

Multi-Fiber Breakout Cable up to 144 Fibers

Design Type IT-(ZN)HH Indoor



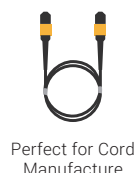
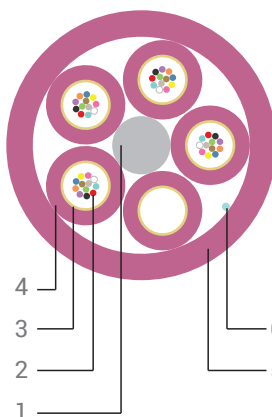
Properties

- Metal free indoor cable
- Completely dry design
- For direct connector assembly
- High flexibility and light weight
- Halogen free and non-corrosive fire gases
- Low fire load for high safety requirements
- Jacket material in accordance with UL 94V-0



Cable Construction

1 Central Strength Member	FRP
2 Fiber	SM or MM (250 μ)
3 Strength Member	Swellable Aramid Yarn
4 Inner Jacket	LSZH UV Resistant
5 Outer Jacket	LSZH - FR, UV Resistant
6 Ripcord	Polyester



Sheath Marking

Print Color/Method	Black / Ink-Jet	(length marking 1 m intervals)
Cable Printing	Manufacturer name, fiber count, fiber type, product code, cable type, date, meter marking	

Optical Characteristics and Physical Properties

Fiber Type		SM	OM1	OM2	OM3	OM4
Jacket Color		Yellow	Orange	Orange	Aqua	Violet
Core Diameter (μm)		9.0 ±0.5	62.5 ±2.5	50 ±2.5	50 ±2.5	50 ±2.5
Cladding Diameter (μm)		125 ±5.0	125 ±5.0	125 ±5.0	125 ±5.0	125 ±5.0
Primary Coating Diameter (μm)		245 ±10	245 ±10	245 ±10	245 ±10	245 ±10
Attenuation (max. in cable) (dB/km)	@1310 nm	≤ 0.40	-	-	-	-
	@1550 nm	≤ 0.30	-	-	-	-
	@850 nm	-	≤ 3.4	≤ 3.0	≤ 3.0	≤ 3.0
	@1300 nm	-	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0
Bandwidth (overfilled)	@850 nm	-	200 Mhz*km	500 Mhz*km	1500 Mhz*km	3500 Mhz*km
	@1300 nm	-	500 Mhz*km	500 Mhz*km	500 Mhz*km	500 Mhz*km
Serial Ethernet	@850 nm	-	-	-	1000 meters	1040 meters
	@1300 nm	-	-	-	600 meters	600 meters
Serial Ethernet	@850 nm	-	-	-	300 meters	550 meters
	@1300 nm	-	-	-	300 meters	300 meters

Mechanical and Environmental Properties

Test	Test Conditions	Type	Value	Unit	Method
Tube Diameter	-	All types	3.0	mm	-
Approx. Cable Diameter - Weight	-	2x12	10.2 - 93.0	mm-kg/km	-
		4x12	10.2 - 95.0		
		6x12	11.2 - 115.0		
		8x12	13.1 - 136.0		
Max. Tensile Strength	During installation	All types	2000	N	IEC 60794-1-2 E1
	In service		1500		
Min. Bending Radius	During installation / In service	2x12 / 4x12	100/150	mm	IEC 60794-1-2 E11
		6x12	115/170		
		8x12	130/195		
Crush Resistance	Short term	All types	2200	N/dm	IEC 60794-1-2 E3
	Long term		1000		
Impact Resistance	Wp=1.0 J	All types	20	impact	IEC 60794-1-2 E4
Temperature Range	During installation		-5 to +50	°C	IEC 60794-1-22 F12
	In service	-	-20 to +60		
	In storage		-40 to +70		

Combustion Properties

Property	Test Conditions	Type	Result	Method
Euroclass CPR Level	-	All types	B2ca, s1a, d0, a1	-
Fire Propagation	On a vertical single cable	All types	passed	IEC 60332-1-2
Smoke Density	-	All types	passed	IEC 61034-2
Halogen Acid Gas	Jacket material	All types	passed	IEC 60754-1
Degree of Acidity	Jacket material	All types	passed	IEC 60754-2

Cable Coding System

I - 48 - MFB - 102 - MF - M4 - H - H - VT - B2ca

Type	Fiber Count	Cable Type	Diameter	Tube Type	Fiber Type	Sheath Mat.	Sheath Mat.	Color
Indoor: I	24 Fiber: 24 48 Fiber: 48 72 Fiber: 72 96 Fiber: 96 144 Fiber: 1441	Multi-Fiber Breakout: MFB	10.2 mm: 102 11.2 mm: 112 13.1 mm: 131 17.0 mm: 170	Multi-Fiber: MF	SM G.657 A2: A2 SM G.657 B3: B3 MM G.651 OM1: M1 MM G.651 OM2: M2 MM G.651 OM3: M3 MM G.651 OM4: M4	LSZH: H	LSZH: H	Yellow: YE A2 Yellow: YE B3 Orange: OG M1 Orange: OG M2 Aqua: AQ M3 Violet: VT M4