Glossary

ARC RESISTANCE — The time required for an arc to establish a conductive path in a material.

ARMATURE — (1) Rotating machine: the member in which alternating voltage is generated, (2) electromagnet: the member which is moved by magnetic force.

ARMOR — Mechanical protector for cables; usually a helical winding of metal tape, formed so that each convolution locks mechanically upon the previous one (interlocked armor); may be a formed metal tube or a helical wrap of wires.

ARRHENIUS PLOT — A statistical method used to predict time-to-failure, based on a device's performance at different temperatures. One method is given in IEEE Standard 101.

ASCII — American National Standard Code for Information Interchange. A seven bit plus parity code established by the American National Standards Institute to achieve compatibility among data services and consisting of 96 displayed upper and lower case characters and 32 nondisplayed control codes.

ASKAREL — A synthetic insulating oil which is nonflammable but very toxic. It has been replaced by silicone oils.

ASTM — American Society for Testing Materials. An organization that sets standards on various material tests for industry.

ATTENUATION — The decrease in magnitude of a signal as it travels through any transmitting medium, such as a cable or circuitry. Attenuation is measured as a ratio or as the logarithm of a ratio (decibel).

ATTENUATION CONSTANT — A rating for a cable or other transmitting medium, which is the relative rate of amplitude decrease of voltage or current in the direction of travel. It is measured in decibels per unit length of cable.

AUDIO — A term used to describe sounds within the range of human hearing. Also used to describe devices which are designed to operate within this range.

AUDIO FREQUENCY — The range of frequencies audible to the human ear. Usually 20–20,000 Hz.

AUI — Attachment Unit Interface. The interface between the Ethernet/IEEE 802.3 controller and the baseband transceiver or broadband modem.

AWG — American Wire Gauge. A wire diameter specification. The lower the AWG number the larger the wire diameter.

AWM — Appliance wiring material.

B

BACKFILL — The materials placed to fill an excavation, such as sand in a trench.

BALANCED CIRCUIT — A circuit so arranged that the impressed voltages on each conductor of the pair are equal in magnitude but opposite in polarity with respect to ground.

BALANCED LINE — A cable having two identical conductors with the same electromagnetic characteristics in relation to other conductors and to ground.

BALLAST — A device designed to stabilize current flow.

BAND MARKING — A continuous circumferential band applied to a conductor at regular intervals for identification.

BANDWIDTH — The width of a communication channel, measured as frequency (in cycles per second, or hertz). A channel's bandwidth is a major factor in determining how much information it can carry.

BARE CONDUCTOR — A conductor having no insulation or jacket.

BARREL-PACKED — Method of coiling wire into a drum for shipment.

BASEBAND — A signalling technique in which the signal is transmitted in its original form and not changed by modulation.

BASEBAND LAN — A local area network employing baseband signalling.

BELDFOIL® — Belden trademark for a highly effective electrostatic shield using reinforced metallic foil.

BELT — Layers of insulation on a conductor, or layers of jacket on a cable.

BELTED-TYPE CABLE — Multiple conductor cable having a layer of insulation over the assembled insulated conductors.

BER — Bit Error Rate. The ratio of received bits that are in error, relative to a specific number of bits received; usually expressed as a number referenced to a power of 10.

BIL — Basic Impulse Level. The crest value of a lightning impulse voltage of a specified wave shape which a high-voltage cable or termination is required to withstand under specified conditions.

BIMETALLIC WIRE — A wire formed of two different metals joined together (not alloyed). It can include wire with a steel core, plated, or coated wire.

BINDER — A tape or thread used for holding assembled cable components in place.

BINDING POST — A device for clamping or holding electrical conductors in a rigid position.

BIRDCAGE — The undesired unwinding of a stranded cable.

BIT — Abbreviation for binary digit. A unit of information equal to one binary decision or the designation of one of two possible and equally likely states (such as 1 and 0) of anything used to store or convey information.

BITS PER SECOND (bps) — The number of bits of data transmitted through a digital process control cable in one second.

BNC — Common connector for coax. BNC is said to be an abbreviation for Bayonet-Neill-Concelman.

BONDED CABLE — Cable consisting of preinsulated conductors or multiconductor components laid in parallel and bonded into a flat cable.

BONDED CONSTRUCTION — An insulation construction in which the glass braid and nylon jacket are bonded together.

BONDING — The method used to produce good electrical contact between metallic parts of any device. Used extensively in automobiles and aircraft to prevent static buildup. Also refers to the connectors and straps used to ground equipment.

BOOSTER — A device inserted into a line (or cable) to increase the voltage. Boosting generators are also used to raise the level of a DC line. Transformers are usually employed to boost AC voltages. The term booster is also applied to antenna preamplifiers.

BOOT — (1) Protective coating over a cable, wire or connector in addition to the normal jacketing or insulation. (2) A form placed around the wire termination of a multicontact connector to contain the liquid potting compound before it hardens.