

BMHF Series High Frequency Rotary Joint

BMHF series High Frequency Rotary Joint (Slip Ring) is specifically designed to transmit high-speed serial digital signals or analog signal , as well as radar antenna, communication in moving, input signal in moving, etc. It can support maximum transfer rate 40GHz. This series product can support single channel high frequency transmissions, also support high-frequency signal transmission and 24V control signal, communication signal, power supply and fluid media. Video signal adopt 75Ω characteristic impedance. High-frequency signal adopts 50Ω characteristic impedance RF coaxial connector. (other specified connectors are switchable, lead wires are optional, such as RG178、RG179, RG316、RG174,etc) ;

Features

- Support 1,2,3,4 high-frequency channel/channels.
- Combine with 1~96wires Power/Signal.
- Perfect VSWR
- Suitable for large volume data transmission without delay
- High-rate transmission and high-definition video data
- Widely applied for satellite、radar、portable antenna、equipments of communication in moving,etc.



BMHF Series Models

Model#	Channel	Max Frequency(GHz)	Power/signal(circuits)	OD(mm)
BMHF100	1	DC-30GHz DC-50GHz	0	6.6/12.5/22/14.5
BMHF107	1	DC-3GHz	0~24	33
BMHF108	1	DC-30GHz	1~48	56
BMHF109	1	DC-30GHz	1~72	86
BMHF200	2	4.5GHz;18GHz	0	31.8
BMHF208	2	4.5GHz;18GHz	1~72	99
BMHF300	3	2.5GHz	0	65
BMHF400	4	2.5GHz	0	65
BMHF800	8	3GHz	0	56

BMHF100 SERIES

1 Channel Rf Rotary Joints

BMHF100 is single channel high frequency rotary joint, which is specifically designed for high-speed serial digital signals or analog signal transmission. It can support maximum transfer rate 30GHz. BMHF series can support single channel or high-frequency signal transmission by itself. Also BMHF series can be customized to combine high-frequency signal with 24V control signal, communication signal, power supply and fluid media. Please refer to BMHF108 series.

Product images



Typical application:

- Military radar antenna, multi shaft 3D simulator
- Antenna rotating platform with radio-frequency signal, support 1080P, 1080I, etc HD-SDI high definition rotary table
- Support 1080P, 1080I, etc HD-SDI all-in-one machine (high speed dome)

The pictures are for reference only

If there are changes in the appearance and size of the product, the actual product should prevail.

Part# Explanation

BMHF100-SMA-30G

BMHF: High frequency slip ring

100: 1 channel high frequency

30G: Max frequency 30GHz

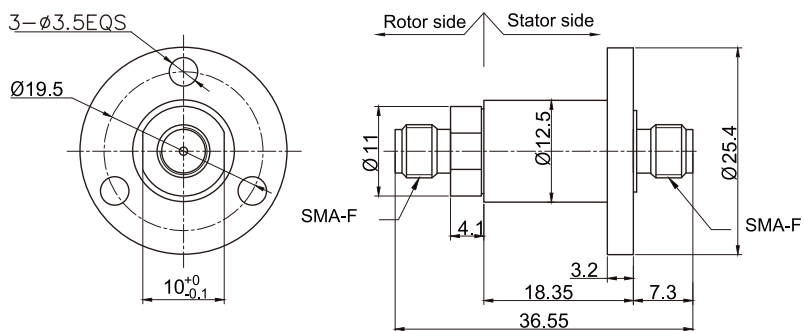
SMA: SMA connector; N: N connector

W50: Exit Rg316 Wires/50Ω

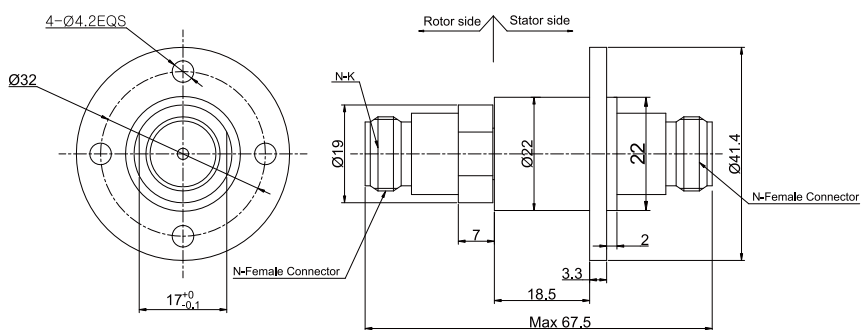
W75: Exit Rg179 Wires/75Ω

Dimensions

BMHF100-SMA-30G Dimensions

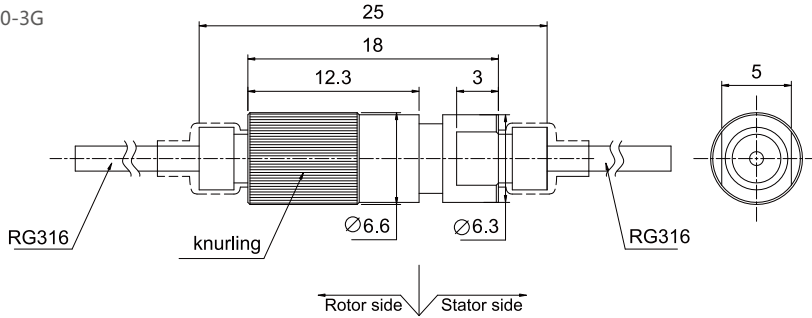


BMHF100-N-12G Dimensions

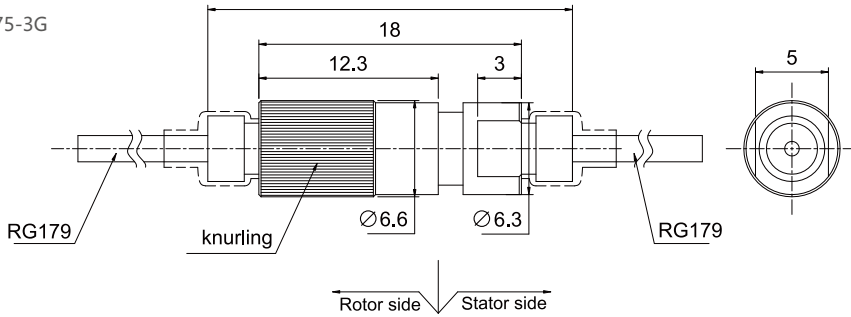


BMHF100-W50-3G/BMHF100-W75-3G Dimensions

BMHF100-W50-3G



BMHF100-W75-3G



BMHF100-1 channel RF rotary joint part list

Project	RF Channel	Fquency	Connector Type	Characteristic Impedance	Insertion Loss	VSWR	VSWR Ripple
BMHF100-SMA-30G	1	DC-30GHz	SMA	50Ω	0.45db	≤1.4	≤0.05
BMHF100-N-12G	1	DC-12GHz	N	50Ω	0.3db	≤1.3	≤0.05
BMHF100-W50-3G	1	DC-3GHz	coaxial-cable Rg316	50Ω	0.3db	≤1.3	≤0.05
BMHF100-W75-3G	1	DC-3GHz	coaxial-cable Rg179	75Ω	0.3db	≤1.3	≤0.05

Mechanical Data

Project	Numerical value
Working Life	50 million revs
Rotating Speed	100RPM
Working Temperature	-30°C~80°C
Operating Humidity	0~85% RH
Contact Material	Gold-Gold
Housing Material	stainless steel
Torque	0.1N.m; +0.03N.m/6 rings
Protection Grade	IP51

BMHF100-50G SERIES

1 Channel Rf Rotary Joints

BMHF100-50G is single channel high frequency rotary joint, which is specifically designed for high-speed serial digital signals or analog signal transmission. It can support maximum transfer rate 50GHz. MHF series can support single channel or high-frequency signal transmission by itself. Also MHF series can be customized to combine high-frequency signal with 24V control signal, communication signal, power supply and fluid media. Please refer to MHF108 series.

Product images



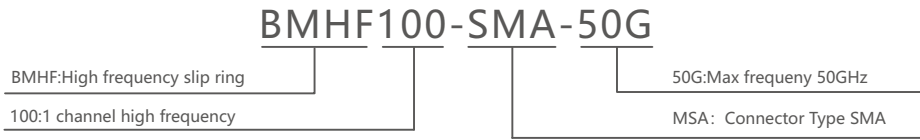
Typical application:

- Military radar antenna, multi shaft 3D simulator
- Antenna rotating platform with radio-frequency signal, support 1080P, 1080I, etc HD-SDI high definition rotary table
- Support 1080P, 1080I, etc HD-SDI all-in-one machine (high speed dome)

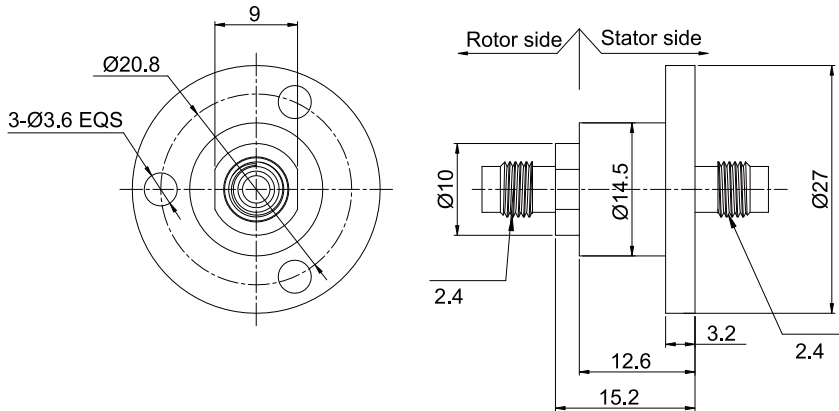
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Part# Explanation



Dimensions



BMHF100-50G channel RF rotary joint part list

Part#	RF Channel	Frquency	Connector Type
MHF100-SMA-50G	1	50GHz	2.4

Mechanical Data

Parameter	Numerical value
Working Life	50 million revs
Rotating Speed	60RPM
Working Temperature	-40°C-70°C
Operating Humidity	0-95%RH
Contact Material	Gold-Gold
Housing Material	Aluminum alloy
Torque	0.05Nm
Protection Grade	Ip60
Surface treatment	Conductive oxidation

RF Rotary joints Specifications

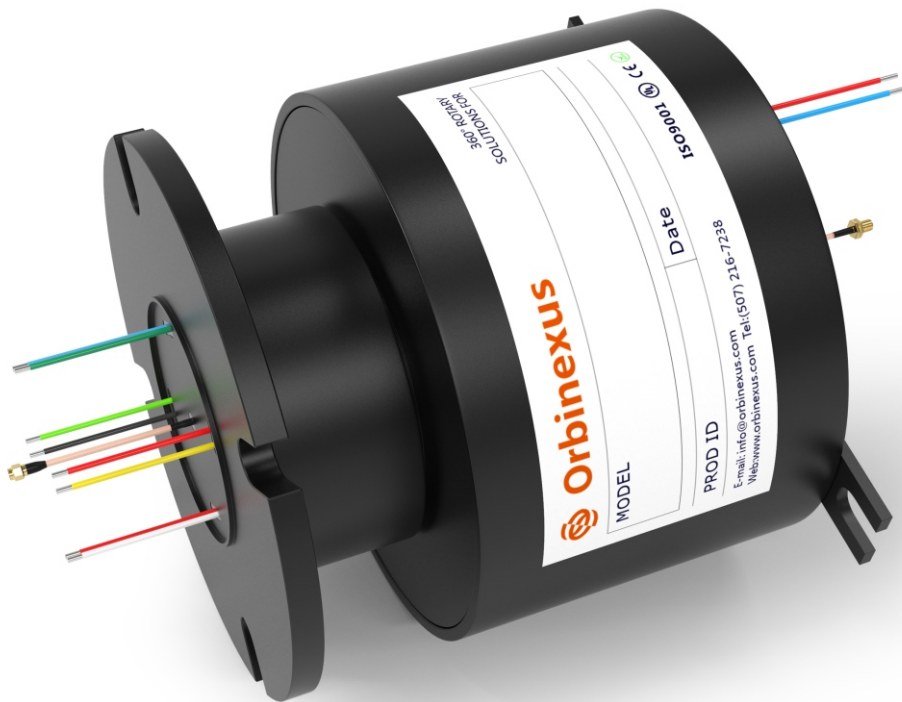
Parameter	Numerical value
Frquency	DC-50GHz
power	≥20@18GHz
voltage standing wave ratio	DC-18GHz≤1.5 18GHz-26.5GHz≤1.8 26.5GHz-50GHz≤2.6
VSWR Ripple	0.15
Insertion Loss	DC-18GHz≤0.8 18GHz-26.5GHz≤1.2 26.5GHz-50GHz≤2.5
Insertion Loss Ripple	0.15
Minimum isolation	60dB
Connector Type	2.4

BMHF107 SERIES

1 Channel Rf Rotary Joints+electric Slip Ring

BMHF107 is 1 channel RF + electric combining high frequency rotary joint. High frequency + electric slip ring is specifically designed to support high-speed serial digital signals or analog signal transmission. It can support maximum rate 3GHz. This series product can support single channel high frequency transmissions, also high-frequency signal transmission combining with 24V control signal, communication signal, power supply and fluid media. Video signal adopt 50Ω characteristic impedance. High-frequency signal adopts 50Ω characteristic impedance RF coaxial connector. (other specified connectors are switchable, also Lead wire size are optional, such as RG178、RG316、RG174, etc.)

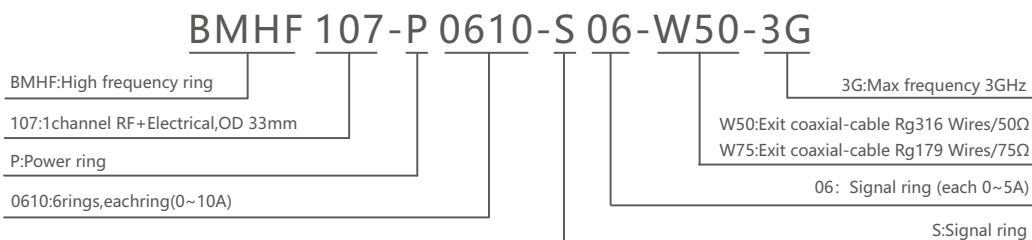
Product images



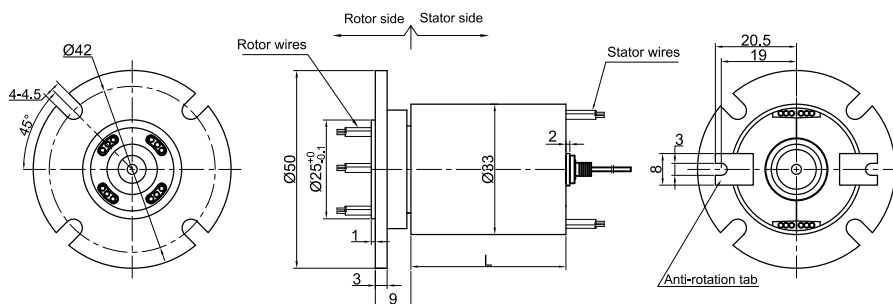
The pictures are for reference only

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Part# Explanation



Dimensions



BMHF107 channel RF rotary joint part list

Part#	RF Channel	Frquency	10A	Signal 5A	Length (mm)
BMHF107-S06	1	DC-3GHz	0	6	25.4
BMHF107-S12	1	DC-3GHz	0	12	39.2
BMHF107-S18	1	DC-3GHz	0	18	53
BMHF107-S24	1	DC-3GHz	0	24	66.8

Note: 1) N channels 10A rings parallel can be used as 1 channel N*10A current. For example: 2 rings 10A parallel could be used as 1 wires 20A
 2) circuit number and current strength can be customized, please contact customer service for more details.

RF Rotary joints Specifications

Parameter	Numerical value
Frequency	0~3GHz
Rated Power	5W
VSWR	< 1.3
Insertion Loss	0.3db
VSWR Ripple	< 0.05
Insertion Loss Ripple	0.05db
Connector Types	Exit coaxial-cable directiy
Characteristic Impedance	50Ω or 75Ω

Mechanical Data

Parameter	Numerical value
Working Life	50 million revs
Rotating Speed	100RPM
Working Temperature	-30°C-80°C
Operating Humidity	0-85%RH
Contact Material	Gold-Gold
Housing Material	Aluminum alloy
Torque	0.1N.m; +0.03N.m/6 rings
Protection Grade	IP51

Electrical Data

Project	Power	Signal
Rated Voltage	0~400VAC/VDC	0~240VAC/VDC
Insulation Resistance	≥500MΩ/300VDC	≥200MΩ/300VDC
Lead Wires	AWG22#Teflon	AWG22#Teflon
Lead Length	Standard length 300mm(adjustable)	
Insulating Strength	200VAC@50Hz,60s	
Electrical Noise	<0.01Ω	

Options for custom slip ring

Note: Below special demands can be customized According , the delivery date will be extended 3 to15 days; also the cost will be increased 30%to 50% . Most of our basic parts are standard and modular which can save the cost and lead time.

1. Cable exit way and cable length can be customized for both rotor and stator.
2. Because of the structure limitation, length/height/OD can be customized on your request.
3. Support current or signal up to 200 rings.
4. Aviation plug, terminal and heat-shrink tube are optional.
5. Hybrid slip ring for Yaskawa/Panasonic/Siemens servo control signal, power line and encoder line.
6. Support mixed high speed data transmission (including Ethernet, USB, RS232, RS485, Profibus, CanBUS, CANOPEN, DeviceNET, CC-LINK, ProfiNET, EtherCAT, etc.)
7. Can combine temperature control signal with thermocouple signal.
8. Special environment can be customized, such as quakeproof, high temperature, etc.
9. Hybrid Pneumatic/hydraulic and electric slip ring can be mixed.
10. High temperature can up to 500 degrees.
11. High pressure can up to 110KV
12. Rotating speed can up to 10000RPM
13. Maximum current can up to 5000 amperes.
14. Military grade
15. Optional for underwater IP65, IP68.
16. Optional for stainless steel housing

Technical support : Info@orbinexus.com

BMHF108 SERIES

1 Channel Rf Rotary Joints+electric Slip Ring

BMHF108 is 1 channel RF + electric combining high frequency rotary joint. High frequency + electric slip ring is specifically designed to support high-speed serial digital signals or analog signal transmission. It can support maximum rate 30GHz. This series product can support single channel high frequency transmissions, also high-frequency signal transmission combining with 24V control signal, communication signal, power supply and fluid media. Video signal adopt 50Ω characteristic impedance. High-frequency signal adopts 50Ω characteristic impedance RF coaxial connector. (other specified connectors are switchable, also Lead wire size are optional, such as RG178、RG316、RG174, etc.)

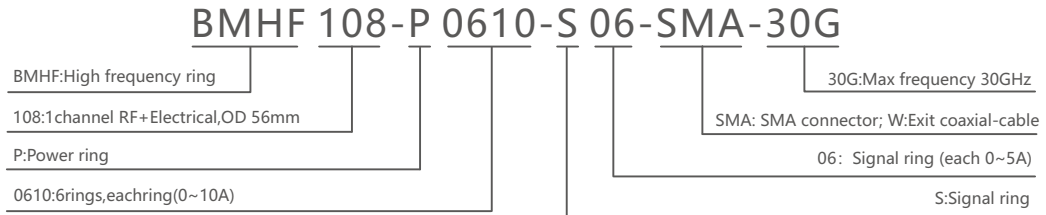
Product images



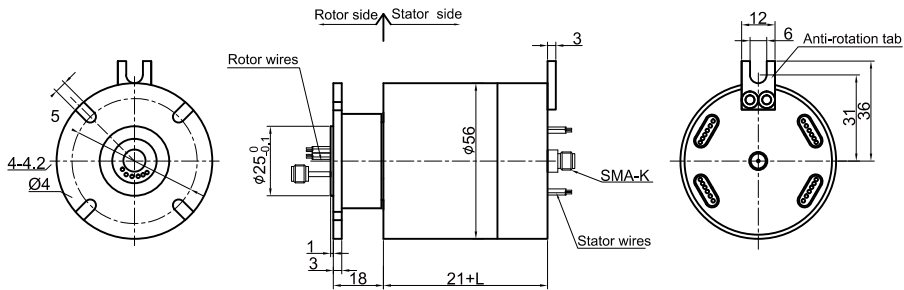
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Part# Explanation



Dimensions



BMHF108 channel RF rotary joint part list

Parts#	RF Channel	Frguency	10A	Signal 5A	Length(mm)
BMHF108-S06	1	DC-30GHz	0	6	38
BMHF108-P0610	1	DC-30GHz	6	0	38
BMHF108-S12	1	DC-30GHz	0	12	54.8
BMHF108-P1210	1	DC-30GHz	12	0	54.8
BMHF108-P0610-S06	1	DC-30GHz	6	6	54.8
BMHF108-P0410-S08	1	DC-30GHz	2	8	54.8
BMHF108-P0210-S10	1	DC-30GHz	2	10	54.8
BMHF108-S18	1	DC-30GHz	0	18	71.6
BMHF108-P1810	1	DC-30GHz	18	0	71.6
BMHF108-P0610-S12	1	DC-30GHz	6	12	71.6
BMHF108-P1210-S06	1	DC-30GHz	12	6	71.6
BMHF108-P0610-S18	1	DC-30GHz	6	18	88.4
BMHF108-P1210-S12	1	DC-30GHz	12	12	88.4
BMHF108-P1810-S06	1	DC-30GHz	18	6	88.4
BMHF108-S24	1	DC-30GHz	0	24	88.4
BMHF108-P2410	1	DC-30GHz	24	0	88.4
BMHF108-S30	1	DC-30GHz	0	30	105.2

BMHF108 channel RF rotary joint part list

Parts#	RF Channel	Frquency	10A	Signal 5A	Length(mm)
BMHF108-S36	1	DC-30GHz	0	36	125
BMHF108-S48(2A)	1	DC-30GHz	0	48	158.6

Note: 1) N channels 10A rings parallel can be used as 1 channel N*10A current. For example: 2 rings 10A parallel could be used as 1 wires 20A
 2) circuit number and current strength can be customized, please contact customer service for more details.

RF Rotary joints Specifications

Parameter	Numerical value
Frequency	0~30GHz
Rated Power	20W
VSWR	< 1.4
Insertion Loss	0.45db
VSWR Ripple	< 0.05
Insertion Loss Ripple	0.05db
Connector Types	SMA-F
Characteristic Impedance	50Ω

Mechanical Data

Parameter	Numerical value
Working Life	50 million revs
Rotating Speed	100RPM
Working Temperature	-30°C-80°C
Operating Humidity	0-85%RH
Contact Material	Gold-Gold
Housing Material	Aluminum alloy
Torque	0.1N.m; +0.03N.m/6 rings
Protection Grade	IP51

Electrical Data

Project	Power	Signal
Rated Voltage	0~440VAC/VDC	0~240VAC/VDC
Insulation Resistance	≥1000MΩ/500VDC	≥1000MΩ/500VDC
Lead Wires	AWG16#Teflon	AWG22#Teflon
Lead Length	Standard length 300mm(adjustable)	
Insulating Strength	500VAC@50Hz,60s	
Electrical Noise	<0.01Ω	

Options for custom slip ring

Note: Below special demands can be customized According , the delivery date will be extended 3 to15 days; also the cost will be increased 30%to 50% . Most of our basic parts are standard and modular which can save the cost and lead time.

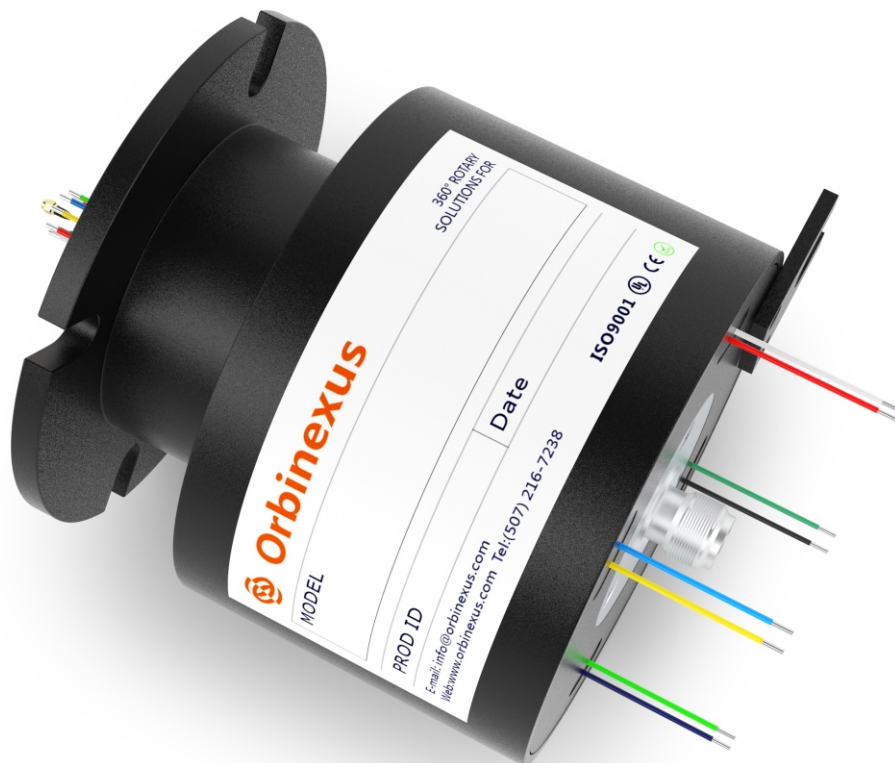
1. Cable exit way and cable length can be customized for both rotor and stator.
 2. Because of the structure limitation, length/height/OD can be customized on your request.
 3. Support current or signal up to 200 rings.
 4. Aviation plug, terminal and heat-shrink tube are optional.
 5. Hybrid slip ring for Yaskawa/Panasonic/Siemens servo control signal, power line and encoder line.
 6. Support mixed high speed data transmission (including Ethernet, USB, RS232, RS485, Profibus, CanBUS, CANOPEN, DeviceNET, CC-LINK, ProfinET, EtherCAT, etc.)
 7. Can combine temperature control signal with thermocouple signal.
 8. Special environment can be customized, such as quakeproof, high temperature, etc.
 9. Hybrid Pneumatic/hydraulic and electric slip ring can be mixed.
 10. High temperature can up to 500 degrees.
 11. High pressure can up to 110KV
 12. Rotating speed can up to 10000RPM
 13. Maximum current can up to 5000 amperes.
 14. Military grade
 15. Optional for underwater IP65, IP68.
 16. Optional for stainless steel housing
- Technical support : Info@orbinexus.com

BMHF109 SERIES

1 Channel Rf Rotary Joints+electric Slip Ring

MHF109 is 1 channel RF + electric combining high frequency rotary joint. High frequency + electric slip ring is specifically designed to support high-speed serial digital signals or analog signal transmission. It can support maximum rate 30GHz. This series product can support single channel high frequency transmissions, also high-frequency signal transmission combining with 24V control signal, communication signal, power supply and fluid media. Video signal adopt 50Ω characteristic impedance. High-frequency signal adopts 50Ω characteristic impedance RF coaxial connector. (other specified connectors are switchable, also Lead wire size are optional, such as RG178, RG316, RG174, etc.)

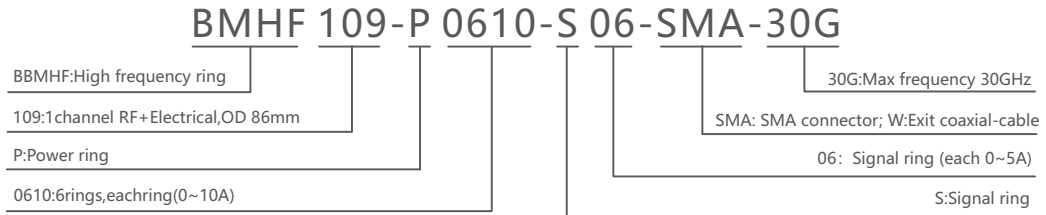
Product images



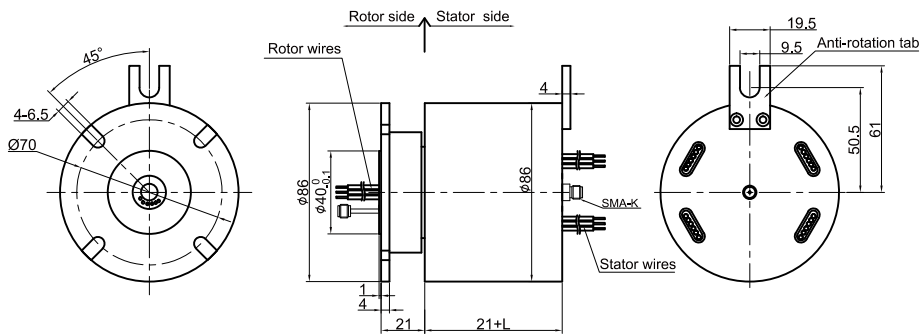
The pictures are for reference only

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Part# Explanation



Dimensions



BMHF109 channel RF rotary joint part list

Parts#	RF Channel	Frguency	10A	Signal 5A	Length(mm)
BMHF109-S02	1	DC-30GHz	0	2	31.6
BMHF109-P0210	1	DC-30GHz	2	0	31.6
BMHF109-S03	1	DC-30GHz	0	3	35
BMHF109-P0310	1	DC-30GHz	3	0	35
BMHF109-S06	1	DC-30GHz	0	6	45.2
BMHF109-P0210-S04	1	DC-30GHz	2	4	45.2
BMHF109-P0410-S02	1	DC-30GHz	4	2	45.2
BMHF109-P0610	1	DC-30GHz	6	0	45.2
BMHF109-S12	1	DC-30GHz	0	12	65.6
BMHF109-P0210-S10	1	DC-30GHz	2	10	65.6
BMHF109-P0310-S09	1	DC-30GHz	3	9	65.6
BMHF109-P0610-S06	1	DC-30GHz	6	6	65.6
BMHF109-P0810-S04	1	DC-30GHz	8	4	65.6
BMHF109-P1010-S02	1	DC-30GHz	10	2	65.6
BMHF109-P1210	1	DC-30GHz	12	0	65.6
BMHF109-S18	1	DC-30GHz	0	18	86
BMHF109-P0210-S16	1	DC-30GHz	2	16	86

BMHF108 channel RF rotary joint part list

Parts#	RF Channel	Frquency	10A	Signal 5A	Length(mm)
BMHF109-P0410-S14	1	DC-30GHz	4	14	86
BMHF109-P0610-S12	1	DC-30GHz	6	12	86
BMHF109-P0810-S10	1	DC-30GHz	8	10	86
BMHF109-P1010-S08	1	DC-30GHz	10	8	86
BMHF109-P1210-S06	1	DC-30GHz	12	6	86
BMHF109-P1410-S04	1	DC-30GHz	14	4	86
BMHF109-P1610-S02	1	DC-30GHz	16	2	86
BMHF109-S24	1	DC-30GHz	0	24	106.4
BMHF109-P0410-S20	1	DC-30GHz	4	20	106.4
BMHF109-P0610-S18	1	DC-30GHz	6	18	106.4
BMHF109-P1210-S12	1	DC-30GHz	12	12	106.4
BMHF109-P1810-S06	1	DC-30GHz	18	6	106.4
BMHF109-P2410	1	DC-30GHz	24	0	106.4
BMHF109-S30	1	DC-30GHz	0	30	126.8
BMHF109-P0610-S24	1	DC-30GHz	6	24	126.8
BMHF109-P1210-S18	1	DC-30GHz	12	18	126.8
BMHF109-P1810-S12	1	DC-30GHz	18	12	126.8
BMHF109-P2410-S06	1	DC-30GHz	24	6	126.8
BMHF109-P3010	1	DC-30GHz	30	0	126.8
BMHF109-S36	1	DC-30GHz	0	36	150.2
BMHF109-P0610-S30	1	DC-30GHz	6	30	150.2
BMHF109-P1210-S24	1	DC-30GHz	12	24	150.2
BMHF109-P3610	1	DC-30GHz	36	0	150.2
BMHF109-S42	1	DC-30GHz	0	42	170.6
BMHF109-P0610-S36	1	DC-30GHz	6	36	170.6
BMHF109-P1210-S30	1	DC-30GHz	12	30	170.6
BMHF109-S48	1	DC-30GHz	0	48	193.2
BMHF109-P0610-S42	1	DC-30GHz	6	42	193.2
BMHF109-P0910-S39	1	DC-30GHz	9	39	193.2
BMHF109-P1210-S36	1	DC-30GHz	12	36	193.2
BMHF109-P1810-S30	1	DC-30GHz	18	30	193.2
BMHF109-P2410-S24	1	DC-30GHz	24	24	193.2
BMHF109-S60	1	DC-30GHz	0	60	234
BMHF109-P0610-S54	1	DC-30GHz	6	54	234
BMHF109-P0910-S51	1	DC-30GHz	9	51	234
BMHF109-P1210-S48	1	DC-30GHz	12	48	234
BMHF109-S72	1	DC-30GHz	0	72	277.8

Note: 1) N channels 10A rings parallel can be used as 1 channel N*10A current. For example: 2 rings 10A parallel could be used as 1 wires 20A
2) circuit number and current strength can be customized, please contact customer service for more details.

RF Rotary joints Specifications

Parameter	Numerical value
Frequency	0~30GHz
VSWR	< 1.4
Insertion Loss	0.45db
VSWR Ripple	< 0.05
Insertion Loss Ripple	0.05db
Connector Types	SMA-F
Characteristic Impedance	50Ω

Mechanical Data

Parameter	Numerical value
Working Life	50 million revs
Rotating Speed	150RPM
Working Temperature	-30°C-80°C
Operating Humidity	0-85%RH
Contact Material	Gold-Gold
Housing Material	Aluminum alloy
Torque	0.1N.m; +0.03N.m/6 rings
Protection Grade	IP51

Electrical Data

Project	Power	Signal
Rated Voltage	0~440VAC/VDC	0~440VAC/VDC
Insulation Resistance	≥1000MΩ/500VDC	≥1000MΩ/500VDC
Lead Wires	AWG16#Teflon	AWG22#Teflon
Lead Length	Standard length 300mm(adjustable)	
Insulating Strength	500VAC@50Hz,60s	
Electrical Noise	<0.01Ω	

Options for custom slip ring

Note: Below special demands can be customized According , the delivery date will be extended 3 to15 days; also the cost will be increased 30%to 50% . Most of our basic parts are standard and modular which can save the cost and lead time.

1. Cable exit way and cable length can be customized for both rotor and stator.
2. Because of the structure limitation, length/height/OD can be customized on your request.
3. Support current or signal up to 200 rings.
4. Aviation plug, terminal and heat-shrink tube are optional.
5. Hybrid slip ring for Yaskawa/Panasonic/Siemens servo control signal, power line and encoder line.
6. Support mixed high speed data transmission (including Ethernet, USB, RS232, RS485, Profibus, CanBUS, CANOPEN, DeviceNET, CC-LINK, ProfiNET, EtherCAT, etc.)
7. Can combine temperature control signal with thermocouple signal.
8. Special environment can be customized, such as quakeproof, high temperature, etc.
9. Hybrid Pneumatic/hydraulic and electric slip ring can be mixed.
10. High temperature can up to 500 degrees.
11. High pressure can up to 110KV

12. Rotating speed can up to 10000RPM
 13. Maximum current can up to 5000 amperes.
 14. Military grade
 15. Optional for underwater IP65, IP68.
 16. Optional for stainless steel housing
- Technical support : Info@orbinexus.com

BMHF200A SERIES

2 Channel Rf Rotary Joints

BMHF200A is 2 channels high frequency rotary joint; the maximum frequency of every channel is 4.5GHz or 18G. High frequency slip ring is specifically designed to support high-speed serial digital signals or analog signal transmission. options: it can combine with electric power, 24V control signal, communication signal, power supply, media of fluid, water, air, gas etc.

Product images



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Part# Explanation

BMHF 200A-SMA-4.5G

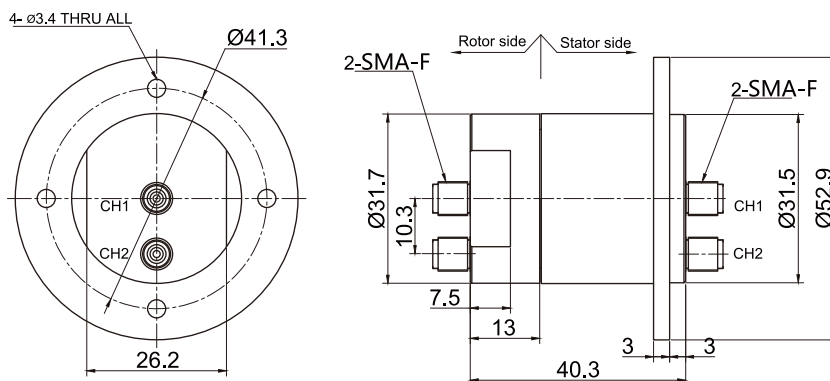
BMHF: High frequency ring

200A: 2 channel RF

4.5G: Max frequency 4.5GHz

SMA: SMA connector; W: Exit coaxial-cable

Dimensions



BMHF200A channel RF rotary joint part list

Parts#	RF Channel	Frquency	Connector type
MHF200-SMA-4.5G	2	4.5GHz / Channel	SMA-F(50 Ω)

RF Rotary joints Specifications

Parameter	Channel 1 value	Channel 2 value
Frquency	DC-4.5GHz	DC-4.5GHz
Peak power maximum	1kW	1kW
Maximum average power	50W@1GHz	50W@1GHz
voltage standing wave ratio	1.25	1.6
VSWR Ripple	0.1	0.2
Insertion Loss	0.2	0.8
Insertion Loss Ripple	0.15dB	0.2dB
Minimum isolation	60dB	60dB
Connector type	SMA-F	SMA-F

Mechanical Data

Parameter	Numerical value
Working Life	50 million revs
Rotating Speed	50RPM
Working Temperature	-40°C~ +70°C
Operating Humidity	0-95%RH
Contact Material	Gold-Gold
Housing Material	stainless steel
Torque	0.1N.m; +0.03N.m/6 rings
Protection Grade	IP51
Surface treatment	Conductive oxidation

BMHF200B SERIES

2 Channel Rf Rotary Joints

BMHF200B is 2 channels high frequency rotary joint; the maximum frequency of every channel is 4.5GHz or 18G. High frequency slip ring is specifically designed to support high-speed serial digital signals or analog signal transmission. options: it can combine with electric power, 24V control signal, communication signal, power supply, media of fluid, water, air, gas etc.

Product images



The pictures are for reference only

If there are changes in the appearance and size of the product, the actual product should prevail.

Part# Explanation

BMHF 200B-SMA-18G

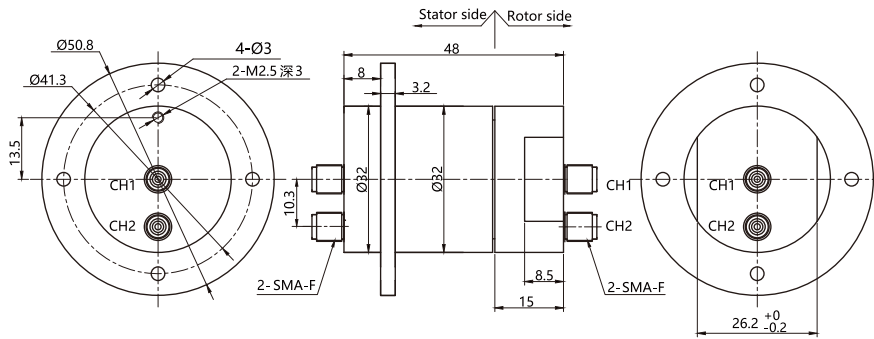
BMHF:High frequency ring

200B: 2channel RF

4.5G:Max frequency 18GHz

SMA: SMA connector; W:Exit coaxial-cable

Dimensions



BMHF200B channel RF rotary joint part list

Parts#	RF Channel	Frquency	Connector type
BMHF200B-SMA-18G	2	18GHz / Channel	SMA-F(50 Ω)

RF Rotary joints Specifications

Parameter	Channel 1 value	Channel 2 value
Frquency	DC-18GHz	DC-18GHz
Peak power maximum	1kW	1kW
Maximum average power	50W@1GHz	50W@1GHz
voltage standing wave ratio	1.25	1.6
VSWR Ripple	0.1	0.2
Insertion Loss	0.2	0.8
Insertion Loss Ripple	0.15dB	0.2dB
Minimum isolation	60dB	60dB
Connector type	SMA-F	SMA-F

Mechanical Data

Parameter	Numerical value
Working Life	50 million revs
Rotating Speed	50RPM
Working Temperature	-40°C~+70°C
Operating Humidity	0-95%RH
Contact Material	Gold-Gold
Housing Material	stainless steel
Torque	0.1N.m; +0.03N.m/6 rings
Protection Grade	IP51
Surface treatment	Conductive oxidation

BMHF208 SERIES

2 Channels Rf Rotary Joints+ Electric Slip Ring

BMHF208 is 2 channels RF + electric combining high frequency rotary joint. High frequency + electric slip ring is specifically designed to support high-speed serial digital signals or analog signal transmission. It can support maximum rate 40GHz. This series product can support 2 channels high frequency transmission, also high-frequency signal transmission combining with 24V control signal, communication signal, power supply and fluid media. High-frequency signal adopts 50Ω characteristic impedance RF coaxial connector. (Other specified connectors are switchable, also Lead wire size are optional, such as RG278、RG326、RG274, etc.)

Product images



The pictures are for reference only

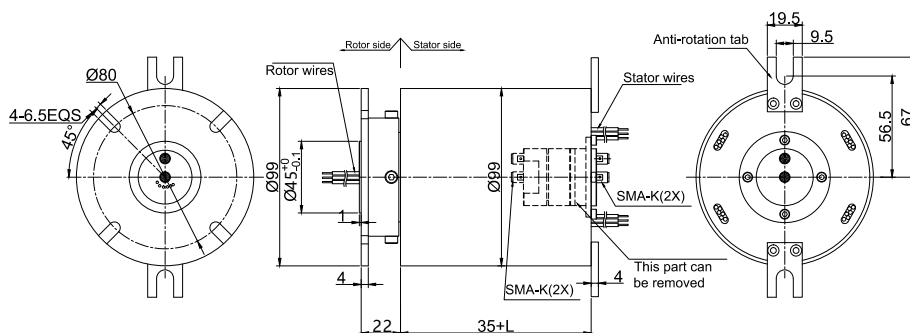
If there are changes in the appearance and size of the product, the actual product should prevail.

Part# Explanation

BMHF 208-P 0620-S 06-SMA-4.5G

BBMHF:High frequency ring	4.5G:4.5GHz / Each channel
208:2 channel RF+Electrical	SMA: SMA connector; W:Exit coaxial-cable
P:Power ring	06: Signal ring (each 0~5A)
0620:6rings,eachring(0~20A)	S:Signal ring

Dimensions



BMHF208 channel RF rotary joint part list

Parts#	RF Channel	Frquency	20A	Signal 5A	Length(mm)
BMHF208-S02	2	4.5GHz/Channel	0	2	32.6
BMHF208-P0220	2	4.5GHz/Channel	2	0	32.6
BMHF208-S03	2	4.5GHz/Channel	0	3	35
BMHF208-P0320	2	4.5GHz/Channel	3	0	35
BMHF208-S06	2	4.5GHz/Channel	0	6	45.2
BMHF208-P0220-S04	2	4.5GHz/Channel	2	4	45.2
BMHF208-P0420-S02	2	4.5GHz/Channel	4	2	45.2
BMHF208-P0620	2	4.5GHz/Channel	6	0	45.2
BMHF208-S22	2	4.5GHz/Channel	0	22	65.6
BMHF208-P0220-S20	2	4.5GHz/Channel	2	20	65.6
BMHF208-P0320-S09	2	4.5GHz/Channel	3	9	65.6
BMHF208-P0620-S06	2	4.5GHz/Channel	6	6	65.6
BMHF208-P0820-S04	2	4.5GHz/Channel	8	4	65.6
BMHF208-P2020-S02	2	4.5GHz/Channel	20	2	65.6
BMHF208-P2220	2	4.5GHz/Channel	22	0	65.6
BMHF208-S28	2	4.5GHz/Channel	0	28	86
BMHF208-P0220-S26	2	4.5GHz/Channel	2	26	86

BMHF208 channel RF rotary joint part list

Parts#	RF Channel	Frquency	20A	Signal 5A	Length(mm)
BMHF208-P0420-S24	2	4.5GHz/Channel	4	24	86
BMHF208-P0620-S22	2	4.5GHz/Channel	6	22	86
BMHF208-P0820-S20	2	4.5GHz/Channel	8	20	86
BMHF208-P2020-S08	2	4.5GHz/Channel	20	8	86
BMHF208-P2220-S06	2	4.5GHz/Channel	22	6	86
BMHF208-P2420-S04	2	4.5GHz/Channel	24	4	86
BMHF208-P2620-S02	2	4.5GHz/Channel	26	2	86
BMHF208-S24	2	4.5GHz/Channel	0	24	206.4
BMHF208-P0420-S20	2	4.5GHz/Channel	4	20	206.4
BMHF208-P0620-S28	2	4.5GHz/Channel	6	28	206.4
BMHF208-P2220-S22	2	4.5GHz/Channel	22	22	206.4
BMHF208-P2820-S06	2	4.5GHz/Channel	28	6	206.4
BMHF208-P2420	2	4.5GHz/Channel	24	0	206.4
BMHF208-S30	2	4.5GHz/Channel	0	30	226.8
BMHF208-P0620-S24	2	4.5GHz/Channel	6	24	226.8
BMHF208-P2220-S28	2	4.5GHz/Channel	22	28	226.8
BMHF208-P2820-S22	2	4.5GHz/Channel	28	22	226.8
BMHF208-P2420-S06	2	4.5GHz/Channel	24	6	226.8
BMHF208-P3020	2	4.5GHz/Channel	30	0	226.8
BMHF208-S36	2	4.5GHz/Channel	0	36	250.2
BMHF208-P0620-S30	2	4.5GHz/Channel	6	30	250.2
BMHF208-P2220-S24	2	4.5GHz/Channel	22	24	250.2
BMHF208-P3620	2	4.5GHz/Channel	36	0	250.2
BMHF208-S42	2	4.5GHz/Channel	0	42	270.6
BMHF208-P0620-S36	2	4.5GHz/Channel	6	36	270.6
BMHF208-P2220-S30	2	4.5GHz/Channel	22	30	270.6
BMHF208-S48	2	4.5GHz/Channel	0	48	293.2
BMHF208-P0620-S42	2	4.5GHz/Channel	6	42	293.2
BMHF208-P0920-S39	2	4.5GHz/Channel	9	39	293.2
BMHF208-P2220-S36	2	4.5GHz/Channel	22	36	293.2
BMHF208-P2820-S30	2	4.5GHz/Channel	28	30	293.2
BMHF208-P2420-S24	2	4.5GHz/Channel	24	24	293.2
BMHF208-S60	2	4.5GHz/Channel	0	60	234
BMHF208-P0620-S54	2	4.5GHz/Channel	6	54	234
BMHF208-P0920-S52	2	4.5GHz/Channel	9	52	234
BMHF208-P2220-S48	2	4.5GHz/Channel	22	48	234
BMHF208-S72	2	4.5GHz/Channel	0	72	277.8

Note: 1) N channels 10A rings parallel can be used as 1 channel N*10A current. For example: 2 rings 10A parallel could be used as 1 wires 20A
 2) circuit number and current strength can be customized, please contact customer service for more details.

RF Rotary joints Specifications

Parameter	Channel 2 value	Channel 2 value
Frequency	0~4.5GHz	0~4.5GHz
VSWR	<1.3	<1.6
Insertion Loss	0.3db	0.5db
VSWR Ripple	<0.05	<0.2
Insertion Loss Ripple	0.05db	0.15db
Connector Types	SMA-F	SMA-F
Characteristic Impedance	50Ω	50Ω

Electrical Data

Project	Power	Signal
Rated Voltage	0~440VAC/VDC	0~240VAC/VDC
Insulation Resistance	≥1000MΩ/500VDC	≥1000MΩ/500VDC
Lead Wires	AWG16#Teflon	AWG22#Teflon
Lead Length	Standard length 300mm(adjustable)	
Insulating Strength	500VAC@50Hz,60s	
Electrical Noise	<0.01Ω	

Mechanical Data

Parameter	Numerical value
Working Life	50 million revs
Rotating Speed	50RPM
Working Temperature	-40°C~ +80°C
Operating Humidity	0-85%RH
Contact Material	Gold-Gold
Housing Material	Aluminum alloy
Torque	0.1N.m; +0.03N.m/6 rings
Protection Grade	IP51

Options for custom slip ring

Note: Below special demands can be customized According , the delivery date will be extended 3 to15 days; also the cost will be increased 30%to 50% . Most of our basic parts are standard and modular which can save the cost and lead time.

1. Cable exit way and cable length can be customized for both rotor and stator.
2. Because of the structure limitation, length/height/OD can be customized on your request.
3. Support current or signal up to 200 rings.
4. Aviation plug, terminal and heat-shrink tube are optional.
5. Hybrid slip ring for Yaskawa/Panasonic/Siemens servo control signal, power line and encoder line.
6. Support mixed high speed data transmission (including Ethernet, USB, RS232, RS485, Profibus, CanBUS, CANOPEN, DeviceNET, CC-LINK, ProfiNET, EtherCAT, etc.)
7. Can combine temperature control signal with thermocouple signal.
8. Special environment can be customized, such as quakeproof, high temperature, etc.
9. Hybrid Pneumatic/hydraulic and electric slip ring can be mixed.
10. High temperature can up to 500 degrees.
11. High pressure can up to 110KV

12. Rotating speed can up to 10000RPM
 13. Maximum current can up to 5000 amperes.
 14. Military grade
 15. Optional for underwater IP65, IP68.
 16. Optional for stainless steel housing
- Technical support : Info@orbinexus.com

BMHF300 SERIES

3 Channels Rf Rotary Joints

BMHF300 is 3 channels high frequency rotary joint, which is specifically designed for high-speed serial digital signals or analog signal transmission. It can support maximum transfer rate 2.5GHz. MHF series can support single channel or high-frequency signal transmission by itself. Also MHF series can be customized to combine high-frequency signal with 24V control signal, communication signal, power supply and fluid media.

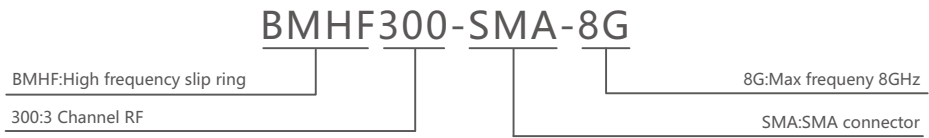
Product images



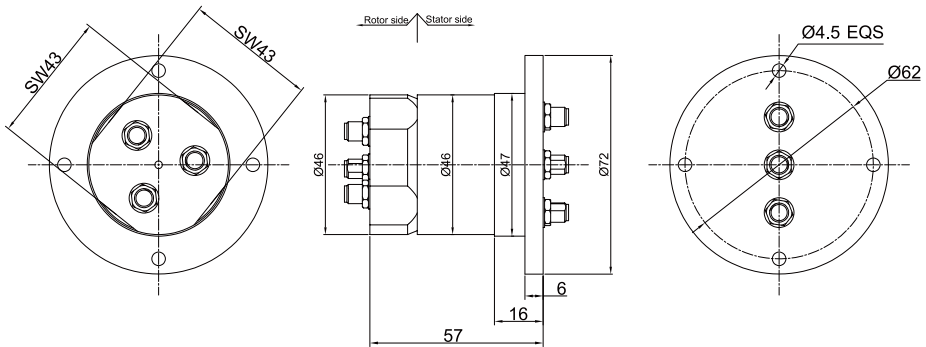
The pictures are for reference only

If there are changes in the appearance and size of the product, the actual product should prevail.

Part# Explanation



Dimensions



BMHF300 channel RF rotary joint part list

Part#	RF Channel	Frquency	Connector Type
BMHF300 -SMA-8G	3	8GHz / Channel	SMA-F

Mechanical Data

Parameter	Numerical value
Working Life	50 million revs
Rotating Speed	60RPM
Working Temperature	-40°C - +65°C
Operating Humidity	0-95%RH
Contact Material	Gold-Gold
Housing Material	Aluminum alloy
Torque	$\leq 0.05\text{N.m}$
Protection Grade	IP65
Surface treatment	Conductive oxidation

RF Rotary joints Specifications

Parameter	Channel 1 value	Channel 2 value	Channel 3 value
Interfaces	SMA-F(50Ω)	SMA-F(50Ω)	SMA-F(50Ω)
Frequency	0~8GHz	0~8GHz	0~8GHz
Average power, max.	10W	10W	10W
Vswr, max.	1.5	1.5	1.6
Vswr wow, max	0.1	0.1	0.1
Insertion loss, max.	1.3dB	1.3dB	1.3dB
Insertion loss wow, max.	0.15dB	0.15dB	0.15dB
Isolation degree (minimum value)	70dB	70dB	70dB
Phase stability (maximum)	±3°	±3°	±3°

BMHF400 SERIES

4 Channels Rf Rotary Joints

BMHF400 is 4 channels high frequency rotary joint, which is specifically designed for high-speed serial digital signals or analog signal transmission. It can support maximum transfer rate 2.5GHz. MHF series can support single channel or high-frequency signal transmission by itself. Also MHF series can be customized to combine high-frequency signal with 24V control signal, communication signal, power supply and fluid media.

Product images



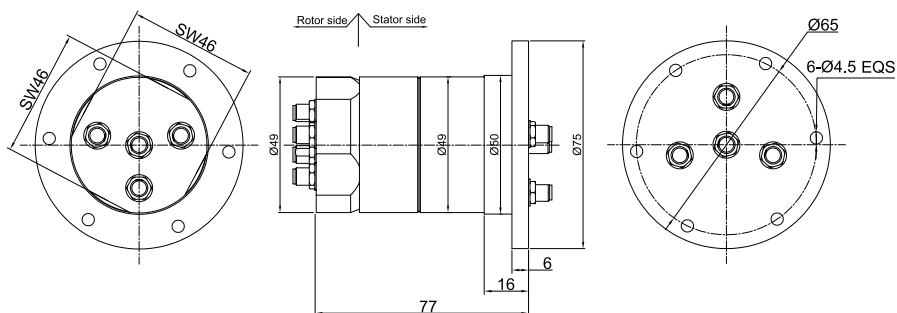
The pictures are for reference only

If there are changes in the appearance and size of the product, the actual product should prevail.

Part# Explanation



Dimensions



BMHF400 channel RF rotary joint part list

Part#	RF Channel	Frquency	Connector Type
BMHF400-SMA-4G	4	4GHz / Channel	SMA-F

Mechanical Data

Parameter	Numerical value
Working Life	50 million revs
Rotating Speed	60RPM
Working Temperature	-40°C~+65°C
Operating Humidity	0~85% RH
Contact Material	Gold-Gold
Housing Material	stainless steel
Torque	0.1N.m; +0.03N.m/6 rings
Protection Grade	IP51

RF Rotary joints Specifications

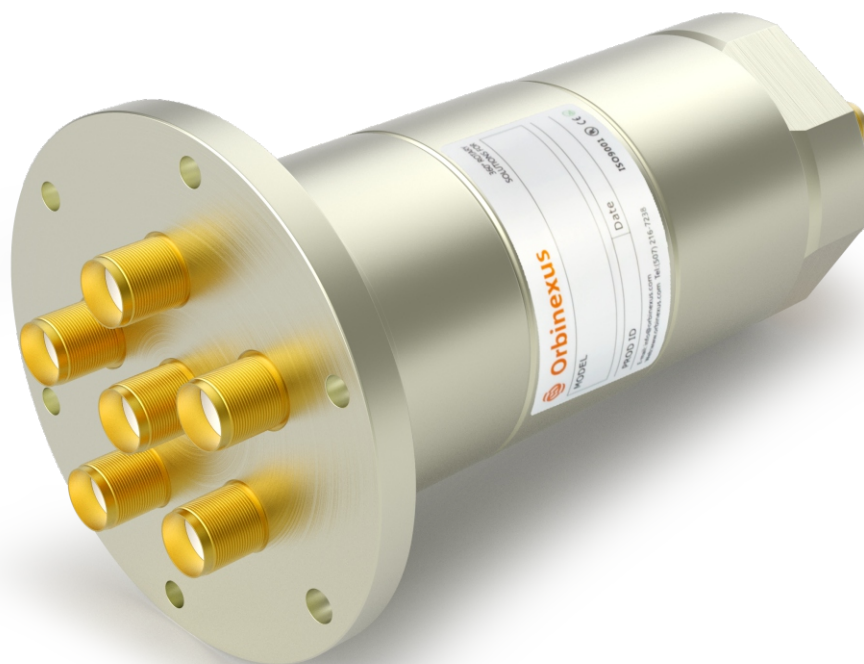
Parameter	Channel 1-4 value
Interfaces	SMA-F(50Ω)
Frequency	0~8GHz
Average power, max.	10W
Vswr, max.	1.5
Vswr wow, max	0.1
Insertion loss, max.	1.4dB
Insertion loss wow, max.	0.15dB
Isolation degree (minimum value)	70dB

BMHF600 SERIES

6 Channels Rf Rotary Joints

BMHF600 is 6 channels high frequency rotary joint, which is specifically designed for high-speed serial digital signals or analog signal transmission. It can support maximum transfer rate 8GHz. MHF series can support single channel or high-frequency signal transmission by itself. Also MHF series can be customized to combine high-frequency signal with 24V control signal, communication signal, power supply and fluid media.

Product images



The pictures are for reference only

If there are changes in the appearance and size of the product, the actual product should prevail.

Part# Explanation

BMHF600-SMA-8G(6G)

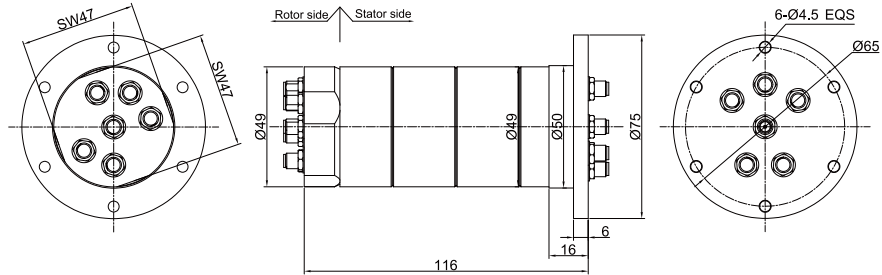
BMHF:High frequency slip ring

600: 6 Channel RF

8G(6G):Max frequency 8GHz/6G

SMA:SMA connector

Dimensions



BMHF600 channel RF rotary joint part list

Part#	RF Channel	Frquency	Connector Type
BMHF600-SMA-8G	6	8GHz / Channel	SMA-F

Mechanical Data

Parameter	Numerical value
Rotating speed, max.	60RPM
Working life (minimum)	50 million rpm
torque force	≤0.5N.M
Operation temperature	-40°C~ + 65°C
Storage temperature	-50°C~ + 70°C
Relative temperature (maximum)	95%
IP protection level	IP65
Material	Aluminum Alloy
Humidity	GJB150.9A-2009
Vibrate	GJB150.16A-2009
Impact	GJB150.18A-2009

RF Rotary joints Specifications

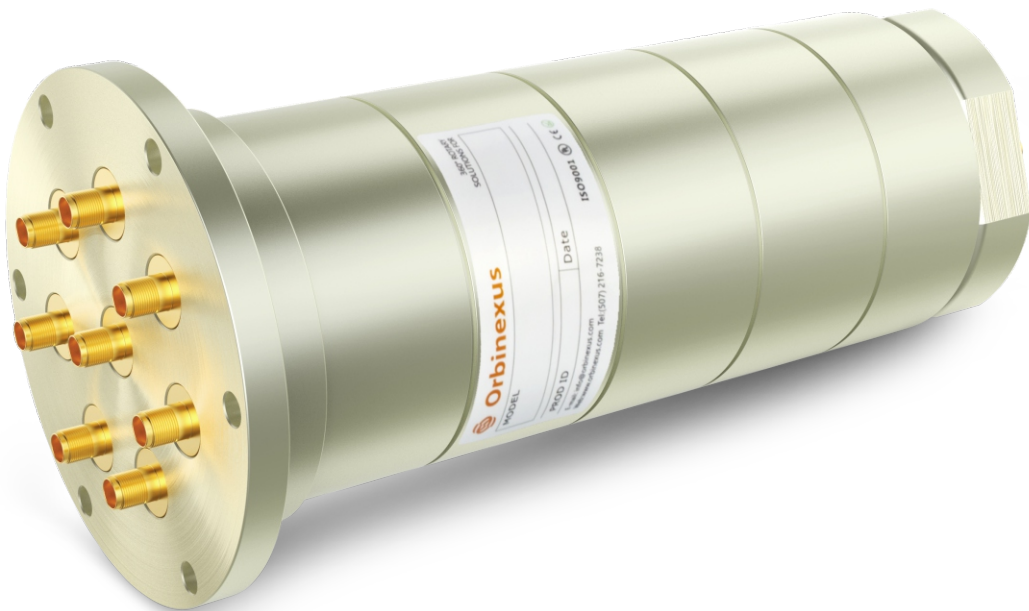
Parameter	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6
Interfaces	SMA-F(50Ω)	SMA-F(50Ω)	SMA-F(50Ω)	SMA-F(50Ω)	SMA-F(50Ω)	SMA-F(50Ω)
Frequency	0~8GHz	0~8GHz	0~8GHz	0~6GHz	0~6GHz	0~6GHz
Vswr, max.	1.5	1.5	1.5	1.6	1.6	1.6
Vswr wow,Max	0.1	0.1	0.1	0.1	0.1	0.1
Insertion loss, max.	1.4dB	1.4dB	1.5dB	1.5dB	1.5dB	1.5dB
Insertion loss fluctuation	0.15dB	0.15dB	0.15dB	0.15dB	0.15dB	0.15dB
Isolation degree (minimum value)	70dB	70dB	70dB	70dB	70dB	70dB

BMHF800 SERIES

8 Channels Rf Rotary Joints

MHF800 is 8 channels high frequency rotary joint, which is specifically designed for high-speed serial digital signals or analog signal transmission. It can support maximum transfer rate 3GHz. MHF series can support single channel or high-frequency signal transmission by itself. Also MHF series can be customized to combine high-frequency signal with 24V control signal, communication signal, power supply and fluid media.

Product images



The pictures are for reference only

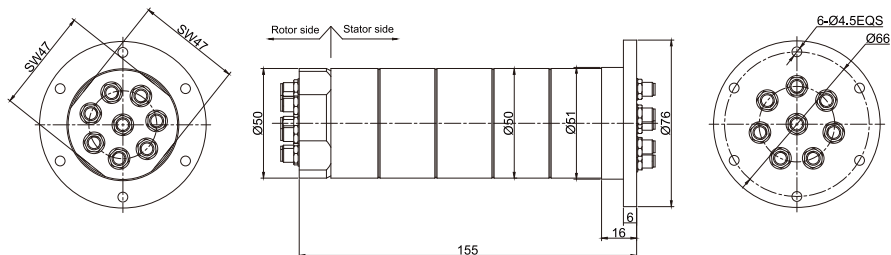
If there are changes in the appearance and size of the product, the actual product should prevail.

Part# Explanation

BMHF800-SMA-8G(6G)

BMHF:High frequency slip ring	8G(6G):Max frequency 8GHz/6G
800: 6 Channel RF	SMA:SMA connector

Dimensions



BMHF800 channel RF rotary joint part list

Part#	RF Channel	Frquency	Connector Type
BMHF600 -SMA-8G	8	8GHz / Channel	SMA-F

Mechanical Data

Parameter	Numerical value
Rotating speed, max.	60RPM
Working life (minimum)	50 million rpm
Torque force	≤0.51N.M
Operation temperature	-40°C~ + 65°C
Storage temperature	-50°C~ + 70°C
Relative temperature (maximum)	95%
IP protection level	IP65
Material	Aluminum Alloy
Humidity	GJB150.9A-2009
Vibrate	GJB150.16A-2009
Impact	GJB150.18A-2009

RF Rotary joints Specifications

Parameter	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
Interfaces	SMA-F(50Ω)	SMA-F(50Ω)	SMA-F(50Ω)	SMA-F(50Ω)	SMA-F(50Ω)	SMA-F(50Ω)	SMA-F(50Ω)	SMA-F(50Ω)
Frequency	0~8Ghz	0~8Ghz	0~8Ghz	0~6Ghz	0~6Ghz	0~6Ghz	0~6Ghz	0~6Ghz
Average power, max.	10W	10W	10W	10W	10W	10W	10W	10W
Vswr, max.	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6
Vswr wow, Max	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Insertion loss, max.	1.4dB	1.4dB	1.5dB	1.5dB	1.5dB	1.5dB	1.5dB	1.5dB
Insertion loss fluctuation	0.15dB	0.15dB	0.15dB	0.15dB	0.15dB	0.15dB	0.15dB	0.15dB
Isolation degree (minimum value)	70dB	70dB	70dB	70dB	70dB	70dB	70dB	70dB