HISCIENCE

Slip ring product selection manual

Excellence in Every Turn: Rotary Connections

SHENZHEN HISCIENCE CO.,LTD.

Company Profile

Company Core Strengths

For nearly 20 years, Hiscience has leveraged its resource advantages in the three major military fields of optical communication, microwave devices, and laser technology, focusing on the research and development of automated and intelligent slip rings. As the only slip ring manufacturer in the industry with a professional background in lasers, optical communication, and microwave radio frequency, Hiscience is uniquely positioned to lead the market.

Hiscience is dedicated to addressing the technical challenges in the slip ring industry, such as high-speed and RF signal frame loss and frequent communication signal alarms. Through joint research and development with the military, the company ensures a high level of consistency, reliability, and a 99.99% pass rate for its products. Hiscience provides high-quality products for various industries, including security, medical, new energy, intelligent robots, intelligent industry, aviation, aerospace, navigation, and military. The company is at the forefront of standardization, digitization, and intelligence development in the slip ring industry.

Three Major Business Areas

Hiscience operates in three major business areas: security monitoring, military communications, and intelligent industry.

Security monitoring and military communications are core areas where Hiscience has established a long-standing presence. The company collaborates with renowned companies such as Hikvision, Dahua, Uniview, Huawei, Kedacom, CRRC, CSSC, and military research institutes.

With the rapid advancement of the intelligent industrial era, Hiscience has expanded its business into new sectors, including new energy lithium batteries, industrial sewing machines, robotic arms, robots, polishing machines, drones, packaging machinery, wind power, and other automation equipment sub-industries. Hiscience leverages its unique professional resources and automation expertise to excel in these areas.

Brand Story

2011 Fiber optic connectors and fiber optic patch cords

2012 Cooperated with Wuhan Post and Telecommunications Research Institute to develop multi-channel wavelength division multiplexers

2013 Developed and mass-produced a non-contact single-channel fiber optic slip ring with over 100 million RPM

2014 Development and application of non-contact 8 circuits fiber optic slip ring

2015 Development of RF coaxial rotary joints and high-frequency slip rings

2016 Multi-channel RF and high-frequency slip rings are officially used in the equipment of a certain military enterprise

2017 RF + Electric slip rings utilized in multiple projects in cooperation with Harbin Military University

2018 Development and mass production of a series of optical fiber slip rings specialized forsecurity monitoring

2019 Hiscience's new structure and technology for hat slip rings obtained multiple national patents, revolutionizing traditional slip ring design. The patented optoelectronic slip ring increased production efficiency by more than 10 times compared to traditional methods, with a pass rate of 100%

2020 Hiscience's slip ring big data center plan officially launched, leading the industry in standardization, digitization, and intelligence development

2021 Hiscience's slip rings obtained certification from the military weapon equipment management system

2022 Hiscience launched an upgraded mercury slip ring series

2023 Hiscience launched a full range of standard slip rings, leading the industry's development of product standardization models

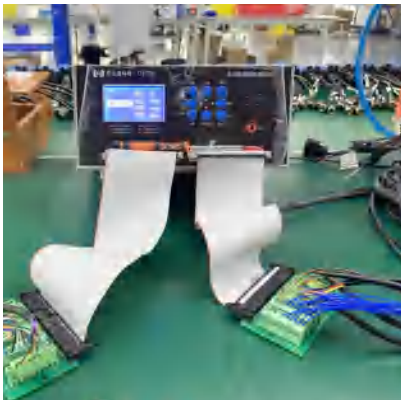
2024 To be continued . . . . . .

Quality Testing Equipment

Coordinate Measuring Machine

Hipot Tester (AC/DC/IR)

DC Resistance Meter



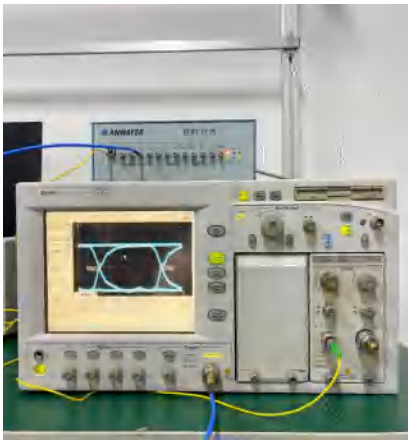
Cable Tester

High Current Test Equipment

Rohs Test Equipment

Thin-Film Thickness Measurement Instrument

Quality Testing Equipment

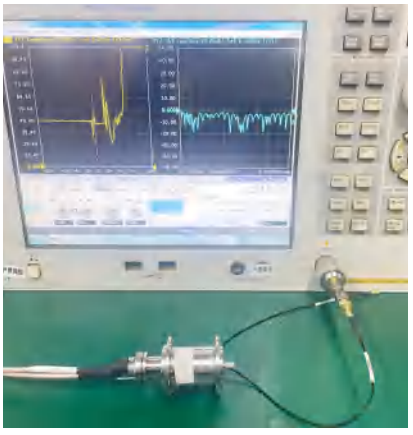


Wide-Bandwidth Oscilloscope

Optical Fiber End Face Inspection Experts

Life Test Equipment

Insertion Loss & Return Loss Test Station



Vector Network Analyzer

Thermal Shock Test Machine

Temperature & Humidity Test Chamber

Slip Ring Laboratory (EMC Test Laboratory)

Certificates

Hiscience boasts professional testing reports and core technology certifications, having successfully passed ISO, CE, RoHS, and various military certifications. These credentials ensure the highest standards of product quality and reliability.

Catalog

Capsule Slip Ring Series

Product Series Introduction

Hiscience's Capsule Slip Ring represents a revolutionaryadvancement in structural design, production processes, assemblytechniques, performance testing standards, and technology. Key production stages are fully automated to ensure consistency and prevent damage throughout manufacturing and installation.

The slip ring features an exceptionally smooth ring path surfacewith a surface roughness of ≤Ra0.4, effectively preventing brushwire breakage and minimizing early powder accumulation. Thissmooth surface also reduces resistance value fluctuation, extendingthe brush wire lifespan by over 2 times and ensuring superior reliability and consistency.

Designed to meet the exacting standards of industries such as security, intelligent manufacturing,aviation, aerospace, navigation, and military, Hiscience delivers high-quality products tailored to demanding applications.

Electrical Specifications		Mechanical Specifications	
Technical Specification	Power/Signal	Technical Specification	Numeric
Rating Voltage	0~60VAC/VDC	Working Life	5 Million
Insulation Resistance	≥50MΩ/100VDC	Roating Speed	300RMP
Lead Wire Size	Please refer to the selection table	Working Temperature	-30℃ ~+80℃
Lead Length	Standard 200mm(can be customized)	Housing Material	Precious Metal
Dielectric Strength	≥200VAC @50Hz, 60s	Housing Material	Engineering Plastics/Stainless Steel /Specialty Aluminum
Dynamic Contact	<0.01Ω	Torque	0.01N.m
Protection(IP Grade)	IP40		

Customization Options Description:

1、Operating Temperature: Standard range -20℃ to +60℃; customizable from -60℃ to +200℃

2、Rotating Speed: Standard range 0 to 300 RPM; customizable up to 20,000 RPM

3、Reference Lifespan: Standard 5 million rotations @ 300 RPM; extended lifespan versions available upon customization

4、Housing Material: Options include engineering plastic, aluminum alloy, and stainless steel

5、Protection (IP Grade): Standard IP50-68; customization available

6、Connectors: Various types and lengths can be customized as per requirements

7、Integration Capabilities: Supports integration with pneumatic, hydraulic, RF, and fiber optic rotary joints

8、Signal Transmission: Capable of simultaneous transmission of multiple signals including industrial Ethernet, serial, industrial bus, USB, SDI, etc.

Capsule Slip Ring Series

Features

Hiscience's medium-sized Capsule Slip Rings range in outer diameter from 22mm to 54mm, accommodating up to 125 circuits or more.The contact parts utilize wear-resistant and corrosion-resistant superhard gold surface treatment technology, exceeding international military standards for connector contact parts in hardness, strength, abrasion resistance, and conductivity. This ensures exceptional reliability and durability.

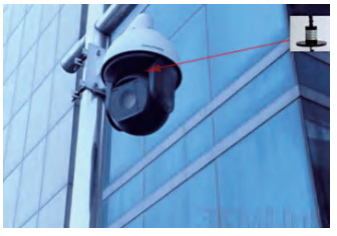
Designed with high precision, compact size, and ease of installation, these slip rings offer customizable options for high-speed operation, extended lifespan, and enhanced protection. They can seamlessly integrate various signal types including Ethernet, USB, RS, LVDS, Canbus, FireWire, SDI, HDMI, among others.

Customization options encompass slip ring channels, current capacity, size configurations, speed capabilities, sealing levels, housing materials, and more, catering to diverse industrial requirements.

Applications

Hiscience's medium-sized Capsule Slip Rings are utilized across various industries and applications, including:

- High Speed Dome
- Pan-Tilt-Zoom Systems
- Electrical Test Equipment
- Medical Equipment
- Rotary Tables
- Manufacturing and Control Equipment



Installation Instructions and Diagrams

1、Mounting: This series of slip rings is designed for flange-mounting on the stator mounting component.

2、Concentricity: Ensure the rotor mounting component is connected with proper concentricity to the slip ring drive. If using the rotor lead as the drive, evaluate its suitability for the intended use.

3、Installation: Refer to the diagram below. Use screws with washers to install the slip ring; the washers prevent over-tightening of the flange.

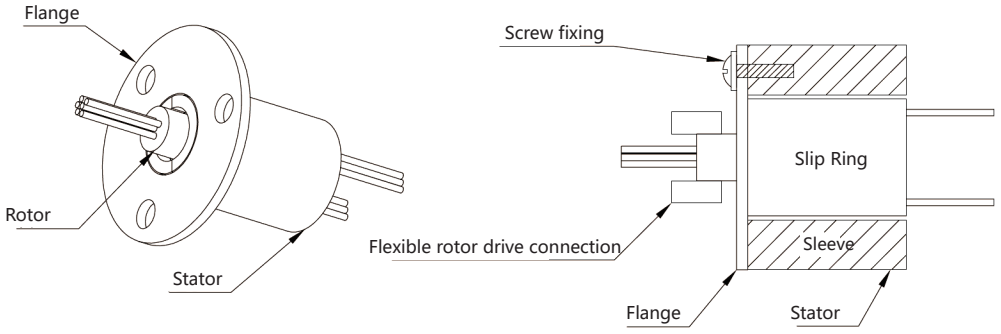
4、Weight Handling: The slip ring should not support the weight of connected equipment. Securely fix rotating equipment to prevent additional load on the slip ring rotor.

5、Environmental Protection: Protect the slip ring from dust and moisture. For outdoor use, consider installing a protective cover (excluding special non-standard customized slip rings).

6、Wire Protection: Ensure all wire insulation is protected during equipment rotation. During wiring, avoid placing weight on wire ends and prevent them from experiencing force or pulling.

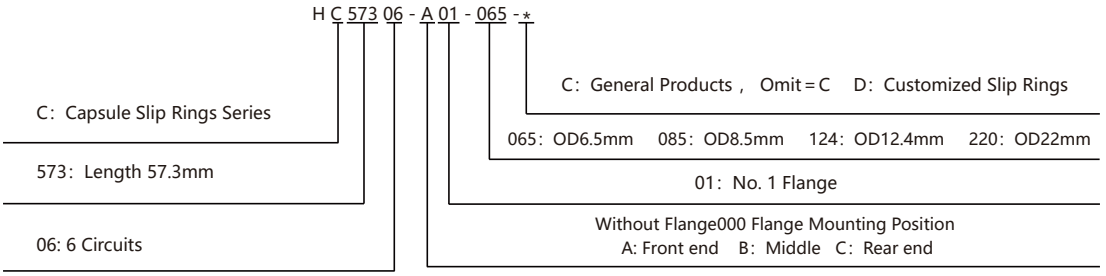
7、Wire Stripping: When stripping wires, take care not to damage the insulation.

Capsule Slip Ring Series



Part Number Description

For example：HC57306-A01-065



Color Code Of Lead Wire

Ring #	1	2	3	4	5	6	7	8	9	10	11	12
Color	Black	Brown	Red	Orange	Yellow	Green	Blue	Violet	Grey	White	Pink	Azury

Remark: If more than 12wires, repeat as sequence , use number tubes to distinguish them.

Standard Series Selection Table

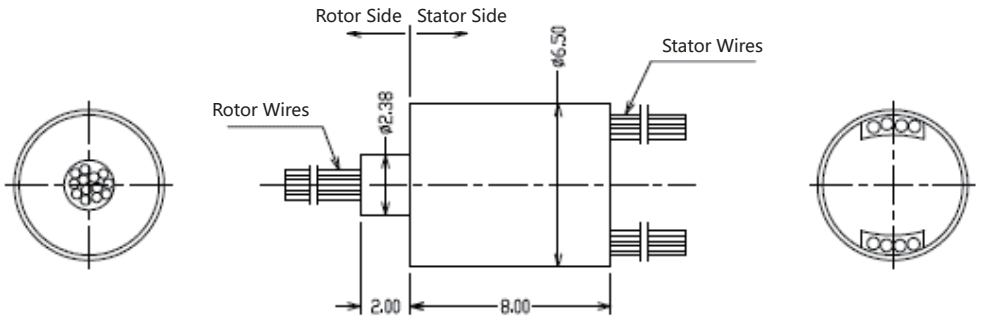
Capsule Slip Rings Series

Part NO.	Length(mm)	OD(mm)	Circuits	Current	Voltage(VDC/VAC)
HC**-065	8~15.6	6.5	1~12	Signal(2A)	0-48
HC**-085	11.8	8.5	1~8	Signal(2A)	0-48
HC**-124	13.2~23.9	12.4	1~18	Signal(2A)	0-60
HC**-220	17~54.5	22	1~36	Signal(2A)	0-60

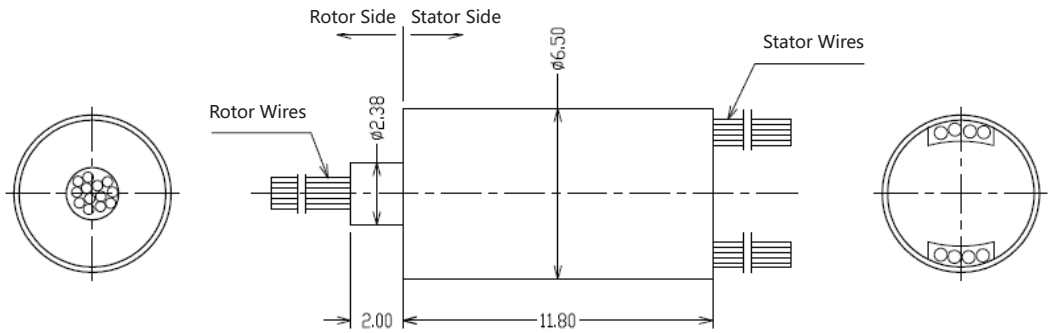
HC**-065 Series Selection Table

HC**-065 Series					
Part NO.	Length(mm)	OD(mm)	Circuits	Current	Voltage(VDC/VAC)
HC08002-065	8	6.5	2	Signal/1A	0-48
HC08004-065	8	6.5	4	Signal/2A	0-48
HC11802-065	11.8	6.5	2	Signal/2A	0-48
HC11804-065	11.8	6.5	4	Signal/1.5A	0-48
HC11808-065	11.8	6.5	8	Signal/1A	0-48
HC15612-065	15.6	6.5	12	Signal/1A	0-48

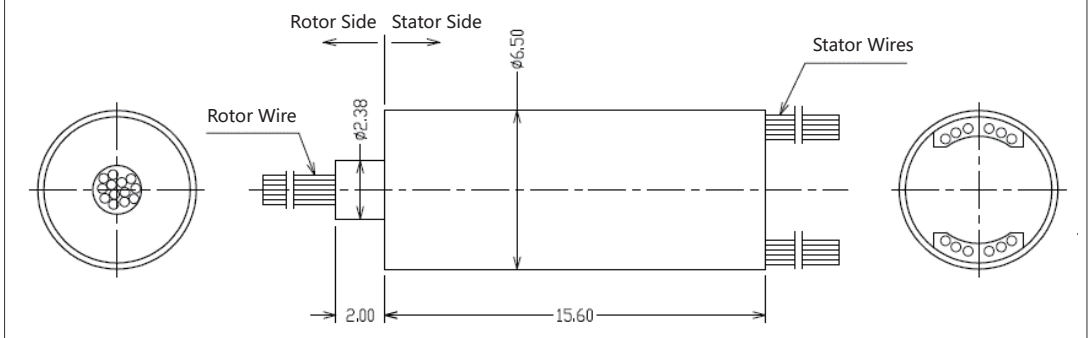
HC**-065 Series Dimensions（HC08002、HC08004）



HC**-065 Series Dimensions（HC11802、HC11804、HC11808）



HC**-065 Series Dimensions (HC15612)

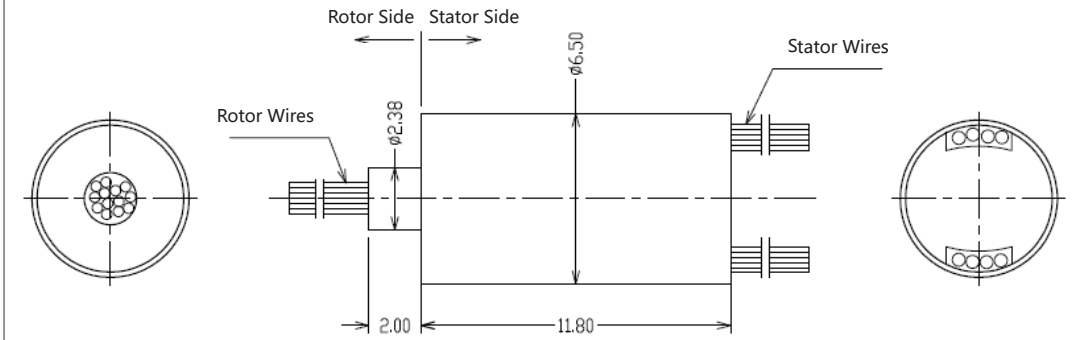


HC**-085 Series Selection Table

HC**-085 Series

Part NO.	Length(mm)	OD(mm)	Circuits	Current	Voltage(VDC/VAC)
HC11804-085	11.8	8.5	4	Signal/2A	0-48
HC11806-085	11.8	8.5	6	Signal/2A	0-48
HC11808-085	11.8	8.5	8	Signal/2A	0-48
HC11802-085	11.8	8.5	2	Signal/2A	0-48

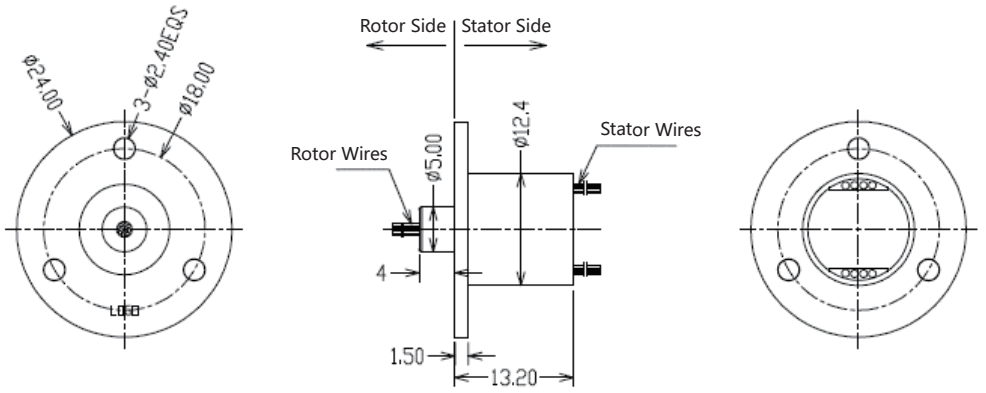
HC**-085 Series Dimensions (HC11802、HC11804、HC11806、HC11808)



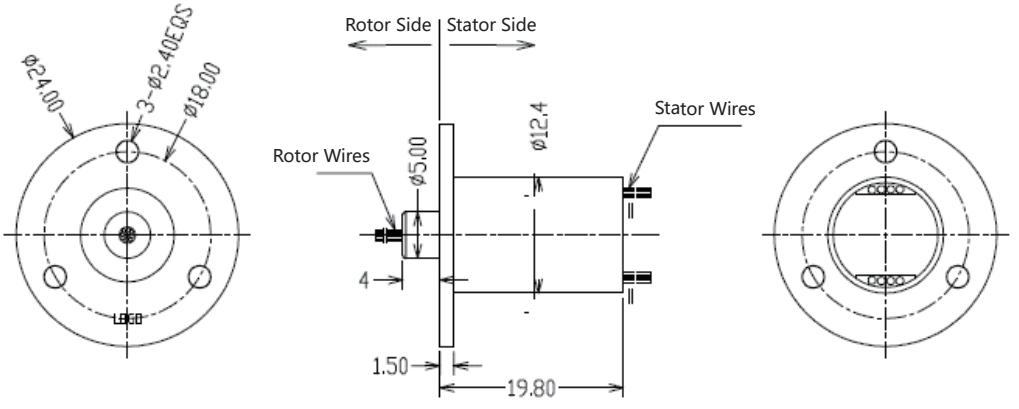
HC**-124 Series Selection Table

HC**-124 Series					
Part NO.	Length(mm)	OD(mm)	Circuits	Current	Voltage(VDC/VAC)
HC13204-A01-124	13.2	12.4	4	Signal/2A	0-60
HC13206-A01-124	13.2	12.4	6	Signal/2A	0-60
HC19808-A01-124	19.8	12.4	8	Signal/2A	0-60
HC19812-A01-124	19.8	12.4	12	Signal/2A	0-60
HC23918-A01-124	23.9	12.4	18	Signal/2A	0-60

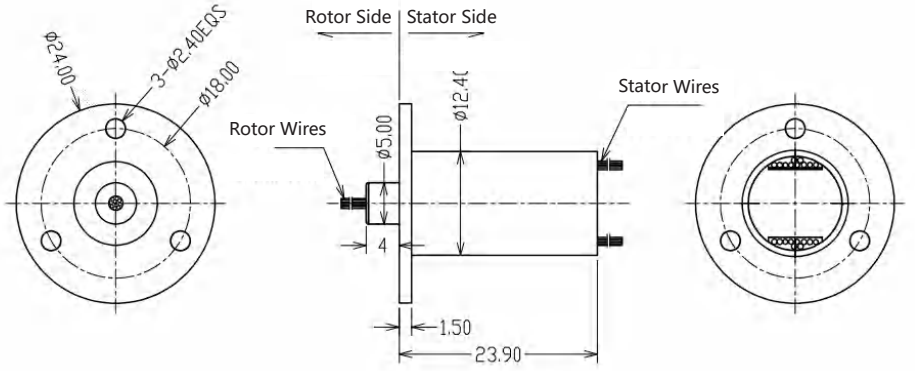
HC**-124 Series Dimensions（HC13204、HC13206）



HC**-124 Series Dimensions（HC19808、HC19812）



HC**-124 Series Dimensions (HC23918)

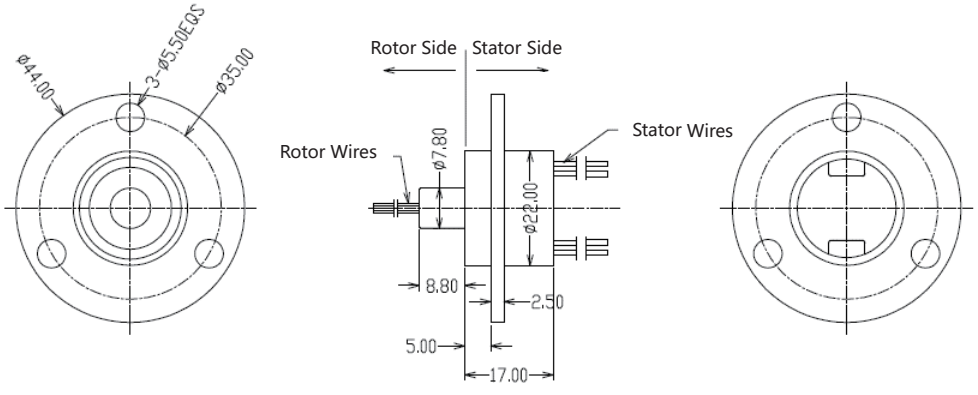


HC**-220Series Selection Table

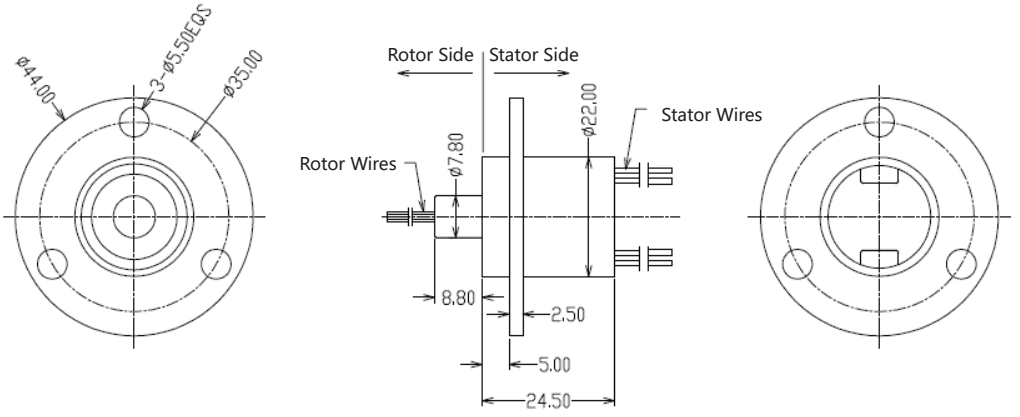
HC**-220 Series

Part NO.	Length(mm)	OD(mm)	Circuits	Current	Voltage(VDC/VAC)
HC17004-B01-220	17	22	4	Signal/2.5A	0-60
HC17006-B01-220	17	22	6	Signal/2.5A	0-60
HC24508-B01-220	24.5	22	8	Signal/2.5A	0-60
HC24512-B01-220	24.5	22	12	Signal/2.5A	0-60
HC31918-B01-220	31.9	22	18	Signal/2A	0-60
HC39624-B01-220	39.6	22	24	Signal/2A	0-60
HC54536-B01-220	54.5	22	36	Signal/1A	0-60

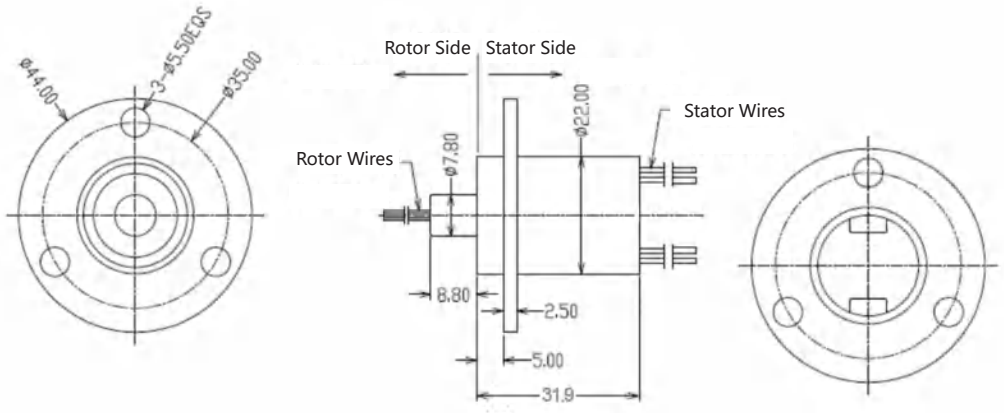
HC**-220 Series Dimensions (HC17004、HC17006)



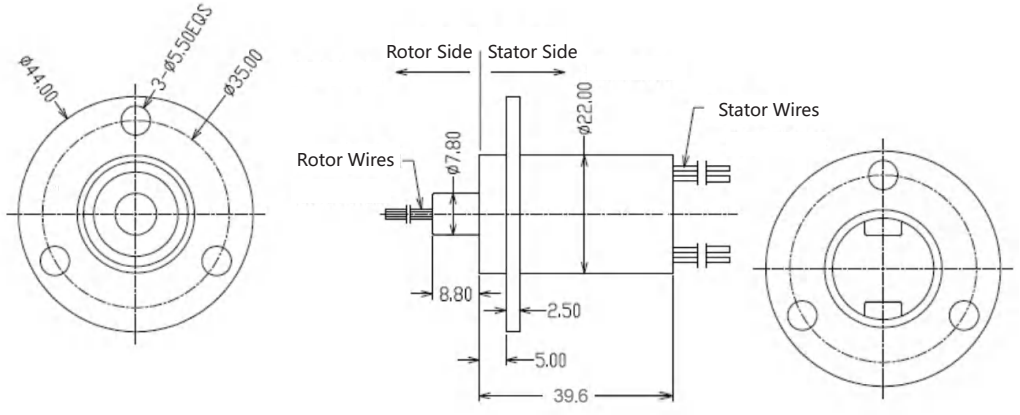
HC**-220 Series Dimensions (HC24508、HC24512)



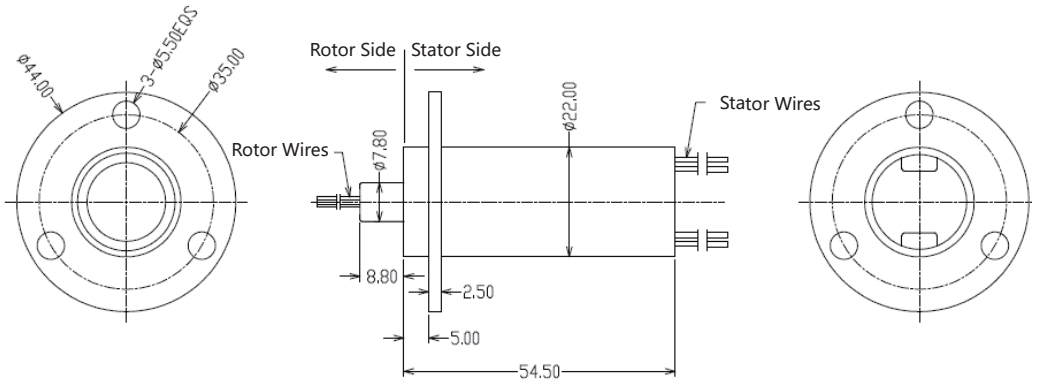
HC**-220 Series Dimensions (HC31918)



HC**-220 Series Dimensions (HC39624)



HC**-220 Series Dimensions (HC54536)



Fiber Optic Slip Rings series

Product Series Introduction

The fiber optic slip ring, also known as an optical slip ring, is especialized rotating connector designed to facilitate uninterrupted 360° rotation and transmission of optical energy and signals. It enables seamless fiber optic signal transmission between rotating and stationary components, making it ideal for applications requiring high-speed signals, large information capacity, high precision, and long-distance transmission.

Unlike traditional slip rings, the optical signal transmission in a fiber optic slip ring is non-contact and non-frictional, ensuring a lifespan of up to hundreds of millions of rotations. The fully sealed design guarantees independent transmission of optical signals, free from interference with electrical signals and immune to electromagnetic interference. This design feature provides robust adaptability to challenging application environments, including low temperatures, high pressures, and electromagnetic interference.

When paired with an electric slip ring, the fiber optic slip ring forms a Fiber-Electric Slip Ring system capable of transmitting both power and high-speed data simultaneously, offering versatile solutions for complex industrial and technological requirements.

Optical Parameter		Mechanical Parameter		Environmental Parameter	
NO.of Circuits	1-37 channels are optional	Maximum Rotational Speed	Single Mode 2000RPM or higher Multi Mode 300RPM	Working Temperature	-40℃~+85℃
Wavelength Range	650-1650nm (customizable for special wavelengths)	Connector Tensile Strength	≥75N		
Insertion Loss	Single Mode < 2dB Multi Mode < 4dB	Package Form	Pigtails / interface	Working Humidity	≤70% RH or higher
Insertion loss variation value	Single Mode < 1dB Multi Mode < 2dB	Connector Type	ST/FC/SC/LC		
Return Loss	≥45dB	Housing Type	0.9/2/3mm (TPU or armored)	Protection (IP Grade)	IP65 (up to IP68)
Crosstalk	> 45dB	Vibration	MIL-STD-167-1A		
Max Power	23dBm (customizable for high power)	Shock	MIL-STD-810G		

Customization Options Description:

1、Service Life: Single Mode ≥ 200 million rotations (300 RPM); Multi Mode ≥ 100 million rotations (300 RPM)

2、Fiber Transmission Types: Various options available

3、Power and Signal Configurations: Number and types are customizable

4、Fiber Type: Options include single-mode or multi-mode, single-channel or multi-channel configurations

5、Customization: Shape, shell material, and drive connector are customizable

6、Fiber Connectors: Optional types such as FC, LC, PC, ST, etc.

Fiber Optic Slip Rings series

Features

Hiscience's fiber optic slip ring incorporates patented optical coupling technology, offering significant advantages: Patented Optical Coupling Technology: Self-developed with simplified coupling process—no fiber collimators or coaxial adjustment needed. One-time assembly with efficiency over 10 times higher than market counterparts, ensuring a 100% pass-through rate.

- Long Service Life: Supports 200-400 million rotations
- Original Low-Loss Optical Coupling Technology: Ensures minimal signal loss
- Sealed Structure: Optical components remain unaffected by external environment factors
- Compact and Lightweight: Facilitates easy integration with electrical slip rings
- No Leakage, No Electromagnetic Interference: Suitable for long-distance transmission (tens to hundreds of kilometers)
- High Bandwidth Transmission: Offers significantly larger transmission bandwidth than electrical connectors. Compatible with wavelength division multiplexers for enhanced bandwidth utilization.

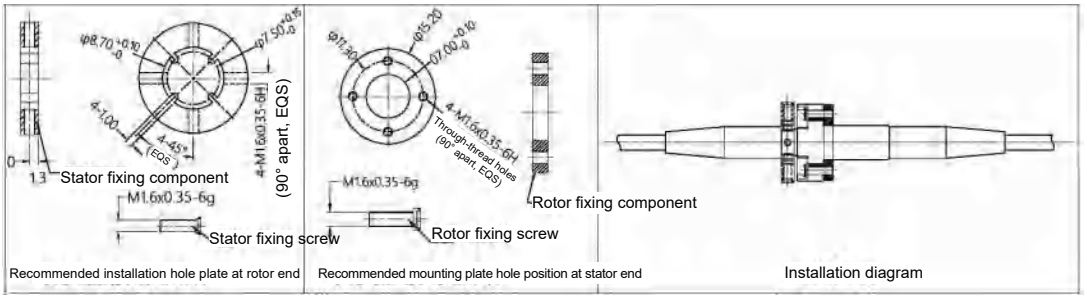
Applications

Hiscience's fiber optic slip rings find essential application in a diverse range of industries and systems, including:

- Robots
- Material Handling Systems
- Medical Systems
- Remote Control Systems
- Radar Systems
- Rotating Turrets on Vehicles
- Video Surveillance Systems
- Offshore Equipment
- Naval Systems
- National or International Security Systems
- Submarine Operations Systems

These slip rings enable high-speed transmission and precise control of video, digital, and analog signals, making them ideal for fiber optic sensing and other rotating systems (speed tables) requiring reliable and uninterrupted data transmission.

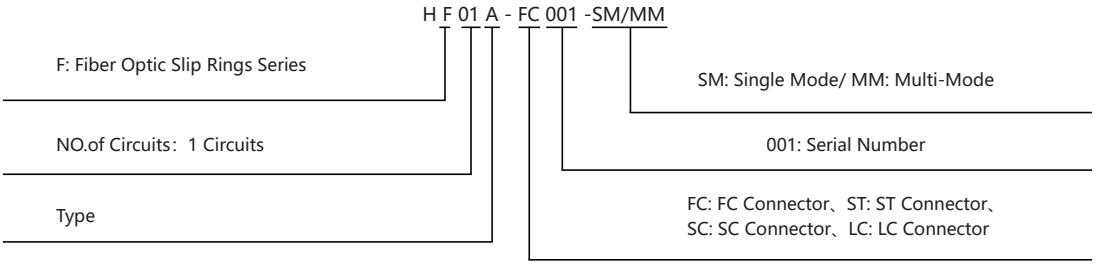
Installation Instructions and Diagrams



Fiber Optic Slip Rings series

Part Number Description

For example：HF01A-FC001-SM/MM



Fiber Optic Slip Ring Technical Specifications:

- Fiber Mode: (Single Mode): 9/125um； (Multi Mode): 50/125um, 62.5/125um
- Fiber Optic Connector：FC: FC Connector ； ST:ST Connector ； SC: SC Connector
  LC: LC Connector ； PC The default connector face is PC
  If APC is needed, add APC after the connector code, such as: FC/APC
- Wavelength Range：Single Mode 1310/1550；Multi Mode 850/1310

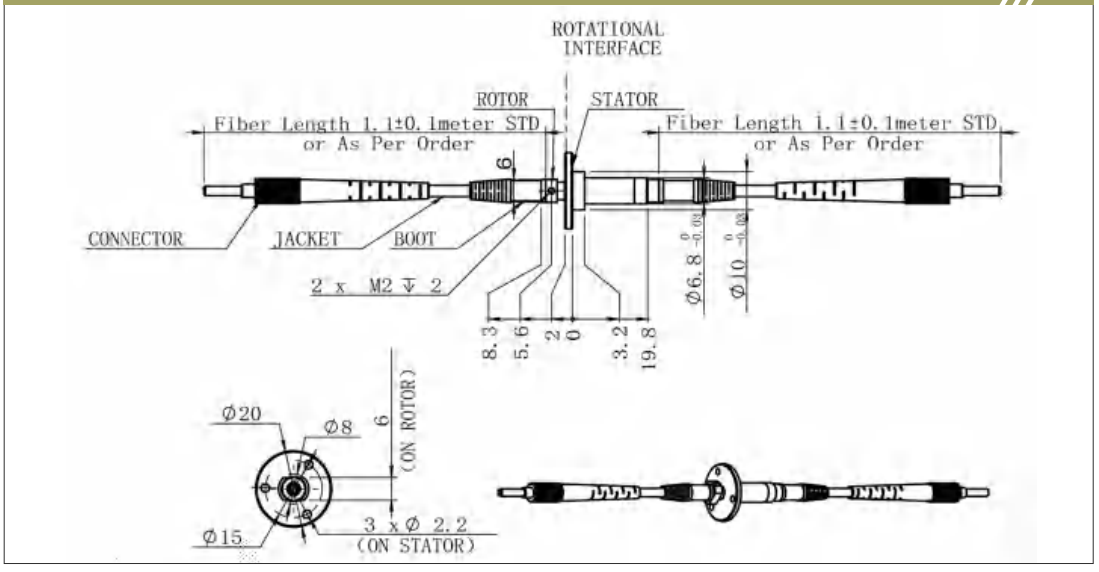
Standard Series Selection Table

Fiber Optic Slip Rings Series							
Part NO.	Channels	Fiber Mode	Wavelength Range	Insertion Loss	Return Loss	MaximumRotational Speed	Connector type
HF01A Series	1	SM/MM	650~1650nm (Default:1310& 1550nm)	≤2dB	≥30dB	2000RPM	(Default): FC/PC
HF01B Series	1	SM/MM	650~1650nm (Default:1310& 1550nm)	≤2dB	≥30dB	2000RPM	(Default): FC/PC
HF01C Series	1	SM/MM	650~1650nm (Default:1310& 1550nm)	≤2dB	≥30dB	2000RPM	(Default): FC/PC
HF**A Series	2-4	SM/MM	780~1650nm (Default:1310& 1550nm)	≤4.0dB	≥45dB	300RPM	(Default): FC/PC
HF**B Series	2-7	SM/MM	780~1650nm (Default:1310& 1550nm)	≤4.0dB	≥45dB	300RPM	(Default): FC/PC
HF**C Series	2-7	SM/MM	780~1650nm (Default:1310& 1550nm)	≤4.0dB	≥45dB	300RPM	(Default): FC/PC
HF**D Series	2-31	SM/MM	780~1650nm (Default:1310& 1550nm)	≤4.0dB	≥40dB	300RPM	(Default): FC/PC

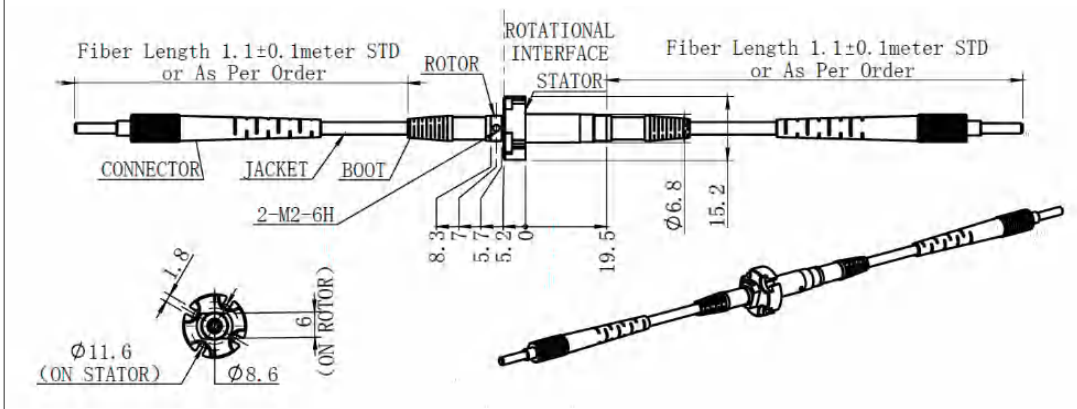
HF01A HF01B FH01C Series Selection Table

HF01A HF01B HF01C Single Channel Series			
Technical specifications	Single/Multi Mode		
Channels	1	Working Life	≥200 Million(300rpm)
Wavelength Range	650~1650nm (Default:1310& 1550nm)	Connector Tensile Strength	≥75N
Insertion Loss	≤2.0dB	Housing Material	Stainless Steel
Rotation Variation	≤±0.25dB	Connector Type	Default: FC/PC
Return Loss	≥30dB	Package Form	Pigtails At Both Ends, Default⌀ 3.0mm, Length 1.0M.
Max Power	25dBm	Vibration	MIL-STD-167-1A
Working Temperature	-40~+80℃	Shock	MIL-STD-810G
Storage Temperature	-45~+85℃	Protection(IP Grade)	IP65
Max Speed	2000RPM		

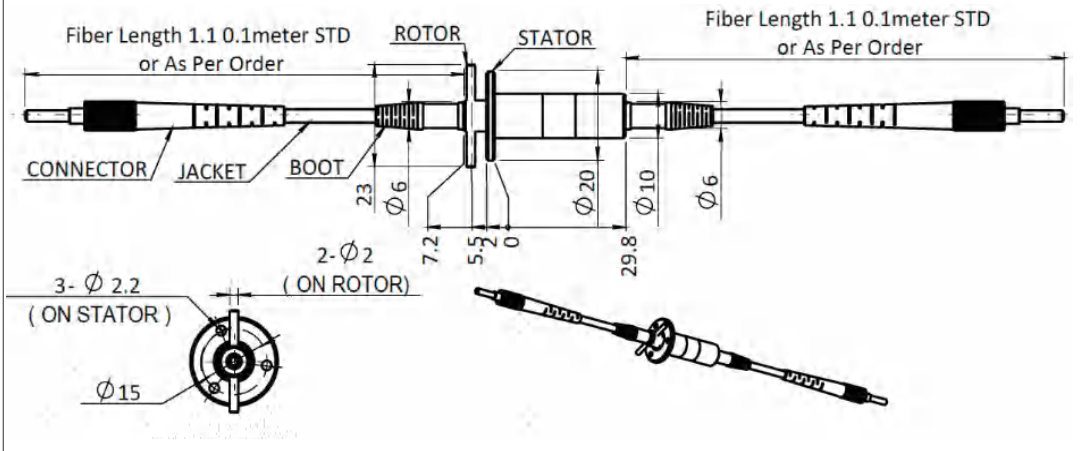
HF01A Series Dimensions



HF01B Series Dimensions



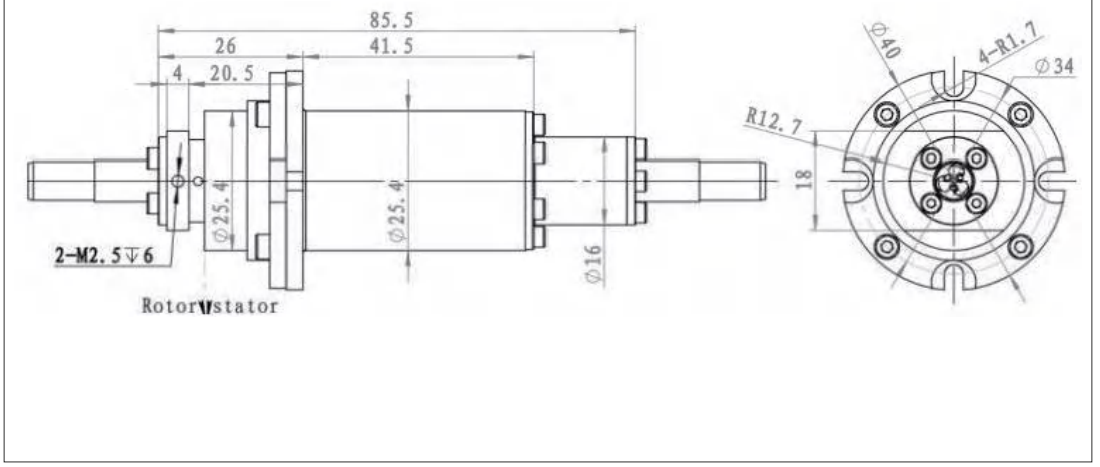
HF01C Series Dimensions



HF**A Series Selection Table

HF Multi-Channel A Series			
Technical specifications	Single/Multi Mode		
Channels	2-4	Working Life	≥ 50 Million(300rpm)
Wavelength Range	780~1650nm (Default:1310& 1550nm)	Connector Tensile Strength	≥75N
Insertion Loss	≤4.0dB	Housing Material	Stainless Steel
Rotation Variation	≤±1.0dB	Connector Type	Default: FC/PC
Return Loss	≥45dB	Package Form	Pigtails At Both Ends, Default⌀ 3.0mm, Length 1.0M.
Max Power	25dBm	Vibration	MIL-STD-167-1A
Working Temperature	-40~+75℃	Shock	MIL-STD-810G
Storage Temperature	-45~+85℃	Protection(IP Grade)	IP65
Max Speed	300RPM		

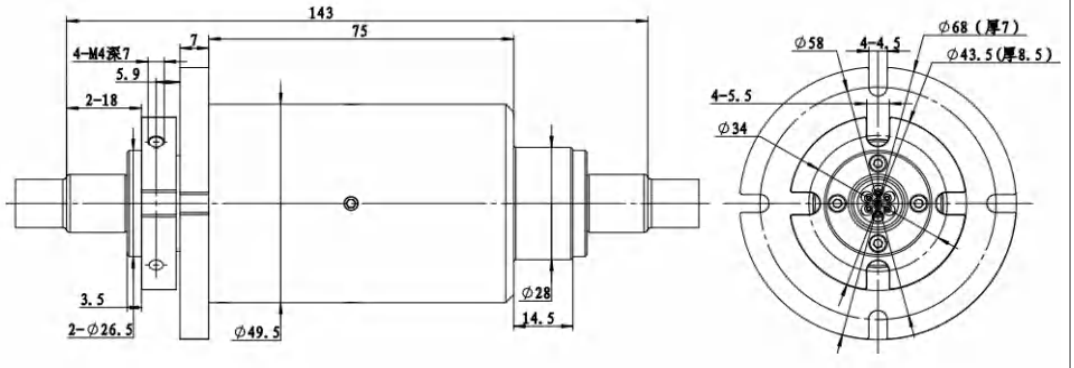
HF**A Series Dimensions



HF**B Series Selection Table

HF Multi-Channel B Series			
Technical specifications	Single/Multi Mode		
Channels	2-7	Working Life	≥ 50 Million(300rpm)
Wavelength Range	780~1650nm (Default:1310& 1550nm)	Connector Tensile Strength	≥75N
Insertion Loss	≤4.0dB	Housing Material	Stainless Steel
Rotation Variation	≤±0.75dB	Connector Type	Default: FC/PC
Return Loss	≥45dB	Package Form	Pigtails At Both Ends, Default⌀ 3.0mm, Length 1.0M.
Max Power	25dBm	Vibration	MIL-STD-167-1A
Working Temperature	-40~+75℃	Shock	MIL-STD-810G
Storage Temperature	-45~+85℃	Protection(IP Grade)	IP65
Max Speed	300RPM		

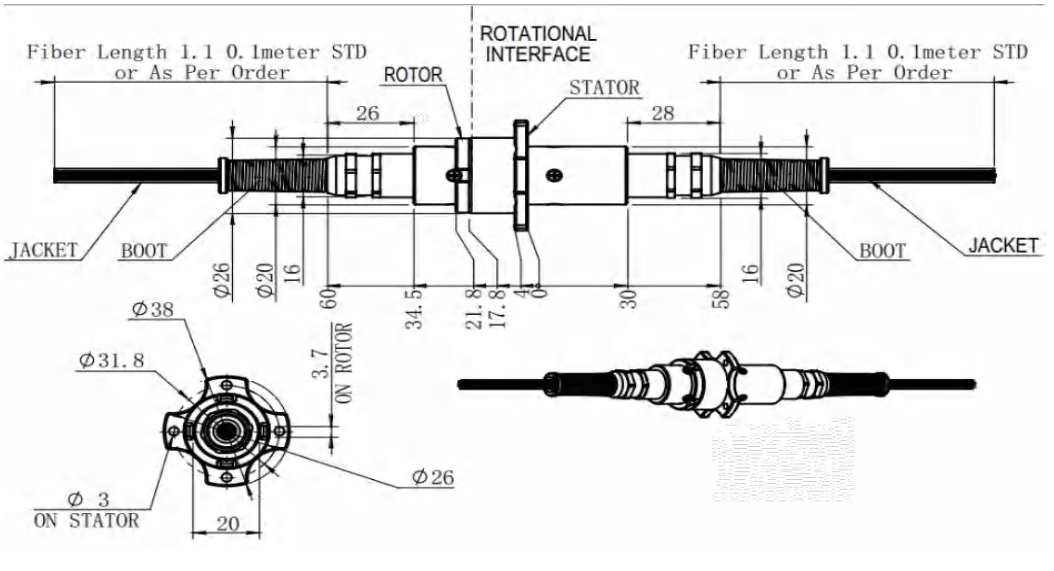
HF**B Series Dimensions



HF**C Series Selection Table

HF Multi-Channel C Series			
Technical specifications	Single/Multi Mode		
Channels	2-7	Working Life	≥ 50 Million(300rpm)
Wavelength Range	780~1650nm (Default:1310& 1550nm)	Connector Tensile Strength	≥75N
Insertion Loss	≤4.0dB	Housing Material	Stainless Steel
Rotation Variation	≤±0.75dB	Connector Type	Default: FC/PC
Return Loss	≥45dB	Package Form	Pigtails At Both Ends, Default⌀ 3.0mm, Length 1.0M.
Max Power	25dBm	Vibration	MIL-STD-167-1A
Working Temperature	-40~+75℃	Shock	MIL-STD-810G
Storage Temperature	-45~+85℃	Protection(IP Grade)	IP65
Max Speed	300RPM		

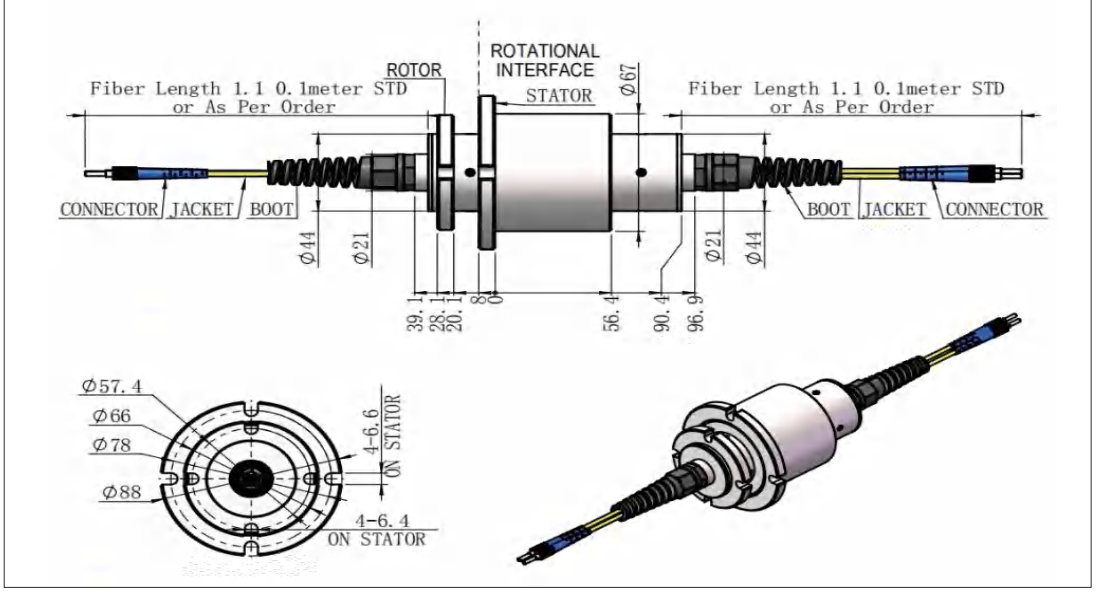
HF**C Series Dimensions



HF**D Series Selection Table

HF Multi-Channel D Series			
Technical specifications	Single/Multi Mode		
Channels	2-31	Working Life	≥ 50 Million(300rpm)
Wavelength Range	780~1650nm (Default:1310& 1550nm)	Connector Tensile Strength	≥75N
Insertion Loss	≤4.0dB	Housing Material	Stainless Steel
Rotation Variation	≤±0.75dB	Connector Type	Default: FC/PC
Return Loss	≥45dB	Package Form	Pigtails At Both Ends, Default⌀ 3.0mm, Length 1.0M.
Max Power	25dBm	Vibration	MIL-STD-167-1A
Working Temperature	-40~+75℃	Shock	MIL-STD-810G
Storage Temperature	-45~+85℃	Protection(IP Grade)	IP65
Max Speed	400RPM		

HF**D Series Dimensions



Low Torque Pneumatic Slip Ring Series

Product Series Introduction

Hiscience's pneumatic rotary joints independently rotate 360°to transmit single or multiple routes of gas or negative pressure vacuum. The transmission media includes compressed air and industrial inert gas. Pneumatic rotary joints are generally categorized based on the number of gas transmission channels. Hiscience's pneumatic rotary joints support 1~24 pneumatic passages, with a maximum working pressure range from -1.5 kPa to 1 MPa.

Low Torque Design: Hiscience pioneers low torque pneumatic rotary joints in the industry.The starting torque is as low as 0.01 N·m, and the rotating torque is 5-10 times smaller than traditional pneumatic rotary joints, eliminating the hidden danger of damaging customer equipment due to excessive torque. Dual Protection Design: It also adopts a dual protection design with excellent sealing. The sealing pipe and sealing ring are made of special materials with wear resistance, corrosion resistance, and a long lifespan.

Pneumatic Slip Rings Parameters		Mechanical Parameter	
NO.of Circuits	2/4/6/8/12/16/24	Working Speed	0~500RPM
		Housing Material	Metal
Port Size	M5 G1/8”	Environmental Parameter	
Maximum Working Pressure	-100Kpa~1Mpa	Working Temperature	-30℃~+70℃
Transmitting Media	Compressed Air	Other Parameter	
ID	6mm	Working life	20 Million RPM
Torque	As low as 0.01N.m		

Customization Options Description:

1、Working Temperature: Customizable according to customer requirements

2、Shock Resistance Level: Complies with MIL-SID-810E standards

3、Pipe Size and Port Size: Can be customized to fit specific needs

4、Pressure Range: Customizable according to application requirements

5、Integration Capability: Supports integration of multiple lines such as power lines, signal lines, industrial buses, control lines, solenoids, induction lines, etc.

6、Gas Inlet Position and Number of Circuits: Customizable based on customer specifications

7、Working Temperature: Can be customized up to 300℃ as per customer requirements

8、High Speed Capability: Customizable with speeds up to 5000 rpm as needed

9、Customization for Special Gas Properties: pneumatic rotary joints can be tailored to accommodate specific gas properties of customers.

Low Torque Pneumatic Slip Ring Series

Features

- Minimum Starting Torque: 0.01 N.m
- Rotational Torque: 5-10 times smaller than traditional pneumatic rotary joints, or more
- Maximum Speed: Up to 500 RPM,Lifespan: Over 20 million rotations
- Compact Design: Structurally designed to withstand vacuum pressures of up to -100 kPa
- Materials: Wear-resistant, corrosion-resistant, ensuring long lifespan,Dual Protection: Ensures no air leakage
- Integrated Transmission: Capable of transmitting electricity, signals, light, Ethernet, and industrial bus
- Standard Interfaces: M5, G1/8"; customizable connectors and pipe sizes available as per specific requirements
- Sealing Components: Easily replaceable and repairable, reducing costs without needing to purchase new products
- Gas Transmission: Capable of transmitting compressed air and industrial inert gases; customization available for special gases

Applications

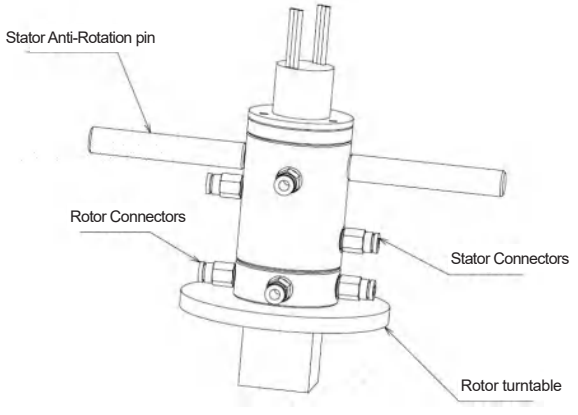
These applications span various industries requiring equipment capable of seamless 360-degree gas transmission. They include disc grinding and welding machines, industrial automation systems, packaging equipment, chip mounting machines, robotic systems, testing apparatus, lithium battery production lines, mobile phone testing facilities, high-end mobile phone assembly lines, laser systems, coating and separator machinery, packaging film equipment for soft pack batteries, binding and laminating machines, electronic semiconductor manufacturing automation, and other specialized devices necessitating efficient gas transmission during operation.

Installation Instructions and Diagrams

1、Ensure the slip ring installation position aligns with the equipment, and connect the pipe to the rotor to prevent any gas or liquid leakage.

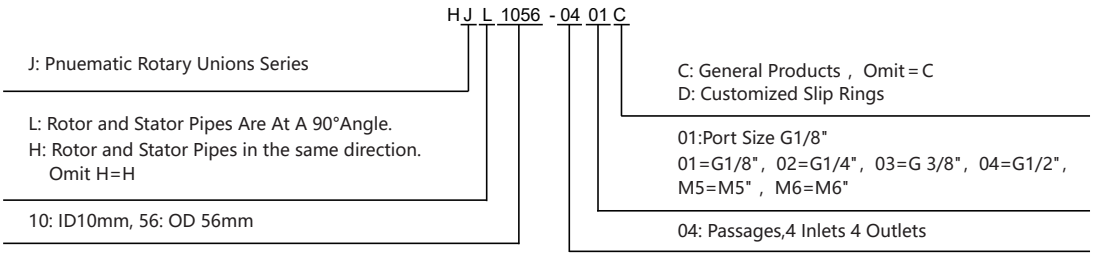
2、Before final installation, adjust the rotor's concentricity to ensure smooth rotation of the rotary joints.

3、Secure the stator by screwing in the Anti-Rotation pin, which can be customized based on customer specifications.



Part Number Description

For example: HJL1056-0401 HJ1056-0401=HJH1056-0401



Standard Series Selection Table

HJ Series M5 Port Pnuematic Rotary Unions

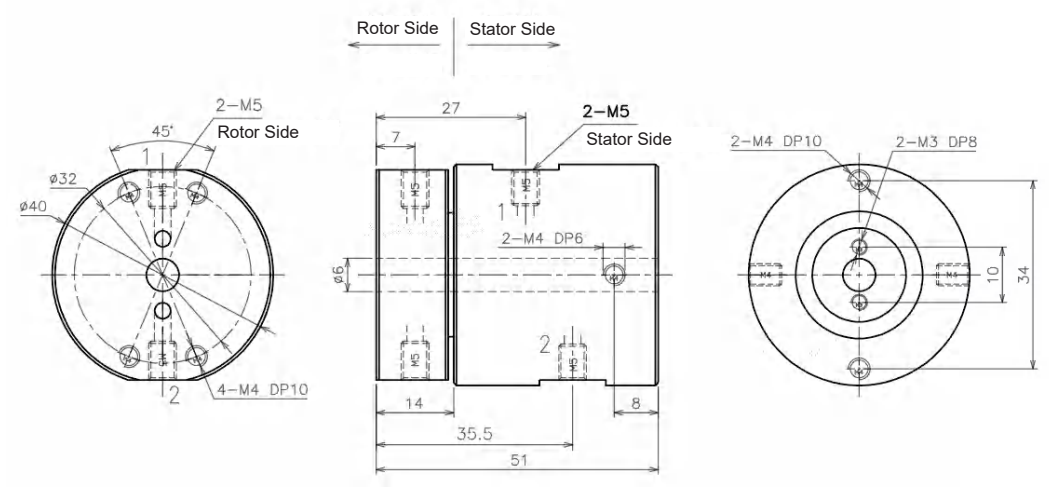
Part NO.	Passages(Gas)	Port Size	Pipe Size
HJ0640-02M5	2	M5	4~6mm
HJ0640-04M5	4	M5	4~6mm
HJ0640-06M5	6	M5	4~6mm
HJ0640-08M5	8	M5	4~6mm
HJ0640-12M5	12	M5	4~6mm
HJ0640-16M5	16	M5	4~6mm
HJ0640-24M5	24	M5	4~6mm

HJ Series G1/8" Port Pnuematic Rotary Unions

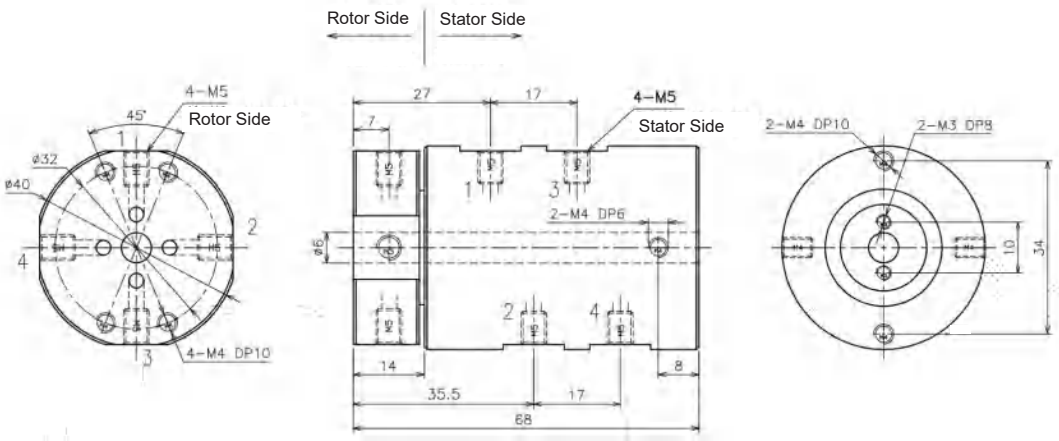
Part NO.	Passages(Gas)	Port Size	Pipe Size
HJ1056-0201	2	G1/8"	6~8mm
HJ1056-0401	4	G1/8"	6~8mm
HJ1056-0601	6	G1/8"	6~8mm
HJ1056-0801	8	G1/8"	6~8mm
HJ1056-1201	12	G1/8"	6~8mm
HJ1056-1601	16	G1/8"	6~8mm
HJ1056-2401	24	G1/8"	6~8mm
HJ0862-1201	12	G1/8"	6~8mm
HJ0862-1601	16	G1/8"	6~8mm

Standard Series Dimensions（M5 Port）

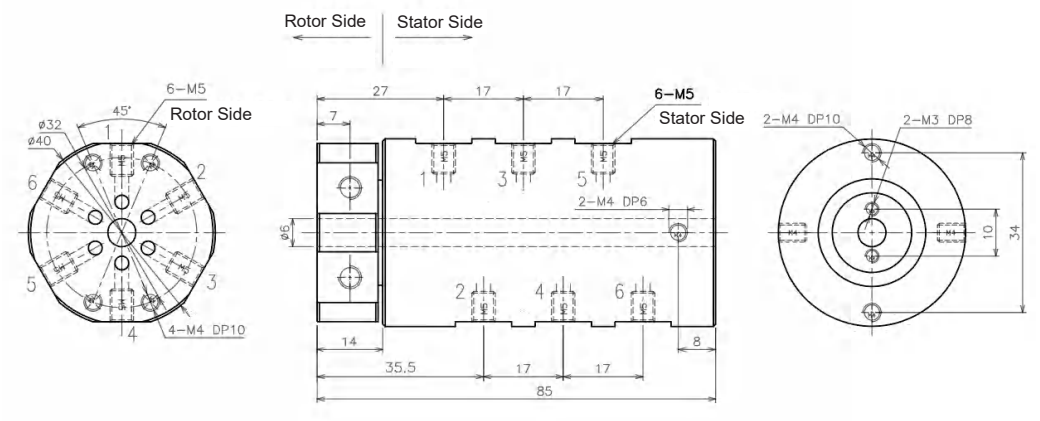
HJ0640-02M5 Dimensions



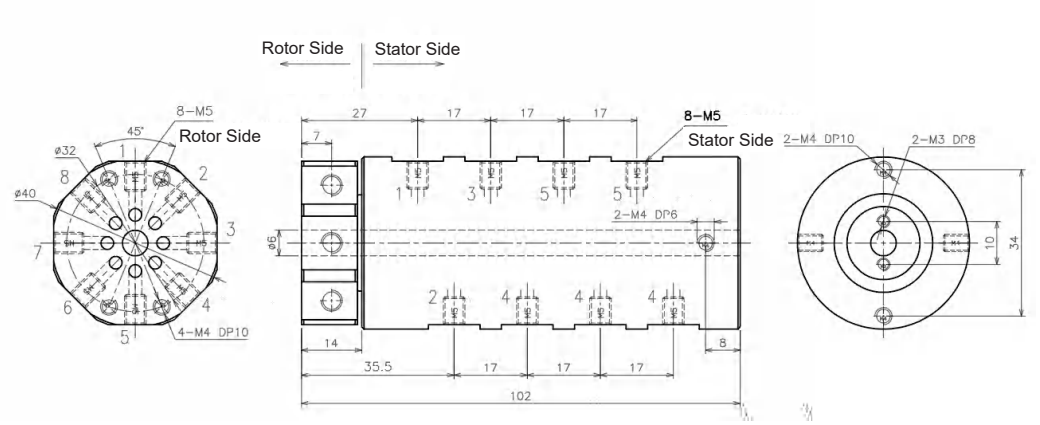
HJ0640-04M5 Dimensions



HJ0640-06M5 Dimensions

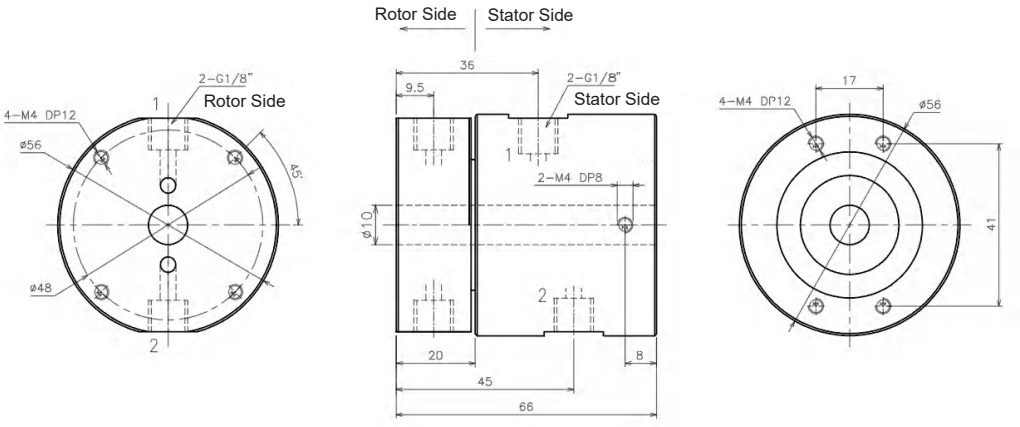


HJ0640-08M5 Dimensions

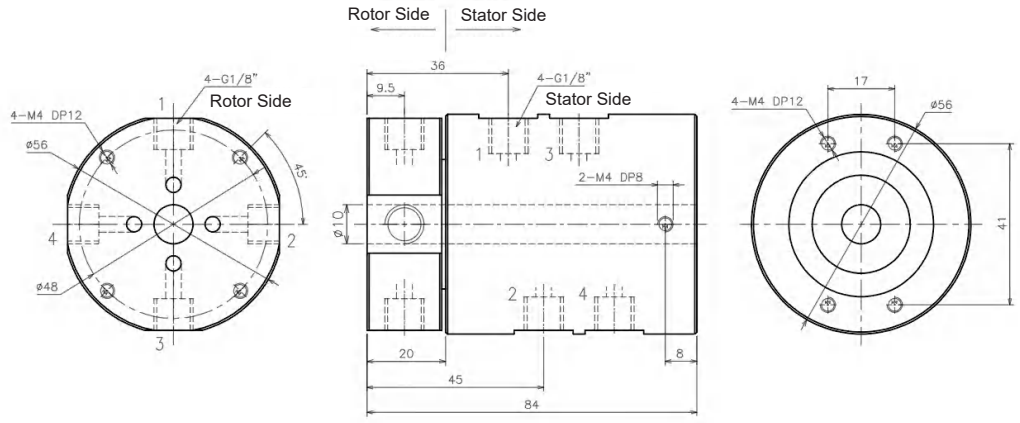


Standard Series Dimensions（G1/8 Port）

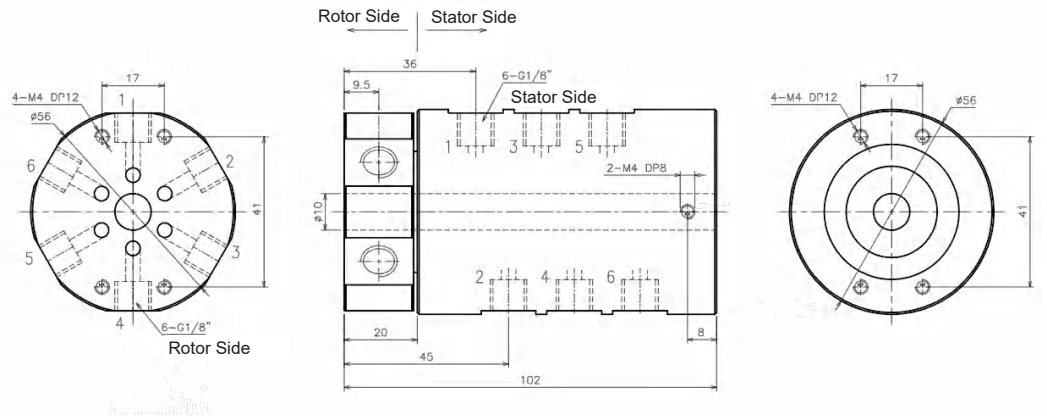
HJ1056-0201 Dimensions



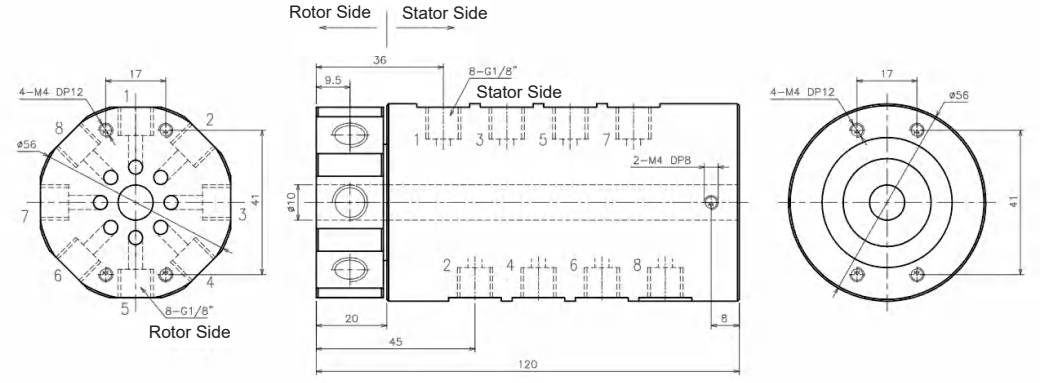
HJ1056-0401 Dimensions



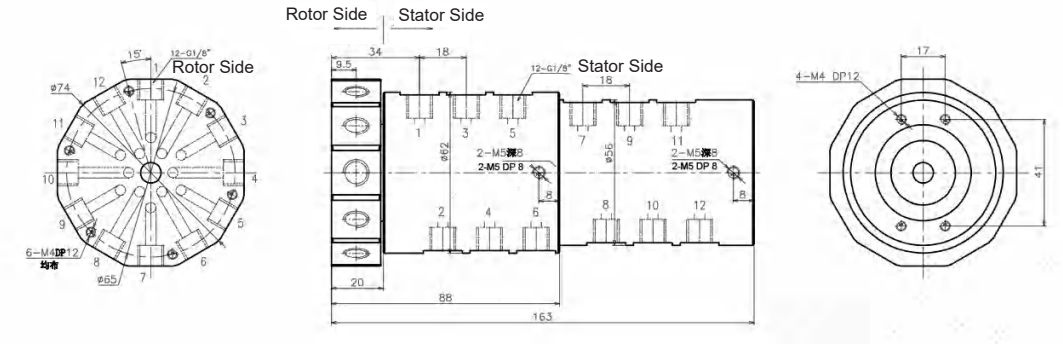
HJ1056-0601 Dimensions



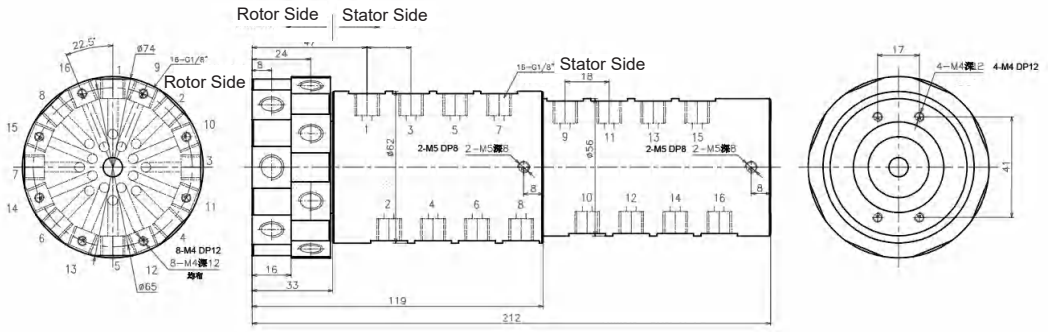
HJ1056-0801 Dimensions



HJ0862-1201 Dimensions



HJ0862-1601 Dimensions



Mercury (replace) Slip Ring Series

Product Series Introduction

Hiscience introduces the Mercury (upgrade replacement) slip ring series after years of research and rigorous testing. This series features compact size, robust conductivity, high temperature adaptability, and environmental friendliness. It inherits the product characteristics of traditional mercury slip rings while eliminating the environmental concerns associated with mercury. The series represents a high-cost-effective solution with small footprint and high-current conductivity. As a patented product of Hiscience, it has gained significant market favorability since its launch.

Technical Parameter			
Circuits	1	Rated Current	60~600A
Resistance	＜1mΩ	Working Temperature	-30℃~+70℃
Roating Speed	Reference to Spec	Contact Material	Precious Metal
Housing Material	Stainless Steel	Installation Way	Non-Inverting

Customization Options Description:

1、Housing Material: Customize the housing material to suit specific environmental or operational requirements

2、Binding Post Specifications: Tailor the binding post specifications to accommodate different connection needs

3、Number of Circuits: Customize the number of circuits to match application-specific signal or power transmission requirements

4、Working Speed: Adjust the working speed to meet operational demands, ranging from low-speed to high-speed applications

5、Working Temperature: Customize the working temperature range to ensure optimal performance in varied environmental conditions, from extreme cold to high heat

Mercury (replace) Slip Ring Series

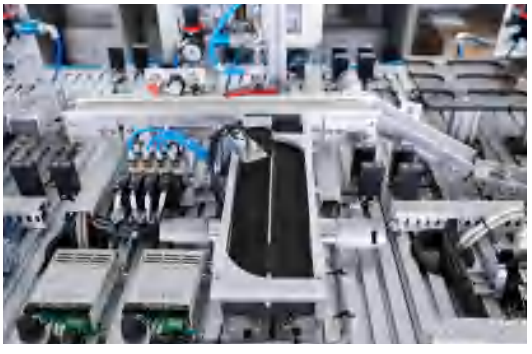
Features

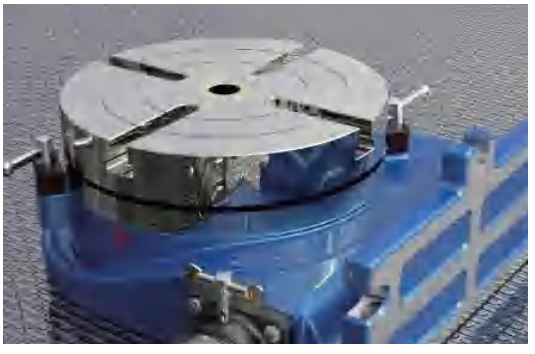
- Over 80 million revolutions
- M10 binding post for easy installation
- Environmentally friendly, non-toxic, non-polluting
- Compact size, high precision, easy to install
- High reliability, stability and cost effectiveness

Applications

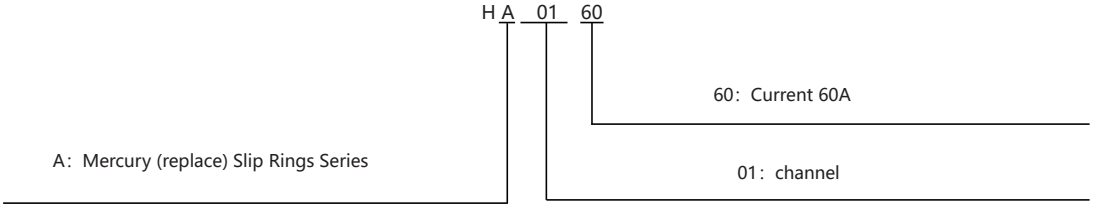
Hiscience's slip rings are versatile solutions tailored for a wide range of industrial and specialized applications. They are extensively used in:

From automated machinery to cable reels, horizontal copper and rotating silver plating production lines, our slip rings facilitate seamless transmission of power and signals. They are integral to rotating stages, light boxes, and workbenches, ensuring reliable performance in antennas, semiconductor production lines, heated spinners, circular silver screen cameras, and new energy production equipment. Their robust design also meets the rigorous demands of military applications.





Part Number Description

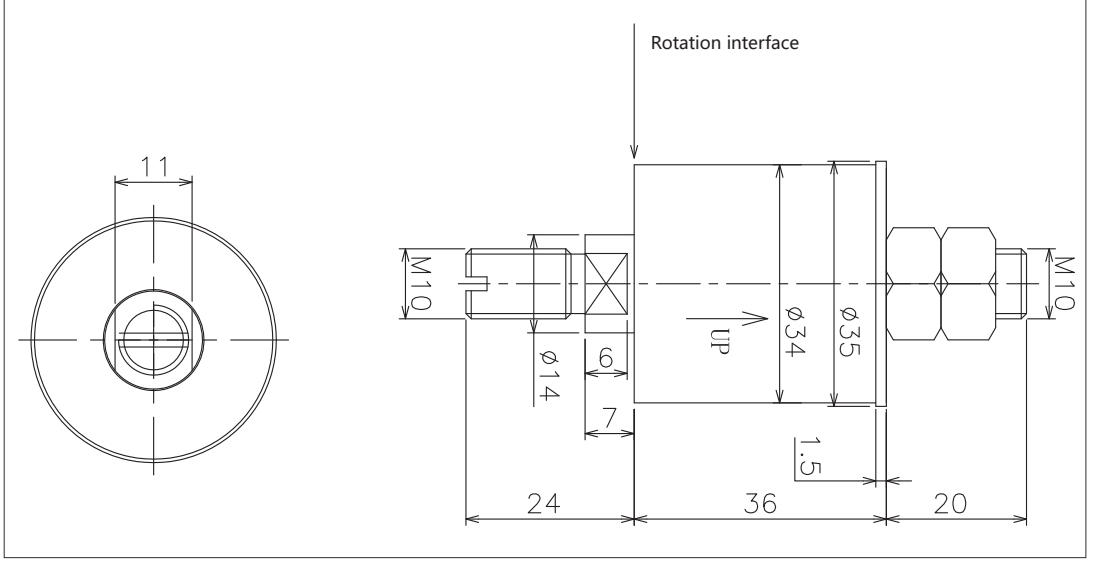


Standard Series Selection Table

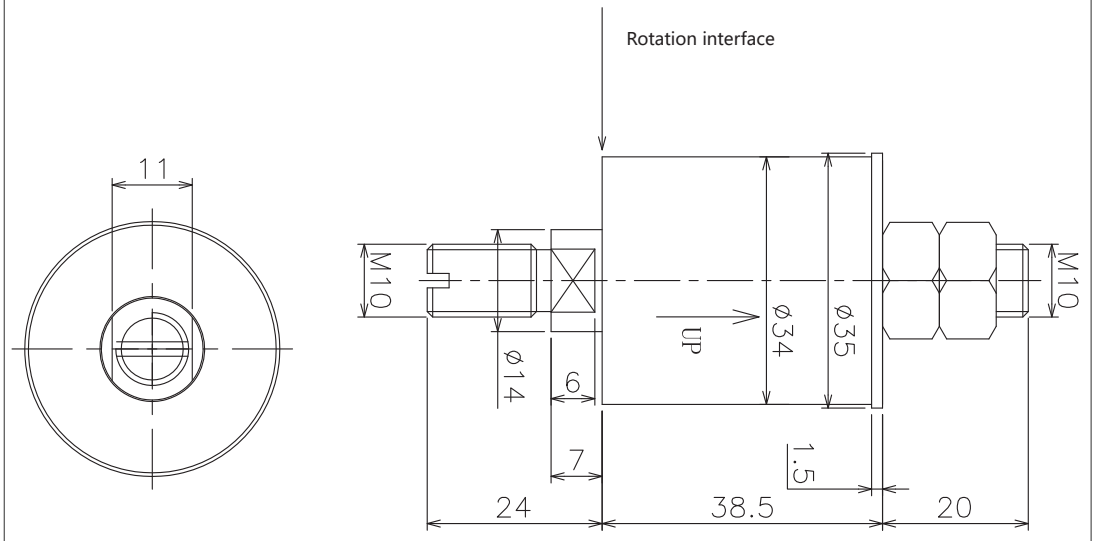
Mercury (Upgraded Replacement) Slip Ring Series

Part NO.		HA0160	HA01100	HA01200	HA01300	HA01400	HA01500	HA01600
NO.of poles		1	1	1	1	1	1	1
Binding Post size		M10	M10	M12	M14	M16	M18	M20
Load & Temperature Rise1	Current 1	60A	100A	200A	300A	400A	500A	600A
	Load Temperature Rise	≤10℃	≤10℃	≤10℃	≤10℃	≤10℃	≤10℃	≤10℃
Load & Temperature Rise2	Current 2	80A	110A	220A	330A	450A	550A	650A
	Load Temperature Rise	≤20℃	≤20℃	≤20℃	≤20℃	≤20℃	≤20℃	≤20℃
Load & Temperature Rise3	Current 3	100A	120A	250A	360A	500A	650A	750A
	Load Temperature Rise	≤35℃	≤35℃	≤35℃	≤35℃	≤40℃	≤40℃	≤40℃
Roating Speed		500RPM	500RPM	300RPM	300RPM	200RPM	100RPM	100RPM
Resistance		< 1mΩ	< 1mΩ	< 1mΩ	< 1mΩ	< 1mΩ	< 1mΩ	< 1mΩ
Working Temperature		-30°C~ +70°C	-30°C~ +70°C	-30°C~ +70°C	-30°C~ +70°C	-30°C~ +70°C	-30°C~ +70°C	-30°C~ +70°C
Note: Differences in appearance size may exist, but all wiring methods use binding post.								

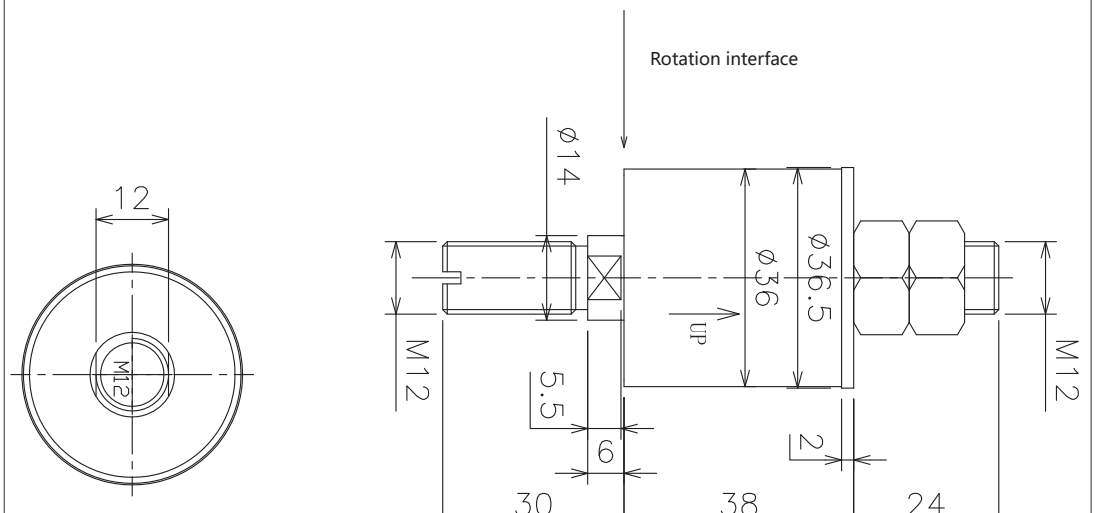
HA0160 Dimensions



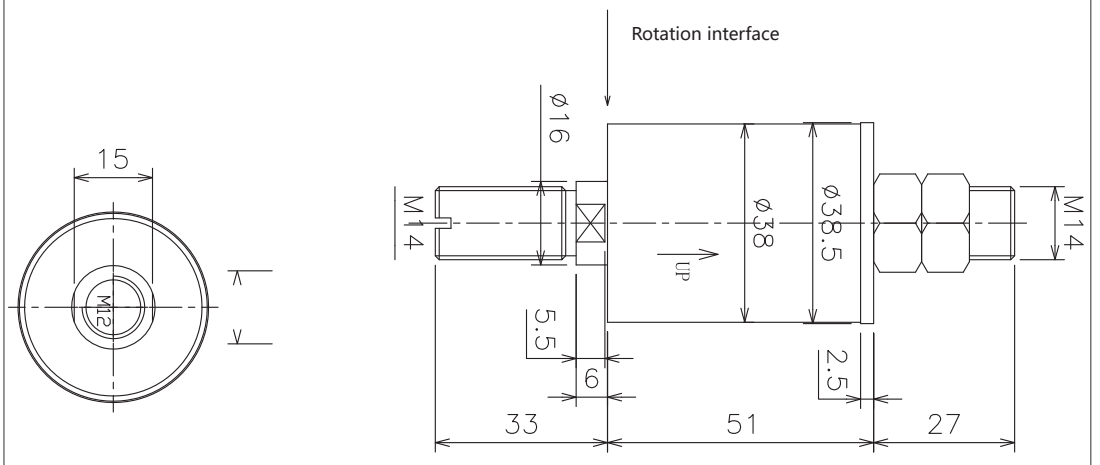
HA01100 Dimensions



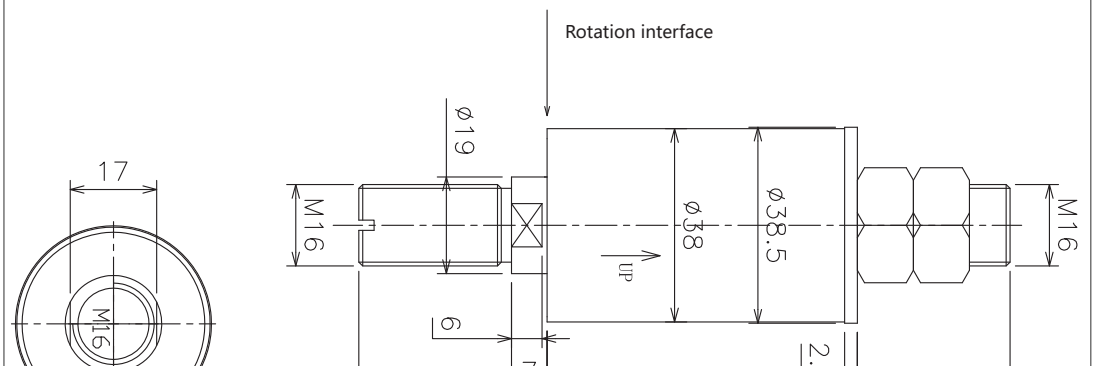
HA01200 Dimensions



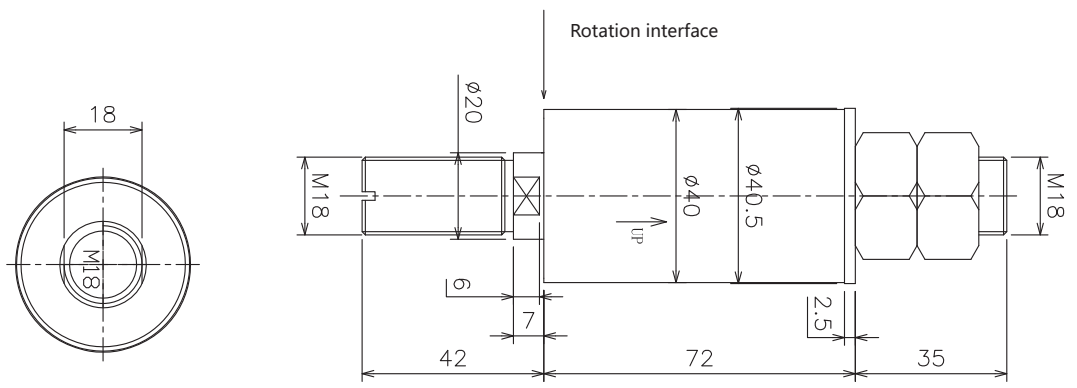
HA01300 Dimensions



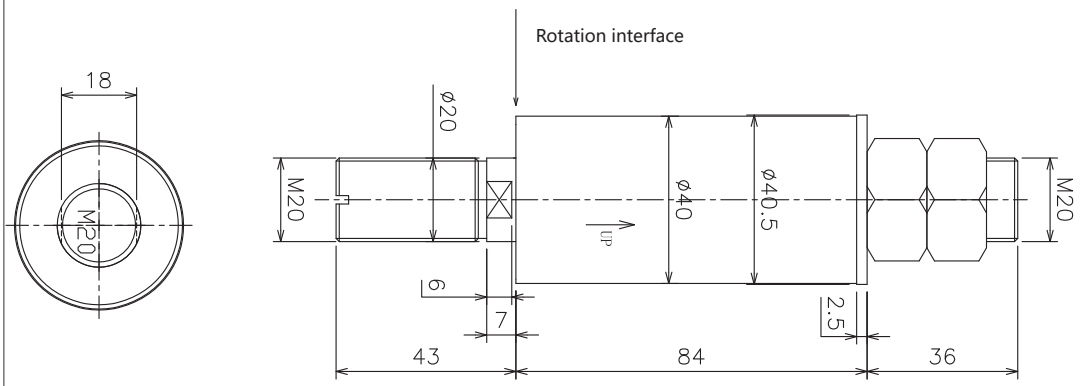
HA01400 Dimensions



HA01500 Dimensions



HA01600 Dimensions



Pancake Slip Rings series

Product Series Introduction

Hiscience HP series super thin flat pancake slip rings are specifically designed to accommodate equipment with limited vertical space and the necessity for expanded lateral space, meeting the spatial requirements of specialized systems. These slip rings feature a low profile and large outer diameter, resembling a platter, hence the name "pancake slip rings."

The contacts are crafted from precious metals, ensuring high stability, low torque, minimal loss, maintenance-free operation, low electrical noise, and an extended service life. This design makes them ideal for applicationswhere installation space is restricted but reliable performance is crucial.They find wide application in various industries requiring compact yet efficient rotary electrical connections.

Mechanical Specifications		Electrical Specifications		
Technical Specification	Numeric	Technical Specification	Numeric	
Working Life	Please refer to the grade table		Power	Signal
Roating Speed	Please refer to the grade table	Rating Voltage	0-440VAC/VDC	0-240VAC/VDC
Working Temperature	-30°C~80°C	Insulation Resistance	≥500MΩ/500VDC	≥300MΩ/300VDC
Working Humidity	0~85% RH	Lead Wire Size	Please refer to the grade table	
Contact Material	Please refer to the grade table	Lead Wire Length	Please refer to the grade table	
Housing Material	Aluminum Alloy	Dielectric Strength	500VAC@50Hz，60s	
Torque	0.1N.m(+0.03N.m/6Circuits)	Dynamic Contact Resistance	＜0.01Ω	
Protection(IP Grade)	IP51			

Customization Options Description:

1、Working Temperature: Adjustable to meet specific operational requirements

2、Product Thickness: Tailored to fit dimensional constraints as specified by the customer

3、Lead Wire Length: Customizable to suit installation and connectivity needs

4、Rotating Speed: Adjustable to accommodate varying operational speeds as per customer specifications

5、Protection (IP Grade): Customizable ranging from IP50 to IP68 for ingress protection against dust and moisture

6、Shock Resistance Level: Conforms to MIL-SID-810E standards for robust shock resistance

7、Integration Capability: Can integrate multiple power supply lines, signal lines, industrial buses, control lines, solenoids, and induction lines as required by specific application needs.

Pancake Slip Rings series

Features

- Ultra-thin Design: Achieves a minimum thickness of 6.5mm, ideal for applications with limited space requirements
- Fiber Brush Technology: Ensures reliable contact with extremely low friction and minimal contact resistance.
- Eliminates friction debris, enhancing longevity and performance stability
- Mixed Transmission Capability: Supports simultaneous transmission of precision signals and power supply, accommodating diverse operational needs
- Precious Metal Contacts: Spring piece contacts made from precious metals ensure high stability, reliability, and extended service life.

Applications

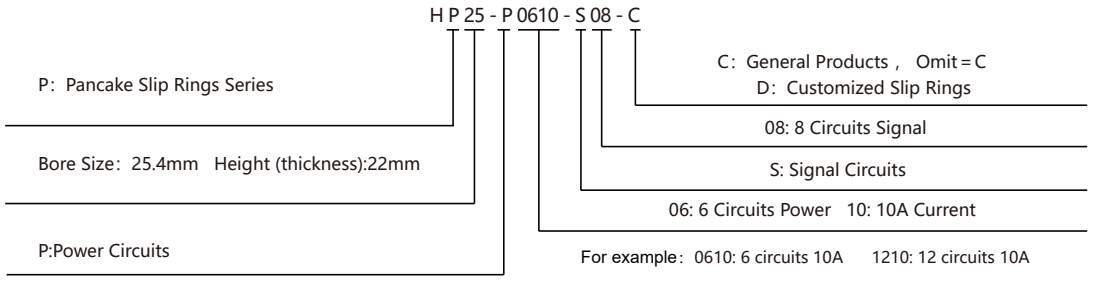
Hiscience's HP series super thin flat pancake slip rings are extensively utilized in a variety of industrial and commercial applications, including:

- Industrial machining centers
- Rotating worktables
- Heavy equipment turntables
- Cable reels
- Packaging equipment
- Magnetic clutches
- Process control equipment
- Rotating sensor
- Emergency lighting equipment
- Robotics
- Exhibition and display equipment
- Medical devices
- Revolving doors

These slip rings are designed to efficiently manage electrical connections in confined spaces, ensuring reliable transmission of signals and power essential for seamless operation across diverse industrial and commercial environments.

Part Number Description

For example：HP25-P0610 S08



Color Code Of Lead Wire												
Ring #	1	2	3	4	5	6	7	8	9	10	11	12
Color	Black	Brown	Red	Orange	Yellow	Green	Blue	Violet	Grey	White	Pink	Azury

Remark: If more than 12wires, repeat as sequence , use number tubes to distinguish them.

Standard Series Selection Table

Pancake Slip Rings Series			
Part NO.	No.Of Signal Circuits Or 5A	10A	OD(mm)
HP25-S02	2	0	92
HP25-P0210	0	2	92
HP25-P0410	0	4	108
HP25-S06	6	0	124
HP25-P0610	0	6	124
HP25-P1210	0	12	172
HP25-P0610-S06	6	6	172

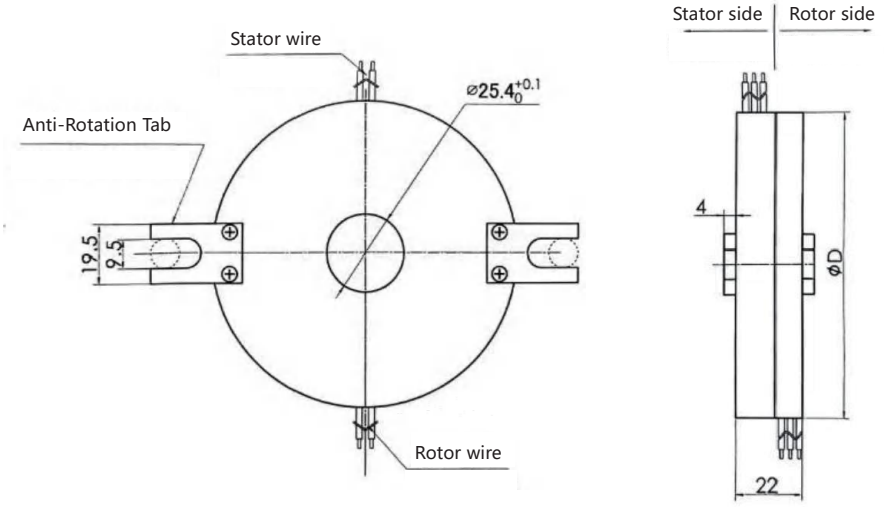
For example:

HP25-S02: "HP25" denotes the H series super thin flat pancake slip rings with an inner diameter of 25.4mm. "S02" indicates 2 circuits for signals.

HP25-P0610-S06: "HP25" signifies super thin flat pancake slip rings with an inner diameter of 25.4mm. "P0610" specifies 6 circuits, each supporting 10A of power current.

"S06" denotes 6 circuits for signals

HP25Series Dimensions



Rotary Unions Series

Product Series Introduction

Rotary Unions are essential 360-degree rotating devices that facilitate both physical and electrical connections. Hiscience offers G1/8"M5 interface standard products featuring 2, 4, 6, 8 gas passages and 6-24 circuits rotary unions. These units utilize high-quality contact and insulation materials, minimizing signal loss and interference to ensure precise and reliable transmission of signals. Such efficiency is critical for applications demanding accurate data, stable power connections, or precise control.

Hiscience provides customizable solutions within this product series to cater to diverse application needs. Customization options include connector types, circuit configurations, speed requirements, operating temperatures, and installation preferences. This flexibility allows seamless integration into various systems and devices, ensuring compatibility and optimal performance across different industrial environments.

Electrical Parameter			
Circuits & Current	6~14 circuits(2A)	Lead Wire Size	AWG26# Teflon Insulated
Rating Voltage	240VAC/DC	Dielectric Strength	≥300V@50Hz
Insulation Resistance	300MΩ @300VDC	Dynamic Contact Resistance	≤35MΩ
Mechanical Parameter			
Lead Wire Length	Rotor:250mm Stator:250mm	Working Speed	0~100rpm
Protection(IP Grade)	IP51	Working Temperature	-30℃～+80℃
Contact Material	Precious Metal	Housing Material	Aluminum Alloy +Engineering Plastics
Pneumatic Parameter			
Passages	2~8 Passages	Connection Thread Size	G1/8"，6～8mm
Pressure	-100kPa~1Mpa<1 Mpa	Transmitting media	Compressed Air
Torque	As low as 0.01N.m		

Customization Options Description:

1、Working Speed：Adjustable to meet specific operational requirements

2、Number and Position of Gas Passages：Customizable to accommodate varying gas transmission needs

3、Port Specifications and Pipe Size of Gas Passages：Tailored to fit specific connector types and pipe diameters

4、Pressure：Adjustable to support different pressure ranges as required

5、Rating Voltage：Configurable to operate within specific voltage ratings

6、Working Temperature：Customizable to withstand temperatures suited to operational environments

7、Transmitting Media：Supports various media such as compressed air, industrial gases, etc

8、Number of Circuits：Configurable from a minimum to maximum circuit requirement，Power and Signal Type：Supports integration of power lines, signal lines, and different signal types.

9、Lead Length：Adjustable to accommodate varying distances between components.Connection Terminals：Customizable based on connector types and interface specifications.Housing Material and Color：Options available for selecting suitable materials and colors.

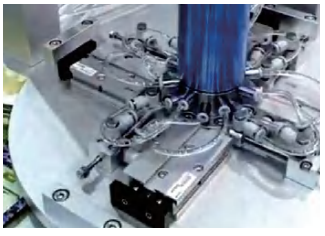
Features

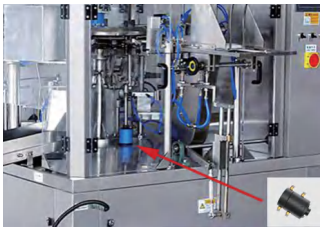
- Low Torque: Starting torque as low as 0.01 N.m.
- Rotational Torque: 5-10 times smaller than traditional pneumatic slip rings.
- Maximum Speed: Up to 500 RPM,Lifespan: Over 20 million rotations.
- Structural Design: Compact design capable of withstanding vacuum pressure from -100 kPa to 1 MPa.
- Durability: Wear-resistant and corrosion-resistant materials ensure a long lifespan.Dual Protection: Features dual protection to prevent air leakage.
- Maintenance: Sealing components can be easily replaced and repaired, reducing costs.
- Customization: Can simultaneously transmit power lines, signal lines, industrial buses, control lines, solenoid valves, and induction lines, tailored to specific requirements.

Applications

The low torque pneumatic slip ring by Hiscience finds essential use in a variety of industrial applications, including：

- Industrial automation equipment
- Robots
- Packaging machinery
- Lithium battery manufacturing equipment
- Chip mounting machines
- Testing and detection equipment





Part Number Description

For example：HK83-0403-P0610-S06

H K 83 04 03 P 06 10 - S 06

- Pneumatic-Electric Hybrid Slip Rings Series
- 83: OD83mm，04: ID4mm
- 04: Passages Gas 4
- Port Size: 01=G1/8" 02=G1/4" 03=G3/8" 04=G1/2"
- P: Power
- 06: 6 Current Power
- 10: Current 10A
- S: Signal Circuits
- 06: 6 Circuits Signal

Color Code Of Lead Wire

Ring #	1	2	3	4	5	6	7	8	9	10	11	12
Color	Black	Brown	Red	Orange	Yellow	Green	Blue	Violet	Grey	White	Pink	Azury

Remark: If more than 12wires, repeat as sequence , use number tubes to distinguish them.

Rotary Unions Series

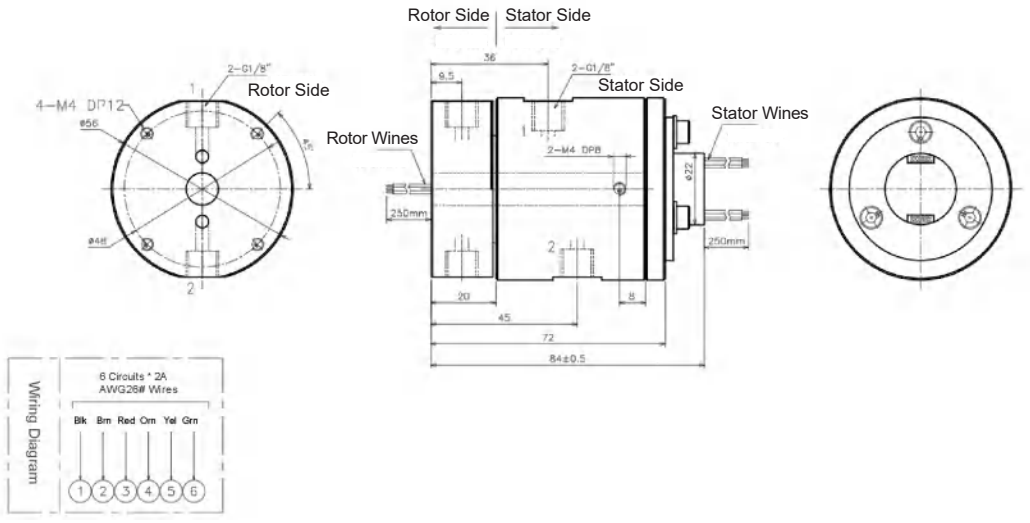
Standard Series Selection Table

HK Series Rotary Unions G1/8"Port				
Part NO.	Passages(Gas)	Port Size	Pipe Size	Circuits (Power/Signal/2A)
HK56-0201-P0602	2	G1/8"	6~8mm	6 Circuits
HK56-0201-P1202	2	G1/8"	6~8mm	12 Circuits
HK56-0201-P1802	2	G1/8"	6~8mm	18 Circuits
HK56-0201-P2402	2	G1/8"	6~8mm	24 Circuits
HK56-0401-P0602	4	G1/8"	6~8mm	6 Circuits
HK56-0401-P1202	4	G1/8"	6~8mm	12 Circuits
HK56-0401-P1802	4	G1/8"	6~8mm	18 Circuits
HK56-0401-P2402	4	G1/8"	6~8mm	24 Circuits
HK56-0601-P0602	6	G1/8"	6~8mm	6 Circuits
HK56-0601-P1202	6	G1/8"	6~8mm	12 Circuits
HK56-0601-P1802	6	G1/8"	6~8mm	18 Circuits
HK56-0601-P2402	6	G1/8"	6~8mm	24 Circuits
HK56-0801-P0602	8	G1/8"	6~8mm	6 Circuits
HK56-0801-P1202	8	G1/8"	6~8mm	12 Circuits
HK56-0801-P1802	8	G1/8"	6~8mm	18 Circuits
HK56-0801-P2402	8	G1/8"	6~8mm	24 Circuits

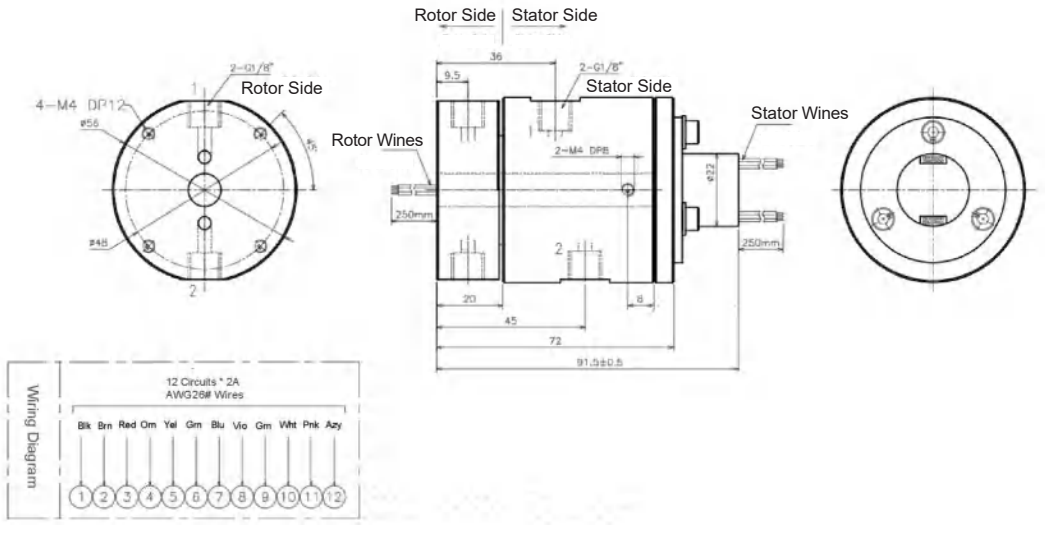
HK 2 Inlets 2 Outlets Series Rotary Unions(Rotary Joint)

G1/8"Port +6~24 Circuits Electrical Signal(2A)					
Part NO.	Passages(Gas)	Port Size	Pipe Size	Signal(2A)	Length L(mm)±0.5
HK56-0201-P0602	2	G1/8"	6~8mm	6	12
HK56-0201-P1202	2	G1/8"	6~8mm	12	19.5
HK56-0201-P1802	2	G1/8"	6~8mm	18	26.9
HK56-0201-P2402	2	G1/8"	6~8mm	24	34.6

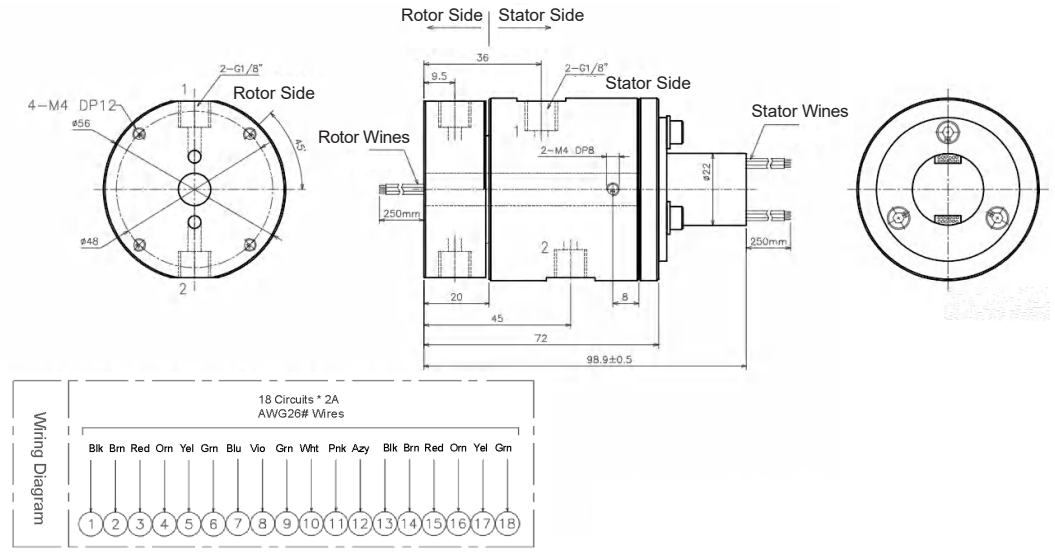
HK56-0201-P0602 Dimensions



HK56-0201-P1202 Dimensions

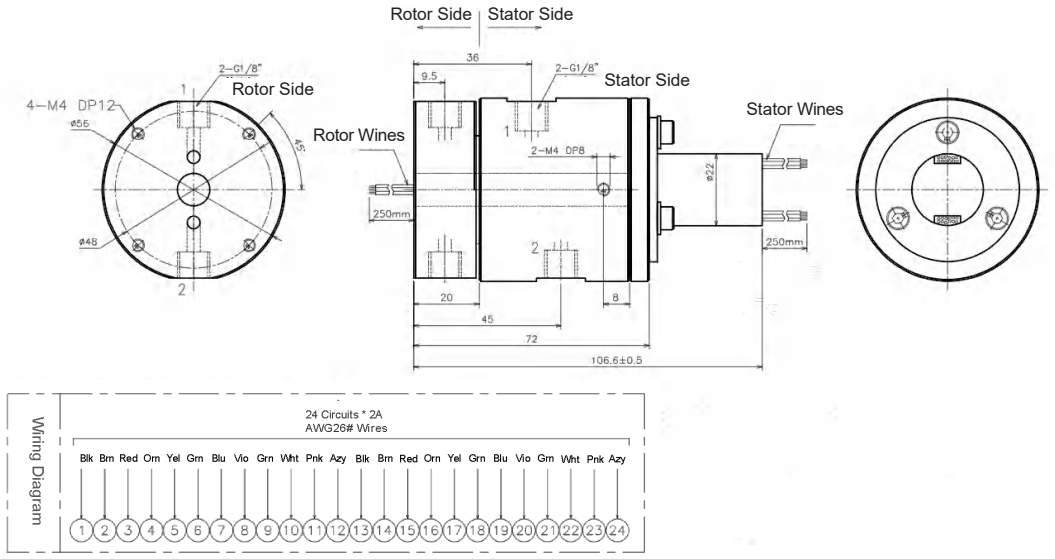


HK56-0201-P1802 Dimensions



Note: Wires of the same color are distinguished by group using numbered tubes.

HK56-0201-P2402 Dimensions

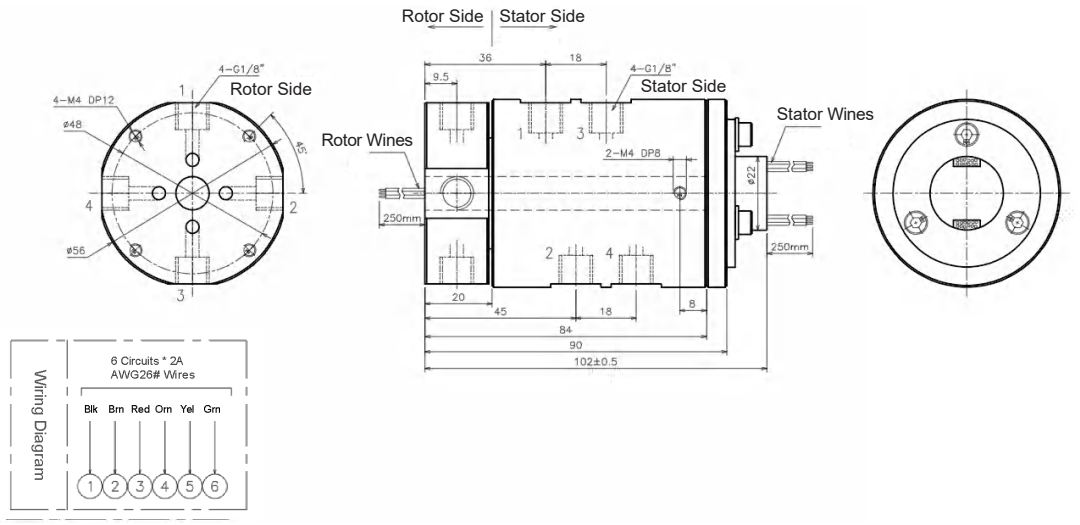


Note: Wires of the same color are distinguished by group using numbered tubes.

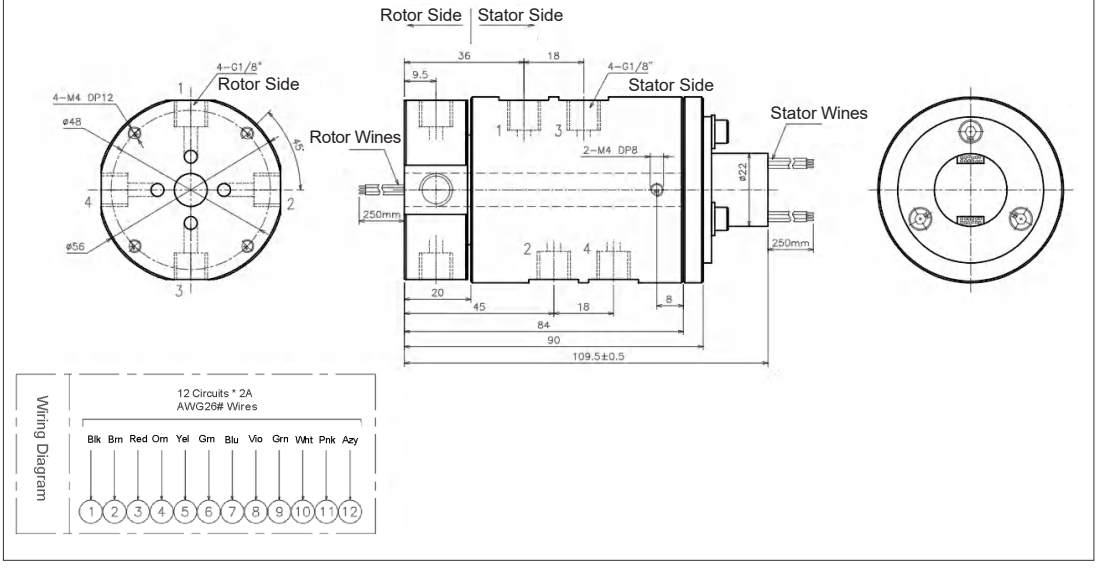
HK 4 Inlets 4 Outlets Series Rotary Unions(Rotary Joint)

G1/8"Port +6~24 Circuits Electrical Signal(2A)					
Part NO.	Passages(Gas)	Port Size	Pipe Size	Signal(2A)	Length L(mm)±0.5
HK56-0401-P0602	4	G1/8"	6~8mm	6	12
HK56-0401-P1202	4	G1/8"	6~8mm	12	19.5
HK56-0401-P1802	4	G1/8"	6~8mm	18	26.9
HK56-0401-P2402	4	G1/8"	6~8mm	24	34.6

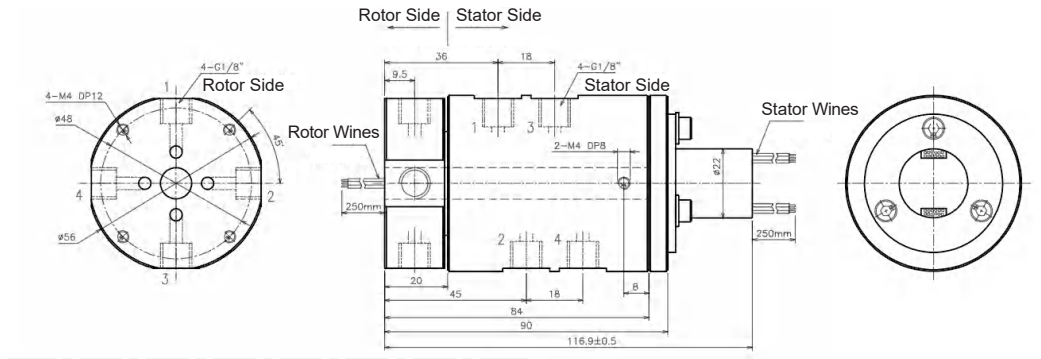
HK56-0401-P0602 Dimensions

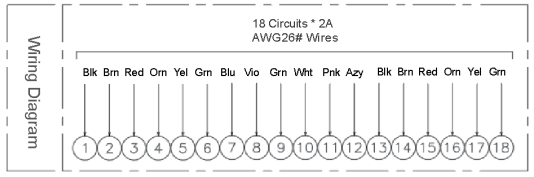


HK56-0401-P1202 Dimensions



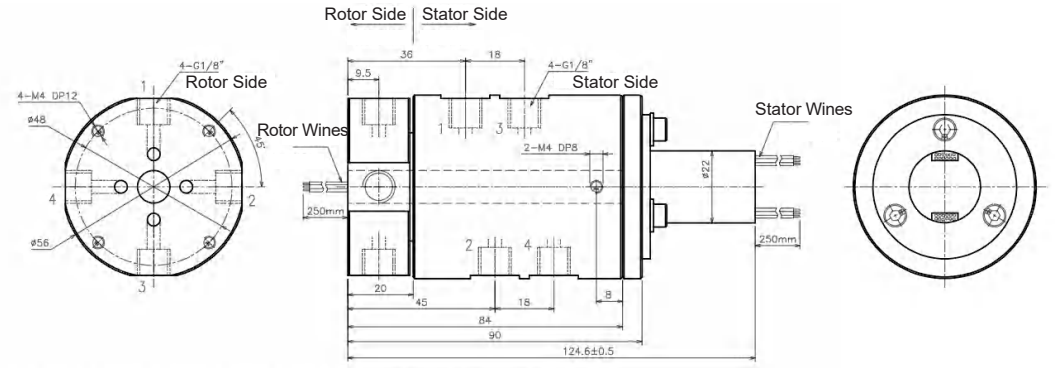
HK56-0401-P1802 Dimensions

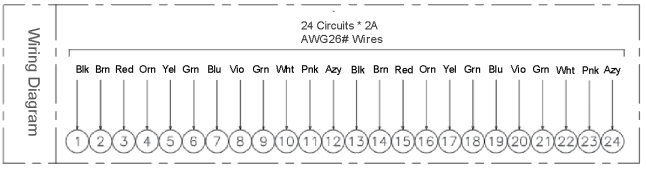




Note: Wires of the same color are distinguished by group using numbered tubes.

HK56-0401-P2402 Dimensions



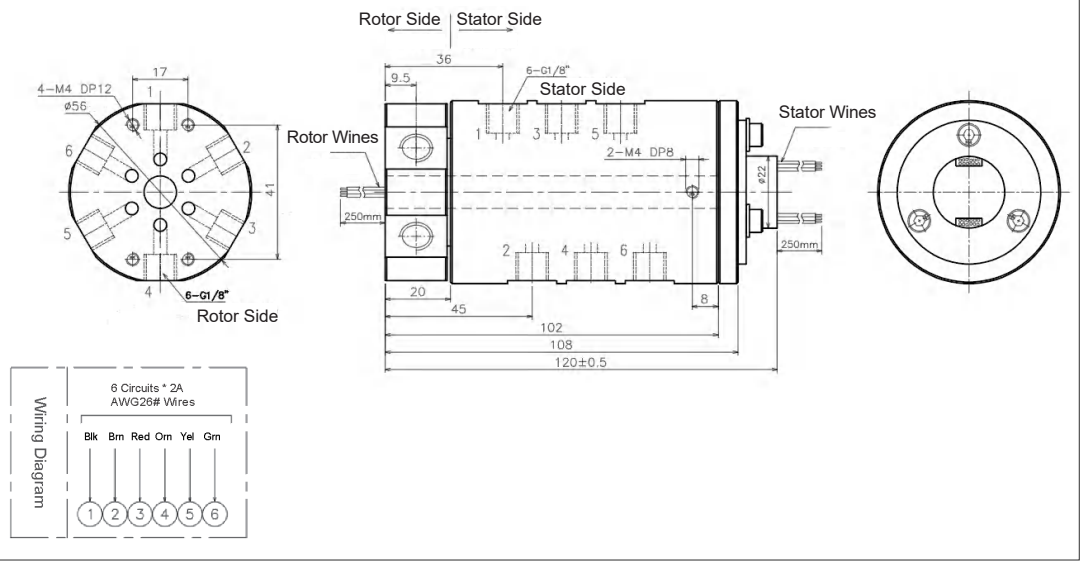


Note: Wires of the same color are distinguished by group using numbered tubes.

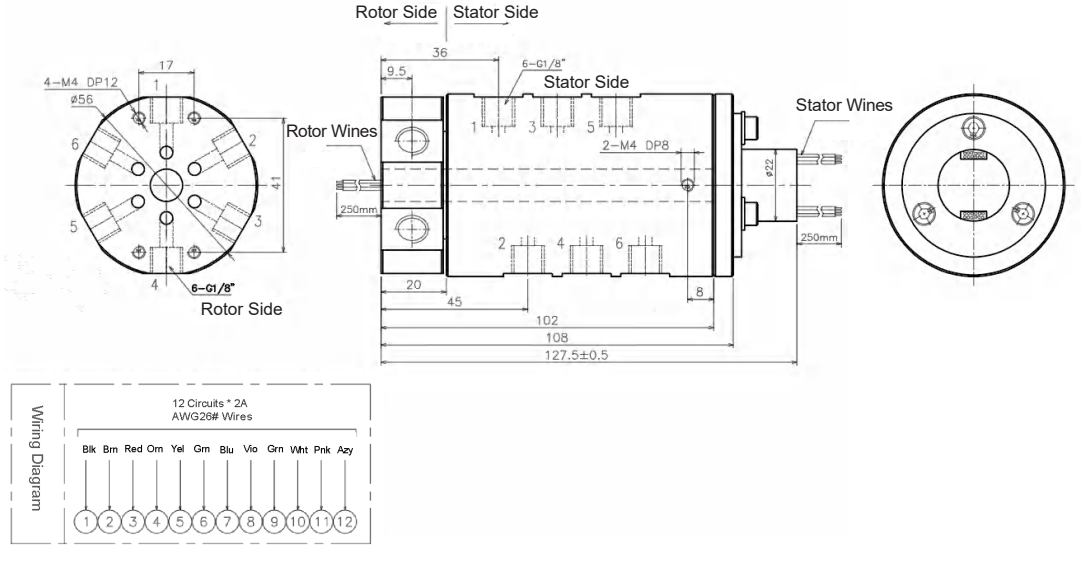
HK 6 Inlets 6 Outlets Series Rotary Unions(Rotary Joint)

G1/8"Port +6~24 Circuits Electrical Signal(2A)					
Part NO.	Passages(Gas)	Port Size	Pipe Size	Signal(2A)	Length L(mm)±0.5
HK56-0601-P0602	6	G1/8"	6~8mm	6	12
HK56-0601-P1202	6	G1/8"	6~8mm	12	19.5
HK56-0601-P1802	6	G1/8"	6~8mm	18	26.9
HK56-0601-P2402	6	G1/8"	6~8mm	24	34.6

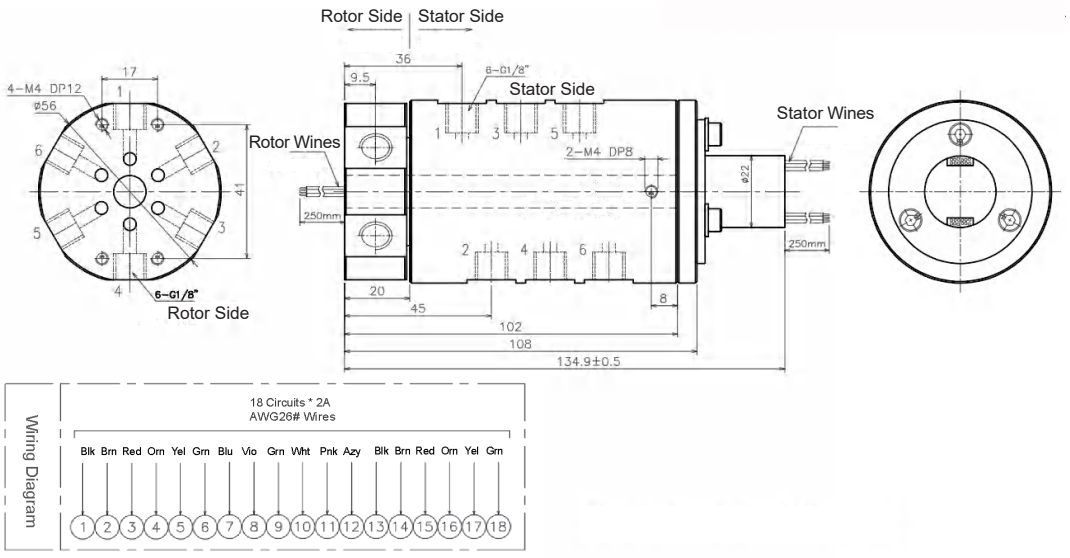
HK56-0601-P0602 Dimensions



HK56-0601-P1202 Dimensions

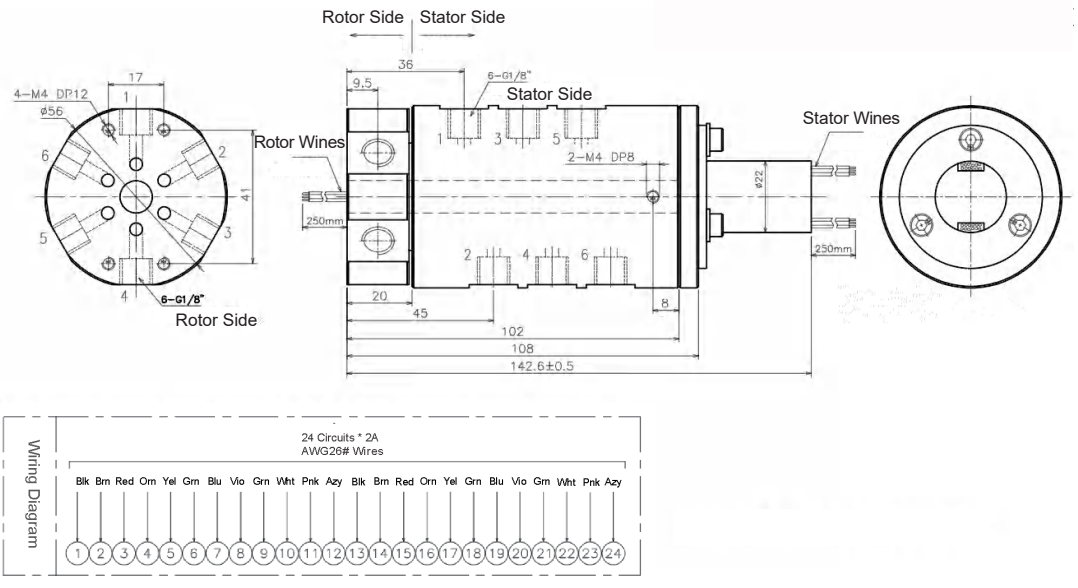


HK56-0601-P1802 Dimensions



Note: Wires of the same color are distinguished by group using numbered tubes.

HK56-0601-P2402 Dimensions

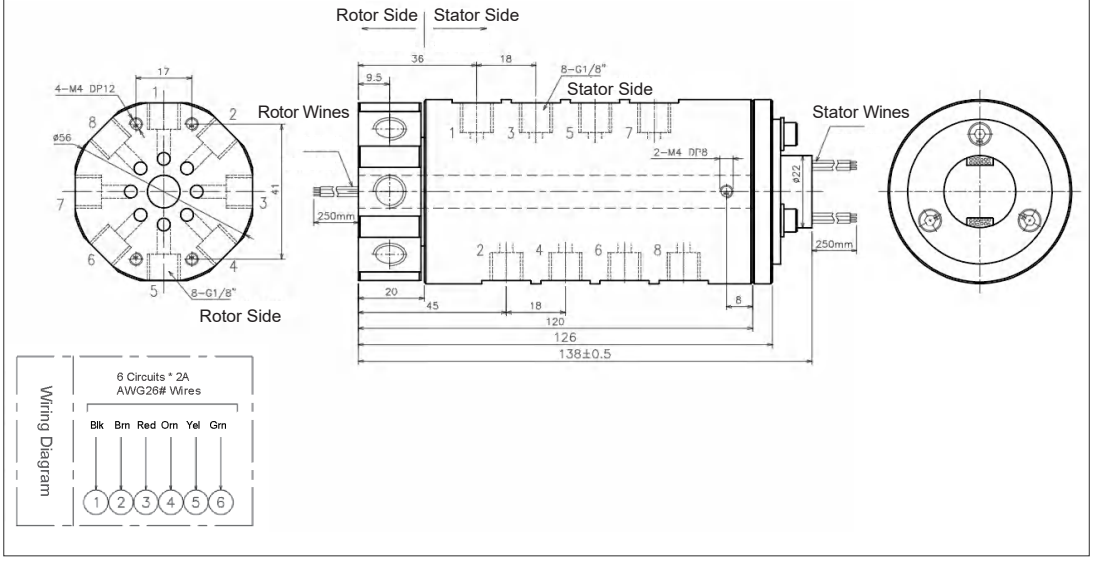


Note: Wires of the same color are distinguished by group using numbered tubes.

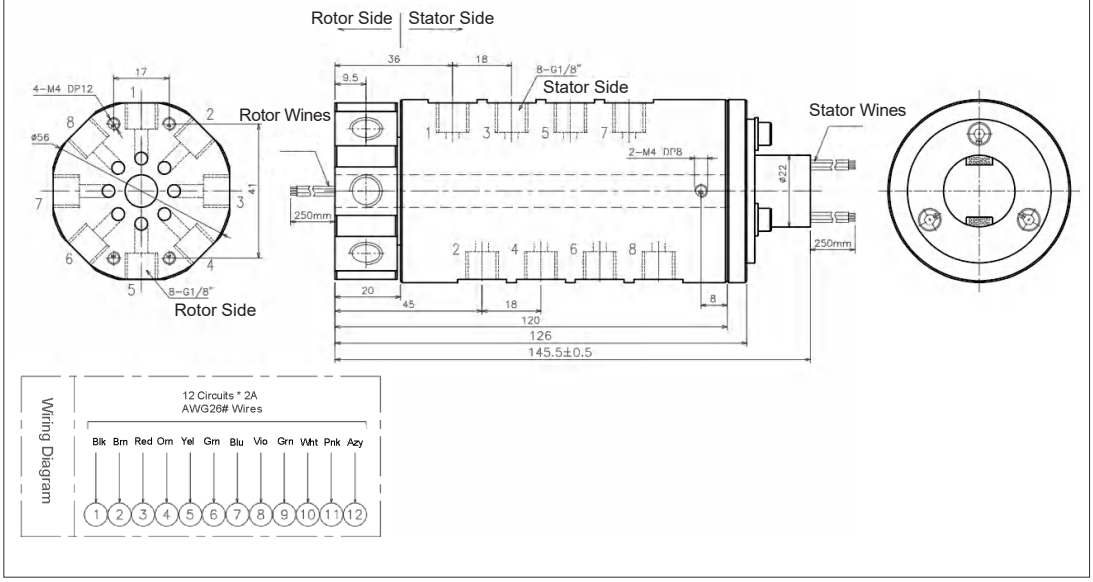
HK 8 Inlets 8 Outlets Series Rotary Unions(Rotary Joint)

G1/8"Port +6~24 Circuits Electrical Signal(2A)					
Part NO.	Passages(Gas)	Port Size	Pipe Size	Signal(2A)	Length L(mm)±0.5
HK56-0801-P0602	8	G1/8"	6~8mm	6	12
HK56-0801-P1202	8	G1/8"	6~8mm	12	19.5
HK56-0801-P1802	8	G1/8"	6~8mm	18	26.9
HK56-0801-P2402	8	G1/8"	6~8mm	24	34.6

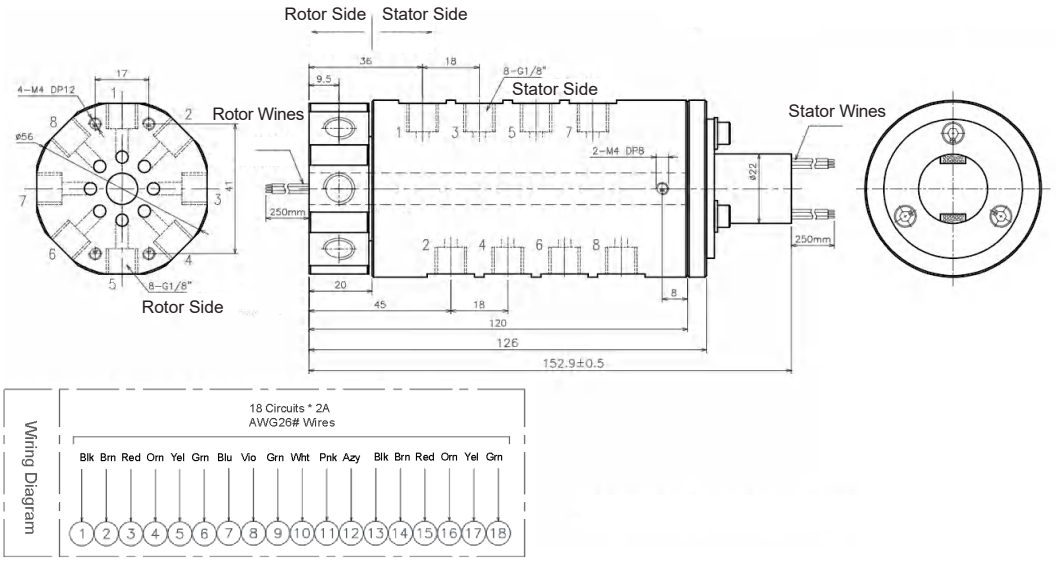
HK56-0801-P0602 Dimensions



HK56-0801-P1202 Dimensions

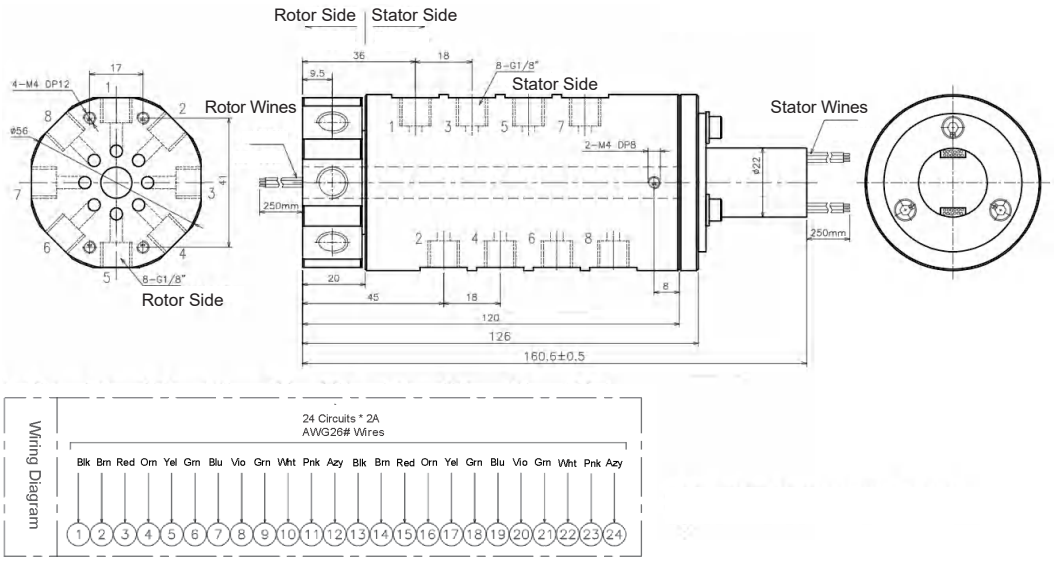


HK56-0801-P1802 Dimensions



Note: Wires of the same color are distinguished by group using numbered tubes.

HK56-0801-P2402 Dimensions



Note: Wires of the same color are distinguished by group using numbered tubes.

Through Bore Slip Ring Series

Product Series Introduction

Hiscience's Through Bore Slip Rings utilize advanced brush-type technology. The contact components feature a triple-hardened, ultra-hard gold surface treatment technology, which surpasses the international military connector standards in hardness, strength, wear resistance, and conductivity. The ring surface is exceptionally smooth, with a surface roughness of ≤Ra0.4. Each signal path is meticulously designed to prevent signal loss during high-speed rotation.

The center through-bore options range from 0 to 1000 mm, with current capacities from 0 to 5000A. The voltage capacity can reach up to 10000V, accommodating a wide range of transmission and rotation needs.

Electrical& Electronics		Mechanical Parameter		Environmental Parameter	
NO.of Circuits	06/12/18/24	Working Speed	0~300RPM	Working Temperature	-40℃~+80℃
Curent	5A(Signal)/10A	Contact Material	Precious Metal		
Voltage	440VAC / DC	Housing Material	Aluminum Alloy / Engineering Plastics	Working Humidity	≤70%RH
Dielectric Strength	500VAC@50Hz	Lead Wire Size	Teflon or other wire	Protection (IP Grade)	IP50
Insulation Resistance	≥500MΩ@500VDC	Lead Wire Length	Stator / Rotor:300mm	Other Parameter	
Dynamic Contact Resistance	Minimum resistance of 1mΩ	Torque	≤0.1N.m / 6 Circuits +0.03N.m / 6 Circuits	Working life	20 Million Revolutions (Customizable)

Customization Options Description:

1、Working Temperature: Standard range: -30℃~+70℃, Custom range: -60℃ ~ +200℃

2、Working Speed: Standard:0~300RPM, Customizable: up to 0 ~ 20000 RPM

3、Reference Lifetime: Standard:10 million revolutions @ 300RPM,Extended lifetime slip rings available upon request

4、Housing Material: Options include engineering plastics, aluminum alloy, and stainless steel

5、IP Grade: Standard: IP50,Customizable: up to IP68

6、Type of Connectors and Length: Various connector types and lengths available upon request

7、Integration Capabilities: Can be integrated with pneumatic, hydraulic, RF, and fiber optic rotary joints

8、Signal Support: Supports simultaneous transmission of multiple signals, including industrial Ethernet, serial, industrial bus, USB, SDI, etc.

Through Bore Slip Ring Series

Features

- Transmission Capabilities: Capable of transmitting both analog and digital signals
- Mixed Transmission: Supports the mixed transmission of power and various signals, including:
  - (1)、Ethernet：Rates of 10Mbps, 100Mbps, 1000Mbps
  - (2)、Industrial Ethernet: EtherNet, EtherCAT, ProfiNet, Powerlink, SercosIII/IP, etc
  - (3)、High-Definition Video: SDI, LVDS, etc
  - (4)、Serial Communication: RS232, RS485, RS422, etc
  - (5)、Universal Serial Bus: USB 2.0
  - (6)、Industrial Fieldbus: CANBus, ProfiBus, InterBus, CC-Link, DeviceNet, etc
  - (7)、Sensor Signals: Thermocouples, RTDs, Strain Gauges, etc
- Durability: Exceptionally long lifetime, maintenance-free
- Ease of Installation: Easy to install

Applications

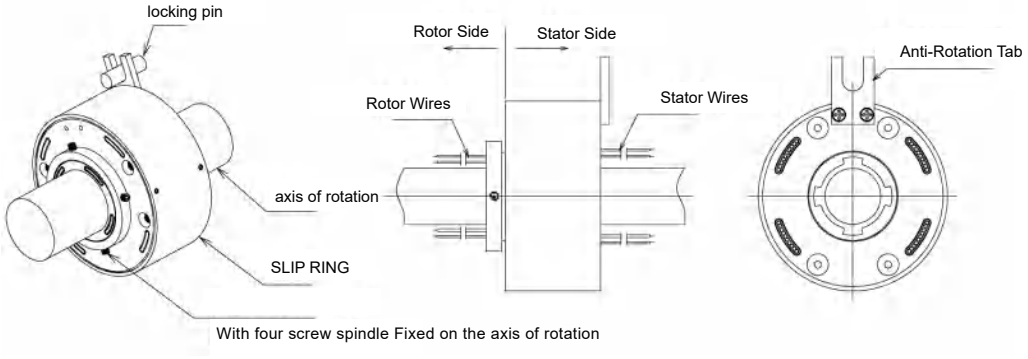
Industrial Automation Equipment、Medical Equipment、Wind Power Equipment、Test & Measurement Equipment Exhibition/ Display Equipment、Robotics Equipment、Turntable Equipment、Amusement Equipment、SOTM (Satcom On The Move)、High -Speed Rail Equipment、Packaging Machinery、Marine & Offshore Equipment、Construction Machinery.

Installation Instructions and Diagrams

1、Load-Bearing: The slip ring must not be used as a load-bearing component, and the leads must not be subject to external pulling forces.

2、Connection: During installation, the rotor and stator should not both be rigidly connected. It is recommended to use 4 locking screws to secure the slip ring rotor to the rotating shaft, with a locking pin inserted into the stator end to prevent rotation. Additionally, the leads should be carefully routed to avoid interference or damage.

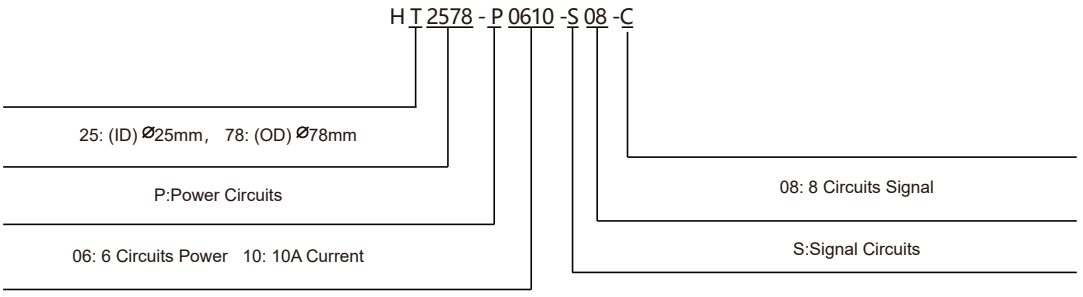
3、Environmental Protection: Slip rings are precision electrical components. If the operating environment is harsh, additional protective measures should be taken, or a customized slip ring with a higher ingress protection rating should be selected.



Through Bore Slip Ring Series

Part Number Description

For example：HT2578-P0610-S08



Color Code Of Lead Wire

Ring #	1	2	3	4	5	6	7	8	9	10	11	12
Color	Black	Brown	Red	Orange	Yellow	Green	Blue	Violet	Grey	White	Pink	Azury

Remark: If more than 12wires, repeat as sequence , use number tubes to distinguish them.

Standard Series Selection Table

HT Series Through Bore Slip Rings

Part NO.	ID(mm)	OD(mm)	NO.Of Circuits(mm)
HT1256	12.7	56	1~36
HT1256F	12.7	56	1~36
HT2578	25.4	78	1~36
HT2578F	25.4	86	1~36
HT3899	38.1	99	1~36
HT3899F	38.1	99	1~36
HT50119	50	119	1~36
HT50119F	50	119	1~36

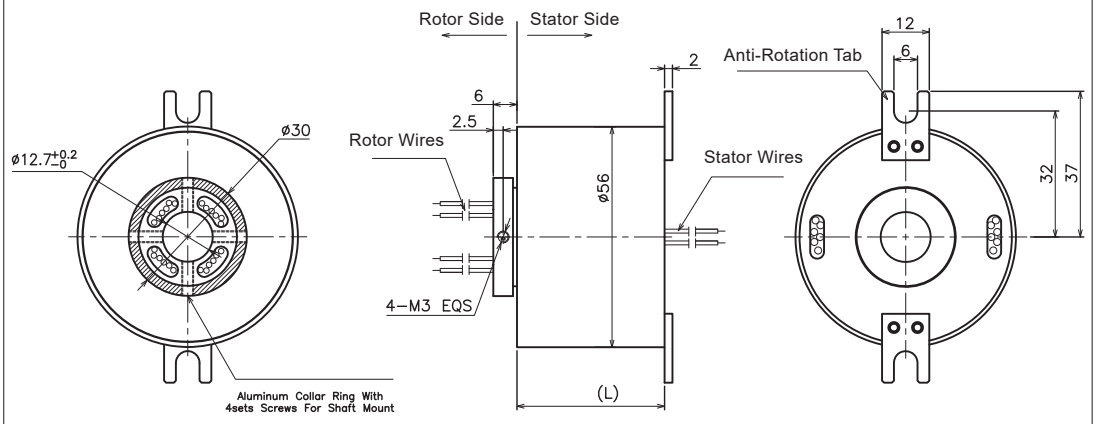
HT1256 Series

HT1256 Series				
Part NO.	NO.of Circuits			Length (mm)
	10A	5A	Signal	
HT1256-P0605	0	6	0	41.7
HT1256-P1205	0	12	0	67.5
HT1256-P1805	0	18	0	67.5
HT1256-P2405	0	24	0	92.7
HT1256-P3005	0	30	0	105.6
HT1256-P3605	0	36	0	118.5
HT1256-P0610	6	0	0	41.7
HT1256-P1210	12	0	0	67.5
HT1256-P1810	18	0	0	80.1
HT1256-P2410	24	0	0	105.6
HT1256-S09	0	0	9	42.3
HT1256-S18	0	0	18	67.5
HT1256-S27	0	0	27	92.7
HT1256-S36	0	0	36	105.6
HT1256-P0605-S09	0	6	9	67.5
HT1256-P0605-S18	0	6	18	80.1
HT1256-P1205-S09	0	12	9	80.1
HT1256-P1205-S18	0	12	18	92.7
HT1256-P1805-S09	0	18	9	92.7
HT1256-P1805-S18	0	18	18	118.5
HT1256-P0610-S09	6	0	9	67.5
HT1256-P0610-S18	6	0	18	92.7
HT1256-P1210-S09	12	0	9	80.7
HT1256-P1210-S18	12	0	18	105.6

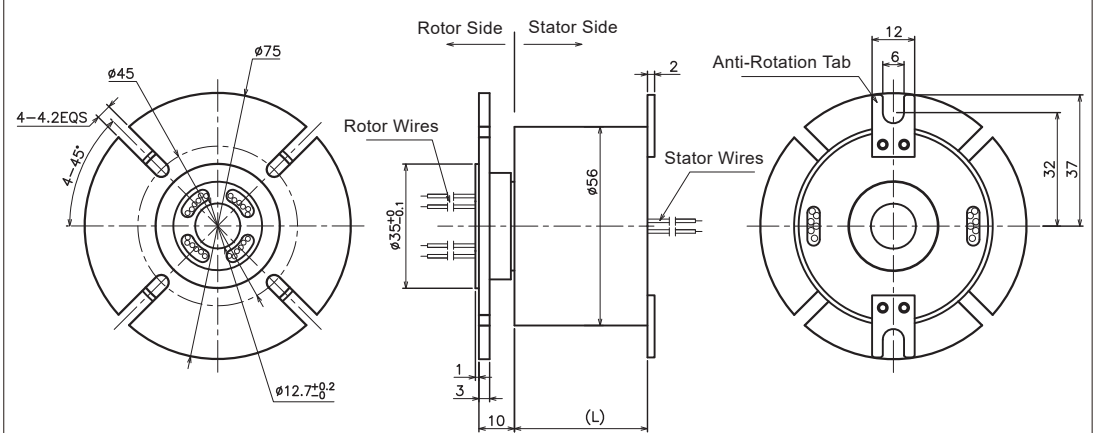
HT1256F Series

HT1256F Series				
Part NO.	NO.of Circuits			Length (mm)
	10A	5A	Signal	
HT1256F-P0605	0	6	0	41.7
HT1256F-P1205	0	12	0	67.5
HT1256F-P1805	0	18	0	67.5
HT1256F-P2405	0	24	0	92.7
HT1256F-P3005	0	30	0	105.6
HT1256F-P3605	0	36	0	118.5
HT1256F-P0610	6	0	0	41.7
HT1256F-P1210	12	0	0	67.5
HT1256F-P1810	18	0	0	80.1
HT1256F-P2410	24	0	0	105.6
HT1256F-S09	0	0	9	42.3
HT1256F-S18	0	0	18	67.5
HT1256F-S27	0	0	27	92.7
HT1256F-S36	0	0	36	105.6
HT1256F-P0605-S09	0	6	9	67.5
HT1256F-P0605-S18	0	6	18	80.1
HT1256F-P1205-S09	0	12	9	80.1
HT1256F-P1205-S18	0	12	18	92.7
HT1256F-P1805-S09	0	18	9	92.7
HT1256F-P1805-S18	0	18	18	118.5
HT1256F-P0610-S09	6	0	9	67.5
HT1256F-P0610-S18	6	0	18	92.7
HT1256F-P1210-S09	12	0	9	80.7
HT1256F-P1210-S18	12	0	18	105.6

HT1256 Series Dimensions



HT1256F Series Dimensions



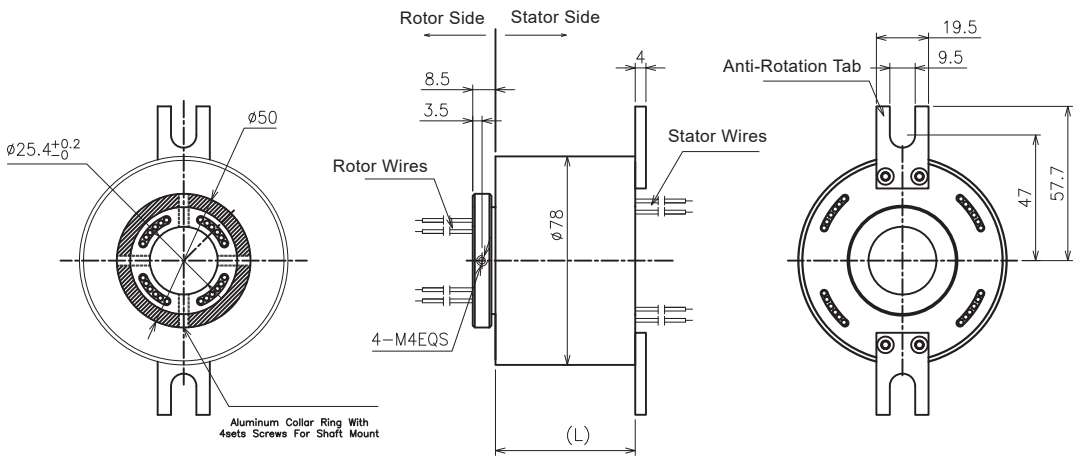
HT2578 Series

HT2578 Series				
Part NO.	NO.of Circuits			Length (mm)
	10A	5A	Signal	
HT2578-P0605	0	6	0	47.1
HT2578-P1205	0	12	0	68.7
HT2578-P1805	0	18	0	68.7
HT2578-P2405	0	24	0	90.3
HT2578-P3005	0	30	0	111.9
HT2578-P3605	0	36	0	133.5
HT2578-P0610	6	0	0	47.1
HT2578-P1210	12	0	0	68.7
HT2578-P1810	18	0	0	90.3
HT2578-P2410	24	0	0	111.9
HT2578-P3010	30	0	0	133.5
HT2578-S09	0	0	9	47.1
HT2578-S18	0	0	18	68.7
HT2578-S27	0	0	27	90.3
HT2578-S36	0	0	36	111.9
HT2578-P0605-S09	0	6	9	68.7
HT2578-P0605-S18	0	6	18	90.3
HT2578-P0605-S27	0	6	27	111.9
HT2578-P1205-S09	0	12	9	90.3
HT2578-P1205-S18	0	12	18	111.9
HT2578-P1205-S27	0	12	27	133.5
HT2578-P1805-S09	0	18	9	111.9
HT2578-P1805-S18	0	18	18	133.5
HT2578-P2405-S09	0	24	9	111.9
HT2578-P2405-S18	0	24	18	133.5
HT2578-P3005-S09	0	30	9	133.5
HT2578-P0610-S09	6	0	9	68.7
HT2578-P0610-S18	6	0	18	90.3
HT2578-P0610-S27	6	0	27	111.9
HT2578-P1210-S09	12	0	9	90.3
HT2578-P1210-S18	12	0	18	111.9
HT2578-P1810-S09	18	0	9	111.9
HT2578-P1810-S18	18	0	18	133.5
HT2578-P2410-S09	24	0	9	133.5

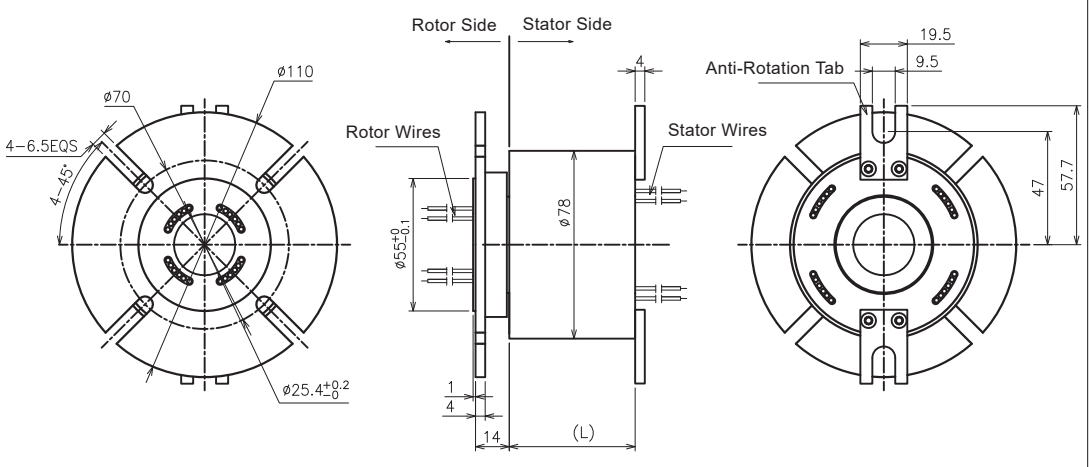
HT2578F Series

HT2578F Series				
Part NO.	NO.of Circuits			Length (mm)
	10A	5A	Signal	
HT2578F-P0605	0	6	0	47.1
HT2578F-P1205	0	12	0	68.7
HT2578F-P1805	0	18	0	68.7
HT2578F-P2405	0	24	0	90.3
HT2578F-P3005	0	30	0	111.9
HT2578F-P3605	0	36	0	133.5
HT2578F-P0610	6	0	0	47.1
HT2578F-P1210	12	0	0	68.7
HT2578F-P1810	18	0	0	90.3
HT2578F-P2410	24	0	0	111.9
HT2578F-P3010	30	0	0	133.5
HT2578F-S09	0	0	9	47.1
HT2578F-S18	0	0	18	68.7
HT2578F-S27	0	0	27	90.3
HT2578F-S36	0	0	36	111.9
HT2578F-P0605-S09	0	6	9	68.7
HT2578F-P0605-S18	0	6	18	90.3
HT2578F-P0605-S27	0	6	27	111.9
HT2578F-P1205-S09	0	12	9	90.3
HT2578F-P1205-S18	0	12	18	111.9
HT2578F-P1205-S27	0	12	27	133.5
HT2578F-P1805-S09	0	18	9	111.9
HT2578F-P1805-S18	0	18	18	133.5
HT2578F-P2405-S09	0	24	9	111.9
HT2578F-P2405-S18	0	24	18	133.5
HT2578F-P3005-S09	0	30	9	133.5
HT2578F-P0610-S09	6	0	9	68.7
HT2578F-P0610-S18	6	0	18	90.3
HT2578F-P0610-S27	6	0	27	111.9
HT2578F-P1210-S09	12	0	9	90.3
HT2578F-P1210-S18	12	0	18	111.9
HT2578F-P1810-S09	18	0	9	111.9
HT2578F-P1810-S18	18	0	18	133.5
HT2578F-P2410-S09	24	0	9	133.5

HT2578 Series Dimensions



HT2578F Series Dimensions



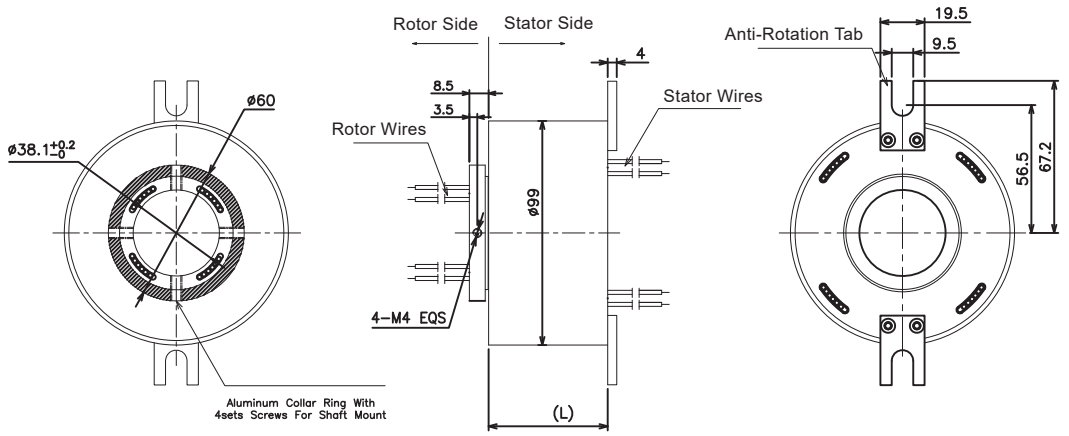
HT3899 Series

HT3899 Series				
Part NO.	NO.of Circuits			Length (mm)
	10A	5A	Signal	
HT3899-P0605	0	6	0	47.1
HT3899-P1205	0	12	0	68.7
HT3899-P1805	0	18	0	68.7
HT3899-P2405	0	24	0	90.3
HT3899-P3005	0	30	0	111.9
HT3899-P3605	0	36	0	133.5
HT3899-P0610	6	0	0	47.1
HT3899-P1210	12	0	0	68.7
HT3899-P1810	18	0	0	90.3
HT3899-P2410	24	0	0	111.9
HT3899-P3010	30	0	0	133.5
HT3899-S09	0	0	9	47.1
HT3899-S18	0	0	18	68.7
HT3899-S27	0	0	27	90.3
HT3899-S36	0	0	36	111.9
HT3899-P0605-S09	0	6	9	68.7
HT3899-P0605-S18	0	6	18	90.3
HT3899-P0605-S27	0	6	27	111.9
HT3899-P1205-S09	0	12	9	90.3
HT3899-P1205-S18	0	12	18	111.9
HT3899-P1205-S27	0	12	27	133.5
HT3899-P1805-S09	0	18	9	111.9
HT3899-P1805-S18	0	18	18	133.5
HT3899-P2405-S09	0	24	9	111.9
HT3899-P2405-S18	0	24	18	133.5
HT3899-P3005-S09	0	30	9	133.5
HT3899-P0610-S09	6	0	9	68.7
HT3899-P0610-S18	6	0	18	90.3
HT3899-P0610-S27	6	0	27	111.9
HT3899-P1210-S09	12	0	9	90.3
HT3899-P1210-S18	12	0	18	111.9
HT3899-P1810-S09	18	0	9	111.9
HT3899-P1810-S18	18	0	18	133.5
HT3899-P2410-S09	24	0	9	133.5

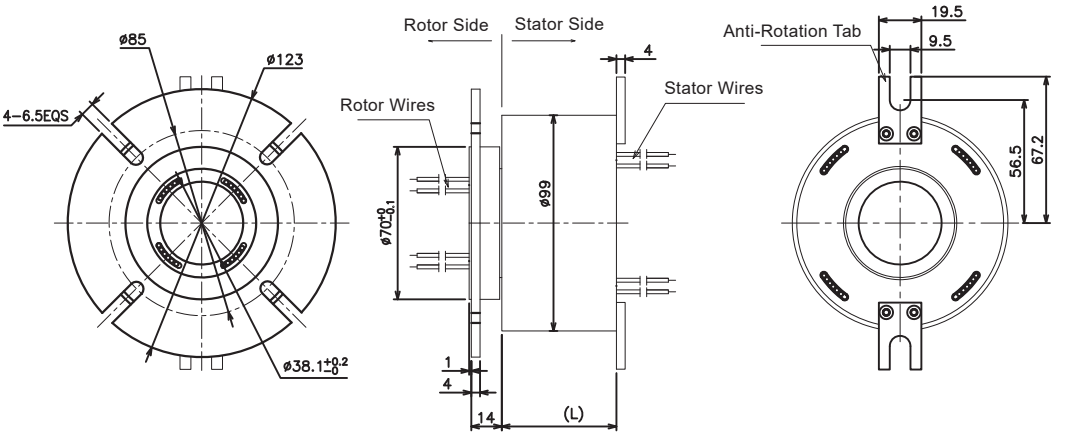
HT3899F Series

HT3899F Series				
Part NO.	NO.of Circuits			Length (mm)
	10A	5A	Signal	
HT3899F-P0605	0	6	0	47.1
HT3899F-P1205	0	12	0	68.7
HT3899F-P1805	0	18	0	68.7
HT3899F-P2405	0	24	0	90.3
HT3899F-P3005	0	30	0	111.9
HT3899F-P3605	0	36	0	133.5
HT3899F-P0610	6	0	0	47.1
HT3899F-P1210	12	0	0	68.7
HT3899F-P1810	18	0	0	90.3
HT3899F-P2410	24	0	0	111.9
HT3899F-P3010	30	0	0	133.5
HT3899F-S09	0	0	9	47.1
HT3899F-S18	0	0	18	68.7
HT3899F-S27	0	0	27	90.3
HT3899F-S36	0	0	36	111.9
HT3899F-P0605-S09	0	6	9	68.7
HT3899F-P0605-S18	0	6	18	90.3
HT3899F-P0605-S27	0	6	27	111.9
HT3899F-P1205-S09	0	12	9	90.3
HT3899F-P1205-S18	0	12	18	111.9
HT3899F-P1205-S27	0	12	27	133.5
HT3899F-P1805-S09	0	18	9	111.9
HT3899F-P1805-S18	0	18	18	133.5
HT3899F-P2405-S09	0	24	9	111.9
HT3899F-P2405-S18	0	24	18	133.5
HT3899F-P3005-S09	0	30	9	133.5
HT3899F-P0610-S09	6	0	9	68.7
HT3899F-P0610-S18	6	0	18	90.3
HT3899F-P0610-S27	6	0	27	111.9
HT3899F-P1210-S09	12	0	9	90.3
HT3899F-P1210-S18	12	0	18	111.9
HT3899F-P1810-S09	18	0	9	111.9
HT3899F-P1810-S18	18	0	18	133.5
HT3899F-P2410-S09	24	0	9	133.5

HT3899 Series Dimensions



HT3899F Series Dimensions



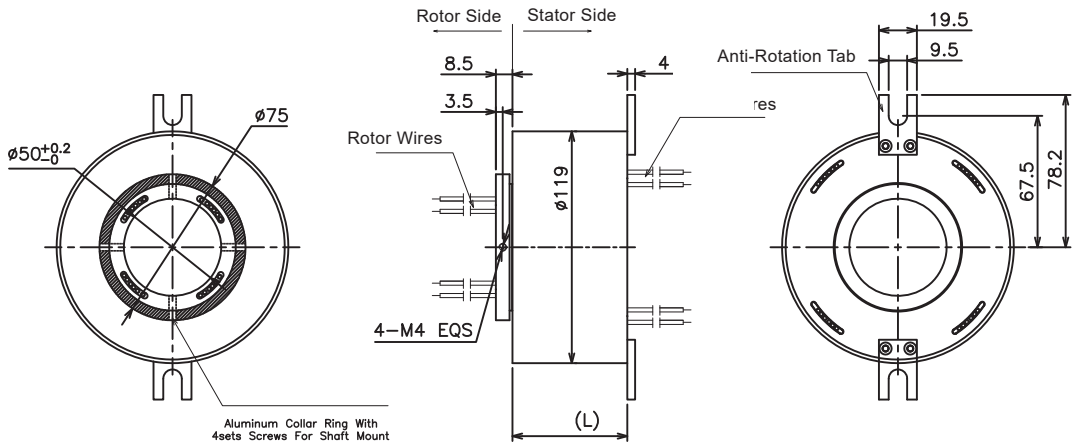
HT50119 Series

HT50119 Series				
Part NO.	NO.of Circuits			Length (mm)
	10A	5A	Signal	
HT50119-P0605	0	6	0	52.1
HT50119-P1205	0	12	0	73.7
HT50119-P1805	0	18	0	73.7
HT50119-P2405	0	24	0	95.3
HT50119-P3005	0	30	0	116.9
HT50119-P3605	0	36	0	138.5
HT50119-P0610	6	0	0	52.1
HT50119-P1210	12	0	0	73.7
HT50119-P1810	18	0	0	95.3
HT50119-P2410	24	0	0	116.9
HT50119-P3010	30	0	0	138.5
HT50119-S09	0	0	9	52.1
HT50119-S18	0	0	18	73.7
HT50119-S27	0	0	27	95.3
HT50119-S36	0	0	36	116.9
HT50119-P0605-S09	0	6	9	73.7
HT50119-P0605-S18	0	6	18	95.3
HT50119-P0605-S27	0	6	27	116.9
HT50119-P1205-S09	0	12	9	95.3
HT50119-P1205-S18	0	12	18	116.9
HT50119-P1205-S27	0	12	27	138.5
HT50119-P1805-S09	0	18	9	116.9
HT50119-P1805-S18	0	18	18	138.5
HT50119-P2405-S09	0	24	9	116.9
HT50119-P2405-S18	0	24	18	138.5
HT50119-P3005-S09	0	30	9	138.5
HT50119-P0610-S09	6	0	9	73.7
HT50119-P0610-S18	6	0	18	95.3
HT50119-P0610-S27	6	0	27	116.9
HT50119-P1210-S09	12	0	9	95.3
HT50119-P1210-S18	12	0	18	116.9
HT50119-P1810-S09	18	0	9	116.9
HT50119-P1810-S18	18	0	18	138.5
HT50119-P2410-S09	24	0	9	138.5

HT50119F Series

HT50119F Series				
Part NO.	NO.of Circuits			Length (mm)
	10A	5A	Signal	
HT50119F-P0605	0	6	0	52.1
HT50119F-P1205	0	12	0	73.7
HT50119F-P1805	0	18	0	73.7
HT50119F-P2405	0	24	0	95.3
HT50119F-P3005	0	30	0	116.9
HT50119F-P3605	0	36	0	138.5
HT50119F-P0610	6	0	0	52.1
HT50119F-P1210	12	0	0	73.7
HT50119F-P1810	18	0	0	95.3
HT50119F-P2410	24	0	0	116.9
HT50119F-P3010	30	0	0	138.5
HT50119F-S09	0	0	9	52.1
HT50119F-S18	0	0	18	73.7
HT50119F-S27	0	0	27	95.3
HT50119F-S36	0	0	36	116.9
HT50119F-P0605-S09	0	6	9	73.7
HT50119F-P0605-S18	0	6	18	95.3
HT50119F-P0605-S27	0	6	27	116.9
HT50119F-P1205-S09	0	12	9	95.3
HT50119F-P1205-S18	0	12	18	116.9
HT50119F-P1205-S27	0	12	27	138.5
HT50119F-P1805-S09	0	18	9	116.9
HT50119F-P1805-S18	0	18	18	138.5
HT50119F-P2405-S09	0	24	9	116.9
HT50119F-P2405-S18	0	24	18	138.5
HT50119F-P3005-S09	0	30	9	138.5
HT50119F-P0610-S09	6	0	9	73.7
HT50119F-P0610-S18	6	0	18	95.3
HT50119F-P0610-S27	6	0	27	116.9
HT50119F-P1210-S09	12	0	9	95.3
HT50119F-P1210-S18	12	0	18	116.9
HT50119F-P1810-S09	18	0	9	116.9
HT50119F-P1810-S18	18	0	18	138.5
HT50119F-P2410-S09	24	0	9	138.5

HT50119 Series Dimensions



HT50119F Series Dimensions