ICS 31.240 SLOVENSKÁ TECHNICKÁ NORMA August 2016

STN	**Stavebnicové konštrukcie na elektrické a elektronické zariadenia. Systém nosných konštrukcií rádu 482,6 mm (19 palcov). Časť 3-109: Rozmery skriniek na zabudované počítačové zariadenia.**	**STN EN 60297-3-109** 18 8001

Mechanical structures for electrical and electronic equipment - Dimensions of mechanical structures of the 482,6 mm (19 in) series - Part 3-109: Dimensions of chassis for embedded computing devices

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. 07/16

Obsahuje: EN 60297-3-109:2016, IEC 60297-3-109:2015

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60297-3-109

February 2016

ICS 31.240

English Version

Mechanical structures for electrical and electronic equipment - Dimensions of mechanical structures of the 482,6 mm (19 in) series - Part 3-109: Dimensions of chassis for embedded computing devices (IEC 60297-3-109:2015)

Structures mécaniques pour équipements électriques et électroniques - Dimensions des structures mécaniques de la série 482,6 mm (19 pouces) - Partie 3-109: Dimensions des châssis pour dispositifs informatiques intégrés (IEC 60297-3-109:2015)

Mechanische Bauweisen für elektronische Einrichtungen - Maße der 482,6-mm-(19-in-)Bauweise - Teil 3-109: Maße von Einschüben für eingebettete Datenverarbeitung (IEC 60297-3-109:2015)

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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

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EN 60297-3-109:2016

European foreword

The text of document 48D/598/FDIS, future edition 1 of IEC 60297-3-109, prepared by SC 48D “Mechanical structures for electrical and electronic equipment” of IEC/TC 48 “Electrical connectors and mechanical structures for electrical and electronic equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60297-3-109:2016.

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)	2016-09-28
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2018-12-28

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Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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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

Publication	Year	Title	EN/HD	Year
IEC 60297-3-100	-	Mechanical structures for electronic equipment - Dimensions of mechanical structures of the 482,6 mm (19 in) series - Part 3-100: Basic dimensions of front panels, subracks, chassis, racks and cabinets	EN 60297-3-100	-
IEC 60529	-	Degrees of protection provided by enclosures (IP Code)	EN 60529	-
IEC 61587-1	-	Mechanical structures for electronic equipment - Tests for IEC 60917 and IEC 60297 series - Part 1: Environmental requirements, test set-up and safety aspects for cabinets, racks, subracks and chassis under indoor conditions	EN 61587-1	-
IEC 61587-3	-	Mechanical structures for electronic equipment - Tests for IEC 60917 and IEC 60297 - Part 3: Electromagnetic shielding performance tests for cabinets and subracks	EN 61587-3	-
IEC 61587-5	-	Mechanical structures for electronic equipment - Tests for IEC 60917 and IEC 60297 - Part 5: Seismic tests for chassis, subracks, and plug-in units	EN 61587-5	-

IEC 60297-3-109

Edition 1.0 2015-11

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Mechanical structures for electrical and electronic equipment – Dimensions of mechanical structures of the 482,6 mm (19 in) series – Part 3-109: Dimensions of chassis for embedded computing devices

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IEC 60297-3-109:2015-11(en-fr)

IEC Central Office
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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MECHANICAL STRUCTURES FOR ELECTRICAL AND ELECTRONIC EQUIPMENT – DIMENSIONS OF MECHANICAL STRUCTURES OF THE 482,6 mm (19 in) SERIES –

Part 3-109: Dimensions of chassis for embedded computing devices

FOREWORD

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International Standard IEC 60297-3-109 has been prepared by subcommittee 48D: Mechanical structures for electrical and electronic equipment, of IEC technical committee 48: Electrical connectors and mechanical structures for electrical and electronic equipment.

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

FDIS	Report on voting
48D/598/FDIS	48D/602/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 60297-3 series, published under the general title *Mechanical structures for electrical and electronic equipment – Dimensions of mechanical structures of the 482,6 mm (19 in) series*, can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

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.

INTRODUCTION

The main applications for embedded computing devices are in machine control, medical, transportation, aerospace and communication environments. For such applications single board computers are typically used.

In order to meet the different environmental conditions and handling requirements, single board computers require for mechanical, thermal and environmental protection by means of appropriate chassis designs. These devices currently reflect a very fragmented situation in the view of any existing mechanical structures dimensional standard. Due to the lack of standardization the individual solutions are realized with proprietary dimensions.

The rapidly growing market for single board computing devices calls for dimensional coordination of chassis and associated printed boards, in order to replace proprietary solutions. This standard will establish a three dimensional grid of 44,45 mm (1,75 in) for chassis and the associated printed boards, which meets best the most frequent dimensional environment of the IEC 60297 series. Once this standard is established, the design and manufacturing of embedded computing solutions will gain significant cost efficiency.

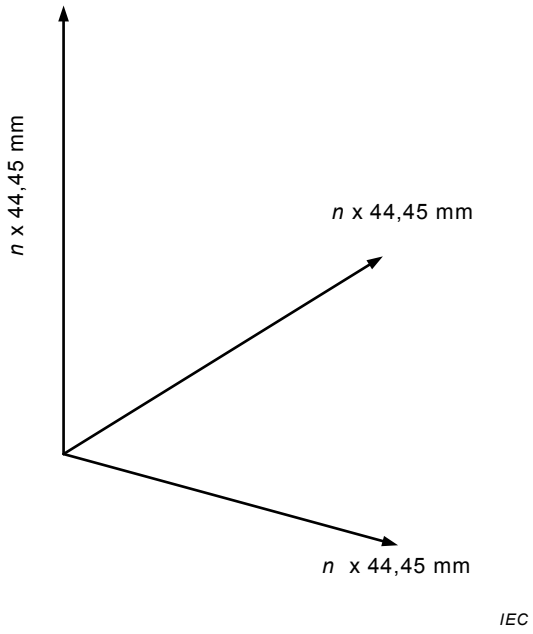

Figure 1 – Three dimensional grid for chassis and associated printed boards

MECHANICAL STRUCTURES FOR ELECTRICAL AND ELECTRONIC EQUIPMENT – DIMENSIONS OF MECHANICAL STRUCTURES OF THE 482,6 mm (19 in) SERIES –

Part 3-109: Dimensions of chassis for embedded computing devices

1 Scope

This part of IEC 60297 specifies dimensions and physical properties of chassis and associated printed boards in order to provide mechanical and environmental integrity for embedded computing devices. They are used in various applications such as machine control, medical, transportation, aerospace and telecommunication, typically based on single board computers.

For the easy definition of the suitable chassis and associated single board dimensions, this standard is based on a structural grid of 44,45 mm (1,75 in).

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 60297-3-100, *Mechanical structures for electronic equipment – Dimensions of mechanical structures of the 482,6 mm (19 in) series – Part 3-100: Basic dimensions of front panels, subracks, chassis, racks and cabinets*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 61587-1, *Mechanical structures for electronic equipment – Tests for IEC 60917 and IEC 60297 series – Part 1: Environmental requirements, test set-up and safety aspects for cabinets, racks, subracks and chassis under indoor conditions*

IEC 61587-3, *Mechanical structures for electronic equipment – Tests for IEC 60917 and IEC 60297 – Part 3: Electromagnetic shielding performance tests for cabinets and subracks*

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