Hybrid Cable

Glass Yarn
Loose Tube with Fiber
FRP Rod
Tinned Copper
WS tape
Outer Sheath
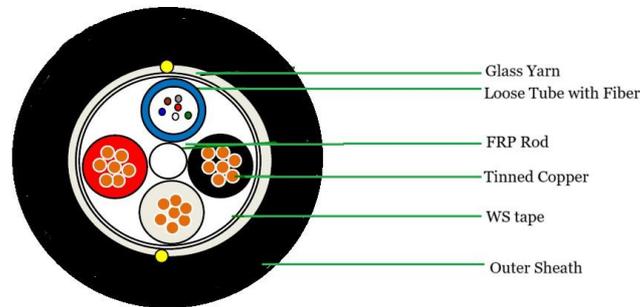
Hybrid cables integrate data transmission and power delivery into a single cable, simplifying structured cabling systems. They support high-speed communication, PoE compatibility, and enhanced EMI resistance for stable performance. Durable and efficient, they are ideal for smart building systems, IoT, and surveillance applications. Streamlined installation reduces costs and future-proofs network infrastructure

Features

- Minimizes the need for multiple cables in installations.
- Built for robust performance in harsh environments.
- Excellent consistent performance
- Covered under 3C3® Performance Warranty

Constructional Specifications

Fiber Parameters

Fiber Type	:	G 657A1
Fiber Count	:	4F
Fiber Color	:	Blue, Orange, Green, Brown, Grey and White
Loose Tube Color	:	Blue
Strength Member	:	FRP Rod
Additional Strength Member	:	Glass Yarn
Water Blocking	:	Water Sweallable Yarn & Tape

Copper Wire Parameters

Copper Size	:	12 AWG Stranded tinned copper wires
No.of Conductor	:	4 Core (Black & Red)
Insulation	:	Cross Linked PE
Outer Jacket	:	LSZH
Outer Sheath Color	:	Black
Cable diameter	:	12.5±1.5mm

Note: Image shown here is only for reference

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Mechanical Specifications

Max Operating Tension	:	1000 Newton
Max Installation Tension	:	2000 Newton
Crush Resistance	:	2000 Newton
Minimum bending Radius	:	300mm

Optical Specifications

Cladding diameter	:	125±0.5 µm
Core-Cladding Concentricity Error	:	≤0.60µm
Cladding non-circularity	:	≤1 %
Coating Diameter	:	245±10µm
Attenuation Coefficient	:	@1310nm ≤0.36 db/km
		@1550 nm ≤0.25 db/km
Cable Cutoff Wavelength	:	≤1260nm
Mode Field Diameter	:	@1310 nm 9.2±0.5 µm
Chromatic dispersion	:	1270~1340nm ≤5.3ps/(nm·km)
	:	1285-1330 nm ≤3.5ps/(nm·km)
	:	1550nm≤18 ps/(nm·km)
Zero dispersion wavelength	:	1302~1324nm
Zero dispersion slope	:	≤ 0.092ps/(nm2·km)
Polarization Mode dispersion	:	≤ 0.20 ps/√km

Environmental Specifications

Operating temperature	:	- 20°C to +60°C
Installation temperature	:	- 20°C to +60°C

Ordering Information

Product Code	Description
89901-002-0404	Hybrid Cable, 4F, G657A1, SM fiber+ 4Core 12 AWG copper