

Glossary

NEWTON — The derived SI unit for force; the force which will give one kilogram mass an acceleration of one meter per second. Equals 0.2248 pounds force.

NFPA — National Fire Protection Association.

NICKEL CLAD COPPER WIRE — A wire with a layer of nickel on a copper core where the area of the nickel is approximately 30% of the conductor area.

NM — A UL cable type. Nonmetallic sheathed cable, braid or plastic covered. For dry use, 90°C conductor rating.

NM-B — A UL cable type.

NMC — Nonmetallic sheathed cable, plastic or neoprene covered. Wet or dry use, 90°C conductor rating.

NODE — A station.

NOISE — In a cable or circuit any extraneous sounds or signal which tends to interfere with the sound or signal normally present in or passing through the system.

NOMEX — DuPont's trademark for a heat resistant, flame retardant nylon.

NOMINAL — Name or identifying value of a measurable property by which a conductor or component or property of a conductor is identified, and to which tolerances are applied.

NOMINAL VOLTAGE (NATIONAL ELECTRICAL CODE) — A nominal value assigned to a circuit or system for the purpose of conveniently designating its voltage class (as 120/240, 480Y/277, 600 etc.). The actual voltage at which a circuit operates can vary from the nominal within a range that permits satisfactory operation of equipment.

NOMOGRAPH — A chart or diagram with which equations can be solved graphically by placing a straight edge on two known values and reading the answer where the straight edge crosses the scale of the unknown value.

NONCONTAMINATING — A type of PVC jacket material whose plasticizer will not migrate into the dielectric of a coaxial cable and thus avoid contaminating and destroying the dielectric.

NONCONTAMINATING PVC — A polyvinyl chloride formulation, which does not produce electrical contamination through plasticizer migration.

NONFLAMMABLE — The property of a material that is not capable of being easily ignited.

NONMIGRATING PVC — Polyvinyl chloride compound formulated to inhibit plasticizer migration.

NRZI — Non-Return to Zero Inverted. A binary encoding technique in which a change in state represents a binary 0 and no change in state represents a binary 1.

N-SERIES CONNECTOR — A coaxial connector (RG-8/U) used in standard Ethernet networks.

NTSC — National Television Standard Committee. The U.S. color TV standard.

NUMERICAL APERTURE — The acceptance angle of an optical fiber which determines the angle at which light can enter the fiber; expressed as a number which is equivalent to the sine of the angle.

NYLON — An abrasion-resistant thermoplastic with good chemical resistance. Polyamide.

O

OD — Outside diameter.

OEM — Original equipment manufacturer.

OFHC — Oxygen-free high-conductivity copper.

OHM — The electrical unit of resistance. The value of resistance through which a potential difference of one volt will maintain a current of one ampere.

OHM'S LAW — Stated $V = IR$, $I = V/R$, or $R = V/I$ where V is voltage, I is current and R is resistance.

OIL AGING — Cable aged in an accelerated manner by placement in an oil bath and heated to a preset temperature for a stated time.

OPEN CELL — Foamed or cellular material with cells which are generally interconnected.

OPEN CIRCUIT — A break in an electrical circuit so that there can be no current flow.

OPTICAL CONDUCTOR — Materials which offer a low optical attenuation to transmission of light energy.

OPTICAL CROSS-CONNECT — A cross-connect unit used for circuit administration. It provides for the connection of individual optical fibers with optical fiber patch cords.

OPTICAL ENCODER — A device whose position is determined by a photoelectric device and converted to an electrical data output.

OPTICAL FIBER — Any filament or fiber, made of dielectric materials, that is used to transmit light signals; optical fiber usually consists of a core, which carries the signal, and cladding, a substance with a slightly higher refractive index than the core, which surrounds the core and serves to reflect the light signal. See also Fiber Optics.

OPTICAL WAVEGUIDE — A fiber used for optical communications. Analogous to a waveguide used for microwave communications.

OSCILLATORY SURGE — A surge which includes both positive and negative polarity values.

OSCILLOSCOPE — Test instrument for showing visually the changes in a varying voltage by means of the wavy line made on a fluorescent screen by the deflection of a beam of cathode rays.

OSHA — Abbreviation for Occupational Safety and Health Act. Specifically the Williams-Steiger laws passed in 1970 covering all factors relating to safety in places of employment.

OSMOSIS — The diffusion of fluids through membranes.

OUTDOOR TERMINATION — A cable termination intended for use where it is not protected from direct exposure to either solar radiation or precipitation.

OUTGASSING — Dissipation of gas from a material.

OUTPUT — The useful power or signal delivered by a circuit or device.

OVERALL DIAMETER — Finished diameter over wire or cable.

OVERCOAT CONDUCTOR — A stranded conductor made from individual strands of tin-coated wire stranded together, and then given an overall tin coat.

OVERLAP — The amount the trailing edge laps over the leading edge of a spiral tape wrap.

