



REVIEW DEFINITIONS

Definitions are covered in Article 100 of the *National Electrical Code (NEC)*. The questions that follow will not cover all of the definitions but only the more pertinent ones. The answers given here are the author's. Refer to Article 100 of the *NEC* for the official definitions. Some definitions appear in the *Code* elsewhere than Article 100 (see *NEC*, Index).

1-1 What does “accessible” mean as applied to wiring methods?

It means readily available to inspection, repair, removal, and so on, without disturbing the building structure or finish; not permanently closed by the structure or finish of a building.

1-2 What does “accessible” mean as applied to equipment?

It means equipment that may be readily reached without climbing over obstacles—that is, not in locked or other hard-to-get-at areas such as panelboards mounted inside kitchen cabinets or mounted in or on the walls above washers and dryers or in closets or bathrooms; service-entrance equipment that can be reached only by going into a closet, behind a stairway, or around some other obstacle. All of these would *not* be termed “accessible.”

1-3 What does “ampacity” mean?

It means the amount of flowing current (in amperes) that a conductor can carry continuously for specific-use conditions and not exceed the temperature rating of the conductor (see *NEC*, Section 310.10).

1-4 What is a building?

A building may be a structure that stands by itself or one that is separated from another by a fire wall.

1-5 What does “dead front” mean?

It means that no live (energized) parts are exposed to a person operating that electrical equipment.

1-6 What does “approved” mean?

It means any appliance, wiring material, or other electrical equipment that is acceptable to the enforcing authorities. Underwriters Laboratories (UL) is (by far) the most acceptable authority to inspectors. A note of caution: Do not be fooled by a UL label on the motor or cord of an appliance but without such a label on the entire article (see *NEC*, Section 110.2). The entire appliance must be approved, not just the cord.

1-7 What does “identified” mean as it is applied to equipment?

It means that the equipment is suitable for the particular use or environment, and that it has been evaluated by a qualified electrical testing organization and features a product listing or label indicating its suitability.

1-8 What is a branch circuit?

A branch circuit is the portion of a wiring system that extends beyond the last overcurrent-protective device. In interpreting this, you must not consider the thermal cutout or the motor overload protection as the beginning of the branch circuit. The branch circuit actually begins at the final fusing or circuit-breaker point where the circuit breaks off to supply the motor.

1-9 What is a small-appliance branch circuit?

This is the circuit supplying one or more outlets connecting appliances only; there is no permanently connected lighting on this circuit, except the lighting that may be built into the appliance. This term is most often used in connection with Sections 210.11(C)(1) and 210.52(B) of the *NEC*, which refers to outlets for small-appliance loads in kitchens, laundries, pantries, and dining and breakfast rooms of dwellings.

1-10 What is a general-purpose circuit?

This is a branch circuit to which lighting and/or appliances may be connected. Lighting may be connected to this circuit, whereas lighting cannot be connected to the circuit mentioned in question 1-10.

1-11 What is a multiwire branch circuit?

A multiwire branch circuit has two or more ungrounded conductors with a potential difference between them and also has a grounded (neutral) conductor with an equal potential difference between it and each of the other wires, for example, a three-wire 120/240-volt system or a 120/208-volt wye system, using two- or three-phase conductors and a grounded conductor. However, in either case, the “hot” wires must not be tied to one phase but must be connected to different phases to make the system a multiwire circuit (see *NEC*, Section 210.4).

1-12 What is a circuit breaker?

It is a device that is designed not only to open and close a circuit nonautomatically but also to open the circuit automatically at a predetermined current-overload value. The circuit breaker may be thermally or magnetically operated; however, ambient temperatures affect the operation of the thermally operated type, so that the trip value of the current is not as stable as with the magnetic type.

1-13 What is a current-carrying conductor?

It is a conductor that is expected to carry current under normal operating conditions.

1-14 What is a non-current-carrying conductor?

It is one that carries current only in the event of a malfunction of equipment or wiring. An equipment grounding conductor is a good example; it is employed for protection and is quite a necessary part of the wiring system, but it is not used for carrying current, except in the case of faulty operation, where it aids in tripping the overcurrent-protective device.

1-15 What is a pressure connector (solderless)?

It is a device that establishes a good electrical connection between two or more conductors by some means of mechanical pressure. A pressure connector is used in place of soldering connections and is required to be of an approved type. A wirenut is the most common connector of this type.

1-16 What is meant by “demand factor”?

This is the ratio between the maximum demand on a system or part of a system and the total connected load on the same system or part of the system.

1-17 What is meant by “dusttight”?

It means the capacity to keep dust out of the enclosing case so that dust cannot interfere with normal operation. This is discussed further in connection with Articles 500 and 502 of the *NEC*, both of which cover hazardous (classified) locations.

1-18 What is meant by “explosionproof apparatus”?

It means an apparatus enclosed in a case that is capable of sustaining an explosion that may occur within itself and is also capable of preventing ignition of specified gases or vapors surrounding the enclosure by sparks, flashes, or explosion of the gases or vapors within; it must also operate at a temperature that will not ignite any flammable atmosphere or residue surrounding it. If an explosion does occur within the equipment, the gases are allowed to escape either by a ground joint or by threads, and the escaping gases are thereby cooled to a temperature low enough to inhibit the ignition of any external gases.

1-19 What are feeders?

Feeders are the circuit conductors between the service equipment or the source of a separately derived system and the final branch-circuit overcurrent device or devices. Generally, feeders are comparatively large in size and supply a feeder panel, which is composed of a number of branch-circuit overcurrent devices. See Article 215 of the *NEC*.

1-20 What is a fitting?

A fitting is a mechanical device, such as a locknut or bushing, that is intended primarily for a mechanical, rather than an electrical, function.

1-21 What is meant by a “ground”?

It means an electrical connection, either accidental or intentional, that exists between an electrical circuit or equipment and earth or some other electrical conducting body that serves in place of the earth and ultimately connects to the earth.

1-22 What does “grounded” mean?

It means connected to earth or to some other conducting body that serves in place of the earth.

1-23 What is a grounded conductor?

It is a system or circuit conductor that is intentionally grounded.

1-24 What is a grounding conductor?

It is a conductor that is used to connect equipment, devices, or wiring systems with grounding electrodes.

1-25 What is a grounding conductor (equipment)?

It is the conductor used to connect non-current-carrying metal parts of equipment, raceways, and other enclosures to the system grounding conductor at the service and/or the grounding electrode conductor.

1-26 What is a grounding electrode conductor?

It is a conductor used to connect the grounding electrode to the equipment grounding conductor and/or to the grounded conductor of the circuit at the service.

1-27 What is a dwelling unit?

A dwelling unit includes one or more rooms used by one or more persons, with space for sleeping, eating, and living, and a permanent provision for cooking and sanitation.

1-28 What is an outlet?

It is a point in the wiring system at which current is taken to supply some equipment.

1-29 What is meant by “raintight”?

It means capable of withstanding a beating rain without resulting in the entrance of water.

1-30 What is a receptacle?

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

1-31 What does “rainproof” mean?

It means so constructed, protected, or treated as to prevent rain from interfering with the successful operation of the apparatus.

NOTE

Pay particular attention to the following questions; they involve services and are probably among the most misused of any definitions in the *NEC*.

1-32 What is meant by the term “service”?

“Service” refers to the conductors and equipment for delivering electrical energy from the secondary distribution system—the street main, the distribution feeder, or the transformer—to the wiring system on the premises. This includes the service-entrance equipment and the grounding electrode.

1-33 What are service conductors?

They are the portion of the supply conductors that extends from the street main, duct, or transformers to the service-entrance equipment of the premises supplied. For overhead conductors, this includes the conductors from the last line pole (this does not mean the service pole) to the service equipment.

1-34 What is a service cable?

A service cable is a service conductor manufactured in the form of a cable and normally referred to as “SE cable” or “USE cable” (see *NEC*, Article 338).

1-35 What is meant by the term “service drop”?

“Service drop” refers to the overhead 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. If there is a service pole with a meter on it, such as a farm service pole, the service drop does not stop at the service pole; all wires extending from this pole to a building or buildings are service drops, as well as the conductors from the last line pole to the service pole (see *NEC*, Articles 100 and 230, II).

1-36 What are service-entrance conductors (overhead system)?

They are that portion of the service conductors between the terminals of service equipment and a point outside the building,

clear of building walls, where they are joined by a splice or tap to the service drop, street main, or other source of supply.

1-37 What are service-entrance conductors (underground system)?

They are the service conductors between the terminals of the service equipment and the point of connection to the service lateral. Where service equipment is located outside the building walls, there may be no service-entrance conductors, or they may be entirely outside the building.

1-38 What are sets of service-entrance conductors?

Sets of service-entrance conductors are taps run from main service conductors to service equipment.

1-39 What is meant by “service equipment”?

This is the necessary equipment, usually consisting of circuit breakers or switches and fuses and their accessories, located near the point of entrance of supply conductors to a building or other structure, or an otherwise defined area, and intended to constitute the main control and means of cutoff of the supply.

1-40 What is meant by “service lateral”?

This refers to the underground service conductors between the street main, including any risers at the pole or other structure or from transformers, and the first point of connection to the service-entrance conductors in a terminal box. The point of connection is considered to be the point of entrance of the service conductors into the building.

1-41 What is a service raceway?

This is the rigid metal conduit, electrical metallic tubing (EMT), or other raceway that encloses service-entrance conductors.

1-42 What is meant by “special permission”?

This refers to the written consent of the authority enforcing the *NEC*. Under most circumstances, this is a local electrical inspector.

1-43 What is a general-use switch?

This is a device intended for use as a switch in general distribution and branch circuits. It is rated in amperes and is capable of interrupting its rated current at its rated voltage.

1-44 What is a T-rated switch?

This is an AC general-use snap switch that is capable of use on resistive and inductive loads that do not exceed the ampere rating at the voltage involved, on tungsten-filament lighting loads that do not exceed the ampere rating at 120 volts, and on motor loads that do not exceed 80 percent of their ampere rating at the rated voltage.

1-45 What is an isolating switch?

This is a switch that is intended for isolating an electric circuit from its 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.

1-46 What is a motor-circuit switch?

This is 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.

1-47 What is meant by “watertight”?

This means that a device is so constructed that moisture will not enter the enclosing case.

1-48 What is meant by “weatherproof”?

This means that a device or system is so constructed or protected that exposure to the weather will not interfere with successful operation. Being raintight or watertight may fulfill the requirements for “weatherproof.” However, weather conditions vary, and consideration should be given to the conditions resulting from snow, ice, dust, and temperature extremes.

1-49 What is meant by the “voltage” of a circuit?

This is the greatest effective difference of potential (root-mean-square difference of potential) that exists between any two conductors of a circuit. On various systems, such as three-phase four-wire, single-phase three-wire, and three-wire direct current, there may be various circuits of numerous voltages.

1-50 What is meant by “bonded” or “bonding”?

This means that a device or system is connected to establish electrical continuity and conductivity.

1-51 What is an equipment bonding jumper?

This is the connection between two or more portions of the equipment grounding conductor.

1-52 What is the system bonding jumper?

This is the connection between the grounded circuit conductor (usually the neutral) and the supply-side bonding jumper (SSBJ), or the equipment grounding conductor, or both, at a separately derived system.

1-53 What is the main bonding jumper?

This is the connection between the grounded circuit conductor and the equipment grounding conductor, at the service.

