

Slip Rings With Through-Bores

Endura-Trac™

Plus W series

Description

The Endura-Trac™ series of slip ring assemblies were developed for a wide variety of applications and environments. The flexible design and through-bore capability of up to 9 inches, along with many other options make it ideal for a designer to incorporate into new and retrofit applications. Modular construction allows a range of signal and power combinations with power circuits up to 30 amps and signal circuits up to 5 amps. These slip ring assemblies are a quick turn solution for your application. Off-the-shelf components allow for a delivery which meets your needs. The Plus W series is DeviceNet and ControlNet capable.

Features

- Unobstructed bore sizes from 1.5 inch to 9.0 inch
- Up to 100 signal circuits (rated at 250 V / 5 A each)
Up to 24 power circuits (rated at 600 V / 30 A each)
For combinations of these, see chart on next page
- Continuous bidirectional rotation up to 1,000 rpm
- Flying lead wire bundle, 24 inch lead length
- #20 AWG signal lead wire, #12 AWG power lead wire
- All metal exterior cover
- Shaft and flange mounting
- Stator, rotor, or both can rotate

Benefits

- Ease of installation
- Compatible with data bus protocols
- Transfers power, as well as analog and digital signals
- Replaceable brush blocks
- 169 different combinations of signals and power circuits



Typical Applications

- Packaging machines
- Index tables
- Paper and film converting
- Rotary machines
- Machine tools
- Automation equipment
- Medical equipment
- Surveillance equipment
- Inspection equipment

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Plus W Series Specifications		Options
Maximum Speed	1.5 and 3.0 inch bore: 1000 rpm 4.0, 6.0 and 9.0 inch bore: 600 rpm	<ul style="list-style-type: none"> • Open frame • Drive adaptor for stator de-rotation • Longer lead lengths • Sealed version (NEMA 12) • Various power and signal configurations available
Power Circuits	Up to 24 power circuits: 30 A / 600 volts	
Signal Circuits	Up to 100 signal circuits: 5 A / 250 volts	
Terminals	Power circuits - 12 AWG flying leads Signal circuits - 20 AWG flying leads	
Mounting	Shaft mounting	
Temperature Range	-20°C to +80°C	

*Please note that the operational life of the unit is dependent upon rotational speed, environment and temperature.

Bore Size	ID Actual	OD	Max RPM	"L1"	S	R
1.5 inch (38,1 mm)	1.52 (38,61)	4.97 (126,24)	1000	.2 (XX) + .4 (YY) + 1.63	4.033 (102,44)	1.896 (48,16)
3.0 (76,2)	3.02 (76,71)	6.47 (164,34)	1000	.2 (XX) + .4 (YY) + 1.38	5.488 (139,40)	3.396 (86,26)
4.0 (101,6)	4.02 (102,11)	7.50 (190,50)	600	.2 (XX) + .4 (YY) + 1.44	6.500 (165,10)	4.396 (111,66)
6.0 (152,40)	6.02 (152,91)	9.50 (241,30)	600	.2 (XX) + .4 (YY) + 1.44	8.332 (211,63)	6.646 (168,81)
9.0 (228,60)	9.02 (229,11)	12.50 (317,50)	600	.2 (XX) + .4 (YY) + 1.715	11.500 (292,10)	9.585 (243,46)

Note: For "Sealed Unit" add .75 (19,05) for length.

To determine length of overall unit, use the following formulas or contact us for assistance.

xx = Total number of signal rings

yy = Total number of power rings

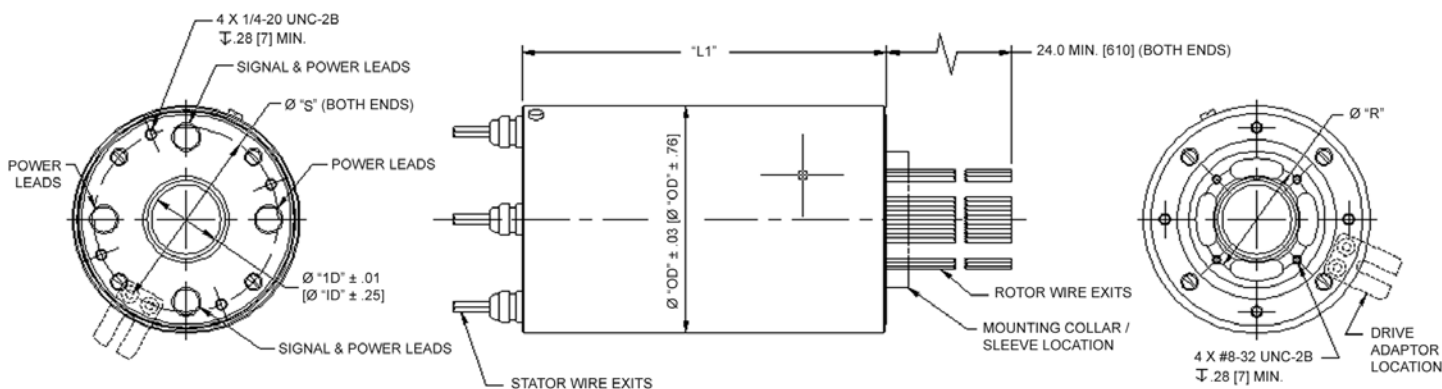
$$L1 = .2 (xx) + .4 (yy) + 1.63$$

Additional configurations available, contact factory for details.

Number of signal rings
(multiples of 4)

Number of power rings (multiples of 2)	Number of signal rings (multiples of 4)										
	0	4	8	12	16	20	24	28	32	36	40
0	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-

Plus W Series Dimensions



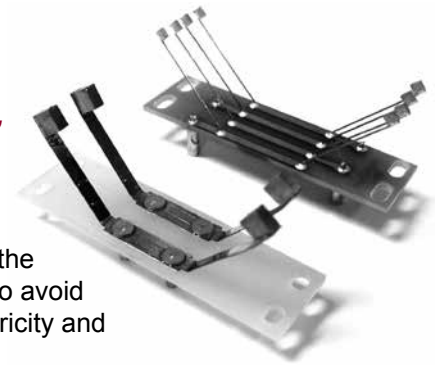
Dimensions in inches [millimeters]

The end views shown above are for the 1.5 inch ID slip ring. Please consult factory for 3, 4, 6 and 9 inches.

Slip Rings With Through-Bores

Endura-Trac™ Accessories

Our pre-engineered slip rings that feature a flexible design, minimized lead times and maximum reliability



Mounting Guidelines

There are several mounting options available on Endura-Trac™ products. One of the most important rules to remember when designing the installation of a slip ring is to avoid hard mounting both the rotating and stationary sections. This can transfer concentricity and axial run-out into the slip ring assembly and can adversely affect slip ring life.

Hard Mounting (Fixed Mounting): Any concentricity or axial run-out in the rotating-mechanical system is transferred to the slip ring assembly.

Soft Mounting (Floating Mount): Any concentricity or axial run-out in the rotating-mechanical system is not transferred to the slip ring assembly.

Ideally, the inner portion of the slip ring (ID) should be mounted by attaching a flange directly to it with screws or by using a Mounting Collar Kit that attaches to the slip ring rotor section and connects to the shaft with set-screws. The outer portion of the slip ring (OD) is soft mounted using a Drive Adapter Kit. If the OD is hard mounted in a housing or with a flange, the ID may be soft mounted using a flexible coupling. Hard mounting both the rotor and stator is not recommended.

Mounting Accessories

The Mounting Collar Kit attaches to either end of the slip ring rotor and facilitates mounting to a shaft by means of 2 set-screws located approximately 100° apart. All mounting collars add 0.50 inch to the overall unit length.

Drive Adapter Kits are the perfect solution for soft mounting the stator section of the slip ring. This simple pin-in-slot arrangement prevents system concentricity or axial run-out problems from being transferred into the slip ring.

Mounting Accessories For Standard and Plus W Series			
Bore Size (Inch)	W-Series	Mounting Collar Kit Part Number	Drive Adapter Kit Part Number
1.5	Standard	W1500086	W1500087
1.5	Plus	W1500090	W1500087
3.0	Standard	W3000046	W1500087
3.0	Plus	W3000069	W1500087
4.0	Plus	W4000035	W1500087
6.0	Plus	W6000021	W1500087
9.0	Plus	W9000019	W1500087

Replacement Brush Blocks Standard and Plus W-Series		
Bore Size (Inch)	Circuit Type	Part Number
1.5	Signal	W1500053
	Power	W1500088
3.0	Signal	W3000057
	Power	W3000058
4.0	Signal	W4000029
	Power	W4000030
6.0	Signal	W6000019
	Power	W6000017
9.0	Signal	W9000011
	Power	W9000012

Replacement brush block assemblies are easy to install with a standard screw driver and socket wrench. They are made of the same reliable silver composite brushes that are provided on the original unit. Contact the factory for assistance. Custom formulations of silver composite brushes with additives can extend brush life or be used in adverse environments.