

# INTERNATIONAL STANDARD

## AMENDMENT 1

**Home and building electronic systems (HBES) and building automation and control systems (BACS) –  
Part 3: Electrical safety requirements**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOME AND BUILDING ELECTRONIC SYSTEMS (HBES) AND  
BUILDING AUTOMATION AND CONTROL SYSTEMS (BACS) –****Part 3: Electrical safety requirements****AMENDMENT 1****FOREWORD**

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Amendment 1 to IEC 63044-3:2017 has been prepared by IEC technical committee 23: Electrical accessories.

The text of this Amendment is based on the following documents:

|            |                  |
|------------|------------------|
| CDV        | Report on voting |
| 23/912/CDV | 23/961A/RVC      |

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Amendment is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications/](http://www.iec.ch/standardsdev/publications/).

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## INTRODUCTION

*In the last sentence of the third paragraph, replace "circuit" with "network".*

*In the first sentence of the fourth paragraph, replace "products" with "devices".*

*In the last sentence of the fourth paragraph, replace "circuit" with "network".*

*In the fifth paragraph, replace "products" with "devices".*

*In the first sentence of the sixth paragraph, replace "products" with "devices" and delete "circuit" after "network".*

*In the first bulleted list item, delete "circuit" after "PELV".*

## 1 Scope

*Replace the two first paragraphs with the following:*

"This document specifies the electrical safety requirements for HBES/BACS."

*In the third paragraph, delete "network" after "HBES/BACS".*

*Delete the fourth paragraph and list, which begins: "This document is applicable to..."*

*Replace the fifth paragraph and list with the following:*

"This document covers the following requirements and compliance criteria:

- protection against hazards from the device;
- protection against overvoltages on the network;
- protection against touch current;
- protection against hazards caused by different types of network;
- protection of the communication wiring against overheating caused by excessive current."

## 3 Terms, definitions and abbreviated terms

### 3.1 Terms and definitions

*In 3.1.1, replace "circuits" and "circuit" with "networks" and "network", respectively, in the third dashed list item of the definition and in Note 1 and Note 4.*

*In 3.1.6, replace "circuit" with "network" in the term itself and in the definition.*

*In 3.1.8, replace "circuit" with "network" in the terms, and in the definition and note.*

*In 3.1.9, replace "circuit" with "network" in the terms, and in the definition and Note 2.*

*In 3.1.10, replace "circuit" and "circuits" with "network" and "networks", respectively, in the terms, and in the definition and notes.*

*In 3.1.11, replace "circuit" and "circuits" with "network" and "networks", respectively, in the terms, and in the definition and notes.*

*In 3.1.12, replace "circuits" and "circuit" with "networks" and "network", respectively, in the definition.*

*In 3.1.13, replace "circuit" with "network" in the definition and replace the SOURCE line with the following:*

[SOURCE: IEC 60050-195:1998, 195-06-19, modified – "(electrically)" has been omitted from the term and "circuit" has been replaced with "network" in the definition.]

*In 3.1.17, replace "circuits" with "networks" in the definition and replace the SOURCE line with the following:*

[SOURCE: IEC 60050-195:1998, 195-06-18, modified – "circuits" has been replaced with "networks" in the definition.]

### **3.2 Abbreviated terms**

*Add the following abbreviated term:*

FELV Functional Extra Low Voltage

## **4 Classification of HBES/BACS network interfaces**

*Replace the content of Clause 4 with "Void".*

## **5 Safety requirements and compliance criteria**

*Replace "appropriate" with "electrical" and "Table 1" with "Annex A".*

*Add the following paragraphs after the existing paragraph:*

"This document applies in the following way.

- a) If the safety standard for the device to be part of the HBES/BACS does not specify electrical safety requirements for HBES/BACS, this document (IEC 63044-3) applies.
- b) If the safety standard for the device to be part of the HBES/BACS specifies electrical safety requirements for HBES/BACS, the requirements of this document (IEC 63044-3) shall be used as the minimum levels required."

## **6 Requirements**

### **6.1 General**

*Delete first paragraph.*

### **6.2 Classification requirements of installation areas**

#### **6.2.1 Overvoltage category**

*Delete "system" in the first paragraph.*

#### **6.2.2 Pollution degree**

*Delete "system" in the first paragraph.*

*Add a new subclause:*

### **6.2.3 Material class**

All devices of an HBES/BACS shall comply with the minimum material class IIIa (CTI = 175 V).

## **6.3 Electrical safety requirements**

*In the heading to 6.3.2, replace "circuit" with "network".*

*In 6.3.2.1, heading, replace "products" with "devices".*

*In the first paragraph of 6.3.2.1, replace "products" with "devices" and "3.1.4" with "3.1.1".*

*In 6.3.2.2, heading, replace "Products connected to" with "Devices interconnected via".*

*In 6.3.2.2, replace the first paragraph with the following:*

"For devices connected to an HBES/BACS network as defined in IEC 63044-1:2017, 3.1.2 and IEC 63044-1:2017/AMD1:2021, 3.1.2, the protection against electric shock in accordance with 6.3.1 applies. Table 1 specifies the required electrical separation between the device network and the HBES/BACS network and applies in addition to the product standard."

*Add the following after the first paragraph:*

"If the separation between the mains and SELV is done with a transformer, this shall be a safety transformer according to IEC 61558-2-6 or IEC 61558-2-16."

*In the third dashed list item at the end of 6.3.2.2, replace "Table 12" with "in Table 1".*

*After the sentence of the fourth dashed list item at the end of 6.3.2.2, add the following sentence:*

"If clearances have been chosen for inhomogeneous field conditions according to IEC 60664-1:2007, Table F.2, no verification by a voltage withstand test is needed."

*In the Note of 6.3.3.1, replace "products" with "devices".*

*In 6.3.3.2, replace the existing heading with the following new heading:*

### **6.3.3.2 Limitation of touch current from the HBES/BACS device to an ICT network**

*Replace the first paragraph with the following:*

"For HBES/BACS devices connected to an ICT network, as defined in 3.1.1, the appropriate requirements in IEC 62949 apply in addition to the product standard."



*In 6.3.3.3, replace the heading with the following new heading:*

**6.3.3.3 Limitation of the touch current from the device to the HBES/BACS network**

*In 6.3.3.4.1, replace the Note with the following Note:*

NOTE The values used for these requirements are taken from IEC 61140:2016.

*In 6.3.3.4.2, 1), add "AC RMS or 10 mA ripple-free DC" after "3,5 mA".*

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