Slip rings

Three chamber system | **Ethernet transmission** | **SR130**

In general, slip rings are used to transmit power, signals or data, as well as pneumatics and hydraulics, from a stationary to a rotating platform.

The transmission between the stator and rotor units is achieved in an extremely reliable way by sliding contacts.

The slip ring SR130 is ideal for applications requiring high transmission rates. The three-chamber system allows parallel transmission of signals, load and data up to 100 Mbit/s (contacting) and 1 Gbit/s (contactless).

Rugged

- Reliable operation in harsh environments.
- Rugged metal housing.
- High protection level IP64.

Flexible

- Fast and easy installation.
- Modular construction.
- Wide variety of connector and cable connections.
- Hollow shaft up to ø 50 mm.

Reliable

- Reliable thanks to interference-proof transmission.
- Transmission of Ethernet, signal, load, pneumatics and hydraulics.
- Innovative contact technology, low-maintenance and durable.
- Fieldbus or Ethernet up to 100 Mbit/s (contacting) and 1 Gbit/s (contactless).

Application areas for slip rings

Industrial automation, bottling plants, labelling machines, rotary tables ...

Configuration – Options

Type of mounting
- flange mounting (s. dimensional drawing)
- other types of mounting on request

Signal / data channels
- Ethernet transmission, contacting (up to 100 Mbit/s)
- Ethernet transmission, contactless (up to 1 Gbit/s)
- PT100, 2-wire
- PT100, 4-wire
- thermocouples
- other signal- /data channels on request

Load channels
- 10 A, 50 V AC/DC
- 25 A, 50 V AC/DC
- 10 A, 400 V AC/DC
- 25 A, 400 V AC/DC
- 10 A, 750 V AC/DC
- 25 A, 750 V AC/DC
- other load channels on request

Central lead-through
- central bore, inside diameter up to max. 50 mm
- other central lead-throughs on request

Type of connection (stator and rotor)
- M12 connector (depending on the interface)
- cable (load, signal)
- connector assembled on the cable
- other connection types, such as for example assembled motor or servo cables, on request

Type of protection
- IP64 (other types of protection on request)

Encoder
- flexible installation or removal

Pre-assembled cordsets for Ethernet, signal/data or load on request.

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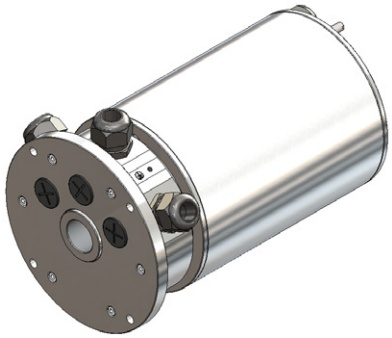
Technical data

Overall length		dep. on the number of transmission paths
Type of connection (stator and rotor)	load	cable 2 m
	signal / data	cable 2 m
	Ethernet	M12 connector, 4-pin, D coded
Material pairing	load	gold / gold
	signal / data	gold / gold
	Ethernet	gold / gold
Voltage / current loading		
	load channels	750 V AC/DC, max. 25 A, 50/60 Hz
	signal / data channels	50 V AC/DC, max. 6 A
Contact resistance		
	load channels	≤ 0.1 Ohm (dynamic) [1]
	signal / data channels	≤ 0.1 Ohm (dynamic) [2]
Insulation resistance		10^3 MOhm, at 500 V DC
Dielectric strength		1000 V eff. (60 sec.)

Speed max. (signal / data channels)	100 min^{-1}
Service life (signal / data channels)	typ. 10 ... 20 Mio. revolutions (at room temperature) depends on installation position
Maintenance cycles	maintenance free
Maintenance	none
Operating temperature	-30° ... +80°C [-22°F ... +176°F]
Protection acc. to EN 60529	max. IP64 (higher on request)
Transmission paths	max. 20 (> 20 on request)

Technology in detail

Front view



Central bore

For the central lead-through of electrical connections, media channels, etc.

1) Voltage measurement, ambient temperature, DC series connection, ohmic load, min. 4 A test current.
2) 2-wire resistance measurement, ambient temperature, 6.5-digit digital multimeter or similar, values without testing cable.

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Terminal assignment

M12 connector, 4-pin, Ethernet transmission					
Signal:	Transmit data +	Receive data +	Transmit data -	Receive data -	 D coded
Abbreviation:	TxD+	RxD+	TxD-	RxD-	
Pin:	1	2	3	4	

Dimensions

Dimensions in mm [inch]