SLOVENSKI STANDARD
oSIST prEN IEC 60152:2021

01-januar-2021

Identifikacija vodnikov trifaznih omrežij po urnih indeksih

Identification by hour numbers of the phase conductors of 3-phase electric systems

Repérage par indices horaires des conducteurs des réseaux triphasés

Ta slovenski standard je istoveten z: **prEN IEC 60152:2020**

ICS:

29.020	Elektrotehnika na splošno	Electrical engineering in general

oSIST prEN IEC 60152:2021 **en,fr,de**

3/1459/CDV

COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER: **IEC 60152 ED2**	
DATE OF CIRCULATION: **2020-11-06**	CLOSING DATE FOR VOTING: **2021-01-29**
SUPERSEDES DOCUMENTS: **3/1446/CD, 3/1458/CC**	

IEC TC 3 : DOCUMENTATION, GRAPHICAL SYMBOLS AND REPRESENTATIONS OF TECHNICAL INFORMATION

SECRETARIAT: Sweden	SECRETARY: Mr Thomas Borglin
OF INTEREST TO THE FOLLOWING COMMITTEES: TC 2,SC 3C,SC 3D,TC 9,TC 14,TC 23,SC 23G,TC 38,TC 61,SC 61B,SC 61C,SC 61D,SC 61H,TC 62	PROPOSED HORIZONTAL STANDARD: ☒ Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.

FUNCTIONS CONCERNED:

☐ EMC ☐ ENVIRONMENT ☐ QUALITY ASSURANCE ☐ SAFETY

☒ SUBMITTED FOR CENELEC PARALLEL VOTING ☐ NOT SUBMITTED FOR CENELEC PARALLEL VOTING

Attention IEC-CENELEC parallel voting

The attention of IEC National Committees, members of CENELEC, is drawn to the fact that this Committee Draft for Vote (CDV) is submitted for parallel voting.

The CENELEC members are invited to vote through the CENELEC online voting system.

This document is still under study and subject to change. It should not be used for reference purposes.

Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

TITLE:

Identification by hour numbers of the phase conductors of 3-phase electric systems

PROPOSED STABILITY DATE: 2030

NOTE FROM TC/SC OFFICERS:

This CDV is developed in response to the decision no. 15 of the TC 3 meeting in Shanghai, China, 2019-10-24/25.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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DESIGNATION OF PHASE DIFFERENCES BY HOUR NUMBERS IN THREE-PHASE AC SYSTEMS

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IEC 60152 has been prepared by IEC technical committee 3: Documentation, graphical symbols and representations of technical information.

This 2nd edition cancels and replaces the 1st edition published in 1963. This edition constitutes a technical revision.

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

a) The title has been updated to reflect the content of the publication;

b) The concept of identifying conductors with hour number has been removed as the concept is considered out of date and other means for identifying conductors exists;

c) Definition of hour number (clock number) and phase difference introduced;

d) Updated to the last IEC template.

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

FDIS	Report on voting
3/XX/FDIS	3/XX/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.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

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.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

The National Committees are requested to note that for this document the stability date is 2030.

THIS TEXT IS INCLUDED FOR THE INFORMATION OF THE NATIONAL COMMITTEES AND WILL BE DELETED AT THE PUBLICATION STAGE.

DESIGNATION OF PHASE DIFFERENCES BY HOUR NUMBERS IN THREE-PHASE AC SYSTEMS

1 Scope

This document specifies methods and rules for the designation of phase difference between two items in a three-phase AC system. The designations are intended to be applied in the technical documentation of industrial installations, equipment and products, and also on markings of equipment and products.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1
hour number
clock number
designation of a phase difference between the same quantity of two items in an AC system

3.2
phase difference
for two sinusoidal quantities of the same frequency in a given order, difference between their initial phases with possible addition of a multiple of 2π so that the difference is greater than −π and not greater than π

Note 1 to entry: For the quantities $a'(t) = \hat{A}'cos(\omega t + \vartheta_0')$ and $a''(t) = \hat{A}''cos(\omega t + \vartheta_0'')$, the phase difference is $\emptyset = \vartheta_0'' - \vartheta_0' + 2\pi n$, where n is an integer, chosen so that $-\pi < \emptyset \leq \pi$

[SOURCE: IEV 103-07-06]

4 Hour numbers

For the designation of a phase difference in a three-phase AC system, the following hour numbers may be used:

0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 and 11.

Each hour number shall represent the corresponding multiple of a phase difference of 30°.

Note 1 to entry: On a watch or clock where the hours are indicated by the numbers 1 – 12, the hour indicated by the number 12 is also representing the hour 0.

EXAMPLE 1: A phase difference designated by the hour number 3 represents a difference in phase of 90°.

EXAMPLE 2: A phase difference designated by the hour number 5 represents a difference in phase of 150°.