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Design of graphical symbols for use in the technical documentation of products —

Part 1: Basic rules

Création de symboles graphiques à utiliser dans la documentation technique de produits —

Partie 1: Règles fondamentales

Reference number
ISO 81714-1:1999(E)

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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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 81714-1 was prepared jointly by Technical Committees ISO/TC 10, *Technical drawings, product definition and related documentation*, ISO/TC 145, *Graphical symbols*, and IEC/TC 3, *Documentation and graphical symbols*. Formal voting has taken place within both ISO and IEC.

This first edition of ISO 81714-1 cancels and replaces ISO/IEC 11714-1:1996, which has been updated. It serves as the basis for the design of graphical symbols in all fields of the technical documentation of products. Applications of this part of ISO 81714 are, for example, future editions of IEC 60617 and ISO 14617.

In order to collect all requirements concerning relevant graphical symbols within one single numerical series, ISO/TC 10 and IEC/TC 3, in conjunction with ISO/TC 145, agreed to publish all parts of this International Standard within the 81714 series.

The Technical Management Board of ISO and the Committee of Action of IEC have decided that for each part of this series, one organization shall be chosen responsible. The Technical Committees involved have agreed not to change any part of International Standard 81714 without mutual agreement.

International Standard 81714 consists of the following parts, under the general title *Design of graphical symbols for use in the technical documentation of products*:

ISO 81714-1 — *Part 1: Basic rules*

IEC 81714-2 — *Part 2: Specification for graphical symbols in a computer sensible form including graphical symbols for a reference library, and requirements for their interchange*

IEC 81714-3 — *Part 3: Classification of connect nodes, networks and their encoding*

Further parts specific to individual subject field requirements are under consideration.

Design of graphical symbols for use in the technical documentation of products —

Part 1: **Basic rules**

1 Scope

This part of ISO 81714 specifies basic rules for the design of graphical symbols for use in the technical documentation of products taking into account basic application needs.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 81714. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of ISO 81714 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 31–11:1992, *Quantities and units - Part 11: Mathematical signs and symbols for use in the physical sciences and technology.*

ISO 129: 1985, *Technical drawings - Dimensioning - General principles, definitions, methods of execution and special indications.*

ISO 6428 :1982, *Technical drawings - Requirements for microcopying.*

ISO/IEC 8859 (all parts), *Information processing - 8-bit single-byte coded graphic character sets.*

ISO/IEC 10367:1991, *Information technology - Standardized coded graphic character sets for use in 8-bit codes.*

ISO/IEC 10646–1:1993, *Information technology - Universal Multiple-Octet Coded Character Set (UCS) - Part 1: Architecture and Basic Multilingual Plane.*

IEC 61286: 1995, *Information technology - Coded graphic character set for use in the preparation of documents used in electrotechnology and for information interchange.*

3 Definitions

For the purposes of this part of ISO 81714, the following definitions apply.

3.1 graphical symbol

visually perceptible figure used to transmit information independently of language

NOTES —

1 The graphical symbol may represent objects of interest, such as products, functions or requirements for manufacturing, quality control etc.

2 This is not to be confused with the simplified representation of products which is always drawn to scale and may look like a graphical symbol.