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

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International Standard IEC 62153-4-9 has been prepared by IEC technical committee 46: Cables, wires, waveguides, R.F. connectors, R.F. and microwave passive components and accessories.

This standard cancels and replaces IEC/PAS 62338 published in 2002.

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

CDV	Report on voting
46/190/CDV	46/222/RVC

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site 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- withdrawn;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.

A bilingual version of this publication may be issued at a later date.

METALLIC COMMUNICATION CABLE TEST METHODS –

Part 4-9: Electromagnetic compatibility (EMC) – Coupling attenuation of screened balanced cables, triaxial method

1 Scope

This part of IEC 62153 applies to metallic communication cables. It specifies a test method for determining the coupling attenuation a_C of screened balanced cables. Due to the concentric outer tube, measurements are independent of irregularities on the circumference and external electromagnetic fields.

A wide dynamic and frequency range can be applied to test even super screened cables with normal instrumentation from low frequencies up to the limit of defined transversal waves in the outer circuit at approximately 4 GHz. However, the upper frequency is limited by the properties of the baluns.

The procedure to measure the coupling attenuation a_C is based on the procedure to measure the screening attenuation a_S according to IEC 62153-4-5.

2 Normative references

The following referenced documents are indispensable for the application 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 60050-726, *International Electrotechnical Vocabulary (IEV) – Chapter 726: Transmission lines and wave guides*

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

IEC 62153-4-5, *Metallic communication cables test methods – Part 4-5: Electromagnetic compatibility (EMC) – Coupling or screening attenuation – Absorbing clamp method*