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Graphical symbols for diagrams — —

Part 1:
General rules

Symboles graphiques pour schémas —

Partie 1: Informations générales et index

FDIS stage

ISO Copyright Office copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: + 41 22 749 01 11

Email: copyright@iso.org
E-mail: copyright@iso.org
Website: www.iso.orgwww.iso.org

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ~~ISO's~~ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see ~~www.iso.org/iso/foreword.html~~www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 10, *Technical product documentation*, Subcommittee SC 10, *Process plant documentation.*

This third edition cancels and replaces the second edition (ISO 14617-1:2005), which has been technically revised.

The main changes are as follows:

~~— Term: "Application examples" renamed to "Symbol examples";~~

— Clause 3 terms and definitions were changed;

— "GSD" was added in front of registration numbers defined in a previous version of ISO 14617 series;

~~— Clause 3 terms and definition was changed;~~

— ~~The~~ symbols using letter codes, which were defined in ~~the previous~~ ISO 14617 ~~Part~~ 6, are not included in ~~this new~~the revised ISO 14617 series because the definition of letter codes moved to ISO 15519-2~~:2015~~. See ~~Annex C;~~Annex C;

— ~~The~~ structuring of presentation of graphical symbols has been changed in order to improve user's access to navigate and find symbols;

— ~~Annexes~~annexes have reconstructed.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

0.1 0.1General

ISO/TC 10/SC 10 prepares standards for diagrams including graphical symbols, which together with standardsInternational Standards prepared by other ISO committees and IEC constitute the basis for the preparation of diagrams.

The interrelations between these standards International Standards are illustrated in Figure 1.Figure 1. Standards in bold are ISO/TC 10/SC 10 standards.

NOTE Standards in bold are ISO/TC10/SC10 standards. Standards marked * are collective application standards (See explanation in below Clause 0.2 Collective application standards)

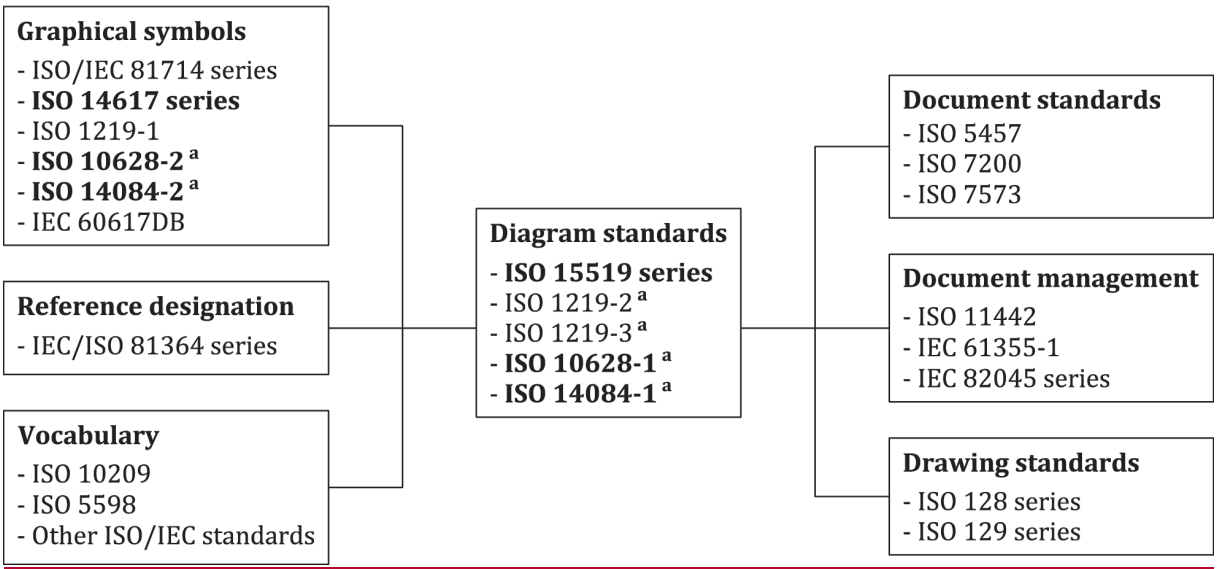

Figure 1 — Interrelations between ISO and IEC standards for diagrams

0.2 0.2Collective application standards

Technical committees, requiring a field specific standard, are allowedcan, in co-operation with ISO/TC 10, to develop their own collective application standard for the preparation of diagrams and graphical symbols in accordance withas per the rulesrequirements given in ISO 15519-1 and/or ISO 14617, or both. Collective application standards shouldare not to be contradictory with respect to the source standard(s).

Collective application standards are marked *a in Figure 1.Figure 1.

Graphical symbols for diagrams — —

Part — 1: General rules

1 Scope

This document specifies general rules for and gives guidance on the preparation and presentation of graphical symbols for diagrams, which are related to physical industrial components, products and processing.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 81714-1, *Design of graphical symbols for use in the technical documentation of products — Part 1: Basic rules*

3 Terms and definitions

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

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

— ISO Online browsing platform: available at https://www.iso.org/obphttps://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/https://www.electropedia.org/

3.1 3.1
graphical symbol
visually perceptible figure with a particular meaning used to transmit information independently of language

Note 1 to entry: The graphical symbol can represent objects of interest, such as products, functions or requirements for manufacturing, quality control, etc.

Note 2 to entry: A graphical symbol is not to be confused with the simplified representation of products which are normally drawn to scale and which can look like a graphical symbol.

Note 3 to entry: The graphical symbol means the same as the technical product documentation symbol (TPD-symbol).

[SOURCE: ISO 81714-1:2010, 3.1, modified — Note 3 to entry added.]

3.2 3.2
basic symbol
symbol which can be used direct in diagrams or combined with *supplementary symbols* (3.3)(3.3) to form *symbol examples* (3.5)(3.5)

3.3 ~~3.3~~
supplementary symbol
symbol which can be combined with a *basic symbol* ~~(3.2)~~(3.2) to form a *symbol example* ~~(3.5)~~(3.5)

3.4 ~~3.4~~
application rule
information on how to design composite symbols and how to apply the *graphical symbols* ~~(3.1)~~(3.1) in a diagram

Note 1 to entry: The *symbol examples* ~~(3.5)~~(3.5) are regarded as guidelines.

Note 2 to entry: Application rules for symbols are specified in Annex A of ISO 14617-2:~~202X~~2025.

3.5 ~~3.5~~
symbol example
example of how to combine ~~*basis symbols* (3.2)~~*basissymbols* (3.2) and *supplementary symbols* ~~(3.3)~~(3.3) using the *application rules* ~~(3.4)~~(3.4)

Note 1 to entry: Each symbol example is accompanied by information on which *basic* and *supplementary symbols* ~~(3.2) (3.3)~~(3.2) (3.3) have been used to compose itself.

Note 2 to entry: The symbol examples are regarded as guidelines.

3.6 ~~3.6~~
registration number
unique number assigned each *graphical symbol* ~~(3.1)~~(3.1)

Note 1 to entry: In principle, this number is arbitrarily chosen. No information can be derived from it.

Note 2 to entry: The registration number remains unchanged throughout the lifetime of the corresponding graphical symbol, including in future revisions of this document. If a graphical symbol is slightly changed in the future, the registration number shall be supplemented with one or more characters. If the graphical symbol is substantially changed, it shall instead be given a new registration number.

Note 3 to entry: Three types of registration number are used, where "n" is a digit:

— ~~—~~basic and supplementary symbols: GSD nnnn;

— ~~—~~application rules: Rnnnn;

— ~~—~~symbol examples: GSD Xnnnn.

The supplemented registration number according to a small change of symbol is nnnn-m, where “m” is the number of changing times. Detail explanations of registration number are shown in ~~Annex A.~~Annex A.

Note 4 to entry: ~~Annex C~~ Annex C specifies common registration number rules for ISO 14617-2 and derived collective application standards.

Note 5 to entry: ”GSD” was added in front of registration numbers defined in a previous version of ISO 14617 series. The reason is to distinguish the graphical symbols in ISO 14617 series from those defined by other standards on the ISO ~~OBP, online~~Online browsing platform. “GSD” stands for graphical symbols for diagrams.