

Graphical symbols for diagrams —

Part 11: Architectural and topographical installation plans and diagrams

The European Standard EN 60617-11:1996 has the status of a
British Standard

ICS 01.080.30; 29.020

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- GAMBICA (BEAMA Ltd.)
- Transmission and Distribution Association (BEAMA Ltd.)

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National foreword

This British Standard has been prepared by Technical Committee GEL/3 and is the English language version of EN 60617-11:1996 *Graphical symbols for diagrams — Part 11: Architectural and topographical installation plans and diagrams*, published by the European Committee for Electrotechnical Standardization (CENELEC). It is identical with IEC 617-11:1996 published by the International Electrotechnical Commission (IEC).

This British Standard supersedes BS 3939-11:1985, which is withdrawn.

NOTE The French language version of the alphabetic index has not been included.

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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 46, an inside back cover 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.

ICS 01.080.30

Descriptors: Electrical installation, circuit diagram, electric diagram, electrical symbol

English version

Graphical symbols for diagrams Part 11: Architectural and topographical installation plans and diagrams

(IEC 617-11:1996)

Symboles graphiques pour schémas
Partie 11: Schémas et plans d'installation,
architecturaux et topographiques
(CEI 617-11:1996)

Graphische Symbole für Schaltpläne
Teil 11: Gebäudebezogene und topographische
Installationspläne und Schaltpläne
(IEC 617-11:1996)

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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/389/FDIS, future edition 2 of IEC 617-11, 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 60617-11 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

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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 a 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 indexes in Annex A and B 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).

Regles generales

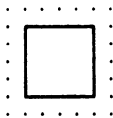
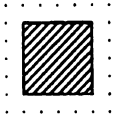
La présente publication regroupe des symboles spécialement créés pour les cartes et plans à petite échelle pour lesquels les symboles donnés dans les autres parties ne pourraient convenir. Ces derniers sont cependant également utilisables.

Sur les cartes, le centre d'un symbole, tel que ceux des sections 1, 2 ou 5 par exemple, doit correspondre à l'emplacement exact du centre de l'entité.

Chapitre I: Centrales et postes électriques

Section 1 — Symboles généraux

- 1.1 Un cadre rectangulaire peut être utilisé au lieu d'un cadre carré.
- 1.2 Pour les cartes à petite échelle les surfaces hachurées peuvent être remplies.

No.	Symbole	Symbol	Légende	Description
	En projet Planned	En service ou indéterminé In service or unspecified		
11-01-01			Centrale	Generating station
11-01-02				

General rules

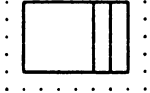
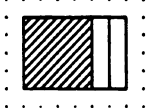
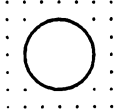
This publication contains symbols developed for small-scale maps or plans for which the symbols given in the other parts would not be quite suitable. The latter may however be used as well.

On maps, the centre of a symbol, such as those of sections 1, 2 or 5 for example, shall correspond with the exact location of the centre of the entity.

Chapter I: Generating stations and substations

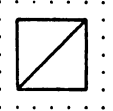
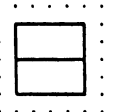
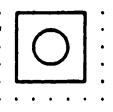
Section 1 — General Symbols

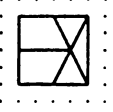
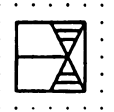
- 1.1 A rectangular outline may be used instead of a square.
- 1.2 On small scale maps it may be desirable to replace the hatched areas in the symbols by completely filled-in areas.

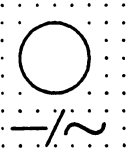
No.	Symbole	Symbol	Légende	Description
	En projet Planned	En service ou indéterminé In service or unspecified		
11-01-03			Centrale de production combinée d'énergie électrique et de chaleur	Combined electric and heat generating station
11-01-04				
11-01-05			Sous-station Poste	Substation
11-01-06				

Section 2 — Types particuliers de centrales et postes électriques

Section 2 — Specific types of generating stations and substations

No.	Symbole En projet Planned	Symbol En service ou indéterminé In service or unspecified	Légende	Description
11-02-01			Centrale hydraulique	Hydroelectric generating station
11-02-02				
11-02-03			Centrale thermique EXEMPLES: — charbon — lignite — fuel — gaz	Thermoelectric generating station EXEMPLES: — coal — lignite — oil — gas
11-02-04				
11-02-05			Centrale nucléaire	Nuclear energy generating station
11-02-06				

No.	Symbole	Symbol	Légende	Description
	En projet Planned	En service ou indéterminé In service or unspecified		
11-02-07			Centrale géothermique	Geothermal generating station
11-02-08				
11-02-09			Centrale solaire	Solar generating station
11-02-10				
11-02-11			Centrale éolienne	Wind generating station
11-02-12				

No.	Symbole	Symbol	Légende	Description
	En projet Planned	En service ou indéterminé In service or unspecified		
11-02-13			Centrale à plasma MHD (magnéto-hydro-dynamique)	Plasma generating station MHD (magneto-hydrodynamic)
11-02-14				
11-02-15			Sous-station de conversion Figurée pour courant continu converti en courant alternatif	Converting substation The symbol is shown with conversion from DC to AC
11-02-16				

Chapitre II: Réseaux

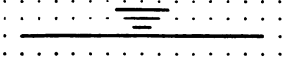
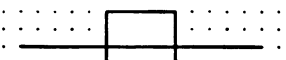
Section 3 — Lignes

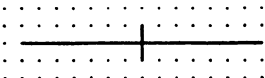
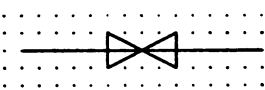
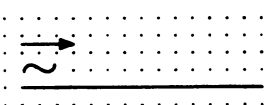
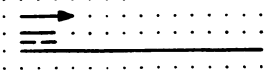
3.1 On retrouve des exemples de ligne en 03-01-01.

Chapter II: Networks

Section 2 — Lines

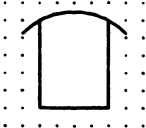
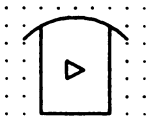
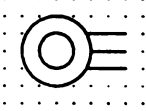
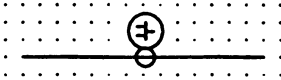
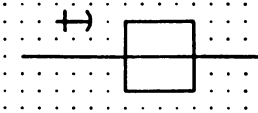
3.1 EXAMPLES of lines are given in 03-01-01.

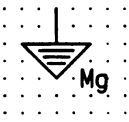
No.	Symbole Symbol	Légende	Description
11-03-01		Ligne souterraine	Underground line
11-03-02		Ligne immergée	Submarine line
11-03-03		Ligne aérienne	Overhead line
11-03-04		Ligne dans un conduit Ligne dans un fourreau	Line within a duct Line within a pipe
11-03-05		Des informations complémentaires peuvent être données au-dessus de la ligne représentant le chemin des conduits, par exemple le nombre de voies. EXEMPLE: Ligne dans un conduit à six voies	Additional information may be shown above the line representing the duct route, for example the number of ways. EXAMPLE: Line within a six-way-duct
11-03-06		Ligne passant à travers une chambre d'accès	Line passing through an access chamber

No.	Symbole Symbol	Légende	Description
11-03-07		Ligne avec point de raccordement enterré	Line with a buried joint
11-03-08		Ligne avec bouchon d'étanchéité (gaz ou huile)	Line with gas or oil block
11-03-09		Ligne avec vanne d'arrêt de gaz ou d'huile	Line with gas or oil stop valve
11-03-10		Ligne avec bouchon d'étanchéité à gaz ou huile, avec contournement	Line with gas or oil block by-pass
11-03-11		Alimentation en courant alternatif par lignes de télécommunications	AC power feeding on telecommunication lines
11-03-12		Alimentation en courant continu par lignes de télécommunications	DC power feeding on telecommunication lines

Section 4 — Éléments divers

Section 4 — Miscellaneous items

No.	Symbole Symbol	Légende	Description
11-04-01		Cabine ou armoire pour installation extérieure, symbole général Des symboles distinctifs peuvent préciser quels appareils sont placés dans la cabine.	Overground weather-proof enclosure, general symbol Qualifying symbols or designations may be used to indicate the apparatus contained in the enclosure.
11-04-02		EXEMPLE: Cabine d'amplification	EXAMPLE: Amplifying point in a weather-proof enclosure
11-04-03		Point de répartition Les entrées et les sorties peuvent être disposées selon besoin.	Cross-connection point Inputs and outputs may be oriented as required.
11-04-04		Concentrateur de lignes Connecteur automatique de lignes Le symbole représente un transmission du signal de gauche à droite. Un groupe de lignes (à gauche) est concentré en un nombre restreint de lignes (à droite).	Line concentrator Automatic line connector The symbol is shown for signal transmission from left to right. A number of lines on the left are concentrated for fewer lines on the right.
11-04-05		EXEMPLE: Concentrateur de lignes sur poteau	EXAMPLE: Line concentrator on a pole
11-04-06		Dispositif évitant le glissement d'un câble Par rapport à la chambre d'accès il convient de figurer le symbole du côté vers lequel le glissement est à éviter.	Anti-creepage device for cable The symbol should be shown on the "creepout" side of the access chamber.
11-04-07		EXEMPLE: Chambre d'accès avec dispositif évitant le glissement du câble Le symbole montre que le glissement vers la gauche est évité.	EXAMPLE: Access chamber with a cable having anti-creepage device The symbol shows that creepage towards the left is prevented.

No.	Symbole Symbol	Légende	Description
11-04-08		Anode de protection On peut préciser le type d'anode en ajoutant le symbole chimique littéral du matériau.	Protective anode The type of anode material may be indicated by adding its chemical letter symbol.
11-04-09		EXEMPLE: Anode de protection en magnésium	EXEMPLE: Magnesium protective anode