इंटरनेट मानक

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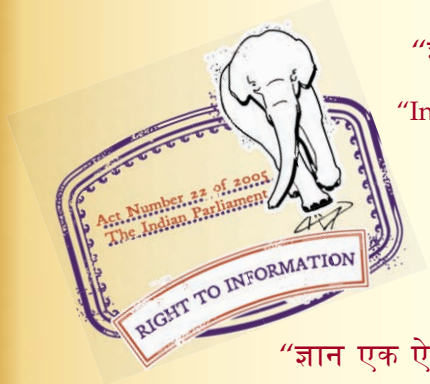
Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

"जानने का अधिकार, जीने का अधिकार"
Mazdoor Kisan Shakti Sangathan
"The Right to Information, The Right to Live"

"पुराने को छोड नये के तरफ"
Jawaharlal Nehru
"Step Out From the Old to the New"

IS 12032-11 (1987): Graphical symbols for diagrams in the field of electrotechnology, Part 11: Architectural and topographical installation plans and diagrams [ETD 1: Basic Electrotechnical Standards]



"ज्ञान से एक नये भारत का निर्माण"
Satyanarayan Gangaram Pitroda
"Invent a New India Using Knowledge"

"ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है"
Bhartṛhari—Nītiśatakam
"Knowledge is such a treasure which cannot be stolen"

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IS : 12032 (Part 11) - 1987
IEC Pub 617-11 (1983)
(Reaffirmed 2004)

Indian Standard

GRAPHICAL SYMBOLS FOR DIAGRAMS IN THE FIELD OF ELECTROTECHNOLOGY

PART 11 ARCHITECTURAL AND TOPOGRAPHICAL INSTALLATION PLANS AND DIAGRAMS

(IEC Title : Graphical Symbols for Diagrams — Part 11 : Architectural and Topographical Installation Plans and Diagrams)

UDC 621·3·061 : 003·62

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Gr 8

November 1988

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Indian Standard

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Basic Electrotechnical Standards Sectional Committee, ETDC 1 [Ref : Doc : ETDC 1 (3081)]

National Foreword

This Indian Standard (Part 11) which is identical with IEC Pub 617-11 (1983) 'Graphical symbols for diagrams — Part 11 : Architectural and topographical installation plans and diagrams', issued by the International Electrotechnical Commission (IEC), was adopted by the Bureau of Indian Standards on the recommendation of the Basic Electrotechnical Standards Sectional Committee and approval of the Electrotechnical Division Council.

Cross Reference

International Standard	*Corresponding Indian Standard*
IEC Pub 445(1973) Identification of apparatus terminals and general rules for a uniform system of terminal marking, using an alphanumeric notation	IS : 11353-1985 Guide for uniform system of marking and identification of conductors and apparatus terminals
IEC Pub 617-8 (1983) Graphical symbols for diagrams — Part 8 : Measuring instruments, lamps and signalling devices	IS : 12032 (Part 8)-1987 Graphical symbols for diagrams in the field of electrotechnology : Part 8 Measuring instruments, lamps and signalling devices

Adopted 18 June 1987

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NEW DELHI 110002

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INTRODUCTION

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 instance, shall correspond with the exact location.

The symbol size may be varied to suit the application.

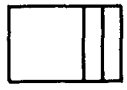
CHAPTER I: GENERATING STATIONS AND SUBSTATIONS

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.	Symbol		Description
	Planned	In service	
11-01-01			Generating station
11-01-02			

No.	Symbol		Description
11-01-03			Combined electric and heat generating station
11-01-04			
11-01-05			Substation
11-01-06			

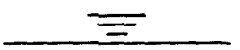
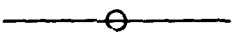
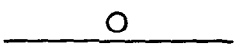
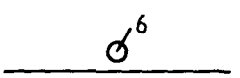
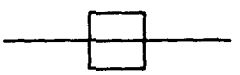
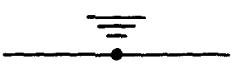
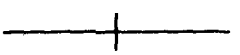
SECTION 2 – SPECIFIC TYPES OF GENERATING STATIONS AND SUBSTATIONS

No.	Symbol		Description
	Planned	In service	
11-02-01 11-02-02			Hydroelectric generating station
11-02-03 11-02-04			Thermoelectric generating station (coal, lignite, oil, gas, etc.)
11-02-05 11-02-06			Nuclear energy generating station
11-02-07 11-02-08			Geothermic generating station
11-02-09 11-02-10			Solar generating station

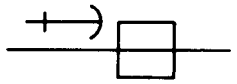
No.	Symbol		Description
11-02-11			Wind generating station
11-02-12			
11-02-13			Plasma generating station MHD (magneto-hydrodynamic)
11-02-14			
11-02-15			Converting substation, d.c. to a.c. shown
11-02-16			

CHAPTER II: NETWORKS

SECTION 3 – LINES

No.	Symbol	Description
11-03-01		Underground line
11-03-02		Submarine line
11-03-03		Overhead line
11-03-04		Duct or pipe *Note.* – The number of ducts, the cross-section dimensions or other particulars such as duct occupancy, may be shown above the line representing the duct route.
11-03-05		*Example:* Line of six-way duct
11-03-06		Line with manhole, giving access to jointing chamber
11-03-07		Line with buried jointing point
11-03-08		Line with gas or oil block
11-03-09		Line with gas or oil stop valve
11-03-10		Line with gas or oil block by-pass
11-03-11		Power feeding (a.c.) on telecommunication lines
11-03-12		Power feeding (d.c.) on telecommunication lines

SECTION 4 – MISCELLANEOUS ITEMS

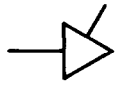
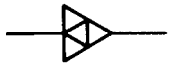
No.	Symbol	Description
11-04-01		Overground, weather-proof enclosure, general symbol *Note.* – Qualifying symbols or designations may be used to indicate the apparatus contained in the enclosure.
11-04-02		*Example:* Amplifying point in a weather-proof enclosure
11-04-03		Cross-connection point *Note.* – Inlets and outlets may be oriented as required.
11-04-04		Line concentrator Automatic line connector
11-04-05		*Example:* Line concentrator on a pole
11-04-06		Anti-creepage device for cable *Note.* – The symbol should be shown on the "creep-out" side of the manhole.
11-04-07		*Example:* Manhole equipped with anti-creepage device for cable (Creepage to the left is prevented)
11-04-08		Protective anode *Note.* – The type of anode material may be indicated by adding its chemical letter symbol.
11-04-09		*Example:* Magnesium protective anode

CHAPTER III: CABLED DISTRIBUTION SYSTEMS FOR SOUND AND TELEVISION

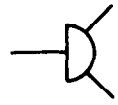
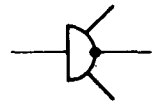
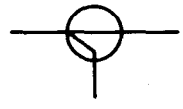
SECTION 5 – HEAD ENDS

No.	Symbol	Description
11-05-01		Head end with local antenna, shown with one branch feeder *Note.* – Branch feeders may be drawn from any convenient point on the circle.
11-05-02		Head end without local antenna, shown with one input and one output trunk

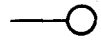
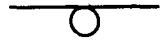
SECTION 6 – AMPLIFIERS

No.	Symbole	Description
11-06-01		Bridging amplifier, shown with three branch or spur feeder outputs *Notes 1.* – The dot is used to distinguish an output at a relatively higher level. *2.* – Branch or spur feeders may leave the sloping sides of the symbol at any convenient angle.
11-06-02		Trunk bridging amplifier assembly, shown with three branch feeder outputs
11-06-03		End of line (branch or spur feeder) amplifier, shown with one spur feeder output
11-06-04		Amplifier with return channel

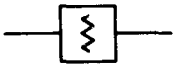
SECTION 7 – SPLITTERS AND DIRECTIONAL COUPLERS

No.	Symbol	Description
11-07-01		Splitter, two-way
11-07-02		Splitter, three-way, with one higher level output The notes with symbol 11-06-01 apply.
11-07-03		Directional coupler

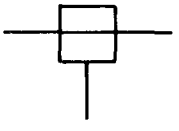
SECTION 8 – TAP-OFF AND SYSTEM OUTLETS

No.	Symbol	Description
11-08-01		Subscriber's tap-off, single tap-off shown on line *Notes 1.* – The line inside the circle may be replaced by a designation. *2.* – The line representing the subscriber feeder may be omitted if no ambiguity will arise.
11-08-02		System outlet
11-08-03		Looped system outlet Serial wired outlet

SECTION 9 – EQUALIZERS AND ATTENUATORS

No.	Symbol	Description
11-09-01		Equalizer
11-09-02		Variable equalizer
11-09-03		Attenuator (Map symbol) *Note.* – Symbol 10-16-01 may also be used.

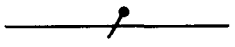
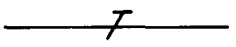
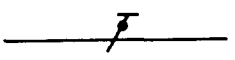
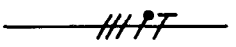
SECTION 10 – POWER FEEDING DEVICES

No.	Symbol	Description
11-10-01		Line power unit, a.c. type shown
11-10-02		Power block, shown in a distribution feeder
11-10-03		Power feeding injection point

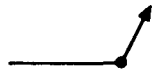
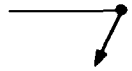
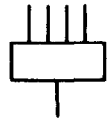
CHAPTER IV: INSTALLATIONS IN BUILDINGS

SECTION 11 – IDENTIFICATION OF SPECIFIC CONDUCTORS

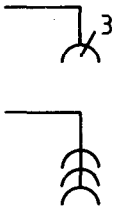
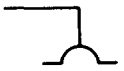
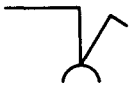
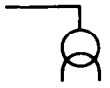
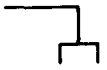
11.1 The symbols shown in this section may be replaced by letter symbols given in IEC Publication 445: Identification of Apparatus Terminals and General Rules for a Uniform System of Terminal Marking, Using an Alphanumeric Notation.

No	Symbol	Description
11-11-01		Neutral conductor
11-11-02		Protective conductor
11-11-03		Combined protective and neutral conductor
11-11-04		*Example:* Three-phase wiring with neutral conductor and protective conductor

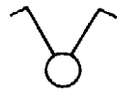
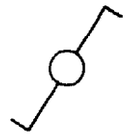
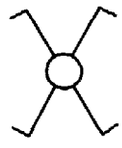
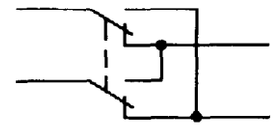
SECTION 12 – WIRING

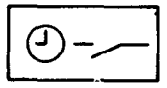
No.	Symbol	Description
11-12-01		Wiring going upwards
11-12-02		Wiring going downwards
11-12-03		Wiring passing through vertically
11-12-04		Box, general symbol
11-12-05		Connection or junction box
11-12-06		Consumers terminal with wiring Service entrance equipment
11-12-07		Distribution centre, shown with five conduits

SECTION 13 – SOCKET OUTLETS

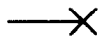
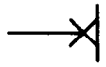
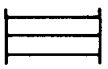
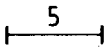
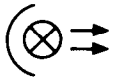
No.	Symbol	Description
11-13-01	Use symbol 03-03-01	Socket outlet (power), general symbol Receptacle outlet (power), general symbol
11-13-02 Form 1 11-13-03 Form 2		Multiple socket outlet (power), three outlets shown
11-13-04		Socket outlet (power) with protective contact
11-13-05		Socket outlet (power) with shutter
11-13-06		Socket outlet (power) with single-pole switch
11-13-07		Socket outlet (power) with interlocked switch
11-13-08		Socket outlet (power) with isolating transformer, for example: shaver outlet
11-13-09		Socket outlet (telecommunications), general symbol *Note.* – Designations are used to distinguish different types of outlet in accordance with the following table: TP = telephone M = microphone = loudspeaker FM = frequency modulation TV = television TX = telex

SECTION 14 – SWITCHES

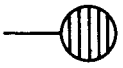
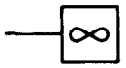
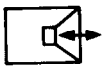
No.	Symbol	Description
11-14-01		Switch, general symbol
11-14-02		Switch with pilot light
11-14-03		Period limiting switch, single pole
11-14-04		Switch, two pole
11-14-05		Multiposition switch, for example for different degrees of lighting, single pole
11-14-06		Two-way switch, single pole
11-14-07		Intermediate switch Equivalent circuit diagram 
11-14-08		Dimmer

No.	Symbol	Description
11-14-09		Pull-cord switch, single pole
11-14-10		Push-button
11-14-11		Push-button with indicator lamp
11-14-12		Push-button with restricted access (glass cover, etc.)
11-14-13		Period limiting equipment
11-14-14		Time switch
11-14-15		Key-operated switch Watchman's system device

SECTION 15 – LIGHTING OUTLETS AND FITTINGS

No.	Symbol	Description
11-15-01		Lighting outlet position, shown with wiring
11-15-02		Lighting outlet on wall, shown with wiring running to the left
11-15-03	Use symbol 08-10-01	Lamp, general symbol *Note.* – The symbol may be qualified as shown in IEC Publication 617-8: Graphical Symbols for Diagrams, Part 8: Measuring Instruments, Lamps and Signalling Devices, Section 10.
11-15-04		Luminaire, fluorescent lamp, general symbol *Examples:*
11-15-05		Luminaire with three fluorescent tubes
11-15-06		Luminaire with five fluorescent tubes
11-15-07		Projector, general symbol
11-15-08		Spot light
11-15-09		Flood light
11-15-10		Auxilliary apparatus for discharge lamp *Note.* – Use only when the auxilliary apparatus is not incorporated in the luminaire.
11-15-11		Emergency lighting luminaire on special circuit
11-15-12		Self-contained emergency lighting luminaire

SECTION 16 – MISCELLANEOUS

No.	Symbol	Description
11-16-01		Water heater, shown with wiring
11-16-02		Fan, shown with wiring
11-16-03		Time clock
11-16-04		Electric lock
11-16-05		Intercommunication instrument

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