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

Order code

SR085	-	XX	-	XX	-	XX	-	X	X	X	X	X	-	V100
Type		a		b		c		d	e	f	g	h		i

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* [1)]
(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 load channels* [1)]
(0, 2, 4, 6, 8, 10)
00 = none
02 = 2 load channels
...
10 = 10 load channels
(other options on request)

d *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

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

f *Contact material for signal/data channels*
0 = no signal channels
3 = silver / precious metal
(other options on request)

g *Media lead-through*
0 = none
C = air, rotatable connector
Flange mounting for 12 mm tube
(others on request)

h *Protection rating*
1 = IP50
2 = IP64

i *Version number (options)*
V100 = standard

1) Combinations of data and load channels > 13 upon request.

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Technical data [1]

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) [2]	
signal / data channels	≤ 0.1 Ohm (silver / precious metal) [3]	
Insulation resistance	10^3 MOhm, at 500 V DC	
Dialectric 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 [4] (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 / brass	
signal / data channels	silver / precious metal	
Operating temperature	-35 °C ... +85 °C [-31 °F ... +185 °F]	
Protection acc. to EN 60529	max. IP64	
Transmission paths	max. 20 (> 20 on request)	

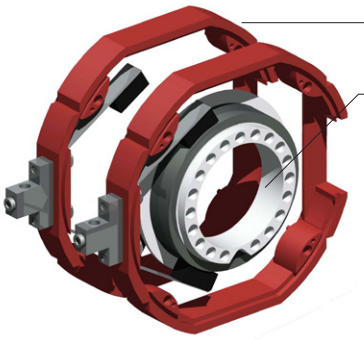
Rotatable connector, air

Air pressure max.	10 bar (150 psi)
Speed max.	up to 800 min^{-1}
For tube diameter	12 mm [0.31“]

Approvals

CE compliant in accordance with Low Voltage Directive	2014/35/EU
UKCA compliant in accordance with Low Voltage Regulations	S.I. 2016/1101

Modular construction system



Technology in detail

Easily accessible connections

Practical maintenance window

IP64 version with rotor and stator protective cover

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.

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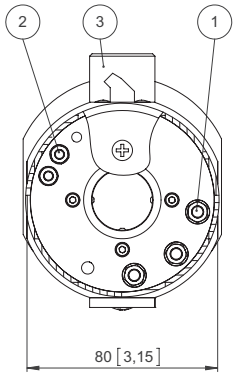
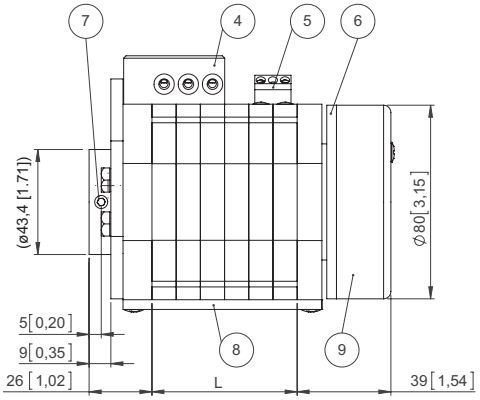
Dimensions

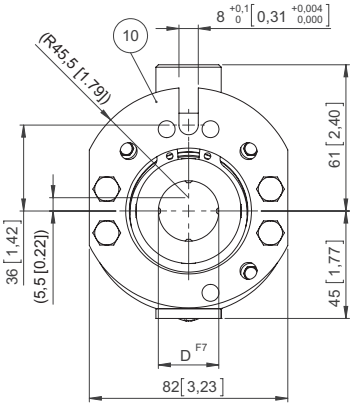
Dimensions in mm [inch]

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

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	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“]	