Oil & Gas - Cable Solutions

Exploration & Production - Offshore

Fiber Optic Cables

Armoured and sheathed S670T FOC

S670T Armored and Sheathed Marine Fiber Optic Cables

Tight buffer construction.
2 to 48 fibers / single-mode or mulitimode / LSZH / Armored and sheathed.

APPLICATION

The S670T series of Marine Shipboard armored fiber optic cables are designed especially for the harsh environments of commercial marine vessels, offshore oil platforms, drilling rigs, and other similar applications.
S670T low smoke/zero halogen, flame retardant cables offer versatility and ease of installation in a construction suited for marine applications. They are compliant with the latest IEC requirements
S670T cables meet the requirements of IEC 60793-1 and IEC 60792-2 specifications, are encapsulated in all dielectric, tight buffered construction, individually reinforced with aramid yarns and jacketed (breakout style). The breakout components are cabled around a central member providing additional tensile strength to the entire construction. The thermoplastic low smoke/ zero halogen double jacketing system under and over the marine grade bronze braided armor offers excellent resistance to chemicals, fluids, fungus, and abrasion.

STANDARDS & APPROVALS

IEC/EN 60794 Optical Fibre Cables (test procedures)
IEC 60794-1-1 Optical Fibre Cables (test procedures)
IEC 60794-1-2 Optical Fibre Cables (test procedures)
IEC 60794-2 Optical Fibre Cables (test procedures)
IEEE 45 and IEEE 1580 Marine Shipboard Cables
IEC 60332-1 Flame Retardance
IEC 60332-3-22 or 24 and IEEE 1202 Fire retardance
IEC 60754-1 & 60754-2 - Halogen free properties
IEC 61034-1 & 61034-2 Smoke emission properties
NES 713 Toxicity Requirements
IEEE 802.3z (Gigabit Ethernet) Performance requirements

Det Norske Veritas (DNV)
American Bureau of Shipping (ABS)
Lloyd's Register of Shipping (LRS)

DESIGN & CONSTRUCTION

1 CENTRAL STRENGTH MEMBER
Dielectric material (epoxy fiberglass rod)

2 FIBER
Multimode or singlemode fibers with an easily strippable 900µm tight buffering colored per TIA/EIA 598

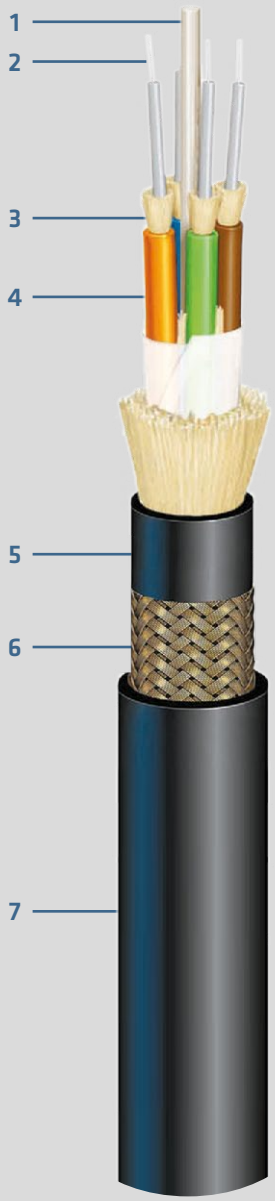
3 SUBUNIT STRENGTH MEMBER
Aramid yarn

4 SUBUNIT JACKET
2.0 mm ChromaTek-L™ Halex
low smoke zero halogen polyolefin

5 JACKET
ChromaTek-L™ Halex
low smoke zero halogen polyolefin

6 ARMOR
Braided bronze in accordance with IEEE 1580 (2010)

7 SHEATH
ChromaTek-L™ Halex
low smoke zero halogen polyolefin



CONTACT INFO:
prysmianoilandgas@prysmiangroup.com
www.prysmiangroup.com/contact-us

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PERFORMANCES/RATINGS

FIRE BEHAVIOUR

IEC 60332-1
IEC 60332-3-22 or 24
IEEE 1202

CHEMICAL RESISTANCE

VERY GOOD

IMPACTS

GOOD
IEC 60794

SMOKE DENSITY, CORROSIVITY AND TOXICITY

low

LOW EMISSION

OPERATING TEMPERATURE

-20 °C to +80 °C

INSTALLATION TEMPERATURE

-10 °C to +60 °C

UV RESISTANCE

VERY GOOD

QUALITY & TESTING

Prysmian has a built-in multi-step quality assurance program, covering the production process from cable design and raw material purchases to final inspection and testing documentation.

The ISO 9001 quality system of Prysmian Group (together with ISO 14001 and OHSAS 18001) has been assessed, approved and is currently audited by SGS.

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TECHNICAL DATA

DRAKA USA PART NUMBER	NUMBER OF FIBRES	INSTALLATION		OPERATING		CABLE OUTSIDE DIAMETER	APPROXIMATE CABLE WEIGHT
		Pull Strength Newtons (lbs)	Bend Radius cm (in)	Tension Newtons (lbs)	Bend Radius cm (in)	mm (in)	Kg/Km (Lbs/Mft)
S670T-02R-xxy	2	600 (135)	22.4 (8.8)	200 (45)	11.2 (4.4)	11.23 (.442)	204 (137)
S670T-04-xxy	4	600 (135)	25.0 (9.8)	200 (45)	12.5 (4.9)	12.45 (.490)	210 (141)
S670T-06-xxy	6	600 (135)	25.6 (10.2)	200 (45)	12.8 (5.1)	12.83 (.505)	238 (160)
S670T-08-xxy	8	600 (135)	28.5 (11.2)	200 (45)	14.3 (5.6)	14.32 (.564)	287 (193)
S670T-10-xxy	10	600 (135)	31.4 (12.4)	200 (45)	15.7 (6.2)	15.65 (.616)	345 (232)
S670T-12-xxy	12	600 (135)	33.8 (13.4)	200 (45)	16.9 (6.7)	16.92 (.666)	400 (268)
S670T-16-xxy	16	2700 (600)	33.8 (13.4)	600 (135)	16.9 (6.7)	16.92 (.666)	393 (264)
S670T-18-xxy	18	2700 (600)	33.8 (13.4)	600 (135)	16.9 (6.7)	16.92 (.666)	391 (263)
S670T-24-xxy	24	2700 (600)	39.0 (15.4)	600 (135)	19.5 (7.7)	19.51 (.768)	472 (317)
S670T-36-xxy	36	2700 (600)	44.7 (17.6)	600 (135)	22.4 (8.8)	22.35 (.880)	595 (400)
S670T-48-xxy	48	2700 (600)	57.8 (22.8)	600 (135)	28.9 (11.4)	28.91 (1.138)	954 (641)

Replace the xxy with the Fiber Designation in the fiber performance table below. NOTE: Fibers are not suitable for F07 crimp and cleave connector. Information is subject to change without notice. Consult factory for a variety of alternate constructions for specific applications.

FIBER PERFORMANCE

62.5µm MULTIMODE 50µm MULTIMODE 200µm MULTIMODE 8.3µm SINGLE-MODE

Fiber Designation	62X	50H	200S	010X
Applicable Specification	IEC 60793-10 Type A1b	ITU G.65.1 & IEC 60793-10 Type A1a.1	ITU G.651 & IEC 60793-2 Type A1a	
Fiber Type	Graded Index	Graded Index	Step Index	Matched Clad
Core Diameter	62.5µm ±2.5µm	50µm ±2.5µm	200µm ±5µm	8.3µm Nominal
Cladding Diameter	125µm ±1µm	125µm ±1µm	230µm ±10µm	125µm ±1µm
Coating Diameter	242µm ±7µm	242µm ±7µm	500µm ±30µm	242µm ±7µm
Buffer Diameter	900µm ±50µm	50µm ±2.5µm	900µm ±50µm	900µm ±50µm
Numerical Aperture	0.275 ±0.015	0.200 ±0.015	.037 Nominal (2m 5% intensity)	n/a
Mode Field Diameter	n/a	n/a	n/a	9.1µm ±0.4µm
Attenuation	≤ 3.5 dB/Km @ 850nm ≤ 1.0 dB/Km @ 1300nm	≤ 3.5 dB/Km @ 850nm ≤ 1.0 dB/Km @ 1300nm	≤ 12.0 dB/Km @ 820nm	≤ 0.70 dB/Km @ 1310nm ≤ 0.70 dB/Km @ 1550nm
Bandwidth	≥ 200 MHz/Km @ 850nm ≥ 500 MHz/Km @ 1300nm	≥ 500 MHz/Km @ 850nm ≥ 500 MHz/Km @ 1300nm	≥ 20 MHz/Km @ 820nm	n/a n/a
Dispersion	n/a n/a	n/a n/a	n/a n/a	≤ 3.0 ps/nm-Km @ 1285-1330nm ≤ 18 ps/nm-Km @ 1550nm
Proof Test	100,000 psi	100,000 psi	100,000 psi	100,000 psi

This product information sheet is provided for reference only.
Please consult the factory or your representative to confirm all engineering information or refer to the related catalogues available in the local countries website.

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