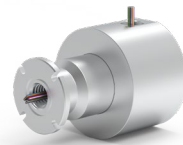
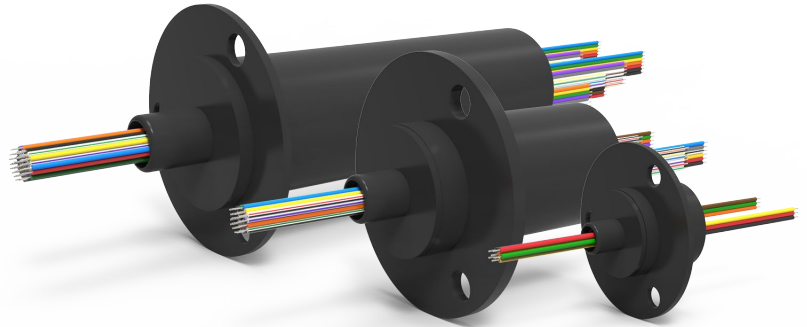


## ES Series: Overview

- + High-Quality Gold-on-Gold Contacts
- + Compact Capsule Design
- + Splash Seals for Dust and Moisture
- + Low Torque Design
- + Suitable for Analog or Digital Signals
- + Low Electrical Noise
- + Precision Ball Bearings
- + Data Speeds Under 50 Megabits / Sec\*
- + Compatible With a Range of Data Bus Protocols



### PROTECTIVE ENCLOSURE

Enhanced protection for your slip ring against water, dust & damage.

[Learn More On Page 6](#)

The ES Series electrical slip ring is a rotating assembly used to transfer power, control circuits or data (analog / digital) from stationary inlets to rotating outlets.

Versatile and compact, the ES Series electrical slip rings feature a low torque design with gold-on-gold contacts and offer low electrical noise. The ES Series also includes flexible, color-coded lead wires suitable for transferring analog and digital signals. Standard models are available from 6 to 56 circuits.

SPECIFICATIONS	
Operating Speed (max.)	100 / 250 RPM Continuous**
Data Speed (max.)	Under 50 Mbps (non-Ethernet)*
Standard Circuit Options	6, 12, 18, 24, 36, 56
Voltage [AC/DC] (max.)	120 / 240***
Amps	2
Lead Gauge (AWG)	28, 26
Wire Material	Silver-Plated Copper
Electrical Noise (max.)	60 Milliohms
Contact Material	Gold
Temperature Range	-40 °F to 176 °F (-40 °C to +80 °C)

\* In order to successfully transfer digital data signals, a variety of conditions must be met. Please consult with DSTI for approval. For the most reliable transfer of digital data signals, see our Ethernet slip ring options.

\*\* The max operating speed for models ES6A & ES12A is 100 RPM

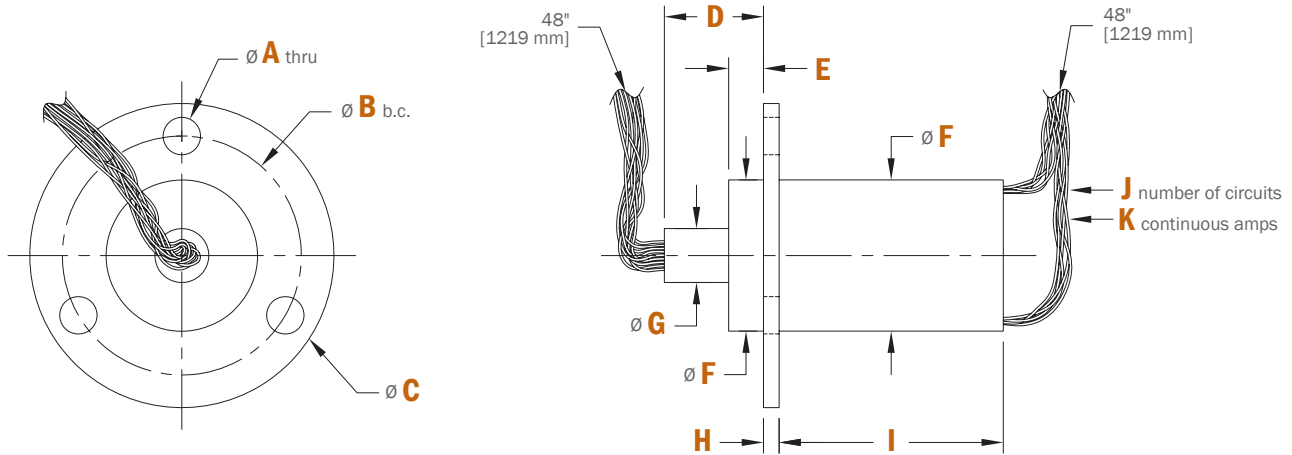
\*\*\* Voltage for ES6A & ES12A is 120



TDS Precision Products GmbH  
 Industriestrasse 1a  
 CH-8157 Dielsdorf

T + 41 44 885 30 80  
 info@tds-pp.com  
 www.tds-pp.com

## ES Series: Dimensions



	ES6A	ES6	ES12A	ES12
<b>A</b>	.129" [3.28mm]	.215" [5.50mm]	.129" [3.28mm]	.215" [5.50mm]
<b>B</b>	.725" [18.42mm]	1.375" [34.93mm]	.725" [18.42mm]	1.375" [34.93mm]
<b>C</b>	.95" [24.13mm]	1.75" [44.45mm]	.95" [24.13mm]	1.75" [44.45mm]
<b>D</b>	.47" [11.94mm]	.57" [14.48mm]	.47" [11.94mm]	.57" [14.48mm]
<b>E</b>	.20" [5.08mm]	.20" [5.08mm]	.20" [5.08mm]	.20" [5.08mm]
<b>F</b>	.50" [12.70mm]	.87" [22.10mm]	.50" [12.70mm]	.87" [22.10mm]
<b>G</b>	.19" [4.83mm]	.31" [7.87mm]	.19" [4.83mm]	.31" [7.87mm]
<b>H</b>	.04" [1.02mm]	.09" [2.36mm]	.04" [1.02mm]	.09" [2.36mm]
<b>I</b>	.34" [8.64mm]	.48" [12.19mm]	.59" [14.99mm]	.75" [19.05mm]
<b>J</b>	6 Circuits	6 Circuits	12 Circuits	12 Circuits
<b>K</b>	2 Amps	2 Amps	2 Amps	2 Amps

	ES18	ES24	ES36	ES56
<b>A</b>	.215" [5.50mm]	.215" [5.50mm]	.220" [5.60mm]	.220" [5.60mm]
<b>B</b>	1.375" [34.93mm]	1.375" [34.93mm]	1.410" [35.81mm]	1.410" [35.81mm]
<b>C</b>	1.75" [44.45mm]	1.75" [44.45mm]	1.75" [44.45mm]	1.75" [44.45mm]
<b>D</b>	.57" [14.48mm]	.57" [14.48mm]	.48" [12.19mm]	.48" [12.19mm]
<b>E</b>	.20" [5.08mm]	.20" [5.08mm]	.11" [2.80mm]	.11" [2.80mm]
<b>F</b>	.87" [22.10mm]	.87" [22.10mm]	1.00" [25.40mm]	1.00" [25.40mm]
<b>G</b>	.31" [7.87mm]	.31" [7.87mm]	.38" [9.53mm]	.38" [9.53mm]
<b>H</b>	.09" [2.36mm]	.09" [2.36mm]	.06" [1.50mm]	.06" [1.50mm]
<b>I</b>	1.02" [25.91mm]	1.29" [32.77mm]	2.06" [75.30mm]	2.96" [75.30mm]
<b>J</b>	18 Circuits	24 Circuits	36 Circuits	56 Circuits
<b>K</b>	2 Amps	2 Amps	2 Amps	2 Amps

## Wiring Color Codes: ES Series

ES6		
Tag #	Color	Description/Awg
1	BLK	2A/28
2	BRN	
3	RED	
4	ORN	
5	YEL	
6	GRN	

ES6A		
Tag #	Color	Description/Awg
1	BLK	2A/28
2	BRN	
3	RED	
4	ORN	
5	YEL	
6	GRN	

ES12		
Tag #	Color	Description/Awg
1	BLK	2A/28
2	BRN	
3	RED	
4	ORN	
5	YEL	
6	GRN	
7	BLU	
8	VIO	
9	GRY	
10	WHT	
11	WHT-BLK	
12	WHT-BRN	

ES12A		
Tag #	Color	Description/Awg
1	BLK	2A/28
2	BRN	
3	RED	
4	ORN	
5	YEL	
6	GRN	
7	BLU	
8	VIO	
9	GRY	
10	WHT	
11	WHT-BLK	
12	WHT-BRN	

ES18		
Tag #	Color	Description/Awg
1	BLK	2A/28
2	BRN	
3	RED	
4	ORN	
5	YEL	
6	GRN	
7	BLU	
8	VIO	
9	GRY	
10	WHT	
11	WHT-BLK	
12	WHT-BRN	
13	WHT-RED	
14	WHT-ORN	
15	WHT-YEL	
16	WHT-GRN	
17	WHT-BLU	
18	WHT-VIO	

## Wiring Color Codes: ES Series

ES24			ES36			ES56		
Tag #	Color	Description/Awg	Tag #	Color	Description/Awg	Tag #	Color	Description/Awg
1	BLK	2A/28	1	BLK	2A/26	1	BLK	2A/26
2	BRN		2	BRN		2	BRN	
3	RED		3	RED		3	RED	
4	ORN		4	ORN		4	ORN	
5	YEL		5	YEL		5	YEL	
6	GRN		6	GRN		6	GRN	
7	BLU		7	BLU		7	BLU	
8	VIO		8	VIO		8	VIO	
9	GRY		9	GRY		9	GRY	
10	WHT		10	WHT		10	WHT	
11	WHT-BLK		11	WHT-BLK		11	WHT-BLK	
12	WHT-BRN		12	WHT-BRN		12	WHT-BRN	
13	WHT-RED		13	WHT-RED		13	WHT-RED	
14	WHT-ORN		14	WHT-ORN		14	WHT-ORN	
15	WHT-YEL		15	WHT-YEL		15	WHT-YEL	
16	WHT-GRN		16	WHT-GRN		16	WHT-GRN	
17	WHT-BLU		17	WHT-BLU		17	WHT-BLU	
18	WHT-VIO		18	WHT-VIO		18	WHT-VIO	
19	WHT-GRY		19	BLK		19	BLK	
20	WHT-BLK-BRN		20	BRN		20	BRN	
21	WHT-BLK-RED		21	RED		21	RED	
22	WHT-BLK-ORN		22	ORN		22	ORN	
23	WHT-BLK-YEL		23	YEL		23	YEL	
24	WHT-BLK-GRN		24	GRN		24	GRN	
			25	BLU	25	BLU		
			26	VIO	26	VIO		
			27	GRY	27	GRY		
			28	WHT	28	WHT		
			29	WHT-BLK	29	WHT-BLK		
			30	WHT-BRN	30	WHT-BRN		
			31	WHT-RED	31	WHT-RED		
			32	WHT-ORN	32	WHT-ORN		
			33	WHT-YEL	33	WHT-YEL		
			34	WHT-GRN	34	WHT-GRN		
			35	WHT-BLU	35	WHT-BLU		
			36	WHT-VIO	36	WHT-VIO		
						37	BLK	2A/26
						38	BRN	
						39	RED	
						40	ORN	
						41	YEL	
						42	GRN	
						43	BLU	
						44	VIO	
						45	GRY	
						46	WHT	
						47	WHT-BLK	
						48	WHT-BRN	
						49	WHT-RED	
						50	WHT-ORN	
						51	WHT-YEL	
						52	WHT-GRN	
						53	WHT-BLU	
						54	WHT-VIO	
						55	BLK	
						56	BRN	



## Installation & Mounting

### PREPARATION:

Remove the slip ring from the shipping container. Inspect the entire assembly, including wire leads to make sure there is no visual damage that occurred during transport.

### RECOMMENDED INSTALLATION PRACTICE:

Because of possible geometric mismatching between the customer's application and the slip ring, "hard mounting" of both ends of the slip ring (i.e., securing the rotor and stator such that there is NO floating during operation) is not recommended and may cause premature failure.

### CAPSULE SLIP RING, FLANGE MOUNT:

The slip ring capsule is designed to be flange-mounted to the customer's interface while allowing either the barrel and flange to be rotated or the rotor itself.

The rotor leads can be used to rotate with the equipment. Wrap the rotor and rotor leads together with heat shrink tubing for added protection.

Use screws to mount the slip ring. Washers can be used protect the flange from excessive strain. If lock washers are also used, flat washers should be mounted between the lock washers and the flange. (Note: mounting hardware is not included).

The slip ring is not designed to bear the weight of the equipment to which it is connected. Rotating equipment should be secured so that no axial or radial load is applied to the slip ring rotor.

Secure all leads so that they do not rub against any surface as the equipment rotates. Care should be taken when routing and securing the leads so that no side loading of the slip ring occurs.

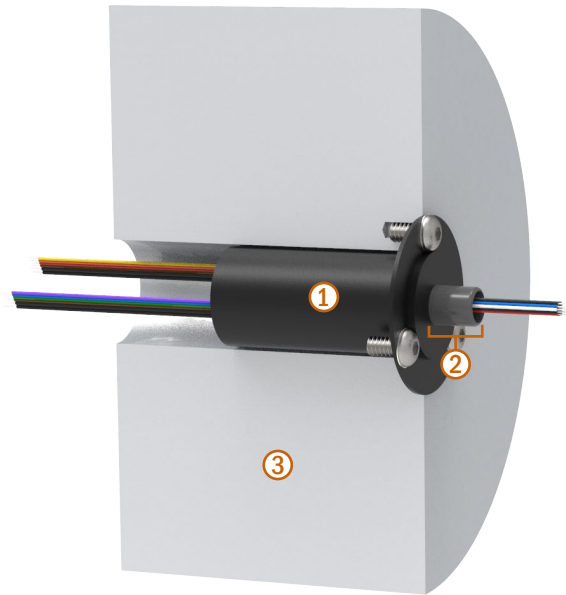
The slip ring should be protected from dust and moisture. DSTI offers an optional [Slip Ring Protective Enclosure \(SRPE\)](#) for enhanced protection against water, dust and damage.

### INITIAL START-UP:

Begin rotation of the equipment and verify that while rotating at the maximum operating speed there is no visible movement of the slip ring assembly due to misalignment and no binding or rubbing of the wire leads.

THESE INSTRUCTIONS ARE INTENDED TO BE USED AS A GENERAL GUIDE, PLEASE CONSULT DSTI TO DISCUSS ANY SPECIFIC QUESTIONS RELATED TO YOUR INSTALLATION.

### MOUNTING EXAMPLE



- ① BARREL & FLANGE (STATOR)
- ② ROTOR
- ③ CUSTOMER INTERFACE EXAMPLE

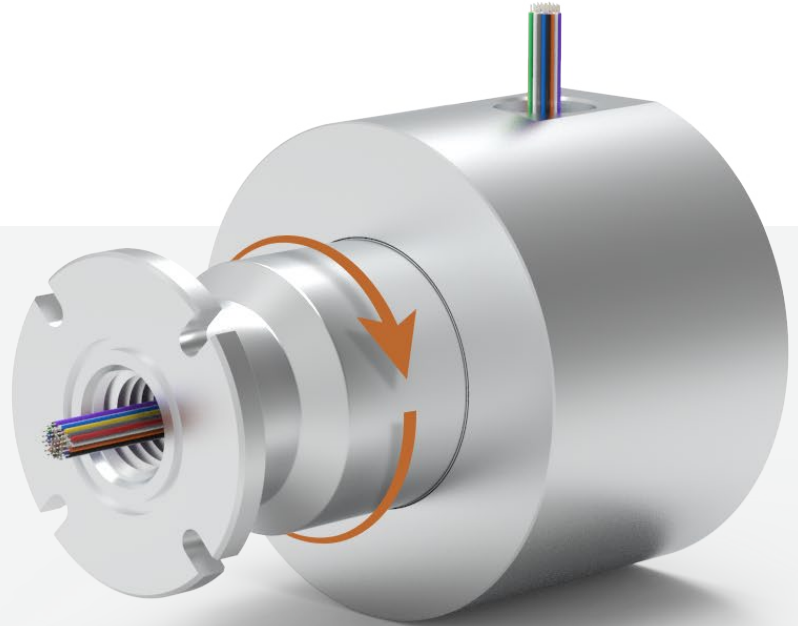
## Slip Ring Protective Enclosure (SRPE-100)

[LEARN MORE](#)

Enhance protection with a waterproof and dustproof sealed slip ring enclosure.

DSTI offers a wide range of slip rings for transferring electrical signals, power or data from a fixed structure to a rotating piece of equipment.

To mitigate slip ring damage when used in harsh environments, DSTI offers an all-aluminum enclosure for enhanced protection against water and dust ingress. The SRPE features a low-torque design, a flange located on the shaft for improved mounting capabilities and NPT connections for installing electrical conduit.



**SPRAY & SPLASH PROTECTION**



**DUST & DIRT PROTECTION**



**CONTINUOUS ROTATION UP TO 250 RPM**



**IN-STOCK & READY TO SHIP**

### SPECIFICATIONS

SLIP RING COMPATIBILITY*	ES, ESM, ESE
CONNECTION OPTIONS	NPT / Shaft Flange
CONNECTION SIZE	.50" / 1.250" O-Ring
DIAMETER	3.69"
LENGTH	4.99"
MINIMUM TORQUE	8 in-lbs.
MAXIMUM ROTATION	250 RPM
MATERIAL	Aluminum

\*Not compatible with ES6A or ES12A slip rings. Slip rings are sold separately.

