

**AIC or A.I.C.** - See Interrupting Capacity.

**AL/CU** - A marking designation used on devices to indicate their suitability for connection to either aluminum or copper conductors.

**Alternating Current** - Electric current that continually reverses its direction. It is expressed in cycles per second (hertz or Hz).

**Ambient Temperature** - The temperature of a medium (gas or liquid) surrounding an object.

**American Wire Gauge** - see AWG.

**Ampacity** - See Current Carrying Capacity.

**Ampere** - The unit of current. One ampere is the current flowing through one ohm of resistance at one volt potential.

**Anneal** - Relief of mechanical stress through heat and gradual cooling. Annealing copper renders it less brittle.

**Arcing time** - The time between melting of a fuse link, or parting of circuit breaker contacts, until the overcurrent is interrupted.

**Armor** - A braid or wrapping of metal, usually steel, used for mechanical protection.

**Armored Cable** - A cable having a metallic covering for protection against mechanical injury.

**Audio Frequency** - The range of frequencies audible to the human ear. Usually 20 - 20,000 Hz.

**AWG** - American Wire Gauge - A Standard used in the determination of the physical size of a conductor determined by its circular mil area. Usually expressed as AWG. Also referred to as Brown and Sharpe (B&S) wire gauge.

**AWM** - Appliance Wiring Material - Appliance wiring material is a classification of Underwriters' Laboratories, Inc., covering insulated wire and cable intended for internal wiring of appliances and equipment. Each construction satisfies the requirements for use in particular applications.

**Bayonet** - A lampholder for low-voltage incandescent lamps having an unthreaded metal shell with two diametrically opposite key ways that cooperate with similarly located projections on a mating lamp bulb. Pushing down on the bulb and turning it clockwise in the socket locks the bulb in place.

**Bi-Pin Medium** - A fluorescent lampholder having two contacts, used in pairs, with Type T-8 tubular fluorescent lamps that are approximately 1" (25.4mm) in diameter, having two contacts at each end.

**Bi-Pin Miniature** - Similar to medium Bi-Pin lampholder except for use with Type T-5 tubular fluorescent lamps that are approximately 5/8" (15.9mm) in diameter.

**Braid** - A fibrous or metallic group of filaments interwoven in cylindrical form to form a covering over one or more wires.

**Breakdown Voltage** - The voltage at which the insulation between two conductors breaks down.

**Building Wire** - Wire used for light and power in permanent installations utilizing 600 volts or less. Usually in an enclosure and which will not be exposed to outdoor environments.

**Bunch Stranding** - A group of wires of the same diameter twisted together without a predetermined pattern.

**Cabling** - The twisting together of two or more insulated conductors to form a cable.

**Candelabra** - A small screw-based threaded lampholder accepting a bulb approximately 1/2" (12.7mm) in diameter commonly used in night lights, indicator lights and Christmas tree bulbs.

**Capacitance** - The ability of a dielectric material between conductors to store electricity when a difference of potential exists between the conductors. The unit of measurement is the farad, which is the capacitance value that will store a charge of one coulomb when a one - volt potential difference exists between the conductors. In AC, one farad is the capacitance value that will permit one ampere of current when the voltage across the capacitor changes at a rate of one volt per second.

**Circline** - A four-contact double-ended lampholder for use with tubular, circular, fluorescent lamps.

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

**Clock Hanger** - A single receptacle generally recessed behind a special cover plate having a hook or other means of supporting a wall-hung clock.

**Cold Flow** - Permanent deformation of the insulation due to mechanical force or pressure (not due to heat softening)

**Color Code** - (Wire and Cable) - A system for circuit identification through use of solid colors and contrasting tracers.

**Concentric Stranding** - A group of uninsulated wires twisted so as to contain a center core with one or more distinct layers of spirally wrapped, uninsulated wires laid overall to form a single conductor.

**Conductor** - An uninsulated wire suitable for carrying electrical current.

**Conduit** - A tube or trough for protecting electrical wires and cables. It may be a solid or flexible tube in which insulated electrical wires are run.

**Connector** - A device used to physically and electrically connect two or more conductors.

**Contacts** - The parts of the connector that actually carry the electrical current, and are touched together or separated to control the flow.

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

**Control Cable** - A multi-conductor cable made for operation in control or signal circuits.

**Copper Clad** - Steel with a coating of copper welded to it, as distinguished from copper-plated. Same as Copperweld.

**Cord** - A small, very flexible insulated cable constructed to withstand mechanical abuse. (Note: There is no sharp dividing line with respect to size between a cord and a cable, but generally, a cord is considered to be a size No. AWG 10 and smaller.)

**Core** - In cables, a term used to denote a component or assembly of components, over which other materials are applied, such as additional components, shield, sheath, or armor.

**Corona** - Ionization of air surrounding a conductor caused by the influence of high voltage. Causes deterioration of insulation materials.

**Corrosion Resistant** - A device constructed of special materials and/or suitable plated to withstand corrosive environments.

**Crazing** - The minute cracks on the surface of plastic materials.

**Crosslinked** - Inter-molecular bonds between long chain thermoplastic polymers by chemical or electron bombardment means. The properties of the resulting thermosetting material are usually improved.

**CSA** - Abbreviation for Canadian Standards Association, a non-profit, independent organization that operates a listing service for electrical and electronic materials and equipment. The Canadian counterpart of the Underwriters Laboratories.

**CSA NRTL** - New CSA mark for product suitable for use in the U.S.A.

**CSA NRTL/C** - New CSA mark for product suitable for use in the U.S.A. and Canada.

**Current Carrying Capacity** - The maximum current an insulated conductor can safely carry without exceeding its insulation and jacket temperature limitations.

**cUL** - New UL mark for product suitable for use in Canada.

**Decibel (db)** - A unit that expresses differences of power or voltage level. It is used to express power loss in passive circuits or cables.

**Dielectric** - (1) Any insulating medium which intervenes between two conductors and permits electrostatic attraction and repulsion to take place across it. (2) A material having the property that energy required to establish an electric field is recoverable in whole or in part, as electric energy.

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

**Direct Capacitance** - The capacitance measured directly from conductor to conductor through a single insulating layer.

**DPDT** - (Double Pole, Double Throw) - A switch that makes or breaks the connection of two conductors to two separate circuits.

**DPST** - (Double Pole, Single Throw) - A switch that makes or breaks the connection of two circuit conductors in a single branch circuit.

**Drain Wire** - In a cable, the uninsulated wire laid over the component or components and used as a ground connection.

**Drawing** - In wire manufacture, pulling the metal through a die or series of dies to reduce diameter to a specified size.

**Dual-Element Fuse** - An internal construction consisting of a separate time-delay overload element which interrupts overcurrents up to approximately 500-600% rating, plus separate fuse links which quickly open higher value currents. All dual-element fuses have time delay, but not all time-delay fuses have dual-element construction.

**Dust Proof** - A device so constructed or protected that dust will not interfere with its operation (N.E.C.).

**Duct** - An underground or overhead tube used for carrying electrical conductors.

**Edison Base** - A lampholder having a threaded internal shell approximately 1" (25.4mm) in diameter which accepts lamp bulbs of the size commonly used for domestic illumination.

**Eccentricity** - Like concentricity, a measure of the center of a conductor's location with respect to the circular cross section of the insulation. Expressed as a percentage of displacement of one circle within the other.

**Elastomer** - Any elastic, rubber-like substance such as natural or synthetic rubber.

**Elongation** - The fractional increase in length of a material stressed in tension.

**EMI** - Abbreviation of Electromagnetic Interference.

**Explosion Proof** - A device so constructed as to meet requirements of hazardous (classified) locations of the NEC (National Electrical Code) NFPA-70.

**Farad** - A unit of electrical capacity.

**Fast-Acting Fuse** - See normal-opening fuse.

**FEP** - Fluorinated ethylene propylene, a melt extrudable fluorocarbon resin. Teflon is the DuPont registered trademark.

**Filled Cable** - Construction where cable core is filled with material that prevents moisture from entering or passing through the cable.

**Filler** - (1) A material used in multiconductor cables to occupy large interstices formed by the assembled conductors. (2) An inert substance added to a compound to improve properties or decrease cost.

**Fixture Wire** - Fixture wires according to the NEC (National Electrical Code) are designed for installation in lighting fixtures and in similar equipment where enclosed or protected and not subject to bending or twisting in use. They also are used for connecting lighting fixtures to the conductors of the circuit that supplies the fixtures. Fixture wires shall not be smaller than No. AWG 18. Flexible stranding is used for most fixture wire but solid conductors may be used in some applications.

**Flame Resistance** - The ability of a material not to propagate flame once the heat source is removed.

**Flat Cable** - A Cable with two smooth or corrugated but essentially flat surfaces.

**Flex Life** - The measurement of the ability of a conductor or cable to withstand repeated bending.

**Flush-Mounted** - A device intended to be installed flush with the surface of a panel or on equipment, or on a wall.

**Four-way** - A switch installed between pairs of three-way switches to control one electrical load from three locations.

**Frequency** - The number of times an alternating current repeats its cycle in one second.

**Fused Plug** - A plug designed to accept fuses in the line contact(s) for protection of attached equipment.

**Gauge** - A term used to denote the physical size of a wire.

**GFCI** - (Ground Fault Circuit Interrupter) - A receptacle or plug integral with a circuit-interrupting device that detects leakage current to ground on the load side activating a circuit-interrupting device.

**Ground** - An electrical term meaning to connect to the earth or other large conducting body to serve as an earth, thus making a complete electrical circuit.

**Harness** - An arrangement of wires and cables, usually with many breakouts, which have been tied together or pulled into a rubber or plastic sheath, used to interconnect an electric circuit.

**Hertz (Hz)** - A term replacing cycles - per - second as an indication of frequency.

**High Voltage** - Generally considered to an operating voltage of over 600 volts.

**Hi-Pot** - A test where a fixed voltage is applied to a cable to verify that no damage has occurred during transit or installation.

**Hook-up Wire** - A single insulated conductor used for low current, low voltage (usually under 600 volts) applications within enclosed electronic equipment.

**Hospital Grade** - A device designed to meet additional performance requirements of high abuse areas often found in hospital locations. Such devices are tested to „Hospital Grade“ requirements of UL (Underwriters' Laboratories, Inc.) Standard.

**HPD** - Heater cord with thermoset insulation and cotton or rayon braid overall.

**HPN** - Parallel heater cord, unbraided, using an integral thermoset insulation.

**Hz** - Abbreviation for hertz.

**Impedance** - The total opposition that a circuit offers to the flow of alternating current or any other varying current at a particular frequency. It is a combination of resistance R and reactance X, measured in ohms.

**Incandescent** - Lampholders of the threaded screw shell types for use with standard sizes of incandescent bulbs, having threaded bases.

**Inductance** - The property of a circuit or circuit element that opposes a change in current flow, thus causing current changes to lag behind voltage changes. It is measured in henrys.

**Insulated Wire** - A conductor of electricity covered with a non-conducting material.

**Insulation** - A material having high resistance to the flow of electric current. Often called a dielectric in radio frequency cable.

**Interchangeable** - A receptacle, combination, or other device, each individually housed and having common mounting dimensions and intended for field installation on a single or multiple opening mounting strap.

**Intermediate** - A lampholder with a threaded screw shell accepting intermediate size incandescent lamps with threaded bases that are approximately 13/32" (10.3mm) in diameter. Most often used in decorative lighting such as candle sconces, etc.

**Interrupting Capacity (AIC)** - The highest RMS symmetrical current, at specified test parameters, which the device is rated to interrupt. Device must interrupt all available currents up to its interrupting capacity. Also commonly called interrupting rating. See definition of interrupting rating.

**Interrupting Rating (I.R.)** - The highest available symmetrical RMS alternating current that the device has been tested at, and which it has interrupted safely under test conditions (UL, BSI etc.).

**I.R.** - Insulation resistance.

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

**Jacket** - A material covering over a wire insulation or an assembly of components. An overall jacket on a complex cable grouping is also often referred to as a sheath.

**Jumper Cable** - A short flat cable interconnecting two wiring boards or devices or a 5 to 15kv single conductor flexible power cable used to bypass energized power lines during maintenance or repair operations.

**Junction** - A point in a circuit where two or more wires are connected.

**Lay** - The length measured along the axis of a wire or cable required for a single strand (in stranded wire) or conductor (in cable) to make one complete turn about the axis of the conductor or cable.

**Lighted or Illuminated Receptacle** - A receptacle that, when connected to an electrical circuit, is illuminated in the area of the receptacle face.

**Line Cord** - A cord terminating in a plug at one end used to connect equipment or appliances to a power outlet.

**Locking** - A device 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 counterclockwise direction.

**Longitudinal Shield** - A tape shield, flat or corrugated, applied longitudinally with the axis of the core being shielded.

**MCM** - One thousand circular mils.

**Medium Base (Edison)** - The most common type of screw-in lampholder found in everyday lighting fixtures, table lamps, and accepting incandescent bulbs with screw bases approximately 1" (25.4mm) in diameter.

**Mercury switch** - A type of switch construction employing liquid mercury as the contact means for making and breaking an electrical circuit.

**Mil** - A unit used in measuring diameter of a wire or thickness of insulation over a conductor. One one-thousandth of an inch. (0.001").

**Miniature** - The smallest screw-in type lampholder accepting incandescent lamp bulbs of approximately 3/8" (9.5mm) in diameter commonly used in games, flashlights and the smallest Christmas tree bulbs.

**Mogul** - The largest screw-in type of lampholder accepting incandescent lamp bulbs having screw bases approximately 1 1/2" (38.1mm) in diameter. Used in street lighting fixtures and industrial high bay fixtures.

**Molded Plug** - A connector molded on either end of a cord or cable.

**Momentary Contact** - A switch which establishes circuit contact when its actuator is moved to, and held, in the „ON“ position. The circuit is broken when actuator is allowed to return, of itself, to the „OFF“ position. (Such a switch may also be furnished to operate in the opposite mode.).

**Motor Lead Wire** - Wire which connects to the usually fragile and easily damaged magnet wire found in coils, transformers, and stator or field windings. General requirements are abrasion resistance, toughness, flexibility, dielectric strength, thermal resistance, and low percent of extractables (where applicable, such as in hermetic wires).

**MTW** - Thermoplastic insulated machine tool wire.

**Multiconductor** - More than one conductor within a single cable complex.

**Mylar®** - A synthetic compound with high dielectric qualities made by DuPont and used extensively in the wire and cable industry.

**NEMA** - Abbreviation for National Electrical Manufacturers Association.

**Neoprene** - A synthetic rubber with good resistance to oil, chemical, and flame. Also called polychloroprene.

**Non-renewable Fuse** - A fuse which cannot be restored for service after it has opened on an overcurrent.

**Normal-opening fuse** - (also fast-acting) - A fuse which has no intentional, build-in, time-delay. Actual opening time is determined by fuse class overcurrent, etc.

**Nylon** - An abrasion resistant thermoplastic with good chemical resistance used for wire and cable jacketings, wiring devices, plugs, and connectors.

**O.D.** - Overall or outside diameter.

**Ohm** - A unit of electrical resistance.

**One-Time Fuse** - Technically, any non-renewable fuse. However, usually refers to UL Class H fuses and to Normal-opening Class K-5 fuses. Also „Code“ fuses.

**OSHA** - Abbreviation for Occupational Safety and Health Act, specifically the Williams-Steiger Law passed in 1970 covering all factors relating to safety in places of employment.

**Overcoat** - Individual strands of tinned copper wire stranded together and then covered with a tin coating.

**Parallel Cord** - A construction in which 2 or more conductors are laid parallel and surrounded and separated by an insulating material.

**PBT** - Polybutylene terephthalate - A protective film applied over the dielectric of a conductor to provide desired mechanical characteristics.

**Pendant** - A type of switch or a lampholder intended for installation at the end of a length of portable cord or cable.

**Pilot Light** - A device with an integral lamp in the actuator, which lights when the power switch is in the „ON“ position.

**Pin and Sleeve** - A receptacle, plug or connector with round pin or sleeve type contacts.

**Plasticizer** - A chemical agent added to plastics to make them softer and more pliable.

**Plating** - The application of one metal over another.

**Plenum** - The air return path of a central air handling system, either duct work or open space over a dropped ceiling.

**Plenum Cable** - Cable approved by Underwriters' Laboratories (UL) for installation in plenums without the need for conduit.

**Polychlorophene** - Chemical name for Neoprene. A rubber-like compound used for jacketing where wire and cable will be subject to rough usage, moisture, oil, greases, solvents and chemicals. May also be used as low insulating material.

**Portable Power Cable** - Flexible, all rubber insulated for hard usage. Some cables have shielded conductors (metallic or non-metallic) and can have neoprene sheath overall.

**Potting** - The sealing of a cable termination or other component with a liquid that thermosets into an elastomer.

**Primary Insulation** - The first layer of non-conductive material applied over a conductor, whose prime function is to act as electrical insulation.

**PSI** - Pounds per square inch.

**Push Button** - A switch with an actuator mechanism that is operated by depressing a button.

**Put-Up** - Refers to packaging of wire and cable. The term itself refers to the packaged product that is ready to be stored or shipped.

**PVC** - Abbreviation for polyvinyl chloride.

**Rated Voltage** - The maximum voltage at which an electrical component can operate for extended periods without undue degradation or safety hazard.

**Rating** - A designated limit of operating characteristics based on definite conditions, such as current rating, voltage rating, interrupting rating, etc.

**REA** - Abbreviation for Rural Electrification Administration, which is part of the U.S. Dept. of Agriculture. REA establishes specifications and provides approval for telephone station wire and power cable.

**Rectifier Fuse** - See Semiconductor fuse.

**Reinforcement** - A material used to reinforce, strengthen or give dimensional stability to another material.

**Renewable Fuse** - A fuse which may be readily restored to service by replacing the renewal element after operation.

**Resistance** - A measure of the difficulty in moving electrical current through a medium when voltage is applied. It is measured in ohms.

**RFI** - Abbreviation for Radio Frequency Interference.

**RG/U** - Radio Government, Universal - RG is the military designation for coaxial cable and U stands for „general utility.“

**RMS or R.M.S. Current** - Literally „Root Mean Square“ (from the arithmetical means of calculating it). The effective value of an alternating current sine wave which is calculated as the square root of the average of the squares of all the instantaneous values of the current throughout one cycle. R.M.S. alternating current is that value of an alternating current which produces the same heating effect as a given direct current value.

**Rocker** - A switch with an actuator mechanism that is operated by a push button actuator that pivots on its center.

**Rope Strand** - A conductor composed of a center group of twisted strands surrounded by one or more layers of similar groups of twisted strands.

**Rotary** - A switch having an actuating member that when turned in a clockwise direction completes the switch circuit and breaks the switch circuit when turned in the same or opposite direction.

**S** - Heavy Duty, rubber-insulated portable cord. Standard copper conductors with separator and individual rubber insulation. Two or more color-coded conductors cabled with filler, wrapped with separator and rubber jacketed overall 600V.

**Safety** („Tamper-proof“ or „Tamper-resistant“) - A receptacle which by its construction limits improper access to its energized contacts - NEC (National Electrical Code).

**Semiconductor** - A non-conductive material made slightly conductive by the addition of a specified sum of conductive material.

**Semiconductor fuse** - A fuse specifically designed to protect semiconductors such as: silicon rectifiers, silicon controlled rectifiers, thyristers, transistors, and similar components.

**SEO** - Same construction as STO, except insulation and jacket are made of Thermoplastic Elastomer Rubber (TPE) 600V.

**SEOW** - Same construction as SEO, except with oil resistant jacket and suitable for outdoor use. UL listed for continuous submersion in water 600V.

**Separator** - Pertaining to wire and cable, a layer of insulating material such as textile paper, mylar, etc., which is placed between a conductor and its dielectric, between a cable jacket and the components it covers, or between various components of multiple conductor cable. It can be utilized to improve stripped qualities and/or flexibility, or can offer additional mechanical or electrical protection to the components it separates.

**Sheath** - The material, usually an extruded plastic or elastomer, applied outer-most to a wire or cable. Very often referred to as jacket.

**Shield** - A metallic layer placed around an insulated conductor or group of conductors to prevent electrostatic or electromagnetic interference between the enclosed wires and external fields. This shield can be braided or served wires, foil wrap, foil backed tape, a metallic tube, or conductive vinyl or rubber. When a metallic braid or tinned or bare copper is applied over the insulated conductors, the shielding effectiveness is in proportion to the amount of coverage, usually expressed in percentage.

**SIC** - Specific Inductive Capacity.

**Signal Cable** - A cable designed to carry current of usually less than one ampere per conductor.

**SJ** - Junior hard service rubber-insulated pendant or portable cord. Same construction as SJT except insulation and jacket is thermoset 300V.

**SJE** - Same construction as SJT, except insulation and jacket made of Thermoplastic Elastomer Rubber (TPE) 300V.

**SJEO** - Same construction as SJO, except insulation and jacket made of Thermoplastic Elastomer Rubber (TPE).

**SJEOW** - Same construction as SEOW except 300 volt rated and small in diameter.

**SJO** - Same as SJ, but oil-resistant compound outer jacket. 300V, 60°C, 75°C or 90°C.

**SJOOW** - Same as SJOOW except 300 volt rated and smaller in diameter.

**SJT** - Junior hard service thermoplastic conductors with overall thermoplastic jacket, 300V, 60°C, 75°C, 90°C, or 105°C.

**SJTO** - Same as SJT, but oil-resistant outer jacket.

**Slimline-Single Pin** - A fluorescent lampholder having a single pin contact and accepting fluorescent lamps of the T-8 or T-12 types, 1" (25.4mm) or 1 1/2" (38.1mm) in diameter, and in smaller version, the T-6 type, 3/4" (19.1mm) in diameter.

**Snap-In** - A special type of device supplied with assembled side spring clips which snap into a hole cut in a flat panel, securing the lampholder in place without additional fastening means.

**SO** - Hard service cord. Same construction as type S, except oil-resistant jacket. 600V, 60°C to 105°C.

**SOW** - Oil resistant jacketed portable cord, for outdoor use. Water resistant rated.

**SOOW** - Same as SOW except oil resistant insulation and is suitable for continuous submersion in water.

**Solid Conductor** - A conductor consisting of a single wire.

**SP-1** - All rubber, parallel-jacketed, two-conductor light duty cord for pendant or portable use. 300V.

**SP-2** - Same as SP-1, but heavier construction, with or without third conductor for grounding purposes. 300V.

**SP-3** - Same as SP-2, but heavier construction for refrigerators or room air conditioners. 300V.

**Spacing** - Distance between the closest edges of two adjacent conductors or mounting lugs.

**Spark Test** - A test designated to locate imperfections (usually pin-holes) in a wire insulation by application of an electrical potential across the material for a very short period of time while the wire is drawn through an electrode field with one end of the wire grounded.

**SPDT** - (Single Pole, Double Throw) - A switch that makes or breaks the connection of a single conductor with either of two other single conductors.

**SPE** - Same construction as SP-1, except insulation and jacket made of Thermoplastic Elastomer Rubber (TPE).

**Spiral Wrap** - The helical wrap of a tape over a core.

**SPST** - (Single Pole, Single Throw) - A switch that makes or breaks the connection of a single conductor in a single branch circuit.

**SPT-1** - Same as SP-1, except all-thermoplastic, 300V. With or without third conductor for grounding.

**SPT-2** - Same as SP-2, except all-thermoplastic, 300V. With or without third conductor for grounding.

**SPT-3** - Same as SP-3, except all-thermoplastic, 300V. With or without third conductor for grounding.

**ST** - Hard service cord, jacketed. Same as type S, except all-plastic construction. 600V, 60°C to 105°C.

**Station Wire** - PVC jacketed wire specially designed for use in ducts or stapled to surfaces for direct connection to subscriber's phone.

**STO** - Same as ST, but with oil-resistant outer jacket. 600V, 60°C to 105°C.

**Straight Blade** - (Non-locking) - A device into which mating plugs are inserted at right angle to the plane of the connector face.

**Strand** - A single uninsulated wire.

**Stranded Conductor** - A conductor composed of individual groups of wires twisted together to form an entire unit.

**Surface-Mounted** - A device intended to be installed on the surface of a panel, or on equipment, or on wall.

**Surge** - A temporary and relatively large increase in the voltage or current in an electrical circuit or cable. Also called transient.

**Sure Suppression** - A receptacle containing electronic components which limit peak receptacle voltage above a predetermined value when such voltage spikes exceed this value.

**SV** - Vacuum cleaner cord, rubber-insulated with rubber jacket rated at 300V.

**SVE** - Same construction as SV, except insulation and jacket made of Thermoplastic Elastomer Rubber (TPE).

**SVT** - Same as SV, except all-plastic construction. With or without third conductor for grounding purposes only. 300V, 60°C to 105°C.

**SVTO** - Same as SVT except oil resistant jacket.

**Switchboard Cable** - Multicore telephone cables used for the internal wiring of telephone exchanges.

**Switchboard Wire** - An insulated wire for general purpose connections in telephone exchanges.

**Teflon** - A DuPont Company trademark for polytetrafluorethylene.

**Tensile Strength** - The pull stress required to break a given specimen in pounds per square inch (PSI).

**TEW** - CSA thermoplastic equipment wire. Solid or stranded single conductor, plastic-insulated, 600V, 105°C.

**TF** - Fixture wire, thermoplastic-covered, solid or 7 strands 60°C.

**TFF** - Same as TF, but flexible stranding 60°C.

**TFN** - Same as TF, but with nylon sheath.

**TFFN** - Same as TFF, but with nylon sheath.

**Thermoplastic** - A material that softens when heated and becomes firm on cooling.

**Thermoset** - A material that hardens or sets when heat is applied and that, once set, cannot be softened by heating. The application of heat is called „curing.“

**THHN** - Thermoplastic insulated nylon or PBT jacketed building wire 90°C, 600V, for dry locations.

**Three Way** - A switch used in pairs to control one electrical load from two locations.

**THW** - Thermoplastic, vinyl insulated building wire. Flame retardant, moisture and heat resistant, 75°C, 600V, for dry and wet locations.

**THWN** - Same as THW, but with nylon jacket overall.

**Time Delay** - A switch containing a mechanism which automatically turns the switch „OFF“ at a predetermined time interval.

**Time-Delay Fuses** - When compared to normal-opening fuses, time delay fuses have an increased opening time for overcurrents between approximately 200% and 600% rating. Time delay is indicated on the fuse label by: time-delay, T-D, D, or other suitable marking. Time delay in overload range --- 200% - 600% rating --- permits fuses to withstand system switching surges and motor starting currents. Time delay Class H, K, RK1, RK5, and J fuses hold 500% current for ten seconds, minimum, and pass the same 135% and 200% rating opening-time tests as normal-opening fuses.

**Timer** - A switch containing an auxiliary timing device that can be set or adjust to turn off an electrical load at a preset time.

**Tinned Copper** - Tin coating over copper to aid in soldering and inhibit corrosion.

**Tinned Wire** - Copper wire that has been coated with a layer of tin or solder to simplify soldering.

**Toggle** - A switch having a lever type actuating member which makes or breaks the switch contact mechanism when its position is changed.

**TPE** - Abbreviation for Thermoplastic Elastomer such as UL Class 36. A class of thermoplastic materials with physical properties similar to rubber.

**Tray** - A cable tray is a unit or assembly of units or sections and associated fittings, made of noncombustible materials forming a rigid structural system used to support cables.

**Tray Cable** - A factory-assembled multiconductor or multipair control, signal or power cable specifically approved under the NEC (National Electrical Code) for installation in trays.

**Tubing** - A tube of extruded nonsupported plastic or metallic material.

**TW** - Thermoplastic vinyl-jacketed building wire, moisture resistant, 60°C.

**Twisted Pair** - A twisted pair is composed of two small separately insulated wires twisted together without a common covering.

**UL** - Abbreviation for Underwriters Laboratories, a non-profit independent organization that operates a listing service for electrical and electronic materials and equipment.

**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 and is capable of producing a current when a closed circuit is connected between two points.

**VW-1** - A flammability rating established by UL (Underwriters' Laboratories) for wire and cables that pass a specially designed vertical flame test, formerly designated FR-1.

**W** - UL and CSA designation for outdoor listed flexible cord that is tested against sunlight requirements (e.g., STW).

**Wall Thickness** - The thickness of the applied insulation or jacket.

**Water Resistant** - UL designation for devices or cords that have insulation on the individual conductors that pass UL requirements (e.g. cords, ST).

**Watertight** - A device so constructed that moisture will not enter under specified test conditions.

**Weatherproof** - A device so constructed or protected that exposure to weather will not interfere with the successful operation of the device NEC (National Electrical Code).

**Wire** - (1) A single piece of slender, flexible metal ranging in approximate size from a piece that is difficult to bend by hand to a fine thread; (2) Several wires (as in 1) twisted together; (3) Wires (as in 1 or 2) that are insulated.

**Wire Gauge** - A measure of the diameter or sizes of wires. The sizes are expressed by numbers.

**XHHW** - Heat and moisture resistant crosslinked polyethylene insulated building wire, 90°C dry, 75°C wet.

**XHHW-2** - ditto, 90°C wet or dry.

**XLPE** - Crosslinked polyethylene

Conversation Factors		(English/Metric and Metric/English)		Knockout Holes Recommended				
Inch x 25.4	= Millimeters	Kilogram/km x 0.6214	= Pounds/kft	km <sup>2</sup> x 0.3861	= Sq. Mile	NPT Hub Size	inches	mm
Millimeters x 0.03937	= Inches	Pounds/kft x 1.4881	= Kilogram/km	Circular Mil x 0.7854	= Sq. Mil			
Feet x 0.3048	= Meters	US gallon x 3.785	= dm <sup>3</sup>	Cu. Inch x 16.39	= cm <sup>3</sup>	1/4"	.54" - .57"	13.7 - 14.5
Meters x 3.281	= Feet	dm <sup>3</sup> x 0.2642	= US gallon	cm <sup>3</sup> x 0.06102	= Cu. Inch	3/8"	.67" - .70"	17.0 - 17.8
Miles x 1.609	= Kilometers	Pint x 0.47	= Liters	Cu. Foot x 0.02832	= Cu. Meter (m <sup>3</sup> )	1/2"	.86" - .91"	21.8 - 23.0
Kilometers x 0.6214	= Miles	Liter x 2.13	= Pint	Cu. Meter x 35.31	= Cu. Foot	3/4"	1.09" - 1.14"	27.8 - 29.0
Ohms/km x 0.3048	= Ohms/kft	Sq. Inch x 6.452	= cm <sup>2</sup>	HP x 0.7457	= KW	1"	1.36" - 1.41"	34.5 - 35.7
Ounce x 28.35	= Gram (g)	cm <sup>2</sup> x 0.155	= Sq. Inch	KW x 1.341	= HP	1 1/4"	1.72" - 1.77"	43.7 - 44.9
Gram x 0.03527	= Ounce	Sq. Foot x 0.0929	= m <sup>2</sup>	PSI x 0.6896	= N/cm <sup>2</sup>	1 1/2"	1.97" - 2.02"	50.0 - 51.2
Pound x 0.4536	= Kilogram (kg)	m <sup>2</sup> x 10.76	= Sq. Foot	N/cm <sup>2</sup> x 1.4501	= PSI	2"	2.45" - 2.50"	62.3 - 63.5
Kilogram x 2.205	= Pound	Sq. Mile x 2.59	= km <sup>2</sup>			2 1/2"	2.95" - 3.00"	75.0 - 76.2
						3"	3.58" - 3.63"	90.9 - 92.1