

ROV Tethers & Umbilicals



As a manufacturer of Harsh Environment cables, Umbilicals International has the design and manufacturing capability to provide a variety of Remotely Operated Vehicle (ROV) cables. Umbilicals International has extensive experience designing and manufacturing tethers and umbilicals for the full spectrum of ROV's, from small electric Eyeball systems to large hydraulically powered Workclass vehicles.

Depending on the intended operating conditions, the ROV umbilical may be designed with strength properties obtained from Kevlar/Vectran or from a steel armor. The steel armor offers additional benefits, such as protection of the cable; however this does increase the system weight significantly and should be taken into account when selecting the best overall solution.



REV	DESCRIPTION
0	Released For Customer Approval
1	Design Review

Outer Jacket
6.0mm Yellow FRP
Wall Thickness Pass
Color: Yellow

Strength Member
Impregnated Aramid Yam
Double Layer

PP Fillers for Roundness

(B) Optical Fiber Components
30AWG Tube 2.40mm x 2.0mm containing:
8SMFO 50125250 μm , 100KPSI (BLU, GRN, GRN, BRN, GRY, WHT)
8SMFO 9125250 μm , 100KPSI (RED, BLK, YEL, VIO, PINK, AQUA)
Tube is insulated with PP to 3.90mm (1 PLC)

(C) 3.3 KVac Power Conductor
10AWG 5.7mm² 7x19, 234mm BCS
Insulated with PP to 5.30mm OD (3 PLCS)

(D) 3KVac Power Conductor
13AWG 2.50mm² 19, 459mm BCS
Insulated with PP to 4.10mm (2 PLCS)

(A) Jacketed Shielded Twisted Quad
20AWG 56mm² 7x207mm BCS Insulated with PP to 1.66mm, 8x203mm TCW Drain and Aluminum Tape Shielding. PE Jacket to 5.30mm OD (1 PLC)

①(A), 6 x 52mm² TCS Drain Wires
conductive PE, Cu/Filler Tape
Bar Tape and Interices are Filled with
mg

Finished Diameter: 35.0mm +/- 1.0mm

Metric	Electrical Properties:	Max. Heat (30x3.90)	DC RESIST (200Vdc)	Non- Inductive (Ohms)	Impedance (Ohm)	Non-Attenuation (dB/100m)	Max. Voltage (Rating of ac)
35.0 mm	20 AWG 52mm ² STQ(A)	<39.0	>5.0	75 ±5	---	---	500
295 mm	Fiber Tube (B) 8MFO	---	---	---	---	850	3.5
400 mm	Fiber Tube (B) 8MFO	---	---	---	---	1300	1.5
400 mm	Fiber Tube (B) 8MFO	---	---	---	---	1300	.60
wt 1114 kg/km						1550	.60
Vol 120 kg/m ³	10 AWG 5.7mm ² Core (C)	<3.60	>5.0	---	---	---	3,000
Vol 880.0 kg/m ³	13 AWG 2.50mm ² Core (D)	<8.20	>5.0	---	---	---	3,000

selected with the nearest standard AWG's in order to reduce manufacturing lead time.

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Buoyant SCV Tether Cable 35,0mm

DESIGNED BY: JULIO ESPINOSA
DATE: 11/20/2007
PART NO: CDR012135

CHECKED BY: MARCEL WOLRING
FILE NAME: CDR012135
SCALE: NTS

REV: 1
SUBJ: 1 of 1



Whether the requirement is for the supply of a recognized design or an innovative new construction, the Umbilicals International engineers located at the corporate office in Stafford, Texas are able to design and produce a cable quickly and cost effectively. Be sure to contact Umbilicals International for all of your harsh environment cable requirements.