



# INTERNATIONAL STANDARD



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

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### METALLIC COMMUNICATION CABLE TEST METHODS –

#### **Part 4-4: Electromagnetic compatibility (EMC) – Test method for measuring of the screening attenuation $a_s$ up to and above 3 GHz, triaxial method**

#### FOREWORD

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

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

This edition includes the following significant technical changes with respect to the previous edition. Impedance matching adapters are no longer required when measuring devices have a characteristic impedance different from the characteristic impedance of the test equipment. The reflection loss due to a mismatch is taken into account by a (calculated) correction factor.

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

FDIS	Report on voting
46/545/FDIS	46/554/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.

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

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- withdrawn,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.

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

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## **METALLIC COMMUNICATION CABLE TEST METHODS –**

### **Part 4-4: Electromagnetic compatibility (EMC) – Test method for measuring of the screening attenuation $a_s$ up to and above 3 GHz, triaxial method**

#### **1 Scope**

This part of IEC 62153 describes a test method to determine the screening attenuation  $a_s$  of metallic communication cable screens. Due to the concentric outer tube, measurements are independent of irregularities on the circumference and outer electromagnetic field.

A wide dynamic 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.

#### **2 Normative references**

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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