

TECHNICAL REPORT

RAPPORT TECHNIQUE

**High-voltage switchgear and controlgear –
Part 301: Dimensional standardisation of high-voltage terminals**

**Appareillage à haute tension –
Partie 301: Normalisation dimensionnelle des bornes à haute tension**

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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland
Email: inmail@iec.ch
Web: www.iec.ch

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Tél.: +41 22 919 02 11

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HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –**Part 301: Dimensional standardisation of high-voltage terminals**

FOREWORD

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IEC 62271-301, which is a technical report, has been prepared by subcommittee 17A: High-voltage switchgear and controlgear, of IEC technical committee 17: Switchgear and controlgear.

This second edition cancels and replaces the first edition published in 2004 and constitutes a technical revision.

The main changes with respect to the previous edition are the addition of Clause 2, Terms and definitions, as well as Figures 2 through 7.

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
17A/873/DTR	17A/882/RVC

Full information on the voting for the approval of this technical report 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 62271series, published under general title *High-voltage switchgear and controlgear*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result 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

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HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

Part 301: Dimensional standardisation of high-voltage terminals

1 Scope

This technical report applies to high-voltage switchgear and controlgear such as circuit-breakers, disconnectors and switches. However, its application to other equipment is not excluded. No coordination between dimensions and the rated normal current can be given.

2 Terms and definitions

For the purposes of this document, the following terms and definition apply.

2.1

high-voltage (HV) terminal

conductive part of switchgear and controlgear to which a terminal connector is fastened

2.2

terminal connector

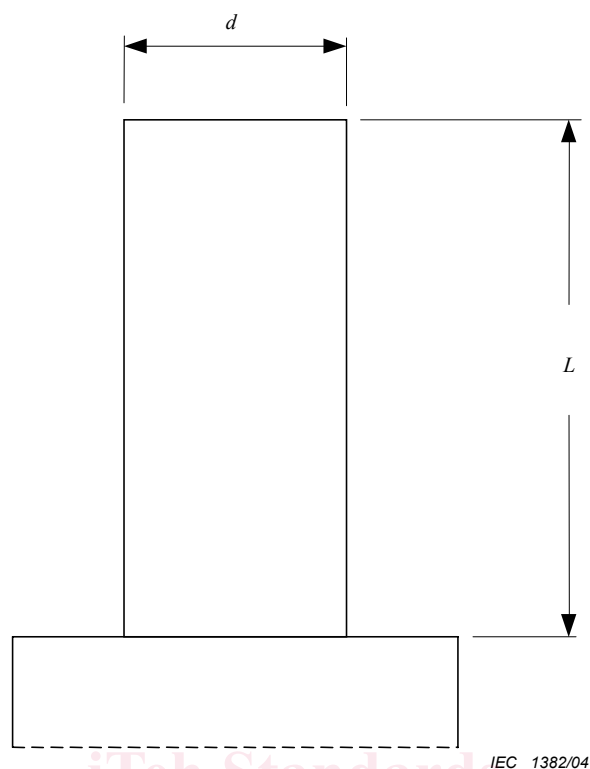
part that joins a conductor to a HV terminal

3 HV terminals with cylindrical shape

The following dimensions are recommended (see Figure 1):

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Diameter d (mm)	20	30	30	30	32	32	40	40	50	50	50	60	80
Corresponding length L (mm)	80	80	125	130	80	130	80	125	40	80	100	125	125

Figure 1 – Dimensions for HV terminals with cylindrical shape

NOTE Solutions combining two cylindrical terminals on the same plate can be used, for example two cylinders of 40 mm × 80 mm with a centre distance of 200 mm.

4 HV terminals with rectangular shape

The recommended dimensions for rectangular HV terminals should be restricted to the diameters of and the distances between the holes.

The dimensions are as follows:

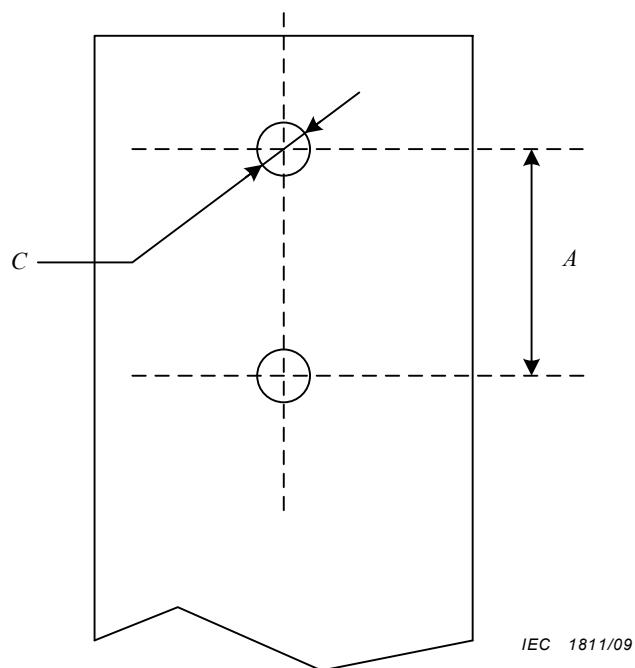
- hole diameters: 14 mm, 16 mm, 17 mm, 18 mm 19 mm and 22 mm;
- distance between holes: 40 mm, 45 mm, 50 mm and 60 mm (centre-to-centre).

NOTE A hole diameter of 14,3 mm and distance between holes of 44,5 mm exist in certain countries.

Any possible combination of these dimensions is permitted.

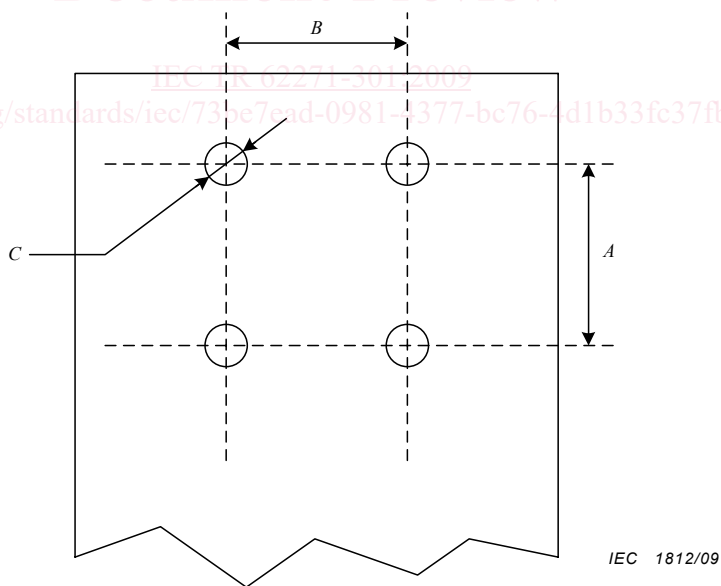
The distance between holes should be applied to two adjacent holes, both along the abscissa or ordinate.

Typical examples of hole arrangements are given in Figures 2 through 7.



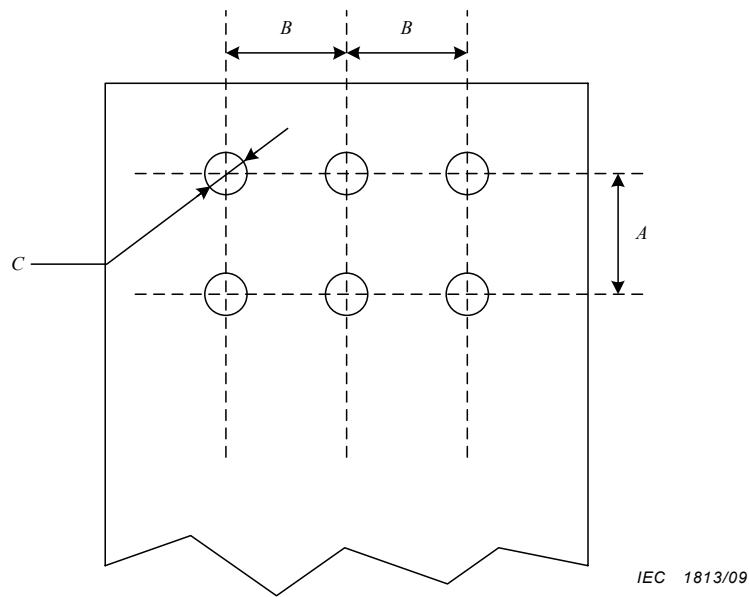
A mm	C mm
32	14
40	14
44,5	14,3

Figure 2 – Two hole HV terminals



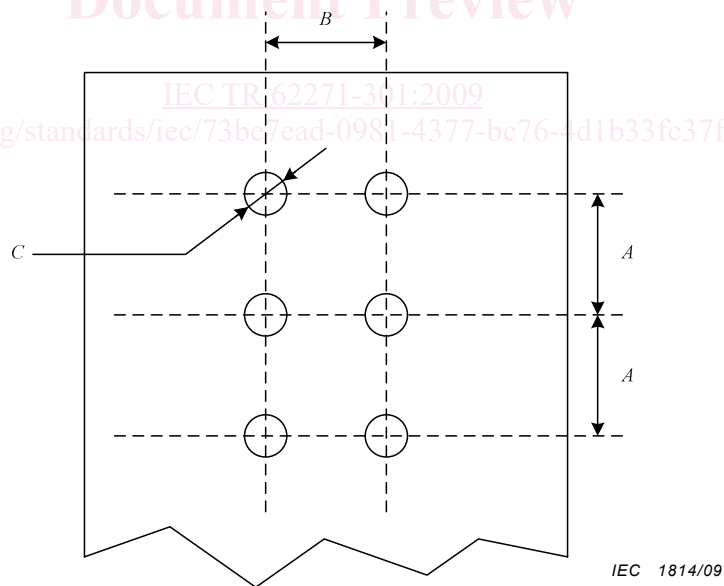
A mm	B mm	C mm
40	40	14
44,5	44,5	14,3
45	45	14
45	45	16
50	50	14

Figure 3 – Four hole HV terminals (2 × 2 hole pattern)



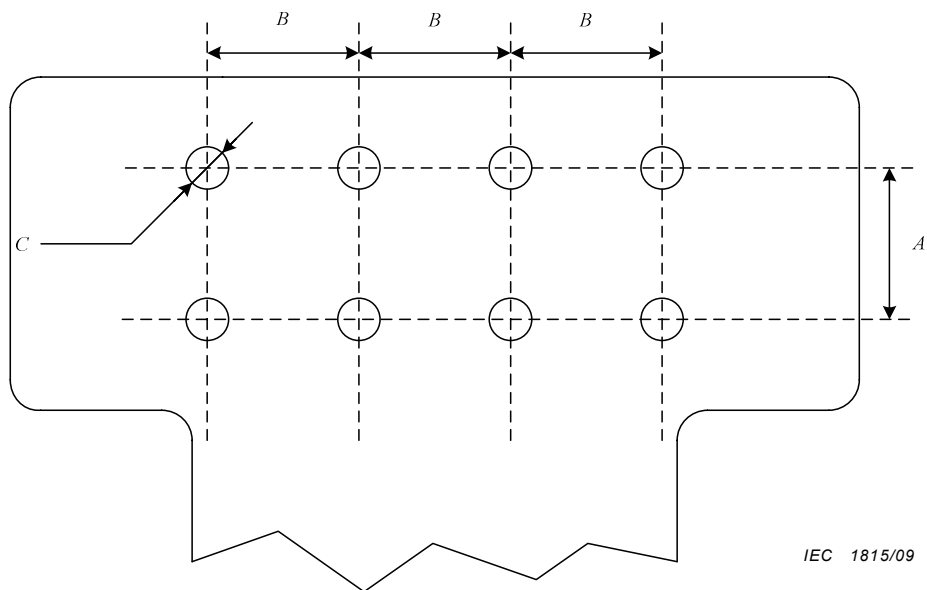
A	B	C
mm	mm	mm
44,5	44,5	14,3
45	45	14
45	45	16

Figure 4 – Six hole HV terminal (2 × 3 hole pattern)



A	B	C
mm	mm	mm
44,5	44,5	14,3
45	45	14
45	45	16

Figure 5 – Six hole HV terminal (3 × 2 hole pattern)



A	B	C
mm	mm	mm
50	50	14

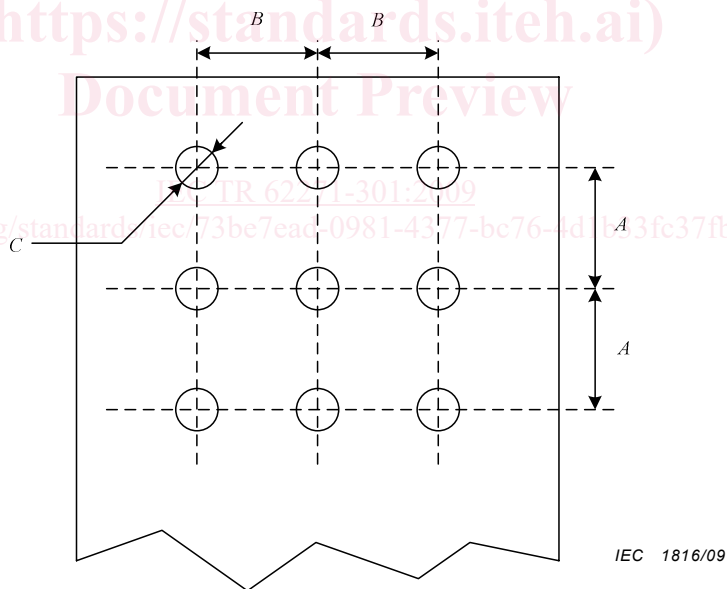
Figure 6 – Eight hole HV terminal (2 × 4 hole pattern)

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A	B	C
mm	mm	mm
45	45	16
40	40	14

Figure 7 – Nine hole HV terminal (3 × 3 hole pattern)