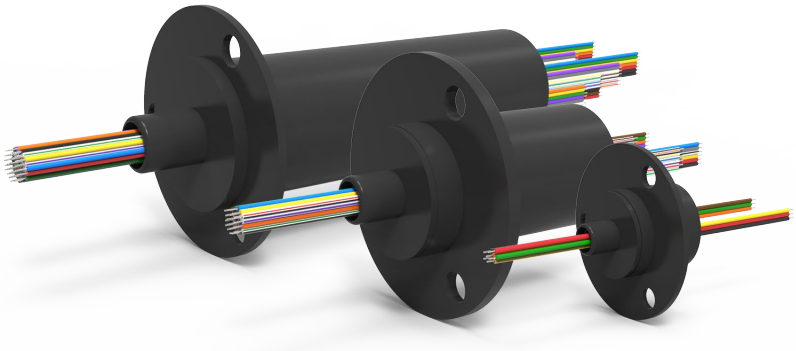
ES Series: Overview

- 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

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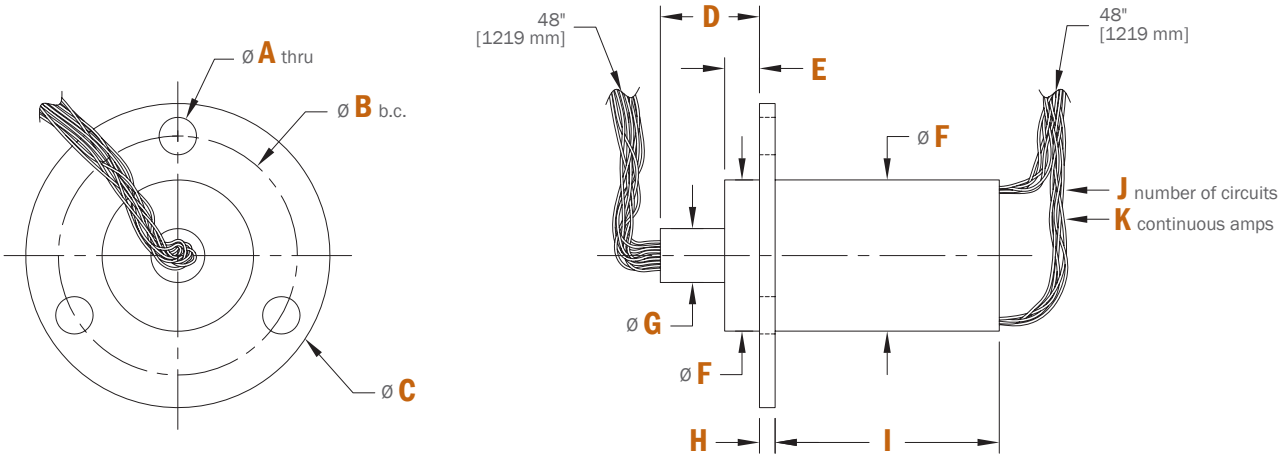
ES Series: Dimensions



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

	ES18	ES24	ES36	ES56
A	.215″ [5.50mm]	.215″ [5.50mm]	.220″ [5.60mm]	.220″ [5.60mm]
B	1.375″ [34.93mm]	1.375″ [34.93mm]	1.410″ [35.81mm]	1.410″ [35.81mm]
C	1.75" [44.45mm]	1.75" [44.45mm]	1.75" [44.45mm]	1.75" [44.45mm]
D	.57″ [14.48mm]	.57″ [14.48mm]	.48″ [12.19mm]	.48″ [12.19mm]
E	.20″ [5.08mm]	.20″ [5.08mm]	.11″ [2.80mm]	.11″ [2.80mm]
F	.87″ [22.10mm]	.87″ [22.10mm]	1.00″ [25.40mm]	1.00″ [25.40mm]
G	.31″ [7.87mm]	.31″ [7.87mm]	.38″ [9.53mm]	.38″ [9.53mm]
H	.09″ [2.36mm]	.09″ [2.36mm]	.06″ [1.50mm]	.06″ [1.50mm]
I	1.02″ [25.91mm]	1.29″ [32.77mm]	2.06″ [75.30mm]	2.96″ [75.30mm]
J	18 Circuits	24 Circuits	36 Circuits	56 Circuits
K	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		
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	
19	WHT-GRY	
20	WHT-BLK-BRN	
21	WHT-BLK-RED	
22	WHT-BLK-ORN	
23	WHT-BLK-YEL	
24	WHT-BLK-GRN	

ES36		
Tag #	Color	Description/Awg
1	BLK	2A/26
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	
19	BLK	
20	BRN	
21	RED	
22	ORN	
23	YEL	
24	GRN	
25	BLU	
26	VIO	
27	GRY	
28	WHT	
29	WHT-BLK	
30	WHT-BRN	
31	WHT-RED	
32	WHT-ORN	
33	WHT-YEL	
34	WHT-GRN	
35	WHT-BLU	
36	WHT-VIO	

ES56		
Tag #	Color	Description/Awg
1	BLK	2A/26
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	
19	BLK	
20	BRN	
21	RED	
22	ORN	
23	YEL	
24	GRN	
25	BLU	
26	VIO	
27	GRY	
28	WHT	
29	WHT-BLK	
30	WHT-BRN	
31	WHT-RED	
32	WHT-ORN	
33	WHT-YEL	
34	WHT-GRN	
35	WHT-BLU	
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

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

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.

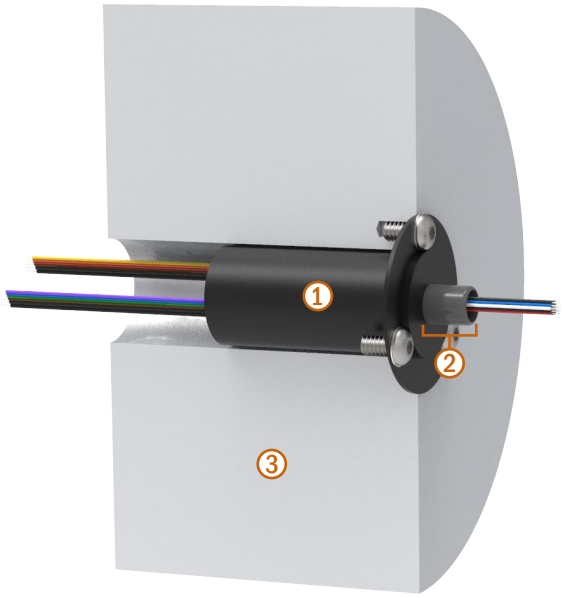
Secure all leads so that they do not rub against any surface as the equipment rotates. Care should be taken when routing and securing the leads so that no side loading of the slip ring occurs.

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.

MOUNTING EXAMPLE



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

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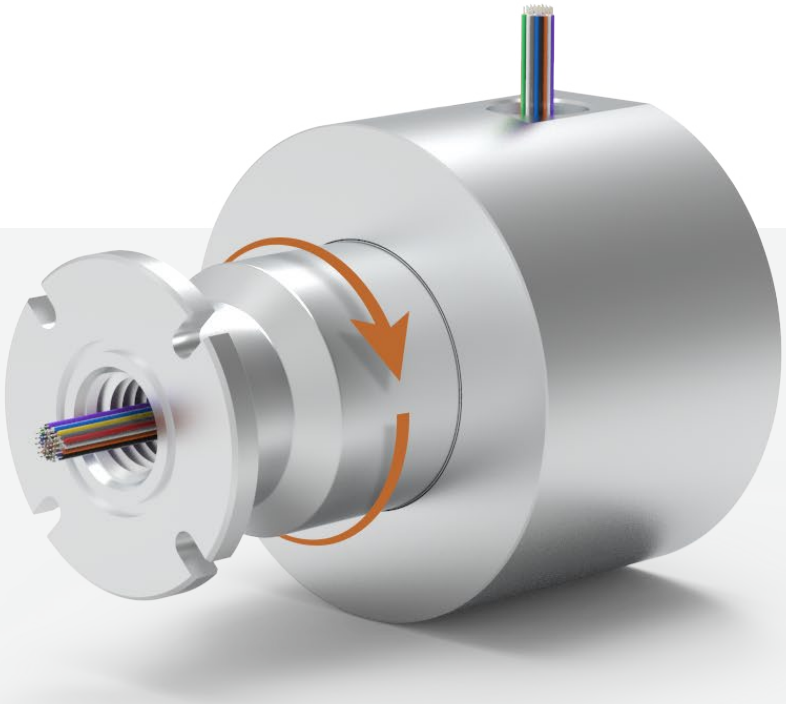
Slip Ring Protective Enclosure (SRPE-100)

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.