SHANGHAI KUKA

China's leading Cable Manufacturer

ROV Cable

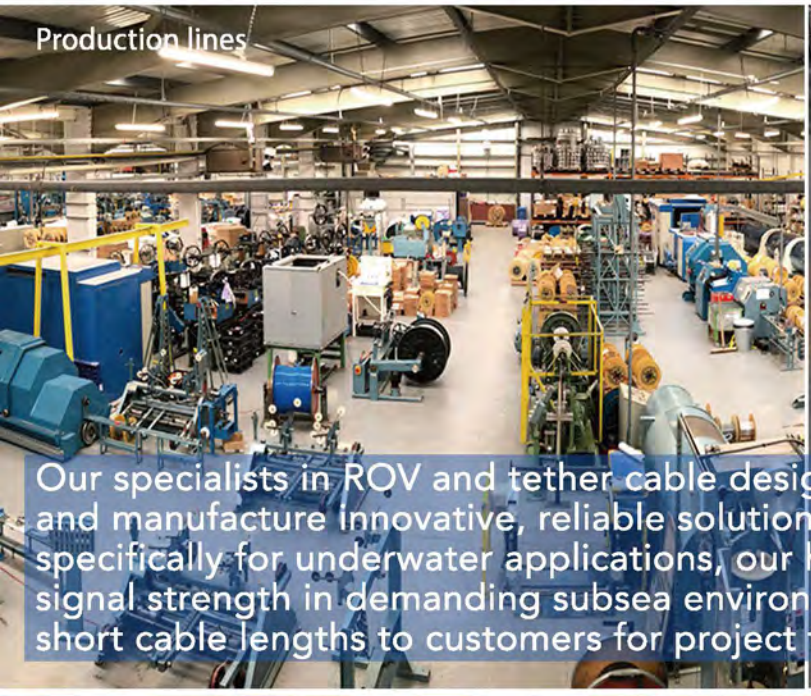
Electrical, Fibre Optic and Hybrid Cables

www.kukacable.com

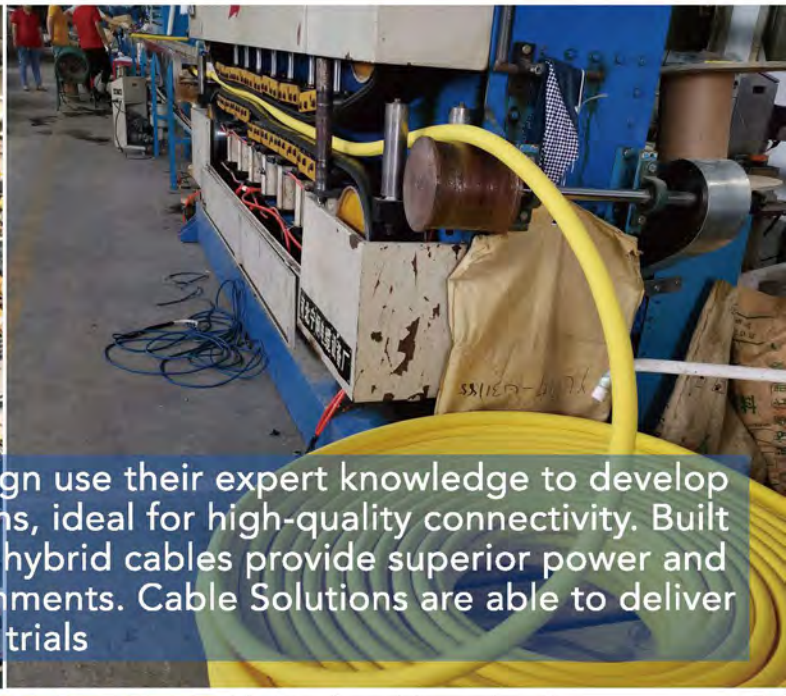
ABOUT US

KUKA® is famous as international wire&cable solution factory, established in 1998 having its headquarter in Shanghai, China. We now have three factories, all equipped with automated technology and advanced quality management systerm. We design, manufacture and supply ROV cables and composite subsea cables and provides a global customer base with standard and bespoke cable solutions for downhole, seabed marine, subsea, etc.

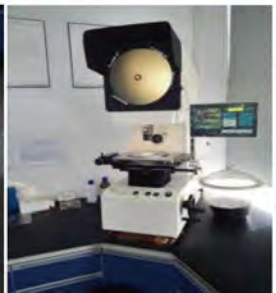
Factory center.
Add: No. 5878 Tingwei Road, Jinshan District, Shanghai, China



Production lines



Our specialists in ROV and tether cable design use their expert knowledge to develop and manufacture innovative, reliable solutions, ideal for high-quality connectivity. Built specifically for underwater applications, our hybrid cables provide superior power and signal strength in demanding subsea environments. Cable Solutions are able to deliver short cable lengths to customers for project trials



Laboratory and Testing facilities

Contents

ROV cable feature

■ Applications

ROV tether cable are widely used in interconnecting subsea installations; connecting subsea installations to fixed and floating platforms as well as connecting systems to shore.

The tether cable that connects the ROV with the controller significantly affects the underwater performance of the ROV, and it's vital that the cable ensures a stable signal transmission during subsea operation.

Strength and flexibility is equally key in designing to ensure the function. It is also important that the tether cable is neutrally buoyant, reducing drag on the micro ROV, helping the vehicle run smooth with less water resistance and loading.

■ Our ROV cable solution

1. Hybrid cables for superior signal strength

We have the full experience to design compact products with excellent resistance to water pressure and mechanical compression while maintaining high-quality connectivity and power strength.

2. Buoyancy by design

Either fresh or saltwater? Warm or cold water? We calculate the needed cable density for best practice, no matter the nature of the environment.

3. Waterblocking for all applications

Cable designs for submerged use need proper waterblocking to prevent water transportation along the cable. We have a variety of options to prevent water from both entering the cable, and to keep water from transporting longitudinally inside the cable.

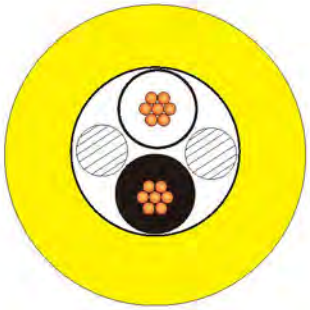
4. KUKA ROV cable design

* **Fibre, CAT or coaxes** for high-speed data transmission
* **Triple-extruded conductors**, low to medium voltage and high current capacity
* **Thin wall design, low weight and compact water-resistant materials** for supreme reliability and long operational lifespan.
* **Aramid braids and ropes** for anti-torsion and tensile strength – minimizing strain and stress
* **Screening and armor** – we provide the best option based on the desired performance

2x28AWG PE/PUR

■ Construction details

Name	ROV buoyant tether cable
Model	2R02260
Specification	2x28AWG
Characteristic	Fresh water neutrally buoyant , Waterproof, Wear-resistant, Small diameter



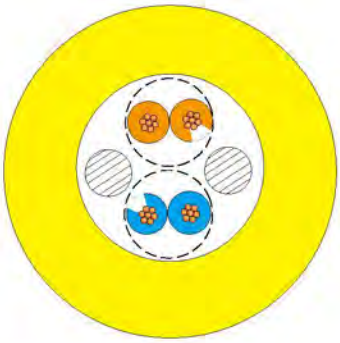
Conductor	Material	Tinned copper wire
	Structure	11/0.1mm
Insulation	Material	Polyethylene (PE)
	Structure	Two wires twisted
	Color	Black and white
Filler	Kevlar +Water blocking yarn	
Around	Non-woven fabric	
Work strength	350N	
Breaking strength	1550N	
Jacket	Material	Polyurethane (PUR)
	Color	Yellow
Cable diameter	Ø 4.00 ± 0.20 mm	
Voltage	300/500V	
Job depth	200M	
Weight	0.012kg/m	

■ Picture

2x2x26AWG PE/PUR

■ Construction details

Name	ROV buoyant tether cable
Model	4R02261
Specification	2x2x26AWG
Characteristic	Fresh water neutrally buoyant , Hydrolysis UV resistant , Small diameter



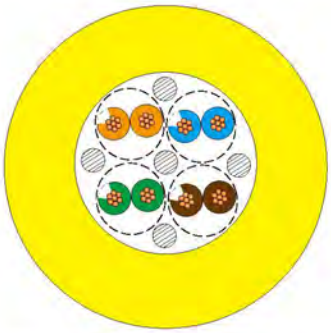
Conductor	Material	Bare copper
	Structure	7/0.16mm
Insulation	Material	Polyethylene (PE)
	Structure	Double twisted
	Color	Blue white and blue
		Orange white and orange
Filler	Kevlar +Water blocking yarn	
Around	Non-woven fabric	
Work strength	300N	
Breaking strength	1550N	
Jacket	Material	Foaming Polyurethane (PUR)
	Color	Yellow
Cable diameter	Ø 6.00 ± 0.30 mm	
Voltage	300/500V	
Job depth	300M	
Weight	0.023kg/m	

■ Picture

4x2x26AWG PE/PUR

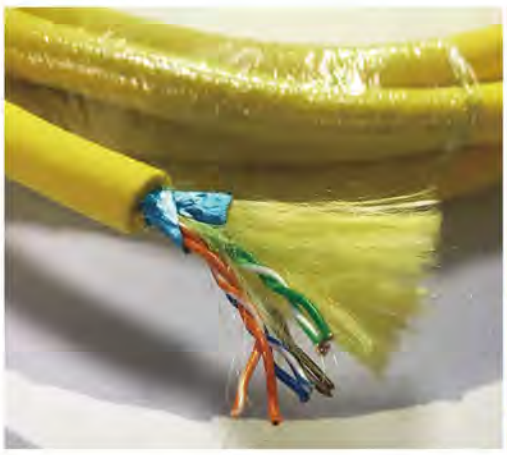
■ Construction details

Name	ROV buoyant tether cable
Model	8R02262
Specification	4x2x26AWG
Characteristic	Fresh water neutrally buoyant , Waterproof, UV resistant



Conductor	Material	Bare copper
	Structure	7/0.16mm
Insulation	Material	Polyethylene (PE)
	Structure	Four twisted pairs
	Color	Blue white and blue
		Orange white and orange
		Green white and green
		Brown white and brown
Filler	Kevlar +Water blocking yarn	
Around	Non-woven fabric	
Work strength	350N	
Breaking strength	1550N	
Jacket	Material	Foaming Polyurethane (PUR)
	Color	Yellow
Cable diameter	Ø 7.60 ± 0.30 mm	
Voltage	300/500V	
Job depth	300M	
Weight	0.050kg/m	

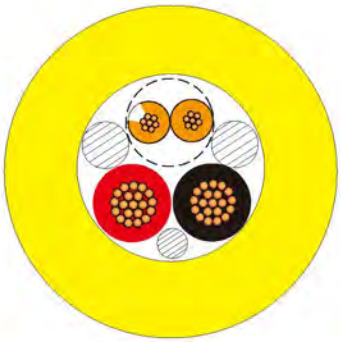
■ Picture



2X18AWG+1X(2X24AWG) PE/PUR

■ Construction details

Name	Hybrid communication cable
Model	4RXP071
Specification	2X18AWG+1X(2X24AWG)
Characteristic	Twisted shielded data pair, Textile braid, Waterblocking fllers and tape, buoyant



Conductor	Material	Bare copper+Tinned copper
	Structure	19/0.25mm+7/0.2mm
Insulation	Material	HDPE+PE
	Structure	Cores twisted in pairs
	Color	Red/Black
		+Orange white and orange
Filler	Kevlar +Swelling waterblocking tape	
Around	Non-woven fabric	
Work strength	300N	
Breaking strength	1550N	
Jacket	Material	Foaming Polyurethane (PUR)
	Color	Yellow
Cable diameter	Ø 8.80 ± 0.40 mm	
Voltage	1000V+250V	
Job depth	300M	
Weight	0.080kg/m	

■ Picture

Single-mode fibre

■ Construction details

Name	Fiber optic ROV cable
Model	1RFO180
Specification	1-core single-mode Fibre
Characteristic	Fibers in plastic tube, Waterblocking tape, buoyant,

Conductor	Material	single-mode Fibre
	Structure	/
Insulation	Material	Polyvinyl chloride (PVC)
	Structure	/
	Color	Blue
Filler	Kevlar +Water blocking yarn	
Around	Non-woven fabric	
Work strength	300N	
Breaking strength	1000N	
Jacket	Material	Foaming Polyurethane (PUR)
	Color	Yellow
Cable diameter	Ø 5.80 ± 0.20 mm	
Voltage	/	
Job depth	200M	
Weight	0.038kg/m	

■ Picture

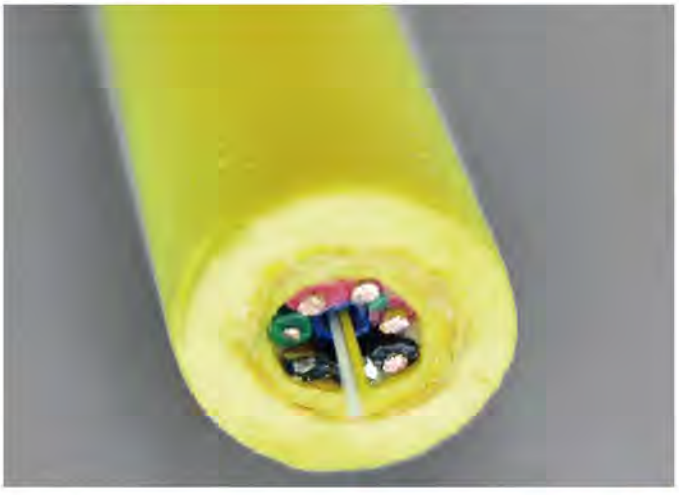
Optic fiber + 10x0.34mm2 PE/PUR

■ Construction details

Name	Fiber optic hybrid cable
Model	1RFOM181
Specification	Optic fiber + 10x0.34mm2
Characteristic	Elements laid up together, Textile braid, Swelling waterblocking tape

Conductor	Material	Fiber optic +Tinned copper
	Structure	single-mode+19/0.15mm
Insulation	Material	PBT tube+HDPE
	Structure	Cores laid up together
	Color	Blue tube
		+Black/red/blue/brown/green
Filler	Kevlar +Swelling waterblocking tape	
Around	Textile braid	
Work strength	800N	
Breaking strength	3200N	
Jacket	Material	Foaming Polyurethane (PUR)
	Color	Yellow
Cable diameter	Ø 10.40 ± 0.50 mm	
Voltage	1000V	
Job depth	300M	
Weight	0.112kg/m	

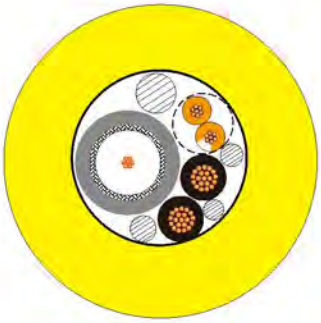
■ Picture



Coaxial+ 2x16AWG+ 1x(2X24AWG) PE/PUR

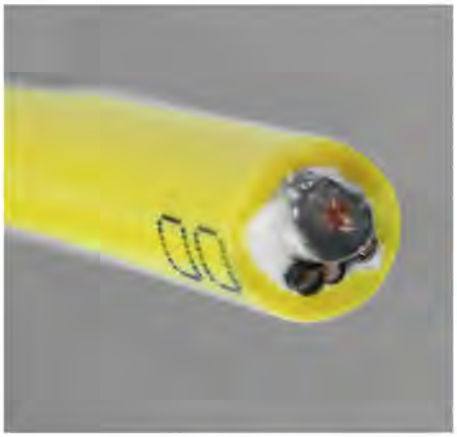
■ Construction details

Name	Video hybrid cable
Model	1VMC190
Specification	Coaxial+ 2x16AWG+ 1x(2X24AWG)
Characteristic	Video coaxial, Waterblocking compound, Twisted screened pairs



Conductor	Material	Tinned copper
	Structure	7x1.6mm+19/0.3mm+ 7/0.2mm
Insulation	Material	Foamed polyolefin+ PE +PE
	Structure	Tinned copper braid
	Color	Black
		+Orange white and orange
Filler	Kevlar +Swelling waterblocking tape	
Around	Textile braid, polyester tape	
Work strength	800N	
Breaking strength	3200N	
Jacket	Material	Foaming Polyurethane (PUR)
	Color	Yellow
Cable diameter	Ø 11.00 ± 0.50 mm	
Voltage	1000V+ 250V	
Job depth	300M	
Weight	0.132kg/m	

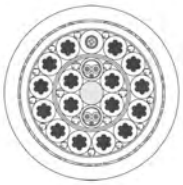
■ Picture

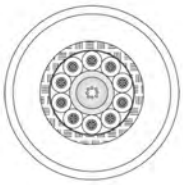


Custom designs- Remotely operated vehicles cables

Customized neutrally buoyant ROV tether cable with hybrid construction for observation and work class vehicle with light intervention, survey and construction capability.

■ Typical construciton & characteristics





~ Tinned copper/bare copper conductors

~ Polypropylene insulation

~ Cores twisted in pairs

~ Foamed Polyethylene sheath

~ Swelling water blocking fillers

~ LCP ber braid strength member

~ Hydrolysis and UV resistant matt/glossy PUR outer sheath

~ Produced and deployed in one continuous length over 4 km

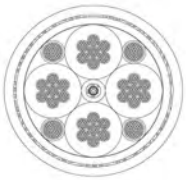
~ Customized capability of floatation and immersion in shallow water for water main inspection and control

■ Designs Picture

Custom designs- Fiber Optic Subsea Hybrid cables

Special data transmission custom hybrid cable for pipeline inspection tools, and subsea use in exploiting marine.

■ Typical construciton & characteristics



~ Multimode fiber optic in PBT tube/ stainless steel tube

~ Aramidic yarn braid strength member

~ Cross-linked polyethylene low friction and highly resistant sheath

~ Tinned copper conductors

~ Cross-linked polyethylene insulation

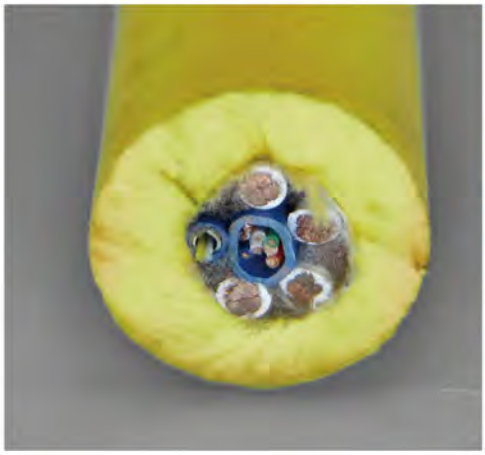
~ Protective polyester tape

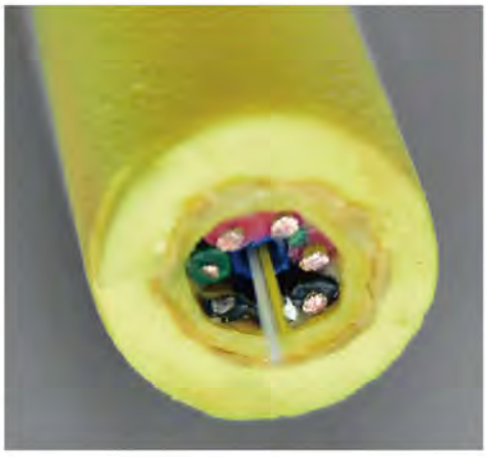
~ Glass ber yarn braid

~ Designed to be robust in dynamic use and high power

~ Special multipolar hybrid cable with multi-mode optical fibers in stainless steel tube and reinforcing braid

■ Designs Picture

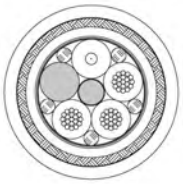


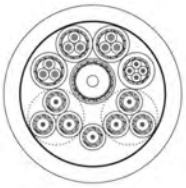


Custom designs - Subsea Detection & Instrumentation cables

Customized composed cable with micro wave coaxial for special subsea exploration, detection and instrumentation.

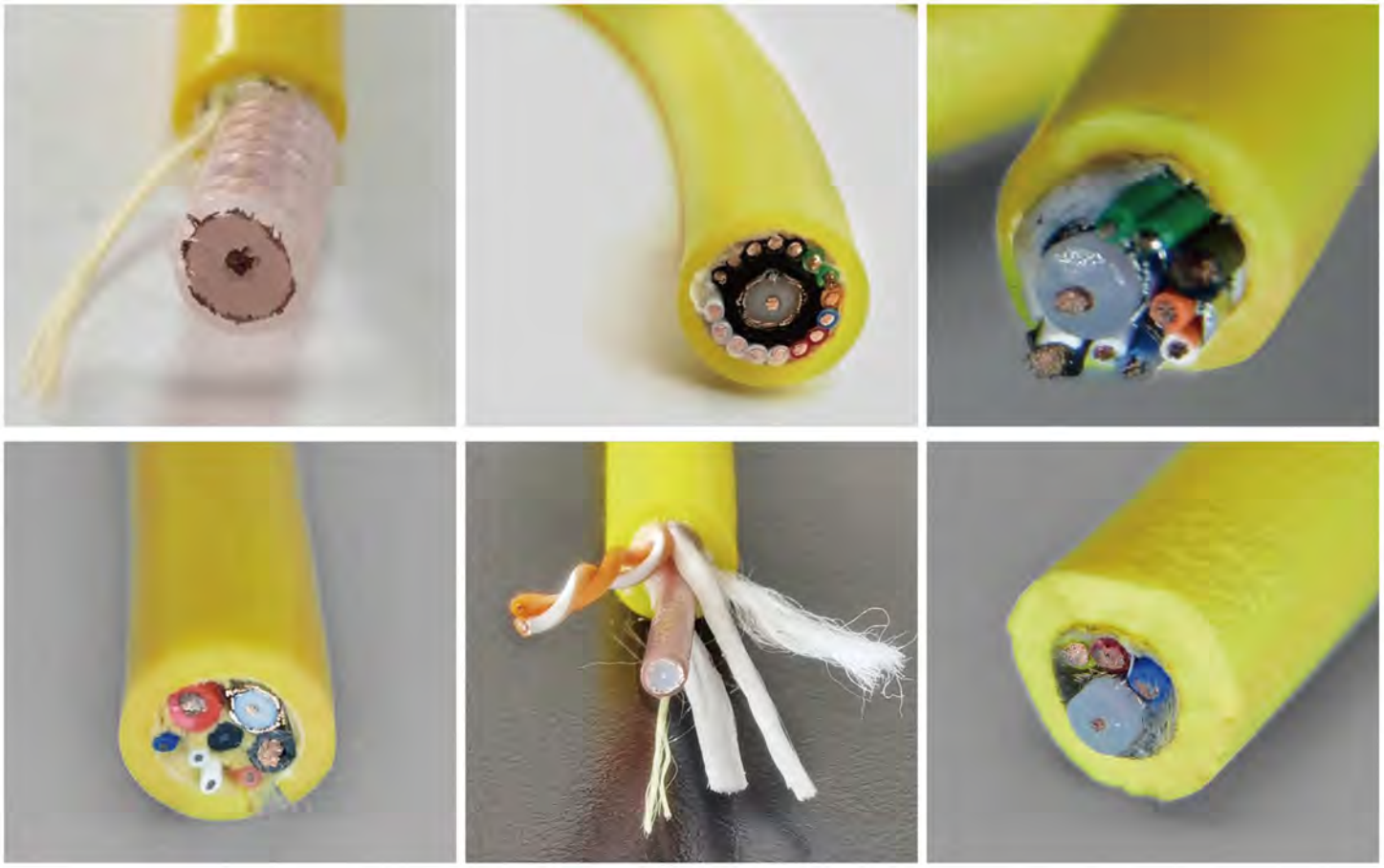
■ Typical construciton & characteristics





~ Micro wave coax cable
~ Tinned copper conductors
~ HDPE insulation
~ Polyethylene sheath
~ Silicone waterblocking compound
~ Hydrolysis UV resistant PUR outer
~ Galvanized steel braid armour
~ High performance ultra low loss coaxial cable
~ Swelling water blocking capacity
~ Hybrid cable suitable for several protocol optical fiber and video trasmission

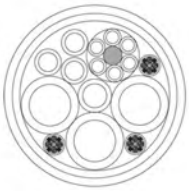
■ Designs Picture



Custom designs- Umbilicals cables

Neutrally buoyant diver umbilical cable, such as customized intervention and maintenance umbilical cable for subsea trenching machine.

■ Typical construciton & characteristics



~ Diver/Hydraulic/Thermoplastic hoses

~ Bare and tinned copper conductors

~ HDPE insulation

~ Twisted shielded pairs

~ Aramidic ber braid strength member

~ Hydrolysis UV resistant PUR outer sheath

~ Customized cables construction and hoses choice

~ Air, gas and fluid hoses custom fitted cable

~ Light weight in sea water

~ Specially designed and manufactured with durable materials to guarantee operational strength and dynamic requirements

■ Reference Picture

Contact us

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