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ICS 29.060.10

RECOMMENDATIONS FOR DIMENSIONAL CO-ORDINATION BETWEEN ENCLOSURES AND BUILT-IN DEVICES FOR RAIL FIXING FOR HOUSEHOLD AND SIMILAR INSTALLATIONS

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TECHNICAL REPORT

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Supersedes R023-001:1995

English version

Recommendations for dimensional co-ordination between enclosures and built-in devices for rail fixing for household and similar installations

This Technical Report was approved by CENELEC on 2006-01-21.

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CENELEC

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

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Foreword

Report R023-001:1995 was prepared by the Technical Committee CENELEC TC 23E, Circuit breakers and similar devices for household and similar applications. It has been drawn up on the basis of the decisions taken by TC 23E at their 9th meeting on 8th and 9th November 1994, where the document CLC/TC23E(Sec)38 and the relevant comments of the National Committees were examined.

This Report was approved by CENELEC on 1995-03-06.

Following BT decision D124/C048 and TC 23E advice, an updated version of R023-001:1995 was circulated for voting for conversion into a Technical Report in accordance with the Internal Regulations, Part 2, Subclause 11.4.3.3 and was approved by CENELEC as CLC/TR 50473 on 2006-01-21.

This Technical Report supersedes R023-001:1995.

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1 Scope

The purpose of this report is to give recommendations of the co-ordination of dimensions between enclosures and built-in devices for rail fixing for household or similar installations by listing the principal overall and related mounting dimensions, the rated current of a single device not exceeding 125 A. Examples of these devices are: MCBs, RCDs switches, fuse-systems, indicating lamps, relays, socket-outlets, timing switches, etc.

Compliance with this document does not preclude the need for compliance with other relevant specifications.

This document needs not apply to type tested and partially type tested assemblies which are covered by other specifications. The means of fixing envisaged in this document are mounting rails. Other possible means of fixing may be used but are not covered by these recommendations.

NOTE The only criterion chosen in this document for co-ordination of dimensions has been the geometry of the devices. When selecting the enclosure, other criteria should be taken into account, e.g. the rated current of the devices.

2 Normative references

EN 60715:2001, *Dimensions of low-voltage switchgear and controlgear - Standardized mounting on rails for mechanical support of electrical devices in switchgear and controlgear installations* (IEC 60715:1981 + A1:1995)

3 Definitions

For the purpose of this Technical Report the following definitions apply:

3.1
module (m)
a basic single block

3.2
device
a modular block that is not intended to be split into independent units

4 Mounting rails

The mounting rails used shall be of the 35 mm “Top hat” type according to EN 60715 or an equivalent mounting means, obtained e.g. by moulding or pressing.

NOTE Other types of mounting rails may be used but are not necessarily covered by these recommendations.

Recommendations for dimensional co-ordination of devices designed to be fixed on two mounting rails are under consideration. Examples are given in Annex A.

5 Dimensions of devices relevant to mounting

The principal dimensions necessary to co-ordinate the built-in devices with the enclosures are given in Figure 1.

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5.1 Width "*l*"

The width of a device shall be

$$l = n \times (m\ ^{+0,5}_{0})\ \text{mm}$$

where

n = 0,5 or 1 or 1,5 or 2 or 2,5 or 3 or 3,5 or 4 …

m = 12,5 or 17,5 mm

NOTE The preferred value for future designs is m = 17,5 mm.

5.2 Height of a given device "*h*"

h_1 and h_2 of a given device (see Figure 1a)) need not to be equal.

h_{1max} or h_{2max}, whichever is the greater, shall be chosen from the series 45 – 55 – 75 – 100 – 125 mm.

NOTE 1 The maximum height (h_1 + h_2) must not exceed twice the values chosen.

NOTE 2 The means for fixing or removing the device to and from the rail are not taken into account.

5.3 Height of front projection "*d*" (see Figure 1a))

Up to and including a value h_1 or h_2 – whichever is the greater – of 45 mm the height d of the front projections shall be 45 ± 0,5 mm.

For values of h_1 or h_2 greater than 45 mm the front projection "d" shall have one of the following values: 45 mm and 80 mm, with a tolerance of ± 0,5 mm.

NOTE The preferred value for future designs is d = 45 mm.

5.4 Depth dimensions q_1, q_2 and q_3 (see Figure 1a))

The depth dimensions are given in Table 1.

Table 1 – Depth dimensions

q_{1max} mm	q_{2min} mm	q_{3max} [b] mm
44 [a]	50 [c]	55
		60
		70
		92,5
55	57	70
		92,5
64	66	80
		100
76	84	100

[a] Preferred value.

[b] Where more than one value of q_{3max} is shown for a value of q_{1max} and q_{2min}; the appropriate value is a function of the design "family" of the device.

[c] Preferred value of q_{2min} = 52 mm.

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