

Brief Introduction

Since 2013, the company has been committed to addressing the challenge of domestic substitution for imported water-tight connectors. Currently, it has achieved independent domestic development of a series of products including water-tight electrical connectors, water-tight signal connectors, water-tight coaxial connectors, water-tight optical fiber connectors, and water-tight hybrid optoelectronic connectors.

The products undergo rigorous and comprehensive testing prior to shipment, featuring high quality, high performance, and high reliability. They are suitable for operations in water depths of up to 10,000 meters and can be interchangeably used with imported brand products of the same model.

The company's products have been widely applied in various fields including underwater military defense, offshore oil and gas extraction, seabed observation, underwater robotics, underwater camera lighting systems, underwater telemetry systems, underwater communication systems, and diving equipment. They have been recognized as qualified subcontractors by multiple research institutions and shipbuilding equipment groups.



Catalogue

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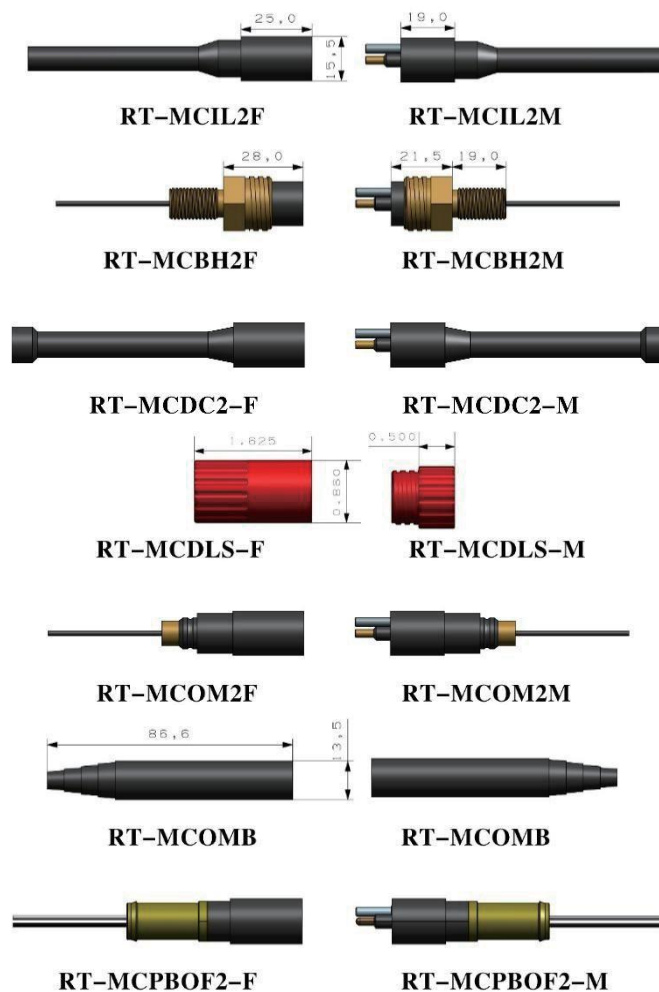
Micro Circular - 2, 3, 4, 5, 6 and 8 contact

Microscopic Round 2. 3. 4. 5. 6. 8 Core

product picture :



product size :



Micro Circular-2, 3, 4, 5, 6, and 8 contact points

Connector male face diagram:



Product Parameter :

Connector rated voltage:300v DC/AC

2、 3. Rated current of single-core connector:10A per pin contact (instantaneous current per terminal may reach 20A)

5、 6.8-core connector single-core rated current:5A per pin contact (instantaneous current per terminal may reach 10A)

Insulation resistance:>200M Ω

Contact resistance: <0.01 Ω

Number of plug-and-play cycles:≥ 500 cycles

Operating temperature:in water, -4 to 60°C, 25 to 140°F

In air, at-40 to 60°C, and-40 to 140°F

Storage temperature:-40 to 60°C, -40 to 140°F

Product qualified pressure level:80MPa, 8000 m water depth

Connector body material:chloroprene rubber

Metal materials of the cabin component base:brass C 36000, stainless steel 316L, titanium alloy TC4, hard anodized aluminum 7075

Positioning pin:Stainless steel 316L

O-ring:Nitrile rubber

Lock fastening:POM or stainless steel

Spring retaining ring:Stainless steel 304

Cable specifications:

2、 3-4 core perforated cabin parts (30 cm length): 20AWG 0.52mm² white polytetrafluoroethylene (PTFE)

5、 6/8-core through-cabin component loose wire (30 cm length): 22AWG 0.33mm² white polytetrafluoroethylene (PTFE)

2、 3-4 core water-resistant cable (60 cm length): 18AWG 0.82mm² chloroprene rubber outer sheath

5、 6-core and 8-core water-resistant cable (60 cm length): 20AWG 0.33mm² chloroprene rubber outer sheath

Waterproof cable sequence color definition:

1: Black 2: White 3: Red 4: Green 5: Orange 6: Blue 7: White-Black 8: Red-Black

Waterproof cable wire diameter:

2 The outer diameter of the core water-tight cable is 8.45 mm. 3-core water-resistant cable outer diameter: 9.4 mm

4 Outer diameter of core water-tight cable: 9.8 mm 5-core water-tight cable outer diameter: 7.8 mm

6 Outer diameter of core water-tight cable: 8.2 mm 8-core water-resistant cable outer diameter: 9.8 mm

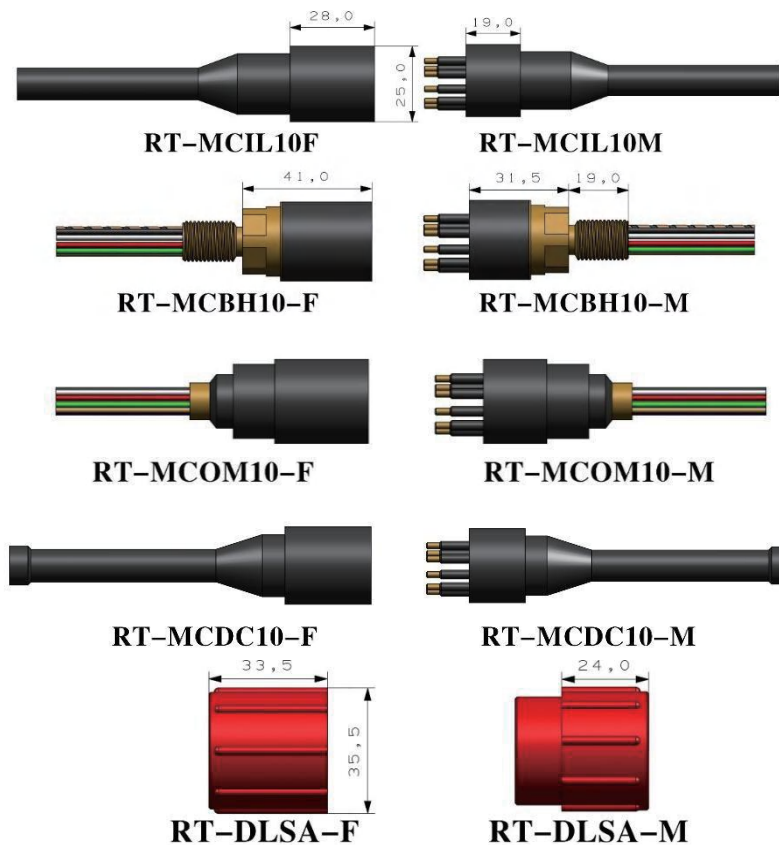
Micro Circular - 10, 12 and 16 contacts

Microscopic Round 10.12.16 Cores

product picture :



product size :



Micro Circular-10,12, and 16 contacts

Connector male face diagram:



Product Parameter :

Connector rated voltage:300v DC/AC

10、 12-core and 16-core connectors: Single-core rated current:5 A per pin contact (instantaneous current per terminal may reach 20A)

Insulation resistance:>200M Ω

Contact resistance: <0.01 Ω

Number of plug-and-play cycles: $\geq$ 500 cycles

Operating temperature:in water, -4 to 60°C, 25 to 140°F

In air, at-40 to 60°C, and-40 to 140°F

Storage temperature:-40 to 60°C, -40 to 140°F

Product qualified pressure rating:80MPa, 8000 m water depth

Connector body material:chloroprene rubber

Metal materials of the cabin component base:brass C 36000, stainless steel 316L, titanium alloy TC4, hard anodized aluminum 7075

O-ring:Nitrile rubber

Lock fastening:POM or stainless steel

Spring retaining ring:Stainless steel 304

Cable specifications:

10、 12/16 core perforated cabin parts (30 cm length): 22AWG 0.33 mm² white polytetrafluoroethylene (PTFE)

10、 12/16-core water-resistant cable (30 cm length): 20AWG 0.52 mm² chloroprene rubber outer sheath

Waterproof cable sequence color definition:

1: Black 2: White 3: Red 4: Green 5: Orange 6: Blue 7: White-Black 8: Red-Black

9: Green-Black 10: Orange-Black 11: Blue-Black 12: Black-White 13: Red-White 14: Green-White 15: Blue-White 16: Black-Red

Waterproof cable wire diameter:

10 The outer diameter of the core water-tight cable is 10.3 mm.

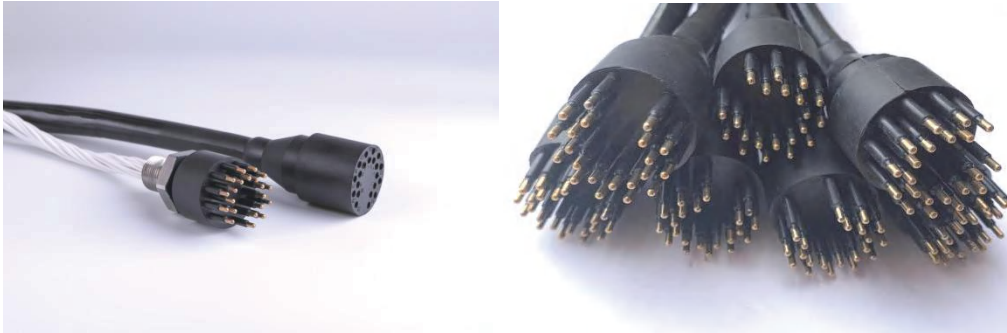
12 Outer diameter of core water-tight cable: 11 mm

16 Outer diameter of core water-tight cable: 12mm

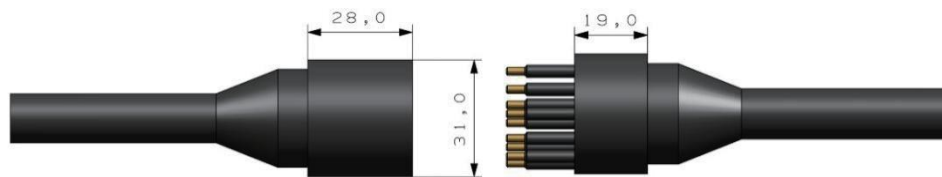
Micro Circular - 21 contacts

Microscopic Round, 21-Core

product picture :

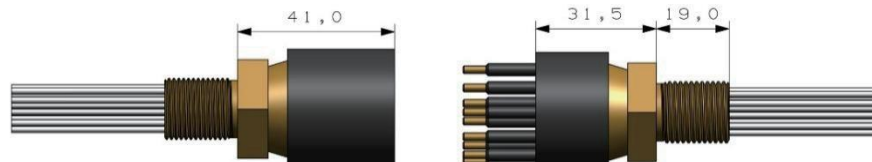


product size :



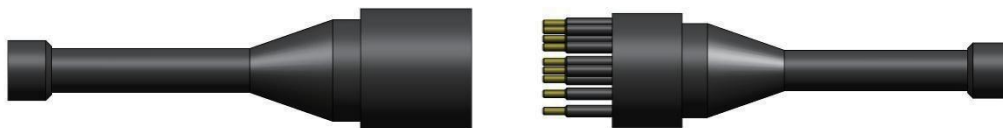
RT-MCIL21F

RT-MCIL21M



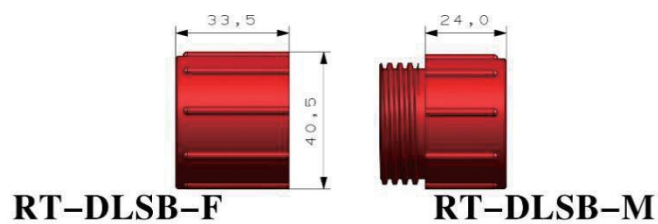
RT-MCBH21F

RT-MCBH21M



RT-MCDC21F

RT-MCDC21M



RT-DLSB-F

RT-DLSB-M

Micro Circular-21 contacts

Connector male face diagram:



Product Parameter :

Connector rated voltage:300VDC/AC

Single-core rated current of 21-pin connector:5 A per pin contact (transient current per terminal may reach 20A)

Insulation resistance:>200M Ω

Contact resistance: <0.01 Ω

Number of plug-and-play cycles: $\geq$ 500 cycles

Operating temperature:in water, -4 to 60°C, 25 to 140°F

In air, at-40 to 60°C, and-40 to 140°F

Storage temperature:-40 to 60°C, -40 to 140°F

Product qualified pressure rating:80MPa, 8000 m water depth

Connector body material:chloroprene rubber

Metal materials of the cabin component base:brass C 36000, stainless steel 316L, titanium alloy TC4, hard anodized aluminum 7075

O-ring:Nitrile rubber

Lock fastening:POM or stainless steel

Spring retaining ring:Stainless steel 304

Cable specifications:

21-core through-cabin component (30 cm length): 22AWG 0.33mm² white polytetrafluoroethylene (PTFE)

21-core water-resistant cable (60 cm length): 20AWG 0.52mm² polyurethane outer sheath

Waterproof cable sequence color definition:

White cable sheath number inside the cable

Waterproof cable wire diameter:

The outer diameter of 21-core water-tight cable is 12mm.

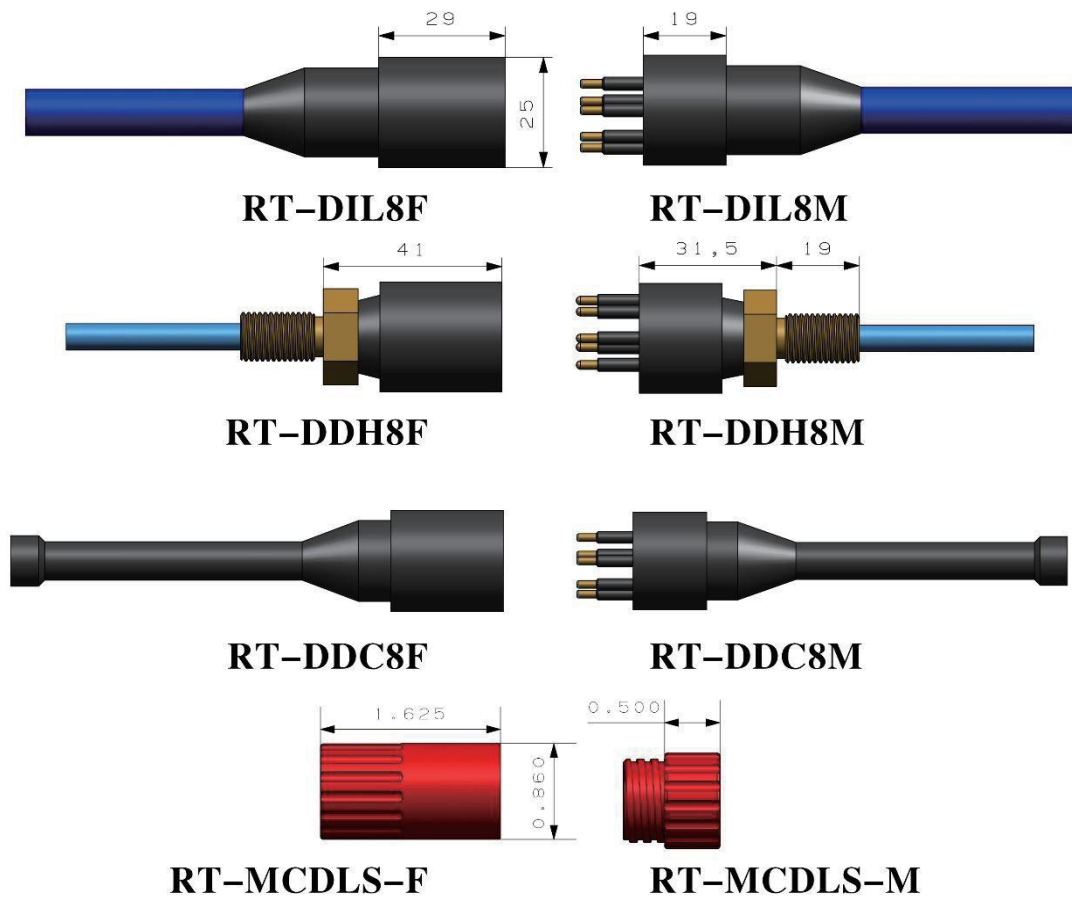
Ethernet Circular - 8 contacts

Micro Round Ethernet 8-Core

product picture :



product size :



Ethernet Circular-8 Contacts

Mini Circular Ethernet 8-Core

Connector male face diagram:



Product Parameter :

Connector rated voltage:300v DC/AC

8 Core Ethernet transmission rate:1 Gbit/s (within 75 meters of cable length)

Insulation resistance:>200M Ω

Contact resistance: <0.01 Ω

Number of plug-and-play cycles: $\geq$ 500 cycles

Operating temperature:in water, -4 to 60°C, 25 to 140°F

In air, at-40 to 60°C, and-40 to 140°F

Storage temperature:-40 to 60°C, -40 to 140°F

Product qualified pressure level:60MPa, 6000 m water depth

Connector body material:chloroprene rubber

Metal materials of the cabin component base:brass C 36000, stainless steel 316L, titanium alloy TC4, hard anodized aluminum 7075

O-ring:Nitrile rubber

Lock fastening:POM or stainless steel

Spring retaining ring:Stainless steel 304

Cable specifications:

8 Core-penetrating cable (100 cm length): CAT5e Category 5e network cable (includes RJ45 connector, **not included in shipping!**)

8 Waterproof Ethernet cable (100 cm length): 24AWG 0.33mm² blue polyurethane outer sheath

Waterproof cable sequence color definition:

*1-2: Brown, brown/white

*3-4: Blue, Blue/White

*5-6: Orange, Orange/White

*7-8: Green, Green/White

Waterproof cable wire diameter:

8 Outer diameter of core Ethernet waterproof cable: 10.1 mm

Metal Shell 1500 - 2, 3, 4, 5, 6 and 8 contacts

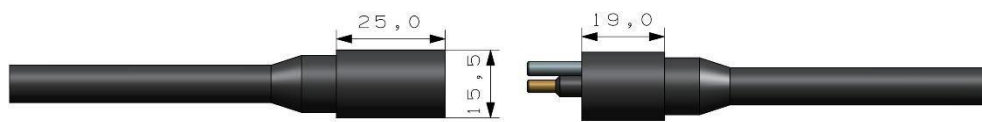
Micro Round Metal Flange 2.3.4.5.6.8 Core

product picture :

The corresponding water-tight cable plug for the metal flange series is the miniature round series MCIL.

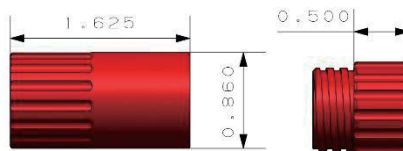


product size :



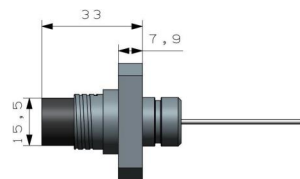
RT-MCIL2F

RT-MCIL2M

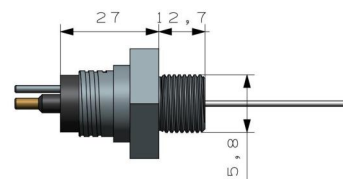


RT-MCDLS-F

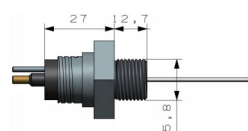
RT-MCDLS-M



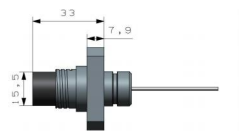
RT-FCR1502F



RT-BCR1502M



RT-BCR1502M



RT-FCR1502F



Metal Shell 1500-2, 3, 4, 5, 6, and 8 contacts Micro circular metal flange 2.3.4.5.6.8 core

Connector male face diagram:



Product Parameter :

Connector rated voltage:300v DC/AC

2、 3. Rated current of single-core connector:10A per pin contact (instantaneous current per terminal may reach 20A)

5、 6. Rated current of single-core connector:5A per pin contact (transient current per terminal may be 10A)**Insulation resistance:**>200M Ω

Contact resistance: <0.01 Ω

Number of plug-and-play cycles: $\geq$ 500 cycles

Operating temperature:in water, -4 to 60°C, 25 to 140°F

In air, at-40 to 60°C, and-40 to 140°F

Storage temperature:-40 to 60°C, -40 to 140°F

Product qualified pressure level:80MPa, 8000 m water depth

Connector body material:chloroprene rubber

Metal material of the cabin door base:brass C 36000, stainless steel 316L, titanium alloy TC4

O-ring:Nitrile rubber

Lock fastening:POM or stainless steel

Spring retaining ring:Stainless steel 304

Positioning pin:Stainless steel 316L

Cable specifications:

2、 3-4 core perforated cabin parts (30 cm length): 20AWG 0.52mm² white polytetrafluoroethylene (PTFE)

5、 6/8-core through-cabin component loose wire (30 cm length): 22AWG 0.33mm² white polytetrafluoroethylene (PTFE)

2、 3-4 core water-resistant cable (60 cm length): 18AWG 0.82mm² chloroprene rubber outer sheath

5、 6-core and 8-core water-resistant cable (60 cm length): 20AWG 0.33mm² chloroprene rubber outer sheath

Waterproof cable sequence color definition:

1: Black 2: White 3: Red 4: Green 5: Orange 6: Blue 7: White-Black 8: Red-Black

Waterproof cable wire diameter:

2 Outer diameter of core water-resistant cable: 8.45mm; Outer diameter of 3-core water-

**Metal Shell 1500-2, 3, 4, 5, 6, and 8 contacts Micro
circular metal flange 2.3.4.5.6.8 core**

resistant cable: 9.4mm

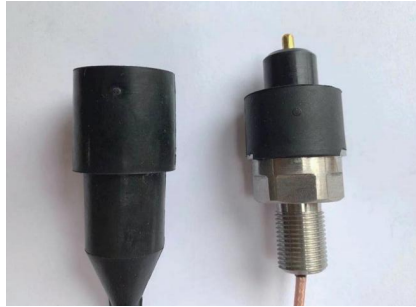
4 Outer diameter of core water-resistant cable: 9.8 mm; Outer diameter of 5-core water-resistant cable: 7.8 mm

6 Outer diameter of core water-resistant cable: 8.2 mm; Outer diameter of 8-core water-resistant cable: 9.8 mm

Coax series 75 Ohm / 50 Ohm

Micro Round Coaxial Connector (75 Ohm, 50 Ohm)

product picture :



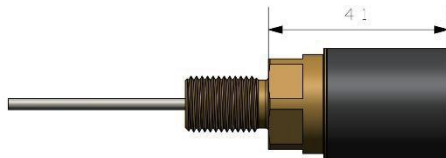
product size :



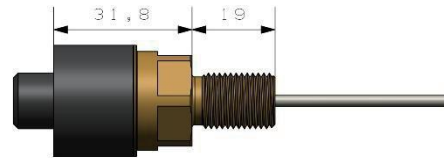
RT-HF75CXILF



RT-HF75CXILM



RT-HF75CXBHF



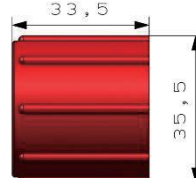
RT-HF75CXBHM



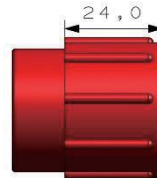
RT-HF75CXDCF



RT-HF75CXDCM



RT-DLSA-F



RT-DLSA-M

75 The Ohm and 50 Ohm connectors have identical external dimensions.

Coax series 75 Ohm / 50 Ohm

Micro round coaxial connector (75 Ohm, 50 Ohm)

Connector male face diagram:



Product Parameter :

Video type: Recommended for composite SDI, HD-SDI, and 3G-SDI video

50 Ohm frequency: 0.3GHz/0.6GHz/0.9GHz/1.2GHz/1.5GHz/1.8GHz/2.1GHz/2.4GHz/2.7GHz/3.0GHz

50 Ohm Damping :

5.0dB/7.7dB/9.9dB/11.6dB/13.4dB/15.3dB/17.3dB/19.3dB/21dB/22.5dB

50 Maximum frequency recommended by Ohm: 3.0GHz

75 Ohm frequency: 0.9GHz/1.2GHz/1.5GHz/1.8GHz/2.1GHz/2.4GHz/2.7GHz/3.0GHz

75 Ohm attenuation: 6.3dB/7.4dB/8.6dB/9.9dB/11.3dB/12.8dB/14.5dB/15.7dB

75 Maximum frequency recommended by Ohm: 3.0GHz

Insulation resistance: >200M Ω

Contact resistance: <0.01 Ω

Number of plug-and-play cycles: $\geq$ 500 cycles

Operating temperature: in water, -4 to 60°C, 25 to 140°F

In air, at -40 to 60°C, and -40 to 140°F

Storage temperature: -40 to 60°C, -40 to 140°F

Product qualified pressure level: 60MPa, 6000 m water depth

Connector body material: chloroprene rubber

Metal material of the cabin door base: brass C 36000, stainless steel 316L, titanium alloy TC4

O-ring: Nitrile rubber

Lock fastening: POM or stainless steel

Spring retaining ring: Stainless steel 304

Cable specifications:

50 Ohm through-hole component (100 cm length): RG316 coaxial cable

50 Ohm waterproof cable (100 cm length): PUR jacket cable with RG58 coaxial conductor

75 Ohm through-hole component (100 cm length): RG179 coaxial cable

75 Ohm waterproof cable (100 cm length): PUR jacket cable with Mini-RG59 coaxial conductor

Waterproof cable wire diameter:

50 Ohm waterproof cable outer diameter: RG58 PUR cable 0.230" (5.85mm)

75 Ohm waterproof cable outer diameter: Mini-RG59 PUR cable, 0.230" (5.85mm)

Micro Circular LP - 2, 3, 4, 5, 6 and 8 contact

Microscopic Round Right-Angle 2. 3. 4. 5. 6. 8 Core

Product Picture :

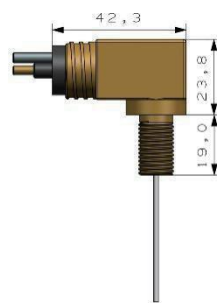


The matching water-resistant cable plug belongs to the miniature round series MCIL.

product size :



RT-MCBHRA2F



RT-MCBHRA2M

Micro Circular LP-2, 3, 4, 5, 6, and 8 contact points

Connector male face diagram:



Product Parameter :

Connector rated voltage:300v DC/AC

2、 3. Rated current of single-core connector:10A per pin contact (instantaneous current per terminal may reach 20A)

5、 6. Rated current of single-core connector:5A per pin contact (transient current per terminal may be 10A)**Insulation resistance:**>200M Ω

Contact resistance: <0.01 Ω

Number of plug-and-play cycles: $\geq$ 500 cycles

Operating temperature:In water, -4 to 60°C, 25 to 140°F; in air, -40 to 60°C, -40 to 140°F

Storage temperature:-40 to 60°C, -40 to 140°F

Product qualified pressure rating:80MPa, 8000 m water depth

Connector body material:chloroprene rubber

Metal material of right-angle penetration component base:brass C 36000, stainless steel 316L

Positioning pin:Stainless steel 316L

O-ring:Nitrile rubber

Lock fastening:POM or stainless steel

Spring retaining ring:Stainless steel 304

Cable specifications:

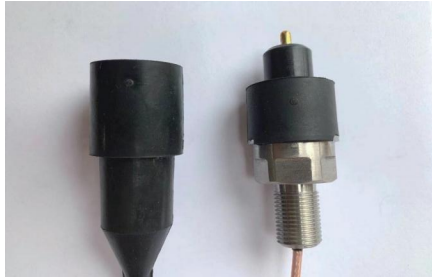
2、 3-4 core perforated cabin parts (30 cm length): 20AWG 0.52mm² white polytetrafluoroethylene (PTFE)

5、 6/8-core through-cabin component loose wire (30 cm length): 22AWG 0.33mm² white polytetrafluoroethylene (PTFE)

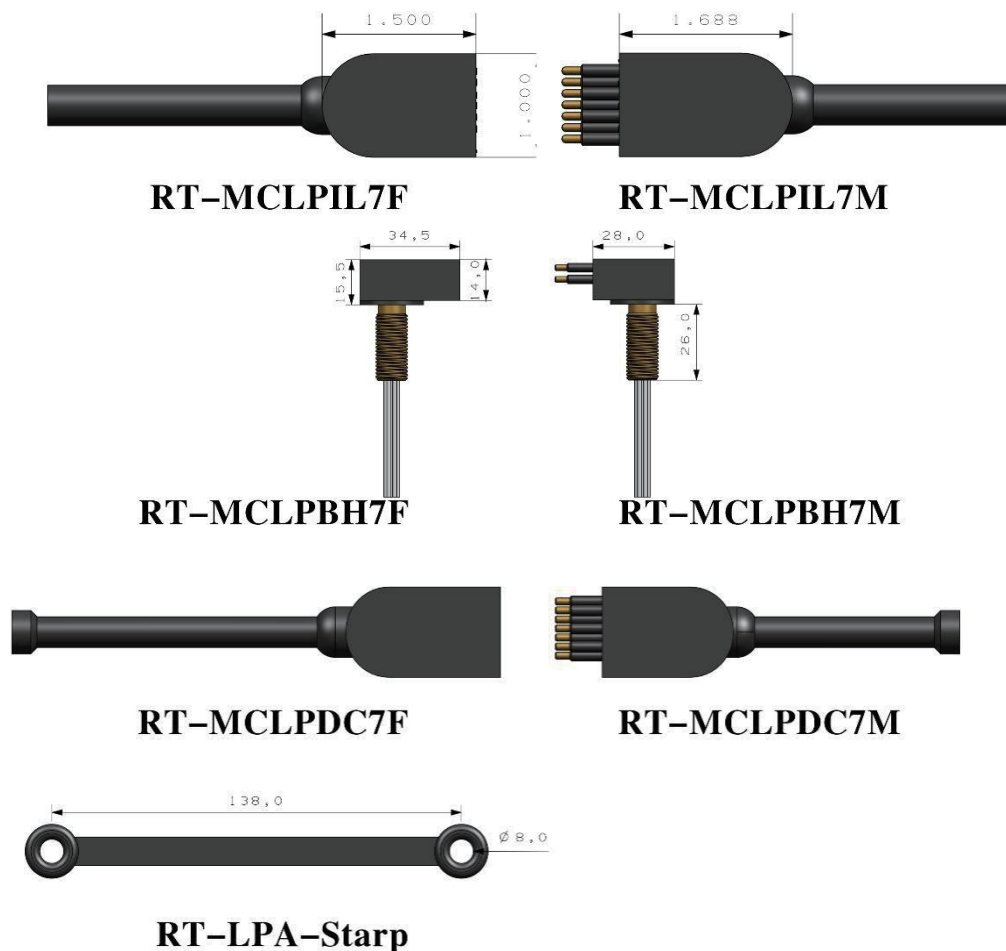
Micro Low Profile - 7 and 9 contacts

Micro Rectangular Right Angle 7.9 Core

product picture :



product size :

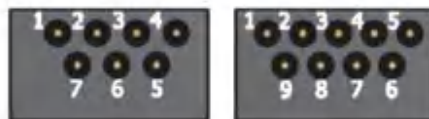


pay attention to ! ! !

If connectors need to be fabricated on both sides of the cable, the locking straps must be installed in advance. Otherwise, they cannot be added after fabrication.

Micro Low Profile-7 and 9 contacts Micro rectangular right-angle 7.9 pin

Connector male face diagram:



Product Parameter :

Connector rated voltage:300v DC/AC

7 and 9-pin connector single-core rated current:5 A per pin contact (instantaneous current per terminal may be 10A)

Insulation resistance:>200M Ω

Contact resistance: <0.01 Ω

Number of plug-and-play cycles: $\geq$ 500 cycles

Operating temperature:in water, -4 to 60°C, 25 to 140°F

In air, at-40 to 60°C, and-40 to 140°F

Storage temperature:-40 to 60°C, -40 to 140°F

Product qualified pressure level:80MPa, 8000 m water depth

Connector body material:chloroprene rubber

Metal material of the cabin door base:brass C 36000, stainless steel 316L, titanium alloy TC4

O-ring:Nitrile rubber

Lock fastening:POM or stainless steel

Spring retaining ring:Stainless steel 304

Cable specifications:

7 9-core through-cabin piece loose strand (30 cm length): 22AWG 0.33mm² white polytetrafluoroethylene; 7 and 9-core water-tight cable (60 cm length): 20AWG 0.52 mm² chloroprene rubber outer sheath

Waterproof cable sequence color definition:

1: Black 2: White 3: Red 4: Green 5: Orange 6: Blue 7: White-Black 8: Red-Black

9: Green-Black 10: Orange-Black

Waterproof cable wire diameter:

10 Outer diameter of core water-tight cable; 10.3 mm

8 Outer diameter of core water-tight cable: 9.8 mm

The rectangular 7-pin connector uses an 8-pin cable (only 7 pins are utilized)

The rectangular 9-pin connector uses a 10-pin cable (only 9 pins are utilized). Due to the absence of 7-pin and 9-pin cables, 8-pin and 10-pin cables must be used.

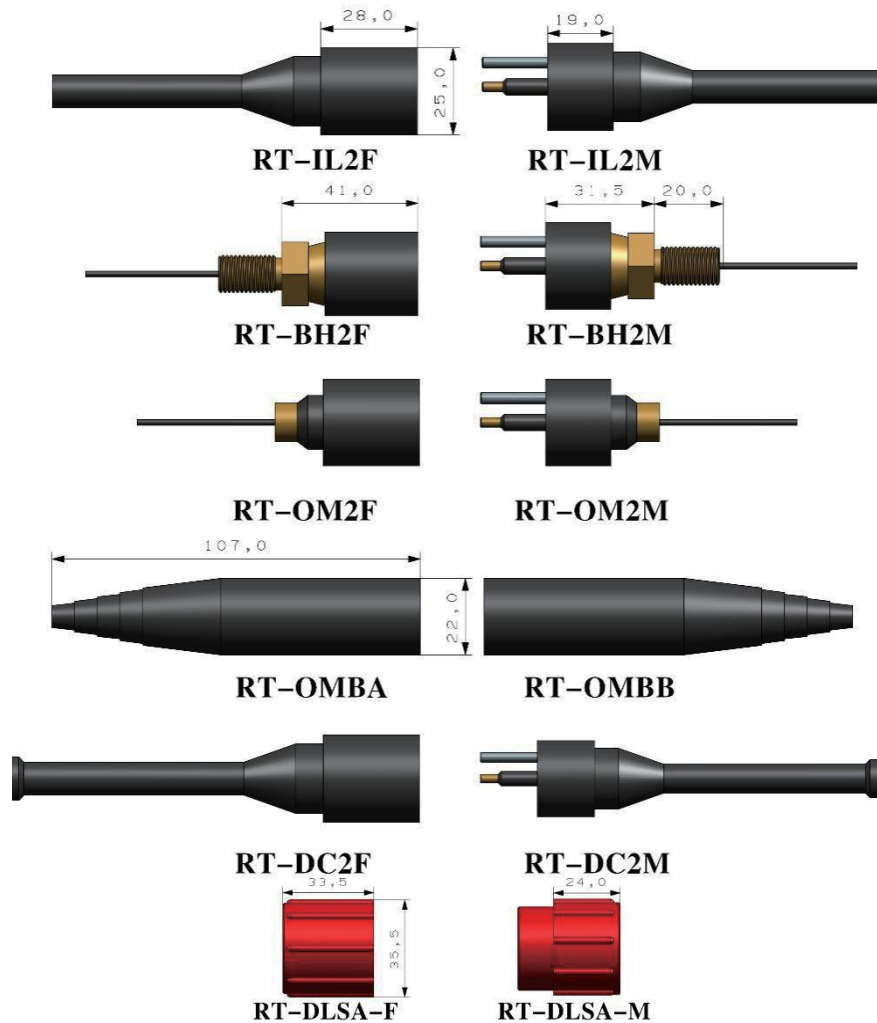
Circular series- 2, 3, 4, 5contact

Standard Round 2.3.4.5 Core

product picture :

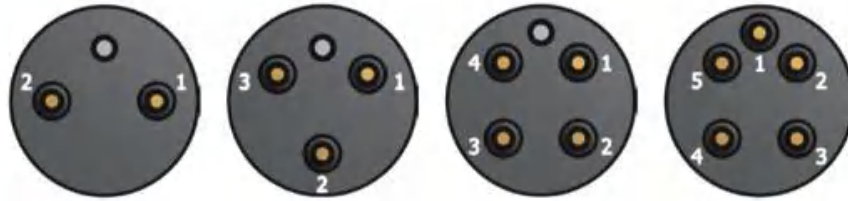


product size :



Circular series-2,3,4,5contact Standard circular 2. 3. 4. 5 core

Connector male face diagram:



Product Parameter :

Connector rated voltage:600v DC/AC

2、 3, 4, 5 Core connector single-core rated current:10A per pin contact (instantaneous current per terminal may be 20A)

Insulation resistance:>200M Ω

Contact resistance: <0.01 Ω

Number of plug-and-play cycles: $\geq$ 500 cycles

Operating temperature:in water, -4 to 60°C, 25 to 140°F

In air, at-40 to 60°C, and-40 to 140°F

Storage temperature:-40 to 60°C, -40 to 140°F

Product qualified pressure level:140MPa, 11000 m water depth

Connector body material:chloroprene rubber

Metal materials of the cabin component base:brass C 36000, stainless steel 316L, titanium alloy TC4, hard anodized aluminum 7075

Positioning pin:Stainless steel 316L

O-ring:Nitrile rubber

Lock fastening:POM or stainless steel

Spring retaining ring:Stainless steel 304

Cable specifications:

2、 3, 4, 5 core-penetrating cable components (30 cm length): 18AWG 0.82mm² white polytetrafluoroethylene (PTFE)

2、 3-4 core water-resistant cable (60 cm length): 16AWG 1.31mm² chloroprene rubber outer sheath

5 Waterproof cable with core (60 cm length): 18AWG 0.82mm², with a chloroprene rubber outer sheath. Color code definition for the cable sequence:

1: Black 2: White 3: Red 4: Green 5: Orange

Waterproof cable wire diameter:

2 Outer diameter of core water-tight cable: 9.3 mm

3-core water-tight cable outer diameter: 9.8 mm

Circular series-2,3,4,5contact Standard circular 2. 3. 4. 5 core

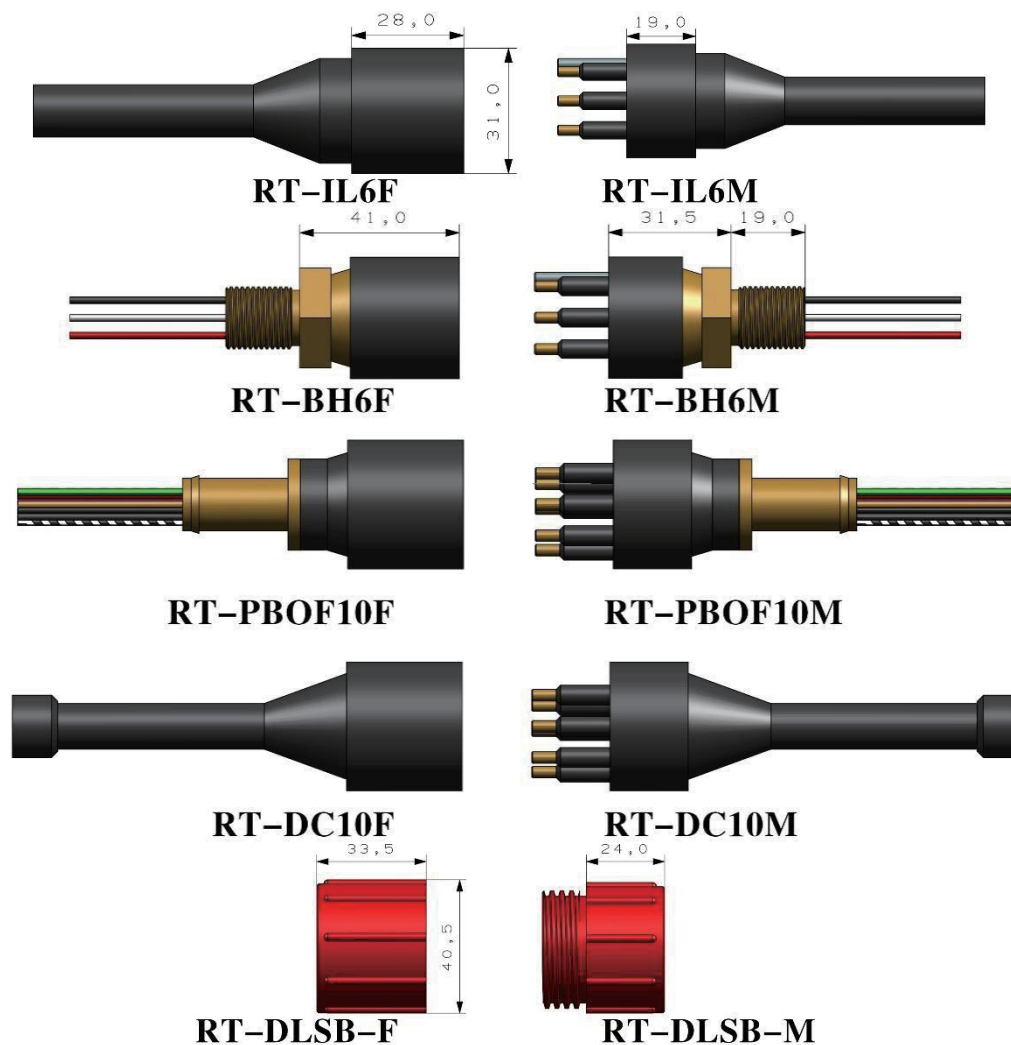
4 Outer diameter of core water-tight cable: 10.4 mm 5-core water-tight cable outer diameter:
11.8 mm

Circular series-6,8,10contact Standard circular 6.8.10 core

Product Picture :



product size :



Circular series-6,8,10contact Standard circular 6.8.10 core

Connector male face diagram:



Product Parameter :

Connector rated voltage:600v DC/AC

6、 8. Rated current of single-core connectors for 8-pin and 10-pin connectors:10A per pin contact (instantaneous current per terminal may be 50A)

Insulation resistance:>200M Ω

Contact resistance: <0.01 Ω

Number of plug-and-play cycles:≥ 500 cycles

Operating temperature:In water, -4 to 60°C, 25 to 140°F; in air, -40 to 60°C, -40 to 140°F

Storage temperature:-40 to 60°C, -40 to 140°F

Product qualified pressure level:140MPA, 11000 m water depth

Connector body material:chloroprene rubber

Metal materials of the cabin component base:brass C 36000, stainless steel 316L, titanium alloy TC4, hard anodized aluminum 7075

Positioning pin:Stainless steel 316L

O-ring:Nitrile rubber

Lock fastening:POM or stainless steel

Spring retaining ring:Stainless steel 304

Cable specifications:

6、 8-pin and 10-pin through-cabin parts (30 cm length): 18AWG 0.82mm² white polytetrafluoroethylene (PTFE)

6、 8-core water-resistant cable (60 cm length): 16AWG 1.31mm² chloroprene rubber outer sheath

10 Core waterproof cable (60 cm length): 18AWG 0.82mm² chloroprene rubber outer sheath

Waterproof cable sequence color definition:

1: Black 2: White 3: Red 4: Green 5: Orange 6: Blue 7: White-Black 8: Red-Black

9: Green-Black 10: Orange-Black

Waterproof cable wire diameter:

6 The outer diameter of the core water-tight cable is 13.2 mm.

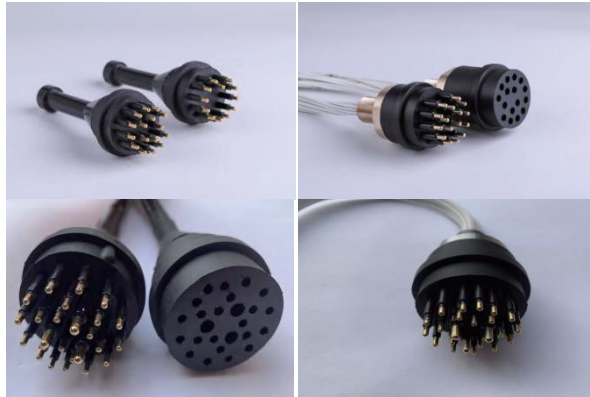
8 The outer diameter of the core water-tight cable is 14.1 mm.

10 Outer diameter of core water-tight cable: 15.4 mm

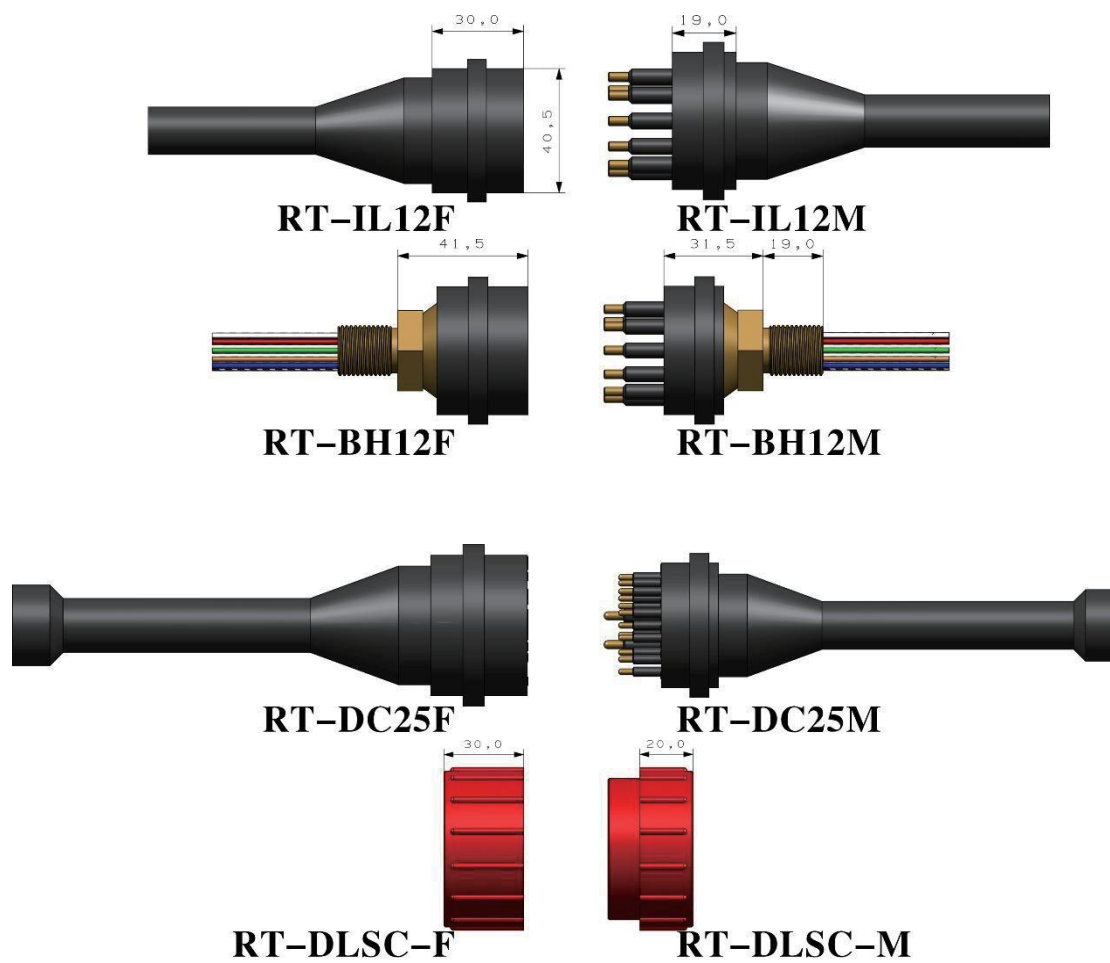
Circular - 12, 16 and 25 contacts

Standard Round 12.16.25 Core

product picture :



product size :



Circular-12,16, and 25 contacts Standard round 12,16, and 25 pins

Connector male face diagram:



Product Parameter :

Connector rated voltage:600v DC/AC

12、 16-core rated current:10A per single-pin contact of each connector core (instantaneous current per terminal may reach 50A)

25 Core rated current:3 power pins, 10A per core; 22 signal pins, 5A per core

Insulation resistance:>200M Ω

Contact resistance: <0.01 Ω

Number of plug-and-play cycles: ≥ 500 cycles

Operating temperature:In water, -4 to 60°C, 25 to 140°F; in air, -40 to 60°C, -40 to 140°F

Storage temperature:-40 to 60°C, -40 to 140°F

Product qualified pressure level:140MPa, 11000 m water depth

Connector body material:chloroprene rubber

Metal materials of the cabin component base:brass C 36000, stainless steel 316L, titanium alloy TC4, hard anodized aluminum 7075

Positioning pin:Stainless steel 316L

O-ring:Nitrile rubber

Lock fastening:POM or stainless steel

Spring retaining ring:Stainless steel 304

Cable specifications:

12、 16-core through-cabin component wire (30 cm length): 18AWG 0.82mm² white polytetrafluoroethylene (PTFE)

25 Dispersed wire for core-piercing components (30 cm length):

3 Root power cable 18AWG 0.82mm² white polytetrafluoroethylene (PTFE)

22 Root signal cable 22AWG 0.32mm² white polytetrafluoroethylene (PTFE)

12 and 16-core water-resistant cable (60 cm length): 18AWG 0.82mm² chloroprene rubber outer sheath

25 Core waterproof cable (60 cm length):

3 Root power cable 18AWG 0.82mm

22 Root signal cable 22AWG 0.32mm² with polyurethane outer sheath

Waterproof cable sequence color definition: !!: 25-core waterproof cable sheath with white wire number

1: Black 2: White 3: Red 4: Green 5: Orange 6: Blue 7: White-Black 8: Red-Black

Circular-12,16, and 25 contacts Standard round 12,16, and 25 pins

9: Green-Black 10: Orange-Black 11: Blue-Black 12: Black-White 13: Red-White 14: Green-White 15: Blue-White 16: Black-Red

Waterproof cable wire diameter:

12 Outer diameter of core water-tight cable: 15.4 mm

16 Outer diameter of core water-tight cable: 17.9 mm

25 The outer diameter of the core water-tight cable is 13.5 mm.

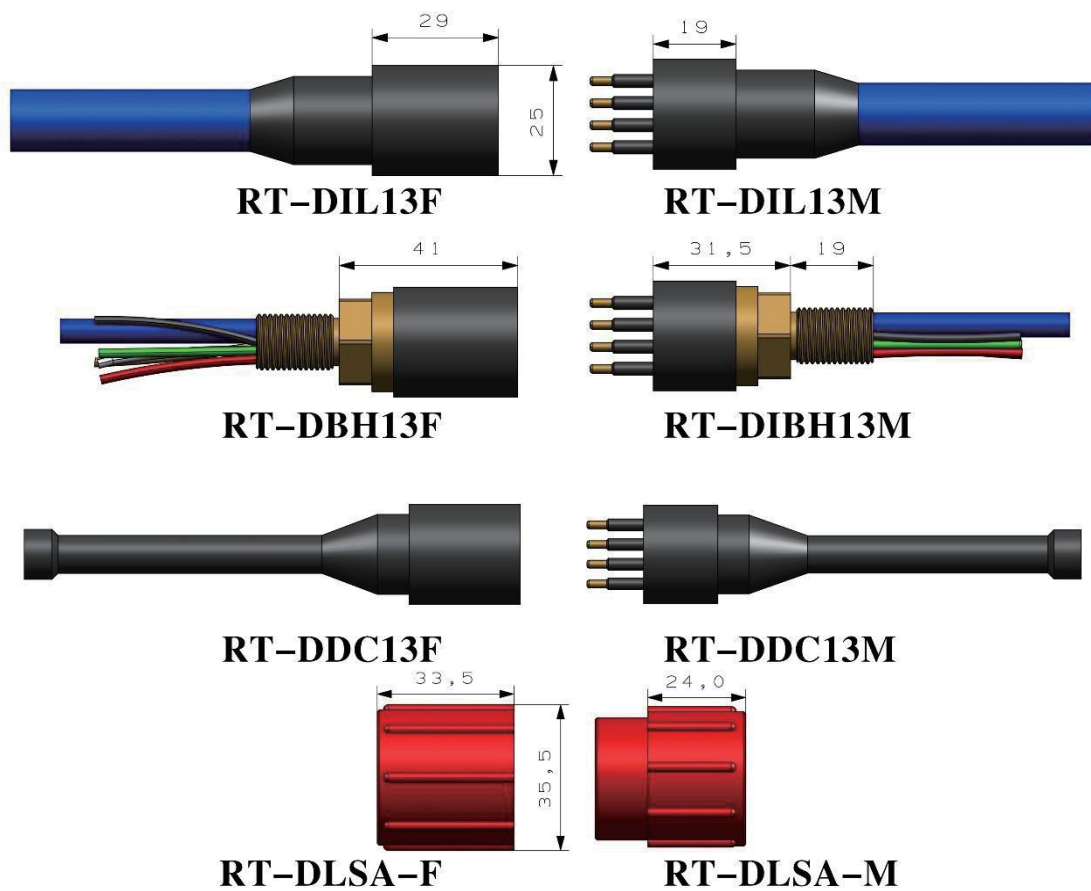
Power Ethernet Circular - 13 contacts

Standard Round 13-Pin Ethernet Connector (4 Power 8 Network 1 Shielding)

product picture :



product size :



Power Ethernet Circular - 13 contacts

Standard round 13-pin Ethernet connector (4 power 8 network 1 shielding)

Connector male face diagram:



Product Parameter :

Connector rated voltage:600v DC/AC

4 Rated current of the root power cable:4A per pin contact (16A instantaneous current per pin)

Rated voltage of internal network cable:250v DC/AC

Internal 8-core Ethernet transmission rate:1 Gbit/s (within 75 meters of cable length)

Insulation resistance:>200M Ω

Contact resistance: <0.01 Ω

Number of plug-and-play cycles: $\geq$ 500 cycles

Operating temperature:In water, -4 to 60°C, 25 to 140°F; in air, -40 to 60°C, -40 to 140°F

Storage temperature:-40 to 60°C, -40 to 140°F

Product qualified pressure level:60MPA, 6000 m water depth

Connector body material:chloroprene rubber

Metal material of the cabin door base:brass C 36000, stainless steel 316L, titanium alloy TC4

O-ring:Nitrile rubber

Lock fastening:POM or stainless steel

Spring retaining ring:Stainless steel 304

Cable specifications:

13 Dispersed wire for core-piercing components (100 cm length):

8 Cat5e Super Category 5e network cable (includes RJ45 connector,**not shipped with accessories!**),
4-core power conductor-4 x 18AWG 0.82mm² white polytetrafluoroethylene

13 Waterproof Ethernet cable (100 cm length): 4 pairs of 24AWG twisted pair network cable,
power conductor: 4 x 18AWG 0.82mm² shield layer: tin-plated copper braided blue polyurethane
outer sheath

Waterproof cable sequence color definition:

1: Black

2: Black

3: White

*4-5: Brown, Brown, White

*6-7: Blue, Blue/White

*8-9: Orange, Orange/White

*10-11: Green, Green/White

12: Red 13: Green

13-core Ethernet waterproof cable outer diameter: 13mm

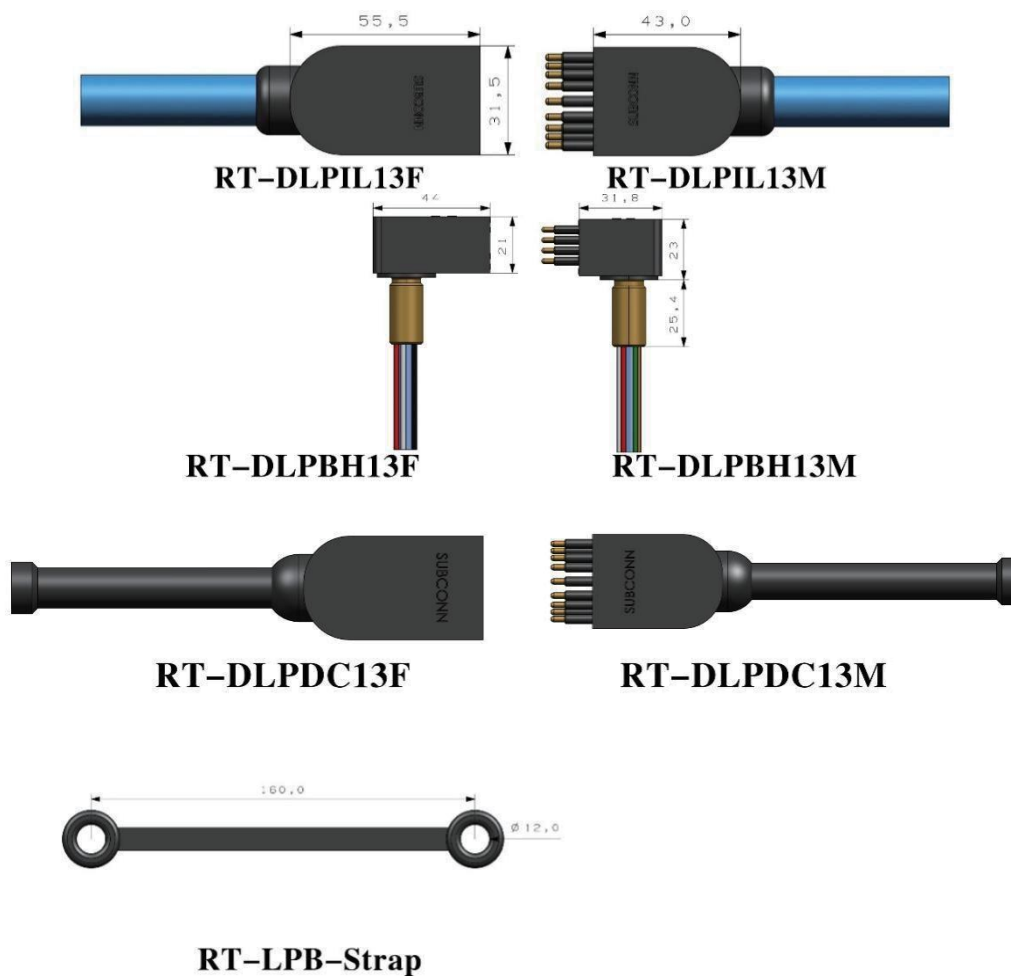
Power Ethernet Low Profile - 13 contacts

Rectangular Flat 13-Pin Ethernet Connector (4-Pin Power, 8-Pin Network, 1-Pin Shielding)

product picture :



product size :



Power Ethernet Low Profile-13 Contacts Rectangular Flat 13-pin Ethernet Connector (4-pin power, 8-pin network, 1-pin shielding)

Connector male face diagram:



Product Parameter :

Connector rated voltage:600v DC/AC

4 Rated current of the root power cable:4 A per pin contact (16A instantaneous current per pin)

Rated voltage of internal network cable:250v DC/AC

Internal 8-core Ethernet transmission rate:1 Gbit/s (within 75 meters of cable length)

Insulation resistance:>200M Ω

Contact resistance: <0.01 Ω

Number of plug-and-play cycles: $\geq$ 500 cycles

Operating temperature:In water, -4 to 60°C, 25 to 140°F; in air, -40 to 60°C, -40 to 140°F

Storage temperature:-40 to 60°C, -40 to 140°F

Product qualified pressure level:60MPa, 6000 m water depth

Connector body material:chloroprene rubber

Metal materials of the cabin component base:brass C 36000, stainless steel 316L, titanium alloy TC4, hard anodized aluminum 7075

O-ring:Nitrile rubber

Lock fastening:POM or stainless steel

Spring retaining ring:Stainless steel 304

Cable specifications:

13 Dispersed wire for core-piercing components (100 cm length):

8 Cat5e Super Category 5e network cable (includes RJ45 connector,**not shipped with accessories!**),

4-core power conductor-4 x 18AWG 0.82mm² white polytetrafluoroethylene

13 Waterproof Ethernet cable (100 cm length): 4 pairs of 24AWG twisted pair network cable, power conductor: 4 x 18AWG 0.82mm², shielding layer: tin-plated copper braided, blue polyurethane outer sheath

Waterproof cable sequence color definition:

1: Black

2: Black

3: White

*4-5: Brown, Brown, White

*6-7: Blue, Blue/White

*8-9: Orange, Orange/White

*10-11: Green, Green/White

12: Red 13: Green

13 Outer diameter of core Ethernet waterproof cable: 13mm

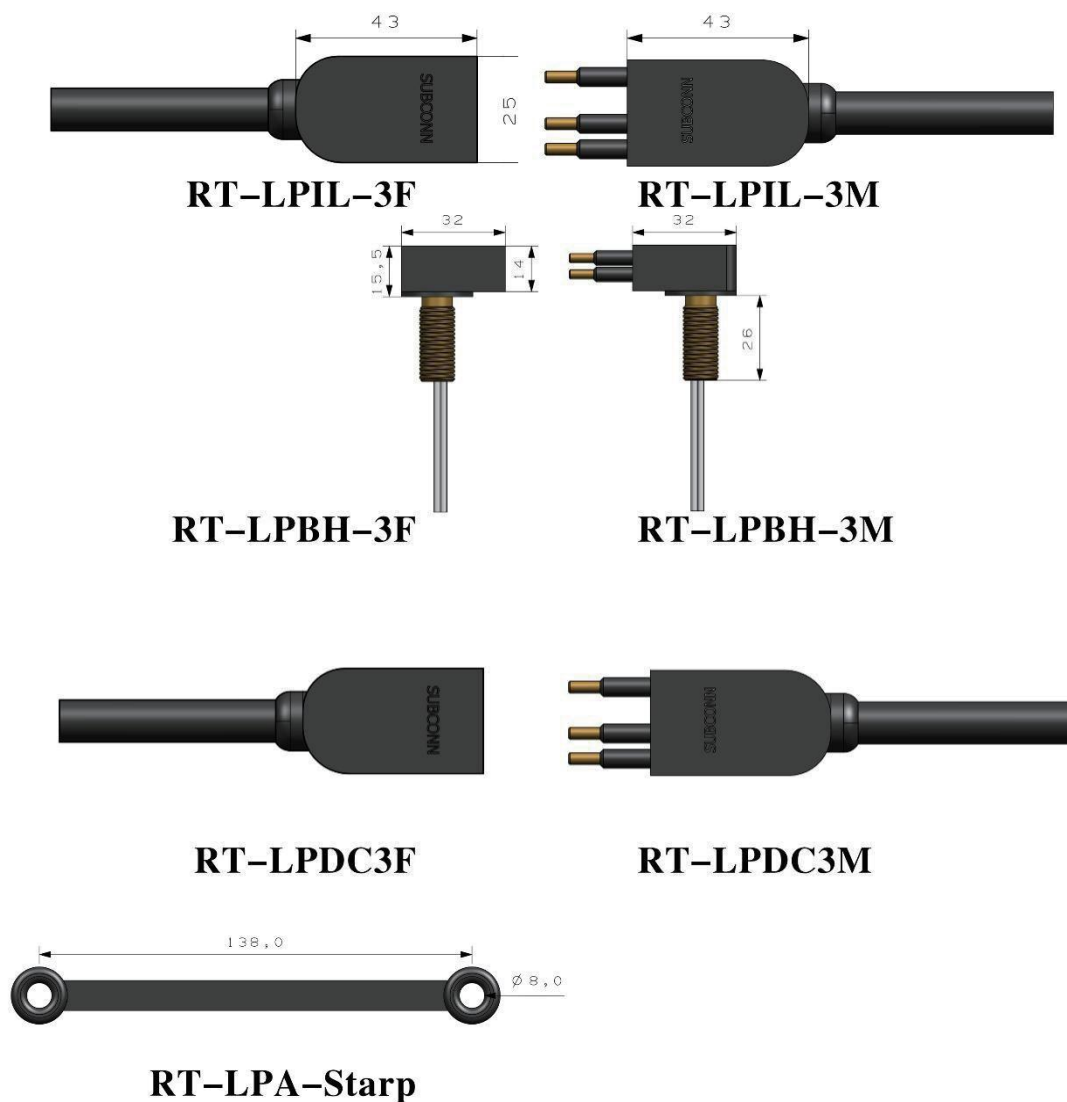
Low Profile - 3, 4 and 5 contacts

Standard Rectangle Right Angle 3.4.5 Core

product picture :



product size :



Low Profile-3, 4, and 5 contacts

Standard rectangle right-angle 3.4.5 core

Connector male face diagram:



Product Parameter :

Connector rated voltage:600v DC/AC

3、 4. Rated current of single-core connector:10A per pin contact (transient current per terminal may reach 25A)

Insulation resistance:>200M Ω

Contact resistance: <0.01 Ω

Number of plug-and-play cycles: $\geq$ 500 cycles

Operating temperature:in water, -4 to 60°C, 25 to 140°F

In air, at-40 to 60°C, and-40 to 140°F

Storage temperature:-40 to 60°C, -40 to 140°F

Product qualified pressure level:80MPa, 8000 m water depth

Connector body material:chloroprene rubber

Metal material of the cabin door base:brass C 36000, stainless steel 316L, titanium alloy TC4

O-ring:Nitrile rubber

Lock fastening:POM or stainless steel

Spring retaining ring:Stainless steel 304

Positioning pin:Stainless steel 316L

Cable specifications:

3、 4-5 core perforated cable components (30 cm length): 18AWG 0.82mm² white polytetrafluoroethylene (PTFE)

3、 4-core water-resistant cable (60 cm length): 16AWG 1.31mm² chloroprene rubber outer sheath

5 Core waterproof cable (60 cm length): 18AWG 1.31mm² chloroprene rubber outer sheath

Waterproof cable sequence color definition:

1: Black 2: White 3: Red 4: Green 5: Orange

Waterproof cable wire diameter:

3 Outer diameter of core water-tight cable: 10.5 mm

4 Outer diameter of core water-tight cable: 11 mm

5 Outer diameter of core water-tight cable: 11.5 mm

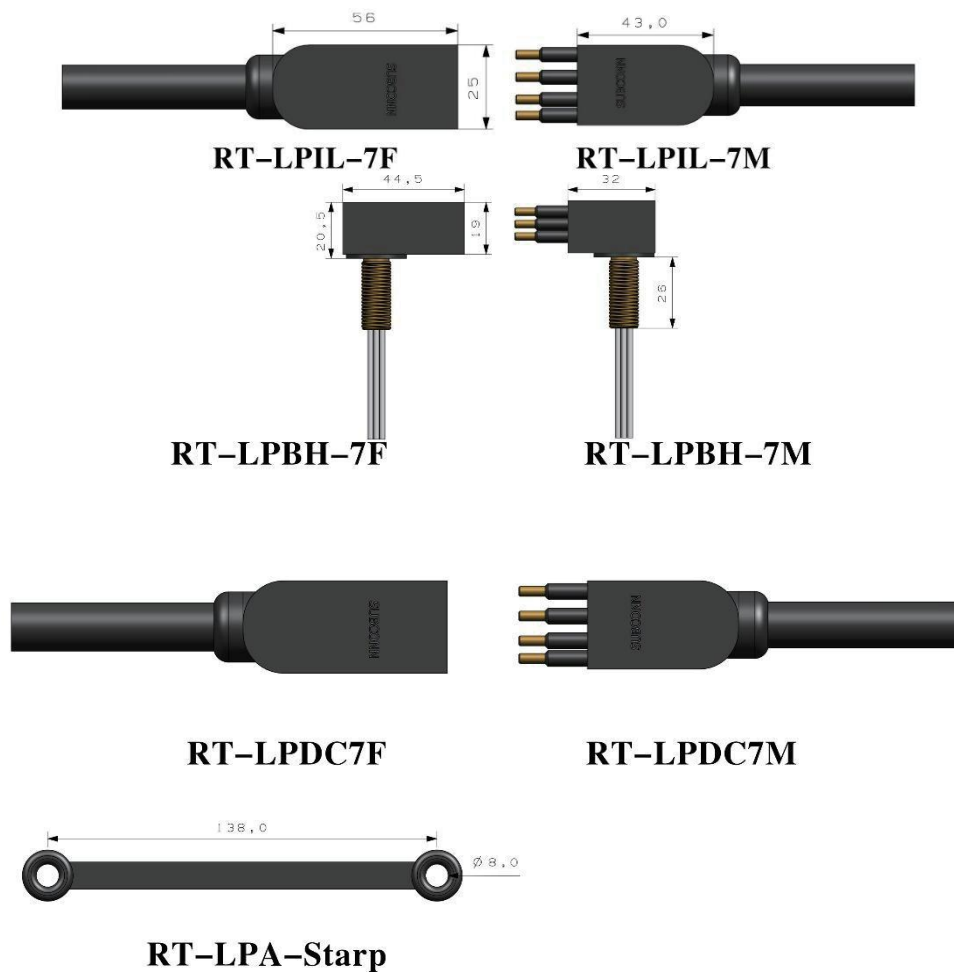
Low Profile - 7 contacts

Standard Rectangle Right-Angle 7-Core

product picture :



product size :



Low Profile-7 Contacts

Standard Rectangular

Right Angle 7 Pin

Product Parameter :

Connector rated voltage:600v DC/AC

7 Single-core rated current of the core connector:10A per pin contact
(instantaneous current per terminal may reach 25A)

Insulation resistance:>200M Ω

Contact resistance: <0.01 Ω

Number of plug-and-play cycles: $\geq$ 500 cycles

Operating temperature:In water, -4 to 60°C, 25 to 140°F; in air, -40 to 60°C, -40 to 140°F

Storage temperature:-40 to 60°C, -40 to 140°F

Product qualified pressure rating:80MPa, 8000 m water depth

Connector body material:chloroprene rubber

Metal material of the cabin door base:brass C 36000, stainless steel 316L,
titanium alloy TC4

O-ring:Nitrile rubber

Lock fastening:POM or stainless steel

Spring retaining ring:Stainless steel 304

Cable specifications:

7 Core-penetrating cable (30 cm length): 18AWG 0.82mm² white polytetrafluoroethylene (PTFE)

7 Waterproof core cable (60 cm length): 18AWG 1.31mm² chloroprene rubber outer sheath

Waterproof cable sequence color definition:

1: Black 2: White 3: Red 4: Green 5: Orange 6: Blue 7: White-Black

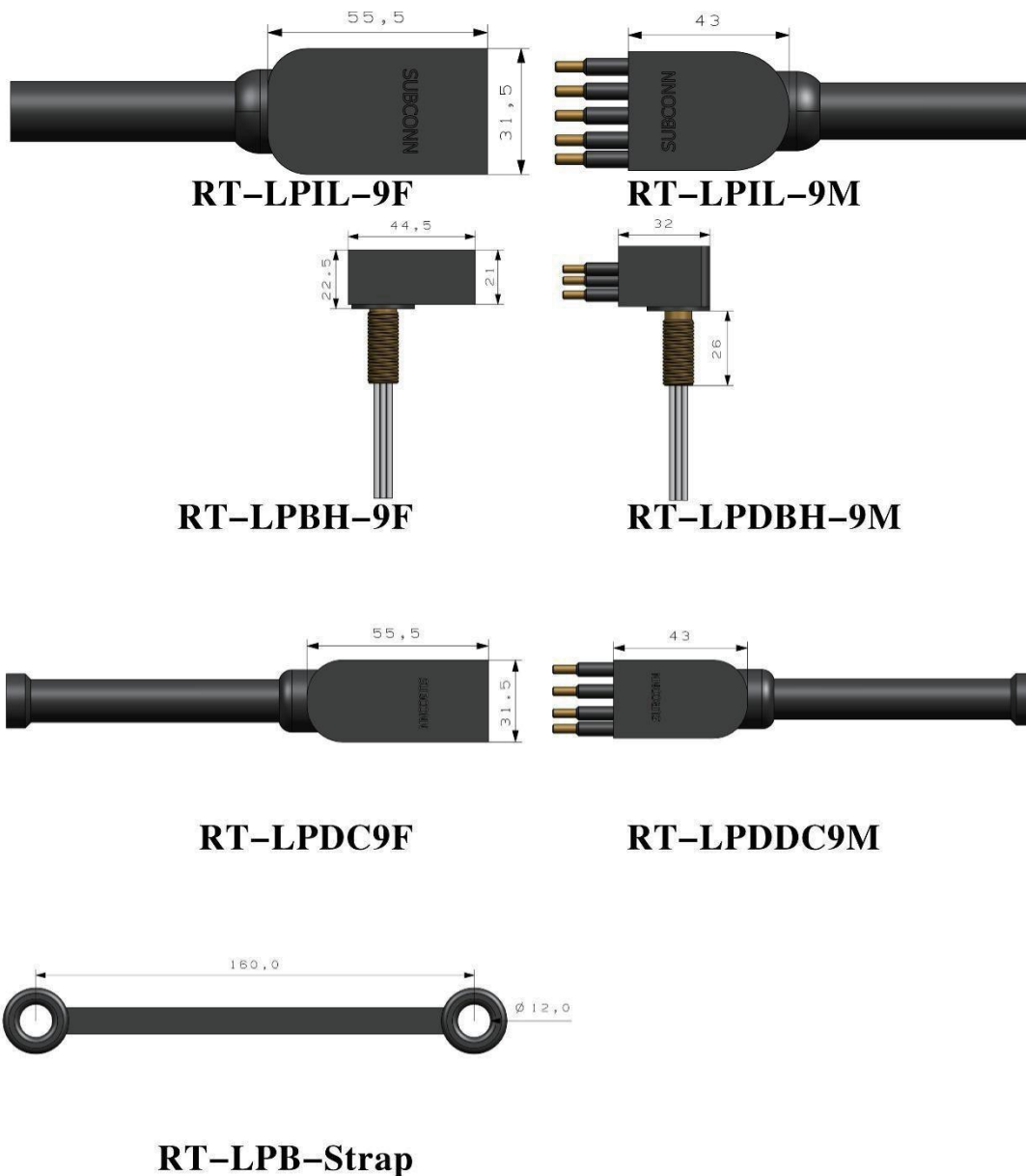
Waterproof cable wire diameter:

8 The outer diameter of the core water-tight cable is 13.2 mm.

The rectangular 7-pin connector uses an 8-pin cable (only 7 pins are utilized)

Low Profile-9 Contacts
Standard Rectangular
Right Angle 9 Pin

Product Size :



Low Profile-9 Contacts

Standard Rectangular

Right Angle 9 Pin

Connector male face diagram:



Product Parameter :

Connector rated voltage:600v DC/AC

9 Single-core rated current of the core connector:10A per pin contact
(instantaneous current per terminal may reach 25A)

Insulation resistance:>200M Ω

Contact resistance: <0.01 Ω

Number of plug-and-play cycles: $\geq$ 500 cycles

Operating temperature:In water, -4 to 60°C, 25 to 140°F; in air, -40 to 60°C, -40 to 140°F

Storage temperature:-40 to 60°C, -40 to 140°F

Product qualified pressure rating:80MPa, 8000 m water depth

Connector body material:chloroprene rubber

Metal material of the cabin door base:brass C 36000, stainless steel 316L, titanium alloy TC4

O-ring:Nitrile rubber

Lock fastening:POM or stainless steel

Spring retaining ring:Stainless steel 304

Cable specifications:

9 Core-penetrating cable (30 cm length): 18AWG 0.82mm² white polytetrafluoroethylene (PTFE)

9 Waterproof core cable (60 cm length): 18AWG 1.31mm² chloroprene rubber outer sheath

Waterproof cable sequence color definition:

1; Black 2; White 3; Red 4; Green 5; Orange 6; Blue 7; White-Black 8; Red-Black 9; Green and Black

Waterproof cable wire diameter:

10 The outer diameter of the core water-tight cable is 14.5 mm.

The rectangular 9-pin connector uses a 10-pin cable (only 9 pins are utilized)

High Power - 4 contacts

High-Power 4-Pin Connector

product picture :



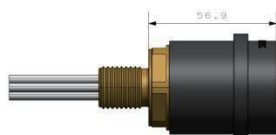
product size :



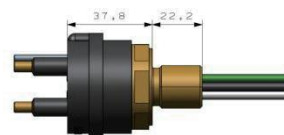
RT-HPIL4F



RT-HPIL4M



RT-HPBH4F



RT-HPBH4M



RT-HPDC4F



RT-HPDC4M



RT-DLSC-F



RT-DLSC-M

High Power-4 Contacts

High-power 4-pin connector

Connector male face diagram:



Product Parameter :

Rated voltage:600V DC/AC

Rated current (in air):50A (transient current is 200A)

Rated current (in water): 28A (transient current is 112A)

Insulation resistance:>200M Ω

Contact resistance: <0.01 Ω

Number of plug-and-play cycles: $\geq$ 500 cycles

Operating temperature:in water, -4 to 60°C, 25 to 140°F

In air, at-40 to 60°C, and-40 to 140°F

Storage temperature:-40 to 60°C, -40 to 140°F

Product qualified pressure level:80MPa, 8000 m water depth

Connector body material:chloroprene rubber

Metal material of the cabin door base:brass C 36000, stainless steel 316L, titanium alloy TC4

O-ring:Nitrile rubber

Lock fastening:POM or stainless steel

Spring retaining ring:Stainless steel 304

Positioning pin:Stainless steel 316L

Cable specifications:

High-power four-core through-cabin component stranded wire (30 cm length): Single-core wire gauge 10AWG 5.26mm² white polytetrafluoroethylene (PTFE)

High-power four-core water-resistant cable (60 cm length): Single-core wire gauge 8AWG 8.36mm² with chloroprene rubber outer sheath

Waterproof cable sequence color definition:

1: Black 2: White 3: Brown 4: Blue

Waterproof cable wire diameter:

The outer diameter of single-core water-tight cable is 16.1 mm.

RMG series product

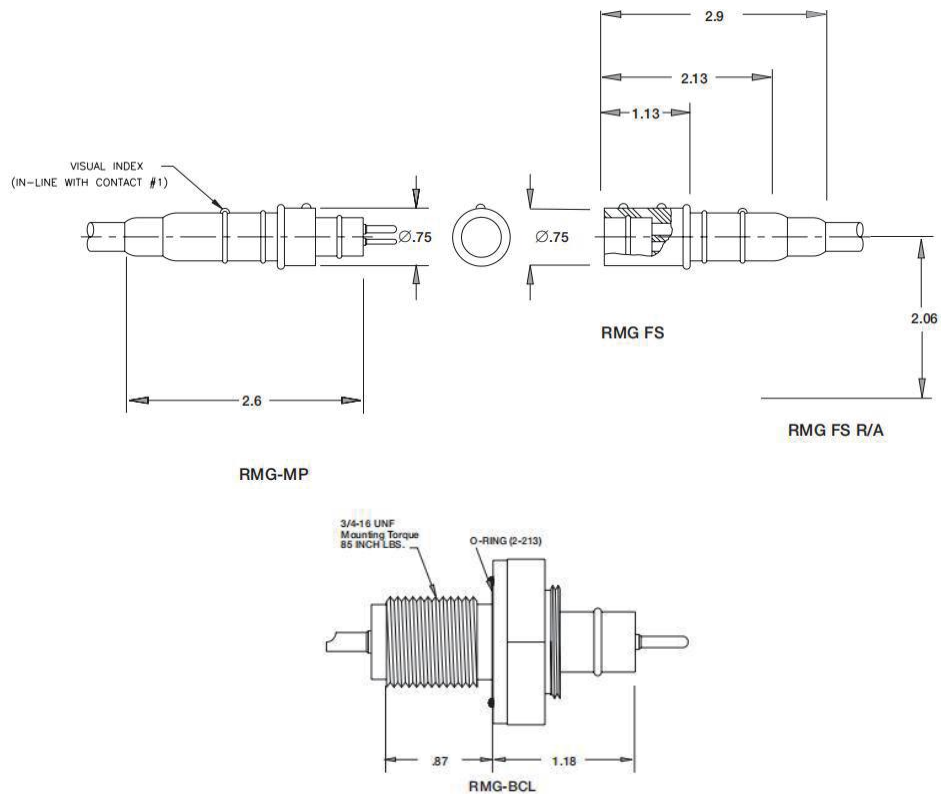
RMG 2.3.4 Core Connector

(5 and 6-pin connectors are not currently being developed)

product picture :



product size :

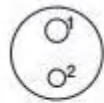


(!!! The RMG series cabin accessories only have male heads)

RMG series product

RMG 2.3.4 Core connectors (5-and 6-core versions are not currently under development)

Front view diagram of RMG connector female terminal:



RMG-2-FS



RMG-3-FS



RMG-4-FS

Product Parameter :

RMG Connector rated voltage:600v DC/AC

2、 3.4-core RMG connector single-core rated current:10A per pin contact (instantaneous current per terminal may reach 20A)

Insulation resistance:>200M Ω

Contact resistance: <0.01 Ω

Number of plug-and-play cycles: $\geq$ 700 cycles

Operating temperature:in water, -4 to 60°C, 25 to 140°F

In air, at-40 to 60°C, and-40 to 140°F

Storage temperature:-40 to 60°C, -40 to 140°F

Product qualified pressure level:140MPA, 11000 m water depth

Connector body material:chloroprene rubber

RMG Cabin Passage Base Metal Material:Stainless steel 316L, Titanium alloy TC4(The cabin passage metal material can be required to be made of glass fiber reinforced epoxy resin material. Note! This material can only withstand pressure up to 60MPA.)

O-ring:Nitrile rubber

Lock fastening:POM or stainless steel

RMG cable specifications:

2、 3-4 core perforated cabin parts (30 cm length): 18AWG 1.31mm² white polytetrafluoroethylene (PTFE)

3、 4-core water-resistant cable (60 cm length): 20AWG 0.52mm² chloroprene rubber outer sheath

RMG waterproof cable sequence color definition:

1: White 2: Black 3: Green 4: Red

RMG waterproof cable wire diameter:

2 The outer diameter of the core water-tight cable is 8.45 mm.

3 Outer diameter of core water-tight cable: 9.4 mm

4 Outer diameter of core water-tight cable: 9.8 mm

Nuts and washers and Locking sleeve

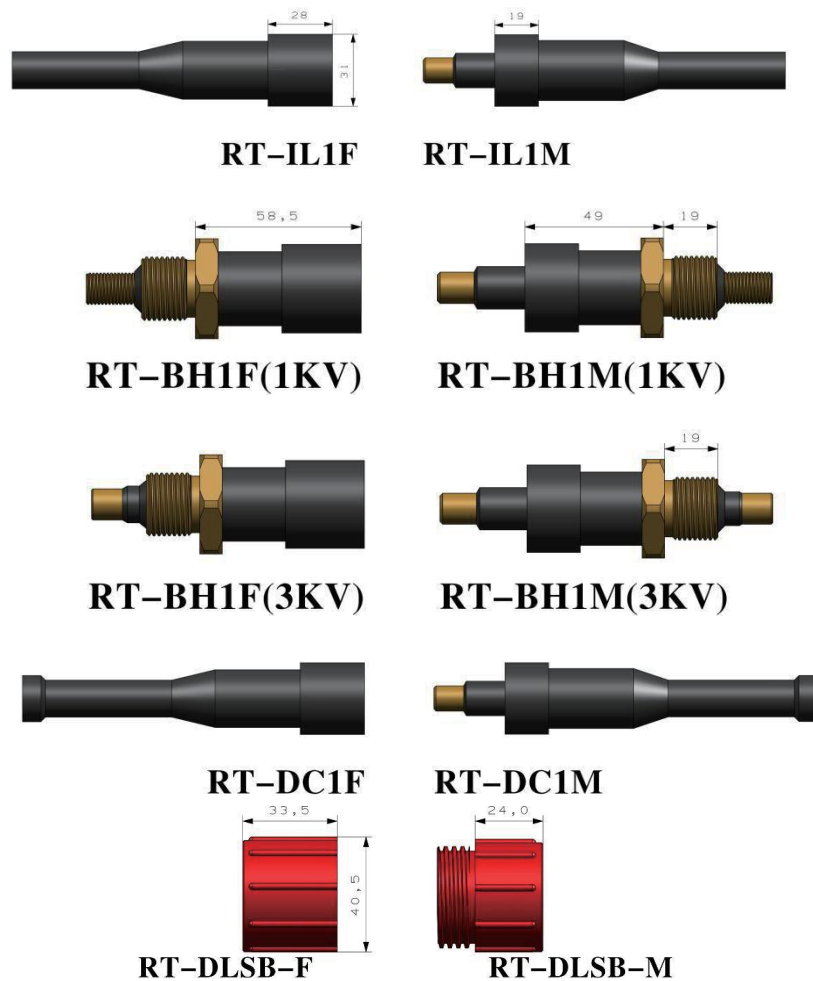
Power - 1 contact

Single-Core High-Current Connector (available in 3000V Specifications)

product picture :



product size :



Nuts and washers and Locking sleeve

Power - 1 contact

Single-core high-current connector (available in 3000V specifications)

Product Parameter :

High-current single-core connector water-tight cable and metal cabin penetrator (1 KV specification) Rated voltage:1000V DC/AC

High-current single-core connector water-tight cable and metal cabin penetrator (1KV specification) rated current:250A **High-current single-core connector metal cabin penetrator (3KV specification) rated voltage:** 3000V DC/AC

High-current single-core connector metal bayonet connector (3KV specification) rated current:90A

Insulation resistance:>200M Ω

Contact resistance: <0.01 Ω

Number of plug-and-play cycles: $\geq$ 500 cycles

Operating temperature:in water, -4 to 60°C, 25 to 140°F

In air, at -40 to 60°C, and -40 to 140°F

Storage temperature:-40 to 60°C, -40 to 140°F

Product qualified pressure rating:80MPa, 8000 m water depth

Connector body material:chloroprene rubber

Metal material of the cabin door base:brass C 36000, stainless steel 316L, titanium alloy TC4

O-ring:Nitrile rubber

Lock fastening:POM or stainless steel

Spring retaining ring:Stainless steel 304

Cable specifications:

The high-current single-core submarine cable component features no loose wires and a threaded terminal post at the socket tail end, with a matching brass adapter plate for connecting high-current single-core water-resistant cables (60 cm length): 1/0 AWG 53.46 mm² chloroprene rubber outer sheath.

Waterproof cable sequence color definition:

1: Black

Waterproof cable wire diameter:

The outer diameter of single-core water-tight cable is 15.4 mm.

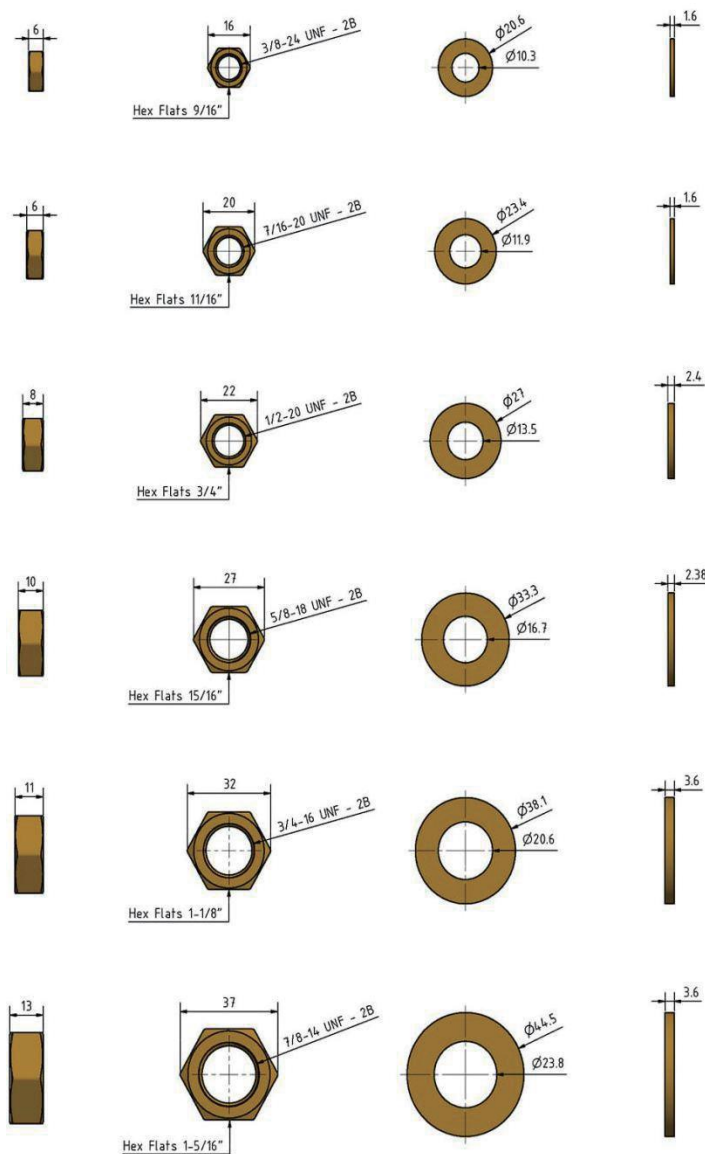
Nuts, washers, and locking sleeve

Product Picture :



Nut product size:

The nut is manufactured from brass by default, with customization options available for stainless steel or titanium alloy.



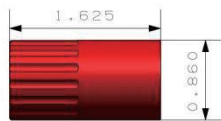
Nuts, washers, and locking sleeve

Locking collar product size:

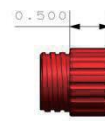
Select the appropriate model based on different connectors;

The lock buckle defaults to red and can be customized in black.

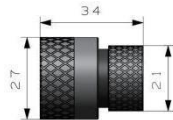
The material defaults to brass, with customization options available for stainless steel or titanium alloy.



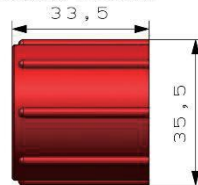
RT-MCDLS-F



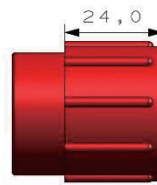
RT-MCDLS-M



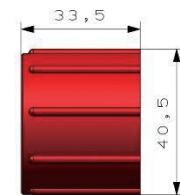
RT-MCDDWLS



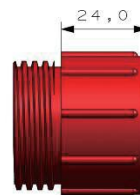
RT-DLSA-F



RT-DLSA-M



RT-DLSB-F



RT-DLSB-M



RT-DLSC-F



RT-DLSC-M

RT-HUMMER Series Parameters



This ultra-miniature connector design incorporates features of popular machine-to-machine connections, with gold-plated contacts ranging from 28AWG to 22AWG and rated for up to 10,000 psig pairing. The hull connector consists of a metal housing with a molded glass-reinforced epoxy (GRE) insert. The cable connector meets standard or cable length requirements using chloroprene rubber. This design delivers a robust and cost-effective connection solution.

specifications :

Opening pressure	Cooperative pressure	Rated voltage	Insulation resistance	Working temperature	Cabin mounting torque
Special order pressure up to 1000 psi (700 bar)	1000psi	300 VDC	300 VDC > 200 MΩ (acceptance grade)	-4°C to 60°C	HUMG 12in-lb HUMK 30in-lb HUML 60in-lb

material :

Bulkhead	Brass (CA #360)
O molding ring	Ding Qing
Cable	Chloroprene rubber, polyurethane
Full-length	18 inch
Connecting line	TFE

RT-HUMER connector symbol representation

RT-HUMX-X-XXX

HUM stands for: HUMMER series identifier

X represents: Shell size: G, K, L

X represents: core count

XXX Representative: Category: BCR: Hexagon

BCR FACE SEAL: Hexagonal flange seat

CCP : cable

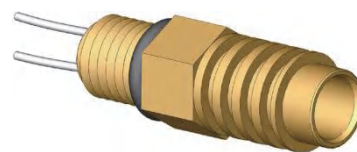
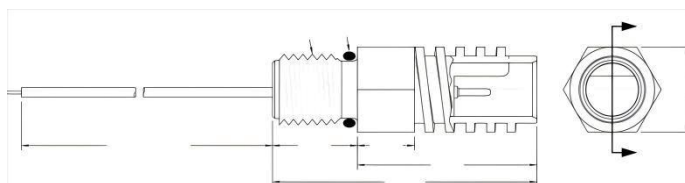
DSR: Metal plug (inserted into the seat)

DSP: Rubber plug (for cable mating)

Current parameters of RT-HUMMER series products

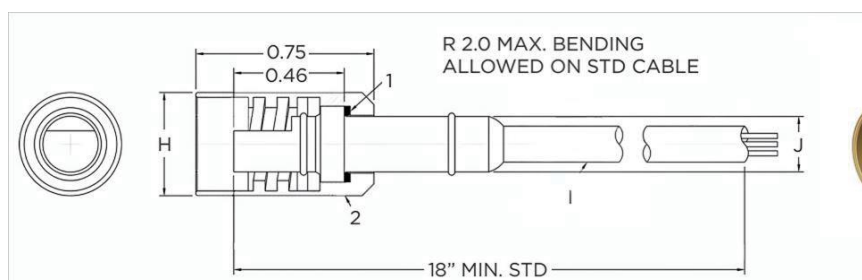
Product	Current (amps)
HUMG-2	1.50
HUMG-5	0.24
HUMK-5	1.10
HUMK-12	0.16
HUML-12	0.80
HUML-28	0.10

RT-HUM-BCR Product Specifications



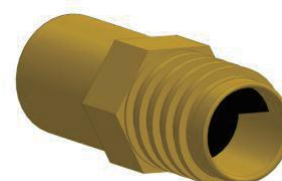
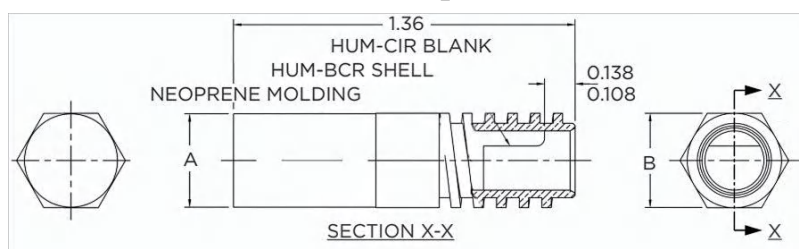
Shell size	Thread size	O-ring size	Product name
G	5/16-24 UNF-2A	3-902	HUMG-X-BCR
K	3/8-24 UNF-2A	3-903	HUMK-X-BCR
L	1/2-20 UNF-2A	3-905	HUML-X-BCR

RT-HUM-CCP Product Specifications



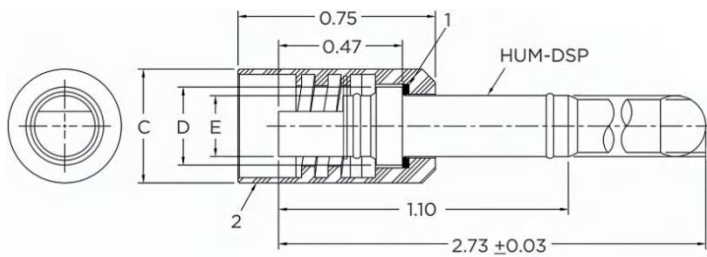
Shell size	End diameter (inches)	Cable wire diameter (inches)	Product name
G	0.43	0.187	HUMG-X-CCP
K	0.56	0.275	HUMK-X-CCP
L	0.69	0.375	HUML-X-CCP

RT-HUM-DSR Product Specifications



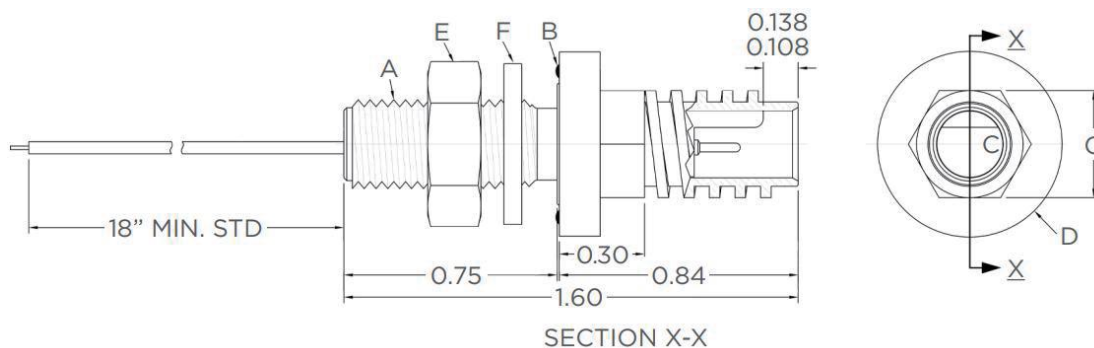
Shell size	Hexagonal plate size	Product name
G	0,37	HUMG-X-DSR
K	0,50	HUMK-X-DSR
L	0,62	HUML-X-DSR

RT-HUM-DSP Product Specifications



Shell size	C size (inches)	D size (inches)	E size (inches)	Product name
G	0,17	0,29	Typically 0.24	HUMG-X-DSP
K	0,23	0,42	Typically 0.36	HUMK-X-DSP
L	0,30	0,55	Typically 0.49	HUML-X-DSP

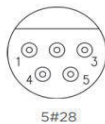
RT-HUM-BCR FACE SEAL Product Specifications



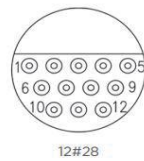
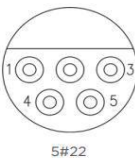
Shell size	Thread size	O-ring size	Product name
G	5/16-24 UNF-2A	2-013	HUMG-X-FCR
K	3/8-24 UNF-2A	2-014	HUMK-X-FCR
L	1/2-20 UNF-2A	2-016	HUML-X-FCR

Socket Interview Diagram and Cable Specifications

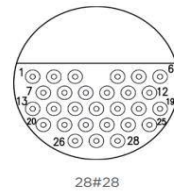
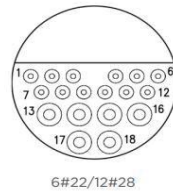
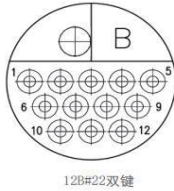
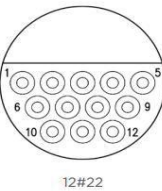
G



K



L



Product Specifications of RT-BURTON Series



Since 1945, Cooper Interconnect has manufactured robust and reliable electrical connection devices for extreme environments and critical applications. Connectors and penetrators are fabricated from 316L stainless steel, other alloys, or integral plastic materials. The selection of elastomers is based on toughness properties, compression set (memory), and electrical compatibility. All joints operate at a working pressure of 10,000 PSI.

For these reasons, many ROV manufacturers have chosen Cooper Interconnect for their vehicles. Medium and large ROVs may incorporate more Cooper Interconnect connectors than the combined total of connectors from all other manufacturers.

RT-BURTON Series Underwater Connectors Features:

The BURTON 5500 series connectors lack O-ring sealing between the plug and socket. Our sealing solution consists of an integral molded face seal integrated into the plug, which prevents detachment. Short tapered ACME threads are utilized on housings of size 16 and above. Short tapered ACME threads are prone to misalignment or damage.

Electrical contact points are connected to conductors via crimping rather than welding. Crimped contact points exhibit superior bending life compared to welded ones. All elastomer-metal bonding surfaces undergo sandblasting, cleaning, and primer application. Subsequently, the components are molded at high temperatures under thousands of pounds of pressure for 20 minutes or longer. This process ensures complete adhesion and prevents moisture infiltration.

RT-BURTON Series Socket Features:

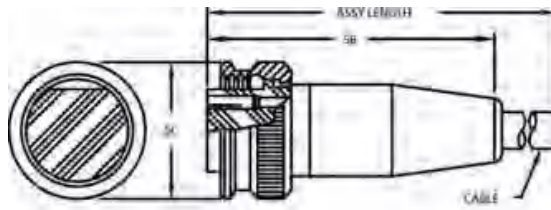
The BURTON 5500 series sockets feature a unique waterproof blocking system that extends to the conductor level. This ensures that in the event of catastrophic accidents during system connections—such as a plug being torn from the socket—water cannot penetrate your valuable equipment. Many competing connection systems fail to achieve conductor-level waterproof blocking. The pins are fully enclosed within a metal housing, meaning they remain unbent or undamaged even when connectors endure impacts or foot traffic.

RT-BURTON Series Plug Features:

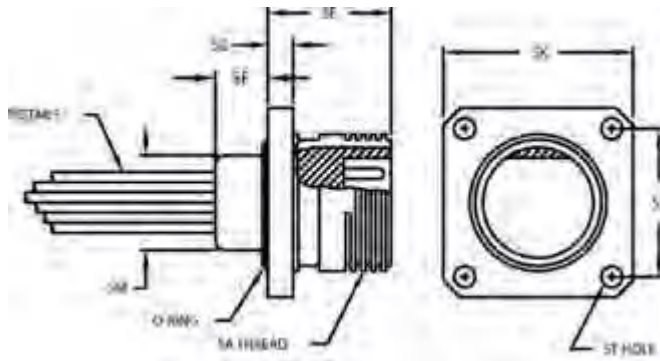
The plug features a metal housing enclosed within an elastic

casing, which endows it with exceptional robustness and resistance to bending damage. The contact points of the plug are fully bonded and mutually isolated. This ensures that electrical integrity can be maintained even if the cable sheath is compromised and penetrates the plug.

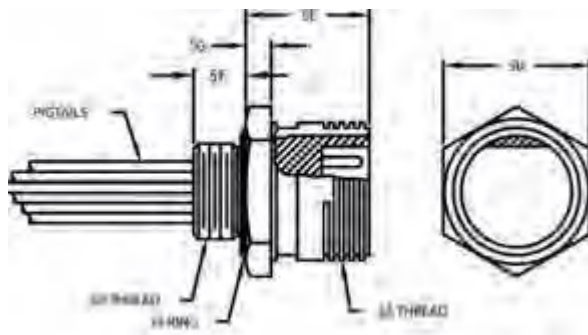
RT-BURTON 5501 Series Underwater Connector (Cable)



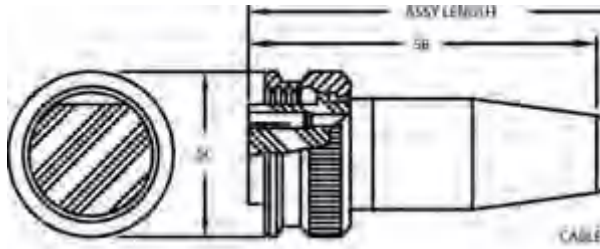
RT-BURTON 5506 Series Submarine Connector (Flange Seat)



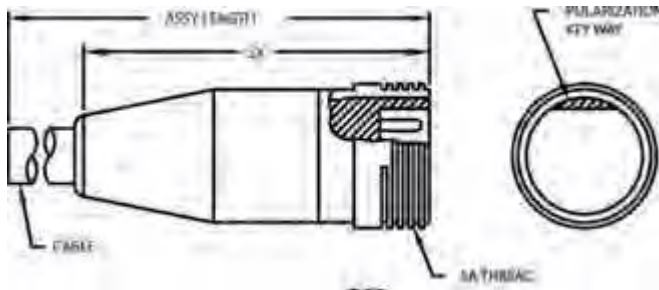
RT-BURTON 5507 Series Underwater Connector (Hexagon Base)



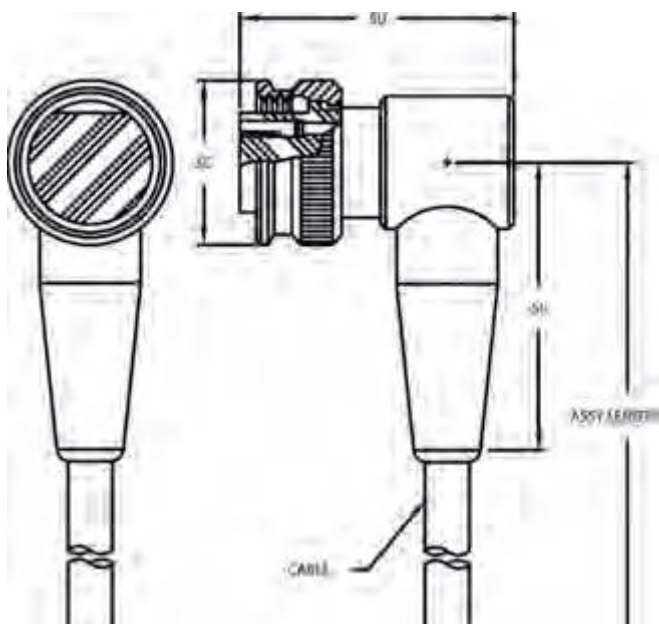
RT-BURTON 5501 Series Underwater Connector (Plug)



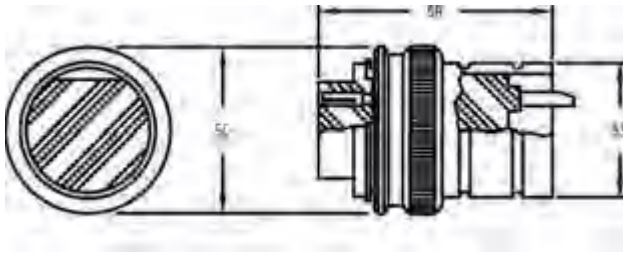
RT-BURTON 5502 Series Underwater Connector (Plug)



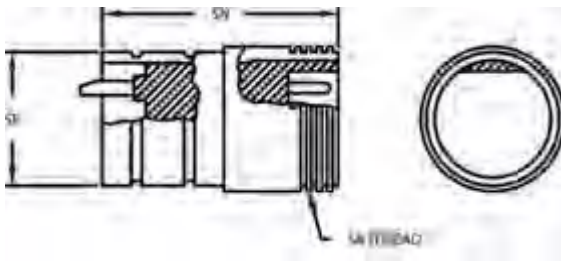
RT-BURTON 55R1 Series Underwater Connector (Right Angle)



RT-BURTON 55A1 Series Underwater Connector (Joint)



RT-BURTON 55A2 Series Underwater Connector (Joint)



Data and specifications:

Pressure	10000PSI
Voltage	600-3000

material :

Connect	Highly Conductive Copper Alloy
Connecting shell	316LSS (passivated)
Connector	Integrated elastomer
Cable	US waterproofing-A or military-grade C-915
Caudal fin	Military W-16878

System part number:

Example: 55 0 1-24-20-0004

55 Representative: Series

0 Representative: Special name: A.Connectable

R. right angle

0-600V (Standard)

1-1000V

2-2000V

3-3000V

9-1100V

1 Representative: Category: 1.CCP (Cable)

2. CCR (opposite direction)

6. FCR (Flange Seat)

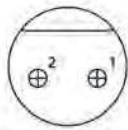
7. BCR (Hexagon)

24 Representative: Case dimensions

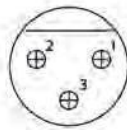
20 Representative: Number of terminals

0004 represents: Length (feet)

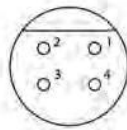
Socket Interview Diagram and Cable Specifications



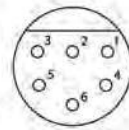
1502
(2 #16 AWG)



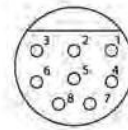
1503
(3 #16 AWG)



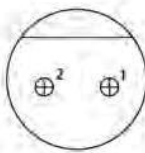
1504
(4 #18 AWG)



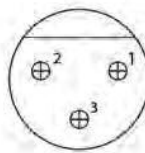
1506
(6 #18 AWG)



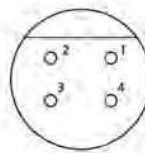
1508
(8 #18 AWG)



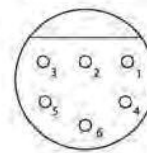
1602
(2 #16 AWG)



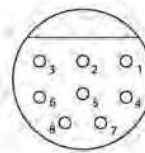
1603
(3 #16 AWG)



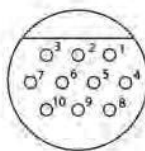
1604
(4 #18 AWG)



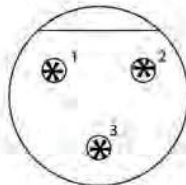
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(6 #18 AWG)



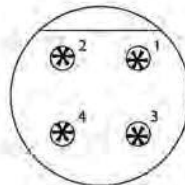
1608
(8 #18 AWG)



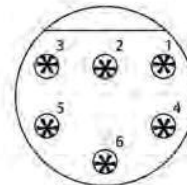
1610
(10 #18 AWG)



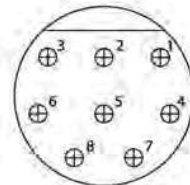
2003
(3 #16 AWG)



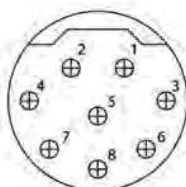
2004
(4 #16 AWG)



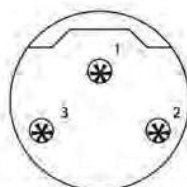
2006
(6 #16 AWG)



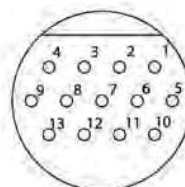
2008
(8 #16 AWG)



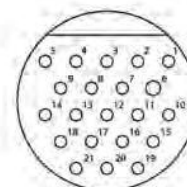
20A8
(8 #16 AWG)



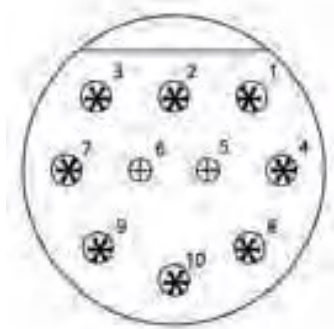
20B3
(3 #16 AWG)



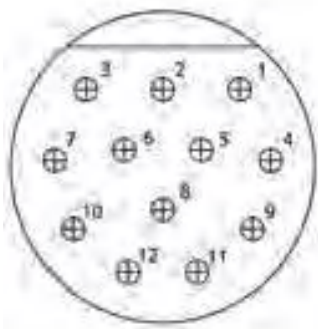
2013
(13 #18 AWG)



2021
(21 #18 AWG)



2410 (10#16AWG)



2412(12#16AWG)



2420(20#18AWG)

PIN DIAMETER	1/16 	3/32 	1/8 	5/32 	3/16 
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For panel-mounted sockets, secure them in place using 4 bolts. Recommended dimensions and torque values are as follows:

Hull	Bolt	Torque force
15	#10	25 pound-feet
16	#10	25 pound-feet
20	1/4	45 pound-feet
24	1/4	45 pound-feet