

Slip rings

Modular	Fieldbus – 12 Mbit/s	SR085
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In general slip rings are used to transmit power, signals or data, pneumatic and hydraulic, from a stationary to a rotating platform.

The transmission between the stator and rotor takes place via sliding contacts and is extremely reliable.

The construction is modular and offers the greatest flexibility in a variety of applications.

Flexible and rugged

- Modular construction system, load and signal/data channels can be combined as desired.
- Rugged GFPC housing (glass-reinforced polycarbonate), 30% glass-fiber content for industrial usage.
- Long service life and long maintenance cycles.

Reliable with Safety-Trans™ Design

- Two-cavity system for load and signal transmission.
- Labyrinth seal.
- High vibration resistance.
- Fieldbus signals such as Profibus, CANopen etc. up to 12 Mbit/sec.

Applications

Packaging machines, textile machines, pipeline inspection systems, video surveillance equipment, bottling plants, rotary tables

Order code	SR085 - XX - XX - XX - XXXXX - V100	
	Type a b c d e f g h i	
<p>a <i>Type of mounting</i> 00 = flange mounting 20 = hollow shaft, ø 20 mm [0.79"] 25 = hollow shaft, ø 25 mm [0.98"] 30 = hollow shaft, ø 30 mm [1.18"] IN = hollow shaft, ø 1" (other options on request)</p> <p>b <i>Number of signal/data channels¹⁾</i> (0, 2, 4, 6, 8, 10) 00 = no signal/data channels 02 = 2 signal/data channels ... 10 = 10 signal/data channels (other options on request)</p> <p>c <i>Number of load channels¹⁾</i> (0, 2, 4, 6, 8, 10) 00 = none 02 = 2 load channels 04 = 4 load channels 06 = 6 load channels L3 = 3 load channels + ground PE L4 = 4 load channels + ground PE (others on request)</p>	<p>d <i>Max. load current</i> 0 = no load channel 1 = 16 A, 240 V AC/DC 2 = 25 A, 240 V AC/DC 3 = 10 A, 400 V AC/DC 4 = 20 A, 400 V AC/DC</p> <p>e <i>Mounting position</i> 0 = any, only with either load or signal channels 1 = standing and horizontal 2 = hanging (over head)</p> <p>f <i>Contact material for signal/data channels</i> 0 = no signal channels 3 = silver / precious metal (others on request)</p>	<p>g <i>Media lead-through</i> 0 = none C = air, rotatable connector Flange mounting for 12 mm tube H = air, rotatable connector Hollow shaft for 8 mm tube (others on request)</p> <p>h <i>Protection rating</i> 1 = IP50 2 = IP64</p> <p>i <i>Version number (options)</i> V100 = standard</p>

1) Combinations of data and load channels > 13 upon request.

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Technical data ¹⁾	
Overall length	dep. on the number of transmission paths
Hollow shaft diameter	up to ø 30 mm [1.18"]
Type of connection	
hollow shaft mounting	stator: terminal clamp rotor: screw terminal
flange mounting	stator: terminal clamp rotor: single wires, 2 m [6.56"] (towards the assembly flange)
Voltage/current loading	
load channels	240 V AC/DC, max. 16 A (order option 1) 240 V AC/DC, max. 25 A (order option 2) 400 V AC/DC, max. 10 A (order option 3) 400 V AC/DC, max. 20 A (order option 4)
signal channels	48 V AC/DC, max. 2 A
Contact resistance	
load channels	≤ 1 Ohm (dynamic) ²⁾
signal / data channels	≤ 0.1 Ohm (silver / precious metal) ³⁾
Insulation resistance	10 ³ MOhm, at 500 V DC
Dielectric strength	1000 V eff. (60 sec.)
Speed max. (signal / data channels)	800 min ⁻¹ , up to 10 channels (depends on installation position and numbers of channels)
Service life (signal / data channels)	typ. 500 million revolutions ⁴⁾ (at room temperature) depends on installation position
Maintenance cycles	first maintenance after 50 million revolutions, all further maintenance intervals after 100 million revolutions
Maintenance	contact oil not required
Material pairing	
load channels	copper / brass
signal / data channels	silver / precious metal
Operating temperature	-35 °C ... +85 °C [-31 °F ... +185 °F]
Protection acc. to EN 60529	max. IP64
Transmission paths	max. 20 (> 20 on request)

Rotatable connector, air	
Air pressure max.	10 bar (150 psi)
Speed max.	up to 800 min ⁻¹
For tube diameter	12 mm [0.31"]

Approvals	
CE compliant in accordance with	
Low Voltage Directive	2014/35/EU
UKCA compliant in accordance with	
Low Voltage Regulations	S.I. 2016/1101

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Technology in detail

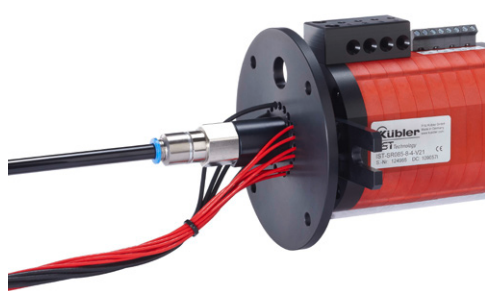
Easily accessible connections



IP64 protection cover



Flange mounting with media lead-through



Media lead-through rotor side



1) Data correspond to typical values. However, these may vary considerably depending on the installation situation and application.
 2) Voltage measurement, ambient temperature, DC series connection, ohmic load, min. 4 A test current.
 3) 2-wire resistance measurement, ambient temperature, 6.5-digit digital multimeter or similar, values without testing cable.
 4) Typical values, may vary considerably depending on installation situation and application.

Slip rings

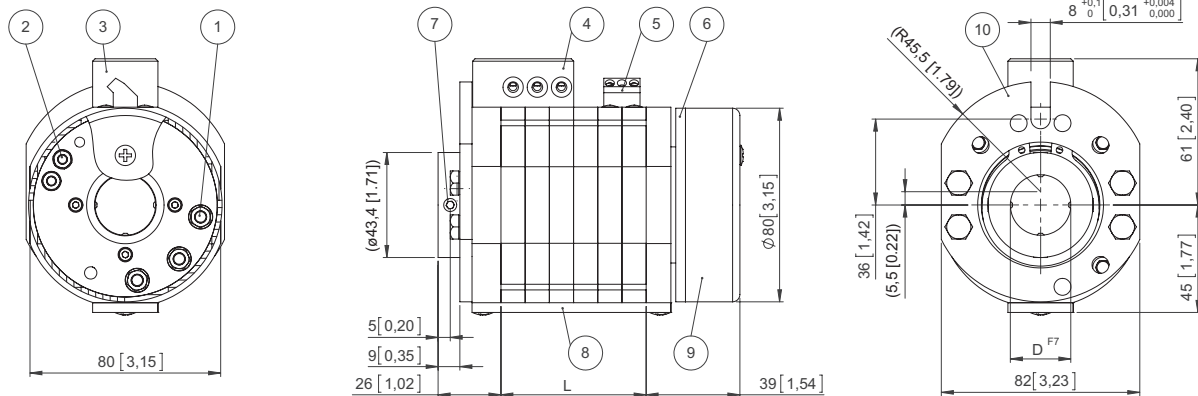
Modular **Fieldbus – 12 Mbit/s** **SR085**

Dimensions

Dimensions in mm [inch]

Standard version

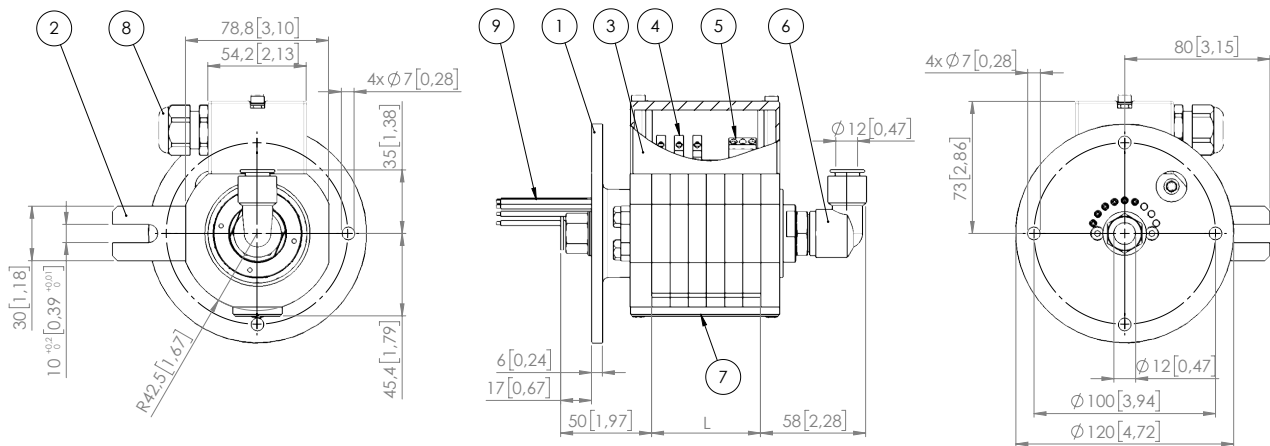
Example: Type SR085-25-02-03-11301-V100
(2 data channels, 3 load channels)



- 1 – Screw terminal M5 for load transmission
- 2 – Screw terminal M4 for signal transmission
- 3 – Terminal clamp for power without wire protection, with shock-hazard touch protection
- 4 – Wire lead-in for power possible on both sides
- 5 – Terminal clamp for signal transmission
- 6 – Rotating connection ring
- 7 – 4 x socket set screw DIN 914 M6
- 8 – Maintenance window
- 9 – Protective cover for connections
- 10 – Torque stop

Version with mounting flange and media lead-through

Example: Typ SR085-00-02-03-113C1-V100
(2 data channels, 3 load channels)



- 1 – Mounting flange
- 2 – Torque stop
- 3 – Stator protection cover
- 4 – Terminal clamp for load transmission
- 5 – Terminal clamp for signal transmission
- 6 – Media lead-through (optional)
- 7 – Maintenance window
- 8 – Cable gland load and signal cable
- 9 – Stranded wires for load and signal transmission

Calculation of the overall length

Additional dimensions L	
+ number of signal/data channels (silver / precious metal)	+ 10 mm [0.39"] per data channels
+ number of load channels, order options 1 and 2	+ 10 mm [0.39"] per load channel
+ number of load channels, order options 3 and 4 (10 or 20 A, 400 V)	+ 20 mm [0.79"] per load channel, if only load + 10 mm [0.39"]
+ labyrinth isolation ring for load and signal transmission	+ 10 mm [0.39"]