

IEEE Std 100-1996

The IEEE Standard Dictionary of Electrical and Electronics Terms

Sixth Edition



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Sixth Edition

**Standards Coordinating Committee 10, Terms and Definitions
Jane Radatz, Chair**

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How to use this dictionary

The terms defined in this dictionary are listed in *letter-by-letter* alphabetical order. Spaces are ignored in this style of alphabetization, so *cable value* will come before *cab signal*. Descriptive categories associated with the term in earlier editions of IEEE Std 100 will follow the term in parentheses. New categories appear after the definitions (see Categories, below), followed by the designation of the standard or standards that include the definition. If a standard designation is followed by the letter s, it means that edition of the standard was superseded by a newer revision and the term was not included in the revision. If a designation is followed by the letter w, it means that edition of the standard was withdrawn and not replaced by a revision. A bracketed number refers to the non-IEEE standard sources given in the back of the book.

Acronyms and abbreviations are no longer listed in a separate section in the dictionary; rather, they are incorporated alphabetically with other terms. Each acronym or abbreviation refers to its expanded term, where it is defined. Acronyms and abbreviations for which no definition was included in past editions have been deleted from this edition of IEEE Std 100.

Abstracts of the current set of approved IEEE standards are provided in the back of the book. It should be noted that updated information about IEEE standards can be obtained at any time from the IEEE Standards World Wide Web site at <http://standards.ieee.org/>.

Categories

The category abbreviations that are used in this edition of IEEE Std 100 are defined below. This information is provided to help elucidate the context of the definition. Older terms for which no category could be found have had the category "Std100" assigned to them. Note that terms from sources other than IEEE standards, such as the National Electrical Code® (NEC®) or the National Fire Protection Association, may not be from the most recent editions; the reader is cautioned to check the latest editions of all sources for the most up-to-date terminology.

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Categories

AE
 AHDL
 AMR
 AP
 ATL
 BA
 BT
 C
 CAS
 CE
 CHM
 COM
 CS
 DA
 DEI
 DESG
 DIS
 ED
 EDU
 EEC
 ELM
 EM
 EMB
 EMC
 GRS
 GSD
 IA
 IE
 II
 IM
 IT
 IVHS
 LEO
 LM
 MAG
 MIL
 MM
 MTT
 NEC
 NESC
 NFPA
 NI
 NIR
 NN
 NPS
 ODM
 OE
 PA
 PE
 PEL
 PQ
 PSPD
 PV
 QUL
 R
 RA
 REM

real) time equals live time plus dead time.

(NI) N42.14-1991

(2) The live time, in seconds and fraction thereof, of acquisition of the spectrum. It is expressed as 14 characters including decimal point with leading zeros interpreted as zeros.

(NPS) 1214-1992

(3) The total time of the measurement minus the total dead time.

(NI) N42.12-1994

live work Work on or near (e.g., part of tools being used or worker's body less than minimum approach distance) energized or potentially energized lines (i.e., grounding, live tool work, hot stick work, gloving and barehand work)

(PE/T&D) 516-1995

live zone The period(s) in the operating cycle of a machine during which corrective functions can be initiated.

(IA) [60]

LLC See: logical link control.

LLC frame A token ring frame containing an LLC PDU exchanged between peer entities using the MAC services.

(C/LM) 8802-5-1995

LLC sublayer See: logical link control sublayer.

LME See: layer management entity.

LMI See: layer management interface.

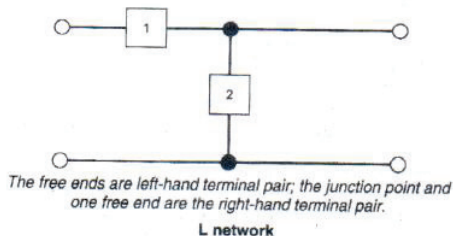
LMSC See: LAN/MAN Standards Committee.

LNA See: launch numerical aperture.

L network (1) (general) A network composed of two branches in series, the free ends being connected to one pair of terminals and the junction point and one free end being connected to another pair of terminals. See also: network analysis.

(Std100) 270-1966w

(2) An unbalanced ladder network composed of a series arm and a shunt arm.



(CAS) [13]

load (1) (charge) (induction and dielectric heating usage) The material to be heated. See also: induction heating.

(IA) 54-1955w

(2) (output) (power and distribution transformers) The apparent power in megavolt-amperes, kilovolt-amperes, or volt-amperes that may be transferred by the transformer.

(PE) C57.12.80-1978r

(3) (rotating machinery) All the numerical values of the electrical and mechanical quantities that signify the demand to be made on a rotating machine by an electric circuit or a mechanism at a given instant. See also: direct-current commutating machine.

(PE) [9]

(4) (programming) To place data into internal storage.

(C) [20], [85]

(5) (electric) (electric utilization) The electric power used by devices connected to an electrical generating system. See also: generating station.

(PE) [54]

(6) (A) (automatic control) An energy-absorbing device.

(B) (automatic control) The material, force, torque, energy, or power applied to or removed from a system or element.

(PE) [3]

(7) (data transmission) A power-consuming device connected to a circuit. One use of the word "load" is to denote a resistor or impedance which replaces some circuit element temporarily or permanently removed. For example, if a filter is disconnected from a line, the line may be artificially terminated in an impedance which simulates the filter that was

removed. The artificial termination is then called a load or a dummy load.

(PE) 599-1985w

(8) (A) (test, measurement, and diagnostic equipment) To read information from cards or tape into memory. (B) (test, measurement, and diagnostic equipment) Building block or adapter providing a simulation of the normal termination characteristics of a unit under test. (C) (test, measurement, and diagnostic equipment) The effect that the test equipment has on the unit under test or vice versa.

(MIL) [2]

(9) (A) (software) To read machine code into main memory in preparation for execution and, in some cases, to perform address adjustment and linking of modules. See also: loader. (B) (software) To copy computer instructions or data from external storage to internal storage or from internal storage to registers. Contrast: store. See also: fetch; move.

(C) 610.12-1990

(10) (data management) To insert data values into a database that previously contained no data. Synonym: populate. See also: download; upload.

(C) 610.5-1990

(11) To move the image of a client program from a long-term storage medium (such as a disk) into memory where it may be executed.

(BA/C) 1275-1994

(12) (A) In computer operations, the amount of scheduled work to be performed on a computer system. See also: line load. (B) In electronics, the amount of current drawn by a device. Note: This determines the "drive strength" of the circuit. See also: loading.

(C) 610.10-1994, 610.7-1995

(13) To enter data or programs into storage or working registers. See also: mount.

(C) 610.10-1994

(14) Demand or energy.

(PE) 858-1993

(15) The true or apparent power consumed by power utilization equipment performing its normal function.

(PE/SWG) C37.100-1992

loadability (of an air switch) The ratio of allowable continuous current at 25°C ambient temperature to rated current. Note: Loadability is a measure of the average allowable continuous current over a range of ambient temperatures from 10°C to 40°C for the air surrounding air switches.

(PE/SWG) C37.30-1992, C37.34-1994, C37.37-1996

loadability factor (of an air switch) The ratio of allowable continuous current at a given ambient temperature to rated current.

(PE/SWG) C37.37-1996

Loadable Device (LD) A station on the network that is capable of accepting a load from a Load Service.

(C/LM) 15802-4-1994

load&add A data-access operation that adds a next value to a specified data type and returns the previous data value.

(C/MM) 1596.5-1993

load-and-go (1) An operating technique in which there are no stops between the loading and execution phases of a program, and which may include assembling or compiling.

(C) [20], [85]

(2) (software) An operating technique in which there are no stops between the loading and execution phases of a computer program.

(C) 610.12-1990

load angle (synchronous machines) The angular displacement, at a specified load, of the center line of a field pole from the axis of the armature magnetomotive force pattern.

(PE) [9]

load-angle curve (load-angle characteristic) (synchronous machines) A characteristic curve giving the relationship between the rotor displacement angle and the load, for constant values of armature voltage, field current, and power factor.

(PE) [9]

load balancing reactor A series connected reactor used to correct the division of current between parallel-connected transformers or circuits which have unequal impedance voltages under steady-state and short-circuit conditions.

(PE) C57.16-1996

load-band of regulated voltage (rotating machinery) The band or zone, expressed in percent of the rated value of the regulated voltage, within which the synchronous-machine