

INTERNATIONAL ELECTROTECHNICAL COMMISSION
COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

IEC 60947-5-1
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Low-voltage switchgear and controlgear –

Appareillage à basse tension –

Part 5-1: Control circuit devices
and switching elements –
Electromechanical
control circuit devices

Partie 5-1: Appareils et éléments de
commutation pour circuits de commande –
Appareils électromécaniques
pour circuits de commande

CORRIGENDUM 1

5.2.2 Terminal identification and marking

5.2.2 Identification et marquage des bornes

Replace the existing text by the following new text:

Remplacer le texte existant par le nouveau texte suivant :

Subclause 7.1.8.4 of IEC 60947-1:2007 applies, with the additional requirements stated in Annex M.

Le Paragraphe 7.1.8.4 de l'IEC 60947-1:2007 s'applique, avec les exigences additionnelles identifiées dans l'Annexe M.

Table 8 – Immunity tests

Replace the existing table by the following new table:

Table 8 – Immunity tests

Type of test	Basic standard	Test level required		Acceptance criteria
Electrostatic discharge immunity test	IEC 61000-4-2	8 kV / air discharge or 4 kV / contact discharge		B ^k
Radiated radio-frequency electromagnetic field immunity test 80 MHz to 1 GHz	IEC 61000-4-3	10 V/m		A
Radiated radio-frequency electromagnetic field immunity test 1,4 GHz to 2 GHz	IEC 61000-4-3	3 V/m		A
Radiated radio-frequency electromagnetic field immunity test 2 GHz to 2,7 GHz	IEC 61000-4-3	1 V/m		A
Electrical fast transient/burst immunity test (with capacitive coupling clamp)	IEC 61000-4-4	2 kV / 5 kHz on power ports ^a 1 kV / 5 kHz on signal ports ^b		B ^k
Surge immunity test (1,2/50 μs - 8/20 μs) ^c	IEC 61000-4-5	2 kV (line to earth) 1 kV (line to line)		B
Conducted disturbances induced by radiofrequency fields immunity test (150 kHz to 80 MHz)	IEC 61000-4-6	10 V		A
Power frequency magnetic field immunity test ^d	IEC 61000-4-8	30 A/m		A
Voltage dips immunity test ^h	IEC 61000-4-11	Class 2 ^{e, f} 0 % during 0,5 cycle	Class 3 ^{e, f} 0 % during 0,5 cycle	B ^{k, l}
		Class 2 ^{e, f} 0 % during 1 cycle	Class 3 ^{e, f} 0 % during 1 cycle	B
		Class 2 ^{e, f, g} 70 % during 25/30 cycles	Class 3 ^{e, f, g} 40 % during 10/12 cycles 70 % during 25/30 cycles 80 % during 250/300 cycles	C
Voltage interruptions immunity test ^h	IEC 61000-4-11	Class 2 ^{e, f, g} 0 % during 250/300 cycles	Class 3 ^{e, f, g} 0 % during 250/300 cycles	C
Immunity to harmonics in the supply	IEC 61000-4-13	No requirements ⁱ		
^a Power port: the point at which a conductor or cable carrying the primary electrical power needed for the operation of the electronic circuit or the switching element or associated equipment is connected.				
^b Signal port: the point at which a conductor or cable carrying information for transferring data or signals is connected to the electronic circuit or the switching element.				
^c Not applicable for extra-low voltage a.c. ports (≤ 30 V) and extra-low voltage d.c. input/output ports (≤ 60 V), when the secondary circuits (isolated from the a.c. mains) are not subject to transient overvoltages.				
^d Applicable only to equipment containing devices susceptible to power frequency magnetic fields.				

- ^e Class 2 applies to points of common coupling and in-plant points of common coupling in the industrial environment in general.
- Class 3 applies to in-plant couplings in industrial environment only. This class should be considered when a major part of the load is fed through converters; welding machines are present; large motors are frequently started or loads vary rapidly.
- The manufacturer shall state the applicable class.
- ^f The given percentage means percentage of the rated operational voltage, e.g. 0 % means 0 V.
- ^g The value before the solidus (/) is for 50 Hz and the value behind is for 60 Hz tests.
- ^h Applicable for a.c. equipment only.
- ⁱ Requirements are under study for the future.
- ^k For keeping the functionality at the system level (e.g. automation or process) the state of the switching element shall not change for more than 1 ms for d.c. devices or one half-cycle of supply frequency for a.c. devices.
- ^l For devices with power consumption of more than 750 mW, the recovery time of the switching element may be longer than one half-cycle but shall be less than the maximum recovery time.

Tableau 8 – Essais d'immunité

Remplacer le tableau existant par le nouveau tableau suivant :

Tableau 8 – Essais d'immunité

Type de l'essai	Norme de base	Niveau d'essai exigé		Critère d'acceptation
Essai d'immunité aux décharges électromagnétiques	IEC 61000-4-2	8 kV / décharge dans l'air ou 4 kV / décharge au contact		B ^k
Essai d'immunité aux champs électromagnétiques rayonnés aux fréquences radioélectriques 80 MHz à 1 GHz	IEC 61000-4-3	10 V/m		A
Essai d'immunité aux champs électromagnétiques rayonnés aux fréquences radioélectriques 1,4 GHz à 2 GHz	IEC 61000-4-3	3 V/m		A
Essai d'immunité aux champs électromagnétiques rayonnés aux fréquences radioélectriques 2 GHz à 2,7 GHz	IEC 61000-4-3	1 V/m		A
Essais d'immunité aux transitoires électriques rapides en salves (avec pince de couplage capacitive)	IEC 61000-4-4	2 kV / 5 kHz aux accès de puissance ^a 1 kV / 5 kHz aux accès de signaux ^b		B ^k
Essai d'immunité aux ondes de choc (1,2/50 µs – 8/20 µs) ^c	IEC 61000-4-5	2 kV (phase-terre) 1 kV (phase-phase)		B
Essai d'immunité aux perturbations conduites, induites par les champs radioélectriques (150 kHz à 80 MHz)	IEC 61000-4-6	10 V		A
Essai d'immunité au champ magnétique à la fréquence du réseau ^d	IEC 61000-4-8	30 A/m		A
Essai d'immunité aux creux de tension ^h	IEC 61000-4-11	Classe 2 ^{e, f} 0 % pendant 0,5 cycle	Classe 3 ^{e, f} 0 % pendant 0,5 cycle	B ^{k, l}
		Classe 2 ^{e, f} 0 % pendant 1 cycle	Classe 3 ^{e, f} 0 % pendant 1 cycle	B
		Classe 2 ^{e, f, g} 70 % pendant 25/30 cycles	Classe 3 ^{e, f, g} 40 % pendant 10/12 cycles 70 % pendant 25/30 cycles 80 % pendant 250/300 cycles	C
Essai d'immunité aux interruptions de tension ^h	IEC 61000-4-11	Classe 2 ^{e, f, g} 0 % pendant 250/300 cycles	Classe 3 ^{e, f, g} 0 % pendant 250/300 cycles	C
Immunité aux harmoniques du réseau	IEC 61000-4-13	Pas d'exigences ⁱ		