

Downhole High Temperature and High Pressure Slip Ring

Model 303



The model 303 is a family of electrical slip ring products designed specifically for the extremely harsh high temperature and high pressure (HTHP) downhole environment. These products are designed and tested to operate at temperatures of up to 200°C and pressures of 25,000 psi (1700 Bar), and are generally configured for an oil-filled environment.

Features

- Withstands temperatures of up to 200°C and pressures of 25,000 psi (1700 Bar). Higher temperatures and pressures possible
- Can be combined with high temperature and high pressure resolvers and motors for position and speed feedback and motive power
- Inner bore and outer diameter can be customized for specific downhole tooling envelopes
- Low electrical contact resistance
- Up to 1000 V versions

Benefits

- Slip rings eliminate cable twist and jamming
- Easily integrated with other products such as motors and resolvers to reduce integration issues
- Proven, fielded technology
- Increase in power and bandwidth capacity, and improved power transmission efficiency as compared to inductive technologies
- High quality and reliability

Testing

- High temperature and pressure test simulator capable of 260°C and 30,000 psi
- Fully tested at peak temperature and pressure conditions to minimize any failure modes
- Shock and vibration testing carried out to specific customer requirements

Applications

- Wirelining
- Measuring / logging while drilling
- Industrial high temperature applications

Specifications



Miniature Bore	
Rotational Speeds	Up to 600 rpm standard Contact factory for other requirements
Temperature	200°C standard Consult factory for other requirements
Pressure	25 kpsi (1700 bar)
Channels	Up to 8
Voltage	250 - 500 VAC standard
Current	Up to 2 A per channel
Key Dimensions	0.375" (9.5 mm) hollow bore ID, ~1.7" (43.2 mm) minimum OD



Large Bore	
Rotational Speeds	Up to 300 rpm standard Contact factory for other requirements
Temperature	200°C standard Consult factory for other requirements
Pressure	25 kpsi (1700 bar)
Channels	8
Voltage	Up to 100 VAC standard
Current	10 A per channel
Key Dimensions	3.5" (88.9 mm) hollow bore ID, 3.83" (97.3 mm) minimum OD



High Voltage 20-Channel	
Rotational Speeds	20 RPM standard
Temperature	200°C standard Contact factory for other requirements
Pressure	25 kpsi
Channels	Up to 20
Voltage	Up to 1 k VAC
Current	Up to 5 A per channel
Key Dimensions	OD 1.85" (47 mm)

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

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