

Graphical symbols for diagrams —

Part 3: Conductors and connecting devices

The European Standard EN 60617-3:1996 has the status of a
British Standard

ICS 01.080.30; 29.020

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- British Photographic Association
- Consumer Policy Committee of BSI
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- GAMBICA (BEAMA Ltd.)
- Transmission and Distribution Association (BEAMA Ltd.)

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Contents

	Page
Committees responsible	Inside front cover
National foreword	ii
Foreword	2
Text of EN 60617-3:1996	3

National foreword

This British Standard has been prepared by Technical Committee GEL/3. It is the English language version of EN 60617-3:1996, *Graphical symbols for diagrams Part 3: Conductors and connecting devices*, published by the European Committee for Electrotechnical Standardization (CENELEC). It is identical with IEC 617-3:1996 published by the International Electrotechnical Commission (IEC).

This British Standard replaces BS 3939-3:1985 which is withdrawn.

NOTE The French language version of the alphabetic index has not been included in this standard. A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 19 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

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Descriptors: Electrical conductor, electric diagram, electrical symbol

English version

Graphical symbols for diagrams Part 3: Conductors and connecting devices

(IEC 617-3:1996)

Symboles graphiques pour schémas
Partie 3: Conducteurs et dispositifs de liaison
(CEI 617-3:1996)

Graphische Symbole für Schaltpläne
Teil 3: Schaltzeichen für Leiter und Verbinder
(IEC 617-3:1996)

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CENELEC

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

Central Secretariat: rue de Stassart 35, B-1050 Brussels

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Foreword

The text of document 3A/381/FDIS, future edition 2 of IEC 617-3, prepared by SC 3A, Graphical symbols for diagrams, of IEC TC 3, Documentation and graphical symbols, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60617-3 on 1996-03-05.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1997-02-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1997-02-01

Contents

	Page
Introduction	3
Section 1 Connections	4
Section 2 Junctions, terminals and branchings	7
Section 3 Connection devices	11
Section 4 Cable fittings	14
Annex A (informative) Older symbols	16
Annex B (informative) English alphabetic index	18

Introduction

This part of IEC 617 forms an element of a series which deals with graphical symbols for diagrams.

The series consists of the following 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: Basic 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.*

The scope and the normative references for this series are given in IEC 617-1.

Symbols have been designed in accordance with requirements given in the future ISO 11714-1¹⁾. The module size $M = 2,5$ mm has been used. For better readability smaller symbols in this standard have been enlarged to double size and are marked “200 %” in the symbol column. To save space larger symbols have been reduced to half size and are marked “50 %” in the symbol column. In accordance with the future ISO 11714-1, clause 7, symbol dimensions (for instance height) may be modified in order to make space for greater number of terminals or for other layout requirements. In all cases, whether the size is enlarged or reduced, or dimensions modified, the thickness of the original line should be maintained without scaling.

The symbols in this standard are laid out in such a way that the distance between connecting lines is a multiple of a certain module. The module 2M has been chosen to provide enough space for a required terminal designation. The symbols have been drawn to a size convenient for comprehension, using the same grid consistently in the representation of all symbols.

All symbols are designed within a grid in a computer-aided draughting system. The grid which was used has been reproduced in the background of the symbols.

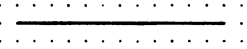
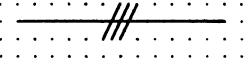
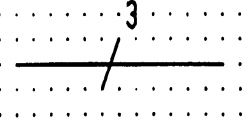
The older symbols which were included in appendix A of the first edition of IEC 617-3 for a transitional period, are no longer part of this second edition, as they will definitely be withdrawn from use.

The indexes in Annex B and C include an alphabetic list of symbol names and their corresponding number. The symbol names are based on the description of the symbols of this part. A general index including an alphabetic list of symbols of all parts is given in IEC 617-1.

¹⁾ At present, at the stage of Draft International Standard (document 3/563/DIS).

Section 1 — Liaisons

Section 1 — Connections

No.	Symbole Symbol	Légende	Description
03-01-01		Liaison Groupe de liaisons EXEMPLES: – conducteur – câble – ligne – ligne de propagation Lorsqu'un trait unique représente un groupe de conducteurs, leur nombre de liaisons peut être indiqué soit par autant de tirets obliques, soit par un seul tiret oblique complété d'un chiffre correspondant au nombre de liaisons. La longueur du symbole de liaison peut être ajustée en fonction de la disposition du schéma.	Connection Group of connections EXEMPLES: – conductor – cable – line – transmission path If a single line represents a group of conductors, the number of connections may be indicated either by adding as many oblique strokes or one stroke followed by the figure for the number of connections. The length of the connection symbol may be adjusted to the layout of the diagram.
03-01-02	Forme 1 Form 1 	EXEMPLES: Trois liaisons Des renseignements complémentaires peuvent être indiqués comme suit:	EXEMPLES: Three connections Additional information may be indicated such as:
03-01-03	Forme 2 Form 2 	– nature du courant – système de distribution – fréquence – tension – nombre de conducteurs – section de chaque conducteur – symbole chimique du métal du conducteur Le nombre de conducteurs est suivi de la valeur de la section, séparée par un x. Si certains conducteurs ont des sections différentes, il convient d'en séparer les caractéristiques par le signe +. (Suite au verso)	– kind of current – system of distribution – frequency – voltage – number of conductors – cross-sectional area of each conductor – the chemical symbol for the conductor material The number of conductors is followed by the sectional area, separated by x. If different sizes are used, their particulars should be separated by +. (Continued overleaf)