Irish Standard
I.S. EN 61587-3:2013

Mechanical structures for electronic equipment - Tests for IEC 60917 and IEC 60297 -- Part 3: Electromagnetic shielding performance tests for cabinets and subracks (IEC 61587 -3:2013 (EQV))

I.S. EN 61587-3:2013

Incorporating amendments/corrigenda issued since publication:

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I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

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This document replaces:	*This document is based on:*	*Published:*
EN 61587-3:2006	EN 61587-3:2013 EN 61587-3:2006	26 April, 2013 3 November, 2006

This document was published
under the authority of the NSAI and comes into effect on:

1 May, 2013

ICS number:
31.240

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie

W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

I.S. EN 61587-3:2013

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61587-3

April 2013

ICS 31.240

Supersedes EN 61587-3:2006

English version

Mechanical structures for electronic equipment - Tests for IEC 60917 and IEC 60297 - Part 3: Electromagnetic shielding performance tests for cabinets and subracks

(IEC 61587-3:2013)

Structures mécaniques pour équipment électronique -
Essais pour la CEI 60917
et la CEI 60297 -
Partie 3: Essais de performances du blindage électromagnétique pour les baies et les bacs à cartes
(CEI 61587-3:2013)

Mechanische Bauweisen für elektronische Einrichtungen -
Prüfungen für IEC 60917 und IEC 60297 -
Teil 3: Schirmdämpfungsprüfungen für Schränke und Baugruppenträger
(IEC 61587-3:2013)

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CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 61587-3:2013 E

Foreword

The text of document 48D/527/FDIS, future edition 2 of IEC 61587-3, prepared by SC 48D, "Mechanical structures for electronic equipment", of IEC TC 48, "Electromechanical components and mechanical structures for electronic equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61587-3:2013.

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)	2013-12-13
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-03-13

This document supersedes EN 61587-3:2006.

EN 61587-3:2013 includes the following significant technical changes with respect to EN 61587-3:2006:

EN 61587-3:2013 corrects the errors of EM code descriptions and the frequency range for the shielding performance is extended up to 3 000 MHz.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 61587-3:2013 was approved by CENELEC as a European Standard without any modification.

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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60297	Series	Dimensions of mechanical structures of the 482,6 mm (19 in) series	HD 493	Series
IEC 60917	Series	Modular order for the development of mechanical structures for electronic equipment practices	EN 60917	Series
IEC 61000-4-3	-	Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	-
IEC 61000-5-7	-	Electromagnetic compatibility (EMC) - Part 5-7: Installation and mitigation guidelines - Degrees of protection by enclosures against electromagnetic disturbances (EM code)	EN 61000-5-7	-
CISPR 16-1	Series	Specification for radio disturbance and immunity measuring apparatus and methods	EN 55016-1	Series

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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MECHANICAL STRUCTURES FOR ELECTRONIC EQUIPMENT – TESTS FOR IEC 60917 AND IEC 60297 –

Part 3: Electromagnetic shielding performance tests for cabinets and subracks

FOREWORD

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International Standard IEC 61587-3 has been prepared by subcommittee 48D: Mechanical structures for electronic equipment, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

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

The main technical changes with regard to the previous edition are as follows.

This edition corrects the errors of EM code descriptions and the frequency range for the shielding performance is extended up to 3 000 MHz.

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

FDIS	Report on voting
48D/527/FDIS	48D/534/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 IEC 61587 series, under the general title *Mechanical structures for electronic equipment – Tests for IEC 60917 and IEC 60297*, 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 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.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

MECHANICAL STRUCTURES FOR ELECTRONIC EQUIPMENT – TESTS FOR IEC 60917 AND IEC 60297 –

Part 3: Electromagnetic shielding performance tests for cabinets and subracks

1 Scope and object

This part of IEC 61587 specifies the tests for empty cabinets and subracks concerning electromagnetic shielding performance, in the frequency range of 30 MHz to 3 000 MHz. Stipulated attenuation values are chosen for the definition of the shielding performance level of cabinets and subracks for the IEC 60297 and IEC 60917 series. The shielding performance levels are chosen with respect to the requirements of the typical fields of industrial application. They will support the measures to achieve electromagnetic compatibility but cannot replace the final testing of compliance of the equipped enclosure.

The purpose of this standard is to ensure physical integrity and environmental performance of cabinets and subracks, taking into account the need for different levels of performance in different applications. It is intended to give the user a level of confidence in the selection of products to meet his specific needs. This standard in whole or in part applies only to the empty enclosures, for example cabinets and subracks according to IEC 60297 and IEC 60917 and does not apply to the enclosures when electronic equipment is installed. Chassis may be tested in the same way as subracks and cases may be tested in the same way as cabinets.

This standard was developed in close relationship to IEC 61000-5-7 but with the specific focus on subracks and cabinets and the determination of performance levels at the chosen frequency range.

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 60297 (all parts), *Mechanical structures for electronic equipment – Dimensions of mechanical structures of the 482,6 mm (19 in) series*

IEC 60917 (all parts), *Modular order for the development of mechanical structures for electronic equipment practices*

IEC 61000-4-3, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test*

IEC 61000-5-7, *Electromagnetic compatibility (EMC) – Part 5-7: Installation and mitigation guidelines – Degrees of protection provided by enclosures against electromagnetic disturbances (EM code)*

CISPR 16-1 (all parts), *Specification for radio disturbance and immunity measuring apparatus and methods*