



AICI

Indoor and outdoor Armoured industrial cable, LSZH tight buffer

Application:

Optical cable for industry environments. The cable is suitable for both indoor and outdoor use. Continuous submergence in water is not recommended. Outer jacket made of UV- and weather resistant material may be exposed for shorter periods to fluids such as diesel and mineral oils (acc. to IEC 60811-2-1). The cable is reinforced with a steel wire braiding between the two jackets. Strength elements of glass yarn around the cable core allow easy installation of long lengths. The 0,9mm tight buffer is easy to strip allowing fast and reliable splicing and connector mounting. Each fibre is color coded for easy identification. Outer jacket is marked to show fibre type and cable type. The cable is DNV approved.

Specifications:

Temperature installed:	-30 to +70 [°C]
Temperature @ installation:	-10 to +70 [°C]
Tensile performance IEC 60794-1-2-E1:	
for 4 and 8 fibre:	1000 [N]
for 12 fibre:	1500 [N]
for 24 fibre:	2000 [N]
Crush, acc IEC 60794-1-2E3:	2000 [N/10cm]
Impact, acc IEC 60794-1-2E4:	1 impacts, 25J
Torsion, acc IEC 60794-1-2E7:	± 1 turns/1m
Water tightness acc. IEC 60794-1-2F5B:	< 3m/24hours
Min. bending radius fixed:	15 x outer diam
Min. bending radius flexible:	10 x outer diam
Cable bend (IEC 60794-1-2E11):	<0.5dB/±5 turn
Flexibility (IEC 60794-1-2E8):	1000 cycles

Fire and smoke classifications:

IEC 60332-3-22 and IEC 60332-1-2
IEC 61034-1/2
IEC 60754-1/2

Chemical resistance:

Mineral oils - IRM 902 (IEC 60811-2-1):	7days/23°C 4hours/70°C
Diesel - IRM 903 (IEC 60811-2-1)	7days/23°C 4hours/70°C

Approvals: DNV- and ABS-certified

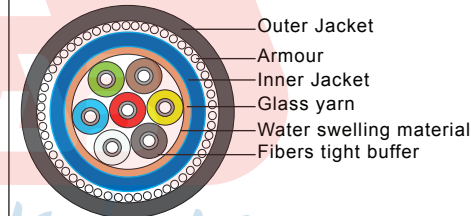
Construction:

Fibers:	Tight buffer, Ø=0,9mm		
Colour of tight:	1 - blue	13 - blue with black ring	
	2 - orange	14 - orange with black ring	
	3 - green	15 - green with black ring	
	4 - brown	16 - brown with black ring	
	5 - grey	17 - grey with black ring	
	6 - white	18 - white with black ring	
	7 - red	19 - red with black ring	
	8 - black	20 - yellow with black ring	
	9 - yellow	21 - violet with black ring	
	10 - violet	22 - pink with black ring	
	11 - pink	23 - turquoise with black ring	
	12 - turquoise	24 - white with double black ring	

No. of fibers:	Diam. inner sheath [mm]	Outer diam. [mm]	Weight [kg/km]	Tensile str. * (inst./oper.) [N]
4	5,2	8,5	105	700/250
8	6,0	9,4	125	800/350
12	6,7	10,3	145	1200/500
24	8,5	12,1	185	1700/750

* acc. IEC 60794-1-2E1

Filler:	Glass yarn
Inner Jacket:	Black LSZH compound, SHF1
 Armour alt. 1:	Galvanised steel wire braid
 Armour alt. 2:	Tinned copper wire braid
 Armour alt. 3:	Bronze wire braid
Outer Jacket:	Black LSZH, UV-resist. compound, SHF1



Multimode fibres			MM 62.5 IEC 60793-2-10	MM50 ITU-T G651.1 IEC 60793-2-10	MM50-OM3 ISO/IEC 11801 IEC 60793-2-10	MM50-OM4 ISO/IEC 11801 IEC 60793-2-10
			Type A1b Telecordia GR-20-core	Type A1a.1 Telecordia GR-20-core	Type A1a.2 Telecordia GR-20-core	Type A1a.2 Telecordia GR-20-core
ITU-T type			-	G 651	-	-
Core Diameter		µm	62.5 ± 2	50 ± 2	50 ± 2	50 ± 2
Core non-circularity		%	≤ 5	≤ 5	≤ 5	≤ 5
Cladding Diameter		µm	125 ± 1,0	125 ± 1,0	125 ± 1,0	125 ± 1,0
Coating Diameter		µm	245 ± 5	242 ± 5	242 ± 5	242 ± 5
Cladding non-circularity		%	0,7	0,7	0,7	0,7
Core/cladding concentricity error		µm	≤ 1,0	≤ 1,0	≤ 1,0	≤ 1,0
Coating/cladding concentricity error		µm	≤ 10	≤ 6	≤ 6	≤ 6
Numerical Aperture		µm	0.275 ± 0.015	0.200 ± 0.015	0.200 ± 0.015	0.200 ± 0.015
Proof test		kpsi	≥ 100	≥ 100	≥ 100	≥ 100
Attenuation	at 850 nm	db/km (max)	≤ 3,5	≤ 2,8	≤ 2,8	≤ 2,8
	at 1300 nm	db/km (max)	≤ 1,0	≤ 0,8	≤ 0,8	≤ 0,8
Bandwith	at 850 nm	MHz x km	≥ 200	≥ 500	≥ 1500	≥ 3500
	at 1300 nm	MHz x km	≥ 500	≥ 500	≥ 500	≥ 500

Single mode fibres			Single mode SMR 9/125/250	Single mode SMR LWP 9/125/250	Non-zero Dispersion
ITU-T type			G652.B	G652.D	G655
Mode Field diameter (MDF)	at 1310 nm	µm	9.2 ± 0.4	9.2 ± 0.4	-
	at 1550 nm	µm	-	-	9.2 ± 0.5
Cladding Diameter		µm	125 ± 1	125 ± 0.7	125 ± 1
Coating Diameter		µm	245 ± 10	245 ± 5	245 ± 10
Attenuation	at 1310 nm	db/km (max)	≤ 0.38	≤ 0.35	-
	at 1383 nm	db/km (max)	-	≤ 0.33	-
	at 1550 nm	db/km (max)	≤ 0.25	≤ 0.25	≤ 0.25
	at 1625 nm	db/km (max)	-	≤ 0.28	≤ 0.28
Zero dispersion wavelength		λ ₀	1302 - 1322	1302 - 1322	-
Chromatic Disper- sion	at 1285 - 1330nm	ps/nm x km	≤ 0.35	≤ 0.35	-
	at 1550 nm	ps/nm x km	≤ 18.0	≤ 18.0	-
	at 1530 - 1565 nm	ps/nm x km	-	-	5.5 to 10.0
PDM	at 1565 - 1625 nm	ps/nm x km	-	-	7.5 to 13.0
	at 1550 nm	ps/vkm	-	-	≤ 0.20