



NSAI
Standards

Irish Standard
I.S. EN 60297-3-106:2010

Mechanical structures for electronic equipment - Dimensions of mechanical structures of the 482,6 mm (19 in) series -- Part 3-106: Adaptation dimensions for subracks and chassis applicable with metric cabinets or racks in accordance with IEC 60917-2-1 (IEC 60297-3-106:2010 (EQV))

I.S. EN 60297-3-106:2010

Incorporating amendments/corrigenda issued since publication:

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SWIFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

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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
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60297-3-106

April 2010

ICS 31.240

English version

**Mechanical structures for electronic equipment -
Dimensions of mechanical structures of the 482,6 mm (19 in) series -
Part 3-106: Adaptation dimensions for subracks and chassis applicable
with metric cabinets or racks in accordance with IEC 60917-2-1
(IEC 60297-3-106:2010)**

Structures mécaniques pour équipements
électroniques -
Dimensions des structures mécaniques
de la série 482,6 mm (19 pouces) -
Partie 3-106: Dimensions d'adaptation
des bacs et des châssis, applicables
aux baies ou aux bâtis dimensionnés
selon le système métrique, conformément
à la CEI 60917-2-1
(CEI 60297-3-106:2010)

Bauweisen für elektronische
Einrichtungen -
Maße der 482,6-mm-(19-Zoll-)Bauweise -
Teil 3-106: Adaptionsmaße
für Baugruppenträger und Einschübe,
geeignet für metrische Schränke
oder Gestelle nach IEC 60917-2-1
(IEC 60297-3-106:2010)

This European Standard was approved by CENELEC on 2010-04-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 48D/419/FDIS, future edition 1 of IEC 60297-3-106, 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 was approved by CENELEC as EN 60297-3-106 on 2010-04-01.

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

The following dates were fixed:

- | | | |
|--|-------|------------|
| – latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement | (dop) | 2011-01-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2013-04-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60297-3-106:2010 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60297-3-100	NOTE	Harmonized as EN 60297-3-100.
IEC 60917-1	NOTE	Harmonized as EN 60917-1.
IEC 60917-2-2	NOTE	Harmonized as EN 60917-2-2
IEC 61587-1	NOTE	Harmonized as EN 61587-1
IEC 61587-2	NOTE	Harmonized as EN 61587-2
IEC 61587-3	NOTE	Harmonized as EN 61587-3

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60297	Series	Mechanical structures for electronic equipment - Dimensions of mechanical structures of the 482,6 mm (19 in) series	EN 60297	Series
IEC 60297-3-101	-	Mechanical structures for electronic equipment - Dimensions of mechanical structures of the 482,6 mm (19 in) series - Part 3-101: Subracks and associated plug-in units	EN 60297-3-101	-
IEC 60917	Series	Modular order for the development of mechanical structures for electronic equipment practices	EN 60917	Series
IEC 60917-2-1	-	Modular order for the development of mechanical structures for electronic equipment practices - Part 2: Sectional specification - Interface co-ordination dimensions for the 25 mm equipment practice - Section 1: Detail specification - Dimensions for cabinets and racks	EN 60917-2-1	-
IEC 60917-2-4	-	Modular order for the development of mechanical structures for electronic equipment practices - Part 2-4: Sectional specification - Interface co-ordination dimensions for the 25 mm equipment practice - Adaptation dimensions for subracks or chassis applicable in cabinets or racks in accordance with IEC 60297-3-100 (19 in)	EN 60917-2-4	-

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

Part 3-106: Adaptation dimensions for subracks and chassis applicable to metric cabinets or racks in accordance with IEC 60917-2-1

1 Scope and object

This part of IEC 60297 specifies dimensions for mounting flanges of 19 in subracks or chassis that are to be mounted into metric cabinets or racks.

Additional dimensions for subracks or chassis are according to the IEC 60297 series, and for metric cabinets or racks to the IEC 60917 series.

EMC, seismic, climatic and environmental requirements and tests, are defined in the IEC 61587 series.

The drawings used in this standard are not intended to indicate product design, only the specific dimensions that should be used.

The terminology used complies with IEC 60917-1.

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

IEC 60297-3-101, *Mechanical structures for electronic equipment – Dimensions of mechanical structures of the 482,6 mm (19 in) series – Part 3-101: Subracks and associated plug-in units*

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

IEC 60917-2-1, *Modular order for the development of mechanical structures for electronic equipment practices – Part 2: Sectional specification – Interface co-ordination dimensions for the 25 mm equipment practice – Section 1: Detail specification – Dimensions for cabinets and racks*

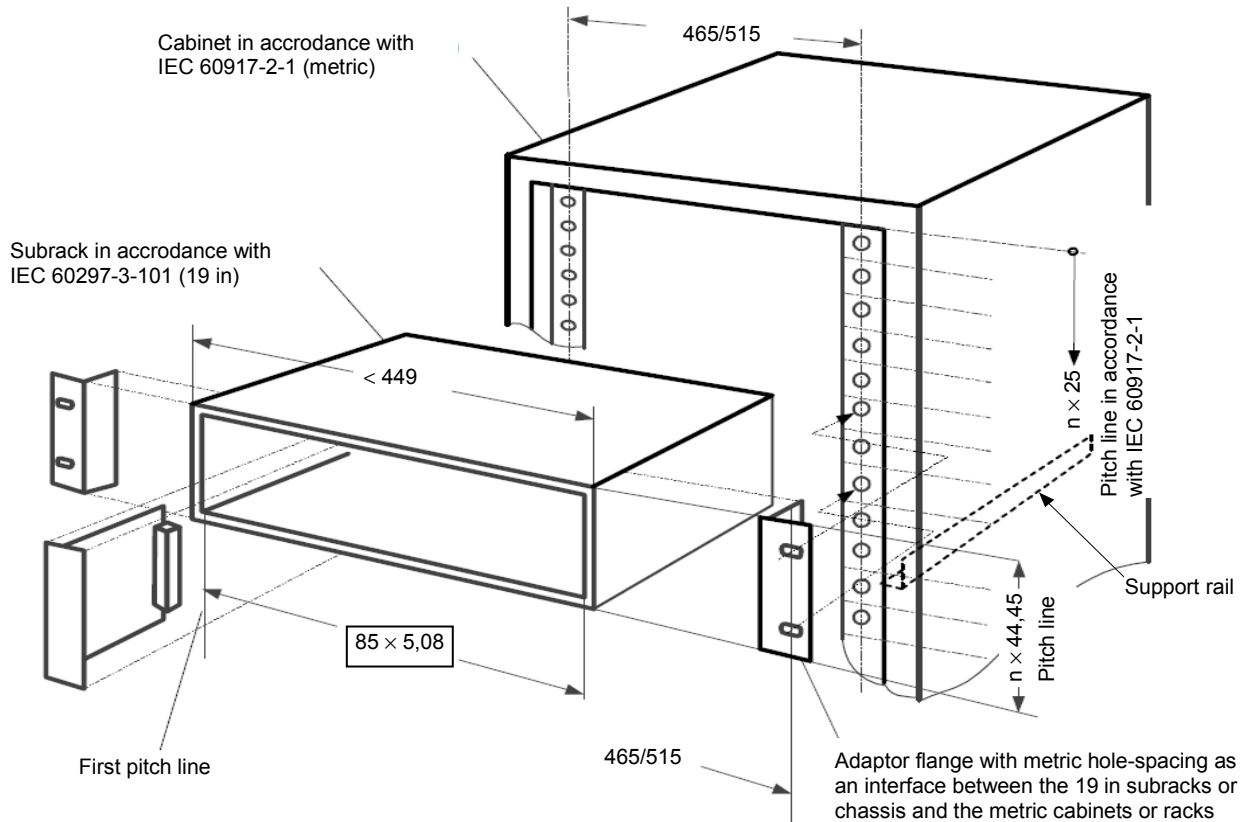
IEC 60917-2-4, *Modular order for the development of mechanical structures for electronic equipment practices – Part 2-4: Sectional specification – Interface co-ordination dimensions for the 25 mm equipment practice – Adaptation dimensions for subracks or chassis applicable in cabinets or racks in accordance with IEC 60297-3-100 (19 in)*

3 Arrangement overview (Figure 1) and definitions

This standard defines dimensions for flanges of 19 in subracks or chassis that are applicable for mounting on metric cabinets or racks. Dimensions for applications where metric subracks

or chassis are to be mounted into 19 in cabinets or racks are defined in a separate standard (IEC 60917-2-4).

All other dimensions are in compliance with IEC 60297 series (19 in standard) and IEC 60917 series (metric standard).



IEC 463/10

Dimensions in mm

**Figure 1 – Arrangement overview –
Adaptation of subracks of the IEC 60297-3-101 series
into cabinets of the IEC 60917-2-1 series**

4 Dimensions for flanges of 19 in subracks or chassis applicable for mounting on metric cabinets or racks

4.1 General

Dimensions for mounting holes arrangements on the flanges are arranged by the two mounting layouts in the cabinets:

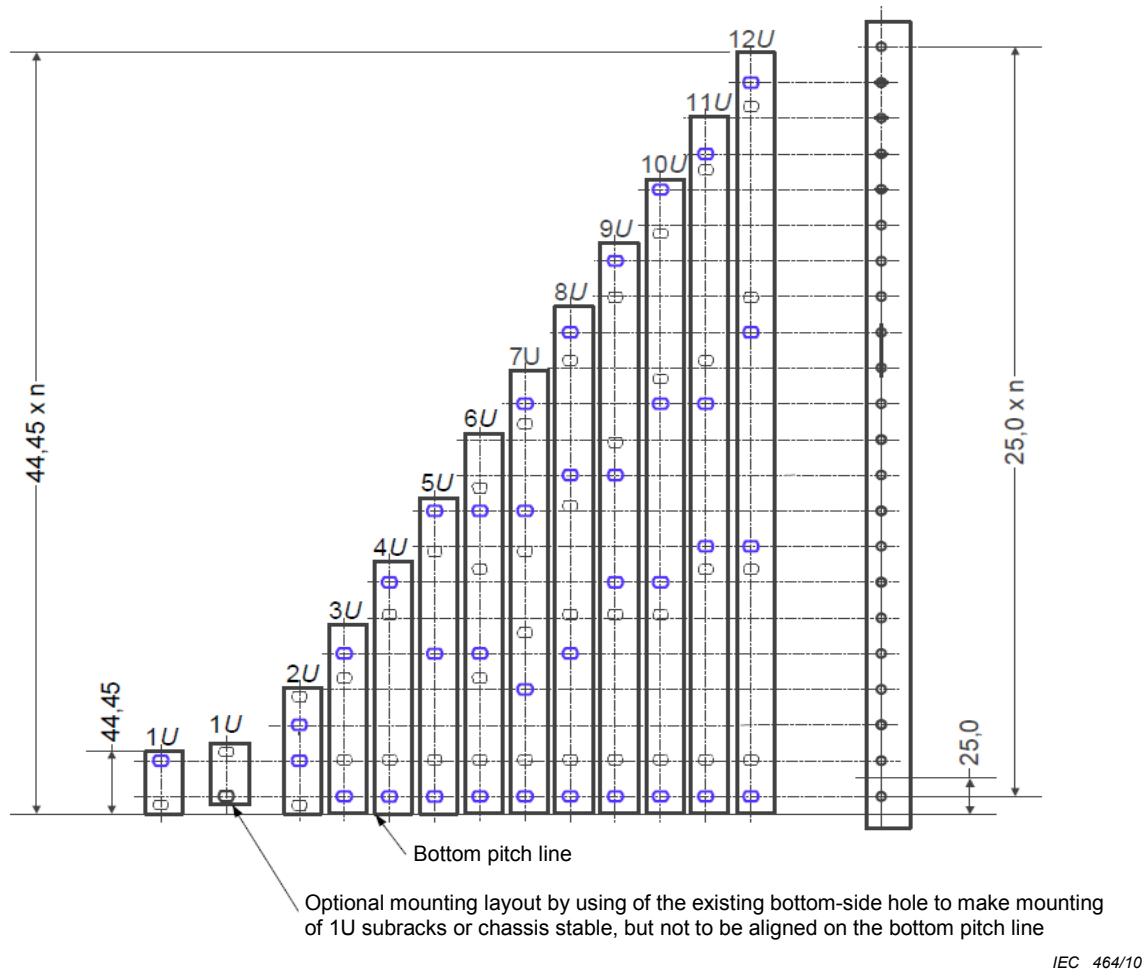
- mounting layout referred to the pitch lines of the 19 in subracks or chassis, and
- mounting layout referred to the centre lines of the 19 in subracks or chassis.

4.2 Dimensions for mounting holes arrangements on the flanges, mounting-layout referred to the pitch lines of the 19 in subracks, or chassis

Figure 2 shows the mounting holes arrangements on the flanges.

Figure 3 and Table 1 show detailed dimensions of mounting holes positions of the flanges.

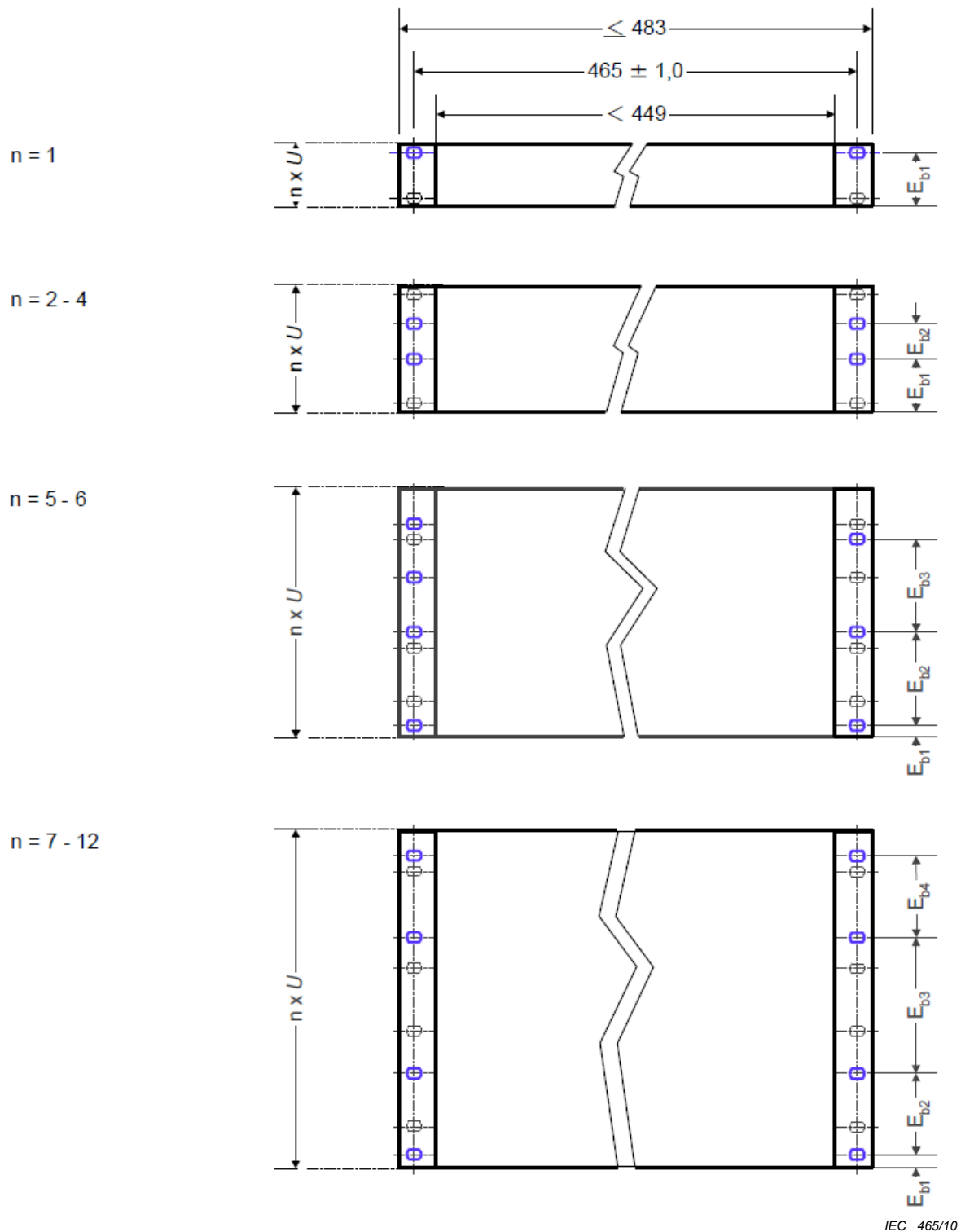
This mounting layout may be recommended for existing subracks or chassis with their support rails utilized.



Dimensions in mm

Figure 2 – Mounting hole arrangements on the flanges, mounting layout referred to the bottom pitch lines of the 19 in subracks or chassis

Flange height: $n \times 44,45$



Dimensions in mm

Figure 3 – Dimensions of mounting hole positions of the flanges, mounting layout referred to the bottom pitch lines of the 19 in subracks or chassis

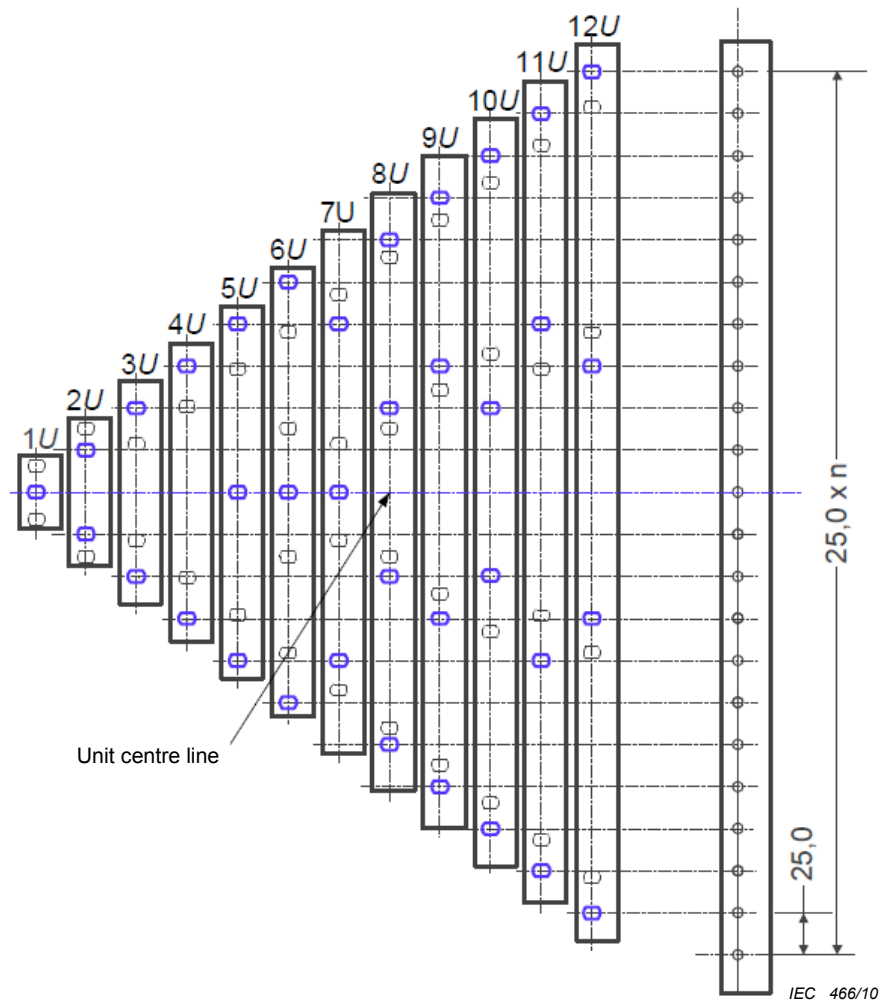
Table 1 – Dimensions of mounting holes positions of the flange, mounting layout referred to the bottom pitch lines of the 19 in subracks or chassis*Dimensions in mm*

Height units $n \times U$	E_{b1} $\pm 0,4$	E_{b2} $\pm 0,4$	E_{b3} $\pm 0,4$	E_{b4} $\pm 0,4$
1U ^a (44,45)	37,7	–	–	–
1U ^b (44,45)	5,95	–	–	–
2U (88,90)	37	25	–	–
3U (133,35)	12	100	–	–
4U (177,80)	12	150	–	–
5U (222,25)	12	100	100	–
6U (266,70)	12	100	100	–
7U (311,15)	12	75	125	75
8U (355,60)	12	100	125	100
9U (400,05)	12	150	75	150
10U (444,50)	12	150	125	150
11U (488,95)	12	175	100	175
12U (533,40)	12	175	150	175
<p>a Use of the existing mounting hole of the 19 in 1U subrack or chassis.</p> <p>b Optional mounting layout by using of the existing bottom-side hole to make mounting of 1U subracks or chassis stable, but not to be aligned on the bottom pitch line.</p>				

4.3 Dimensions for mounting holes arrangements on the flanges, mounting layout referred to the unit centre lines of the 19 in subracks or chassis

Figure 4 shows the mounting holes arrangements on the flanges.

Figure 5 and Table 2 show detailed dimensions of mounting holes positions of the flanges.



Dimensions in mm

Figure 4 – Mounting hole arrangements on the flanges, mounting layout referred to the unit centre lines of the 19 in subracks or chassis

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