

Slip Rings

Modular

IST-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

Application areas for Slip Rings

- Packaging machines
- Textile machines
- Pipeline inspection systems
- Video surveillance equipment (CCTV)
- Bottling plants
- Rotary tables

Standard models

can be delivered from an order quantity of 1 piece

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).



Hollow shaft 25 mm

- 2 x signal / data - 3 x power
- 6 x signal / data - 4 x power
- 6 x signal / data - 0 x power
- 0 x signal / data - 5 x power

- IST-SR085-25-02-03-11101-V100
- IST-SR085-25-06-04-11101-V100
- IST-SR085-25-06-00-00101-V100
- IST-SR085-25-00-05-10001-V100

Hollow shaft 30 mm

- 2 x signal / data - 3 x power
- 6 x signal / data - 6 x power
- 4 x signal / data - 0 x power
- 0 x signal / data - 6 x power

- IST-SR085-30-02-03-11101-V100
- IST-SR085-30-06-06-11101-V100
- IST-SR085-30-04-00-00101-V100
- IST-SR085-30-00-06-10001-V100

Order code

IST - 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.

- a** Type of mounting
 00 = flange mounting
 20 = hollow shaft, ø 20 mm
 24 = hollow shaft, ø 24 mm
 25 = hollow shaft, ø 25 mm
 30 = hollow shaft, ø 30 mm
 IN = hollow shaft, ø 1 Inch
 (other options on request)

- b** Number of signal/data channels¹⁾
 (only in pairs e.g. 2, 4, 6)

- c** Number of power (load) channels¹⁾

- d** 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

- e** Mounting position
 0 = any, only with either power or signal channels
 1 = standing and horizontal (flange down)
 2 = hanging and horizontal (flange up)

- f** Contact material for data channels
 0 = no signal channels
 1 = gold alloy
 2 = copper alloy
 3 = silver alloy

- g** Media lead-through
 0 = none
only 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 or shaft:
 6 = air, rotatable connector (up to 300 min⁻¹)

- h** Protection rating
 1 = IP 50
 2 = IP 64

- 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

Accessories

Maintenance set

comprises brush and contact oil for signal contacts

IST-MS-01

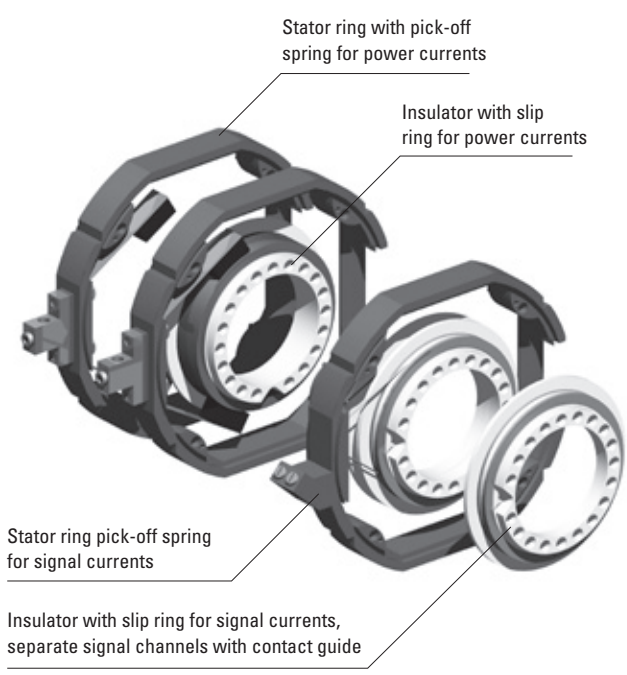
1) 20 combination max., for example 4 data channels and 16 power channels

Slip Rings

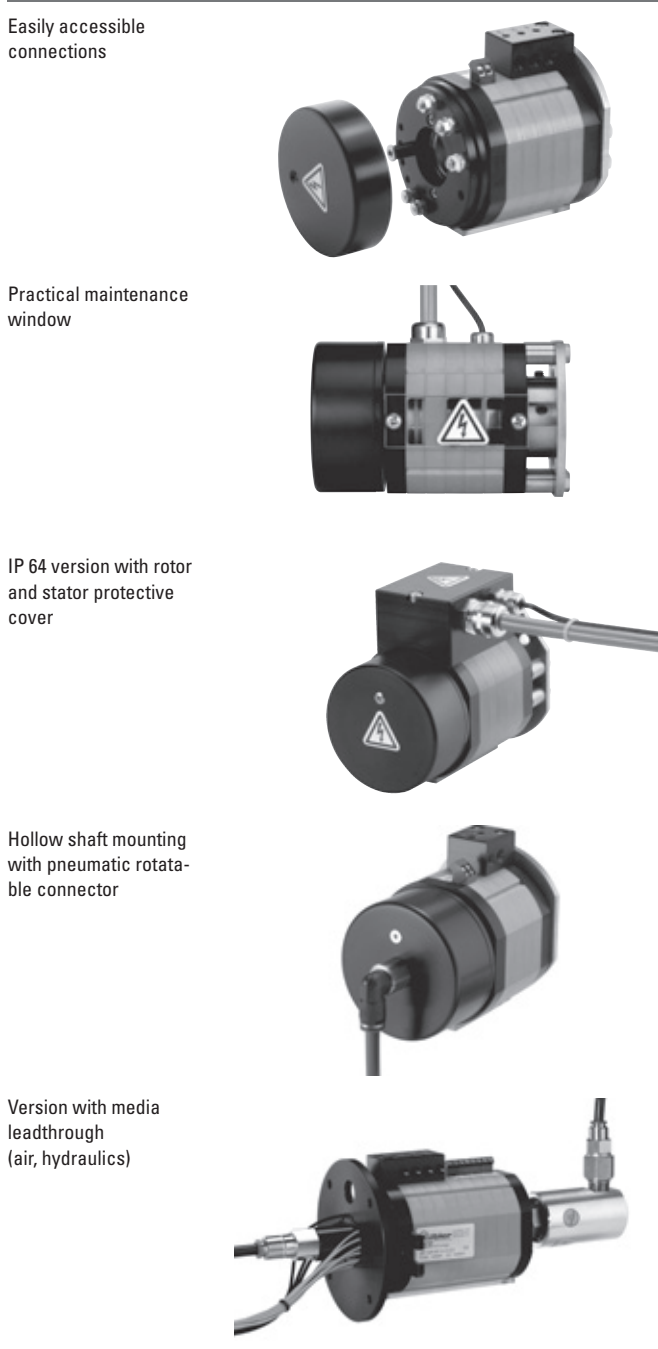
Modular IST-SR085

Technical Data (standard version)	
Dimensions	see drawing
Overall length	dep. on the number of transmission paths
Hollow shaft diameter	up to \varnothing 30 mm
Voltage/current loading	
power 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	
power channel	≤ 1 Ohm
signal/data channels	$\leq 0,1$ Ohm
Insulation resistance	10^9 MOhm, at 500 V DC
Dielectric strength	1000 V eff. (60 sec.)
Speed	max. 800 min ⁻¹ (depends on installation position and number of channels)
Operating temperature	-30 ... +80°C
Protection	max. IP 64
Maintenance cycles	
Contact material of the data/signal channels:	
silver alloy	First maintenance after max. 50 mio revolutions or at least once a year – all further maintenance intervals max. 100 mio revolutions or at least once a year
other contacts	After max. 50 million revolutions or at least once a year
Transmission paths	max. 20 (> 20 on request)
Standards	EN61010-1 2001, VDE 0110 part 1, VDE 0295/6.92, VDE 0100 part 523

Modular Construction System



Technology in detail



Slip rings

Slip Rings

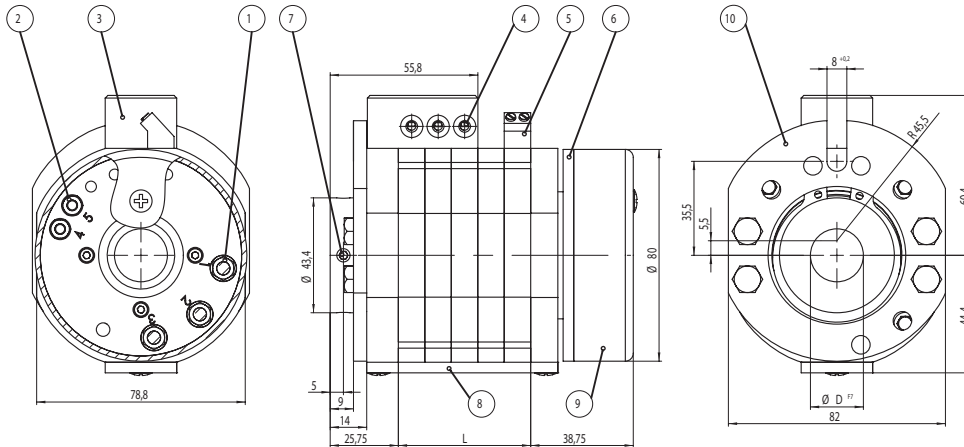
Modular

IST-SR085

Dimensions

Standard version

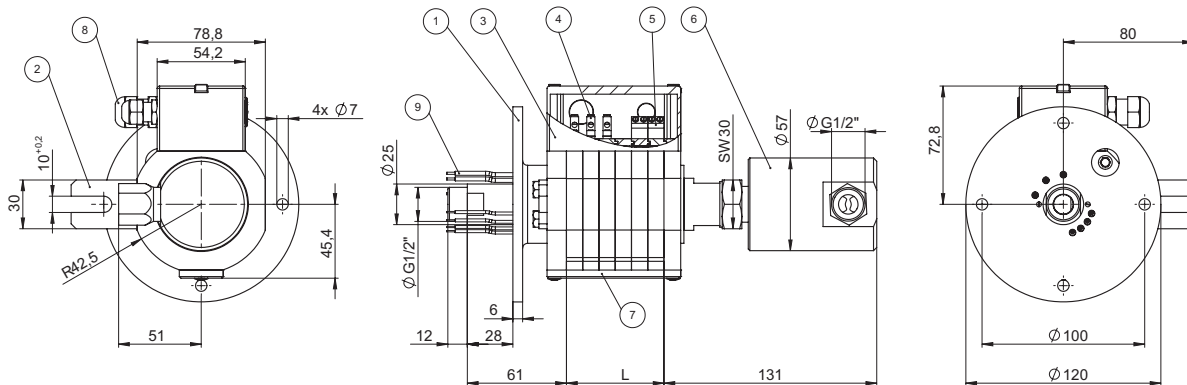
Example: Type IST-SR085-25-02-03-11101-V100
(2 data channels, 3 power channels)



- | | | |
|--|---|--------------------------------------|
| 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 IST-SR085-00-04-03-11122-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
slip ring with flange mounting and media lead-through 1/2" or 3/8"	185 mm
slip ring with flange mounting and media lead-through 1/4"	168 mm
Additional dimensions	
+ number of signal/data channels gold alloy	+ 10 mm per 2 data channels
+ number of signal/data channels silver alloy	+ 10 mm per data channels
+ number of power channels, order options 1 and 2	+ 10 mm per power channel
+ number of power channels, order options 3 and 4 (10 or 20 A, 400 V)	+ 20 mm per power channel, if only power + 10 mm
+ labyrinth isolation ring for power and signal transmission	+ 10 mm