Representation of states of objects by graphical symbols

EESTI STANDARDIKESKUS
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NATIONAL FOREWORD

See Eesti standard EVS-EN 62744:2015 sisaldab Euroopa standardi EN 62744:2015 ingliskeelset teksti.	This Estonian standard EVS-EN 62744:2015 consists of the English text of the European standard EN 62744:2015.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 09.01.2015.	Date of Availability of the European standard is 09.01.2015.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 01.080.01

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62744

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English Version

Representation of states of objects by graphical symbols (IEC 62744:2014)

Représentation d'états d'objets par des symboles graphiques
(IEC 62744:2014)

Darstellung von Objektzuständen mittels grafischer Symbole
(IEC 62744:2014)

This European Standard was approved by CENELEC on 2015-01-01. 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 CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, 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 CEN-CENELEC Management Centre has the same status as the official versions.

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

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

The text of document 3/1194A/FDIS, future edition 1 of IEC 62744, prepared by IEC/TC 3 "Information structures, documentation and graphical symbols" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62744:2015.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2015-10-01
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-01-01

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 62744:2014 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60447:2004	NOTE	Harmonized as EN 60447:2004 (not modified).
IEC 61082-1:2006	NOTE	Harmonized as EN 61082-1:2006 (not modified).
IEC 61310-1:2007	NOTE	Harmonized as EN 61310-1.
IEC 61355	NOTE	Harmonized as EN 61355.
IEC 61966-2-1:1999	NOTE	Harmonized as EN 61966-2-1:2000 (not modified).
IEC 61966-2-1:1999/A1:2003	NOTE	Harmonized as EN 61966-2-1:2000/A1:2003 (not modified).
IEC 62542:2013	NOTE	Harmonized as EN 62542:2013 (not modified).
IEC 62682:2014	NOTE	Harmonized as EN 62682:2014 [1)] (not modified).
IEC 80416-1:2008	NOTE	Harmonized as EN 80416-1:2009 (not modified).
IEC 81346-1:2009	NOTE	Harmonized as EN 81346-1:2009 (not modified).

1) To be published.

IEC 81714-2:2006	NOTE	Harmonized as EN 81714-2:2007 (not modified).
ISO/IEC 81714-1:2010	NOTE	Harmonized as EN ISO 81714-1:2010 (not modified).
ISO 7731:2003	NOTE	Harmonized as EN ISO 7731:2008 (not modified).
ISO 24502:2010	NOTE	Harmonized as EN ISO 24502:2010 (not modified).

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60073	2002	Basic and safety principles for man-machine interface, marking and identification - Coding principles for indicators and actuators	EN 60073	2002
IEC 60417	-	Graphical symbols for use on equipment	-	-
IEC 60617	-	Graphical symbols for diagrams	-	-
IEC 61360-4	-	Standard data element types with associated classification scheme for electric components - Part 4: IEC reference collection of standard data element types and component classes	EN 61360-4	-
IEC Guide 108	-	Guidelines for ensuring the coherency of IEC publications - Application of horizontal standards	-	-
ISO 7000	-	Graphical symbols for use on equipment - Registered symbols	-	-
ISO 14617	series	Graphical symbols for diagrams	-	-

CONTENTS

INTRODUCTION

This international standard deals with the representation of operational states of objects by standardized graphical symbols. The graphical symbols presented in standards like IEC 60417, IEC 60617 and ISO 14617 are actually presented in a static form. This standard establishes rules and recommendations for how objects being represented by graphical symbols can be presented with a dynamic behaviour indicating the operational states of objects occurring in practice. This standard provides guidance for developers and designers of graphical symbols, for example in IEC 60617, ISO 14617, IEC 60417 or any other pictorial representation of an object if being requested to consider additional forms for the presentation of operational states.

This standard also provides information relevant to designers of HMI systems, to be installed in rooms with appropriate ambient conditions (e.g. used for supervising systems).

This standard does not define rules for the design of static graphical symbols for diagrams as provided in IEC 61082 and the ISO/IEC 81714 series or for icons and graphical symbols for use on equipment as provided in IEC 60417, ISO 7000 and in the ISO/IEC 11581 series.

This standard does not define a list indicating which existing graphical symbols are available to be used to represent objects in their operational states following the rules established in this standard.

REPRESENTATION OF STATES OF OBJECTS BY GRAPHICAL SYMBOLS

1 Scope

This international standard provides generic rules for the representation of states of objects by graphical symbols standardized in IEC 60617, ISO 14617, IEC 60417, for example, and for future graphical symbols included in these standards.

NOTE 1 Graphical symbols in IEC 60617, ISO 14617 and IEC 60417 are mostly presented with a single graphic, not representing the different operational states of objects occurring during their life cycle, e.g. in operation, of the object that the graphical symbol represents.

NOTE 2 The graphical symbols in IEC 60617 and ISO 14617 are – at the time of writing of the first edition of this standard – generally shown in the operational state “not energized”.

NOTE 3 Within the different periods of an object within its life cycle, i.e. design, manufacturing, operation, disposal, each period counts with different states. However, this standard focuses only on those states occurring during the active operation period from an object put into service until it is taken out of service.

This horizontal standard has the purpose of:

- ensuring the coherence of the corpus of standardization documents;
- avoiding duplication of work and contradictory requirements.

The standard provides operational states of an object as examples that typically occur and which need to be represented by standardized graphical symbols and defines generic rules to be applied. It specifies which types of presentation facilities are recommended to present the different operational states to humans.

States concerning the different types of alarm, their classification and management are not dealt with in this standard.

This standard does neither define rules for the design of static graphical symbols for diagrams as provided in IEC 61082 and the ISO/IEC 81714 series nor for icons and graphical symbols for use on equipment as provided in IEC 60417, ISO 7000 and in the ISO/IEC 11581 series.

This horizontal standard is primarily intended for use by technical committees in the preparation of standards in accordance with the principles laid down in IEC Guide 108.

One of the responsibilities of a technical committee is, wherever applicable, to make use of horizontal standards in the preparation of its publications. The content of this horizontal standard will not apply unless specifically referred to or included in the relevant publications.

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.

IEC 60073:2002, *Basic and safety principles for man-machine interface, marking and identification – Coding principles for indicators and actuators*