

<b>STN</b>	<b>Skúšobné metódy kovových káblov a iných pasívnych súčiastok</b> <b>Časť 4-15: Elektromagnetická kompatibilita (EMC)</b> <b>Skúšobná metóda na meranie prenosovej impedancie a tlmenia tienenia alebo tlmenia spojenia pomocou triaxiálnej komory</b>	<b>STN</b> <b>EN IEC 62153-4-15</b>  34 7012
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Metallic cables and other passive components test methods - Part 4-15: Electromagnetic compatibility (EMC) - Test method for measuring transfer impedance and screening attenuation - or coupling attenuation with triaxial cell

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 11/21

Obsahuje: EN IEC 62153-4-15:2021, IEC 62153-4-15:2021

EUROPEAN STANDARD

**EN IEC 62153-4-15**

NORME EUROPÉENNE

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September 2021

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English Version

**Metallic cables and other passive components test methods -  
Part 4-15: Electromagnetic compatibility (EMC) - Test method for  
measuring transfer impedance and screening attenuation - or  
coupling attenuation with triaxial cell  
(IEC 62153-4-15:2021)**

Méthodes d'essais des câbles métalliques et autres  
composants passifs - Partie 4-15 : Compatibilité  
électromagnétique (CEM) - Méthode d'essai pour le  
mesurage de l'impédance de transfert et de  
l'affaiblissement d'écran - ou de l'affaiblissement de  
couplage avec cellule triaxiale  
(IEC 62153-4-15:2021)

Prüfverfahren für metallische Kommunikationskabel - Teil 4-  
15: Elektromagnetische Verträglichkeit (EMV) -  
Prüfverfahren zur Messung des Kopplungswiderstandes  
und der Schirmdämpfung oder der Kopplungsdämpfung mit  
der Triaxialen Zelle  
(IEC 62153-4-15:2021)

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**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

**EN IEC 62153-4-15:2021 (E)****European foreword**

The text of document 46/814/FDIS, future edition 2 of IEC 62153-4-15, prepared by IEC/TC 46 "Cables, wires, waveguides, RF connectors, RF and microwave passive components and accessories" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62153-4-15:2021.

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where 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](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61196-1	-	Coaxial communication cables - Part 1:- Generic specification - General, definitions and requirements		-
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	2015	Metallic communication cable test methods- - Part 4-4: Electromagnetic compatibility (EMC) - Shielded screening attenuation, test method for measuring of the screening attenuation $a_S$ up to and above 3 GHz		-
IEC 62153-4-7	-	Metallic cables and other passive components - 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 - Triaxial tube in tube method	EN IEC 62153-4-7	-
IEC 62153-4-8	-	Metallic cables and other passive- components - Test methods - Part 4-8: Electromagnetic compatibility (EMC) - Capacitive coupling admittance		-
IEC 62153-4-9	2018	Metallic communication cable test methods - Part 4-9: Coupling attenuation of screened balanced cables, triaxial method		-

**EN IEC 62153-4-15:2021 (E)**

IEC 62153-4-10	-	Metallic communication cable test methods - Part 4-10: Electromagnetic compatibility (EMC) - Transfer impedance and screening attenuation of feed-throughs and electromagnetic gaskets - Double coaxial test method	-
IEC 62153-4-16	-	Metallic cables and other passive-components 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

## NORME INTERNATIONALE



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le mesurage de l'impédance de transfert et de l'affaiblissement d'écran –  
ou de l'affaiblissement de couplage avec cellule triaxiale**



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# INTERNATIONAL STANDARD

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**Metallic cables and other passive components test methods –  
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ou de l'affaiblissement de couplage avec cellule triaxiale**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**METALLIC CABLES AND OTHER PASSIVE  
COMPONENTS TEST METHODS –****Part 4-15: Electromagnetic compatibility (EMC) – Test method for  
measuring transfer impedance and screening attenuation –  
or coupling attenuation with triaxial cell**

## FOREWORD

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International Standard IEC 62153-4-15 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 2015. This edition constitutes a technical revision.

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

- a) measurement of coupling attenuation of balanced connectors, assemblies and components with balun and balunless added;
- b) application of a test adapter was added;
- c) application of a moveable shorting plane;

- d) application of the triaxial "absorber" cell;
- e) correction of test results in the case that the receiver input impedance  $R$  is higher than the characteristic impedance of the outer circuit  $Z_2$ .

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

FDIS	Report on voting
46/814/FDIS	46/822/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

A list of all the parts in the IEC 62153-4 series, published under the general title *Metallic communication cable test methods – Electromagnetic compatibility (EMC)*, can be found on the IEC website.

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## METALLIC CABLES AND OTHER PASSIVE COMPONENTS TEST METHODS –

### Part 4-15: Electromagnetic compatibility (EMC) – Test method for measuring transfer impedance and screening attenuation – or coupling attenuation with triaxial cell

#### 1 Scope

This part of IEC 62153 specifies the procedures for measuring with triaxial cell the transfer impedance, screening attenuation or the coupling attenuation of connectors, cable assemblies and components, for example accessories for analogue and digital transmission systems, and equipment for communication networks and cabling.

Measurements can be achieved by applying the device under test directly to the triaxial cell or with the tube-in-tube method in accordance with IEC 62153-4-7.

#### 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 61196-1, *Coaxial communication cables – Part 1: Generic specification – General, definitions and requirements*

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 62153-4-4:2015, *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*

IEC 62153-4-7, *Metallic communication cable test methods – Part 4-7: Electromagnetic compatibility (EMC) – Test method for measuring the transfer impedance  $Z_T$  and the 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 62153-4-8, *Metallic cables and other passive components – Test methods – Part 4-8: Electromagnetic compatibility (EMC) – Capacitive coupling admittance*

IEC 62153-4-9:2018, *Metallic communication cable test methods – Part 4-9: Electromagnetic compatibility (EMC) – Coupling attenuation of screened balanced cables, triaxial method*

IEC 62153-4-10, *Metallic communication cable test methods – Part 4-10: Electromagnetic compatibility (EMC) – Transfer impedance and screening attenuation of feed-throughs and electromagnetic gaskets – Double coaxial test method*

IEC 62153-4-16, *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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