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INTERNATIONAL STANDARD

Multicore and symmetrical pair/quad cables for digital communications – Part 12: Symmetrical single pair cables with transmission characteristics up to 600 MHz – Work area wiring – Sectional specification

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CONTENTS

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MULTICORE AND SYMMETRICAL PAIR/QUAD CABLES FOR DIGITAL COMMUNICATIONS –

Part 12: Symmetrical single pair cables with transmission characteristics up to 600 MHz – Work area wiring – Sectional specification

FOREWORD

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International Standard IEC 61156-12 has been prepared by subcommittee 46C: Wires and symmetric cables, of IEC technical committee 46: Cables, wires, waveguides, RF connectors, RF and microwave passive components and accessories.

The text of this International Standard is based on the following documents:

CDV	Report on voting
46C/1136/CDV	46C/1152/RVC

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

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

A list of all parts in the IEC 61156 series, published 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 this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

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- withdrawn,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

MULTICORE AND SYMMETRICAL PAIR/QUAD CABLES FOR DIGITAL COMMUNICATIONS –

Part 12: Symmetrical single pair cables with transmission characteristics up to 600 MHz – Work area wiring – Sectional specification

1 Scope

This part of IEC 61156 describes cables intended to be used for transmission of 1 Gbit/s over a single twisted pair for office, home and industrial application. An example of an existing application is 1000BASE-T1; see ISO/IEC TR 11801-9906. The transmission characteristics of these cables are specified up to a frequency of 600 MHz and at a temperature of 20 °C. The cable type recognised is intended to be used for the work area wiring of shielded channels with a nominal length of 40 m. Possible designs are U/FTP, X/UTP and X/FTP, where X stands for F, S or SF.

These cables can comprise more than one pair in case several systems are operated in parallel. In this case, refer to Clause 7 of this document.

The cables covered by this document 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, e.g. the electric power supplies of public utility mains, they are intended to be used to support the delivery of low voltage remote powering applications.

Annex A provides a blank detail specification (BDS) that can be used to summarize design and performance requirements agreed upon between the supplier and the user of a specific cable type.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60708, *Low-frequency cables with polyolefin insulation and moisture barrier polyolefin sheath*

IEC 61156-1:2007, *Multicore and symmetrical pair/quad cables for digital communications – Part 1: Generic specification*
IEC 61156-1:2007/AMD1:2009[1]

IEC 62153-4-3, *Metallic communication cable test methods – Part 4-3: Electromagnetic compatibility (EMC) – Surface transfer impedance – Triaxial method*

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

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[1] A consolidated edition 3.1 of this publication exists, comprising IEC 61156-1:2007 and IEC 61156-1:2007/AMD1:2009.