



**Alternating Current (AC)** – Current that regularly reverses the direction of its flow in a repeating, cyclical pattern.

**Adapter** – An accessory used for interconnecting non-mating devices or converting an existing device to a new or modified use.

**Appliance Leakage Current Interrupter (ALCI)** – An ALCI is a device intended to be used in conjunction with an electrical appliance. Its function is to interrupt both conductors of electrical circuit to a load when a fault current to ground exceeds 6mA which is much less than that required operating overcurrent protection device (breaker or fuse) of a circuit. The ALCI is intended to be used only in a circuit that has a solid grounded neutral conductor. ALCIs are considered “personal protection” devices and can function with reversed polarity.

**Ampacity (Amps)** – The current in amperes that a conductor can carry continuously under electrical use without exceeding its performance rating or design limitations.

**Ampere (Amp)** – The unit of measure for electrical current. One ampere is the current flowing through one ohm of resistance at one volt potential.

**Angle Cord Connector** – An electrical connector that allows an attached flexible cord to exit at right angles to the connector face.

**Attachment Plug** – A male contact device that provides a readily detachable connection of a flexible cord or cable to receptacles, connectors, and/or flanged equipment power outlets.

**Auto Reset** – GFCI/ELCI that powers-up automatically upon plug-in or after power restoration in the absence of a ground-fault condition. However, user must press the reset button in the event of a ground-fault to restore power regardless of the reset type selected (see Manual Reset)

**American Wire Gauge (AWG)** – A relative system for the designation of wire diameter.

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

**Circuit (Electric)** – The complete path of an electrical circuit. When the continuity is broken, it is called an open circuit; when the continuity is maintained, it is called a closed circuit.

**Class I Locations** – Those locations in which flammable gases or vapors are or may be present in the air at quantities sufficient to produce explosive or ignitable mixtures.

**Class II Locations** – Those locations that are hazardous because of the presence of combustible dust.

**Class III Locations** – Those locations that are hazardous because of the presence of easily ignitable fibers or flyings, but in which the fibers or flyings are not likely to be in suspension in the air in quantities sufficient to produce ignitable mixtures.

**Conductor** – The un-insulated portion of a conductive wire suitable for carrying electrical current.

**Conductor Fill** – Refers to the number of current carrying and grounding conductors permitted by the National Electrical Code (NEC) to be used in conduit and tubing.

**Conduit** – A pipe or tube designed to enclose and protect conductors or cables from moisture and physical damage.

**Contacts** – The part of the electrical connectors that carry electrical current and are mated (or contacted) together or separated to control electrical current flow.



**Continuity Check** – A test to determine whether electrical current flows continuously throughout the length of a single wire, individual wires in a cable, or an electrical circuit.

**Cord** – A flexible insulated cable of one or more conductors used to carry electrical current and/or to provide equipment grounding.

**Cord Connector** – A female contact device used in making a detachable electrical connection to an electrical attachment plug or a flanged electrical power inlet.

**Cord Grip** – Means by which the flexible cord entering a device is gripped or secured in order to relieve stress on the electrical terminals from mechanical tension applied to the cord during use.

**Corrosion Resistant** – A wiring device constructed of special materials and/or suitably plated metal parts that are designed to withstand corrosive environments. Corrosive resistant devices must pass the ASTM B117-13 five-hundred hour Salt Spray (Fog) test with no visible corrosion.

**Current Carrying Capacity** – The maximum current an insulated conductor can safely carry without exceeding its insulation, dielectric rating, and/or jacket temperature limitations.

**CSA** - Canadian Standards Association; a nonprofit association serving business, industry, government and consumers in Canada and develops standards for electrical products that parallel UL standards in many aspects but are not always identical. CSA tests products and grants paying clients “certification” that their products meet CSA standards.

**Direct Current (DC)** – An electric current that flows in one direction from high potential to low potential through a circuit such as a battery.

**Dielectric Strength** – The voltage that an insulation material can withstand before electrical breakdown (shorting) occurs. Usually expressed as a voltage gradient (such as volts per mil).

**Dust Proof** - A wiring device designed so that dust will not interfere with its operations. The IP Suitability Rating designates the degree of protection a device offers against the ingress of foreign objects.

**Equipment Leakage Current Interrupter (ELCI)** – A device intended to provide leakage current protection in appliances and utilization equipment. The device’s function is to interrupt all ungrounded conductors of a supply circuit to electrical equipment in the event a fault-current (in excess of the fault-trip current) occurs between live parts and the grounded enclosure or other ground parts. An ELCI is not intended to be used in place of a GFCI, ALCI, or IDCI and may have fault-trip current value greater than a personal-protection level of 6mA. The use of an ELCI is not intended to replace or supersede the protection requirements concerning trip-current and trip-time of a GFCI. ELCIs are considered “equipment protection” devices, not personal protection devices.

**Electrical Metallic Tubing (EMT or Thinwall)** – Conduit called thinwall as a contrast to the “heavywall” of rigid or IMC.

**Electrical Nonmetallic Tubing (ENT)** – A plastic corrugated raceway of circular cross section that is resistant to moisture and chemical atmospheres, and that is flame retardant.

**Electric Vehicle (EV)** - Are propelled by an electric motor (or motors) powered by rechargeable battery packs.

**Explosion Proof** – A wiring device constructed to meet the requirements of hazardous locations as defined by the National Electrical Code, NFPA-70.



**Extended Range Electric Vehicle (EREV)** - Operates as a battery electric vehicle for a certain number of miles. After the battery has been discharged, a gas engine powers an electric generator for several hundred miles of 'extended-range' driving.

**Electric Vehicle Supply Equipment (EVSE)** - A power control station or equipment required to charge a vehicle – an EV charging station.

**Flame Resistant** – The ability of a material not to circulate a flame once the heat source is removed.

**Flanged Inlet** – A plug which is intended for flush mounting on an appliance or equipment and which serves to connect utilization equipment to a cord connector.

**Flanged Outlet** – A receptacle intended for flush mounting on appliances or equipment to provide a means for power connection via an inserted plug.

**Flush-Mounted** – A wiring device intended to be installed flush with the surface of a panel or a piece of equipment.

**Frequency** – The rate of voltage oscillation (reversing) within an alternating current (AC) power source. U.S. typically is 60 Hz or 60 oscillations/second. Europe typically is 50Hz or 50 oscillations/second.

**Gauge (Ga)** – A term used to denote the physical size of a wire (see AWG).

**Ground Fault Circuit Interrupter (GFCI)** – A device intended for personal and equipment protection. It de-energizes a circuit within an established period of time (25mS) when a current to ground (ground-fault leakage) exceeds some predetermined value (6 mA, for Class A GFCI) which is less than that required to operate the overcurrent (overload) protection device (breaker or fuse) of the supply circuit. (GFCI may also be commonly referred to as GFI)

**Ground** – An electrical term meaning to connect to the earth or other large conducting body to serve as an earth.

**Grounded Neutral** – A GFCI will automatically trip if the neutral conductor is grounded on the load side of the device (after sensor). If the load side neutral is shorted to ground and a ground fault occurs simultaneously, some of the fault current would flow through the neutral wire to the sensor while some current would flow through the inadvertent ground path. If such a grounded connection occurs, it is possible for a person to contact the ground and receive an electric shock.

**Hospital Grade** – A wiring device designed to meet the performance requirements of high-abuse areas typically found in health care facilities. These devices are tested to the Hospital Grade requirements of Underwriters Laboratories Inc. Standard 498.

**Hot Wire** - An electrically charged, conductive wire that provides power to the load. The hot wire is usually covered with black insulation (with secondary colors of red, yellow, or orange).

**In-line** – A device that can be attached to a length of cord or cable to control or monitor utilization equipment.

**Isolated Ground** – A grounding-type receptacle in which the equipment ground contact and terminal is electrically isolated from the receptacle mounting means.

**Line Side** – Primary side or power supply side of an electrical device.

**Load Side** – Secondary side or power load side of an electrical device.

**Locking Connector** – A connector designed to lock an inserted plug in place when the plug is rotated in a clockwise direction. The plug can then only be removed when turned in a counter-clockwise direction.



**Manual Reset** – GFCI/ELCI that requires the user to press the reset button upon plug-in or primary power restoration to prevent accidental equipment start-ups (also called safe-start). This requirement is necessary after each and every occurrence of primary power restoration (see Auto Reset).

**Molded-on Adapter** – An adapter that is factory molded to a length of flexible cord.

**Multiple Adapter** – An adapter that is attached to a power cord for equipment that provides an additional receptacle opening at the top of the adapter.

**Neutral Wire** - The wire that conducts the power back to the source and completes the circuit. The neutral wire is usually covered with white insulation or alternately grey or light blue.

**Neighborhood Electric Vehicle** - a U.S. denomination for battery electric vehicles that are legally limited to roads with posted speed limits as high as 45 miles per hour (72 km/h) depending on the particular laws of the state, usually are built to have a top speed of 30 miles per hour (48 km/h), and have a maximum loaded weight of 3,000 lbs. (1,400 kg). NEVs fall under the United States Department of Transportation classification for low-speed vehicles.

**Nuisance Trip** – GFCI/ELCI fault-trip caused by conditions other than those for which the device is intended to respond.

**Ohm** - the SI unit of electrical resistance, defined to be the electrical resistance between two points of a conductor when a constant potential difference applied between these points produces in this conductor a current of one ampere

**Open Neutral Protection** – GFCI/ELCI fault-trip upon loss of the neutral connection. When the neutral connection is open, this creates an unsafe condition where the available current has lost its normal return flow path, thus increasing the potential for the current to flow elsewhere (causing possible inadvertent shock).

**Plug-in Hybrid Electric Vehicle (PHEV)** - an HEV that also can have its battery recharged from the grid.

**Pin and Sleeve** – A receptacle or plug with round-pin or sleeve-type contacts

**Plug** – A device with male contacts which, when inserted in a receptacle, establishes connection between the conductors of the attached flexible cord and the conductors connected to the receptacle.

**Primary** – The line (power source) side of a device.

**Rated Voltage** – The maximum voltage at which an electrical component can operate for extended periods without undue degradation of its insulation properties and the creation of a safety hazard.

**Receptacle** – A device with female contacts which is primarily installed at a structure or in a piece of equipment and is intended to establish electrical connection with an inserted plug.

**Reverse Polarity** – Condition where the Hot and Neutral connections are reversed.

**Secondary** – The load (equipment) side of a device.

**Straight Blade** – A wiring device into which mating plugs are inserted at a right angle to the plane of the connector face.

**Surface-Mounted** - Any wiring device that mounts on a flat or plane surface.

**Switch** – A device for making, breaking, or changing the connections in an electrical circuit.



**Trip** – Denotes automatic or response interruption by the GFCI/ELCI or other device of an electrical circuit.

**Trip Time** – The elapsed interval between the time when the ground-fault current is first applied and the time when the circuit is interrupted.

**U.L. Listed** – Indicates an item has been tested and approved to the safety standards established by Underwriters Laboratories.

**V<sub>RMS</sub>** – Voltage (root mean square).

**Voltage** – The term most often used in place of electromotive force, potential, potential difference, or voltage drop to designate the electrical pressure that exists between two points which is capable of producing a current when a closed circuit is connected between the two points.

**Watertight** – A wiring device specially constructed so that water will not enter under specified test conditions. The IP Suitability Rating designates the degree of protection a device offers against the ingress of moisture and water.

**Weatherproof** – A wiring device specially constructed so that exposure to weather will not interfere with its operation.

**Weatherproof Connector** – A connector constructed or protected so that exposure to weather will not interfere with successful operation.

**Weatherproof Plug** – A plug constructed or protected so that exposure to weather will not interfere with successful operation.

**Weatherproof Receptacle** – A receptacle constructed or protected so that exposure to weather will not interfere with successful operation.

**Wet Locations** – Installations underground or in concrete slabs or masonry in direct contact with earth, and locations subject to saturation with water or other liquids, such as vehicle washing areas, and locations exposed to weather and left unprotected.

**“W” Type Adapter** – An adapter in the form of a “W” having three cord connectors on one end and one male plug on the other end (base of “W”).

**“Y” Type Adapter** – An adapter in the form of a “Y” having two cord connectors on one end and one male plug on the other end (base of “Y”).