SLOVENSKI

PREDSTANDARD

SIST EN 61010-031:2003/oprA1:2005

september 2005

Varnostne zahteve za električno opremo za meritve, nadzorovanje in laboratorijsko uporabo - 031. del: Varnostne zahteve za ročne sonde za električne meritve in preskušanja

Safety requirements for electrical equipment for measurement, control and laboratory use – Part 031: Safety requirements for hand-held probe assemblies for electrical measurement and test

ICS 19.080; 71.040.10

Referenčna številka
SIST EN 61010-031:2003/oprA1:2005(en)

66/362/CDV

COMMITTEE DRAFT FOR VOTE (CDV)
PROJET DE COMITÉ POUR VOTE (CDV)

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Secretary: Nick Bradfield (United Kingdom) Secrétaire:		
Also of interest to the following committees Intéresse également les comités suivants	Supersedes document Remplace le document 66/361/MCR	
Functions concerned Fonctions concernées ☒ Safety / Sécurité ☐ EMC / CEM ☐ Environment / Environnement ☐ Quality assurance / Assurance qualité		

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Titre : CEI 61010-031 A1 Ed.1 : Règles de sécurité pour appareils électriques de mesurage, de régulation et de laboratoire - Partie 031: Prescriptions de sécurité pour sondes équipées tenues à la main pour mesurage et essais électriques

Title : IEC 61010-031 A1 Ed.1: Safety requirements for electrical equipment for measurement, control and laboratory use - Part 031: Safety requirements for hand-held probe assemblies for electrical measurement and test

Note d'introduction

Introductory note

ATTENTION	ATTENTION
CDV soumis en parallèle au vote (CEI) et à l'enquête (CENELEC)	**Parallel IEC CDV/CENELEC Enquiry**

Amendment 1 to IEC 61010-031: 2002 First Edition

1.1 Scope

Addition:

Add a new item d):

d) Low-voltage attenuating and non-attenuating PROBE ASSEMBLIES (type D), that are RATED for direct connection only to voltages not exceeding 33 V r.m.s., or 46,7 V peak, or 70 V d.c., and are suitable for currents exceeding 8 A.

Revision:

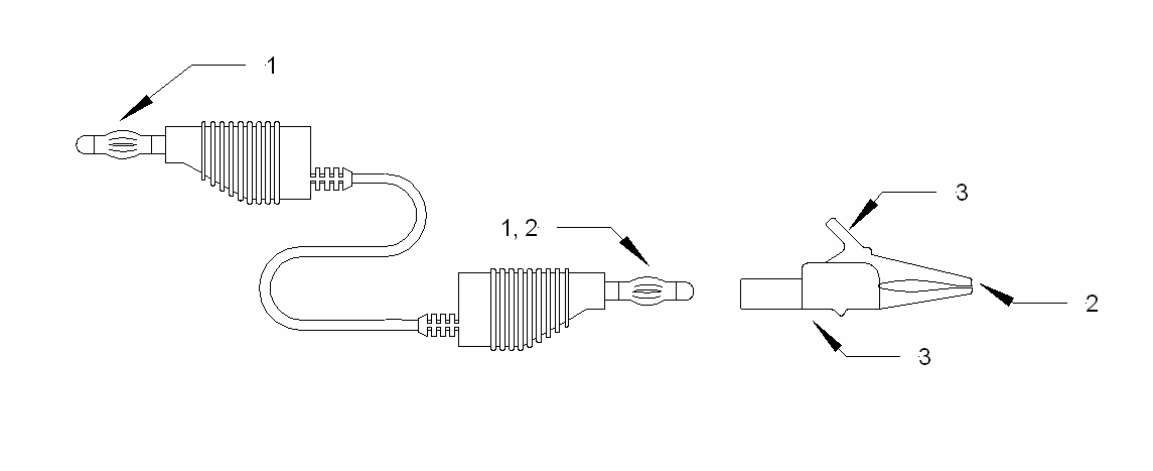
Revise the first bullet of the note to:

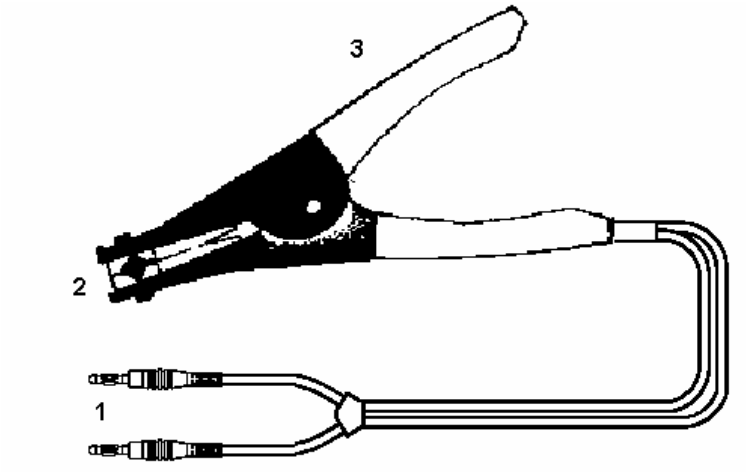
- are not within the definitions of Types A, B, C, or D, or,

3 Definitions

Addition:

Add a new Figure 101 after Figure 2:





Key:

1: Connector

2: Probe tip

3: Hand-held area of crocodile clip or clamp

Figure 101: Examples of Type D PROBE ASSEMBLIES

5.1.2 Identification

Deletion and replacement:

In table 1, delete the symbol in the "Symbol" column and the reference in the "Reference" column of row number 7, .and replace the description with "Not used".

5.1.5 Parts protected by DOUBLE INSULATION or REINFORCED INSULATION

Deletion:

Delete the text and the conformity statement of the subclause.

Replacement:

Replace the title with:

5.1.5 Not used

5.1.6 Rating

Replacement:

Replace the first sentence of the third paragraph with:

"For type A and type D PROBE ASSEMBLIES only, the maximum RATED current of the PROBE ASSEMBLY shall be marked together with the maximum RATED circuit-to-earth voltage."

6.3.1.3 Capacitance

Addition:

Add a new last paragraph, as follows:

See Figure 5.

6.3.2.3 Capacitance

Replacement:

Replace the title of figure 5 with:

Figure 5 Charged capacitance level in NORMAL CONDITION and SINGLE-FAULT CONDITION (see 6.3.1.3 and 6.3.2.3)

6.4.3 Cables

Addition:

Add a new item d:

d) For Type D PROBE ASSEMBLIES, 125 V.

6.4.4 Probe tips

Replacement and addition:

Replace paragraph 5, the note, and the conformity statement with the following new text, and add figures 102 and 103:

The exposed conductive part of a PROBE TIP, except for parts of a crocodile clip where the outer jaws are insulated, shall be constructed as follows:

c) For PROBE ASSEMBLIES RATED for measurement category I or II, the exposed conductive part of a PROBE TIP shall not exceed 19 mm.

d) For special applications within measurement category I where the energy levels will not support arc flash or fire, the exposed conductive part of a PROBE TIP may exceed 19 mm but shall not exceed 80 mm.

e) For PROBE ASSEMBLIES RATED for measurement category III or IV, the exposed conductive part of a PROBE TIP shall not exceed 4 mm.

Accessories provided or specified by the manufacturer for use with the probe assembly shall meet the following requirements:

f) each combination of a PROBE ASSEMBLY and an accessory shall meet c), d), or e) above, as applicable, and

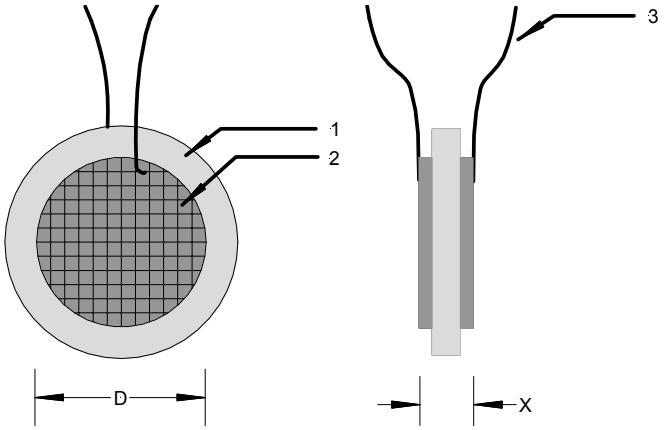
g) each accessory is RATED for the same or lower measurement category as the PROBE ASSEMBLY.

Conductive parts of a crocodile or similar clip RATED for measurement category III or IV shall not be ACCESSIBLE when closed.

The jaws of a crocodile or similar clip RATED for measurement category III or IV shall have additional protection against a short-circuit caused by both jaws, during insertion and removal between conductors or busbars. Protection shall be provided by BASIC INSULATION based on the RATED WORKING VOLTAGE, without regard for transient overvoltages.

Conformity is checked by measurement, inspection, and the following test:

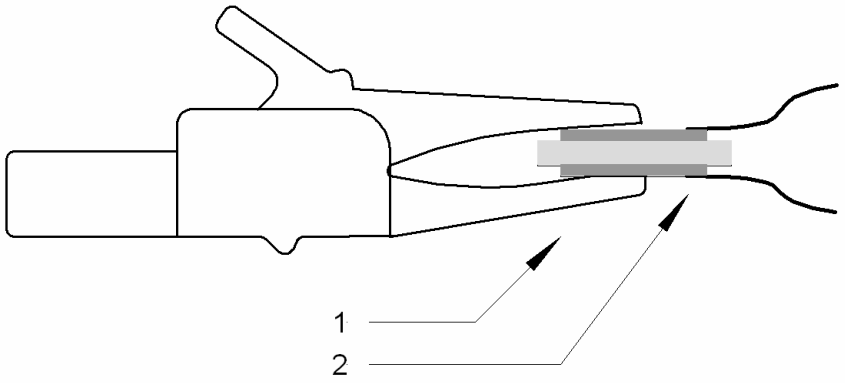
The test probe of figure 102, with a 3 mm thickness (x), is inserted into the jaw opening as shown in figure 103. While the test probe is inserted, the voltage test of 6.6 is performed with the test voltage applied between the test lead wires, using the values for BASIC INSULATION for the RATED WORKING VOLTAGE (transients are disregarded).



Key:

1: Non-conductive base material
2: Conductive surface material
3: Test lead wires
D: Diameter of conductive surface material
X: Overall thickness of test probe

Figure 102– Test probe to check protection against short-circuits



Key:

1: Jaws of crocodile or similar clip
2: Test probe inserted into jaws

Figure 103 – Use of the test probe of figure 102

6.5 CLEARANCES and CREEPAGE DISTANCES

Replacement:

Replace "6.5.4" in the first line with "6.5.3".

6.6 Dielectric strength tests

Replacement:

Replace the title with:

6.6 Voltage tests

6.6.4 Voltage tests

Replacement:

Replace the title with:

6.6.4 Test voltages

6.7 Constructional requirements for protection against electric shock

Replacement:

Replace the title with:

6.7 Constructional requirements

6.7.4.2 Flexing/Pull test

Replacement and addition:

Replace the text of 6.7.4.2 with the following text and add table 101, but keep the existing figure 7: