BRITISH STANDARD

BS 7888-1:1998
Incorporating Amendment No. 1

LV and MV accessories for power cables with rated voltage from 0.6/1 kV (U_m = 1.2 kV) up to and including 20.8/36 kV (U_m = 42 kV) —

Part 1: General

(Implementation in part of HD 623, 628, 629.1 and 629.2)

ICS 29.060.20; 29.120.20

BSI
British Standards

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by Technical Committee GEL/20, Electric cables, to Technical Subcommittee GEL/20/11 (formerly GEL/20/7), Cable accessories, upon which the following bodies were represented:

Association of Consulting Engineers

BEAMA Electrical Cable and Conductor Accessory Manufacturers' Association

British Approvals Service for Cables

British Cables Association

Electrical Installation Equipment Manufacturers' Association (BEAMA Ltd.)

Electricity Association

ERA Technology Ltd.

Institution of Lighting Engineers

London Underground Ltd.

Railway Industries Association

This British Standard, having been prepared under the direction of the Electrotechnical Sector Board, was published under the authority of the Standards Board and comes into effect on 15 March 1998

The following BSI references relate to the work on this standard:
Committee reference GEL/20/11
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Amendments issued since publication

Amd. No.	Date	Comments
13896	2 May 2003	Addition of **3.24** and **3.25**

Contents

Foreword

BS 7888 was prepared by Technical Subcommittee GEL/20/11. It implements the nationally applicable parts of Harmonization Documents HD 623, 628, 629.1 and 629.2, published by the European Committee for Electrotechnical Standardization (CENELEC), in accordance with the decision of the CENELEC Technical Board.

BS 7888 applies to accessories for power cables with rated voltage U_0/U from 0.6/1 kV (U_m = 1.2 kV) up to and including 20.8/36 kV (U_m = 42 kV) and is published as a series of separate parts and sections, as follows.

Part number	Section number	Title
Part 1		*General*
Part 2		*Methods of test*
Part 3		*Test requirements for LV accessories*
Part 4		*Test requirements for MV accessories*
	Section 4.1	*Accessories for cables with extruded insulation*
	Section 4.2	*Accessories for cables with impregnated paper insulation*

BS 7888-1 is to be read in conjunction with all the appropriate subordinate parts of BS 7888.

It has been assumed in the preparation of this British Standard that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

WARNING. The methods of test described in this British Standard do not detail all precautions necessary to meet the requirements of the Health and Safety at Work, etc. Act 1974. Attention should be paid to any appropriate safety precautions and the tests should only be performed by authorized personnel.

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

Compliance with a British Standard does not of itself confer immunity from legal obligations

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 and 5 and a back cover.

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1 Scope

This British Standard gives generic definitions applicable to the BS 7888 series.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 4727-2:Group 08:1994, *Glossary of electrotechnical, power, telecommunications, electronics, lighting and colour terms — Part 2: Terms particular to power engineering — Group 08: Electric cables.*

3 Terms and definitions

For the purposes of all parts and sections of BS 7888, the definitions given in BS 4727:Part 2:Group 08 apply together with the following.

3.1
connector
metallic device to connect cable conductors together

3.2
termination
device fitted to the end of a cable to ensure electrical connection with other parts of the system and to maintain the insulation up to the point of connection

3.3
indoor termination
termination intended for use where it is not exposed to either solar radiation or weathering

3.4
outdoor termination
termination intended for use where it is exposed to either solar radiation or weathering or both

3.5
terminal box
air- or compound-filled box fully enclosing a termination

3.6
shrouded termination
indoor termination with additional insulation at the bushing connection and used in an air-filled terminal box

3.7
joint
accessory suitable for use in air or underground which makes a connection between two or more insulated power cables to form a continuous circuit

3.8
straight joint
accessory making a connection between two cables to form a continuous circuit

3.9
branch joint
accessory making a connection of a branch cable to a main cable

3.10
transition joint
straight or branch joint making a connection between cables having different types of extruded insulation, or between paper insulated cables and cables with extruded insulation

3.11
radial field joint
joint where the individual cores are screened throughout the joint

3.12
non-radial field joint
joint which does not contain individual core screens

3.13
rigid joint

a) joint which incorporates a resin encapsulant capable of being poured at ambient temperature and which cures to a solid state by an irreversible chemical reaction without the application of external heat:

b) joint which incorporates a non-setting encapsulant within a rigid outer box

3.14
non-rigid joint
joint which incorporates polymeric tapes, heat- or cold-shrinkable components or pre-moulded parts without a rigid outer box

3.15
stop end
accessory providing a means of insulating the unconnected end of an energized cable

3.16
armour and/or metallic screen continuity and earthing connections
connections between the earth potential components of the cables in a joint or termination

3.17
heat-shrinkable components
expanded polymeric extruded tubings or moulded parts which undergo thermally activated recovery when heated to an appropriate temperature

3.18
cold-shrinkable components
expanded polymeric extruded tubings or moulded parts which undergo recovery without the application of heat, e.g. by the removal of a support component

3.19
pre-moulded components
pre-fabricated and shaped elastomeric components which are passed over the cable insulation to produce an interference fit

3.20
recovery

NOTE Recovery may be complete and unimpeded (full recovery) or may take place on to a solid substrate such as a cable core.

a) **of heat-shrinkable materials**

thermally activated retraction of heat-shrinkable extruded tubing or moulded parts

b) **of cold-shrinkable or pre-stretched materials**

retraction of cold-shrinkable or pre-stretched extruded tubing or moulded parts without the influence of heat

3.21
compression connector
connector which is attached to a conductor by pressure-forming or reshaping the connector barrel

3.22
mechanical connector
connector which is attached to a conductor by mechanical means e.g. a screw or bolt

3.23
type test
tests required to be made before supplying a type of cable accessory covered by this standard on a general commercial basis in order to demonstrate satisfactory performance characteristics to meet the intended application. These tests are of such a nature that, after they have been made, they need not be repeated unless changes are made in the cable accessory material, design or type of manufacturing process which might change the performance characteristics

3.24
tracking
an irreversible degradation by formation of paths, which are conductive even under dry conditions, starting and developing on the surface of an insulating material and which may occur on surfaces in contact with air and also on the interfaces between different insulating materials

3.25
erosion
an irreversible and non-conducting degradation of the surface of an insulator that occurs by loss of material, and which may be uniform, localized or tree-shaped

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Bibliography

Standards publications

HD 623[1)], *Specification for joints, stop ends and outdoor terminations for distribution cables of rated voltage 0.6/1.0 kV.*

HD 628[1)], *Test methods for accessories for power cables with rated voltage from 3.6/6 kV (U_m = 7.2 kV) up to and including 20.8/36 (U_m = 42 kV).*

HD 629-1[1)], *Test requirements on accessories for use on power cables of rated voltage from 3.6/6 (7.2) kV up to 20.8/36 (42) kV — Part 1: Cables with extruded insulation.*

HD 629-2[1)], *Test requirements on accessories for use on power cables of rated voltage from 3.6/6 (7.2) kV up to 20.8/36 (42) kV — Part 2: Cables with impregnated paper insulation.*

[1)] Referred to in the foreword only.

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