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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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CONTENTS

FOREWORD	5
1 Scope	7
2 Normative references	7
3 Terms and definitions	8
4 Installation considerations	8
4.1 General remarks	8
4.2 Bending radius of installed cable.....	8
4.3 Climatic conditions.....	8
5 Materials and cable construction	8
5.1 General remarks	9
5.2 Cable construction	9
5.2.1 Conductor.....	9
5.2.2 Insulation.....	9
5.2.3 Cable element	9
5.2.4 Cable make-up	9
5.2.5 Screening of the cable core	9
5.2.6 Sheath.....	9
5.2.7 Identification.....	10
5.2.8 Finished cable	10
6 Characteristics and requirements	10
6.1 General remarks	10
6.2 Electrical characteristics and tests	10
6.2.1 Conductor resistance.....	10
6.2.2 Resistance unbalance.....	11
6.2.3 Dielectric strength.....	11
6.2.4 Insulation resistance.....	11
6.2.5 Mutual capacitance.....	11
6.2.6 Capacitance unbalance	11
6.2.7 Transfer impedance.....	11
6.2.8 Coupling attenuation.....	12
6.2.9 Current-carrying capacity.....	13
6.3 Transmission characteristics	13
6.3.1 Velocity of propagation (phase velocity).....	13
6.3.2 Phase delay and differential delay (delay skew).....	13
6.3.3 Attenuation (α).....	14
6.3.4 Unbalance attenuation (TCL)	15
6.3.5 Near-end crosstalk ($NEXT$).....	16
6.3.6 Far-end crosstalk ($FEXT$ $ACR-F$)	16
6.3.7 Alien (exogenous) near-end crosstalk ($ANEXT$)	17
6.3.8 Alien (exogenous) far-end crosstalk ($AFEXT$ $AACR-F$)	17
6.3.9 Alien (exogenous) crosstalk of bundled cables	17
6.3.10 Impedance.....	17
6.3.11 Return loss (RL).....	17
6.4 Mechanical and dimensional characteristics and requirements.....	20
6.4.1 Dimensional requirements	20
6.4.2 Elongation at break of the conductors	20

6.4.3	Tensile strength of the insulation	20
6.4.4	Elongation at break of the insulation	20
6.4.5	Adhesion of the insulation to the conductor.....	20
6.4.6	Elongation at break of the sheath	20
6.4.7	Tensile strength of the sheath.....	20
6.4.8	Crush test of the cable.....	20
6.4.9	Impact test of the cable	20
6.4.10	Bending under tension	20
6.4.11	Repeated bending of the cable	20
6.4.12	Tensile performance of the cable	20
6.4.13	Shock-test requirements of the cable	20
6.4.14	Bump-test requirements of the cable	21
6.4.15	Vibration-test requirements of the cable.....	21
6.5	Environmental characteristics	21
6.5.1	Shrinkage of insulation	21
6.5.2	Wrapping test of insulation after thermal ageing	21
6.5.3	Bending test of insulation at low temperature.....	21
6.5.4	Elongation at break of the sheath after ageing	21
6.5.5	Tensile strength of the sheath after ageing	21
6.5.6	Sheath pressure test at high temperature	21
6.5.7	Cold bend test of the cable	21
6.5.8	Heat shock test.....	21
6.5.9	Damp heat steady state	21
6.5.10	Solar radiation (UV test)	21
6.5.11	Solvents and contaminating fluids.....	22
6.5.12	Salt mist and sulphur dioxide	22
6.5.13	Water immersion	22
6.5.14	Hygroscopicity	22
6.5.15	Wicking.....	22
6.5.16	Flame propagation characteristics of a single cable	22
6.5.17	Flame propagation characteristics of bunched cables	22
6.5.18	Halogen gas evolution	22
6.5.19	Smoke generation.....	22
6.5.20	Toxic gas emission	22
6.5.21	Integrated fire test	22
7	Category 5e multipair cable	22
7.1	General.....	22
7.2	Transmission	23
8	Introduction to the blank detail specification	23
Annex A (informative) Acronyms for common cable constructions		26
Annex A (informative) Blank detail specification		26
Bibliography.....		31
Figure 1 — Impedance template		7
Figure A.1 — Common cable construction examples		12
Table 1 – Cable categories		7
Table 2 – Transfer impedance		12

Table 3 – Coupling attenuation in dB	13
Table 4 – Attenuation equation constants	14
Table 5 – Near-end unbalance attenuation.....	15
Table 6 – Worst-pair <i>PS NEXT</i> (1) values.....	16
Table 7 – Worst-pair <i>PS-EL-FEXT ACR-F</i> (1) values	16
Table 8 – <i>PS ANEXT</i>	17
Table 9 – <i>PS AACR-F</i>	17
Table 10 – Return loss.....	19
Table A.1 – Cable construction acronyms	

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**

FOREWORD

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International Standard IEC 61156-5 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.

This third edition cancels and replaces the second edition published in 2009 and Amendment 1:2012. This edition constitutes a technical revision.

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

- a) additional balance levels with respect to MICE implementation by certain cabling specifications;
- b) reference to current standards and technical reports with respect to measurement techniques and remote powering.

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

FDIS	Report on voting
46C/1140/FDIS	46C/1144/RVD

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.

This International Standard is to be used in conjunction with IEC 61156-1:2007 and IEC 61156-1:2007/AMD1:2009.

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,
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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 (all parts).

It covers cable designs comprising 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 _A	500
Category 7	600
Category 7 _A	1 000

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

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, for example the electric power supplies of public utility mains, they are intended to be used to support the delivery of low voltage ~~and~~ remote powering applications such as IEEE 802.3af (Power over Ethernet) ~~and~~ or further developments for example according to IEEE 802.3at ~~(Power over Ethernet Plus)~~ or IEEE 802.3bt. More information on the capacity to support these applications according to the installation practices are given in IEC 61156-1-4, IEC TR 61156-1-6 and ISO/IEC TS 29125.

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

~~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 62153-4-3, *Metallic communication cables 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*

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

INTERNATIONAL STANDARD

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CONTENTS

FOREWORD	5
1 Scope	7
2 Normative references	7
3 Terms and definitions	8
4 Installation considerations	8
4.1 General remarks	8
4.2 Bending radius of installed cable.....	8
4.3 Climatic conditions.....	8
5 Materials and cable construction	8
5.1 General remarks	8
5.2 Cable construction	9
5.2.1 Conductor.....	9
5.2.2 Insulation.....	9
5.2.3 Cable element	9
5.2.4 Cable make-up	9
5.2.5 Screening of the cable core	9
5.2.6 Sheath.....	9
5.2.7 Identification.....	10
5.2.8 Finished cable	10
6 Characteristics and requirements	10
6.1 General remarks	10
6.2 Electrical characteristics and tests	10
6.2.1 Conductor resistance.....	10
6.2.2 Resistance unbalance.....	10
6.2.3 Dielectric strength.....	11
6.2.4 Insulation resistance.....	11
6.2.5 Mutual capacitance.....	11
6.2.6 Capacitance unbalance	11
6.2.7 Transfer impedance.....	11
6.2.8 Coupling attenuation.....	11
6.2.9 Current-carrying capacity.....	12
6.3 Transmission characteristics	12
6.3.1 Velocity of propagation (phase velocity).....	12
6.3.2 Phase delay and differential delay (delay skew).....	12
6.3.3 Attenuation (α).....	12
6.3.4 Unbalance attenuation (TCL)	13
6.3.5 Near-end crosstalk ($NEXT$).....	14
6.3.6 Far-end crosstalk ($ACR-F$).....	15
6.3.7 Alien (exogenous) near-end crosstalk ($ANEXT$)	15
6.3.8 Alien (exogenous) far-end crosstalk ($AACR-F$)	16
6.3.9 Alien (exogenous) crosstalk of bundled cables	16
6.3.10 Impedance.....	16
6.3.11 Return loss (RL).....	16
6.4 Mechanical and dimensional characteristics and requirements.....	17
6.4.1 Dimensional requirements	17
6.4.2 Elongation at break of the conductors	17

6.4.3	Tensile strength of the insulation	17
6.4.4	Elongation at break of the insulation	17
6.4.5	Adhesion of the insulation to the conductor.....	17
6.4.6	Elongation at break of the sheath	17
6.4.7	Tensile strength of the sheath.....	17
6.4.8	Crush test of the cable.....	17
6.4.9	Impact test of the cable	18
6.4.10	Bending under tension	18
6.4.11	Repeated bending of the cable	18
6.4.12	Tensile performance of the cable	18
6.4.13	Shock-test requirements of the cable	18
6.4.14	Bump-test requirements of the cable	18
6.4.15	Vibration-test requirements of the cable.....	18
6.5	Environmental characteristics	18
6.5.1	Shrinkage of insulation	18
6.5.2	Wrapping test of insulation after thermal ageing	18
6.5.3	Bending test of insulation at low temperature.....	18
6.5.4	Elongation at break of the sheath after ageing	18
6.5.5	Tensile strength of the sheath after ageing	18
6.5.6	Sheath pressure test at high temperature	19
6.5.7	Cold bend test of the cable	19
6.5.8	Heat shock test.....	19
6.5.9	Damp heat steady state	19
6.5.10	Solar radiation (UV test)	19
6.5.11	Solvents and contaminating fluids.....	19
6.5.12	Salt mist and sulphur dioxide	19
6.5.13	Water immersion	19
6.5.14	Hygroscopicity	19
6.5.15	Wicking.....	19
6.5.16	Flame propagation characteristics of a single cable	19
6.5.17	Flame propagation characteristics of bunched cables	19
6.5.18	Halogen gas evolution	19
6.5.19	Smoke generation.....	20
6.5.20	Toxic gas emission	20
6.5.21	Integrated fire test	20
7	Category 5e multipair cable	20
7.1	General.....	20
7.2	Transmission	20
8	Introduction to the blank detail specification	20
	Annex A (informative) Blank detail specification	22
	Bibliography.....	27
	Table 1 – Cable categories	7
	Table 2 – Transfer impedance	11
	Table 3 – Coupling attenuation in dB	12
	Table 4 – Attenuation equation constants	13
	Table 5 – Near-end unbalance attenuation.....	14
	Table 6 – Worst-pair <i>PS NEXT</i> (1) values.....	15

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Table 8 – <i>PS ANEXT</i>	16
Table 9 – <i>PS AACR-F</i>	16
Table 10 – Return loss.....	17

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