

# Slip rings

<b>Modular</b>	<b>Fieldbus – 12 Mbit/s</b>	<b>SR085</b>
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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

<b>SR085</b>	-	<b>XX</b>	-	<b>XX</b>	-	<b>XX</b>	-	<b>XX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	<b>XX</b>	-	<b>V100</b>				
Type		<b>a</b>		<b>b</b>		<b>c</b>		<b>d</b>		<b>e</b>		<b>f</b>		<b>g</b>		<b>h</b>		<b>i</b>		<b>k</b>

### **a** Type of mounting

- 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)

### **b** 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
- (other options on request)

### **c** Number of PE channels

- 0 = none
- A = 1 PE channel
- B = 2 PE channels
- (other options on request)

### **d** 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
- (other options on request)

### **e** Max. load current

- 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

### **f** Mounting position

- 0 = any, only with either load or signal channels
- 1 = standing and horizontal
- 2 = hanging (over head)

### **g** Contact material for signal/data channels

- 0 = no signal channels
- 3 = silver / precious metal
- (others on request)

### **h** Media rotary feedthrough (rotor connection)

- 0 = none
- Air, rotation screw connection, flange mounting
- C = tube Ø 12 mm
- D = tube Ø 10 mm
- E = tube Ø 8 mm

Air, rotation screw connection, Hollow shaft mounting (not possible with all hollow shaft diameters)

- H = tube Ø 8 mm

### **i** Protection

- 1 = IP50
- 2 = IP64

### **k** Version number (options)

- V100 = standard (without options)

### Stock types

SR085-30-02-02-21301-V100

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

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

Approvals	
<b>CE compliant</b> in accordance with	
Low Voltage Directive	2014/35/EU

## 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

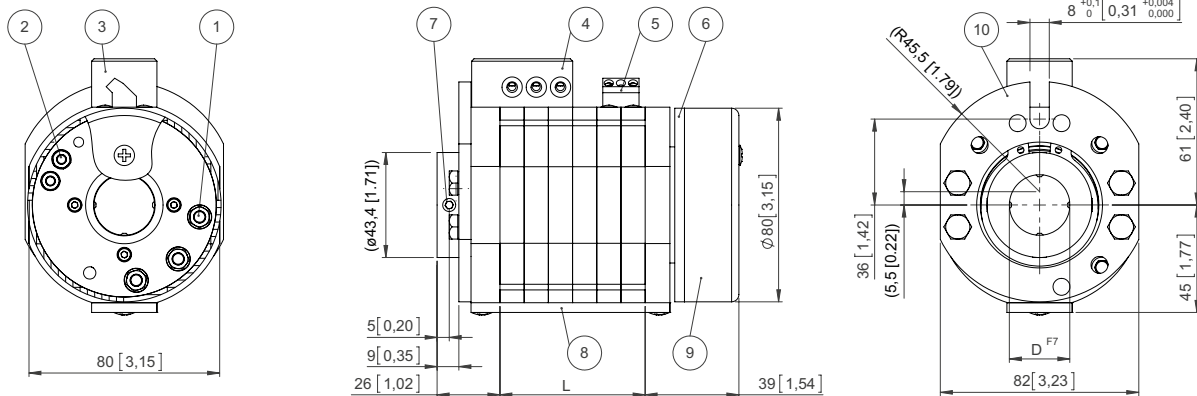
**Modular**      **Fieldbus – 12 Mbit/s**      **SR085**

## Dimensions

Dimensions in mm [inch]

### Standard version

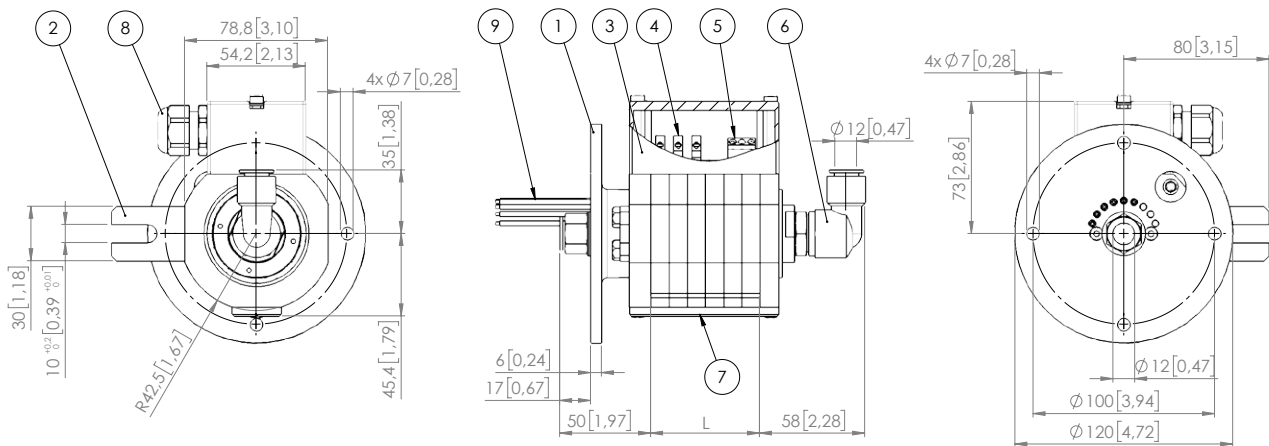
Example: Type SR085-25-02-03-11301-V100  
(2 data channels, 3 load channels)



- 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"]