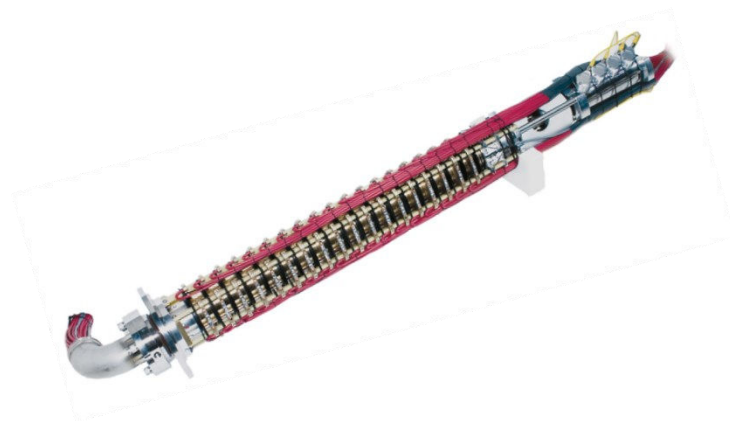


# 5.52" Diameter Electrical Slip Ring

## Model 176

Focal Technologies Corporation, a Moog Inc. company, has over 30 years of expertise in supplying standard and custom marine products for harsh environments and is a leading manufacturer of high performance and high quality electrical slip rings. Contact Focal for assistance in selecting the best solution for your requirement.



The Model 176 is comprised of electrical power and signal passes, and provides superior performance and reliability in demanding operational environments. The Model 176 may be used for high voltage and high current applications, customized to meet customer specific needs. The slip ring is waterproof rated to IP66, with the option for greater ingress protection.

The Model 176 may be constructed for subsea use where underwater operation is required. The slip ring may be fluid-filled, and pressure compensated. Additional options are available for high voltage use in submerged applications.

For hazardous locations, the Model 176-X variant is fully certified as a flameproof and explosion proof enclosure.

### Features

- Electrical passes rated up to 7200 V / 20 A
- Pigtail exits are capable of being sealed
- Sealed housing design tested to IP66 standards
- Can accommodate a variety of wire and cable types
- Maintained type certification for Hazardous locations
- Stainless steel construction
- Rugged design intended for harsh environments
- Reliable operation under shock and vibration
- Underwater designs available

### Benefits

- Compliance with the highest quality standards for design, manufacture and test
- Maintenance free operation
- More than 30 years of proven field performance
- Integration with fiber optic rotary joints and fluid rotary unions to provide a complete rotating interface solution

### Applications

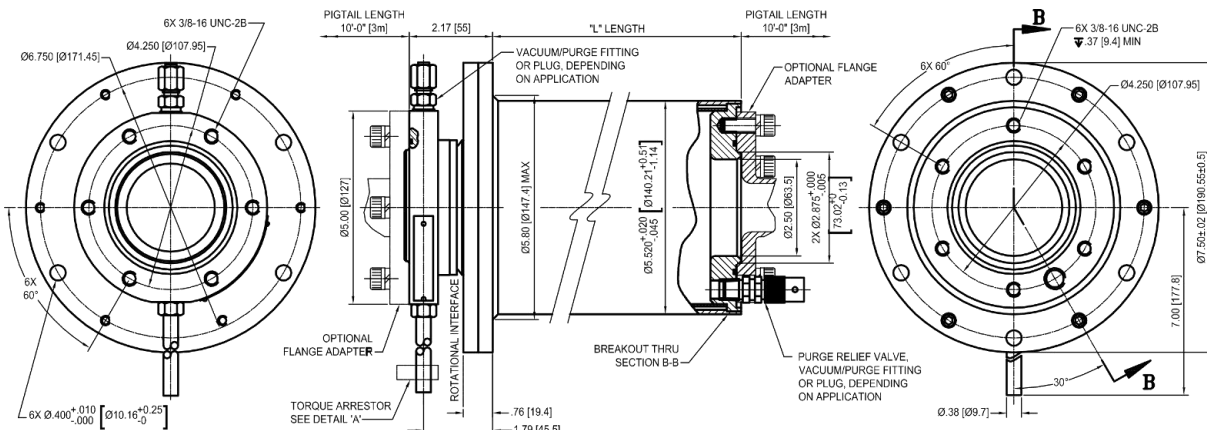
- Winch cable reels and TMS applications
- Remotely Operated Vehicles (ROVs)
- Seismic survey
- Towed instrument arrays
- Oceanographic survey (surface and subsea)
- Mine countermeasures

# Specifications

Electrical	
<b>Voltage</b>	Maximum 7200 VAC
<b>Current</b>	Maximum 20 A per pass Maximum 720 A total current *  *Maximum total current is dependent on duty cycle, ambient temperature and specific configuration. Consult factory to ensure configuration is suitable for application.
Electrical Performance	
<b>Contact Resistance</b>	20 mΩ nominal
<b>Insulation Resistance</b>	Typically > 500 MΩ @ 1 kVDC
<b>Short Circuit Rating</b>	1.5 kA / 1s, 3.7 kA peak
<b>Signal Types</b>	Analog Video, CanBus, Profibus, Device Net, 10 Base-T Ethernet, SHDSL, RS-485
Mechanical	
<b>Rotation Speed</b>	Maximum 50 rpm continuous
<b>Ingress Protection</b>	Sealed to IP66, except for pigtail exits
<b>Operating Temperature</b>	-20°C to +55°C
<b>Housing</b>	Stainless steel (304)
<b>Insertion Length "L"</b> (see drawing below)	Varies with number of electrical passes
Environment Test	
<b>Temperature</b>	Tested to MIL-STD-810F methods 501.4 and 502.4
<b>Vibration</b>	Tested to MIL-STD-167-1
<b>Shock</b>	Tested to MIL-STD-810D, method 516.3
<b>Humidity</b>	Tested to MIL-STD-810F, method 507.4

Please contact factory with your application details

Hazardous Area Option: Model 176-X	
<b>Certification</b>	<p><b>US:</b> Class I, Division 1, Group C &amp; D, T5 Class I, Zone 1, AEx db IIB T5 Gb ETL ATM 4007859</p> <p><b>CAN:</b> Class I, Division 2, Group C &amp; D, T5 ETL ATM 4007859 Ex db IIB T5 Gb ETL22CA105073054X</p> <p><b>ATEX:</b> CE 0344 II 2 G Ex db IIB T5 Gb ETL 23 ATEX 0295X</p> <p><b>GB:</b> UKCA 8505 II 2 G Ex db IIB T5 Gb ITS 22 UKEX 0584X</p> <p><b>IECEX:</b> Ex db IIB T5 Gb ETL 13.0013X</p>
Terminations	
<b>Standard</b>	Wire pigtails, 10 ft [3.0 m]
<b>Flange and Cable Covers</b>	Various entry threads and orientations available
<b>Special</b>	Supply and installation of connectors, terminals, conduit, cable, glands, junction boxes, sealed pigtail exits
Additional Options	
<b>Optics</b>	Fiber Optic Rotary Joint (FORJ) or optical converter
<b>Design Classification</b>	ABS, DNV, BV, LRS
<b>Covered Pigtails</b>	Tinned copper braid and heat shrink installed over loose wire pigtails
<b>Submersed Applications</b>	Fluid-fill fittings or fluid-filled/pressure compensated at factory
<b>Other Devices</b>	RF Rotary Joint, shaft encoder, sensors, Fluid Rotary Union (FRU), slip ring sensors, customer supplied product
<b>Ingress Protection</b>	IP 67 or IP 68
<b>Housing Material</b>	316 stainless steel



All specifications and information are subject to change without notice. Please contact Focal for the latest updates.

Dimensions in inches [mm].