UNDERWATER FIBER OPTIC HYBRID CABLE

TETHERS & UMBILICALS FOR REMOTELY OPERATED VEHICLES (ROVS)

Optional Ordering
- Increased Strength
- Only Underwater / Neutral Buoyant
- Bend Insensitive Fibers
- Optional Colors

Underwater Fiber Optic Hybrid Cable has extreme toughness with a unique, high modulus coating for better survivability in harsh environments.
Underwater Fiber Optic Hybrid Cable designs are solid, com-pression resistant constructions withstanding hydrostatic pressures at depths to 7 Km.

Fiber Type: Single Mode 9/125um , Multimode 62.5/125um Multimode 50/125um

Flexible fiber tether with high modulus coated fiber, Kevlar strength member and hard polyurethane jacket.
Compact designs with semi-rigid center strength core, waterblocked interstices and hard polyurethane jacket.
Increased strength designs including steel armor may be ordered.

OUR ADVANTAGES

EASY SOLUTIONS
ADAPTABILITY IS ONE OF OUR BEST QUALITIESIT PERMIT US TO COPE WITH YOUR REQUESTON A SHORT NOTICE AND EFFEC TIVELY.

NO PRICE FIGHTS
WE ESCAPED THE CLASSICAL REBATE UNTILYOU DROP " POLICY . WE ARE PRICE WISE SINCETHE BEGINNING

HIGH LEVEL EXPERIENCE
OUR TECHNLAL CAPABILITIES HAVE BEENTESTED FOR MORE THAN 30 YEARS ANDIN-DRECT CONNECTION WITH END USERS . SO TOSAY

ENDLESS INVESTIGATION
WE CONTINUOUSY MEASURE EVERYTHINGTEST . TEST AND TESTAGAIN . THIS HELPS NUNDERSTAND RISKS AND REWARDS . ANDBEPREPARED

NO FORTUNE TELLER
WE BASE OUR DECISIONS ON CLEAR BUSIESSPLANS , THINKING BEFORE MAKING OUR STEPSAND KEEPIN-GA'NOTTODO LISTFOR EVERY-OVE OF THEM

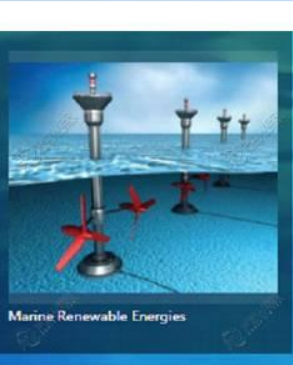
TEAM BUILDING
OUR TEAMIS MADE NOT ONLY BY OUR STAFFBUTIT INCLUDES ALSO ALL OUR CUSTOMERSWEACT LIKEA TEAM WEGROW LKEA TEAMWE WINLIKE A TEAM

UNDERWATER FIBER OPTIC HYBRID CABLE

UNDERWATER CABLE

It can be applied to submarine observation network / offshore oil / marine sonar / seismic detection / underwater robot / marine wind power / smart ocean and other fields.

☑ Customized Design ☑ Full Ocean Depth Application
☑ Vertical and Horizontal Watertightness
☑ Photoelectric multi-core Composite Structure ☑ High Tensile Strength


Marine Renewable Energies

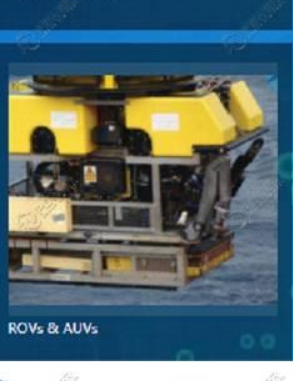
Diving

Oil and Gas

Towed Streamers

Submarines

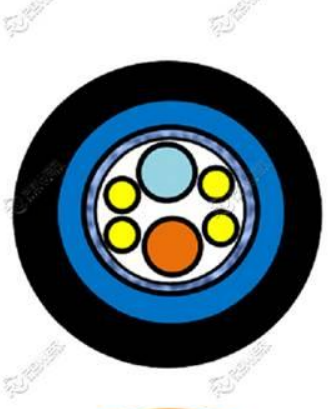
Water Treatment

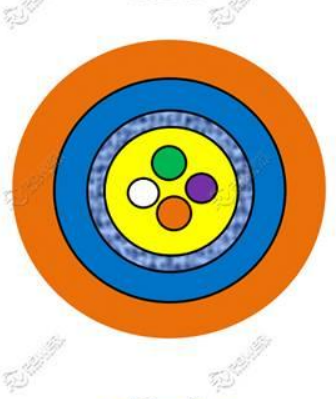

ROVs & AUVs

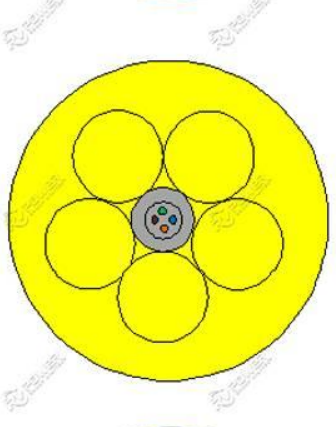
Vessels

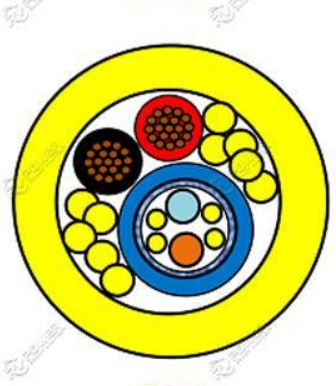
Geophysics

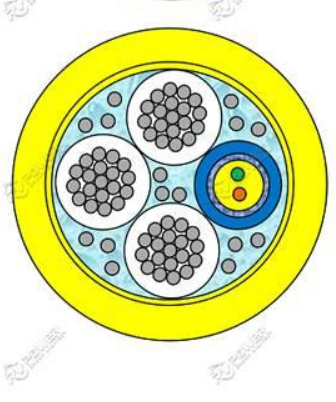
PRODUCT MIX

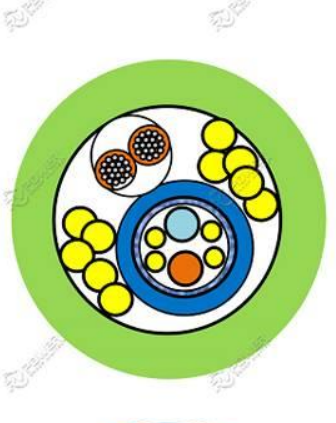

Underwater Fiber Optic Hybrid Cable
2 Core 9/125um Single Model Fiber

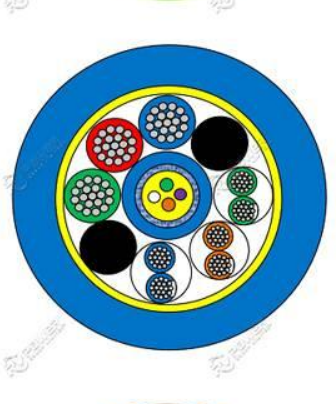

Underwater Fiber Optic Hybrid Cable
4 Core Fiber Optic

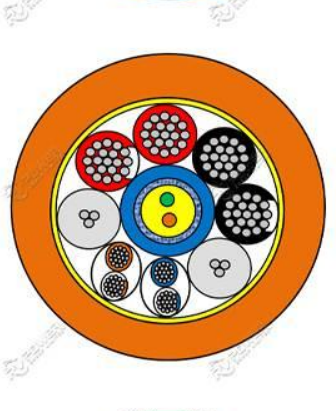

Underwater Fiber Optic Hybrid Cable
4 Core Fiber Optic

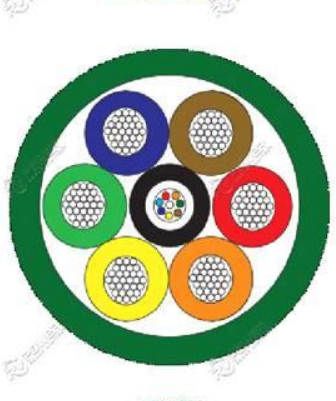

Underwater Fiber Optic Hybrid Cable
2 Core Power
2 Core Fiber Optic

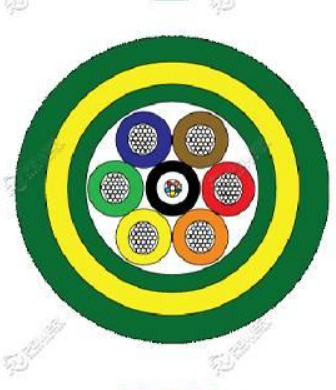

Underwater Fiber Optic Hybrid Cable
3 Core Power
2 Core Fiber Optic

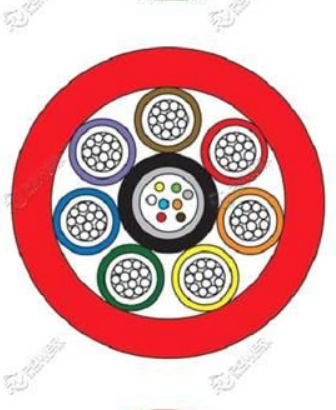

Underwater Fiber Optic Hybrid Cable
1 Pair Twisted Core
2 Core Fiber Optic

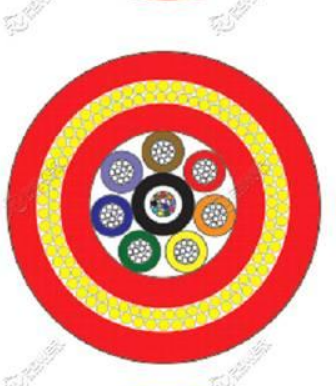

Underwater Fiber Optic Hybrid Cable
3 Core Power
3 Pair Twisted Core
4 Core Fiber Optic

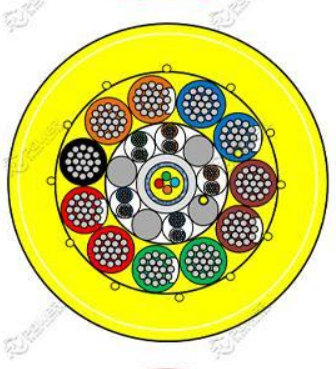

Underwater Fiber Optic Hybrid Cable
4 Core Power
2 Pair Twisted Core
2 Core Fiber Optic

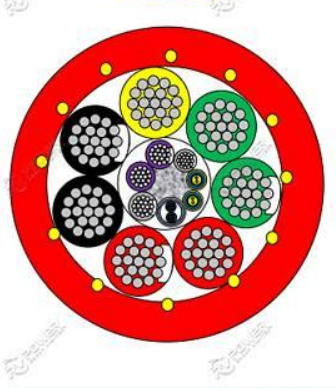

Underwater Fiber Optic Hybrid Cable
6 Core Power
8 Core Fiber Optic

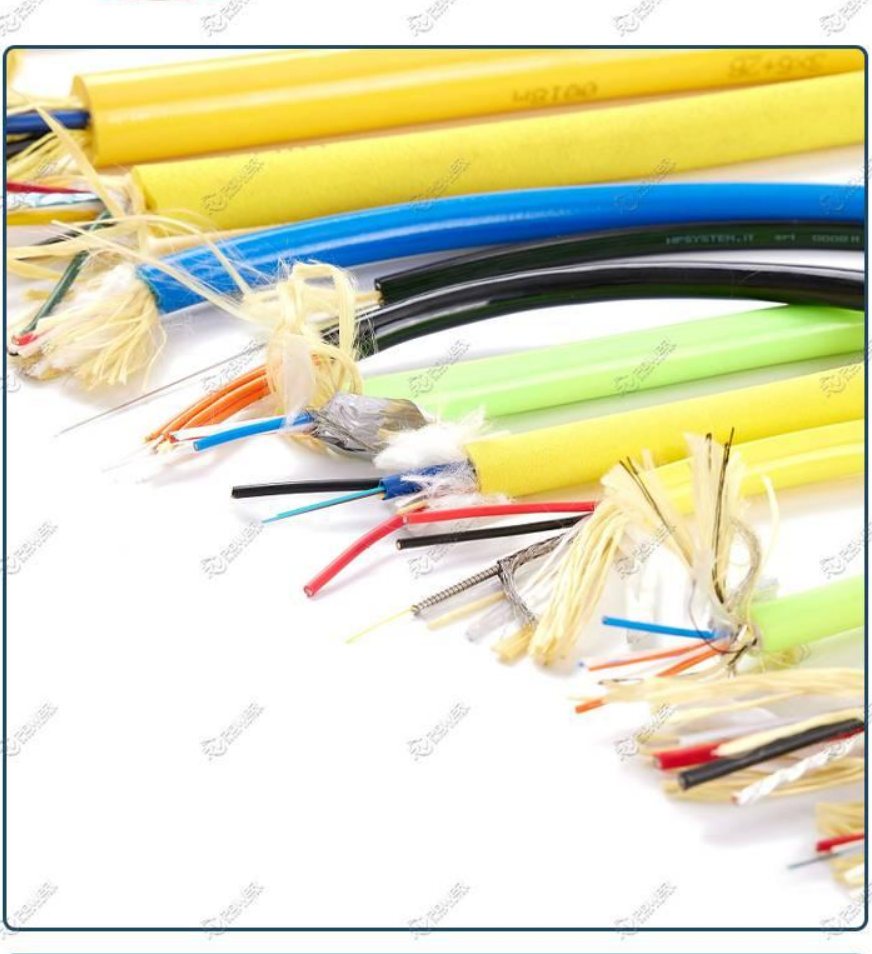

Underwater Fiber Optic Hybrid Cable
6 Core Power
6 Core Fiber Optic

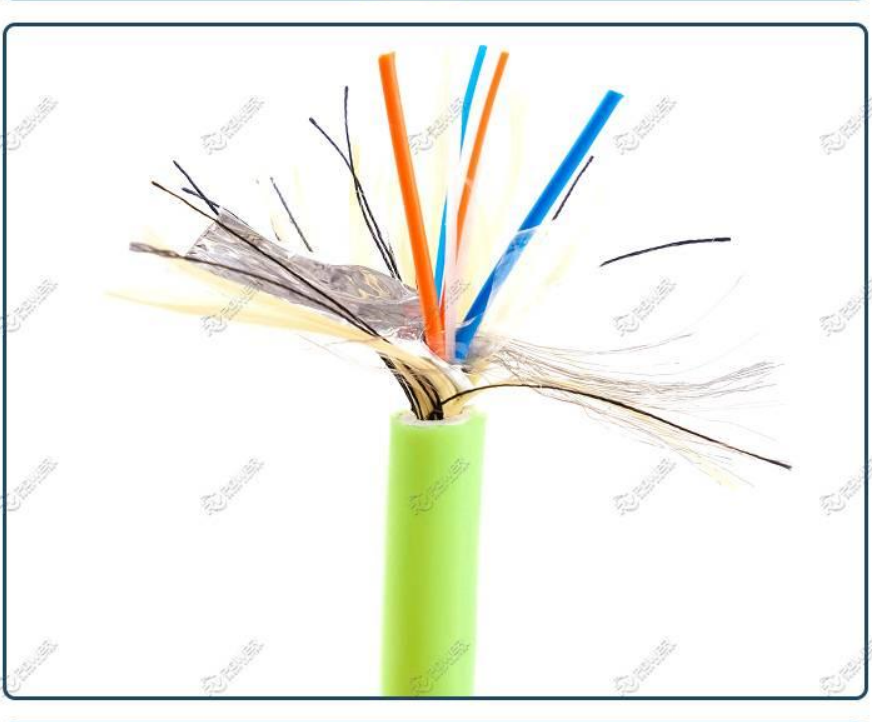

Underwater Fiber Optic Hybrid Cable
7 Core Power
8 Core Fiber Optic


Underwater Fiber Optic Hybrid Cable
7 Core Power
8 Core Fiber Optic


Underwater Fiber Optic Hybrid Cable
11 Core Power
5 Pair Twisted Core
4 Core Fiber Optic


Underwater Fiber Optic Hybrid Cable
11 Core Power
1 Pair Twisted Core
4 Core Fiber Optic





SPECIFICATION FOR ENHANCED LOW MACROBENDING SENSITIVE, LOW WATER PEAKSINGLEMODE OPTICAL FIBER

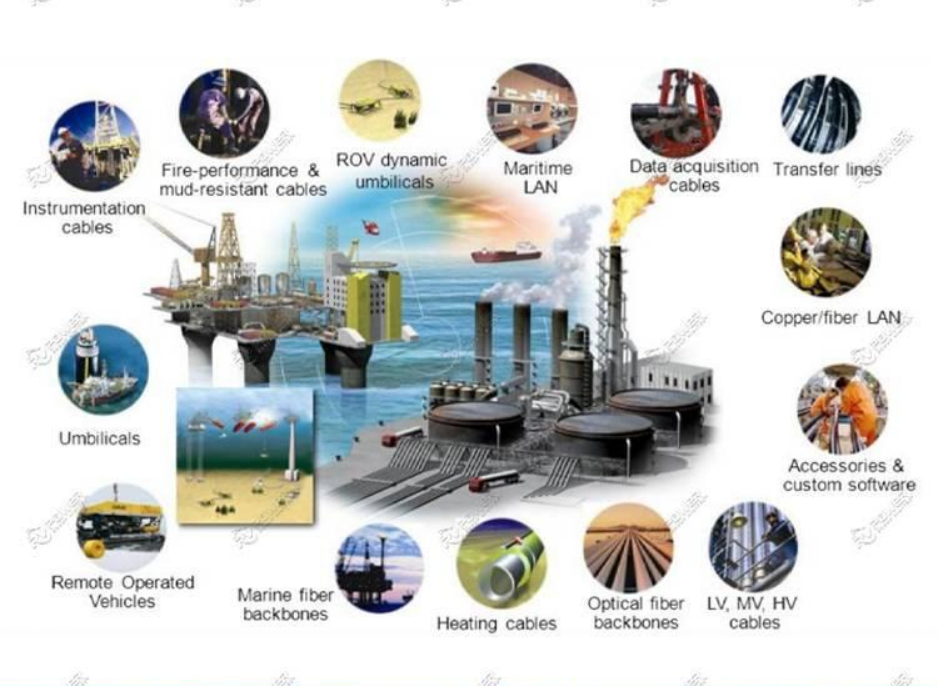
OPTICAL PROPERTIES		
Fiber Selected to Meet Cabled Attenuation	@ 1310 nm @ 1550 nm	≤ 0.38 dB/km ≤ 0.25 dB/km
Attenuation Uniformity	Point or step defect Extended variations	≤ 0.1 dB ≤ 0.1 dB
Mode Field Diameter	@ 1310nm	8.8 ± 0.4 µm
Cut-Off Wavelength	λccf	≤1260 nm
Zero Dispersion Wavelength		1300 - 1324 nm
Slope at Zero Dispersion Wavelength		≤ 0.092 ps/nm2.km
Un-cabled Fiber – Individual		≤ 0.1 ps/√km
Link Design Value PMDq		≤ 0.2 ps/√km
Effective Group Index	@1310/1550 nm	1.467/1.468
MACROBENDING PROPERTIES		
10 Turns Around 30mm Diameter	@ 1550 nm	≤ 0.03 dB/km
10 Turns Around 30mm Diameter	@ 1625 nm	≤ 0.1 dB/km
1 Turn Around 20mm Diameter	@ 1550 nm	≤ 0.1 dB/km
1 Turn Around 20mm Diameter	@ 1625 nm	≤ 0.2 dB/km
1 Turn Around 15mm Diameter	@ 1550 nm	≤ 0.5 dB/km
1 Turn Around 15mm Diameter	@ 1625 nm	≤ 1.0 dB/km
GEOMETRICAL PROPERTIES		
Cladding Diameter	125 ± 0.7 µm	
Glass Concentricity Error	≤ 0.5 µm	
Cladding Non-Circularity	≤ 0.7 %	
Coating Diameter	242 ± 7 µm	
Coating Concentricity Error	≤ 12.0 µm	
Coating Non-Circularity	≤ 5 %	
MECHANICAL PROPERTIES		
Proof Test Level	≥ 0.69 GPa / ≥ 1.0 %	

CABLES FOR MARITIME AND UNDERWATER TECHNOLOGIES

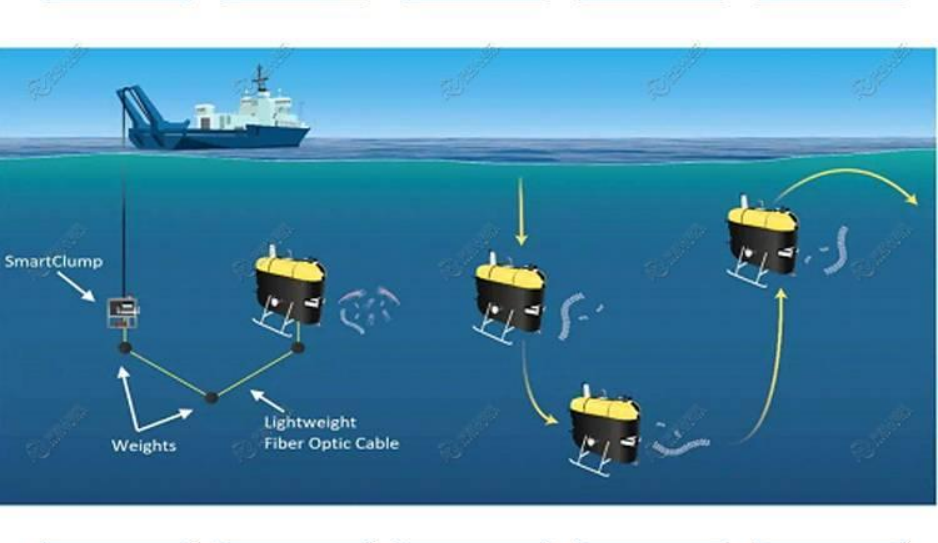
Underwater technology, especially at great depths, is challenging. ROVs, used for underwater inspection, survey and search work,Require cables with high performance and reliability for efficient and accurate control, providing the required strength to support the vehicle.Cables and tethers used for Remotely Operated Vehicles represent the vital connection between the vehicle and the vessel.These products include: neutrally buoyant tethers, Kevlar strength member cables, hybrid cables.
We has many years of knowledge and experience manufacturing cables for the ROV.We offer a complete range of standard communication, video, power and combined service cables, designed to meet the extreme pressures of the subsea environment. Whatever your diving application needs, we can create flexible, cost-effective engineering solutions to suit your requirements and your budget.

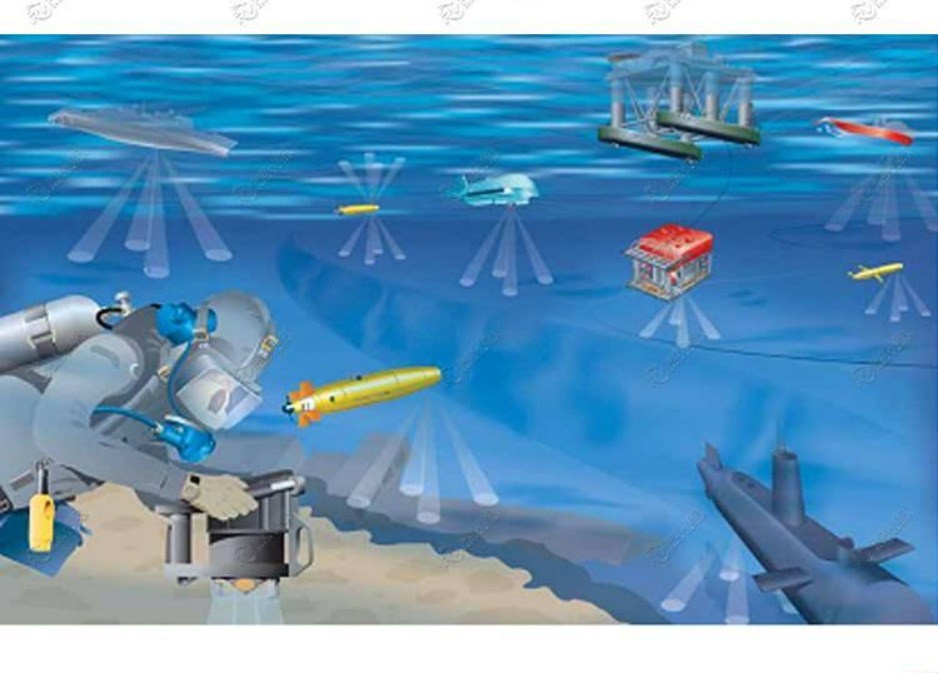
SUBSEA CABLES TYPE

ROV Tether Cable
ROV Umbilicals Cable
Diver umbilical
Pool robotic cleaner cable
Neutrally Buoyant Cables
Diver Communications Cable
Underwater Video Cable – Diver
CCTV Inspection Crawler Video Cables
Underwater Fiber Optic Cable
Underwater Instrumentation Cable
Underwater Multiconductor Power & Control Cable
Underwater Ethernet Cable
Sidescan Sonar Tow Cable
Coax Oceanoghraphic Tow Cable
Push-rod Cables
Polyurethane or Polyethylene Jacketed Cables
Composite Underwater Communication Cables
PUR underwater umbilical hybrid Optical
Custom Cable Designs



UNDERWATER FIBER OPTIC HYBRID CABLE





DETAIL DISPLAY

ONE

ENHANCED LOW MACROBENDING SENSITIVE

Single Mode 9/125um , Multimode 62.5/125um Multimode 50/125um

TWO

RESILIENT, FLEXIBLE AND NEUTRALLY BOUYANT

Custom ROV cables using tried and proven components for power, video, data, etc., which areavailable for your design, providing shorter lead times.

THREE

ONE SINGLE LONG CONTINUOUS LENGTH REQUIRED

solid, com-pression resistant constructions withstanding hydrostatic pressures at depths to 7 Km.

FOUR

HIGH BREAKING STRENGTH

Strength Layer: Light weight Kevlar fibers are designed into each cable construction to meet specific ROV intended use for maximum strength and longevity. Increased strength designs including steel armor may be ordered.

FIVE

SMALL SIZED. LIGHT . PRESSURE RESISTANT . ABRASION/ EROSION RESISTANT

Jacket Materials are chosen for optimal bonding, moisture and mechanical resistance. Each ROV cable is uniquely designed for specific ROV types using PE, TPE, PUR, and foam variations for flotation.

OIL RESISTANT
FLAE RESISTANT
HALOGEN FREE
COLD RESISTANT
ABRASION RESISTANT
OZONE RESISTANT
UV RESISTANT
MICROBE RESISTANT
MUD RESISTANT
WATER RESISTANT