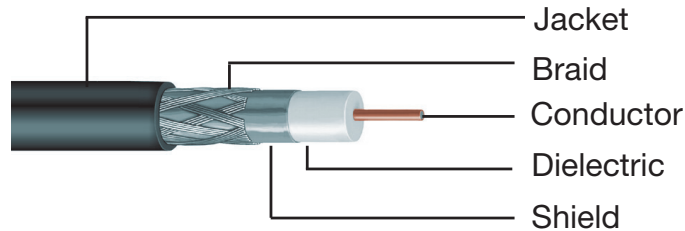




COAX BROCHURE



Coax Components



A. Center Conductor: Commscope's in-house wire drawing allows for process controls, assuring tight tolerances and uniform wire diameter. This results in lower attenuation, better structural return loss (SRL), precision impedance, and a better fit with field connectors. Center conductors can be stranded or solid. Stranded conductors are usually found in applications requiring repeated flexing of the cable after installation.

- **Bare Copper:** security/CCTV low frequency (less than 3MHz) transmissions, as in may be required for security Copper Clad Steel: higher strength than bare copper, less likely to be damaged. Normally used in CATV, MATV and other broadband applications where frequencies above 5MHz Tinned Copper: useful in applications where corrosion protection and solderability are desirable Silvered Copper: excellent solderability and low attenuation characteristics. Frequently used for high frequency (above 2GHZ) applications Copper Clad Aluminum—Trunk Cable—excellent attenuation characteristics and eliminates waste. Normally used in video distribution and other broadband applications.

B. Dielectric: Commscope employs precision, automated technology utilizing programmable logic controls(PLC) and statistical logic controllers (SLC). The result is improved dielectric application; which insures uniform impedance, better SRL, and high frequency capabilities (3.0GHz and above).

- **Solid PE:** good uniformity (better SRL). Not easily damaged. Foamed PE: better velocity of propagation than solid dielectric. Commscope's micro cell technology ensures dielectric uniformity, resulting in improved SRL and impedance characteristics; minimizes moisture ingress. Fire Retardant Polyethylene (FRPE): required for some CM, CMR applications Air Dielectric: actually uses air as the dielectric. Manufactured by installing discs or stranding a PE filament around the center conductor and inserting into a hollow tube. FEP: performance characteristics close to PE, used for plenum rated products.

C. Shielding: Coaxial cable shielding consists of a conductive envelope placed over the dielectric, thus 'shielding' the center conductor from electromagnetic interference (EMI). EMI's result from magnetic and/or electrostatic fields emanating from nearby electrical sources/components.

- **Foil Shields:** aluminum foil is bonded to both sides of polyethylene or polyester tape, which in turn is placed around the dielectric. This effectively provides 100% shield coverage from EMI. Commscope cable is manufactured such that the foil tape is bonded to the dielectric. Bonding the foil to the dielectric helps prevent 'zippering' (loosening of the foil when the cable is bent), which improves electrical capabilities of the cable.
- **Braid Shields:** Thin metal strands are braided (woven) together around the cable dielectric. Braid designation is given as a percentage of coverage followed by a two letter designation code (i.e., 96% TC braid would be 96% coverage of a Tin Copper braid). The higher the percentage of braid coverage, the better the shielding characteristics. Braid shields enhance the structural integrity of the cable. Other advantages include good flexibility (flex life), minimization of low frequency interference, and lower DC resistance than foil. Braid shields do not provide 100% shielding, but can provide adequate protection for some applications, especially at low frequencies. Different types of shielding also serves as the outer conductor, loop resistance of the cable (resistance of center conductor plus resistance of outer conductor) is directly proportional to the shield resistance.
- **Copper Braid:** commonly used for low frequency applications. Tin Copper Braid: Copper braid coated with tin. While more expensive than plain copper braid, tinned copper braid is useful in applications where corrosion is a concern and/or where connection need to be soldered. Silver Copper Braid: Copper braid coated with silver. The most expensive of the common braid types, silver copper braid offers corrosion resistance along with excellent solderability and is used in applications where specifications are demanding (as in high frequency mil spec applications).
- **Foil/Braid Shields:** Foil and braid shields are commonly combined to enhance shielding performance characteristics.
 - Dual Shields:
Aluminum Foil (Tape) / Aluminum Braid
Aluminum Foil (Tape) / Tin Copper Braid
 - Tri Shields:
Tape / 60% Braid / Tape
Tape / 77% Braid / Tape
 - Quad Shields:
Aluminum Foil (Tape) / 60% Braid / Tape / 40% Braid

D. Jackets:

• **Non-Plenum Jackets:**

Polyvinylchloride (PVC)—typically used indoors for general purpose, listed products and maybe for aerial outdoors. A very flexible thermoplastic material
Polyethylene (PE)—typically used for burial (flooded) and other outdoor applications. Excellent long term stability in harsh environments

• **Plenum Jackets:**

Kynar-K (PVDF)—used in high temperature plenum environments. Excellent chemical resistance.
Comflex-V (Plenum rated PVC)—used in plenum environments

• **Specialty Jackets:**

LSZH (Low Smoke Zero Halogen)
FEP (Fluorinated Ethylene Propylene)

Coaxial is chosen for applications by impedance:

• **50 Ohm:**

- DecNet—Trunk-RG8; Drop-RG58
- ThinNet—RG58
- ThickNet—RG8
- Specialty Appliance (AWM1354)—RG8, RG213, RG214

Note: 50 Ohm cables are also often specified for radio transmission (cell phone antennae and other antennae systems, HAM radios, Citizen Band, etc.)

• **75 Ohm:**

- Video (Modulated—like CATV, Multi-media, High speed Internet, Central Office Switching and Unmodulated— like CCTV, Camera Video, and Computer Video) CATV/MATV—cable of choice will have a copper coated steel (CCS) center conductor for either analog or digital.
- Shielding varies depending on application. Noisy electrical environments (containing EMI's) require more shielding.
- CCTV/Security—typically transmitting at low frequencies (less than 3 MHz) requiring a solid copper center conductor. Bare copper center conductors may also be necessary for digital transmissions, where the DCR must be as low as possible. Copper braid may be required when powering over coax. Camera applications may also require a separate power supply, hence a separate power leg. Video—cable swept to 3000MHz (3.0GHz). Some applications may require ground lead and others, like TVRO, may require other conductors.
- Broadcast—precision built cables typically with higher transmission capabilities than 'standard' coax. Tinned copper braid is often required for repeated connectorizations.

• **93 Ohm:**

- Data (IBM ArcNet)

SERIES 59 PLENUM:

Catalog #	Description	Product Type
2020K	65% AL braid, CCS cond	VID
2020V	65% AL braid, CCS cond	VID
2022V	Quad shield, CCS cond	VID
2037V	95% BC braid, BC cond	SEC
2039V	95% BC braid, CCS cond	SEC
2041V	95% BC braid, CCS cond	VID
2045V	95% TC braid, CCS cond	VID
2054K	95% BC braid, BC cond w/ 2-18AWG	SEC
2054V	95% BC braid, BC cond w/ 2-18AWG	SEC
2065V	96% TC braid, BC cond	BCS

SERIES 59 NON-PLENUM:

Catalog #	Description	Product Type
5520	95% BC braid, BC cond, Outdoor	SEC
5540	Quad shield, CCS cond	VID
5553	95% BC braid, BC cond	SEC
5554	95% BC braid, BC cond w/2-18AWG	SEC
5554M	Same as 5554 w/messenger	SEC
5555	95% BC braid, CCS cond	VID
5565	95% TC braid, BC cond	BCS
5571	40% AL braid, CCS cond	VID
5572	67% AL braid, CCS cond	VID
5572R	67% AL braid, CCS cond	VID
5573	95% AL braid, CCS cond	VID
5574	67% AL braid, CCS cond, Outdoor	VID

Coax	Type
BCS	Broadcast
SEC	Security
VID	Video

SERIES 6 PLENUM:

Catalog #	Description	Product Type
0359V	Dual version of 2275V	VID
2210V	Quad shield, BC cond w/1-CAT5E	VID
2220V	Dual version of 2227V	VID
2227V	Quad shield, CCS cond	VID
2227K	Quad shield, CCS cond	VID
2229V	Quad shield, BC cond	VID
2275V	60% AL braid, CCS cond	VID
2275K	60% AL braid, CCS cond	VID
2276V	90% AL braid, CCS cond	VID
2277V	95% BC braid, BC cond	SEC
2277K	95% BC braid, BC cond	SEC
2279V	95% TC braid, BC cond	BCS
2281V	77% AL braid, CCS cond, Tri-shield	VID

SERIES 6 NON-PLENUM:

Catalog #	Description	Product Type
5700	95% BC braid, BC cond	SEC
5715	60% TC braid, BC cond	VID
5720	95% BC braid, BC cond, Outdoor	SEC
5722	60% AL braid, CCS cond w/msgr (aerial)	VID
5725	40% AL braid, CCS cond	VID
5727	90% AL braid CCS cond	VID
5729	60% AL braid, BC cond	VID
5730	60% AL braid, CCS cond	VID
5731	60% AL braid, BC cond w/17AWG ground	VID
5733	90% AL braid, CCS cond w/ messenger	VID
5738	60% AL braid, CCS cond, Outdoor	VID
5741	Quad shield, CCS cond, Outdoor	VID
5750	Quad shield, CCS cond, MAP	VID
5765	95% TC braid, BC cond	BCS
5781	Quad shield, BC cond	VID
5782	Dual version of 5781	VID
5786	Dual version of 5730	VID
5787	Dual 60% AL braid, CCS cond, Outdoor	VID
5788	Dual vers. of 5730 w/17AWG CCS ground	VID
5789	Version of 5787 w/17AWG CCS ground	VID

SERIES 11 PLENUM:

Catalog #	Description	Product Type
2285K	60% AL braid, CCS cond	VID
2286K	95% BC braid, BC cond	SEC
2287K	Quad shield, CCS cond	VID

SERIES 11 NON-PLENUM:

Catalog #	Description	Product Type
5901	60% TC braid, BC cond	VID
5904	93% BC braid, BC cond	SEC
5906	95% TC braid, BC cond	BCS
5910	60% AL braid, CCS cond w/ msgr	VID
5915	90% AL braid, CCS cond	VID
5916	60% AL braid, CCS cond	VID
5916R	60% AL braid, CCS cond, Riser	VID
5917	60% AL braid, CCS cond, Outdoor	VID
5918	Dual version of 5916	VID
5920	93% BC braid, BC cond	SEC
5940	Quad shield, CCS cond	VID
5940R	Quad shield, CCS cond, Riser	VID
5950	Quad shield, 14AWG CCS cond, MAP	VID

OTHER 75 OHM:

Catalog #	Description	Product Type
2035K	RGBSC, mini - 93% TC braid, SC cond	BCS
203505	93% TC braid, 5-SC cond	BCS
753603	93% TC braid, 3-stranded BC cond	BCS
753605	93% TC braid, 5-stranded BC cond	BCS
7538	95% TC, BC cond	BCS
7538B	95% TC braid, BC cond, mini low-loss	BCS
7501	Precision Video - 98% TC+96% TC braid, BC cond	BCS
7505	96% TC braid, BC cond	BCS
2312K	Plenum Trunk - AL sheath, CCA cond	VID

50 OHM - RG58 NON-PLENUM:

Catalog #	Description	Product Type
2100V	95% TC braid, BC cond	VID

RG58 NON-PLENUM:

Catalog #	Description	Product Type
3104	93% TC braid, stranded TC cond	VID
3130	95% TC braid, BC cond	VID
3135	95% TC braid, stranded TC cond	VID

VSAT I, II, III PLENUM:

Catalog #	Description	Product Type
2427K	90% TC braid, BC cond	VID

VSAT I, II, III NON-PLENUM:

Catalog #	Description	Product Type
3226	90% BC braid, BC cond, Outdoor	VID
3227	90% TC braid, BC cond, Outdoor	VID
7725	96%+96% BC braid, BC cond	VID
7726	96%+96% BC braid, BC cond	VID

Coax	Type
BCS	Broadcast
SEC	Security
VID	Video



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