */
#define MDC_ATTR_DEV_AL_COND            2326 /*         2597 */

```

#define MDC_ATTR_DISP_RES	2327	/*	33	*/
#define MDC_ATTR_ERR_LOG_ENTRY_LIST	2328	/*	1426	*/
#define MDC_ATTR_FILTER_SPECN	2329	/*	54	*/
#define MDC_ATTR_GRID_VIS_I16	2330	/*	46	*/
#define MDC_ATTR_GRID_VIS_I32	2331	/*	47	*/
#define MDC_ATTR_GRID_VIS_I8	2332	/*	45	*/
#define MDC_ATTR_ID_ASSOC_NO	2333	/*	97	*/
#define MDC_ATTR_ID_BED_LABEL	2334	/*	96	*/
#define MDC_ATTR_ID_CHAN_NUM_PHYS	2335	/*	61	*/
#define MDC_ATTR_ID_COMPAT	2336	/*	7	*/
#define MDC_ATTR_ID_HANDLE	2337	/*	1	*/
#define MDC_ATTR_ID_INSTNO	2338	/*	105	*/
#define MDC_ATTR_ID_INVOK_COOKIE	2339	/*	2416	*/
#define MDC_ATTR_ID_LABEL	2340	/*	3	*/
#define MDC_ATTR_ID_LABEL_ACT	2341	/*	112	*/
#define MDC_ATTR_ID_LABEL_HELP	2342	/*	99	*/
#define MDC_ATTR_ID_LABEL_STRING	2343	/*	4	*/
#define MDC_ATTR_ID_MODEL	2344	/*	5	*/
#define MDC_ATTR_ID_NOM_PARTITION	2345	/*	2413	*/
#define MDC_ATTR_ID_PARAM_GRP	2346	/*	62	*/
#define MDC_ATTR_ID_PHYSIO	2347	/*	65	*/
#define MDC_ATTR_ID_POSN	2348	/*	8	*/
#define MDC_ATTR_ID_PROD_SPECN	2349	/*	6	*/
#define MDC_ATTR_ID_SOFT	2350	/*	88	*/
#define MDC_ATTR_ID_TYPE	2351	/*	2	*/
#define MDC_ATTR_ID_TYPE_ACT	2352	/*	113	*/
#define MDC_ATTR_ID_TYPE_METRIC_STAT	2353	/*	2153	*/
#define MDC_ATTR_INDEX_SEL	2354	/*	79	*/
#define MDC_ATTR_INDIC_ACTIV	2355	/*	104	*/
#define MDC_ATTR_LIMIT_CURR	2356	/*	78	*/
#define MDC_ATTR_LINE_FREQ	2357	/*	1413	*/
#define MDC_ATTR_LIST_SEL	2358	/*	111	*/
#define MDC_ATTR_LOCALIZN	2359	/*	10	*/

```

#define MDC_ATTR_LOG_ENTRIES_CURR          2360 /*          1425 */
#define MDC_ATTR_LOG_ENTRIES_MAX          2361 /*          1424 */
#define MDC_ATTR_METRIC_CALIB             2362 /*          1404 */
#define MDC_ATTR_METRIC_CLASS             2363 /*          1805 */
#define MDC_ATTR_METRIC_INFO_LABEL        2364 /*          1405 */
#define MDC_ATTR_METRIC_INFO_LABEL_STR    2365 /*          1406 */
#define MDC_ATTR_METRIC_LIST_SRC          2366 /*          1820 */
#define MDC_ATTR_METRIC_SPECN             2367 /*           19 */
#define MDC_ATTR_METRIC_STAT              2368 /*           20 */
#define MDC_ATTR_METRIC_STORE_CAPAC_CNT   2369 /*          1829 */
#define MDC_ATTR_METRIC_STORE_FORMAT      2370 /*          1828 */
#define MDC_ATTR_METRIC_STORE_SAMPLE_ALG  2371 /*          1827 */
#define MDC_ATTR_METRIC_STORE_USAGE_CNT   2372 /*          1830 */
#define MDC_ATTR_MODE_MSMT                2373 /*           27 */
#define MDC_ATTR_MODE_OP                  2374 /*           75 */
#define MDC_ATTR_MSMT_STAT                2375 /*          1819 */
#define MDC_ATTR_NOM_VERS                  2376 /*           86 */
#define MDC_ATTR_NU_ACCUR_MSMT            2378 /*           60 */
#define MDC_ATTR_NU_CMPD_VAL_OBS           2379 /*           30 */
#define MDC_ATTR_NU_MSMT_RES               2381 /*           36 */
#define MDC_ATTR_NU_RANGE_MSMT            2382 /*           34 */
#define MDC_ATTR_NU_RANGE_PHYSIO          2383 /*           35 */
#define MDC_ATTR_NU_VAL_OBS                2384 /*           29 */
#define MDC_ATTR_NUM_SEG                   2385 /*          1831 */
#define MDC_ATTR_OP_SPEC                   2386 /*           90 */
#define MDC_ATTR_OP_STAT                   2387 /*           73 */
#define MDC_ATTR_OP_TEXT                   2388 /*          106 */
#define MDC_ATTR_POWER_STAT                2389 /*           72 */
#define MDC_ATTR_PT_BSA                    2390 /*          1416 */
#define MDC_ATTR_PT_DEMOG_ST              2391 /*          1414 */
#define MDC_ATTR_PT_DOB                    2392 /*          1418 */
#define MDC_ATTR_PT_GEN_INFO               2393 /*          1417 */
#define MDC_ATTR_PT_ID                     2394 /*          1415 */

```

#define MDC_ATTR_PT_NAME	2395 /*	1419 */
#define MDC_ATTR_PT_NAME_FAMILY	2396 /*	2158 */
#define MDC_ATTR_PT_NAME_GIVEN	2397 /*	2157 */
#define MDC_ATTR_PT_NAME_BIRTH	2398 /*	2879 */
#define MDC_ATTR_PT_NAME_MAIDEN	2398 /*	2159 */
#define MDC_ATTR_PT_NAME_MIDDLE	2399 /*	2156 */
#define MDC_ATTR_PT_NAME_TITLE	2400 /*	2155 */
#define MDC_ATTR_PT_SEX	2401 /*	1420 */
#define MDC_ATTR_PT_TYPE	2402 /*	66 */
#define MDC_ATTR_RANGE_DISTRIB	2403 /*	58 */
#define MDC_ATTR_SA_CALIB_I16	2404 /*	49 */
#define MDC_ATTR_SA_CALIB_I32	2405 /*	50 */
#define MDC_ATTR_SA_CALIB_I8	2406 /*	48 */
#define MDC_ATTR_SA_CMPD_VAL_OBS	2407 /*	39 */
#define MDC_ATTR_SA_FREQ_SIG	2408 /*	55 */
#define MDC_ATTR_SA_MSMT_RES	2409 /*	53 */
#define MDC_ATTR_SA_RANGE_PHYS_I16	2410 /*	2418 */
#define MDC_ATTR_SA_RANGE_PHYS_I32	2411 /*	2419 */
#define MDC_ATTR_SA_RANGE_PHYS_I8	2412 /*	2417 */
#define MDC_ATTR_SA_SPECN	2413 /*	40 */
#define MDC_ATTR_SA_VAL_OBS	2414 /*	38 */
#define MDC_ATTR_SCALE_SPECN_I16	2415 /*	43 */
#define MDC_ATTR_SCALE_SPECN_I32	2416 /*	44 */
#define MDC_ATTR_SCALE_SPECN_I8	2417 /*	42 */
#define MDC_ATTR_SCAN_CTXT_MODE	2418 /*	95 */
#define MDC_ATTR_SCAN_EXTEND	2419 /*	85 */
#define MDC_ATTR_SCAN_LIST	2420 /*	82 */
#define MDC_ATTR_SCAN_REP_PD	2421 /*	84 */
#define MDC_ATTR_SCO_CAPAB	2422 /*	98 */
#define MDC_ATTR_SEG_DATA_GEN	2424 /*	1838 */
#define MDC_ATTR_SEG_DATA_NU_OPT	2425 /*	1839 */
#define MDC_ATTR_SEG_DATA_RTSA_OPT	2426 /*	1840 */
#define MDC_ATTR_SEG_USAGE_CNT	2427 /*	2154 */

```

#define MDC_ATTR_SETTINGS_SYST          2428 /*          69 */
#define MDC_ATTR_SITE_LIST_BODY         2429 /*          2420 */
#define MDC_ATTR_SITE_LIST_MSMT        2430 /*          25 */
#define MDC_ATTR_SPD_SWEEP_DEFAULT      2431 /*          57 */
#define MDC_ATTR_STAT_LOCK              2432 /*          103 */
#define MDC_ATTR_STAT_OP_TOG           2433 /*          100 */
#define MDC_ATTR_STD_SAFETY             2434 /*          89 */
#define MDC_ATTR_SYS_CAPAB              2435 /*          87 */
#define MDC_ATTR_SYS_ID                 2436 /*          64 */
#define MDC_ATTR_SYS_SPECN             2437 /*          74 */
#define MDC_ATTR_SYS_TYPE               2438 /*          63 */
#define MDC_ATTR_TIME_ABS               2439 /*          67 */
#define MDC_ATTR_TIME_BATT_REMAIN      2440 /*         1412 */
#define MDC_ATTR_TIME_END_SEG           2442 /*         1835 */
#define MDC_ATTR_TIME_PD_MSMT          2443 /*          28 */
#define MDC_ATTR_TIME_PD_OP_HRS        2444 /*          13 */
#define MDC_ATTR_TIME_PD_SAMP          2445 /*          56 */
#define MDC_ATTR_TIME_PD_AL_SUSP       2446 /*         2602 */
#define MDC_ATTR_TIME_REL               2447 /*         2604 */
#define MDC_ATTR_TIME_STAMP_ABS        2448 /*          31 */
#define MDC_ATTR_TIME_STAMP_REL        2449 /*          32 */
#define MDC_ATTR_TIME_START_SEG        2450 /*         1833 */
#define MDC_ATTR_TOG_LABELS            2451 /*          107 */
#define MDC_ATTR_TSA_MARKER_LIST       2452 /*         1818 */
#define MDC_ATTR_TX_WIND                2453 /*          94 */
#define MDC_ATTR_UNIT_CODE              2454 /*         3847 */
#define MDC_ATTR_UNIT_CODE_X           2455 /*          161 */
#define MDC_ATTR_UNIT_LABEL             2456 /*          22 */
#define MDC_ATTR_UNIT_LABEL_STRING     2457 /*          23 */
#define MDC_ATTR_UNIT_LABEL_STRING_X   2458 /*          163 */
#define MDC_ATTR_UNIT_LABEL_X           2459 /*          162 */
#define MDC_ATTR_VAL_BATT_CHARGE       2460 /*          68 */
#define MDC_ATTR_VAL_CURR               2461 /*          77 */

```

#define MDC_ATTR_VAL_ENUM_OBS	2462	/*	164	*/
#define MDC_ATTR_VAL_ENUM_OBS_CMPD	2463	/*	165	*/
#define MDC_ATTR_VAL_RANGE	2464	/*	76	*/
#define MDC_ATTR_VAL_STEP_WIDTH	2465	/*	91	*/
#define MDC_ATTR_VMD_STAT	2466	/*	11	*/
#define MDC_ATTR_VMO_LIST_SRC	2467	/*	24	*/
#define MDC_ATTR_VMO_REF	2468	/*	102	*/
#define MDC_ATTR_VMO_REF_GLB	2469	/*	1832	*/
#define MDC_ATTR_VMS_MDS_LOCALIZN	2470	/*	59	*/
#define MDC_ATTR_VMS_MDS_STAT	2471	/*	70	*/
#define MDC_ATTR_VMS_MDS_TEXT_CAT	2472	/*	81	*/
#define MDC_ATTR_AL_COND	2476	/*	2839	*/
#define MDC_ATTR_AL_LIMIT	2477	/*	2840	*/
#define MDC_ATTR_AL_OP_TEXT_STRING	2478	/*	2855	*/
#define MDC_ATTR_ANAESTHETIST	2479	/*	2897	*/
#define MDC_ATTR_ARCHIVE_VERS	2480	/*	2860	*/
#define MDC_ATTR_AUTH_LEVEL	2481	/*	2878	*/
#define MDC_ATTR_BATT_CHARGE_CYCLES	2482	/*	2852	*/
#define MDC_ATTR_BATT_CURR	2483	/*	2850	*/
#define MDC_ATTR_BATT_STAT	2484	/*	2841	*/
#define MDC_ATTR_BATT_VOLTAGE	2485	/*	2848	*/
#define MDC_ATTR_BATT_VOLTAGE_SPECN	2486	/*	2849	*/
#define MDC_ATTR_CAPAC_BATT_FULL	2487	/*	2843	*/
#define MDC_ATTR_CAPAC_BATT_REMAIN	2488	/*	2842	*/
#define MDC_ATTR_CAPAC_BATT_SPECN	2489	/*	2846	*/
#define MDC_ATTR_CIRCUM_HEAD	2490	/*	2891	*/
#define MDC_ATTR_CLASS	2491	/*	2829	*/
#define MDC_ATTR_CODE_DIAGNOSTIC	2492	/*	2869	*/
#define MDC_ATTR_CODE_PROCEDURE	2493	/*	2871	*/
#define MDC_ATTR_DESC_DIAGNOSTIC	2494	/*	2870	*/
#define MDC_ATTR_DESC_PROCEDURE	2495	/*	2872	*/
#define MDC_ATTR_DIAGNOSTIC_INFO	2496	/*	2893	*/
#define MDC_ATTR_DISCRIM_CONSTRUCT	2497	/*	2856	*/

#define MDC_ATTR_ENUM_ADD_DATA	2498	/*	2838	*/
#define MDC_ATTR_EXT_OBJ_RELATION	2499	/*	2831	*/
#define MDC_ATTR_FINDINGS	2500	/*	2868	*/
#define MDC_ATTR_ID_BED	2501	/*	2892	*/
#define MDC_ATTR_ID_MSMT_EXT	2502	/*	2835	*/
#define MDC_ATTR_ID_PHYSICIAN	2503	/*	2877	*/
#define MDC_ATTR_ID_PT_MOTHER	2504	/*	2889	*/
#define MDC_ATTR_ID_SESS_NOTES_ARCHIVE	2505	/*	2865	*/
#define MDC_ATTR_ID_SESS_TEST_ARCHIVE	2506	/*	2862	*/
#define MDC_ATTR_ID_SESS_ARCHIVE	2507	/*	2873	*/
#define MDC_ATTR_ID_SUBSTANCE_LABEL_STRING	2508	/*	2834	*/
#define MDC_ATTR_LOCATION	2509	/*	2858	*/
#define MDC_ATTR_NAME_BINDING	2510	/*	2830	*/
#define MDC_ATTR_NAME_SESS_NOTES_ARCHIVE	2511	/*	2866	*/
#define MDC_ATTR_NAME_SESS_TEST_ARCHIVE	2512	/*	2863	*/
#define MDC_ATTR_NAME_SESS_ARCHIVE	2513	/*	2874	*/
#define MDC_ATTR_OP_TEXT_STRING	2514	/*	2853	*/
#define MDC_ATTR_PHYSICIAN_ADMIT	2515	/*	2894	*/
#define MDC_ATTR_PHYSICIAN_ATTEND	2516	/*	2895	*/
#define MDC_ATTR_PROC_HIST	2517	/*	2861	*/
#define MDC_ATTR_PROCEDURE_DATE	2518	/*	2896	*/
#define MDC_ATTR_PROTECTION	2519	/*	2899	*/
#define MDC_ATTR_PT_AGE	2520	/*	2880	*/
#define MDC_ATTR_PT_AGE_GEST	2521	/*	2882	*/
#define MDC_ATTR_PT_BIRTH_LENGTH	2522	/*	2887	*/
#define MDC_ATTR_PT_BIRTH_WEIGHT	2523	/*	2888	*/
#define MDC_ATTR_PT_HEIGHT	2524	/*	2883	*/
#define MDC_ATTR_PT_NAME_MOTHER	2525	/*	2890	*/
#define MDC_ATTR_PT_RACE	2526	/*	2881	*/
#define MDC_ATTR_PT_WEIGHT	2527	/*	2884	*/
#define MDC_ATTR_SESS_NOTES_ARCHIVE_COMMENTS	2528	/*	2867	*/
#define MDC_ATTR_SESS_TEST_ARCHIVE_COMMENTS	2529	/*	2864	*/
#define MDC_ATTR_SESS_ARCHIVE_COMMENTS	2530	/*	2875	*/

#define MDC_ATTR_NAME_STUDY	2531	/*	2859	*/
#define MDC_ATTR_SURGEON	2532	/*	2898	*/
#define MDC_ATTR_TEMP_BATT	2534	/*	2851	*/
#define MDC_ATTR_TIME_PD_AVG	2535	/*	2832	*/
#define MDC_ATTR_TIME_REL_HI_RES	2536	/*	2837	*/
#define MDC_ATTR_TIME_STAMP_REL_HI_RES	2537	/*	2836	*/
#define MDC_ATTR_TIME_START	2538	/*	2833	*/
#define MDC_ATTR_TIME_STOP	2539	/*	2876	*/
#define MDC_ATTR_TOG_LABELS_STRING	2540	/*	2854	*/
#define MDC_ATTR_ID_SUBSTANCE	2542	/*	2901	*/
#define MDC_ATTR_NAME_SYS	2543	/*	2905	*/
#define MDC_ATTR_PHYSICIAN_NAME	2544	/*	2906	*/
#define MDC_ATTR_PHYSICIAN_NAME_FAMILY	2545	/*	2909	*/
#define MDC_ATTR_PHYSICIAN_NAME_GIVEN	2546	/*	2907	*/
#define MDC_ATTR_PHYSICIAN_NAME_MIDDLE	2547	/*	2910	*/
#define MDC_ATTR_PHYSICIAN_NAME_TITLE	2548	/*	2911	*/
#define MDC_ATTR_SCO_HELP_TEXT_STRING	2549	/*	2904	*/
#define MDC_ATTR_SITE_LIST_BODY_EXT	2550	/*	2903	*/
#define MDC_ATTR_SITE_LIST_MSMT_EXT	2551	/*	2902	*/
#define MDC_ATTR_MIB_SYS	2552	/*	2914	*/
#define MDC_ATTR_MIB_IP	2553	/*	2915	*/
#define MDC_ATTR_MIB_ICMP	2554	/*	2916	*/
#define MDC_ATTR_MIB_IF	2555	/*	2917	*/
#define MDC_ATTR_MIB_AT	2556	/*	2918	*/
#define MDC_ATTR_MIB_UDP	2557	/*	2919	*/
#define MDC_ATTR_SCAN_CFG_LIMIT	2558	/*	2960	*/
#define MDC_ATTR_MSMT_PRINCIPLE	2560	/*	3003	*/
#define MDC_ATTR_ENUM_RANGE_MSMT	2561	/*	3004	*/
#define MDC_ATTR_EVENT_LOG_ENTRY_LIST	2564	/*	3854	*/
#define MDC_ATTR_EVENT_LOG_ENTRY_LIST	2564	/*	5452	*/
#define MDC_ATTR_STRING_CURR	2565	/*	3855	*/
#define MDC_ATTR_SET_STRING_SPEC	2567	/*	3856	*/
#define MDC_ATTR_ENUM_RANGE_MSMT_BIT_STRING	2568	/*	3857	*/

#define MDC_ATTR_ID_PRINTER_NAME	2569 /*	4499 */
#define MDC_ATTR_PRINTER_CMD_LANG	2570 /*	4500 */
#define MDC_ATTR_PRINTER_STAT	2571 /*	4501 */
#define MDC_ATTR_PRINTER_STAT_STRING	2572 /*	4502 */
#define MDC_ATTR_PAPER_SIZE	2573 /*	4503 */
#define MDC_ATTR_PRINT_MARGINS	2574 /*	4504 */
#define MDC_ATTR_PRINTER_GRP_RES_STD	2575 /*	4505 */
#define MDC_ATTR_PRINTER_GRP_RES_COLOR	2576 /*	4506 */
#define MDC_ATTR_PRINTER_COLOR_SUP	2577 /*	4507 */
#define MDC_ATTR_PRINTER_DUPLX_SUP	2578 /*	4508 */
#define MDC_ATTR_PRINTER_LOC_LANG_SUP	2579 /*	4509 */
#define MDC_ATTR_PRINTER_ACC_PCOL	2580 /*	4510 */
#define MDC_ATTR_PRINTER_TFTP_ADDR	2581 /*	4534 */
#define MDC_ATTR_SA_FIXED_VAL_SPECN	2582 /*	4822 */
#define MDC_ATTR_SA_MARKER_LIST_I16	2582 /*	5715 */
#define MDC_ATTR_DELAY_TIME_MAX	2583 /*	4862 */
#define MDC_ATTR_PDMO_CAPAB	2584 /*	4905 */
#define MDC_ATTR_PDMO_IMPL_VERS	2585 /*	4906 */
#define MDC_ATTR_SYS_ADT_ST	2586 /*	4907 */
#define MDC_ATTR_PT_DEMOG_REF_LIST	2587 /*	4908 */
#define MDC_ATTR_PT_DEMOG_ST_SYNCH	2588 /*	4909 */
#define MDC_ATTR_PT_DEMOG_DATA_LIST	2589 /*	4910 */
#define MDC_ATTR_PT_PACED_MODE	2590 /*	5390 */
#define MDC_ATTR_EVENT_LOG_INFO	2591 /*	5453 */
#define MDC_ATTR_EVENT_LOG_CHANGE_COUNT	2592 /*	5454 */
#define MDC_ATTR_CC_CAPAB	2593 /*	5461 */
#define MDC_ATTR_CC_TYPE	2594 /*	5462 */
#define MDC_ATTR_CC_NUM_DIFS	2595 /*	5463 */
#define MDC_ATTR_CC_THIS_DIF_INDEX	2596 /*	5464 */
#define MDC_ATTR_CC_EXT_MNG_PROT	2597 /*	5465 */
#define MDC_ATTR_MIB_EXT_OID	2598 /*	5468 */
#define MDC_ATTR_LOCALE	2600 /*	5711 */
#define MDC_ATTR_PT_LBM	2601 /*	5712 */

#define MDC_ATTR_OP_TEXT_STRING_DYN	2602	/*	5713	*/
#define MDC_ATTR_SA_MARKER_LIST_I8	2603	/*	5714	*/
#define MDC_ATTR_SA_MARKER_LIST_I32	2604	/*	5716	*/
#define MDC_ATTR_DSA_MARKER_LIST	2605	/*	5717	*/
#define MDC_ATTR_CHAN_NUM_LOGICAL	2606	/*	5718	*/
#define MDC_ATTR_TIME_SUPPORT	2607	/*		*/
#define MDC_ATTR_DATE_TIME_STATUS	2608	/*		*/
#define MDC_ATTR_TIME_ABS_ISO	2609	/*		*/
#define MDC_ATTR_TIME_STAMP_LIST_EXT	2610	/*		*/
#define MDC_ATTR_TIME_ABS_REL_SYNC	2611	/*		*/
#define MDC_ATTR_TIME_ZONE	2612	/*		*/
#define MDC_ATTR_TIME_DAYLIGHT_SAVINGS_TRANS	2613	/*		*/
#define MDC_ATTR_CUM_LEAP_SECONDS	2614	/*		*/
#define MDC_ATTR_NEXT_LEAP_SECOND	2615	/*		*/
#define MDC_ATTR_REPORTING_DELAY_AVG	2616	/*		*/
#define MDC_ATTR_SAMPLE_TIME_SYNC	2617	/*		*/
#define MDC_ATTR_SAMPLE_TIME_SYNC_HIRES	2618	/*		*/
#define MDC_ATTR_CMPLX_INFO	2619	/*		*/
#define MDC_ATTR_CMPLX_VAL_OBS	2620	/*		*/
#define MDC_ATTR_CMPLX_DYN_ATTR	2621	/*		*/
#define MDC_ATTR_CMPLX_STATIC_ATTR	2622	/*		*/
#define MDC_ATTR_CMPLX_RECURSION_DEPTH	2623	/*		*/
#define MDC_ATTR_RANGE_CURR	2624	/*		*/
#define MDC_ATTR_RANGE_OP_TEXT_STRING	2625	/*		*/
/* Partition: ACT				
Description Action				*/
#define MDC_ACT_ACC_SETTINGS	3073	/*	1403	*/
#define MDC_ACT_ADMIT_PT	3074	/*	908	*/
#define MDC_ACT_CLR_LOG	3075	/*	906	*/
#define MDC_ACT_DISCH_PT	3076	/*	907	*/
#define MDC_ACT_GET_CTXT_HELP	3077	/*	2160	*/

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#define MDC_ACT_PRE_ADMIT_PT          3078 /*          909 */
#define MDC_ACT_REFR_CTXT             3079 /*          486 */
#define MDC_ACT_REFR_EPI_DATA         3080 /*          159 */
#define MDC_ACT_REFR_OP_ATTR          3081 /*          492 */
#define MDC_ACT_REFR_OP_CTXT          3082 /*          490 */
#define MDC_ACT_SCO_OP_INVOK          3083 /*          910 */
#define MDC_ACT_SEG_CLR               3084 /*         1821 */
#define MDC_ACT_SEG_GET               3085 /*         1822 */
#define MDC_ACT_SEG_GET_INFO          3086 /*         1824 */
#define MDC_ACT_SET_MDS_STATE         3087 /*          905 */
#define MDC_ACT_UPLD_TEXT_CTLG        3088 /*          485 */
#define MDC_ACT_PDMO_TXN              3089 /*         4913 */
#define MDC_ACT_PDMO_PROMPT           3090 /*         4914 */
#define MDC_ACT_PDMO_MSG_BOX          3091 /*         4915 */
#define MDC_ACT_GET_EVENT_LOG_ENTRIES 3092 /*         5455 */
#define MDC_ACT_GET_MIB_DATA          3093 /*         5467 */
#define MDC_ACT_POLL_MDIB_DATA        3094 /*         5621 */
#define MDC_ACT_SET_TIME              3095 /*          */
#define MDC_ACT_SET_TIME_ZONE         3096 /*          */
#define MDC_ACT_SET_LEAP_SECONDS      3097 /*          */
#define MDC_ACT_SET_TIME_ISO          3098 /*          */

/* Partition: NOTI
Description Notification */
#define MDC_NOTI_NOS                   3328 /*          840 */
#define MDC_NOTI_AL_STAT_SCAN_RPT     3329 /*          904 */
#define MDC_NOTI_ATTR_UPDT            3330 /*          488 */
#define MDC_NOTI_BUF_SCAN_RPT         3331 /*          157 */
#define MDC_NOTI_FAST_BUF_SCAN_RPT    3332 /*          158 */
#define MDC_NOTI_MDS_ATTR_UPDT        3333 /*          484 */
#define MDC_NOTI_MDS_CREAT            3334 /*         1709 */
#define MDC_NOTI_OBJ_ACTIV            3335 /*          479 */

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#define MDC_NOTI_OBJ_CREAT	3336 /*	477 */
#define MDC_NOTI_OBJ_DEACT	3337 /*	480 */
#define MDC_NOTI_OBJ_DEL	3338 /*	478 */
#define MDC_NOTI_OP_ATTR_UPDT	3339 /*	1411 */
#define MDC_NOTI_OP_CREAT	3340 /*	487 */
#define MDC_NOTI_OP_DEL	3341 /*	489 */
#define MDC_NOTI_PT_DEMOG_MOD	3342 /*	902 */
#define MDC_NOTI_PT_DEMOG_ST_MOD	3343 /*	903 */
#define MDC_NOTI_SCAN_ATTR_UPDT	3344 /*	899 */
#define MDC_NOTI_SCO_ATTR_UPDT	3345 /*	493 */
#define MDC_NOTI_SCO_OP_INVOK_ERR	3346 /*	901 */
#define MDC_NOTI_SCO_OP_REQ	3347 /*	483 */
#define MDC_NOTI_SCO_PROMPT	3348 /*	482 */
#define MDC_NOTI_SYS_ERR	3349 /*	476 */
#define MDC_NOTI_UNBUF_SCAN_RPT	3350 /*	160 */
#define MDC_NOTI_CONN_INDIC	3351 /*	4526 */
#define MDC_NOTI_PRINTER_PROMPT	3352 /*	4512 */
#define MDC_NOTI_PDMO	3353 /*	4916 */
#define MDC_NOTI_SCO_ST	3354 /*	5366 */
#define MDC_NOTI_DATE_TIME_CHANGED	3355 /*	*/
/* Partition: MD-Gen		
Description <i>Medical Device - Generic</i>		*/
#define MDC_DEV	4096 /*	4959 */
#define MDC_DEV_MDS	4097 /*	4960 */
#define MDC_DEV_VMD	4098 /*	5093 */
#define MDC_DEV_CHAN	4099 /*	5225 */
#define MDC_DEV_ANALY	4100 /*	3820 */
#define MDC_DEV_ANALY_MDS	4101 /*	4961 */
#define MDC_DEV_ANALY_VMD	4102 /*	5094 */
#define MDC_DEV_ANALY_CHAN	4103 /*	5226 */
#define MDC_DEV_ANALY_SAT_O2	4104 /*	2474 */

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#define MDC_DEV_ANALY_SAT_O2_MDS           4105 /*           4962 */
#define MDC_DEV_ANALY_SAT_O2_VMD           4106 /*           5095 */
#define MDC_DEV_ANALY_SAT_O2_CHAN          4107 /*           5227 */
#define MDC_DEV_ANALY_CONC_GAS_IDENT        4108 /*           2471 */
#define MDC_DEV_ANALY_CONC_GAS_IDENT_MDS    4109 /*           4963 */
#define MDC_DEV_ANALY_CONC_GAS_IDENT_VMD    4110 /*           5096 */
#define MDC_DEV_ANALY_CONC_GAS_IDENT_CHAN    4111 /*           5228 */
#define MDC_DEV_ANALY_CONC_GAS_MULTI_PARAM  4112 /*           3821 */
#define MDC_DEV_ANALY_CONC_GAS_MULTI_PARAM_MDS 4113 /*           4964 */
#define MDC_DEV_ANALY_CONC_GAS_MULTI_PARAM_VMD 4114 /*           5097 */
#define MDC_DEV_ANALY_CONC_GAS_MULTI_PARAM_CHAN 4115 /*           5229 */
#define MDC_DEV_ANALY_URINE_CHEM           4116 /*           2553 */
#define MDC_DEV_ANALY_URINE_CHEM_MDS        4117 /*           4965 */
#define MDC_DEV_ANALY_URINE_CHEM_VMD        4118 /*           5098 */
#define MDC_DEV_ANALY_URINE_CHEM_CHAN        4119 /*           5230 */
#define MDC_DEV_ANALY_ELEC_POTL_BRAIN        4120 /*           2513 */
#define MDC_DEV_ANALY_ELEC_POTL_BRAIN_MDS    4121 /*           4966 */
#define MDC_DEV_ANALY_ELEC_POTL_BRAIN_VMD    4122 /*           5099 */
#define MDC_DEV_ANALY_ELEC_POTL_BRAIN_CHAN    4123 /*           5231 */
#define MDC_DEV_ANALY_ELEC_POTL_HEART_ACTIV  4124 /*           2518 */
#define MDC_DEV_ANALY_ELEC_POTL_HEART_ACTIV_MDS 4125 /*           4967 */
#define MDC_DEV_ANALY_ELEC_POTL_HEART_ACTIV_VMD 4126 /*           5100 */
#define MDC_DEV_ANALY_ELEC_POTL_HEART_ACTIV_CHAN 4127 /*           5232 */
#define MDC_DEV_ANALY_FLOW_AWAY             4128 /* AWF           2494 */
#define MDC_DEV_ANALY_FLOW_AWAY_MDS          4129 /* AWF           4968 */
#define MDC_DEV_ANALY_FLOW_AWAY_VMD          4130 /* AWF           5101 */
#define MDC_DEV_ANALY_FLOW_AWAY_CHAN         4131 /* AWF           5233 */
#define MDC_DEV_ANALY_CARD_OUTPUT            4132 /*           2505 */
#define MDC_DEV_ANALY_CARD_OUTPUT_MDS        4133 /*           4969 */
#define MDC_DEV_ANALY_CARD_OUTPUT_VMD        4134 /*           5102 */
#define MDC_DEV_ANALY_CARD_OUTPUT_CHAN       4135 /*           5234 */
#define MDC_DEV_ANALY_FLOW_LUNG              4136 /*           2528 */
#define MDC_DEV_ANALY_FLOW_LUNG_MDS          4137 /*           4970 */

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#define MDC_DEV_ANALY_FLOW_LUNG_VMD	4138	/*	5103	*/
#define MDC_DEV_ANALY_FLOW_LUNG_CHAN	4139	/*	5235	*/
#define MDC_DEV_ANALY_FLOW_URINE	4140	/*	2554	*/
#define MDC_DEV_ANALY_FLOW_URINE_MDS	4141	/*	4971	*/
#define MDC_DEV_ANALY_FLOW_URINE_VMD	4142	/*	5104	*/
#define MDC_DEV_ANALY_FLOW_URINE_CHAN	4143	/*	5236	*/
#define MDC_DEV_ANALY_AWAY_MULTI_PARAM	4144	/*	2472	*/
#define MDC_DEV_ANALY_AWAY_MULTI_PARAM_MDS	4145	/*	4972	*/
#define MDC_DEV_ANALY_AWAY_MULTI_PARAM_VMD	4146	/*	5105	*/
#define MDC_DEV_ANALY_AWAY_MULTI_PARAM_CHAN	4147	/*	5237	*/
#define MDC_DEV_ANALY_BLD_CHEM_MULTI_PARAM	4148	/*	2506	*/
#define MDC_DEV_ANALY_BLD_CHEM_MULTI_PARAM_MDS	4149	/*	4973	*/
#define MDC_DEV_ANALY_BLD_CHEM_MULTI_PARAM_VMD	4150	/*	5106	*/
#define MDC_DEV_ANALY_BLD_CHEM_MULTI_PARAM_CHAN	4151	/*	5238	*/
#define MDC_DEV_ANALY_LUNG	4152	/*	2532	*/
#define MDC_DEV_ANALY_LUNG_MDS	4153	/*	4974	*/
#define MDC_DEV_ANALY_LUNG_VMD	4154	/*	5107	*/
#define MDC_DEV_ANALY_LUNG_CHAN	4155	/*	5239	*/
#define MDC_DEV_ANALY_MUSCL	4156	/*	2541	*/
#define MDC_DEV_ANALY_MUSCL_MDS	4157	/*	4975	*/
#define MDC_DEV_ANALY_MUSCL_VMD	4158	/*	5108	*/
#define MDC_DEV_ANALY_MUSCL_CHAN	4159	/*	5240	*/
#define MDC_DEV_ANALY_PT_PHYSIO	4160	/*	2470	*/
#define MDC_DEV_ANALY_PT_PHYSIO_MDS	4161	/*	4976	*/
#define MDC_DEV_ANALY_PT_PHYSIO_VMD	4162	/*	5109	*/
#define MDC_DEV_ANALY_PT_PHYSIO_CHAN	4163	/*	5241	*/
#define MDC_DEV_ANALY_SKIN_MULTI_PARAM	4164	/*	2547	*/
#define MDC_DEV_ANALY_SKIN_MULTI_PARAM_MDS	4165	/*	4977	*/
#define MDC_DEV_ANALY_SKIN_MULTI_PARAM_VMD	4166	/*	5110	*/
#define MDC_DEV_ANALY_SKIN_MULTI_PARAM_CHAN	4167	/*	5242	*/
#define MDC_DEV_ANALY_PRESS_AWAY	4168	/*	3837	*/
#define MDC_DEV_ANALY_PRESS_AWAY_MDS	4169	/*	4978	*/
#define MDC_DEV_ANALY_PRESS_AWAY_VMD	4170	/*	5111	*/

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#define MDC_DEV_ANALY_PRESS_AWAY_CHAN          4171 /*          5243 */
#define MDC_DEV_ANALY_PRESS_BLD                4172 /* BP      2475 */
#define MDC_DEV_ANALY_PRESS_BLD_MDS           4173 /* BP      4979 */
#define MDC_DEV_ANALY_PRESS_BLD_VMD           4174 /* BP      5112 */
#define MDC_DEV_ANALY_PRESS_BLD_CHAN           4175 /* BP      5244 */
#define MDC_DEV_ANALY_PRESS_BRAIN_INTRACRAN    4176 /* ICP     3842 */
#define MDC_DEV_ANALY_PRESS_BRAIN_INTRACRAN_MDS 4177 /* ICP     4980 */
#define MDC_DEV_ANALY_PRESS_BRAIN_INTRACRAN_VMD 4178 /* ICP     5113 */
#define MDC_DEV_ANALY_PRESS_BRAIN_INTRACRAN_CHAN 4179 /* ICP     5245 */
#define MDC_DEV_ANALY_PRESS_LUNG                4180 /*          2529 */
#define MDC_DEV_ANALY_PRESS_LUNG_MDS           4181 /*          4981 */
#define MDC_DEV_ANALY_PRESS_LUNG_VMD           4182 /*          5114 */
#define MDC_DEV_ANALY_PRESS_LUNG_CHAN           4183 /*          5246 */
#define MDC_DEV_ANALY_RESP_RATE                4184 /*          2488 */
#define MDC_DEV_ANALY_RESP_RATE_MDS           4185 /*          4982 */
#define MDC_DEV_ANALY_RESP_RATE_VMD           4186 /*          5115 */
#define MDC_DEV_ANALY_RESP_RATE_CHAN           4187 /*          5247 */
#define MDC_DEV_ANALY_RES_LUNG                 4188 /*          2530 */
#define MDC_DEV_ANALY_RES_LUNG_MDS             4189 /*          4983 */
#define MDC_DEV_ANALY_RES_LUNG_VMD            4190 /*          5116 */
#define MDC_DEV_ANALY_RES_LUNG_CHAN            4191 /*          5248 */
#define MDC_DEV_ANALY_TEMP_HEART_OUTPUT        4192 /*          3840 */
#define MDC_DEV_ANALY_TEMP_HEART_OUTPUT_MDS    4193 /*          4984 */
#define MDC_DEV_ANALY_TEMP_HEART_OUTPUT_VMD    4194 /*          5117 */
#define MDC_DEV_ANALY_TEMP_HEART_OUTPUT_CHAN    4195 /*          5249 */
#define MDC_DEV_ANALY_VOL_HEART                4196 /*          2519 */
#define MDC_DEV_ANALY_VOL_HEART_MDS            4197 /*          4985 */
#define MDC_DEV_ANALY_VOL_HEART_VMD            4198 /*          5118 */
#define MDC_DEV_ANALY_VOL_HEART_CHAN            4199 /*          5250 */
#define MDC_DEV_ANALY_VOL_LUNG                 4200 /*          2531 */
#define MDC_DEV_ANALY_VOL_LUNG_MDS             4201 /*          4986 */
#define MDC_DEV_ANALY_VOL_LUNG_VMD            4202 /*          5119 */
#define MDC_DEV_ANALY_VOL_LUNG_CHAN            4203 /*          5251 */

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#define MDC_DEV_CALC	4204	/*	3822	*/
#define MDC_DEV_CALC_MDS	4205	/*	4987	*/
#define MDC_DEV_CALC_VMD	4206	/*	5120	*/
#define MDC_DEV_CALC_CHAN	4207	/*	5252	*/
#define MDC_DEV_CALC_HEMO	4208	/*	3823	*/
#define MDC_DEV_CALC_HEMO_MDS	4209	/*	4988	*/
#define MDC_DEV_CALC_HEMO_VMD	4210	/*	5121	*/
#define MDC_DEV_CALC_HEMO_CHAN	4211	/*	5253	*/
#define MDC_DEV_CALC_RENAL	4212	/*	3824	*/
#define MDC_DEV_CALC_RENAL_MDS	4213	/*	4989	*/
#define MDC_DEV_CALC_RENAL_VMD	4214	/*	5122	*/
#define MDC_DEV_CALC_RENAL_CHAN	4215	/*	5254	*/
#define MDC_DEV_FILTER_CONC	4216	/*	3825	*/
#define MDC_DEV_FILTER_CONC_MDS	4217	/*	4990	*/
#define MDC_DEV_FILTER_CONC_VMD	4218	/*	5123	*/
#define MDC_DEV_FILTER_CONC_CHAN	4219	/*	5255	*/
#define MDC_DEV_FILTER_CONC_AWAY	4220	/*	2497	*/
#define MDC_DEV_FILTER_CONC_AWAY_MDS	4221	/*	4991	*/
#define MDC_DEV_FILTER_CONC_AWAY_VMD	4222	/*	5124	*/
#define MDC_DEV_FILTER_CONC_AWAY_CHAN	4223	/*	5256	*/
#define MDC_DEV_GEN	4224	/*	3826	*/
#define MDC_DEV_GEN_MDS	4225	/*	4992	*/
#define MDC_DEV_GEN_VMD	4226	/*	5125	*/
#define MDC_DEV_GEN_CHAN	4227	/*	5257	*/
#define MDC_DEV_GEN_CONC_AWAY	4228	/*	2496	*/
#define MDC_DEV_GEN_CONC_AWAY_MDS	4229	/*	4993	*/
#define MDC_DEV_GEN_CONC_AWAY_VMD	4230	/*	5126	*/
#define MDC_DEV_GEN_CONC_AWAY_CHAN	4231	/*	5258	*/
#define MDC_DEV_GEN_ELEC_POTL_HEART_DEFIB	4232	/*	2485	*/
#define MDC_DEV_GEN_ELEC_POTL_HEART_DEFIB_MDS	4233	/*	4994	*/
#define MDC_DEV_GEN_ELEC_POTL_HEART_DEFIB_VMD	4234	/*	5127	*/
#define MDC_DEV_GEN_ELEC_POTL_HEART_DEFIB_CHAN	4235	/*	5259	*/
#define MDC_DEV_GEN_ELEC_POTL_MUSCL	4236	/*	2059	*/

#define MDC_DEV_GEN_ELEC_POTL_MUSCL_MDS	4237	/*	4995	*/
#define MDC_DEV_GEN_ELEC_POTL_MUSCL_VMD	4238	/*	5128	*/
#define MDC_DEV_GEN_ELEC_POTL_MUSCL_CHAN	4239	/*	5260	*/
#define MDC_DEV_GEN_ELEC_POTL_SKIN	4240	/*	3827	*/
#define MDC_DEV_GEN_ELEC_POTL_SKIN_MDS	4241	/*	4996	*/
#define MDC_DEV_GEN_ELEC_POTL_SKIN_VMD	4242	/*	5129	*/
#define MDC_DEV_GEN_ELEC_POTL_SKIN_CHAN	4243	/*	5261	*/
#define MDC_DEV_GEN_EVOK_POTL_BRAIN_MULTI_PARAM	4244	/*	3846	*/
#define MDC_DEV_GEN_EVOK_POTL_BRAIN_MULTI_PARAM_MDS	4245	/*	4997	*/
#define MDC_DEV_GEN_EVOK_POTL_BRAIN_MULTI_PARAM_VMD	4246	/*	5130	*/
#define MDC_DEV_GEN_EVOK_POTL_BRAIN_MULTI_PARAM_CHAN	4247	/*	5262	*/
#define MDC_DEV_GEN_RATE_HEART	4248	/*	2521	*/
#define MDC_DEV_GEN_RATE_HEART_MDS	4249	/*	4998	*/
#define MDC_DEV_GEN_RATE_HEART_VMD	4250	/*	5131	*/
#define MDC_DEV_GEN_RATE_HEART_CHAN	4251	/*	5263	*/
#define MDC_DEV_GEN_TEMP_MUSCL	4252	/*	2543	*/
#define MDC_DEV_GEN_TEMP_MUSCL_MDS	4253	/*	4999	*/
#define MDC_DEV_GEN_TEMP_MUSCL_VMD	4254	/*	5132	*/
#define MDC_DEV_GEN_TEMP_MUSCL_CHAN	4255	/*	5264	*/
#define MDC_DEV_METER	4256	/*	3828	*/
#define MDC_DEV_METER_MDS	4257	/*	5000	*/
#define MDC_DEV_METER_VMD	4258	/*	5133	*/
#define MDC_DEV_METER_CHAN	4259	/*	5265	*/
#define MDC_DEV_ECG	4260	/*	2487	*/
#define MDC_DEV_ECG_MDS	4261	/*	5001	*/
#define MDC_DEV_ECG_VMD	4262	/*	5134	*/
#define MDC_DEV_ECG_CHAN	4263	/*	5266	*/
#define MDC_DEV_METER_CONC_SKIN_GAS	4264	/*	2551	*/
#define MDC_DEV_METER_CONC_SKIN_GAS_MDS	4265	/*	5002	*/
#define MDC_DEV_METER_CONC_SKIN_GAS_VMD	4266	/*	5135	*/
#define MDC_DEV_METER_CONC_SKIN_GAS_CHAN	4267	/*	5267	*/
#define MDC_DEV_METER_CONC_URINE	4268	/*	2556	*/
#define MDC_DEV_METER_CONC_URINE_MDS	4269	/*	5003	*/

#define MDC_DEV_METER_CONC_URINE_VMD	4270 /*	5136 */
#define MDC_DEV_METER_CONC_URINE_CHAN	4271 /*	5268 */
#define MDC_DEV_EEG	4272 /*	2483 */
#define MDC_DEV_EEG_MDS	4273 /*	5004 */
#define MDC_DEV_EEG_VMD	4274 /*	5137 */
#define MDC_DEV_EEG_CHAN	4275 /*	5269 */
#define MDC_DEV_EMG	4276 /*	2544 */
#define MDC_DEV_EMG_MDS	4277 /*	5005 */
#define MDC_DEV_EMG_VMD	4278 /*	5138 */
#define MDC_DEV_EMG_CHAN	4279 /*	5270 */
#define MDC_DEV_METER_FLOW_AWAY	4280 /*	2500 */
#define MDC_DEV_METER_FLOW_AWAY_MDS	4281 /*	5006 */
#define MDC_DEV_METER_FLOW_AWAY_VMD	4282 /*	5139 */
#define MDC_DEV_METER_FLOW_AWAY_CHAN	4283 /*	5271 */
#define MDC_DEV_METER_FLOW_BLD	4284 /*	2510 */
#define MDC_DEV_METER_FLOW_BLD_MDS	4285 /*	5007 */
#define MDC_DEV_METER_FLOW_BLD_VMD	4286 /*	5140 */
#define MDC_DEV_METER_FLOW_BLD_CHAN	4287 /*	5272 */
#define MDC_DEV_METER_FLOW_CARD	4288 /*	2486 */
#define MDC_DEV_METER_FLOW_CARD_MDS	4289 /*	5008 */
#define MDC_DEV_METER_FLOW_CARD_VMD	4290 /*	5141 */
#define MDC_DEV_METER_FLOW_CARD_CHAN	4291 /*	5273 */
#define MDC_DEV_METER_FLOW_LUNG	4292 /*	3829 */
#define MDC_DEV_METER_FLOW_LUNG_MDS	4293 /*	5009 */
#define MDC_DEV_METER_FLOW_LUNG_VMD	4294 /*	5142 */
#define MDC_DEV_METER_FLOW_LUNG_CHAN	4295 /*	5274 */
#define MDC_DEV_METER_FLOW_URINE	4296 /*	2557 */
#define MDC_DEV_METER_FLOW_URINE_MDS	4297 /*	5010 */
#define MDC_DEV_METER_FLOW_URINE_VMD	4298 /*	5143 */
#define MDC_DEV_METER_FLOW_URINE_CHAN	4299 /*	5275 */
#define MDC_DEV_METER_PHYSIO_MULTI_PARAM	4300 /*	3830 */
#define MDC_DEV_METER_PHYSIO_MULTI_PARAM_MDS	4301 /*	5011 */
#define MDC_DEV_METER_PHYSIO_MULTI_PARAM_VMD	4302 /*	5144 */

#define MDC_DEV_METER_PHYSIO_MULTI_PARAM_CHAN	4303	/*	5276	*/
#define MDC_DEV_METER_SKIN_MULTI_PARAM	4304	/*	2549	*/
#define MDC_DEV_METER_SKIN_MULTI_PARAM_MDS	4305	/*	5012	*/
#define MDC_DEV_METER_SKIN_MULTI_PARAM_VMD	4306	/*	5145	*/
#define MDC_DEV_METER_SKIN_MULTI_PARAM_CHAN	4307	/*	5277	*/
#define MDC_DEV_METER_BLD_CHEM	4308	/*	2509	*/
#define MDC_DEV_METER_BLD_CHEM_MDS	4309	/*	5013	*/
#define MDC_DEV_METER_BLD_CHEM_VMD	4310	/*	5146	*/
#define MDC_DEV_METER_BLD_CHEM_CHAN	4311	/*	5278	*/
#define MDC_DEV_METER_PRESS_AIR	4312	/*	2501	*/
#define MDC_DEV_METER_PRESS_AIR_MDS	4313	/*	5014	*/
#define MDC_DEV_METER_PRESS_AIR_VMD	4314	/*	5147	*/
#define MDC_DEV_METER_PRESS_AIR_CHAN	4315	/*	5279	*/
#define MDC_DEV_METER_PRESS_BLD	4316	/* BP	3838	*/
#define MDC_DEV_METER_PRESS_BLD_MDS	4317	/* BP	5015	*/
#define MDC_DEV_METER_PRESS_BLD_VMD	4318	/* BP	5148	*/
#define MDC_DEV_METER_PRESS_BLD_CHAN	4319	/* BP	5280	*/
#define MDC_DEV_METER_PRESS_INTRA_CRAN	4320	/* ICP	2514	*/
#define MDC_DEV_METER_PRESS_INTRA_CRAN_MDS	4321	/* ICP	5016	*/
#define MDC_DEV_METER_PRESS_INTRA_CRAN_VMD	4322	/* ICP	5149	*/
#define MDC_DEV_METER_PRESS_INTRA_CRAN_CHAN	4323	/* ICP	5281	*/
#define MDC_DEV_METER_PRESS_HEART	4324	/*	2522	*/
#define MDC_DEV_METER_PRESS_HEART_MDS	4325	/*	5017	*/
#define MDC_DEV_METER_PRESS_HEART_VMD	4326	/*	5150	*/
#define MDC_DEV_METER_PRESS_HEART_CHAN	4327	/*	5282	*/
#define MDC_DEV_METER_PRESS_LUNG	4328	/*	2538	*/
#define MDC_DEV_METER_PRESS_LUNG_MDS	4329	/*	5018	*/
#define MDC_DEV_METER_PRESS_LUNG_VMD	4330	/*	5151	*/
#define MDC_DEV_METER_PRESS_LUNG_CHAN	4331	/*	5283	*/
#define MDC_DEV_METER_RES_AIR	4332	/*	2502	*/
#define MDC_DEV_METER_RES_AIR_MDS	4333	/*	5019	*/
#define MDC_DEV_METER_RES_AIR_VMD	4334	/*	5152	*/
#define MDC_DEV_METER_RES_AIR_CHAN	4335	/*	5284	*/

#define MDC_DEV_METER_RES_LUNG	4336 /*	2539 */
#define MDC_DEV_METER_RES_LUNG_MDS	4337 /*	5020 */
#define MDC_DEV_METER_RES_LUNG_VMD	4338 /*	5153 */
#define MDC_DEV_METER_RES_LUNG_CHAN	4339 /*	5285 */
#define MDC_DEV_METER_STRENGTH_MUSCL	4340 /*	2545 */
#define MDC_DEV_METER_STRENGTH_MUSCL_MDS	4341 /*	5021 */
#define MDC_DEV_METER_STRENGTH_MUSCL_VMD	4342 /*	5154 */
#define MDC_DEV_METER_STRENGTH_MUSCL_CHAN	4343 /*	5286 */
#define MDC_DEV_METER_TEMP_AIR	4344 /* TEMPairw	2503 */
#define MDC_DEV_METER_TEMP_AIR_MDS	4345 /* TEMPairw	5022 */
#define MDC_DEV_METER_TEMP_AIR_VMD	4346 /* TEMPairw	5155 */
#define MDC_DEV_METER_TEMP_AIR_CHAN	4347 /* TEMPairw	5287 */
#define MDC_DEV_METER_TEMP_BLD	4348 /*	2479 */
#define MDC_DEV_METER_TEMP_BLD_MDS	4349 /*	5023 */
#define MDC_DEV_METER_TEMP_BLD_VMD	4350 /*	5156 */
#define MDC_DEV_METER_TEMP_BLD_CHAN	4351 /*	5288 */
#define MDC_DEV_METER_TEMP_BRAIN	4352 /*	3841 */
#define MDC_DEV_METER_TEMP_BRAIN_MDS	4353 /*	5024 */
#define MDC_DEV_METER_TEMP_BRAIN_VMD	4354 /*	5157 */
#define MDC_DEV_METER_TEMP_BRAIN_CHAN	4355 /*	5289 */
#define MDC_DEV_METER_TEMP_HEART	4356 /*	2523 */
#define MDC_DEV_METER_TEMP_HEART_MDS	4357 /*	5025 */
#define MDC_DEV_METER_TEMP_HEART_VMD	4358 /*	5158 */
#define MDC_DEV_METER_TEMP_HEART_CHAN	4359 /*	5290 */
#define MDC_DEV_METER_TEMP_LUNG	4360 /*	2540 */
#define MDC_DEV_METER_TEMP_LUNG_MDS	4361 /*	5026 */
#define MDC_DEV_METER_TEMP_LUNG_VMD	4362 /*	5159 */
#define MDC_DEV_METER_TEMP_LUNG_CHAN	4363 /*	5291 */
#define MDC_DEV_METER_TEMP	4364 /*	2493 */
#define MDC_DEV_METER_TEMP_MDS	4365 /*	5027 */
#define MDC_DEV_METER_TEMP_VMD	4366 /*	5160 */
#define MDC_DEV_METER_TEMP_CHAN	4367 /*	5292 */
#define MDC_DEV_METER_TEMP_RENAL	4368 /*	2527 */

#define MDC_DEV_METER_TEMP_RENAL_MDS	4369	/*	5028	*/
#define MDC_DEV_METER_TEMP_RENAL_VMD	4370	/*	5161	*/
#define MDC_DEV_METER_TEMP_RENAL_CHAN	4371	/*	5293	*/
#define MDC_DEV_METER_TEMP_SKIN	4372	/*	2552	*/
#define MDC_DEV_METER_TEMP_SKIN_MDS	4373	/*	5029	*/
#define MDC_DEV_METER_TEMP_SKIN_VMD	4374	/*	5162	*/
#define MDC_DEV_METER_TEMP_SKIN_CHAN	4375	/*	5294	*/
#define MDC_DEV_METER_VOL_AIR	4376	/*	2504	*/
#define MDC_DEV_METER_VOL_AIR_MDS	4377	/*	5030	*/
#define MDC_DEV_METER_VOL_AIR_VMD	4378	/*	5163	*/
#define MDC_DEV_METER_VOL_AIR_CHAN	4379	/*	5295	*/
#define MDC_DEV_METER_VOL_HEART	4380	/*	2524	*/
#define MDC_DEV_METER_VOL_HEART_MDS	4381	/*	5031	*/
#define MDC_DEV_METER_VOL_HEART_VMD	4382	/*	5164	*/
#define MDC_DEV_METER_VOL_HEART_CHAN	4383	/*	5296	*/
#define MDC_DEV_METER_VOL_MUSCL	4384	/*	2546	*/
#define MDC_DEV_METER_VOL_MUSCL_MDS	4385	/*	5032	*/
#define MDC_DEV_METER_VOL_MUSCL_VMD	4386	/*	5165	*/
#define MDC_DEV_METER_VOL_MUSCL_CHAN	4387	/*	5297	*/
#define MDC_DEV_MON	4388	/*	3831	*/
#define MDC_DEV_MON_MDS	4389	/*	5033	*/
#define MDC_DEV_MON_VMD	4390	/*	5166	*/
#define MDC_DEV_MON_CHAN	4391	/*	5298	*/
#define MDC_DEV_MON_URINE_CHEM	4392	/*	2555	*/
#define MDC_DEV_MON_URINE_CHEM_MDS	4393	/*	5034	*/
#define MDC_DEV_MON_URINE_CHEM_VMD	4394	/*	5167	*/
#define MDC_DEV_MON_URINE_CHEM_CHAN	4395	/*	5299	*/
#define MDC_DEV_MON_BLD_CHEM_MULTI_PARAM	4396	/*	3845	*/
#define MDC_DEV_MON_BLD_CHEM_MULTI_PARAM_MDS	4397	/*	5035	*/
#define MDC_DEV_MON_BLD_CHEM_MULTI_PARAM_VMD	4398	/*	5168	*/
#define MDC_DEV_MON_BLD_CHEM_MULTI_PARAM_CHAN	4399	/*	5300	*/
#define MDC_DEV_MON_BRAIN_FUNC	4400	/*	3832	*/
#define MDC_DEV_MON_BRAIN_FUNC_MDS	4401	/*	5036	*/

#define MDC_DEV_MON_BRAIN_FUNC_VMD	4402	/*	5169	*/
#define MDC_DEV_MON_BRAIN_FUNC_CHAN	4403	/*	5301	*/
#define MDC_DEV_MON_HEART_MULTI_PARAM	4404	/*	2484	*/
#define MDC_DEV_MON_HEART_MULTI_PARAM_MDS	4405	/*	5037	*/
#define MDC_DEV_MON_HEART_MULTI_PARAM_VMD	4406	/*	5170	*/
#define MDC_DEV_MON_HEART_MULTI_PARAM_CHAN	4407	/*	5302	*/
#define MDC_DEV_MON_LUNG_FUNC	4408	/*	2533	*/
#define MDC_DEV_MON_LUNG_FUNC_MDS	4409	/*	5038	*/
#define MDC_DEV_MON_LUNG_FUNC_VMD	4410	/*	5171	*/
#define MDC_DEV_MON_LUNG_FUNC_CHAN	4411	/*	5303	*/
#define MDC_DEV_MON_MUSCL	4412	/*	2542	*/
#define MDC_DEV_MON_MUSCL_MDS	4413	/*	5039	*/
#define MDC_DEV_MON_MUSCL_VMD	4414	/*	5172	*/
#define MDC_DEV_MON_MUSCL_CHAN	4415	/*	5304	*/
#define MDC_DEV_MON_PT_PHYSIO_MULTI_PARAM	4416	/*	2491	*/
#define MDC_DEV_MON_PT_PHYSIO_MULTI_PARAM_MDS	4417	/*	5040	*/
#define MDC_DEV_MON_PT_PHYSIO_MULTI_PARAM_VMD	4418	/*	5173	*/
#define MDC_DEV_MON_PT_PHYSIO_MULTI_PARAM_CHAN	4419	/*	5305	*/
#define MDC_DEV_MON_RENAL_FUNC_MULTI_PARAM	4420	/*	2526	*/
#define MDC_DEV_MON_RENAL_FUNC_MULTI_PARAM_MDS	4421	/*	5041	*/
#define MDC_DEV_MON_RENAL_FUNC_MULTI_PARAM_VMD	4422	/*	5174	*/
#define MDC_DEV_MON_RENAL_FUNC_MULTI_PARAM_CHAN	4423	/*	5306	*/
#define MDC_DEV_MON_SKIN_MULTI_PARAM	4424	/*	2548	*/
#define MDC_DEV_MON_SKIN_MULTI_PARAM_MDS	4425	/*	5042	*/
#define MDC_DEV_MON_SKIN_MULTI_PARAM_VMD	4426	/*	5175	*/
#define MDC_DEV_MON_SKIN_MULTI_PARAM_CHAN	4427	/*	5307	*/
#define MDC_DEV_MON_PHYSIO_MULTI_PARAM	4428	/*	3833	*/
#define MDC_DEV_MON_PHYSIO_MULTI_PARAM_MDS	4429	/*	5043	*/
#define MDC_DEV_MON_PHYSIO_MULTI_PARAM_VMD	4430	/*	5176	*/
#define MDC_DEV_MON_PHYSIO_MULTI_PARAM_CHAN	4431	/*	5308	*/
#define MDC_DEV_PUMP	4432	/*	3834	*/
#define MDC_DEV_PUMP_MDS	4433	/*	5044	*/
#define MDC_DEV_PUMP_VMD	4434	/*	5177	*/

#define MDC_DEV_PUMP_CHAN	4435	/*	5309	*/
#define MDC_DEV_PUMP_HEART_LUNG	4436	/*	2477	*/
#define MDC_DEV_PUMP_HEART_LUNG_MDS	4437	/*	5045	*/
#define MDC_DEV_PUMP_HEART_LUNG_VMD	4438	/*	5178	*/
#define MDC_DEV_PUMP_HEART_LUNG_CHAN	4439	/*	5310	*/
#define MDC_DEV_PUMP_FLOW_HEART	4440	/*	2520	*/
#define MDC_DEV_PUMP_FLOW_HEART_MDS	4441	/*	5046	*/
#define MDC_DEV_PUMP_FLOW_HEART_VMD	4442	/*	5179	*/
#define MDC_DEV_PUMP_FLOW_HEART_CHAN	4443	/*	5311	*/
#define MDC_DEV_PUMP_PRESS_BLD_INTRAAORT	4444	/*	383	*/
#define MDC_DEV_PUMP_PRESS_BLD_INTRAAORT_MDS	4445	/*	5047	*/
#define MDC_DEV_PUMP_PRESS_BLD_INTRAAORT_VMD	4446	/*	5180	*/
#define MDC_DEV_PUMP_PRESS_BLD_INTRAAORT_CHAN	4447	/*	5312	*/
#define MDC_DEV_PUMP_INFUS	4448	/*	2478	*/
#define MDC_DEV_PUMP_INFUS_MDS	4449	/*	5048	*/
#define MDC_DEV_PUMP_INFUS_VMD	4450	/*	5181	*/
#define MDC_DEV_PUMP_INFUS_CHAN	4451	/*	5313	*/
#define MDC_DEV_REGUL	4452	/*	3835	*/
#define MDC_DEV_REGUL_MDS	4453	/*	5049	*/
#define MDC_DEV_REGUL_VMD	4454	/*	5182	*/
#define MDC_DEV_REGUL_CHAN	4455	/*	5314	*/
#define MDC_DEV_REGUL_FLOW_AWAY_VENT	4456	/*	2489	*/
#define MDC_DEV_REGUL_FLOW_AWAY_VENT_MDS	4457	/*	5050	*/
#define MDC_DEV_REGUL_FLOW_AWAY_VENT_VMD	4458	/*	5183	*/
#define MDC_DEV_REGUL_FLOW_AWAY_VENT_CHAN	4459	/*	5315	*/
#define MDC_DEV_REGUL_BLD_CHEM	4460	/*	2507	*/
#define MDC_DEV_REGUL_BLD_CHEM_MDS	4461	/*	5051	*/
#define MDC_DEV_REGUL_BLD_CHEM_VMD	4462	/*	5184	*/
#define MDC_DEV_REGUL_BLD_CHEM_CHAN	4463	/*	5316	*/
#define MDC_DEV_SYS_PT_VENT	4464	/*	2473	*/
#define MDC_DEV_SYS_PT_VENT_MDS	4465	/*	5052	*/
#define MDC_DEV_SYS_PT_VENT_VMD	4466	/*	5185	*/
#define MDC_DEV_SYS_PT_VENT_CHAN	4467	/*	5317	*/

#define MDC_DEV_REGUL_DECOMPRESS	4468	/*	2534	*/
#define MDC_DEV_REGUL_DECOMPRESS_MDS	4469	/*	5053	*/
#define MDC_DEV_REGUL_DECOMPRESS_VMD	4470	/*	5186	*/
#define MDC_DEV_REGUL_DECOMPRESS_CHAN	4471	/*	5318	*/
#define MDC_DEV_REGUL_PRESS_LUNG	4472	/*	2490	*/
#define MDC_DEV_REGUL_PRESS_LUNG_MDS	4473	/*	5054	*/
#define MDC_DEV_REGUL_PRESS_LUNG_VMD	4474	/*	5187	*/
#define MDC_DEV_REGUL_PRESS_LUNG_CHAN	4475	/*	5319	*/
#define MDC_DEV_REGUL_RATE_VENT	4476	/* RR	2535	*/
#define MDC_DEV_REGUL_RATE_VENT_MDS	4477	/* RR	5055	*/
#define MDC_DEV_REGUL_RATE_VENT_VMD	4478	/* RR	5188	*/
#define MDC_DEV_REGUL_RATE_VENT_CHAN	4479	/* RR	5320	*/
#define MDC_DEV_REGUL_TEMP_BLD	4480	/*	2508	*/
#define MDC_DEV_REGUL_TEMP_BLD_MDS	4481	/*	5056	*/
#define MDC_DEV_REGUL_TEMP_BLD_VMD	4482	/*	5189	*/
#define MDC_DEV_REGUL_TEMP_BLD_CHAN	4483	/*	5321	*/
#define MDC_DEV_REGUL_TEMP_SKIN	4484	/*	2550	*/
#define MDC_DEV_REGUL_TEMP_SKIN_MDS	4485	/*	5057	*/
#define MDC_DEV_REGUL_TEMP_SKIN_VMD	4486	/*	5190	*/
#define MDC_DEV_REGUL_TEMP_SKIN_CHAN	4487	/*	5322	*/
#define MDC_DEV_REGUL_VOL_VENT	4488	/* VD	2536	*/
#define MDC_DEV_REGUL_VOL_VENT_MDS	4489	/* VD	5058	*/
#define MDC_DEV_REGUL_VOL_VENT_VMD	4490	/* VD	5191	*/
#define MDC_DEV_REGUL_VOL_VENT_CHAN	4491	/* VD	5323	*/
#define MDC_DEV_SYS_MULTI_MODAL	4492	/*	3819	*/
#define MDC_DEV_SYS_MULTI_MODAL_MDS	4493	/*	5059	*/
#define MDC_DEV_SYS_MULTI_MODAL_VMD	4494	/*	5192	*/
#define MDC_DEV_SYS_MULTI_MODAL_CHAN	4495	/*	5324	*/
#define MDC_DEV_SYS_BRAIN_MULTI_PARAM	4496	/*	2515	*/
#define MDC_DEV_SYS_BRAIN_MULTI_PARAM_MDS	4497	/*	5060	*/
#define MDC_DEV_SYS_BRAIN_MULTI_PARAM_VMD	4498	/*	5193	*/
#define MDC_DEV_SYS_BRAIN_MULTI_PARAM_CHAN	4499	/*	5325	*/
#define MDC_DEV_SYS_CARD_MULTI_PARAM	4500	/*	3818	*/