



INTERNATIONAL STANDARD

**Multicore and symmetrical pair/quad cables for digital communications –
Part 7: Symmetrical pair cables with transmission characteristics up to
1 200 MHz – Sectional specification for digital and analogue communication
cables**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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CONTENTS

FOREWORD.....	5
1 Scope.....	7
2 Normative references	7
3 Terms and definitions	7
4 Installation consideration.....	8
4.1 General remarks	8
4.2 Bending radius of installed cable.....	8
4.3 Climatic conditions.....	8
5 Material and cable construction	8
5.1 General remarks	8
5.2 Cable construction	8
5.2.1 General	8
5.2.2 Conductor.....	8
5.2.3 Insulation.....	9
5.2.4 Cable element	9
5.2.5 Cable make-up	9
5.2.6 Screening of the cable core	9
5.2.7 Sheath.....	9
5.2.8 Identification.....	10
5.2.9 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 within a pair.....	10
6.2.3 Dielectric strength.....	10
6.2.4 Insulation resistance.....	11
6.2.5 Mutual capacitance	11
6.2.6 Capacitance unbalance pair to ground.....	11
6.2.7 Transfer impedance	11
6.2.8 Coupling attenuation.....	11
6.2.9 Current-carrying capacity.....	12
6.2.10 Resistance of the screen	12
6.3 Transmission characteristics	12
6.3.1 General remark.....	12
6.3.2 Velocity of propagation (phase velocity).....	12
6.3.3 Phase delay and differential phase delay (delay skew)	12
6.3.4 Attenuation (α).....	13
6.3.5 Unbalance attenuation near-end (<i>TCL</i> , <i>EL TCTL</i>).....	13
6.3.6 Near-end crosstalk (<i>PS NEXT</i> , <i>NEXT</i>).....	14
6.3.7 Far-end crosstalk (<i>PS ACR-F</i> , <i>ACR-F</i>).....	15
6.3.8 Alien (exogenous) near-end crosstalk	16
6.3.9 Alien (exogenous) far-end crosstalk.....	16
6.3.10 Alien (exogenous) crosstalk of bundled cables	16
6.3.11 Impedance.....	16
6.3.12 Return loss (<i>RL</i>).....	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	17
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 at high temperature	18
6.5.7	Cold bend test of the cable	19
6.5.8	Hot shock test.....	19
6.5.9	Damp heat steady state	19
6.5.10	Solar radiation (UV)	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	Resistance to fire.....	19
6.5.19	Halogen gas evolution	19
6.5.20	Smoke generation.....	20
6.5.21	Toxic gas emission	20
6.5.22	Integrated fire test	20
7	Introduction to the blank detail specification	20
	Annex A (informative) Blank detail specification	21
	Bibliography.....	26
	Table 1 – Transfer impedance	11
	Table 2 – Coupling attenuation	11
	Table 3 – Attenuation, constant values	13
	Table 4 – Attenuation values.....	13
	Table 5 – Near-end crosstalk, power-sum (<i>PS NEXT</i>).....	15

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Table 6 – Far-end crosstalk (PS_{ACR-F})	16
Table 7 – Return loss	17

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FOR DIGITAL COMMUNICATIONS –**

**Part 7: Symmetrical pair cables with transmission
characteristics up to 1 200 MHz –
Sectional specification for digital and analogue
communication cables**

FOREWORD

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IEC 61156-7 has been prepared by subcommittee 46C: Wires and symmetrical cables, of IEC technical committee 46: Cables, wires, waveguides, RF connectors, RF and microwave passive components and accessories. It is an International Standard.

This part of IEC 61156 is to be read in conjunction with IEC 61156-1:2023.

This second edition cancels and replaces the first edition published in 2003 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) restructure all text to comply with ISO/IEC Directives Part 2;

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- b) align clauses with IEC 61156-1:2023;
- c) remove the clause related to screening attenuation as it is no longer a test to be performed (replaced by coupling attenuation);
- d) replace the IEC 62153-4-2 method (injection clamp) with IEC 61156-4-5 (absorbing clamp) for coupling attenuation measurement to be consistent with all other parts of the IEC 61156 series;
- e) include IEC 62153-4-9 test method (triaxial) for coupling attenuation measurement to be consistent with all other parts of the IEC 61156 series;
- f) incorporate the blank detail specification.

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

Draft	Report on voting
46C/1228/CDV	46C/1233/RVC

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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 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 7: Symmetrical pair cables with transmission characteristics up to 1 200 MHz – Sectional specification for digital and analogue communication cables

1 Scope

This part of IEC 61156 specifies cables that can be used for various communication systems as well as for analogue systems, such as video, that exist or are under development and which may 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 as well as to enhance present systems.

It covers a cable having four individually screened (S/FTP) pairs. The cable can be provided with a common screen over the cable core.

The transmission characteristics are specified up to a frequency of 1 200 MHz and at a temperature of 20 °C.

The cables covered by this sectional specification are intended to operate with voltages and currents normally encountered in communication systems and support the delivery of DC low voltage remote powering applications. These cables are not intended to be used in conjunction with low impedance sources, for example the electric power supply of public utility mains.

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

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

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 cable test methods – Part 4-5: Electromagnetic compatibility (EMC) – Screening or coupling 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*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61156-1 apply.