

Marine Slip Rings



Slip ring has always played a critical role in the worldwide marine industry, with inherent advantages, slip ring provides unrestrained power and signal connection between the stationary and rotating devices for a range of marine machinery, for example ROVs, cranes, winches, wireline/ logging and FPSO swivel stacks. Using the slip ring, the system can be freely rotated in both directions while not damaging cables.

As the fast development of global technology, the slip ring units used in marine applications are required to have more advanced performance, more robust configuration and even more complex solution combinations. AOOD design and manufacture high performance electrical slip ring assemblies for use in marine industry for decades. AOOD marine slip rings are designed to operate in extreme marine environments.

Marine slip rings can be designed in a wide range of sizes, powers and numbers of ways, uninterrupted power supply of voltage rating from signal to 10,000V and current rating to 500Amps. Gold plated fiber brushes are used for signal circuits and silver graphite brushes on precious metal plated rings are used for high current circuits. These electrical slip rings can be combined with fiber optic rotary joints and fluid rotary joints to provide a comprehensive rotating interface solution for surface or subsea applications.

R176 Series Electrical Slip Rings



Features

- Maximum 7200VAC
- Maximum 20A per ring, maximum 720A total current
- 140mm diameter
- Sealed to IP67, stainless steel enclosure
- Can accommodate a variety of power and signal combinations
- Highest quality standards of design, manufacture and test
- Reliable operation under shock, vibration and harsh environment
- Typically used in ROVs, surface / subsea winches and cranes

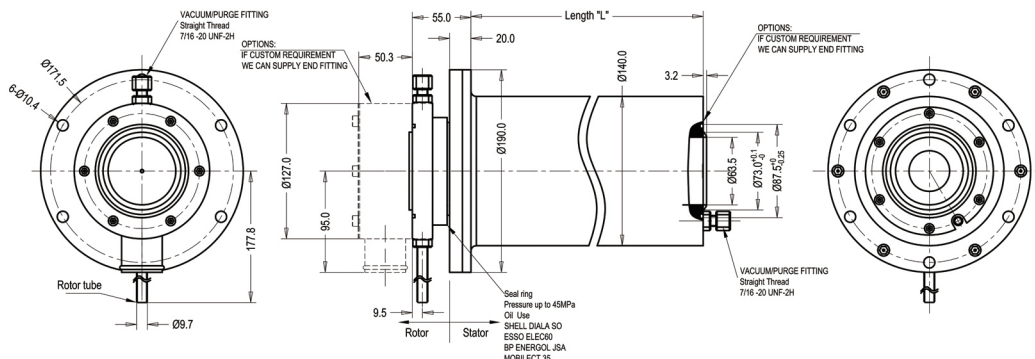
Options

- Supply and installation of customer specific connectors
- Seal pigtail exists
- Combination with FORJs and fluid rotary joints to provide a complete rotating interface solution
- Customized mounting configurations
- Fluid filling and pressure compensation for underwater use
- Hazardous areas certifications

Specifications

Electrical	
Voltage	Max 7200 VAC
Current	Max 720 A per ring Max 100 A total current
Insulation Resistance	>500MΩ @ 1000VDC
Electric Noise	Max 20mΩ
Dielectric Strength	Typical 2x voltage @ 50Hz
Signal Types	Analog Video, Canbus, Profibus, Device Net, Ethernet, SHDSL, RS485
Mechanical	
Operating speed	50rpm
Torque	<2.5 N*m
Life	50,000,000 revolutions
Protection	IP67 (IP68 optional)

Materials	
Contact Material	Precious metal
Housing Material	Stainless Steel 304 (316 optional)
Cables	Standard 3m loose wire pigtails, tinned copper braid and heat shrink installed over loose wire pigtails.
Environment	
Working Temperature	-40°C~ +70°C
Storage Temperature	-45°C~ +80°C
Working Humidity	95±3% (30°C+5°C)
Vibration	10~30 HZ frequency, double amplitude 0.8mm; 30~200 HZ frequency, acceleration 2g;two circulation last 30min.
Rush	40g, 11ms, half sine wave, vertical direction 3 times, level 3 times



Dimension L is determined by number of rings and is detailed on our quotation.

Customized Marine Slip Rings for Surface Operation



SLIP RING - ADSR-12J

- Up to 12 x 2A Rings
- 100mm OD x 225.7mm L
- Stainless Steel 304 Housing
- 1000Vac Voltage
- Sealed to IP65



SLIP RING - ADSR-S176B-17P

- Up to 15 x 100A Rings+2 x 10A Rings
- 165mm OD x 637mm L
- Stainless Steel 304 Housing
- 3000Vac Voltage
- Sealed to IP65



SLIP RING - ADSR-180-55

- Up to 55 x 2A Rings
- 72mm OD x 420mm L
- Stainless Steel 304 Housing
- 1000Vac Voltage
- Sealed to IP65



SLIP RING - ADSR-190-66P

- Up to 69 x 30A Rings
- 190mm ID x 538mm OD x 1159mm L
- Stainless Steel 304 Housing
- 3300Vac Voltage
- Sealed to IP65

IP68 Protection Slip Rings for Subsea Operation



SLIP RING - ADSR- SC13-7

- 7 x 5A Rings
- 65mm OD x 78mm L
- Sealed to IP68 @ underwater 60m
- 220Vac Voltage
- PG7 waterproof connector



SLIP RING - ADSR- T25-6P13S

- 6 x 5 A Rings+10 x 2A Rings +1 coax
- 89mm OD x 187.2mm L
- Sealed to IP68 @ underwater 400m
- 1000Vac Voltage
- Stainless Steel 316L Housing



SLIP RING - ADSR- T38S-18-FORJ

- 13 x 10A Rings+5 x 5A Rings+1 channel FORJ integrated
- 380Vac Voltage
- Sealed to IP68 @ 0.3Mpa
- 110mm OD x 243mm L



SLIP RING - ADSR-S176-10P3S-MX3

- 10 x 20A Rings+ 3 x 5A Rings + 3 channel FORJ integrated
- 5000Vac Voltage
- Sealed to IP68 @ underwater 4000m
- 140mm OD x 921mm L