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Edition 2.0 2018-06

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Metallic cables and other passive components – Test methods – Part 4-8: Electromagnetic compatibility (EMC) - Capacitive coupling admittance

Câbles métalliques et autres composants passifs – Méthodes d'essai – Partie 4-8: Compatibilité électromagnétique (CEM) – Admittance de couplage capacitif

IEC 62153-4-8:2018-06 (en-fr)

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METALLIC CABLES AND OTHER PASSIVE COMPONENTS – TEST METHODS –

Part 4-8: Electromagnetic compatibility (EMC) – Capacitive coupling admittance

FOREWORD

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International Standard IEC 62153-4-8 has been prepared by IEC technical committee 46: Cables, wires, waveguides, RF connectors, RF and microwave passive components and accessories.

This second edition cancels and replaces the first edition published in 2006. This edition constitutes a technical revision.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

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

a) use of the triaxial set-up in a similar manner as for the measurement of the transfer impedance (see IEC 62153-4-3),

b) use of vector network analyser instead of capacitance bridge or pulse generator.

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

FDIS	Report on voting
46/684/FDIS	46/690/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.

A list of all parts of the IEC 62153 series, under the general title: *Metallic cables and other passive components – Test methods*, 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- withdrawn,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.

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METALLIC CABLES AND OTHER PASSIVE COMPONENTS – TEST METHODS –

Part 4-8: Electromagnetic compatibility (EMC) – Capacitive coupling admittance

1 Scope

This part of IEC 62153 specifies a test method for determining the capacitive coupling admittance, the capacitive coupling impedance and the coupling capacitance by the use of a triaxial set-up in a similar manner as for the measurement of the transfer impedance (see IEC 62153-4-3). Most cables have negligible capacitive coupling; however, in the case of cables with loose single-braids, the coupling through the holes in the screen shall be determined by the measurement of the capacitive coupling admittance.

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

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp.

3.1
inner circuit
circuit consisting of the screens and the conductor(s) of the test specimen

Note 1 to entry: Quantities relating to the inner circuit are denoted by the subscript “1”. See Figure 1 and Figure 2.

3.2
outer circuit
circuit consisting of the screen surface and the inner surface of a surrounding test jig

Note 1 to entry: Quantities relating to the outer circuit are denoted by the subscript “2”. See Figure 1 and Figure 2.