

SLOVENSKI STANDARD oSIST prEN IEC 61084-2-4:2023

01-februar-2023

Sistemi kabelskih korit in sistemi kabelskih cevi za električne inštalacije - 2-4. del: Posebne zahteve - Podporni drogovi in podporni stebri			
Cable trunking systems and cable ducting systems for electrical installations - Part 2-4: Particular requirements - Service poles and service posts			
Elektroinstallationskanalsysteme für elektrische Installationen - Teil 2-4: Besondere Anforderungen für freistehende Installationseinheiten			
Systèmes de goulottes et systèmes de conduits-profilés pour installations électriques - Partie 2-4: Exigences particulières - Colonnes et colonnettes			
6d151a58c542/osist-pren-iec-61084-2-4-2023 Ta slovenski standard je istoveten z: prEN IEC 61084-2-4:2022			

<u>ICS:</u>

29.120.10 Inštalacijske cevi za električne namene

Conduits for electrical purposes

oSIST prEN IEC 61084-2-4:2023

en

2003-01. Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

oSIST prEN IEC 61084-2-4:2023

iTeh STANDARD PREVIEW (standards.iteh.ai)

oSIST prEN IEC 61084-2-4:2023 https://standards.iteh.ai/catalog/standards/sist/79dd6e2a-5752-48e1-bdb4-6d151a58c542/osist-pren-iec-61084-2-4-2023

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

DRAFT prEN IEC 61084-2-4

December 2022

ICS 29.060.01; 29.120.10

Will supersede EN 50085-2-4:2009

English Version

Cable trunking systems and cable ducting systems for electrical installations - Part 2-4: Particular requirements - Service poles and service posts (IEC 61084-2-4:2017)

Systèmes de goulottes et systèmes de conduits-profilés pour installations électriques - Partie 2-4: Exigences particulières - colonnes et colonnettes (IEC 61084-2-4:2017) Elektroinstallationskanalsysteme für elektrische Installationen - Teil 2-4: Besondere Anforderungen für freistehende Installationseinheiten (IEC 61084-2-4:2017)

This draft European Standard is submitted to CENELEC members for enquiry. Deadline for CENELEC: 2023-03-03.

The text of this draft consists of the text of IEC 61084-2-4:2017.

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.

This draft European Standard was established by CENELEC in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

© 2022 CENELEC All rights of exploitation in any form and by any means reserved worldwide for CENELEC Members.

prEN IEC 61084-2-4:2022 (E)

European foreword

This document (prEN IEC 61084-2-4:2022) consists of the text of document IEC 61084-2-4:2017, prepared by SC 23A "Cable management systems" of IEC/TC 23 "Electrical accessories".

This document is currently submitted to the Enquiry.

The following dates are proposed:

•	latest date by which the existence of this document has to be announced at national level	(doa)	dor + 6 months
•	latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	dor + 12 months
•	latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	dor + 60 months (to be confirmed or modified when voting)

This document will supersede EN 50085-2-4:2009 and all of its amendments and corrigenda (if any).

This document has been prepared under a Standardization Request given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For relationship with EU Directive(s) / Regulation(s), see informative Annex ZZ, which is an integral part of prEN IEC 61084-2-4:2022/prAA:2022.

oSIST prEN IEC 61084-2-4:2023 https://standards.iteh.ai/catalog/standards/sist/79dd6e2a-5752-48e1-bdb4-6d151a58c542/osist-pren-iec-61084-2-4-2023





Edition 2.0 2017-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE



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

Systèmes de goulottes et systèmes de conduits-profilés pour installations électriques – <u>SIST prEN IEC 61084-2-4-2023</u> Partie 2-4: Exigences particulières – Colonnes et colonnettes Sci-bdb4-

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

ICS 29.060.01; 29.120.10

ISBN 978-2-8322-4123-3

Warning! Make sure that you obtained this publication from an authorized distributor. Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.

 Registered trademark of the International Electrotechnical Commission Marque déposée de la Commission Electrotechnique Internationale

CONTENTS

FOF	REWORD	3
1	Scope	5
2	Normative references	5
3	Terms and definitions	6
4	General requirements	6
5	General conditions for tests	7
6	Classification	7
7	Marking and documentation	8
8	Dimensions	8
9	Construction	8
10	Mechanical properties	10
11	Electrical properties	16
12	Thermal properties	17
13	Fire hazard	17
14	External influences	18
15	Electromagnetic compatibility	18
Ann	ex A (informative) Types of cable trunking systems (CTS) and cable ducting	
•	ems (CDS)	
	ex B (normative) CTS/CDS IK code	24
pole	ex AA (normative) Use of test results according to IEC 61084-2-4:2015 for service s and service posts being part of CTS/CDS covered by IEC 61084-2-1:2015 or by 61084-2-2:2015	25
Ann	ex AB (normative) Routine test for the socket outlets wiring of pre-wired service	
pole	s and service posts (correct polarity and protection against electric shock)	28
Bibli	iography	30
Figu	re 101 – Types and application of service poles and service posts	20
Figu	re 102 – Detail of the cylinder for vertical load test in accordance with 10.5.103	21
	re 103 – Detail of the circular plate for vertical load test in accordance with .104	
	le AA.1 – Use for service poles and service posts being part of CTS/CDS covered EC 61084-2-1:2015	25
	le AA.2 – Use for service poles and service posts being part of CTS/CDS covered EC 61084-2-2:2015	26
	le AB.1 – Diagrammatic representation of routine tests to be applied to the socket ets wiring of pre-wired service poles and service posts	28

IEC 61084-2-4:2017 © IEC 2017

- 3 -

INTERNATIONAL ELECTROTECHNICAL COMMISSION

CABLE TRUNKING SYSTEMS AND CABLE DUCTING SYSTEMS FOR ELECTRICAL INSTALLATIONS –

Part 2-4: Particular requirements – Service poles and service posts

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committee; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61084-2-4 has been prepared by subcommittee 23A: Cable management systems, of IEC technical committee 23: Electrical accessories.

This second edition cancels and replaces the first edition published in 1996. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- classification;
- construction;
- mechanical and electrical properties.

- 4 -

IEC 61084-2-4:2017 © IEC 2017

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

FDIS	Report on voting
23A/830/FDIS	23A/837/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

This International Standard is to be used in conjunction with IEC 61084-1:2017.

This part of the IEC 61084 series supplements or modifies the corresponding clauses of IEC 61084-1:2017 as follows:

- where no particular clause or subclause of IEC 61084-1 is mentioned, the corresponding clause or subclause of IEC 61084-1 applies as far as is reasonable;
- where "addition" or "replacement" is stated, the relevant text of IEC 61084-1 is to be adapted accordingly;
- subclauses, figures and tables which are additional to those in IEC 61084-1 are numbered starting from 101.

In this standard, the following print types are used:

- requirements and definitions: roman type;
- compliance statements: italic type.

A list of all parts in the IEC 61084 series, published under the general title *Cable trunking and cable ducting systems for electrical installations*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

IEC 61084-2-4:2017 © IEC 2017

– 5 –

CABLE TRUNKING SYSTEMS AND CABLE DUCTING SYSTEMS FOR ELECTRICAL INSTALLATIONS –

Part 2-4: Particular requirements – Service poles and service posts

1 Scope

This part of the IEC 61084 series specifies requirements and tests for cable trunking systems (CTS) and cable ducting systems (CDS) intended for the accommodation, and where necessary for the electrically protective separation, 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 AC and 1 500 V DC

Service poles and service posts are intended to be mounted in free space and in contact with mounting surface(s) only at one or two ends, where the word "mounted" means fixed or placed on the floor with a weighted base or linked to a mounting surface through a flexible component.

NOTE Service poles and service posts can also be part of a CTS/CDS intended for wall or ceiling mounting covered by IEC 61084-2-1 or floor mounting covered by IEC 61084-2-2 and are then also tested according to said parts, as appropriate.

This international standard does not apply to conduit systems, cable tray systems, cable ladder systems, powertrack systems or equipment covered by other standards.

2 Normative references **OSIST PREN IEC 61084-2-4:2023**

https://standards.iteh.ai/catalog/standards/sist/79dd6e2a-5752-48e1-bdb4-This clause of Part 1 is applicable, except as follows:_61084-2-4-2023

Addition:

IEC 60068-2-75:2014, Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests

IEC 60228:2004, Conductors of insulated cables

IEC 61084-1:2017, Cable trunking systems and cable ducting systems for electrical installations – Part 1: General requirements

IEC 61084-2-1:2017, Cable trunking and cable ducting systems for electrical installations – Part 2-1: Particular requirements – Cable trunking systems and cable ducting systems intended for mounting on walls and ceilings

IEC 61084-2-2:2017, Cable trunking systems and cable ducting systems for electrical installations – Part 2-2: Particular requirements – Cable trunking systems and cable ducting systems intended for mounting underfloor, flushfloor, or onfloor

ISO 535:2014, Paper and board – Determination of water absorptiveness – Cobb method

ISO 536:2012, Paper and board – Determination of grammage

ISO 9328-7:2011, Steel flat products for pressure purposes – Technical delivery conditions – Part 7: Stainless steels

IEC 61084-2-4:2017 © IEC 2017

3 Terms and definitions

This clause of Part 1 is applicable, except as follows:

Addition:

3.101

service pole

CTS/CDS intended to be mounted in free space and in contact with mounting surfaces only at two ends

Note 1 to entry: Service pole can be part of a CTS/CDS intended for wall, ceiling or floor mounting. See Figure 101.

Note 2 to entry: The word "mounted" means fixed or placed on the floor with a weighted base or linked to a mounting surface through a flexible component.

3.102

service post

CTS/CDS intended to be mounted in free space and in contact with mounting surface only at one end

Note 1 to entry: Service post can be part of a CTS/CDS intended for wall, ceiling or floor mounting. See Figure 101.

Note 2 to entry: The word "mounted" means fixed or placed on the floor with a weighted base or linked to a mounting surface through a flexible component.

3.103

pre-equipped service pole/service post

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

https://standards.iteh.ai/catalog/standards/sist/79dd6e2a-5752-48e1-bdb4-

3.104

6d151a58c542/osist-pren-iec-61084-2-4-2023

pre-wired service pole/service post

service pole/service post 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

3.105

modular service pole/service post

service pole/service post which includes the assembly of two or more modules allowing to increase the height or width or depth of the product

3.106

rated current

value of the current assigned to a pre-wired and/or pre-equipped service pole/service post by the manufacturer and to which operation and performances characteristics are referred

3.107

rated voltage

value of the voltage assigned to a pre-wired and/or pre-equipped service pole/service post by the manufacturer and to which operation and performances characteristics are referred

4 General requirements

This clause of Part 1 is applicable.

IEC 61084-2-4:2017 © IEC 2017 - 7 -

5 General conditions for tests

This clause of Part 1 is applicable, except as follows:

5.1 Replacement:

5.1 Unless otherwise specified, tests according to this standard are type tests.

Additional subclause:

5.101 Unless otherwise specified in the relevant test, service poles/service posts are tested on the longest version declared by the manufacturer, and service poles/service posts 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:

6.4.1 Flame propagating CTS/CDS

This subclause of Part 1 is not applicable.

Additional subclauses:

6.101 According to floor treatment for service poles/service posts placed on the floor

- 6.101.1 Service poles/service posts for dry-treatment of floor
- 6.101.2 Service poles/service posts for wet-treatment of floor
- 6.102 According to resistance to vertical load applied through small surface area
- 6.102.1 CTS/CDS for 500 N
- 6.102.2 CTS/CDS for 750 N
- 6.102.3 CTS/CDS for 1 000 N
- 6.102.4 CTS/CDS for 1 500 N
- 6.102.5 CTS/CDS for 2 000 N
- 6.102.6 CTS/CDS for 2 500 N
- 6.102.7 CTS/CDS for 3 000 N
- 6.103 Optional classification according to resistance to vertical load applied through large surface area
- 6.103.1 CTS/CDS for 2 000 N
- 6.103.2 CTS/CDS for 3 000 N
- 6.103.3 CTS/CDS for 5 000 N
- 6.103.4 CTS/CDS for 10 000 N
- 6.103.5 CTS/CDS for 15 000 N

- 8 -

IEC 61084-2-4:2017 © IEC 2017

7 Marking and documentation

This clause of Part 1 is applicable except as follows:

7.3 Add the following three last bullet points:

- for modular service poles/service posts, the constraints concerning the number or configuration of assembled modules;
- whether non-vertical mounting is allowed;
- whether the flexible component, if any, linking to the mounting surface is not part of the enclosure.

8 Dimensions

This clause of Part 1 is applicable except as follows:

Replacement:

There are no dimensional requirements.

9 Construction

This clause of Part 1 is applicable except as follows:

9.1 Sharp edges

Replacement of the second paragraph by: TEC 61084-2-4-2023

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

Replacement of the fourth paragraph by:

Compliance is checked by inspection using one sample.

9.3 Means for protective separation and/or retention

Replacement of the second paragraph by:

Compliance is checked by the tests of 10.3 and 10.5.

Additional subclauses:

9.101 Service poles/service posts which are likely to be moved during use shall be provided with means to relieve conductors from strain in terminals or terminations.

NOTE A service pole with a weighted base is an example of service pole likely to be moved during use. A clamped service pole is not considered likely to be moved during use.

When a cable anchorage is used, compliance is checked by inspection and by the test of 9.11.

Other means are checked by the following test.