# **Xtreme Marine EO**

Electro-Optic Underwater Cable

Winchester Interconnect's subsea fiber + power cable designs can be used for a multitude of underwater applications from shallow, rugged shorelines to deepwater installations (to depths of 6km). A sample offering of our more common designs below can also be modified with additional fibers, larger conductors, higher voltage, increased workloads or addition of steel armoring.







# **DESIGN**

Tried and proven materials are carefully chosen for long term exposure and submergence in marine environments of sea or fresh water, polar to tropical, fully water-blocked with pressure resistant designs to 6km depths

# **CABLE PROPERTIES**

### **Fiber Optics**

- Single-mode type SMF28E 9/125 micron, multi-mode 62.5/125 micron and 50/125 micron
- Fiber components: Xtreme-Light® PUR Simplex fiber, Xtreme-Light® PUR Multi-fiber (3, 4 or 6 fibers) or stainless steel tube (3 to 72 fibers)

#### **Conductors**

- Insulated with premium copolymer insulation with excellent long-term moisture resistance. -20C to 90C, 600VDC typical with 1kv, 1.5kv, 3kv, 4.5kv to 3.5kb also available
- Higher temperature insulations are offered at 105C, 125C, 150C, 200C

# **Strength Members**

- Synthetic fibers of Kelvar® or Vectran® in braid or torque-balance served layers
- Typical BS values for marine instrumentation as listed Higher strength designs up to 36k lbs can be ordered. Steel armor, GIPS dual-serve can also be added.

#### Jackets

- Xtreme-Marine® grade Polyurethane 9oC is standard. Other available jackets of HDPE, light-weight TPE, foam jackets for buoyancy
- Also available: High temperature jackets 105C, 125C, 150C, 200C



# **CABLE MANUFACTURING**

# **PART NUMBERS**

Part Number	Fiber Optic	Power Cond.	Wall	Core	VDC	BS	Wall	Dia.
FM021814-1	2x SMF Xtremelight	2X 18AWG	0.022	0.228	2.0 kv	1400	0.055	0.360
FM021814-2	2x SMF Xtremelight	2x 16AWG	0.018	0.228	1.0 kv	1400	0.065	0.380
FM021814-3	2x SMF Xtremelight	2X 14AWG	0.101	0.228	600 V	2700	0.065	0.392
FM021814-4	3x SMF Xtremelight	3x 12AWG	0.055	0.444	4.0 kv	2700	0.075	0.625
FM021814-5	3x SMF Xtremelight	3x 10AWG	0.040	0.444	3.6 kv	2700	0.090	0.655
FM021814-6	3x SMF Xtremelight	3x 8AWG	0.040	0.444	3.6 kv	4000	0.090	0.670
FM021814-7	3x SMF SS- Tube Core	6x 22AWG	0.010	0.160	600 V	2700	0.052	0.292
FM021814-8	3x SMF SS- Tube Core	6x 220AWG	0.006	0.160	300 V	2700	0.070	0.332
FM021814-9	3x SMF SS- Tube Core	6x 18AWG	0.016	0.246	1.0 kv	4000	0.080	0.455
FM021814- 10	3x SMF SS- Tube Core	6x 22AWG	0.016	0.280	1.0 kv	4000	0.090	0.475