

## Glossary

**HYBRID CABLE** — Multiconductor cable containing two or more types of components.

**HYDROSCOPIC** — Readily absorbing and retaining moisture.

**HYGROSCOPIC** — Readily absorbing and retaining moisture.

**HYPALON** — DuPont's trademark for chlorosulphonated polyethylene (CSP).

**HYPOT®** — (see hipot) Registered trade name of Associated Research, Inc. for their high-voltage tester.

**HYSTERESIS** — The time lag exhibited by a body in reacting to changes in forces affecting it; an internal friction.

**Hz** — Hertz. A measure of frequency or bandwidth equal to one cycle per second. Named after experimenter Heinrich Hertz.

### I

**I** — Symbol used to designate current.

**IACS** — International Annealed Copper Standard for copper used in electrical conductors. 100% conductivity at 20°C is 0.017241 ohm-mm<sup>2</sup>/m.

**ICEA** — Insulated Cable Engineers Association. The association of cable manufacturing engineers who make nationally recognized specifications for cables. Formerly IPCEA.

**IEC** — International Electrotechnical Commission.

**IEEE** — Institute of Electrical and Electronic Engineers. An international professional society that issues its own standards and is a member of ANSI and ISO.

**IEEE 10BASE2 Network** — A network conforming to the IEEE 802.3 local area network standard. The network is capable of carrying information at rates up to 10 Mbps over distances up to 2,800 meters (9,184 feet).

**IEEE 10BROAD36** — 10 million bits per second over broadband coaxial cable with node-to-node coverage of 3,600 meters. The IEEE 802.3 specification for running Ethernet on broadband.

**IEEE-488** — An IEEE standard for a parallel interface bus consisting of eight bidirectional data lines, eight control lines, and eight signal grounds, which provides for connection to an IEEE-488 device.

**IEEE-802** — Standards for the interconnection of local networking computer equipment. The IEEE-802 standard deals with the Physical Link Layers of the ISO Reference Model for OS.

**IEEE 802.3** — An IEEE standard describing the physical and data link layers of a local area network based on bus topology and CSMA/CD.

**IEEE 802.4** — A physical layer standard specifying a LAN with a token-passing access method on a bus topology. Used with Manufacturing Automation Protocol LANs.

**IEEE 802.5** — A physical layer standard specifying a LAN with a token-passing access method on a ring topology. Used by IBM's token ring hardware.

**IEEE 802.7** — A proposed physical layer standard specifying a LAN using both 802.3 and 802.4 standards.

**IF** — Intermediate-frequency.

**IMPACT TESTS** — Tests designed to reveal the behavior of material of a finished part if it were subjected to impact or shock loading.

**IMPEDANCE** — The total opposition a circuit, cable, or component offers to alternating current. It includes both resistance and reactance and is generally expressed in ohms.

**IMPEDANCE, HIGH** — Generally, the area of 25,000 ohms or higher.

**IMPEDANCE, LOW** — Generally, the area of 1 through 600 ohms.

**IMPEDANCE MATCH** — A condition whereby the impedance of a particular cable or component is the same as the impedance of the circuit, cable, or device to which it is connected.

**IMPEDANCE MATCHING STUB** — A section of transmission line or a pair of conductors cut to match the impedance of a load. Also called matching stub.

**IMPEDANCE MATCHING TRANSFORMER** — A transformer designed to match the impedance of one circuit to that of another.

**IMSA** — International Municipal Signal Association.

**IN-BAND SIGNALING** — The transmission of signalling information at some frequency or frequencies that lie within a carrier channel normally used for information transmission.

**INCOHERENT SOURCE** — A fiber optic light source which emits wide, diffuse beams of light of many wave lengths.

**INDEX EDGE** — Edge of flat (ribbon) cable from which measurements are made, normally indicated by the location of the printing which is near the index edge. Sometimes indicated by a thread or other identification stripe.

**INDOOR TERMINATION** — A cable termination intended for use where it is protected from direct exposure to both solar radiation and precipitation.

**INDUCTANCE** — A property of a conductor or circuit which resists a change in current. It causes current changes to lag behind voltage changes and is measured in henrys.

**INDUCTION** — The phenomenon of a voltage, magnetic field, or electrostatic charge being produced in an object by lines of force from the source of such fields.

**INDUCTION HEATING** — Heating a conducting material by placing it in a rapidly changing magnetic field. The changing field induces electric currents in the material and I<sup>2</sup>R losses account for the resultant heat.

**INDUCTIVE COUPLING** — Cross talk resulting from the action of the electromagnetic field of one conductor on the other.

**INPUT** — (1) A signal (or power) which is applied to a piece of electric apparatus, (2) The terminals on the apparatus to which a signal or power is applied.

**INSERTION LOSS** — A measure of the attenuation of a device by determining the output of a system before and after the device is inserted into the system.

**INSERTION TOOL** — A small, hand-held tool used to insert contacts into a connector.

**INSULATED RADIANT HEATING WIRE** — Similar to blanket wire but heavier construction for applications such as in ceiling panels, buried in ground or driveway and concrete walks.

**INSULATED SPLICE** — A splice with a dielectric medium applied over the connected conductors and adjacent cable insulation.

**INSULATING (ISOLATING) JOINT** — A cable joint which mechanically couples and electrically separates the sheath, shield, and armor on contiguous lengths of cable.