

# INTERNATIONAL STANDARD

**IEC**  
**60189-2**

Fourth edition  
2007-05

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**Low-frequency cables and wires  
with PVC insulation and PVC sheath –**

**Part 2:  
Cables in pairs, triples, quads and quintuples  
for inside installations**



Reference number  
IEC 60189-2:2007(E)



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# INTERNATIONAL ELECTROTECHNICAL COMMISSION

## **LOW-FREQUENCY CABLES AND WIRES WITH PVC INSULATION AND PVC SHEATH –**

### **Part 2: Cables in pairs, triples, quads and quintuples for inside installations**

#### FOREWORD

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International Standard IEC 60189-2 has been prepared by subcommittee 46C: Wires and symmetrical cables, of IEC technical committee 46: Cables, wires, waveguides, r.f. connectors, r.f. and microwave passive components and accessories.

This fourth edition cancels and replaces the third edition published in 1981, amendment 1 (1989) and amendment 2 (1996). This edition constitutes a technical revision.

This edition includes an update of the technical characteristics.

The text of this standard is based on the following documents:

FDIS	Report on voting
46C/821/FDIS	46C829/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The list of all the parts of the IEC 60189 series, under the general title *Low-frequency cables and wires with PVC insulation and PVC sheath*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

## **LOW-FREQUENCY CABLES AND WIRES WITH PVC INSULATION AND PVC SHEATH –**

### **Part 2: Cables in pairs, triples, quads and quintuples for inside installations**

#### **1 Scope**

This part of IEC 60189 is applicable to cables for inside installations, intended for the interconnection of the following:

- transmission equipment;
- telecommunications equipment;
- equipment for data processing.

NOTE It is the responsibility of the manufacturer to establish quality assurance by quality control procedures which will ensure that the product will meet the requirements of this standard. It is not intended that a complete testing programme must be carried out on every length of conductor and cable. When the purchaser wishes to specify acceptance tests or other quality procedures, it is essential that agreement be reached between the purchaser and the manufacturer by the time of ordering.

#### **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.

IEC 60028, *International standard of resistance for copper*

IEC 60189-1:2007, *Low-frequency cables and wires with PVC insulation and PVC sheath – Part 1: General test and measuring methods*

IEC 60304, *Standard colours for insulation for low-frequency cables and wires*

IEC 60332-3 (all parts): *Tests on electric cables under fire conditions – Part 3: Test for vertical flame spread*

IEC 60344, *Calculation method of resistance of plain and coated copper conductors of low-frequency cables and wires – Application guide*

#### **3 Terms and definitions**

For the purposes of this document, the terms and definitions are given in IEC 60189-1 apply.

#### **4 Cable construction and dimensions**

##### **4.1 Conductor**

##### **4.1.1 Conductor material**

The conductor shall consist of annealed copper, uniform in quality and free from defects. The properties of the copper shall be in accordance with IEC 60028.