

**PENLINK**

# Standard Slip Ring Catalogue

COMPACT SERIES [PSC]

HOLLOW SHAFT SERIES [PSH]

TERMINAL SERIES [PST]



## STANDARD SLIP RING CATALOGUE

## Catalogue Index

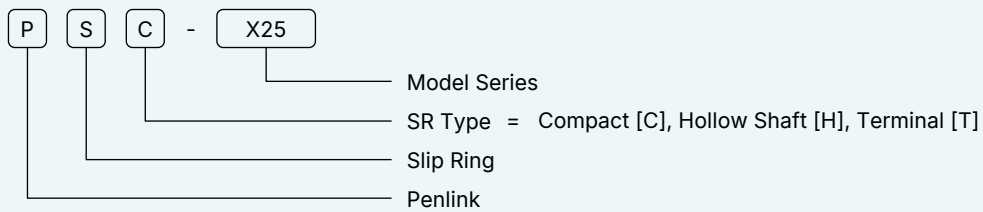
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| <b>Compact Series (PSC Series)</b>  | <b>4-17</b>  |
| Compact Series slip rings are designed for space-saving installations where reliable transmission of power and signals is essential. With gold-gold contacts and advanced fiber brush technology, these models offer low electrical noise, high durability, and maintenance-free operation for demanding environments.        |              |
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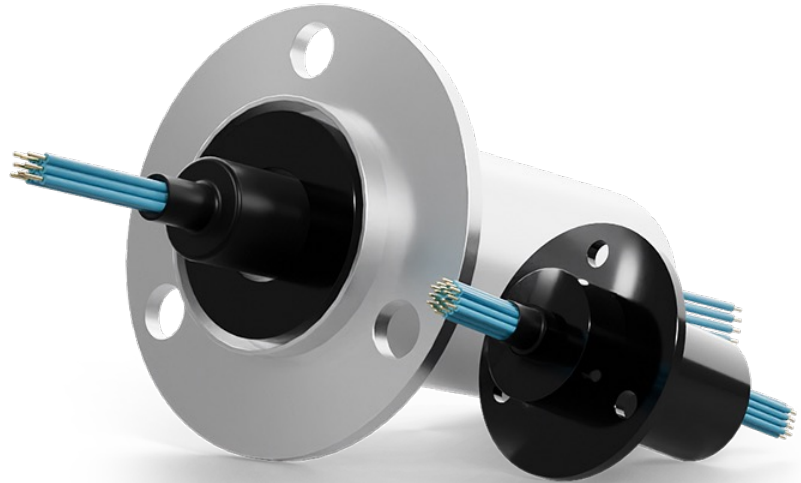
## STANDARD SERIAL CODE EXPLANATION

## Understanding Penlink Product Codes

Penlink slip ring product codes are designed to convey key technical details in a concise manner. Each letter or number in the code corresponds to a fundamental aspect of the product, such as the basic design, size, and specific model identifier. This straightforward system makes it easy to understand the essential characteristics of each slip ring at a glance.

## Product Codes





## STANDARD COMPACT SERIES

### Fully Modifiable Solutions

Our PSC-X12 to PSC-X25 Compact Slip Rings are precision-engineered to deliver uninterrupted signal and data transmission, even in the most demanding environments. Designed with gold-gold contacts for superior conductivity and longevity, these slip rings ensure low electrical noise and extended durability for consistent, high-performance operation.

These compact slip rings can be customized to reach up to IP65 protection, providing a solid barrier against dust and moisture. Durable, color-coded, silver-plated Teflon®-insulated lead wires simplify installation and enhance reliability. Available in various configurations to meet diverse application needs, certain models support currents up to 10A.

Utilizing advanced fiber brush technology, our slip rings maintain smooth, maintenance-free 360° rotation, eliminating the need for lubricants. Low torque and minimal contact pressure reduce wear, delivering quiet operation with electrical noise held below 0.01 Ω for clear signal quality. For additional customization options, contact us for tailored solutions.

### PSC Series Base Configurations

| Model   | Length      | Max. Circuits | Ampere    | Modified Circuits                | OD    |
|---------|-------------|---------------|-----------|----------------------------------|-------|
| PSC-X12 | 14-23mm     | 18            | 2A        | Contact us for more info         | ø12mm |
| PSC-X18 | 15,9-25,5mm | 14            | 2A        | Contact us for more info         | ø18mm |
| PSC-X22 | 19-56,8mm   | 36            | 2A/6A/10A | Contact us for more info         | ø22mm |
| PSC-X25 | 51,7-85,5mm | 56            | 2A/6A/10A | 2RG178, Contact us for more info | ø25mm |

*Our standard configuration provides 2A per ring, with the flexibility to combine 2 rings for 4A or 3 rings for 6A, tailored to your specific current requirements. Additionally, we offer seamless integration of RG178 (50Ω) or RG179 (75Ω) coaxial cables. Furthermore, we accommodate requests for alternative flange dimensions to suit your unique specifications.*

## STANDARD COMPACT SERIES

## Standard Color Codes

## Standard Color Codes

|                    |                    |                  |                   |                   |                    |
|--------------------|--------------------|------------------|-------------------|-------------------|--------------------|
| 1. Red             | 2. Yellow          | 3. Black         | 4. Blue           | 5. Green          | 6. White           |
| 7. Purple          | 8. Grey            | 9. Brown         | 10. Orange        | 11. Deep Blue     | 12. Khaki          |
| 13. White / Red    | 14. White / Black  | 15. White / Blue | 16. White /Purple | 17. White / Brown | 18. White / Green  |
| 19. White / Orange | 20. White / Yellow | 21. White / Grey | 22. Black / Red   | 23. Black / Blue  | 24. Yellow / Green |

*For slip rings with more than 24 circuits, the colours is repeated, and placed in separate identified shrink tubes. Labels can be added on request.*

## Disclaimer

Color can mismatch depending on configuration and cable type. The colors listed in the table above are standard color codes, this means that they can change on different models and housing. Please contact Penlink with your PSC-X model for correct color coding.

**STANDARD COMPACT SERIES**

## Signal and Bus

Our standard slip rings comes with signals for data, video and power transmission. Your transmission requirements are key when picking out the right product. Knowing the transmission will enable us to find the right slip ring for your project.

If you can't find a model with the right transmission, we can always modify the slip ring for you. This may alter the design of the slip ring so always contact us for more information regarding your model and specification.

### **Data Circuits**

Our slip ring handle up to 1 GB of data (1000Base-X) and can be equipped with different cable to be used for all known industry standard data, as example, Profinet, Can-bus, Profibus, DMX, 100Base-X or similar type. It's even possible to transfer several independent data channels through one slip ring.

### **Video Signals**

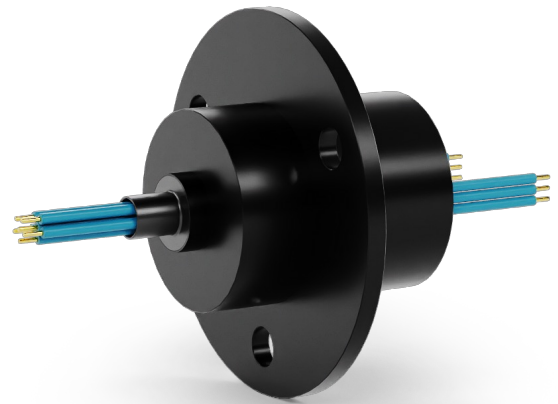
Our slip ring handle both standard and high-definition videos, up to SMPTE 424M/2,97 gb/s with 3G HD-SDI. Combined with our fiber optical joint, the slip ring handle up to 24G-SDI.

## PSC-X12 SERIES

## Compact Standard

The PSC-X12 series slip rings are designed for efficient transmission of electrical power and signals in rotating systems. Their compact ring diameter minimizes wear and dynamic imbalance, ensuring long service life. Gold-to-gold alloy contacts provide low resistance, extremely low electrical noise, and minimal interference—making PSC-X12 ideal for sensitive signals like video, fieldbus, and measurement equipment.

Available in versions up to 2A, 6A, or 10A, and in many standard configurations (6–18 circuits), the compact design fits perfectly in high-performance, space-limited applications.



## Technical Specification

| Specification         | PSC-X12  |
|-----------------------|--|
| Rated Voltage         | 240VDC/240VAC  |
| Number of Circuits    | 6-18 circuits, or higher on request                                      |
| Lead Size             | AWG28  |
| Lead Material         | Color coded, PTFE insulated, Silver plated copper, FEP insulated (AWG16) |
| Lead Length           | Standard 250mm, easy to modify   |
| Insulation Resistance | 1000MΩ/500VDC  |
| Dielectric Strength   | 500VAC@50Hz, 60s   |
| Electrical Noise      | <0.01Ω   |
| Rated Speed           | 0~300rpm   |
| Working Temperature   | -20°C ~ +80°C  |
| Humidity              | 60%RH or higher  |
| Contact Material      | Precious metal   |
| Housing               | Engineering plastic  |
| Protection Level      | IP51, on request IP65  |

## Product Features

- Quick delivery
- Low cost
- Ideal for video & digital signals
- Gold alloy rings & brushes
- High reliability
- Low friction torque
- Smooth rotation
- In compliance with CE and ROHS standards

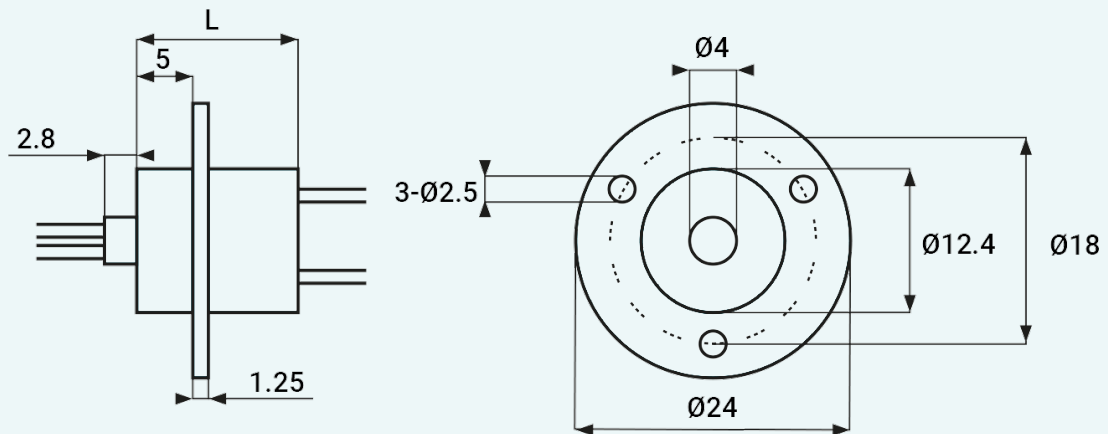
## Applications

- Video Systems
- Robotics
- Hose & Cable Reels
- Medical / Pharmaceutical
- Wind Turbines (small)
- Packaging

## PSC-X12 SERIES

## Outline Dimensions

## PSC-X12-STANDARD

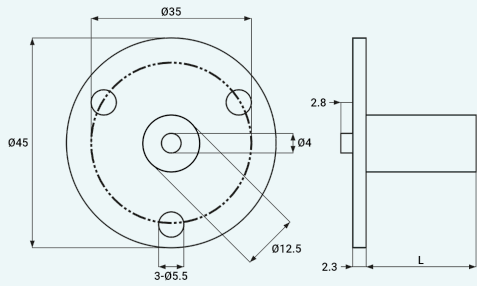


| Model      | No. of Circuits | Length (mm) |
|------------|-----------------|-------------|
| PSC-X12-6  | 6               | 14          |
| PSC-X12-8  | 8               | 18,5        |
| PSC-X12-12 | 12              | 19,5        |
| PSC-X12-15 | 15              | 23          |
| PSC-X12-18 | 18              | 23          |

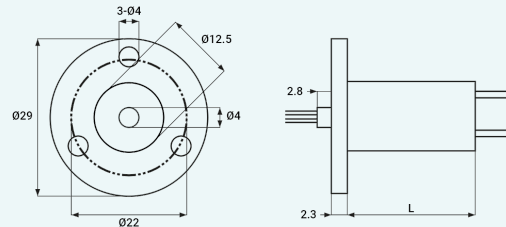
## PSC-X12 SERIES

## Outline Dimensions

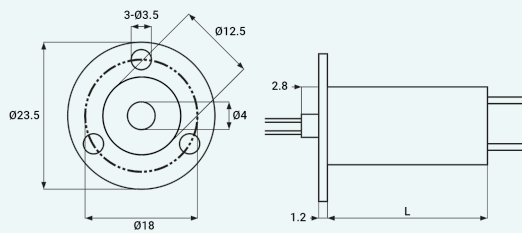
PSC-X12-A



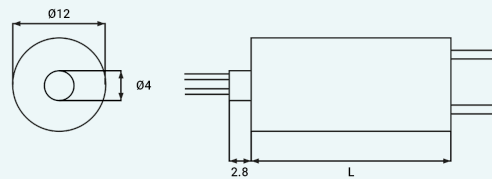
PSC-X12-A1



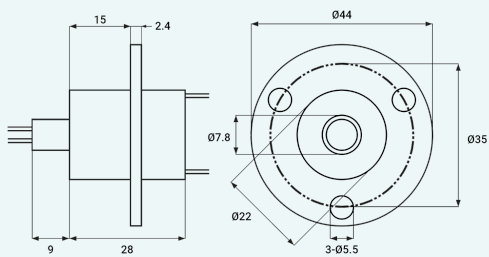
PSC-X12-A2



PSC-X12-C



PSC-X12-D

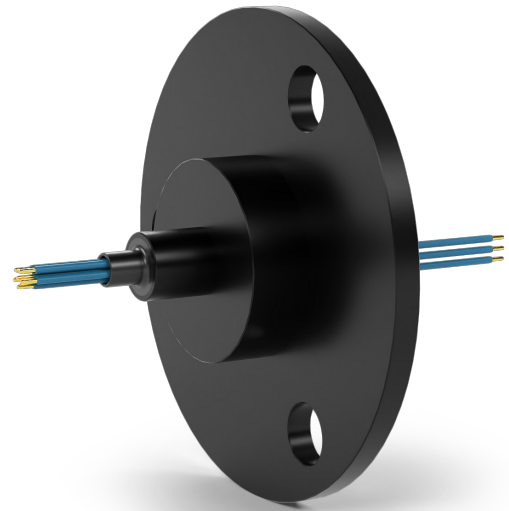


## PSC-X18 SERIES

## Compact Standard

The PSC-X18 series slip rings are ideal for transferring electrical power and signals in rotating applications. Their small ring diameter reduces wear and dynamic imbalance, ensuring long service life. Gold-to-gold alloy contacts provide low resistance, minimal electrical noise, and reduced interference—making PSC-X18 perfect for sensitive and high-frequency signals, such as video, fieldbus, and measurement equipment.

Available in versions up to 2A, 6A, or 10A and in standard configurations from 6 to 14 circuits, the compact design is well-suited for high-performance, space-constrained systems.



## Technical Specification

| Specification         | PSC-X18  |
|-----------------------|--|
| Rated Voltage         | 240VDC/240VAC  |
| Number of Circuits    | 6-14 circuits, or higher on request                                      |
| Lead Size             | AWG28  |
| Lead Material         | Color coded, PTFE insulated, Silver plated copper, FEP insulated (AWG16) |
| Lead Length           | Standard 250mm, easy to modify   |
| Insulation Resistance | 1000MΩ/500VDC  |
| Dielectric Strength   | 500VAC@50Hz, 60s   |
| Electrical Noise      | <0.01Ω   |
| Rated Speed           | 0~300rpm   |
| Working Temperature   | -20°C ~ +80°C  |
| Humidity              | 60%RH or higher  |
| Contact Material      | Precious metal   |
| Housing               | Engineering plastic  |
| Protection Level      | IP51, on request IP65  |

## Product Features

- Quick delivery
- Low cost
- Ideal for video & digital signals
- Gold alloy rings & brushes
- High reliability
- Low friction torque
- Smooth rotation
- In compliance with CE and ROHS standards

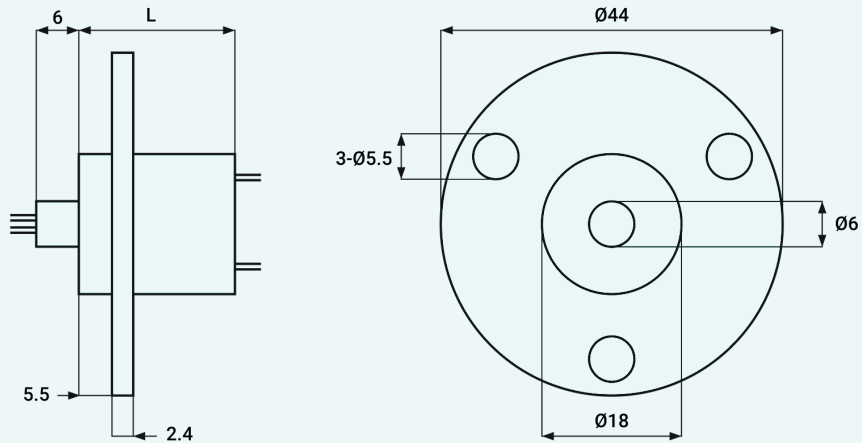
## Applications

- Video Systems
- Robotics
- Hose & Cable Reels
- Medical / Pharmaceutical
- Wind Turbines (small)
- Packaging

## PSC-X18 SERIES

## Outline Dimensions

## PSC-X18-STANDARD

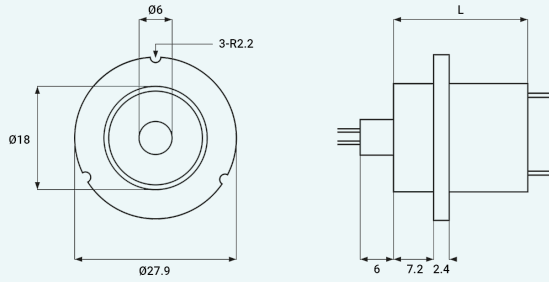


| Model      | No. of Circuits | Length (mm) |
|------------|-----------------|-------------|
| PSC-X18-6  | 6               | 15,9        |
| PSC-X18-12 | 12              | 23,7        |
| PSC-X18-14 | 14              | 25,5        |

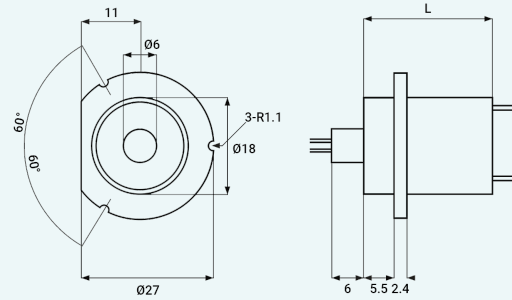
## PSC-X18 SERIES

## Outline Dimensions

PSC-X18-A1



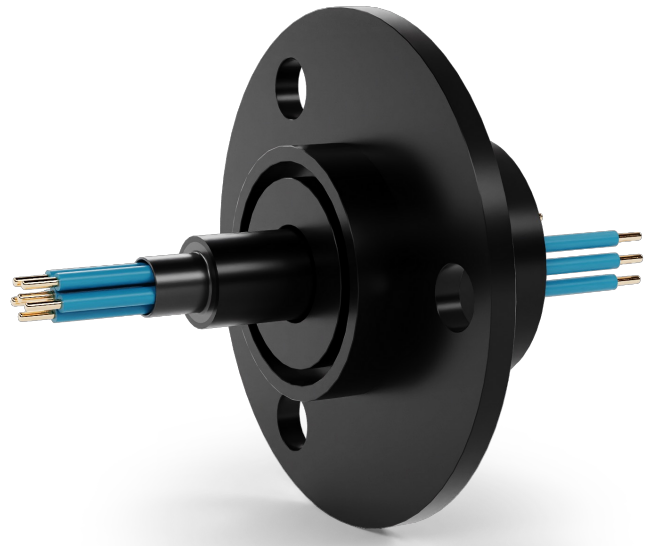
PSC-X18-B



**PSC-X22 SERIES****Compact Standard**

The PSC-X22 series slip rings are designed for reliable transmission of electrical power and critical signals in rotating systems. Their small ring diameter ensures low wear and minimal dynamic imbalance, supporting long service life and stable operation. Gold-to-gold alloy contacts provide low electrical resistance, reduced noise, and minimal interference—making PSC-X22 especially suitable for high-frequency signals (such as video and fieldbus), as well as low-current and low-voltage applications like strain gauges and measurement equipment.

Available in many standard configurations with 6 to 36 circuits, the compact size allows easy integration into high-performance, space-limited systems.

**Technical Specification**

| Specification         | PSC-X22  |
|-----------------------|--|
| Rated Voltage         | 240VDC/240VAC  |
| Number of Circuits    | 6-36 circuits, or higher on request                                      |
| Lead Size             | AWG26  |
| Lead Material         | Color coded, PTFE insulated, Silver plated copper, FEP insulated (AWG16) |
| Lead Length           | Standard 250mm, easy to modify   |
| Insulation Resistance | 1000MΩ/500VDC  |
| Dielectric Strength   | 500VAC@50Hz, 60s   |
| Electrical Noise      | <0.01Ω   |
| Rated Speed           | 0~300rpm   |
| Working Temperature   | -20°C ~ +80°C  |
| Humidity              | 60%RH or higher  |
| Contact Material      | Precious metal   |
| Housing               | Engineering plastic  |
| Protection Level      | IP51, on request IP65  |

**Product Features**

- Quick delivery
- Low cost
- Ideal for video & digital signals
- Gold alloy rings & brushes
- High reliability
- Low friction torque
- Smooth rotation
- In compliance with CE and ROHS standards

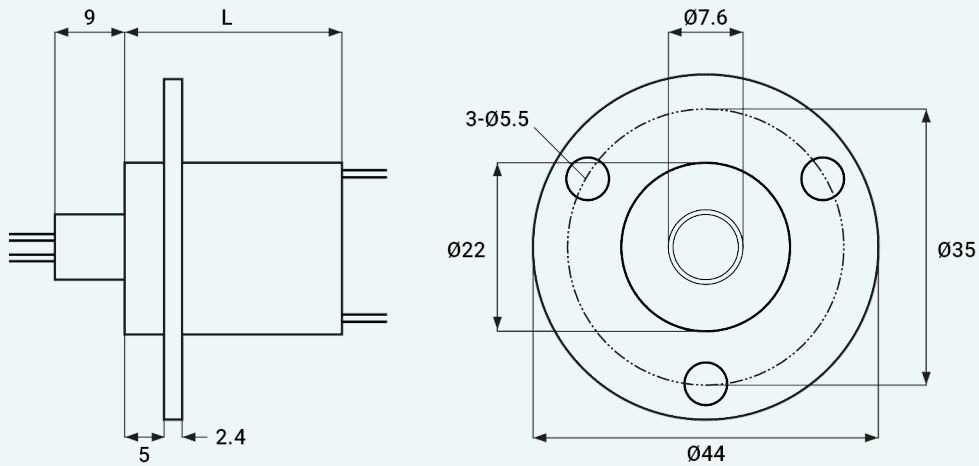
**Applications**

- Video Systems
- Robotics
- Hose & Cable Reels
- Medical / Pharmaceutical
- Wind Turbines (small)
- Packaging

## PSC-X22 SERIES

## Outline Dimensions

## PSC-X22-STANDARD

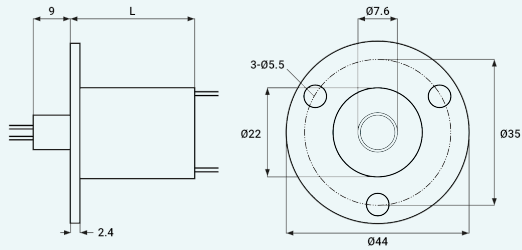


| Model            | No. of Circuits | 2A | 6A | 10A | Length (mm) |
|------------------|-----------------|----|----|-----|-------------|
| PSC-X22-6        | 6               | 6  | -  | -   | 19          |
| PSC-X22-7        | 7               | 7  | -  | -   | 19          |
| PSC-X22-12       | 12              | 12 | -  | -   | 28          |
| PSC-X22-12-2P/2S | 4               | 2  | 2  | -   | 28          |
| PSC-X22-15       | 15              | 15 | -  | -   | 29,5        |
| PSC-X22-18       | 18              | 18 | -  | -   | 33,4        |
| PSC-X22-18-3P    | 3               | -  | -  | 3   | 33,4        |
| PSC-X22-24       | 24              | 24 | -  | -   | 41,2        |
| PSC-X22-24-4P/6S | 10              | 6  | 4  | -   | 41,2        |
| PSC-X22-36       | 36              | 36 | -  | -   | 56,8        |

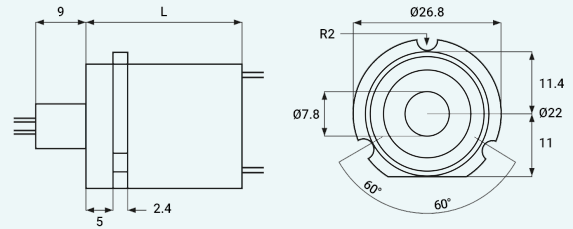
## PSC-X22 SERIES

## Outline Dimensions

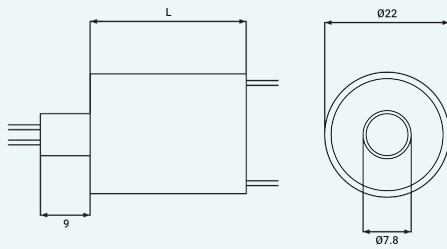
PSC-X22-A



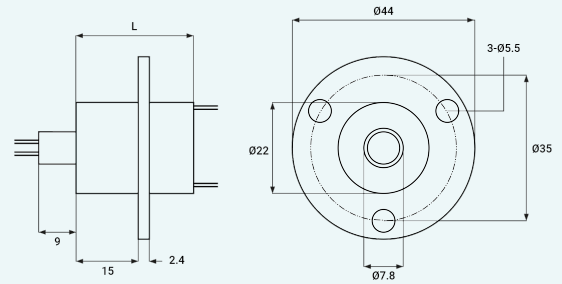
PSC-X22-B



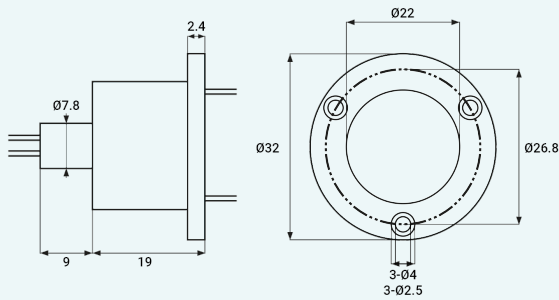
PSC-X22-C



PSC-X22-D



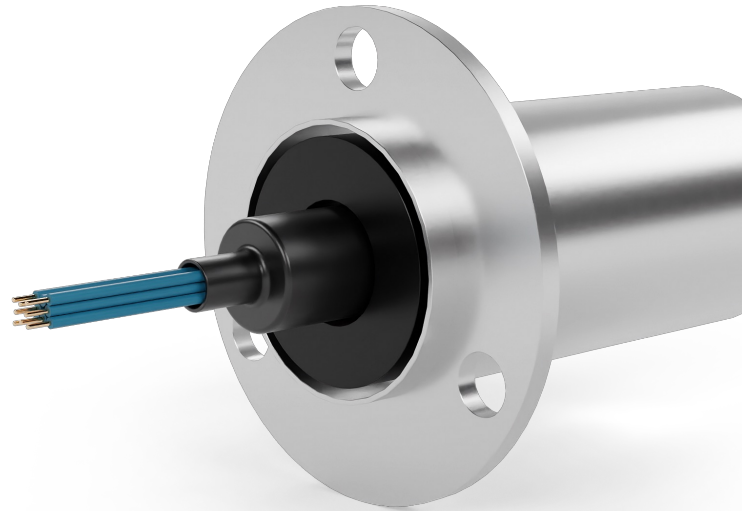
PSC-X22-E



**PSC-X25 SERIES****Compact Standard**

The PSC-X25 series slip rings are designed for flexible, cost-effective, and reliable transmission of electrical power and signals in rotating systems. Their small ring diameter ensures low peripheral speed, reduced dynamic imbalance, and very low wear. Gold-to-gold alloy contacts provide long service life, low electrical noise, and minimal interference—making PSC-X25 especially suitable for critical signals, high-frequency data, and low-current or low-voltage applications.

Available in many standard configurations with up to 56 circuits (2A, 6A, or 10A), the compact size allows easy installation in high-performance, space-limited systems. Coaxial options are also available for advanced signal needs.

**Technical Specification**

| Specification         | PSC-X25  |
|-----------------------|--|
| Rated Voltage         | 240VDC/240VAC  |
| Number of Circuits    | 6-56 circuits, or higher on request                                      |
| Lead Size             | AWG28 or AWG26 for 2A; AWG22 for 6A; AWG16 for 10A                       |
| Lead Material         | Color coded, PTFE insulated, Silver plated copper, FEP insulated (AWG16) |
| Lead Length           | Standard 250mm, easy to modify   |
| Insulation Resistance | 1000MΩ/500VDC  |
| Dielectric Strength   | 500VAC@50Hz, 60s   |
| Electrical Noise      | <0.01Ω   |
| Rated Speed           | 0~300rpm   |
| Working Temperature   | -20°C ~ +80°C  |
| Humidity              | 60%RH or higher  |
| Contact Material      | Precious metal   |
| Housing               | Aluminium  |
| Protection Level      | IP51, on request IP65  |

**Product Features**

- Quick delivery
- Low cost
- Ideal for video & digital signals
- Gold alloy rings & brushes
- High reliability
- Low friction torque
- Smooth rotation
- In compliance with CE and ROHS standards

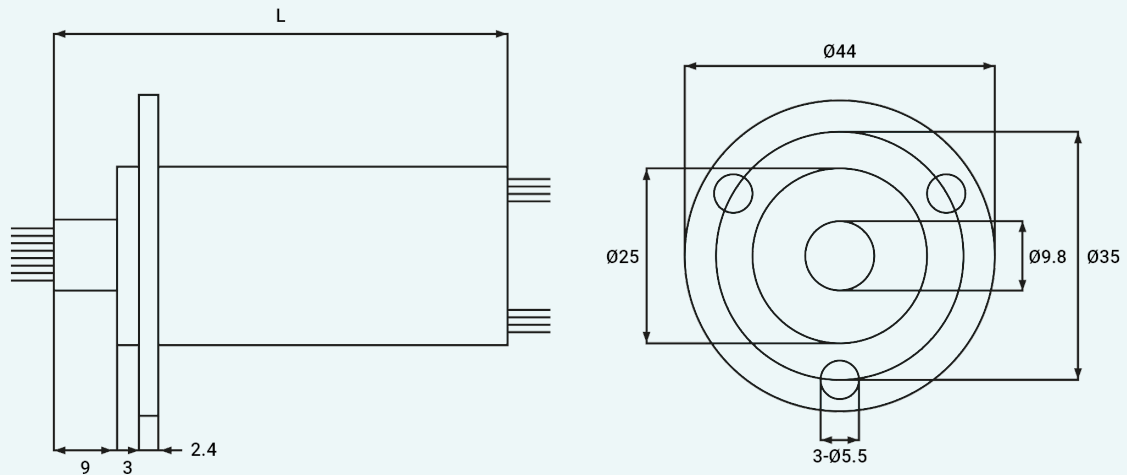
**Applications**

- Video Systems
- Robotics
- Hose & Cable Reels
- Medical / Pharmaceutical
- Wind Turbines (small)
- Packaging

## PSC-X25 SERIES

## Outline Dimensions

## PSC-X25-STANDARD



| Model                     | No. of Circuits | 2A | 6A | 10A | RG178 or RG179 | Length (mm) |
|---------------------------|-----------------|----|----|-----|----------------|-------------|
| PSC-X25-30                | 30              | 30 | -  | -   | -              | 51,7        |
| PSC-X25-30-4P/18S         | 22              | 18 | 4  | -   | -              | 51,7        |
| PSC-X25-30-3P/15S         | 18              | 15 | -  | 3   | -              | 51,7        |
| PSC-X25-36                | 36              | 36 | -  | -   | -              | 59,5        |
| PSC-X25-36-4P/24S         | 28              | 24 | 4  | -   | -              | 59,5        |
| PSC-X25-36-4P/20S/2RG1798 | 26              | 20 | 4  | -   | 2              | 59,5        |
| PSC-X25-46                | 46              | 46 | -  | -   | -              | 72,5        |
| PSC-X25-46-4P/34S         | 38              | 34 | 4  | -   | -              | 72,5        |
| PSC-X25-46-4P/30S/2RG178  | 36              | 30 | 4  | -   | 2              | 72,5        |
| PSC-X25-56                | 56              | 56 | -  | -   | -              | 85,5        |
| PSC-X25-56-4P/44S         | 48              | 44 | 4  | -   | -              | 85,5        |
| PSC-X25-56-4P/40S/2RG178  | 46              | 40 | 4  | -   | 2              | 85,5        |



#### STANDARD TERMINAL SERIES

## Reliable & Maintenance-Free Connectivity

Our Terminal Connection Slip Rings are precision-engineered to deliver seamless, high-current electrical connections, making them ideal replacements for mercury slip rings in the manufacturing sector. These slip rings feature gold-plated rings paired with gold alloy brushes to maximize performance, durability, and reliability in demanding industrial applications.

With a rated voltage of 240VDC/240VA, a dielectric strength of 500VAC at 50Hz for 60 seconds, and an insulation resistance of 1000M $\Omega$  at 500VDC, they ensure safe, efficient, and stable operation. Electrical noise is tightly controlled, limited to  $\leq 10\text{m}\Omega$ , enabling reliable data transmission. Designed to handle speeds from 0 to 400 rpm, they operate efficiently in temperatures from -20°C to +80°C and in humidity levels of 60% RH or above.

Built with durable precious metal contacts and housed in resilient engineering plastic, our slip rings offer an IP51 protection level to guard against environmental factors.

Their advanced fiber brush technology allows for continuous 360° rotation, ensuring smooth and maintenance-free signal transmission without the need for lubrication. Electrical noise remains below 0.01  $\Omega$  for superior signal clarity. With multiple contact points per circuit, these slip rings achieve minimal contact pressure, reducing wear and noise for extended, dependable performance.

**PST-X32 SERIES**

## Terminal Standard

The PST-X32 model is developed initially for the packaging industries and are mostly used by flow pack machines. The slip rings allow high current circuits, combined with signals for sensors, and is suited for high operation speed with a long lifetime. The terminals pins are connected on the slip ring, that allows smooth installation.

PST-X32 model has 2 or 3 high currents circuits and can be combined with two circuits for sensors. The PST-X32 model is also available in an IP65 version suitable to be installed in machines, that needs regular cleaning with water. The PST-X45 model has 6 power circuits and a model with additional 2 circuits for signals.

Their compact size allows installation into small systems thus requiring high performances.



## Technical Specification

| Specification         | PST-X32   |
|-----------------------|---|
| Rated Voltage         | 240VDC/240VAC                                       |
| Number of Circuits    | 2, 3, 4, 5  |
| Connection            | Gold plated pin connection                          |
| Insulation Resistance | 1000MΩ/500VDC                                       |
| Dielectric Strength   | 500VAC@50Hz, 60s                                    |
| Electrical Noise      | <0.01Ω  |
| Rated Speed           | 0~400rpm  |
| Working Temperature   | -20°C to +80°C (option: -40 to +80°C on AL housing) |
| Humidity              | 60%RH or higher                                     |
| Contact Material      | Precious metal                                      |
| Housing               | Engineering plastic                                 |
| Protection Level      | IP51, on request IP65                               |

### Product Features

- Quick delivery
- Low cost
- Ideal for video & digital signals
- Gold alloy rings & brushes
- High reliability
- Low friction torque
- Smooth rotation
- In compliance with CE and ROHS standards

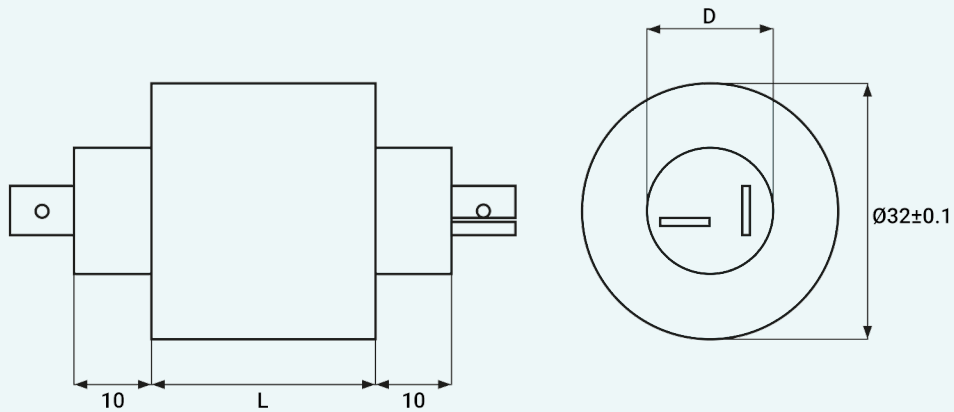
### Applications

- Flowpack
- Wind Turbines
- Packaging

## PST-X32 SERIES

## Outline Dimensions

PST-X32-2

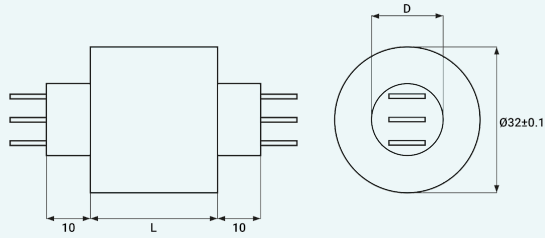


| Model      | Total No. of Circuits | 2A | 5A | 15A | 20A | OD x Length (mm)             | Pin Thickness x Width (mm) |
|------------|-----------------------|----|----|-----|-----|------------------------------|----------------------------|
| PST-X32-2  | 2                     | -  | -  | 2   | -   | $\varnothing 32 \times 28$   | 0,8 x 6,3                  |
| PST-X32-3  | 3                     | -  | -  | 3   | -   | $\varnothing 32 \times 28$   | 0,8 x 6,3                  |
| PST-X32-4  | 4                     | 2  | -  | 2   | -   | $\varnothing 32 \times 28$   | 0,8 x 6,3 / 0,8 x 2,8      |
| PST-X32-3M | 3                     | -  | -  | -   | 3   | $\varnothing 32 \times 44,5$ | 0,8 x 6,3                  |
| PST-X32-5M | 5                     | -  | 3  | -   | 2   | $\varnothing 32 \times 44,5$ | 0,8 x 6,3 / 0,8 x 2,8      |

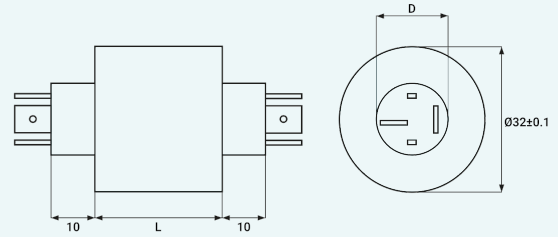
## PST-X32 SERIES

## Outline Dimensions

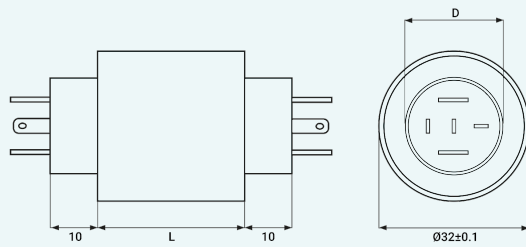
PST-X32-3



PST-X32-4



PST-X32-5



**PST-X45 SERIES**

## Terminal Standard

The PST-X32 model is developed initially for the packaging industries and are mostly used by flow pack machines. The slip rings allow high current circuits, combined with signals for sensors, and is suited for high operation speed with a long lifetime. The terminals pins are connected on the slip ring, that allows smooth installation.

PST-X32 model has 2 or 3 high currents circuits and can be combined with two circuits for sensors. The PST-X32 model is also available in an IP65 version suitable to be installed in machines, that needs regular cleaning with water. The PST-X45 model has 6 power circuits and a model with additional 2 circuits for signals.

Their compact size allows installation into small systems thus requiring high performances.



## Technical Specification

| Specification         | PST-X45   |
|-----------------------|---|
| Rated Voltage         | 240VDC/240VAC                                       |
| Number of Circuits    | 6, 8  |
| Connection            | Gold plated pin connection                          |
| Insulation Resistance | 1000MΩ/500VDC                                       |
| Dielectric Strength   | 500VAC@50Hz, 60s                                    |
| Electrical Noise      | <0.01Ω  |
| Rated Speed           | 0~400rpm  |
| Working Temperature   | -20°C to +80°C (option: -40 to +80°C on AL housing) |
| Humidity              | 60%RH or higher                                     |
| Contact Material      | Precious metal                                      |
| Housing               | Engineering plastic                                 |
| Protection Level      | IP51, on request IP65                               |

### Product Features

- Quick delivery
- Low cost
- Ideal for video & digital signals
- Gold alloy rings & brushes
- High reliability
- Low friction torque
- Smooth rotation
- In compliance with CE and ROHS standards

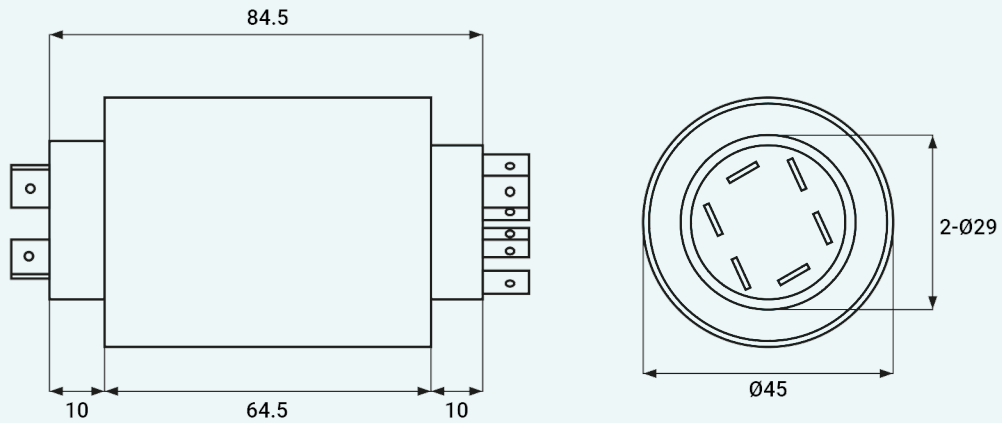
### Applications

- Flowpack
- Wind Turbines
- Packaging

## PST-X45 SERIES

## Outline Dimensions

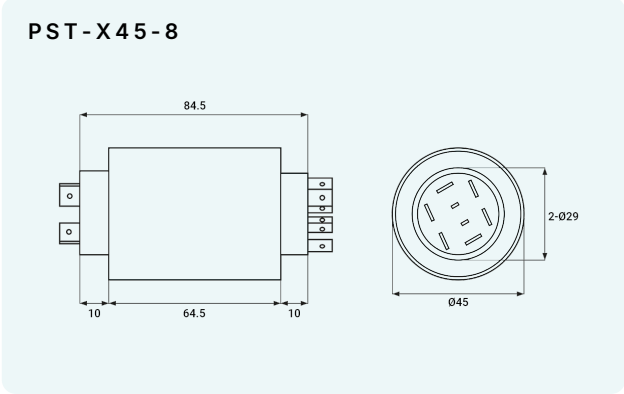
PST-X45-6



| Model     | Total No. of Circuits | 2A | 5A | 15A | 20A | OD x Length (mm) | Pin Thickness x Width (mm) |
|-----------|-----------------------|----|----|-----|-----|------------------|----------------------------|
| PST-X45-6 | 6                     | -  | -  | -   | 6   | Ø45 x 64,5       | 0,8 x 6,3                  |
| PST-X45-8 | 8                     | -  | 2  | -   | 6   | Ø45 x 64,5       | 0,8 x 6,3 / 0,8 x 2,8      |

PST-X45 SERIES

Outline Dimensions





## STANDARD HOLLOW SHAFT SERIES

### Seamless Signal & Data Transmission

Experience seamless signal and data transmission even during full 360° rotation, thanks to our cutting-edge fiber brush technology. Our slip rings require no maintenance or lubricating oil, ensuring hassle-free operation. With low torque and smooth rotation, they deliver reliable performance.

Electrical noise is kept below 0.01  $\Omega$  for pristine signal quality. Featuring multiple contact points in each circuit, they operate with minimal contact pressure, resulting in low noise and wear.

Moreover, we offer extensive customization options for flange, cables, housing, IP-rating, transmission, circuits, and connectors with our standard selection of slip rings. If your needs extend beyond standard modifications, we're prepared to tailor our slip rings precisely to your application requirements.

| Model      | Length (mm) | Max. Circuits | Ampere | Max. Modified Circuits   | ID (mm) | OD (mm) |
|------------|-------------|---------------|--------|--------------------------|---------|---------|
| PSH-X12-54 | 33,4-75,2   | 24            | 5A     | Contact us for more info | ø12     | ø54     |

| Model    | Length (mm) | Max. Circuits | Ampere         | Max. Modified Circuits | ID (mm) | OD (mm) |
|----------|-------------|---------------|----------------|------------------------|---------|---------|
| PSH-X25  | 55-127      | 48            | 2A/10A/15A     | 96                     | ø25     | ø78     |
| PSH-X38  | 54,1-126,1  | 48            | 2A/10A/15A     | 96                     | ø38     | ø99     |
| PSH-X50  | 69,5-219,5  | 72            | 5A/10A/15A/20A | 156                    | ø50     | ø120    |
| PSH-X60  | 77,5-287,5  | 96            | 5A/10A/15A/20A | 216                    | ø60     | ø135    |
| PSH-X70  | 80,8-290,8  | 96            | 5A/10A/15A/20A | 216                    | ø70     | ø155    |
| PSH-X80  | 88,5-298,5  | 96            | 5A/10A/15A/20A | 216                    | ø80     | ø180    |
| PSH-X90  | 88,5-298,5  | 96            | 5A/10A/15A/20A | 216                    | ø90     | ø190    |
| PSH-X100 | 93,5-314    | 80            | 5A/10A/15A/20A | 216                    | ø100    | ø203    |

## STANDARD HOLLOW SHAFT SERIES

## Lead Color Codes

| Standard Color Codes                       |            |            |           |            |               |           |
|--|------------|------------|-----------|------------|---------------|-----------|
| Circuits 1-6<br>Exit A Red Shrink Tube     | 1. Red     | 2. Yellow  | 3. Black  | 4. Blue    | 5. Green      | 6. White  |
| Circuits 7-12<br>Exit B Black Shrink Tube  | 7. Purple  | 8. Gray    | 9. Brown  | 10. Orange | 11. Deep Blue | 12. Khaki |
| Circuits 13-18<br>Exit C Blue Shrink Tube  | 13. Red    | 14. Yellow | 15. Black | 16. Blue   | 17. Green     | 18. White |
| Circuits 19-24<br>Exit D Green Shrink Tube | 19. Purple | 20. Gray   | 21. Brown | 22. Orange | 23. Deep Blue | 24. Khaki |

## Disclaimer

Color can mismatch depending on configuration and cable type. The colors listed in the table above are standard color codes, this means that they can change on different models and housing. Please contact Penlink with your PSH-X model for correct color coding.

**STANDARD HOLLOW SHAFT SERIES**

## Signal and Bus

Our standard slip rings comes with signals for data, video and power transmission. Your transmission requirements are key when picking out the right product. Knowing the transmission will enable us to find the right slip ring for your project.

If you can't find a model with the right transmission, we can always modify the slip ring for you. This may alter the design of the slip ring so always contact us for more information regarding your model and specification.

**Data Circuits**

Our slip ring handle up to 1 GB of data (1000Base-X) and can be equipped with different cable to be used for all known industry standard data, as example, Profinet, Can-bus, Profibus, DMX, 100Base-X or similar type. It's even possible to transfer several independent data channels through one slip ring.

**Video Signals**

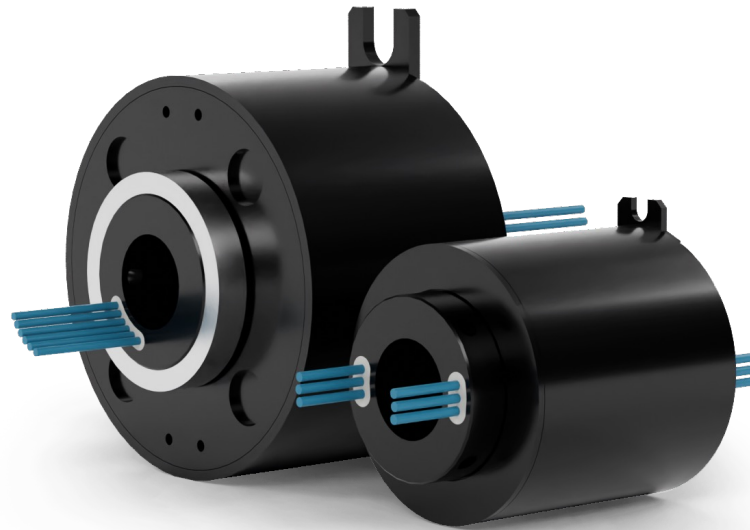
Our slip ring handle both standard and high-definition videos, up to SMPTE 424M/2,97 gb/s with 3G HD-SDI. Combined with our fiber optical joint, the slip ring handle up to 24G-SDI.

## PSH-X12

## Small Hollow Shaft Slip Ring

The rotary electrical slip ring features four lead exits evenly distributed on the rotor side and two on the stator side, facilitating smooth power transmission. With a versatile voltage rating of 240VAC/VDC and a rated current of 5A per ring, it ensures reliable performance.

The leads are AWG22 silver-plated and PTFE insulated, with a standard length of 500mm, offering excellent insulation resistance of  $\geq 500M\Omega/500VDC$  and dielectric strength of 500VAC/50Hz for 60 seconds. Electrical noise is minimized to  $\leq 10m\Omega$ . Its protection level stands at IP51, ensuring adequate safeguarding in various environments.



## Technical Specification

| Specification         | PSH-X12   |
|-----------------------|---|
| Number Of Circuits    | 6-24  |
| Current               | 5A  |
| Cable Size            | AWG22 silver plated, PTFE insulated   |
| Cable length          | Standard 500mm  |
| Dielectric Strength   | 500VAC/50Hz, 60s  |
| Insulation Resistance | $\geq 500M\Omega/500VDC$  |
| Noise                 | $\leq 10m\Omega$  |
| Operation Speed       | 0~400rpm  |
| Temperature           | -20°C to +80°C  |
| Rating Life           | 80 million revolutions (depending on speed and on environmental conditions) |
| Contact               | Precious metal  |
| Protection            | IP51 or higher on request   |

### Product Features

- Quick delivery
- Low cost
- Ideal for video & digital signals
- Gold alloy rings & brushes
- High reliability
- Low friction torque
- Smooth rotation
- In compliance with CE and ROHS standards

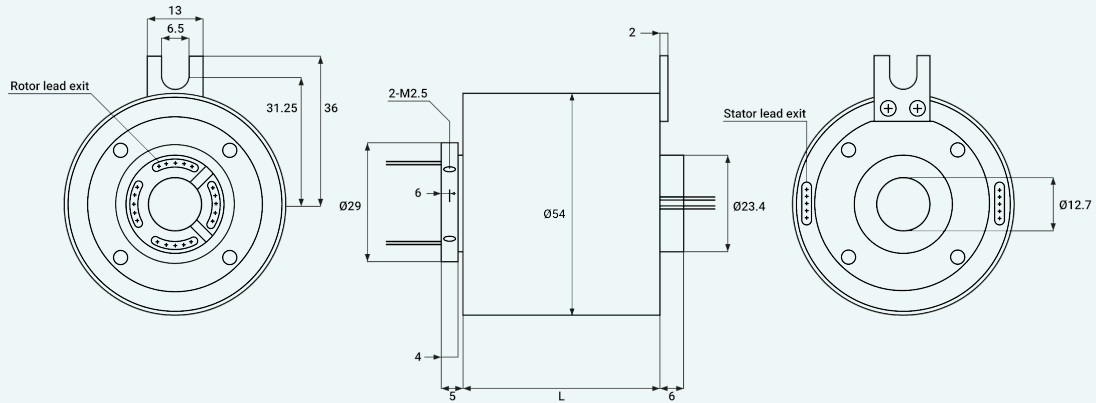
### Applications

- Cable Reels
- Medical Equipment
- Packaging Machines

## PSH-X12 SERIES

## Outline Dimensions

## PSH-X12



| Model      | Length (mm) | Circuits |
|------------|-------------|----------|
| PSH-X12-6  | 33,4        | 6        |
| PSH-X12-12 | 47,3        | 12       |
| PSH-X12-18 | 61,3        | 18       |
| PSH-X12-24 | 75,2        | 24       |

## PSH-X25

## Hollow Shaft Slip Ring

The PSH-X25 series slip rings are engineered for seamless power and signal transmission in rotating applications. They offer reliable performance with high voltage ratings (380VAC for power, 240VAC/VDC for signal) and excellent insulation resistance ( $\geq 1000\text{M}\Omega/500\text{VDC}$  for power,  $\geq 500\text{M}\Omega/500\text{VDC}$  for signal), ensuring robust electrical insulation and minimal signal interference.

The design features precious metal contacts and engineering plastic housing for durability, low torque, and long service life. Standard protection is IP51, with optional upgrades to IP54 or IP65 for demanding environments. The PSH-X25 series is versatile and flexible, making installation easy across a wide range of applications.



## Technical Specification

| Specification         | PSH-X25   |
|-----------------------|---|
| Number Of Circuits    | 6-48  |
| Current               | 10A & 2A  |
| Cable Size            | AWG22 sliver plated, PTFE insulated   |
| Cable length          | Standard 500mm  |
| Dielectric Strength   | 500VAC/50Hz, 60s  |
| Insulation Resistance | $\geq 500\text{M}\Omega/500\text{VDC}$                                      |
| Noise                 | $\leq 10\text{m}\Omega$   |
| Operation Speed       | 0~400rpm  |
| Temperature           | -20°C to +80°C  |
| Rating Life           | 80 million revolutions (depending on speed and on environmental conditions) |
| Contact               | Precious metal  |
| Protection            | IP51 or higher on request   |

### Product Features

- Quick delivery
- Low cost
- Ideal for video & digital signals
- Gold alloy rings & brushes
- High reliability
- Low friction torque
- Smooth rotation
- In compliance with CE and ROHS standards

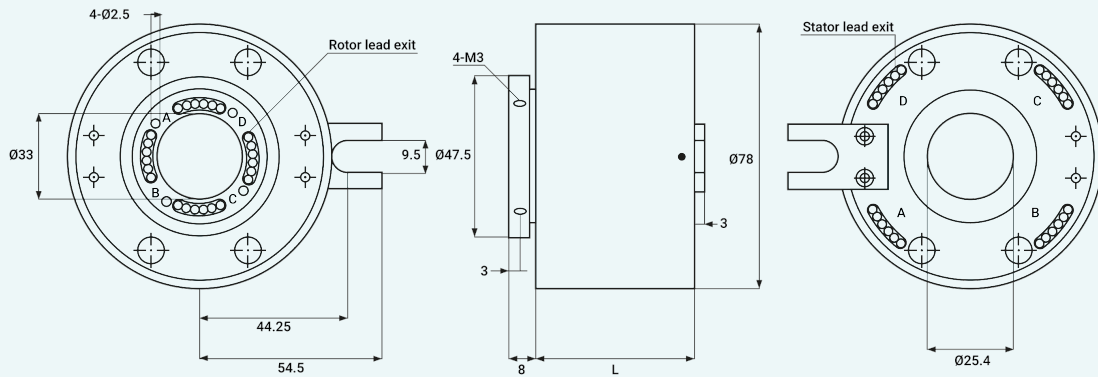
### Applications

- Cable Reels
- Medical Equipment
- Packaging Machines

## PSH-X25 SERIES

## Outline Dimensions

## PSH-X25



| Model           | Length (mm) | 10A/15A | 2A | Total No. of Circuits |
|-----------------|-------------|---------|----|-----------------------|
| PSH-X25-6P      | 55          | 6       | –  | 6                     |
| PSH-X25-12S     | 55          | –       | 12 | 12                    |
| PSH-X25-12P     | 79          | 12      | –  | 12                    |
| PSH-X25-6P/12S  | 79          | 6       | 12 | 18                    |
| PSH-X25-24S     | 79          | –       | 24 | 24                    |
| PSH-X25-18P     | 103         | 18      | –  | 18                    |
| PSH-X25-12P/12S | 103         | 12      | 12 | 24                    |
| PSH-X25-6P/24S  | 103         | 6       | 24 | 30                    |
| PSH-X25-36S     | 103         | –       | 36 | 36                    |
| PSH-X25-24P     | 127         | 24      | –  | 24                    |
| PSH-X25-18P/12S | 127         | 18      | 12 | 30                    |
| PSH-X25-12P/24S | 127         | 12      | 24 | 36                    |
| PSH-X25-6P/36S  | 127         | 6       | 36 | 42                    |
| PSH-X25-48S     | 127         | –       | 48 | 48                    |

**PSH-X38****Hollow Shaft Slip Ring**

The PSH-X38 series slip rings are designed for seamless power and signal transmission in rotating applications. They offer reliable performance with a rated voltage of 380VAC for power and 240VAC/VDC for signal, making them suitable for a wide range of uses. Superior insulation resistance ( $\geq 1000\text{M}\Omega/500\text{VDC}$  for power,  $\geq 500\text{M}\Omega/500\text{VDC}$  for signal) ensures robust electrical insulation and minimal signal interference. Constructed with precious metal contacts and engineering plastic housing, they deliver low torque, long service life, and stable operation.

Standard protection is IP51, with optional upgrades to IP54 or IP65 for demanding environments. The PSH-X38 series combines versatility and flexibility for easy integration into various systems.

**Technical Specification**

| Specification         | PSH-X38   |
|-----------------------|---|
| Number Of Circuits    | 6-48  |
| Current               | 15A, 10A, 2A  |
| Cable Size            | AWG22 silver plated, PTFE insulated   |
| Cable length          | Standard 500mm  |
| Dielectric Strength   | 500VAC/50Hz, 60s  |
| Insulation Resistance | $\geq 500\text{M}\Omega/500\text{VDC}$                                      |
| Noise                 | $\leq 10\text{m}\Omega$   |
| Operation Speed       | 0~400rpm  |
| Temperature           | -20°C to +80°C  |
| Rating Life           | 80 million revolutions (depending on speed and on environmental conditions) |
| Contact               | Precious metal  |
| Protection            | IP51 or higher on request   |

**Product Features**

- Quick delivery
- Low cost
- Ideal for video & digital signals
- Gold alloy rings & brushes
- High reliability
- Low friction torque
- Smooth rotation
- In compliance with CE and ROHS standards

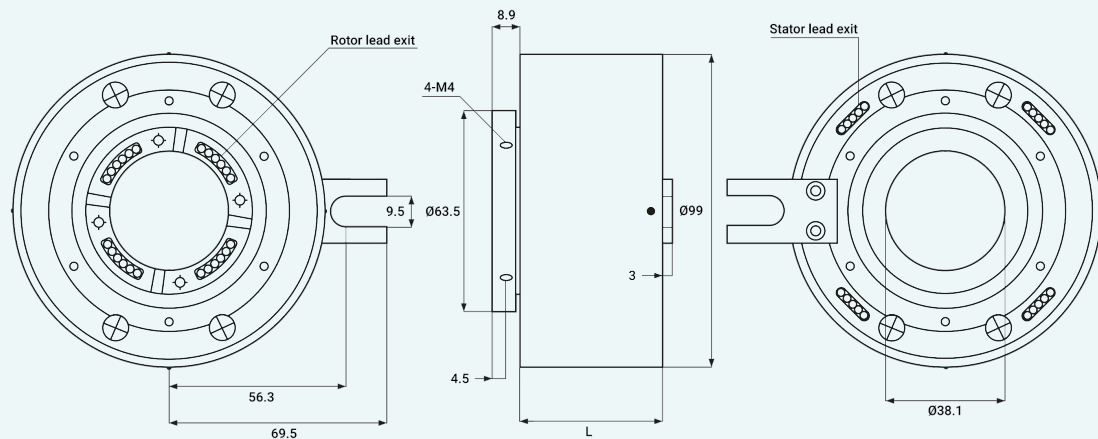
**Applications**

- Cable Reels
- Medical Equipment
- Packaging Machines

## PSH-X38 SERIES

## Outline Dimensions

## PSH-X38

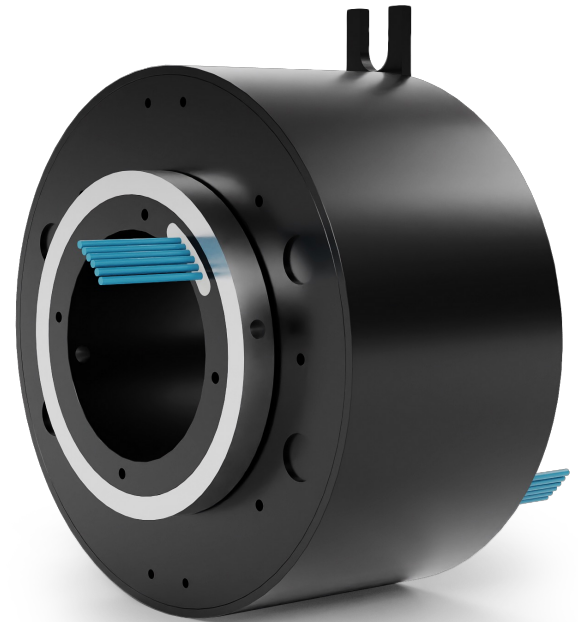


| Model           | Length (mm) | 10A/15A | 2A | Total No. of Circuits |
|-----------------|-------------|---------|----|-----------------------|
| PSH-X38-6P      | 54,1        | 6       | –  | 6                     |
| PSH-X38-12S     | 54,1        | –       | 12 | 12                    |
| PSH-X38-12P     | 78,1        | 12      | –  | 12                    |
| PSH-X38-6P/12S  | 78,1        | 6       | 12 | 18                    |
| PSH-X38-24S     | 78,1        | –       | 24 | 24                    |
| PSH-X38-18P     | 102,1       | 18      | –  | 18                    |
| PSH-X38-12P/12S | 102,1       | 12      | 12 | 24                    |
| PSH-X38-6P/24S  | 102,1       | 6       | 24 | 30                    |
| PSH-X38-36S     | 102,1       | –       | 36 | 36                    |
| PSH-X38-24P     | 126,1       | 24      | –  | 24                    |
| PSH-X38-18P/12S | 126,1       | 18      | 12 | 30                    |
| PSH-X38-12P/24S | 126,1       | 12      | 24 | 36                    |
| PSH-X38-6P/36S  | 126,1       | 6       | 36 | 42                    |
| PSH-X38-48S     | 126,1       | –       | 48 | 48                    |

**PSH-X50****Hollow Shaft Slip Ring**

The PSH-X50 series slip rings are engineered to provide seamless power and signal transmission in rotating machinery. They offer dependable performance, featuring a rated voltage of 380VAC for power circuits and 240VAC/VDC for signal lines, accommodating a wide range of applications. High insulation resistance ( $\geq 1000\text{M}\Omega/500\text{VDC}$  for power and  $\geq 500\text{M}\Omega/500\text{VDC}$  for signal) guarantees strong electrical isolation and minimal signal disruption.

With precious metal contacts and a housing made from engineered plastics, these slip rings deliver low torque, extended durability, and consistent operation. The standard protection rating is IP51, with options to upgrade to IP54 or IP65 for superior environmental resistance. The PSH-X50 series combines versatility and adaptability in both design and installation.

**Technical Specification**

| Specification         | PSH-X50   |
|-----------------------|---|
| Number Of Circuits    | 6-72  |
| Current               | 15A, 10A, 5A  |
| Cable Size            | AWG22 silver plated, PTFE insulated   |
| Cable length          | Standard 500mm  |
| Dielectric Strength   | 500VAC/50Hz, 60s  |
| Insulation Resistance | $\geq 500\text{M}\Omega/500\text{VDC}$                                      |
| Noise                 | $\leq 10\text{m}\Omega$   |
| Operation Speed       | 0~400rpm  |
| Temperature           | -20°C to +80°C  |
| Rating Life           | 80 million revolutions (depending on speed and on environmental conditions) |
| Contact               | Precious metal  |
| Protection            | IP51 or higher on request   |

**Product Features**

- Quick delivery
- Low cost
- Ideal for video & digital signals
- Gold alloy rings & brushes
- High reliability
- Low friction torque
- Smooth rotation
- In compliance with CE and ROHS standards

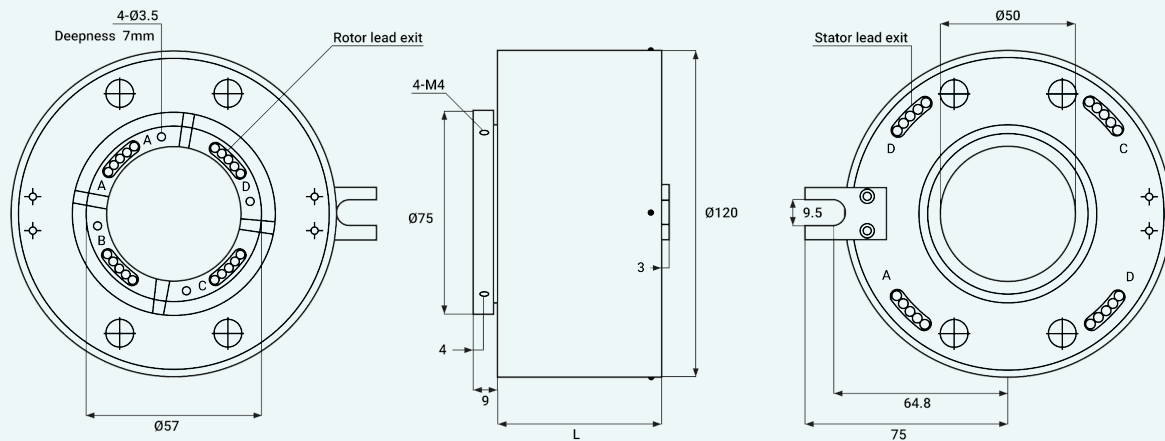
**Applications**

- Cable Reels
- Medical Equipment
- Packaging Machines

## PSH-X50 SERIES

## Outline Dimensions

## PSH-X50



| Model           | Length (mm) | 10A/15A | 2A | Total No. of Circuits |
|-----------------|-------------|---------|----|-----------------------|
| PSH-X50-6P      | 69,5        | 6       | –  | 6                     |
| PSH-X50-12S     | 69,5        | –       | 12 | 12                    |
| PSH-X50-12P     | 99,5        | 12      | –  | 12                    |
| PSH-X50-6P/12S  | 99,5        | 6       | 12 | 18                    |
| PSH-X50-24S     | 99,5        | –       | 24 | 24                    |
| PSH-X50-18P     | 129,5       | 18      | –  | 18                    |
| PSH-X50-12P/12S | 129,5       | 12      | 12 | 24                    |
| PSH-X50-6P/24S  | 129,5       | 6       | 24 | 30                    |
| PSH-X50-36S     | 129,5       | –       | 36 | 36                    |
| PSH-X50-24P     | 159,5       | 24      | –  | 24                    |
| PSH-X50-18P/12S | 159,5       | 18      | 12 | 30                    |
| PSH-X50-12P/24S | 159,5       | 12      | 24 | 36                    |
| PSH-X50-6P/36S  | 159,5       | 6       | 36 | 42                    |
| PSH-X50-48S     | 159,5       | –       | 48 | 48                    |
| PSH-X50-30P     | 189,5       | 30      | –  | 30                    |
| PSH-X50-24P/12S | 189,5       | 24      | 12 | 36                    |
| PSH-X50-18P/24S | 189,5       | 18      | 24 | 42                    |
| PSH-X50-12P/36S | 189,5       | 12      | 36 | 48                    |
| PSH-X50-6P/48S  | 189,5       | 6       | 48 | 54                    |
| PSH-X50-60S     | 189,5       | –       | 60 | 60                    |

*\*More models on next page*

## PSH-X50 SERIES

## Outline Dimensions

| Model           | Length (mm) | 10A/15A | 2A | Total No. of Circuits |
|-----------------|-------------|---------|----|-----------------------|
| PSH-X50-36P     | 219,5       | 36      | –  | 36                    |
| PSH-X50-30P/12S | 219,5       | 30      | 12 | 42                    |
| PSH-X50-24P/24S | 219,5       | 24      | 24 | 48                    |
| PSH-X50-18P/36S | 219,5       | 18      | 36 | 54                    |
| PSH-X50-12P/48S | 219,5       | 12      | 48 | 60                    |
| PSH-X50-6P/60S  | 219,5       | 6       | 60 | 66                    |
| PSH-X50-72S     | 219,5       | –       | 72 | 72                    |

**PSH-X60****Hollow Shaft Slip Ring**

The PSH-X60 series slip rings are engineered to provide smooth power and signal transmission in rotating systems. They deliver dependable performance with a rated voltage of 380VAC for power circuits and 240VAC/VDC for signal circuits, making them adaptable to various applications. High insulation resistance ( $\geq 1000\text{M}\Omega/500\text{VDC}$  for power and  $\geq 500\text{M}\Omega/500\text{VDC}$  for signal) guarantees strong electrical isolation and reduced signal disruption.

Featuring precious metal contacts and a housing made from engineering plastics, these slip rings offer low torque, extended durability, and consistent operation. The standard protection rating is IP51, with optional upgrades to IP54 or IP65 available for improved environmental resilience. The PSH-X60 series provides excellent versatility and ease of integration for diverse design requirements.

**Technical Specification**

| Specification         | PSH-X60   |
|-----------------------|---|
| Number Of Circuits    | 6-96  |
| Current               | 20A, 15A, 10A, 5A   |
| Cable Size            | AWG22 silver plated, PTFE insulated   |
| Cable length          | Standard 500mm  |
| Dielectric Strength   | 500VAC/50Hz, 60s  |
| Insulation Resistance | $\geq 500\text{M}\Omega/500\text{VDC}$                                      |
| Noise                 | $\leq 10\text{m}\Omega$   |
| Operation Speed       | 0~400rpm  |
| Temperature           | -20°C to +80°C  |
| Rating Life           | 80 million revolutions (depending on speed and on environmental conditions) |
| Contact               | Precious metal  |
| Protection            | IP51 or higher on request   |

**Product Features**

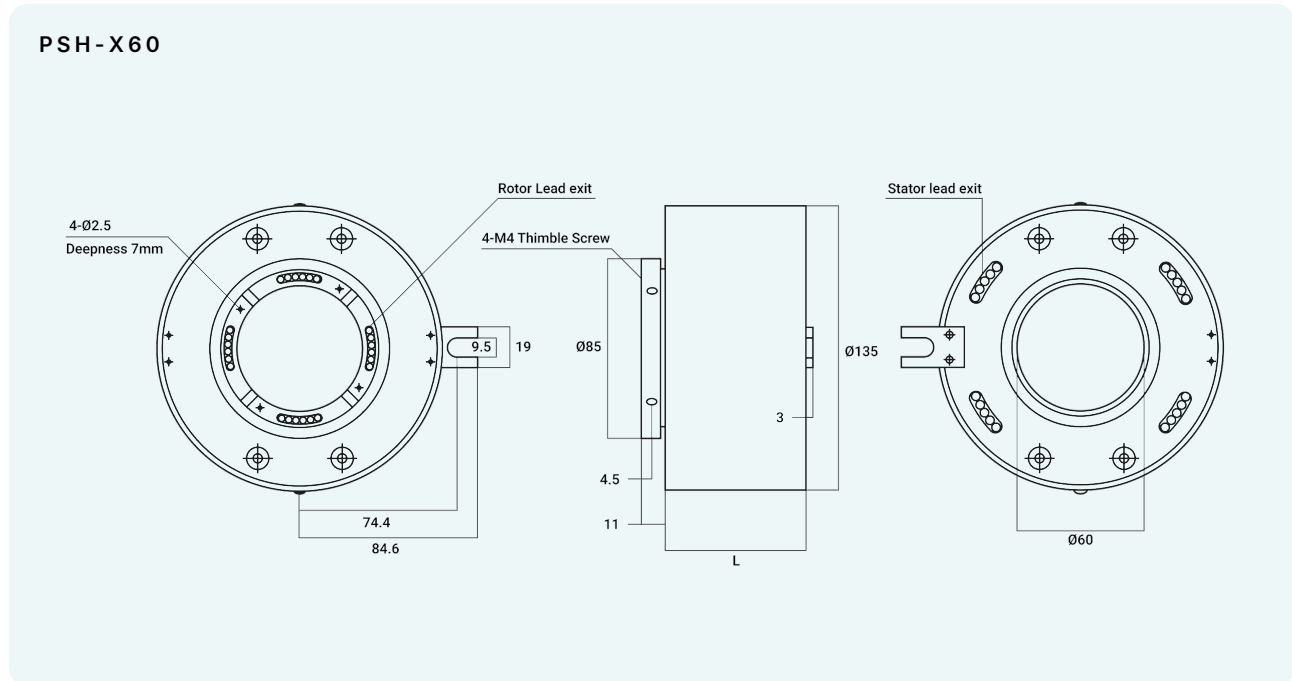
- Quick delivery
- Low cost
- Ideal for video & digital signals
- Gold alloy rings & brushes
- High reliability
- Low friction torque
- Smooth rotation
- In compliance with CE and ROHS standards

**Applications**

- Cable Reels
- Medical Equipment
- Packaging Machines

## PSH-X60 SERIES

## Outline Dimensions



| Model           | Length (mm) | 10A/15A | 2A | Total No. of Circuits |
|-----------------|-------------|---------|----|-----------------------|
| PSH-X60-6P      | 77,5        | 6       | –  | 6                     |
| PSH-X60-12S     | 77,5        | –       | 12 | 12                    |
| PSH-X60-12P     | 107,5       | 12      | –  | 12                    |
| PSH-X60-6P/12S  | 107,5       | 6       | 12 | 18                    |
| PSH-X60-24S     | 107,5       | –       | 24 | 24                    |
| PSH-X60-18P     | 137,5       | 18      | –  | 18                    |
| PSH-X60-12P/12S | 137,5       | 12      | 12 | 24                    |
| PSH-X60-6P/24S  | 137,5       | 6       | 24 | 30                    |
| PSH-X60-36S     | 137,5       | –       | 36 | 36                    |
| PSH-X60-24P     | 167,5       | 24      | –  | 24                    |
| PSH-X60-18P/12S | 167,5       | 18      | 12 | 30                    |
| PSH-X60-12P/24S | 167,5       | 12      | 24 | 36                    |
| PSH-X60-6P/36S  | 167,5       | 6       | 36 | 42                    |
| PSH-X60-48S     | 167,5       | –       | 48 | 48                    |
| PSH-X60-30P     | 197,5       | 30      | –  | 30                    |
| PSH-X60-24P/12S | 197,5       | 24      | 12 | 36                    |
| PSH-X60-18P/24S | 197,5       | 18      | 24 | 42                    |
| PSH-X60-12P/36S | 197,5       | 12      | 36 | 48                    |
| PSH-X60-6P/48S  | 197,5       | 6       | 48 | 54                    |
| PSH-X60-60S     | 197,5       | –       | 60 | 60                    |

*\*More models on next page*

## PSH-X60 SERIES

## Outline Dimensions

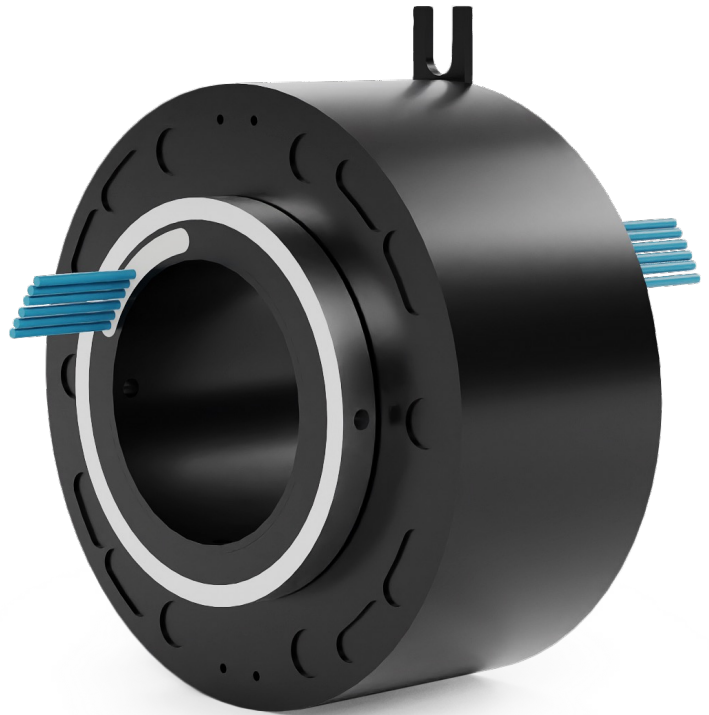
| Model           | Length (mm) | 10A/15A | 2A | Total No. of Circuits |
|-----------------|-------------|---------|----|-----------------------|
| PSH-X60-36P     | 227,5       | 36      | –  | 36                    |
| PSH-X60-30P/12S | 227,5       | 30      | 12 | 42                    |
| PSH-X60-24P/24S | 227,5       | 24      | 24 | 48                    |
| PSH-X60-18P/36S | 227,5       | 18      | 36 | 54                    |
| PSH-X60-12P/48S | 227,5       | 12      | 48 | 60                    |
| PSH-X60-6P/60S  | 227,5       | 6       | 60 | 66                    |
| PSH-X60-72S     | 227,5       | –       | 72 | 72                    |
| PSH-X60-42P     | 257,5       | 42      | –  | 42                    |
| PSH-X60-36P/12S | 257,5       | 36      | 12 | 48                    |
| PSH-X60-30P/24S | 257,5       | 30      | 24 | 54                    |
| PSH-X60-24P/36S | 257,5       | 24      | 36 | 60                    |
| PSH-X60-18P/48S | 257,5       | 18      | 48 | 66                    |
| PSH-X60-12P/60S | 257,5       | 12      | 60 | 72                    |
| PSH-X60-6P/72S  | 257,5       | 6       | 72 | 78                    |
| PSH-X60-84S     | 257,5       | –       | 84 | 84                    |
| PSH-X60-48P     | 287,5       | 48      | –  | 48                    |
| PSH-X60-42P/12S | 287,5       | 42      | 12 | 54                    |
| PSH-X60-36P/24S | 287,5       | 36      | 24 | 60                    |
| PSH-X60-30P/36S | 287,5       | 30      | 36 | 66                    |
| PSH-X60-24P/48S | 287,5       | 24      | 48 | 72                    |
| PSH-X60-18P/60S | 287,5       | 18      | 60 | 78                    |
| PSH-X60-12P/72S | 287,5       | 12      | 72 | 84                    |
| PSH-X60-6P/84S  | 287,5       | 6       | 84 | 90                    |
| PSH-X60-96S     | 287,5       | –       | 96 | 96                    |

## PSH-X70

## Hollow Shaft Slip Ring

The PSH-X70 series slip rings are engineered to provide seamless transmission of power and signals in rotary applications. These devices support a rated voltage of 380VAC for power circuits and 240VAC/VDC for signal circuits, accommodating a wide range of operational requirements. They feature high insulation resistance values, with  $\geq 1000M\Omega$  at 500VDC for power lines and  $\geq 500M\Omega$  at 500VDC for signal lines, ensuring effective electrical isolation and minimizing signal degradation. The construction incorporates precision precious metal contacts and a housing made of advanced engineering plastics, resulting in reduced torque, enhanced durability, and consistent operational stability.

The standard ingress protection rating is IP51, with options to upgrade to IP54 or IP65 to meet more stringent environmental conditions.



## Technical Specification

| Specification         | PSH-X70   |
|-----------------------|---|
| Number Of Circuits    | 6-96  |
| Current               | 20A, 15A, 10A, 5A   |
| Cable Size            | AWG22 silver plated, PTFE insulated   |
| Cable length          | Standard 500mm  |
| Dielectric Strength   | 500VAC/50Hz, 60s  |
| Insulation Resistance | $\geq 500M\Omega/500VDC$  |
| Noise                 | $\leq 10m\Omega$  |
| Operation Speed       | 0~400rpm  |
| Temperature           | -20°C to +80°C  |
| Rating Life           | 80 million revolutions (depending on speed and on environmental conditions) |
| Contact               | Precious metal  |
| Protection            | IP51 or higher on request   |

## Product Features

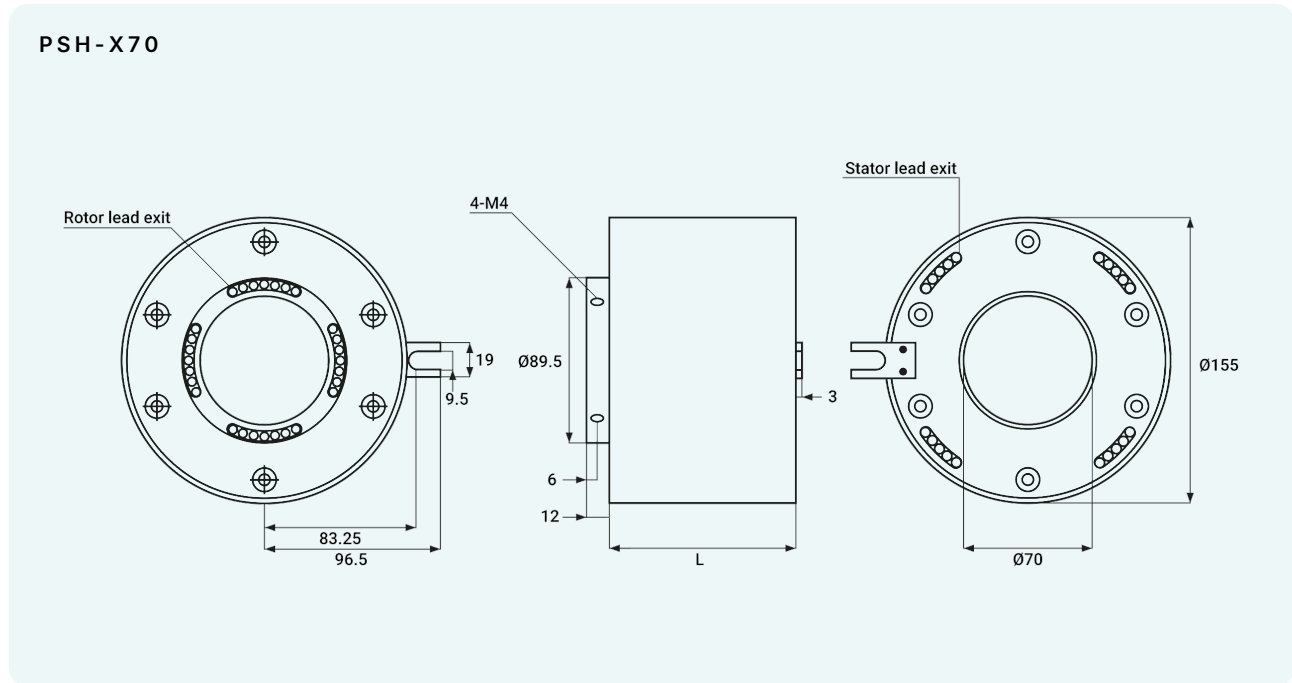
- Quick delivery
- Low cost
- Ideal for video & digital signals
- Gold alloy rings & brushes
- High reliability
- Low friction torque
- Smooth rotation
- In compliance with CE and ROHS standards

## Applications

- Cable Reels
- Medical Equipment
- Packaging Machines

## PSH-X70 SERIES

## Outline Dimensions



| Model           | Length (mm) | 10A/15A | 2A | Total No. of Circuits |
|-----------------|-------------|---------|----|-----------------------|
| PSH-X70-6P      | 80,8        | 6       | –  | 6                     |
| PSH-X70-12S     | 80,8        | –       | 12 | 12                    |
| PSH-X70-12P     | 110,8       | 12      | –  | 12                    |
| PSH-X70-6P/12S  | 110,8       | 6       | 12 | 18                    |
| PSH-X70-24S     | 110,8       | –       | 24 | 24                    |
| PSH-X70-18P     | 140,8       | 18      | –  | 18                    |
| PSH-X70-12P/12S | 140,8       | 12      | 12 | 24                    |
| PSH-X70-6P/24S  | 140,8       | 6       | 24 | 30                    |
| PSH-X70-36S     | 140,8       | –       | 36 | 36                    |
| PSH-X70-24P     | 170,8       | 24      | –  | 24                    |
| PSH-X70-18P/12S | 170,8       | 18      | 12 | 30                    |
| PSH-X70-12P/24S | 170,8       | 12      | 24 | 36                    |
| PSH-X70-6P/36S  | 170,8       | 6       | 36 | 42                    |
| PSH-X70-48S     | 170,8       | –       | 48 | 48                    |
| PSH-X70-30P     | 200,8       | 30      | –  | 30                    |
| PSH-X70-24P/12S | 200,8       | 24      | 12 | 36                    |
| PSH-X70-18P/24S | 200,8       | 18      | 24 | 42                    |
| PSH-X70-12P/36S | 200,8       | 12      | 36 | 48                    |
| PSH-X70-6P/48S  | 200,8       | 6       | 48 | 54                    |
| PSH-X70-60S     | 200,8       | –       | 60 | 60                    |

*\*More models on next page*

## PSH-X70 SERIES

## Outline Dimensions

| Model           | Length (mm) | 10A/15A | 2A | Total No. of Circuits |
|-----------------|-------------|---------|----|-----------------------|
| PSH-X70-36P     | 230,8       | 36      | –  | 36                    |
| PSH-X70-30P/12S | 230,8       | 30      | 12 | 42                    |
| PSH-X70-24P/24S | 230,8       | 24      | 24 | 48                    |
| PSH-X70-18P/36S | 230,8       | 18      | 36 | 54                    |
| PSH-X70-12P/48S | 230,8       | 12      | 48 | 60                    |
| PSH-X70-6P/60S  | 230,8       | 6       | 60 | 66                    |
| PSH-X70-72S     | 230,8       | –       | 72 | 72                    |
| PSH-X70-42P     | 260,8       | 42      | –  | 42                    |
| PSH-X70-36P/12S | 260,8       | 36      | 12 | 48                    |
| PSH-X70-30P/24S | 260,8       | 30      | 24 | 54                    |
| PSH-X70-24P/36S | 260,8       | 24      | 36 | 60                    |
| PSH-X70-18P/48S | 260,8       | 18      | 48 | 66                    |
| PSH-X70-12P/60S | 260,8       | 12      | 60 | 72                    |
| PSH-X70-6P/72S  | 260,8       | 6       | 72 | 78                    |
| PSH-X70-84S     | 260,8       | –       | 84 | 84                    |
| PSH-X70-48P     | 290,8       | 48      | –  | 48                    |
| PSH-X70-42P/12S | 290,8       | 42      | 12 | 54                    |
| PSH-X70-36P/24S | 290,8       | 36      | 24 | 60                    |
| PSH-X70-30P/36S | 290,8       | 30      | 36 | 66                    |
| PSH-X70-24P/48S | 290,8       | 24      | 48 | 72                    |
| PSH-X70-18P/60S | 290,8       | 18      | 60 | 78                    |
| PSH-X70-12P/72S | 290,8       | 12      | 72 | 84                    |
| PSH-X70-6P/84S  | 290,8       | 6       | 84 | 90                    |
| PSH-X70-96S     | 290,8       | –       | 96 | 96                    |

**PSH-X80****Hollow Shaft Slip Ring**

The PSH-X80 series slip rings ensure continuous power and signal transmission in rotary systems, supporting 380VAC for power and 240VAC/VDC for signals. They feature high insulation resistance ( $\geq 1000\text{M}\Omega/500\text{VDC}$  for power,  $\geq 500\text{M}\Omega/500\text{VDC}$  for signals) for excellent electrical isolation.

With precision precious metal contacts and a durable engineering plastic housing, they offer low torque, long lifespan, and reliable performance. Standard protection is IP51, with optional IP54 or IP65. The PSH-X80 series provides versatile integration for advanced electromechanical applications. These slip rings are designed to meet demanding operational requirements, ensuring minimal maintenance and maximum efficiency. Their robust construction makes them ideal for a wide range of industrial environments.

**Technical Specification**

| Specification         | PSH-X80   |
|-----------------------|---|
| Number Of Circuits    | 6-96  |
| Current               | 20A, 15A, 10A, 5A   |
| Cable Size            | AWG22 sliver plated, PTFE insulated   |
| Cable length          | Standard 500mm  |
| Dielectric Strength   | 500VAC/50Hz, 60s  |
| Insulation Resistance | $\geq 500\text{M}\Omega/500\text{VDC}$                                      |
| Noise                 | $\leq 10\text{m}\Omega$   |
| Operation Speed       | 0~400rpm  |
| Temperature           | -20°C to +80°C  |
| Rating Life           | 80 million revolutions (depending on speed and on environmental conditions) |
| Contact               | Precious metal  |
| Protection            | IP51 or higher on request   |

**Product Features**

- Quick delivery
- Low cost
- Ideal for video & digital signals
- Gold alloy rings & brushes
- High reliability
- Low friction torque
- Smooth rotation
- In compliance with CE and ROHS standards

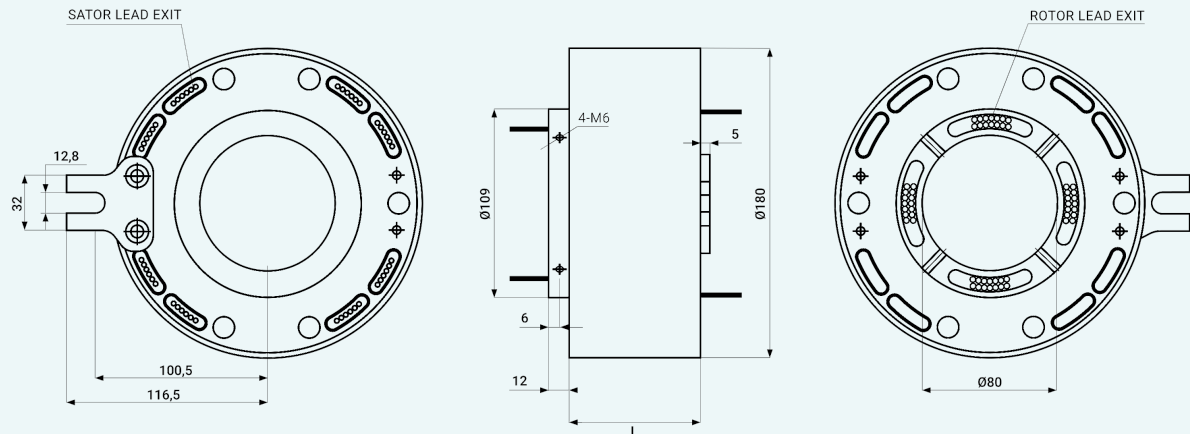
**Applications**

- Cable Reels
- Medical Equipment
- Packaging Machines

## PSH-X80 SERIES

## Outline Dimensions

## PSH-X80



| Model               | Length (mm) | 10A/15A | 2A | Total No. of Circuits |
|---------------------|-------------|---------|----|-----------------------|
| PSH-X80-180-6P      | 88,5        | 6       | -  | 6                     |
| PSH-X80-180-12S     | 88,5        | -       | 12 | 12                    |
| PSH-X80-180-12P     | 118,5       | 12      | -  | 12                    |
| PSH-X80-180-6P/12S  | 118,5       | 6       | 12 | 18                    |
| PSH-X80-180-24S     | 118,5       | -       | 24 | 24                    |
| PSH-X80-180-18P     | 148,5       | 18      | -  | 18                    |
| PSH-X80-180-12P/12S | 148,5       | 12      | 12 | 24                    |
| PSH-X80-180-6P/24S  | 148,5       | 6       | 24 | 30                    |
| PSH-X80-180-36S     | 148,5       | -       | 36 | 36                    |
| PSH-X80-180-24P     | 178,5       | 24      | -  | 24                    |
| PSH-X80-180-18P/12S | 178,5       | 18      | 12 | 30                    |
| PSH-X80-180-12P/24S | 178,5       | 12      | 24 | 36                    |
| PSH-X80-180-6P/36S  | 178,5       | 6       | 36 | 42                    |
| PSH-X80-180-48S     | 178,5       | -       | 48 | 48                    |
| PSH-X80-180-30P     | 208,5       | 30      | -  | 30                    |
| PSH-X80-180-24P/12S | 208,5       | 24      | 12 | 36                    |
| PSH-X80-180-18P/24S | 208,5       | 18      | 24 | 42                    |
| PSH-X80-180-12P/36S | 208,5       | 12      | 36 | 48                    |
| PSH-X80-180-6P/48S  | 208,5       | 6       | 48 | 54                    |
| PSH-X80-180-60S     | 200,8       | -       | 60 | 60                    |

*\*More models on next page*

## PSH-X80 SERIES

## Outline Dimensions

| Model               | Length (mm) | 10A/15A | 2A | Total No. of Circuits |
|---------------------|-------------|---------|----|-----------------------|
| PSH-X80-180-36P     | 238,5       | 36      | –  | 36                    |
| PSH-X80-180-30P/12S | 238,5       | 30      | 12 | 42                    |
| PSH-X80-180-24P/24S | 238,5       | 24      | 24 | 48                    |
| PSH-X80-180-18P/36S | 238,5       | 18      | 36 | 54                    |
| PSH-X80-180-12P/48S | 238,5       | 12      | 48 | 60                    |
| PSH-X80-180-6P/60S  | 238,5       | 6       | 60 | 66                    |
| PSH-X80-180-72S     | 238,5       | –       | 72 | 72                    |
| PSH-X80-180-42P     | 268,5       | 42      | –  | 42                    |
| PSH-X80-180-36P/12S | 268,5       | 36      | 12 | 48                    |
| PSH-X80-180-30P/24S | 268,5       | 30      | 24 | 54                    |
| PSH-X80-180-24P/36S | 268,5       | 24      | 36 | 60                    |
| PSH-X80-180-18P/48S | 268,5       | 18      | 48 | 66                    |
| PSH-X80-180-12P/60S | 268,5       | 12      | 60 | 72                    |
| PSH-X80-180-6P/72S  | 268,5       | 6       | 72 | 78                    |
| PSH-X80-180-84S     | 268,5       | –       | 84 | 84                    |
| PSH-X80-180-48P     | 298,5       | 48      | –  | 48                    |
| PSH-X80-180-42P/12S | 298,5       | 42      | 12 | 54                    |
| PSH-X80-180-36P/24S | 298,5       | 36      | 24 | 60                    |
| PSH-X80-180-30P/36S | 298,5       | 30      | 36 | 66                    |
| PSH-X80-180-24P/48S | 298,5       | 24      | 48 | 72                    |
| PSH-X80-180-18P/60S | 298,5       | 18      | 60 | 78                    |
| PSH-X80-180-12P/72S | 298,5       | 12      | 72 | 84                    |
| PSH-X80-180-6P/84S  | 298,5       | 6       | 84 | 90                    |
| PSH-X80-180-96S     | 298,5       | –       | 96 | 96                    |

**PSH-X90****Hollow Shaft Slip Ring**

The PSH-X90 series slip rings are designed for efficient, uninterrupted transmission of electrical power and signals in rotary systems. They support voltages up to 380VAC for power and 240VAC/VDC for signals, suitable for various industrial uses. With high insulation resistance ( $\geq 1000\text{M}\Omega$  for power and  $\geq 500\text{M}\Omega$  for signals at 500VDC), they ensure excellent dielectric performance and minimal cross-talk.

Featuring precious metal contacts and a durable engineering plastic housing, these slip rings offer low friction torque, long mechanical life, and stable operation. Standard ingress protection is IP51, with options to upgrade to IP54 or IP65 for better dust and moisture resistance. The PSH-X90 series also offers flexible mechanical and electrical integration to fit diverse design needs.

**Technical Specification**

| Specification         | PSH-X90   |
|-----------------------|---|
| Number Of Circuits    | 6-96  |
| Current               | 20A, 15A, 10A, 5A   |
| Cable Size            | AWG22 sliver plated, PTFE insulated   |
| Cable length          | Standard 500mm  |
| Dielectric Strength   | 500VAC/50Hz, 60s  |
| Insulation Resistance | $\geq 500\text{M}\Omega/500\text{VDC}$                                      |
| Noise                 | $\leq 10\text{m}\Omega$   |
| Operation Speed       | 0~400rpm  |
| Temperature           | -20°C to +80°C  |
| Rating Life           | 80 million revolutions (depending on speed and on environmental conditions) |
| Contact               | Precious metal  |
| Protection            | IP51 or higher on request   |

**Product Features**

- Quick delivery
- Low cost
- Ideal for video & digital signals
- Gold alloy rings & brushes
- High reliability
- Low friction torque
- Smooth rotation
- In compliance with CE and ROHS standards

**Applications**

- Cable Reels
- Medical Equipment
- Packaging Machines

## PSH-X80 SERIES

## Outline Dimensions

## PSH-X90

Please contact us if you want an drawing of PSH-X90

| Model           | Length (mm) | 10A/15A | 2A | Total No. of Circuits |
|-----------------|-------------|---------|----|-----------------------|
| PSH-X90-6P      | 88,5        | 6       | –  | 6                     |
| PSH-X90-12S     | 88,5        | –       | 12 | 12                    |
| PSH-X90-12P     | 118,5       | 12      | –  | 12                    |
| PSH-X90-6P/12S  | 118,5       | 6       | 12 | 18                    |
| PSH-X90-24S     | 118,5       | –       | 24 | 24                    |
| PSH-X90-18P     | 148,5       | 18      | –  | 18                    |
| PSH-X90-12P/12S | 148,5       | 12      | 12 | 24                    |
| PSH-X90-6P/24S  | 148,5       | 6       | 24 | 30                    |
| PSH-X90-36S     | 148,5       | –       | 36 | 36                    |
| PSH-X90-24P     | 178,5       | 24      | –  | 24                    |
| PSH-X90-18P/12S | 178,5       | 18      | 12 | 30                    |
| PSH-X90-12P/24S | 178,5       | 12      | 24 | 36                    |
| PSH-X90-6P/36S  | 178,5       | 6       | 36 | 42                    |
| PSH-X90-48S     | 178,5       | –       | 48 | 48                    |
| PSH-X90-30P     | 208,5       | 30      | –  | 30                    |
| PSH-X90-24P/12S | 208,5       | 24      | 12 | 36                    |
| PSH-X90-18P/24S | 208,5       | 18      | 24 | 42                    |
| PSH-X90-12P/36S | 208,5       | 12      | 36 | 48                    |
| PSH-X90-6P/48S  | 208,5       | 6       | 48 | 54                    |
| PSH-X90-60S     | 200,8       | –       | 60 | 60                    |
| PSH-X90-36P     | 238,5       | 36      | –  | 36                    |
| PSH-X90-30P/12S | 238,5       | 30      | 12 | 42                    |
| PSH-X90-24P/24S | 238,5       | 24      | 24 | 48                    |
| PSH-X90-18P/36S | 238,5       | 18      | 36 | 54                    |
| PSH-X90-12P/48S | 238,5       | 12      | 48 | 60                    |
| PSH-X90-6P/60S  | 238,5       | 6       | 60 | 66                    |

*\*More models on next page*

## PSH-X80 SERIES

## Outline Dimensions

| Model           | Length (mm) | 10A/15A | 2A | Total No. of Circuits |
|-----------------|-------------|---------|----|-----------------------|
| PSH-X90-72S     | 238,5       | –       | 72 | 72                    |
| PSH-X90-42P     | 268,5       | 42      | –  | 42                    |
| PSH-X90-36P/12S | 268,5       | 36      | 12 | 48                    |
| PSH-X90-30P/24S | 268,5       | 30      | 24 | 54                    |
| PSH-X90-24P/36S | 268,5       | 24      | 36 | 60                    |
| PSH-X90-18P/48S | 268,5       | 18      | 48 | 66                    |
| PSH-X90-12P/60S | 268,5       | 12      | 60 | 72                    |
| PSH-X90-6P/72S  | 268,5       | 6       | 72 | 78                    |
| PSH-X90-84S     | 268,5       | –       | 84 | 84                    |
| PSH-X90-48P     | 298,5       | 48      | –  | 48                    |
| PSH-X90-42P/12S | 298,5       | 42      | 12 | 54                    |
| PSH-X90-36P/24S | 298,5       | 36      | 24 | 60                    |
| PSH-X90-30P/36S | 298,5       | 30      | 36 | 66                    |
| PSH-X90-24P/48S | 298,5       | 24      | 48 | 72                    |
| PSH-X90-18P/60S | 298,5       | 18      | 60 | 78                    |
| PSH-X90-12P/72S | 298,5       | 12      | 72 | 84                    |
| PSH-X90-6P/84S  | 298,5       | 6       | 84 | 90                    |
| PSH-X90-96S     | 298,5       | –       | 96 | 96                    |

**PSH-X100****Hollow Shaft Slip Ring**

The PSH-X100 series slip rings are designed to ensure smooth power and signal transmission in rotating systems. They deliver dependable performance with a rated voltage of 380VAC for power and 240VAC/VDC for signal, making them suitable for diverse applications. High insulation resistance ( $\geq 1000\text{M}\Omega/500\text{VDC}$  for power and  $\geq 500\text{M}\Omega/500\text{VDC}$  for signal) ensures excellent electrical isolation and minimal signal interference. Featuring precious metal contacts and a durable engineering plastic housing, these slip rings provide low torque, extended service life, and consistent operation.

The standard protection rating is IP51, with options to upgrade to IP54 or IP65 for improved environmental resistance. The PSH-X100 series offers adaptability and flexibility to meet various design and installation requirements.

**Technical Specification**

| Specification         | PSH-X100  |
|-----------------------|---|
| Number Of Circuits    | 6-80  |
| Current               | 20A, 15A, 10A, 5A   |
| Cable Size            | AWG22 sliver plated, PTFE insulated   |
| Cable length          | Standard 500mm  |
| Dielectric Strength   | 500VAC/50Hz, 60s  |
| Insulation Resistance | $\geq 500\text{M}\Omega/500\text{VDC}$                                      |
| Noise                 | $\leq 10\text{m}\Omega$   |
| Operation Speed       | 0~400rpm  |
| Temperature           | -20°C to +80°C  |
| Rating Life           | 80 million revolutions (depending on speed and on environmental conditions) |
| Contact               | Precious metal  |
| Protection            | IP51 or higher on request   |

**Product Features**

- Quick delivery
- Low cost
- Ideal for video & digital signals
- Gold alloy rings & brushes
- High reliability
- Low friction torque
- Smooth rotation
- In compliance with CE and ROHS standards

**Applications**

- Cable Reels
- Medical Equipment
- Packaging Machines

## PSH-X100 SERIES

## Outline Dimensions

## PSH-X100

Please contact us if you want an drawing of PSH-X100

| Model            | Length (mm) | 10A/15A | 2A | Total No. of Circuits |
|------------------|-------------|---------|----|-----------------------|
| PSH-X100-6P      | 93,5        | 6       | –  | 6                     |
| PSH-X100-10S     | 93,5        | –       | 10 | 10                    |
| PSH-X100-12P     | 125         | 12      | –  | 12                    |
| PSH-X100-6P/10S  | 125         | 6       | 10 | 16                    |
| PSH-X100-20S     | 125         | –       | 20 | 20                    |
| PSH-X100-18P     | 156,5       | 18      | –  | 18                    |
| PSH-X100-12P/10S | 156,5       | 12      | 10 | 22                    |
| PSH-X100-6P/20S  | 156,5       | 6       | 20 | 26                    |
| PSH-X100-30S     | 156,6       | –       | 30 | 30                    |
| PSH-X100-24P     | 188         | 24      | –  | 24                    |
| PSH-X100-18P/10S | 188         | 18      | 10 | 28                    |
| PSH-X100-12P/20S | 188         | 12      | 20 | 32                    |
| PSH-X100-6P/30S  | 188         | 6       | 30 | 36                    |
| PSH-X100-48S     | 188         | –       | 40 | 40                    |
| PSH-X100-30P     | 219,5       | 30      | –  | 30                    |
| PSH-X100-24P/10S | 219,5       | 24      | 10 | 34                    |
| PSH-X100-18P/20S | 219,5       | 18      | 20 | 38                    |
| PSH-X100-12P/30S | 219,5       | 12      | 30 | 42                    |
| PSH-X100-6P/40S  | 219,5       | 6       | 40 | 46                    |
| PSH-X100-50S     | 219,5       | –       | 50 | 50                    |
| PSH-X100-36P     | 251         | 36      | –  | 36                    |
| PSH-X100-30P/10S | 251         | 30      | 10 | 40                    |
| PSH-X100-24P/20S | 251         | 24      | 20 | 44                    |
| PSH-X100-18P/30S | 251         | 18      | 30 | 48                    |
| PSH-X100-12P/40S | 251         | 12      | 40 | 52                    |
| PSH-X100-6P/50S  | 251         | 6       | 50 | 56                    |

*\*More models on next page*

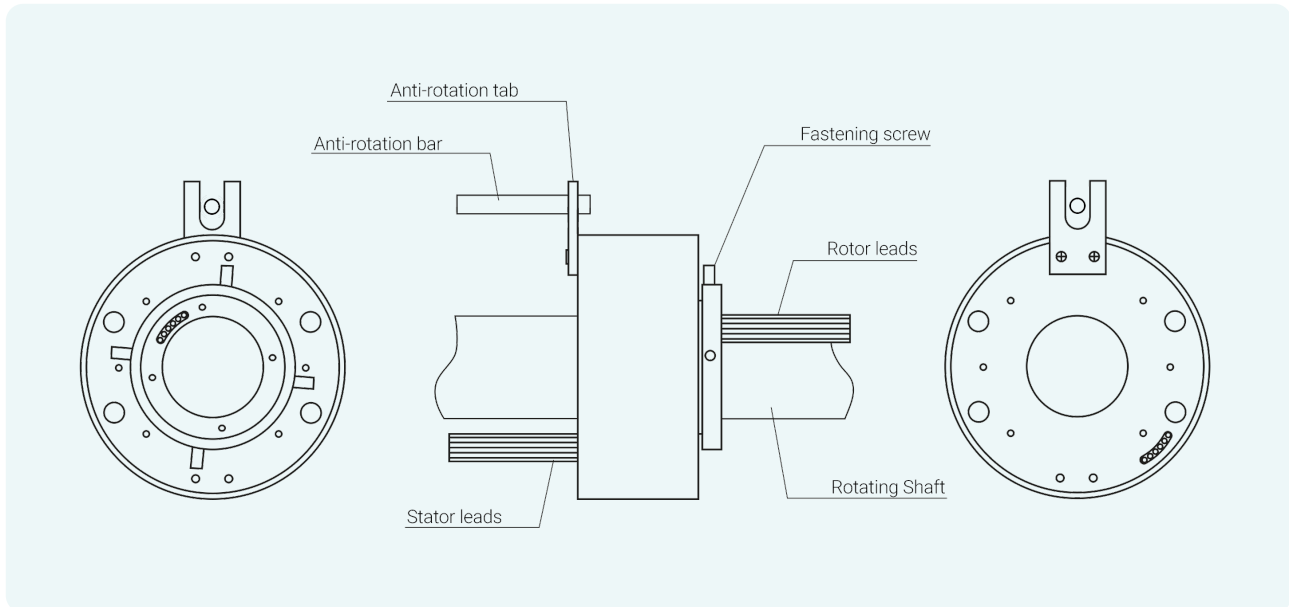
## PSH-X100 SERIES

## Outline Dimensions

| Model            | Length (mm) | 10A/15A | 2A | Total No. of Circuits |
|------------------|-------------|---------|----|-----------------------|
| PSH-X100-60S     | 251         | –       | 60 | 60                    |
| PSH-X100-42P     | 282,5       | 42      | –  | 42                    |
| PSH-X100-36P/10S | 282,5       | 36      | 10 | 46                    |
| PSH-X100-30P/20S | 282,5       | 30      | 20 | 50                    |
| PSH-X100-24P/30S | 282,5       | 24      | 30 | 54                    |
| PSH-X100-18P/40S | 282,5       | 18      | 40 | 58                    |
| PSH-X100-12P/50S | 282,5       | 12      | 50 | 62                    |
| PSH-X100-6P/60S  | 282,5       | 6       | 60 | 66                    |
| PSH-X100-70S     | 282,5       | –       | 70 | 70                    |
| PSH-X100-48P     | 314         | 48      | –  | 48                    |
| PSH-X100-42P/10S | 314         | 42      | 10 | 52                    |
| PSH-X100-36P/20S | 314         | 36      | 20 | 56                    |
| PSH-X100-30P/30S | 314         | 30      | 30 | 60                    |
| PSH-X100-24P/40S | 314         | 24      | 40 | 64                    |
| PSH-X100-18P/50S | 314         | 18      | 50 | 68                    |
| PSH-X100-12P/60S | 314         | 12      | 60 | 72                    |
| PSH-X100-6P/70S  | 314         | 6       | 70 | 76                    |
| PSH-X100-80S     | 314         | –       | 80 | 80                    |

## INSTALLATION

## General Slip Ring Installation



## Important read before installation

The slip ring must not be used to bear any load, and the cables should remain free from tension or stress.

- During installation, ensure the cables are adequately protected.
- The slip ring is intended for use in dry, low-dust environments. In harsher conditions, additional protective measures should be implemented, such as upgrading to a higher IP rating.
- The anti-rotation bar should not be tightly pressed against the anti-rotation tab; it is essential to maintain some clearance between the two.

Ensure proper alignment between the rotor and stator; it is advisable to use the four set screws to achieve the best alignment possible. The anti-rotation stop on the stator prevents the slip ring from rotating independently. Our slip rings are designed with low inertia and should not be rigidly fixed, as doing so can significantly reduce their expected lifespan.

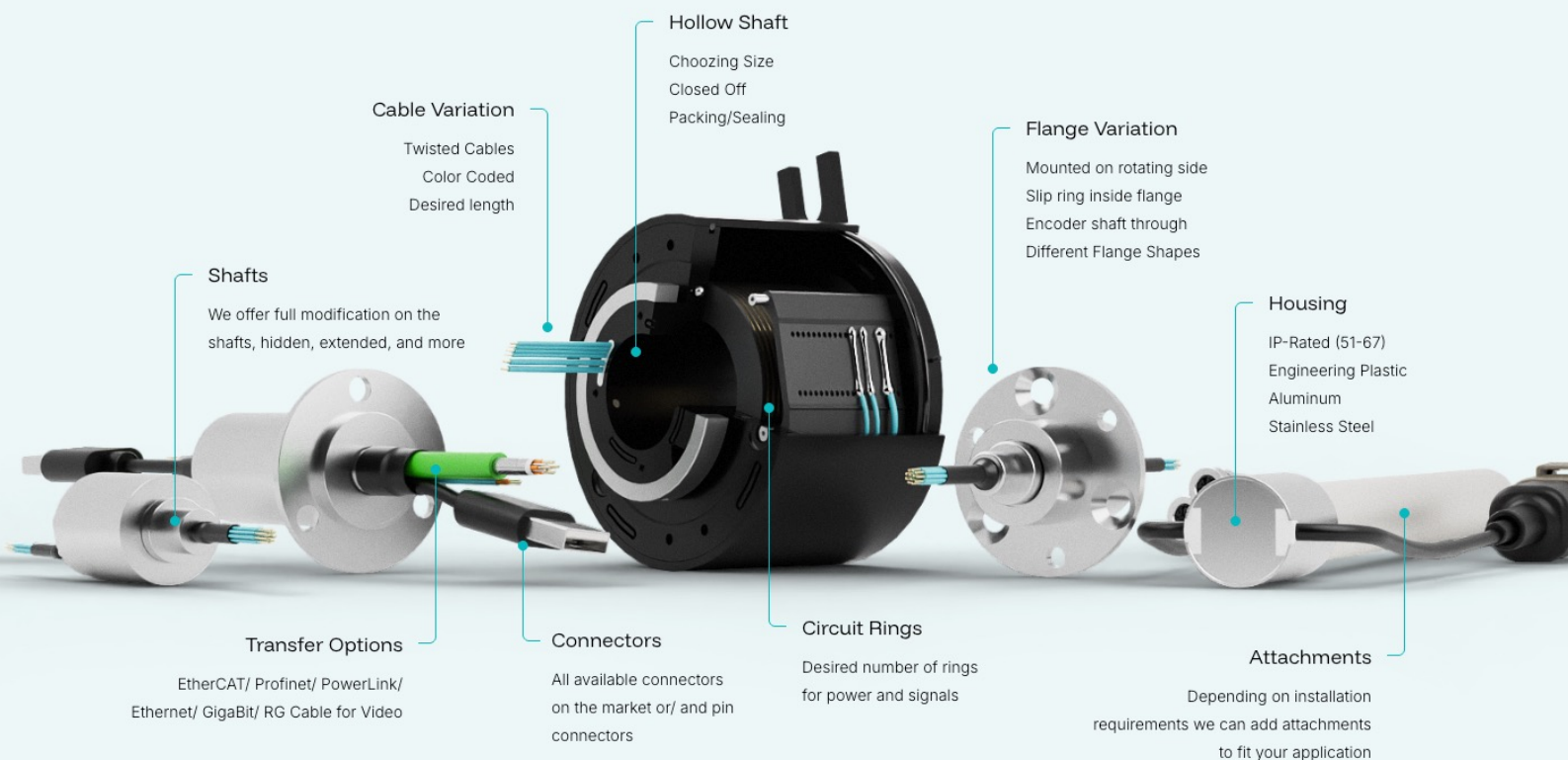
If you have any questions regarding installation, please do not hesitate to contact us for assistance.

**MODIFIED STANDARD****Penlink modifies according to your needs**

Our standard range of slip rings can be customised to meet your specific application needs. We can adjust the current capacity and signal type of the slip ring or combine the electrical slip ring with optical or fluid rotary joints. Additionally, we can integrate the slip ring with an angle transducer or adapt it with mechanical flanges and connectors.

By tailoring our standard slip rings, we provide solutions that precisely align with your requirements and application demands.

Contact us today to explore the numerous possibilities. We are committed to delivering the highest quality products designed for long-lasting performance.





Standard Slip Ring Catalogue 2026 Edition  
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Please note that drawings are subject to change and measurements may not be exact. We encourage you to contact us for the most accurate and up-to-date information.