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).

10 by 10

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

Order code

SR085 - XX - XX - XX - X X X X X - 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

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* [1)]

c *Number of power (load) channels* [1)]

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* [2)]
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^{-1})

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.

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Technical data (standard version)

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) [1]	
signal / data channels	≤ 0.1 Ohm (silver / precious metal) [2]	
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 (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 / bronze	
signal / data channels	silver / precious metal	
Operating temperature	-35° …+85°C [-31°F ... +185°F]	
Protection acc. to EN 60529	max. IP64	
Transmission paths	max. 20 (> 20 on request)	

Air connection (media lead-through no. 1 - 3)

Air pressure max.	10 bar (150 psi)
Vacuum max.	7 kPa (2“ Hg)
Speed max.	800 min^{-1}

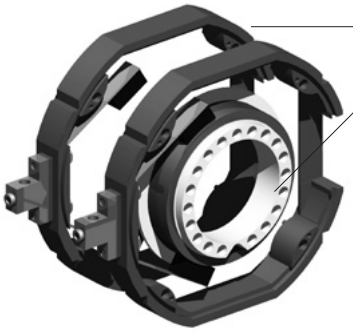
Hydraulics connection (media lead-through no. 4 + 5)

Hydraulic pressure max.	35 bar (510 psi)
Speed max.	800 min^{-1}

Rotatable connector, air (media lead-through no. 6)

Air pressure max.	10 bar (150 psi)
Speed max.	300 min^{-1}
For tube diameter	8 mm [0.31“]

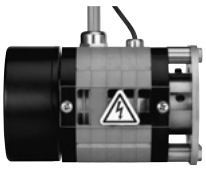
Modular construction system



Technology in detail

Easily accessible connections

Practical maintenance window



IP64 version with rotor and stator protective cover

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.

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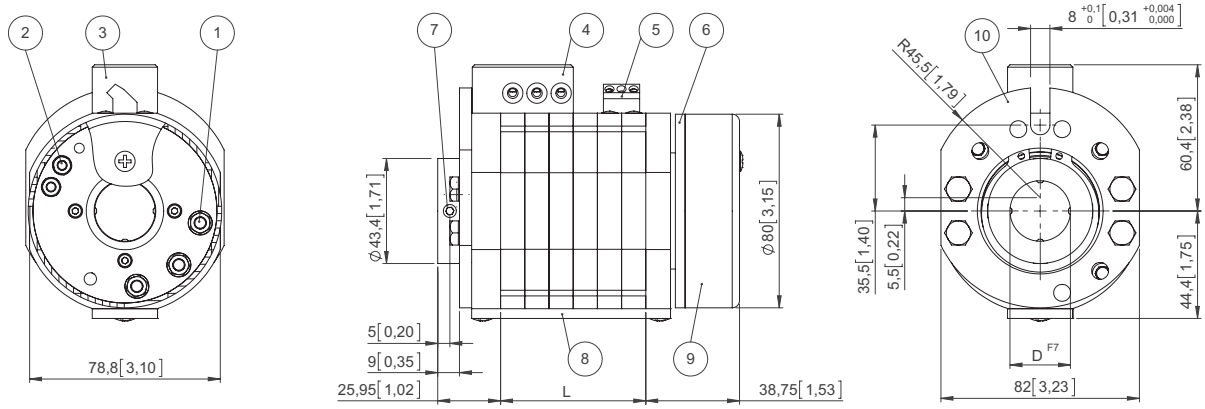
Dimensions

Dimensions in mm [inch]

Standard version

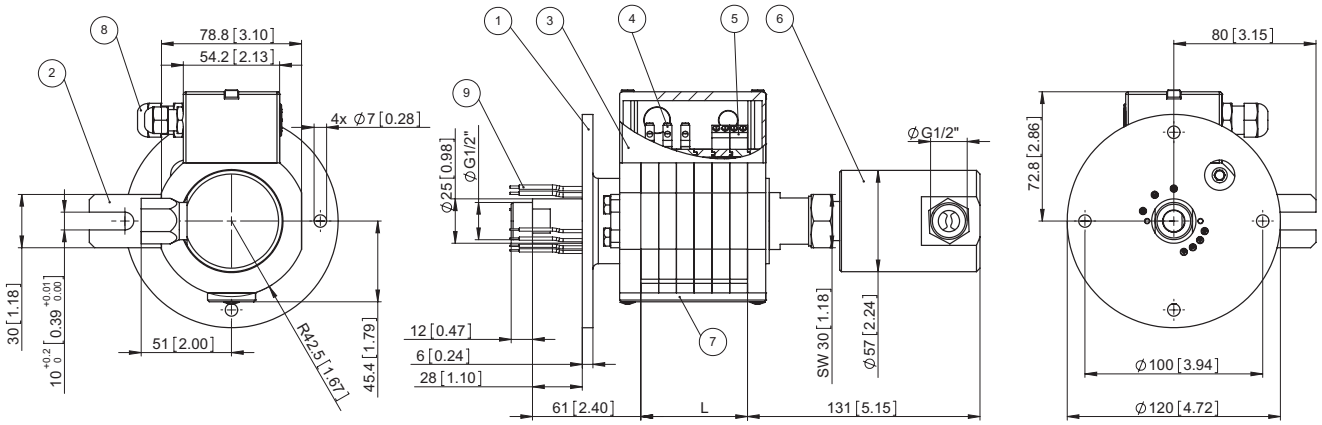
Example: Type SR085-25-02-03-11301-V100
(2 data channels, 3 load channels)



1 – Screw terminal M5 for load transmission
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

Air lead-through versions

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



1 – Mounting flange
2 – Torque stop
3 – Stator protective cover
4 – Terminal clamp power
5 – Terminal clamp signal
6 – Media lead-through
7 – Maintenance window
8 – Cable gland
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"]