



**SLOVENSKI STANDARD**  
**SIST EN 50001:1995**

**01-december-1995**

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**Low-voltage switchgear and controlgear for industrial use - Dimensions, general rules**

Low-voltage switchgear and controlgear for industrial use - Dimensions, general rules

Niederspannungs-Schaltgeräte für industrielle Anwendung - Abmessung, allgemeine Regeln

Appareillage industriel à basse tension - Dimensions, règles générales

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**Ta slovenski standard je istoveten z: EN 50001:1995**

SIST EN 50001:1995  
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**ICS:**

29.130.20	Nizkonapetostne stikalne in krmilne naprave	Low voltage switchgear and controlgear
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## EUROPEAN STANDARD

LOW VOLTAGE SWITCHGEAR AND CONTROL GEAR  
FOR INDUSTRIAL USE - DIMENSIONS

CENELEC  
CNC/N2 - EN 50001  
January 1973

## 1. GENERAL

### 1.1 Sphere of Application

The present standard is applicable generally to low voltage apparatus such as for example:

- Contractors, according to IEC Publication 158-1
  - Switches, isolators (IEC Publication in preparation)
  - Circuit breakers according to IEC Publication 157-1
  - Starters, according to IEC Publications 292-1 & 292-2
  - Auxiliary control devices, according to IEC Publication 337-1
  - Electrical relays according to IEC Publications 255 - 1 and 255 - 2
- Which are currently used in assemblies of switch gear and control gear, electrical equipment of machines and industrial installations.

### 1.2 Purpose (standards.iteh.ai)

The purpose of the present standard is to establish the dimensions, including the fixing dimensions, of low voltage industrial apparatus.

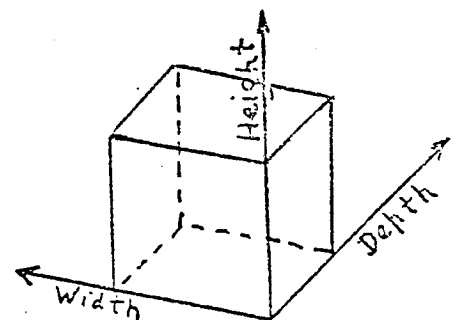
## 2. DEFINITIONS

For the purpose of the present standard:

- The letters a, b, c, designate the dimensions of the apparatus
- The letters x, y, z designate the dimensions of the place of installation.

### 2.1 Arrangement of the Dimensions

	on the apparatus	Place of installation
Width	a	x
Height	b	y
Depth	c	z

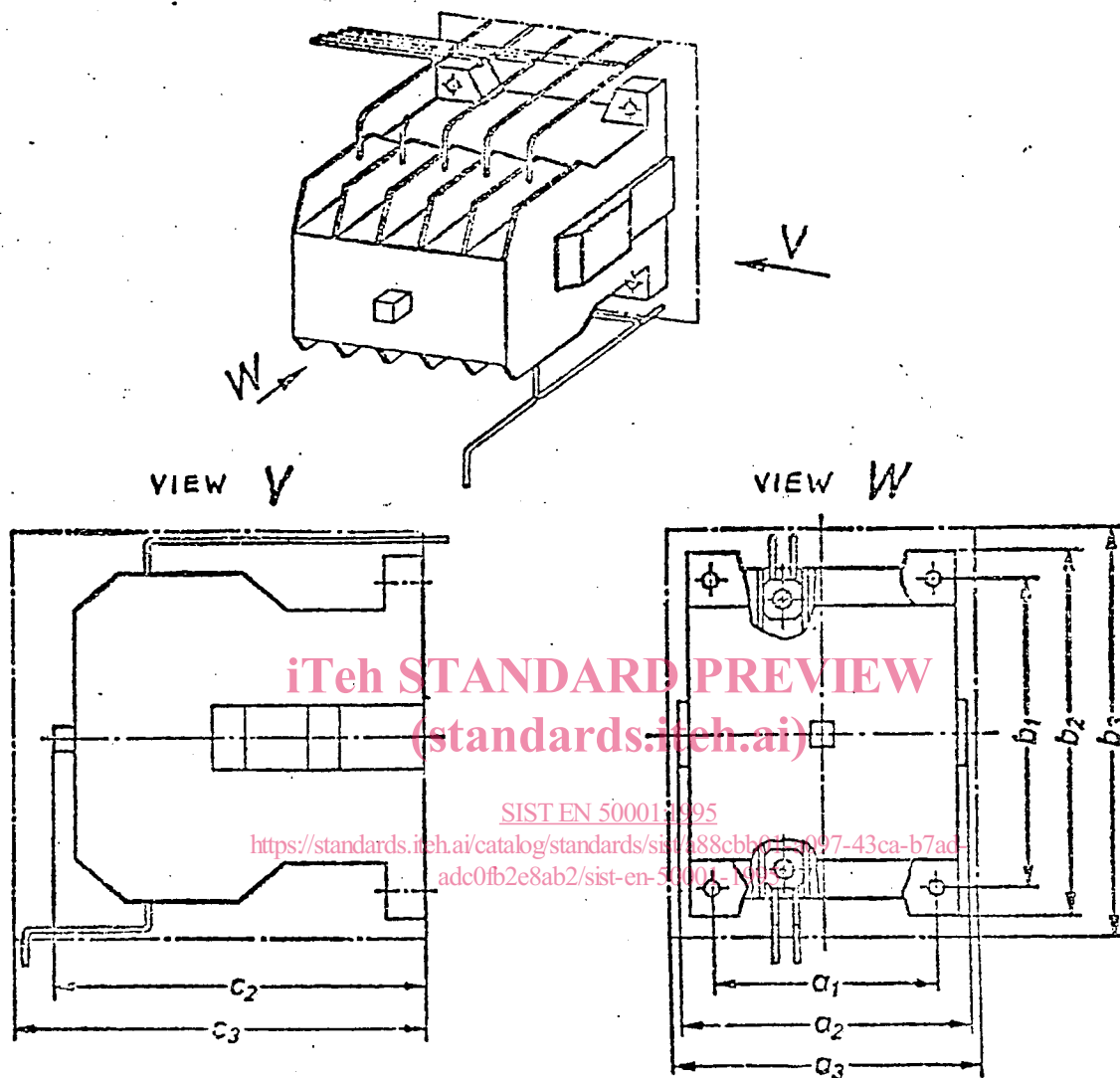


2.1.1 If there is only one possible mounting position for the apparatus: a corresponds to x b corresponds to y c corresponds to z

2.1.2 In the case where several mounting positions are possible, dimension b is taken in the direction in which the external conductors leave the apparatus.

2.2 Designation of Dimensions

## 2.2.1 On the apparatus.



$a_1, b_1$  between centres of Fixing holes.

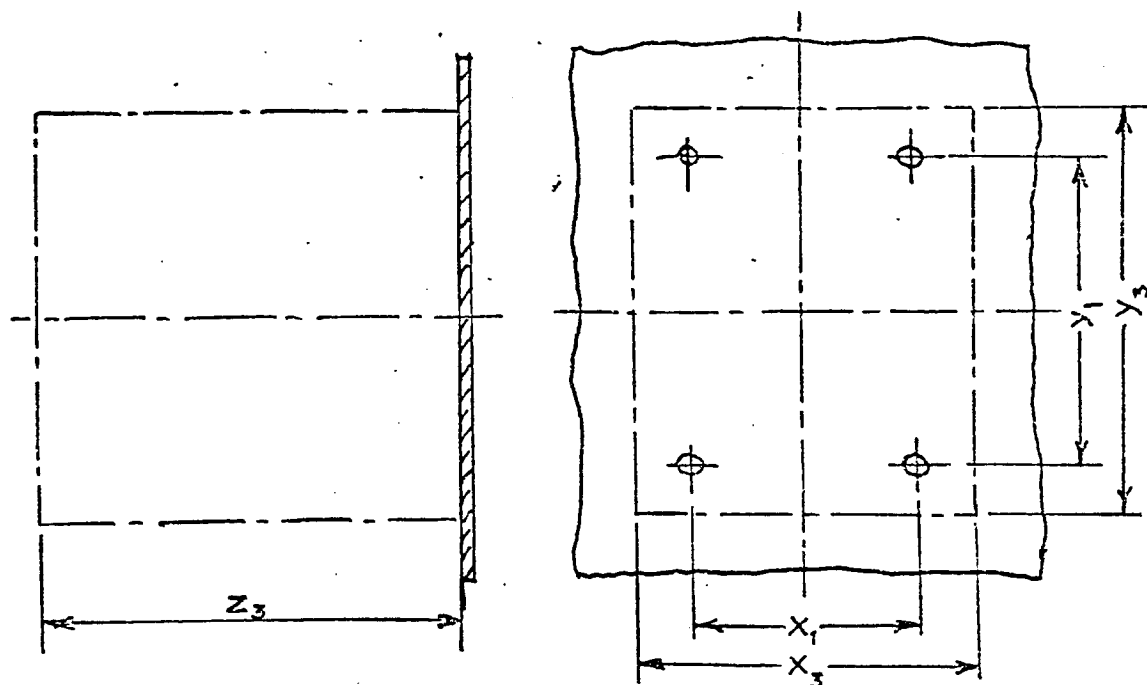
$a_2, b_2, c_2$  overall dimension of the apparatus.

$a_3, b_3, c_3$  dimensions of the apparatus when ready for use.

These latter dimensions represent the minimum volume, greater than the overall dimensions of the apparatus, which is needed for the correct connection of conductors of the largest cross section indicate by the manufacturer and for the arrangement of the conductors when mounting a single piece of apparatus. Dimensions  $a_3$  and  $b_3$  indicate the dimensions of the rectangle necessary for the installation, cabling, use, maintenance and removal of a single piece of apparatus.

These dimensions include manufacturing tolerances, creepage distances and air clearances, together with any safety area which may be necessary.

## 2.2.2 At the place of installation.



$x_1, y_1$  distances between fixing holes.

$x_3, y_3, z_3$  dimensions envisaged for use.

These latter dimensions may be equal to or greater than the corresponding dimensions  $a_3, b_3$  and  $c_3$  of the apparatus which is to be mounted.

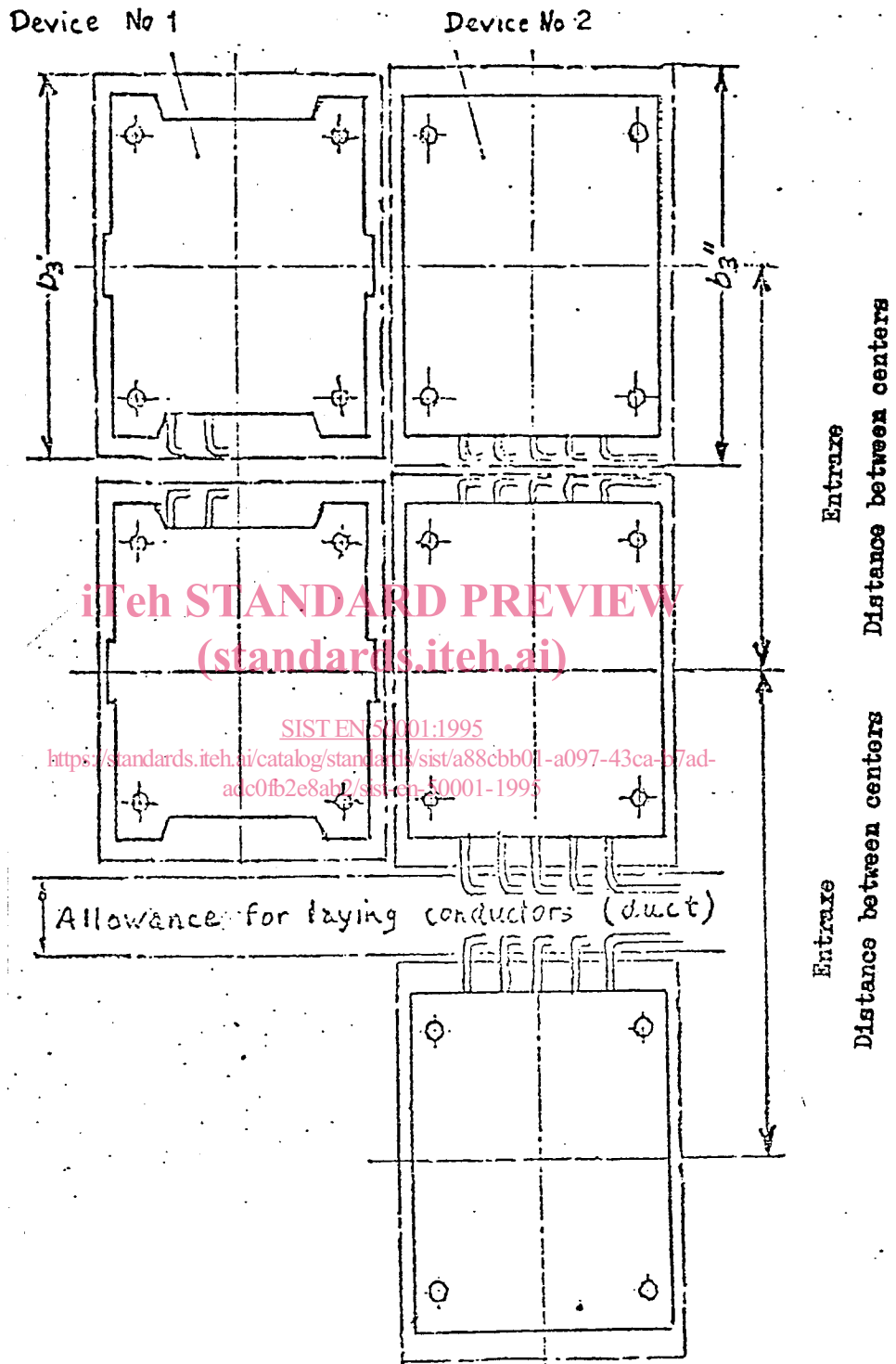
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If a given mounting space is expected to accommodate any one of several devices of which dimensions  $a_3, b_3$  and  $c_3$  differ from one to the other, the dimensions  $x_3, y_3$  and  $z_3$  are fixed by the highest values of  $a_3, b_3$  and  $c_3$  respectively.

NOTE:

Depending on construction and size of the equipment, the method of connection, the conductor sizes and the intended cable routes, the designer must, in order to determine the total area required for a group of apparatus, add a sufficient allowance to the calculated dimensions  $x_3, y_3$  and  $z_3$  for one or more groups of  $a_3$  and  $b_3$  values.

An appropriate allowance is also required if it is necessary to increase the clearance distances in air or to obtain greater freedom of movement for mounting or maintenance.



### 3. MODULAR SYSTEM

The standardized dimensions of L.V. apparatus, coming within the scope of this standard, will be laid down in supplementary sheets, on the basis of a modular system having a basic module of 5 mm and, for apparatus of which the dimension "a" (and x in the mounting space) are less than 40 mm, with a basic module of 2.5 mm.

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## COMMENTS ON STANDARD EN 1001

1. Manufacturers and users of apparatus intended for distribution of electrical energy and/or the breaking, protection, supervision, control or regulation of electrical apparatus, have for a long time, and rightly, expressed the wish that there should be standardisation of dimensions of certain L.V. apparatus which is produced in large quantities so that it is possible easily to replace, if necessary, apparatus made by one manufacturer by similar apparatus from another manufacturer.
  2. A draft dimensional standard for low voltage switchgear and control gear has been prepared by CENELCOM community commission No 2 and submitted to the National electrotechnical committees of the Common Market countries. The present standard takes into account the comments of these National committees and therefore constitutes a european standard which applies in all these countries.
  3. A general system for the arrangement and designation of the dimensions is defined in Clause 2, which distinguishes very clearly between the dimensions  $a_3$ ,  $b_3$  and  $c_3$  of the apparatus and the dimensions  $x_3$ ,  $y_3$  and  $z_3$  of the space available for its installation. This makes it possible to consider the interchangeability of different pieces of apparatus even if the individual dimensions are different.
  4. The basic modules of 5 mm and 2.5 mm, laid down in Clause 3 of the standard reduce considerably the choice of values for the dimensions. The choice of a few preferred values taken from the series of modular values (see supplementary sheets) will facilitate the use of a mounting system common to many pieces of apparatus having differing dimensions.
  5. Corresponding standard sheets will shortly be prepared, as for example European Standard EN 1002.
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