# Chapter 34

# ELECTRICAL DEFINITIONS

## SECTION E3401
## GENERAL

**E3401.1 Scope.** This chapter contains definitions that shall apply only to the electrical requirements of Chapters 33 through 42. Unless otherwise expressly stated, the following terms shall, for the purpose of this code, have the meanings indicated in this chapter. Words used in the present tense include the future; the singular number includes the plural and the plural the singular. Where terms are not defined in this section and are defined in Section R202 of this code, such terms shall have the meanings ascribed to them in that section. Where terms are not defined in these sections, they shall have their ordinarily accepted meanings or such as the context implies.

**ACCESSIBLE.** (As applied to wiring methods.) Capable of being removed or exposed without damaging the building structure or finish, or not permanently closed in by the structure or finish of the building.

**ACCESSIBLE.** (As applied to equipment.) Admitting close approach; not guarded by locked doors, elevation or other effective means.

**ACCESSIBLE, READILY.** Capable of being reached quickly for operation, renewal or inspection, without requiring those to whom ready access is requisite to climb over or remove obstacles or to resort to portable ladders, chairs, etc.

**AMPACITY.** The current, in amperes, that a conductor can carry continuously under the conditions of use without exceeding its temperature rating.

**APPLIANCE.** Utilization equipment, normally built in standardized sizes or types, that is installed or connected as a unit to perform one or more functions such as clothes washing, air conditioning, food mixing, deep frying, etc.

**APPROVED.** Acceptable to the authority having jurisdiction.

**ARC-FAULT CIRCUIT INTERRUPTER.** A device intended to provide protection from the effects of arc-faults by recognizing characteristics unique to arcing and by functioning to de-energize the circuit when an arc-fault is detected.

**ATTACHMENT PLUG (PLUG CAP) (PLUG).** A device that, by insertion into a receptacle, establishes connection between the conductors of the attached flexible cord and the conductors connected permanently to the receptacle.

**AUTOMATIC.** Self-acting, operating by its own mechanism when actuated by some impersonal influence as, for example, a change in current strength, pressure, temperature or mechanical configuration.

**BATHROOM.** An area, including a basin, with one or more of the following: a toilet, a tub or a shower.

**BONDING.** The permanent joining of metallic parts to form an electrically conductive path that will ensure electrical continuity and the capacity to conduct safely any current likely to be imposed.

**BONDING JUMPER.** A reliable conductor to ensure the required electrical conductivity between metal parts required to be electrically connected.

**BONDING JUMPER (EQUIPMENT).** The connection between two or more portions of the equipment grounding conductor.

**BONDING JUMPER, MAIN.** The connection between the grounded circuit conductor and the equipment grounding conductor at the service.

**BRANCH CIRCUIT.** The circuit conductors between the final overcurrent device protecting the circuit and the outlet(s).

**BRANCH CIRCUIT, APPLIANCE.** A branch circuit that supplies energy to one or more outlets to which appliances are to be connected, and that has no permanently connected luminaires that are not a part of an appliance.

**BRANCH CIRCUIT, GENERAL PURPOSE.** A branch circuit that supplies two or more receptacle outlets or outlets for lighting and appliances.

**BRANCH CIRCUIT, INDIVIDUAL.** A branch circuit that supplies only one utilization equipment.

**BRANCH CIRCUIT, MULTIWIRE.** A branch circuit consisting of two or more ungrounded conductors having voltage difference between them, and a grounded conductor having equal voltage difference between it and each ungrounded conductor of the circuit, and that is connected to the neutral or grounded conductor of the system.

**CABINET.** An enclosure designed either for surface or flush mounting and provided with a frame, mat or trim in which a swinging door or doors are or may be hung.

**CIRCUIT BREAKER.** A device designed to open and close a circuit by nonautomatic means and to open the circuit automatically on a predetermined overcurrent without damage to itself when properly applied within its rating.

**CONCEALED.** Rendered inaccessible by the structure or finish of the building. Wires in concealed raceways are considered concealed, even though they may become accessible by withdrawing them. [See "Accessible (As applied to wiring methods)."]

**CONDUCTOR**

**Bare.** A conductor having no covering or electrical insulation whatsoever.

**Covered.** A conductor encased within material of composition or thickness that is not recognized by this code as electrical insulation.

**Insulated.** A conductor encased within material of composition and thickness that is recognized by this code as electrical insulation.

**CONDUIT BODY.** A separate portion of a conduit or tubing system that provides access through a removable cover(s) to the interior of the system at a junction of two or more sections of the system or at a terminal point of the system. Boxes such as FS and FD or larger cast or sheet metal boxes are not classified as conduit bodies.

**CONNECTOR, PRESSURE (SOLDERLESS).** A device that establishes a connection between two or more conductors or between one or more conductors and a terminal by means of mechanical pressure and without the use of solder.

**CONTINUOUS LOAD.** A load where the maximum current is expected to continue for 3 hours or more.

**COOKING UNIT, COUNTER-MOUNTED.** A cooking appliance designed for mounting in or on a counter and consisting of one or more heating elements, internal wiring, and built-in or separately mountable controls.

**COPPER-CLAD ALUMINUM CONDUCTORS.** Conductors drawn from a copper-clad aluminum rod with the copper metallurgically bonded to an aluminum core. The copper forms a minimum of 10 percent of the cross-sectional area of a solid conductor or each strand of a stranded conductor.

**CUTOUT BOX.** An enclosure designed for surface mounting and having swinging doors or covers secured directly to and telescoping with the walls of the box proper. (See "Cabinet.")

**DEAD FRONT.** Without live parts exposed to a person on the operating side of the equipment.

**DEMAND FACTOR.** The ratio of the maximum demand of a system, or part of a system, to the total connected load of a system or the part of the system under consideration.

**DEVICE.** A unit of an electrical system that is intended to carry but not utilize electric energy.

**DISCONNECTING MEANS.** A device, or group of devices, or other means by which the conductors of a circuit can be disconnected from their source of supply.

**DWELLING**

**Dwelling unit.** One or more rooms for the use of one or more persons as a housekeeping unit with space for eating, living and sleeping, and permanent provisions for cooking and sanitation.

**One-family dwelling.** A building consisting solely of one dwelling unit.

**Two-family dwelling.** A building consisting solely of two dwelling units.

**ENCLOSED.** Surrounded by a case, housing, fence or walls that will prevent persons from accidentally contacting energized parts.

**ENCLOSURE.** The case or housing of apparatus, or the fence or walls surrounding an installation, to prevent personnel from accidentally contacting energized parts or to protect the equipment from physical damage.

**ENERGIZED.** Electrically connected to a source of voltage.

**EQUIPMENT.** A general term including material, fittings, devices, appliances, luminaires, apparatus and the like used as a part of, or in connection with, an electrical installation.

**EXPOSED.** (As applied to live parts.) Capable of being inadvertently touched or approached nearer than a safe distance by a person. It is applied to parts not suitably guarded, isolated or insulated.

**EXPOSED.** (As applied to wiring methods.) On or attached to the surface or behind panels designed to allow access.

**EXTERNALLY OPERABLE.** Capable of being operated without exposing the operator to contact with live parts.

**FEEDER.** All circuit conductors between the service equipment, or the source of a separately derived system, or other power supply source and the final branch-circuit overcurrent device.

**FITTING.** An accessory such as a locknut, bushing or other part of a wiring system that is intended primarily to perform a mechanical rather than an electrical function.

**GROUND.** A conducting connection, whether intentional or accidental, between an electrical circuit or equipment and the earth, or to some conducting body that serves in place of the earth.

**GROUNDED.** Connected to earth or to some conducting body that serves in place of the earth.

**GROUNDED, EFFECTIVELY.** Intentionally connected to earth through a ground connection or connections of sufficiently low impedance and having sufficient current-carrying capacity to prevent the buildup of voltages that may result in undue hazards to connected equipment or to persons.

**GROUNDED CONDUCTOR.** A system or circuit conductor that is intentionally grounded.

**GROUNDING CONDUCTOR.** A conductor used to connect equipment or the grounded circuit of a wiring system to a grounding electrode or electrodes.

**GROUNDING CONDUCTOR, EQUIPMENT.** The conductor used to connect the noncurrent-carrying metal parts of equipment, raceways and other enclosures to the system grounded conductor, the grounding electrode conductor or both, at the service, at each building or structure where supplied from a common service, or at the source of a separately derived system.

**GROUNDING ELECTRODE CONDUCTOR.** The conductor used to connect the grounding electrode(s) to the equipment grounding conductor, to the grounded conductor, or to both, at the service equipment or at the source of a separately derived system.

**GROUND-FAULT CIRCUIT-INTERRUPTER.** A device intended for the protection of personnel that functions to de-

energize a circuit or portion thereof within an established period of time when a current to ground exceeds the value for a Class A device.

**GUARDED.** Covered, shielded, fenced, enclosed or otherwise protected by means of suitable covers, casings, barriers, rails, screens, mats or platforms to remove the likelihood of approach or contact by persons or objects to a point of danger.

**IDENTIFIED.** (As applied to equipment.) Recognizable as suitable for the specific purpose, function, use, environment, application, etc., where described in a particular code requirement.

**INTERRUPTING RATING.** The highest current at rated voltage that a device is intended to interrupt under standard test conditions.

**ISOLATED.** (As applied to location.) Not readily accessible to persons unless special means for access are used.

**LABELED.** Equipment or materials to which has been attached a label, symbol or other identifying mark of an organization acceptable to the authority having jurisdiction and concerned with product evaluation that maintains periodic inspection of production of labeled equipment or materials and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

**LIGHTING OUTLET.** An outlet intended for the direct connection of a lampholder, a luminaire (lighting fixture) or a pendant cord terminating in a lampholder.

**LISTED.** Equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states either that the equipment, material, or services meets identified standards or has been tested and found suitable for a specified purpose.

**LIVE PARTS.** Energized conductive components.

**LOCATION, DAMP.** Location protected from weather and not subject to saturation with water or other liquids but subject to moderate degrees of moisture. Examples of such locations include partially protected locations under canopies, marquees, roofed open porches and like locations, and interior locations subject to moderate degrees of moisture, such as some basements, some barns and some cold-storage warehouses.

**LOCATION, DRY.** A location not normally subject to dampness or wetness. A location classified as dry may be temporarily subject to dampness or wetness, as in the case of a building under construction.

**LOCATION, WET.** Installations underground or in concrete slabs or masonry in direct contact with the earth and locations subject to saturation with water or other liquids, such as vehicle-washing areas, and locations exposed to weather.

**LUMINAIRE.** A complete lighting unit (lighting fixture) consisting of a lamp or lamps together with parts designed to distribute the light, to position and protect the lamps and ballast, where applicable, and to connect the lamps to the power supply.

**MULTIOUTLET ASSEMBLY.** A type of surface, or flush, or freestanding raceway; designed to hold conductors and receptacles, assembled in the field or at the factory.

**OUTLET.** A point on the wiring system at which current is taken to supply utilization equipment.

**OVEN, WALL-MOUNTED.** An oven for cooking purposes and consisting of one or more heating elements, internal wiring, and built-in or separately mountable controls.

**OVERCURRENT.** Any current in excess of the rated current of equipment or the ampacity of a conductor. Such current might result from overload, short circuit or ground fault.

**OVERLOAD.** Operation of equipment in excess of normal, full-load rating, or of a conductor in excess of rated ampacity that, when it persists for a sufficient length of time, would cause damage or dangerous overheating. A fault, such as a short circuit or ground fault, is not an overload.

**PANELBOARD.** A single panel or group of panel units designed for assembly in the form of a single panel, including buses and automatic overcurrent devices, and equipped with or without switches for the control of light, heat or power circuits, designed to be placed in a cabinet or cutout box placed in or against a wall or partition and accessible only from the front.

**PLENUM.** A compartment or chamber to which one or more air ducts are connected and that forms part of the air distribution system.

**POWER OUTLET.** An enclosed assembly that may include receptacles, circuit breakers, fuseholders, fused switches, buses and watt-hour meter mounting means, intended to supply and control power to mobile homes, recreational vehicles or boats, or to serve as a means for distributing power required to operate mobile or temporarily installed equipment.

**PREMISES WIRING (SYSTEM).** That interior and exterior wiring, including power, lighting, control and signal circuit wiring together with all of their associated hardware, fittings and wiring devices, both permanently and temporarily installed, that extends from the service point of utility conductors or source of power such as a battery, a solarphotovoltaic system, or a generator, transformer, or converter winding, to the outlet(s). Such wiring does not include wiring internal to appliances, luminaires (fixtures), motors, controllers, and similar equipment.

**QUALIFIED PERSON.** One who has the skills and knowledge related to the construction and operation of the electrical equipment and installations and has received safety training on the hazards involved.

**RACEWAY.** An enclosed channel of metal or nonmetallic materials designed expressly for holding wires, cables, or busbars, with additional functions as permitted in this code. Raceways include, but are not limited to, rigid metal conduit, rigid nonmetallic conduit, intermediate metal conduit, liquid-tight flexible conduit, flexible metallic tubing, flexible metal con-

duit, electrical nonmetallic tubing, electrical metallic tubing, underfloor raceways, cellular concrete floor raceways, cellular metal floor raceways, surface raceways, wireways and busways.

**RAINPROOF.** Constructed, protected or treated so as to prevent rain from interfering with the successful operation of the apparatus under specified test conditions.

**RAIN TIGHT.** Constructed or protected so that exposure to a beating rain will not result in the entrance of water under specified test conditions.

**RECEPTACLE.** A receptacle is a contact device installed at the outlet for the connection of an attachment plug. A single receptacle is a single contact device with no other contact device on the same yoke. A multiple receptacle is two or more contact devices on the same yoke.

**RECEPTACLE OUTLET.** An outlet where one or more receptacles are installed.

**SERVICE.** The conductors and equipment for delivering energy from the serving utility to the wiring system of the premises served.

**SERVICE CABLE.** Service conductors made up in the form of a cable.

**SERVICE CONDUCTORS.** The conductors from the service point to the service disconnecting means.

**SERVICE DROP.** The overhead service conductors from the last pole or other aerial support to and including the splices, if any, connecting to the service-entrance conductors at the building or other structure.

**SERVICE-ENTRANCE CONDUCTORS, OVERHEAD SYSTEM.** The service conductors between the terminals of the service equipment and a point usually outside the building, clear of building walls, where joined by tap or splice to the service drop.

**SERVICE-ENTRANCE CONDUCTORS, UNDERGROUND SYSTEM.** The service conductors between the terminals of the service equipment and the point of connection to the service lateral.

**SERVICE EQUIPMENT.** The necessary equipment, usually consisting of a circuit breaker(s) or switch(es) and fuse(s), and their accessories, connected to the load end of the service conductors to a building or other structure, or an otherwise designated area, and intended to constitute the main control and cutoff of the supply.

**SERVICE LATERAL.** The underground service conductors between the street main, including any risers at a pole or other structure or from transformers, and the first point of connection to the service-entrance conductors in a terminal box or meter or other enclosure, inside or outside the building wall. Where there is no terminal box, meter or other enclosure with adequate space, the point of connection shall be considered to be the point of entrance of the service conductors into the building.

**SERVICE POINT.** Service point is the point of connection between the facilities of the serving utility and the premises wiring.

**STRUCTURE.** That which is built or constructed.

**SWITCHES**

**General-use switch.** A switch intended for use in general distribution and branch circuits. It is rated in amperes and is capable of interrupting its rated current at its rated voltage.

**General-use snap switch.** A form of general-use switch constructed so that it can be installed in device boxes or on box covers or otherwise used in conjunction with wiring systems recognized by this code.

**Isolating switch.** A switch intended for isolating an electric circuit from the source of power. It has no interrupting rating and is intended to be operated only after the circuit has been opened by some other means.

**Motor-circuit switch.** A switch, rated in horsepower that is capable of interrupting the maximum operating overload current of a motor of the same horsepower rating as the switch at the rated voltage.

**UTILIZATION EQUIPMENT.** Equipment that utilizes electric energy for electronic, electromechanical, chemical, heating, lighting or similar purposes.

**VENTILATED.** Provided with a means to permit circulation of air sufficient to remove an excess of heat, fumes or vapors.

**VOLTAGE (OF A CIRCUIT).** The greatest root-mean-square (rms) (effective) difference of potential between any two conductors of the circuit concerned.

**VOLTAGE, NOMINAL.** A nominal value assigned to a circuit or system for the purpose of conveniently designating its voltage class (e.g., 120/240). The actual voltage at which a circuit operates can vary from the nominal within a range that permits satisfactory operation of equipment.

**VOLTAGE TO GROUND.** For grounded circuits, the voltage between the given conductor and that point or conductor of the circuit that is grounded. For ungrounded circuits, the greatest voltage between the given conductor and any other conductor of the circuit.

**WATER TIGHT.** So constructed that moisture will not enter the enclosure under specified test conditions.

**WEATHERPROOF.** So constructed or protected that exposure to the weather will not interfere with successful operation.