SLOVENSKI STANDARD
SIST EN 60617-3:1997

01-december-1997

Grafični simboli za sheme - 3. del: Vodniki in spojne priprave (IEC 60617-3:1996)

Graphical symbols for diagrams -- Part 3: Conductors and connecting devices

Graphische Symbole für Schaltpläne -- Teil 3: Schaltzeichen für Leiter und Verbinder

Symboles graphiques pour schémas -- Partie 3: Conducteurs et dispositifs de liaison

Ta slovenski standard je istoveten z: **EN 60617-3:1996**

ICS:

01.080.40	Grafični simboli za uporabo v risbah, diagramih, načrtih v elektrotehniki in elektroniki ter v ustrezni tehnični proizvodni dokumentaciji	Graphical symbols for use on electrical and electronics engineering drawings, diagrams, charts and in relevant technical product documentation
29.020	Elektrotehnika na splošno	Electrical engineering in general

SIST EN 60617-3:1997 **sl**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60617-3

June 1996

ICS 01.080.30

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)

This European Standard was approved by CENELEC on 1996-03-05. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

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

Endorsement notice

The text of the International Standard IEC 617-3:1996 was approved by CENELEC as a European Standard without any modification.

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
IEC
617-3

Deuxième édition
Second edition
1996-05

Symboles graphiques pour schémas –

Partie 3:
Conducteurs et dispositifs de liaison

Graphical symbols for diagrams –

Part 3:
Conductors and connecting devices

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IEC Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE
M

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For price, see current catalogue

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

GRAPHICAL SYMBOLS FOR DIAGRAMS –

Part 3: Conductors and connecting devices

FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international cooperation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.

2) The formal decisions or agreements of the IEC on technical matters, prepared by technical committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.

3) They have the form of recommendations for international use published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.

4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.

International Standard IEC 617-3 has been prepared by sub-committee 3A: Graphical symbols for diagrams, of IEC technical committee 3: Documentation and graphical symbols.

This second edition cancels and replaces the first edition published in 1983 and constitutes a technical revision.

The text of this standard is based on the following documents:

FDIS	Reports on voting
3A(CO)208 3A/381/FDIS	3A(CO)220 3A/419/RVD

Full information on the voting for the approval of this standard can be found in the reports on voting indicated in the above table.

Annexes A, B and C are for information only.

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 11714-1*. 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.

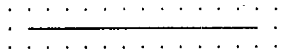
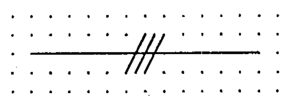
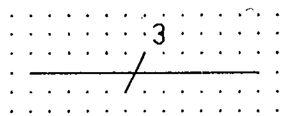
* At present, at the stage of Draft International Standard (document 3/563/DIS).

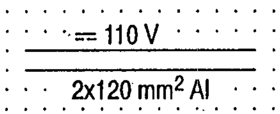
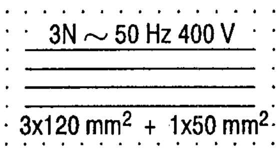
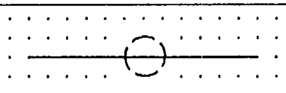
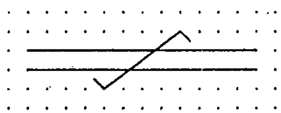
SYMBOLES GRAPHIQUES POUR SCHÉMAS
Troisième partie: Conducteurs et dispositifs de liaison

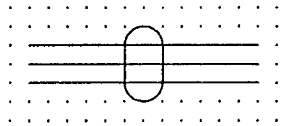
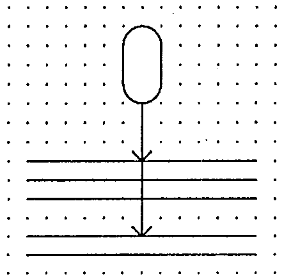
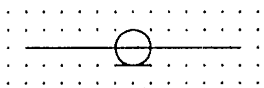
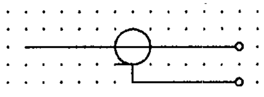
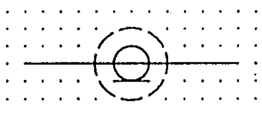
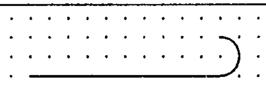
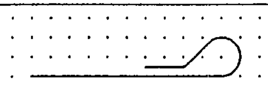
GRAPHICAL SYMBOLS FOR DIAGRAMS
Part 3: Conductors and connecting devices

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 adjustée en foretion de la disposition du schéma.	Connection Group of connections EXAMPLES: – 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: – nature du courant – système de distribution – fréquence	EXAMPLES: Three connections Additional information may be indicated such as: – kind of current – system of distribution – frequency
03-01-03	Forme 2 Form 2 	– 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)	– 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)

No.	Symbole Symbol	Légende	Description
03-01-04		EXEMPLES: Circuit à courant continu, 110 V, deux conducteurs de 120 mm^2 en aluminium	EXAMPLES: Direct current circuit, 110 V, two aluminium conductors of 120 mm^2
03-01-05		Circuit à courant triphasé, 50 Hz, 400 V, trois conducteurs de 120 mm^2, avec fil neutre de 50 mm^2 Il est permis de remplacer 3N par 3+N	Three-phase circuit, 50 Hz, 400 V, three conductors of 120 mm^2 , with neutral of 50 mm^2 3N may be replaced by 3+N
03-01-06		Liaison flexible	Flexible connection
03-01-07		Conducteur sous écran La méthode de représentation du 03-01-10 peut être utilisée pour plusieurs conducteurs sous un écran commun ou dans le même câble ou torsadés, mais les symboles de ces conducteurs sont mêlés avec ceux des autres connexions. Le symbole d'un câble, d'un écran, d'une torsade, doit être figuré au-dessus, au-dessous ou près du groupe où sont mêlés les symboles de conducteur. Il doit être relié par une ligne conduisant aux lignes individuelles qui représentent les conducteurs dans le même écran, câble ou groupe torsadé.	Screened conductor The drawing method shown in 03-01-10 may be used if several conductors are contained within the same screen or cable or are twisted together, but the symbols for these conductors are intermingled with symbols for other connections. The symbol for cable, screen, or twist shall be shown, either above, below, or beside the intermingled group of conductor symbols. It shall be connected by a leader line pointing to the individual lines representing the conductors within the same screen, cable or twisted group.
03-01-08		Liaison torsadée Deux liaisons figurées La règle de 03-01-07 est applicable	Twisted connection Two connections shown The rule with 03-01-07 applies

03-01-09		Conducteurs dans un câble, trois conducteurs figurés La règle de 03-01-07 est applicable	Conductors in a cable, three conductors shown The rule with 03-01-07 applies
03-01-10		EXEMPLE: Cinq conducteurs parmi lesquels deux sont dans un câble et repérés par des flèches	EXAMPLE: Five conductors, two of which marked by arrow-heads are in one cable
03-01-11		Paire coaxiale Si la structure coaxiale ne continue pas, le trait tangent doit être représenté sur le côté coaxial seulement.	Coaxial pair If the coaxial structure is not maintained, the tangential line shall be drawn only on the coaxial side.
03-01-12		EXEMPLE: Paire coaxiale raccordée sur bornes	EXAMPLE: Coaxial pair connected to terminals
03-01-13		Paire coaxiale sous écran	Coaxial pair with screen
03-01-14		Extrémité d'un conducteur ou d'un câble, non connectée	End of a conductor or cable not connected
03-01-15		Extrémité d'un conducteur ou d'un câble, non connectée et spécialement isolée	End of a conductor or cable not connected and specially insulated