

# LPP Rotary Unions ( Can Be Integrated with Electricity )



Rotary Union		Electrical & Electronics		Mechanical	
Circuits	2/4/6/8/10/12	Circuits	1 ~ 36	Working Speed	0 ~ 100rpm
Gas Pipe Outer Diameter(mm)	φ4	Current	2A each circuit or higher	Contact Material	Gold to gold
Maximum Working Pressure	-1.5Kpa ~ 1Mpa	Voltage	240V AC/DC	Housing Material	Engineering Plastic / Metal (Optional)
Medium	Compressed air, inert gas, etc.	Dielectric Strength	≥500VAC@50Hz	Wire Type	AWG28# Teflon® UL
Environmental		Insulation Resistance	100MΩ@500VDC	Wire Length	250mm ( Optional )
Temperature	-20℃~+60℃ ( Optional )			Others	
Humidity	≤60%RH	ElectricalNoise	35mΩ ( Min 1mΩ )	Life	5 million (can be customized)
Protection Grade	IP50 ( Optional )				

## Brief Introduction

The LPP rotary unions can perform rotation of 360 degrees. The medium includes inert gas such as compressed air, steam, vacuum, nitrogen, hydrogen, etc. It can integrate slip ring to transport various control signals. The sealing surface and sealing ring are made of special materials, with the advantages of wear resistance, long life, corrosion resistance, and no leakage. Customers can install LPP rotary unions independently according to the application environment.

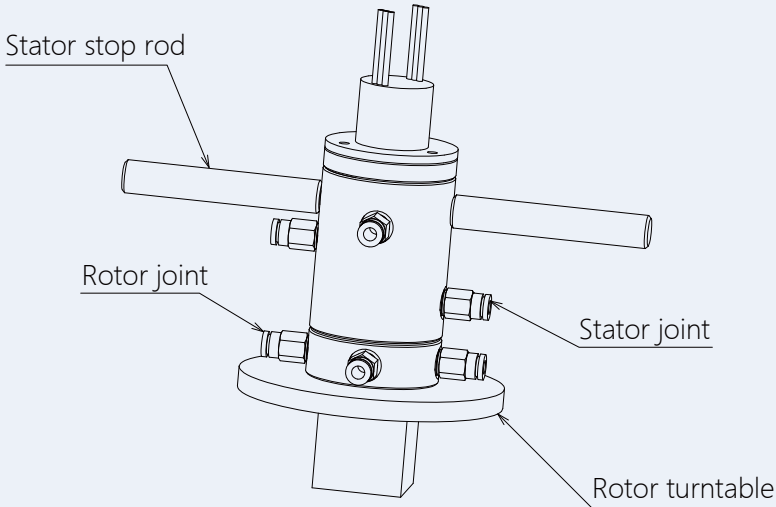
- Features
- Continuable medium: compressed air, nitrogen, and other inert gases;
  - Small size, light weight, low torque
  - Integrated power, switching signal, Ethernet, USB, industrial bus, sensor and other signals;
  - Customized rotary joint parameters and integrated slip ring can be customized according to customer requirements;
  - The joint and pipe diameter can be customized according to customer requirements;
- Optional
- Inner diameter & Outer diameter/Number of circuits/Current & Voltage/Wire length/Housing material and color/Protection level/Signal and power can be transmitted separately or in combination

## Installation Specifications

1. The mounting position of the slip ring is matched with the equipment. It is necessary to connect the air pipe at the rotor end to ensure that there is no leakage.
2. Debug the concentricity of the rotor before installation and ensure the smooth rotation of the slip ring.
3. The stator is screwed into the anti-rotation rod through the anti-rotation hole to stop rotation, and can also be customized according to customer requirements.

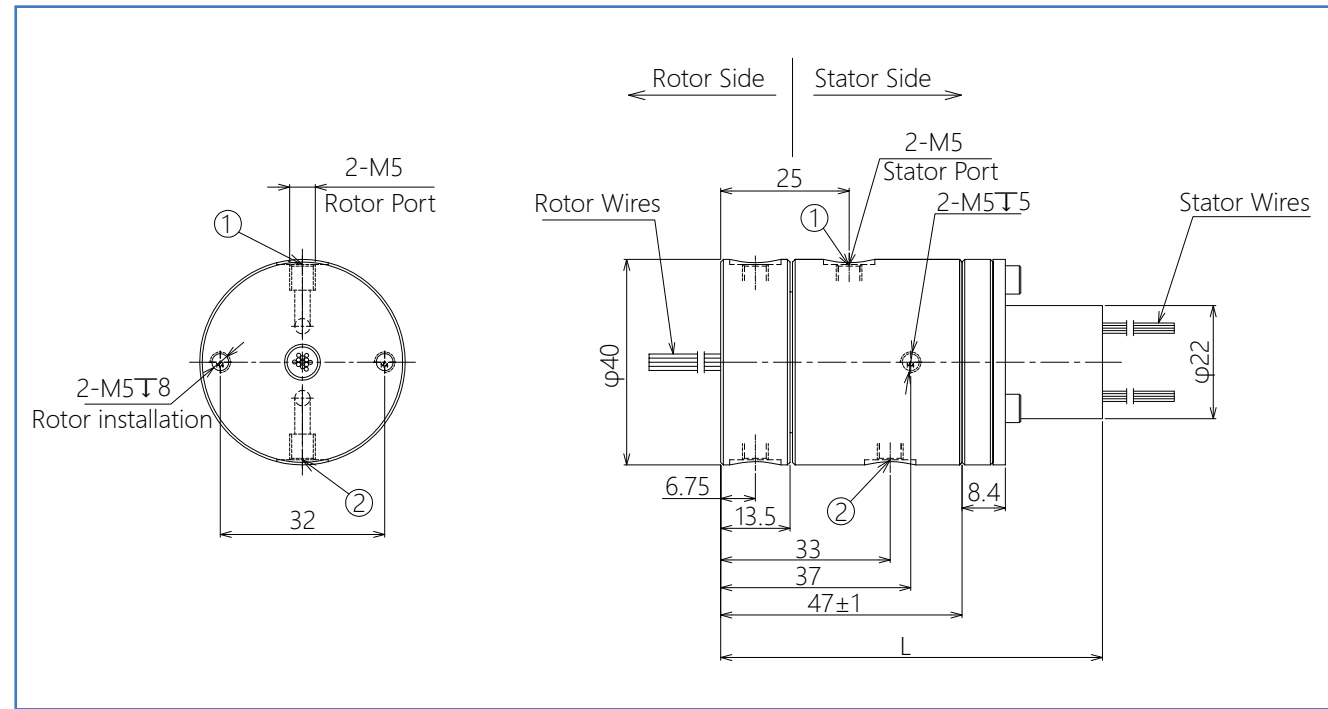
Precautions for Installation of Rotary Joints:

1. Rotary joints should prevent impact and drop during delivery and storage to avoid damage to the interface and internal parts.
2. The bolts for fixing need to be loosened.
3. When installing the rotary joints, it should be noted that the thread direction of the inner and outer tubes corresponds to the rotation direction of the drum, and the thread rotation direction of the inner and outer tubes should also be the same.
4. The inlet and outlet of the rotary joint should be connected directly to the hose as much as possible. The transmission



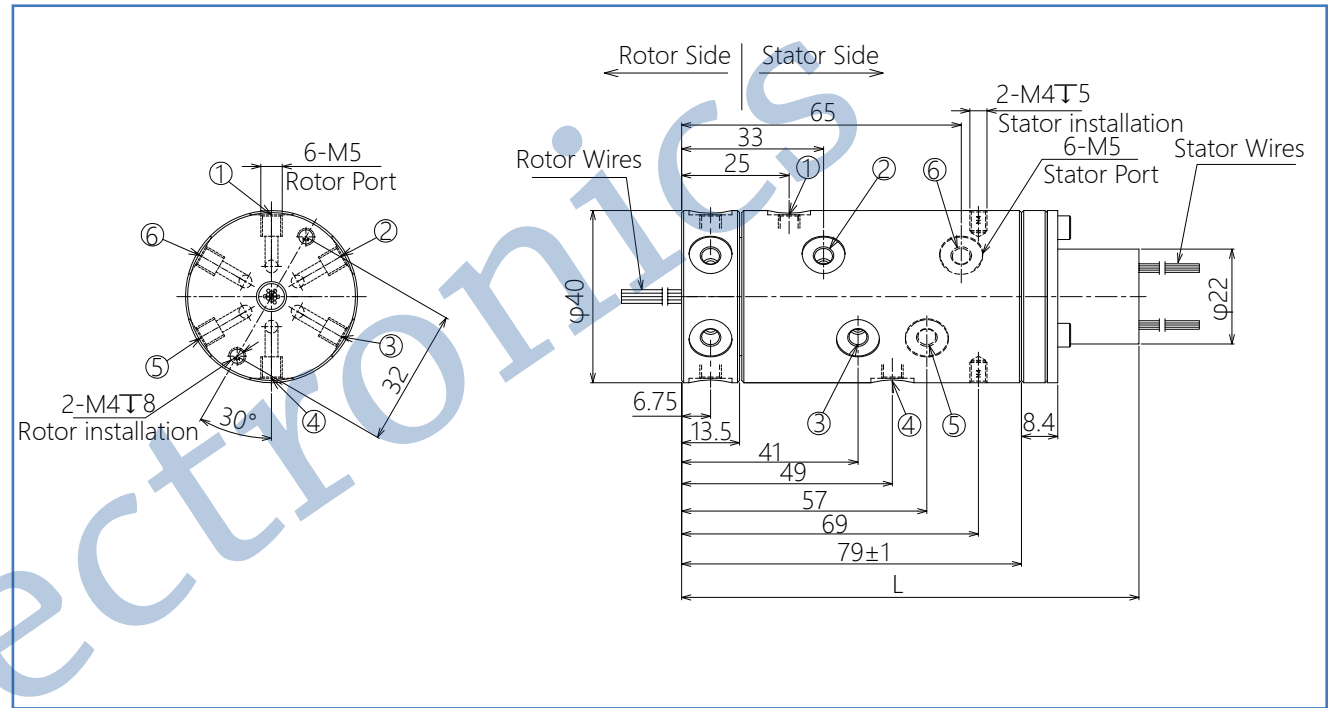
LPP Rotary Unions Outline Drawing

LPPL06-02A-xx02(xx Represents the Number of Circuits)

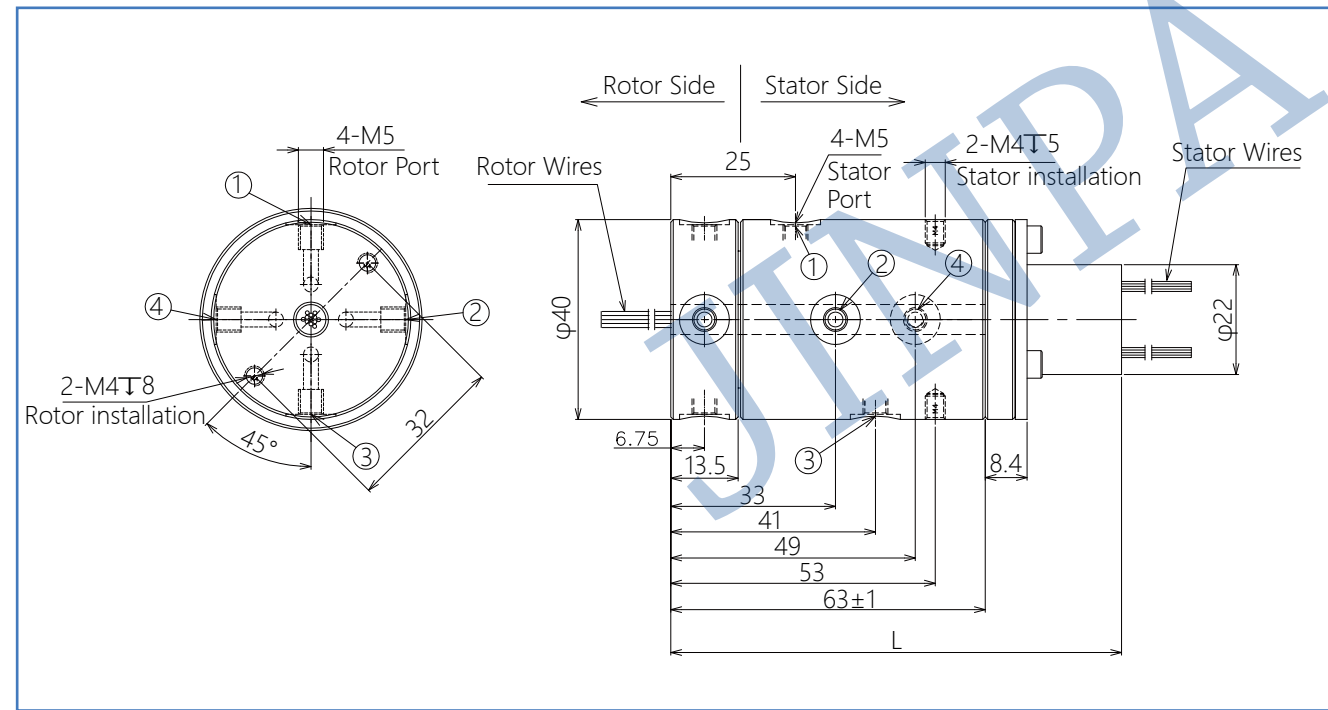


LPP Rotary Unions Outline Drawing

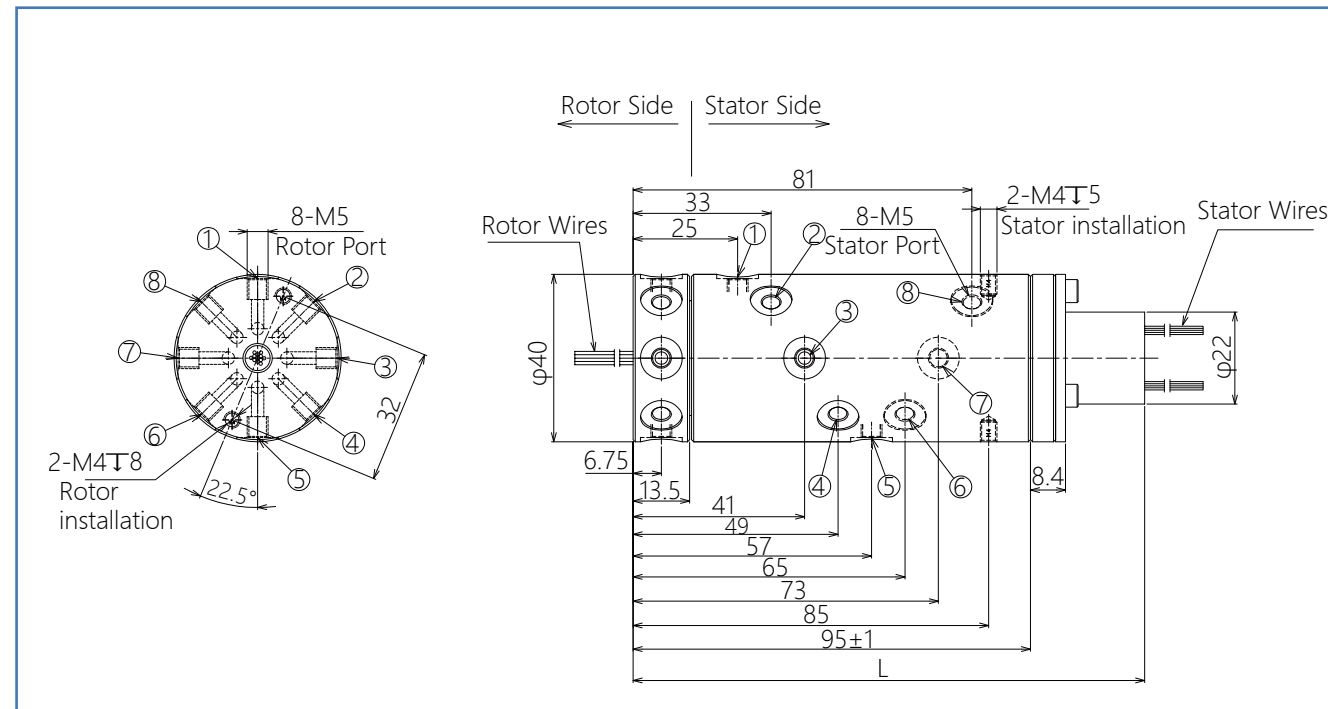
LPPL06-06A-xx02(xx Represents the Number of Circuits)



LPPL06-04A-xx02(xx Represents the Number of Circuits)

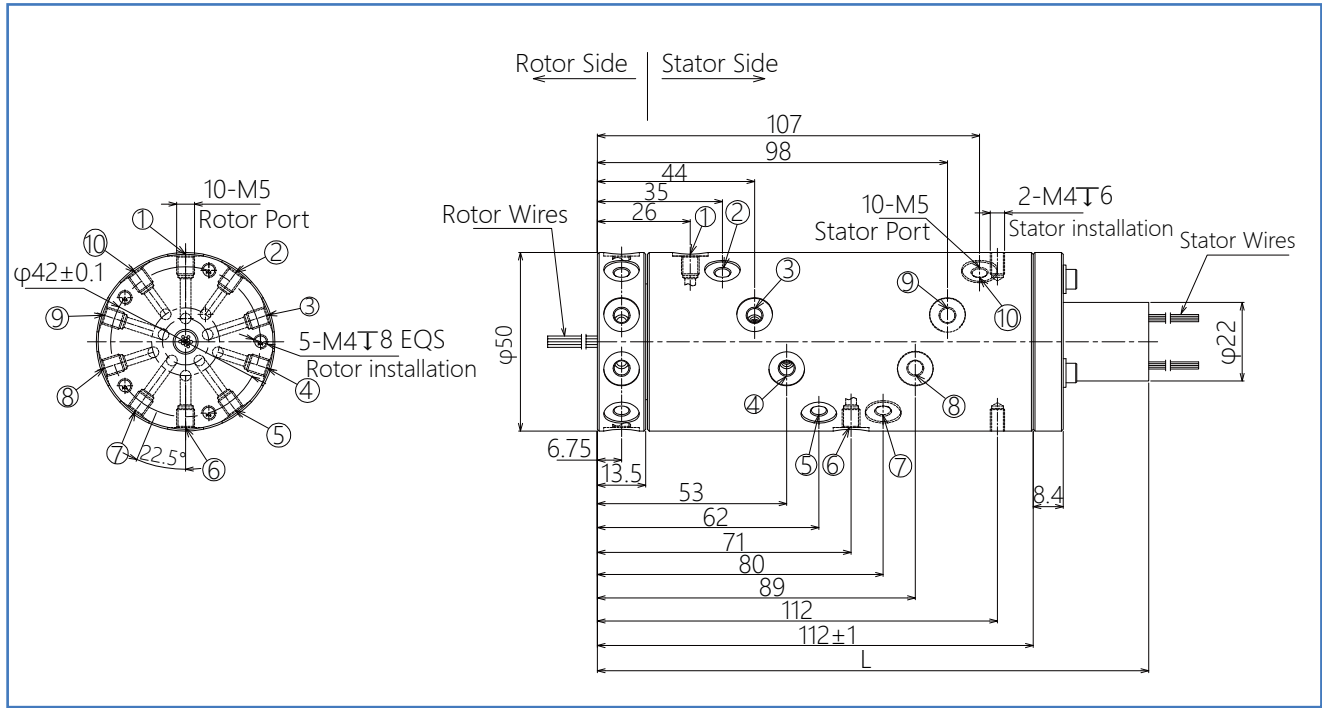


LPPL06-08A-xx02(xx Represents the Number of Circuits)

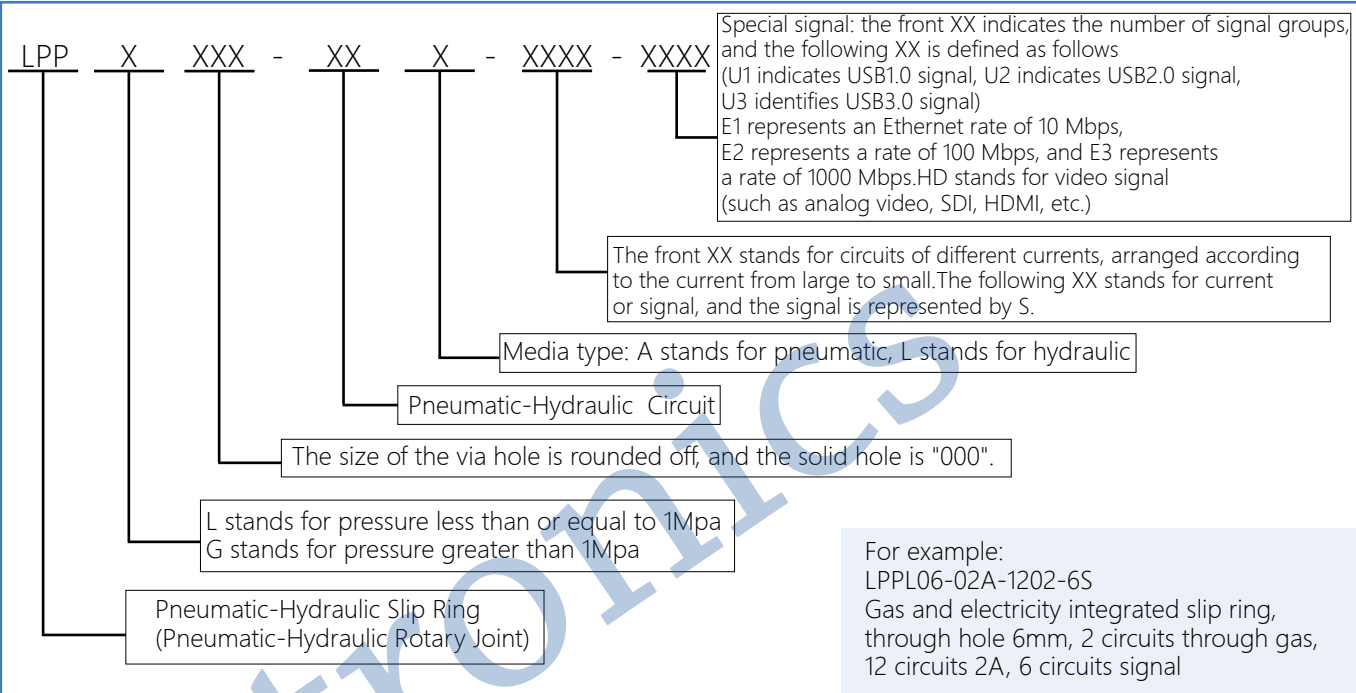
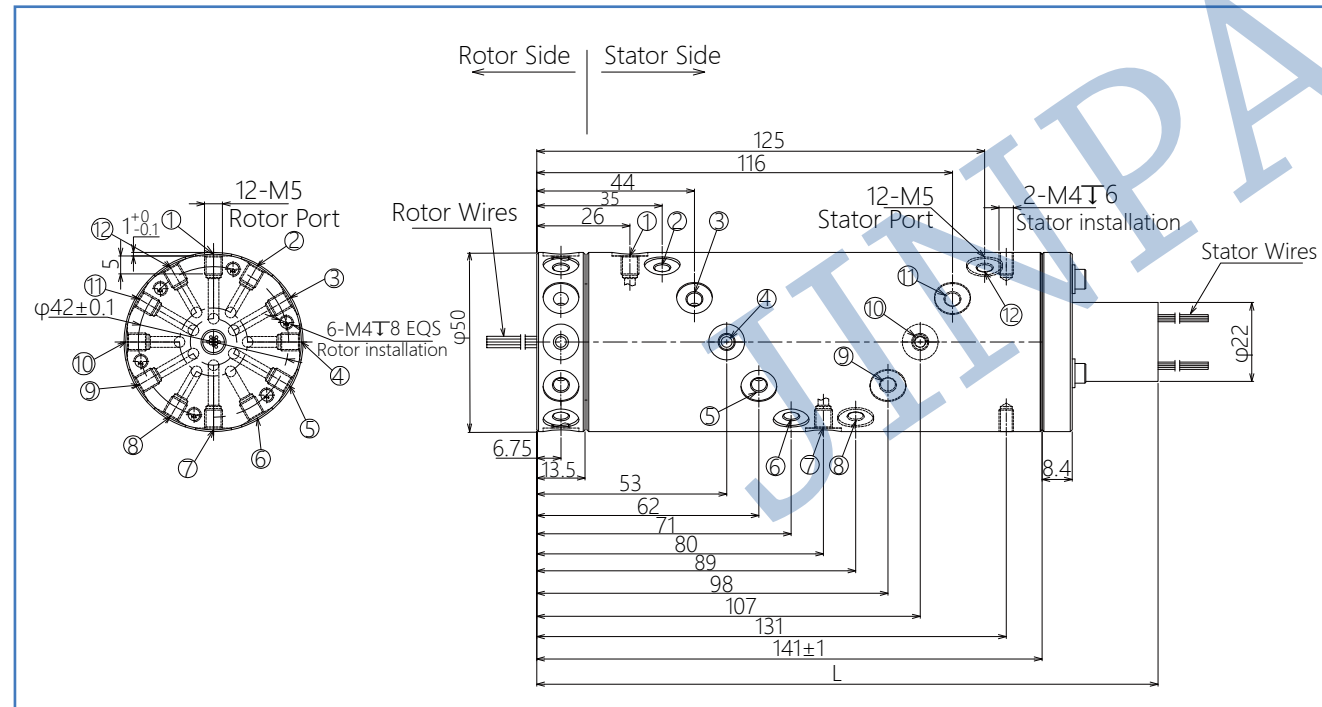


LPP Rotary Unions Outline Drawing

LPPL06-10A-xx02(xx Represents the Number of Circuits)

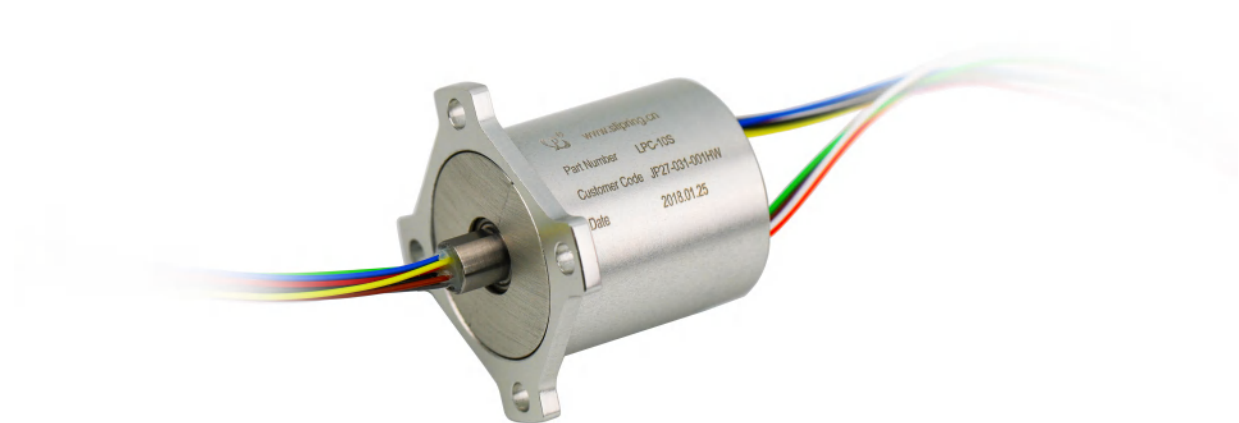


LPPL06-12A-xx02(xx Represents the Number of Circuits)



LPP Rotary Unions ( Can Be Integrated with Electricity )									
Model	Circuits	ID (mm)	OD (mm)	Length (L)(mm)	Connector Type	Maximum Working Pressure	Working Speed	Torque	Number of Integrated Circuits (≤2A/signal)
LPPL06-02A	2	φ6	φ40	47	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤0.6N.m	/
LPPL06-02A-1202		/		74.3	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤0.6N.m	12
LPPL06-02A-2402		/		90.7	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤0.6N.m	24
LPPL06-02A-3602		/		105.2	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤0.6N.m	36
LPPL06-04A	4	φ6	φ40	63	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤0.8N.m	/
LPPL06-04A-1202		/		90.3	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤0.8N.m	12
LPPL06-04A-2402		/		106.7	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤0.8N.m	24
LPPL06-04A-3602		/		121.2	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤0.8N.m	36
LPPL06-06A	6	φ6	φ40	79	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤1.0N.m	/
LPPL06-06A-1202		/		106.3	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤1.0N.m	12
LPPL06-06A-2402		/		122.7	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤1.0N.m	24
LPPL06-06A-3602		/		137.2	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤1.0N.m	36
LPPL06-08A	8	φ6	φ40	95	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤1.3N.m	/
LPPL06-08A-1202		/		122.3	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤1.3N.m	12
LPPL06-08A-2402		/		138.7	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤1.3N.m	24
LPPL06-10A	10	φ6	φ50	122	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤1.6N.m	/
LPPL06-10A-1202		/		149.3	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤1.6N.m	12
LPPL06-10A-2402		/		165.7	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤1.6N.m	24
LPPL06-12A	12	φ6	φ50	141	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤2.0N.m	/
LPPL06-12A-1202		/		168.3	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤2.0N.m	12
LPPL06-12A-2402		/		184.7	M5	-1.5Kpa ~ 1Mpa	0 ~ 100rpm	≤2.0N.m	24

# Long Life Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of Circuits	10 CKT	Rotating Speed	0~1200 rpm	Temperature	-10℃~+80℃
Current	1A	Contact Material	Gold-to-gold	Humidity	≤60%RH
Voltage	0~20VDC	Housing Material	Aluminum alloy	Protection Grade	IP40
Dielectric Strength	≥500VAC@50Hz	Torque	/	Others	
Insulation Resistance	≥100MΩ@500VDC	Wire Type	AWG28#		
Dynamic Contact Resistance	≤30mΩ	Wire Length	Rotor: 250±5mm Stator: 250±5mm		
		Life Span		270 million rpm	

## Features

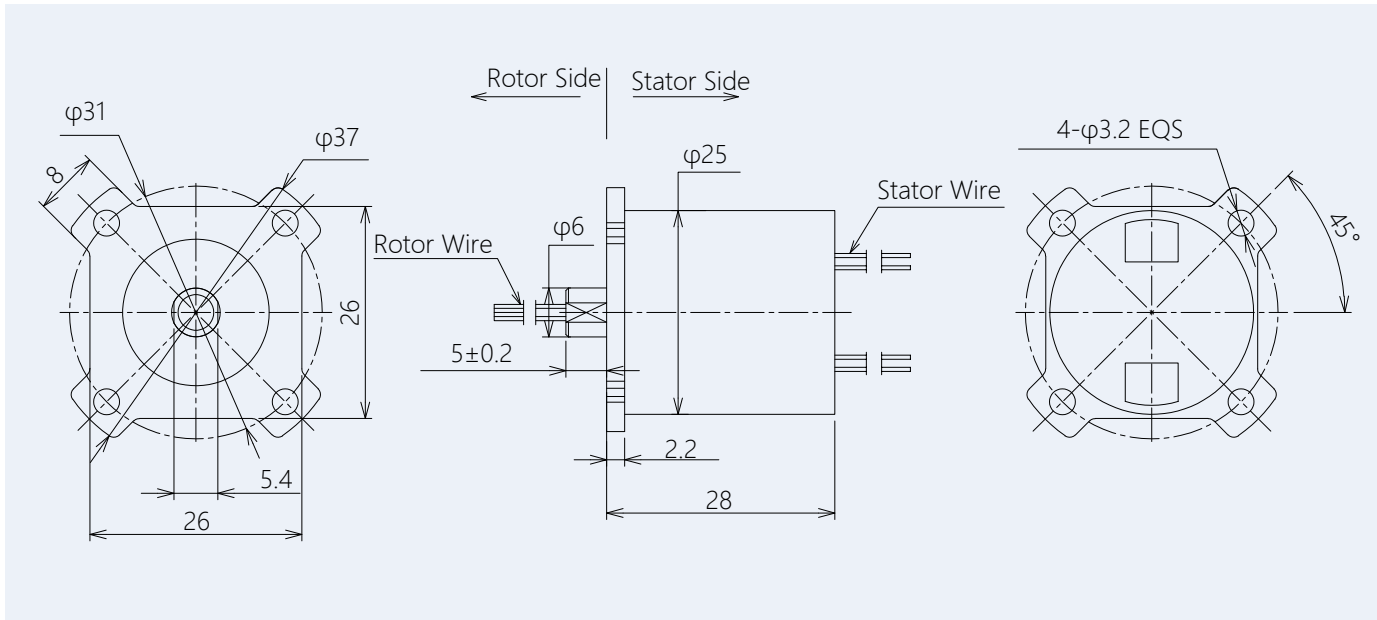
- Long life slip ring can reach a life of more than 270 million rpm under the test conditions of 5000/rpm.
- Maintenance free during life cycle.

## Advantages

- High and low temperature resistance
- High vibration resistance, high impact
- Isolation is greater than 60db, signal transmission loss is extremely low
- Contact surface mirror running-in technology reaches the world's leading level

Long Life Slip Ring	
Model	Applications
LPC-10S	Military equipment; Laboratories and other special equipment.

## Outline drawings



# VR Slip Ring



Electrical & Electronics		Mechanical		Enviromental	
Number of Circuits	2 circuits*1.5A/1 circuit*DC/ 2 circuits*4A1 circuit*HDMI/ 1 circuit*USB2.0	Rotating Speed	0~100 rpm	Temperature	-20℃~+60℃
Current	4A	Contact Material	Gold-to-gold	Humidity	≤60%RH
Voltage	48V	Housing Material	Engineering plastic	Protection Grade	IP40
Dielectric Strength	≥200V@50Hz	Wire Type	AWG22#/AWG26# AWG28#/ AWG30#/USB2.0 /HDMI/DC	Others	
Insulation Resistance	≥50MΩ@200V			Life Span	/
Electrical Noise	≤15mΩ(Signal Ring)	Wire Length	Rotor: 250±5mm Stator: 250±5mm		

## Features

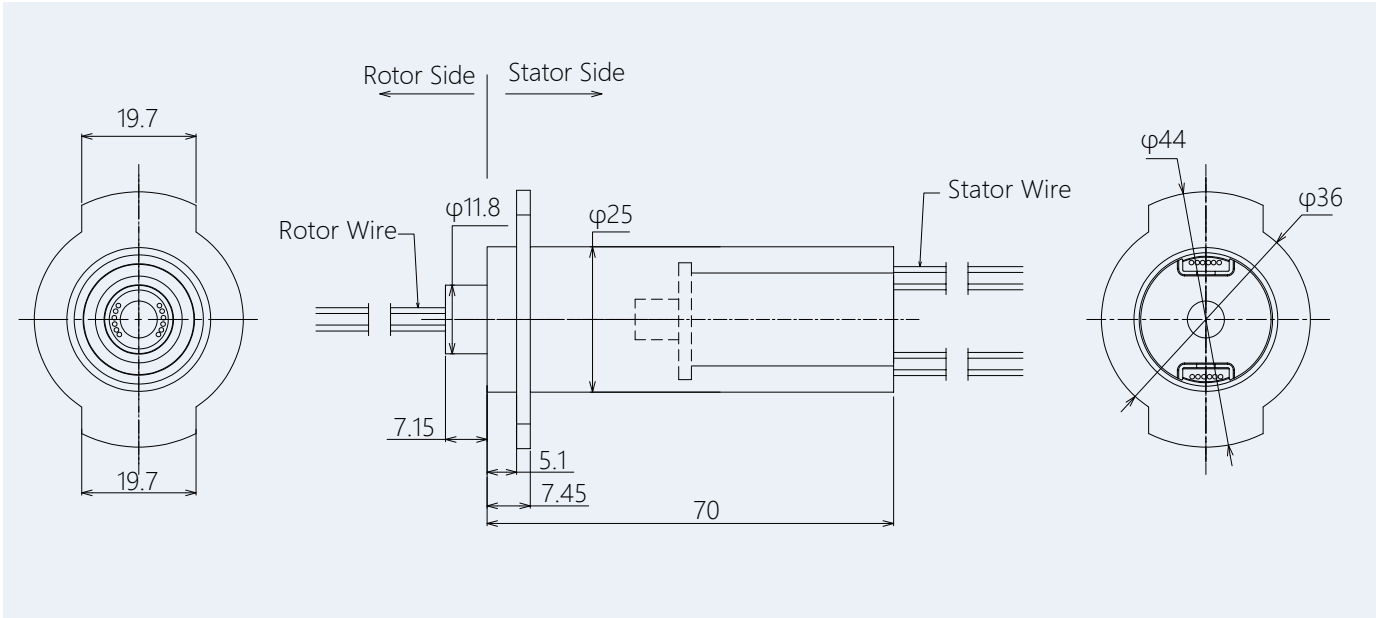
- Transmission of HDMI signal, USB2.0 signal, electric signal.
- Double slip rings integration mechanism.

## Advantages

- Integrate a variety of signals, of which HDMI signal transmission rate reaches 2K@90HZ (ultra clear video), leading domestically
- Independent research and development of HDMI elbow socket

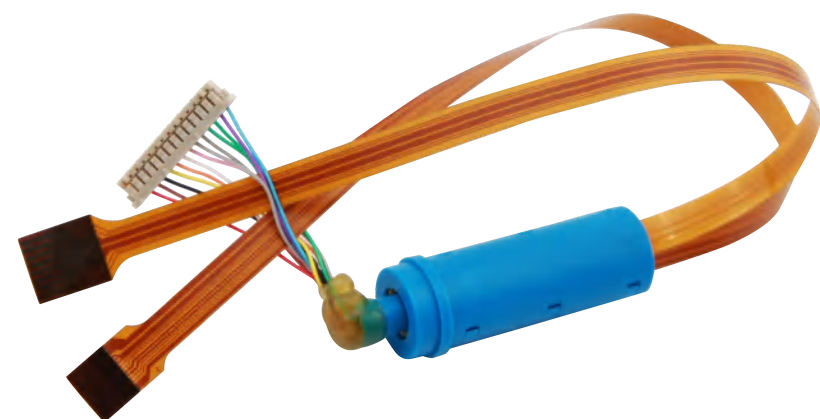
VR Slip Ring	
Model	Applications
LPC-0104-0402-HD01-U2	VR equipment; Treadmills; Game seats

## Outline drawings





# FPC Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Channel number	11CKT	Working speed	0~60rpm	Working temperature	-20°C~+60°C
Working current	9 circuits* signal 1A/ 2 circuits * 2A (customized)	Contact material	Precious metal	Working humidity	≤60%RH
Working voltage	48VAC/DC	Shell material	Engineering plastics	IP protection grade	IP40
Withstand voltage strength	≥100VAC@50Hz(S)	Torque	≤2.5mNm	Others	
Insulation resistance	≥10MΩ@100VDC(S)	Conductor specification	AWG30# teflon conductor / FPC flat cable (customized)	Life Span	10 million (customized)
Dynmaic resistance fluctuation value	≤35mΩ (1 mΩ at minimum)	Wire Length	Rotor: 33+2/-0mm Stator: 180/150±2 mm (customized)		

## Features

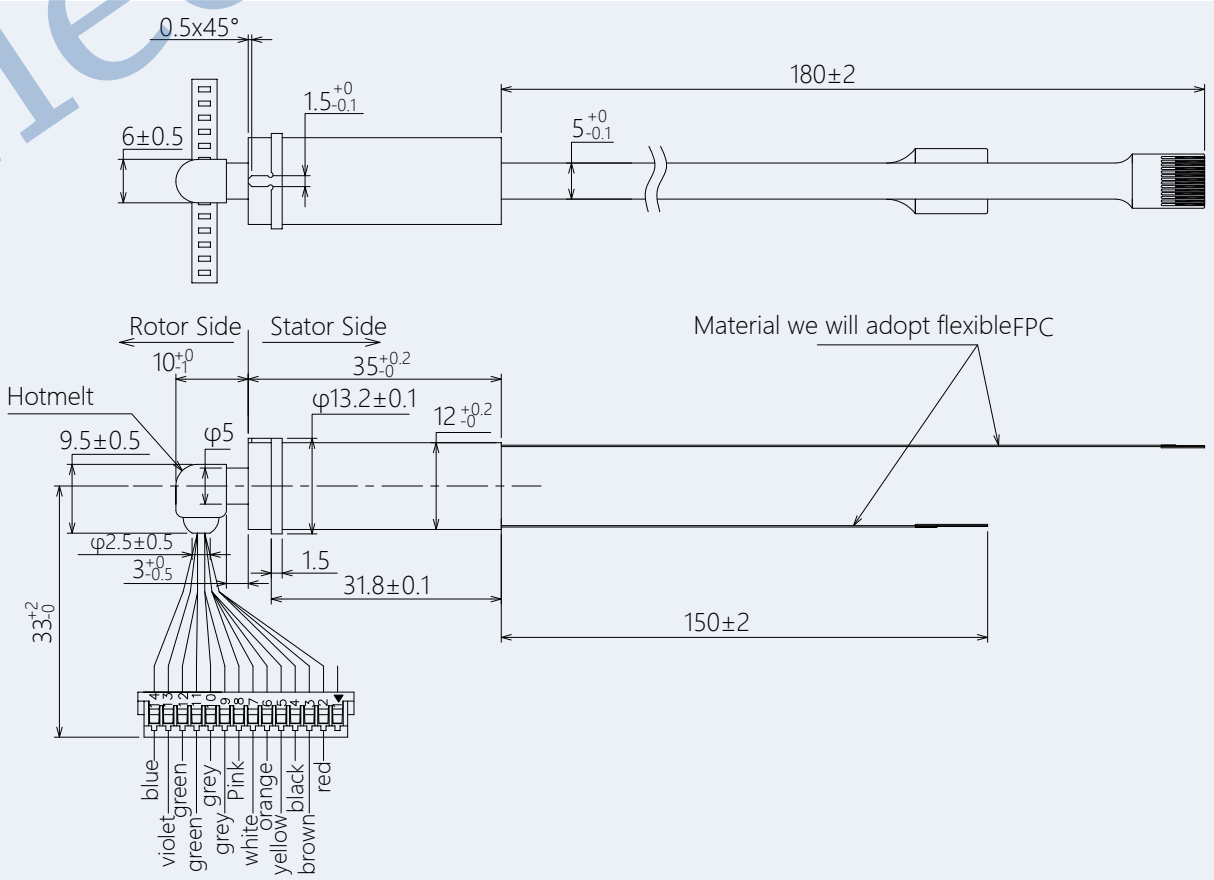
- Small power current transmission, analog and data signal
- Low torsion force and reliable transmission
- Domestic leading military high-standard surface treatment technique and precise and tight internal structure
- Gold-to-gold contact ensures stability and service life.
- FPC connection mode has excellent folding endurance and thinner thickness.

## Advantages

- As a highly reliable, optimal and flexible connection mode, FPC slip ring is featured by high wiring density, light weight and equal wiring diameter and is applicable to many products such as mobile phones, notebooks, PDA, digital cameras, LCM, etc.

Hing Precision Slip Ring	
Model	Applications
LPM-18C-0202-09S	Photographic apparatus

## Outline drawings



# High Protective Level Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of Circuits	6CKT	Rotating Speed	0~60 rpm	Temperature	-20°C~+60°C
Current	5A	Contact Material	Gold-to-gold	Humidity	≤60%RH
Voltage	0~48VAC/DC	Housing Material	Aluminum alloy	Protection Grade	IP68
Dielectric Strength	≥200VAC@50Hz	Torque	/	Others	
Insulation Resistance	≥100MΩ@200VDC	Wire Type	AWG22#	Life Span	Can be customized
Electrical Noise	≤35mΩ	Wire Length	Rotor: 250±5mm Stator: 250±5mm		

## Features

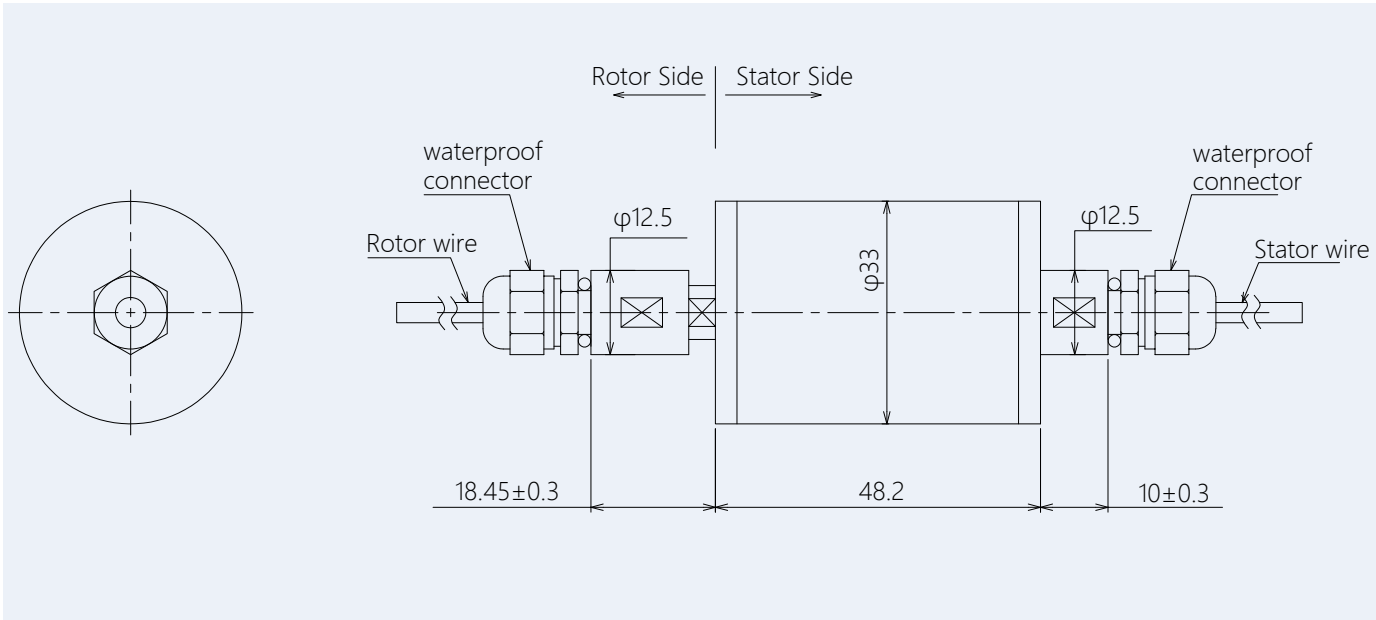
- High protection grade slip ring is specially developed for underwater, high pressure seabed and various harsh environments
- High sealing grade, protection grade reaches IP68
- Stable and reliable

## Advantages

- Support signal and power transmission
- All stainless steel full seal design, professional sealing program
- To meet the long-term underwater or corrosive environment, the theoretical value of working water depth is more than 300 meters

Hing Precision Slip Ring	
Model	Applications
LPC-18A-0605-IP68	Ships; Port Equipment; Underwater Operations Equipment; Offshore Oil Platforms;Deep Sea Submersibles; Underwater Vehicles

## Outline drawings



# High Speed Slip Ring / High Temperature Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of Circuits	8CKT	Rotating Speed	0~18000 rpm	Temperature	-55℃~+210℃
Current	2A	Contact Material	Gold-to-gold	Humidity	≤60%RH
Voltage	40VAC/DC	Housing Material	Aluminum oxide white	Protection Grade	IP40
Dielectric Strength	≥500VAC@400Hz	Torque	≤0.1N*M	Others	
Insulation Resistance	≥600MΩ@200VDC	Wire Type	AWG28#	Life Span	Can be customized
Electrical Noise	≤10mΩ	Wire Length	Rotor: 250±5mm Stator: 250±5mm		

## Features

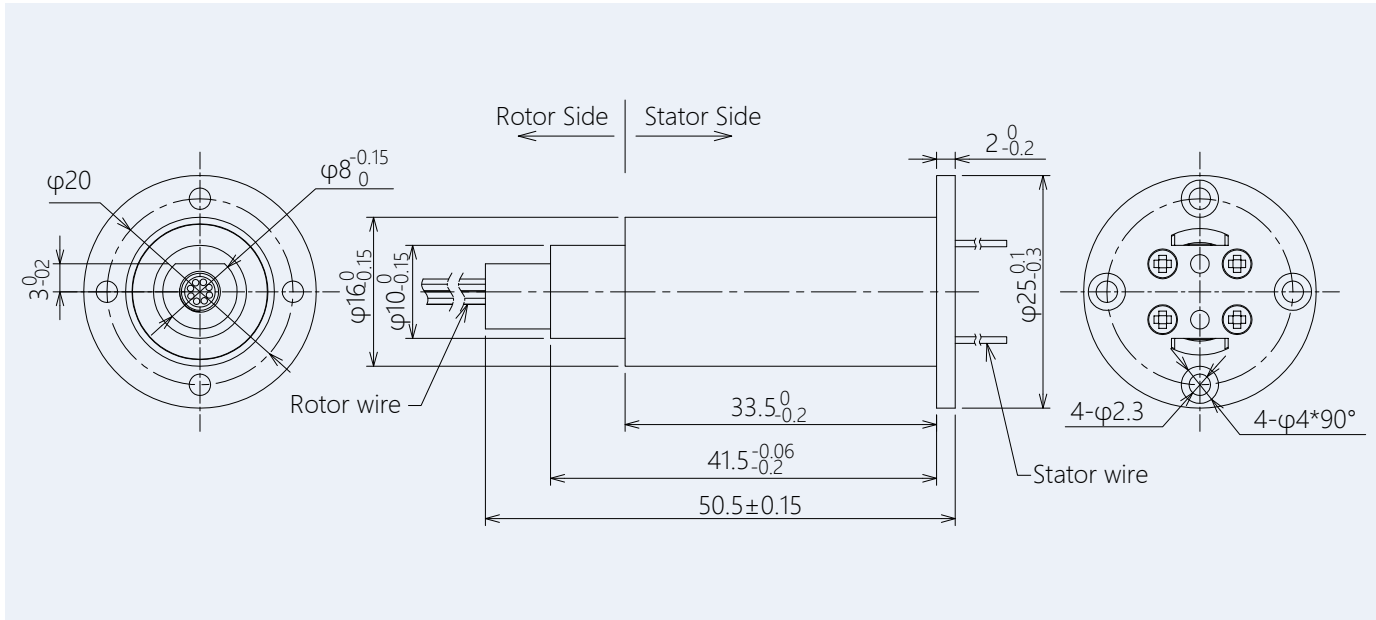
- High speed reaches 0~10000/rpm
- Instantly reach 18000/rpm
- High temperature use up to 210 ° C

## Advantages

- Using special molding process and super wear resistant materials
- Solve the influence of vibration and temperature changes on the signal at high speed
- Simultaneously meet high vibration performance indicators in harsh environments

High Speed Slip Ring / High Temperature Slip Ring	
Model	Applications
FGCK-P155-2-K12	Testing; Aviation; Oil Exploration, etc.

## Outline drawings





# Marine Winch Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of circuits	6CKT	Rotating speed	0~100rpm	Temperature	-20°C~+75°C
Current	2×50A+4×Fiber Optics	Contact material	Copper graphite	Humidity	≤90%RH
Voltage	4000VAC	Housing material	Stainless steel 316	Protection Grade	IP65
Dielectric strength	≥8000VAC@50Hz ≥1000VAC@50Hz (signal)	Wire type	AWG7# Teflon 4-channel single-mode armored fiber	Others	
Insulation resistance	≥1000MΩ@500VDC ≥100MΩ@300VDC (signal)	Wire length	2M		
				Life span	Can be customized

## Features

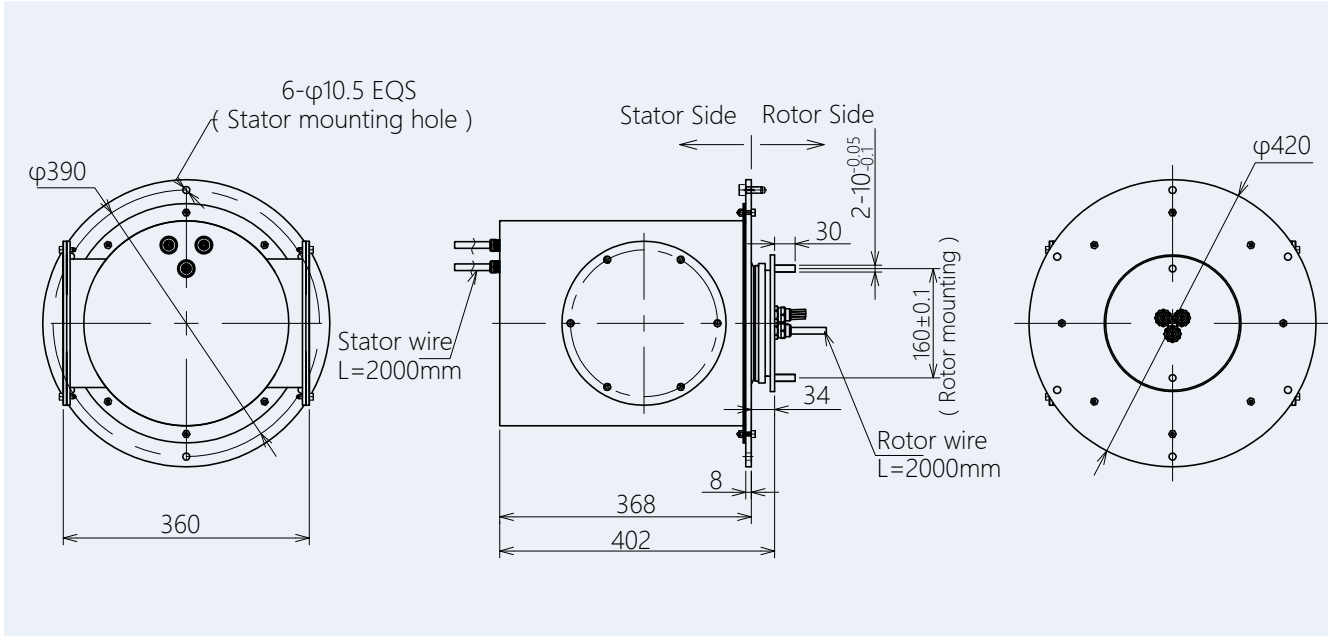
- 4,000V high voltage, transmits power and fiber optic signal
- Reliable and stable channel transmission
- Super long service life, regular maintenance

## Advantages

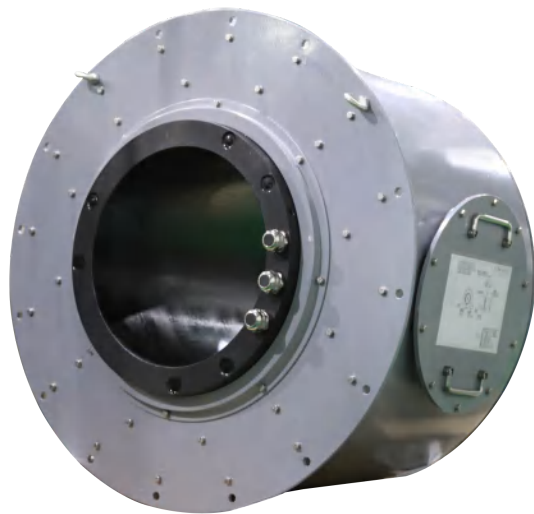
- Long distance transmission reaching 4km
- High data transmission rate, low loss and no interference
- High protection level, strong corrosion-resistance, shock-resistance and vibration-resistance, fits in harsh maritime environment

Large Current Slip Ring	
Model	Applications
LPA000-0250-FO04	15T cable towing winch

## Outline drawings



# Platform Winch Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of circuits	4CKT	Rotating speed	0~1rpm	Temperature	-10℃~+60℃
Current	3×350A+1×PE	Contact material	Copper graphite	Humidity	≤90%RH
Voltage	380VAC	Housing material	Q235	Protection Grade	IP56
Dielectric strength	≥1500VAC@50Hz	Wire type	95mm <sup>2</sup> soft rubber wire	Others	
Insulation resistance	≥1000MΩ@500VDC	Wire length	/		
				Life span	Can be customized

## Features

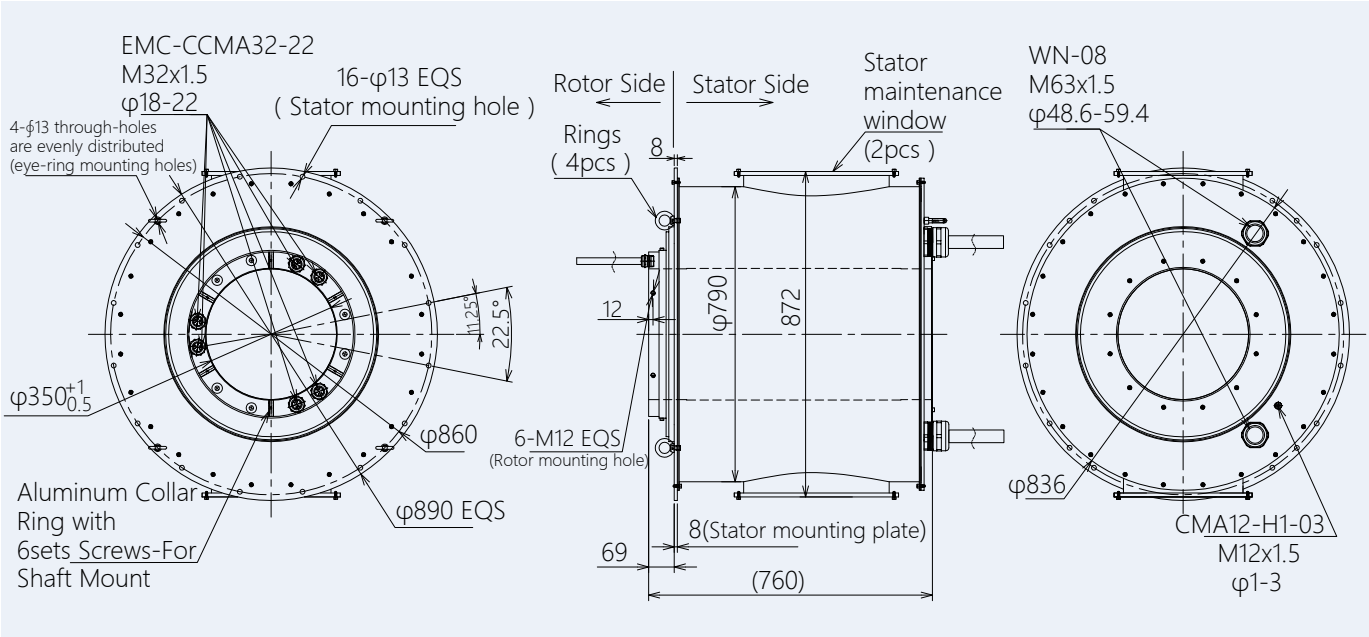
- Bore diameter 350mm
- Adopt imported graphite brush
- Super long service life, regular maintenance

## Advantages

- 350mm large through-bore diameter, high-power transmission
- High data transmission rate, low loss and no interference
- High protection level, strong corrosion-resistance, shock-resistance and vibration-resistance, fits in harsh maritime environment

Large Current Slip Ring	
Model	Applications
LPA350-03350-01PE	1200T wind turbine installation platform winch

## Outline drawings



# Marine Crane Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of circuits	14CKT	Rotating speed	0~5rpm	Temperature	0°C~+50°C
Current	3×400A+1×PE+10S	Contact material	Precious metal/ copper graphite	Humidity	≤95%RH
Voltage	690VAC	Housing material	Q235	Protection Grade	IP44
Dielectric strength	≥2500VAC@50Hz ≥1000VAC@50Hz (signal)	Wire type	70mm <sup>2</sup> soft rubber wire/1mm <sup>2</sup> Teflon	Others	
Insulation resistance	≥500MΩ@1000VDC ≥500MΩ@500VDC (signal)	Wire length	Without cable	Life span	Can be customized

## Features

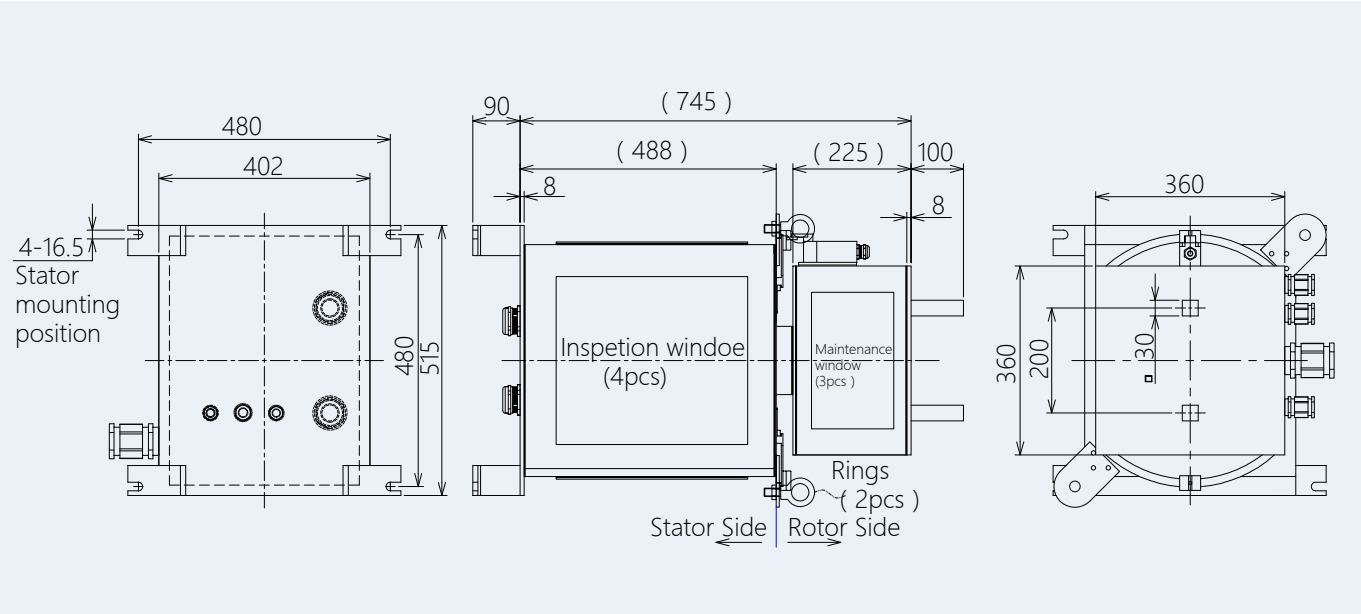
- 400A large current
- Super long service life, regular maintenance
- Protection grade IP44

## Advantages

- Simultaneous transmission of high power and signals
- Adopts imported graphite brush, stable performance
- Strong corrosion-resistance, shock-resistance and vibration-resistance, fits in harsh maritime environment

Large Current Slip Ring	
Model	Applications
LPA000-03400-01PE-10S	35T Marine Crane

## Outline drawings



# Entertainment Equipment Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of circuits	53CKT	Rotating speed	0~15rpm	Temperature	-10°C~+80°C
Current	14×500A+12×50A+9×2A+2×Gigabit Ethernet	Contact material	Precious metal/ copper graphite	Humidity	≤85%RH
Voltage	380VAC	Housing material	Q235	Protection Grade	IP51
Dielectric strength	≥1500VAC@50Hz ≥300VAC@50Hz (signal)	Wire type	95/25mm <sup>2</sup> rubber wire/ AWG26# Teflon/ Ethernet cable	Others	
Insulation resistance	≥500MΩ@1000VDC ≥100MΩ@300VDC (signal)	Wire length	/		
				Life span	Can be customized

## Features

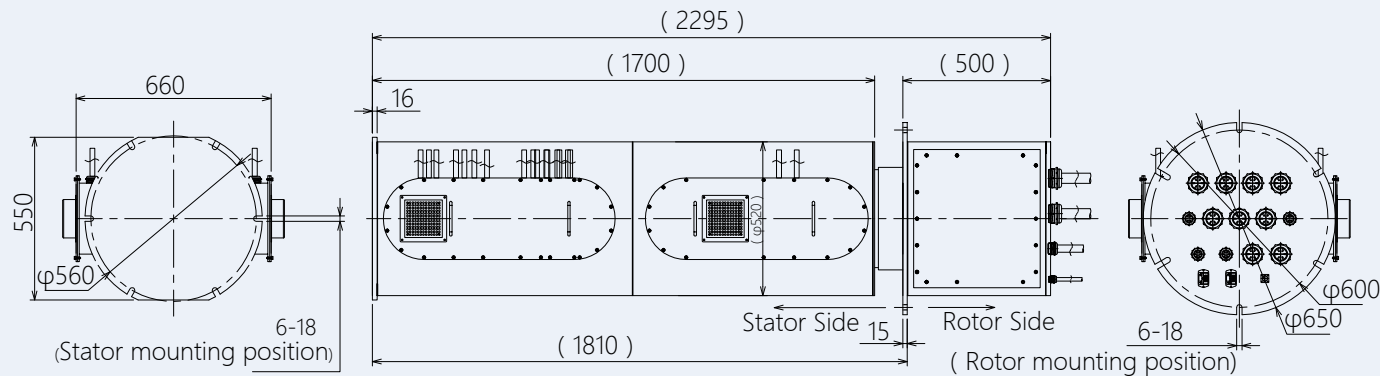
- Built-in ventilation system, low temperature rise
- Adopts imported graphite brush
- Precise rotate angel, great transmission performance, smooth and reliable operation

## Advantages

- Simultaneous rotary transmission of high power and signals
- Independent module design to eliminate interference
- Multi-channel for large current, outer height up to 2.3m, module assembling

Large Current Slip Ring	
Model	Applications
LPA000-14500-1250-0902-02E3	Dynamic 5D Cinema

## Outline drawings



# Floating Crane Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of circuits	40CKT	Rotating speed	0~5rpm	Temperature	-20℃~+50℃
Current	9×800A+1×PE+30×20A+4×fluid	Contact material	Precious metal/copper graphite	Humidity	≤95%RH
Voltage	440VAC/230V	Housing material	Q235	Protection Grade	IP22
Dielectric strength	≥2500VAC@60Hz ≥500VAC@60Hz (signal)	Wire type	150mm <sup>2</sup> rubber wire/ AWG12# Teflon	Others	
Insulation resistance	≥500MΩ@1000VDC ≥500MΩ@500VDC (signal)	Wire length	/	Life span	Can be customized

## Features

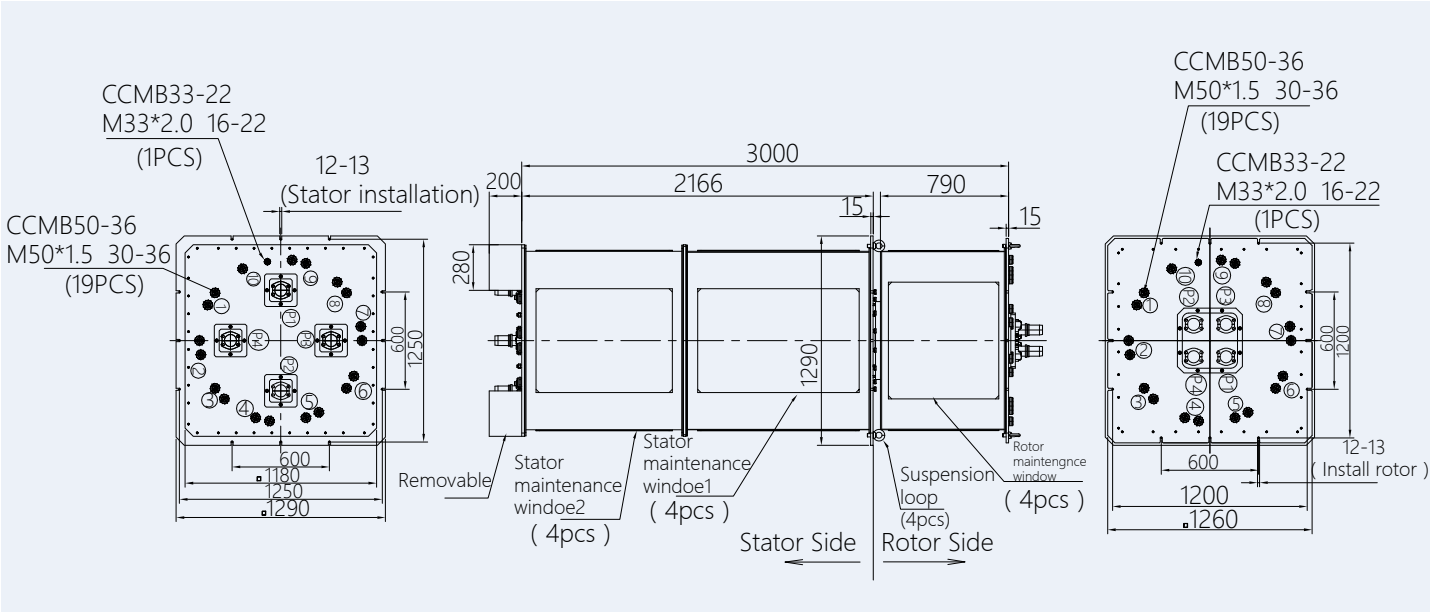
- Large size, outer configuration 1.3\*1.3\*3M
- Super long service life, regular maintenance
- Excellent transmission performance, smooth operation, good isolation with hydraulic channel and pneumatic channel

## Advantages

- Simultaneous rotary transmission of high power, signals, gas and fluid.
- Adopts imported graphite brush with stable performance
- Large pipe diameter high temperature rotary joint, can endure high temperature up to 150℃, 65mm pipe diameter

Large Current Slip Ring	
Model	Applications
LPA000-09800-01PE-3020-04L	Floating Crane

## Outline drawings





# Ship Electric Propeller Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of circuits	62CKT	Rotating speed	0~3rpm	Temperature	-5℃~+45℃
Current	6×200A+6×18A +44× signal +1×gas+5×liquid	Contact material	Precious metal/ copper graphite	Humidity	≤95%RH
Voltage	440VAC/220VAC /24DAC	Housing material	Stainless steel 304	Wire length	custom
Dielectric strength	≥2500VAC@50Hz ≥500VAC@50Hz (signal)	Wire type	70mm2 marine shielded cable CBPJP 85-SC/3*2.5mm <sup>2</sup> Marine cable CBPJP 85-SC/12*0.22mm <sup>2</sup> Marine cable CBI PJ 85-SC/12*0.22mm <sup>2</sup> Marine cable CBJPJ 85-SC	Protection Grade	IP65
Insulation resistance	≥500MΩ@1000VDC ≥500MΩ@500VDC (signal)			Others	
				Life span	Can be customized

## Features

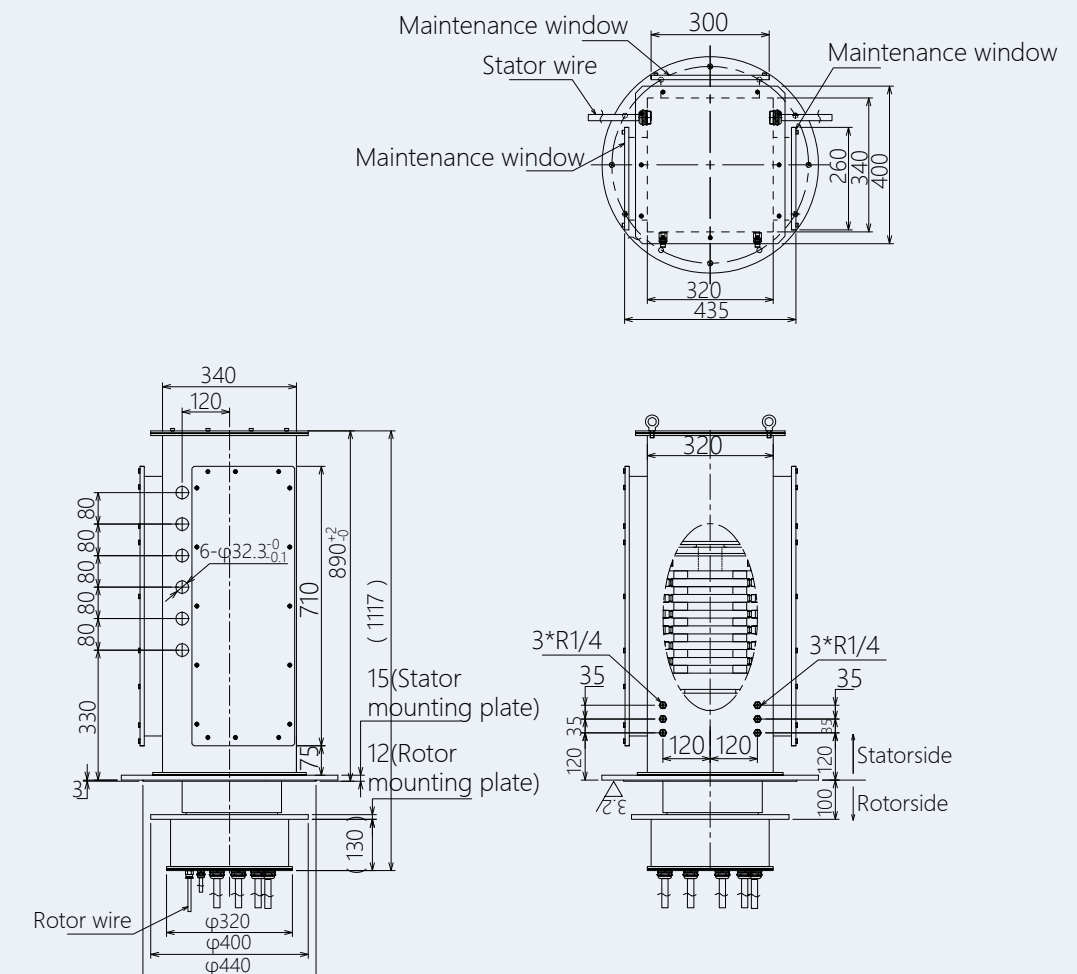
- Long life and easy maintenance
- High rotation precision, excellent transmission performance, stable and reliable operation
- Diverse form factor to support more installation requirements

## Advantages

- Power can be 3MW, 6MW, 7.5MW, etc.
- High-power, signal and gas-liquid rotary joint hybrid transmission
- IP65 protection level

Large Current Slip Ring	
Model	Applications
LPA000-06200-0618-44S-01A-05L	200kW ship electric propeller

## Outline drawings



# Wind Turbine Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of circuits	19CKT	Rotating speed	0~30rpm	Temperature	-40°C~+80°C
Current	7×22A+12× signal	Contact material	Fiber brush	Humidity	≤60%RH
Voltage	400VAC/24VDC	Housing material	Aluminium alloy	Protection Grade	IP54
Dielectric strength	≥1000VAC@50Hz (current) ≥300VAC@50Hz (signal)	Wire type	AWG14# tin plating teflon ® UL/ LAPP UNITRONIC®LiYCY 12x0,34	Others	
Insulation resistance	≥500MΩ@500VDC (current) ≥100MΩ@300VDC (signal)	Wire length	Rotor: 250 mm Stator: 1,500 mm		
				Life span	80 million or higher

## Features

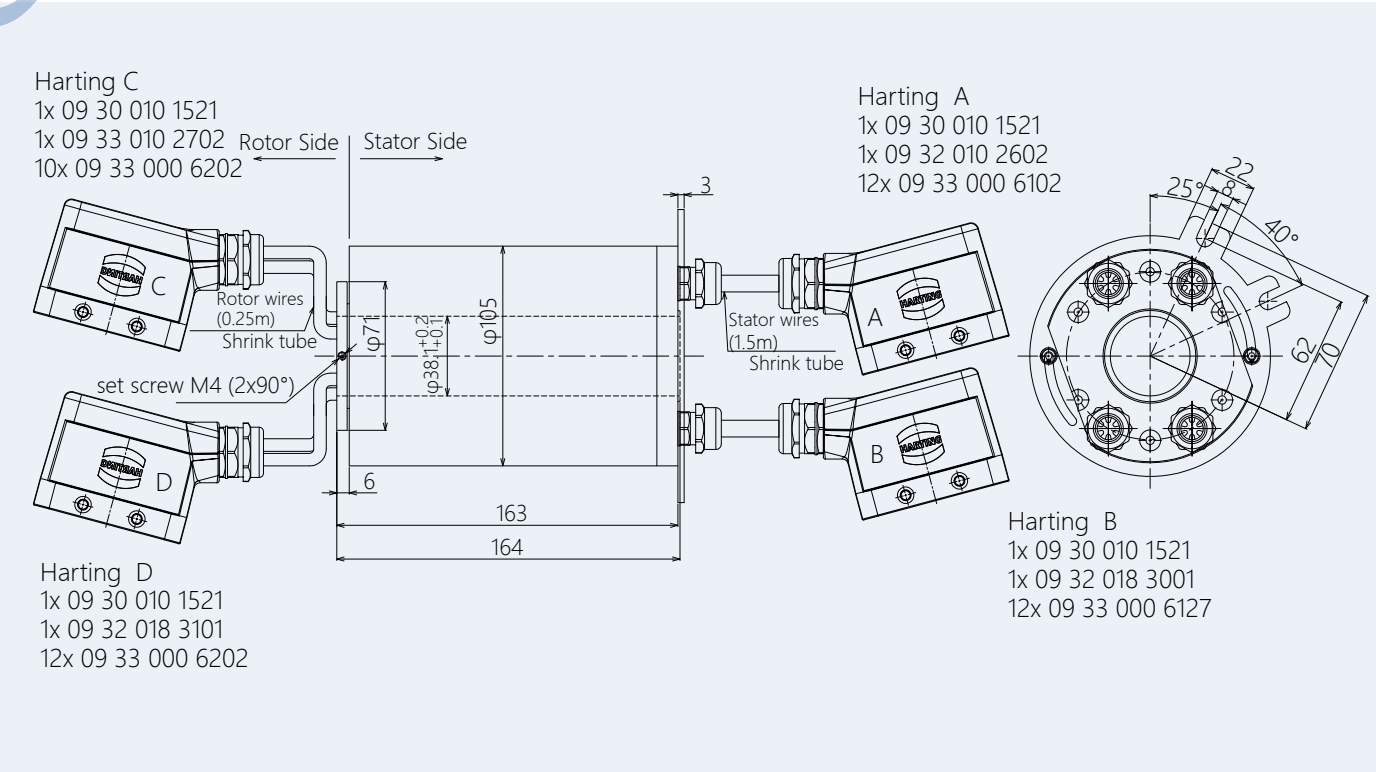
- Transmission power and signal
- Ultra-long service life, free maintenance and strong vibration resistance
- Multiple fiber contacts, military electroplating, wear-resistant, small contact resistance
- Harting joint installation to facilitate mounting and dismantling.

## Advantages

- Powers can be small or 1.25 MW, 1.5 MW, 2.0 MW, 3.0 MW, etc.
- Independent module design to avoid interference
- Temperature control system is optional.

Wind Turbine Slip Ring	
Model	Applications
SPT038-0722-12S	wind turbine generator

## Outline drawings



# Construction Machinery Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of circuits	14CKT	Rotating speed	0~100rpm	Temperature	-30°C~+80°C
Current	3×30A+9S+2×CANBUS+1×throttle signal	Contact material	Precious metal	Humidity	≤95%RH
Voltage	36VDC	Housing material	Aluminum alloy	Protection Grade	IP65
Dielectric strength	≥500VAC@50Hz	Wire type	4.0/0.75mm <sup>2</sup> FLRY-B/CANBUS	Others	
Insulation resistance	≥500MΩ@500VDC	Wire length	Stator side:2.4m/ CANBUS 3.4m Rotor side:1.7m	Life span	Can be customized

## Features

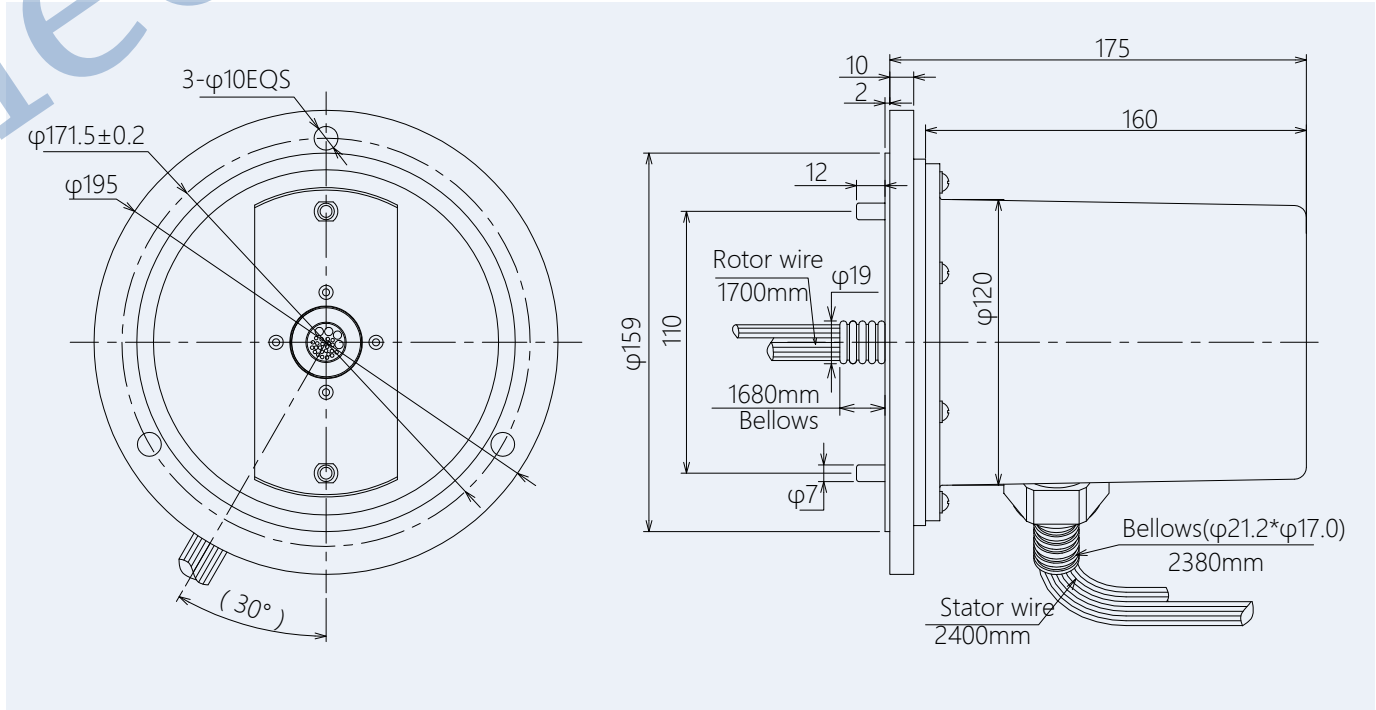
- Simultaneous transmission of power and signal
- Standard installation , protection grade IP67
- Maintenance-free

## Advantages

- Excellent water-proof performance, protection grade up to IP67, fits to work in outdoor environment
- Multiple channels for power, general signals, throttle signal and CANBUS signal, etc. Able to integrate encoder.
- Meet the requirements of crane models with 12T~350T lifting capacity

Construction Machinery	
Model	Applications
LPTS000-0330-1105	25T Truck Crane

## Outline drawings



# Construction Machinery Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of circuits	14CKT	Rotating speed	0~100rpm	Temperature	-30°C~+80°C
Current	3×30A+9S+2×CANBUS	Contact material	Precious metal	Humidity	≤95%RH
Voltage	36VDC	Housing material	Aluminum alloy	Protection Grade	IP65
Dielectric strength	≥500VAC@50Hz	Wire type	4.0/0.75mm²FLRY-B /CANBUS	Others	
Insulation resistance	≥500MΩ@500VDC	Wire length	Stator: 2.4m Rotor: 1.7m CANBUS: 3.4m	Life span	Can be customized

## Features

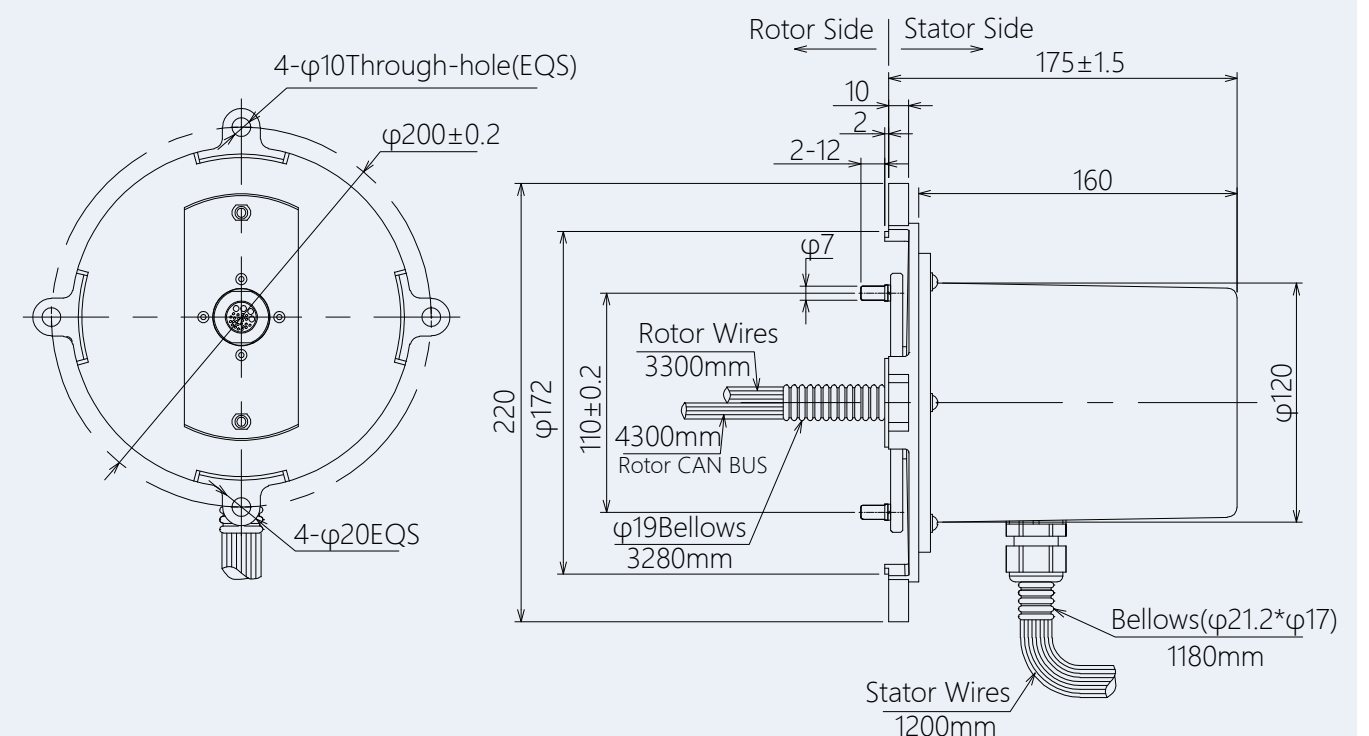
- Simultaneous transmission of power and signal
- Up-side-down installation , protection grade IP67
- Maintenance-free

## Advantages

- Excellent water-proof performance, protection grade up to IP67, fits to work in outdoor environment
- Multiple channels for power, general signals, throttle signal and CANBUS signal, etc. Able to integrate encoder.
- Meet the requirements of crane models with 12T~350T lifting capacity

Construction Machinery	
Model	Applications
LPTS000-0330-1105	50T crane truck

## Outline drawing





# Construction Machinery Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of circuits	16CKT	Rotating speed	0~100rpm	Temperature	-40℃~+85℃
Current	5×30A+12×5A+1× Angle signal	Contact material	Precious metal	Humidity	≤95%RH
Voltage	36VDC	Housing material	Aluminum alloy	Protection Grade	IP65
Dielectric strength	≥500VAC@50Hz	Wire type	4.0/1.0mm <sup>2</sup> FLRY-B	Others	
Insulation resistance	≥500MΩ@500VDC	Wire length	Stator :700mm Rotor :1200mm		

## Features

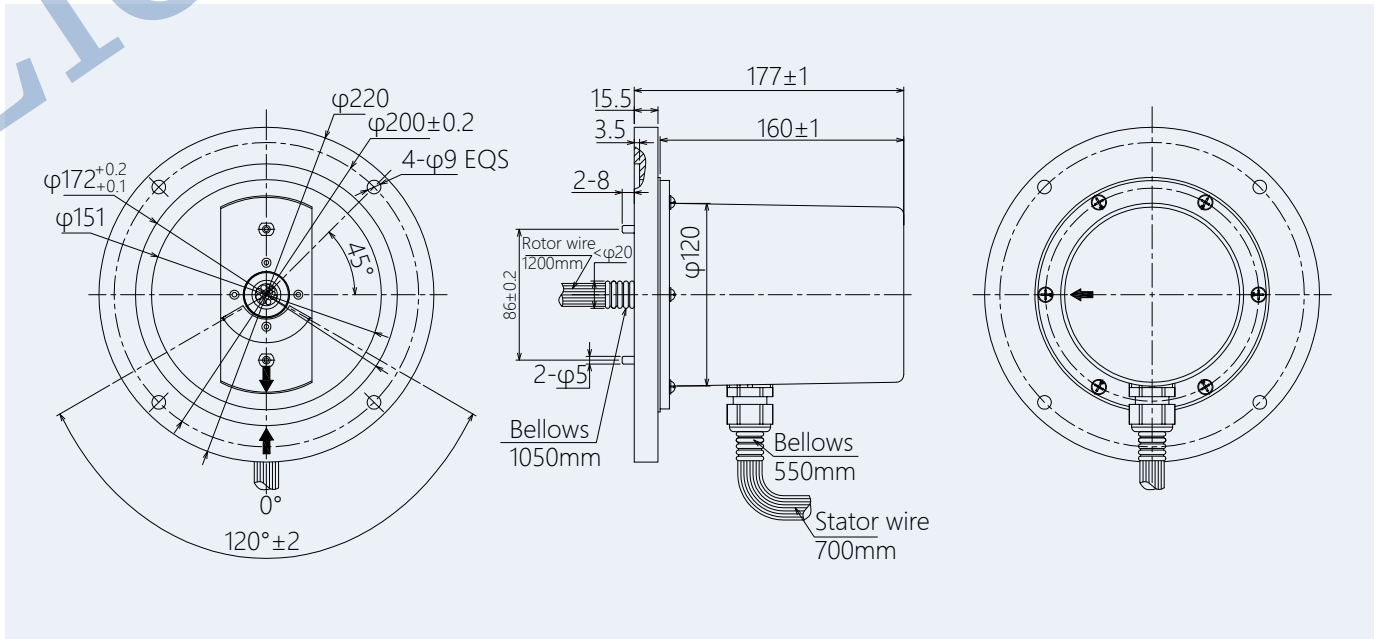
- Simultaneous transmission of power and signal
- Integrated angle loop signal
- Standard installation , protection grade IP67
- Maintenance-free

## Advantages

- National patent winning angle signal transmission structure
- Excellent water-proof performance, protection grade up to IP67, fits to work in outdoor environment
- Multiple channels for power, general signals, throttle signal, CANBUS signal and angle loop signal, etc. Able to integrate encoder.
- Meet the requirements of crane models with 20T~80T lifting capacity

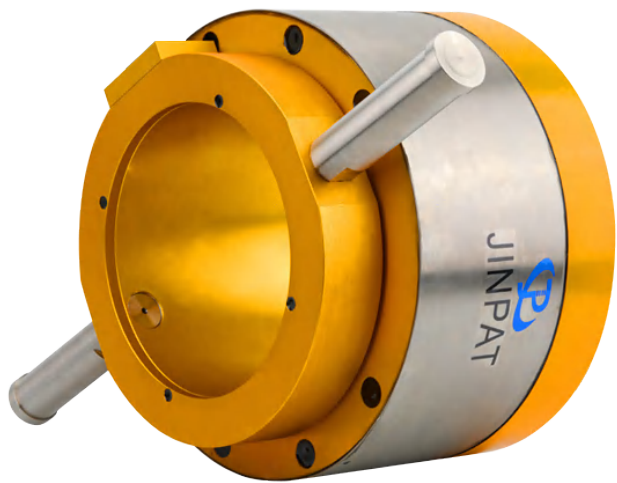
Construction Machinery	
Model	Applications
LPTS000-0340-1305	20~80T crane truck

## Outline drawing





# Construction Machinery Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of circuits	12CKT	Rotating speed	0~100rpm	Temperature	-30°C~+80°C
Current	4×30A+2×10A+3×5A+4×CANBUS+1×Throttle signal	Contact material	Precious metal	Humidity	≤95%RH
Voltage	36VDC	Housing material	Aluminum alloy	Protection Grade	67
Dielectric strength	≥500VAC@50Hz	Wire type	4.0/2.0/0.75mm²FLRY-B/CANBUS	Others	
Insulation resistance	≥500MΩ@500VDC	Wire length	Stator side:3500mm Rotor side:1500mm	Life span	Can be customized

## Features

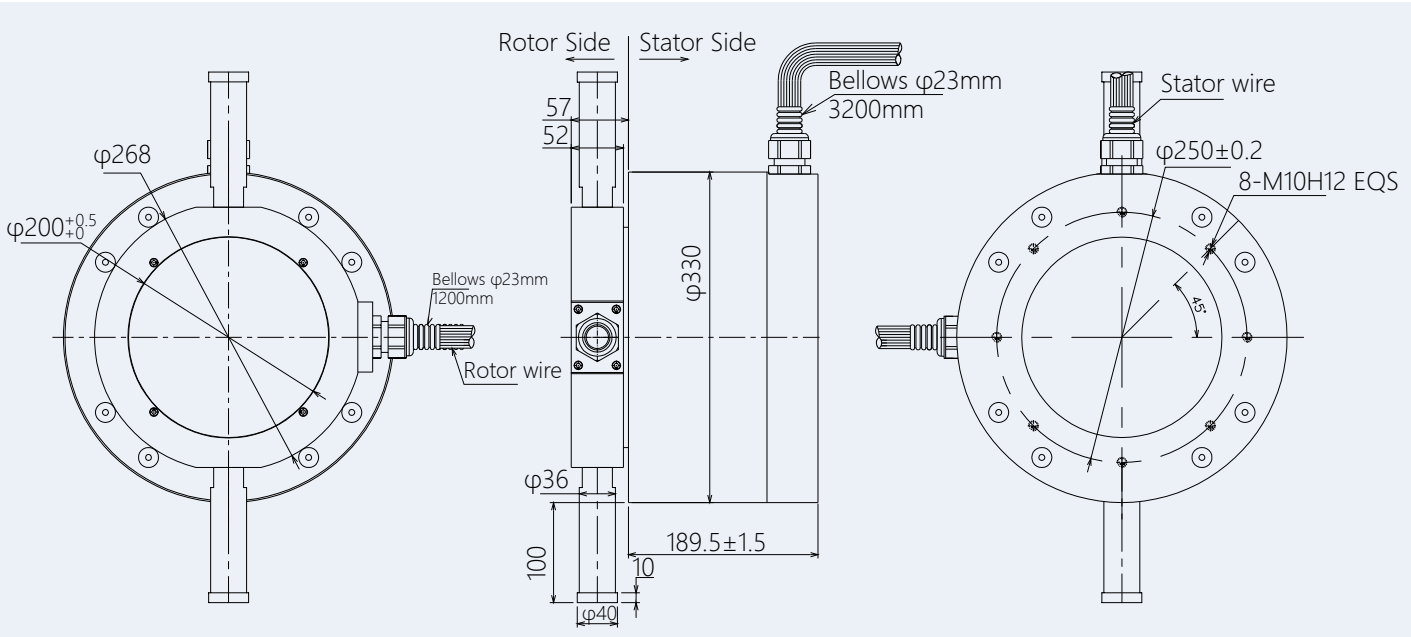
- Simultaneous transmission of power and signal
- Large through-bore design
- Standard installation , protection grade IP67
- Maintenance-free

## Advantages

- Excellent water-proof performance, protection grade up to IP67, fits to work in outdoor environment
- Multiple channels for power, general signals, throttle signal and CANBUS signal, etc.
- Meet the requirements of crane models with 12T~350T lifting capacity
- Large through-bore series, bore diameter 200mm

Construction Machinery	
Model	Applications
LPT200-0430-0210-06S	100T All terrain crane

## Outline drawings



# Construction Machinery Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of circuits	18CKT	Rotating speed	0~100rpm	Temperature	-30°C~+80°C
Current	4×40A+12S+2×CANBUS	Contact material	Precious metal	Humidity	≤95%RH
Voltage	220VAC	Housing material	Aluminum alloy	Protection Grade	65
Dielectric strength	≥500VAC@50Hz	Wire type	4.0/1.0mm <sup>2</sup> FLRY-B /CANBUS	Others	
Insulation resistance	≥500MΩ@500VDC	Wire length	Stator side:2500mm Rotor side:2500mm		

## Features

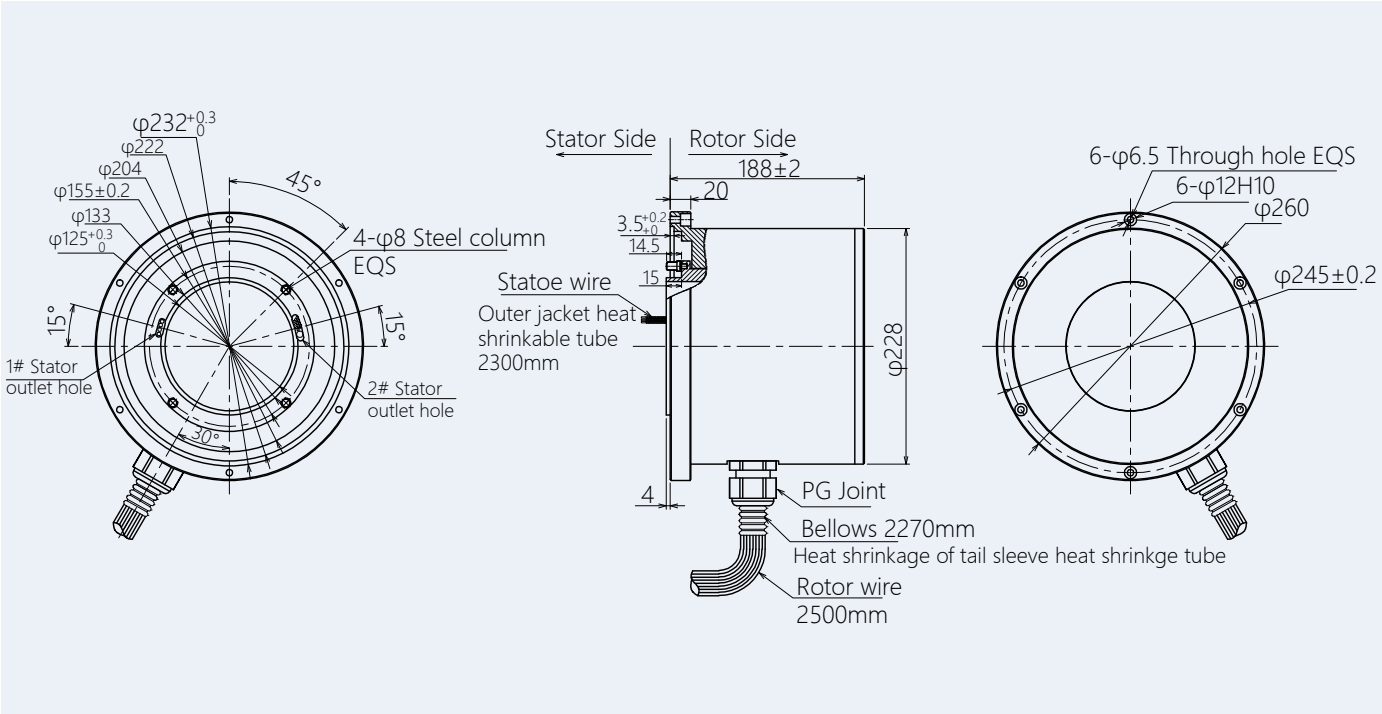
- Simultaneous transmission of power and signal
- Large through-bore design
- Standard installation , protection grade IP67
- Maintenance-free

## Advantages

- Excellent water-proof performance, protection grade up to IP67, fits to work in outdoor environment
- Multiple channels for power, general signals and CANBUS signal, etc.

Construction Machinery	
Model	Applications
LPTS000-0440-14S	Aerial ladder fire truck

## Outline drawings



# Turntable Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of circuits	135CKT	Rotating speed	0~300rpm	Temperature	-20°C~+60°C
Current	4x15A+22x10A+13x5A+72x2A+2E2+3x1553B	Contact material	Precious metal/ Gold to Gold	Humidity	≤60%RH
Voltage	400VAC/48VDC	Housing material	Aluminum alloy	Protection Grade	IP44
Dielectric strength	≥1000VAC@50Hz ≥300VAC@50Hz (signal)	Wire type	AWG14/17/22 /26# 2-core shielded twisted pair wire/ 1553B/network cable	Others	
Insulation resistance	≥500MΩ@500VDC ≥100MΩ@300VDC (signal)			Life span	Can be customized
Electrical noise	≤10mΩ(at 50rmp)	Wire length	Rotor side: 1.5m Stator side: 1.5m		

## Features

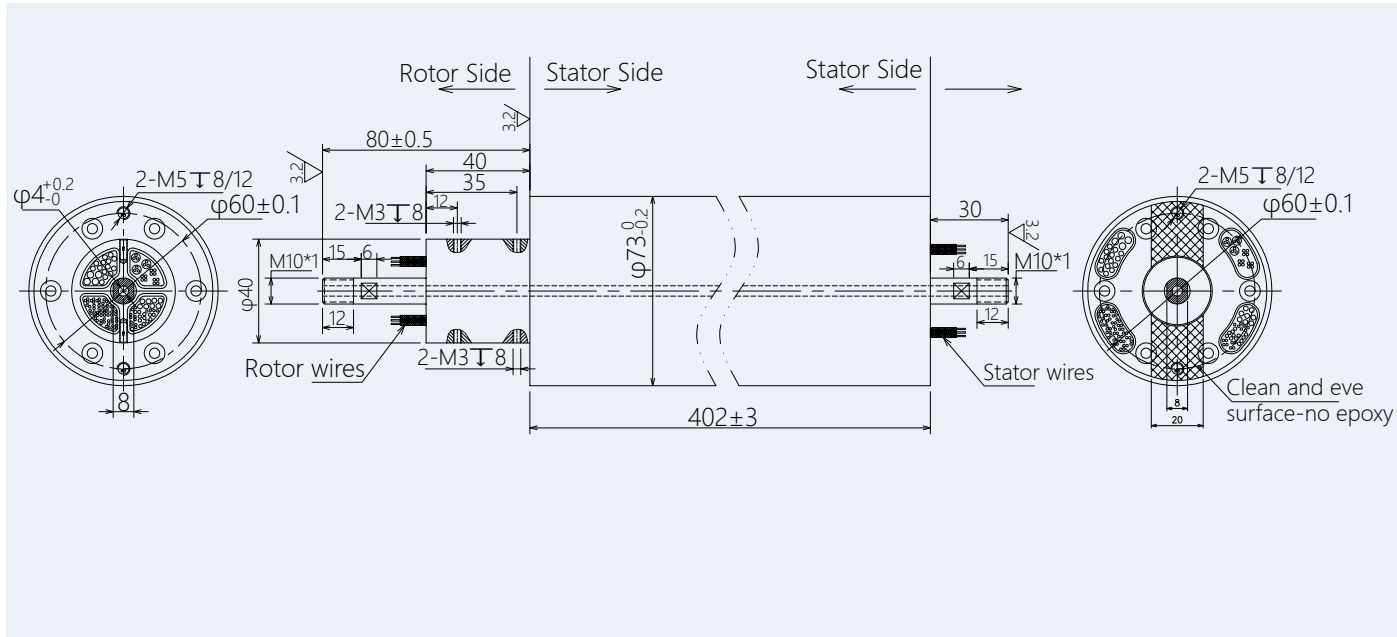
- Simultaneous transmission of power and signal
- Adopts gold-to-gold contact to transmit signal
- Long service life, maintenance-free
- Compact structure, main shaft is equipped with 4mm gas channel

## Advantages

- Able to integrate up to 135 channels
- Module design, guarantees consistency of the products
- Compact structure, small size
- Adopt special soft wire

Turntable Slip Ring	
Model	Applications
LPT004-073-0415-2210-1305-7202-02E2-03S	2D simulation turntable

## Outline drawings



# Turntable Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of circuits	88CKT	Rotating speed	0~100rpm	Temperature	-20°C~+50°C
Current	10x21A+5x14A+12x5A+15x2A+4x1A+20x Signal+2xE2+PE	Contact material	Precious metal/ gold-to-gold	Humidity	≤60%RH
Voltage	700/350/400VAC /24VDC	Housing material	Aluminum alloy	Protection grade	IP44
Dielectric strength	≥1000VAC@50Hz ≥300VAC@50Hz (signal)	Wire type	AWG10#single core wire(TY-CO-like)/AWG24#4-core shielded twisted pair wire(Tyco-like) /AWG22#2-core shielded twisted pair wire(TYCO-like)	Others	
Insulation resistance	500MΩ@500VDC 100MΩ@300VDC (signal)			Life span	Can be customized
Electrical noise	≤10mΩ(at 50rpm)	Wire length	Rotor side : 2m Stator side : 2m		

## Features

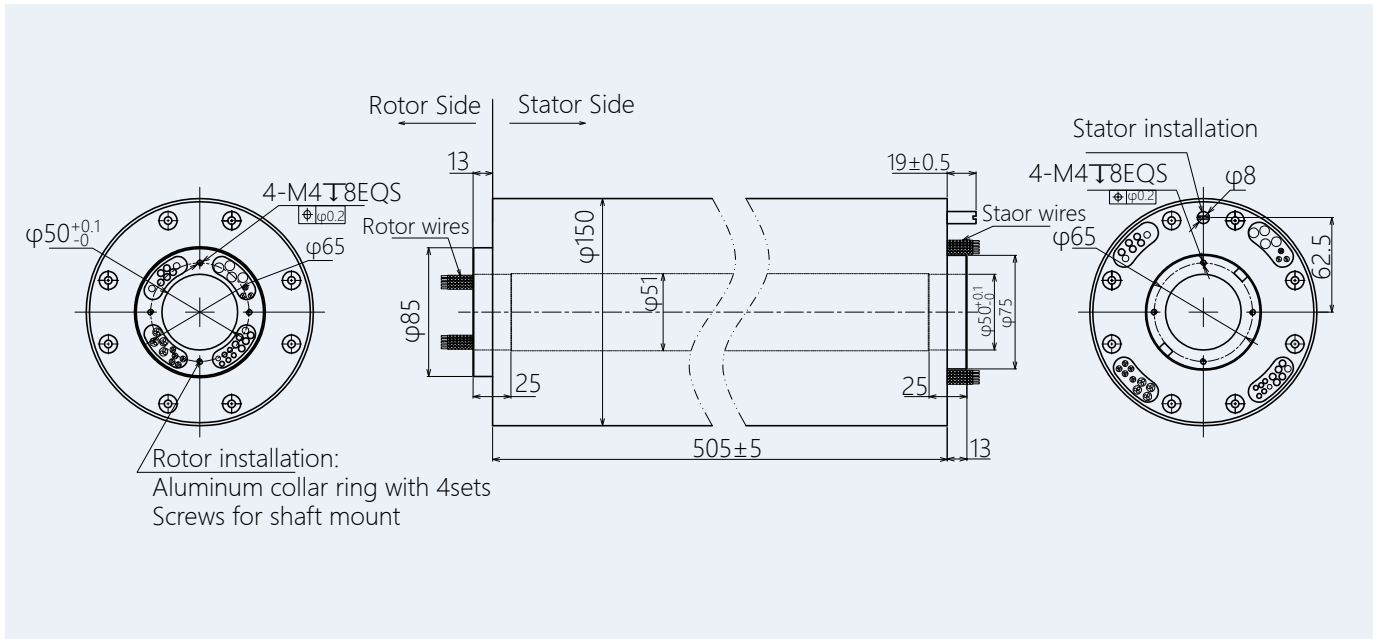
- Simultaneous transmission of power and signal
- Adopts gold-to-gold contact
- Voltage: 700VAC
- Maintenance-free

## Advantages

- Able to integrate up to 88 channels
- Module design, guarantees consistency of the products
- Compact structure, small size
- Adopts special soft wire

Turntable Slip Ring	
Model	Applications
LPT050-1021-0514-1205-1502-0401-20S-02E2	Two-axis simulation turntable

## Outline drawings



# Turntable Slip Rings

Electrical & Electronics		Mechanical		Enviromental	
Number of circuits	104CKT	Rotating speed	0~100rpm	Temperature	-20°C~+60°C
Current	40x20A+64x5A	Contact material	Precious metal	Humidity	≤70%RH
Voltage	380VAC/24VDC	Housing material	Aluminum alloy	Protection Grade	IP56
Dielectric strength	≥1000VAC@50Hz ≥300VAC@50Hz (signal)	Wire type	AWG12#Teflon /0.3mm2 8-core shielded twisted pair wire	Others	
Insulation resistance	500MΩ@500VDC 100MΩ@300VDC (signal)	Wire length	Rotor side : 12m Stator side: 3m	Life span	Can be customized
Electrical noise	≤70mΩ(at 50rpm)				

## Features

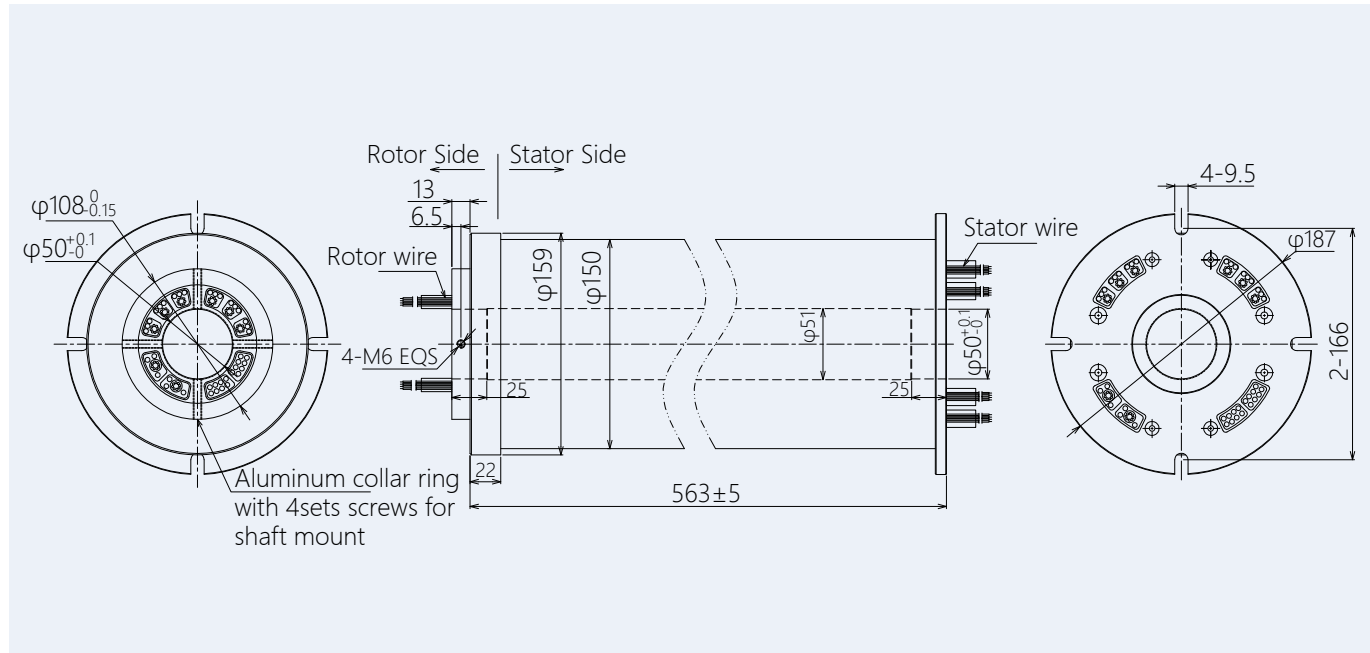
- Simultaneous transmission of low-power and signal
- Protection grade IP56
- Arranges wire exits according to the stations
- Maintenance-free

## Advantages

- Able to integrate up to 240 channels
- Module design, guarantees consistency of the products
- Compact structure, small size
- Adopts special soft wire

Turntable Slip Ring	
Model	Applications
LPT050-4020-6405	8-station CNC polishing machine

## Outline drawings





# Explosion-proof Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of circuits	11CKT	Rotating speed	0~5rpm	Temperature	T3
Current	6x200A+1xPE+5x63A	Contactmaterial	Precious metal/ copper graphite	Humidity	≤60%RH
Voltage	440VAC	Housingmaterial	Stainless steel 304	Protection Grade	IP65
Dielectric strength	≥2500VAC@60Hz ≥1000VAC@50Hz (signal)	Wire type	70mm <sup>2</sup> /AWG6# Teflon	Others	
Insulation resistance	≥500MΩ@1000VDC ≥500MΩ@500VDC (signal)	Wire length	/		
		Life span		Can be customized	

## Features

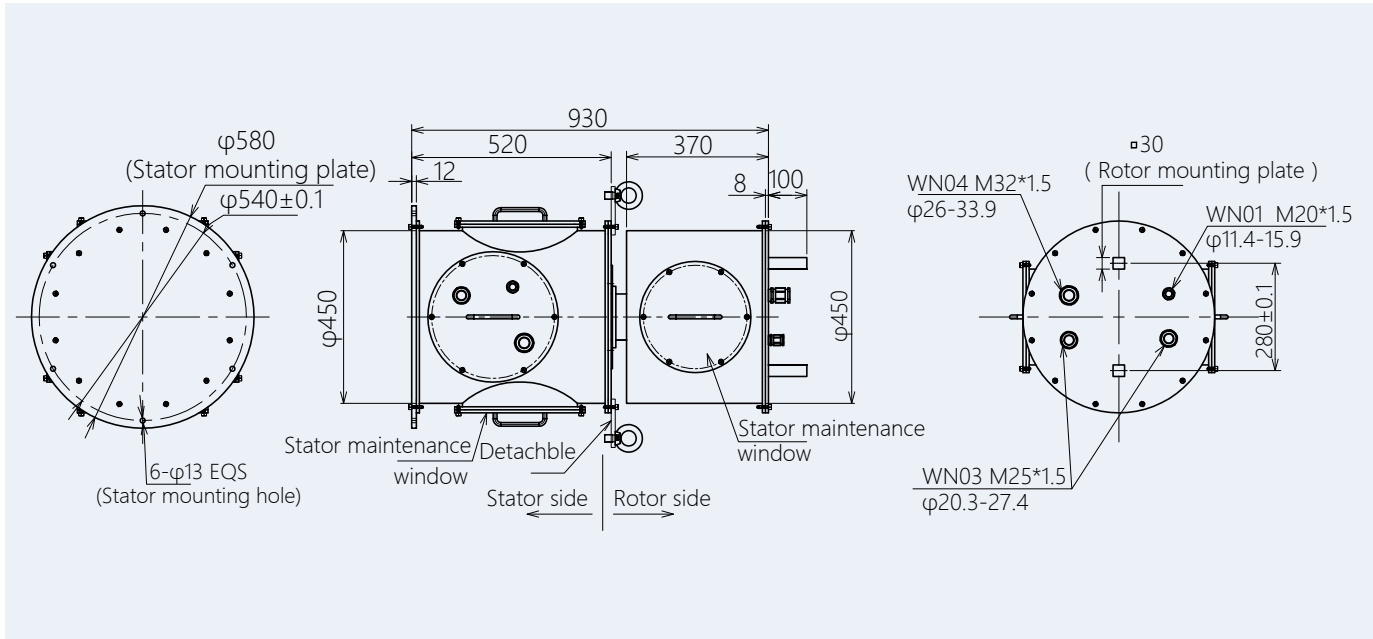
- Simultaneous transmission of high power and signal
- Explosion-proof classification: Ex d IIB
- Temperature group: T3 ( 200°C )
- Adopts imported graphite brush
- Adopts stainless steel 304 as housing material

## Advantages

- Explosion-proof slip ring is highly safe and reliable, which fits to work in explosive environments like oil exploitation platform, dust workshop, chemical equipment and spraying atmosphere, etc.

Explosion-Proof Slip Ring	
Model	Applications
LPA000-05200-01PE-0563Ex	Offshore oil exploitation platform

## Outline drawings



# Explosion-Proof Slip Rings

Electrical & Electronics		Mechanical		Enviromental	
Number of circuits	7CKT	Rotating speed	0~20rpm	Temperature	T3
Current	7x10A	Contact material	Precious metal	Humidity	≤60%RH
Voltage	220VAC	Housing material	Aluminum alloy	Protection Grade	IP65
Dielectric strength	≥1000VAC@50Hz	Wire type	W7F46PP-11.80mm 7-core fluoroplastic F46 double steel wire armor	Others	
Insulation resistance	≥500MΩ@500VDC	Wire length	Rotor side:300mm Stator side:300mm	Life span	Can be customized

## Advantages

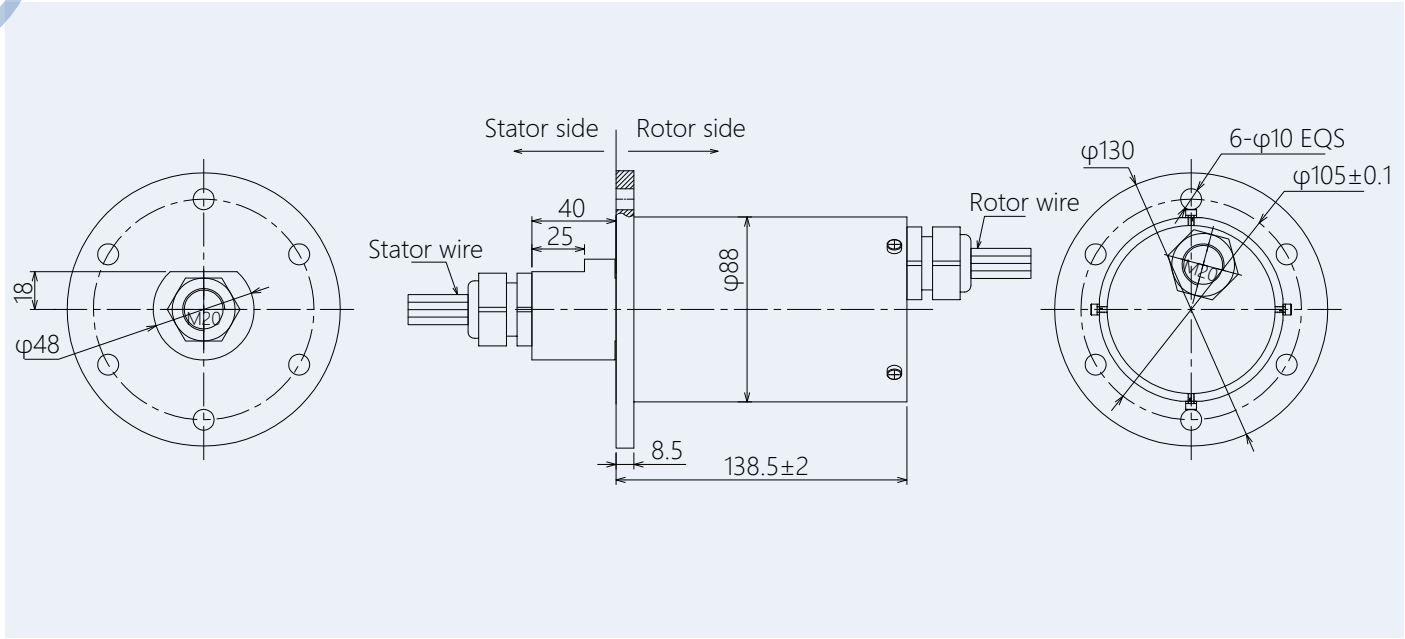
- Transmits signal
- Explosion-proof classification: Ex d IIB
- Temperature group: T4 ( 135℃ )

## Features

- Explosion-proof slip ring is highly safe and reliable, which fits to work in explosive environments like oil exploitation platform, dust workshop, chemical equipment and spraying atmosphere, etc.

Explosion-Proof Slip Ring	
Model	Shale gas exploitationplatform
LPT000-0710EX	Shale gas exploitation platform

## Outline drawings



# Integral Pancake Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of circuits	6CKT	Rotating speed	0~100rpm or higher	Temperature	-40°C~+80°C
Current	10A/signal(optional)	Contact material	Precious metal	Humidity	≤60%RH
Voltage	240VAC/DC	Housing material	Aluminum alloy	Protection Grade	IP51
Dielectric strength	500VAC@50Hz	Torque	0.3N.m(for reference)	Others	
Insulation resistance	≥500MΩ@500VDC	Wire type	Optional		
Electrical noise	≤30mΩ(at 50rpm)	Wire length	Stator side : 300mm Rotor side : 300mm		
				Life span	Can be customized

## Features

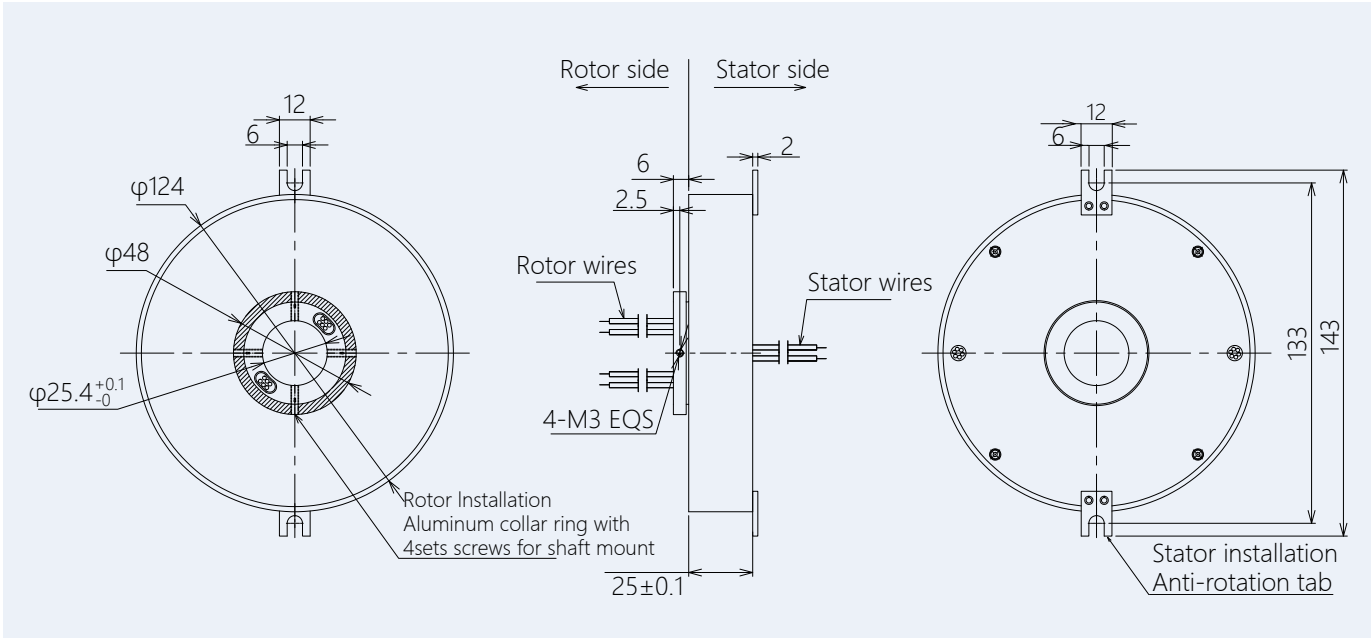
- 6 channels for current, 10A each
- Two precise rolling bearings contribute to low torque
- Demonstrates high precision, excellent transmit performance, smooth and reliable operation

## Advantages

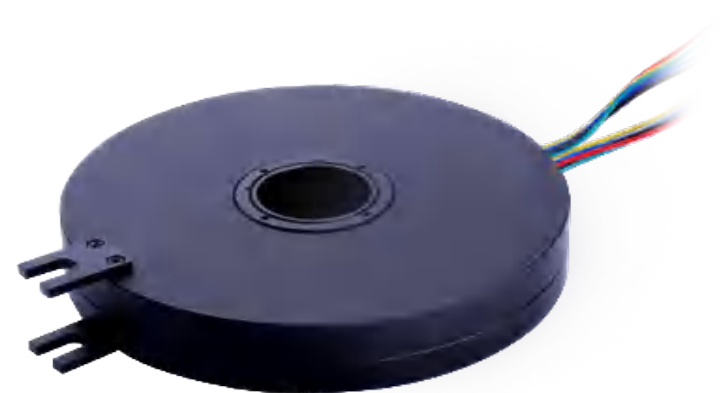
- Super thin, only 25mm, especially designed for applications with limited axial installation space, maintenance-free
- Low torque, two precise bearings, smooth operation
- Adopts advanced imported brush shrapnel to achieve longer service life

Integral Pancake Slip Rings	
Model	Applications
LPK025-0610	Industrial Automation

## Outline drawings



# Integral Pancake Slip Rings



Electrical & Electronics		Mechanical		Enviromental	
Number of circuits	2CKT	Rotating speed	0~100rpm or higher	Temperature	-55℃~+80℃
Current	4A/signal(optional)	Contact material	Gold-to-gold	Humidity	≤60%RH
Voltage	240VAC/24VDC	Housing material	Aluminum alloy	Protection Grade	IP54
Dielectric strength	500VAC@50Hz	Torque	0.5N.m(for reference)	Others	
Insulation resistance	≥500MΩ@500VDC	Wire type	AWG20# Tin plated Teflon	Life span	Can be customized
Electrical noise	≤30mΩ(at 50rpm)	Wire length	Stator : 300mm Rotor : 300mm		

## Features

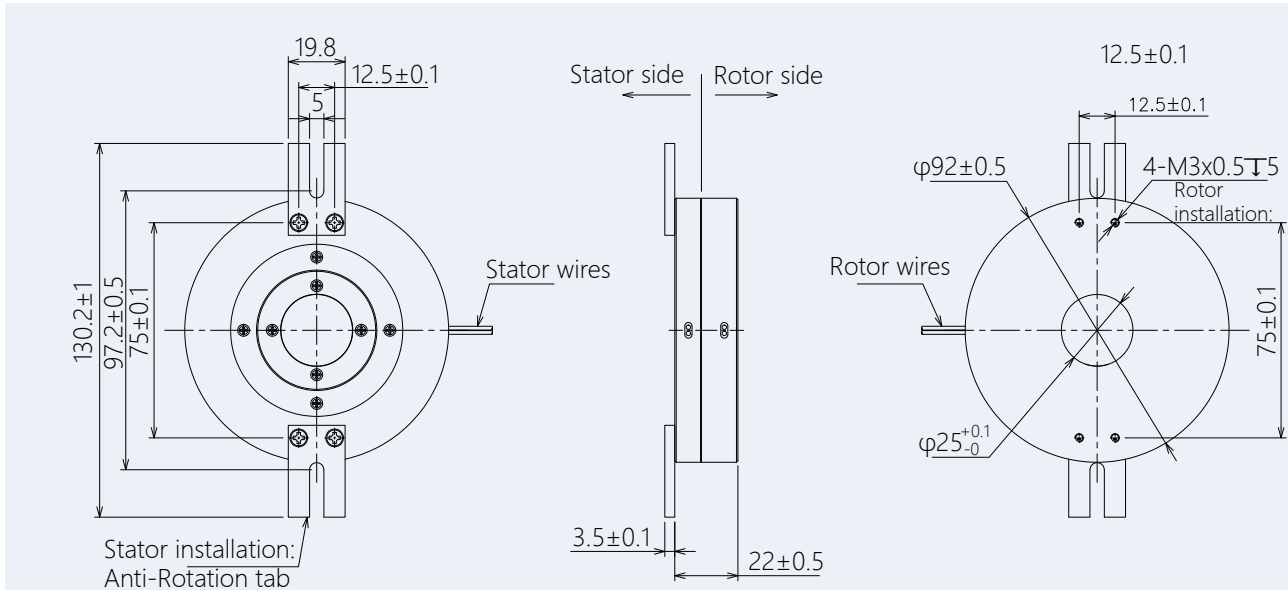
- Sing-row rolling bearing, high protection grade
- Simultaneous transmission of power and signal
- Compact structure to fit in small application with limited installation space
- Maintenance-free, low torque
- Demonstrates high precision, excellent transmit performance, smooth and reliable operation

## Advantages

- Super thin, only 22mm, especially designed for applications with limited axial installation space, maintenance-free
- High protection grade up to IP54, especially designed for humid, dusty and heavily polluted environments.
- Gold-to-gold contact guarantees low friction and long service life
- For the excellent performances, the slip rings are applied in vehicle onboard equipment system, and win favorable reputation in the market

Integral Pancake Slip Rings	
Model	Applications
LPK025-0204	Military airborne

## Outline drawings



# LPPG Pneumatic Hydraulic Rotary Joints



Electrical & Electronics		Mechanical		Enviromental	
Number of channels	4CKT	Temperature	0 ~ 60rpm	Rotating speed	-40℃~+60℃ or as requested
Gas pipe outer diameter (mm)	φ10mm			Humidity	≤60%RH
Maximum operating pressure	25Mpa	Housing material	Metal	Protection grade	IP67
Medium	Compressed air, inertgas, cool water and hydraulicoil, etc.			Others	
				Life span	Can be customized

## Features

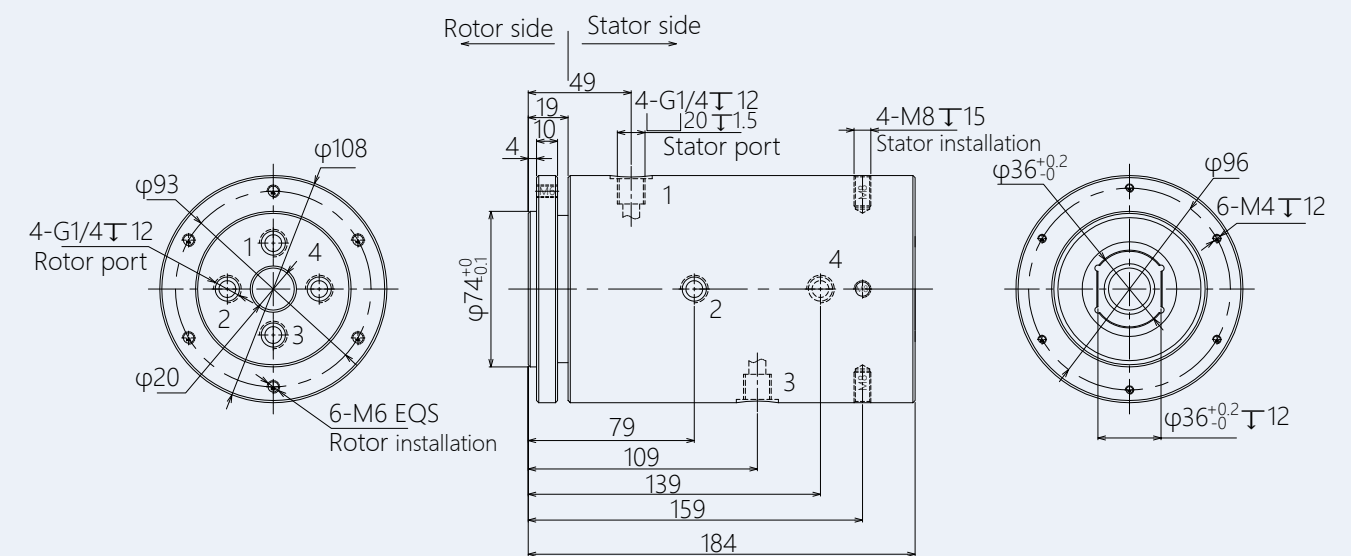
- Medium: compressed air, inert gas, cool water and hydraulic oil, etc.
- G1/4 connector, optional size
- Maximum operating pressure up to 25Mpa (higher operating pressure customizable)

## Advantages

- Able to transmit various media while implementing 360°rotation
- Able to function smoothly and normally in harsh environments like humid atmosphere and undersea.
- Adopts top German dynamic rotary sealing structure, achieves ideal intact sealing in a efficient way

LPG Pneumatic Hydraulic Rotary Joints	
Model	Applications
LPG020-04A	Construction Machinery Slip Rings

## Outline drawings





Gas-Liquid Electric Integrated Slip Rings



Hydraulic Slip Ring		Mechanical		Electrical & Electronics	
Number of channels	4 (Can be customized)	Rotating speed	0 ~ 100rpm	Number of circuits	12
Gas pipe outer diameter (mm)	φ10mm	Contact material	Precious metal	Current	240A , 10xsignal
Maximum operating pressure	5Mpa (Can be customized)	Housing material	Metal (optional)	Voltage	240V AC/DC
Medium	Compressed air, inert gas, cool water and hydraulic oil, etc.	Wire type	AAWG20#/AWG14# Teflon wire	Dielectric strength	≥500VAC@50Hz
Environmental		Wire length	300mm (optional)	Insulation resistance	500mΩ@500VDC
Temperature	-20℃~+60℃	Others			
Humidity	≤60%RH	Life span	Can be customized	Electrical noise	≤30mΩ
Protection grade	IP65 ( optional )				

Features

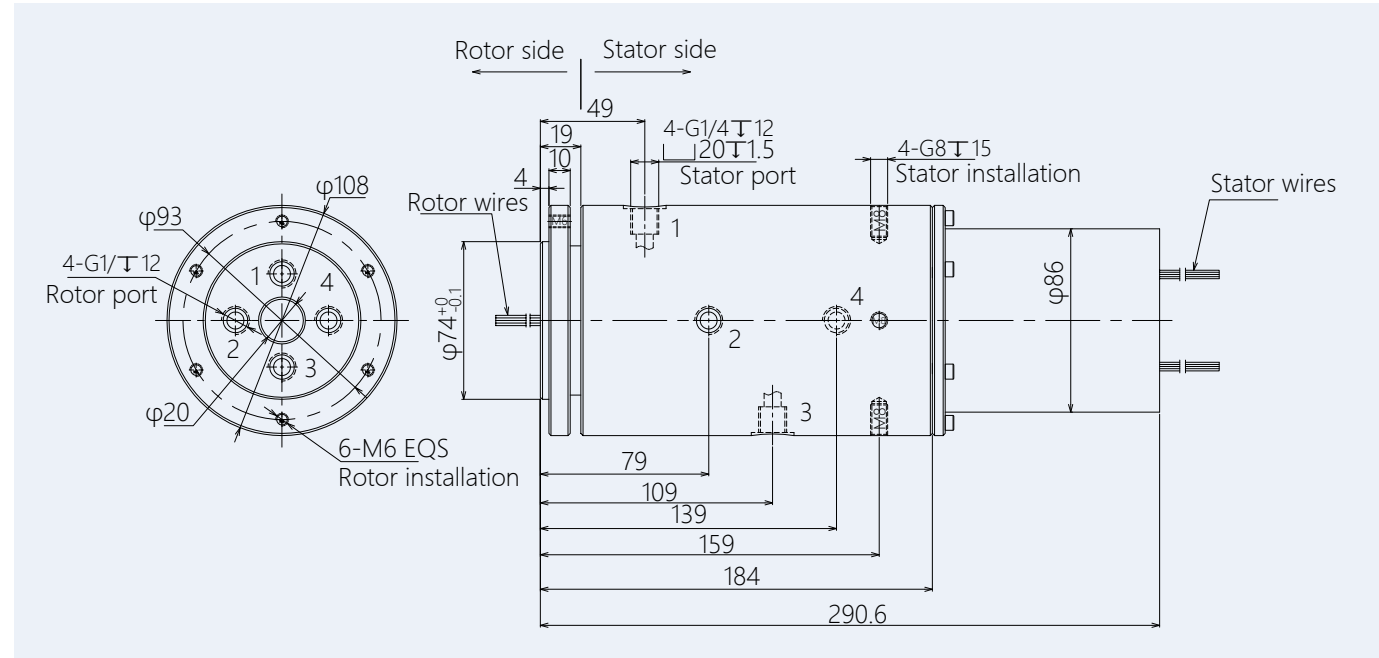
- Transmits power, encoder signal, electromagnetic valve signal, switch signal,RS422, RS485, Can-Bus, Ethernet signal and USB signal, etc.
- Medium: compressed air, nitrogen, cool water and hydraulic oil, etc.
- Transmits graphic and video signal, even high-definition signal while implementing 360°rotation.

Advantages

- Able to function smoothly and normally in harsh environments like humid atmosphere and undersea.
- Able to transmit power and various signals simultaneously.
- Adopts top German dynamic rotary sealing structure, achieves ideal intact sealing in a efficient way

Gas-Liquid Electric Integrated Slip Ring	
Model	Applications
LPT-000-0240-10S-04A	Automation Equipment

Outline drawings



## Typical Application of JINPAT Slip Rings



Video Surveillance



VR



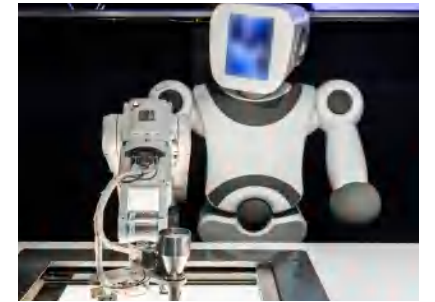
Drone



Radar Antenna



Electro-Optical Pod



Robot



Construction Machinery



Automation Equipment



Offshore Equipment



Charging Pile



Entertainment Equipment



Total Station Detector

JINPAT slip rings have been sold to more than 100 countries and JINPAT has established long-term friendly cooperative relations with many well-known research institutions, universities and multinational companies. In order to better serve customers, JINPAT is looking for distributors around the world.

