

DNV GL Type approved multi fiber loose tube cables – steel- or glass armoured



RADOX®



LSFH™

Properties

- Steel armoured inner and outer cable
- With rodent protection (steel armoured)
- For high mechanical and thermal requirements
- Low smoke, halogen free and self-extinguishing
- Low fire load for high safety requirements

Applications

- For outdoor and indoor installations and in mechanically unprotected environments
- Data cable in distribution networks
- For installations directly in the ground

Design

Cable design	multi fiber loose tubes up to 24 fibers, jelly-filled	
Strain relief	aramid yarn/glass-roving	
Rodent protection	steel-armoured	glass-roving
Jacket material	RADOX®	LSFH™
Jacket colour	black	

According to IEC 60794-1-2

Ordering information

24.../W(ZN)HAR...82 Certificate No. TAE 0000173

24.../W(ZNG)H...120 Certificate No. TAE 0000172

Please see page 169.

Approvals

DNV GL Type approved

Certificate no.:

TAE 0000173

TAE 0000172

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Specification		Steel armoured	Glas armoured	
Jacket-Ø	mm	8.2	12.0	
Number of fibers		2 - 24	2 - 24	
Multi fiber loose tube	mm	standard	standard	
Approx. weight	kg/km	115	178	

Mechanical properties					
Tensile strength	during installation	N	3750	9000	IEC 60794-1-2 E1
	in service	N	2000	4500	
Min. bending radius	during installation	mm	120	180	IEC 60794-1-2 E11
	in service	mm	80	120	
Crush resistance	5 min	N/dm	2000	6000	IEC 60794-1-2 E3
Cold bending radius	T= -25°C	mm		120	
Impact resistance	Wp = 5 J	impacts	1	1	IEC 60794-1-21 E4
Repeated bending	R=100 / weighth = 10kg	cycles		500	IEC 60794-1-21 E6
Torsion	± 180	cycles	20	20	IEC 60794-1-21 E7

Thermal properties					
Temperature range	during installation	°C	-20 to +70	-10 to +50	IEC 60794-1-22 F1
	in service	°C	-50 to +85	-40 to +70	
	in storage	°C	-50 to +85	-40 to +70	

Combustion properties					
Fire load		MJ/m	1.7	3.1	
Fire propagation	on a vertical single cable		b	b	IEC 60332-1-2
Fire propagation	on a vertical cable bundle		b	b	IEC 60332-3-24
Fire test	with circuit integrity (CI)	min.		180 180	IEC 60331-25 EN50200
Smoke density			b	b	IEC 61034-2
Halogen acid gas	jacket material		b	b	IEC 60754-1
Degree of acidity	jacket material		b	b	IEC 60754-2
Oil resistance	IRM902		168h; 100 °C	8h; 70 °C	IEC 60092-360
Drilling fluid resistance	IRM903		168h; 100 °C		IEC 60092-360
Drilling fluid resistance	CaBr2		56d; 70 °C		IEC60092-360
2011/65/EC (RoHS)			compliant		

p = passed