

**GLOSSARY OF ELECTRICAL
CONNECTOR RELATED TERMS
2019-04-03**

| | |
|---|---|
| ABRASION RESISTANCE | The ability of a material to resist abrading and wear as from sand and dust or one item sliding against another; surface wear. (Erosion) |
| ACCELERATED AGING | A test in which certain parameters, such as voltage and temperature, are increased above normal operating values to obtain observable deterioration in a relatively short period of time. The plotted results give expected service life under normal conditions. Also called accelerated life test. |
| ACCEPTANCE TESTS | Those tests deemed necessary to determine acceptability of product and as agreed by purchaser and vendor. |
| ACCESSIBLE INSULATION DISPLACEMENT CONNECTION | An insulation displacement connection in which it is possible to access test points for carrying out mechanical tests (e.g. transverse extraction force) and electrical measurements (e.g. contact resistance) without deactivation of any design features intended to establish and/or maintain the insulation displacement connection. This accessibility mainly occurs when the insulation displacement connection is enclosed in a component. |
| ACCESSORY | Mechanical devices, such as jackscrews, cable clamps, added to connector shells and other such hardware that is attached to connectors to make up the total connector configuration. |
| ACCORDION CONTACT | A type of connector contact where a flat spring is given a Z shape to permit high deflection without overstress. |
| ACME | A square thread which allows for rapid coupling of connectors versus finer pitched threads. A larger crosssection of thread body makes this an extremely strong design versus the usual v thread. (Ref: MIL-DTL-38999 series III & Amphenol QWLD) |
| ADAPTER | An intermediate device to provide for connector attachments such as accessories, special mounting means, or special inter-connection means to an electrical termination. |
| ADAPTER CONNECTOR | A fixed or free component to permit electrical connection(s) between two or more connectors where direct connection is mechanically impossible. |
| ADHESION PROMOTION | The chemical process of preparing a surface to enhance its ability to be bonded to another surface or to accept an over plate. |
| AGING | The change in properties of a material with time under specific conditions. |
| AIRBORNE | Pertaining to applications peculiar to aircraft and missiles or other systems designed for operation primarily within the earth's atmosphere. |
| ALIGNMENT TUBE | A tube into which fiber ends are introduced, providing alignment prior to sealing the fiber ends in place to form a splice. |
| ALLOY | A substance having metallic properties and being composed of two or more chemical elements of which at least one is an elemental metal. |
| ALTERNATING CURRENT | An electrical current (sinusoidal in nature), which reverses at regular intervals. The repetition rate is expressed as hertz (cycles per second). |
| ALTERNATIVE INSERT POSITION | Orientation achieved by rotating the insert in circular connectors |
| AMBIENT | The surrounding environment coming into contact with the system or component in question. |
| AMBIENT TEMPERATURE | The temperature of the surrounding environment. |
| AMPACITY | See current carrying capacity. |
| ANGULAR MISALIGNMENT | Angular departure of one fiber from the axis defined by the other when two fibers are connected or spliced. |
| ANNEAL | To heat a metal and cool slowly to relieve hardness or brittleness that may have occurred naturally or may have been induced. |
| ANODIZE | To form a protective insulating oxide layer on a metal (e.g. aluminum) by electrolytic action. Anodized finishes can be natural or a decorative color. |
| ANTI-BIND ROLL OFF | Feature that prevents shell binding caused by side loads during mating/demating. |
| ANTI-ROTATION CONNECTOR | A connector designed to provide keying or locking provisions to maintain positive orientation for accessory hardware. |
| ANVIL | The part of a crimping die, normally stationary, that positions and supports the terminal during crimping; sometimes called the Nest. |
| APPARENT DIAMETER (of a stranded conductor) | The diameter of the circumscribing circle of the bundle of strands. |
| ARC | A discharge of electricity caused by a breakdown in dielectric; either an increase in voltage or a loss of dielectric capability, or a combination of both. |

| | |
|---|---|
| ARC RESISTANCE | The resistance of a material to the effects of a high voltage, low current arc (under prescribed conditions) passing across the surface of the material. The arc resistance is stated as a measure of total elapsed time at that voltage required to form a conductive path on the surface (material carbonized by the arc). |
| ASPECT RATIO | A ratio of length or depth of a hole to its preplated diameter. |
| ASPERITY | On a conducting material, the microscopic-level surface roughness. These surface imperfections affect the effective contact area when two contact surfaces are mated with one another. |
| ATTENUATION | The reduction of average power during the transmission of a signal from the input to the output of the device under test, usually measured in decibels (dB). |
| AVALANCHE PHOTODIODE (APD) | A photodetector used in high speed, broad bandwidth fiber optic systems. The avalanche feature results from the rush of electrons across a junction under a very high bias. The APD requires a much higher reverse bias and has a higher cutoff frequency than a PIN-photodiode, and therefore, at higher frequencies is a more sensitive device. |
| AWG | An abbreviation for American Wire Gauge. |
| AXIAL DISPLACEMENT | The incremental difference between an initial position and a final position resulting from a force applied along the axis of a component. |
| AXIAL LEAD | A lead wire extending from a component or module body along its longitudinal axis. |
| AXIS | The center line about which parts of a body may be referred. |
| BACK MOUNTED | Installed such that the connectors mounting flange is positioned behind the connector mounting surface when viewed from the mating face or front side of the connector. |
| BACKPLANE | An interconnection device having terminations, such as for wire wrap, on one side and usually having connector receptacles on the other side, used to provide point-to-point electrical interconnections between connector termination elements. The point-to-point electrical interconnections may be printed wiring. |
| BACKPLANE PANEL | An interconnection panel into which PC cards or other panels can be plugged. These panels come in a variety of designs ranging from a PC motherboard (backplane) to individual connectors mounted in a metal frame. Backplane panels lend themselves to automatic wiring. |
| BACKSHELL | A connector accessory or component, that may or may not be supplied with the connector, attaches to the back of the connector, can facilitate wiring harness strain relief, tighter harness routing in restricted space, and wiring shield termination, and can provide for shielding from electrical interference and/or moisture protection. |
| BAIL | A loop of wire used to prevent permanent separation of two or more parts assembled together. Example: the bail holding dustcaps on round connectors. |
| BAIL LATCH | A loop of wire formed into a bail that is used to prevent the inadvertent disassembly of two halves of a connector pair. |
| BALANCED LINE (WAVEGUIDE) (two conductor) | A transmission line consisting of two conductors in the presence of ground capable of being operated in such a way that the voltages on the two conductors at all transverse planes are equal in magnitude and opposite in direction. The ground may be a conducting sheath, forming a shielded transmission line. |
| BALANCED WIRE CIRCUIT (DATA TRANSMISSION) | One whose two sides are electrically alike and symmetrical with respect to ground and other conductors. The term is commonly used to indicate a circuit whose two sides differ only by chance. |
| BALANCED VOLTAGES | Voltages relative to ground on the two conductors of a balanced line that, at every point along the line, is equal in magnitude and opposite in polarity. |
| BANDWIDTH | The frequency range of electrical signals transmitted. |
| BANDWIDTH (3-dB) | The bandwidth between halfpower points. The frequency of half-power transfers in the case of baseband signals. |
| BARREL CHAMFER | The flared entrance or internal bevel at the wire entry of the contact termination element, that is intended to facilitate entry of the conductor. |
| BARREL, CONDUCTOR | That section of the terminal, splice, or contact that accommodates the conductor, without insulation. |
| BARREL, INSULATION | The section of the terminal, splice or contact that accommodates the wire with insulation. |
| BARREL SIZE | An assigned number denoting the size of the contact barrel that accommodates the conductor. |
| BARREL, WIRE | (See BARREL, CONDUCTOR) |
| BARRIER | A section of dielectric material that insulates contacts or terminals from each other and from ground. |
| BARRIER SEAL | A seal provided through the connector between housing, insert, and contacts to inhibit the ingress of contaminants. |
| BARRIER STRIP | A continuous section of dielectric material that insulates electrical circuits from each other or from ground. |

| | |
|-----------------------------------|---|
| BASE MATERIAL | A material from which the connector or contact components are made and on which one or more metals or coatings may be deposited. |
| BASIS METAL | Metal from which the connector, contact, or metal accessory is made and on which one or more metals or coating may be deposited. |
| BASE METAL | (See BASIS METAL). |
| BASIC IDENTIFICATION NUMBER (BIN) | The number used to identify contacts for use in military specification type connectors, whose performance is governed by the requirements set forth in SAE AS39029. |
| BASIS MATERIAL | Material upon which coatings are deposited. |
| BASIS METAL | The metal from which a connector, contact, terminal, or splice is made. |
| BAYONET COUPLING | A quick coupling mechanism utilizing pins or keys on one connector half and ramps on the corresponding connector half. (Ref: MILDTL38999 Series I and II and ITT Cannon's CIR.) |
| BEAM (IDC) | The specially shaped metallic parts of an insulation displacement termination positioned on each side of the slot. |
| BELLIED MOUTH | (See BARREL CHAMFER) |
| BELLMOUTH | A flared or widened entrance of a contact or connector that allows easier insertion. Normally used on test connectors; also used to facilitate blind mating. |
| BELLOWS CONTACT | A connector contact, that is a flat spring, folded to provide a uniform spring rate over the full tolerance range of the mating unit. |
| BENIGN ENVIRONMENT | A term referring to kind and/or favorable conditions that cause little or no effect or degradation on an item; a controlled environment. |
| BERYLLIUM COPPER | The alloying and hardening of copper with the addition of the metal beryllium. This alloy is used extensively for electrical contact base metal because of its hardness and ability to withstand numerous flexures without relaxation or loss of its spring constant. |
| BIFILAR CONTACT (TWINAX) | Assembly of three contacts consisting of two inner contacts arranged parallel to one another with the third contact peripheral to, and encircling the two inner contacts, enabling termination of screened/shielded twisted pair cables. |
| BIFURCATED | Pertaining to lengthwise slotting of a flat spring contact used in printed circuit card edge connectors. |
| BIFURCATE CONNECTOR | A hermaphroditic connector containing fork-shaped mating contacts. |
| BIFURCATED CONTACT | A flat contact with a lengthwise slot, the two arms of which apply contact force in the same direction. |
| BINDING POST | A fixed terminal of the type to which conductors are connected by means of mechanical compression. |
| BIRDCAGE | A defect in stranded wire where the strands in the stripped portion between the insulated covering wire and a soldered connection (or an end tinned lead) have separated from the normal lay of the strands. |
| BIT PERIOD | The time interval between the successive like edges of the clock signal (rise to rise or fall to fall). This is the reciprocal of the clock frequency. |
| BLADE CONTACT | A solid contact with a rectangular crosssection, usually with a chamfered mating edge. |
| BLANK (PRINTED CIRCUIT) | An unprocessed or partially processed piece of base material or metalclad base material, cut from a sheet or panel and having the rough dimensions of a printed board. |
| BLIND MATE | Allows both connector halves to be joined in a normal engaging mode when either one or both connectors are concealed. |
| BLISTER | A localized swelling and separation between any of the layers of a laminate base material, or between base material and conductive foil or protective coating. (It is a form of delamination.) |
| BOARD MOUNTED CONNECTOR | A connector suitable for being permanently attached to a printed wiring board. |
| BOARD THICKNESS | The overall thickness of the base material and all conductive materials deposited thereon. |
| BODY, CONNECTOR | The main portion of a connector consisting of the housing and insulator/insert assembly to which contacts and accessories are attached. |
| BOND STRENGTH | The force per unit area required to separate two adjacent layers of a printed circuit board by a force applied perpendicular to the board surface. |
| BONDED ASSEMBLY | A connector assembly in which the components are bonded together using an electrically appropriate adhesive in a sandwich like structure to provide sealing against moisture and other environment, which weaken electrical insulating properties. |
| BONDING CONDUCTOR | A cable or strap that provides an electrical path for the purposes of providing a current path for safety and/or shielding grounds, to prevent shock or spark hazards, and to provide a low impedance path for EMI/RFI. |
| BONDING CONNECTOR | A device used to connect exposed metal to ground. It normally carries no current, but is used as a current path to eliminate shock or spark hazards and insure the operation of circuit protective devices in the case of breakdown. |

| | |
|------------------------|--|
| BOOT | A protective covering or connector accessory, usually made of a flexible or semirigid insulation material, designed to house wire/cable terminations as a protective device, facilitate harness direction, and provide a moisture seal when bonded or used as a potting form. |
| BOUND CONNECTION | An electrical connection between a wire and a sharp-cornered post in which the wire is laid parallel to the length of the post and adjacent to its wider face. The wire is secured to the post by tightly wrapping several turns of a separate solid wire around the post and the wire to be secured. Each turn of the wrapping wire contacts the bound wire producing deformation in it and also locks on at least two corners of the post. |
| BOW | The deviation from flatness of a board characterized by a roughly cylindrical or spherical curvature such that, if the board is rectangular, its four corners are in the same plane. |
| BOX MOUNT | A connector designed to be mounted in a panel or box where no accessories will be mounted on the rear of the connector. This type of connector will not have rear accessory threads. |
| BRAID | A woven or braided sheath made from conductive or nonconductive material, used as a covering for an insulated conductor or group of insulated conductors. When flattened it may be used as a grounding strap. |
| BRANCH CONNECTOR | A connector that joins a branch conductor to the main conductor at a specified angle. |
| BRASS | An alloy of 50 to 90 percent copper and 5 to 50 percent zinc. Used to manufacture electrical contact elements. This material has a hardness, which is greater than copper but less than beryllium copper. |
| BREAKAWAY CONNECTOR | A connector designed to separate when a specified force is applied to the cable, without damage to the cable or the connector. |
| BREAKDOWN VOLTAGE | The electrical potential necessary to cause the passage of a specific electric current through an insulator or insulating material. |
| BREECH-LOCK COUPLING | A quick coupling mechanism utilizing rifle breech style machined valleys and plateaus on each half of the connector pair to facilitate and maintain coupling. (Ref: MIL-DTL-38999 Series IV.) |
| BRIDGING, ELECTRICAL | The formation of a conductive path between conductors. |
| BUFFER, FIBER | A layer of material, which is used to provide mechanical protection for the optical fiber. |
| BUNDLE | A group of wires fastened or held together by auxiliary means such as straps, ties, clamps, lacing tape/twine or flexible wrappings (jackets) or sheaths, also called cable. |
| BUSING | The joining of two or more circuits to provide a common electrical connection. |
| BUTT | To join two conductors together endtoend without overlap, with their axes being collinear. |
| BUTT CONTACT | A mating contact configuration in which the mating surfaces engage end to end but do not overlap, with their axis in line. |
| BUTT SPLICE | A device for joining conductors end-to-end with their axis in line and not overlapping. (See SPLICE) |
| BUTTING CONNECTOR | A connector that is basically cylindrical and has a mating face with a basically circular periphery. |
| BUTTING DIES | Crimping dies so designed that the opposing die faces touch at the closed condition of the crimping cycle. Also called bottoming dies. |
| BUTTON BOARD CONNECTOR | A set of compressed, randomly crumpled, springy, highly conductive wire elements shaped in the form of a thick buttons, housed in a connector body to form a multiple of pressure butt-type contacts. |
| BUTTON HOOK CONTACT | A contact with a curved, hook-like termination often located at the rear of hermetic headers to facilitate soldering or desoldering of leads. |
| BUTTON-HOOK TERMINAL | (See TERMINAL, HOOK) |
| CABLE | Two or more insulated conductors, solid or stranded, contained in a common covering, or two or more insulated connectors twisted or molded together without a common covering, such as a shield and/or jacket. |
| CABLE ADAPTER | A part of a connector or an accessory consisting of a rigid housing for attachment of the connector body. It may incorporate provisions for a cable clamp or seal for terminating cable shields and provide shielding to electrical interference. It may be straight or angled. |
| CABLE CLAMP | A connector accessory or portion of a component that is designed to grip the wire or cable to provide strain relief and absorb mechanical stress that would otherwise be transmitted to the termination. |
| CABLE CLAMP ADAPTER | A mechanical adapter that attaches to the rear of a plug or receptacle to allow the attachment of a cable clamp. |
| CABLE SEAL | A device designed to seal a jacketed cable to a component. |
| CABLE SEALING CLAMP | A device consisting of a gland nut and sealing member designed to seal around a single jacketed cable, providing an environmental seal. |
| CABLE SHIELDING CLAMP | A connector accessory device consisting of a sealing member and cable support designed to terminate the shield of the electrical cable at the connector. |

| | |
|----------------------------|---|
| CABLE SUPPORT SLEEVE | A flexible accessory or a part of a component placed around the cable to minimize flexing of the cable at the point of entry into the component. |
| CANTILEVERED CONTACT | A spring contact in which the contact force is provided by one or more cantilevered springs. |
| CAPACITANCE | That property of a system of conductors and dielectrics, that permits the storage of electricity when potential differences exist between the conductors. Its value is expressed as the ratio of the electrostatic charge on a conductor to the potential difference between the conductors required to maintain that charge. |
| CAPACITIVE COUPLING | The electrical interaction between two conductors caused by the capacitance between them. |
| CAPACITIVE REACTANCE | The opposition of capacitance to alternating current, equal to the reciprocal of the product of the angular frequency of the current times the capacitance. Symbol: X_C The imaginary part of impedance due to capacitance. |
| CAPTIVE DEVICE | A multi-part fastener, usually screw-type, whose components are retained without separation when loosened from its base assembly. |
| CAPTIVE DEVICE-FASTENERS | A fastener, usually screwtype, whose components are retained without separation when loosened from its base assembly. |
| CAPTIVE HARDWARE | Hardware, that is held in place by some mechanical means |
| CARD EDGE CONNECTOR | A connector designed to have a printed wiring board inserted into the connector, to make contact with the printed wiring on the board. |
| CAVITY | The lengthwise opening in a printed circuit edge connector that receives the printed circuit board. (also see CONTACT CAVITY) |
| CENTER-TO-CENTER SPACING | The nominal distance between the centers of adjacent features on any single layer of a printed board. |
| CERTIFICATION | Verification that specified training or testing has been performed, and required proficiencies or parameter values have been attained. |
| CHAMFER | The angle on the inside edge of barrel entrance of a connector that permits easier insertion of the cable into the barrel. |
| CHARACTERISTIC IMPEDANCE | The ratio of voltage to current in a propagating wave, i.e., the impedance that is offered to this wave at any point of the line. (In printed boards its value depends on the width of the conductor, the distance from the conductor to ground planes, and the dielectric constant of the media between them.) |
| CIRCULAR CONNECTOR | A connector that is basically circular and has a mating face with a basically circular periphery. |
| CIRCUMFERENTIAL CRIMP | A type of crimp where the crimping dies completely surround a barrel resulting in a symmetrical reshaping of the barrel. Some circumferential crimps are oval, hexagonal, circular, etc. |
| CIRCUIT | The interconnection of a number of electrical elements and/or devices performing a desired electrical function. |
| CIRCUIT LAYER | A layer of a printed board containing conductors, including ground and voltage planes. |
| CIRCUMFERENTIAL SEPARATION | A crack or void in the plating extending around the entire circumference of a platedthrough hole, in the solder fillet around the lead wire, in the solder fillet around an eyelet, or at the interface between a solder fillet and a land. |
| CLAD | A condition of the base material to which a relatively thin layer or sheet of metal has been bonded to one or both sides, i.e., a metal clad base material. |
| CLADDING, FIBER | That part of a fiber, that concentrically surrounds the core of the fiber and has a lower refractive index than the core. |
| CLADDING, METAL | A method of applying a layer of metal over another metal whereby the junction of the two metals is continuously welded. |
| CLEARANCE HOLE | A hole in the conductive pattern larger than, but coaxial with, a hole in the printed board base material. |
| CLIP | A resilient device, that deflects on mating to produce a connection. |
| CLIP CONNECTION | A connection made by a clip. |
| CLIP POST | A termination to accept a clip connection. |
| CLOCKING | The arrangement of connector inserts, jack-screws, polarizing pins/sockets, keys/keyways, or housing configurations to prevent the mismatching or cross mating of connectors. |
| CLOSED CRIMP BARREL | A crimp barrel with a closed shape before crimping. |
| CLOSED END SPLICE | A splice, open at one end only, designed to terminate two or more conductors. (See SPLICE) |
| CLOSED ENTRY | A design that limits the size of mating parts to a specified dimension. Usually used in reference to pin and socket contacts. |
| CLOSED ENTRY CONTACT | A socket or contact cavity design in which the insert or body of the connector limits the size or position of the mating contact or printed wiring board to a predetermined maximum dimension. |
| COATING, FIBER | That part of the fiber that surrounds the cladding and provides physical protection from exposure to the atmosphere. |

| | |
|----------------------------------|---|
| COAXIAL CONSTRUCTION | The construction of a connector, contact, or cable with an inner conductor surrounded by a dielectric that in turn, is enclosed in an outer conductor that also acts as a shield. A protective jacket usually covers the outer conductor of a cable and also acts as an insulator. Compare to Triaxial. |
| COEFFICIENT OF THERMAL EXPANSION | The incremental linear dimensional change of a material per unit change in temperature, usually expressed as parts per million or in inches per inch per degree. |
| COINED | The pressure forming into a particular shape of a conducting material or conducting metal alloy. |
| COLD FLOW | Permanent deformation of material due to mechanical force or pressure (not due to heat softening). |
| COLD WELD | A weld achieved by pressure only, without electrical current or elevated temperature. |
| COLD WORK | Hardening and embrittlement of metal due to repeated stress action. |
| CODING | A system for the identification of components, wires, contacts, materials, tools and related devices by means of color. |
| COMPATIBLE CONNECTORS | A feature set that results in connectors being intermountable, intermatable and of identical performance. |
| COMPLIANT PRESS-IN TERMINATION | A press-in termination having a compliant press-in section. |
| COMPRESSION RING | A separate ring, within the backshell assembly, that is chamfered to provide an environmental seal by compressing the rear grommet. |
| COMPONENT | An individual part or combination of parts that, when interconnected, perform a design function(s). |
| COMPONENT ELEMENT | An identifiable part of a component, that is an assembly of individual elements. In the case of a connector the component elements are the individual parts of the connector assembly, such as the contacts, insulator body, shell, etc. |
| COMPONENT HOLE | A hole used for attachment and electrical connection of component terminations, including pins and wires, to the printed board. |
| COMPONENT MOUNTING | The act of attaching a component to a printed board, or the manner in which it is attached, or both. |
| COMPONENT MOUNTING ORIENTATION | The direction in which the components on a printed board or other assembly are lined up electrically with respect to the polarity of polarized components, or with respect to one another. |
| COMPONENT PIN | A component lead that is not readily formable without damage. |
| COMPONENT SIDE | The primary side of a singlesided assembly. |
| COMPOSITE CONNECTOR | A connector, that has its structural shell, constructed of either reinforced polymeric materials, metal matrix composite materials, or combinations of polymeric resins and non-polymeric materials used in lieu of what would ordinarily require an allmetal shell. The connector may or may not have a conductive element, component and/or finish. |
| COMPRESSION CONNECTOR | A connector crimped by an externally applied force; the conductor is also crimped by such force inside the tube-like connector body. Compression connectors are in very intimate contact with the two ends of the conductors being spliced. |
| COMPRESSIVE STRENGTH | The maximum compressive stress a material is capable of sustaining. For materials that do not fail by a shattering fracture, the value is arbitrary, depending on the distortion allowed. |
| CONCENTRICITY | In a wire or cable, the degree to which the location of the geometric center of the conductor coincides with the geometric center of the surrounding insulation. |
| CONCENTRIC CONTACT | A set of coaxial contacts providing independent circuits through a single mechanical assembly. |
| CONDITIONING | Time-limited exposure of a test specimen to a specified environment(s) prior to testing. |
| CONDUCTANCE (G) | The reciprocal of resistance. It is the ratio of current (I) passing through a material to the potential difference (V) at its ends. The measure of a materials ability to conduct electric charge. The real part of the complex representation of admittance. |
| CONDUCTIVE FOIL | A thin sheet of metal that may cover one or both sides of a base material and is intended for forming the conductive pattern. |
| CONDUCTIVE PATTERN | The configuration or design of the conductive material on the base material. (This includes conductors, lands, vias, heatsinks, and passive components when these are an integral part of the printed board manufacturing process.) |
| CONDUCTIVITY | The ability of a material to conduct electric current. It is expressed in terms of the current density (J) per unit of applied electric field (E). It is the reciprocal of resistivity. |
| CONDUCTOR | An electrical currentcarrying material; the conductive element in an electrical wire. |
| CONDUCTOR STOP | A device or design feature on a terminal, splice, contact, or tool, which correctly positions the conductor on the conductor barrel. |
| CONDUCTOR PULL-OUT FORCE | Same as CONDUCTOR TENSILE FORCE |

| | |
|-------------------------------|--|
| CONDUCTOR TENSILE FORCE | The force required to destroy a termination by separating a conductor from its terminal end by exerting an axial pull. |
| CONDUIT ADAPTER | An accessory to secure a connector to a conduit. |
| CONFIGURATION | Specific configuration and arrangement of contacts in a multiplecontact connector. |
| CONFINED CRESCENT CRIMP | A crimp that remains within the OD of the original barrel. It is usually identified by two crescent-shaped forms on the top and bottom of the wire barrel crimp. |
| CONFORMAL COATING | An insulating protective coating that conforms to the configuration of the object coated, usually applied to the complete PC board assembly. |
| CONNECTION | A physical interface between conductors and/or contacts to provide an electrical path. |
| CONNECTION SLOT (IDC) | The specially shaped opening in an insulation displacement termination suitable to displace the insulation of a wire and to insure a gas-tight connection between the termination and the conductor(s) of the wire. |
| CONNECTOR | A component used to provide rapid connect/disconnect service between electrical wire, cable, fiber, and printed wiring boards, and configured to properly terminate to these elements. |
| CONNECTOR AREA | That portion of printed wiring used for the purpose of providing external electrical connections. |
| CONNECTOR ASSEMBLY | A connector with attached accessories as it exists in the final assembly on a system; e.g., connector with backshell, cable clamp, contacts, and dust cover. |
| CONNECTOR BLOCK | A connector housing. |
| CONNECTOR BODY | A connector, less its contacts, termination elements, and accessories required to make a complete connector assembly. |
| CONNECTOR, EDGE CARD | A connector into which the edge of a printed wiring card is inserted so as to make electrical contact with conductive traces located on the circuit board. |
| CONNECTOR, ELECTRICAL | A device, either a plug or a receptacle, that is used to terminate individual electrical conductors, and provides a means to continue the conductors to a mating connection device. |
| CONNECTOR FRONT | The side of a connector that is the mating face. |
| CONNECTOR, HERMAPHRODITIC | A connector that has features enabling it to be mated with an identical connector. |
| CONNECTOR HOUSING | The part of a connector into which the insert and contacts are loaded. |
| CONNECTOR INSERT | An insulating element designed to support and position contacts in a connector housing. |
| CONNECTOR INSERTION LOSS | The loss of power due to insertion of a mated connector into a cable. |
| CONNECTOR INTERFACE | The two surfaces of mating connectors that face each other when mated. |
| CONNECTOR MATED SET | A particular combination of mating connectors. |
| CONNECTOR MODULE | A family of connector inserts that are uniform in external dimensions, but have the ability of each accepting different types of contacts or having different contact densities or configurations. |
| CONNECTOR, PLUG | An electrical connector, intended to be attached to the free end of a conductor, wire, cable bundle, or a printed circuit board that couples or mates to a receptacle connector. |
| CONNECTOR REAR | The wiring side of a connector. |
| CONNECTOR, RECEPTACLE | An electrical connector, generally mounted or installed onto a fixed structure such as a panel, electrical case or chassis, that couples or mates to a plug connector. |
| CONNECTOR, RIGHT ANGLE | A connector that is generally mounted onto a printed wiring board and whose contacts are inserted into a matching pattern of plated through holes in the circuit board and soldered in place. |
| CONNECTOR SET, ELECTRICAL | Two or more separate plug and receptacle connectors designed to be mated together. The set may include mixed connectors mated together, such as one plug connector and one dummy receptacle connector, or one receptacle connector and one dummy plug connector. |
| CONNECTOR SHELL | The case that encloses the connector insert and contact assembly. Shells of mating connectors can protect projecting contacts and provide proper alignment. |
| CONNECTOR SHIELD | A cable outlet specifically designed to terminate the cable braid and provide shielding to electromagnetic interference. |
| CONNECTOR STYLE | A particular connector within a type, e.g., rectangular, circular, trapezoidal. |
| CONNECTOR TERMINATION ELEMENT | The component element (part) that connects the individual contacts to the conductors being terminated in the connector. Usually an integral part of the contact elements. |
| CONNECTOR TYPE | Connector with a particular sub-family, e.g. edgeboard connector, a mated set comprising a board mounted connector and its counterpart, etc. |
| CONNECTOR, UMBILICAL | An electrical connector, used to connect a cable to a vehicle such as an aircraft or rocket, that is mated prior to or during initial movement or launching of the vehicle, and unmates during launch. |
| CONNECTOR VARIANT | Variation within a connector type and style or within a group of related connectors, e.g. number of contacts, polarization, terminations, etc. |

| | |
|--|---|
| CONTACT | The conductive or transmissive element in a connector that makes actual contact with a similar conductive or transmissive element in a mating connector for the purpose of transferring energy. |
| CONTACT ALIGNMENT | A requirement for overall side play that contacts shall have within the insert cavity so as to permit self alignment of mated contacts. Sometimes referred to as amount of contact float. |
| CONTACT ACTIVE AREA | See "Contact Area". |
| CONTACT AREA | The area in contact between two conductive elements through which electrical current flow can take place. |
| CONTACT ARRANGEMENT | The number, spacing and arrangement of contacts in a connector. |
| CONTACT BACK WIPE | An actuated contact surface where a contact travels on the surface of its mating contact during the actuation cycle then moves back to a clean wiped surface at the completion of the actuation or engagement cycle. |
| CONTACT, BLADE | A contact that is a flat broad contact whose width is significantly larger than it's thickness with a lead in chamfer. It is designed to mate with a socket and receptacle contact. |
| CONTACT CAVITY | A defined hole in the connector body itself into which the contact must fit. |
| CONTACT CHATTER | Connector ohmic discontinuities. |
| CONTACT DURABILITY | Endurance measured by the number of mating insertions and withdrawal cycles that a connector withstands while remaining within its specified performance levels. |
| CONTACT, ELECTRICAL | The electrically conductive element in a connector or other device that mates with a corresponding element to provide an electrical path or circuit. |
| CONTACT ENGAGING AND SEPARATING FORCES | Forces resulting from engaging or separating individual contacts with either the mating contact or gauge pins, also referred to as individual insertion and withdrawal forces. |
| CONTACT EXTRACTION FORCE | The axial force required to extract a removal contact from a component. |
| CONTACT FLOAT | The overall side-to-side play, axial movement, and/or angular displacement of contacts within the insert cavity. |
| CONTACT FORCE | The normal force (90 degrees) that exists between engaged contact surfaces. Frequently misidentified as contact pressure. |
| CONTACT, HERMAPHRODITIC | An electrical contact that has features that enable it to be mated with an identical contact. |
| CONTACT INSERTION and REMOVAL FORCES | The force required to insert or remove a contact from its housing with or without the aid of insertion or removal tools. |
| CONTACT INSPECTION HOLE | A hole in the cylindrical rear portion of a contact used to check the depth to which a wire has been inserted. |
| CONTACT LEAD-IN | A chamfered or flared portion of a socket or receptacle contact to facilitate insertion of a pin contact. |
| CONTACT LENGTH | Length of travel made by one contact in contact with another during assembly or disassembly of a connector. Sometimes called Contact Mating Length. Also see Wiping Action |
| CONTACT, PIN | A diametrical contact designed to mater with a socket or receptacle contact. May be hollow or solid, rigid contact. |
| CONTACT PLATING | The deposit of metal applied to the basic contact metal surface to provide the required contact-resistance and/or wear resistance. |
| CONTACT POSITIONS | In most connectors the maximum number of contacts that can be actively engaged. In edge connectors the number of contact positions along the length of the connector, as opposed to the total number of contacts. Also see Readout. |
| CONTACT, POST | A square contact designed to mate with a socket or receptacle contact. It is a solid structure. |
| CONTACT RESISTANCE | The electrical resistance of a pair of engaged contacts. Resistance may be measured in ohms or as a voltage drop at a specified current through the engaged contacts. |
| CONTACT RETAINER (CLIP) | A device either on the contact or in the housing that retains the contact in an insert or body. |
| CONTACT RETENTION | The provision or means in an electrical connector by which the contacts are retained. The ability of a connector to retain contacts. |
| CONTACT RETENTION FORCE | The axial load in either direction that a contact can withstand without being dislodged from its normal position within an insert or body. |
| CONTACT SHOULDER | The flanged portion of the contact that limits its travel into the insert. |
| CONTACT SIZE | Either a single number designator based on the AWG size number most closely corresponding in Circular Mil Area (CMA) to the CMA of the pin contact set, or a double number designator, similarly based whereby the first number corresponds to the CMA of the pin contact, and the second number corresponds to the max wire size accommodated by the contacts termination barrel |
| CONTACT, SOCKET | A contact having an engagement end that will accept entry of a pin contact with the point of electrical contact on the inside diameter of contact. |
| CONTACT SPACING | The distance between the centers of contacts within an insert. |

| | |
|------------------------------------|---|
| CONTACT SPRING | The spring placed inside the socket type contact to force the pin into a position of positive intimate contact. Depending on the application, various types are used, including leaf, cantilevers, napkinring, squirrel cage, hyperbolic and chinese finger springs. All of these types perform the function of aiding in wiping and establishing good contact. |
| CONTACT WIPE | The distance a contact travels on the surface of its mating contact during engagement or separation. |
| CONTACT WIRE RANGE | The size of conductors accommodated by a particular conductor barrel. |
| CONTINUOUS CURRENT RATING | The designated RMS alternating or direct current that the connector can carry continuously under specified conditions. |
| CONVENTIONAL CRIMPED CONNECTION | A connection achieved by the action of inducing crimp indentations to a ferrule that encircles one or more conducting elements. |
| COPPER ALLOY | An alloy in which copper is the predominant element. Generally, the addition of sulfur, lead, or tellurium improves machineability. Cadmium improves tensile strength and wearing qualities. Chromium gives very good mechanical properties at temperatures well above 200 degrees C. Zirconium provides hardness, ductility, strength, and relatively high electrical conductivity at temperatures where copper, and common high conductivity copper alloys tend to weaken. Nickel improves corrosion resistance, while silicon offers much improved mechanical properties. Beryllium, when present in copper alloys, permits maximum strength, while about 0.5% content offers high conductivity. |
| CORE, FIBER | The center region of the fiber that has a higher refractive index than the cladding surrounding it, and through which the optical signal passes. (See FIBER OPTICS) |
| CORROSION | The contamination/destruction of the surface of a metal by chemical reaction. |
| COUPLING, BAYONET, CYLINDRICAL | A coupling mechanism utilizing spiral ramps in one cylindrical connector half to engage projections in the mating half so as to provide jacking and locking together of the mating halves through limited rotation of the coupling ring. |
| COUPLING, BREECH | A coupling mechanism that distributes the coupling load over large solid metal engaging and locking lands for positive coupling alignment and complete connector mating with a limited rotation of the coupling ring. |
| COUPLING, QUICK DISCONNECT | A design feature that permits relatively rapid joining and separation of mating parts. |
| COUPLING RING | That portion of a connector housing that, by rotation, aids in the mating, captivation or unmating of the plug to the receptacle connector. |
| COUPLING, SELFLOCKING | A device that contains means to automatically ensure that a threaded coupling remains connected, to prevent any accidental decoupling during vibration and/or shock. A selflocking connector is intended to be connected easily, but be more difficult to disconnect. |
| COUPLING TERMINATION | Connection in which a metal sleeve is secured to a conductor by mechanically crimping the sleeve with pliers, presses, or automated crimping machines. |
| COUPLING, THREADED | A coupling mechanism utilizing matching screw threads for mating and unmating of cylindrical connectors or other devices. |
| COUPLING, THREADED SELFLOCKING | A coupling mechanism utilizing matching screw threads for mating and unmating of cylindrical connectors or devices incorporating automatically actuated locking mechanism to prevent the coupling ring from disengaging under vibration conditions. |
| COUPLING TORQUE | The force required to rotate a coupling ring or jackscrew when engaging a mating pair of connectors. |
| COUPLING TRIPLE START, SELFLOCKING | A coupling mechanism using a triple start thread for quick connector mating with one full turn of the coupling ring. |
| COVER, DUST | A covering device or material used during storage and transit to protect connectors, harnesses or assemblies against dust and other foreign matter. It may be of a design that attaches to a connector (see COVER, PROTECTIVE) or may completely envelop a connector, harness or electronic assembly. |
| COVER, PROTECTIVE | An accessory used to cover the mating portion of a connector for mechanical, environmental and/or electrical protection. |
| CREEP | The dimensional change with time of a material under load, following the initial instantaneous elastic deformation; the time-dependent part of strain resulting from force. Creep at room temperature is sometimes called cold flow |
| CREEP DISTANCE | The shortest distance on the surface of an insulator separating two electrically conductive surfaces. |
| CREEPAGE | The conduction of electricity across the surface of a dielectric. |
| CRIMP | The physical compressing or reshaping of a conductor barrel or ferrule around a conductor, with mechanical force, and cold welding, to provide good electrical and mechanical attachment. |

| | |
|---------------------------|---|
| CRIMP-AND-POKE | The mechanism of crimping a wire (CRIMP) into the termination barrel of a single contact of a removable pin/socket connector and inserting (AND POKE) the contact into a prescribed contact cavity in the connector body. |
| CRIMP ANVIL (NEST) | The portion of a crimping die that supports a barrel or ferrule during crimping. |
| CRIMP BARREL | A conductor barrel designed to accommodate one or more conductors and to be crimped by means of a crimping tool. |
| CRIMPED CONNECTION | A connection made by crimping |
| CRIMP CONTACT | A contact designed to have a particular size (or range of sizes) of wire crimped into its termination, and not designed to have a wire soldered in place. |
| CRIMP INDENTER | That portion of the crimping die that indents or reshapes the barrel or ferrule. |
| CRIMP INSPECTION HOLE | A hole in the conductor barrel to permit visual inspection of conductor position. |
| CRIMP POT ADAPTER | A sleeve that fits around the stripped conductor and allows for a small wire to fit into a large gauge crimp pot. |
| CRIMP TENSILE STRENGTH | The axial force required to separate the wire from the crimped conductor barrel. The wire may pull out of, or break in, the crimped area of the conductor barrel. |
| CRIMPER | That part of the crimping die, usually the moving portion that indents or compresses the terminal barrels. Also called the Indenter. |
| CRIMPING | A method of permanently attaching a termination to a conductor by pressure deformation or by reshaping the termination barrel around the conductor to establish good electrical and mechanical connection. |
| CRIMPING ZONE | That portion of a crimp barrel where the crimped connection is achieved by pressure deformation or reshaping of the barrel around the conductor. |
| CRIMP TERMINATION | Connection in which a metal sleeve is secured to a conductor by mechanically crimping the sleeve with pliers, presses, or automatic crimping machines. Splices, terminals, and multi-contact connectors are typical terminating devices attached by crimping. Suitable for all wire types. |
| CRIMPING CHAMBER | Area of a crimping tool, formed by mating the anvil (nest) and the crimper (indenter), in which a contact or terminal is crimped. |
| CRIMPING DIES | That portion of a crimping tool that compresses and reshapes the conductor barrel or ferrule to form the crimp. |
| CRIMPING TOOL | The device used to perform a crimp. |
| CROSS CONNECTOR | A connector that joins two branch conductors to the main conductor. The branch conductors are opposite to each other and perpendicular to the main conductor. |
| CROSS CRIMP | A crimp that shapes the terminal by pressing the top and bottom of the terminal barrel without confining the sides. |
| CROSSED WIRE | A technique of measuring contact resistance that eliminates all resistances but the resistance of the contact point. |
| CROSSTALK | The phenomenon in which a signal transmitted on one wire of a cable of a transmission system is detectable in an adjacent wire: also known as bleed through. Any undesired energy appearing in one signal path as a result of coupling from other signal paths. |
| CROSSTALK RATIO | The ratio of the signal coupled (induced) into the quiet signal conductor or conductor pair to the magnitude of the signal in the driven conductor or conductor pair. Both signals shall have the same units of either voltage or current, and the ratio may be expressed as percent or dB. |
| CURRENT (I) | The rate of transfer of electricity, usually expressed in amperes. |
| CURRENT CARRYING CAPACITY | The maximum current an insulated conductor can safely carry without exceeding its insulation and jacket temperature limitations. |
| CURRENT RATING | The maximum current which a device is designed to conduct for a specified time at a specific temperature. |
| CUTOUT, CONNECTOR | A hole or group of holes cut in a panel, case, or chassis for the purpose of mounting a connector. |
| DEAD FACE | The term which describes the various methods to protect contacts when not engaged. The most common method uses a cover on the mating ends of connectors that automatically covers the contacts when the connectors are separated. Typical is a spring powered cover that automatically flips over the faces of the plug and/or receptacle when the two are separated. |
| DEAD FRONT | Mating face of a connector designed so that the contacts are recessed below the surface of the connector insulator body to prevent accidental short circuiting of the connector. |

| | |
|---------------------------------|--|
| DECIBEL (dB) | <p>The decibel is a logarithmic unit used to express ratios of power and voltage. The logarithmic ratio of power:</p> $I_{dB} = 10 \log_{10} \left(\frac{I_1}{I_0} \right) \text{ or } P_{dB} = 10 \log_{10} \left(\frac{P_1}{P_0} \right)$ <p>The logarithmic ratio of voltage:</p> $V_{dB} = 20 \log_{10} \left(\frac{V_1}{V_0} \right) \text{ or } F_{dB} = 20 \log_{10} \left(\frac{F_1}{F_0} \right)$ |
| DEPOSITION | Process of applying a material to a base via vacuum, chemical, electrical, screening, or vapor methods. |
| DEPTH OF CRIMP | The distance the crimp die indenter indents the conductor barrel or ferrule. |
| DIELECTRIC | A material having electrical insulating properties. |
| DIELECTRIC BREAKDOWN | The voltage required to cause an electrical failure or breakthrough of the insulation. |
| DIELECTRIC STRENGTH | The voltage that an insulating material can withstand before breakdown occurs, usually expressed as a voltage gradient (such as volts per mil). Also called electric strength and disruptive gradient. |
| DIELECTRIC WITHSTANDING VOLTAGE | The voltage that an insulating material can withstand, under specified circumstances before breakdown occurs. It is usually expressed as a minimum voltage or a voltage gradient such as volts per mil. |
| DIFFERENTIAL IMPEDANCE | The impedance between the positive input and the negative input, irrespective of the impedance to ground. |
| DIFFERENTIAL MODE VOLTAGE | (1) The instantaneous algebraic difference between the potential of two signals applied to the two sides of a balanced circuit. Also called metallic voltage in the telephone industry. (2) The instantaneous algebraic difference of two signals applied to a balanced circuit, where both signals are referred to a common reference. |
| DIFFERENTIAL SIGNAL | (1) The instantaneous, algebraic difference between two signals. (2) A signal that is conveyed between two separate conductors, instead of one active conductor and signal ground. The magnitude of the differential signal is the difference between the two signals, rather than the voltages between the two individual signals and ground. |
| DIFFERENTIAL VOLTAGE SIGNAL | The voltage difference between the true and complementary signals from a driver with two single-ended outputs whose signals always complement each other. Differential signals are also referred to as "balanced signals". |
| DIMENSIONAL STABILITY | A measure of dimensional change caused by such factors such as temperature, humidity, chemical treatment, age or stress, usually expressed as a units/unit. |
| DIN CONNECTOR | A connector specified by the DIN 41612 specification. Developed by the German Institute For Standardization, and the Association of German Engineers. Widely used internationally for computer backpanel/plug-in circuit card applications. |
| DISCONNECT | A conductive device designed to be separated from its mated part. |
| DIP SOLDER | The process of making electrical connections, usually to a printed circuit board, by the use of dipping one side of the board into molten solder, thus soldering the projecting component leads to the circuitry printed on the board. |
| DIP SOLDER CONTACTS | A contact with a termination intended to be bath-soldered. |
| DIP SOLDER TERMINAL | The terminals (termination elements) on a connector that are inserted into holes in the printed circuit board and then soldered into place. |
| DRIVE SIGNAL | For the time domain method, the drive signal is a step wave form. For the frequency domain method, the drive signal is sinusoidal. |
| DUMMY CONNECTOR | A connector receptacle housing that does not have provisions for attaching conductors. It is generally used for storage of a cable assembly connector plug. |
| DUMMY CONNECTOR, PLUG | A connector device designed to mate with a receptacle connector so as to perform protective, environmental and/or electrical shorting functions. |
| DUMMY CONNECTOR, RECEPTACLE | A connector device designed to mate with a plug connector so as to perform protective, environmental, and cable and harness routing/fitting and storage functions. |
| DUST COVER | See COVER, ELECTRICAL CONNECTOR |
| DYNAMIC GAP | The minimum distance between opposing contacts in an edgeboard connector when a PC board is rapidly removed. |
| EDGEBOARD CONNECTOR | A connector into which the edge of a printed board is inserted to make direct contact to edgeboard contacts. |
| EDGEBOARD CONTACT | A series of contacts printed on or near any edge of a printed board and intended for mating with any edge connector. |

| | |
|------------------------------------|---|
| EDGE CONNECTORS | One-piece - connector that mates directly with PC board by slipping over and gripping the board edge. Connection is made between spring contacts in connector and tabs or contact strips on the PC board. PC board acts as half of the connector. |
| PRINTED CIRCUIT | |
| EFFECTIVE PRESS-IN LENGTH | The length of contact between the press-in section of a press-in termination and the metal plating of the plated-through hole in a printed board in that the press-in termination is inserted. |
| EFFECTIVE WRAPPING LENGTH | That portion of a wrap post suitable and available for the application of the wrapped connection. |
| ELASTOMER | A family of plastics often used in connectors. Any elastic, rubberlike molded plastic such as fluorosilicone or Neoprene that deforms slightly under pressure to act as a seal. |
| ELECTRICAL CONNECTOR | A mechanical coupling device that can be engaged or disengaged at will and includes one or more electrical contact elements that provides a path or multiple paths for the conduction of electrical current. |
| ELECTRICAL ENGAGEMENT LENGTH | The distance a contact travels on the surface of its mating contact during engagement or separation. |
| ELECTROLESS DEPOSITION | The deposition of conductive material from an auto-catalytic plating solution without application of electrical current. |
| ELECTROMAGNETIC INTERFERENCE (EMI) | Interference from unintentionally radiating electric sources like motors, diathermy equipment, etc. |
| ELECTROPLATING | The electrodeposition of an adherent metal coating on a conductive object for protection, decoration, or other purposes. |
| ELECTROTINNING | Electroplating tin on an object. |
| ENCAPSULATING | Enclosing an article in an envelope of plastic or other similar material. |
| END TAIL | The final portion of the last turn of wire in a wrapped connection that extends beyond the last corner contact. |
| ENGAGEMENT INDICATORS | Marks that indicate when a connector is fully engaged. |
| ENVIRONMENTAL CONNECTOR | A connector provided with means for protection against moisture, temperature or contaminants. |
| ENVIRONMENTAL SEAL | A device that is provided with gaskets, seals, grommets, potting or other means to keep out moisture, dirt, air or dust that might reduce its performance. An environmental seal is not designed to exclude EMI/RFI. |
| ENVIRONMENTALLY SEALED | The provision or characteristic of a device that enables it to protect against the entry of moisture, fluids, and foreign, particulate contaminants that could otherwise affect the performance of the device. |
| EXTRACTION TOOL | A device used for removing removable contacts (designed to be reusable/replaceable) from their retaining cavity or mechanism. |
| EYELET | A terminal or tab that is pierced or a closed hook shape, that provides a good mechanical as well as an electrical connection. |
| EYE PATTERN | An oscilloscope display of synchronized pseudo-random digital data (signal amplitude versus time), showing the superposition of accumulated output waveforms |
| FACE SEAL | The design feature that fills the voids between the faces of plug and receptacle when they are fully engaged. This feature provides an environmental seal between the faces of the plug and receptacle and also increases the dielectric between contacts. |
| FAR END CROSSTALK RATIO (FEXT) | The crosstalk ratio calculated on the quiet line at or in proximity to the receiving (destination) end of the driven line. This is the ratio of the far end quiet line signal amplitude to the near end driven line signal amplitude. |
| FEED-THRU | A connector, terminal block, or terminal device having conductive elements accessible from opposite sides of an insulator, or a partition for termination or connection with mating devices. |
| FEMALE CONCENTRIC | A concentric or triaxial contact where the outer contact is female and the center contact(s) may be male or female. |
| FEMALE CONTACT | A contact intended to make electrical engagement on its inner surface and that will accept entry of a male contact. |
| FERRULE | (1) A short tube used in the rear of a crimp contact to reduce its diameter, to allow the use smaller wire in the contact cavity. (2) A sleeve or tube used in coaxial connectors and contacts for the termination of the shield(s). (3) A sleeve of tube in some fiber optic connectors for the termination of the strength members. |
| FIBER OPTIC CABLE | A single or group of optical fibers enclosed by a common protective jacket and usually including a strength member. |
| FIBER OPTICS | See TIA Fiber Optic Glossary, (http://www.tiaonline.org/resources/telecom-glossary) |

| | |
|-------------------------------|--|
| FILLER | A material used to fill the voids in a cable. A filler can be used to maintain the shape of the cable, to maintain the watertight integrity of the cable, or to protect the internal components of the cable (e.g., wires or fibers). |
| FILTER CONTACT | A contact with an integrated filter element included to discriminate against certain frequencies. |
| FIREPROOF CONNECTOR | A connector capable of withstanding flame of a specified temperature for a specified period of time. |
| FIREWALL | A firewall is a fireproof barrier used to prevent the spread of fire between or through a structure. |
| FIRE ZONE | An area that contains flammable material and may also include a source of ignition; e.g. an engine compartment. |
| FIRST MAKE | The first conductive element to make physical electrical contact when two connector halves or a socket and an electrical component are physically mated together. |
| FIXED CONNECTOR | A connector for attachment to a rigid surface. |
| FIXED CONTACT | A contact that is permanently included in the insert material during molding. |
| FLAG | (1) A tongue extending from the side of a hermetic contact onto that a wire is soldered. (2) A rectangular tab used in some lug type applications. |
| FLAG TERMINAL | A terminal having a tongue or body projecting at 90 degrees from the side of the terminal barrel. |
| FLANGE, CONNECTOR | A projection extending from or around the periphery of a connector for the purpose of attaching the connector to a rigid surface or mating connector. |
| FLANGED SPADE TONGUE TERMINAL | A slotted tongue terminal having the ends of the tongue formed up or down to the tongue plane, so as to form a degree of protection against the terminal slipping out from under its captive hardware. |
| FLASH | A thin film of material formed at the sides of a forging, casting, or molded part where some of the material is forced out between the faces of the forging dies of the mold halves. Also the excess metal extruded between both halves of crimping dies when making certain circumferential or symmetrical crimps. Also a thin deposit of plastic material usually at the base of molded-in pins. |
| FLASH PLATING | The application of extremely thin deposits of a plating material for environmental protection or as a base for a subsequent layer of plating material. |
| FLAT CABLE | Any cable with two smooth or corrugated but essentially flat surfaces. |
| FLAT CABLE CONNECTOR | A cable designed specifically to terminate flat cable. May be designed for flat conductor flat cable, or round conductor flat cable. |
| FLEX DAMAGE | Damage usually occurring where a cable enters the housing, which is caused by the sharp bending of the cable. A flex relief restricts the concentration of flexing forcing the cable to bend over a wider arc. |
| FLEXIBLE PRINTED WIRING | A random arrangement of printed wiring utilizing flexible base material with or without flexible cover layers. |
| FLEXURAL STRENGTH | The strength of a material in bending expressed as the tensile stress of the outermost fibers of a bent test sample at the instant of failure. |
| FLOATING BUSHING | A design feature that aids in the alignment of plug and receptacle shells during engagement. The floating bushing generally is an eyelet type bushing that is fitted into the plug mounting holes so that there is freedom of movement in all directions between the plug and receptacle. |
| FLOAT MOUNTING | A fixed connector with mounting means permitting limited movement to facilitate alignment with the mating connector. |
| FOLLOWER | A sleeve used to compress the grommet, thus tightening the seal around the wire entering the connector. |
| FORCE, CONTACT ENGAGING | The force required to fully engage a pair of contacts. |
| FORCE, CONTACT RETENTION | The minimum allowable force that, if applied axially in either direction on a contact, does not displace the contact permanently from its normal position in the connector or jeopardize or damage the contact retention provision. |
| FORCE, CONTACT SEPARATION | The force required to separate a pair of fully mated contacts. |
| FORCE, INSERTION RETENTION | The minimum allowable force that, if applied to the mating face of a connector insert, does not displace the insert permanently from its normal position in the connector housing or jeopardize or damage the insert or connector housing retention provision. |
| FRAME | In the case of a multiple contact connector having a removable body or insert, the frame is the surrounding portion (usually metal) that supports the insert and permits a method for mounting the connector to a panel or mating connector half. |
| FREE CONNECTOR | A connector for attachment to the free end of a wire or cable. |
| FREE COUPLER CONNECTOR | A connector that mates with a free connector in a cable-to-cable application. |
| FRESNEL REFLECTIONS LOSSES | Losses incurred at the terminus interface due to refractive index differences. |

| | |
|----------------------------|--|
| FRETTING CORROSION | A condition where slight movement between mated surfaces occurs, continually exposing fresh metal. As the freshly exposed metal oxidizes, the oxidation builds up until electrical continuity is broken. |
| FRONT MOUNTED | A connector mounted with its mounting flange positioned in front of the mounting surface when looking at the mating face or front side of the connector. |
| FRONT RELEASE CONTACTS | Connector contacts that are released with a tool from the front side of the connector and then removed from the back (wiring side) of the connector. The removal tool engages the front portion of the contact and pushes it out the back where it is removed by hand. |
| FULL CYCLE CONTROL | Controls placed on the crimping cycle of crimping tools forcing the tool to be closed to its fullest extent, forcing completion of the crimping cycle before the tool can be opened. |
| FUNNEL ENTRY | Flared or widened entrance to a terminal or connector wire barrel that offers easier conductor insertion, and assurance that all wire strands are directed into the wire barrel. |
| GAGE | A term used to denote the physical size of a wire. Also spelled gauge. |
| GALLING | Forcible mechanical erosion of material, usually in the coupling mechanism, that can cause connectors to become cold welded or corroded together. |
| GANG DISCONNECT | A connector that permits the rapid and simultaneous disconnection of two or more electrical circuits. |
| GAS TIGHT | A contact system that utilizes soft metals at low contact pressure or hard metals at high contact pressure so that the mating metals are upset and the resultant joint seals and prevents contaminant gases from entering the contact area. |
| GAS-TIGHT AREA (wrap post) | The part of the contact area formed at the corners of the post that are not affected by gases under specified conditions. |
| GENERAL PURPOSE | A connector designed to have multiple uses, and to be low cost; nonapplication specific. |
| GOLD | A very malleable, ductile, high conductivity, yellow metal, that is impervious to most chemicals. This metal is commonly used as a surface plating for contact to enhance contact performance and provide a surface that is impervious to most environmental contaminants. |
| GRID SPACED CONTACTS | Contacts in a multiple contact connector which are spaced in a geometric pattern. |
| GROOVE | Slot or cavity in a connector that bears directly on the cable. Also the depression in a crimping die that holds the connector during crimping. |
| GROMMET | An elastomeric or plastic sealing device that supports and protects terminations and wires/cables from adverse mechanical and environmental conditions. |
| GROMMET FERRULE | A part of a component or accessory used to compress the grommet and/or reduce the transmission of torque to the grommet. |
| GROMMET NUT | A part of a component or an accessory used to retain the grommet or grommet and follower. |
| GROMMET WIRE RANGE | The range of diameters of wire insulation accommodated by a grommet. |
| GROUNDING CONDUCTOR | A conductor that provides a current path from an electrical device to ground. |
| GROUND (GRD) | A conducting connection between an electrical circuit and the earth or other large conducting body to serve as an earth, thus making a complete electrical circuit. |
| GUIDING BLOCK | A specially shaped part of a component that guides/inserts the wires into the slots and can also be used to correctly position the two halves of a connector to ensure proper mating. |
| GUIDE PIN | A pin or rod extending beyond the mating faces of a connector designed to guide the mating of the connector that works to ensure proper alignment and engagement of the contacts. |
| GUIDE SOCKET | A socket or hole in a connector designed to accept a guide pin of a mating connector and thereby position and guide the connectors during mating so as to ensure proper engagement of the contacts. |
| GUSSET | The transition between the terminal tongue and the conductor barrel. |
| HARDWARE | Hardware usually means shells, guide pins, polarizing pins, strain relief clamps, mounting screws, etc. |
| HARNESS | A group of wires or cables routed together with or without attached components and secured in a manner to provide a preshaped electrical wire or cable assembly. |
| HEAD ASSEMBLY | A positioner designed to attach to a crimping tool in place of a turret head. |
| HEADER | A header is a feedthrough device that introduces a conductive path(s) through a panel or other planar surface. |
| HEAT DISTORTION | The deformation of a material due to the application of heat. |
| HEAT ENDURANCE | The time of heat exposure a material can withstand before failing a specific physical test. Heat endurance is an important consideration during oven or vapor phase soldering of terminations. |
| HEAT SOAK | Heating a circuit over a period of time to allow all parts of the package and circuit to stabilize at the same temperature. |
| HERMAPHRODITIC CONNECTOR | A connector in which both mating members are exactly alike at their mating face. There are no male or female members. |

| | |
|-------------------------------|---|
| HERMAPHRODITIC CONTACT | A contact design that is neither pin nor socket and which mates with other contacts of the same design. e.g., tuning fork, brush contact, butt contact, etc. |
| HERMETIC CONNECTOR | A connector that has its contacts bonded in place, usually with fused glass, which permits a pressure differential to be placed across the connector without it leaking or bypassing. |
| HERMETIC SEAL | Hermetically sealed connectors are usually multiple contact connectors where the contacts are bonded to the connector by fused glass or other material and permit a maximum leakage rate of 1.0 micron ft. per hour. |
| HERTZIAN | Calculation of weight distributed over a cross sectional area (point of contact) in ksi or MPa. |
| HERTZIAN STRESS | Stress expressed in pounds per square inch, or equivalent, that is developed during the elastic deformation phase of establishing contact. The stress is a result of normal force and the geometry of the contact and the modulus of elasticity of the contact material. |
| HIGH ORDER MODE | A propagation path that makes a relatively large angle with respect to the fiber axis. |
| HOLDING STRENGTH | Ability of a connector to remain assembled to a cable when under tension. |
| HOOD | A shroud or enclosure attached to and surrounding a connector. |
| HOOK TONGUE TERMINAL | A terminal with a hook shaped tongue. |
| HOOP STRESS (wire wrap) | The tension in the wire induced by the wrapping operation and maintained by the wire being locked on the corners of the post. |
| HOT-LINE CLAMP | A connector that may be installed or removed by means of an insulated stick while the conductor is energized. Also called Live-Line Connector. |
| HOUSING, ELECTRICAL CONNECTOR | The portion of a connector into which the insert is assembled. Also called shell. |
| HOUSING SEAL | A seal provided between the housings to prevent the ingress of moisture and contaminants into the interior of connectors when mated. |
| HYGROSCOPIC | Capable of absorbing moisture from the air. |
| IMMERSION PLATING | The chemical deposition of a thin metallic coating over certain base metals by a partial displacement of the base metal. |
| IMPEDANCE | <p>It offers to the flow of alternating current or to any other varying quantity. It is a combination of resistance (R) and reactance (X), measured in ohms (Ω). The equation for impedance as a function of s-parameters is:</p> $Z_L = \omega L = 2\pi f L$ <p>where,</p> $Z = Z_0 \left[\frac{1 + s_{11}}{1 - s_{11}} \right] = R + jX = Z_0 \left[\frac{(1 + \rho)}{(1 - \rho)} \right]$ <p>Z = total impedance Z_0 = characteristic impedance of the transmission line S_{11} = input impedance ρ = (See Reflection Coefficient)</p> |
| INCLUSION | A foreign particle in the conductive layer, plating, or base material. |
| INDENTER | The part of a crimping tool, usually the moving part, which compresses indentations into the contact conductor barrel. |
| INDUCTANCE | The property of a circuit or circuit element that opposes a change in current flow. Inductance causes current changes to lag behind voltage changes. Inductance is measured in henrys. |
| INDUCTIVE REACTANCE | <p>The opposition of inductance to alternating current, equal to the product of the angular frequency of the current times the self-inductance. Symbol: X_L The imaginary part of the impedance due to the inductance. The equation for inductive reactance is:</p> $X_L = \omega L = 2\pi f L$ <p>where:</p> <p>X_L = is the inductive reactance, measured in ohms ω = is the angular frequency, measured in radians per second f = is the frequency, measured in hertz L is the inductance, measured in henries</p> |
| INFRARED (IR) | Radiation energy with a wavelength longer than that of visible light used for surface mount reflow heating/soldering. |
| INHIBITOR | A material that prevents or delays oxidation and galvanic action on a connector surface or the interface of different conductors. |
| IN-LINE | A receptacle connector designed not to be mounted, usually used in extension cord applications. |
| INSERT, ELECTRICAL CONNECTOR | The insulating element of a connector that supports and positions the contacts. |
| INSERT ARRANGEMENT | The number, spacing, and arrangement of contacts in a connector. |
| INSERT CAVITY | A defined hole in the connector insert into which the contacts are inserted. |

| | |
|-------------------------------------|--|
| INSERT RETENTION | Axial load in either direction that an insert must withstand without being dislocated from its normal position in the connector shell. |
| INSERTION LOSS | The power loss in a transmission cable assembly or system caused by the installation of a component such as a connector, splice, or coupler; typically measured in decibels (dB). It includes losses incurred by the specimen and mismatch losses at the input and output of the specimen. When the impedance of the specimen matches that of the specimen environment impedance "insertion loss" = "attenuation". |
| INSERTION TOOL | A device used to insert contacts into a connector. |
| INSPECTION HOLE | A hole located in the contact barrel that permits inspection to determine that the conductor is properly located before crimping and that the conductor is properly located after crimping, thus ensuring a proper termination. |
| INSULATED TERMINAL | A terminal having its conductor barrel and insulation support, if any, covered with a dielectric material. |
| INSULATION | Material having a high resistance to the flow of electric current, that is used to prevent leakage of current from a conductor. |
| INSULATION BARREL | The part of a terminal end that accommodates but does not secure the cable insulation. |
| INSULATION BARRIER | A raised or recessed configuration of the insulator to increase creepage distance between conducting surfaces. |
| INSULATION CRIMP | The physical reshaping of an insulation sleeve to close or compress around the wire insulation. |
| INSULATION DISPLACEMENT CONNECTOR | A mass termination connector for flat cable with contacts that displace the conductor insulation to establish simultaneous contact with all conductors. |
| INSULATION DISPLACEMENT CONNECTION | A solderless electrical connection made by inserting a single wire into a precisely controlled slot in a termination such that the sides of the slot displace the insulation and deforms the conductor of a solid wire or strands of stranded wire to produce a gas-tight connection |
| INSULATION DISPLACEMENT TERMINATION | A termination designed to accept a wire for the purpose of establishing an insulation displacement connection. |
| INSULATION GRIP | That portion of an insulation barrel that, when closed or compressed around the conductor insulation, makes contact with and provides support for the insulation on the cable. |
| INSULATION PIERCING | A crimping method in which lances pierce wire insulation, enter into the strands and make electrical contact without stripping the insulation. |
| INSULATION PIERCING TERMINAL | A terminal having a barrel with a design that displaces the wire insulation and makes contact with the enclosed conductor. |
| INSULATION RESISTANCE | The ratio of the applied voltage to the total current between two electrodes in contact with a specific insulation, usually expressed in megohms per 1000 feet. |
| INSULATION SUPPORT | That portion of a barrel, similar to an insulation grip, except it is not meant to be compressed around the conductor's insulation. |
| INTERCHANGEABLE | A component is interchangeable when it meets the original performance specifications and is intermountable. In the case of connectors, interchangeability applies only to connector mated sets, since individual connectors are not necessarily intermountable. |
| INTERCONNECTING CABLE | The wiring between modules, units or other parts of the system. |
| INTERCONNECTION | Mechanically joining devices together to complete an electrical circuit. |
| INTERFACE | The two surfaces on the contact side of mating connectors or plugin component (e.g., relay) and receptacle, that face each other when mated. |
| INTERFACIAL GAP | Any gap between the faces of mated inserts. |
| INTERFACIAL CONNECTION | A conductor that connects conductive patterns on opposite sides of a PC board or other base. May be accomplished with a plated through-hole. |
| INTERFACIAL JUNCTION | The junction that is formed by the faces of two mating halves of a connector. This junction can be tightly compressed or loose, depending upon the requirements of the application of the connector. |
| INTERFACIAL SEAL | Sealing of a twopiece connector over the whole area of the interface to provide environmental sealing around each contact. This is usually done by providing a soft elastomeric insert material that comes under compression when both halves of the connector are in their fully mated position. |
| INTERLAYER CONNECTION | An electrical connection between conductive patterns in different layers of a multilayer printed circuit board. |
| INTERMATEABLE CONNECTOR | A connector that is capable of being connected electrically and mechanically to another connector, but without regard to its performance and intermountability. |
| INTERMOUNTABLE | Two connectors are intermountable when their mechanical mounting parameters are identical without regard to intermountability or interchangeability. |
| INTRACONNECTIONS | The joining of elements within devices. |

| | |
|--------------------------------|---|
| ISOLATION STANDARD | A reference fixture without a test sample and with identical crosstalk characteristics as the test fixture. This fixture may or may not be part of the test board. |
| JACK | A panel mounted coaxial connector receptacle. A connector to mate with a telephone plug. |
| JACKET | The material that is the external environmentally protective covering for a cable, used to protect all internal components. |
| JACKSCREW (Screwlock) | A screw attached to one half of a connector pair used to draw and hold both halves together. Sometimes also used also to separate the connector halves. |
| JACKSOCKET | The mating threaded device into that the jackscrew engages to hold two connector halves together. |
| JITTER | The difference between the earliest and latest times at which a signal crosses a specified reference voltage level. |
| JUMPER | An electrical connection between two points on a printed board added after the intended conductive pattern is formed. |
| KEY | A projection on a connector that engages a keyway in a mating connector so as to guide the connector halves during mating |
| KEYING | A mechanical arrangement of guide pins and sockets, keying plugs, contacts, bosses, slots, keyways, inserts or grooves in a connector housing, shell, or insert that allows connectors of the same size and type to be lined up without the danger of making a wrong connection. |
| KEYING PLUG CONTACT | A component that is inserted into the cavity of a connector housing or insert to assure engagement of identically matched components. |
| KEYWAY | A slot or groove into which a key slides. |
| LANYARD | A device attached to certain connectors that permit uncoupling and separation of connector halves by a pull on a wire or cable. |
| LANYARD RELEASE | A plug that is designed to be separated from a receptacle by an axial pull of an attached lanyard without damage to the plug or receptacle. Most often used where quick release is required. |
| LAP JOINT | The juncture of two conductors placed side by side so that they overlap. (See PARALLEL SPLICE and SPLICE) |
| LASER SOLDERING | A selective soldering technique employing a programmable laser system. The laser soldering system is effective for high volume selective soldering of wire wrapping pins to backplanes, powerplanes and PC boards. |
| LAST BREAK | The last conductor to lose physical contact when two connector halves or a socket and an electrical component that have been previously mated, are physically separated from one another. |
| LEVEL OF INTERCONNECTION | The connection point between components (tubes, transistors, IC packages) and the PC board or chassis. |
| LIFE CYCLE | A test that indicated the time span before failure; the test occurs in a controlled, usually accelerated environment. |
| LIVE-LINE CONNECTOR | A connector that may be installed or removed by means of an insulated stick while the conductor is energized. |
| LOADBREAK CONNECTOR | A connector designed to close and interrupt current on energized circuits. |
| LOCATOR | That part of the crimping die, positioner or turret head that places the terminal, splice or contact in the correct crimping area of the crimping tool or die. |
| LOCKING DEVICE | A feature incorporated in certain components to provide mechanical retention of their mating parts. |
| LOCKING SPRING | A spring device either on the contact or installed within the connector insert whose purpose is to retain the contact in the insert. |
| LONGITUDINAL INDENT | An indent shape where the longest dimension is in line with the connector barrel. |
| LOOP INDUCTANCE (L_{Loop}) | <p>The inductance of two or more conductors in which the current flows into one conductor and returns through the other(s). The loop is defined as the current path inscribed by the 'drive' and 'return' path in the conductors.</p> $L_{Loop} = L_1 + L_2 - (2 * L_m)$ <p>where: L_1 = self inductance of the driven conductor L_2 = self inductance of the return path conductor(s) L_m = mutual inductance between the drive and return path conductors</p> |
| LOSS | Energy dissipated without performing useful work. A decrease in power suffered by a signal as it is transmitted from one point to another. (Transmission loss) |

| | |
|-------------------------------------|--|
| LOW INSERTION FORCE (LIF) | A connector whose inherent design calls for the plug to need an insertion (mating) force that is less force than normal for usual designs of that type of connector. For example, if a connector design normally requires 16 lbs. of mating force, then a 4 lb. force would be considered low (LIF), an arbitrary term for most applications. |
| LOW INSERTION FORCE SOCKET (LIF) | A socket in which the contact surfaces normally touch as they are mated and demated. Values are generally established as a force below one Newton (0.225 pound) per contact, but greater than zero Newtons (0 pounds). |
| LOW LEVEL CIRCUIT | An open circuit voltage of 20mV or less. |
| LOW LEVEL CIRCUIT RESISTANCE (LLCR) | This term indicates the contact resistance characteristics of a contact system under conditions where applied voltages (≥ 20 mv) and currents (low milliamp range) do not alter the physical contact interface. Sometimes referred to as "Dry Circuit" conditions |
| LOW ORDER MODE | A propagation path that makes a relatively small angle with respect to the fiber axis. |
| LUG | (See TERMINAL) |
| MALE CONCENTRIC | A concentric or triaxial contact where the outer contact is male: and the center contact(s) may be male or female. Also referred to as a triaxial contact. |
| MASS TERMINATION | Method of termination in which terminals that pierce flat cable insulation without stripping, mate with enclosed conductors to form gas tight metal to metal connections. |
| MATE | The joining, engaging, connecting or coupling of two connectors or devices designed to be utilized together. |
| MATING FACE | See Interface. |
| MATING HARDWARE | A mechanical device that fastens connector halves together. |
| MATING or UNMATING FORCES | The force required to fully engage or separate a plug connector to and from a receptacle connector including the effect of coupling, locking or similar operations. It is the resulting force of all of the contacts assembled to their housings. |
| MATRIX | One of two component materials that make up a composite. The other is commonly referred to as the reinforcement. It can be a metal, resin, or ceramic material. It holds the reinforcement together to enable the transfer of stresses and loads to the reinforcements. |
| MAXIMUM OPERATING TEMPERATURE | The maximum ambient temperature at which a connector will operate continuously within specified performance levels. |
| MEASUREMENT SYSTEM RISE TIME | Rise time measured with the fixture in place, without the specimen, and with filtering (or normalization). Rise time is typically measured from the 10% to 90% level. |
| METAL-TO-METAL BOTTOMING | In cylindrical bayonet connectors, metal-to-metal bottoming is the situation in which the shell surface of the receptacle bottoms (contacts) the inside rear portion of the mating plug. This is achieved by an adjustable ring on the collar of the plug. |
| METERED SOLDER CUP | A solder cup contact partially preloaded with solder before assembly of the connector. |
| MICROBENDING | A random unintentional microscopic bend of a fiber usually caused by compressive or bending forces applied to the cable or fiber. (See FIBER OPTICS) |
| MIGRATION | The movement or sliding of some metal plating, from one location to another. It is felt that this results from a plating action in the presence of moisture and an electrical potential. |
| MISMATCH, CONNECTOR IMPEDANCE | Terminal or connector having different impedance than that for which the circuit or cable is designed. |
| MODIFIED WRAPPED CONNECTION | A connection achieved by wrapping a solid conductor around a post in the normal manner with the wire insulation also wrapped around at least three corners of the post. |
| MODULAR | A modular connector is one in which similar or identical sections can be assembled together to provide the best connector configuration for the application. |
| MOSQUITO CLIP | A formed copper alloy element, cylindrical in form with converging spring fingers which is pressed into a single contact element barrel and termination tail assembly. The resultant assembly forms an individual contact element which when combined with similar contact elements, all contained in prescribed contact cavities in a socket insulator body, makes up a complete multi-contact socket assembly. |
| MOTHERBOARD | A printed board used for interconnecting arrays of plug-in electronic modules. |
| MOTHERDAUGHTER BOARD CONNECTOR | A board mounted connector designed for interconnection of other printed circuit boards. |
| MOUNTING FLANGE | A projection from a component for the purpose of attaching the component to a rigid surface. |
| MOUNTING HARDWARE | A mechanical device that mounts connector assemblies to a piece of equipment or circuit board. |
| MOUTH | Cable entrance of a connector barrel. |
| MOLD, POTTING | An accessory used as a form for containing the potting compound around the terminations of a connector. (See BOOT) |
| MULTILAYER PRINTED CIRCUITS | Electric circuits made on thin copper-clad laminates, stacked together with intermediate insulation and other circuit sheets, bonded together with heat and pressure. Subsequent drilling and electroplating through the layers result in a three dimensional circuit. |

| | |
|--|---|
| MULTIMODE FIBER | A fiber capable of propagating more than one mode of a given wavelength. (See FIBER OPTICS) |
| MULTIPLE CONDUCTOR CABLE | A combination of two or more conductors gathered together and insulated from one another and from the sheath or armor where used. |
| MUTUAL INDUCTANCE (Lm) | The common property of two electric conductors whereby a voltage (electromotive force) is induced across one conductor by a change of current in the other conductor. |
| MUTUAL INDUCTANCE COUPLING COEFFICIENT (Km) | The measure of degree of magnetic coupling between two conductors. It is a unitless parameter and is defined as follows: |
| NEAR END CROSSTALK RATIO (NEXT) | The crosstalk ratio calculated on the quiet line at or near the sending (signal source) end of the driven line. |
| NEOPRENE | Common name for polychloroprene. A material most often used as a cable jacketing compound. |
| NEST | The portion of a crimping die that supports the barrel during crimping. |
| NICK | A cut or notch in a conductor's strands or insulation. |
| NON-ACCESSIBLE INSULATION DISPLACEMENT TERMINATION | An insulation displacement termination in which it is not possible to access test points for carrying out mechanical tests (e.g. transverse extraction force) and electrical measurements (e.g. contact resistance) without deactivation of any design features intended to establish and/or maintain the insulation displacement connection. This is mainly true when the insulation displacement connection is enclosed in a component. |
| NONCONTAMINATING COMPOUND | A compound material that will not leach ingredients, so as to contaminate or degrade adjacent materials under given environmental conditions. |
| NON-REUSABLE INSULATION DISPLACEMENT TERMINATION | An insulation displacement termination that can only be used once. |
| NON-WATERTIGHT CABLE | A cable that contains no intentionally installed internal water blocking materials. |
| NONWETTING | A condition whereby a surface has contacted molten solder, but has had none of the solder adhere to it. |
| NORMAL FORCE | The force on a contact member perpendicular to the contact interface plane. |
| NORMAL INSERTION FORCE SOCKET (NIF) | A socket in which the contact surfaces touch as they are mated and demated. Values are generally established as a force above one Newton (0.225 pound) per contact. |
| "O" CRIMP | An insulation support crimp for open barrel terminals with a crimped form resembling an O. It conforms to the shape of round wire insulation. |
| O-RING | A doughnut-shaped ring of rubber used as a seal around the periphery of the mating insulator interface of cylindrical connectors. |
| OFFGASSING | De-aeration or other gaseous emissions from a device (printed circuit board, component or connector) at ambient or higher pressure when exposed to higher than ambient temperature. |
| OFFSET TONGUE TERMINAL | A terminal whose tongue is forward of its barrel and whose stud hole is offset from the centerline of the conductor barrel. |
| OHMIC CONTACT | A contact between two materials across which the voltage is the same regardless of the direction of the current flow. |
| OPEN BARREL TERMINAL | A terminal with an open conductor and/or insulation barrel that is designed to be crimped around a conductor or wire. |
| OPEN ENTRY CONTACT | A socket type contact, unprotected from possible damage or distortion from a test probe or other wedging device. |
| OPERATING INTERFACE | The surface at which a connector is normally separated. |
| OPERATING TEMPERATURE (AMBIENT) | The maximum environment temperature that a device may function on a continuous basis. |
| OPERATING TEMPERATURE (INTERNAL) | The maximum internal operational temperature capabilities of a connector in continuous service. |
| OPERATING WAVELENGTH | The optical wavelength (often expressed in nanometers) at which the system is intended to operate. |
| OPTICAL FIBER | A fiber is a single discrete optical transmission element usually composed of fiber core, fiber cladding and coating. |
| OPTICAL LINK | A fiber optic cable system consisting of assembled cables, connector, penetrators, couplers and splices used to interconnect electro-optical devices (e.g., sources and detectors) in a system. |
| ORIENTATION | A system providing alternative polarization to prevent cross-mating of similar components when, used on the same equipment. |
| OUTGASSING | De-aeration or other gaseous emission from a device (printed circuit board, component, or connector) when exposed to reduced pressure, heat, or both. |
| OUTLET NUT | An accessory that secures the cable outlet to the body of the connector. |
| OVERSHOOT | That portion of the electrical signal that goes over or past the specified target level during the process of a signal excursion. |
| OXIDATION | The addition of oxygen to a metal to form oxides (rust, etc.). |
| PANEL | The structure or surface to which a device is mounted. |

| | |
|---------------------------------------|--|
| PANEL CUT OUT | A hole or group of holes cut in a panel or chassis for the purpose of mounting a component. |
| PANEL MOUNT | A connector designed to be mounted in or on a panel. Term is most often associated with flanged connectors. |
| PANEL SEAL | A seal provided between a component and a panel. |
| PARALLEL SPLICE | A device for joining two or more conductors in which the conductors lie parallel and adjacent. (See LAP JOINT and SPLICE) |
| PASSIVE INTERMODULATION (PIM) | PIM is an unwanted signal or signals generated by the non-linear mixing of 2 or more frequencies in a passive device such as a connector or cable. For more information describing the effects of nickel plating on PIM visit http://www.amphenolrf.com/simple/PIM%20Paper.pdf |
| PATH | That portion of a printed circuit that carries current between two pads or between a pad and the terminal area (printed contact, edge pad) |
| PENDANT | The type of plug or receptacle that is not mounted in a fixed position or attached to a panel or side of equipment. |
| PERIPHERAL SEAL | A design feature that provides an environmental seal between the forward end of plug and forward end of the receptacle even though they are not fully engaged. It generally consists of a piece of rubber fastened around the inner sidewall of the receptacle front opening skirt or around the outer sidewall of the plug engagement section. |
| PHOSPHOR BRONZE | An alloy of copper tin and phosphorus that is resistant to corrosion and used for contact springs in switches and relays. |
| PHOTODIODE | A semiconductor device, used in fiber optic systems, to convert light energy to electrical energy. |
| PIGTAIL | A conductor or wire extending from an electrical or electronic device to serve as a connection. |
| PIGTAIL, FIBER | A short length of optical fiber permanently attached to an optical emitter, photodiode or connector. It is used to couple power between the optoelectronic component and the transmission fiber. |
| PIGTAIL, WIRE | A short wire extending from an electric or electronic device to serve as a jumper or ground connection. |
| PIN DENSITY | The quantity of pins on a component per unit area. |
| PITCH | The nominal distance from center to center of adjacent conductors or contacts. |
| PLASTIC DEFORMATION | Change in dimensions under load that is not recovered when the load is removed. |
| PLASTICS | High polymeric substances, including both natural and synthetic products (not including rubber) that are capable of flowing under heat and pressure conditions at one time or another. |
| PLATED THROUGH-HOLE | A hole formed by the deposition of metal on the sides of the hole and on both sides of the base to provide electrical connection from the conductive pattern on one side to that on the opposite side of the printed circuit board. |
| PLATING | The overlay of a thin coating of metal on metallic components to prevent rusting or corrosion, sometimes also used to improve conductance, or to provide for easy soldering. |
| PLATING ANODE | Usually a pure form of the metal being used as the plating material, with the cathode being the work-piece being plated. |
| PLATING VOID | The area of absence of a particular metal from a specific cross sectional area. |
| PLATINUM | Platinum is a contact material that provides low and consistent surface resistances. It is used in the moving contacts of ultra sensitive relays, thermostats, and potentiometers. Other metals are added to this precious metal to create alloys with higher mechanical wear resistance. Platinum sometimes can be used to replace gold in the plating of electrical contacts and other metal parts. It is resistant to corrosion and film formation. |
| PLUG | The part of a connector system that is free to move when not interconnected. In the case of a wire to wire, fiber to fiber, or cable to cable connector systems and board to board connector systems, the plug is the portion of the system that will insert contacts into the receptacle body. The contacts can be either pins or sockets. |
| PLUG CONNECTOR | An electrical connector intended to be attached to the free end of a conductor, wire, cable or bundle that couples or mates to a receptacle connector. |
| PLUG, SEALING | An accessory used to fill open, nonwired cavities in a connector grommet so as to prevent the entry of moisture, fluids or foreign particulate contaminants. |
| POINT OF ELECTRICAL CONTACT | The position of application of the force that provides electrical contact. |
| POKE HOME CONTACT | Term applied to a male or female contact to which a wire has been permanently attached prior to the assembly of the contact into the insert. |
| POLARIZATION | The arrangement or orientation of connector inserts, jackscrews, polarizing pins/sockets, keys/keyways, or configurations to prevent the mis-mating or cross mating of connectors. |
| POLARIZING PIN, SOCKET, KEY OR KEYWAY | Devices incorporated in a connector to accomplish polarization. |
| POLARIZING SLOT | A slot at the edge of a printed circuit board used to assure proper insertion and location in a mating edgeboard connector. |

| | |
|-----------------------------|--|
| POLYIMIDE | A class of high temperature thermoplastic resins offering a wide range of physical and mechanical properties including high resistance to oxidation degradation, weathering, radiation, and all strong chemicals except strong bases; resistant to abrasion and frictional wear; and with mechanical and electrical properties that can be retained during continuous use at 480 °F in free air. |
| POSITIONER | A device that is attached to a crimping tool and locates the contact in the correct position for crimping. |
| POSITIVE LOCK | A type of latch or locking mechanism used to hold a die set in an installation tool, or an insert in a connector shell, used in such a way that the parts cannot be unlocked accidentally. Also describes retention of certain wire terminating contacts (tabs) used with edge or printed circuit connectors. |
| POST INSULATE | To insulate an electrical connection after assembly. |
| POTTING | The permanent sealing of the cable end of a connector with a compound or material to exclude moisture, dust, dirt, air and/or provide a strain relief. |
| POTTING CUP | An accessory that, when attached to the rear of a plug or receptacle, provides a pouring form for potting the wires and the wire entry end of the assembly. |
| POTTING MOLD | An item solid or split, designed to be used as a form into which a potting compound is poured or injected and allowed to cure or set to seal the back of the connector. The mold may or may not be removable after the potting cures. |
| PRECIOUS METAL | One of the relatively scarce and valuable metals - gold, silver, and the platinum group metals. |
| PRECIOUS METAL ALLOY | Metal alloys that contain a high percentage, by weight of the noble metals Gold (Au), Platinum (Pt), Palladium (Pd) and/or Silver (Ag). |
| PRESSURE DIFFERENTIAL | The difference in pressure between one side of a connector and the other as in a bulkhead mounting or the pressure difference between the inside and outside of a sealed connector. |
| PRESSURE-SLEEVE | A tubular elastomeric sleeve forming part of a cable clamp assembly. |
| PRE-INSULATE | To insulate an electrical connection before assembly. |
| PRE-INSULATED CRIMP BARREL | A crimp barrel with a permanent layer of insulation through which the crimp is made |
| PRE-INSULATED TERMINAL END | A terminal end having a barrel with a permanent layer of insulation through which a crimp is made. |
| PRE-TINNED | The application of solder to a contact, conductor, or other connecting device prior to soldering; the application of tin plating to the basis metal of connecting devices prior to fabrication. |
| PRE-TINNED SOLDER CUP | Solder cups with inner surfaces that have been pre-coated with a small amount of tin lead solder. |
| PRESS-FIT-CONTACT | An electrical contact that can be pressed into a hole in an insulator, printed board (with or without plated through-holes), or a metal plate. |
| PRESS-IN CONNECTIONS | A solderless electrical connection made by inserting a press-in termination into a plated-through hole of a printed board. |
| PRESS-IN SECTION | The specially shaped section of a press-in termination that is suitable to perform the press in connection operation. |
| PRESS-IN TERMINATION (POST) | A termination having a specially shaped section suitable to provide for a solderless press-in connection. |
| PRIMARY INSULATION | The layer of material that is designed to do the electrical insulating, usually the first layer of material applied over the conductor. |
| PRINTED CONTACT | A portion of a conductive pattern, formed by printing, serving as a contact surface for a connector. Also called Terminal Area or Pad. |
| PRINTED WIRING | A conductive pattern within or bonded to the surface of a base material intended for point to point connection of separate components and not containing printed components. |
| PRINTED CIRCUIT BOARD | An insulating board serving as a base for printed wiring and consisting almost entirely of point-to-point conductors and shielding. |
| PRINTED BOARD CONNECTOR | A connector specifically designed to facilitate connections to printed boards. |
| PROFILE STAMPED | The generation of a contact area and surface (bump, dimple, or other shaped protrusion) that is formed by using a mechanical stamping process. |
| PROGRAMMING | Ability to select various circuit patterns by interconnecting or jumping appropriate contacts on one side of a connector plug or panel. |
| PROPAGATION DELAY | (1) The time it takes for a signal to travel between two specified points of an interconnect system. (2) Time delay between input and output of signal usually measured in nanoseconds per foot of cable. |
| PROPAGATION TIME | Time required for a signal to travel between two points on a transmission line. |
| PULL-OFF CONNECTOR | A connector equipped with a pull off coupling mechanism. |
| PULL-OFF COUPLING | A coupling in which unlocking is achieved by an axial pull on the coupling ring. |

| | |
|------------------------------------|--|
| PULL OUT FORCE | The axial force required to remove a terminated conductor from its attached contact or terminal; the axial force required to remove a contact from its retention member. |
| PULSE RISE or FALL TIME | The time required for the electrical pulse to rise or fall between 10 percent and 90 percent of its steady state power 'on' or 'off' level. |
| PUSH-ON CONTACT | A contact with which a connection is achieved by axial force, with connection or separation being restricted by friction. |
| PUSH-PULL CONNECTOR | A connector having a push-pull coupling. |
| PUSH PULL COUPLING | A quick axial coupling device with self-locking and unlocking features. Unlocking is achieved by an axial pull on the coupling ring. |
| QUAD INDENT | An indenter configuration of a crimp tool producing four closely grouped indents on the connector barrel. |
| QUADRAXIAL (QUADRAX) | The construction of a connector, contact or cable with four insulated elements paired together with a common overall shield. (See COAXIAL and TRIAXIAL for comparison). |
| QUADRAX, KEYED | A quadraxial contact designed with a keying provision to prevent mis-orientation of mating contacts. Contact may be twinaxial in design with two shields (4 electrically isolated elements) or may have 4 electrically isolated contacts surrounded by a shield (5 electrical elements). (See TWINAXIAL for comparison.) |
| QUICK DISCONNECT CONNECTOR | A type of connector that permits the rapid coupling and uncoupling of mating halves. |
| RACK | A type of structure used to house electronic components that permits convenient removal of portions of the equipment. |
| RACK AND PANEL CONNECTOR | One of two mating fixed connectors intended to provide a connection between a unit and its mounting rack, which is usually provided with an alignment device to ensure correct mating. It normally has no coupling device and is mated by the movement between the unit and the rack (does not apply to the printed circuit boards). |
| RADIO FREQUENCY (RF) | The portion of the frequency spectrum lying between 40kHz and 200GHz. |
| RADIO FREQUENCY INTERFERENCE (RFI) | Usually electrical interference from intentionally emissive sources; e.g., radar, radio, etc. |
| RAM | The moving portion in the head of a crimping tool. |
| RANDOM EYE PATTERN | The eye pattern measured through the fixture without the test specimen. |
| RANGE | Number of sizes of connectors or cables of a particular type. |
| RANGE, WIRE | The designation of wire/conductor sizes that a given conductor barrel, ferrule, grommet or accessory will accommodate. |
| RATCHET CONTROL | A device to ensure the full crimping cycle of a crimping tool, preventing a partially crimped contact resulting from an incomplete crimp operation. |
| RATED TEMPERATURE | The maximum temperature at which an electric component can operate for extended periods without loss of its basic properties. |
| RATED VOLTAGE | The voltage at which an electrical component can operate for extended periods without loss of its basic properties. |
| REACTANCE | The opposition of inductance and capacitance to alternating current, expressed in ohms: equal to the product of the sine of the angular phase difference between current and voltage and the ratio of the effective voltage to the effective current. Symbolized by X and measured in ohms. Compare capacitive reactance and inductive reactance. |
| READ OUT | A term used with printed circuit boards and printed circuit connectors, meaning the ability to make contact with certain circuits. Example: a double readout printed circuit connector will permit two wires to be connected to any one circuit on the printed circuit board. |
| REAR INSERTIONFRONT RELEASE | The type of connector whose contacts are inserted from the rear, with the proper insertion tool, and released from the rear with the removal tool inserted from the face (front) of the connector. |
| REAR INSERTIONREAR RELEASE | The type of connector whose contacts are both inserted and removed from the rear of the connector with the proper tools. This does not require demating of the connector installation. |
| REAR RELEASE CONTACTS | Connector contacts that are released and removed from the rear (wire side) of the connector retention device. The removal tool engages the contact from the rear and pulls the contact out of the connector contact retainer. |
| REAR SEAL | That design feature that provides an environmental seal at the rear of plug or receptacle. It generally consists of rubber grommets that fit between the wire and sidewall of the insert cavities or consists of a flat sheet of rubber that fits between the back up of plate and insert and insert of plug or receptacle. This flat sheet of rubber is sometimes called family or group seal since it contains the same number of holes as the insert has cavities. It is through these holes that wires are threaded to the connector contacts. |

| | |
|--|--|
| RECEPTACLE | The part of a connector system that is fixed or stationary when not interconnected. The receptacle may be mounted to a rack, rail, panel, or printed wiring board. In the case of a wire to wire, fiber to fiber, or cable to cable flying connector systems and board to board connector systems, the receptacle is part of the system, that will capture the contacts within its body. The contacts can be either pins or sockets. |
| RECOMBINED | Process of recombining, spurs, runners and molding by-products (regrind) with original (virgin) materials to produce a final product certified to the original manufacturers specifications including fiber length and content. |
| RECTANGULAR CONNECTOR | A connector that is basically rectangular and has a basically rectangular mating face. |
| REFERENCE CORNER | That corner of the wrap post at which the insulated wire makes its first indentation and from which the number of wrapped turns is counted. |
| REFLECTION COEFFICIENT | <p>The reflection coefficient is the ratio of the reflected to incident voltages at any given point. The reflection coefficient is given by:</p> $\text{Gamma } (\Gamma) = \frac{V_{\text{reflected}}}{V_{\text{incident}}} = \frac{Z_L - Z_O}{Z_L + Z_O} = S_{11}$ <p>where: Z_L = is the fixture or specimen impedance Z_O = is the specimen environment impedance</p> <p>NOTE – In the time domain, the reflection coefficient symbol typically used is rho (ρ), while Gamma (Γ) is used for frequency domain measurements.</p> |
| REFLOW SOLDERING | Method of soldering where the solder joint is made by melting the solder pre-coated on the mating components |
| REGRIND | Grinding of spurs and runners or any by-product of the molding process. |
| RELUCTANCE | Property of a magnetic circuit that determines the total magnetic flux in the circuit when a given magnetomotive force is applied. |
| REMOVABLE CONTACT | A contact that can be mechanically joined or remove from an insert. Usually, special tools are required to lock the contact in place or remove it for repair or replacement. |
| REMOVAL TOOL | A device used to remove a contact from a connector. |
| RESILIENT CONTACT | A contact having elastic properties to provide a force to its mating part. |
| RESISTANCE | Property of a conductor that determines the current produced by a given difference of potential. The ohm is the practical unit of resistance, and the symbol R designates resistance in ohms. |
| RESTRICTED ENTRY | A design feature incorporated in a female contact or insulator to prevent the entry of an oversize pin or test probe. |
| RETURN LOSS | <p>The ratio in decibels (dB) of the power incident upon the impedance discontinuity to the power reflected from the discontinuity. The equation for return loss calculated from the reflection coefficient is:</p> $\text{Return Loss} = 20 \log_{10} \left \frac{1}{S_{11}} \right $ |
| RETURN MECHANISM | A device of a crimping tool to return the tool to the full open position when the crimping operation is completed. |
| REUSABLE INSULATION DISPLACEMENT TERMINATION | An insulation displacement termination that can be used more than once. |
| RF CONNECTOR | Connectors used for connecting or terminating radio frequency cable; usually coax, but maybe triaxial or waveguide. |
| RIBBON CABLE | A cable of individually insulated round conductors lying parallel and coplanar, being held together by means of films, adhesives, woven textile yarn, or molded insulation material. |
| RIGHT ANGLE CONNECTOR | A connector in which the axis of the cable outlet or termination connections are at a right-angle with the axis of the mating face. |
| RIGHT ANGLE EDGE CONNECTOR | A connector that is mounted along an edge of, and soldered to, the circuits of a printed circuit board. Contacts of the connector are oriented at a right angle to the termination pins soldered into the printed circuit board, allowing the circuit board to be plugged into a mother board or wired backpanel rack. |
| RING-TONGUE TERMINAL | A terminal having a roundend tongue with a hole to accommodate a screw or stud. |
| RISE TIME | The time required for a voltage step to occur, measured between its initial value and final value, typically from 10% to 90% levels. |

The increase in rise time to a theoretically perfect (zero rise time) voltage step when the specimen is inserted in the transmission path. The formula used to calculate the rise time degradation for Gaussian signals from 10% to 90% is as follows:

$$\text{Rise time degradation} = \sqrt{(\text{measured rise time})^2 - (\text{measured system rise time})^2}$$

RISE TIME DEGRADATION

| | |
|---|---|
| ROSIN FLUX | The mildest and least effective of solder fluxes (Type R). To increase rosin flux efficiency, small amounts of organic activating agents are added. Type RA, fully activated rosin flux, is the flux most commonly used for electrical connections. |
| SAFETYING | The feature of connector design that permits safety wiring of plug and/or receptacle to prevent loosening or a plug vibrating free from a receptacle. |
| SCATTERING PARAMETERS (S-PARAMETER), S_{11} , S_{12} , S_{21} , S_{22} | <p>S_{11} is the reflection coefficient at the input port of the device under test, defined as the ratio of the reflected voltage to incident voltage.</p> <p>S_{12} is the reverse transmission coefficient (isolation), The 12 is derived from the signal appearing on the input port (port 1) from signal applied to the output port (port 2).</p> <p>S_{21} is the forward transmission coefficient (gain), S_{21} are signals on the output (port 2) of the device under test, resulting from signals applied to the input (port 1).</p> <p>S_{22} is the output reflection coefficient as defined by the ratio of the incident voltage to the reflected voltage.</p> <p>The above S-parameters are for single ended systems. S-parameters are frequency dependent, and are by default normalized to 50 ohms. There are additional parameters for differential systems.</p> |
| SCREW LOCK | (See JACKSCREW) |
| SCRIBE-AND-CLEAVE | A technique to prepare fibers for termination in which fibers are lightly scribed, then pulled apart to produce cleavage perpendicular to the fiber axis. |
| SCOOP PROOF (SCOOP-PROOF) | A design feature whereby exposed contacts of a connector cannot be inadvertently touched or damaged by any portion of the mating connector. |
| SCREW MACHINE CONTACTS | A contact made by screw machine operations. |
| SEAL, INTERFACIAL | A seal provided at the interface of a connector designed to prevent fluids or other contaminants from entering the connector contact area. |
| SEALED CONNECTOR | A connector employing a seal capable of fulfilling specified gas tightness requirements. |
| SEALING | The ability of a component to resist the ingress of contaminants. |
| SEALING PLUG | A plug that is inserted to fill an unoccupied contact aperture in a connector insert. Its function is to seal unoccupied apertures in the insert, especially in environmental connectors. |
| SECONDARY INSULATION | A nonconductive material whose prime functions are to protect the conductor against abrasion or other mechanical degradation and provide a second electrical barrier, placed over the primary insulation. |
| SELECTIVE PLATING | The application of plating to a limited portion of a connector contact, especially those areas susceptible to wear. |
| SELF-ALIGN | Design of two mating parts so that they will engage in the proper relative position. |
| SELF INDUCTANCE | The inductance of a single conductor. |
| SERRATION | Alterations of the inside surface of a conductor barrel to provide better gripping of the conductor, or on the outside of a connector housing, to provide better gripping of the connector; protrusions on the rear of a connector housing for positive orientation of accessories. |
| SERVICE LIFE | The period of time that a device is expected to perform satisfactorily. |
| SERVICE RATING | The maximum voltage or current conditions of which a connector or electrical device is designed to function continuously at a specified temperature. |
| SHANK | Cylindrical or rodlike portion of a connector or contact. |
| SHELL | The outside case of a connector into which the insert and the contacts are assembled. |
| SHIELD, ELECTRICAL CONNECTOR | A device placed around that portion of a connector that is used for attaching wires or cables so as to both shield against electromagnetic interference and/or protect the connector wires or cable from mechanical damage. |
| SHIELDED CONNECTOR | A connector designed to prevent the radiation of electromagnetic interference to and from the internal conductor(s). |
| SHIELDED CABLE | One or more wires enclosed within a conductive shield to minimize the electrical interference effects of internal or external circuits. |

| | |
|--------------------------------|---|
| SHIELDING | The metal sleeving surrounding one or more of the conductors, in a wiring circuit to prevent interference, interaction or current leakage to an adjacent wire. Usually grounded, the shielding is carried through the connector shell or through a special internal shell in the case of individual coaxial contacts. |
| SHORE HARDNESS | A procedure for determining the permanent indentation hardness of a material by means of durometer. Shore designation is given to tests made with a specified durometer measuring instrument. |
| SHRINK FIT CONNECTOR | A type of connector in which the contact between the conductor and the connector contact is made by a shrink fit. |
| SHROUD, INSULATION | A part of a connector or device that provides physical protection to otherwise exposed contacts or terminals. |
| SINGLE HOLE MOUNTING | A method of mounting a component that has a shoulder and a captivating device, and installed through a single hole in a panel. |
| SIZING TOOL | A tool simulating a specified maximum size male contact or a specified minimum size female contact. |
| SKEW | The difference in propagation delay between two signal paths. |
| SKID-WASHER | A washer sometimes fitted between a clamp-nut and a pressure-sleeve, to reduce the transmission of torque to the pressure-sleeve. |
| SLEEVE | A socket contact that is simply a conductive tube. Sleeves do not contain pin grips or any other amendments and are usually used with split pins. |
| SLOTTED TONGUE TERMINAL | A terminal, having a bifurcated tongue, that allows attachment to a screw or stud without removal of the mounting hardware. |
| SNAP-ON | Used to describe the easy removal or assembly of one part to another. Example: certain connectors are provided with snap-on plastic covers to permit quick and convenient installation. |
| SNAP-ON CONTACT | A push on contact in which retention is achieved by means of a deformation of the contact area that provides positive axial location. |
| SOCKET | A connector intended to mate with a plugin device such as tubes, relays, transistors, microcircuits, etc. |
| SOCKET or RECEPTACLE CONTACT | A contact designed to interconnect with a pin contact, generally, by capturing or surrounding it. |
| SOCKET CONTACT SLEEVE | A sleeve that holds the contact spring in the correct position within the socket contact. |
| SOLDER | An alloy that melts at relatively low temperatures, and that is used to join or seal metals with higher melting points. |
| SOLDERABILITY | The property of a metal to be wetted by solder. |
| SOLDER CONNECTION | A connection made by soldering. |
| SOLDER CONTACT | A contact designed for the attachment of the conductor by solder. |
| SOLDER CUP | The cup or well at the end of a contact or terminal into which a wire is inserted prior to being soldered. |
| SOLDER EYELET | A solder type contact provided with a hole at its end through which a wire can be inserted prior to being soldered. |
| SOLDER FLUX | A substance that transforms a passive, contaminated metal surface into an active, clean, solderable surface. |
| SOLDER PROJECTION | An undesirable protrusion of solder from a solidified solder joint or coating. |
| SOLDER SLEEVE | A heat shrinkable tubing device containing a predetermined amount of solder and flux used for environmental resistant solder connections and shield termination. |
| SOLDER-TYPE CONNECTOR | A connector in which the contact between the conductor and the connector is made by a solder joint. |
| SOLDERLESS CONNECTION | The joining of two materials by pressure means without the use of solder, brazing or any method requiring heat. |
| SOLDERLESS CONTACT | A contact with a termination portion that is a hollow cylinder to allow it to accept a wire. After a bare wire is inserted, a swaging tool is applied to crimp the contact metal firmly against the wire. Usually called a crimp contact. |
| SOLDERLESS WRAP | A technique of connecting uninsulated solid wire or stripped insulated wire to a terminal post containing a series of sharp edges, by winding the wire around the terminal. (see WIRE-WRAP) |
| SOLID PRESS-IN TERMINATION | A press-in termination having a solid press-in section. |
| SOLIDUS | The lowest temperature at which a metal alloy begins to melt. |
| SPADE TONGUE TERMINAL | (See SLOTTED TONGUE TERMINAL) |
| SPECIMEN ENVIRONMENT IMPEDANCE | The impedance presented to the signal conductors of the device under test by the test fixture. This impedance is a result of transmission lines, termination resistors, attached receivers or signal sources, and fixture parasitic oscillations. |
| SPLICE | A device used to join two or more conductors or optical fibers to each other. |
| SPRING CONTACT | A contact having elastic properties to provide a force to its mating part. |

| | |
|-----------------------------|--|
| SPRING FINGER ACTION | Design of a contact as used in a printed circuit connector or socket contact, permitting easy stressfree spring action to provide contact pressure and/or retention. |
| STACKING | The installation of two or more terminals on a single screw or stud. |
| STAGGERED-CONTACT CONNECTOR | A connector having a staggered arrangement of the terminations and/or the contacts. |
| STAKE CONTACT | A contact for individual mounting to a printed board by staking, and normally soldered to a land. |
| STAMPED CONTACTS | Contacts made by stamping and bending sheet metal rather than by machining of metal stock. |
| STEP AMPLITUDE | The voltage difference between the 0% and 100% levels, ignoring overshoot and undershoot. |
| STEP-PLANE | An internal keying-type device incorporated into plugs and receptacles allowing the connector to be mated only one way. The connector is rotated until the step-planes match; then it is pushed together. |
| STOP PLATE | (See LOCATOR) |
| STRADDLE MOUNT | A method of mounting a connector or other electrical element to a circuit board or other similar member such that the connector contact elements can be attached to both opposing surfaces of the circuit board, with the connector mounting means straddling both sides and the edge of the circuit board. |
| STRAIN RELIEF | A technique involving devices or methods of termination or installation, that reduce the transmission of mechanical stress to the conductor termination. |
| STRAIN RELIEF CLAMP | A clamp designed to remove the strain of a cable pulling on the connector's contacts. Strain reliefs may be attached to the connector or may be part of a cable support system. |
| STRAIN RELIEF SLOT (IDC) | The specially shaped opening in an insulation displacement termination suitable to provide for strain relief. |
| STRAND | One of the wires, or groups of wires, of any stranded conductor. |
| STREAMLINED | A design of highvoltage connectors to eliminate sharp points or corners and to recess all hardware to reduce corona discharge. |
| STRIP | The removal of insulation material from wire or cable. |
| STRIP CONTACTS | A continuous length of formed contacts for use in an automatic installation machine. |
| STRIP TERMINAL | A contact or terminal supplied in some means of continuous form, for use in automatic or semiautomatic crimping machines. |
| STRIPPING FORCE (wrap post) | The amount of force required to be applied to the wrapped connection along the major axis of the post to move the wrapped conductor sufficiently to break the gas tight union of the contact area. |
| STRIPPER | A tool or chemical used to remove insulation material from wire or cable. |
| STUD | A post used for connecting conductors or terminals. It may be threaded, serrated or plain. |
| STUD HOLE | The hole or opening in the tongue of a terminal lug that is intended to accommodate a screw or stud. |
| STUD TYPE BOARD | A terminal board used for connecting conductors or terminals by means of binding posts or stud terminations. (see TERMINAL BOARD). |
| SUBMERSIBLE CONNECTOR | A connector capable of withstanding submersion to a specified depth. |
| SURFACE LEAKAGE | The passage of current over the boundary surface of an insulator as distinguished from passage through its volume. |
| SURFACE MOUNTING | The electrical connection of components to the surface of a conductive pattern without utilizing component holes. |
| SWAGING | The mechanical reshaping of barrels; an obsolete term for crimping. |
| SWAMP | Acronym for Severe Wind and Moisture Problem, as typified by the environment in the wheel-well of an aircraft operating in wet weather. Any extremely wet area, not immersive, where wind or other forces, allows the moisture into intestacies that do not normally require extreme environmental protection. |
| TELEPHONE PLUG | A free connector consisting of two or more contacts on a common shank. |
| TENSILE PULL | Amount of axial load required to break or pull wire from the crimped barrel of a terminal, splice, or contact. |
| TENSILE STRENGTH | Greatest longitudinal stress that a substance can bear without pulling apart. |
| TERMINAL | A device attached to the end of a conductor to provide both mechanical and electrical connections to a post, stud, chassis or another terminal. |
| TERMINAL BLOCK | An assembly containing connection provisions to facilitate the connection of one or more conductors. |
| TERMINAL BOARD | A board fabricated from an insulating material containing a single or multiple row or arrangement of termination points for the purpose of making connections. |
| TERMINAL END | A component to be fitted to a conductor for attachment to a terminal. |
| TERMINAL, EYELET | A terminal or tab that is a pierced or a closed hook shape, providing a good mechanical as well as electrical connection. |

| | |
|---------------------------------|--|
| TERMINAL, FORK | A fork shaped or split terminal used in solder applications. |
| TERMINAL, HOOK | A terminal or tab that is hook shaped to provide a good mechanical as well as an electrical connection when a wire is soldered to it; used on hermetic connectors. Also known as solder hook terminal. |
| TERMINAL LUG | (See TERMINAL) |
| TERMINAL PLATE | A conductive busing bar or commoning bar (link, jumper bar). |
| TERMINAL, SPADE TONGUE | Slotted tongue terminal designed to slip around a screw or stud without removal of the screw or nut. |
| TERMINAL STRIP | (See TERMINAL BOARD) |
| TERMINAL STYLE | The design or configuration of a terminal. (see TERMINAL) |
| TERMINATION | A permanent connection or the part of a contact, terminal or terminal end to which a conductor is normally connected. |
| TERMINATION [electronics usage] | An impedance connected to the end of a transmission line, typically to minimize reflected energy on the line. |
| TERMINATION EXTRACTION TOOL | A device for extracting a press-in termination from a printed board. |
| TERMINATION INSERTION TOOL | A device used to insert press-in terminations or components equipped with press-in terminations into a printed board. |
| TERMINATION POINT | The part of a contact, terminal of a contact, terminal or terminal end to which a conductor is normally attached. |
| TERMINI | Plural of TERMINUS as this is a commonly used term for more than one concatenated fiber optic end, generally to be used in a connector. |
| TERMINUS | A device that terminates an optical fiber and provides a means to locate and contain the optical fiber within a connector. |
| TERMI-POINT | A brand name for a system involving connecting bare solid or stranded wire to a square pin for a connection, using a compression termination technique of wrapping the wire around the sharp edges of the pin. |
| TEST PROBE PROOF | A design feature incorporated in a female contact and or insert to prevent damage by the insertion of a test probe. |
| THERMAL AGING | Exposure to a given thermal condition or a programmed series of conditions for prescribed periods of time. |
| THERMAL RATING | The maximum and/or minimum temperature at which a material will perform its function without undue degradation. |
| THERMAL SHOCK | The resulting characteristics when a material is subjected to rapid and wide range changes in temperature in an effort to discover its ability to withstand heat and cold. |
| THERMAL WIPE | A slight movement of mated contacts caused by thermal expansion or contraction of parts. |
| THERMOCOUPLE CONTACT | Contact of special material used in connectors employed in thermocouple applications. Materials often used are iron, constantan, copper, Chromel?, Alumel?, and others. |
| THERMOPLASTIC | A classification of resin that can be readily softened and resoftened by repeated heating. |
| THERMOSETTING | A classification of resin which cures by chemical reaction when heated and, when cured, cannot be resoftened by reheating. |
| THREADED COUPLING | A means of mating connectors by engaging threads in a coupling ring with threads on a receptacle shell. |
| THROUGH CONNECTION | (See FEEDTHRU) |
| TIN | A silver-white, ductile metal used to coat conductors, especially when solder termination is to be used. |
| TONGUE | The protrusion, usually flat in configuration, of a terminal that is designed to be fastened to a stud, terminal block, chassis, or inserted in a receptacle. |
| TOTAL POST LENGTH | The length of the post from the mounting plane to the tip. |
| TRIAxIAL CONSTRUCTION | The construction of a connector, contact or cable having a coaxial construction but with two shields, each being separated with dielectric material. Triaxial construction allows signals to be transmitted on both the center conductor and the inner shield while the outer shield may be at ground potential. (see COAXIAL and TWINAXIAL for comparison). |
| TRIAxIAL CONTACT | Assembly of three contacts arranged coaxially as inner, intermediate, and outer contacts, enabling the termination of shielded triaxial or twisted pair cables. (Sometimes referred to as concentric twinax) (see TRIAXIAL CONSTRUCTION). |
| TUBULAR TERMINAL | A terminal manufactured from tubing rather than flat stock. |
| TUNING FORK CONTACT | A resilient contact having a shape similar to that of a tuning fork, the two arms of which apply contact force in opposite directions. |
| TURN OF WIRE | A single helical ring of wire wrapped 360 degrees around a wrap post. |
| TURRET HEAD | A device attached to a crimping tool, having multiple positions that can be rotated to position a specific conductor barrel between the indenters. |

| | |
|------------------------------------|---|
| TWINAXIAL CONSTRUCTION | The construction of a connector, contact or cable with two insulated elements paired together with a common overall shield; ex: a twisted shield pair. (see COAXIAL and TRIAXIAL for comparison). |
| TWIST-ON CONNECTOR | A connector that is mated by axial force and locked by rotation of the locking device. |
| TWO-PIECE CONNECTOR | An interconnecting device in which one mating piece is permanently mounted to the printed circuit board (generally by soldering) while the other is attached to equipment. |
| UMBILICAL CONNECTOR | A connector used to make connection to a rocket, missile or anything else where rapid separation is required, as during launching or separation. |
| UNMATE | The disengagement, disconnecting or uncoupling of mated connectors. |
| UNWRAPPING TOOL | A tool to remove a wrapped connection by unwrapping. |
| VAPOR PHASE | A method of simultaneously soldering variously configured component parts. The process is carried out in a specially equipped chamber, and the high temperature of boiling fluorinated hydrocarbon is the heat transfer medium. |
| VAPOR PHASE COMPATIBLE | The ability of a connector or socket and all required ancillary hardware to withstand the heating and cooling processes and other exposures involved in reflow soldering using the vapor phase soldering method. |
| VIA HOLE | A plated through-hole used as an interlayer connection, but in which there is no intention to insert a component lead or other reinforcing material. |
| VIRTUAL CONTACT WIDTH | Combination of the width of the contact face together with any positional variation of the contact. |
| VOLTAGE | The term most often used in place of electromotive force, potential, potential difference, or voltage drop, to designate electrical pressure that exists between two points and is capable of producing a flow of current when a closed circuit is connected between two points. |
| VOLTAGE PROOF | A test voltage equivalent to the working voltage multiplied by a safety factor. |
| VOLTAGE RATING | The highest voltage that may be continuously applied to a wire or cord in conformance with standards or specifications. |
| | <p>The ratio of the maximum magnitude of the voltage on a line to the minimum magnitude at any given point. VSWR can be expressed by the following equations:</p> $VSWR = \frac{ V_{max} }{ V_{min} } = \frac{ V_{inc} + V_{refl} }{ V_{inc} - V_{refl} }$ <p style="text-align: center;">or</p> $VSWR = \frac{(1 + \Gamma)}{(1 - \Gamma)}$ <p>where: V_{inc} = incident voltage wave amplitude V_{refl} = reflected voltage wave amplitude Γ = reflection coefficient</p> |
| VOLTAGE STANDING WAVE RATIO (VSWR) | |
| WATERTIGHT CABLE | A cable that contains internal water blocking compounds. |
| WAVE SOLDERING | A process in which items to be soldered are brought in contact with a gently overflowing wave of liquid solder that is circulated by a pump in an appropriately designed solder pot reservoir. |
| WELDED CONNECTION | A connection made by welding. |
| WETTING | The formation of a relatively uniform, smooth, unbroken and adherent film of solder to a base material. |
| WICKING | Movement of liquid solder along a metallic surface by capillary action. |
| WIPING ACTION | Action of two electrical contacts that come in contact by their contact surfaces sliding against each other. |
| WIRE BARREL | See BARREL, CONDUCTOR |
| WIRE EXTRACTION TOOL (IDC) | A device for extracting the wire(s) from the insulation displacement termination. |
| WIRE INSERTION TOOL | A hand or power operated tool for producing an insulation displacement connection by inserting the wire(s) in a controlled manner to a predetermined position in the slot(s). |
| WIRE RANGE | The sizes of conductors accommodated by a particular wire barrel. Also the diameters of wires or cables accommodated by a sealing grommet. |
| WIRE SEAL | An elastomeric grommet on the rear of a connector that seals around each wire to preclude the entrance of water or moisture. |
| WIRE SIZE | A numerical designation for a conductor, usually expressed in terms of American Wire Gauge (AWG), based on the approximate circular mil area of the conductor. |

| | |
|-----------------------------------|--|
| WIRE STOP | A stop at the end of a terminal wire barrel that prevents wire from passing completely through the barrel in such a way as to interfere with the function of the contact. |
| WITHDRAWAL FORCE | The force required to fully withdraw a set of mating components without the effect of a coupling, locking or similar device. |
| WIRE WRAP | A brand name for a system involving connecting bare solid wire to a square pin for a connection, by wrapping the wire around the sharp edges of the pin. Also known as solderless wrap. |
| WIRING | A network of conducting elements, usually discrete insulated wires that form a part or parts of an electrical system. The conducting elements are generally but not exclusively terminated in an electrical connector device. |
| WORK CURVE | A graph that plots the pullout force, indent force, and relative conductance of a crimp joint as a function of various depths of crimping. |
| WORKING VOLTAGE | Maximum voltage at which a connector is rated to operate. Also see (SERVICE RATING). |
| WRAP CONTACT | A contact designed to accept a wrapped connection. |
| WRAP POST | A termination post that accepts a wrapped connection. |
| WRAP REMOVAL TOOL | A tool to remove a wrapped connection by unwrapping. |
| WRAPPED CONNECTION | A connection achieved by wrapping a solid conductor around a post. |
| WRAPPING TOOL | A tool used to make a wrapped connection. |
| Y CONNECTOR | A connector that joins two branch conductors to the main conductor at an angle. The three conductors are in the same plane. |
| YIELD STRENGTH | The minimum stress at which a material will start to physically deform without further increase in load. |
| ZERO INSERTION FORCE CONNECTOR | A connector in which the contacts do not make electrical or mechanical contact until after the connectors are mated; contacts are mated by movement of an actuation mechanism. |
| ZERO INSERTION FORCE COMPONENT | A component designed to eliminate the insertion and withdrawal forces during mating and unmating. |
| ZERO INSERTION FORCE SOCKET (ZIF) | A socket in which contact surfaces normally do not mechanically touch until after mating thus requiring no component insertion force. After mating the contacts are actuated in some manner to make intimate electrical contact. |
| ZIPPER TUBING | A brand name of jacketing and shielding material that can be added to a cable or harness after assembly completion. |