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



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 |