SLOVENSKI STANDARD

oSIST prEN 50085-2-4:2008

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Sistem kabelskih korit in sistem kabelskih cevi za električne instalacije - 2-4. del: Posebne zahteve za podporne drogove

Cable trunking systems and cable ducting systems for electrical installations - Part 2-4: Particular requirements for service poles

Elektroinstallationskanalsysteme für elektrische Installationen - Teil 2-4: Besondere Anforderungen für freistehende Installationseinheiten

Systemes de goulottes et systemes de conduits-profilés pour installations électriques - Partie 2-4: Regles particulieres pour les colonnes de service

Ta slovenski standard je istoveten z: **prEN 50085-2-4:2007**

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT prEN 50085-2-4

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ICS

English version

Cable trunking systems and cable ducting systems for electrical installations - Part 2-4: Particular requirements for service poles

Systèmes de jonction et de conduite pour installations électriques - Partie 2-4: Règles particulières pour les bornes de service

Elektroinstallationskanalsysteme für elektrische Installationen - Teil 2-4: Besondere Anforderungen für freistehende Installationseinheiten

This draft European Standard is submitted to CENELEC members for CENELEC enquiry. Deadline for CENELEC: 2007-11-16.

It has been drawn up by CLC/TC 213.

If this draft becomes a European Standard, CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

This draft European Standard was prepared by the Technical Committee CENELEC TC 213, Cable management. It is submitted to the CENELEC enquiry.

This European Standard is a system standard for cable management products used for electro-technical purposes. It relates to Low Voltage Directive 2006/95/EC [1)] through consideration of the essential requirements of this directive.

This European Standard is supported by separate standards to which references are made.

This Part 2 is to be used in conjunction with EN 50085-1:2005 (Edition 2) “Cable trunking systems and cable ducting systems for electrical installations – Part 1: General requirements”.

This Part 2 supplements or modifies the corresponding clauses of EN 50085-1:2005. Where a particular clause or subclause of Part 1 is not mentioned in this Part 2, that clause or subclause of Part 1 applies as far as is reasonable. Where this Part 2 states “addition” or “replacement”, the relevant text of Part 1 is to be adapted accordingly.

Clauses, subclauses, notes, tables and figures which are additional to those in Part 1 are numbered starting from 101.

1) *Directive 2006/95/EC of the European Parliament and of the Council of 12 December 2006 on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits*, OJ L 374, 27.12.2006, p. 10–19

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1 Scope

Replacement:

This European Standard specifies requirements and tests for cable trunking systems (CTS) and cable ducting systems (CDS) intended for the accommodation, and where necessary for the electrical separation and/or the segregation, of insulated conductors, cables and possibly other electrical equipment in electrical and/or communication systems installations. The maximum voltage of these installations is 1 000 V a.c. and 1 500 V d.c.

These systems are intended to be mounted in free space and in contact with mounting surface(s) only at one or two ends.

NOTE Service poles can be part of a CTS/CDS intended for wall or ceiling mounting covered by Part 2-1 or floor mounting covered by Part 2-2.

This European Standard does not apply to conduit systems, cable tray systems, cable ladder systems, power track systems or equipment covered by other standards.

This European Standard shall be used in conjunction with EN 50085-1:2005 (Edition 2) "*Cable trunking systems and cable ducting systems for electrical installations – Part 1: General requirements*" which is referred to in this document as Part 1.

2 Normative references

This clause of Part 1 is applicable except as follows:

Add the following references:

EN 60068-2-75	1997	Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests (IEC 60088-2-75:1997)
ISO 9328-7	2004	Steel flat products for pressure purposes – Technical delivery conditions – Part 7: Stainless steels

3 Definitions

This clause of Part 1 is applicable except as follows:

Additional definitions:

3.101
service pole
CTS/CDS intended to be mounted in free space and in contact with mounting surface(s) only at one or two ends. Service pole can be part of a CTS/CDS intended for wall, ceiling or floor mounting

NOTE The word "mounted" means, for example, fixed or placed on the floor with a weighted base.

3.102
pre equipped service pole
service pole already assembled by the manufacturer or responsible vendor with one or more electrical accessories and/or communication components

3.103
pre wired service pole
service pole already assembled by the manufacturer or responsible vendor, wired by means of insulated conductors and/or cables connecting one or more electrical accessories and/or communication components

4 General requirements

This clause of Part 1 is applicable.

5 General conditions for tests

This clause of Part 1 is applicable except as follows:

Additional subclause

5.101 *Unless otherwise specified, service poles which differ only by being shorter than one which complies with the requirements for a given test are deemed to comply with the requirements for the same test.*

6 Classification

This clause of Part 1 is applicable except as follows:

6.3 According to temperatures as given in Tables 1, 2 and 3

Table 1 of Part 1 is not applicable.

6.4.1

This subclause of Part 1 is not applicable.

7 Marking and documentation

This clause of Part 1 is applicable.

8 Dimensions

This clause of Part 1 is applicable except as follows:

Addition:

There are no dimensional requirements.

9 Construction

This clause of Part 1 is applicable except as follows:

9.1 Sharp edges

Replace the second paragraph by:

Compliance is checked by inspection using one sample, if necessary after cutting the samples apart.

Replace the fourth paragraph by:

Compliance is checked by inspection using one sample.

9.3 Means for protective separation and/or retention

Replace the second paragraph by:

Compliance is checked by the tests of 10.5.

Additional subclause:

9.101 Service poles which are intended to be easily re-positioned shall be provided with a cable anchorage.

Compliance is checked by inspection and by the test of 9.12.

10 Mechanical properties

This clause of Part 1 is applicable except as follows:

10.2 Cable support test

This subclause of Part 1 is not applicable.

10.3 Impact test

10.3.1 Impact test for storage and transport

This subclause of Part 1 is not applicable.

10.3.2 Impact test for installation and application

Addition:

10.3.2.101 *The test is carried out on a sample consisting of*

– *for a service pole not longer than 1 000 mm: a complete service pole,*

– *for a service pole longer than 1 000 mm: one or more sections 1 000 mm ± 5 mm long to simulate the various characteristics (function, design, material, …) within the service pole.*

For service poles which differ only in length the test is carried out on the shortest and the longest ones. Other service poles within the range are deemed to comply with the requirements for this test.

For a service pole intended for vertical mounting, the test is carried out only on parts of the service pole which will be lower than 1 500 mm above the floor when installed in accordance with manufacturer's instructions.

The sample includes system components, if any, to simulate normal use.

Before the test, non-metallic system components and composite system components are aged at a temperature declared according to Table 3 for 168 h ± 4 h continuously.

The test is carried out with the impact test values declared according to Table 6.

The impact test apparatus according to Clause 4 of EN 60068-2-75:1997, is mounted on a solid wall or structure providing sufficient support.

For product intended to be mounted at both ends, the sample is placed horizontally in the impact test apparatus. In order to prevent any movement of the ends, the sample is secured at both ends. This method of securing should not introduce a compressive force in the longitudinal axis of the sample which would not exist in normal application. Between both ends, the sample is not supported and is free to move in the impact direction.

Products intended to be mounted at one end are tested in their normal mounting position. The sample is secured at the appropriate end to prevent any movement of this end without any additional support. Products intended to be mounted vertically are tested vertically whenever possible, otherwise they are tested horizontally.

No impact is applied to knockouts, membranes and the like.

When the sample consists of a section, no impact is applied within 50 mm of any open end of the sample.

NOTE When another system component has been included at an end of the sample to prevent movement, this end is still considered open.

Compliance is checked according to 10.3.2.104 after carrying the test of:

– *10.3.2.102 for service poles with declared minimum installation and application temperature of +5 °C or higher,*

– *10.3.2.103 for service poles with declared minimum installation and application temperature lower than +5 °C.*

10.3.2.102 *The test is carried out at an ambient temperature of 20 °C ± 5 °C. The hammer is allowed to fall so that an impact is applied as far as possible perpendicular to the accessible region of the sample likely to be the weakest.*

10.3.2.103 *The samples are placed in a cabinet at a temperature declared according to Table 2.*

After 2 h, each sample is, in turn, removed from the cabinet and immediately placed in position in the impact test apparatus.

At 12 s ± 2 s after the removal of the sample from the cabinet the hammer is allowed to fall so that an impact is applied as far as possible perpendicular to the accessible region of the sample likely to be the weakest. Compliance with impact applied before 10 s provides also compliance with this test of the standard.

Instead of placing the samples in a cabinet and applying the impact at 12 s ± 2 s after the removal of the sample from the cabinet, it is allowed to apply the impact in a climatic chamber at a temperature declared according to Table 2 on samples placed at this temperature for 2 h. Compliance in the climatic chamber is sufficient. In case of failure in the climatic chamber, compliance using the cabinet provides compliance with the standard.

10.3.2.104 *After the test:*

- *the sample shall show no cracks or similar damage visible to normal or corrected vision without magnification and,*
- *the sample shall remain intact*

such that safety is not impaired.

In case of doubt, the test of 14.1.3 is carried out on the impacted samples, with the exception of the open ends, to check that the declared degree of protection against access to hazardous parts is maintained. The declared degree of protection against access to hazardous parts is either the additional letter directly declared by the manufacturer according to 6.7.3, if any, or the degree of protection against access to hazardous parts indirectly declared by the manufacturer according to 6.7.1.

NOTE Any cracks in internal dividers which are not likely to impair electrical safety or use are ignored. Electrical safety can be impaired by any of the following ways:

- when the impact creates a sharp edge on a partition which may damage insulated conductors or cables (see 9.1),
- when the impact decreases the protective separation between compartments in such a way that the protective separation becomes ineffective (see 9.11).

10.4 Linear deflection test

This subclause of Part 1 is not applicable.

10.5 External load test

Additional subclauses:

10.5.101 Test for service poles intended to be mounted at two ends

The test is carried out on a complete service pole mounted between two rigid parallel surfaces.

For service poles which differ only in length the test is carried out on the shortest and the longest ones. Other service poles within the range are deemed to comply with the requirements for this test.

Unless otherwise specified in the manufacturer's instructions, for service poles intended to be clamped between floor and ceiling, the test surfaces are of stainless steel X5CrNi18-9, with a thickness of at least 2 mm according to ISO 9328-7, and a surface quality of 2B, mounted on a rigid base, e.g. concrete.

A compressive force of 400 N ± 20 N is applied perpendicular to the longitudinal axis of the sample in the most unfavourable position and direction.