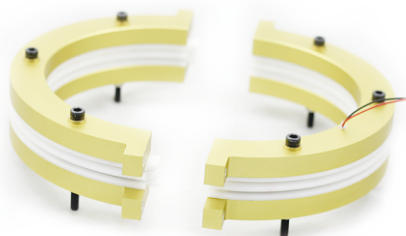


# MSP Separated series slip ring

In some applications, the separated of the rotor and brush bundle can solve the installation problem of the limited size, 2-36 wires are available. Options for 9.5 mm to 100 mm hole or solid. Especially applied to precision instruments, can be customized.



## Features :

- 1) The rotor and stator can be installed separately.
- 2) Save installation space and weight.
- 3) V-groove gold-plated design, anti-oxidation, wearproof.

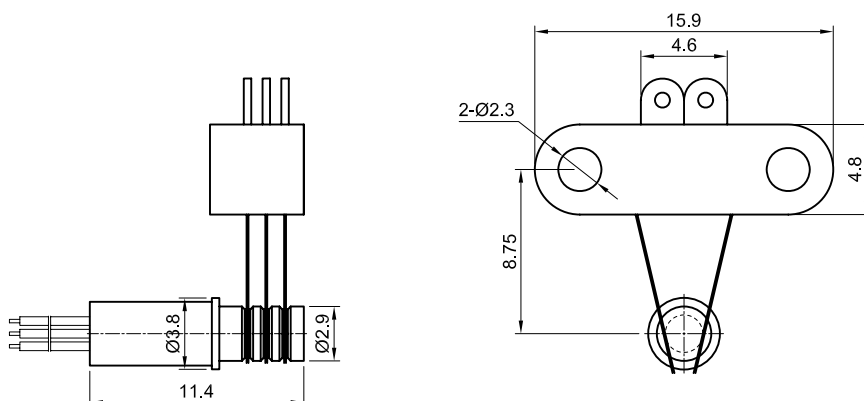
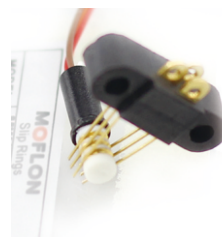
## MSP Series Models

Model#	ID(mm)	OD(mm)	rings	Current(A)	Note
MSP103	0	2.9	3	Signal/2A	Super-miniature
MSP104	0	3.5	4	Signal/2A	Super-miniature
MSP106	9.5	14.73	6	Signal/2A	Miniature through bore
MSP112	9.5	14.73	12	Signal/2A	Miniature through bore
MSP230	30	64	12	Signal/2A	Common
MSP260	60	94	12	Signal/2A	Common
MSP380	80	118	6	Signal/2A	Two parts

# MSP103 Separated Slip Rings

## 3 rings\*1A

MSP103 separated slip ring is a type of minitype slip rings. It adopts a separated rotor and contact brushes combination, supporting 3 wires for signal or 1A. The exiting wires in stator and rotor are correspondingly six colored wires, it can simplify the electrical connection. The 90-degree angle V-groove design has the characteristics of smooth rotation, low torque and low electrical noise, which can exceed ordinary slip ring products.



MSP1039 is the highest-end version of MSP103, which is used for military, aerospace, etc., differences as below

Parts#	Max working speed	Working life	Torque	Electrical noise①@10Rpm
MSP103	250RPM	20 million	0.02 N·m	10mΩ
MSP1039	1000RPM	100 million	0.005 N·m	4mΩ

### Part# Explanation

MSP103 Part# Explanation		
Parts#	Signal or 1A	Products Level
MSP103	3	Common quality
MSP1039	3	High-end quality

Note: N channels 1A rings parallel can be used as 1 channel N\*1A current. For example: 2 rings 1A parallel could be used as 1 wires 2A

### Specifications

Electrical Data			Mechanical Data	
Parameter	Value		Parameter	Value
	Power	Signal		
Rated Voltage	0~240VAC/VDC	0~240VAC/VDC	Working Temperature	-30°C~80°C
Insulation Resistance	≥1000MΩ/500VDC	≥1000MΩ/500VDC	Operating Humidity	0~85% RH
Lead Wires	AWG26#Teflon	AWG26#Teflon	Contact Material	Gold-Gold
Lead Length	Standard 300mm ( adjustable )		Torque	IP41
Dielectric Strength	500VAC@50Hz , 60s			
Electrical Noise	<0.01Ω			

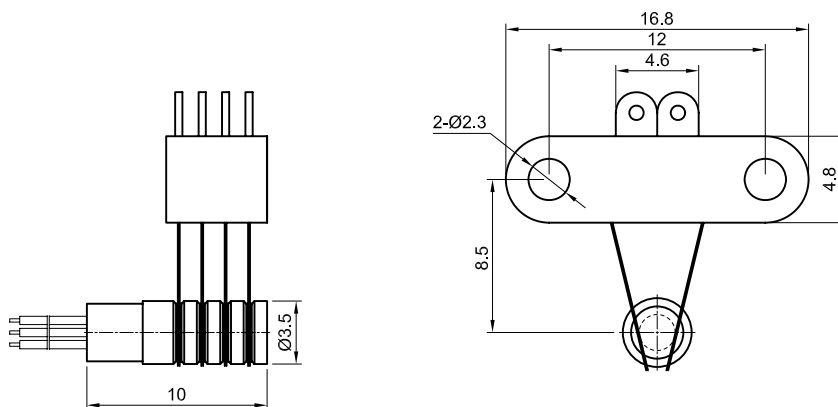
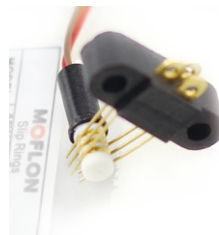
### Lead Wires Color Code

Ring	1	2	3
Code	BLK	RED	YLW

# MSP104 Separated Slip Rings

## 4 rings\*1A

MSP104 separated slip ring is a type of minitype slip rings. It adopts a separated rotor and contact brushes combination, supporting 4 wires for signal or 1A. The exiting wires in stator and rotor are correspondingly six colored wires, it can simplify the electrical connection. The 90-degree angle V-groove design has the characteristics of smooth rotation, low torque and low electrical noise, which can exceed ordinary slip ring products.



MSP1049 is the highest-end version of MSP104, which is used for military, aerospace, etc., differences as below

Parts#	Max working speed	Working life	Torque	Electrical noise①@10Rpm
MSP104	250RPM	20 million	0.02 N•m	10mΩ
MSP1049	1000RPM	100 million	0.005 N•m	4mΩ

### Part# Explanation

MSP104 Part# Explanation		
Parts#	Signal or 1A	Products Level
MSP104	4	Common quality
MSP1049	4	High-end quality

Note: N channels 1A rings parallel can be used as 1 channel N\*1A current. For example: 2 rings 1A parallel could be used as 1 wire 2A

### Specifications

Electrical Data			Mechanical Data	
Parameter	Value		Parameter	Value
	Power	Signal	Working Temperature	-30°C~80°C
Rated Voltage	0~240VAC/VDC	0~240VAC/VDC	Operating Humidity	0~85% RH
Insulation Resistance	≥1000MΩ/500VDC	≥1000MΩ/500VDC	Contact Material	Gold-Gold
Lead Wires	AWG26#Teflon	AWG26#Teflon	Torque	IP41
Lead Length	Standard 300mm ( adjustable )			
Dielectric Strength	500VAC@50Hz , 60s			
Electrical Noise	<0.01Ω			

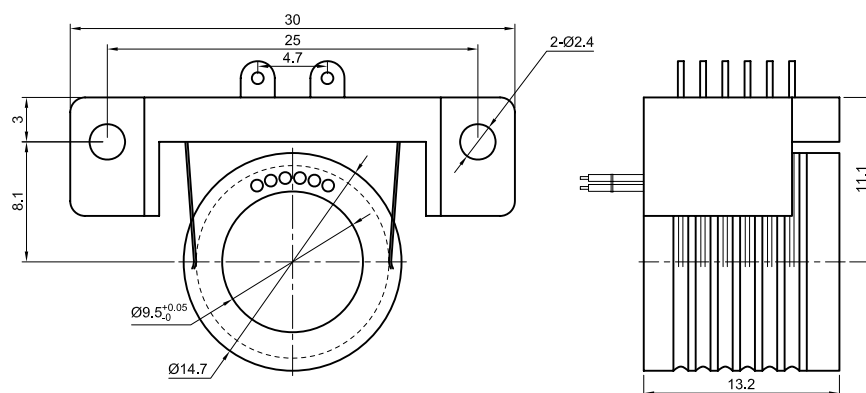
### Lead Wires Color Code

Ring	1	2	3	4
Code	BLK	RED	YLW	GRN

# MSP106 Separated Slip Rings

## 6 rings\*2A

MSP106 separated slip ring is a type of minitype slip rings. It adopts a separated rotor and contact brushes combination, supporting 6 wires for signal or 2A. The exiting wires in stator and rotor are correspondingly six colored wires, it can simplify the electrical connection. The 90-degree angle V-groove design has the characteristics of smooth rotation, low torque and low electrical noise, which can exceed ordinary slip ring products.



MSP1069 is the highest-end version of MSP106, which is used for military, aerospace, etc., differences as below

Parts#	Max working speed	Working life	Torque	Electrical noise①@10Rpm
MSP106	250RPM	20 million	0.02 N•m	10mΩ
MSP1069	1000RPM	100 million	0.005 N•m	4mΩ

### Part# Explanation

MSP106 Part# Explanation		
Parts#	Signal or 2A	Products Level
MSP106	6	Common quality
MSP1069	6	High-end quality

Note: N channels 2A rings parallel can be used as 1 channel N\*2A current. For example: 2 rings 2A parallel could be used as 1 wires 4A

### Specifications

Electrical Data			Mechanical Data	
Parameter	Value		Parameter	Value
	Power	Signal	Working Temperature	-30°C~80°C
Rated Voltage	0~240VAC/VDC	0~240VAC/VDC	Operating Humidity	0~85% RH
Insulation Resistance	≥1000MΩ/500VDC	≥1000MΩ/500VDC	Contact Material	Gold-Gold
Lead Wires	AWG26#Teflon	AWG26#Teflon	Torque	IP41
Lead Length	Standard 300mm ( adjustable )			
Dielectric Strength	500VAC@50Hz , 60s			
Electrical Noise	<0.01Ω			

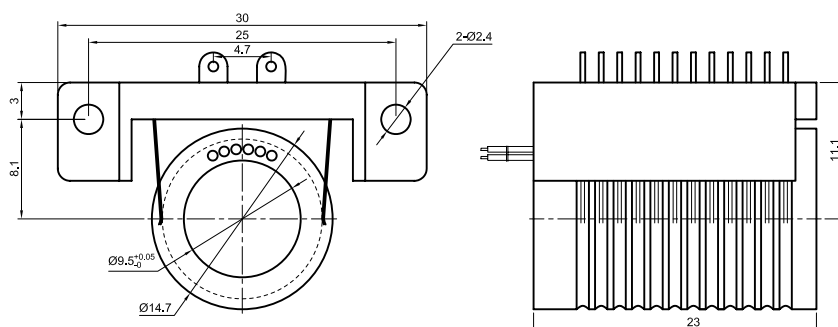
### Lead Wires Color Code

Ring	1	2	3	4	5	6
Code	BLK	RED	YLW	GRN	BLU	WHT

# MSP112 Separated Slip Rings

## 12 rings\*2A

MSP112 separated slip ring is a type of minitype slip rings. It adopts a separated rotor and contact brushes combination, supporting 12 wires for signal or 2A. The exiting wires in stator and rotor are correspondingly six colored wires, it can simplify the electrical connection. The 90-degree angle V-groove design has the characteristics of smooth rotation, low torque and low electrical noise, which can exceed ordinary slip ring products.



MSP1129 is the highest-end version of MSP112, which is used for military, aerospace, etc., differences as below

Parts#	Max working speed	Working life	Torque	Electrical noise①@10Rpm
MSP112	250RPM	20 million	0.02 N•m	10mΩ
MSP1129	1000RPM	100 million	0.005 N•m	4mΩ

### Part# Explanation

MSP112 Part# Explanation		
Parts#	Signal or 2A	Products Level
MSP112	12	Common quality
MSP1129	12	High-end quality

Note: N channels 2A rings parallel can be used as 1 channel N\*2A current. For example: 2 rings 2A parallel could be used as 1 wires 4A

### Specifications

Electrical Data			Mechanical Data	
Parameter	Value		Parameter	Value
	Power	Signal	Working Temperature	-30°C~80°C
Rated Voltage	0~240VAC/VD	0~240VAC/VDC	Operating Humidity	0~85% RH
Insulation Resistance	≥1000MΩ/500VDC	≥1000MΩ/500VDC	Contact Material	Gold-Gold
Lead Wires	AWG26#Teflon	AWG26#Teflon	Torque	IP41
Lead Length	Standard 300mm ( adjustable )			
Dielectric Strength	500VAC@50Hz , 60s			
Electrical Noise	<0.01Ω			

### Lead Wires Color Code

Ring	1	2	3	4	5	6	7	8	9	10	11	12
Code	BLK	RED	YLW	GRN	BLU	WHT	BLK	RED	YLW	GRN	BLU	WHT

Note: 6 wires for 1 group color, from 7-12, repeat the same color as 1...6, indicated with number code pipe.

(Noted : It can be customized for the bore size and rings number according to customer's requirements)

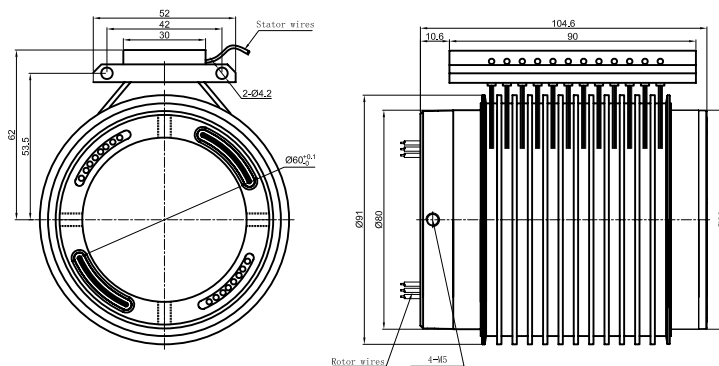
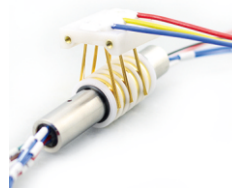


# MSP260 Separated Slip Rings

Bore size 60mm , 12 rings\*10A

( Noted : It can be customized for the bore size and rings number according to customer's requirements )

MSP260 separated slip ring adopts a separated rotor and contact brushes combination, supporting 12 wires for signal or 10A. The exiting wires in stator and rotor are correspondingly six colored wires, it can simplify the electrical connection. The 90-degree angle V-groove design has the characteristics of smooth rotation, low torque and low electrical noise, which can exceed ordinary slip ring products.



MSP2609 is the highest-end version of MSP260, which is used for military, aerospace, etc., differences as below

Parts#	Max working speed	Working life	Torque	Electrical noise①@10Rpm
MSP260	150RPM	10 million	0.1 N·m	10mΩ
MSP2609	400RPM	400 billion	0.05 N·m	4mΩ

## Part# Explanation

MSP260 Part# Explanation		
Part#	Signal or 10A	Products Level
MSP260	12	Common quality
MSP2609	12	High-end quality

Note: 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

## Specifications

Electrical Data			Mechanical Data	
Parameter	Value		Parameter	Value
	Power	Signal	Working Temperature	-30°C~80°C
Rated Voltage	0~440VAC/VDC	0~440VAC/VDC	Operating Humidity	0~85% RH
Insulation Resistance	≥1000MΩ/500VDC	≥1000MΩ/500VDC	Contact Material	Gold-Gold
Lead Wires	AWG16#Teflon	AWG16#Teflon	Torque	IP41
Lead Length	Standard 300mm ( adjustable )			
Dielectric Strength	500VAC@50Hz , 60s			
Electrical Noise	<0.01Ω			

## Lead Wires Color Code

Ring	1	2	3	4	5	6	7	8	9	10	11	12
Code	BLK	RED	YLW	GRN	BLU	WHT	BLK	RED	YLW	GRN	BLU	WHT

(6 wires for 1 group color, from 7-12, repeat the same color as 1...6, indicated with number code pipe)

## Options for custom slip ring

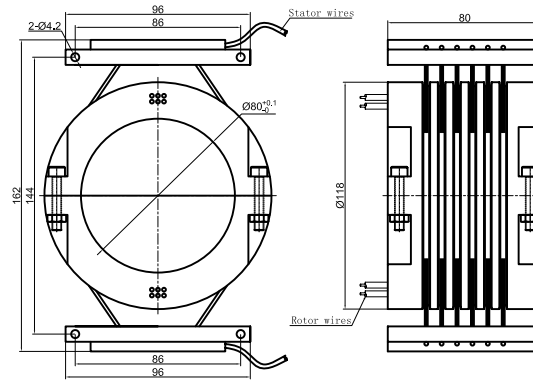
Note: it can be customized as below requirements, lead time would increase 3~15 days, price would increase 5%~50%. Most basic parts of slip ring are standard and modularized, which saved costs and lead time.

- 1) Bore size
- 2) Circuits number
- 3) High temperature, high speed etc.

# MSP380 –Two Parts Separated Slip Rings

Bore size 80mm , 6 rings\*10A

MSP380 is separated slip ring,suitable for the situation where the slip ring can't be put into from the end.It adopts a separated rotor and contact brushes combination,supporting 6 wires for signal or 10A.The exiting wires in stator and rotor are correspondingly six colored wires, it can simplify the electrical connection. The 90-degree angle V-groove design has the characteristics of smooth rotation, low torque and low electrical noise, which can exceed ordinary slip ring products.



MSP3809 is the highest-end version of MSP380,which used for military, aerospace, etc., differences as below

Parts#	Max working speed	Working life	Torque	Electrical noise①@10Rpm
MSP380	150RPM	5 million	0.1 N•m	20mΩ
MSP3809	500RPM	300 billion	0.05 N•m	10mΩ

## Part# Explanation

MSP380 Part# Explanation		
Part#	Signal or 10A	Products Level
MSP380	6	Common quality
MSP3809	6	High-end quality

Note: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

## Specifications

Electrical Data			Mechanical Data	
Parameter	Value		Parameter	Value
	Power	Signal	Working Temperature	-30°C~80°C
Rated Voltage	0~440VAC/VDC	0~440VAC/VDC	Operating Humidity	0~85% RH
Insulation Resistance	≥1000MΩ/500VDC	≥1000MΩ/500VDC	Contact Material	Gold-Gold
Lead Wires	AWG16#Teflon	AWG16#Teflon	Torque	IP41
Lead Length	Standard 300mm ( adjustable )			
Dielectric Strength	500VAC@50Hz , 60s			
Electrical Noise	<0.01Ω			

## Lead Wires Color Code

Ring	1	2	3	4	5	6	7	8	9	10	11	12
Code	BLK	RED	YLW	GRN	BLU	WHT	BLK	RED	YLW	GRN	BLU	WHT

(6 wires for 1 group color, from 7-12, repeat the same color as 1...6, indicated with number code pipe)

## Options for custom slip ring

Note: it can be customized as below requirements, lead time would increase 3~15 days,price would increase 5%~50%.Most basic parts of slip ring are standard and modularized,which saved costs and lead time.

- 1) Bore size
- 2) Circuits number
- 3) High temperature,high speed etc.