

SLOVENSKI STANDARD
SIST EN 62153-4-7:2016**01-maj-2016****Nadomešča:****SIST EN 62153-4-7:2007**

Preskusne metode za kovinske komunikacijske kable - 4-7. del: Metoda za preskušanje slabljenja oklepljenega zaslona za meritve prehodne impedance ZT in zaslonskega slabljenja aS ali sklopnega slabljenja aC rf-konektorjev in sestavov do in nad 3 GHz - Metoda "cev v cevi" (IEC 62153-4-7:2015)

Metallic communication cable test methods - Part 4-7: Shielded screening attenuation test method for measuring the transfer impedance ZT and the screening attenuation aS or the coupling attenuation aC of RF-Connectors and assemblies up to and above 3 GHz, Tube in tube method (IEC 62153-4-7:2015)

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ICS:

33.100.01	Elektromagnetna združljivost na splošno	Electromagnetic compatibility in general
33.120.10	Koaksialni kabli. Valovodi	Coaxial cables. Waveguides

SIST EN 62153-4-7:2016**en**

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EUROPEAN STANDARD

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Supersedes EN 62153-4-7:2006

English Version

**Metallic communication cable test methods -
Part 4-7: Electromagnetic compatibility (EMC) - Test method for
measuring of transfer impedance Z_T and screening attenuation
 a_s or coupling attenuation a_c of connectors and assemblies up to
and above 3 GHz - Triaxial tube in tube method
(IEC 62153-4-7:2015)**

Méthodes d'essai des câbles métalliques de communication
- Partie 4-7: Compatibilité électromagnétique (CEM) -
Méthode d'essai pour mesurer l'impédance de transfert Z_T
et l'affaiblissement d'écrantage a_s ou l'affaiblissement de
couplage a_c des connecteurs et des cordons jusqu'à 3 GHz
et au-dessus - Méthode triaxiale en tubes concentriques
(IEC 62153-4-7:2015)

Prüfverfahren für metallische Kommunikationskabel -
Teil 4-7: Geschirmtes Prüfverfahren zur Messung von
Kopplungswiderstand Z_T und von Schirm a_s - oder
Kopplungsdämpfung a_c von HF-Steckverbindern und
konfektionierten Kabeln bis zu und über 3 GHz - Rohr-im-
Rohr-Verfahren
(IEC 62153-4-7:2015)

STANDARD PREVIEW
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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

EN 62153-4-7:2016**European foreword**

The text of document 46/572/FDIS, future edition 2 of IEC 62153-4-7, prepared by IEC/TC 46 "Cables, wires, waveguides, R.F. connectors, R.F. and microwave passive components and accessories" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62153-4-7:2016.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2016-10-13
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-01-13

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC/TS 62153-4-1	-	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) - Shielded screening attenuation, test method for measuring of the screening attenuation as up to and above 3 GHz		-
IEC 62153-4-15	-	Metallic communication cable test methods - - Part 4-15: Electromagnetic compatibility (EMC) - Test method for measuring transfer impedance and screening attenuation - or coupling attenuation with triaxial cell		-

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INTERNATIONAL STANDARD



**Metallic communication cable test methods –
Part 4-7: Electromagnetic compatibility (EMC) – Test method for measuring of
transfer impedance Z_T and screening attenuation a_s or coupling attenuation a_c
of connectors and assemblies up to and above 3 GHz – Triaxial tube in tube
method**

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CONTENTS

FOREWORD.....	5
INTRODUCTION.....	7
1 Scope.....	8
2 Normative references	8
3 Terms and definitions	8
4 Physical background.....	10
5 Principle of the test methods	10
5.1 General.....	10
5.2 Transfer impedance	12
5.3 Screening attenuation	12
5.4 Coupling attenuation	12
6 Test procedure	13
6.1 General.....	13
6.2 Tube in tube procedure	13
6.3 Test equipment	14
6.4 Calibration procedure.....	15
6.5 Connection between extension tube and device under test	15
6.6 Dynamic range respectively noise floor	15
6.7 Impedance matching	16
6.8 Influence of Adapters	16
7 Sample preparation	17
7.1 Coaxial connector or device	17
7.2 Balanced or multiconductor device	17
7.3 Cable assembly	19
8 Measurement of transfer impedance	19
8.1 General.....	19
8.2 Principle block diagram of transfer impedance	19
8.3 Measuring procedure – Influence of connecting cables	19
8.4 Measuring	20
8.5 Evaluation of test results.....	20
8.6 Test report	20
9 Screening attenuation.....	21
9.1 General.....	21
9.2 Impedance matching	21
9.2.1 General	21
9.2.2 Evaluation of test results with matched conditions	22
9.2.3 Measuring with mismatch.....	22
9.2.4 Evaluation of test results	22
9.3 Test report	23
10 Coupling attenuation.....	23
10.1 Procedure	23
10.2 Expression of results	24
10.3 Test report	24
10.4 Balunless procedure	25
Annex A (normative) Determination of the impedance of the inner circuit	26

Annex B (informative) Example of a self-made impedance matching adapter	27
Annex C (informative) Measurements of the screening effectiveness of connectors and cable assemblies	29
C.1 General.....	29
C.2 Physical basics	29
C.2.1 General coupling equation	29
C.2.2 Coupling transfer function.....	31
C.3 Triaxial test set-up	33
C.3.1 General	33
C.3.2 Measurement of cable assemblies	34
C.3.3 Measurement of connectors.....	35
C.4 Conclusion.....	38
Annex D (informative) Influence of contact resistances	39
Bibliography.....	41
Figure 1 – Definition of Z_T	9
Figure 2 – Principle of the test set-up to measure transfer impedance and screening or coupling attenuation of connectors with tube in tube	11
Figure 3 – Principle of the test set-up to measure transfer impedance and screening attenuation of a cable assembly.....	14
Figure 4 – Principle set-up for verification test.....	16
Figure 5 – Preparation of balanced or multiconductor connectors	18
Figure 6 – Test set-up (principle) for transfer impedance measurement according to test method B of IEC 62153-4-3.....	19
Figure 7 – Measuring the screening attenuation with tube in tube with impedance matching device.....	21
Figure 8 – Measuring the coupling attenuation with tube in tube and balun	24
Figure 9 – Typical measurement of a connector of 0,04 m length with 1 m extension tube	25
Figure 10 – Measuring the coupling attenuation with multiport VNA (balunless procedure is under consideration).....	25
Figure B.1 – Attenuation and return loss of a 50 Ω to 5 Ω impedance matching adapter, log scale	27
Figure B.2 – Attenuation and return loss of a 50 Ω to 5 Ω impedance matching adapter, lin scale	28
Figure C.1 – Equivalent circuit of coupled transmission lines	30
Figure C.2 – Summing function S	31
Figure C.3 – Calculated coupling transfer function ($l = 1$ m; $e_{r1} = 2,3$; $e_{r2} = 1$; $Z_F = 0$).....	32
Figure C.4 – Triaxial set-up for the measurement of the screening attenuation a_S and the transfer impedance Z_T	33
Figure C.5 – Simulation of a cable assembly (logarithmic scale)	35
Figure C.6 – Simulation of a cable assembly (linear scale)	35
Figure C.7 – Triaxial set-up with extension tube for short cable assemblies	36
Figure C.8 – Triaxial set-up with extension tube for connectors.....	36
Figure C.9 – Simulation, logarithmic frequency scale	37
Figure C.10 – Measurement, logarithmic frequency scale	37
Figure C.11 – Simulation, linear frequency scale.....	37

Figure C.12 – Measurement, linear frequency scale.....	37
Figure C.13 – Simulation, logarithmic frequency scale	38
Figure C.14 – simulation, linear frequency scale	38
Figure D.1 – Contact resistances of the test set-up.....	39
Figure D.2 – Equivalent circuit of the test set-up.....	39
Table 1 – IEC 62153, Metallic communication cable test methods – Test procedures with triaxial test set-up	11

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

METALLIC COMMUNICATION CABLE TEST METHODS –**Part 4-7: Electromagnetic compatibility (EMC) – Test method for measuring of transfer impedance Z_T and screening attenuation a_s or coupling attenuation a_c of connectors and assemblies up to and above 3 GHz – Triaxial tube in tube method**

FOREWORD

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International Standard IEC 62153-4-7 has been prepared by IEC 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. This edition constitutes a technical revision.

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

The document is revised and updated. The changes of the revised IEC 62153-4-3:2013, and IEC 62153-4-4:2015, are included.

Measurements can be achieved now with mismatch at the generator site, impedance matching devices are not necessary.

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

FDIS	Report on voting
46/572/FDIS	46/585/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 of the IEC 62153 series, 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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INTRODUCTION

The shielded screening attenuation test set-up according to IEC 62153-4-3 and IEC 62153-4-4 have been extended to take into account the particularities of electrically short elements like connectors and cable assemblies. Due to the concentric outer tube of the triaxial set-up, measurements are independent of irregularities on the circumference and outer electromagnetic fields.

With the use of an additional resonator tube (inner tube respectively tube in tube), a system is created where the screening effectiveness of an electrically short device is measured in realistic and controlled conditions. Also a lower cut off frequency for the transition between electrically short (transfer impedance Z_T) and electrically long (screening attenuation a_S) can be achieved.

A wide dynamic and frequency range can be applied to test even super screened connectors and assemblies with normal instrumentation from low frequencies up to the limit of defined transversal waves in the outer circuit at approximately 4 GHz.

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