ROV HYBRID POWER AND SIGNAL CABLE

TETHERS & UMBILICALS FOR REMOTELY OPERATED VEHICLES (ROVS)

ROV Tether Cable

Typical ROV Tethers include power conductors, shielded data pairs and video using coax, TSP, or fiber optics. Designs available in several configurations, including Neutral Buoyancy.A varied degree of strength designs available depending onworkloads and handling system. The sample cables listed be low are proven working designs for vehicles used worldwide.

Design Variations

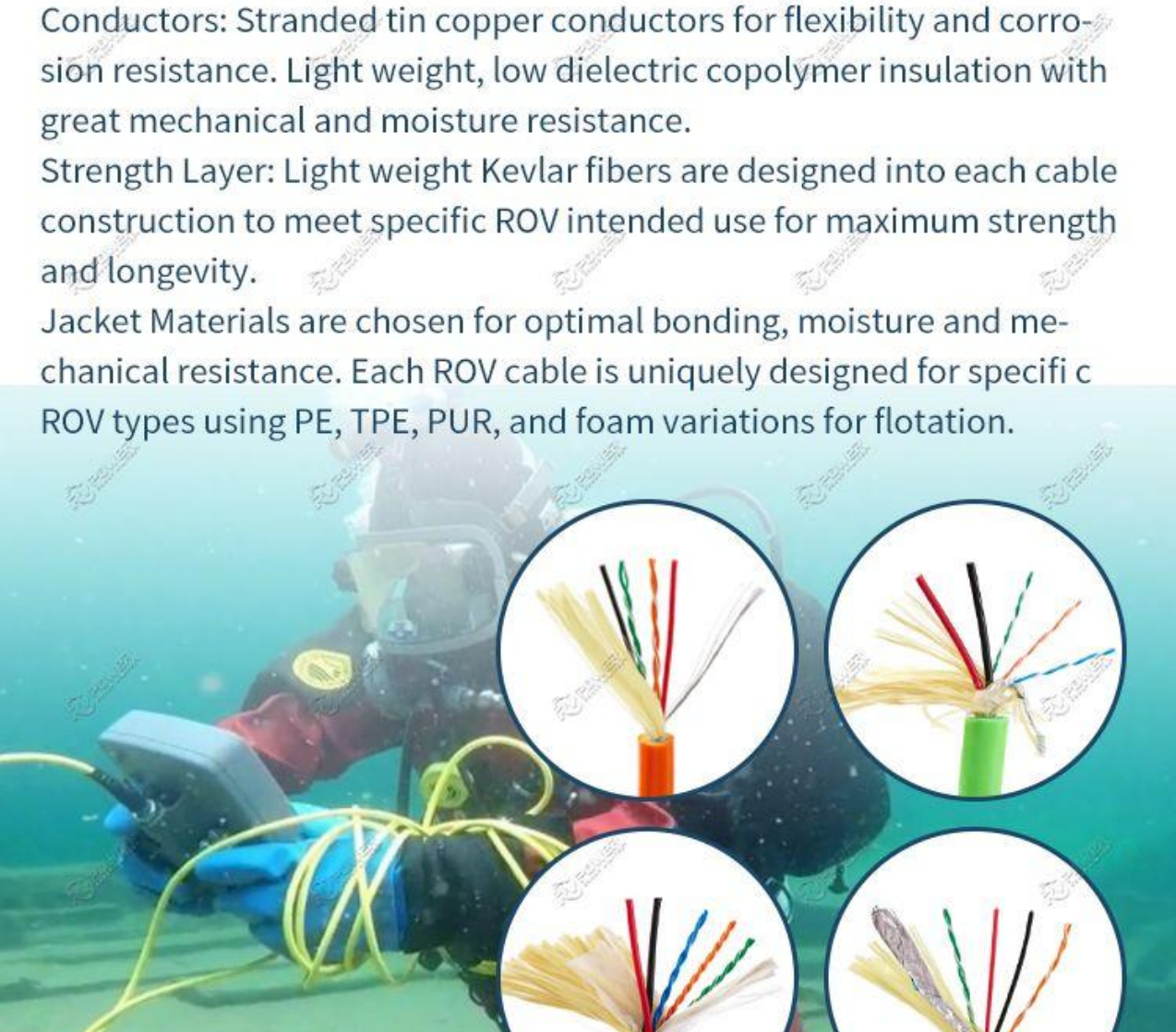
RV POWER GROUP manufactures many custom ROV cables using tried and proven components for power, video, data, etc., which are available for your design, providing shorter lead times.

Cable Properties

Conductors: Stranded tin copper conductors for flexibility and corrosion resistance. Light weight, low dielectric copolymer insulation with great mechanical and moisture resistance.

Strength Layer: Light weight Kevlar fibers are designed into each cable construction to meet specific ROV intended use for maximum strength and longevity.

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



strong
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durable

OUR ADVANTAGES

EASY SOLUTIONS

ADAPTABILITY IS ONE OF OUR BEST QUALITESIT PERMIT US TO COPE WITH YOUR REQUE STON A SHORT NOTICE AND EFFEC TIVELY.

NO PRICE FIGHTS

WE ESCAPED THE OLASSICAL REBATE UNTILYOU DROP " POLICY . WE ARE PRICE WISE SINCETHE BEGINNING

HIGH LEVEL EXPERIENCE

QUR 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

strong
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durable

ROV HYBRID POWER AND SIGNAL CABLE

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

COMPONENTS AND MATERIALS:

- Optical fibers in SS steel tubes /Plastic Tube from 1-24 fibers, single mode, multi-mode,
- Data signals using Ethernet Cat5e and Cat6 signal pairs, RS-232, RS-485, analog, coaxial, shielded components
- Power conductors from 300V to 3.0kv,
- Water block Material : Block water Yarn / Block water Glue
- Strength layers of Synthetic fibers including Kevlar, Vectran
- Jacket compounds :Polyurethane, PE, HDPE, Light weight TPE, foam PE or Foam PUR

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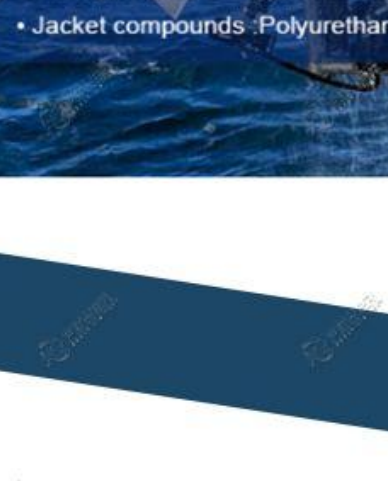
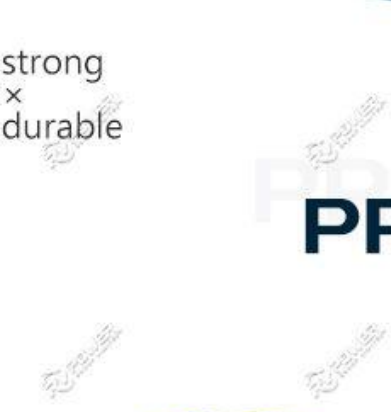
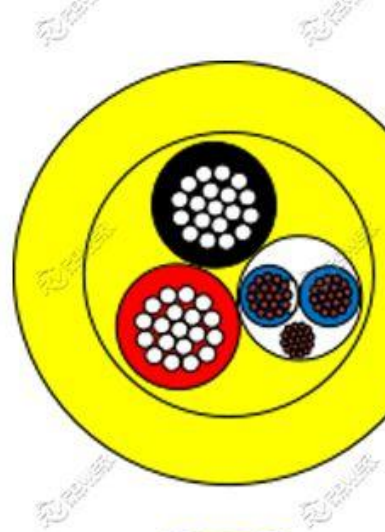
PRODUCT MIX



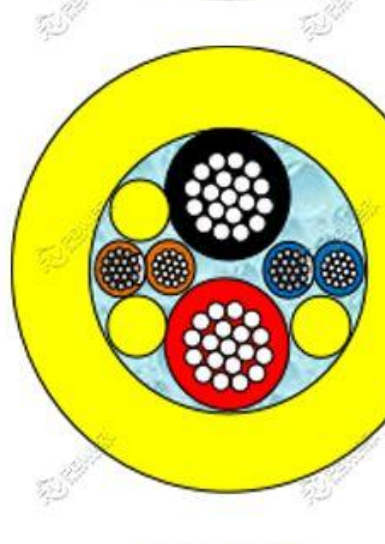
Neutrally buoyant ROV cable
2 POWER Cable
Single Layer
Overall diameter: 5.0mm



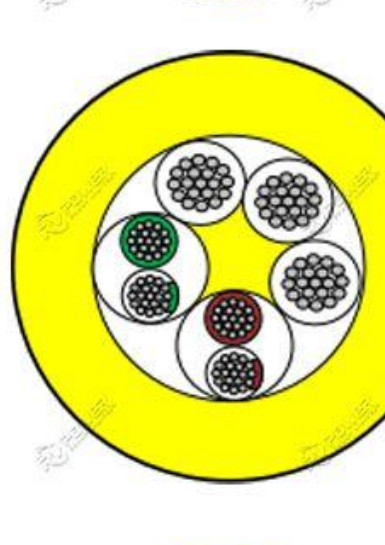
Neutrally buoyant ROV cable
2 POWER Cable
2 Pair SIGNAL DATE Cable
Overall diameter: 11.0mm



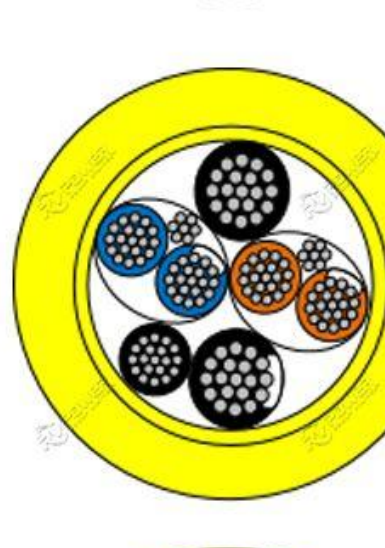
Neutrally buoyant ROV cable
3 POWER Cable
2 Pair SIGNAL DATE Cable
Overall diameter: 9.8mm



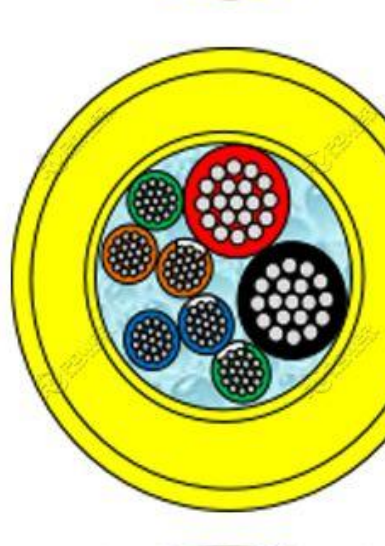
Neutrally buoyant ROV cable
3 POWER Cable
2 Pair SIGNAL DATE Cable
Overall diameter: 9.8mm



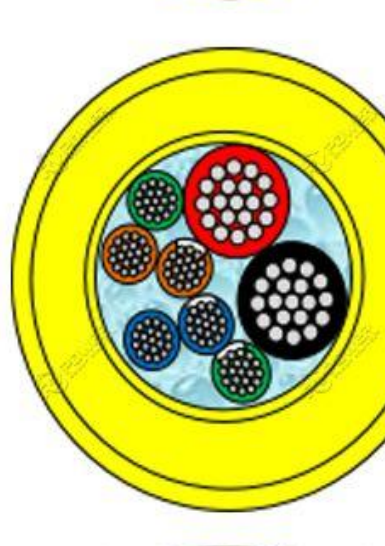
Neutrally buoyant ROV cable
2 POWER Cable
3 Pair SIGNAL DATE Cable
Overall diameter: 9.2mm



Neutrally buoyant ROV cable
4 POWER Cable
4 Pair SIGNAL DATE Cable
Overall diameter: 13.5mm



Neutrally buoyant ROV cable
2 POWER Cable
4 Pair SIGNAL DATE Cable
Overall diameter: 11.0mm

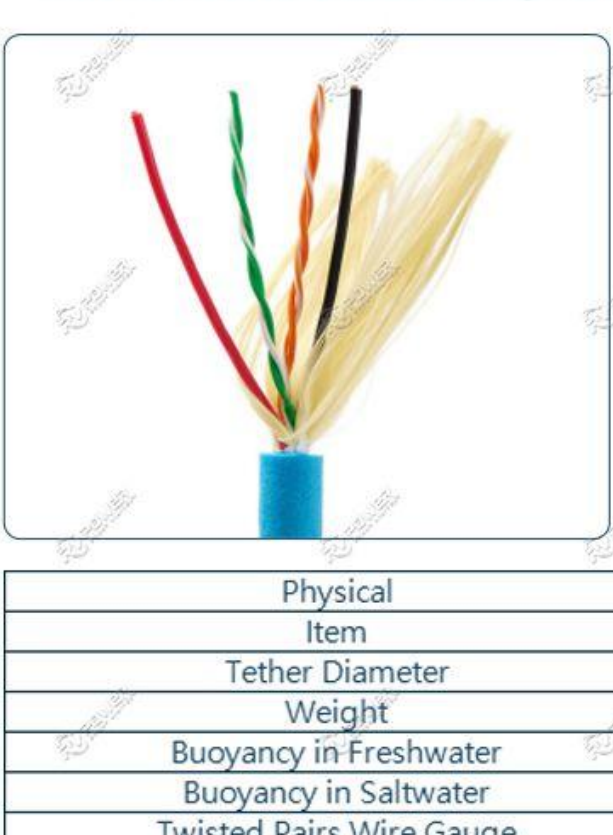


Neutrally buoyant ROV cable
2 POWER Cable
4 Pair SIGNAL DATE Cable
Overall diameter: 11mm

SINGLE LAYER --ROV Hybrid POWER AND SIGNAL Cable

Physical	
Item	Value
Tether Diameter	7.3mm±0.5mm
Weight	0.043 kg/m
Buoyancy in Freshwater	Neutral
Buoyancy in Saltwater	Slightly Positive
Twisted Pairs Wire Gauge	26 AWG
Working Strength	35 kgf
Breaking Strength	155 kgf
Minimum Working Bend Diameter	75 mm
Electrical	
Item	Value
DC Resistance @ 20°C	0.0386 Ω / ft
Characteristic Impedance @ 1 MHz	120 Ω
Capacitance @ 1 kHz	16.5 pF / kft
Insulation Resistance @ 500 VDC	> 500 MΩ / kft
Voltage Rating (Twisted Pair)	300 VDC
Voltage Rating (Between Pairs)	600 VDC
Twisted Pairs	
Pair 1	Blue/White
	Blue
Pair 2	Orange/White
	Orange
Power Cable 1	Black
Power Cable 2	Red

DOUBLE LAYER --ROV Hybrid POWER AND SIGNAL Cable



Physical	
Item	Value
Tether Diameter	8.2mm±0.5mm
Weight	0.053 kg/m
Buoyancy in Freshwater	Neutral
Buoyancy in Saltwater	Slightly Positive
Twisted Pairs Wire Gauge	26 AWG
Working Strength	35 kgf
Breaking Strength	155 kgf
Minimum Working Bend Diameter	85 mm
Electrical	
Item	Value
DC Resistance @ 20°C	0.0386 Ω / ft
Characteristic Impedance @ 1 MHz	120 Ω
Capacitance @ 1 kHz	16.5 pF / kft
Insulation Resistance @ 500 VDC	> 500 MΩ / kft
Voltage Rating (Twisted Pair)	300 VDC
Voltage Rating (Between Pairs)	600 VDC
Twisted Pairs	
Pair 1	Blue/White
	Blue
Pair 2	Orange/White
	Orange
Power Cable 1	Black
Power Cable 2	Red

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durable

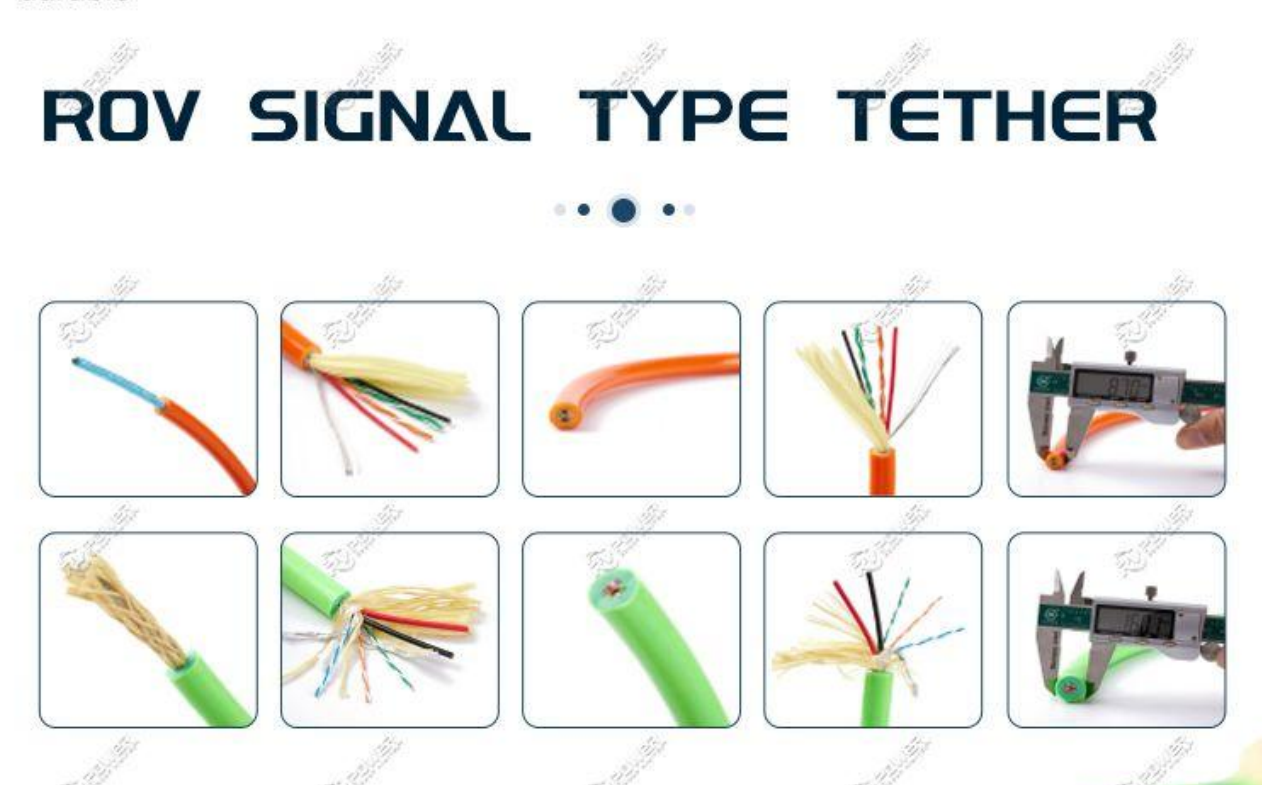
CABLES FOR MARITIME AND UNDERWATER TECHNOLOGIES

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



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ROV SIGNAL TYPE TETHER

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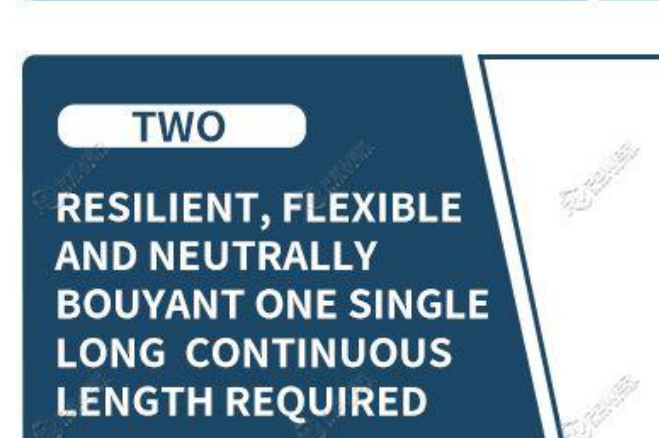
DETAIL DISPLAY



ONE

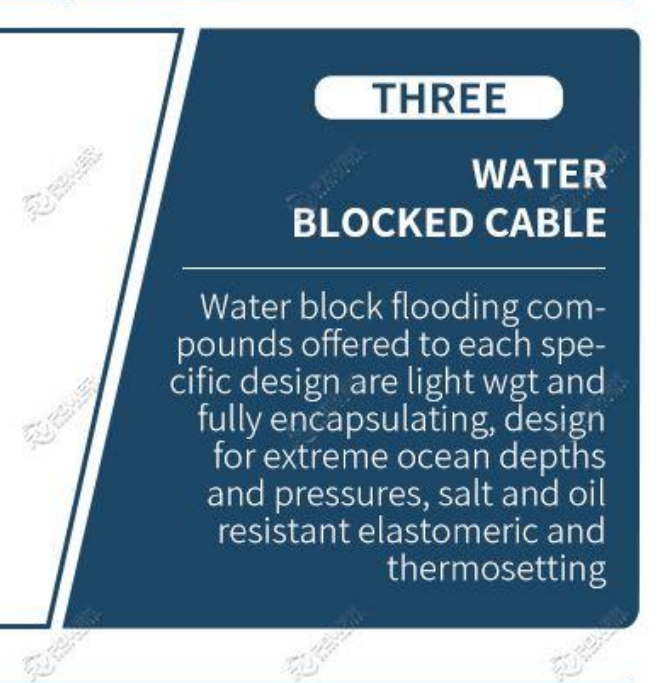
LONG DISTANCE DATA TRASMISSION

Conductors: Stranded Pure/ tin copper conductors for flexibility and corrosion resistance. Light weight, low dielectric copolymer insulation with great mechanical and moisture resistance.

TWO

RESILIENT, FLEXIBLE AND NEUTRALLY BOUYANT ONE SINGLE LONG CONTINUOUS LENGTH REQUIRED

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



THREE

WATER BLOCKED CABLE

Water block flooding compounds offered to each specific design are light wgt and fully encapsulating, design for extreme ocean depths and pressures, salt and oil resistant elastomeric and thermosetting

FOUR

HIGH BREAKING STRENGTH

Strength Layer: Light weight Kevlar fibers are designed into each cable construction to meet specific ROV intended use for max imum strength and longevity.

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