



BSI Standards Publication

**Dimensions of low-voltage switchgear and controlgear - Standardized mounting on rails for mechanical support of switchgear, controlgear and accessories (IEC 60715:2017)**

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## National foreword

This British Standard is the UK implementation of EN 60715:2017. It is identical to IEC 60715:2017. It supersedes BS EN 60715:2001, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PEL/121/1, Low voltage switchgear and controlgear.

A list of organizations represented on this committee can be obtained on request to its secretary.

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EUROPEAN STANDARD

**EN 60715**

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2017

ICS 29.130.20

Supersedes EN 60715:2001

English Version

**Dimensions of low-voltage switchgear and controlgear -  
Standardized mounting on rails for mechanical support of  
switchgear, controlgear and accessories  
(IEC 60715:2017)**

Dimensions de l'appareillage à basse tension - Montage  
normalisé sur profilés-supports pour le support mécanique  
des appareillages et de leurs accessoires  
(IEC 60715:2017)

Abmessungen von Niederspannungsschaltgeräten -  
Genormte Tragschienen für die mechanische Befestigung  
von elektrischen Geräten in Schaltanlagen  
(IEC 60715:2017)

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

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

## **European foreword**

The text of document 121A/153/FDIS, future edition 2 of IEC 60715, prepared by SC 121A "Low-voltage switchgear and controlgear" of IEC/TC 121 "Switchgear and controlgear and their assemblies for low voltage" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60715:2017.

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) 2018-06-01
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-09-01

This document supersedes EN 60715:2001.

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

## **Endorsement notice**

The text of the International Standard IEC 60715:2017 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 are referred to in the text in such a way that some or all of their content constitutes requirements 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 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](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60947-7-2	-	Low-voltage switchgear and controlgear Part 7-2: Ancillary equipment - Protective conductor terminal blocks for copper conductors	-EN 60947-7-2	2009

**Annex ZZ**

(informative)

**Relationship between this European standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered**

This European standard has been prepared under a Commission’s standardisation request relating to harmonised standards in the field of the Low Voltage Directive, M/511, to provide one voluntary means of conforming to safety objectives of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZ.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding safety objectives of that Directive, and associated EFTA regulations.

**Table ZZ.1 – Correspondence between this European standard and Annex I of Directive 2014/35/EU [2014 OJ L96]**

Safety objectives of Directive 2014/35/EU	Clause(s) / sub-clause(s) of this EN	Remarks/note
1 a)	2, 3, 5, Annex A	
1 b)	5, Annex B	
1 c)	Refer to 2 a) to 2 d) and 3 a) to 3 c) of this table	
2 a)	-	Not applicable
2 b)	-	Not applicable
2 c)	4, 5, Annex A, Annex B	
2 d)	-	Not applicable
3 a)	4, 5, Annex A, Annex B	
3 b)	Annex B	
3 c)	Annex B	

**WARNING 1:** Presumption of conformity stays valid only as long as a reference to this European standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

**WARNING 2:** Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**DIMENSIONS OF LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR –  
STANDARDIZED MOUNTING ON RAILS FOR MECHANICAL SUPPORT  
OF SWITCHGEAR, CONTROLGEAR AND ACCESSORIES**

## FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60715 has been prepared by subcommittee 121A: Low-voltage switchgear and controlgear, of IEC technical committee 121: Switchgear and controlgear and their assemblies for low voltage.

This second edition cancels and replaces the first edition published in 1981 and Amendment 1:1995. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) the electrical function of the rail for protective earthing is covered by the relevant product standard.
- b) The document has been editorially updated to bring it into compliance with the ISO/IEC Directives, Part 2:2016, and drawings have been updated to bring them in compliance with ISO tolerancing and drawing standards.

It has the status of a horizontal standard in accordance with IEC Guide 108.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
121A/153/FDIS	121A/163/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

## INTRODUCTION

This document is provided as a horizontal standard. It is necessary to define standardized mounting on rails for mechanical support of low-voltage switchgear and controlgear, electrical accessories, and similar devices.

The user wants them to be easy to fix, remove and rearrange.

Two methods are used for fixing a device on a rail:

- either directly by clipping on the rail (this method is particularly suitable for "top hat" rails or "G" rails);
- or by means of a variety of accessories such as sliding nuts and hooked or T-headed bolts (this method is particularly suitable for "C" rails).

In the case of "G" rails, the first of these methods has been mainly used for mounting terminal blocks which snap in and out of position and are clamped in rows by adjustable end stops.

The rail can take the form of a standard section as an integral part of the enclosure.

Rails are also available of composite sections that combine, for example, "top hat" and "C" section sizes thus accepting devices with various arrangements for mounting.

One or more rails can be used as necessary for fixing devices.

Since rail mounting can affect the performance of equipment, it can be advisable for equipment manufacturers to give guidance in their literature on the suitability for this form of mounting.

# **DIMENSIONS OF LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR – STANDARDIZED MOUNTING ON RAILS FOR MECHANICAL SUPPORT OF SWITCHGEAR, CONTROLGEAR AND ACCESSORIES**

## **1 Scope**

This document specifies dimensional and functional requirements for the compatible mounting of switchgear, controlgear and accessories on some types of rails.

The object of this document is to specify those dimensions that are critical for the correct design of mounting rails and equipment.

The following sections are covered by this document:

- "top hat" section;
- "C" section;
- "G" section.

NOTE 1 Mounting compatibility does not imply functional interchangeability.

Annexes deal with specific steel mounting rails satisfying the requirements of this document, and give additional dimensional data and loading requirements applicable to such rails.

NOTE 2 The detailed design and material of specific steel rails is given in the annexes.

NOTE 3 Other shapes of rails complying with this document not listed in Annex A can be used.

Mounting rails used as a protective conductor using a conducting connection to a protective conductor terminal block are specified in IEC 60947-7-2. In other applications where the mounting rail is used as earthing conductor, the relevant product standard applies.

This document has the status of a horizontal standard in accordance with IEC Guide 108:2006.

This horizontal standard is primarily intended for use by technical committees in the preparation of standards in accordance with the principles laid down in IEC Guide 108.

One of the responsibilities of a technical committee is, wherever applicable, to make use of horizontal standards in the preparation of its publications. The contents of this horizontal standard will not apply unless specifically referred to or included in the relevant publications.

## **2 Normative references**

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60947-7-2, *Low-voltage switchgear and controlgear – Part 7-2: Ancillary equipment – Protective conductor terminal blocks for copper conductors*