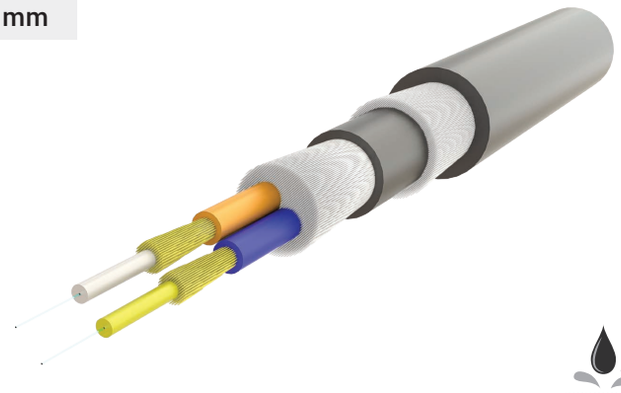
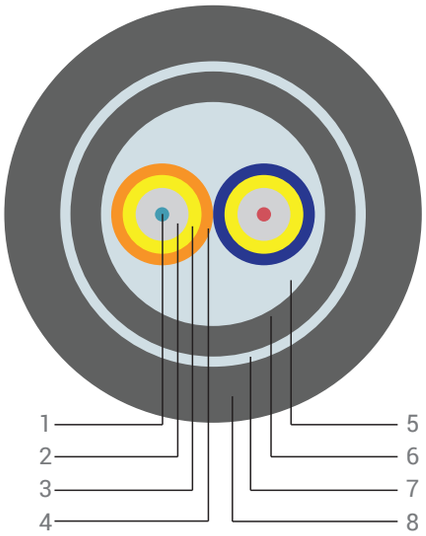
Ruggedized Breakout Fiber Cable

Design Type **UT-V(ZN)H(ZN)BH(ZN)BH Universal 8.2 mm**



Properties

- Metal free indoor and outdoor cable
- Completely dry design
- Rodent-protected with glass-armoured
- For direct connector assembly with strain relief
- High flexibility and light weight
- Halogen free and non-corrosive fire gases
- Low fire load for high safety requirements
- LSZH - FR, UV Resistant Outer Jacket



Cable Construction

1	**Fiber**	SM or MM (250 µ)
2	**Tight Buffer Tube**	900µ LSZH
3	**Strength Member**	Swellable Aramid
4	**Sub-unit Jacket**	LSZH
5	**Strength Member**	Swellable Glass Yarn
6	**Inner Jacket**	LSZH - FR, UV Resistant
7	**Strength Member**	Swellable Glass Yarn
8	**Outer Jacket**	LSZH - FR, UV Resistant

Sheath Marking

Print Color/Method	White / 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		**A2**	**OM2**	**OM3**
Jacket Color		Black	Black	Black
Core Diameter (µm)		9.0 ±0.5	50 ±2.5	50 ±2.5
Cladding Diameter (µm)		125 ±5.0	125 ±5.0	125 ±5.0
Primary Coating Diameter (µm)		245 ±10	245 ±10	245 ±10
Attenuation (dB/km)	@1310 nm	≤ 0.40	-	-
(max. in cable)	@1550 nm	≤ 0.30	-	-
	@850 nm	-	≤ 3.0	≤ 3.0
	@1300 nm	-	≤ 1.0	≤ 1.0
Bandwidth	@850 nm	-	500 Mhz*km	1500 Mhz*km
(overfilled)	@1300 nm	-	500 Mhz*km	500 Mhz*km
Serial Ethernet	@850 nm	-	-	1000 meters
1 Gigabit	@1300 nm	-	-	600 meters
Serial Ethernet	@850 nm		-	300 meters
10 Gigabit	@1300 nm		-	300 meters

Mechanical and Environmental Properties

Test	Test Conditions	Value	Unit	Method
Tight Buffer Diameter	-	0.9	mm	IEC 60811-203
Sub-unit Diameter	-	2.0 ± 0.1	mm	IEC 60811-203
Inner Jacket Diameter	-	5.7 ± 0.1	mm	IEC 60811-203
Outer Jacket Diameter	-	8.2 ± 0.2	mm	IEC 60811-203
Approx. Weight	-	70 ± 10%	kg/km	-
Max. Tensile Strength	During installation	2000	N	IEC 60794-1-2 E1
	In service	1500		
Min. Bending Radius	During installation	120	mm	IEC 60794-1-2 E11
	In service	80		
Crush Resistance	Short term	3000	N/dm	IEC 60794-1-2 E3
	Long term	1500		
Impact Resistance	Wp=2,21J	50	impact	IEC 60794-1-2 E4
Repeated Bending	r=120mm, 1 kg	10	cycles	IEC 60794-1-2 E6
Torsion	±360°	10	cycles	IEC 60794-1-2 E7
Water Penetration	L=1m, 24 h, p<1m	passed	-	IEC 60794-1-2 F5A
Temperature Range	During installation	+5 to +50	°C	IEC 60794-1-22 F1
	In service	-40 to +70		
	In storage	-40 to +70		

Combustion Properties

Property	Test Conditions	Value	Unit	Result	Method
Fire Load	-	1.15	Mj/m	-	-
Fire Propagation	On a vertical single cable	-	-	passed	IEC 60332-1-2
Smoke Density	-	-	-	passed	IEC 61034-2
Halogen Acid Gas	Jacket material	-	-	passed	IEC 60754-1
Degree of Acidity	Jacket material	-	-	passed	IEC 60754-2

Cable Coding System

U - 02 - B20 - 82 - T9H - M2 - H - H - H - BK

Type	Fiber Count	Cable Type	Diameter	Buffer Type	Fiber Type	Sheath Mat.	Sheath Mat.	Sheath Mat.	Color
Universal: U	2 Fibers: 02	Breakout 2mm: B20	8.2 mm: 82	Tight 900µm: T9H	SM G.657 A2: A2 MM G.651 OM2: M2 MM G.651 OM3: M3	LSZH: H	LSZH: H	LSZH: H	Black: BK A2 Black: BK B3 Black: BK M2