

## FIBER OPTIC CABLE

### Multi-fiber Loose Tube Cable LSFH

#### Description

##### 24-.../W(ZNG)H-...120-DNV

- DNV GL Type approved
- DNV GL Certificate no.: TAE0000172
- Outer jacket according to SHF1 class
- For high mechanical and thermal stability
- Low smoke, halogen free and self-extinguishing
- Low fire load for high safety requirements
- Longitudinal and transversal watertight cable



#### Available Types

##### Type of Fiber

E9/125	according to IEC 60793-2-50 Typ B1.3 + ITU G.652.D
E9/125	according to IEC 60793-2-50 Typ B6_a2.+ ITU G.657.A2
G50/125-OM2	according to IEC 60793-2-10 Typ A1a.+ ITU G.651
G50/125-OM3	according to IEC 60793-2-10 A1a2.+ ITU G.651 BendOptimized
G50/125-OM4	according to IEC 60793-2-10 A1a3.+ ITU G.651 BendOptimized
G62/125-OM1	according to IEC 60793-2-10 A1b

##### Standard Colours

Fiber:	According to colour code
Tube:	White or natural
Jacket (outer):	Black (optional with two orange stripes)

#### Technical data

##### Construction

Description / Material	Size	Options / Notice
24 Optical fiber	250 µm	Fiber type, colour
1 Multi-fiber loose tube up to 24 fibers	2.8 mm	Colour, jelly-filled
Reinforcement / glass-rovings		Swellable
2 Ripcords	5.0 mm	Colour
Outer jacket / PE flame retardant (LSFH)	12 mm	Colour, inscription

##### Mechanical data

Characteristics	Conditions	Tested acc. to	Values
Weight			178 kg/km
Tensile strength	During installation In service	IEC 60794-1-21 E1	9000 N 4500 N
Minimal bending radius	During installation In service	IEC 60794-1-21 E11	180 mm 120 mm
Cold bending radius	Radius = 120mm T = -25°C	IEC 60794-1-21 E11A	Passed
Crush resistance	5min	IEC 60794-1-21 E3	6'000 N/dm
Impact resistance	Wp = 5J	IEC 60794-1-21 E4	1 impact
Repeated bending	Radius = 100mm / Weight = 10kg	IEC 60794-1-21 E6	500 cycles
Kink resistance	Radius = 120mm	IEC 60794-1-21 E10	Passed
Torsion	Angle = ±180° Length = 1000mm	IEC 60794-1-21 E7	20 cycles

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#### Environmental Data

Characteristics	Conditions	Tested acc. to	Values
Temperature range	During installation In service In storage	IEC 60794-1-2 F1	-10 °C up to +50°C -40 °C up to +70°C -40 °C up to +70°C
Fire load			3.1 MJ/m
Fire propagation	On a vertical single cable On a vertical cable bundle		IEC 60332-1-2 IEC 60332-3-22
Fire test with circuit integrity (CI)		IEC 60331-25 EN 50200	180min 180min
Fire Test: smoke density Fire Test: halogen acid gas Fire Test: degree of acidity	Jacket material Jacket material	IEC 61034-2 IEC 60754-1 IEC 60754-2	Passed Halogen free Passed
Oil resistance	IRM 902	IEC 60811-404	8h; 70°C
2011/65/EC (RoHS)			Compliant
Water penetration	h = 1m, 24h, p<3m	IEC 60794-1-22 F5	Passed

Specification for singlemode at 1550nm, for multimode at 1300nm..