

TECHNICAL REPORT



Graphical symbols for use on equipment – Vocabulary

IECNORM.COM : Click to view the full PDF of IEC TR 62687:2015



THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2015 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

IEC Catalogue - webstore.iec.ch/catalogue

The stand-alone application for consulting the entire bibliographical information on IEC International Standards, Technical Specifications, Technical Reports and other documents. Available for PC, Mac OS, Android Tablets and iPad.

IEC publications search - www.iec.ch/searchpub

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and also once a month by email.

Electropedia - www.electropedia.org

The world's leading online dictionary of electronic and electrical terms containing 20 000 terms and definitions in English and French, with equivalent terms in 15 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary

65 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

IEC Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: csc@iec.ch.

IECNORM.COM : Click to view the full text of IEC 62687:2015

TECHNICAL REPORT



Graphical symbols for use on equipment – Vocabulary

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 01.080.40

ISBN 978-2-8322-3042-8

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references	6
3 Terms and definitions	6
Annex A (informative) Some terms explained by examples	10
Bibliography.....	13

IECNORM.COM : Click to view the full PDF of IEC TR 62687:2015

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**GRAPHICAL SYMBOLS FOR USE ON EQUIPMENT –
VOCABULARY**

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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

The main task of IEC technical committees is to prepare International Standards. However, a technical committee may propose the publication of a technical report when it has collected data of a different kind from that which is normally published as an International Standard, for example "state of the art".

IEC 62687, which is a technical report, has been prepared by subcommittee 3C: Graphical symbols for use on equipment, of IEC technical committee 3: Information structures, documentation and graphical symbols.

This second edition cancels and replaces the first edition published in 2011. This edition constitutes a technical revision and includes the following significant technical changes with respect to the previous edition:

- a) The title has changed from "terminology" to "vocabulary";
- b) Annex A has been added.

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
3C/2091/DTR	3C/2116/RVC

Full information on the voting for the approval of this technical report can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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.

IECNORM.COM : Click to view the full PDF of IEC TR 62687:2015

INTRODUCTION

The publications cited in the Bibliography, published by IEC, ISO and ITU constitute the source for the glossary in this Technical report.

The terms are primarily collected from Clause 3, “Terms and definitions” of these publications but in some cases terms are also taken from other parts of these publications.

IECNORM.COM : Click to view the full PDF of IEC TR 62687:2015

GRAPHICAL SYMBOLS FOR USE ON EQUIPMENT – VOCABULARY

1 Scope

This Technical Report contains a collection of terms (glossary) used in IEC, ISO and ITU publications in the field of graphical symbols for use on equipment including some related fields.

Some terms are annotated and/or modified for the purpose of clarification.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

None.

3 Terms and definitions

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

3.1

caution

signal word used to indicate a potentially hazardous situation which, if not avoided, may result in minor or moderate injury

[SOURCE: ISO 17724:2003, 6]

3.2

danger

signal word used to indicate an imminently hazardous situation which, if not avoided, may result in death or serious injury

[SOURCE: ISO 17724:2003, 18]

3.3

dynamic graphical symbol

graphical symbol for use on a monitor screen and a console display whose colour and/or appearance change in accordance with the internal status of the piece of equipment

3.4

glyph

recognizable abstract graphic symbol which is independent of any specific design

[SOURCE: ISO/IEC 9541-1:1991, 3.12]

3.5

glyph image

image of a glyph, as obtained from a glyph representation displayed on a presentation surface

[SOURCE: ISO/IEC 9541-1:1991, 3.15]

3.6

graphic symbol

visual representation of a graphic character or of a composite sequence

[SOURCE: ISO/IEC 10646-1:1993, 4.19]

3.7

graphic character

character, other than a control function, that has a visual representation normally handwritten, printed, or displayed

[SOURCE: ISO/IEC 10646-1:1993, 4.18]

3.8

graphical symbol

visually perceptible figure with a particular meaning used to transmit information independently of language

Note 1 to entry: The unique nature of graphical symbols is their language independence. Therefore, the use of letters and punctuation marks as graphical symbol elements should be avoided.

Note 2 to entry: Graphical symbols are usually abstract representations that stand for something but that require learning on the part of users to take on their meaning.

[SOURCE: IEC 80416-1:2008, 3.4]

[SOURCE: ISO 17724:2003, 31]

3.9

graphical symbol for use on equipment

graphical symbol for use on associated assemblies intended to achieve a defined final objective

[SOURCE: Derived from IEC 80416-1:2008]

3.10

icon

graphical symbol presented on a screen or display

Note 1 to entry: Icons can be static, interactive and change as the result of user input or dynamic and change as the result of equipment status.

Note 2 to entry: Alternative definitions depending on domains are as follows:

- user interface [symbol / object] representing an object or a function of the computer system [ISO/IEC FCD 11581-10, 3.4 modified]
- symbol or combination of symbols in graphical user interfaces representing a function of the computer system
- object of manipulation of a function of the computer system through graphical user interfaces for computer applications
 - Icons should be graphical representations that convey information with a minimum reliance on language.
 - Icons have dynamic nature depending on the function of the computer system.
 - Icons may be entirely abstract, like graphical symbols, or pictorial, like pictograms, or fall at some point between those extremes.

[SOURCE: ISO 80416-4:2005, 3.3]

3.11

pictogram

simplified pictorial representations, used to guide people and tell them how to achieve a certain goal

Note 1 to entry: Pictograms should be graphical representations that convey information with a minimum of reliance on language.

Note 2 to entry: Pictograms are, as far as possible, self-explanatory, and require little or no learning on the part of users.

Note 3 to entry: Pictorial representation can be two- or three-dimensional.

[SOURCE: ITU-T E.121:2006, 3.1, modified]

3.12

safety related graphical symbol

graphical symbol for use on equipment that conveys a message with a relation to personal and/or equipment safety and that is not qualified as a safety sign, e.g. because the related risk is comparatively low

Note 1 to entry: A safety related graphical symbol may e.g. express a prohibition (Do not ... !) or a warning related to a specific hazard (Caution! ...), however it is not required to use the safety colours and shapes according to ISO 3864. It can be standardized in IEC 60417 or ISO 7000.

3.13

safety sign

sign which gives a general safety message, obtained by a combination of colour and geometric shape and which, by the addition of a graphical symbol, gives a particular safety message

[SOURCE: ISO 17724:2003, 68]

3.14

sign

configuration of visual elements including symbols, text and shapes intended to communicate a given meaning

[SOURCE: ISO 17724:2003, 71]

3.15

signal word

word that calls attention to a potentially or imminently hazardous situation

[SOURCE: ISO 17724:2003, 73]

3.16

symbol

visual (audible or tactile) sign, single letter, numeral, punctuation mark each of which has a fixed meaning

Note 1 to entry: Symbols are usually graphical representations that convey information with little reliance on language.

Note 2 to entry: Symbols are usually abstract representations that stand for something but that require learning on the part of users to take on their meaning.

Note 3 to entry: Examples of symbols are graphical symbols, graphic symbols, character symbols, chemical symbols, mathematical symbols, musical symbols, sex symbols, status symbols, tactile symbols, audible symbols.

3.17

warning

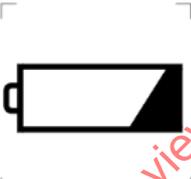
signal word used to indicate a potentially hazardous situation which, if not avoided, could result in death or serious injury

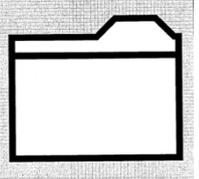
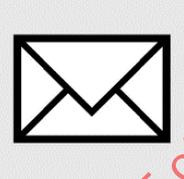
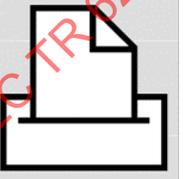
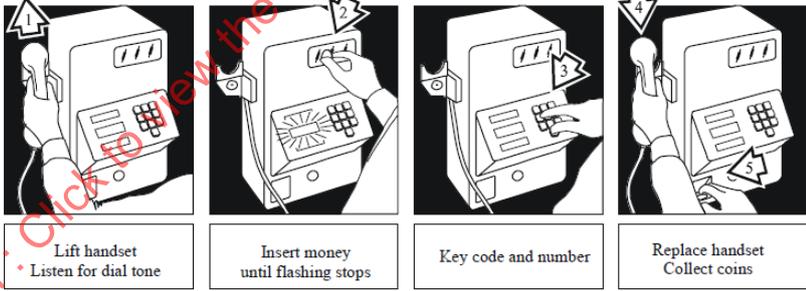
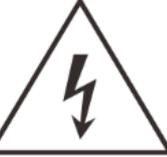
[SOURCE: ISO 17724:2003, 84]

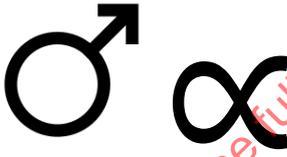
IECNORM.COM : Click to view the full PDF of IEC TR 62687:2015

Annex A
(informative)

Some terms explained by examples

Terms	Examples
<p>3.3 dynamic graphical symbol</p> <p>graphical symbol for use on a monitor screen and a console display whose colour and/or appearance change in accordance with the internal status of the piece of equipment</p>	<div style="display: flex; flex-wrap: wrap; justify-content: space-around;"> <div style="text-align: center;">  <p>IEC 60417-5576 (2002-11-03)</p> </div> <div style="text-align: center;">  <p>IEC 60417-5576-1 (2012-09-01)</p> </div> <div style="text-align: center;">  <p>IEC 60417-5576-2 (2012-09-15)</p> </div> <div style="text-align: center;">  <p>IEC 60417-5576-3 (2012-09-01)</p> </div> </div> <div style="display: flex; flex-wrap: wrap; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">  <p>IEC 62774:2014, Annex A</p> </div> <div style="text-align: center;">  <p>IEC 62774:2014, Annex A</p> </div> <div style="text-align: center;">  <p>IEC 62774:2014, Annex A</p> </div> <div style="text-align: center;">  <p>IEC 62774:2014, Annex A</p> </div> </div> <div style="display: flex; flex-wrap: wrap; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">  <p>IEC 60417-5546 (2003-04-04)</p> </div> <div style="text-align: center;">  <p>IEC 60417-6330A-1 (2015-05-02)</p> </div> <div style="text-align: center;">  <p>IEC 60417-6330A-2 (2015-05-02)</p> </div> </div>
<p>3.4 glyph</p> <p>recognizable abstract graphic symbol which is independent of any specific design</p> <p>NOTE This example is taken from ISO/IEC 10646, U+0041.</p>	<p>A</p>
<p>3.5 glyph image</p> <p>image of a glyph, as obtained from a glyph representation displayed on a presentation surface</p>	<p>A</p>
<p>3.6 graphic symbol</p> <p>visual representation of a graphic character or of a composite sequence</p>	<p>A</p>
<p>3.7 graphic character</p> <p>character, other than a control function, that has a visual representation normally handwritten, printed, or displayed</p>	<p>A</p>

Terms	Examples				
<p>3.8 graphical symbol</p> <p>visually perceptible figure with a particular meaning used to transmit information independently of language</p> <p>NOTE 1 Unique nature of graphical symbols is language independence. Therefore, the use of letters and punctuation marks as graphical symbol elements should be avoided.</p> <p>NOTE 2 Graphical symbols are usually abstract representations that stand for something but that require learning on the part of users to take on their meaning.</p>	 IEC 60417-5019 (2006-08-25)	 IEC 60417-5082 (2002-10-07)	 IEC 60417-5172 (2003-02-18)	 IEC 60417-5179 (2002-10-07)	
<p>3.10 icon</p> <p>graphical symbol presented on a screen or display</p> <p>(Examples were taken from ISO/IEC 11581-2:2011)</p>	 ISO/IEC 11581-2 (2011-12-17), 7.1.2	 ISO/IEC 11581-2 (2011-12-17), 7.1.4	 ISO/IEC 11581-2 (2011-12-17), 7.1.5	 ISO/IEC 11581-2 (2011-12-17), 7.1.8	
<p>3.11 pictogram</p> <p>simplified pictorial representations, used to guide people and tell them how to achieve a certain goal</p> <p>(Example was taken from ITU-T Rec. E.121 (06/2004))</p>	 E.121_F9				
<p>3.12 safety related graphical symbol</p> <p>graphical symbol for use on equipment that conveys a message with a relation to personal and/or equipment safety and that is not qualified as a safety sign, e.g. because the related risk is comparatively low</p>	 IEC 60417-5914 (2002-10-07)	 IEC 60417-6196 (2013-11-02)	 IEC 60417-5216 (2002-10-07)	 IEC 60417-6042 (2010-11-26)	 IEC 60417-6166 (2012-07-14)

Terms	Examples
<p>3.13 safety sign</p> <p>sign which gives a general safety message, obtained by a combination of colour and geometric shape and which, by the addition of a graphical symbol, gives a particular safety message</p>	 <p>ISO 7010-W012 (2011-05-27) ISO 7010-W005 (2011-05-27)</p>
<p>3.14 sign</p> <p>configuration of visual elements including symbols, text and shapes intended to communicate a given meaning</p>	
<p>3.16 symbol</p> <p>visual (audible or tactile) sign, single letter, numeral, punctuation mark each of which has a fixed meaning</p> <p>NOTE 1 Symbols are usually graphical representations that convey information with little reliance on language.</p> <p>NOTE 2 Symbols are usually abstract representations that stand for something but that require learning on the part of users to take on their meaning.</p> <p>NOTE 3 Examples of symbols are graphical symbols, graphic symbols, character symbols, chemical symbols, mathematical symbols, musical symbols, sex symbols, status symbols, tactile symbols, audible symbols.</p>	

IEC TR 62687:2015
Click to view the full PDF of IEC TR 62687:2015