

Hybrid cables



Hybrid breakout cable



Hybrid multi-fiber loose tube cable

Design of hybrid breakout cables

Cable design	single fiber semi-tight tubes, orange, numbered
Conductor	1.5 mm ² up to 4 conductors
Strain relief	Aramide yarn
Jacket material	LSFH™
Jacket colour	black

Design of hybrid multi-fiber loose tube cables

Cable design	multi-fiber loose tubes
Conductor	1.5 mm ² up to 4 conductors
Conductor	2.5 mm ² up to 4 conductors
Strain relief	glass-armouring
Jacket material	PE (optional LSFH™)
Jacket colour	black

Properties

- Custom designed cable configuration
- High chemical resistance against acids and alkalis
- For high mechanical requirements
- Low smoke, halogen free and self extinguishing
- Hybrid multi-fiber loose tube cables are rodent protected (glass armoured)

Applications

- As data and power cable for industry, LAN, video, telephone or customer-specific applications
- Installation outdoors, in moist, wet cable ducts
- With LSFH™ jacket ideal for applications involving high safety requirements in case of a fire (installation indoors)





According to IEC 60794-1-2

Ordering information

- Hybrid breakout cables
up to 04-.../CWJSN(ZN)H-...27+...-C15
up to 08-.../CWJSN(ZN)H-...27+...-C15
- Hybrid multi-fiber loose tube cables, PE jacket / LSFH™
up to 60-.../WSN(ZNG)Y-...150+...-C...
up to 96-.../WSN(ZNG)Y-...180+...-C...

Please see page 161

Hybrid cables

Specification fiber optic components						
	4-way Breakout	8-way Breakout	5-way Multi-fiber loose tube	8-way Multi-fiber loose tube		
Jacket Ø	10.0	13.0	15.0	18.0	mm	
Single fiber cable Ø/multi-fiber loose tube Ø	2.7	2.7	3.0	3.0	mm	
Channel marking on single fiber	numbered		coloured			

Specification conductor						
Outer Ø conductor ¹⁾	1.5 mm ²	2.7	2.7	2.7	2.7	mm
	2.5 mm ²			3.5	3.5	mm
Rated voltage U ₀ /U	1.5 mm ²	600/1000				V
	2.5 mm ²	600/1000				V
Electrical resistance	1.5 mm ²	13.7	13.7	13.7	13.7	Ω/km
	2.5 mm ²			8.2	8.2	
Jacket material	Radox 125, halogen free					

1) Customer-specific order of colours for conductors. Available colours are black, red, white, blue, yellow/green

Mechanical properties							
Tensile strength	during installation	2000	4000	9000	13000	N	IEC 60794-1-2 E1
	in service	1000	2000	4500	6500	N	
Min. bend radius	during installation	150	200	225	270	mm	IEC 60794-1-2 E11
	in service	100	130	150	180	mm	
Crush resistance	short-term	1000	1000	800	800	N/cm	IEC 60794-1-2 E3
	long-term	200	500	300	300	N/cm	
Impact resistance	r = 25 mm	50	50	100	100	impacts	IEC 60794-1-2 E4
	W _p =	2.21	2.21	4.41	4.41	J	

Thermal properties							
Temperature range	during installation	-10 to +60				°C	IEC 60794-1-2 F1
	in service	-20 to +70		-40 to +70		°C	
	in storage	-25 to +70		-40 to +70		°C	

Combustion properties						
Fire propagation	p	p	p ²⁾	p ²⁾		IEC 60332-1
2002/95/EC (RoHS)	compliant					

2) only applies to LSFH™, PE jacket material 'not passed'

p = passed

Other hybrid cable types available upon request.