

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



HORIZONTAL STANDARD  
NORME HORIZONTALE

**Graphical symbols for use on equipment – Guidelines for the inclusion of graphical symbols in IEC publications**

[standards.iteh.ai](http://standards.iteh.ai)

**Symboles graphiques utilisables sur le matériel – Lignes directrices pour l'introduction de symboles graphiques dans les publications de la CEI**

<https://standards.iteh.ai/catalog/standards/sist/c46ca177-d115-4796-9cd2-46c1956795cf/iec-62648-2012>



## THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2012 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.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de la CEI ou du Comité national de la CEI du pays du demandeur.

Si vous avez des questions sur le copyright de la CEI ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de la CEI de votre pays de résidence.

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](mailto:info@iec.ch)  
[www.iec.ch](http://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.

#### Useful links:

IEC publications search - [www.iec.ch/searchpub](http://www.iec.ch/searchpub)

The advanced search enables you 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](http://webstore.iec.ch/justpublished)

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

Electropedia - [www.electropedia.org](http://www.electropedia.org)

The world's leading online dictionary of electronic and electrical terms containing more than 30 000 terms and definitions in English and French, with equivalent terms in additional languages. Also known as the International Electrotechnical Vocabulary (IEV) on-line.

Customer Service Centre - [webstore.iec.ch/csc](http://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](mailto:csc@iec.ch).

### A propos de la CEI

La Commission Electrotechnique Internationale (CEI) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

### A propos des publications CEI

Le contenu technique des publications de la CEI est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

#### Liens utiles:

Recherche de publications CEI - [www.iec.ch/searchpub](http://www.iec.ch/searchpub)

La recherche avancée vous permet de trouver des publications CEI en utilisant différents critères (numéro de référence, texte, comité d'études,...).

Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

Just Published CEI - [webstore.iec.ch/justpublished](http://webstore.iec.ch/justpublished)

Restez informé sur les nouvelles publications de la CEI. Just Published détaille les nouvelles publications parues. Disponible en ligne et aussi une fois par mois par email.

Electropedia - [www.electropedia.org](http://www.electropedia.org)

Le premier dictionnaire en ligne au monde de termes électroniques et électriques. Il contient plus de 30 000 termes et définitions en anglais et en français, ainsi que les termes équivalents dans les langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (VEI) en ligne.

Service Clients - [webstore.iec.ch/csc](http://webstore.iec.ch/csc)

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: [csc@iec.ch](mailto:csc@iec.ch).

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



HORIZONTAL STANDARD  
NORME HORIZONTALE

Graphical symbols for use on equipment – Guidelines for the inclusion of graphical symbols in IEC publications

Symboles graphiques utilisables sur le matériel – Lignes directrices pour l'introduction de symboles graphiques dans les publications de la CEI

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

PRICE CODE  
CODE PRIX

R

ICS 01.080.40

ISBN 978-2-83220-097-1

**Warning! Make sure that you obtained this publication from an authorized distributor.  
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

## CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references .....	6
3 Terms and definitions .....	7
4 Basic requirement for graphical symbols for use on equipment to be included in IEC publications .....	9
5 Principal guidelines .....	9
5.1 General.....	9
5.2 Coherency of graphical symbols for use on equipment .....	10
5.3 Procedures to develop product publications including graphical symbols for use on equipment.....	10
Annex A (normative) Hard and soft procedures.....	11
Annex B (informative) Examples of applications of graphical symbols for use on equipment.....	13
Annex C (informative) IEC 60417 – Proposal form for new graphical symbols .....	17
Bibliography.....	19
Table A.1 – Step-by-step approach to the hard procedures.....	11
Table B.1 – Examples of graphical symbols for use on equipment as safety symbols to form safety signs .....	14
Table B.2 – Example of safety related graphical symbol for use on equipment and safety sign .....	15
Table B.3 – Examples of negation of the meaning of graphical symbols for use on equipment.....	16

**ITeh STANDARD PREVIEW**  
(standards.iteh.ai)

IEC 62648:2012

<https://standards.iteh.ai/catalog/standards/sist/e4bca617-df13-4796-9cd2-46c1956795ce/iec-62648-2012>

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**GRAPHICAL SYMBOLS FOR USE ON EQUIPMENT –  
GUIDELINES FOR THE INCLUSION OF GRAPHICAL  
SYMBOLS IN IEC PUBLICATIONS**

## 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.

International Standard IEC 62648 has been prepared by subcommittee 3C: Graphical symbols for use on equipment, of IEC technical committee 3: Information structures, documentation and graphical symbols.

It has the status of a horizontal standard in accordance with IEC Guide 108.

The text of this standard is based on the following documents:

FDIS	Report on voting
3C/1778/FDIS	3C/1793/RVD

Full information on the voting for the approval of this standard 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.

**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.**

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

[IEC 62648:2012](#)

<https://standards.iteh.ai/catalog/standards/sist/e4bca617-df13-4796-9cd2-46c1956795cf/iec-62648-2012>

## INTRODUCTION

A graphical symbol is defined as a visually perceptible figure with a particular meaning used to transmit information independently of language. Graphical symbols are used on equipment for a wide range of purposes. The understanding of such symbols can be improved by consistent design. This is particularly important where families of symbols are used in one location or on similar equipment. Good design also helps to maintain the legibility of graphical symbols when they are reduced to small dimensions for application. Thus, there is a need for those involved in technical works to collaborate with experts in SC 3C responsible for developing and maintaining graphical symbols for use on equipment to be standardized in the horizontal standard IEC 60417.

This international standard is intended for committees working on graphical symbols for use on equipment to be included in their product publications. It provides them with guidelines on how to create their own graphical symbols for use on equipment as well as on how to consult SC 3C so that these symbols are also included in IEC 60417.

This international standard provides commonly agreeable procedures among SC 3C and other committees developing product publications including graphical symbols for use on equipment in accordance with IEC Guide 108.

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

[IEC 62648:2012](https://standards.iteh.ai/catalog/standards/sist/e4bca617-df13-4796-9cd2-46c1956795cf/iec-62648-2012)

<https://standards.iteh.ai/catalog/standards/sist/e4bca617-df13-4796-9cd2-46c1956795cf/iec-62648-2012>

# GRAPHICAL SYMBOLS FOR USE ON EQUIPMENT – GUIDELINES FOR THE INCLUSION OF GRAPHICAL SYMBOLS IN IEC PUBLICATIONS

## 1 Scope

This International Standard provides guidelines to ensure that graphical symbols for use on equipment in IEC product publications are consistent with the requirements of horizontal standard IEC 60417, and ISO 7000. This document is intended to be used by any technical committees and subcommittees to develop graphical symbols for use on equipment for inclusion in their product publications.

This document is based on and develops IEC Guide 108:2006, Clause 4.

For the creation of new graphical symbols for use on equipment, IEC 80416-1 and ISO 80416-2 are used. For the application of standardized graphical symbols for use on equipment, IEC 80416-3 and ISO 80416-4 are used.

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 contents of this horizontal standard will not apply unless specifically referred to or included in the relevant publications.

<https://standards.iteh.ai/catalog/standards/sist/e4bca617-df13-4796-9cd2-46c1956795cf/iec-62648-2012>

## 2 Normative references

<https://standards.iteh.ai/catalog/standards/sist/e4bca617-df13-4796-9cd2-46c1956795cf/iec-62648-2012>

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 60417, *Graphical symbols for use on equipment*

IEC 80416-1:2008, *Basic principles for graphical symbols for use on equipment – Part 1: Creation of graphical symbols for registration*

IEC 80416-3:2002, *Basic principles for graphical symbols for use on equipment – Part 3: Guidelines for the application of graphical symbols*

IEC Guide 108:2006, *Guidelines for ensuring the coherency of IEC publications – Application of horizontal standards*

ISO 3864-1, *Graphical symbols – Safety colours and safety signs – Part 1: Design principles for safety signs and safety markings*

ISO 7000, *Graphical symbols for use on equipment – Index and synopsis*

ISO 7010:2011, *Graphical symbols – Safety colours and safety signs – Registered safety signs*



ISO 80416-2, *Basic principles of graphical symbols for use on equipment – Part 2: Form and use of arrows*

ISO 80416-4, *Basic principles for graphical symbols for use on equipment – Part 4: Guidelines for the adaptation of graphical symbols for use on screens and displays (icons)*

ISO/IEC Directives Part 2:2011, *Rules for the structure and drafting of International Standards*

ISO/IEC Directives:2011, *Supplement – Procedures specific to IEC*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC Guide 108 and Supplement to ISO/IEC Directives, and the following apply.

#### 3.1 equipment

associated assemblies intended to achieve a defined final objective

[SOURCE: 3.3 of IEC 80416-1:2008]

#### 3.2 graphical symbol

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

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

#### 3.3 graphical symbol for use on equipment

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

[SOURCE: adapted from 3.3 and 3.4 of IEC 80416-1:2008]

#### 3.4 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 3864-1. It can be standardized in IEC 60417 or ISO 7000.

#### 3.5 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, definition 68]

#### 3.6 safety symbol

graphical symbol used together with a safety colour and safety shape to form a safety sign

[SOURCE: ISO 17724:2003, definition 69]

### 3.7

#### **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, definition 18]

### 3.8

#### **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, definition 84]

### 3.9

#### **caution**

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

[SOURCE: ISO 17724:2003, definition 6, modified]

### 3.10

#### **signal word**

word that calls attention to a potentially or imminently hazardous situation

[SOURCE: ISO 17724:2003, definition 73]

### 3.11

#### **icon**

graphical symbol presented on a screen or display

<https://standards.iteh.ai/catalog/standards/sist/e4bca617-df13-4796-9cd2-46195679588g/62648-2012>

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.

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

### 3.12

#### **horizontal standard**

IEC standard on fundamental principles, concepts, terminology or technical characteristics, relevant to a number of technical committees and of crucial importance to ensure the coherence of the corpus of standardization documents

[SOURCE: IEC Guide 108:2006, 3.1, modified]

### 3.13

#### **product publication**

publication covering a specific product or group of related products

Note 1 to entry In this international standard, the term product includes items such as process, service, installation and combinations thereof, commonly known as systems.

[SOURCE: IEC Guide 108:2006, 3.2 – Note has been modified]

### 3.14

#### **change request**

task description for addition, withdrawal or change of one or more graphical symbols in IEC 60417, submitted by an authorized person or body, which will be reviewed and updated by secretary of the responsible committee, possibly with the support of a maintenance team, for evaluation by the validation team VT 60417

Note 1 to entry It is possible that changes to IEC 60417 resulting from several change requests are combined, or that a single change request is subdivided, at any stage in the process.

Note 2 to entry ISO TC 145/SC 3 operates similar procedures in respect of change requests relating to ISO 7000.  
[SOURCE: Adapted from ISO/IEC Directives:2011, *Supplement – Procedures specific to IEC*, Annex J]

### 3.15

#### validation team

permanent, “executive”, group of experts appointed by and acting as delegates on behalf of their National Committees to execute evaluation and validation of Change Requests and to vote for their release as part of IEC 60417

Note 1 to entry All P-members have the right and duty to appoint an own member of the team. The validation team reports to the technical committee or subcommittee.

Note 2 to entry The described procedure in ISO/IEC Directives, *Supplement – Procedures specific to IEC* asks for very short response times from the validation team members. Therefore, the National Committees should appoint one or more deputies that can take over the task when the ordinary one for any reason is absent (travel, business, etc.)

Note 3 to entry It is for the National Committee to decide for how long time a member should be appointed, and also to organize the possible supporting network of experts on National level.

Note 4 to entry The secretariat manages the validation team.

[SOURCE: ISO/IEC Directives:2011, *Supplement – Procedures specific to IEC*, J.3.5, modified]

### 3.16

#### hard procedure

set of rules and guidelines to be followed in order for graphical symbols for use on equipment to be standardized in IEC 60417 or in ISO 7000 and to be referred to in IEC publications, i.e. provisions in relevant parts of ISO/IEC Directives and IEC Guide 108

[IEC 62648:2012](https://standards.iteh.ai/catalog/standards/sist/e4bca617-df13-4796-9cd2-46c1956795cf/iec-62648-2012)

### 3.17

#### soft procedure

set of rules and guidelines to be followed in order for graphical symbols for use on equipment to be designed, and for standardized graphical symbols for use on equipment to be applied to and adapted as icons, i.e. provisions in relevant parts of IEC 80416-1, ISO 80416-2, IEC 80416-3 and ISO 80416-4

<https://standards.iteh.ai/catalog/standards/sist/e4bca617-df13-4796-9cd2-46c1956795cf/iec-62648-2012>

## 4 Basic requirement for graphical symbols for use on equipment to be included in IEC publications

Graphical symbols for use on equipment included in IEC publications shall be in accordance with IEC 60417 and ISO 7000. To meet this requirement, the provisions given in Clause 5 shall be followed.

Annex A provides hard and soft procedures to be followed, Annex B provides examples of the applications of graphical symbols for use on equipment, and Annex C provides a form to propose change requests.

## 5 Principal guidelines

### 5.1 General

The method of referring to graphical symbols for use on equipment shall be in accordance with IEC 80416-3. Regarding the designation systems of graphical symbols for use on equipment, IEC 80416-1:2008, Annex C, shall apply.

## 5.2 Coherency of graphical symbols for use on equipment

All graphical symbols for use on equipment within product publications shall be coherent without contradictions. For this purpose, the IEC and ISO corpus of graphical symbols for use on equipment have been standardized and maintained in the horizontal standard IEC 60417, and ISO 7000. Therefore, all technical committees and subcommittees shall consult IEC 60417 and ISO 7000 in advance of drafting any graphical symbols for use on equipment for their own purpose to be included in product publications.

## 5.3 Procedures to develop product publications including graphical symbols for use on equipment<sup>1</sup>

**5.3.1** Committees developing product publications, dealing with graphical symbols for use on equipment, shall incorporate IEC 60417 and ISO 7000 into their own publication by reference. If necessary, they may specify additional details relevant to their product area in accordance with IEC 80416-3:2002, 4.4.

Where, exceptionally, it is not practicable to reference the standards referred to above, committees should ensure that such parts of those standards as are used are not altered when introduced into their own publications. In this case, IEC 60417 concerned should be indicated.

**5.3.2** Committees responsible for product publications which include non-standardized graphical symbols for use on equipment should ensure that they are adapted to comply with the design rules in IEC 80416-1 and ISO 80416-2 and requirements of IEC 60417 or ISO 7000 when the product publication is next amended or revised.

**5.3.3** If a committee determines that graphical symbols in IEC 60417 and ISO 7000 are not adequate for its intended application, it shall submit, to SC 3C or ISO TC 145/SC 3, respectively, a formal proposal for change request together with a proposed symbol which complies with the appropriate design principles.

If a committee responsible for a product standard determines that graphical symbols in IEC 60417 are not suitable for the committee's intended application it shall submit a formal proposal to SC 3C for a change request for either:

- a new graphical symbol; or,
- an amendment to an existing graphical symbol standardized IEC 60417.

**5.3.4** If, after consultation between SC 3C and the committee, SC 3C considers that the proposed new graphical symbol or proposed amendment to an existing graphical symbol are not suitable for inclusion in IEC 60417, the committee shall request a derogation from IEC 60417 from the SMB and give detailed reasons for the request.

If the request for a derogation is accepted by the SMB, the committee may include the new or amended graphical symbol in the product standard and this shall be indicated in the foreword of the standard (see ISO/IEC Directives, Part 2:2011, 6.1.3).

Relevant documents generated in the course of the development of the project should be drawn to the attention of SC 3C responsible for IEC 60417.

**5.3.5** In the case of change requests related to IEC 60417, realistic target dates shall be agreed between SC 3C and the committee concerned.

---

<sup>1</sup> 5.3.1 to 5.3.5 are adapted from the relevant part of IEC Guide 108.

## Annex A (normative)

### Hard and soft procedures

#### A.1 General

As far as graphical symbols for use on equipment are concerned, every IEC (and ISO) document drafted in accordance with the ISO/IEC Directives, Part 2:2011, shall follow the provision in the second paragraph of 6.6.5.6. Namely, “Graphical symbols for use on equipment shall be in accordance with IEC 60417 and ISO 7000”.

The following two types of procedures shall be followed to meet the provision:

- a) Hard procedures according to ISO/IEC Directives, Part 2, 6.6.5.6, ISO/IEC Directives:2011, *Supplement – Procedures specific to IEC*, Annex J and IEC Guide 108; and
- b) Soft procedures according to IEC 80416-1 and ISO 80416-2.

#### A.2 Hard procedures

Hard procedures are the relevant rules and guidelines, which shall be followed for graphical symbols for use on equipment to be included in IEC documents and publications. Questions and associated answers in Table A.1 provide a step-by-step approach.

**Table A.1 – Step-by-step approach to the hard procedures**

Step	Questions	IEC 62648:2012	Answers
1	Do you plan for graphical symbols for use on equipment to be included in IEC documents?	Yes. Continue to step 2.	No. [termination]
2	Are they found in IEC 60417 or ISO 7000?	No. Continue to step 3.	Yes. Use them in accordance with - IEC 80416-3, in case of normal use (including: negate, fill, rotate); - ISO 80416-4, in case of icons; - IEC 80416-1:2008, 7.9, in case of negation. See also Table B.3. [termination]
3	Have you co-ordinated with IEC TC 3/SC 3C (maintaining IEC 60417) or ISO TC 145/SC 3 (maintaining ISO 7000)?	No. Follows the soft procedures in A.3.	Yes. Relevant Committees and Validation Teams / Maintenance Teams take necessary action. [termination]

For execution of the hard procedures, committees responsible for maintenance of IEC 60417 (i.e. IEC TC 3/SC 3C) and ISO 7000 (i.e. ISO TC 145/SC 3) are involved. In the case of IEC 60417, validation team 60417 and maintenance team 60417, if required, together with relevant committees are major players.