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Electric cables – Thermosetting insulated, armoured cables of rated voltages of 600/1 000 V and 1 900/3 300 V for fixed installations – Specification

bsi.

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Contents

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 40, an inside back cover and a back cover.

Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 30 April 2016. It was prepared by Subcommittee GEL/20/17, *Low voltage cables,* under the authority of Technical Committee GEL/20, *Electric cables*. A list of organizations represented on these committees can be obtained on request to their secretary.

Supersession

This British Standard supersedes BS 5467:1997+A3:2008, which will be withdrawn on 30 April 2017.

Information about this document

This is a full revision of the standard, and introduces the following principal changes.

a) The range of cables types is restricted to cables with copper conductors.

b) The marking requirements have been updated and clarified.

c) Test methods have been updated in accordance with the latest BS EN standards.

d) 48-core auxiliary cables have been removed as they are no longer market relevant.

The new edition takes account of:

- BS EN 50395 (replacing Annex K of BS 5467:1997) on electrical tests;
- BS EN 50396 (replacing Annex D of BS 5467:1997) on thickness measurement;
- BS EN 60332-1-2 (replacing BS EN 50265-2-1); and
- BS EN 62230 (replacing BS EN 50356 and BS 5099) on spark testing.

Product certification/inspection/testing

Users of this British Standard are advised to consider the desirability of third-party certification/inspection/testing of product conformity with this British Standard. Users seeking assistance in identifying appropriate conformity assessment bodies or schemes may ask BSI to forward their enquiries to the relevant association.

Hazard warnings

WARNING. This British Standard calls for the use of substances and/or procedures that can be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.

Use of this document

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.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is "shall".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

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

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

1 Scope

This British Standard specifies requirements for the construction and performance of thermosetting insulated, armoured cables of rated voltages of 600/1 000 V and 1 900/3 300 V.

This British Standard is applicable to cables for use in fixed installations in industrial areas, buildings or similar applications.

This British Standard specifies requirements for the following types of cables:

a) 600/1 000 V cables, wire armoured and oversheathed, having single-core, two-, three-, four- and five-core stranded copper conductor;

b) 600/1 000 V multicore auxiliary cables, wire armoured and oversheathed, stranded copper conductor; and

c) 1 900/3 300 V cables, wire armoured and oversheathed, having single-core or three-core stranded copper conductor.

This British Standard is applicable to cables that are designed for a maximum sustained conductor temperature of 90 °C and for a maximum short-circuit conductor temperature of 250 °C (for a maximum of 5 s).

NOTE 1 Limitation on the temperature of the cables may be imposed in situations where they might be touched or where they could touch other materials.

NOTE 2 Annex A gives a guide to the use and installation of cables, Annex B gives armour wire tests, Annex C gives a compatibility test, Annex D gives an abrasion resistance test, Annex E gives an insulation resistance constant test on oversheath, Annex F gives the resistance of conductor and armour, Annex G gives the gross cross-sectional area of armour, Annex H gives a test for shrinkage of oversheath on cable, Annex I gives guidance on type tests and Annex J gives the standard United Kingdom reference codes.

2 Normative references

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

BS 7655-1.2, *Specification for insulating and sheathing materials for cables – Part 1: Cross-linked elastomeric insulating compounds – Section 1.2: General 90 °C application*

BS 7655-1.3, *Specification for insulating and sheathing materials for cables – Part 1: Elastomeric insulating compounds – Section 1.3: XLPE*

BS 7655-4.2, *Specification for insulating and sheathing materials for cables – Part 4: PVC sheathing compounds – Section 4.2: General application*

BS EN 10244-2:2009, *Steel wire and wire products – Non-ferrous metallic coatings on steel wire – Part 2: Zinc or zinc alloy coatings*

BS EN 50395, *Electrical test methods for low voltage energy cables*

BS EN 50396, *Non electrical test methods for low voltage energy cables*

BS EN 60228, *Conductors of insulated cables*

BS EN 60229, *Electric cables – Tests on extruded oversheaths with a special protective function*

BS EN 60332-1-2:2004+A1:2015, *Tests on electric and optical fibre cables under fire conditions – Part 1-2: Test for vertical flame propagation for a single insulated wire or cable – Procedure for 1 kW pre-mixed flame*