

# Slip Rings

Modular

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

## Reliable with Safety-Trans™ Design

- Two-cavity system for power 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 (CCTV), 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</b>	4 x	4 x	silver / precious metal	<b>SR085-25-04-04-11301-V100</b>
<b>25 mm [0.98"]</b>	6 x	6 x	silver / precious metal	<b>SR085-25-06-06-11301-V100</b>
<b>Hollow shaft</b>	2 x	3 x	silver / precious metal	<b>SR085-30-02-03-11301-V100</b>
<b>30 mm [1.18"]</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

**Please note:** non-standard models will be checked for availability - an alternative model may be proposed. Minimum order quantity 5 pieces for new models. Delivery time 20 to 25 working days. For list of all available types, see [www.kuebler.com/sr-list](http://www.kuebler.com/sr-list)

<b>a</b> 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>d</b> Max. load current 0 = no power 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	<b>f</b> Contact material for signal / data channels <sup>2)</sup> 0 = no signal channels 3 = silver / precious metal 4 = silver / bronze	<b>h</b> Protection rating 1 = IP50 2 = IP64
<b>b</b> Number of signal / data channels <sup>1)</sup>	<b>e</b> Mounting position 0 = any, only with either power or signal channels 1 = standing and horizontal (flange down) 2 = hanging and horizontal (flange up)	<b>g</b> Media lead-through 0 = none <b>only flange mounting (00):</b> 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" <b>hollow shaft or shaft:</b> 6 = air, rotatable connector (up to 300 rpm)	<b>i</b> 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
<b>c</b> Number of power (load) channels <sup>1)</sup>			

1) 20 combination max., for example 4 data channels and 16 power channels  
2) Contact material gold / gold and copper / bronze on request

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### Contact material for electrical signal / data transmission

Contact material	Silver / Bronze	Silver / Precious metal
	contact brush	contact brush
<b>Suitable for</b>		
Very low currents and voltages	x	x
Digital and switching signals	x	x
Fieldbus signals		x
High shock and vibration levels	x	x
Intermittent operation (constant contact resistance < 0.1 ohm when stopped and when rotating)		x
<b>Maintenance</b>		
Contact oil not required for maintenance	x	x

### Calculation of time intervals for maintenance

Calculation of time intervals for maintenance with contact material silver/precious metal or silver/bronze (Maintenance intervals 100 million revolutions)

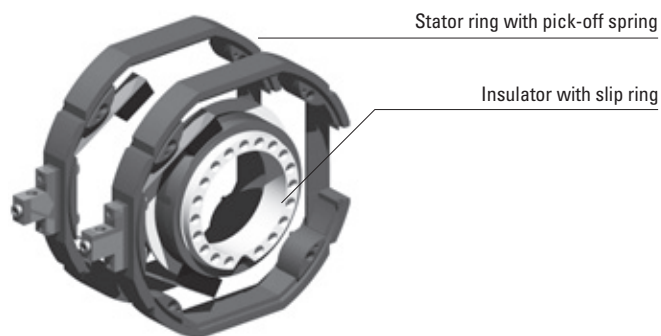
$$\frac{100,000,000 \text{ revolutions}}{200 \text{ rpm} \times 60 \text{ min} \times 24 \text{ h}} = 350 \text{ days}$$

Slip rings

### Technical data (standard version)

<b>Overall length</b>	dep. on the number of transmission paths
<b>Hollow shaft diameter</b>	up to ø 30 mm [1.18"]
<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> (dynamic only with contact material silver/bronze)	
load channel	≤ 1 Ohm
signal/data channels	≤ 0.1 Ohm
<b>Insulation resistance</b>	10 <sup>3</sup> MOhm, at 500 V DC
<b>Dialectric strength</b>	1000 V eff. (60 sec.)
<b>Speed max. (signal / data channels)</b>	800 rpm
<b>Service life (signal / data channels)</b>	typ. 500 million revolutions (depends on installation position)
<b>Maintenance cycles</b>	first maintenance after 50 million revolutions, all further maintenance intervals after 100 million revolutions
<b>Material pairing load channels</b>	copper / bronze
<b>Operating temperature</b>	-35° ... +85°C [-22°F ... +185°F]
<b>Protection</b>	max. IP64
<b>Transmission paths</b>	max. 20 (> 20 on request)
<b>Standards</b>	EN 61010-1 2001, VDE 0110 part 1, VDE 0295/6.92, VDE 0100 part 523

### Modular construction system

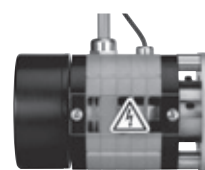


### Technology in detail

Easily accessible connections



Practical maintenance window



IP64 version with rotor and stator protective cover



Hollow shaft mounting with pneumatic rotatable connector



Version with media lead-through  
(air, hydraulics)



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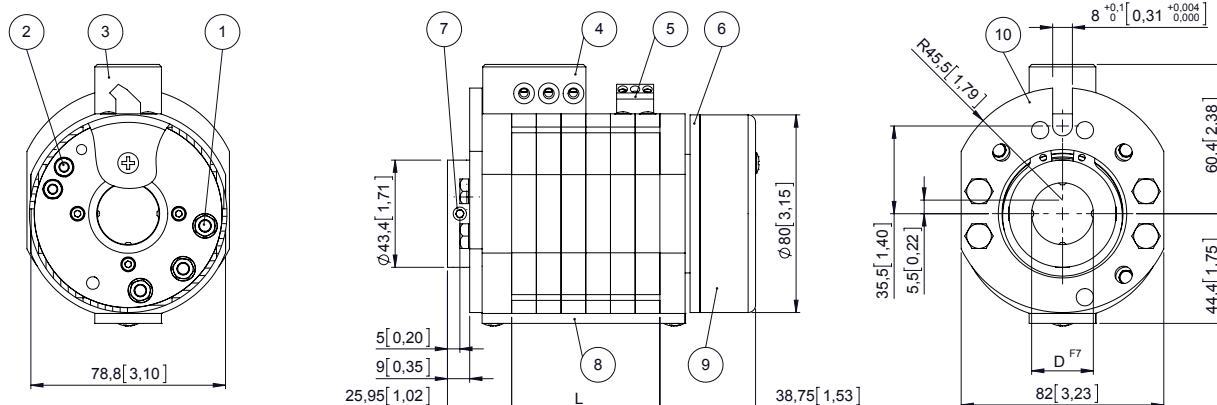
## SR085

### Dimensions

Dimensions in mm [inch]

#### Standard version

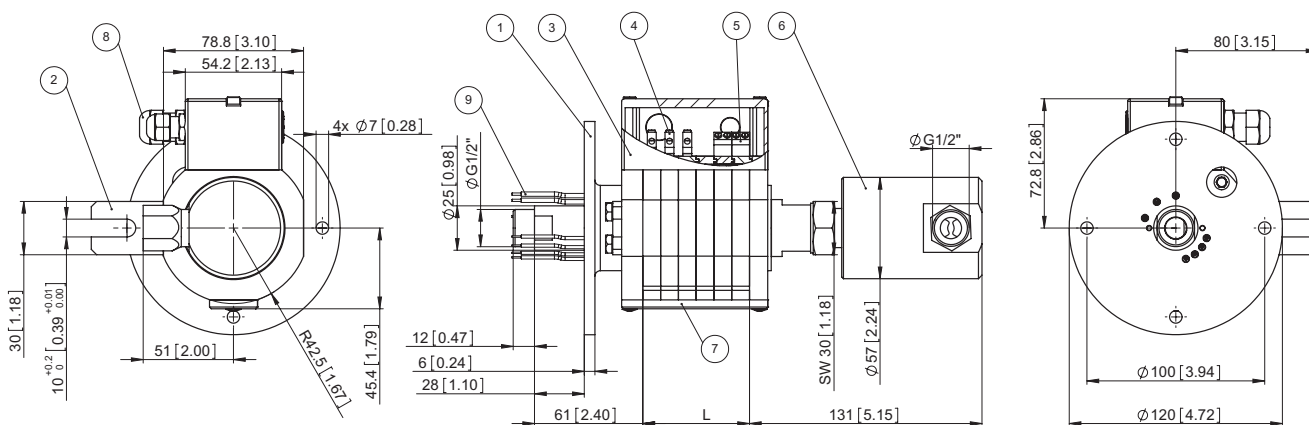
Example: Type SR085-25-02-03-11301-V100  
(2 data channels, 3 power channels)



- |  |   |                                      |
|--|---|--------------------------------------|
| 1 – Screw terminal M5 for power 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 SR085-00-04-03-11422-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   |

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