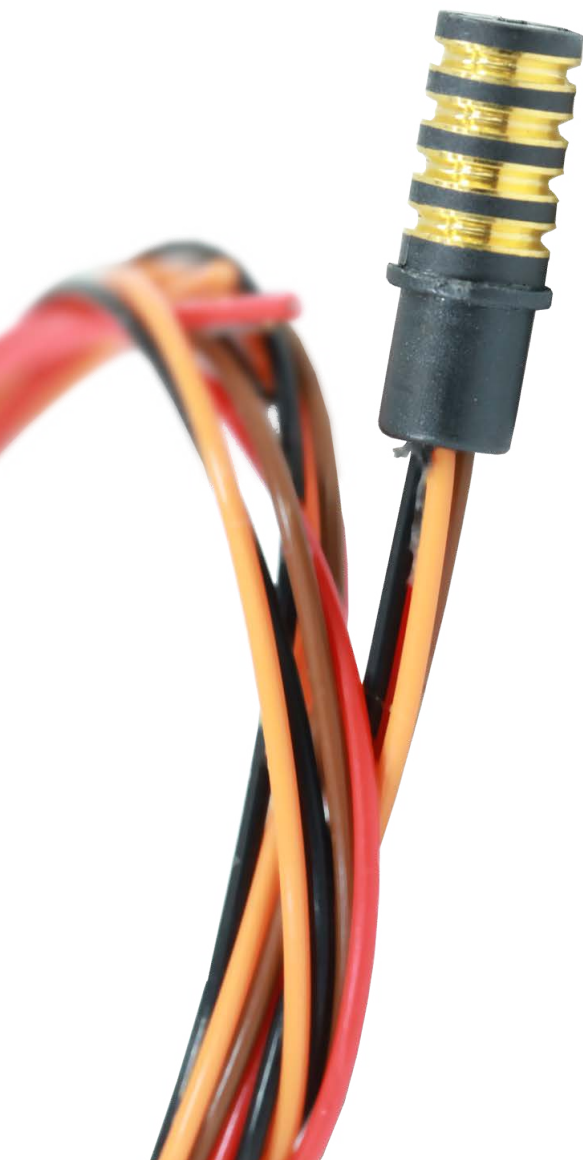




*ROTARX*®

## Separate Slip Rings



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High-Performance Power,  
Signal and Media Transmission

## COMPACT SLIP RINGS

### Our other available catalogues:

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COMPACT SLIP RINGS SOLUTIONS (General catalogue)	(256 pages)
CAPSULATED MINIATURE SLIP RINGS	(44 pages)
AUTOMATION SLIP RINGS	(32 pages)
THROUGH-BORE SLIP RINGS	(68 pages)
PANCAKE SLIP RINGS - with Housing - without Housing	(42 pages)
FASTON SLIP RINGS	(24 pages)
MINIATURE HYBRID SLIP RINGS	(24 pages)
HYBRID SLIP RINGS - Pneumatic / Liquid + Electric	(72 pages)
HYBRID SLIP RINGS - Ethernet + Electric	(34 pages)
HYBRID SLIP RINGS - USB + Electric	(30 pages)
HYBRID SLIP RINGS - Fiber Optical + Electric	(44 pages)
HYBRID SLIP RINGS - Coax + Electric	(40 pages)
HYBRID SLIP RINGS - HD-SDI (1080p)+ Electric	(26 pages)

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# The Company

## Quality and Safety

B-COMMAND was founded in 1995. Since more than 20 years the company has put its focus on **production and sales of electro technical components to all parts of the globe.**

In the early years B-COMMAND focused on electro-mechanical control solutions mainly for the national crane market. Throughout the years the sales area was widened to many international countries and the second main product focus became wind power technology. The company started developing and manufacturing of special limit switches for wind turbines which are still one of the major product lines today.

After more than 10 years of growth and success with electro-mechanical products, another different technology division was established: **electrical transmission technology.**

Due to many analogies with electro-mechanical products and many skilled engineers the new technology focus for transmission of power and signals had been implemented.

QUALITY MANAGEMENT  
Certification 2017



Production & Warehouse

In the beginning the products for electrical transmission technology included simple slip rings for transmitting small power ratings from fixed to rotating parts into machines.

Today, in times of Industry 4.0 and industrial networks, the program contains more than **20.000 possible solutions with combined power and signal transmission, high-frequency solutions, different housing types and super-miniature solutions.**



Offices of our Headquarters Hamburg



## Our technical expertise guarantees the right solution for your applications.

Since more than 10 years the company is certified according to **DIN EN ISO9001:2015 by TÜV in Germany.** All management and production processes are created and approved according to international standards. Especially a **flexible production structure allows short delivery times also for small volume orders or prototypes.**

The purchasing organization of B-COMMAND is internationally targeted. Raw material and production components are sourced from best-rated suppliers worldwide. A network of specialists for all materials is available for developing the best solution for the customers requirements resulting in a perfect fitting product for all individual projects.

B-COMMAND has an international sales network of distributors and sales partners for all regions. Some of the distributors even offer spare parts or series demand products from their own stock in the different countries.

## CONTACT

B-COMMAND GmbH

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All activities at B-COMMAND are focused on customer satisfaction. Creating perfect-fitting technical solutions with best quality for marked-based prices – this is our passion.





# Slip Rings Technology

Slip rings are essential electromechanical parts of commercial or industrial machinery. They have to ensure transfer of data, media, energy and electrical signals in best possible conditions. This can only be realized by combination of a targeted design process, selection of best raw materials, professional production conditions, 100% quality control and skilled assembling on customer side.

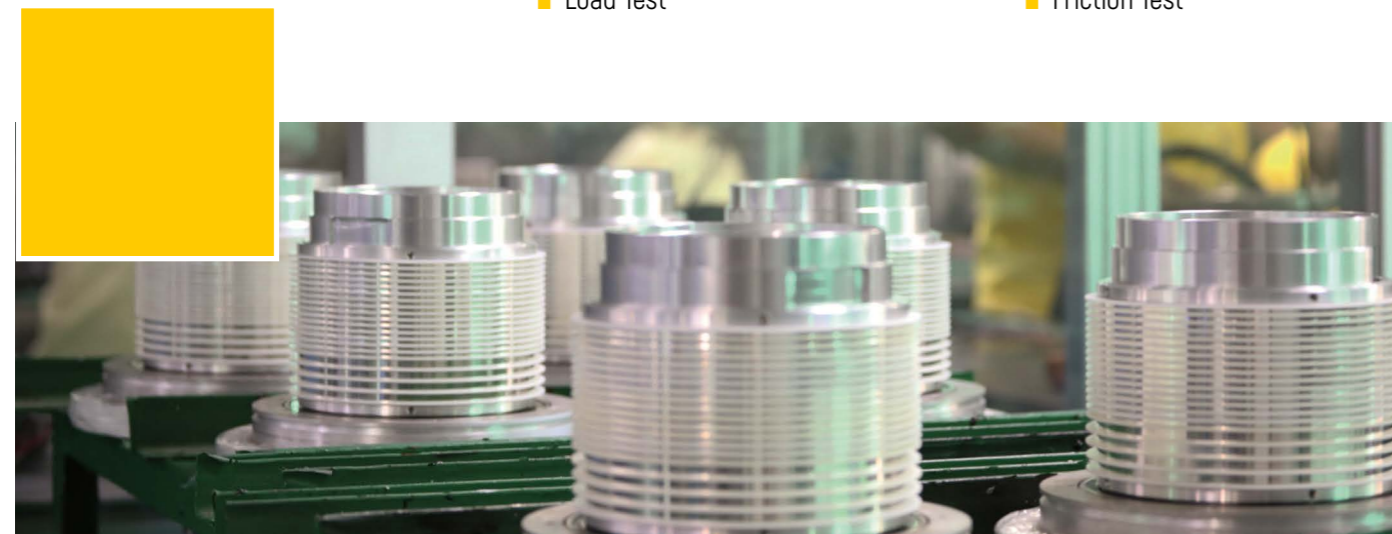


## PREMIUM ENGINEERING

With many years experience and a deep knowledge of all relevant engineering disciplines, B-COMMAND engineering team can provide fast and innovative design solutions for customers around the world. Our engineers are constantly developing new designs and use new materials across a wide spectrum of diverse environments.

In order to ensure only premium-quality products B-COMMAND is able to undertake following tests in our in-house laboratory:

- Humidity Test
- Temperature Test
- Protection Degree Test
- Vibration / Shock Test
- High Pressure / Vacuum Test
- Torque Test
- High Voltage Test
- Large Current Test
- Salt Spray Test
- Load Test
- Electrical Noise Test
- Contact Resistance Test
- Lifetime Test
- Insulation Test
- Frequency Test
- Friction Test



ROTARX - MINIATURE SLIP RINGS

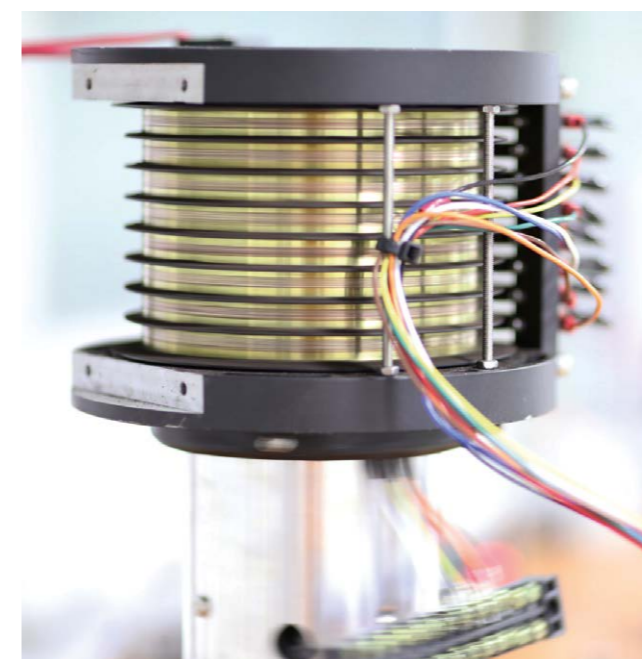
## TOTAL QUALITY CONTROL

High production depth is the key to total quality control. Therefore B-COMMAND has established extended electrical and mechanical production capabilities. Different automatic and semi-automatic multiple axis CNC machining centers, grinding machines, milling machines and coating machines offer a wide range of mechanical options during production process. Only experts with long-term knowledge are operating our machinery in order to grant best quality products for our customers.



## FLEXIBILITY

For B-COMMAND flexibility is not just a word, it is the basis of our organization. Flexible sales and R&D structures with capacity for extensive project inquiries from our customers are as well allocated as flexible production structures with high-volume series production and also fast-track options for small volume orders.



WWW.ROTARX.COM

## INNOVATION

The willingness of lifelong-learning and permanent interest in new technological trends sets our engineering team apart. Industrial communication and electrical complexity of everyday life have moved to a new level and they are still developing fast. We keep an eye on all new technologies, new applications, new materials and forward-looking innovations which can improve or re-invent our products.



# Slip Rings Applications



## WIND POWER TECHNOLOGY

- Small Wind Turbines
- Multi-MW-Turbines
- Signal & Power Transmission



## AEROSPACE TECHNOLOGY

- Drones
- Radars
- Thermal Imaging



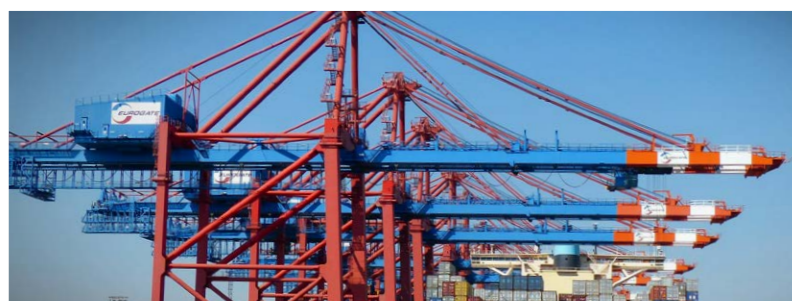
## ROBOTIC TECHNOLOGY

- Production Robots
- Inspection Robots
- Packaging Robots



## CAMERA TECHNOLOGY

- TV-Cameras
- Security Cameras
- Inspection Cameras



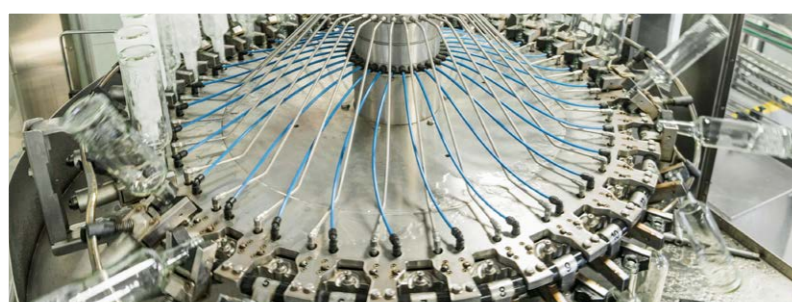
## CRANE TECHNOLOGY

- Post Cranes
- Tower Cranes
- Mobile Cranes



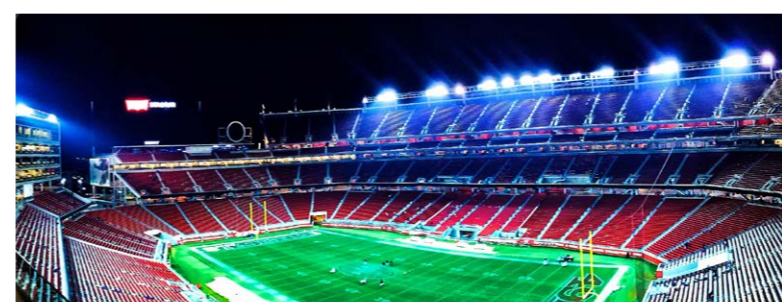
## AMUSEMENT TECHNOLOGY

- Pendulum Rides
- Observation Wheel
- Merry-Go-Round



## PACKAGING TECHNOLOGY

- Packaging Robots
- Filling Machines
- Capping Machines

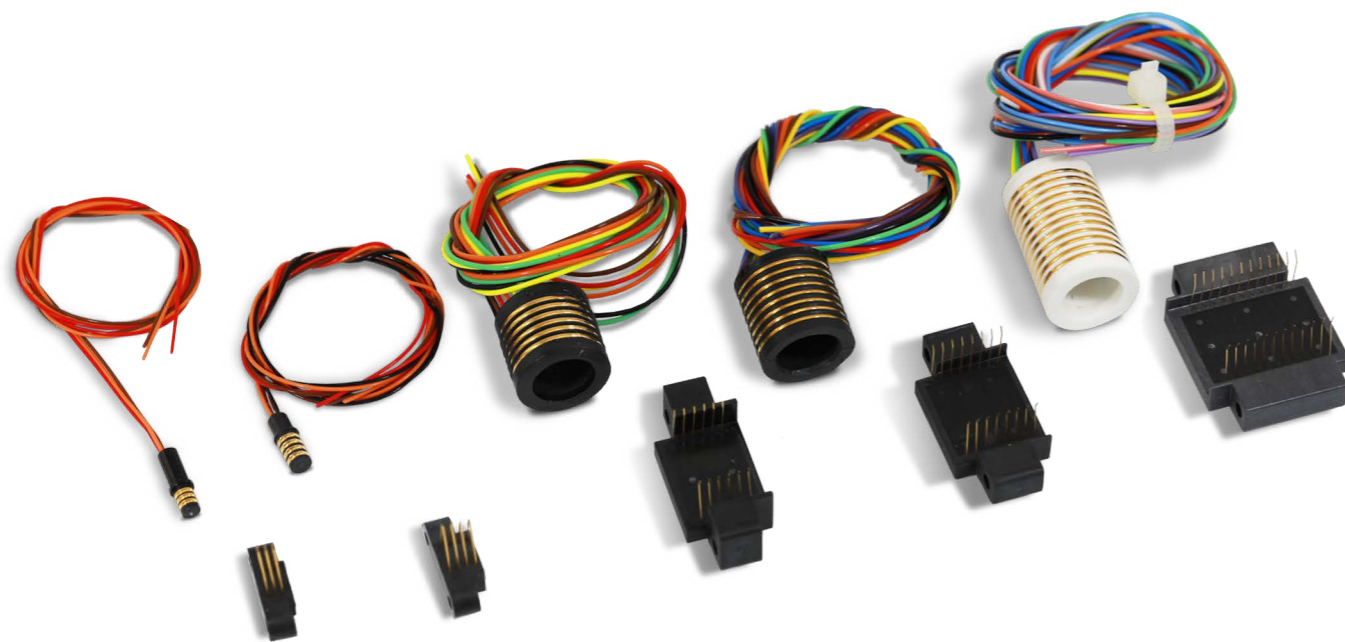


## STAGE TECHNOLOGY

- Rotating Stages
- Rotating Lights
- Revolving Platforms



# RX-SEP Series



## PRODUCT CODE

RX	-	AAA	BBB	-	CC	D	-	EEE	FF	S
		1	2		3	4		5	6	7

Example: RX-SEP080-QS2-01200S  
 (1) Separate Slip Ring with (2) Outer Diameter 80mm, (3) Common Quality Version, (4) Power transmission 10A, (5) 12 rings for power transmission, (6) No rings for signal transmission, (7) Standard Version

1	Series	SEP- Separate Slip Rings	4	Transmission Level	1 - Signal transmission 2A 2 - Power transmission 10A
2	Outer Diameter	From 2.9mm to 118mm (see drawings for details)	5	Number of Power Circuits	6 or 12 rings each 10A
3	Quality Level	QS - Common Quality Version QI - Industrial Quality Version (see specifications for details)	6	Number of Signal Circuits	From 3 rings to 15 rings
			7	Version	S - Standard C - Customized

Through-Bore    
 Cost-Effective    
 Easy Integration    
 RoHS2 CE

Separate slip rings consist of two parts: rotor and brush holder. This type of slip ring is also called split slip ring or PCB design slip ring. As the separate slip ring unit offers maximum flexibility regarding mounting positions inside the customer machine, it is often used in especially space-critical applications.

The customer is free to choose the position of the rotor unit and can place the brushes in best suitable position towards the rotor unit. As this slip ring has no housing, the customer should take care of protection against dust and water of the single components.

Our program of separate slip rings also offers hollow shaft rotor versions in order to place the rotor unit on a drive shaft of some machines. We offer inner diameters from 9,5mm up to 80mm. Overall the separate slip ring is available with maximum 15 rings which can be used from 2A up to 10A each ring.

We offer standardized & modularized design and fully customizable products according to the special requirements of customers in different applications.

If you have specific customized requirements, please feel free to consult us in order to create the most suitable recommendation for your specification.

### ADVANTAGES

- + No Housing
- + Rotor & Stator Unit separated
- + 360° Continuous Rotation
- + Power & Signal Transmission
- + Small & Compact Design
- + Light Weight
- + Easy Installation
- + Cost Effective

### MAIN APPLICATIONS

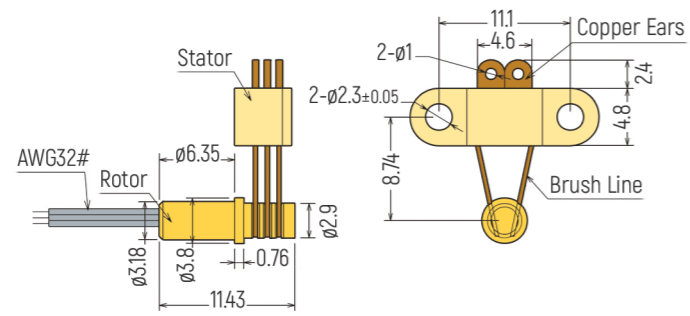
- > Instruments
- > Aviation
- > Drones, Model Airplanes
- > Medical Instruments
- > Measuring Equipment
- > LED Lighting
- > Camera Technology

## SPECIFICATIONS

SEPARATE SLIP RING SPECIFICATIONS		
NUMBER OF CIRCUITS	6 or 12 for power transmission;	3-15 for signal transmission
ELECTRICAL SPECIFICATIONS		
CURRENT RATING	Power transmission circuits: 10A	Signal transmission circuits: 2A
VOLTAGE RATING	Power transmission circuits: 440VAC/DC	Signal transmission circuits: 240VAC/DC
ELECTRICAL NOISE	Common Quality Level:	Precious Metal max 10mΩ
	Industrial Quality Level:	Gold-Gold max 4mΩ
INSULATION RESISTANCE	Power transmission circuits:	≥1000 MΩ @ 500 VDC
	Signal transmission circuits:	1000 MΩ @ 500 VDC
LEAD CABLE SIZE	Power transmission circuits:	AWG16 Teflon
	Signal transmission circuits:	Types SEP003 and SEP004: AWG32 Teflon All other types: AWG28 Teflon
LEAD CABLE LENGTH	Types SEP003, SEP004, SEP015, SEP016 and SEP017: Standard 250mm (Rotor/Stator) All other types: Standard 300mm (Rotor/Stator)	
DIELECTRIC STRENGTH	500VAC @ 50Hz, 60s	
MECHANICAL SPECIFICATIONS		
WORKING LIFE (Quality Level Common / Industrial)	Types SEP003, SEP004, SEP015, SEP016 and SEP017:	50 Million Revs (Common)
	Types SEP050, SEP080, an SEP118:	10 Million Revs (Common) 400 Million Revs (Industrial)
ROTATING SPEED (Quality Level Common / Industrial)	Types SEP003, SEP004, SEP015, SEP016 and SEP017:	0-100 rpm (Common)
	Types SEP050, SEP080, an SEP118:	0-150 rpm (Common) 0-400 rpm (Industrial)
TEMPERATURE RANGE	Types SEP003, SEP004, SEP015, SEP016 and SEP017:	-20°C to +60°C
	Types SEP050, SEP080, an SEP118:	-30°C to +80°C
OPERATING HUMIDITY	Types SEP003, SEP004, SEP015, SEP016 and SEP017:	0-60% RH
	Types SEP050, SEP080, an SEP118:	0-85% RH
CONTACT MATERIAL	Gold-Gold	

**RX-SEP003**

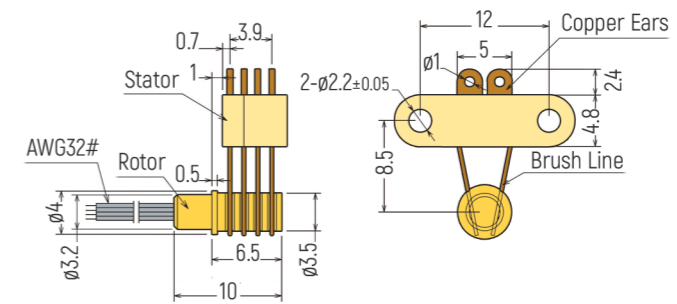
Number of Circuits: 3



MODEL	OD (mm)	ID (mm)	NUMBER OF CIRCUITS
			Power 2A
RX-SEP003-QS1-00003S	2.9	-	3

**RX-SEP004**

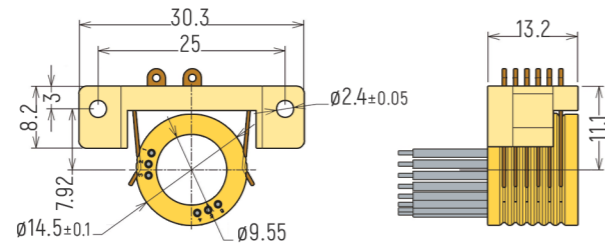
Number of Circuits: 4



MODEL	OD (mm)	ID (mm)	NUMBER OF CIRCUITS
			Power 2A
RX-SEP004-QS1-00004S	3.5	-	4

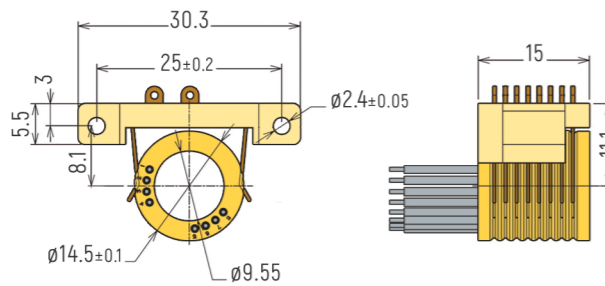
**RX-SEP015**

Number of Circuits: 6



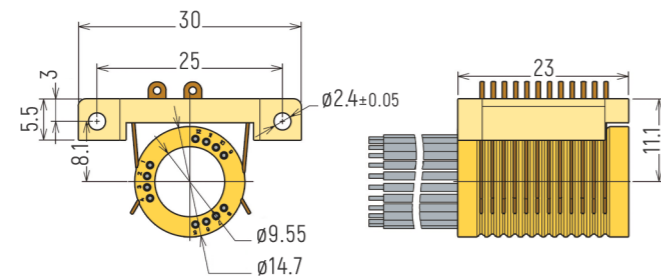
**RX-SEP015**

Number of Circuits: 8



**RX-SEP015**

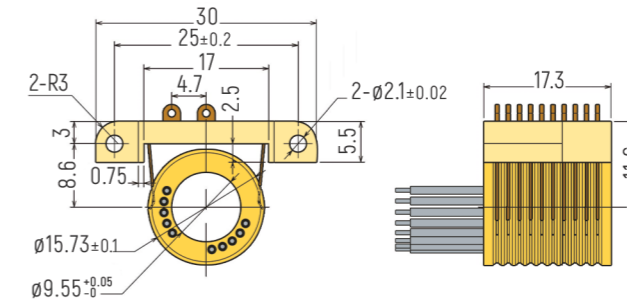
Number of Circuits: 12



MODEL	OD (mm)	ID (mm)	NUMBER OF CIRCUITS
			Power 2A
RX-SEP015-QS1-00006S	14.5	9.55	6
RX-SEP015-QS1-00008S	14.5	9.55	8
RX-SEP015-QS1-00012S	14.7	9.55	12

**RX-SEP016**

Number of Circuits: 10

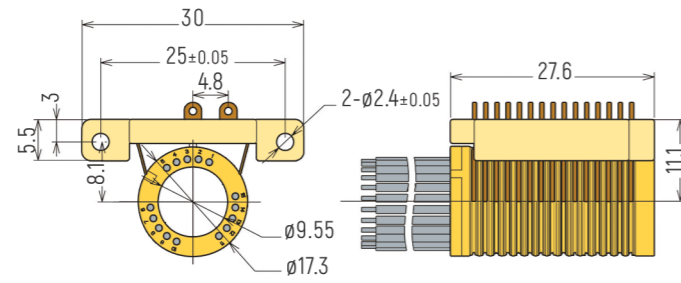


MODEL	OD (mm)	ID (mm)	NUMBER OF CIRCUITS
			Power 2A
RX-SEP016-QS1-00010S	15.73	9.55	10



**RX-SEP017**

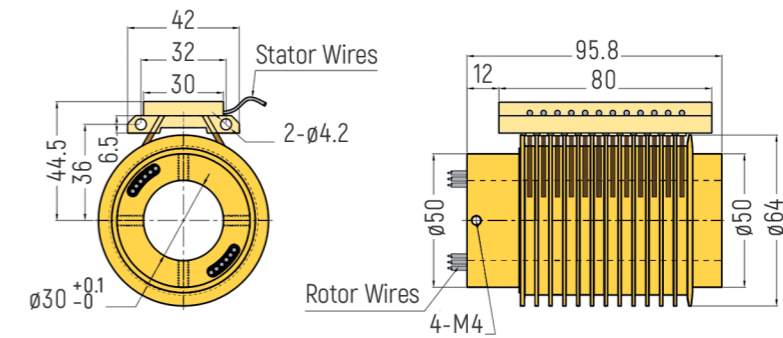
Number of Circuits: 15



MODEL	OD (mm)	ID (mm)	NUMBER OF CIRCUITS
			Power 2A
RX-SEP017-QS1-00015S	17.3	9.55	15

**RX-SEP050**

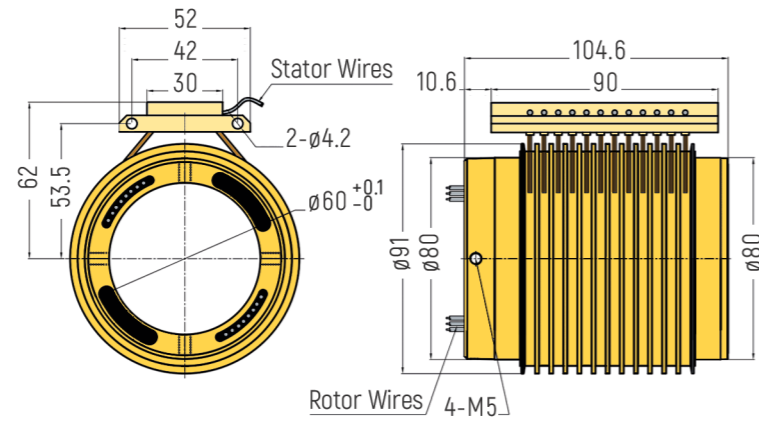
Number of Circuits: 12



MODEL	OD (mm)	ID (mm)	NUMBER OF CIRCUITS
			Power 10A
RX-SEP050-QS2-01200S	50	30	12
RX-SEP050-QI2-01200S	50	30	12

**RX-SEP080**

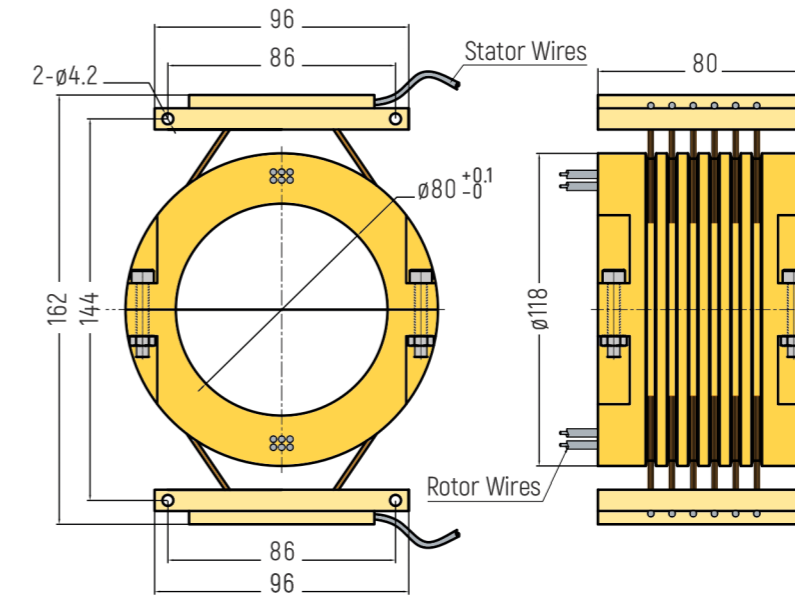
Number of Circuits: 12



MODEL	OD (mm)	ID (mm)	NUMBER OF CIRCUITS
			Power 10A
RX-SEP080-QS2-01200S	80	60	12
RX-SEP080-QI2-01200S	80	60	12

**RX-SEP118**

Number of Circuits: 6



MODEL	OD (mm)	ID (mm)	NUMBER OF CIRCUITS
			Power 10A
RX-SEP118-QS2-00600S	118	80	6
RX-SEP118-QI2-00600S	118	80	6

# Customized Slip Rings



## HYBRID SLIP RING FOR WATER, POWER AND SIGNAL TRANSMISSION

- 12 x 10A power, 1 x gigabit Ethernet, 1 x water leadthrough
- Harting connector for power lines
- Housing material aluminium

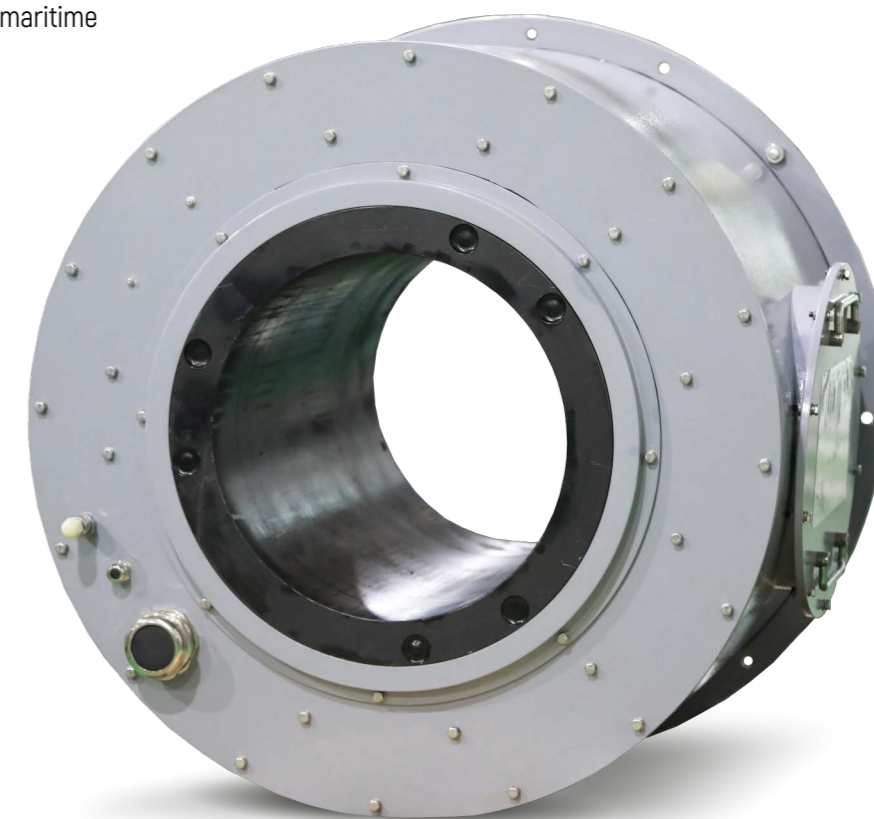


## MEDIUM SIZE SLIP RING WITH MASSIVE FLANGE

- Axial cable outtake rotor, radial cable outtake stator
- Steel housing in customized color
- Special cable protection sleeve

## LARGE SLIP RING FOR MARITIME APPLICATIONS

- Outer diameter 14 meters, inner diameter 0.7 meters
- Housing material steel, color similar to maritime vessel
- Inspection porthole



## MINIATURE METAL HOUSING WITH ELONGATED ROTOR SHAPE

- Special rotor design acc. to customer specification
- 4 x 2A signal rings
- Protection degree IP65



## MEDIUM SIZE SLIP RING WITH MASSIVE FLANGE

- Aluminium rotor flange with customized boreholes
- Flange thickness 13mm
- Protection degree IP65

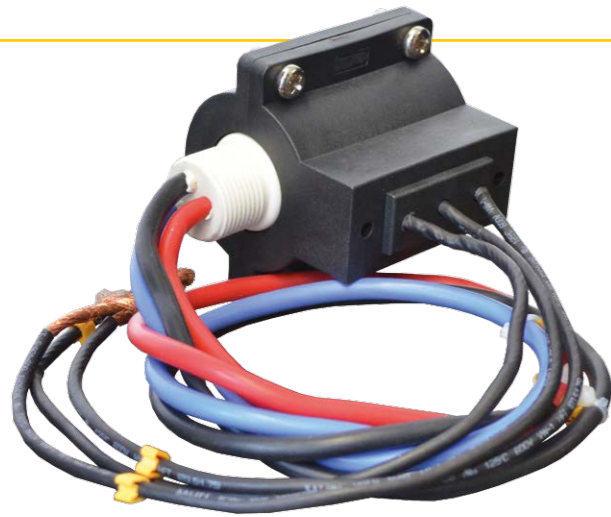


## HYBRID MEDIUM SIZE HOLLOW-SHAFT SLIP RING

- 10 x 10A signal transmission + EtherCat signals
- Massive housing for heavy-duty-applications
- Special flange and double-anti-rotation-tabs







**MINIATURE POWER SLIP RING WITH CUSTOMIZED HOUSING**

- 3 x 63A power transmission on minimum space
- Special plastic housing
- Cable color code according to customer requirement

**PANCAKE SLIP RING WITHOUT HOUSING**

- Special diameter according to customer machine
- 2 rings for power transmission
- Brushholder with customized fixing holes and cable



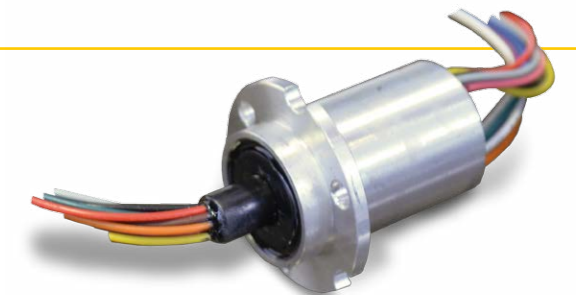
**HYBRID MEDIUM SIZE SLIP RING WITH FIBER OPTIC AND COAX TRANSMISSION**

- Customized housing shape with special rotor design
- Gearwheel teeth shape integrated in rotor design
- FORJ Fiber Optic + COAX transmission



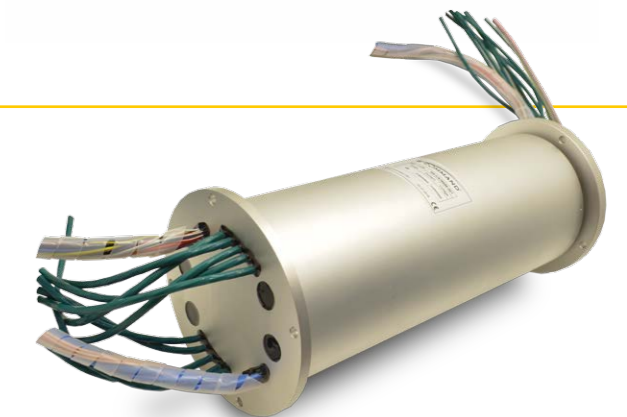
**MINIATURE SLIP RING WITH CUSTOMIZED FLANGE**

- 10 x 2A signal transmission
- Flange position and shape customized
- Cable color code according to customer requirement



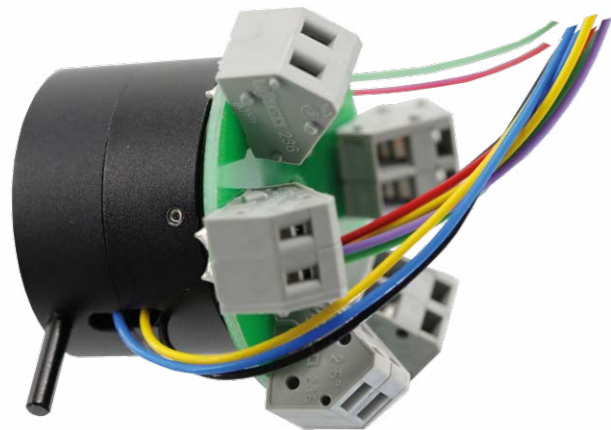
**LARGE METAL HOUSING WITH POWER / DATA TRANSMISSION**

- Dimensions housing according to customer specification
- 86 Rings (63A, 32A, 16A, HD-SDI, EtherCat, Analogue)
- Special CAT7E data-cable with 10 meter length



**MINIATURE SIZE SLIP RING WAGO CONNECTORS ON PCB**

- 16 x 2A signal transmission
- Customized PCB with WAGO connectors for cable connection
- Special housing design with anti-rotation-bar



**MINIATURE SLIP RING WITH 128 RINGS**

- Aluminium housing with rotor flange
- 128 signal rings for data transmission
- Protection degree IP65





**SLIP RING WITH INTEGRATED CONNECTORS**

- Customized fixation boreholes
- Customized connectors and cable with connectors
- Double anti-rotation-tab on stator side

**MEDIUM SIZE HOLLOW-SHAFT SLIP RING WITH CONNECTORS**

- 4 x customized connectors for signal transmission
- Aluminium housing with 150mm free inner diameter
- Housing without flange, axial cable outtakes



**HYBRID MEDIUM SIZE SLIP RING WITH DOUBLE COAX LINE AND POWER TRANSMISSION**

- Customized metal housing without flange
- 2 x COAX lines + several power rings
- Special cable protection sleeve and cable fixation

**HYBRID MEDIUM SIZE SLIP RING WITH FIBER OPTIC AND POWER LINES**

- Customized aluminium housing without flange
- FORJ Fiber Optic + power transmission
- Stainless steel rotor with cable protection sleeve



**HYBRID MINIATURE SLIP RING FOR VIRTUAL REALITY APPLICATIONS**

- Plastic housing with customized flange
- Power and data transmission by USB and HDMI
- Connectors on rotor and stator side for easy usage









## B-COMMAND GMBH

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