

**A****A**

Ampere.

**Accessories**

Mechanical devices, such as cable clamps, added to connector shells and other such hardware which is attachable to connectors to make up the total connector configuration.

**Air-Gap Dielectric**

A coaxial design in which a monofilament of plastic holds the center conductor in place allowing the remainder of the dielectric to be air. Typical velocities of up to 84% can be achieved in the design.

**Alternating Current(AC)**

Electric current that alternates or reverses polarity continuously. The number of alternations per second are described as cycles(hertz or Hz).

**AM(amplitude modulation)**

A system used for broadcasting radio programs

**American Wire Gauge(AWG)**

A standard for expressing wire diameter. As the AWG number gets smaller, the wire diameter gets larger.

**Ampere**

A standard unit of current. Defined as the amount of current that flows when one volt of emf is applied across one ohm of resistance. An ampere of current is produced by one coulomb of charge passing a point in one second.

**ASTM**

The American Society for Testing and Materials, a standards organization which suggests test methods, definitions and practices.

**Attenuation( $\alpha$ )**

The decrease of a signal with the distance in the direction of propagation.

Attenuation may be expressed as the scalar ratio of the input power to the output power, or as the ratio of the input signal voltage to the output signal voltage.

**B****Back Mounted (rear mounting)**

When a connector is mounted from the inside of a panel or box with its mounting flange inside the equipment.

**Balun(Balanced +unbalanced)**

a type of electrical transformer that can convert electrical signal that are balanced about ground (differential) to signals that are unbalanced (single-ended) and vice versa. They are also often used to connect lines of differing impedance.

**Bandwidth**

The range of frequencies for which performance falls within specified limits.

**Bayonet Coupling**

A quick coupling device for plug and receptacle connectors, accomplished by rotation of a cam operating device designed to bring the connector halves together.

**Bending Radius**

Minimum static: The minimum permissible radius for fixed installation of the cable. This radius is mainly used in climatic tests.

Minimum dynamic: The minimum permissible radius for flexible applications of the cable.

**BNC****(Bayonet Navy Connector)**

Coaxial connector with bayonet coupling mechanism. Available in 50 Ohm and 75 Ohm versions. Frequency range DC-4 GHz(50 Ohm) and 1GHz(75 Ohm), respectively.

**BNO**

Connector with bayonet coupling mechanism suitable for shielded twin-axial cables.

**BNT**

Connector with bayonet coupling mechanism suitable for triaxial cables.

**Braid**

Woven wire used as shielding for insulated wires and cables. Also, a woven fibrous protective outer covering over a conductor or cable.

**Breakdown Voltage**

The voltage at which the insulation between two conductors will fail and allow electricity to conduct or 'arc'.

**Bulkhead**

A term used to define a mounting style of connectors. Bulkhead connectors are designed to be inserted into a panel cutout from the rear (component side) or front side of the panel.

**C****C**

Symbol designation for capacitance, and Celsius.

**Cable Assembly**

A completed cable and its associated hardware (e.g., connector).

**Capacitance**

The property of an electrical conductor (dielectric in a capacitor) that permits the storage of energy as a result of electrical displacement. The basic unit of capacitance is the Farad, however, measurement is more commonly in microfarads or picofarads.

**Circuit**

A system of conducting media designed to pass an electric current.

**CATV**

Abbreviation for Community Antenna Television.

**CCTV**

Closed-circuit television

**Coaxial Cable**

A transmission line consisting of two concentric conductors insulated from each other. In its flexible form it consists of either a solid or stranded centre conductor surrounded by a dielectric. A braid is then woven over the dielectric to form an outer conductor. A weatherproof plastic covering is placed on top of the braid.

**Conductivity**

A measure of the ability of a material to conduct electric current under a given electric field. Resistivity is the reciprocal of conductivity.

**Connector**

Used generally to describe all devices used

to provide rapid connect/ disconnect service for electrical cable and wire terminations or pc boards.

**Contact**

The conducting part of an interconnect at the interface between the connector and the lead on the device being connected.

**Contact Cavity**

A defined hole in the connector insert or housing into which the contact must fit.

**Contact Durability**

The number of insertion and withdrawal cycles that a connector must be capable of withstanding while remaining within the performance levels of the applicable specification.

**Contact Engaging & Separating Force**

Force needed to either engage or separate pins and socket contact when they are in and out of connector inserts. Values are generally established for maximum and minimum forces. Performance acceptance levels vary by specification and /or customer requirements.

**Contact Plating**

Deposited metal applied to the basic contact metal to provide the required contact-resistance and /or wear-resistance.

**Contact Pressure**

Force which mating surfaces exert against one another.

**Contact Resistance**

Measurement of electrical resistance of mated contacts when assembled in a connector under typical service use. Electrical resistance is determined by measuring from the rear of the electrical area of one contact to the rear of the electrical area of one contact to the rear of the contact area of the mating contact (excluding both crimps) while carrying a specified test current.

**Core**

The light conducting central portion of an optical fiber with a refractive index higher than that of the cladding. The center of a cable construction. Most often applies to a coaxial cable, where the core is the center conductor and the dielectric material applied to it.

**Corona**

A luminous discharge due to ionization of the air surrounding a conductor caused by voltage gradient exceeding a certain critical value

**Coupling**

The transfer of energy between two or more cables or components of a circuit

**Crimp**

Act of compressing (deforming) a connector ferrule around a cable in order to make an electrical connection

**Cross talk**

Refers to any signal or circuit unintentionally affecting another signal or circuit

**Crimping Tool**

A term commonly used to identify a hand held mechanical device or table press that is used to crimp a contact, terminal or splice.

**Cut-off Frequency(f<sub>c</sub>)**

The frequency, above which other than the TEM mode may occur. The transmission characteristics of cables above their cutoff

frequency may be unstable.

**Cycle**

One complete sequence of values of an alternating quantity, including a rise to maximum in one direction and return to zero; a rise to maximum in the opposite direction and return to Zero. The number of cycle occurring in one second is called the frequency

**D****dBm**

Relative measure of signal power where the reference 0 dBm is equal to one milliwatt. See also decibel.

**Decibel, dB**

A relative, dimensionless unit calculated as ten times the logarithm to the base 10 of a power ratio or as twenty times the logarithm to the base 10 of a voltage ratio.

**Delay Line**

A cable that delays electrical signals by a specified amount of time.

**Dielectric**

In a coaxial cable, the insulation between inner and outer conductor. It significantly influences the electrical characteristics such as impedance, capacitance, and velocity of propagation.

**Directional couplers**

Passive devices used in the field of radio technology. They couple part of the transmission power in a transmission line by a known amount out through another port, often by using two transmission lines set close enough together such that energy passing through one is coupled to the other.

**Dielectric Constant (Permittivity)**

Basic electrical property of a material that describes its behaviour in an electric field. The dielectric constant of the dielectric is the most important design parameter for coaxial cables and determines dimensions, losses and propagation characteristics.

**Dielectric Withstanding Voltage**

The maximum potential gradient that a dielectric material can withstand without failure.

**DIN 7/16**

50  $\Omega$  coaxial connector with screw type coupling mechanism. Suitable for medium to high power applications. Frequency range DC - 7.5 GHz.

**Dissipation**

Unusable or lost energy, such as the production of unused heat in a circuit.

**Distortion**

An unwanted change or addition to a signal or waveform when it is amplified.

This definition excludes noise which is an extraneous signal superimposed on the desired signal.

**E****E**

Voltage(electromotive force).

**Eccentricity**

A measure of a conductor's location with respect to the circular cross section of the insulation. Expresses as a percentage of centre displacement of one circle within the other.

## EIA

Electronic Industries Association (formerly RMA or RETMA).

## Electromagnetic

Referring to the combined electric and magnetic fields caused by electron motion through conductors.

## Electromagnetic Compatibility (EMC)

EMC describes the ability of an electrical system to avoid electromagnetic interference with the environment.

## Electromagnetic Coupling

The transfer of energy by means of a varying magnetic field. Inductive coupling

## Electromagnetic Interference(EMI)

Unwanted electrical or electromagnetic energy that causes undesirable responses, degrading performance or complete malfunctions in electronic equipment. See also: Noise

## ENG

Abbreviation for Electronic News Gathering

## EPR

Ethylene-propylene copolymer rubber. A material with good electrical insulating properties.

## F

Frequency

## Feeder Cable

In a CATV system, the transmission cable from the head end(signal pickup) to the trunk amplifier. Also called a trunk cable.

## Feed-through

A connector or terminal block, usually having double-ended terminals which permit simple distribution and bussing of electrical circuits. Also used to describe a bushing in a wall or bulkhead separating compartment at different pressure levels, with terminations on both sides.

## FEP

Fluorinated ethylene-propylene. A thermoplastic material with good electrical insulating properties and chemical and heat resistance.

## Femtocell

In telecommunications, a femtocell is a small cellular base station, typically designed for use in a home or small business. It connects to the service provider's network via broadband ; current designs typically support 2 to 4 active mobile phones in a residential setting, and 8 to 16 active mobile phones in enterprise settings. A femtocell allows service providers to extend service coverage indoors, especially where access would otherwise be limited or unavailable. Although much attention is focused on WCDMA, the concept is applicable to all standards, including GSM, CDMA2000, TD-SCDMA, WiMAX and LTE solutions.

## Ferrule

A short tube. Used to make solderless connections to shielded or coaxial cable (e.g.as in crimping).

## Fiber

A single, separate optical transmission element characterized by core and cladding.

## Field

An area through which electric and/or magnetic lines of force pass.

## Fillers

Nonconducting components cabled with the insulated conductors or optical fibers to impart roundness, flexibility, tensile strength, or a combination of all three, to the cable.

## Flange

A projection extending from, or around the periphery of, a connector and provided with holes to permit mounting the connector to a panel, or to another mating connector half.

## Flexibility

The ability of a cable to bend in a short radius(also see limpness).

## FM

Frequency modulation

## Foam Polyethylene

See cellular polyethylene.

## Frequency Modulation(fm)

A scheme for modulating a carrier frequency in which the amplitude remains constant but the carrier frequency is displaced in frequency proportionally to the amplitude of the modulating signal. An fm broadcast is practically immune to atmospheric and man-made interference.

## Front Mounted (front mounting)

A connector is front mounted when it is attached to the outside or mating side of a panel. A front mounted connector can only be installed or removed from the outside of the equipment.