



SLOVENSKI STANDARD
SIST EN 50005:1998

01-februar-1998

Low-voltage switchgear and controlgear for industrial use - Terminal marking and distinctive number - General rules

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Industrielle Niederspannungsschaltgeräte - Anschlussbezeichnungen und Kennzahlen - Allgemeine Regeln

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Appareillage industriel à basse tension - Marquage des bornes et nombre caractéristique - Règles générales

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Ta slovenski standard je istoveten z: EN 50005:1976

ICS:

29.130.20	Nizkonapetostne stikalne in krmilne naprave	Low voltage switchgear and controlgear
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Key words electrical switchgear and controlgear — industrial use — low voltage — terminal — marking — distinctive number — induction coil — release — indicating light device — main contact element — auxiliary contact element

English version

Low voltage switchgear and controlgear for industrial use

Terminal marking and distinctive number

General rules

Appareillage industriel à basse tension.
Marquage des bornes et nombre caractéristique.
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This European Standard was accepted by CENELEC on 7 September 1976. CENELEC members are committed in accordance with CENELEC Internal Regulations to give 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 CENELEC General Secretariat or to any CENELEC member.

This European Standard exists in three versions (English, French, German), recognized by CENELEC as equivalent. National versions in other languages rank as translations, and in case of doubt shall be checked against one of the recognized versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Norway, Portugal, Sweden, Switzerland and United Kingdom.

CENELEC

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

General Secretariat: 2 rue Bréderode-Bte 5, B-1000 Brussels

This European Standard has been prepared by the CENELEC Technical Committee 17X.

1. Scope

This standard applies to switchgear and controlgear for industrial use having rated voltages not exceeding 1 000 V a.c. and 1 200 V d.c. It is based on the uniform system of terminal marking specified in IEC-Publication 445-1973*.

The use of this system is recommended for the terminal marking of devices which are frequently contained in low voltage switchgear and controlgear assemblies, when such marking is a requirement of the relevant equipment standard or is usual practice.

Where an identifying colour, in accordance with a recognized system, is applied to an apparatus terminal, the correlation between this colour and the equivalent graphical symbol or the alphanumerical notation according to this standard shall, where necessary, be recorded on an associated drawing or document.

This standard forms the general rules. Additional European standards will give the rules for particular types of devices such as contactor relays, contactor auxiliary contacts, control switches, etc.

The terminal marking applies to devices as delivered by the manufacturer.

2. General

2.1 The terminal marking of an apparatus shall be free from ambiguity, i.e. each marking shall occur only once.

2.2 The marking of different terminals of a circuit element shall indicate that they are in the same current path.

2.3 The marking of the terminals of an impedance (e.g. coil) are always alphanumerical. Capitals (upper case) are preferably used. Where small (lower case) letters are used, they have the same significance as the corresponding capitals.

2.4 The marking of the terminals of a contact element is always numerical. One of the terminals is marked with an odd number, the other terminals of the same contact element are marked with the immediately higher even numbers.

2.5 If incoming and outgoing terminals of an element are to be specially identified as such, then the lower number shall be chosen for the incoming (e.g. incoming 11 and outgoing 12, incoming A1 and outgoing A2).

NOTE. The position of the terminals shown in the examples is not intended to convey any information on the actual position of the terminals on the device itself.

3. Terminal marking of impedances (alphanumerical)

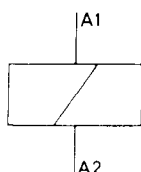
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3.1 Coils

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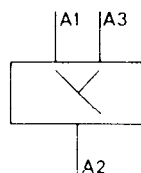
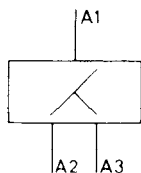
3.1.1 The two terminals of a coil for an electromagnetically operated drive shall be marked by A1 and A2.

Terminals marking A1 and A2 shall replace marking a and b, which were largely used in practice. A1 corresponds to a or A and A2 to b or B.

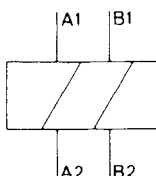


3.1.2 For a coil with tappings, the terminals of the tappings are marked in sequential order A3, A4, etc.

Examples:



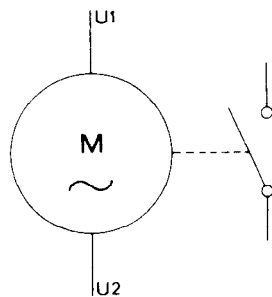
3.1.3 For a coil having two windings, the terminals of the first winding shall be marked A1, A2 and of the second winding B1, B2.



*The reference to the corresponding national standard may be added when this national standard is in accordance with CENELEC H.D. 241.

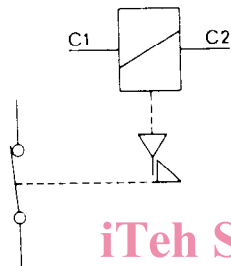
3.2 Motors. When the terminals of an electric motor drive are to be specifically identified as such, the IEC Publication 34-8 or the harmonized national standard shall be applied.

Example:



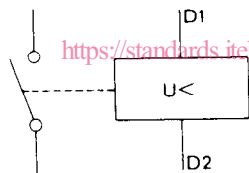
3.3 Electromagnetic releases

3.3.1 Shunt release. The two terminals of a shunt release shall be marked C1 and C2.



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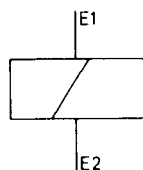
3.3.2 Under voltage release. The two terminals of an under voltage release shall be marked D1 and D2.



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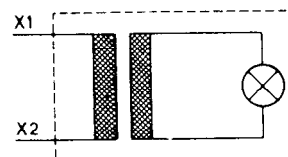
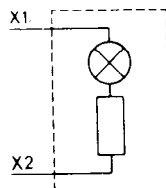
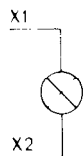
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3.4 Interlocking electromagnets. The two terminals of an interlocking electromagnet shall be marked E1 and E2.



3.5 Indicating light devices. The two terminals of an indicating light device shall be marked X1 and X2.

Examples:



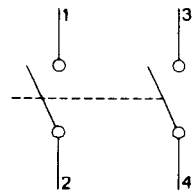
NOTE. The term 'indicating light devices' includes any incorporated resistor or transformer.

4. Terminal marking of contact elements for switching devices with two positions (numerical)

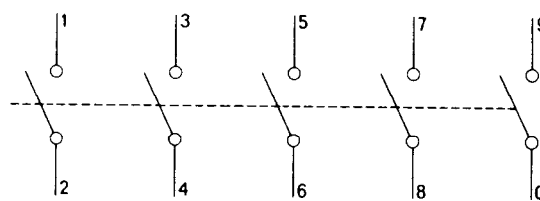
4.1 Contact elements for main circuits (Main contact elements). The terminals of main switching elements are identified by single figure numbers.

Each terminal marked by an odd number is associated with that terminal marked by the following even number.

Examples:



2 main contact elements



5 main contact elements

When a switching device has more than 5 main contact elements, alphanumeric marking shall be chosen, according to IEC-Publication 445 or the national harmonized standard.

4.2 Contact elements for auxiliary circuits (Auxiliary contact elements). The terminals of auxiliary contact elements are identified by two-figure numbers:

- the figure of the units is a function number
- the figure of the tens is a sequence number.

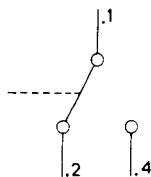
4.2.1 Function number

4.2.1.1 Function number 1 and 2 are allocated to break-contact elements and function numbers 3 and 4 to make-contact elements. (Break-contact element, make-contact element as defined in IEC-Publication 50/441).



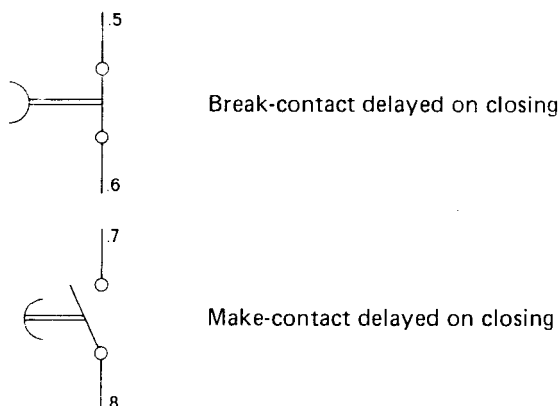
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The terminals of change-over contact elements are marked by the function numbers 1, 2 and 4.



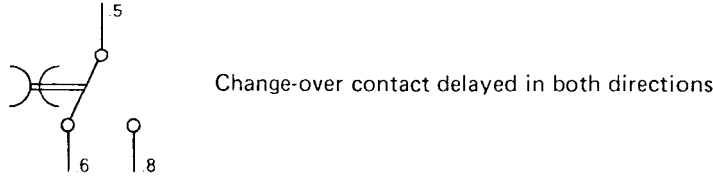
4.2.1.2 Auxiliary contact elements with special functions, e.g. time-delayed auxiliary contact elements, are identified by the function numbers 5 and 6, 7 and 8 for break-contact elements and make-contact elements respectively.

Examples:



The terminals of change-over contact elements with special functions are marked by the function numbers 5, 6 and 8.

Example:

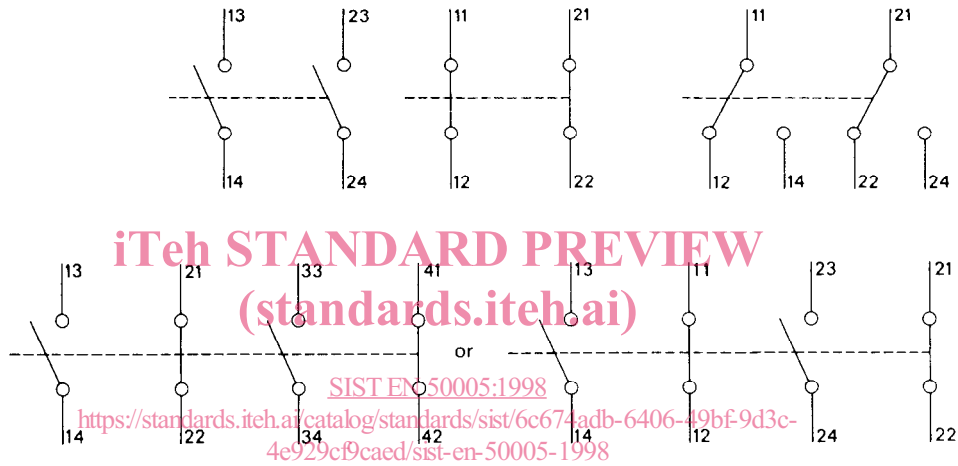


4.2.2 Sequence number

4.2.2.1 Terminals belonging to the *same* contact elements are marked with the *same* sequence numbers.

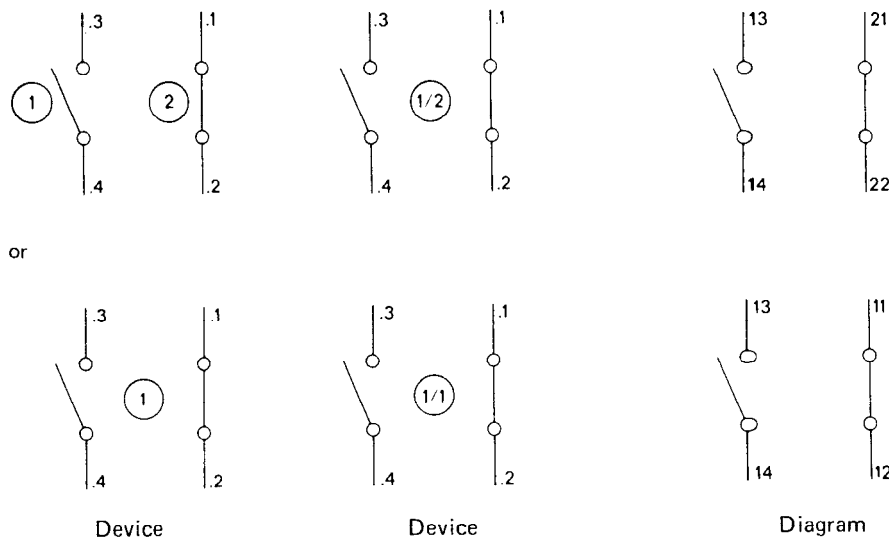
All contact elements having the *same* function shall have *different* sequence numbers.

Examples:



4.2.2.2 The sequence number may be omitted *from the terminals* only if additional information provided by the manufacturer or the user clearly gives such number.

Examples:



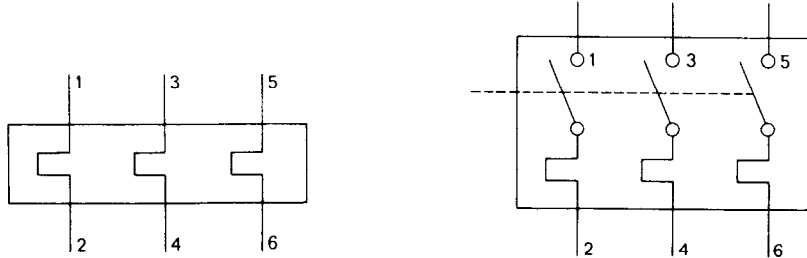
NOTE for 4.2. The dots shown in the above examples are merely used to show the relationship and do not need to be used in practice.

EN 50 005 Page 6

5. Terminal marking of overload protection devices

The terminals of the main circuits of an overload protection device are identified in the same manner as the terminals of main switching elements.

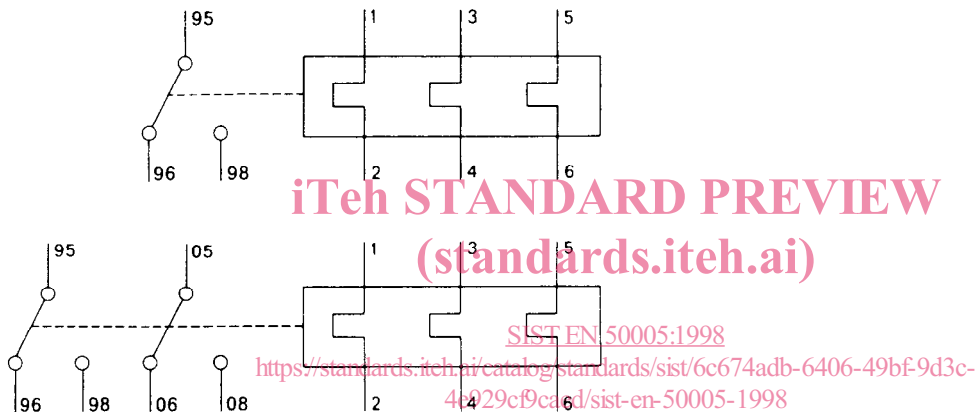
Examples:



The terminals of an auxiliary contact element of an overload protection device are identified in the same manner as the terminals of a special contact element (clause 4.2.1.2) but with the sequence number 9.

If a second sequence number is required, it should be the number 0.

Examples:



6. Distinctive number

A device with a fixed number of make-contact elements and break-contact elements may be allocated a two-figure 'distinctive number'.

The first figure indicates the number of make-contact elements and the second figure the number of break-contact elements.

Example: Device with 3 make-contacts and 1 break-contact.

