

# Slip rings

**Modular**      **Construction system**      **SR085**



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

### Standard models

Delivery time is 10 working days for a maximum of 10 pcs. per delivery. Larger quantities have a delivery time of 15 working days (or alternatively on request).



	Signal / data channels	Load channels	Contact material	Order no.
<b>Hollow shaft 25 mm [0.98"]</b>	4 x	4 x	silver / precious metal	<b>SR085-25-04-04-11301-V100</b>
	6 x	6 x	silver / precious metal	<b>SR085-25-06-06-11301-V100</b>
<b>Hollow shaft 30 mm [1.18"]</b>	2 x	3 x	silver / precious metal	<b>SR085-30-02-03-11301-V100</b>
	6 x	6 x	silver / precious metal	<b>SR085-30-06-06-11301-V100</b>

### Order code

**SR085 - XX - XX - XX - XXXXX - V100**

Type    a    b    c    d e f g h    i

Non-standard models will be checked for availability - an alternative model may be proposed. Minimum order quantity 5 pieces for new models. For orders < 5 pieces, we will invoice a one-shot lump sum for new variants. For list of all available types, see [www.kuebler.com/sr-list](http://www.kuebler.com/sr-list)

- a** Type of mounting  
 00 = flange mounting  
 20 = hollow shaft, ø 20 mm [0.79"]  
 24 = hollow shaft, ø 24 mm [0.94"]  
 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<sup>1)</sup>
- c** Number of power (load) channels<sup>1)</sup>
- d** Max. load current  
 0 = no load channels  
 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
- e** Mounting position  
 0 = any, only with either load or signal channels  
 1 = standing and horizontal (flange down)  
 2 = hanging and horizontal (flange up)
- f** Contact material for signal/data channels<sup>2)</sup>  
 0 = no signal channels  
 3 = silver / precious metal
- g** Media lead-through  
 0 = none  
**flange mounting (00):**  
 1 = air, connection 1/4"  
 2 = air, connection 1/2"  
 3 = air, connection 3/8"  
 4 = hydraulics, connection 1/2"  
 5 = hydraulics, connection 3/8"  
**hollow shaft mounting:**  
 6 = air, rotatable connector (up to 300 min<sup>-1</sup>)
- h** Protection rating  
 1 = IP50  
 2 = IP64
- i** Version number (options)  
 V100 = without options  
 >V100 = Options on request, e.g.:  
 - > 20 channels  
 - other types of mounting  
 - other types of connection  
 e.g. plug connectors

1) Max. 20 signal/data channels (no load), combinations of data and load channels > 13 upon request.  
 2) Contact material gold / gold and copper / bronze on request.

# Slip rings

<b>Modular</b>	<b>Construction system</b>	<b>SR085</b>
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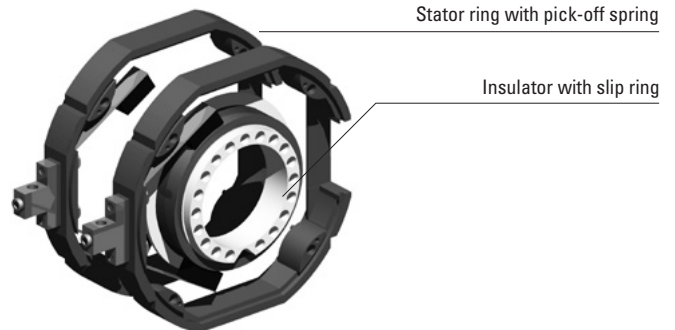
Technical data (standard version)		
<b>Overall length</b>	dep. on the number of transmission paths	
<b>Hollow shaft diameter</b>	up to $\varnothing$ 30 mm [1.18"]	
<b>Type of connection</b>		
hollow shaft mounting	stator:	terminal clamp
	rotor:	screw terminal
flange mounting	stator:	terminal clamp
	rotor:	single wires, 2 m [6.56"] (towards the assembly flange)
<b>Voltage/current loading</b>		
load channels	240 V AC/DC, max. 16 A (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	
<b>Contact resistance</b>		
load channels	$\leq$ 1 Ohm (dynamic) <sup>1)</sup>	
signal / data channels	$\leq$ 0.1 Ohm (silver / precious metal) <sup>2)</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 (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 / bronze	
signal / data channels	silver / precious metal	
<b>Operating temperature</b>	-35° ... +85°C [-31°F ... +185°F]	
<b>Protection acc. to EN 60529</b>	max. IP64	
<b>Transmission paths</b>	max. 20 (> 20 on request)	

Air connection (media lead-through no. 1 - 3)	
<b>Air pressure max.</b>	10 bar (150 psi)
<b>Vacuum max.</b>	7 kPa (2" Hg)
<b>Speed max.</b>	800 min <sup>-1</sup>

Hydraulics connection (media lead-through no. 4 + 5)	
<b>Hydraulic pressure max.</b>	35 bar (510 psi)
<b>Speed max.</b>	800 min <sup>-1</sup>

Rotatable connector, air (media lead-through no. 6)	
<b>Air pressure max.</b>	10 bar (150 psi)
<b>Speed max.</b>	300 min <sup>-1</sup>
<b>For tube diameter</b>	8 mm [0.31"]

## Modular construction system



## Technology in detail

Easily accessible connections



IP64 version with rotor and stator protective cover



Version with media lead-through (air, hydraulics)



Practical maintenance window



Hollow shaft mounting with rotatable connector (air), for tube diameter 8 mm [0.31"]



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.

# Slip rings

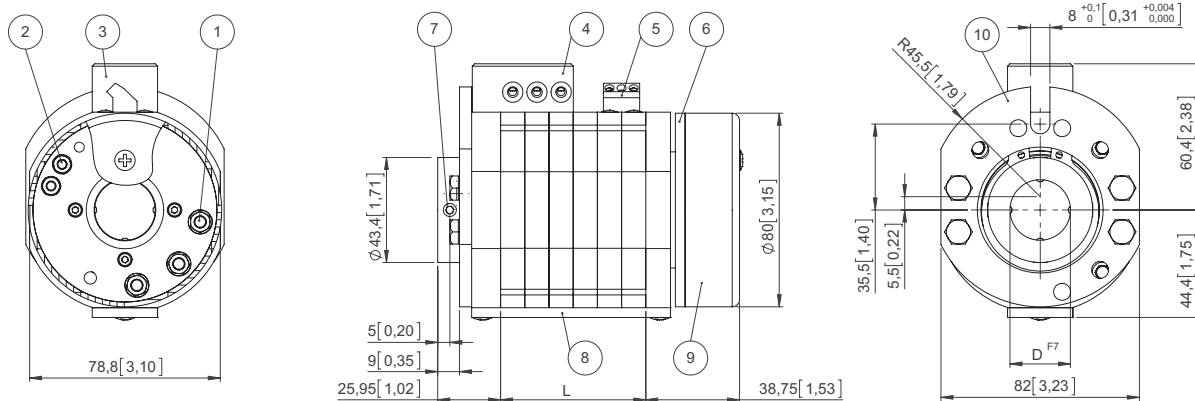
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## Dimensions

Dimensions in mm [inch]

### Standard version

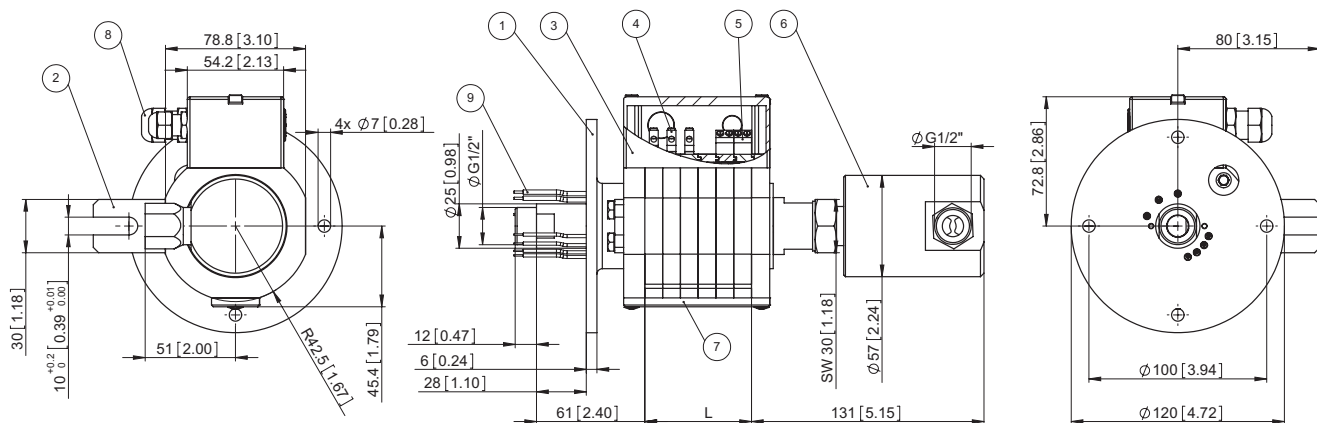
Example: Type SR085-25-02-03-11301-V100  
(2 data channels, 3 load channels)



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

### Air lead-through versions

Example: Type SR085-00-04-03-11322-V100



- |                             |                           |                                   |
|-----------------------------|---------------------------|-----------------------------------|
| 1 – Mounting flange         | 4 – Terminal clamp power  | 7 – Maintenance window            |
| 2 – Torque stop             | 5 – Terminal clamp signal | 8 – Cable gland                   |
| 3 – Stator protective cover | 6 – Media lead-through    | 9 – Connection wires, 2 m [6.56'] |

### Calculation of the overall length

Basic dimensions	
slip ring with hollow shaft	64.5 mm [2.54"]
slip ring with flange mounting and media lead-through 1/2" or 3/8"	185 mm [7.28"]
slip ring with flange mounting and media lead-through 1/4"	168 mm [6.61"]
Additional dimensions	
+ 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"]