IEEE Std 315-1975 (Reaffirmed 1993)
ANSI Y32.2-1975 (Reaffirmed 1989)
CSA Z99-1975
(Revision of IEEE Std 315-1971
ANSI Y32.1-1972
CSA Z99-1972)

IEEE Standard
American National Standard
Canadian Standard

Graphic Symbols for Electrical and Electronics Diagrams

(Including Reference Designation Letters)

Sponsor
IEEE Standards Coordinating Committee 11, Graphic Symbols

Secretariat for American National Standards Committee Y32

American Society of Mechanical Engineers
Institute of Electrical and Electronics Engineers

Approved September 4, 1975
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Reaffirmed December 2, 1993
IEEE Standards Board

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Reaffirmed January 16, 1989
American National Standards Institute

Approved October 9, 1975
Canadian Standards Association

Approved Adopted for Mandatory Use October 31, 1975
Department of Defense, United States of America

IEEE Std 315-1975
(ANSI Y32.2-1975)
31 October, 1975

Acceptance Notice

The following Industry Standardization Document was adopted on 31 October 1975 for mandatory use by the DoD. The indicated industry groups have furnished the clearances required by existing regulations. Copies of the documents are stocked by DoD Single Stock Point, Naval Publications and Forms Center, Philadelphia, PA, 19120, for issue to military activities only.

Title of Document: Graphic Symbols for Electrical and Electronics Diagrams (Including Reference Designation Class Designation Letters)

Document No. (a) IEEE Std 315-1975
(b) ANSI Y32.2-1975

Date of Specific Issue Adopted: (a) 4 September, 1975
(b) 31 October, 1975

Releasing Industry Group: (a) The Institute of Electrical and Electronics Engineers, Inc.
(b) American National Standards Institute, Inc.

Supersedes: IEEE Std 315-1971
(ANSI Y32.2-1970)

Custodians:
Army - EL
Navy - SH
Air Force - 16

Military Coordinating Activity:
Army - EL

Review Activities:
Army - AV, MI, MU
Navy AS, OS, SH, YD

User Activities:
Army - ME
Navy - EC, MC

Project Number: DRPR-0176

Certain provisions of this standard are subject of International Standardization Agreement, ABC NAVY STD-28A, Symbols and Abbreviations for Electrical and Electronics Drawings, to which the U.S. Army also subscribes. When reaffirmations, amendment, revision, or cancellation of this standard is proposed which will effect or violate the international agreement concerned, the Military Coordinating Activity will take appropriate reconcilliation action through military international standardization channels including departmental standardization offices, if required.

NOTICE: When reaffirmation, amendment, revision, or cancellation of this standard is initially proposed, the cognizant secretariat of the industry standard shall inform the Military Coordinating Activity of the proposed change and request their participation.

Preface to CSA Standard Z99-1975 C11B

Graphic Symbols for Electrical and Electronics Diagrams

REXDALE, October 9, 1975

American National Standard Y32.2-1975 (IEEE Std 315-1975), with the modifications shown in Section 100, has been approved as CSA Standard Z99. This action was proposed by the Committee on Electrical Symbols, under the jurisdiction of the Sectional Committee on Abbreviations, Definitions and Symbols and was formerly approved by these Committees.

See Section 100, Canadian Standard Z99 modifications to American National Standard Y32.2-1975 on page 83.

NOTE: In order to keep abreast of progress in the industries concerned, CSA publications are subject to periodic review. Suggestions for improvement will be welcomed at all times. They will be recorded and in due course brought to the attention of the appropriate Committee for consideration.

Also, requests for interpretation will be accepted by the Committee. They should be worded in such a manner as to permit a simple “yes” or “no” answer based on the literal text of the requirement concerned.

All inquiries regarding this standard should be addressed to Canadian Standards Association, 178 Rexdale Boulevard, Rexdale, Ontario M9W 1R3, Canada.

IEEE Standards Board

Approved September 4, 1975

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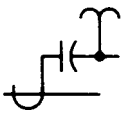
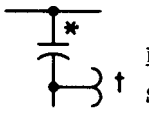
2.2.14 Application: capacitor-bushing potential device



Style 2

2.2.15 Application: carrier-coupling capacitor potential device (used to provide a power-system-frequency voltage and also coupling for carrier signals)

NOTE — 2.2.15A: The dagger is not part of the symbol. If specific indication is desired, the dagger is to be replaced by a letter combination from item 12.1, Note 12.1A.



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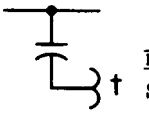
Style 2

*See Note 2.2.12A
†See Note 2.2.15A

2.2.16 Application: coupling capacitor potential device (used only to provide a power-system-frequency voltage)



IEC

Style 2

†See Note 2.2.15

2.3 Antenna

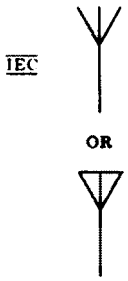
2.3.1 General

Types of functions may be indicated by words or abbreviations adjacent to the symbol.

Qualifying symbols may be added to the antenna symbol to indicate polarization, direction of radiation, or special application.

If required, the general shape of the main lobes of the antenna polar diagrams may be shown adjacent to the symbol. Notes may be added to show the direction and rate of lobe movement.

The stem of the symbol may represent any type of balanced or unbalanced feeder, including a single conductor.



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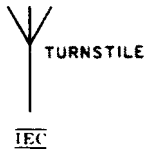
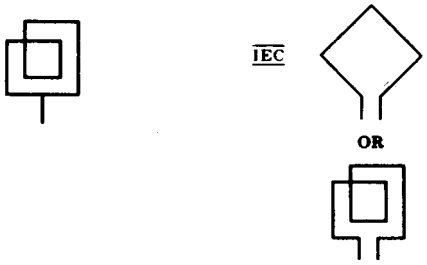
OR

2.3.1.1 Application: turnstile antenna

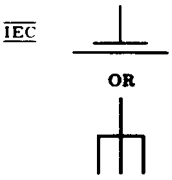


2.3.2 Dipole

2.3.3 Loop



2.3.4 Antenna counterpoise [F]



2.3.5 Qualifying symbols to indicate polarization

Use only if essential to indicate special property of an antenna.

2.3.5.1 Plane polarization

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