

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS C 0617-1 : 1999

(IEC 60617-1 : 1985)

**Graphical symbols for diagrams—
Part 1 : General information,
general index. Cross-reference
tables**

ICS 01.080.40; 29.020

Descriptors : graphic symbols, electrical engineering

Reference number : JIS C 0617-1 : 1999 (E)

C 0617-1 : 1999 (IEC 60617-1 : 1985)

Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of International Trade and Industry through deliberations at Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law:

The series of **JIS C 0617** *Graphical symbols for diagrams* consists of the following 13 parts.

- Part 1 : *General information, general index. Cross-reference tables*
- Part 2 : *Symbol elements, qualifying symbols and other symbols having general application*
- Part 3 : *Conductors and connecting devices*
- Part 4 : *Passive components*
- Part 5 : *Semiconductors and electron tubes*
- Part 6 : *Production and conversion of electrical energy*
- Part 7 : *Switchgear, controlgear and protective devices*
- Part 8 : *Measuring instruments, lamps and signalling devices*
- Part 9 : *Telecommunications : Switching and peripheral equipment*
- Part 10 : *Telecommunications : Transmission*
- Part 11 : *Architectural and topographical installation plans and diagrams*
- Part 12 : *Binary logic elements*
- Part 13 : *Analogue elements*

Date of Establishment: 1999-02-20

Date of Public Notice in Official Gazette: 1999-02-22

Investigated by: Japanese Industrial Standards Committee
Divisional Council on Electricity

JIS C 0617-1:1999, First English edition published in 2000-07

Translated and published by: Japanese Standards Association
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

© JSA 2000

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 the publisher.

Printed in Japan

Contents

	Page
Introduction	1
1 Scope	1
2 Structure	1
3 Related IEC publications	2
4 Terminology	2
4.1 Graphical symbol	3
4.2 Symbol element	3
4.3 General symbol	3
4.4 Qualifying symbol	3
4.5 Block symbol	3
5 Presentation of symbols	3
6 Numbering of symbols	3
7 Use of symbols	4
8 Adaption of symbols to computer-aided draughting systems	4
Annex (informative) General index	6

Graphical symbols for diagrams— Part 1 : General information, general index. Cross-reference tables

Introduction This Japanese Industrial Standard has been prepared based on Section 1 (general) of the first edition issued 1985 of **IEC 60617-1** : *Graphical symbols for diagrams—Part 1 : General information, general index. Cross-reference tables* without changing the technical contents. Section 2 (general index) is stated as Annex (informative) in this Standard.

In addition, the second edition of **IEC 60617-1** has not been issued yet; when issued, it is necessary to check and review at that time.

The **IEC** Standard number is based on the new numbering system of **IEC** Standards put in force on January 1st 1997, and the Standard published before the said date is numbered by adding 60000 to the former number. This is only the change in the numbering system and the contents remain unchanged.

1 Scope This Standard specifies the general information for the parts 2 to 13 of **JIS C 0617**.

Although many symbols have been grouped in parts of the series of **JIS C 0617** relating to specific electrotechnical fields they may be used also in other fields.

Remarks : The normative references to this Standard are as follows.

IEC 60050 *International Electrotechnical Vocabulary (IEV)*

IEC 60113 *Diagrams, charts, tables*

IEC 60750 *Item designation in electrotechnology*

ISO 3098-1 : 1974 *Technical drawings—Lettering—Part 1 : Currently used characters*

2 Structure The series of **JIS C 0617** consists of several parts as set out below:

Part 1 : *General information, general index. Cross-reference tables*

Part 2 : *Symbol elements, qualifying symbols and other symbols having general application*

(For example: outlines and enclosures, qualifying symbols for kind of current and voltage, variability, direction of force, motion and flow etc., mechanical controls, earth and frame connections, ideal circuit elements.)

Part 3 : *Conductors and connecting devices*

(For example: conductors; flexible, screened or twisted, coaxial conductor, terminals, junctions, plugs and sockets, cable sealing ends.)

Part 4 : *Passive components*

(For example: resistors, capacitors, inductors, ferrite cores, magnetic storage matrices, piezoelectric crystals, electret, delay lines.)

Part 5 : *Semiconductors and electron tubes*

(For example: diodes, transistors, thyristors, electronic tubes, radiation detectors.)

Part 6 : *Production and conversion of electrical energy*

(For example: windings, generators, motors, transformers, power converters.)

Part 7 : *Switchgear, controlgear and protective devices*

(For example: contacts, switches, temperature-, proximity- and touch-sensitive switches, switchgear and controlgear, motorstarters, all-or-nothing relays, measuring relays, fuses, gaps, arresters.)

Part 8 : *Measuring instruments, lamps and signalling devices*

(For example: indicating, integrating and recording instruments, thermocouples, telemetering devices, clocks, position and pressure transducers, lamps, horn, bell.)

Part 9 : *Telecommunications: Switching and peripheral equipment*

(For example: switching systems, selectors, telephone sets, telegraph and data apparatus, transducers, recorders and reproducers.)

Part 10 : *Telecommunications : Transmission*

(For example: telecommunication circuits, antennas, radio stations, waveguides, one-two or multi-port devices, masers, lasers, signal generators, changers, threshold devices, modulators, demodulators, discriminators, concentrators, multiplexers, frequency spectrum diagrams, fibre optics transmission lines and devices.)

Part 11 : *Architectural and topographical installation plans and diagrams*

(For example: generating stations and substations, networks, cabled distribution systems for sound and television, installation symbols for switches, socket outlets, lighting outlets, etc.)

Part 12 : *Binary logic elements*

(For example: qualifying symbols, dependency notation, combinative and sequential elements such as buffers, drivers, coders, arithmetic elements, delay elements, bistable, monostable and astable elements, shift registers and counters, memories.)

Part 13 : *Analogue elements*

(For example: amplifiers with qualifying symbols, function generators, coordinate converters, electronic switches.)

3 Related IEC publications More detailed guidance on the use of graphical symbols and the preparation of various types of diagrams will be found in several parts of **IEC 60113 : *Diagrams, Charts, Tables*** and in **IEC 60750 : *Item Designation in Electrotechnology***.

4 Terminology Whenever possible the names of the devices and concepts symbolized in this Standard correspond with those used in the most recent edition of **IEC 60050 : *International Electrotechnical Vocabulary (IEV)***.

As an aid to the understanding of this Standard, terms for the various types of graphical symbols are defined below.