

BS IEC 61084-1:2017



BSI Standards Publication

Cable trunking systems and cable ducting systems for electrical installations

Part 1: General requirements

bsi.

This is a preview. [Click here to purchase the full publication.](#)

National foreword

This British Standard is the UK implementation of IEC 61084-1:2017.

The UK participation in its preparation was entrusted to Technical Committee PEL/213, Cable management.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2017.

Published by BSI Standards Limited 2017

ISBN 978 0 580 89532 6

ICS 29.060.01; 29.120.10

Compliance with a British Standard cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 30 April 2017.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

CONTENTS

FOREWORD.....	5
1 Scope	7
2 Normative references	7
3 Terms and definitions	7
4 General requirements	12
5 General conditions for tests	12
6 Classification	13
6.1 According to material	13
6.2 According to resistance to impact for installation and application	13
6.2.1 CTS/CDS for impact 0,5 J.....	13
6.2.2 CTS/CDS for impact 0,7 J.....	13
6.2.3 CTS/CDS for impact 1 J.....	13
6.2.4 CTS/CDS for impact 2 J.....	13
6.2.5 CTS/CDS for impact 5 J.....	13
6.2.6 CTS/CDS for impact 10 J.....	13
6.2.7 CTS/CDS for impact 20 J.....	13
6.3 According to temperatures as given in Table 1, Table 2 and Table 3 below	13
6.4 According to resistance to flame propagation	14
6.4.1 Flame propagating CTS/CDS.....	14
6.4.2 Non-flame propagating CTS/CDS	14
6.5 According to electrical continuity characteristic	14
6.5.1 CTS/CDS with electrical continuity characteristic	14
6.5.2 CTS/CDS without electrical continuity characteristic	14
6.6 According to electrical insulating characteristic	14
6.6.1 CTS/CDS without electrical insulating characteristic	14
6.6.2 CTS/CDS with electrical insulating characteristic	14
6.7 According to degrees of protection provided by enclosure according to IEC 60529:1989	14
6.7.1 According to protection against ingress of solid foreign objects	14
6.7.2 According to protection against ingress of water	14
6.7.3 According to protection against access to hazardous parts	14
6.8 According to protection against corrosive or polluting substances	14
6.9 According to the system access cover retention	14
6.9.1 CTS/CDS access cover, which can be opened without a tool	14
6.9.2 CTS/CDS access cover, which can only be opened with a tool	14
7 Marking and documentation	14
8 Dimensions.....	17
9 Construction	17
9.1 Sharp edges	17
9.2 Apparatus mounting.....	17
9.3 Means for protective separation and/or retention	17
9.4 Mechanical connections	18
9.5 Accessible conductive parts	19
9.6 Equipotential bonding	20
9.7 Access to live parts.....	20
9.8 Inlet openings	21

9.9	Membranes	21
9.10	Cable restrainer	21
9.11	Cable anchorage	22
10	Mechanical properties	23
10.1	Mechanical strength	23
10.2	Cable support test	23
10.3	Impact test	23
10.3.1	Impact test for storage and transport	23
10.3.2	Impact test for installation and application	24
10.4	Linear deflection test	24
10.5	External load test	24
10.5.1	Fixing test for apparatus mounting of socket outlets	24
10.5.2	Fixing test for apparatus mounting other than socket outlets	25
10.6	System access cover retention	25
11	Electrical properties	26
11.1	Electrical continuity	26
11.1.1	General	26
11.1.2	Preparation and conditioning	26
11.1.3	Electrical impedance tests	26
11.2	Electrical insulation	28
11.2.1	Solid insulation	28
11.2.2	Conditioning and preparation	28
11.2.3	Insulation resistance test	29
11.2.4	Dielectric strength test	29
12	Thermal properties	29
12.1	Resistance to heat	29
12.1.1	General	29
12.1.2	Test for non-metallic or composite system components necessary to retain current-carrying parts in position	29
12.1.3	Test for non-metallic or composite system components not necessary to retain current-carrying parts in position	30
13	Fire hazard	30
13.1	Reaction to fire	30
13.1.1	Initiation of fire	30
13.1.2	Contribution to fire	31
13.1.3	Spread of fire	31
13.1.4	Additional reaction to fire characteristics	32
13.2	Resistance to fire	32
14	External influences	32
14.1	Degree of protection provided by enclosure	32
14.1.1	General	32
14.1.2	Protection against ingress of solid foreign objects	32
14.1.3	Protection against ingress of water	33
14.1.4	Protection against access to hazardous parts	33
14.2	Protection against corrosive or polluting substances	33
15	Electromagnetic compatibility	33
Annex A (informative) Types of cable trunking systems (CTS) and cable ducting systems (CDS)		42
Annex B (normative) CTS/CDS IK code		44

Bibliography.....	45
Figure 1 – Types and application of trunking systems (CTS) and ducting systems (CDS)	34
Figure 2 – Example of impact test apparatus	35
Figure 3 – Arrangement for test for resistance to flame propagation	36
Figure 4 – Enclosure for test for resistance to flame propagation	37
Figure 5 – Ball pressure test apparatus.....	37
Figure 6 – Electrical impedance tests arrangement	39
Figure 7 – Examples of membranes and grommets	39
Figure 8 – Typical apparatus for testing the resistance of cable anchorage to pull force	40
Figure 9 – Typical apparatus for testing the resistance of cable anchorage to twist force	41
Figure 10 – Piston for durability of marking test	41
Table 1 – Minimum storage and transport temperature	13
Table 2 – Minimum installation and application temperature	13
Table 3 – Maximum application temperature	13
Table 4 – Torque values for the test of screwed connections	19
Table 5 – Forces and torques to be applied to cable anchorage	23
Table 6 – Impact test values	24
Table A.1 – Types of CTS and CDS for wall and ceiling installation	42
Table A.2 – Types of CTS and CDS for floor installation	42
Table A.3 – Types of CTS and CDS for installation between two opposite surfaces	43

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**CABLE TRUNKING SYSTEMS AND CABLE DUCTING
SYSTEMS FOR ELECTRICAL INSTALLATIONS –****Part 1: General requirements****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 committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization 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 61084-1 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 1991 and Amendment 1:1993. 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.

This part of the IEC 61084 series is not intended to be used by itself.