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Responsible committee: EPL/46 Cables, wires and waveguides, radio frequency connectors and accessories for communication and signalling

Interested committees:

Title: BS IEC 61156-12 Multicore and symmetrical pair/quad cables for digital communications

Part 12: Symmetrical single pair cables with transmission characteristics up to 1,25 GHz - Work area wiring - Sectional specification

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

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- ii) affects other national standard(s)
- iii) requires additional national guidance or information

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## Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

## UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

## Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

## Template for comments and secretariat observations

|                  |                        |
|------------------|------------------------|
| Date: xx/xx/20xx | Document: ISO/DIS xxxx |
|------------------|------------------------|

| 1  | 2                                          | (3)                          | 4               | 5                                                                                                                                  | (6)                                                                      | 7                                                  |
|----|--------------------------------------------|------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------|
| MB | Clause No./ Subclause No./Annex (e.g. 3.1) | Paragraph/Figure/ Table/Note | Type of comment | Commend (justification for change) by the MB                                                                                       | Proposed change by the MB                                                | Secretariat observations on each comment submitted |
|    | 3.1                                        | Definition 1                 | ed              | Definition is ambiguous and needs clarifying.                                                                                      | Amend to read '...so that the mains connector to which no connection...' |                                                    |
|    | 6.4                                        | Paragraph 2                  | te              | The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK. | Delete reference to UV photometer.                                       |                                                    |



# 46C/1267/CD

COMMITTEE DRAFT (CD)

PROJECT NUMBER:

**IEC 61156-12 ED2**

DATE OF CIRCULATION:

**2023-08-25**

CLOSING DATE FOR COMMENTS:

**2023-11-17**

SUPERSEDES DOCUMENTS:

**46C/1255/RR**

IEC SC 46C : WIRES AND SYMMETRIC CABLES

SECRETARIAT:

France

SECRETARY:

Mr Ladji Diakite

OF INTEREST TO THE FOLLOWING COMMITTEES:

SC 18A, TC 20, TC 23, SC 48B, SC 65C, ISO/IEC JTC 1/SC 25

PROPOSED HORIZONTAL STANDARD:



Other TC/SCs are requested to indicate their interest, if any, in this CD to the secretary.

FUNCTIONS CONCERNED:

☐ EMC

☐ ENVIRONMENT

☐ QUALITY ASSURANCE

☐ SAFETY

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Recipients of this document are invited to submit, with their comments, notification of any local regulations or technical reasons that may exist and should be considered should this proposal proceed, recognizing that failure to address such requirements could result in the need for new or existing "In Some Countries" clauses. (SEE [AC/22/2007](#) OR [NEW GUIDANCE DOC](#)).

TITLE:

**Multicore and symmetrical pair/quad cables for digital communications - Part 12: Symmetrical single pair cables with transmission characteristics up to 1,25 GHz - Work area wiring - Sectional specification**

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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 .....                                            | 8  |
| 5.3 Conductor .....                                                     | 8  |
| 5.4 Insulation .....                                                    | 8  |
| 5.5 Cable element.....                                                  | 9  |
| 5.6 Screening of the cable element.....                                 | 9  |
| 5.7 Cable make-up.....                                                  | 9  |
| 5.8 Screening of the cable core .....                                   | 9  |
| 5.9 Sheath .....                                                        | 9  |
| 5.10 Identification .....                                               | 9  |
| 5.11 Finished cable .....                                               | 9  |
| 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.....                                          | 10 |
| 6.2.4 Insulation resistance .....                                       | 10 |
| 6.2.5 Mutual capacitance .....                                          | 10 |
| 6.2.6 Capacitance unbalance .....                                       | 10 |
| 6.2.7 Transfer impedance .....                                          | 10 |
| 6.2.8 Coupling attenuation and low frequency coupling attenuation ..... | 11 |
| 6.2.9 Current-carrying capacity.....                                    | 11 |
| 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 ( $\alpha$ ).....                                     | 12 |
| 6.3.4 Unbalance attenuation (TCL and EL TCTL).....                      | 13 |
| 6.3.5 Alien (exogenous) near-end crosstalk (PS ANEXT).....              | 13 |
| 6.3.6 Alien (exogenous) far-end crosstalk (PS AACR-F) .....             | 14 |
| 6.3.7 Alien (exogenous) crosstalk of bundled cables .....               | 14 |
| 6.3.8 Impedance.....                                                    | 14 |
| 6.3.9 Return loss (RL) .....                                            | 14 |
| 6.4 Mechanical and dimensional characteristics and requirements .....   | 15 |
| 6.4.1 Dimensional requirements .....                                    | 15 |
| 6.4.2 Elongation at break of the conductor.....                         | 15 |

|    |                                      |                                                                      |    |
|----|--------------------------------------|----------------------------------------------------------------------|----|
| 49 | 6.4.3                                | Tensile strength of the insulation .....                             | 15 |
| 50 | 6.4.4                                | Elongation at break of the insulation .....                          | 15 |
| 51 | 6.4.5                                | Adhesion of the insulation to the conductor.....                     | 15 |
| 52 | 6.4.6                                | Elongation at break of the sheath .....                              | 15 |
| 53 | 6.4.7                                | Tensile strength of the sheath.....                                  | 15 |
| 54 | 6.4.8                                | Crush test of the cable.....                                         | 15 |
| 55 | 6.4.9                                | Impact test of the cable .....                                       | 15 |
| 56 | 6.4.10                               | Bending under tension .....                                          | 15 |
| 57 | 6.4.11                               | Repeated bending of the cable .....                                  | 16 |
| 58 | 6.4.12                               | Tensile performance of the cable .....                               | 16 |
| 59 | 6.4.13                               | Shock-test requirements of the cable .....                           | 16 |
| 60 | 6.4.14                               | Bump-test requirements of the cable .....                            | 16 |
| 61 | 6.4.15                               | Vibration-test requirements of a cable .....                         | 16 |
| 62 | 6.5                                  | Environmental characteristics .....                                  | 16 |
| 63 | 6.5.1                                | Shrinkage of the insulation .....                                    | 16 |
| 64 | 6.5.2                                | Wrapping test of the insulation after thermal ageing .....           | 16 |
| 65 | 6.5.3                                | Bending test of insulation at low temperature .....                  | 16 |
| 66 | 6.5.4                                | Elongation at break of the sheath after ageing .....                 | 16 |
| 67 | 6.5.5                                | Tensile strength of the sheath after ageing .....                    | 16 |
| 68 | 6.5.6                                | Sheath pressure test at high temperature .....                       | 16 |
| 69 | 6.5.7                                | Cold bend test of the cable .....                                    | 16 |
| 70 | 6.5.8                                | Heat shock test.....                                                 | 16 |
| 71 | 6.5.9                                | Damp heat steady state .....                                         | 16 |
| 72 | 6.5.10                               | Solar radiation .....                                                | 16 |
| 73 | 6.5.11                               | Solvents and contaminating fluids.....                               | 17 |
| 74 | 6.5.12                               | Salt mist and sulphur dioxide .....                                  | 17 |
| 75 | 6.5.13                               | Water immersion .....                                                | 17 |
| 76 | 6.5.14                               | Hygroscopicity .....                                                 | 17 |
| 77 | 6.5.15                               | Wicking.....                                                         | 17 |
| 78 | 6.5.16                               | Flame propagation characteristics of a single cable .....            | 17 |
| 79 | 6.5.17                               | Flame propagation characteristics of bunched cables .....            | 17 |
| 80 | 6.5.18                               | Halogen gas evolution .....                                          | 17 |
| 81 | 6.5.19                               | Smoke generation.....                                                | 17 |
| 82 | 6.5.20                               | Toxic gas emission .....                                             | 17 |
| 83 | 6.5.21                               | Integrated fire test method for cables in environmental air handling |    |
| 84 |                                      | spaces.....                                                          | 17 |
| 85 | 7                                    | Bundled cable requirements .....                                     | 17 |
| 86 | 7.1                                  | General.....                                                         | 17 |
| 87 | 7.2                                  | Single pairs sharing one sheath .....                                | 17 |
| 88 | 7.2.1                                | General .....                                                        | 17 |
| 89 | 7.2.2                                | Near-end crosstalk (NEXT) .....                                      | 18 |
| 90 | 7.2.3                                | Attenuation to crosstalk ratio far-end (PS ACR-F) .....              | 18 |
| 91 | Annex A (informative)                | Blank detail specification .....                                     | 19 |
| 92 | Annex B (informative)                | Background information for coupling attenuation and low              |    |
| 93 |                                      | frequency coupling attenuation requirements .....                    | 24 |
| 94 | Bibliography.....                    |                                                                      | 25 |
| 95 |                                      |                                                                      |    |
| 96 | Table 1 – Transfer impedance .....   |                                                                      | 11 |
| 97 | Table 2 – Coupling attenuation ..... |                                                                      | 11 |

|     |                                                    |    |
|-----|----------------------------------------------------|----|
| 98  | Table 3 – Low frequency coupling attenuation ..... | 11 |
| 99  | Table 4 – Attenuation equation constants .....     | 12 |
| 100 | Table 5 – TCL requirements.....                    | 13 |
| 101 | Table 6 – EL TCTL requirements .....               | 13 |
| 102 | Table 7 – PS ANEXT requirements .....              | 13 |
| 103 | Table 8 – PS AACR-F requirements.....              | 14 |
| 104 | Table 9 – RL requirements.....                     | 15 |
| 105 | Table 10 – NEXT and PS NEXT requirements.....      | 18 |
| 106 | Table 11 – ACR-F and PS ACR-F requirements .....   | 18 |
| 107 |                                                    |    |
| 108 |                                                    |    |

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MULTICORE AND SYMMETRICAL PAIR/QUAD  
CABLES FOR DIGITAL COMMUNICATIONS –****Part 12: Symmetrical single pair cables with transmission characteristics  
up to 1,25 GHz – Work area wiring – Sectional specification**

## FOREWORD

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- IEC 61156-11 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. It is an International Standard.
- This second edition cancels and replaces the first edition published in 2021. This edition constitutes a technical revision.
- This edition includes the following significant technical changes with respect to the previous edition:
- a) additional cable type in support of T1-C generic single pair cabling up to 1,25 GHz;
  - b) introduction of low frequency coupling attenuation as an integral parameter describing screening efficiency at frequencies below 30 MHz.

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

| Draft       | Report on voting |
|-------------|------------------|
| 46C/XX/FDIS | 46C/XX/RVD       |

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 [change language if necessary]**.

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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://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](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 1,25 GHz – Work area wiring – Sectional specification

#### 1 Scope

This part of IEC 61156 describes cables intended to be used for single balanced pair cabling for office, home and industrial application described in ISO/IEC 11801-1/AMD1 ED1<sup>1</sup>. An example of existing application is 1000BASE-T1, see ISO/IEC TR 11801-9906. The transmission characteristics of these cables are specified up to a frequency of 1,25 GHz and at a temperature of 20 °C. The T1-B type cable is specified up to 600 MHz, the T1-C type cable up to 1,25 GHz. Depending on the MICE environment and the installation conditions either unscreened or screened cables can be used. A blank detail specification can be found in Annex A.

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

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 remote powering applications.

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

IEC 61156-6, *Multicore and symmetrical pair/quad cables for digital communications – Part 6: Symmetrical pair/quad cables with transmission characteristics up to 1 000 MHz – Work area wiring – Sectional 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 cables test methods – Part 4-5: Electromagnetic compatibility (EMC) – Screening or coupling attenuation – Absorbing clamp method*

IEC 62153-4-9:2018, *Metallic communication cable test methods – Part 4-9: Electromagnetic compatibility (EMC) – Coupling attenuation of screened balanced cables, triaxial method*  
IEC 62153-4-9:2018/AMD1:2020

ISO/IEC TS 29125, *Information technology – Telecommunications cabling requirements for remote powering of terminal equipment*

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<sup>1</sup> Under development