Slip rings | IST-SR085

In general slip rings are used to transmit power, signals or data 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 (load) 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
- Individually replaceable brush rings
- Customised versions easily available

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
- Robots and handling equipment
- Cranes
- Pipeline inspection systems
- Video surveillance (CCTV) equipment
- Fairground rides
- Bottling plants
- Rotary tables

Order code

for standard versions

IST - SR085 - XX - XX - XX - X X X X X - VXXX
Type ❶ ❷ ❸ ❹❺❻❼❽ ❾

❶ **Mounting type**
00 = Flange mounting
Hollow shaft mounting
20 = ø 20 mm
24 = ø 24 mm
25 = ø 25 mm
30 = ø 30 mm
IN = ø 1 Inch
other options on request

❷ **Number of signal/ data channels** [1]
(only in pairs e.g. 2, 4, 6)

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

❹ **Max. power 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

❺ **Mounting position**
0 = Power/data channels not combined
1 = Standing and horizontal (flange down)
2 = Hanging and horizontal (flange up)

❻ **Contact material for data channels**
0 = no data channels
1 = Gold
2 = copper alloy

❼ **Media lead-through**
0 = none
Flange mounting (00)
1 = Air, connection 1/4", max 10 bar [2]
2 = Air, connection 1/2", max 10 bar [2]
3 = Air, connection 3/8", max 10 bar [2]
4 = Hydraulics, connection 1/2", max 70 bar [2]
5 = Hydraulics, connection 3/8", max 70 bar [2]
Flange or hollow shaft mounting
6 = Air, rotatable connector, max 10 bar (up to 300 min^{-1})

❽ **Protection rating**
1 = IP 50
2 = IP 64

❾ **Version number (options)**
V 100 = Standard without options

Options on request:
> 20 channels
other fixing options
other types of connection
e.g. plug connectors

Accessories

Maintenance set

comprises brush and contact oil for signal contacts

Order No.: **IST-MS-01**

1) 20 combination max., for example 4 data channels and 16 power channels
2) only possible with mounting type 'Flange mounting (00)'

Slip rings IST-SR085

Technical Data (standard version)

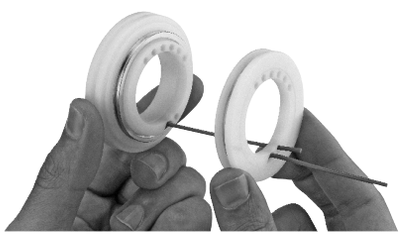
Dimensions	see drawing
Overall length	dependent on the number of transmission paths
Bore diameter	up to ø 30 mm
Voltage/current loading power channel	max. 400 V AC/DC, 20 A
Voltage/current loading signal/data channel	max. 48 V AC/DC, 2 A
Contact resistance power channel	≤ 1 Ohm
Contact resistance signal/data channel	≤ 0.1 Ohm
Insulation resistance at 500 V DC	10^3 M Ohm
Dialectric strength	1000 V eff. (60 sec.)

Speed	max. 800 1/min
Operating temperature	–30 ... +80 °C
Protection rating	max. IP 64
Service life	> 500 Mio. revolutions[1)]
Maintenenance cycles	ca. 50 Mio. revolutions[1)]
Number of rings	ca. 20 (> 20 on request)
Standards	EN61010-1 2001, VDE 0110 part 1, VDE 0295/6.92, VDE 0100 part 523

1) dependent on operating conditions such as, for example, shock, vibration ...

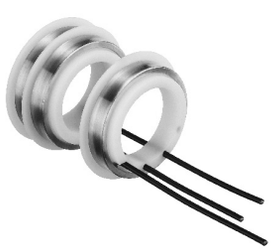
Modular Construction System

Simple installation



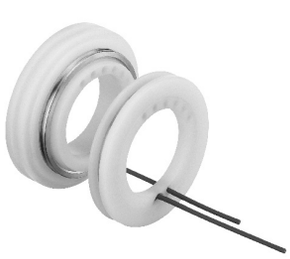
Stator ring with copper graphite pick-off spring for power currents, for a long service life

Insulator with slip ring for power currents



Stator ring with gold or copper alloy (90% gold content) pick-off spring for signal currents

Insulator with slip ring for signal currents, separate signal channels with contact guide

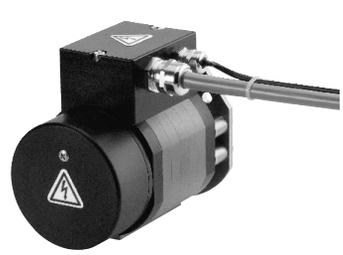


Technology in detail

Easily accessible connections

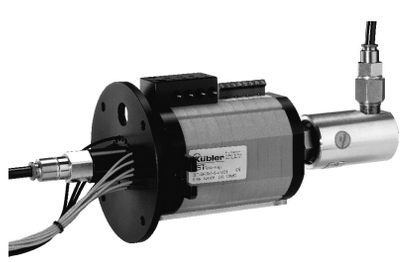
Practical maintenance window

IP 64 version with rotor and stator protective cover



Hollow shaft mounting with pneumatic rotatable connector

Version with media leadthrough (air, hydraulics)

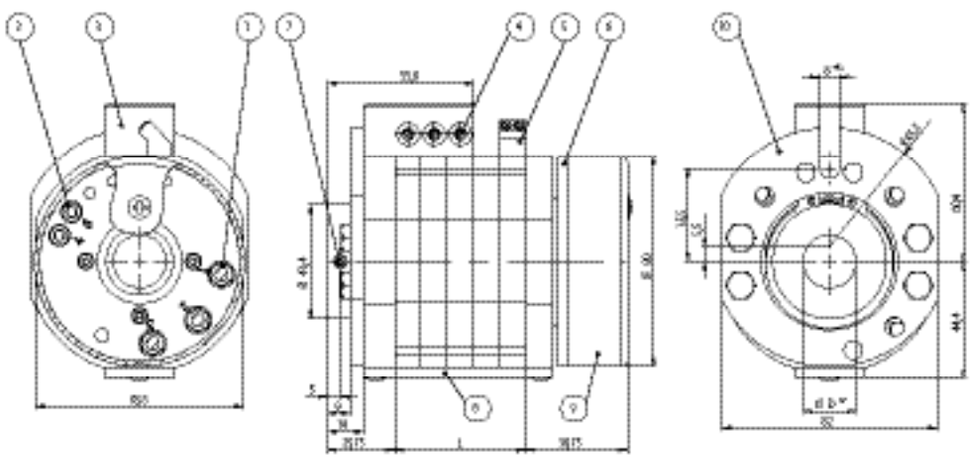


Slip rings — IST-SR085

Dimensions

Air lead-through versions

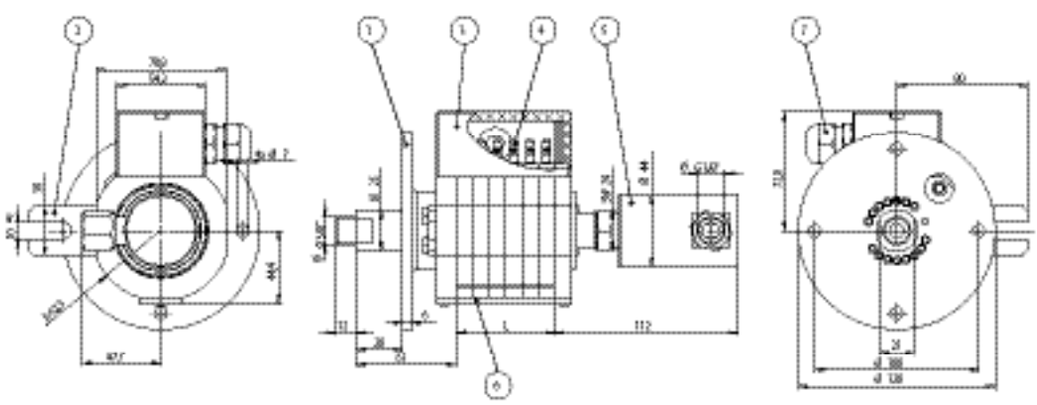
Example: Type IST-SR085-25-02-03-11101-V100
(2 data channels, 3 power channels)



1 – Screw terminal M5 for power transmission
2 – Screw terminal 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 x 10
8 – Maintenance window
9 – Protective cover for connections
10 – Torque stop

air lead-through versions

Example: Type IST-SR085-00-00-06-11131-V123



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

Calculation of the overall length

Basic dimensions	
slip ring with hollow shaft	64,5 mm
slip ring with flange mounting and media lead-through 3/8“	185 mm
slip ring with flange mounting and media lead-through 1/4“	168 mm
Additional dimensions	
+ number of signal/data channels	+ 10 mm / 2 Data channels
+ number of power channels, order variant 1 (16 A, 240 V)	+ 10 mm per power channel
+ number of power channels, order variant 2 (25 A, 240 V)	+ 10 mm per power channel + 10 mm, if only power + 20 mm
+ number of power channels, order variants 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