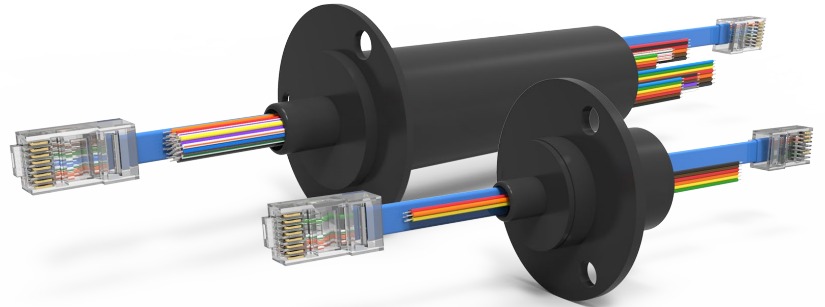


ESE Series: Overview

- + High-Quality Gold-on-Gold Contacts
- + Compact Capsule Design
- + Splash Seals for Dust and Moisture
- + Fully Compliant With IEEE 802.3 Formats
- + 100Base-T / 1000Base-T Ethernet Cable
- + T568B Wiring Terminated With RJ45 Connectors
- + Transfers Analog and Digital Signals
- + Low Electrical Noise
- + Compatible With a Range of Data Bus Protocols
- + Coaxial Options Available With RG178 / RG179 Circuits

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

ESE Series slip rings provide 100Base-T or 1000Base-T Ethernet connections with a combination of 2, 5, and 10 amp power connections. Utilizing high performance gold-on-gold contacts, the ESE Series features low electrical noise and Ethernet cables terminated with RJ45 connectors. Standard models are available from 8 to 51 circuits.



PROTECTIVE ENCLOSURE

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

[Learn More On Page 9](#)

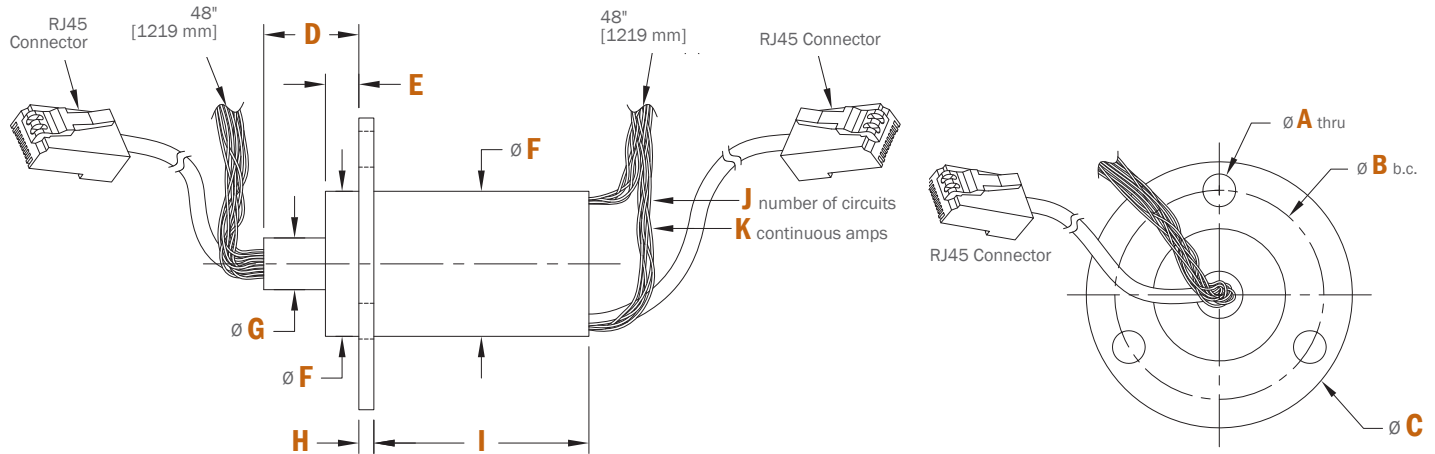
SPECIFICATIONS	
Operating Speed (max.)	250 RPM Continuous
Data Speed (max.)	100 Mbps, 1 Gbps
Standard Circuit Options	8, 10, 12, 14, 18, 41, 43, 45, 47, 51
Voltage [AC/DC] (max.)	240
Amps	1, 2, 5, 10
Lead Gauge (AWG)	28, 26, 20, 16
Wire Material	Silver-Plated Copper
Electrical Noise (max.)	60 Milliohms
Contact Material	Gold
Temperature Range	-40° F to 176° F (-40° C to +80° C)



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 CH-8157 Dielsdorf

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 www.tds-pp.com

ESE Series: Dimensions



	ESE64	ESE264	ESE224	ESE2124	ESE284
A	.215" [5.46mm]	.215" [5.46mm]	.215" [5.46mm]	.215" [5.46mm]	.215" [5.46mm]
B	1.375" [34.93mm]	1.375" [34.93mm]	1.375" [34.93mm]	1.375" [34.93mm]	1.375" [34.93mm]
C	1.75" [44.45mm]	1.75" [44.45mm]	1.75" [44.45mm]	1.75" [44.45mm]	1.75" [44.45mm]
D	.57" [14.40mm]	.57" [14.48mm]	.57" [14.48mm]	.57" [14.48mm]	.57" [14.48mm]
E	.25" [6.35mm]	.25" [6.35mm]	.25" [6.35mm]	.25" [6.35mm]	.25" [6.35mm]
F	.87" [22.1mm]	.87" [22.10mm]	.87" [22.10mm]	.87" [22.10mm]	.87" [22.10mm]
G	.31" [7.87mm]	.31" [7.87mm]	.31" [7.87mm]	.31" [7.87mm]	.31" [7.87mm]
H	.09" [2.4mm]	.09" [2.36mm]	.09" [2.36mm]	.09" [2.36mm]	.09" [2.36mm]
I	.75" [19.05mm]	1.02" [25.91mm]	1.02" [25.91mm]	1.29" [32.77mm]	1.29" [32.77mm]
J	10 Circuits	12 Circuits	8 Circuits	18 Circuits	14 Circuits
K	(6x) 2 Amps (1x) 100Base-T*	(2x) 5 Amps (6x) 2 Amps (1x) 100Base-T*	(2x) 10 Amps (2x) 2 Amps (1x) 100Base-T*	(2x) 5 Amps (12x) 2 Amps (1x) 100Base-T*	(2x) 10 Amps (8x) 2 Amps (1x) 100Base-T*

	ESE438	ESE4358	ESE2358	ESE8278	ESE24278
A	.220" [5.58mm]	.220" [5.58mm]	.220" [5.58mm]	.220" [5.58mm]	.220" [5.58mm]
B	1.410" [35.80mm]	1.410" [35.80mm]	1.410" [35.80mm]	1.410" [35.80mm]	1.410" [35.80mm]
C	1.75" [44.45mm]	1.75" [44.45mm]	1.75" [44.45mm]	1.75" [44.45mm]	1.75" [44.45mm]
D	.48" [12.19mm]	.48" [12.19mm]	.48" [12.19mm]	.48" [12.19mm]	.48" [12.19mm]
E	.11" [2.80mm]	.11" [2.80mm]	.11" [2.80mm]	.11" [2.80mm]	.11" [2.80mm]
F	1.00" [25.40mm]	1.00" [25.40mm]	1.00" [25.40mm]	1.00" [25.40mm]	1.00" [25.40mm]
G	.38" [9.52mm]	.38" [9.52mm]	.38" [9.52mm]	.38" [9.52mm]	.38" [9.52mm]
H	.06" [1.9mm]	.06" [1.9mm]	.06" [1.9mm]	.06" [1.9mm]	.06" [1.9mm]
I	2.96" [75.3mm]	2.96" [75.3mm]	2.96" [75.3mm]	2.96" [75.3mm]	2.96" [75.3mm]
J	51 Circuits	47 Circuits	45 Circuits	43 Circuits	41 Circuits
K	(43x) 2 Amps (1x) 1000Base-T*	(4x) 5 Amps (35x) 2 Amps (1x) 1000Base-T*	(2x) 10 Amps (35x) 2 Amps (1x) 1000Base-T*	(8x) 5 Amps (27x) 2 Amps (1x) 1000Base-T*	(2x) 10 Amps (4x) 5 Amps (27x) 2 Amps (1x) 1000Base-T*

*100BaseT & 1000BaseT (28 gauge / twisted pair) Ethernet circuits can also be used for other data/signal types

Wiring Color Codes: ESE Series

See Ethernet Plug Wiring on Page 8

*28 AWG 100_T = 1 amps max signal; CAT 5 Cable

ESE64		
Tag #	Color	Description/Awg
1	ORN	100_T/28/ Twisted Pair
2	WHT-ORN	
3	GRN	100_T/28/ Twisted Pair
4	WHT-GRN	
5	BLK	2A/26
6	BRN	
7	RED	
8	ORN	
9	YEL	
10	GRN	

ESE224		
Tag #	Color	Description/Awg
1	ORN	100_T/28/ Twisted Pair
2	WHT-ORN	
3	GRN	100_T/28/ Twisted Pair
4	WHT-GRN	
5	BLK	10A/16
6	BRN	2A/26
7	RED	
8	ORN	

ESE264		
Tag #	Color	Description/Awg
1	ORN	100_T/28/ Twisted Pair
2	WHT-ORN	
3	GRN	100_T/28/ Twisted Pair
4	WHT-GRN	
5	BLK	5A/20
6	BRN	2A/26
7	BLK	
8	BRN	
9	RED	
10	ORN	
11	YEL	
12	GRN	

ESE284		
Tag #	Color	Description/Awg
1	ORN	100_T/28/ Twisted Pair
2	WHT-ORN	
3	GRN	100_T/28/ Twisted Pair
4	WHT-GRN	
5	BLK	10A/16
6	BRN	
7	BLK	2A/26
8	BRN	
9	RED	
10	ORN	
11	YEL	
12	GRN	
13	BLU	
14	VIO	

ESE2124		
Tag #	Color	Description/Awg
1	ORN	100_T/28/ Twisted Pair
2	WHT-ORN	
3	GRN	100_T/28/ Twisted Pair
4	WHT-GRN	
5	BLK	5A/20
6	BRN	
7	BLK	2A/26
8	BRN	
9	RED	
10	ORN	
11	YEL	
12	GRN	
13	BLU	
14	VIO	
15	GRY	
16	WHT	
17	WHT-BLK	
18	WHT-BRN	

Wiring Color Codes: ESE Series

See Ethernet Plug Wiring on Page 8

*28 AWG 1000_T = 1 amps max signal; CAT 5 Cable

ESE438			
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	BLK	2A/26	
16	BRN		
17	RED		
18	ORN		
19	YEL		
20	GRN		
21	BLU		
22	VIO		
23	GRY		
24	WHT		
25	WHT-BLK		
26	WHT-BRN		
27	WHT-RED		
28	WHT-ORN		
29	ORN	1000_T/28/ Twisted Pair	2A/26
	WHT-ORN		
	GRN	1000_T/28/ Twisted Pair	
	WHT-GRN		
	BLU	1000_T/28/ Twisted Pair	
	WHT-BLU		
30	BRN	1000_T/28/ Twisted Pair	
	WHT-BRN		
	ORN	1000_T/28/ Twisted Pair	

37	BLK	2A/26
38	BLK	
39	BRN	
40	RED	
41	ORN	
42	YEL	
43	GRN	
44	BLU	
45	VIO	
46	GRY	
47	WHT	
48	WHT-BLK	
49	WHT-BRN	
50	WHT-RED	
51	WHT-ORN	

ESE4358			
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	BLK	5A/20	
16	BRN		
17	RED		
18	ORN	2A/26	
19	BLK		
20	BRN		
21	RED		
22	ORN		
23	YEL		
24	GRN		
25	ORN	1000_T/28/ Twisted Pair	2A/26
	WHT-ORN		
	GRN	1000_T/28/ Twisted Pair	
	WHT-GRN		
	BLU	1000_T/28/ Twisted Pair	
	WHT-BLU		
26	BRN	1000_T/28/ Twisted Pair	
	WHT-BRN		
	ORN	1000_T/28/ Twisted Pair	

33	BLK	2A/26
34	BLK	
35	BRN	
36	RED	
37	ORN	
38	YEL	
39	GRN	
40	BLU	
41	VIO	
42	GRY	
43	WHT	
44	WHT-BLK	
45	WHT-BRN	
46	WHT-RED	
47	WHT-ORN	

Wiring Color Codes: ESE Series

See Ethernet Plug Wiring on Page 8

*28 AWG 1000_T = 1 amps max signal; CAT 5 Cable

ESE2358			
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	10A/16	
12	WHT-BRN		
13	WHT-RED		
14	WHT-ORN		
15	BLK	2A/26	
16	BRN		
17	BLK		
18	BRN		
19	RED		
20	ORN		
21	YEL		
22	GRN		
23	ORN	1000_T/28/ Twisted Pair	2A/26
	WHT-ORN		
	GRN	1000_T/28/ Twisted Pair	
	WHT-GRN		
	BLU	1000_T/28/ Twisted Pair	
	WHT-BLU		
BRN	1000_T/28/ Twisted Pair		
WHT-BRN			

31	BLK
32	BLK
33	BRN
34	RED
35	ORN
36	YEL
37	GRN
38	BLU
39	VIO
40	GRY
41	WHT
42	WHT-BLK
43	WHT-BRN
44	WHT-RED
45	WHT-ORN

ESE8278		
Tag #	Color	Description/Awg
1	BLK	5A/20
2	BRN	
3	RED	
4	ORN	
5	BLK	2A/26
6	BRN	
7	RED	
8	ORN	
9	YEL	
10	GRN	5A/20
11	BLK	
12	BRN	
13	RED	
14	ORN	2A/26
15	BLK	
16	BRN	
17	RED	
18	ORN	
19	YEL	
20	GRN	
21	ORN	1000_T/28/ Twisted Pair
	WHT-ORN	
	GRN	1000_T/28/ Twisted Pair
	WHT-GRN	
	BLU	1000_T/28/ Twisted Pair
	WHT-BLU	
BRN	1000_T/28/ Twisted Pair	
WHT-BRN		

29	BLK	2A/26
30	BLK	
31	BRN	
32	RED	
33	ORN	
34	YEL	
35	GRN	
36	BLU	
37	VIO	
38	GRY	
39	WHT	
40	WHT-BLK	
41	WHT-BRN	
42	WHT-RED	
43	WHT-ORN	



Wiring Color Codes: ESE Series

See Ethernet Plug Wiring on Page 8

*28 AWG 1000_T = 1 amps max signal; CAT 5 Cable

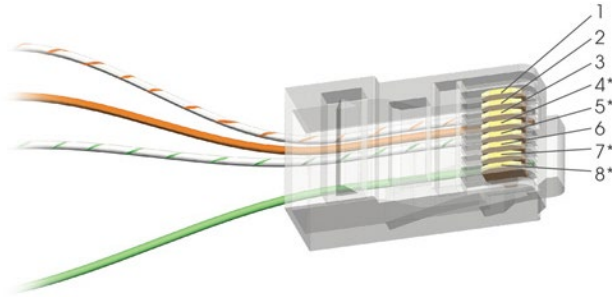
ESE24278		
Tag #	Color	Description/Awg
1	BLK	5A/20
2	BRN	
3	RED	
4	ORN	
5	BLK	2A/26
6	BRN	
7	RED	
8	ORN	
9	YEL	
10	GRN	10A/16
11	BLK	
12	BRN	2A/26
13	BLK	
14	BRN	
15	RED	
16	ORN	
17	YEL	
18	GRN	1000_T/28/ Twisted Pair
19	ORN	
	WHT-ORN	
	GRN	
	WHT-GRN	
	BLU	
	WHT-BLU	
20	BRN	
	WHT-BRN	
	BLU	
	WHT-BLU	
	GRN	
	WHT-GRN	

27	BLK	2A/26
28	BLK	
29	BRN	
30	RED	
31	ORN	
32	YEL	
33	GRN	
34	BLU	
35	VIO	
36	GRY	
37	WHT	
38	WHT-BLK	
39	WHT-BRN	
40	WHT-RED	
41	WHT-ORN	



Ethernet Plug Wiring: 4-Wire *

Color	Pin #
WHT-ORN	1
ORN	2
WHT-GRN	3
N/A	4
N/A	5
GRN	6
N/A	7
N/A	8



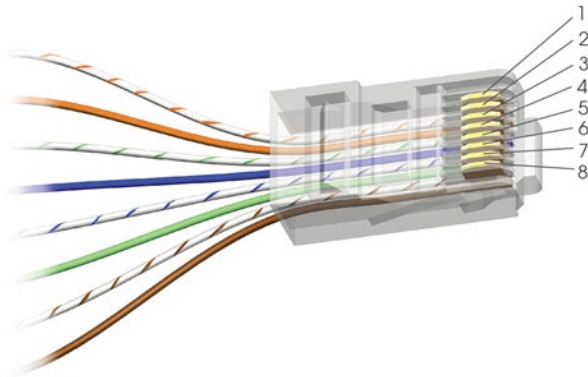
ATTENTION

Ethernet Plug PIN Numbers shown on this page are different than Wire Tag Numbers.

*RJ45 Plug

Ethernet Plug Wiring: 8-Wire *

Color	Pin #
WHT-ORN	1
ORN	2
WHT-GRN	3
BLU	4
WHT-BLU	5
GRN	6
WHT-BRN	7
BRN	8



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.

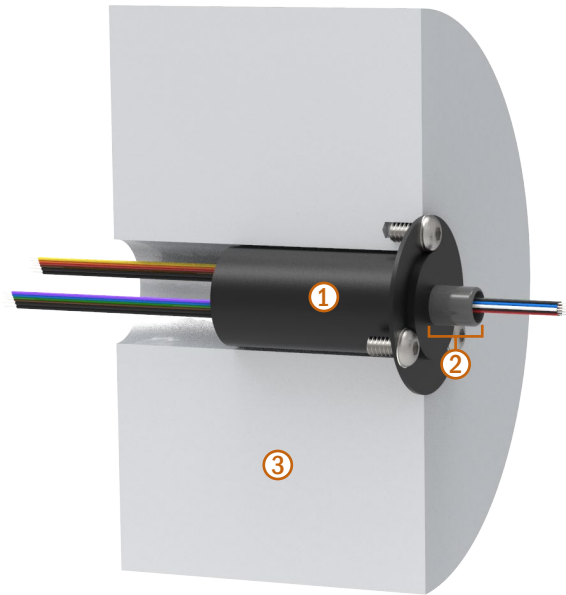
The slip ring should be protected from dust and moisture. DSTI offers an optional [Slip Ring Protective Enclosure \(SRPE\)](#) for enhanced protection against water, dust and damage.

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

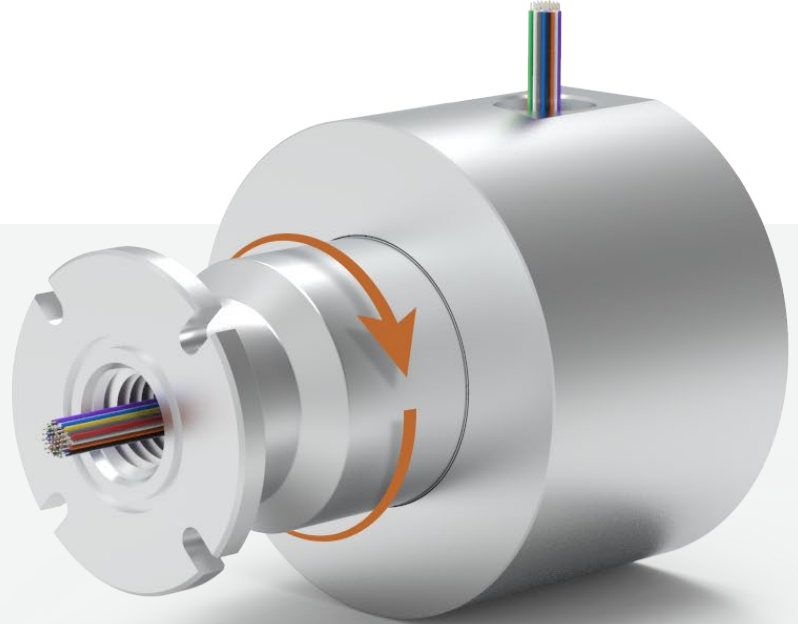
Slip Ring Protective Enclosure (SRPE-100)

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.

