

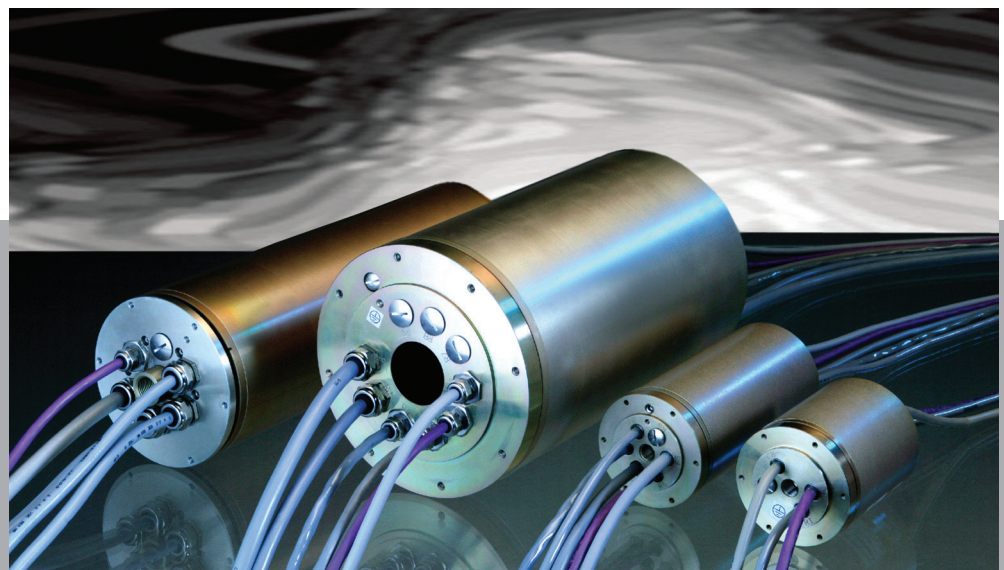
Series G

A standard of highest flexibility

The slip rings of the standard series G200, G300 and G400 offer by their modular design highest flexibility for the transmission of electrical power, signals, data of BUS systems and video for many demanding rotating applications. An additional option range of media rotary joints for air, water and oil complete this series.

Modular assembly

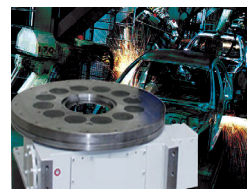
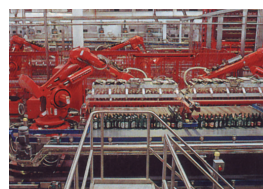
Three basic units and 13 different modules allow for more than 80 million variations. The modules can be selected out of a table and combined independently to meet your requirements. One slip ring system can transmit up to 126 rings. The housing length of the slip ring is defined by the number and type of modules stacked. A free inner bore of the slip rings of this series allows for the integration of a range of media rotary joints.



Classic applications

Highest flexibility, unique variety and an unlimited number of additional rotary elements can be integrated – this all-purpose slip ring series is used in many demanding applications, such as:

- packaging machines
- PET blowing machines
- turntables
- robotics
- bottling machines
- cable reels
- measurement systems
- conveyor systems



Specification

Dimensions	G200	G300	G400
Mechanical data			
Housing	Alu, alodined	Alu, alodined	Alu, alodined
Outer diameter	90 mm	140 mm	200 mm
Free inner bore	8 mm	13 mm	50 mm
Length	depending on n° of modules	depending on n° of modules	depending on n° of modules
Rotational speed	typical 200 rpm current max. 400 rpm	typical 150 rpm current max. 300 rpm	typical 80 rpm current max. 160 rpm
Rotational axis	vertical or horizontal	vertical or horizontal	vertical or horizontal
Protection class	IP 54	IP 54	IP 54
Operating temperature	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C
Torque ¹	< 2 Nm	< 2 Nm	< 2 Nm
Life time	up to 70 Mio rotations	up to 70 Mio rotations	up to 70 Mio rotations
Maintenance interval	15 Mio rotations	15 Mio rotations	15 Mio rotations
Electrical data			
Number of rings	up to 60	up to 135	up to 135
Rated current ²	max. 18 A	max. 25 A	max. 25 A
Max. current	max. 2 x I for 1 s	max. 2 x I for 1 s	max. 2 x I for 1 s
Rated voltage	max. 250 VAC	max. 750 VAC	max. 750 VAC
Interface stator/ rotor	2 m axial cables	2 m axial cables	2 m axial cables
PE	> 50 VAC / 120 VDC	> 50 VAC / 120 VDC	> 50 VAC / 120 VDC
Insulation resistance	100 MΩ at 500 VDC	100 MΩ at 500 VDC	100 MΩ at 500 VDC
Electrical noise	< 20 mΩ	< 20 mΩ	< 20 mΩ
System components			
Media rotary joint	1 x G1/4" 2 x G 1/2" 4 x G 1/4"	1 x G1/4" 2 x G 1/2" 4 x G 1/4"	2 x G 1/2" or 4 x G 1/4"
Standard mounting flange	ø 120 mm	ø 170 mm	ø 250 mm
HF rotary joint	on demand	on demand	on demand
Optical rotary joint	on demand	on demand	on demand

Delivered values are maximum values - only applicable in some of the listed designs.

¹ without media rotary joint

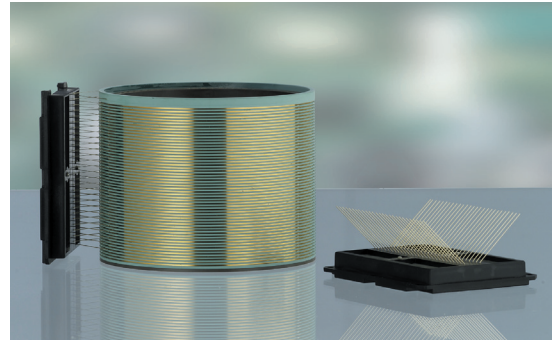
² higher rated current by connecting two or more circuits in parallel

Technology

Our gold wire technology guarantees excellent power, signal and data transmission, long operating life times and compact slip ring designs. Gold wire brushes slide on gold-plated brass rings with well-defined groove geometries.

Typical characteristics are:

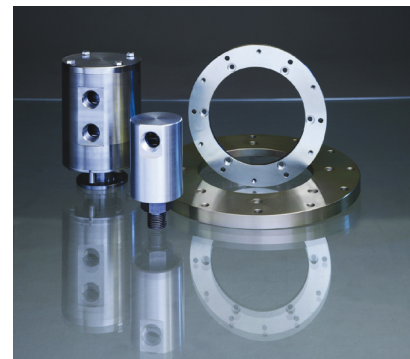
- compact designs
- high contact reliability
- good crosstalk isolation and low electrical noise
- virtually no wear debris and therefore long operational life time
- reliable operation under shock, vibrations and temperature variation



System components

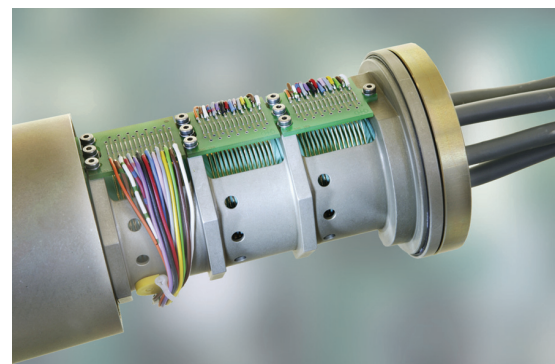
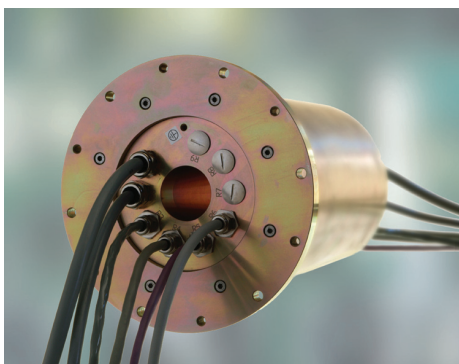
The free inner bore of this series offers easy integration of optional components, e.g.:

- rotor mounting flange
- 1 channel media rotary joint G 1/4" and G 1/2"
- multiple channel media rotary joints
- HF rotary joints
- optical rotary joints



Contact and delivery

This modular series guarantees off the shelf delivery of your slip ring. For prices and more detailed information please contact our sales department.

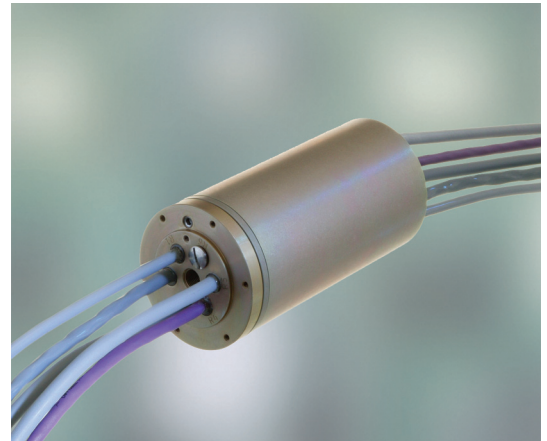


Series G200

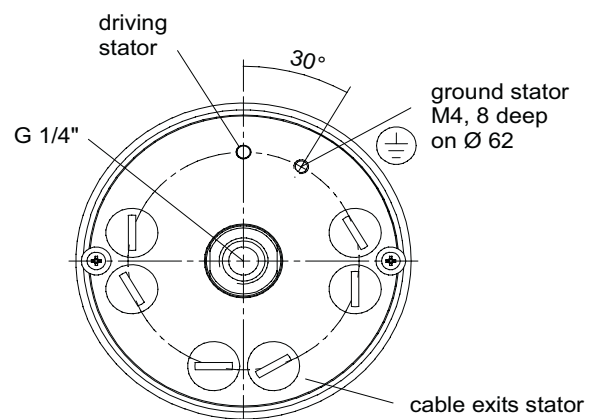
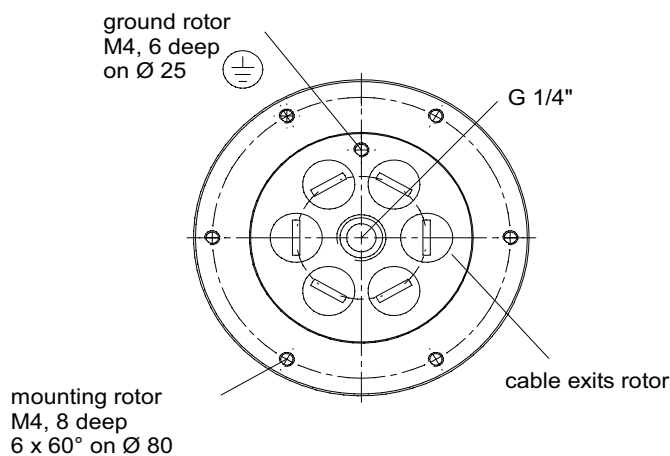
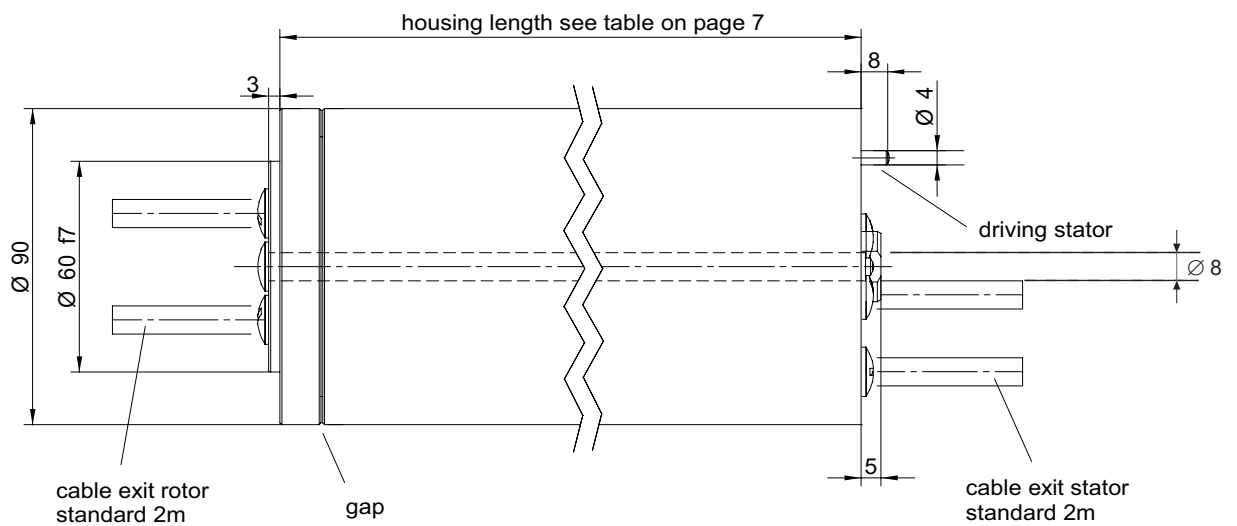
The little G200 of this series is characterized by its compact design.

The number of rings is restricted to 60 to guarantee small dimensions. Because of the typical application of this slip ring - the control of actuators and valve clusters - the operating voltage was restricted to 250 VAC.

The slip ring offers a free inner bore of 8 mm and a G 1/4" connecting thread for the mounting of competitive 1 channel air and media rotary joints. Alternatively 2 and 4 channel air and media rotary joints are possible.



For different modules see table on page 7

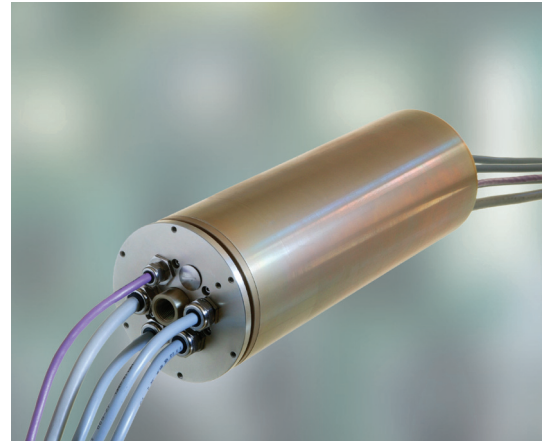


Series G300

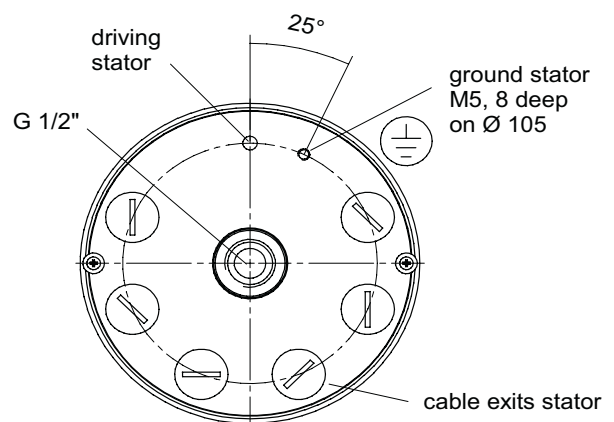
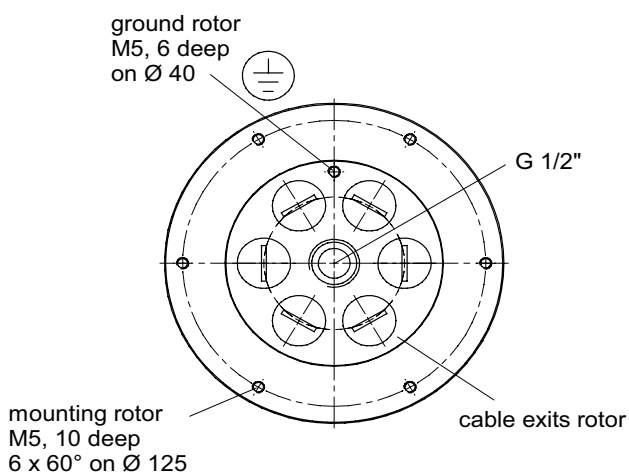
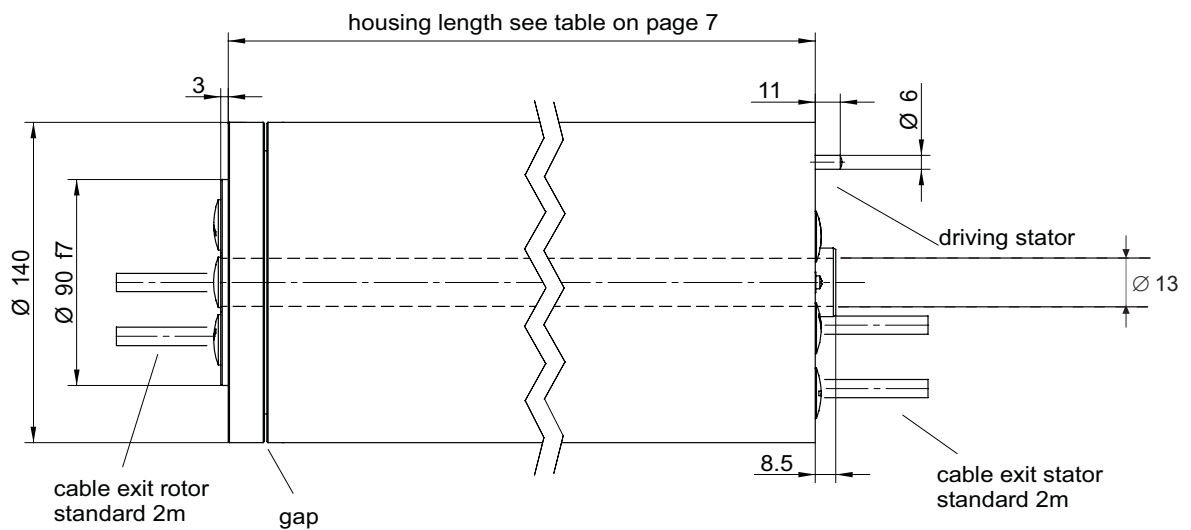
The universal G300 of this series can solve nearly any problem: 4 to 198 rings and up to 750 VAC. This variety allows for the use in large turntables with any number of servo-motors, production elements and control units.

Different BUS systems can be transmitted in parallel. To keep the dimensions as small as possible SCHLEIFRING designed 4 different lengths for easy integration even with limited mounting conditions.

The slip ring offers a free inner bore of 13 mm and a G 1/2" connecting thread for the mounting of competitive 1 channel air and media rotary joints. Alternatively 2 and 4 channel air and media rotary joints are possible.

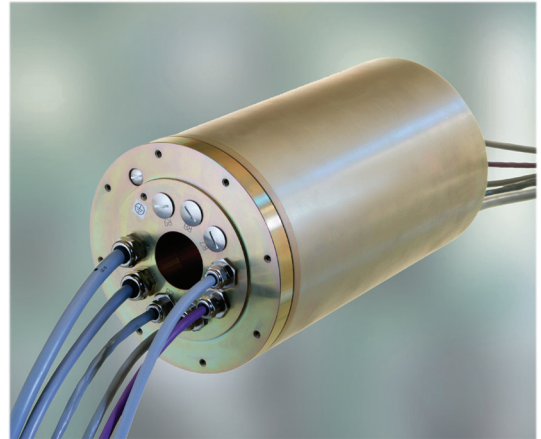


For different modules see table on page 7

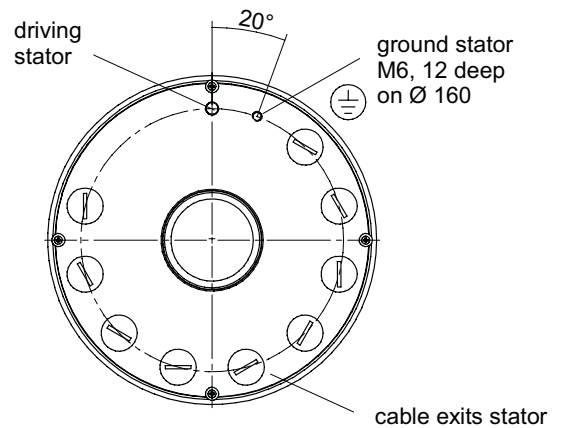
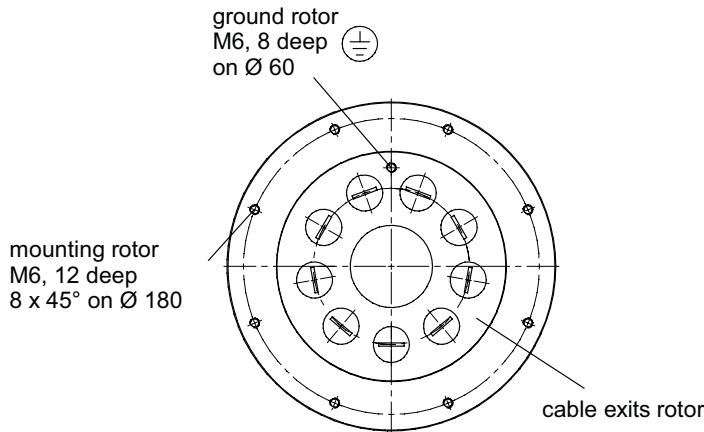
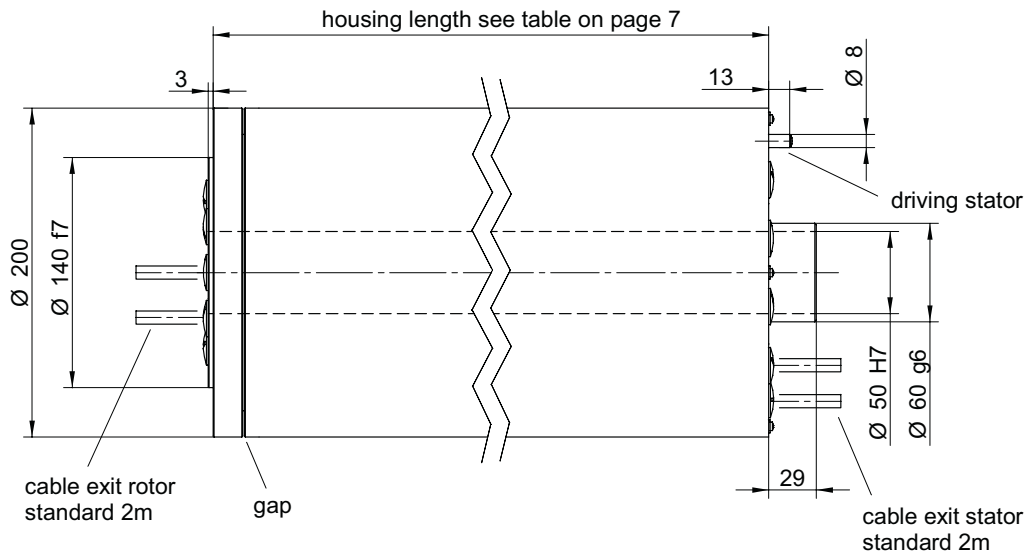


Series G400

The large G400 of this series combines electrical flexibility of the G300 with a free inner bore of 50 mm. This slip ring can be mounted on a shaft thus allowing for enormous engineering flexibility. This free inner bore can also be used for transmission of 2 x G 1/2" or up to 4 x G 1/4" air or media channels thus solving nearly any process or cooling problem. The media rotary joints are easily fixed to the slip ring.



For different modules see table on page 7



Choice of modules

module	application	pattern	n° rings	max. operational voltage (VAC)	max. operational current (A)	cable
PE	PE	0	1	-	25	connecting screw
A ¹	power	2	4	750	25	4 x 4 mm ²
B ¹	power	2	5	400	18	5 x 2.5 mm ²
C	power	1	4	250	16	4 x 1.5 mm ²
D	power	1	6	125	10	6 x 0.75 mm ²
E	signal	1	14	30	3	14 x 0.34 mm ²
F ¹	signal	2	16	125	6	16 x 0.5 mm ²
G ¹	signal	2	22	125	3	22 x 0.5 mm ²
K	signal	1	11	30	6	10 x 0.34 mm ² + shield
H	ASI BUS	1	BUS signal + 4	125	10	2 x 1.5 mm ² + 4 x 1 mm ²
I	Profibus	1	BUS signal + 8	30	6	Profibus cable + 8 x 0.34 mm ²
L	Controlnet/ Video	1	BUS/Video signal + 8	30	6	Controlnet cable [RG59] + 8 x 0.34 mm ²
M	DeviceNet	1	BUS signal + 6	30	6	DeviceNet cable + 6 x 0.34 mm ²
N	Interbus	1	BUS signal + 4	30	6	Interbus cable + 4 x 0.5 mm ²
P	Ethernet	1	Ethernet signal			Ethernet cable CAT 5e

¹ module not to be integrated in series G200

Housing length

series	type	pattern	length
G200	L 1	1-2	116 mm
	L 2	3-4	192 mm
G300	L 1	1-3	171 mm
	L 2	4-5	247 mm
	L 3	6-7	323 mm
	L 4	8-9	399 mm
G400	L 1	1-3	186 mm
	L 2	4-5	262 mm
	L 3	6-7	338 mm
	L 4	8-9	414 mm

Example

Requirement:

5 rings 400 VAC / 11 A for a motor
 26 rings 24 V / 3 A for actuators
 Profibus for control
 1 channel air G 1/2"
 mounting flange

How to proceed:

- Choice of series G300 as media rotary joint 1 x G 1/2" is needed
- Modules are chosen according to electrical requirements: table "Choice of modules"

module	rings	pattern
1 x module B	5 x 400 V / 18 A	2
2 x module E	(2 x 14 =) 28 x 30 V / 3 A	2 x 1
1 x module I	Profibus + 8 x 30 V / 6 A	1

total 5

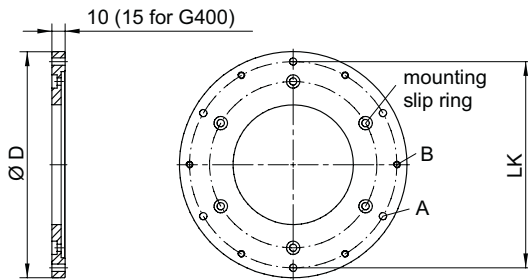
- The table "Housing length" shows the length of the unit:
 5 x pattern for G300 adds up to a length of 247 mm

Order:

Series G300 with
 1 x module B
 2 x module E
 1 x module I
 with integrated mounting flange
 and a rotary joint 1 x G 1/2" for air

System components

Mounting flange

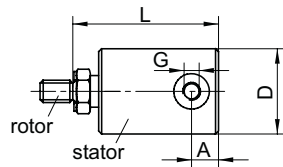


Rotor mounting flange

Aluminum / alodined

	D	LK	A	B
G200	120 mm	105 mm	6 x ø 5.5 mm	6 x M5
G300	170 mm	155 mm	6 x ø 5.5 mm	6 x M5
G400	250 mm	230 mm	6 x ø 9 mm	6 x M8

Media rotary joint

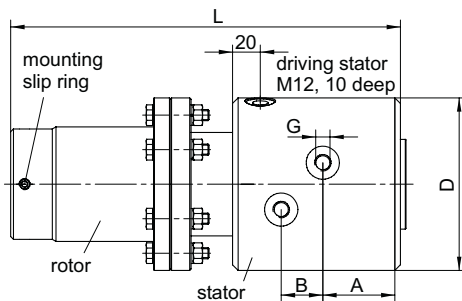


1 channel media rotary joint for G200 and G300

Pressurized air max. 10 bar
 Pressure oil/ water¹ max. 70 bar
 Temperature max. 70° C

Dimensions

	G	D	L	A
G200	1/4"	41 mm	70 mm	10 mm
G300	1/2"	57 mm	96 mm	18 mm

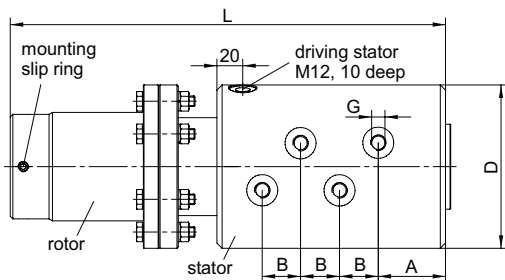


2 channel media rotary joint

Pressurized air max. 10 bar
 Pressure oil/ water¹ max. 200 bar
 Temperature max. 70° C

Dimensions

G	D	L	A	B
1/4"	125 mm	304 mm	52 mm	28 mm
1/2"	160 mm	399 mm	52 mm	32 mm



4 channel media rotary joint

Pressurized air max. 10 bar
 Pressure oil/ water¹ max. 200 bar
 Temperature max. 70° C

Dimensions

G	D	L	A	B
1/4"	125 mm	366 mm	52 mm	24 mm

¹ further media on demand

Optical rotary joints and HF rotary joints on demand.

2003/03-2007
Subject to change