IEC 60297-3-107

Edition 1.0 2012-01

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Mechanical structures for electronic equipment – Dimensions of mechanical structures of the 482,6 mm (19 in) series –
Part 3-107: Dimensions of subracks and plug-in units, small form factor

Structures mécaniques pour équipements électroniques – Dimensions des structures mécaniques de la série 482,6 mm (19 pouces) –
Partie 3-107: Dimensions des bacs et blocs enfichables de petit facteur de forme

IEC 60297-3-107:2012

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

Part 3-107: Dimensions of subracks and plug-in units, small form factor

FOREWORD

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International Standard IEC 60297-3-107 has been prepared by subcommittee 48D: Mechanical structures for electronic equipment, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

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

FDIS	Report on voting
48D/492/FDIS	48D/501/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 60297 series, under the general title *Mechanical structures for electronic equipment – Dimensions of mechanical structures of the 482,6 mm (19 in) series*, can be found of 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- withdrawn,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.

INTRODUCTION

This standard provides for an alternative/smaller form factor of plug-in units as defined in IEC 60297-3-101.

New technologies requiring smaller plug-in unit form factors used in 19 in equipment practice are rapidly gaining acceptance.

Recognizing this development it became obvious that a generic interface standard would be an advantage to the industry.

This standard is based upon and coordinated with the plug-in unit form factor as defined in AMC.0 and MicroTCA developed by PICMG (PCI Industrial Computers Manufacturer Group).

By making critical interface dimensions available and permitting the use of alternative connectors to the industry (beyond AMC.0 and MicroTCA) multiple product solutions may make use of this technology and will increase the overall market acceptance, increase availability, and reduce cost.

In order to meet the requirements of small form factor plug-in units within the subrack the interface dimensions required differ from IEC 60297-3-101. This standard defines these small form factor interface dimensions.

The small form factor generic dimensions are based on and coordinated with AMC.0 and MicroTCA.

Since the AMC.0 and MicroTCA Specification defines only a limited range of connectors this standard opens the possible use of other suitable connectors.

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

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1 Scope and object

This part of IEC 60297 defines the interface dimensions between subracks and associated plug-in units using connectors as defined in PICMG-MTCA.0 (Fixed board, see Figure 7) and IEC 61076-4-116 (Two part, see Figure 12) and other two part connectors, (see Figure 15).

For mechanical and climatic tests refer to IEC 61587-1.

For electromagnetic shielding performance tests refer to IEC 61587-3.

2 Normative references

The following referenced documents are indispensable for the application 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 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 61076-4-116: *Connectors for electronic equipment – Product requirements – Printed board connectors: Detail specification for a high-speed two-part connector with integrated shielding function* (to be published)

PICMG AMC.0: *Advanced Mezzanine Card Specification*

PICMG MicroTCA.0: *Micro Telecommunications Computing Architecture*

PICMG MicroTCA.1: *Air Cooled Rugged MicroTCA Specification*

3 Arrangement overview (4U shown)

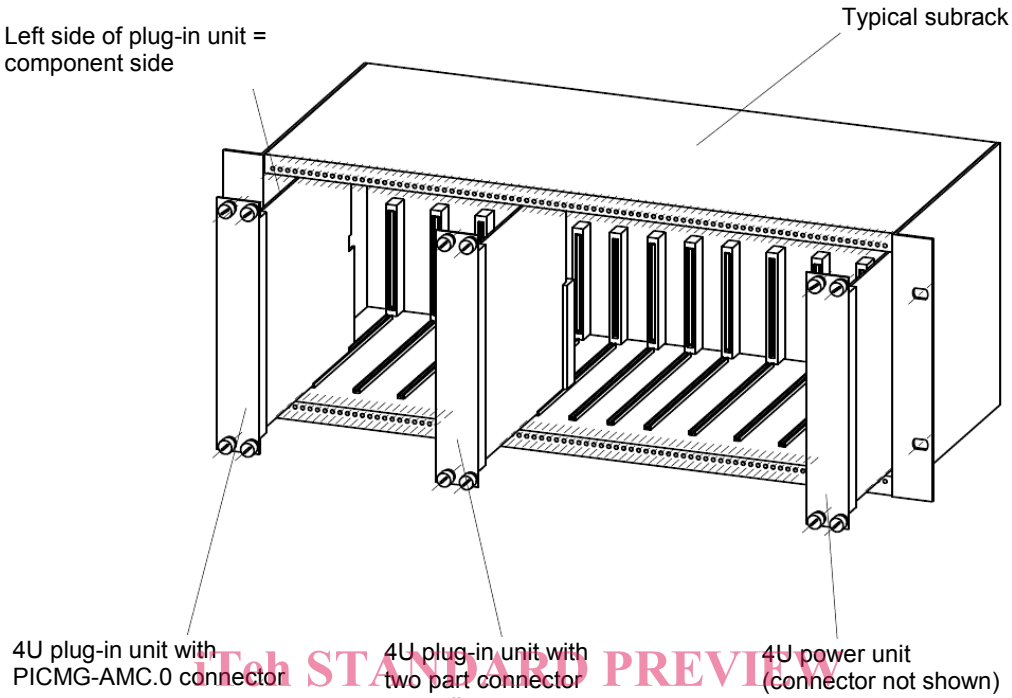

Figure 1 – Arrangement overview

4 Subrack dimensions

4.1 Subrack dimensions front mounting area

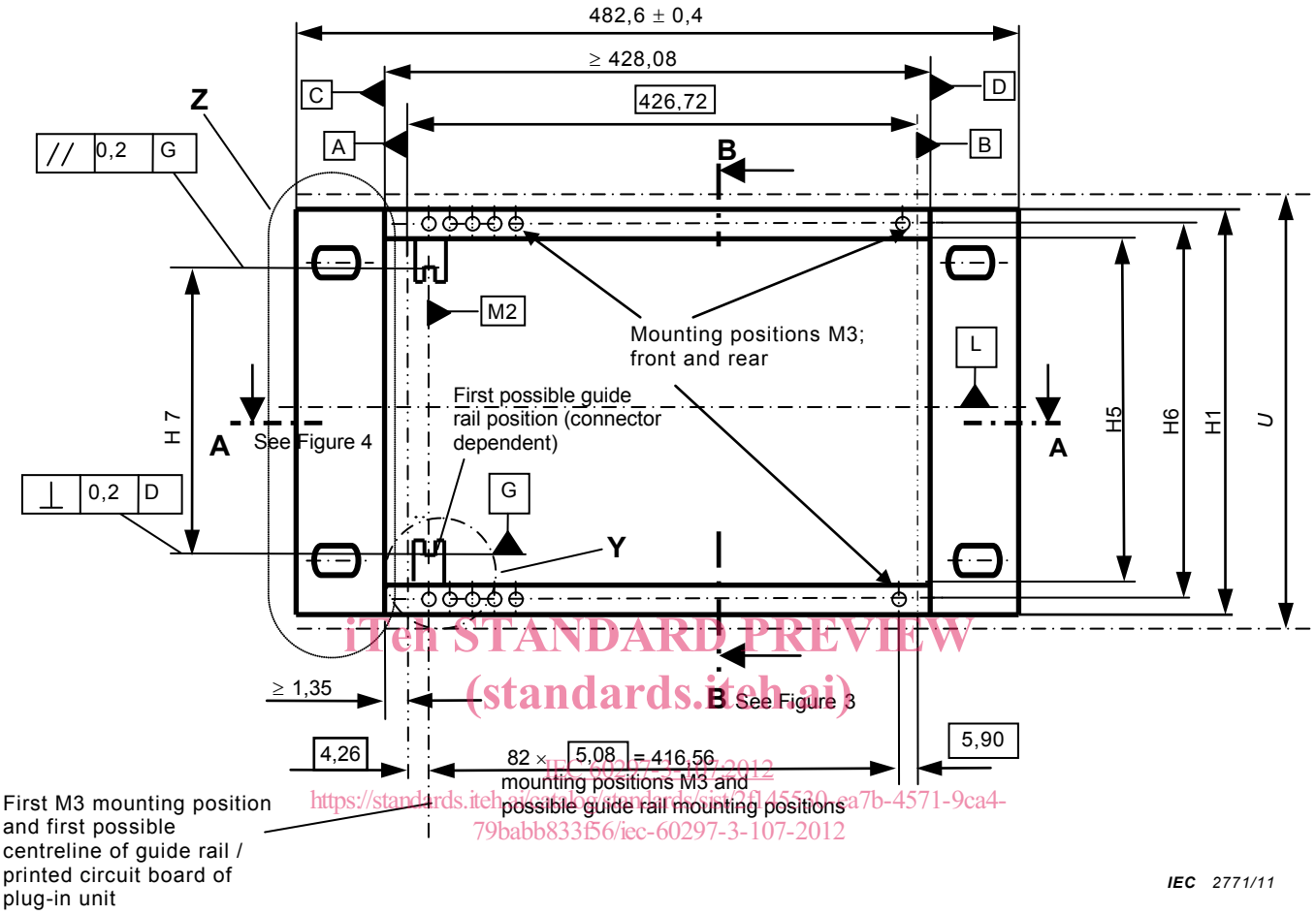

Figure 2a – Front area dimensions

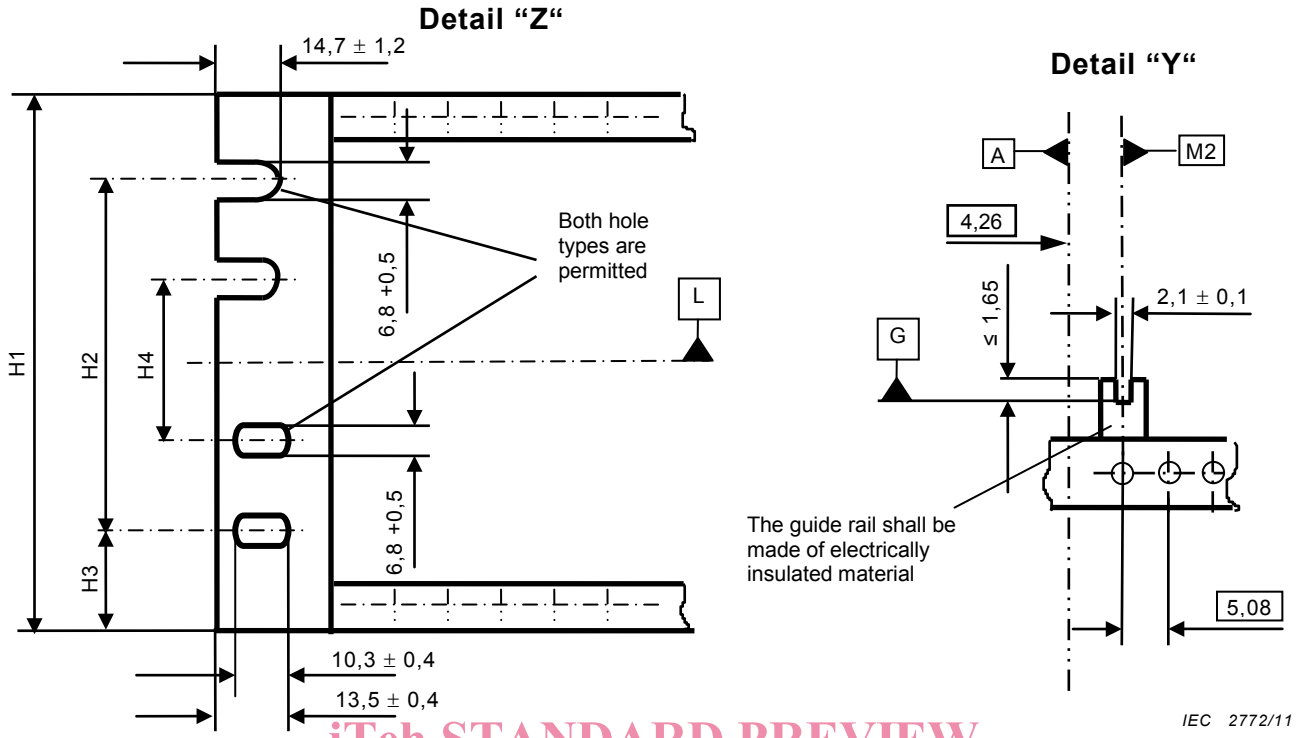

Figure 2b – Mounting holes and guide rail dimensions

Figure 2 – Subrack dimensions, front view

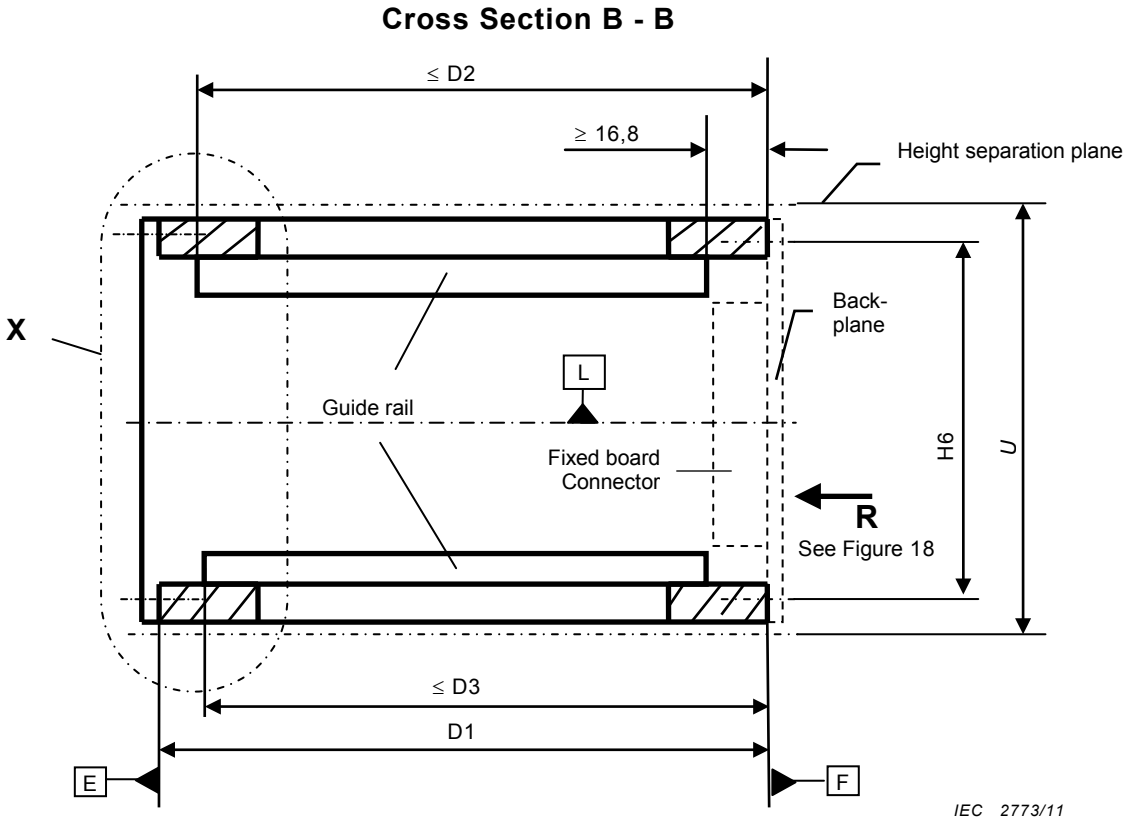

Figure 3a – Guide rail dimensions

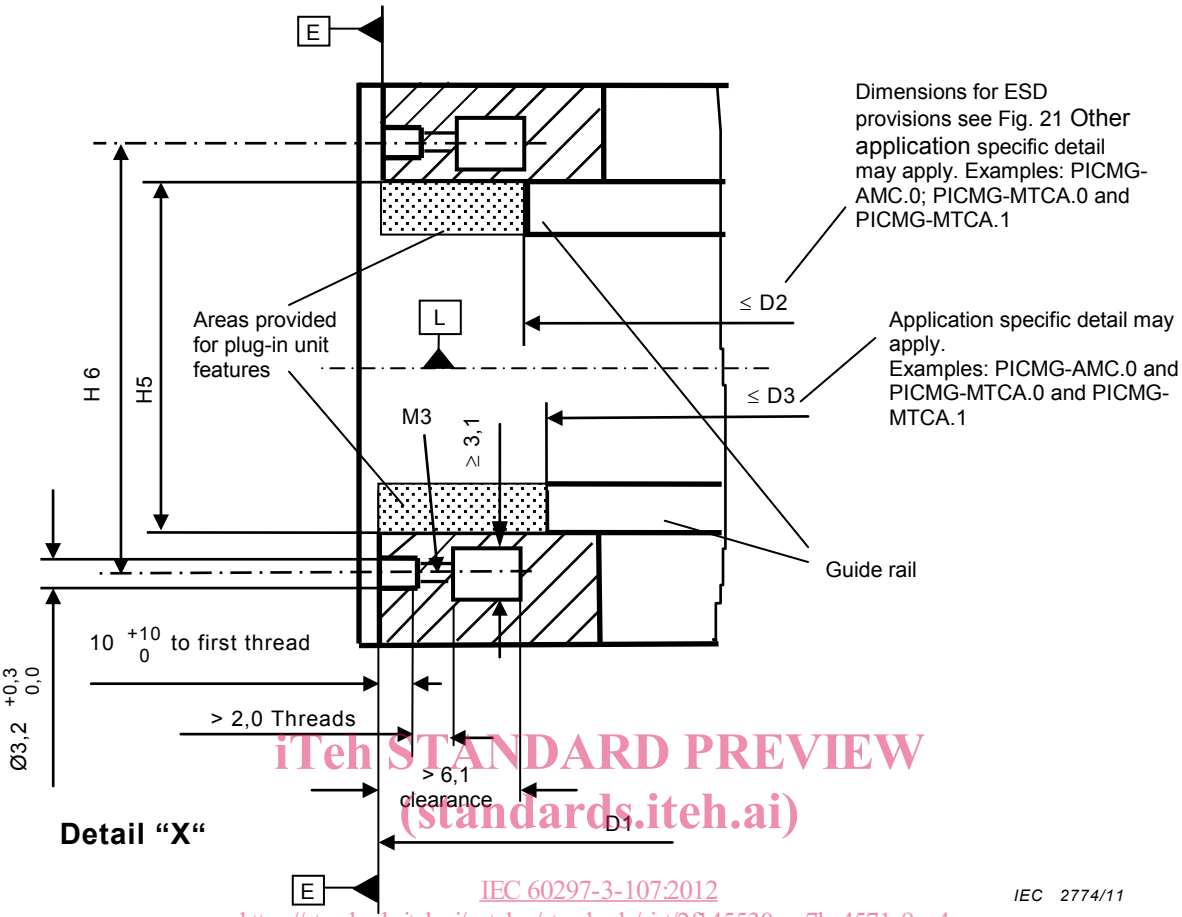

Figure 3b – Mounting hole dimensions

Figure 3 – Subrack dimensions, side view

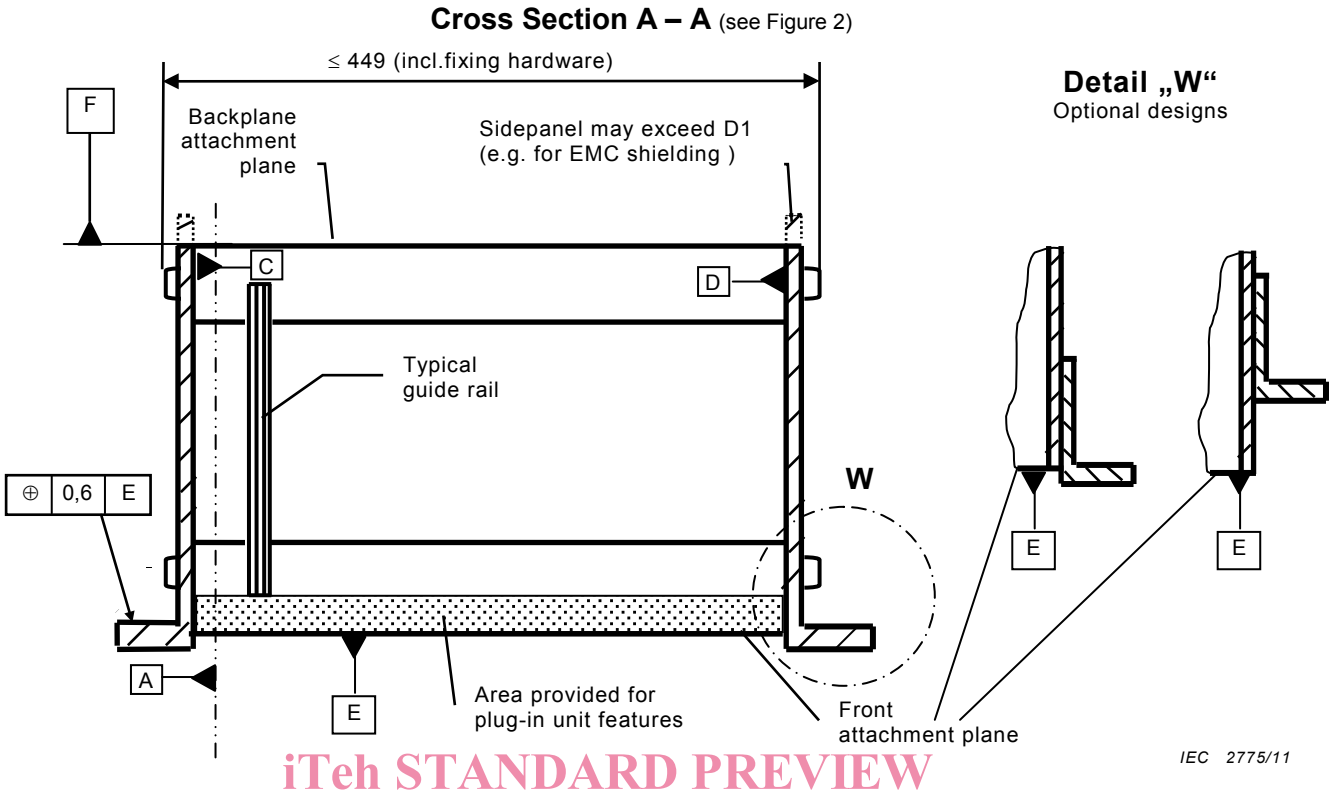

Figure 4 – Subrack dimensions, top view

4.2 Subrack dimensions, rear view, backplane mounting area

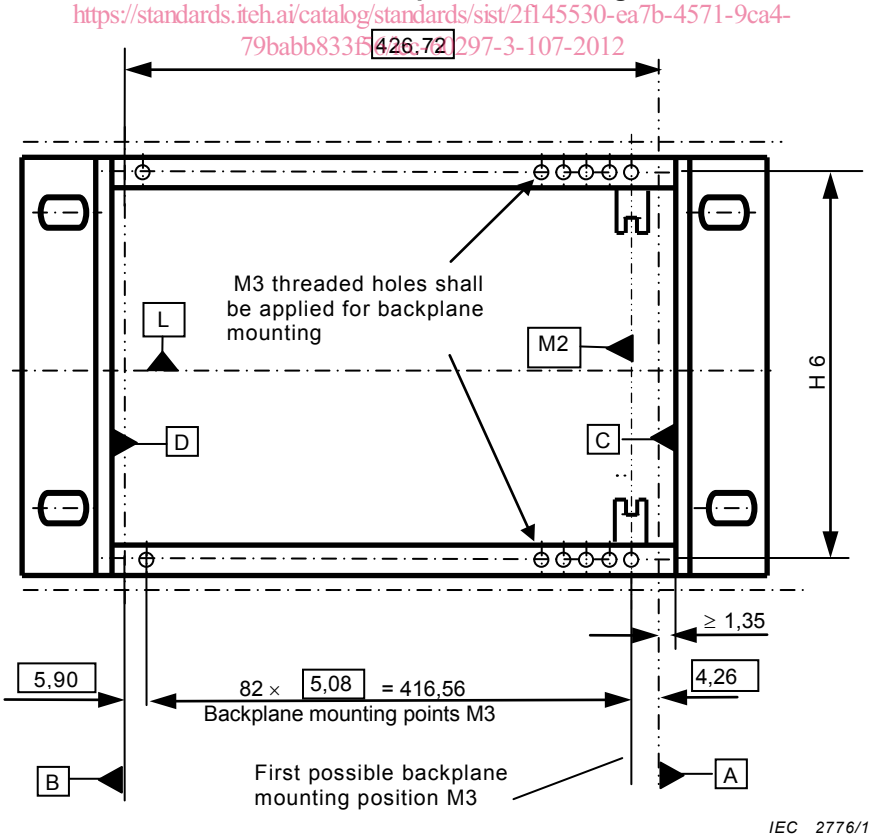

Figure 5 – Subrack dimensions, rear view

5 Plug-in unit dimensions

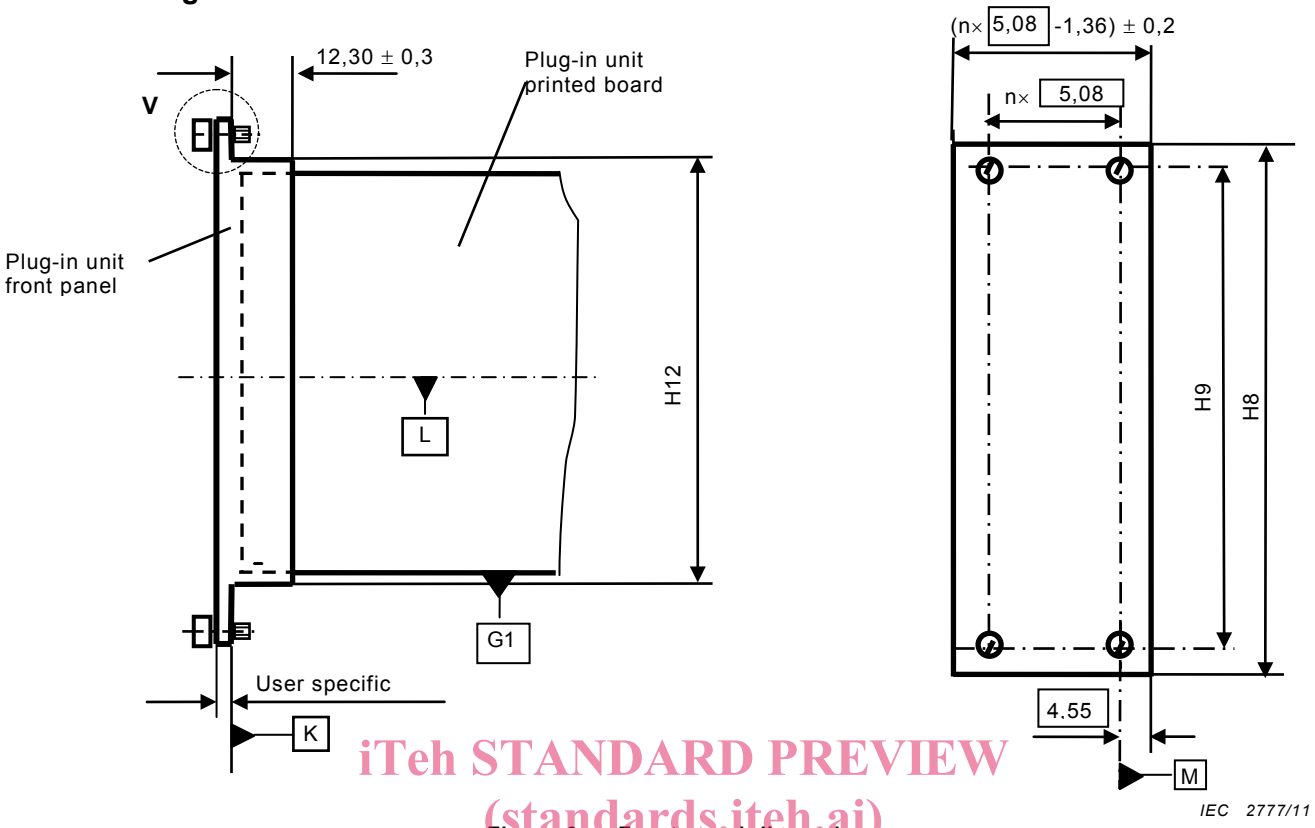

Figure 6a – Front panel dimensions

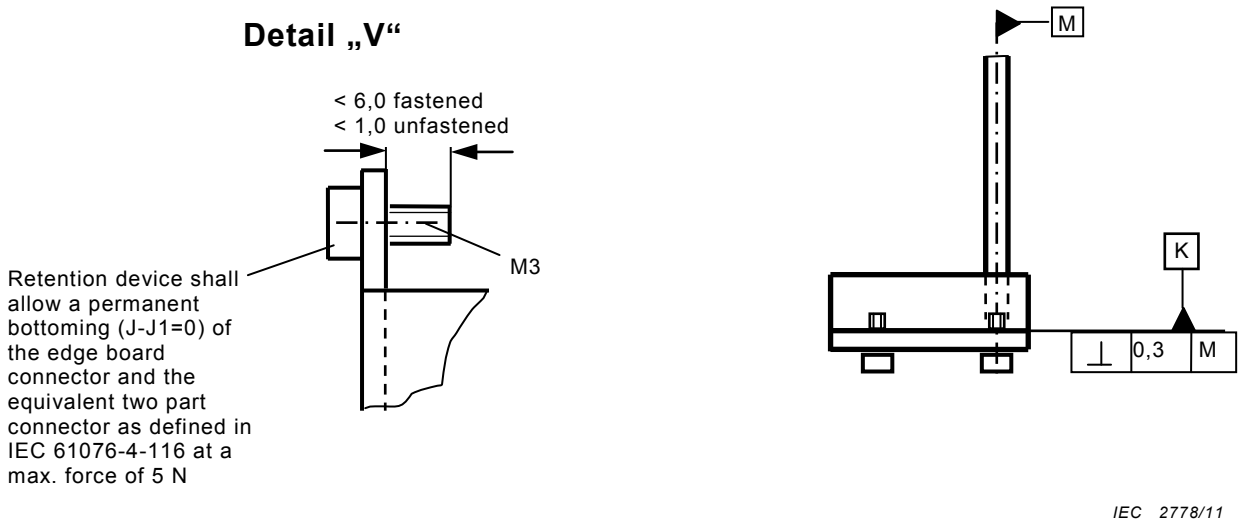

Figure 6b – Retention device dimensions

Figure 6 – Plug-in unit dimensions