Industrial Line | **Ethernet transmission – up to 1 Gbit/s** | **SR130 / SR160 / SR200**

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 or 1 Gbit/s.

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 or 1 Gbit/s.

Application areas for slip rings

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

Order code

SRXXX	XX	-	XX	-	XX	-	X	X	-	X	X	X	2	-	V100
a	b		c		d		e	f		g	h	i	k		l

a *Size*
SR130 = ø 130 mm
SR160 = ø 160 mm
SR200 = □ 200 mm

b *Flange mounting*
21 = stator connections axial, rotor connections radial
22 = stator connections axial, rotor connections axial
11 = stator connections radial, rotor connections radial [1]
12 = stator connections radial, rotor connections axial [1]

c *Modul Ethernet transmission*
00 = none
x1 = 1x 100 Mbit/s
x2 = 2x 100 Mbit/s
1x = 1x 1 Gbit/s
2x = 2x 1 Gbit/s

d *Number of signal/data channels (0, 2, 4, 6, 8, 10)*
00 = no signal/data channels
02 = 2 signal/data channels
...
10 = 10 signal/data channels

e *Number of PE channels*
0 = none
A = 1 PE channel
B = 2 PE channels
C = 3 PE channels
D = 4 PE channels
E = 5 PE channels
F = 6 PE channels

f *Number of load channels*
0 = none
1 = 1 load channel
2 = 2 load channels
...
9 = 9 load channels
A = 10 load channels
B = 11 load channels

g *Max. load current*
0 = none

400 V AC/DC
A = 8,5 A
B = 17 A
C = 25 A
D = 35 A [2]
G = 50 A [2]
H = 70 A [1]

750 V AC/DC
L = 8,5 A
M = 17 A
N = 25 A
O = 35 A [2]
R = 50 A [2]
S = 70 A [1]

h *Type of connection*
A = cable 1 m
B = cable 2 m (standard)
C = cable 3 m
D = cable 5 m
E = cable 10 m

i *Media rotary feedthrough*
0 = none
A = central bore 50 mm
Air, rotation screw connection, flange mounting
C = tube Ø 12 mm
D = tube Ø 10 mm
E = tube Ø 8 mm

k *Protection*
2 = IP64

l *Version number (options)*
V100 = standard

1) Only possible for size SR200.
2) Only possible for size SR160 and SR200.

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Technical data

Overall length		dep. on the number of transmission paths
Type of connection (stator and rotor)	load	cable
	signal / data	cable
	Ethernet 100 Mbit/s	M12 connector, 4-pin, D coded
	Ethernet 1 Gbit/s	M12 connector, 8-pin, X coded
Material pairing	load	silver / silver
	signal / data	silver / silver
	Ethernet	silver / silver
Voltage / current loading		
	load channels	400/750 V AC/DC, max. 70 A
	signal / data channels	60 V, max. 8,5 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
Dialectric strength		1000 V eff. (60 sec.)

Speed max. (signal / data channels)	150 min^{-1} (depending on application)
Service life (signal / data channels)	typ. 200 Mio. revolutions (depending on application)
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)

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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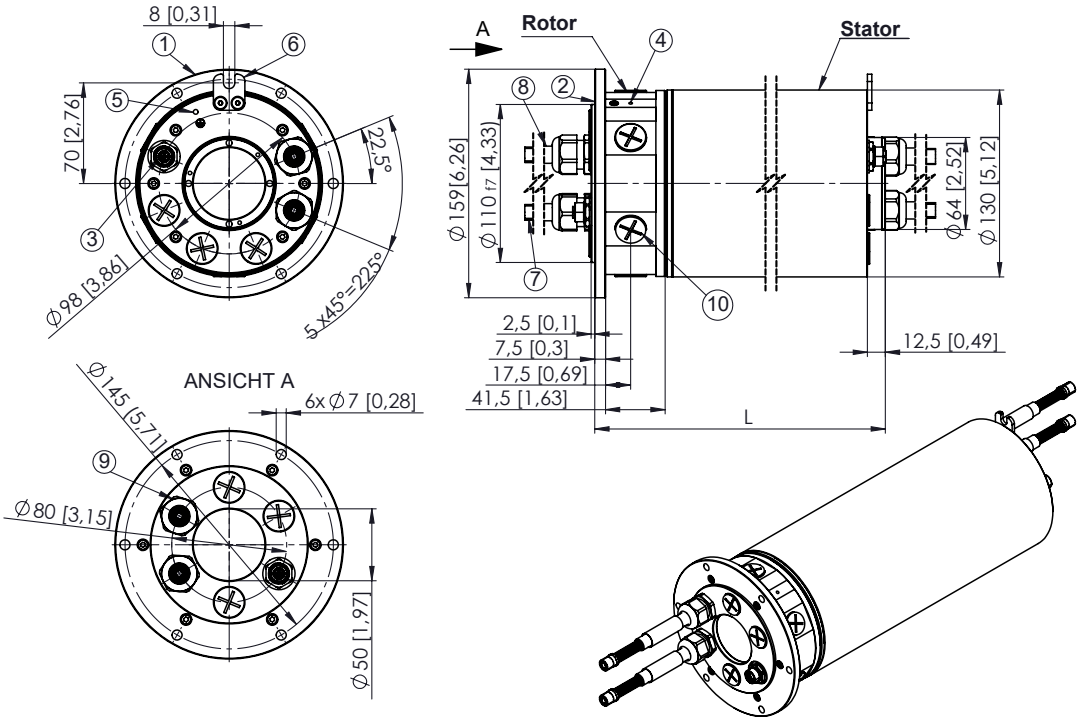
Terminal assignment

M12 connector, 4-pin, Ethernet transmission 100 Mbit/s					
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]

Slip ring SR130



1 – Mounting flange
2 – Centering collar
3 – M12 connector, D coded, female
Ethernet data transmission
4 – Grounding (optional connection option)
5 – Grounding (optional connection option)
6 – Torque stop
7 – Connecting cable load transmission
8 – Connecting cable signal transmission
9 – Cable gland M20 x 1,5
10 – Blanking plug
(Axial or radial outlets on the rotor side)

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