

# Slip rings

<b>Modular</b>	<b>Construction system</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.

Slip rings

<h3>Flexible and rugged</h3> <ul style="list-style-type: none"> <li>Modular construction system, load and signal/data channels can be combined as desired.</li> <li>Rugged GFPC housing (glass-reinforced polycarbonate), 30% glass-fiber content for industrial usage.</li> <li>Long service life and long maintenance cycles.</li> </ul>	<h3>Reliable with Safety-Trans™ Design</h3> <ul style="list-style-type: none"> <li>Two-cavity system for load and signal transmission.</li> <li>Labyrinth seal.</li> <li>High vibration resistance.</li> <li>Fieldbus signals such as Profibus, CANopen etc. up to 12 Mbit/sec.</li> </ul> <h3>Applications</h3> <p>Packaging machines, textile machines, pipeline inspection systems, video surveillance equipment, bottling plants, rotary tables</p>
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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).
	<i>Signal / data channels</i>	<i>Load channels</i>	<i>Contact material</i>	<i>Order no.</i>
<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-	-XXXXXX-	-V100	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 <a href="http://www.kuebler.com/sr-list">www.kuebler.com/sr-list</a>
	Type	a	b	c	d e f g h	i	
<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 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	<b>f</b> Contact material for signal / data channels <sup>2)</sup>	0 = no signal channels 3 = silver / precious metal	<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 load or signal channels 1 = standing and horizontal (flange down) 2 = hanging and horizontal (flange up)	<b>g</b> Media lead-through	0 = none	<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>				<b>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 mounting:</b>	6 = air, rotatable connector (up to 300 min <sup>-1</sup> )		

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.

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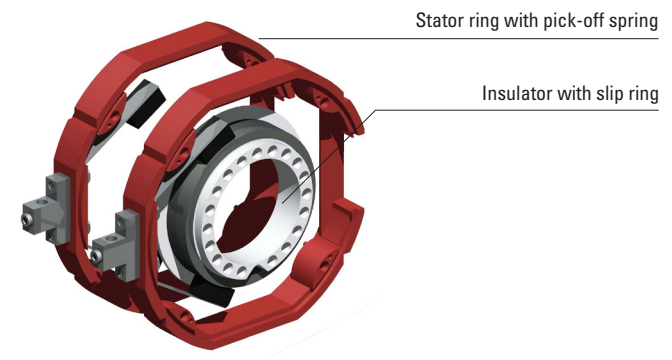
Technical data (standard version)	
<b>Overall length</b>	dep. on the number of transmission paths
<b>Hollow shaft diameter</b>	up to $\varnothing$ 30 mm [1.18"]
<b>Type of connection</b>	
hollow shaft mounting	stator: terminal clamp rotor: screw terminal
flange mounting	stator: terminal clamp rotor: 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>	$10^3$ 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

Practical maintenance window



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



Version with media lead-through (air, hydraulics)



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

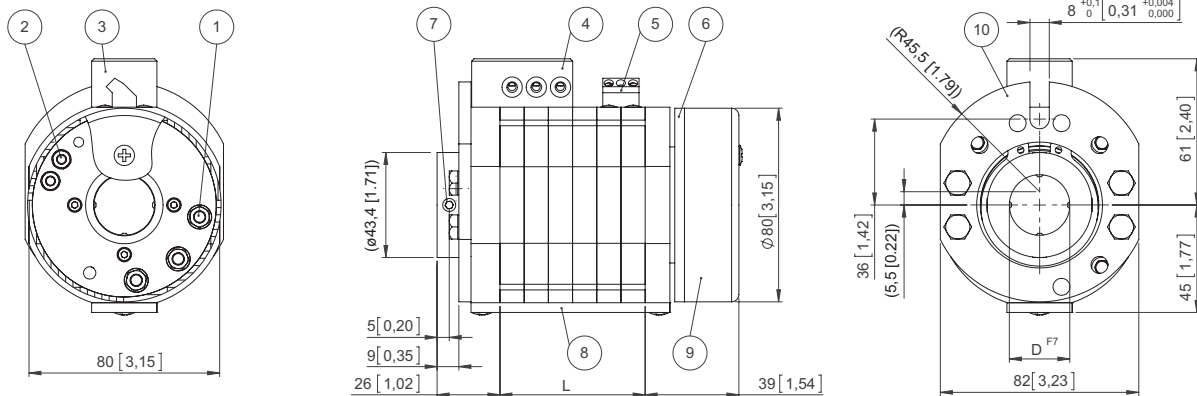
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## Dimensions

Dimensions in mm [inch]

### Standard version

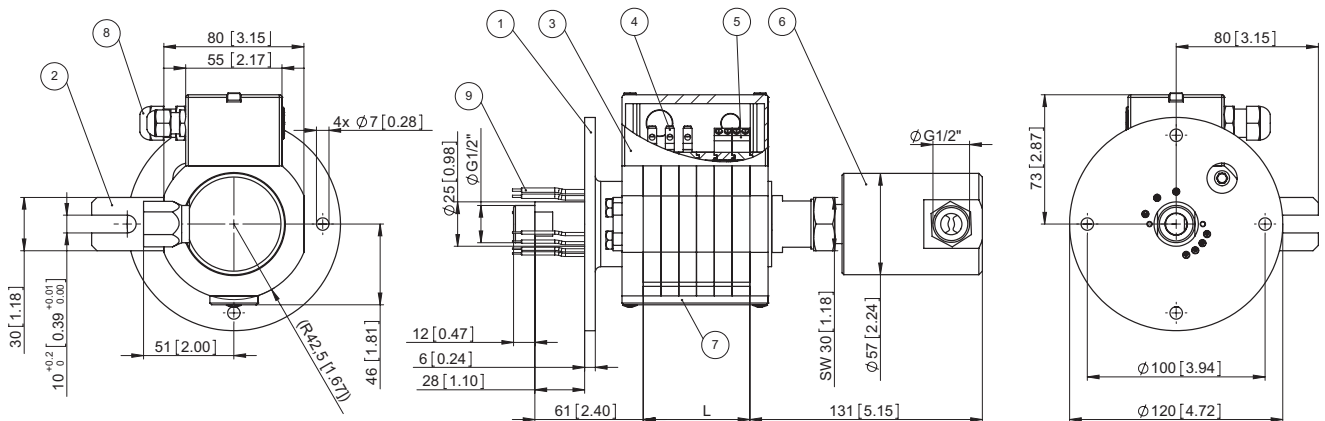
Example: Type SR085-25-02-03-11301-V100  
(2 data channels, 3 load channels)



- |  |   |                                      |
|--|---|--------------------------------------|
| 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	up to 10 channels: 65 mm [2.56"]	from 11 channels: 80 mm [3.15"]
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"]	