

BRITISH STANDARD

Electric cables – Single core PVC insulated flexible cables of rated voltage 600/ 1000 V for switchgear and controlgear wiring

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BSi
British Standards

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16677 Corrigendum No. 1	September 2006	Change reference to 8.1 in 10.4 and Table A.1, change temperature to 90 °C in Table 2

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10, an inside back cover and a back cover.

Foreword

Publishing information

This British Standard was published by BSI and came into effect on 15 July 2006. It was prepared by Subcommittee GEL/20/17, *Low voltage cables*, under the authority of Technical Committee GEL/20, *Electric cables*.

Supersession

This British Standard supersedes BS 6231:1998, which is withdrawn.

Information about this document

This new edition of BS 6231 retains requirements in respect of cable types BK and CK only. Requirements for other types have been withdrawn as they are no longer considered to be market relevant.

The other principal changes introduced in this edition are to call up CENELEC harmonized test methods in place of earlier national methods.

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.

WARNING. This British Standard calls for the use of 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.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are presented 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 obligations

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 construction and performance requirements, and gives methods of test, for single core, non-sheathed electric cables of rated voltage 600/1000 V that have PVC insulation.

The types of cable specified in this standard are as follows:

Type BK - for a maximum conductor temperature of 70 °C (see Table 1);

Type CK - for a maximum conductor temperature of 90 °C (see Table 2).

These cables are intended for use in the wiring of switch, control, metering, relay and instrument panels of power switchgear, and for such purposes as internal connections in rectifier equipment and its motor starters and controllers. They are intended for use at alternating voltages not exceeding 600 V to earth, and direct voltages not exceeding 1000 V to earth. When installed in the equipment they are suitable for wiring circuits for which the prescribed alternating test voltage does not exceed 4 kV r.m.s. for 1 min.

A summary of the tests applicable to the cables is given in Annex A.

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

BS 5099, *Electric cables — Voltage levels for spark testing.*

BS EN 50356, *Method for spark testing of cables.*

BS EN 50363-3, *Insulating, sheathing and covering materials for low voltage energy cables — Part 3: PVC insulating compounds*

BS EN 50395:2005, *Electrical test methods for low voltage energy cables*

BS EN 50396:2005, *Non-electrical test methods for low voltage energy cables*

BS EN 60228, *Conductors of insulated cables*

BS EN 60332-1-2, *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*

BS EN 60811-1-1, *Insulating and sheathing materials of electric cables — Common test methods — Part 1-1: General application — Measurement of thickness and overall dimensions — Tests for determining the mechanical properties.*

3 Terms and definitions

For the purposes of this British Standard the definitions given in BS 4727-2: Group 08 apply, together with the following.

3.1 rated voltage U

nominal power-frequency voltage between phase conductors for which the cable is suitable