JINPAT

Since 1996

RF Rotary Joint

www.electricalslipring.in

Features

- Up to 4 circuits (model with more circuits is customizable)
- Frequency up to 50GHz
- Compact structure with low interference
- Transmit multifarious signals simultaneously
- Ultra low insertion loss and transmission ßuctuation
- Long service life and maintenance-free

Number of Circuits 1/2/3/4(optiongal)
Insertion loss max 0.25dB(Minimum)
Frequency range 1CH:≤50GHz 2CH:≤18GHz
Inserfaces SMA/N/3.5/2.92/2.4/F
VSWR,max 1.2(Minimum)
Peak power,max 10KW(Maximum)

Technical specification parameters

Electrical & Electronics		Mechanical		Environmental	
Channels	1/2/3/4(Optiongal)	Rotating Speed	0~500rpm	Temperature	Industrial: -40℃~+75℃
					Military: -55℃~+85℃
Frequency range	1CH:≤50GHz 2CH:≤18GHz	Interface loads,max	±5N(axial) ±5N(radial)	Storge ambient temperature	-50℃~+85℃
Inserfaces	SMA/N/3.5/2.92/2.4/F	Torque during rotation	1N.cm(Minimum)	Relative Humidity	95%, (condensation not allowed)
Insertion ioss,max	0.25dB(Minimum)	Contact material	Precious metal	IP protection level	IP40 (High protection optional)
Peak power,max	10KW(Maximum)	Case material	Aluminum alloy/ stainless steel/brass	Lifetime	10million revolutions
Isolation,min	50dB				

Selection table

LPHF-High Frequency Slip Rings						
Channel		**Model**	**Freq.range**	**VSWR**	**Insertion loss**	**Dimensions (Flange*OD*Length)**
Single CHannel	Mini (Direct Coaxial)	LPCC-01A	DC-3GHz	≤1.5	≤0.4dB (excluding cables)	φ14.60*φ5.4*43.6
		LPCC-02A				φ14.60*φ5.4*37.2
		LPCC-02A-N				φ14.60*φ5.4*37.2
		LPCC-01A-6G	DC-6GHz	≤1.5	≤0.5dB (excluding cables)	φ14.60*φ5.4*43.6
		LPCC-02A-6G		≤1.6		φ14.60*φ5.4*37.2
		LPCC-01B		≤1.4	≤0.3dB (excluding cables)	φ6.5*18mm (Flangeless)
		LPCC-01C	DC-12GHz	≤1.6	≤0.6dB (excluding cables)	φ25*φ14*44.86
		LPCC-01D			≤1.0dB (excluding cables)	φ14.60*φ8*30.46
	Medium (No Coaxial)	LPHF-01A	DC-18GHz	≤1.4	≤0.5dB	φ14.2*φ11.1*25.4
		LPHF-01C			≤0.4dB	φ25.4*φ12.7*35
		LPHF-01H		≤1.3	≤0.4dB	φ25.4*φ27*61.8
		LPHF-01E	DC-26.5GHz	≤1.7	≤0.7dB	φ25.4*φ12.7*33.65
		LPHF-01K	DC-30MHz	≤1.2	≤0.5dB	φ74.9*φ49*130
		LPHF-01F	DC-40GHz	≤2.0	≤1.2dB	φ25.5*φ12.7*35
		LPHF-01G	DC-50GHz	≤1.72	≤0.92dB	φ25.4*φ12.7*35
		LPHF-01L	DC-60GHz	≤1.7	≤0.35dB	φ25.4*φ12.7*53.1

Selection table

LPHF-High Frequency Slip Rings

Channel	Model	Freq.range	VSWR	Insertion loss	Dimensions (Flange*OD*Length)
2 - CHannel	LPHF-02A	CH1: DC-4.5GHz CH2: DC-4.5GHz	CH1:≤1.2 CH2:≤1.5	CH1:≤0.25dB CH2:≤0.5dB	φ54*φ32*56.4
	LPHF-02A-04				φ52.9*φ32*56.4
	LPHF-02A-14(IP54)				φ53*φ31.65*56.7
	LPHF-02A-05	CH1: DC-30GHz CH2: DC-4.5GHz	CH1: ≤1.5 CH2: ≤1.5	CH1: ≤1.0dB CH2: ≤0.5dB	φ45*φ32*56.4
	LPHF-02A-07	CH1: DC-18GHz CH2: DC-10GHz	CH1: ≤1.5 CH2: ≤2.2	CH1: ≤0.6dB CH2: ≤1.5dB	φ54*φ32*56.4
	LPHF-02B	CH1: DC-18GHz CH2: DC-4GHz	CH1: ≤1.5 CH2: ≤1.5	CH1: ≤0.9dB CH2: ≤0.5dB	φ54*φ32*56.4
	LPHF-02C	CH1: DC-18GHz CH2: DC-13GHz	CH1: ≤1.5 CH2: ≤2.0	CH1: ≤1dB CH2: ≤2dB	φ52.9*φ32*56.2
	LPHF-02D	CH1: DC-18GHz CH2: DC-18GHz	CH1: ≤1.75 CH2: ≤4.5	CH1: ≤1.0dB CH2: ≤3.0dB	φ50.8*φ32*61.2
	LPHF-02E	CH1: DC-8GHz CH2: DC-8GHz	CH1: ≤1.5 CH2: ≤1.5	CH1: ≤0.7dB CH2: ≤0.7dB	φ54*φ33*111.9
	LPHF-02G		CH1: ≤1.3 CH2: ≤2.2	CH1: ≤0.4dB CH2: ≤0.8dB	φ54*φ33*56.4
	LPHF-02F	CH1: DC-18GHz CH2: DC-13GHz	CH1: ≤1.5 CH2: ≤2.0	CH1: ≤0.9dB CH2: ≤1dB	φ45*φ31.75*55.8
	LPHF-02W	CH1: DC-18GHz CH2: DC-10GHz	CH1: ≤1.5 CH2: ≤2.4	CH1: ≤0.6dB CH2: ≤1.5dB	φ54*φ32*47.35
3 - CHannel	LPHF-03A	CH1: DC-4GHz CH2: DC-4GHz CH3: DC-4GHz	CH1: ≤1.6 CH2: ≤1.6 CH3: ≤1.6	CH1: ≤1.0dB CH2: ≤1.0dB CH3: ≤1.0dB	φ56*φ42*122.7
	LPHF-03B	CH1: DC-3GHz CH2: DC-3GHz CH3: DC-3GHz	CH1: ≤1.7 CH2: ≤1.7 CH3: ≤1.7	CH1: ≤0.75dB CH2: ≤0.75dB CH3: ≤0.75dB	φ90*φ80*209.5
4 - CHannel	LPHF-04A	CH1: DC-4GHz CH2: DC-4GHz CH3: DC-4GHz CH4: DC-4GHz	CH1: ≤1.3 CH2: ≤1.5 CH3: ≤1.5 CH4: ≤1.5	CH1: ≤1.0dB CH2: ≤1.0dB CH3: ≤1.0dB CH4: ≤1.0dB	φ56*φ42*103.5
	LPHF-04D	CH1: DC-4GHz CH2: DC-4GHz CH3: DC-4GHz CH4: DC-4GHz	CH1: ≤1.6 CH2: ≤1.6 CH3: ≤1.6 CH4: ≤1.6	CH1: ≤1.0dB CH2: ≤1.0dB CH3: ≤1.0dB CH4: ≤1.0dB	φ56*φ42*106.65
5 - CHannel	LPHF-05D	CH1: DC-5.25GHz CH2: DC-5.25GHz CH3: DC-5.25GHz CH4: DC-5.25GHz CH5: DC-5.25GHz	CH1: ≤2.0 CH2: ≤2.0 CH3: ≤2.0 CH4: ≤2.0 CH5: ≤2.0	CH1: ≤1.5dB CH2: ≤1.5dB CH3: ≤1.5dB CH4: ≤1.5dB CH5: ≤1.5dB	φ56*φ42*135
6 - CHannel	LPHF-06C	CH1: DC-4.6GHz CH2: DC-4.6GHz CH3: DC-4.6GHz CH4: DC-4.6GHz CH5: DC-4.6GHz CH6: DC-4.6GHz	CH1: ≤1.5 CH2: ≤1.5 CH3: ≤1.5 CH4: ≤1.5 CH5: ≤1.5 CH6: ≤1.5	CH1: ≤1.5dB CH2: ≤1.5dB CH3: ≤1.5dB CH4: ≤1.5dB CH5: ≤1.5dB CH6: ≤1.5dB	φ56*φ42*164.5
	LPHF-06E	CH1: DC-4GHz CH2: DC-4GHz CH3: DC-4GHz CH4: DC-4GHz CH5: DC-4GHz CH6: DC-4GHz	CH1: ≤1.5 CH2: ≤1.5 CH3: ≤1.5 CH4: ≤1.5 CH5: ≤1.5 CH6: ≤1.5	CH1: ≤0.8dB CH2: ≤1.1dB CH3: ≤1.1dB CH4: ≤1.1dB CH5: ≤1.1dB CH6: ≤1.1dB	φ56*φ40*122.9

Selection table

Typical Hybrid HF/Electric Slip Ring					
Channel	**Model**	**HF Channels**	**Std.Signals (S)**	**Special Signals** Ethernet(100M/1000M/10000M) /SDI/USB2.0/USB3.0	**Current Paths**
Mini Type (Capsule Slip Ring Integration)	LPC-1C1202	1	/	/	12*2A
	LPC-1C2402		/	/	24*2A
	LPC-1C3002		/	/	30*2A
	LPC-1C3602		/	/	36*2A
Medium Type (Throuhg-Bore Slip Ring Integration)	LPT000-1205-HF01	1	/	/	12*5A
	LPT000-0308-0204 -12S-HF01		12	/	2*4A/3*8A
	LPT000-1202-HF02	2	/	/	12*2A
	LPT000-0205-04S -01E3-HF02		4	1 (1000M Ethernet)	2*5A
	LPT000-47S-3E2- HF03	3	47	3 (100M Ethernet)	/
	LPT000-0430-19S -HF03		19	/	4*30A
	LPT000-0803-10S -02E2-HF04	4	10	2 (100M Ethernet)	8*3A
	LPT000-3602-HF05	5	10	2 (1000M Ethernet)	30*5A/11*10A
	LPT000-1010-06E2 -HF06	6	/	6 (100M Ethernet)	10*10A

Cable Assemblies

- Cable assemblies are pre-conPgured bundles of cables and connectors, designed to ensure reliable power and signal transmission. They simplify installation, reduce wiring errors, and enhance durability in various applications such as industrial automation, medical devices, aerospace, and communications. Customization options include cable type, length, shielding, connector styles, and environmental protection.

Model Description

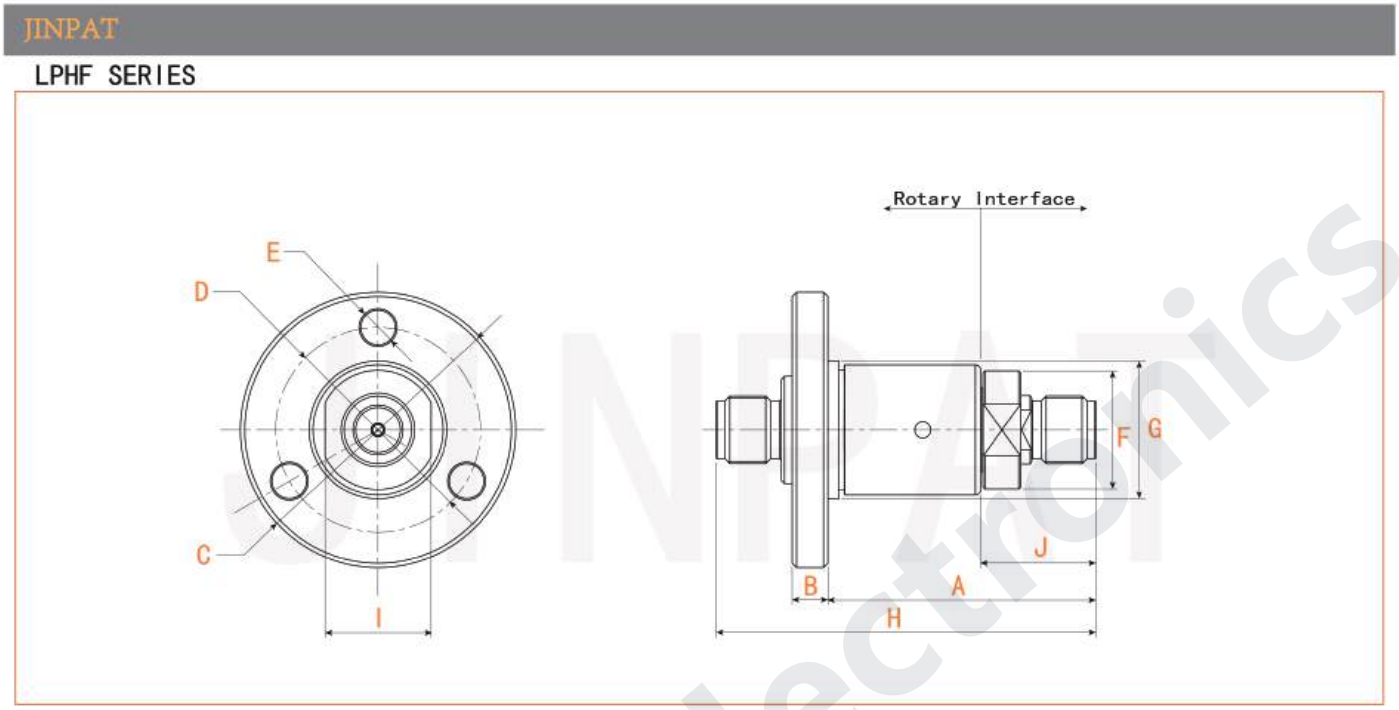
LPHF -XX X(X) X X X

- 1-9: indicates running number
- 0-9: Indicates frequency range:
  see frequency range for details
- 0: Indicates a slight modiÞcation of the standard product external dimensions.
  1: Indicates slight modiÞcation of standard product parameters.
  2: Indicates slight modiÞcation to both standard product parameters/exterior dimensions.
- Letters A ~ Z indicates the running number of the model;
  (X): indicates that the front more than 26 letters after the overßow of 1 digit, expressed in A ~ Z: where W special characters, especially refers to elbow
- Indicates the number of channels: 01 is 1 channel, 02 is 2 channels, and so on.

- Example: LPHF-01A-051 is a 1-channel high-frequency product based on the 01A standard product with unchanged parameters and changed external dimensions. The operating frequency is 18GHz, and the ßow number is 1.

- Note: The above high-frequency product model number in the running number speciÞcally refers to the elbow; such as LPHF-01, said 1-channel high-frequency elbow.

Product Dimension Drawing



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

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 speciÞed 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, Profbus, CanBUS, CANOPEN, DeviceNET, CANBUS, CANPUS). CANOPEN, DeviceNET, CC-LINK, ProÞNET, 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