

INTERNATIONAL ELECTROTECHNICAL COMMISSION
COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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Edition 3.0 2022-08

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**ADJUSTABLE SPEED ELECTRICAL
POWER DRIVE SYSTEMS –**

**ENTRAÎNEMENTS ÉLECTRIQUES DE
PUISSANCE À VITESSE VARIABLE –**

**Part 5-1: Safety requirements – Electrical,
thermal and energy**

**Partie 5-1: Exigences de sécurité –
Électrique, thermique et énergétique**

CORRIGENDUM 1

Corrections to the French version appear after the English text.

Les corrections à la version française sont données après le texte anglais.

3.51 non-mains supply

Replace the example with the following new Note 1 to entry:

Note 1 to entry: Examples of *non-mains supplies* are those which are isolated from the *mains supply* by a transformer or supplied by a battery, generator, solar arrays, wind generator, tidal systems, wave, fuel cell or similar sources not directly connected to the AC or DC power distribution system.

4.3.2.2 Rated conditional short-circuit current (I_{cc}) on input power ports

Replace the existing bulleted list in 4.3.2.2 a), including the note, with the following new bulleted list:

- minimum required prospective short-circuit current ($I_{cp,mr}$); and
 - 1) the protective device rated voltage, current, interrupt rating, I_p and I^2t at I_{cc} ; or
 - 2) the protective device manufacturer and part number;

4.3.3 Short-circuit coordination (upstream protection)

Replace, in the second paragraph, the existing term:

“PDS”

with the following new term:

“BDM/CDM/PDS”.

4.3.5.1 Means of protection

Replace the existing last sentence of this subclause with the following new sentence:

For information requirements, see 6.3.9.7 and 6.3.10.2.

4.4.2.6.2 Limits of the *working voltage* for the *DVC*

Replace, in Table 2, in the third row and sixth column, the existing text in the cell with the following new text:

Voltage (AC peak or DC) 10 ms to 200 ms

4.4.4.2.2 Rating of *protective equipotential bonding*

Replace the existing last three paragraphs with the following new text:

In the case of a single means of *protective equipotential bonding* within the circuit, the *routine test* in 5.2.3.11.2 is required.

Compliance with a) does not require a *type test*.

Compliance with b) shall be checked by the *type tests* in 5.2.3.11.1.

4.4.5.1 General

Replace the existing text by the following new text:

Enhanced protection shall be fully and effectively maintained under all conditions of intended use of the *BDM/CDM/PDS*. *Enhanced protection* shall provide both *basic protection* and *fault protection* and can be achieved by one or a combination of the following provisions:

- a) *double insulation* in 4.4.5.2;
- b) *reinforced insulation* in 4.4.5.3;
- c) *protective impedance* in 4.4.5.4;
- d) electrically protective screening in 4.4.4.7, whereby the screen is separated from *live parts* by at least basic protection in 4.4.3.

4.4.7.2.2 SPD monitoring

Replace the existing first paragraph with the following new text:

If the *BDM/CDM* manufacturer bundles an external SPD with their product for the purpose of overvoltage category reduction, this device shall have a monitoring circuit as required in 4.4.7.2.3 or 4.4.7.2.4 that enables the *BDM/CDM* to create an indication when the device is damaged by an overvoltage. If the SPD is internal to a *BDM/CDM*, the test of 5.2.3.15 applies.

4.4.7.4.2 Reinforced insulation

Replace, in item a), the existing first dashed item with the following:

- the next higher impulse withstand voltage in column 1 of Table 8;

4.4.7.4.5 Clearance to conductive enclosures

Replace, at the beginning of the second paragraph:

During and following

with

After

4.4.7.8.5 Potting materials

Replace, in the first two paragraphs, the existing reference to:

4.4.7.8.4.2

with:

4.4.7.8.4.2 b)

4.7.5.2 Mechanical hazards caused by fan

Replace the existing formula for K factor with the following new formula:

$$K = 6 \times 10^{-7} \times m \times r^2 \times N^2$$

4.11.5 Identification of conductors and terminals of *mains supply* and *non-mains supply*

Replace, in the last sentence, the existing reference to:

6.3.7.4.2

with:

6.3.9.2.2.

4.11.11.3 Connection to external conductors by *field wiring terminals*

Replace, in the third paragraph, the existing reference to:

6.3.7.4.2

with:

6.3.9.2.2.

4.12.1 General

Delete, in the ninth paragraph, the existing reference to:

and 5.2.2.4.3

5.1.7 Test overview

Replace, in Table 25, row 21, column 1, the existing text:

Acoustic pressure and sound level test

with the following new text:

Acoustic noise test