

HYB-SLA-6-01X06+2X18AWG+2X24AWG+12X16AWG-P2W Preliminary HYBRID & COMPOSITE CABLES P/N FH00601ZNB

DEFENSE

Applications

Maritime Environment, Harsh environments, Military-Defense, Portable use and repeated flexing,
Customer Defined



Outer Jacket Material



Outer diameter
19.7 mm nom.



Weight
1200 kg/km



General Construction

This hybrid cable consists of

Element A - 16 AWG Wire 700Vrms

Element B - 18 AWG Wire

Element C - 1 Gel filled PBT loose tube with 6 MM OM1 color-coded optical fibers

Element D - 24 AWG TSP (Twisted Shielded Pair)

The elements are stranded in 2 layers:

1st layer: elements BX2, C & D.

2nd layer: add 12 x A elements.

A specially formulated gel is applied between all the elements in the cable core to block water passage. A PE inner jacket is extruded over the cable core. 2 layers of galvanized steel wires with special grease to protect from corrosion are stranded around the inner jacket to serve as an armor.

Design & Materials

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Sub Unit Construction

Element A

Conductor: Annealed Tinned Copper, 9x0.287mm, 16 AWG
Insulation: ETFE, 2.1 mm O.D nom.

Element B

Conductor: Annealed Tinned Copper, 19x0.25mm, 18 AWG
Insulation: ETFE, 1.8 mm O.D nom.

Element C

Gel filled PBT loose tube with 6 MM OM1 color-coded optical fibers
O.D. 3.1 mm

Element D

Conductor: Annealed Tinned Copper, 19x0.127mm, 24 AWG
Insulation: ETFE, 0.94 mm O.D nom.
number of conductors: 2.
Shield: Tinned copper braid, 85% coverage
Jacket: ETFE, 3.1 mm O.D nom

Strength Elements	Aramid Yarns
Inner Jacket Material	HDPE
Aarmor	Yes
Armoring	Served Galvanized Steel Wire
Armoring Wire Diameter (mm. nom.)	I=1.6, II=1.25 mm
Number Of Fibers	6
Waterblocking	Gel
2 Rip Cords Positioned Diametrically Opposite	Yes
Marking	Per request

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Performance

Breaking Strength (N)	200000
Max. DC Resistance (Ω /km@20°C)	86(24 AWG), 21.2(18 AWG), 13.7(16 AWG)
Dielectric Strength (V/minute)	2000
Voltage Rating (V)	600
Max. Installation Tensile Load (N max.)	50000
Max. fiber strain at MIT (%)	0.2
Max. Residual Tension (MRS) (N max)	111760
Max. Fiber Strain at MRS (%)	0.05
Min. Tensile Strength at Break (lbs.)	210000
Impact Resistance (N*m)	30
Impact Resistance (cycles)	1
Max. Crush Resistance (N/cm)	500
Min. Bend Radius for Installation (mm)	20xD
Min. Bend Radius for Operation (mm)	20xD
Repeated Bending (cycles)	25
Torsion (L=125 x d) (cycles)	10
Min. Installation Temperature (°C)	-20
Max. Installation Temperature (°C)	+45
Min. Operating Temperature (°C)	-20
Max. Operating Temperature (°C)	+70
Min. Storage Temperature (°C)	-40
Max. Storage Temperature (°C)	+70
Drip Test (°C)	80
UV Resistance	Yes

Standards

Applicable Standards
 IEC 60794
 IEC 60794-1-21/22
 ISO/IEC 11801-1
 ASTM G154
 RoHS 3 2015/863/EU



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