BS IEC 62153-4-16:2016

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Metallic communication cable test methods

Part 4-16: Electromagnetic compatibility (EMC) — Extension of the frequency range to higher frequencies for transfer impedance and to lower frequencies for screening attenuation measurements using the triaxial set-up

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National foreword

This British Standard is the UK implementation of IEC 62153-4-16:2016.

The UK participation in its preparation was entrusted to Technical Committee EPL/46, Cables, wires and waveguides, radio frequency connectors and accessories for communication and signalling.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Metallic communication cable test methods –
Part 4-16: Electromagnetic compatibility (EMC) – Extension of the frequency range to higher frequencies for transfer impedance and to lower frequencies for screening attenuation measurements using the triaxial set-up

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International Standard IEC 62153-4-16 has been prepared by IEC technical committee 46: Cables, wires, waveguides, RF connectors, RF and microwave passive components and accessories.

The text of this standard is based on the following documents:

FDIS	Report on voting
46/615/FDIS	46/622/RVD

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

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A list of all parts in the IEC 62153 series, published under the general title *Metallic communication cable test methods*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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- withdrawn,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.

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METALLIC COMMUNICATION CABLE TEST METHODS –

Part 4-16: Electromagnetic compatibility (EMC) – Extension of the frequency range to higher frequencies for transfer impedance and to lower frequencies for screening attenuation measurements using the triaxial set-up

1 Scope

This part of IEC 62153 describes a method to extrapolate the test results of transfer impedance to higher frequencies and the test results of screening attenuation to lower frequencies when measured with the triaxial set-up according to IEC 62153-4-3 (method B) respectively IEC 62153-4-4. A similar approach to extrapolate the test results of transfer impedance to higher frequencies was already described in IEC 61196-1:1995 Subclause 12.2. This method is applicable for homogenous screens, i.e. screens having a transfer impedance directly proportional to length. The transfer impedance may have any frequency behaviour, i.e. it could have a behaviour where it does not increase with 20 dB per decade as observed for screens made of a foil and a braid.

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 TS 62153-4-1:2014, *Metallic communication cable test methods – Part 4-1: Electromagnetic compatibility (EMC) – Introduction to electromagnetic screening measurements*

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

IEC 62153-4-4, *Metallic communication cable test methods – Part 4-4: Electromagnetic compatibility (EMC) – Test method for measuring of the screening attenuation as up to and above 3 GHz, triaxial method*

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

IEC TR 62152:2009, *Transmission properties of cascaded two-ports or quadripols – Background of terms and definitions*

3 Acronyms

CUT cable under test

DUT device under test

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