

Cgbcj bU]b`j UfbcgfbU`bU YU`nUj a Ygb]\_` `cj Y\_!ghfc`žcnbU Yj Ub`Y`]b  
fUndcnbUj Ub`Y`!`F UndcnbUj Ub`Y`hYfa ]bUcj `cdfYa Y]b`\_cb b]\_cj `Xc`c Yb]`  
bUa Ybg\_]` j cXb]\_cj žj\_`f bc`g`gd`cýb]a ]`dfUj ]`nUUZbi a Yf] b]`g]ghYa `f197  
\* \$( ) .&\$\*\$ žgdfYa Yb`YbŁ

Basic and safety principles for man-machine interface, marking and identification -  
Identification of equipment terminals and conductor terminations

**iTeh STANDARD PREVIEW**

Grund- und Sicherheitsregeln für die Mensch-Maschine-Schnittstelle - Kennzeichnung  
der Anschlüsse elektrischer Betriebsmittel und angeschlossener Leiterenden

[SIST EN 60445:2008](https://standards.iteh.ai/catalog/standards/sist/d41cd485-20f1-4809-9c08-9ab5a9d15c92/sist-en-60445-2008)

Principes fondamentaux et de sécurité pour les interfaces homme-machines, le  
marquage et l'identification - Identification des bornes de matériels et des extrémités de  
conducteurs

**Ta slovenski standard je istoveten z: EN 60445:2007**

# ICS:

29.020

Elektrotehnika na splošno

Electrical engineering in  
general

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**Basic and safety principles for man-machine interface,  
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(IEC 60445:2006, modifiziert)

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This European Standard was approved by CENELEC on 2007-02-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving 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 Central Secretariat or to any CENELEC member.

This European Standard exists in two official versions (English and German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

# CENELEC

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of document 16/458/FDIS, future edition 4 of IEC 60445, prepared by IEC TC 16, Basic and safety principles for man-machine interface, marking and identification, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60445 on 2007-02-01.

This European Standard supersedes EN 60445:2000.

This edition includes the following significant technical changes with respect to EN 60445:2000:

- addition of Table 1 – Protective bonding conductor PB (earthed PBE, unearthed PBU);
- deletion of Annex A (informative): "Comparison of former and present designation".

The following dates were fixed:

- latest date by which the EN has to be implemented  
at national level by publication of an identical  
national standard or by endorsement (dop) 2007-11-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2010-02-01

Annex ZA has been added by CENELEC.

## iTeh STANDARD PREVIEW (standards.iteh.ai)

### Endorsement notice

The text of the International Standard IEC 60445:2006 was approved by CENELEC as a European Standard with agreed common modifications as given below.

<https://standards.iteh.ai/catalog/standards/sist/d41cd4fb-20f1-4f09-9c08-9a55a0000002/iec-60445-2006>  
COMMON MODIFICATIONS

### Table 1

Delete footnotes e) and f) and their references in the table.

### Bibliography

Add the following note for IEC 61666:

NOTE Harmonized as EN 61666:1997 (not modified).

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60417		Graphical symbols for use on equipment	-	-
IEC 60446	- <sup>1)</sup>	Basic and safety principles for man-machine interface, marking and identification - Identification of conductors by colours or numerals	EN 60446	1999 <sup>2)</sup>
IEC 60617		Graphical symbols for diagrams	-	-
IEC Guide 104	- <sup>1)</sup>	The preparation of safety publications and the use of basic safety publications and group safety publications	-	-
ISO/IEC Guide 51	- <sup>1)</sup>	Safety aspects - Guidelines for their inclusion in standards	-	-

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<sup>1)</sup> Undated reference.

<sup>2)</sup> Valid edition at date of issue.

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# INTERNATIONAL STANDARD

**IEC  
60445**

Fourth edition  
2006-11

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BASIC SAFETY PUBLICATION

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**Basic and safety principles for man-machine  
interface, marking and identification –  
Identification of equipment terminals and  
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Международная Электротехническая Комиссия

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

# BASIC AND SAFETY PRINCIPLES FOR MAN-MACHINE INTERFACE, MARKING AND IDENTIFICATION – IDENTIFICATION OF EQUIPMENT TERMINALS AND CONDUCTOR TERMINATIONS

## 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 60445 has been prepared by IEC technical committee 16: Basic and safety principles for man-machine interface, marking and identification.

This fourth edition cancels and replaces the third edition published in 1999 and constitutes a technical revision. This edition includes the following significant technical changes with respect to the previous edition:

- a) addition of Table 1 – Protective bonding conductor PB (earthed PBE, unearthed PBU);
- b) addition of footnotes e and f in Table 1 indicating "UK special national conditions";
- c) deletion of Annex A (informative): "Comparison of former and present designation".

It has the status of a basic safety publication in accordance with IEC Guide 104.