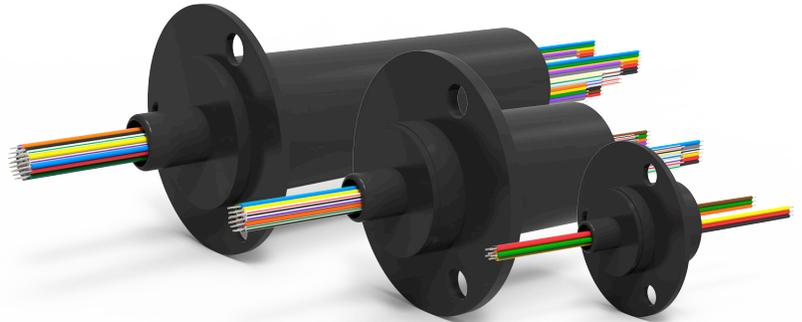


ES Series: Overview

- + 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.¹
- + Compatible With a Range of Data Bus Protocols



IP65 PROTECTIVE ENCLOSURE

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

[Learn More On Page 7](#)

The ES Series electrical slip ring is a rotating assembly used to transfer signals, control circuits and 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.



PRODUCT DOWNLOADS

For Catalogs, Brochures, Models and Drawings visit www.dsti.com/downloads



DID YOU KNOW?

DSTI slip rings can be purchased online at store.dsti.com

SPECIFICATIONS	
Operating Speed (max.)	75 / 100 / 250 RPM Continuous ²
Data Speed (max.)	Under 50 Mbps (non-Ethernet) ¹
Standard Circuit Options	6, 12, 18, 24, 36, 56
Voltage [AC/DC] (max.)	120 / 240 ³
Amps	2
Lead Gauge (AWG)	28, 26
Wire Material	Silver-Plated Copper
Electrical Noise (max.)	60 Milliohms
Contact Material	Gold
Housing Material	Engineered Plastics / Aluminum Alloy ⁴
Temperature Range	-40 °F to 176 °F (-40 °C to +80 °C)

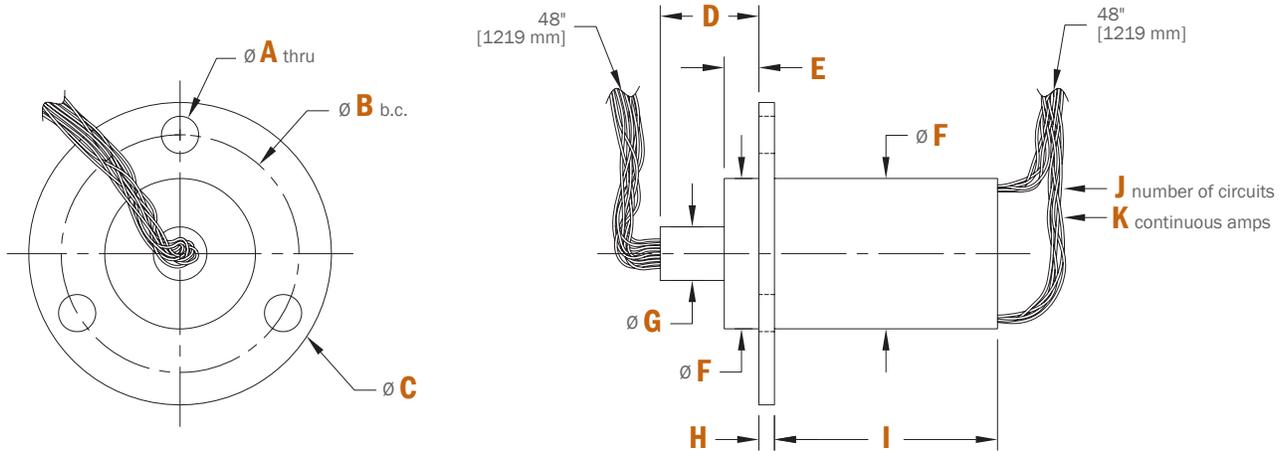
¹ In order to successfully transfer digital data signals, a variety of conditions must be met. Please consult with DSTI for approval. For the most reliable transfer of digital data signals, see our Ethernet slip ring options.

² 75 RPM is the maximum operating speed for models ES6A-L and ES12A-L. 100 RPM is the maximum operating speed for models ES6A, ES12A and all models with "-L" suffix (excluding ES6A-L and ES12A-L).

³ 120V is the maximum voltage for models ES6A, ES12A and models with "-L" suffix.

⁴ Aluminum alloy is the housing material for models ES36-L and ES56-L.

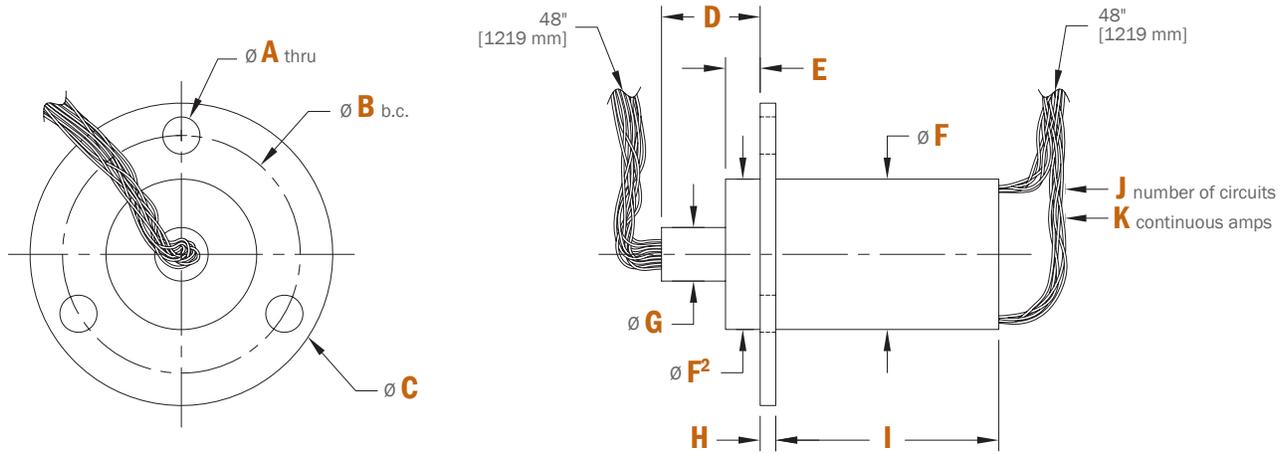
ES Series: Dimensions



	ES6A	ES6A-L	ES6	ES6-L
A	.129" [3.28mm]	.098" [2.5mm]	.217" [5.50mm]	.217" [5.50mm]
B	.725" [18.42mm]	.709" [18mm]	1.375" [34.93mm]	1.378" [35mm]
C	.950" [24.13mm]	.945" [24mm]	1.750" [44.45mm]	1.732" [44mm]
D	.470" [11.94mm]	.307" [7.8mm]	.570" [14.48mm]	.551" [14mm]
E	.200" [5.08mm]	.197" [5mm]	.200" [5.08mm]	.197" [5mm]
F	.500" [12.70mm]	.488" [12.4mm]	.870" [22.10mm]	.866" [22mm]
G	.190" [4.83mm]	.150" [3.8mm]	.31" [7.87mm]	.307" [7.8mm]
H	.040" [1.02mm]	.049" [1.25mm]	.093" [2.36mm]	.094" [2.4mm]
I	.340" [8.64mm]	.305" [7.75mm]	.480" [12.19mm]	.457" [11.6mm]
J	6 Circuits	6 Circuits	6 Circuits	6 Circuits
K	2 Amps	2 Amps	2 Amps	2 Amps

	ES12A	ES12A-L	ES12	ES12-L
A	.129" [3.28mm]	.098" [2.5mm]	.217" [5.50mm]	.217" [5.5mm]
B	.725" [18.42mm]	.709" [18mm]	1.375" [34.93mm]	1.378" [35mm]
C	.950" [24.13mm]	.945" [24mm]	1.750" [44.45mm]	1.732" [44mm]
D	.470" [11.94mm]	.307" [7.8mm]	.570" [14.48mm]	.551" [14mm]
E	.200" [5.08mm]	.197" [5mm]	.200" [5.08mm]	.197" [5mm]
F	.500" [12.70mm]	.488" [12.4mm]	.870" [22.10mm]	.866" [22mm]
G	.190" [4.83mm]	.150" [3.8mm]	.310" [7.87mm]	.307" [7.8mm]
H	.040" [1.02mm]	.049" [1.25mm]	.093" [2.36mm]	.094" [2.4mm]
I	.590" [14.99mm]	.522" [13.25mm]	.750" [19.05mm]	.811" [20.6mm]
J	12 Circuits	12 Circuits	12 Circuits	12 Circuits
K	2 Amps	2 Amps	2 Amps	2 Amps

ES Series: Dimensions



	ES18	ES18-L	ES24	ES24-L
A	.217" [5.50mm]	.217" [5.5mm]	.217" [5.50mm]	.217" [5.5mm]
B	1.375" [34.93mm]	1.378" [35mm]	1.375" [34.93mm]	1.378" [35mm]
C	1.750" [44.45mm]	1.732" [44mm]	1.750" [44.45mm]	1.732" [44mm]
D	.570" [14.48mm]	.551" [14mm]	.570" [14.48mm]	.551" [14mm]
E	.200" [5.08mm]	.197" [5mm]	.200" [5.08mm]	.197" [5mm]
F	.870" [22.10mm]	.866" [22mm]	.870" [22.10mm]	.866" [22mm]
G	.310" [7.87mm]	.307" [7.8mm]	.310" [7.87mm]	.307" [7.8mm]
H	.092" [2.36mm]	.094" [2.4mm]	.092" [2.36mm]	.094" [2.4mm]
I	1.020" [25.91mm]	1.024" [26mm]	1.290" [32.77mm]	1.331" [33.8mm]
J	18 Circuits	18 Circuits	24 Circuits	24 Circuits
K	2 Amps	2 Amps	2 Amps	2 Amps

	ES36	ES36-L	ES56	ES56-L
A	.220" [5.60mm]	.217" [5.5mm]	.220" [5.60mm]	.217" [5.5mm]
B	1.410" [35.81mm]	1.378" [35mm]	1.410" [35.81mm]	1.378" [35mm]
C	1.750" [44.45mm]	1.732" [44mm]	1.750" [44.45mm]	1.732" [44mm]
D	.480" [12.19mm]	.472" [12mm]	.48" [12.19mm]	.472" [12mm]
E	.174" [4.42mm]	.118" [3mm]	.174" [4.42mm]	.118" [3mm]
F	1.00" [25.40mm]	.984" [25mm]	1.00" [25.40mm]	.984" [25mm]
F²	1.06" [4.42mm]	.984" [25mm]	1.06" [27mm]	.984" [25mm]
G	.375" [9.53mm]	.386" [9.8mm]	.375" [9.53mm]	.386" [9.8mm]
H	.059" [1.50mm]	.079" [2mm]	.059" [1.50mm]	.079" [2mm]
I	2.06" [75.30mm]	2.146" [54.5mm]	2.96" [75.30mm]	3.169" [80.5mm]
J	36 Circuits	36 Circuits	56 Circuits	56 Circuits
K	2 Amps	2 Amps	2 Amps	2 Amps

Wiring Color Codes: ES Series

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

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

ES12 / ES12-L		
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 / ES12A-L		
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 / ES18-L		
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 / ES24-L		
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 ¹	
20	WHT-BLK-BRN ²	
21	WHT-BLK-RED ³	
22	WHT-BLK-ORN ⁴	
23	WHT-BLK-YEL ⁵	
24	WHT-BLK-GRN ⁶	

ES36 / ES36-L		
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 / ES56-L		
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	

¹ BLK (ES24-L)

² BRN (ES24-L)

³ RED (ES24-L)

⁴ ORN (ES24-L)

⁵ YEL (ES24-L)

⁶ GRN (ES24-L)



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.

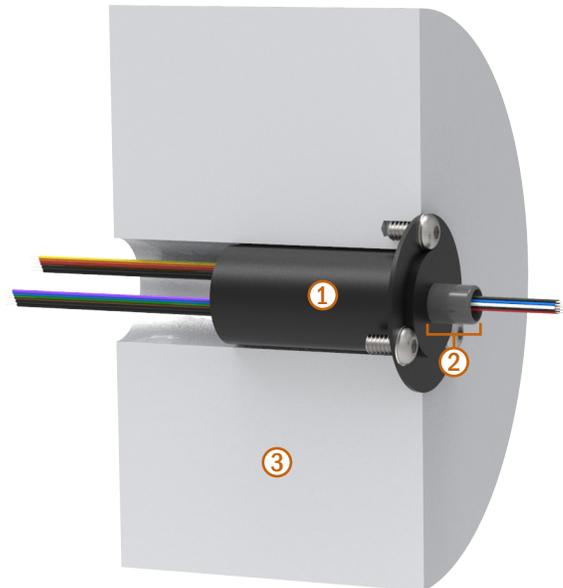
The slip ring should be protected from dust and moisture. DSTI offers an optional IP65 Slip Ring Protective Enclosure (SRPE) for the ultimate protection against water, dust and damage.

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

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

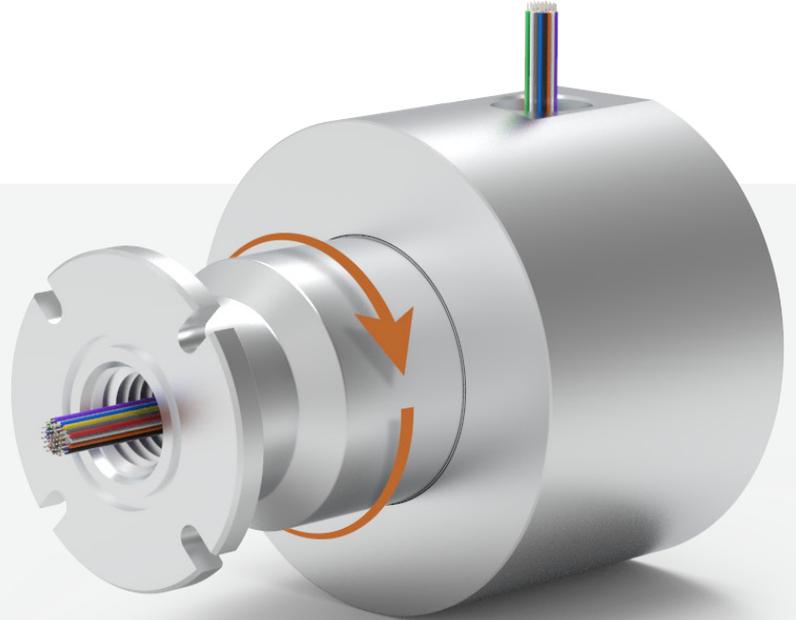
IP65 Slip Ring Protective Enclosure (SRPE-100)

[LEARN MORE](#)

Ultimate protection with our IP65 rated waterproof and dustproof enclosure for capsule slip rings.

Our IP65 rated, sealed slip ring protective enclosure (SRPE) provides the ultimate protection for your electrical slip ring against water, dust, dirt, debris and damage.

To mitigate capsule slip ring damage when used in harsh environments, DSTI offers an all-aluminum, low-torque protective enclosure with features that include a shaft flange for improved mounting capabilities and threaded NPT connections for installing electrical conduit.



IP65 INGRESS PROTECTION



SPRAY & SPLASH PROTECTION



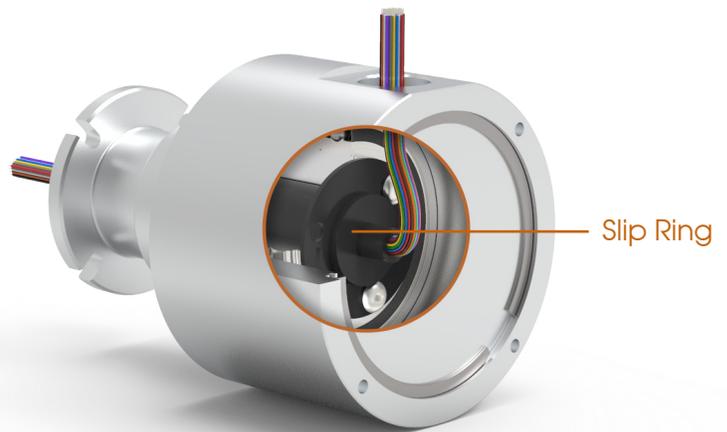
DUST & DIRT PROTECTION



CONTINUOUS ROTATION UP TO 250 RPM

SPECIFICATIONS

SLIP RING COMPATIBILITY*	ES, ESM, ESE
INGRESS PROTECTION RATING	IP65
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/ES6A-L or ES12A/ES12A-L slip rings. Slip rings are sold separately.