

LPT Through Bore - Standard



● Features

- ⊙ Transmit analog and digital signal
- ⊙ The power and signal are mixed transmitted, and the signal categories are as follows:
 - ⊙ Ethernet: Rate (10Mbps/100Mbps/1000Mbps)
 - ⊙ Industrial Ethernet: EtherNet , EtherCAT ,ProPNet, Powerlink , SercosIII/IP, etc.
 - ⊙ HD video: SDI, LVDS, etc.
 - ⊙ Serial communication: RS232, RS485, RS422, etc.
 - ⊙ Universal Serial Bus: USB2.0
 - ⊙ Industrial Fieldbus: CANBus,ProPBus, InterBus, CC-Link, DeviceNet, etc.
 - ⊙ Sensor signal: thermal resistance, thermocouple, strain gauge, etc.
- ⊙ Long service life, maintenance-free
- ⊙ Easy to install



● Technical specification parameters

Electrical & Electronics		Mechanical		Environmental	
Number of Circuits	06/12/18/24	Rotating Speed	0~300rpm	Temperature	Industrial: -20°C~+60°C Military: -55°C~+80°C
Current	5A(Signal)/10A/15A	Contact Material	Engineering plastic	Humidity	95%,100%RH or higher
Voltage	380VAC/DC	Housing Material	Aluminum	Protection Grade	IP50
Dielectric Strength	1000VAC@50Hz	Torque	≤0.1N.m/6 circuits, +0.03N.m/6 circuits	Others	
Insulation Resistance	≥500MΩ@500VDC	Wire Type	Teflon or others	Life Span	10 million (customizable)
Dynamic Contact Resistance	Min 1mΩ	Wire Length	rotor/stator: 300mm		

● Selection table

LPT Standard Through-bore Slip Rings						
Model	ID (mm)	OD (mm)	Voltage	Current	Circuits	Rotating Speed (rpm)
LPT012	φ12.7	φ53	240VAC/DC	5A/Signal	6~24	300
		φ56		5A/Signal		
				10A		
LPT025	φ25.4	φ86	240VAC/DC	5A/Signal	6~24	300
			380VAC/DC	10A		
				15A		
LPT038	φ38.1	φ99	240VAC/DC	5A/Signal	6~24	300
			380VAC/DC	10A		
				15A		
LPT050	φ50	φ119	240VAC/DC	5A/Signal	6~24	300
				10A		
				15A		
LPT060	φ60	φ135	240VAC/DC	5A/Signal	6~24	300
				10A		
				15A		
LPT070	φ70	φ135	240VAC/DC	5A/Signal	6~24	300
				10A		
				15A		
LPT080	φ80	φ160	240VAC/DC	5A/Signal	6~24	300
				10A		
				15A		
LPT096	φ96	φ185	240VAC/DC	5A/Signal	6~24	300
				10A		
				15A		
LPT120	φ120	φ207	240VAC/DC	5A/Signal	6~24	300
				10A		
				15A		
LPT150	φ150	φ250	240VAC/DC	5A/Signal	6~24	300
				10A		
				15A		
LPT180	φ180	φ298	240VAC/DC	5A/Signal	6~24	300
				10A		
				15A		

- The standard LPT models support the following signal types: serial communication, RTD signals, thermocouple signals, sensor signals, and encoder signals.
- Note: For additional signal transmission types, such as Ethernet, USB, HDMI, DP, SDI, GMSL, CameraLink, MIPI, LVDS, analog HD video signals, and Peldbus, please contact us.

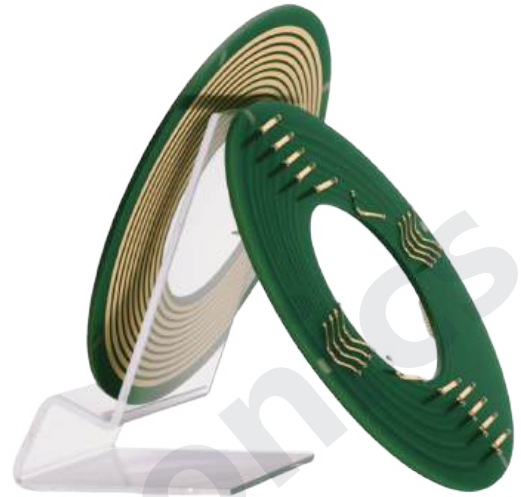
● Features

Minimum thickness up to 5.4m

Transmit analog and digital signal

The power and signal are mixed transmitted, and the signal categories are as follows:

- ⊙ Ethernet: Rate (10Mbps/100Mbps/1000Mbps)
- ⊙ Industrial Ethernet: ProPNet, Powerlink, SercosIII, EtherCAT, EtherNet/IP, etc.
- ⊙ HD video: SDI, LVDS, etc.
- ⊙ Serial communication: RS232, RS485, RS422, etc.
- ⊙ Universal Serial Bus: USB2.0
- ⊙ Industrial Fieldbus: CANBus, CC-Link, InterBus, DeviceNet, ProPBus, etc.
- ⊙ Sensor signal: thermal resistance, thermocouple, strain gauge, etc.
- ⊙ Shock-resistant, maintenance-free



● Technical specification parameters

Electrical & Electronics		Mechanical		Environmental	
Number of Circuits	1~10 circuits	Rotating Speed	0~100rpm	Temperature	Industrial: -20°C~+60°C
					Military: -55°C~+80°C
Current	5A/Signal	Contact Material	Precious metal/ Gold to gold	Humidity	Below 60%RH
Voltage	240VAC/DC	Housing Material	FR-4	Protection Grade	/
Dielectric Strength	500VAC@50Hz (power) 300VAC@50Hz (signal)	Torque	0.1N.m(Reference)	Others	
				Wire Type	AWG20# Teflon®UL
Insulation Resistance	≥500MΩ@500VDC	Wire Length	Stator:300mm Rotor:300mm		
Dynamic Contact Resistance	≤20MΩ (At the speed of 50rpm)				

● Selection table

LPKS Pancake Slip Rings						
Model	Number of Circuits	Voltage (AC/DC)	Current (A)	OD*Length (L) / (mm)	(ID) (mm)	Reference Circle (D)/ (mm)
LPKS005-0105	1	240V	5	φ34*7	5	30
LPKS005-0205	2	240V	5	φ42*7	5	38
LPKS005-0305	3	240V	5	φ52*7	5	46
LPKS005-0405	4	240V	5	φ60*7	5	54
LPKS005-0505	5	240V	5	φ68*7	5	63
LPKS005-0605	6	240V	5	φ76*7	5	70
LPKS005-0705	7	240V	5	φ84*7	5	78
LPKS005-0805	8	240V	5	φ92*7	5	86
LPKS005-0905	9	240V	5	φ100*7	5	94
LPKS005-1005	10	240V	5	φ108*7	5	102
LPKS019-0905	9	240V	5	φ108*7	19	102
LPKS028-0805	8	240V	5	φ108*7	28	102
LPKS036-0705	7	240V	5	φ108*7	36	102
LPKS045-0605	6	240V	5	φ108*7	45	102
LPKS053-0505	5	240V	5	φ108*7	53	102
LPKS061-0405	4	240V	5	φ108*7	61	102
LPKS069-0305	3	240V	5	φ108*7	69	102
LPKS076-0205	2	240V	5	φ108*7	76	102
LPKS084-0105	1	240V	5	φ108*7	84	102

● This series is divided into an integrated pancake slip ring and a separate pancake slip ring. The integrated pancake slip rings provide vias of different size; the separate pancake slip ring consists of a separate rotor and a stator to meet more stringent height requirements, and can be installed by the customer according to the application environment.

● Features

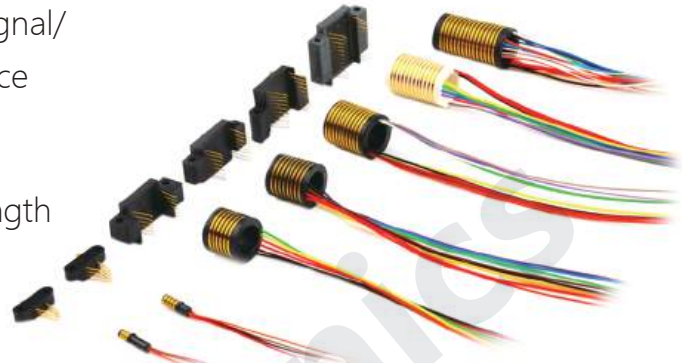
- ⊙ Separated stator and rotor/Transmit power and/or signal/
Low contact resistance/Easy to install/Fit in limited space

Options:

- ⊙ Working Speed/Number of Circuits/Current/Wire Length
- ⊙ Shock-resistant, maintenance-free

Main Applications:

- ⊙ Instruments, meters and measurement equipment
- ⊙ Aviation, military and medical instruments
- ⊙ Aerial camera platform, military/private UAV



● Technical specification parameters

Electrical & Electronics		Mechanical		Environmental	
Number of Circuits	1~15 circuits	Rotating Speed	0-100rpm or higher	Temperature	Industrial: -20°C~+60°C Military: -55°C~+80°C
Current	1-3A per circuit	Contact Material	Gold-to-gold	Humidity	60%RH or higher
Voltage	0-24VAC/DC	Housing Material	/	Protection Grade	/
Dielectric Strength	≥500VAC@50Hz	Torque	/	Others	
Insulation Resistance	≥100MΩ@500VDC	Wire Type	/		
Dynamic Contact Resistance	1mΩ min.	Wire Length	250mm (optional)	Life Span	Customizable

● Selection table

LPS Separate Slip Rings Series				
Model	Number of Circuits	Voltage (AC/DC)	Current (A)	OD*Length (L) / (mm)
LPS-03C	3	240V	3-1A	φ3.8*11.43
LPS-04C	4	240V	4-1A	φ4*10
LPS-06C	6	240V	6-1A	φ14.73*13.2
LPS-08C	8	240V	8-1A	φ14.5*15
LPS-10C	10	240V	10-1A	φ15.73*17.3
LPS-12C	12	240V	12-1A	φ14.7*23
LPS-15C	15	240V	15-1A	φ14.73*27.6

● Our separate slip ring consists of a rotor and a brush stator. With a through hole in the rotor, this slip ring model is compatible with hydraulic channel, pneumatic channel and transmission shaft. Because of its separate design, separate slip ring is able to meet harsh requirements demanded by limited space and special installation in the customer's application. Pin contact is alternative for wire contact.

● Model Description

LPX XXX-XXXX-XXXX-XX - X X

- ⊙ Combination type:
- ⊙ HF for High Frequency,
- ⊙ FO for Fiber Optic
- ⊙ A for Air Over,
- ⊙ L for Liquid Over,
- ⊙ G for Oil Over

⊙ is the number of paths of the combined rotary couplings

- ⊙ Same signals are counted together, different signals are listed in wiring order; special signals (e.g. USB, Ethernet, IF) are listed at the end.
U1/U2/U3: represent USB1.0 / 2.0 / 3.0 respectively
E1/E2/E3: represent 10M / 100M / 1000M Ethernet respectively
MF: represent IF signal (above 30MHz)
Other signals are uniPed with S.

- ⊙ Number of rings and current, number of rings with the same current, if there are several groups with different currents, arranged by current from largest to smallest

- ⊙ For through-hole or half-through-hole sizes, always round to the nearest whole number, or "000" for solids.

- ⊙ LPT: Standard Hollow Shaft Slip Rings / LPTS: Hollow Shaft Slip Rings for Heavy Machinery
LPK: Integral Disk Slip Rings / LPKS: Separate Disk Slip Rings / LPS: Split Disk Slip Rings
LPA: High Current Slip Rings / LPW: Wind Power Slip Rings

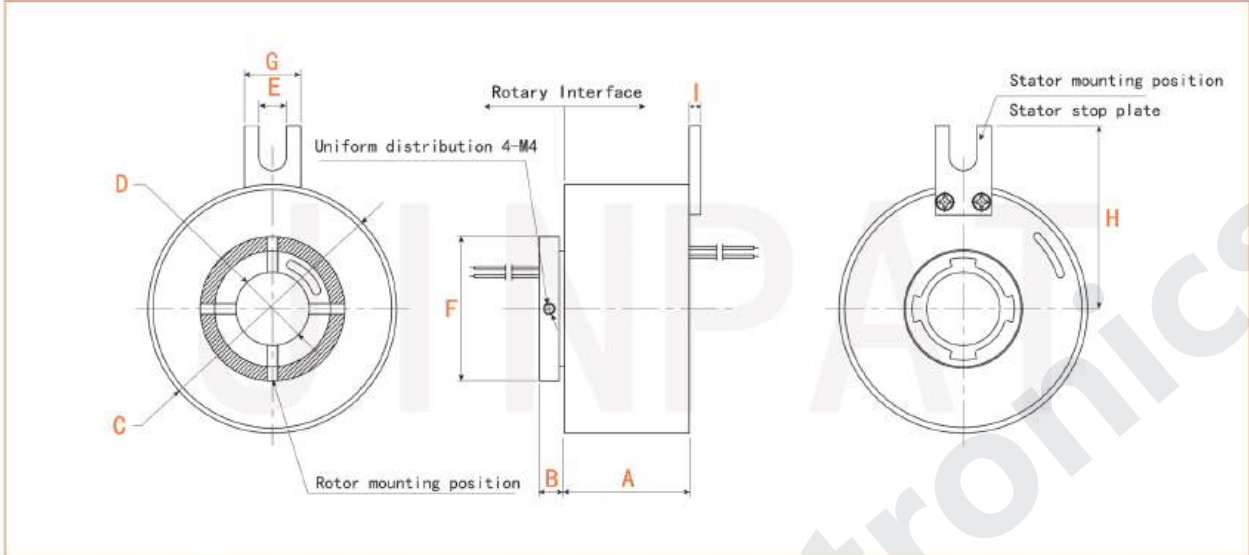
Product Selection Example Description

- Example 1: LPT025-0615-02U2
→ Hollow shaft slip ring, 25mm overbore, 6-way 15A current, 2 sets of USB2.0 signals
- Example 2: LPT000-0210-02E2FS-01A
→ Electrical combination hollow shaft slip ring, solid shaft (no bore), 2-way 10A current, 2 sets of 100Mbps Ethernet signals, with Waterproof (up to IP65), 1 channel over air

● Product Dimension Drawing

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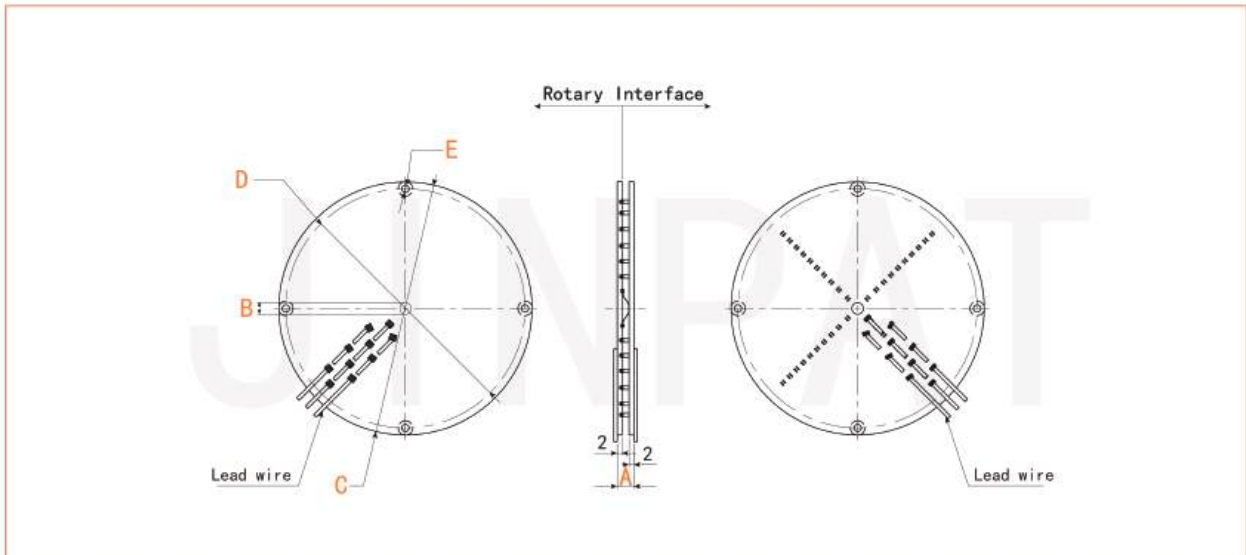
LPT SERIES



Rotating interface: The point where the rotating part meets the stationary part.

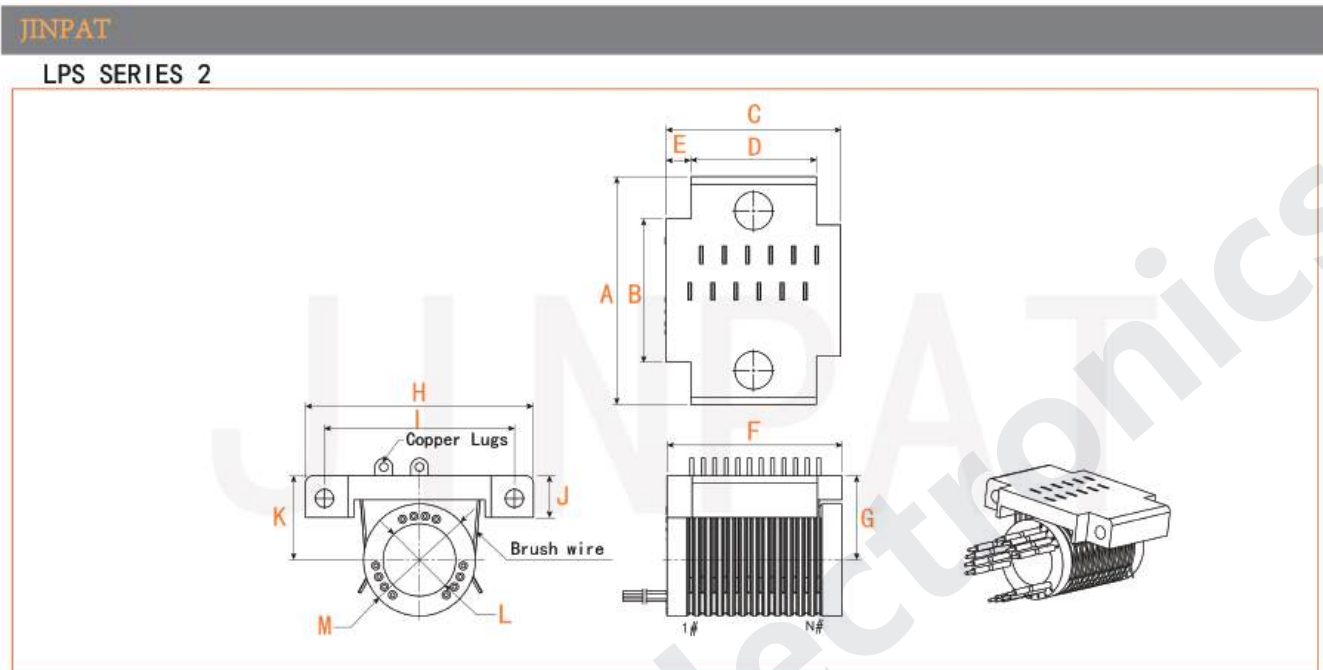
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LPKS SERIES



Rotating interface: The point where the rotating part meets the stationary part.

● Product Dimension Drawing



● Customization options

Note: The following special requirements can be customized, JINPAT most of the basic accessories are standardized, modular, non-standard customization can also greatly reduce the cost and delivery time.

- 1、 Customized rotor and stator outlet and outlet length
- 2、 Due to structural limitations, can be customized in accordance with the specified length or height or external diameter
- 3、 Yasukawa, Panasonic, Siemens and other servo system signals, power lines, and encoder lines mixed slip ring
- 4、 Mixed high-speed data transmission (including Ethernet, USB, RS232, RS485, Profibus, CanBUS, CANOPEN, DeviceNET, CANBUS, CANPUS). CANOPEN, DeviceNET, CC-LINK, ProPNET, EtherCAT and other types of industrial lines).
- 5、 Anti-shock, high temperature and other special environment customization
- 6、 Can be mixed with pneumatic, hydraulic rotary joints integrated pneumatic-electrical-hydraulic slip ring
- 7、 Military grade
- 8、 Waterproof, underwater mode optional, IP65, IP68 optional