

Cables for portable earthing and short-circuiting equipment

ICS 29.060.20

National foreword

This British Standard is the UK implementation of EN 61138:2007. It was derived by CENELEC from IEC 61138:2007. It supersedes BS EN 61138:1998 which is withdrawn.

The CENELEC common modifications have been implemented at the appropriate places in the text and are indicated by tags (e.g. [C] <C>).

The UK participation in its preparation was entrusted by Technical Committee GEL/20, Electric cables, to Subcommittee GEL/20/17, Low voltage cables.

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.

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

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Amendments/corrigenda issued since publication

Date	Comments

English version

Cables for portable earthing and short-circuiting equipment
(IEC 61138:2007, modified)

Câbles d'équipements portables
de mise à la terre et de court-circuit
(CEI 61138:2007, modifiée)

Leitungen für ortsveränderliche
Erdungs- und Kurzschließ-Einrichtungen
(IEC 61138:2007, modifiziert)

This European Standard was approved by CENELEC on 2007-10-01. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists 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 Central Secretariat has the same status as the official versions.

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

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 20/881/FDIS, future edition 3 of IEC 61138, prepared by IEC TC 20, Electric cables, was submitted to the IEC-CENELEC parallel vote.

A draft amendment containing common modifications to the future IEC 61138 was prepared by the Technical Committee CENELEC TC 20, Electric cables, and was submitted to formal vote.

The combined text was approved by CENELEC as EN 61138 on 2007-10-01.

This European Standard supersedes EN 61138:1997 + A11:2003.

The significant technical changes with respect to EN 61138:1997 are as follows:

- extension of the scope to cover silicone rubber as an insulation material;
- introduction of a new normative annex for clashing test.

The following dates were fixed:

- | | | |
|--|-------|------------|
| – latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement | (dop) | 2008-10-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2009-10-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61138:2007 was approved by CENELEC as a European Standard with agreed common modifications.

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CABLES FOR PORTABLE EARTHING AND SHORT-CIRCUITING EQUIPMENT

1 Scope

This International Standard applies to flexible cables with insulation based on ethylene propylene rubber (EPR), polyvinyl chloride (PVC) or silicone rubber (SiR) for portable earthing and short-circuiting equipment.

For this type of cable no rated voltage is given as such cables are exclusively intended for earthing and short-circuiting equipment.

The particular types of cable and their code designations are specified in Clause 6 of this standard.

The test methods specified in this standard are given in [C] EN 50395, EN 50396 [C], IEC 60811 and IEC 62230.

NOTE In addition to the requirements given in this standard, mechanical requirements and requirements for the marking for the complete equipment should be taken into account. These requirements can be found in IEC 61230.

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.

NOTE One or more references to the standard below are in respect of a specific subdivision of that standard, for instance a clause, a table, a class or a type. Cross-references to these standards are undated and, at all times, the latest version should be applied.

[C] EN 50363-2-1, *Insulating, sheathing and covering materials for low voltage energy cables – Part 2-1: Cross-linked elastomeric sheathing compounds*

EN 50363-4-1, *Insulating, sheathing and covering materials for low voltage energy cables – Part 4-1: PVC sheathing compounds*

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

EN 50396, *Non-electrical test methods for low voltage energy cables* [C]

IEC 60228, *Conductors of insulated cables*

[C] Text deleted [C]

IEC 60502-1, *Extruded solid dielectric insulated power cables for rated voltages from 1 kV up to 30 kV*

IEC 60811-1-1, *Common test methods for insulating and sheathing materials of electric and optical cables – Part 1-1: Methods for general application – Measurement of thickness and overall dimensions – Tests for determining the mechanical properties*

IEC 60811-1-2, *Common test methods for insulating and sheathing materials of electric and optical cables – Part 1-2: Methods for general application – Thermal ageing methods*

IEC 60811-1-3, *Common test methods for insulating and sheathing materials of electric and optical cables – Part 1-3: Methods for general application – Methods for determining the density – Water absorption tests – Shrinkage test*

IEC 60811-1-4, *Common test methods for insulating and sheathing materials of electric and optical cables – Part 1-4: Methods for general application – Tests at low temperature*

IEC 60811-2-1, *Common test methods for insulating and sheathing materials of electric and optical cables – Part 2-1: Methods specific to elastomeric compounds – Ozone resistance, hot set and mineral oil immersion tests*

IEC 60811-3-1, *Common test methods for insulating and sheathing materials of electric and optical cables – Part 3-1: Methods specific to PVC compounds – Pressure test at high temperature – Tests for resistance to cracking*

IEC 60811-3-2, *Common test methods for insulating and sheathing materials of electric and optical cables – Part 3-2: Methods specific to PVC compounds – Loss of mass test – Thermal stability test*

IEC 61230, *Live working – Portable equipment for earthing or earthing and short-circuiting*

IEC 62230, *Electrical cables – Spark-test method*

3 Terms and definitions

For the purposes of this document, the following definitions apply.

3.1

type tests

symbol T

tests required to be made before supplying a type of cable covered by this standard on a general commercial basis in order to demonstrate satisfactory performance characteristics to meet the intended application

NOTE 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 materials, design or type of manufacturing process which might change the performance characteristics.

3.2

sample tests

symbol S

tests made on samples of completed cable, or components taken from a completed cable, adequate to verify that the finished product meets the design specifications

3.3

routine tests

symbol R

tests made on all production cable lengths to demonstrate their integrity