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# INTERNATIONAL STANDARD



**Multicore and symmetrical pair/quad cables for digital communications –  
Part 5: Symmetrical pair/quad cables with transmission characteristics up to  
1 000 MHz – Horizontal floor wiring – Sectional specification**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### MULTICORE AND SYMMETRICAL PAIR/QUAD CABLES FOR DIGITAL COMMUNICATIONS –

#### Part 5: Symmetrical pair/quad cables with transmission characteristics up to 1 000 MHz-horizontal floor wiring – Sectional specification

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**This consolidated version of IEC 61156-5 consists of the second edition (2009) [documents 46C/878/FDIS, 46C/888/RVD], its amendment 1 (2012) [documents 46C/954/CDV and 46C/967/RVC], its corrigenda of May 2009 and February 2010. It bears the edition number 2.1.**

**The technical content is therefore identical to the base edition and its amendment and has been prepared for user convenience. A vertical line in the margin shows where the base publication has been modified by amendment 1. Additions and deletions are displayed in red, with deletions being struck through.**

International Standard IEC 61156-5 has been prepared by subcommittee 46C: Wires and symmetric cables, of IEC technical committee 46: Cables, wires, waveguides, R.F. connectors, R.F. and microwave passive components and accessories.

This part of IEC 61156 is to be read in conjunction with IEC 61156-1.

This edition includes the following significant technical changes with respect to the previous edition:

- a) new requirements for new Cat6<sub>A</sub> and Cat7<sub>A</sub> cables;
- b) revised requirements and tests for Cat5e, Cat6 and Cat7 cables.

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

A list of all parts of the IEC 61156 series, under the general title *Multicore and symmetrical pair/quad cables for digital communications* can be found on the IEC website.

The committee has decided that the contents of the base publication and its amendments will remain unchanged until the stability 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- withdrawn,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.

**IMPORTANT – The “colour inside” logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this publication using a colour printer.**

## MULTICORE AND SYMMETRICAL PAIR/QUAD CABLES FOR DIGITAL COMMUNICATIONS –

### Part 5: Symmetrical pair/quad cables with transmission characteristics up to 1 000 MHz-horizontal floor wiring – Sectional specification

## 1 Scope

This part of IEC 61156 describes the cables intended primarily for horizontal floor wiring as defined in ISO/IEC 11801.

It covers individually screened, common screened and unscreened pairs or quads (see Annex A). The transmission characteristics and the frequency range (see Table 1) of the cables are specified at 20 °C.

**Table 1 – Cable categories**

Cable designation	Maximum referenced frequency MHz
Category 5e	100
Category 6	250
Category 6 <sub>A</sub>	500
Category 7	600
Category 7 <sub>A</sub>	1 000

These cables can be used for various communication channels which use as many as four pairs simultaneously. In this sense, this sectional specification provides the cable characteristics required by system developers to evaluate new systems.

The cables covered by this standard are intended to operate with voltages and currents normally encountered in communication systems. While these cables are not intended to be used in conjunction with low impedance sources, for example, the electric power supplies of public utility mains, they are intended to be used to support the delivery of low voltage and power applications such as IEEE 802.3af (Power over Ethernet) and IEEE 802.3at (Power over Ethernet Plus).

## 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 61156-1, *Multicore and symmetrical pair/quad cables for digital communications – Part 1: Generic specification*

IEC 61156-5-1, *Multicore and symmetrical pair/quad cables for digital communications – Symmetrical pair/quad cables with transmission characteristics up to 1 000 MHz – Horizontal floor wiring – Blank detail specification*

IEC 62153-4-5, *Metallic communication cables test methods – Part 4-5: Electromagnetic compatibility (EMC) – Coupling or screening attenuation – Absorbing clamp method*

IEC 62153-4-9, *Metallic communication cable test methods – Part 4-9: Electromagnetic compatibility (EMC) – Coupling attenuation of screened balanced cables, triaxial method*

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