



Model 830 Brushless Slip Ring

Conductors: Eight Conductor
Amps: 2@4 Amps, 6@30 Amps
Volts: 250

The Mercotac® model 830 brushless slip rings are reliable, cost-effective, and versatile for demanding applications in aerospace, defense, medical, industrial, and more. Made of high-quality materials, they withstand harsh environments, providing consistent connections with a liquid metal conduction path, eliminating brush-type slip ring issues.

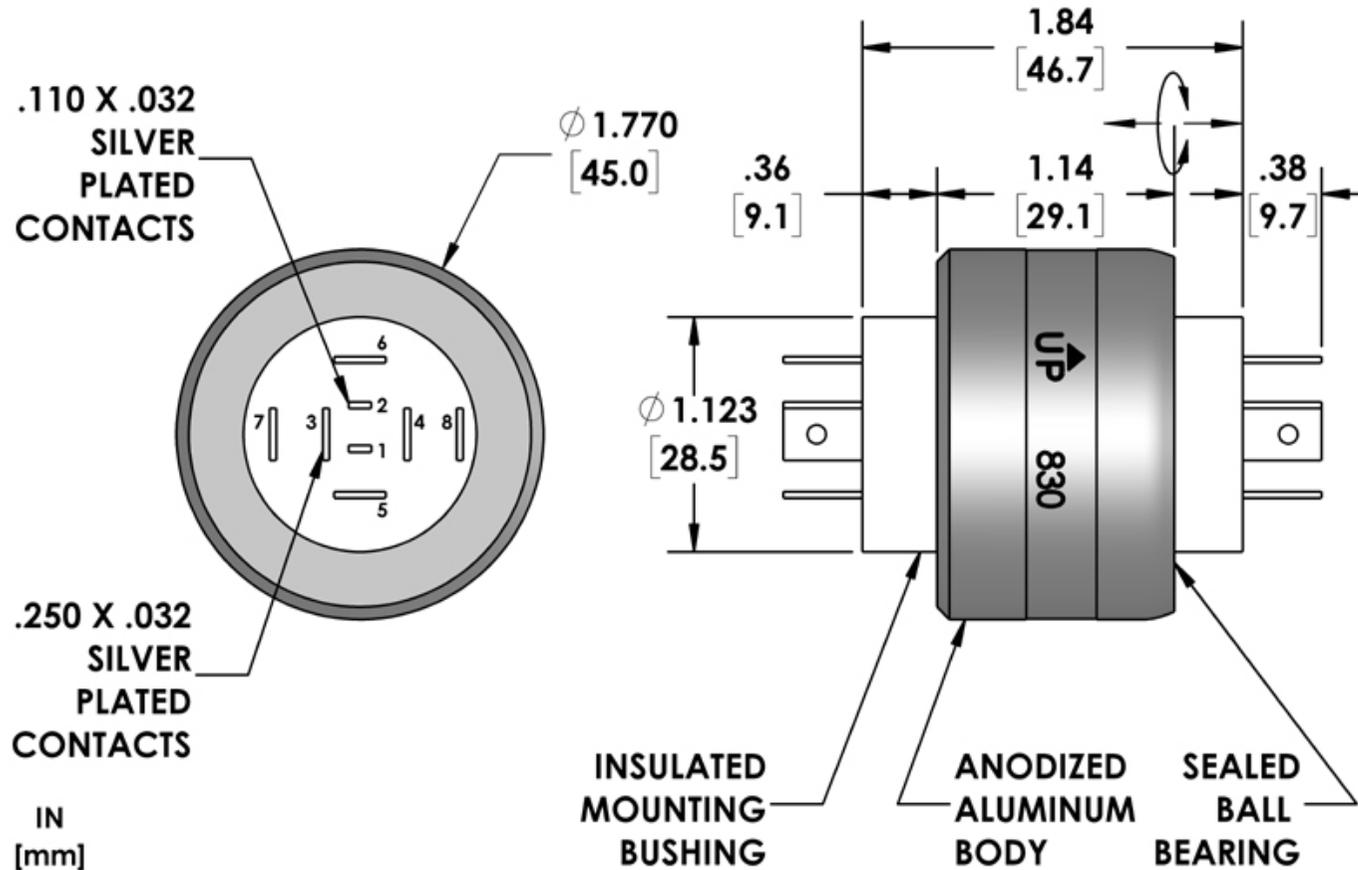
Advantages:

- Durable, compact, and low cost
- Use for signal and/or power connection
- Easy to install and replace
- IP 51 protection rating with boot kit
- Lightweight with robust metal construction
- Long-lasting, energy efficient, and no maintenance
- Made in the USA

[SPEC SHEET](#)[CAD DOWNLOAD](#)

Model 830 Product Specifications

Dimensions



Details:

- Disconnects are included
- 55252 Large Straight Disconnect (Qty. 6)
- 55251 Large Flag Disconnect (Qty. 6)
- 55253 Shrink Tube (Qty. 6)
- 55110 Small Straight Disconnect (Qty. 4)
- Available with stainless steel ball bearing (830-SS) (recommended for wet or corrosive environments).
- Dust/Splash [Boot Kit](#) available.

Specifications

Model No.	Terminals	Body Material	Bearing Type	Max. Rotational Torque (gf-cm)	Max. Voltage Rating (AC/DC)	Max. Current Rating (Amps)	Max. Rotational Speed (RPM)	Operating Temp. Min °F (°C) Max °F (°C)	Max. Frequency (MHz)	Contact Resistance (mΩ)	Circuit Separation (MΩ)
830	8	Anodized Aluminum	Chrome Steel	1000	250	2@4 / 6@30	200	Min -20 (-29) Max 140 (60)	100	<1	>25
830-SS			Stainless Steel								

"SS" designator indicates stainless steel ball bearing (recommended for wet or corrosive environments)

Accessories

Description: Boot Kit Parts
Item #: 57830

- Vinyl **Boot Kit** for dust and splash protection
- IP51 protection rating



Description: Boot Kit Shown Assembled
Item #: 57830

- Vinyl **Boot Kit** for dust and splash protection
- IP51 protection rating



Description: Large Flag Disconnect, Insulated
Item #: 55251

- 16 AWG - 14 AWG
- Qty. 6 included
- Maximum recommended Amps: 15



Description: Large Straight Disconnect, Non-Insulated
Item #: 55252

- 16 AWG - 14 AWG
- Qty.6 included
- Maximum recommended Amps: 15



Description: Small Straight Disconnect, Insulated
Item #: 55110



- 22 AWG - 18 AWG
- Qty. 4 included
- Maximum recommended Amps: 4

Description: Shrink Tube
Item #: 55253



- Qty. 6 included

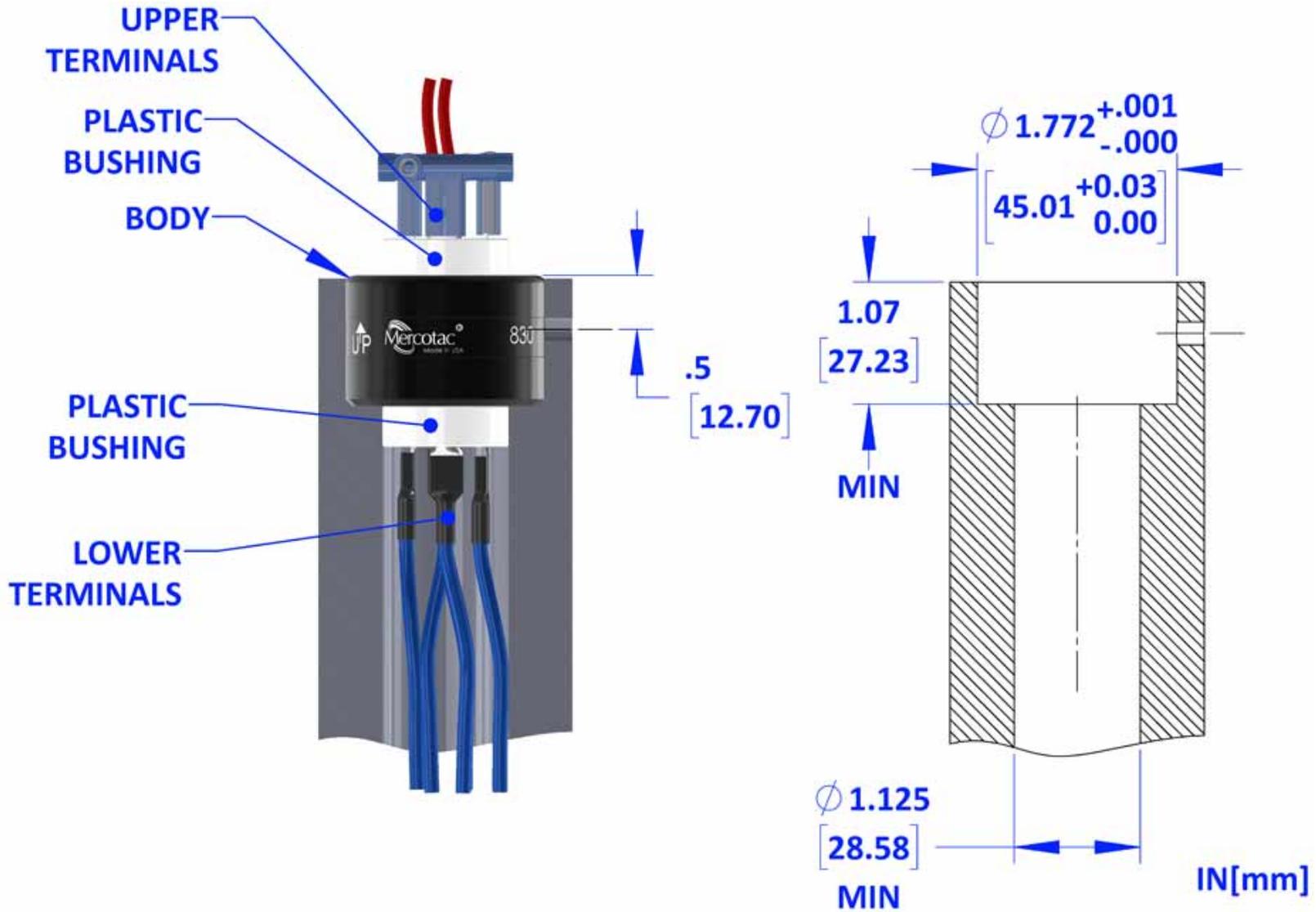
Description: Other Disconnects

- Disconnects for other wire gauges are available and can be substituted for the standard disconnects(22-18 AWG and 12-10 AWG). See [Ampacity Table](#)

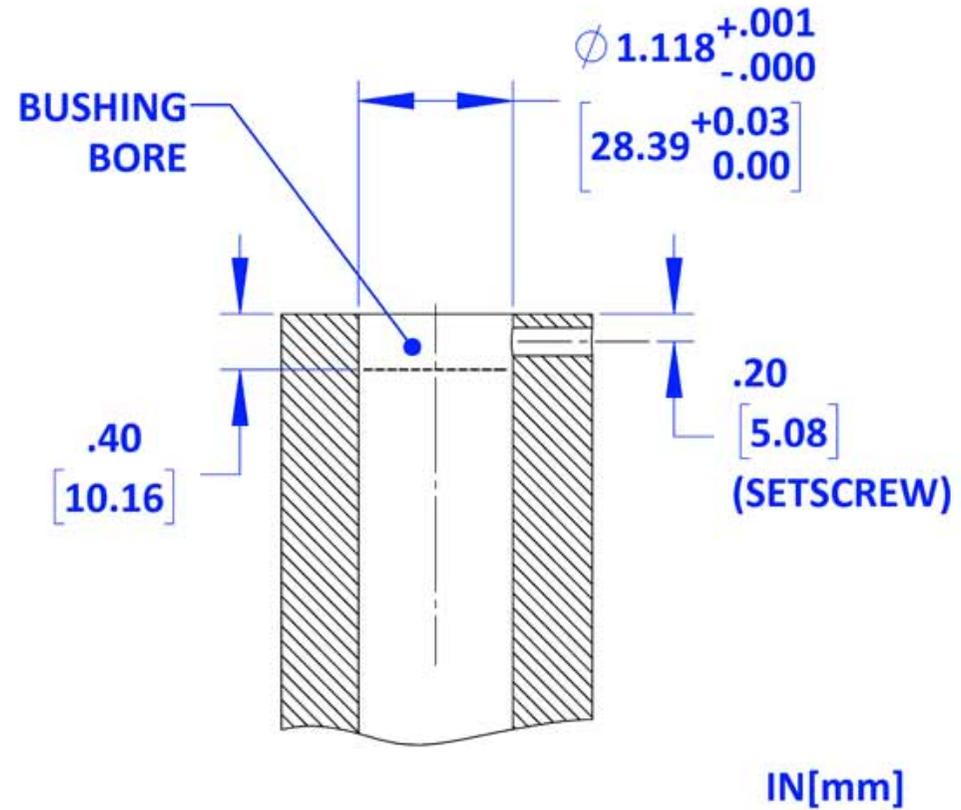
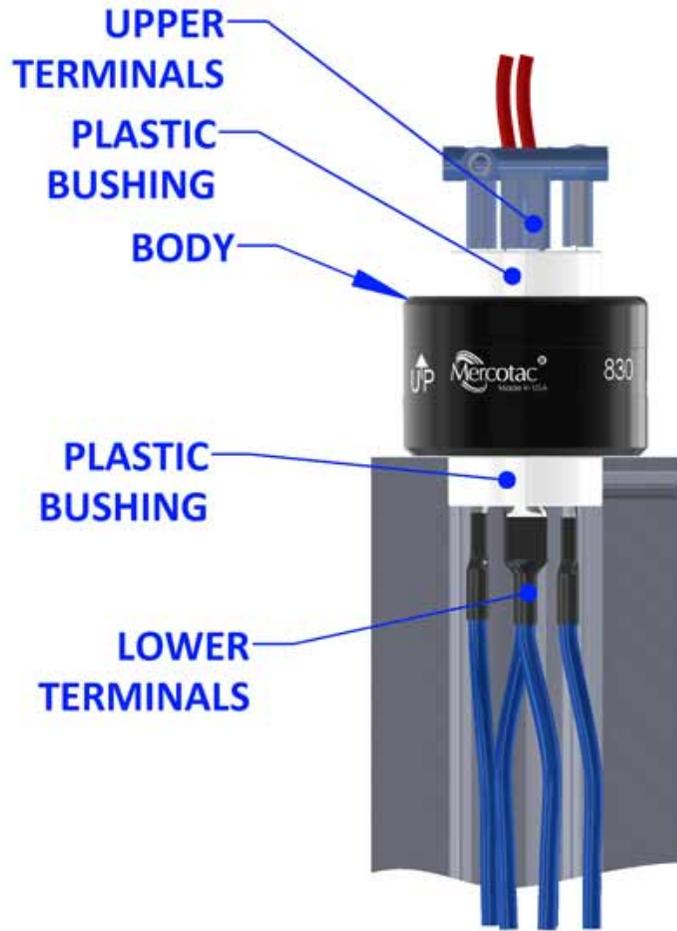
Mounting

Model 830 is typically mounted by either the black body or the white plastic bushing on either end using a set screw or split clamp. When used horizontally, mount the Mercotac so the body of the connector rotates.

Body Mount

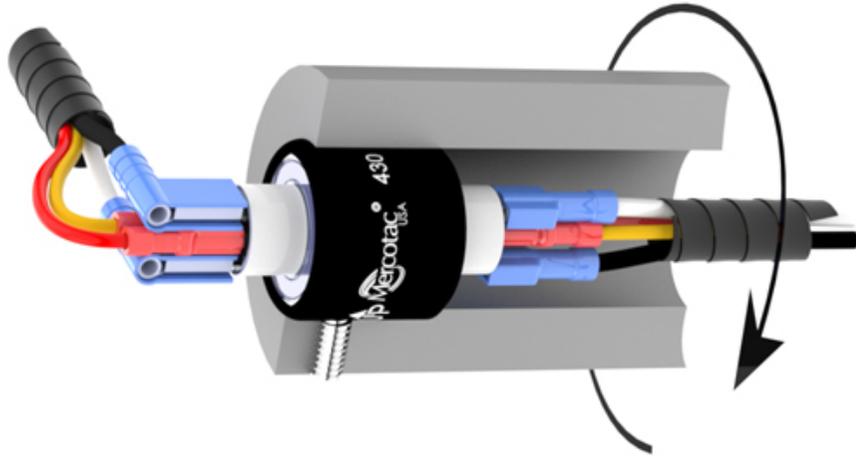


Bushing Mount

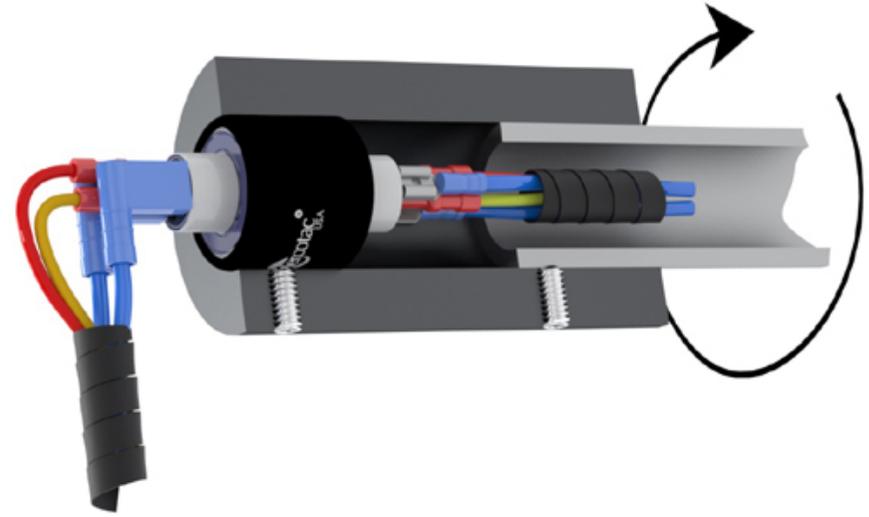


Horizontal Mount to Body

Adaptor Mount to Body

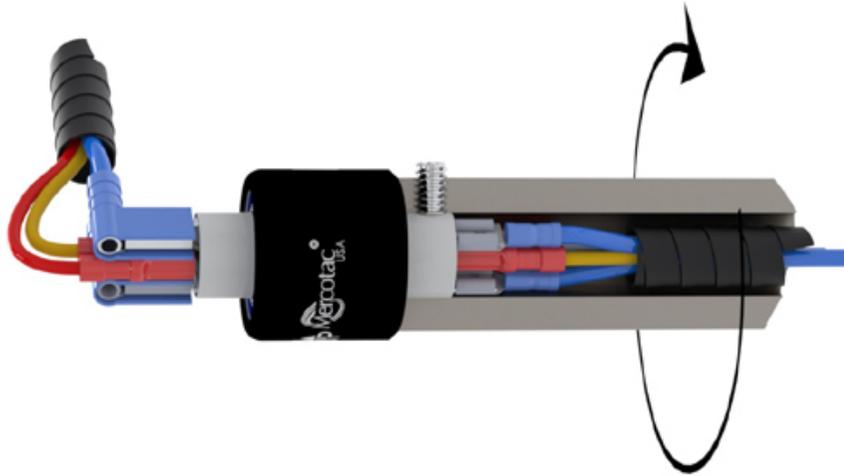


Good mounting method
(but vertical orientation is better)



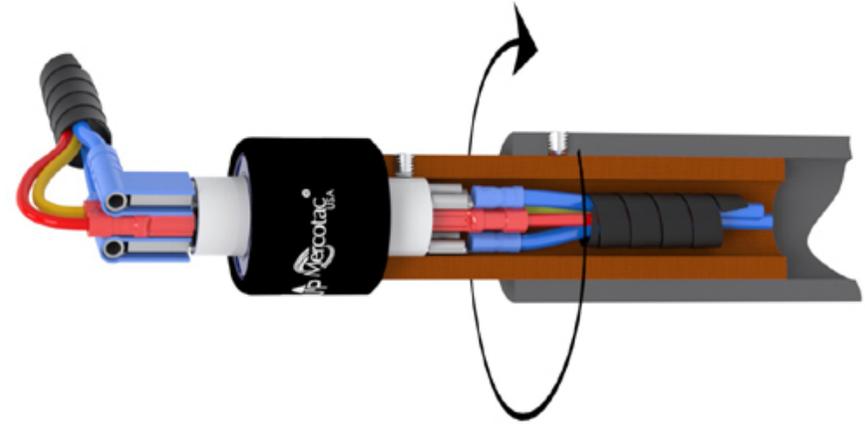
Use when the shaft diameter is smaller
than the body of the Mercotac.

Horizontal Mount to Bushing



Used if the shaft cannot be fitted to the body diameter.

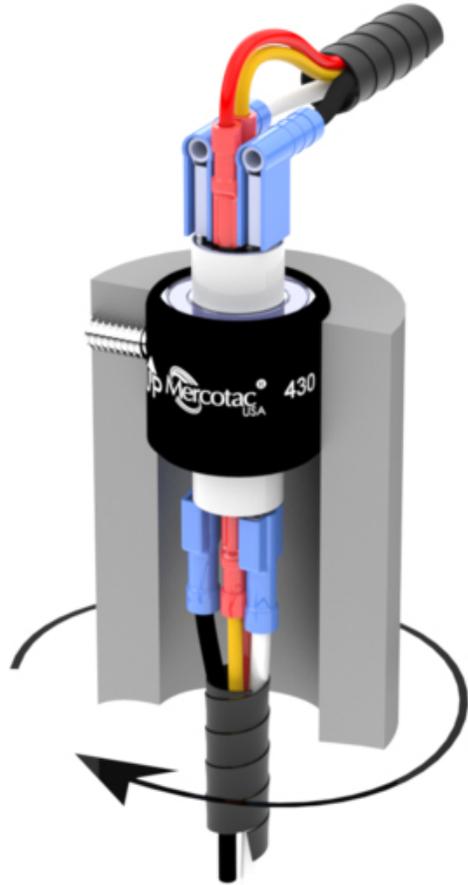
Thermal Insulated Mount to Bushing



May be needed if thermal insulation is necessary
Used if the shaft cannot be fitted to the body diameter.

Top Mount to Body

Bottom Mount to Bushing



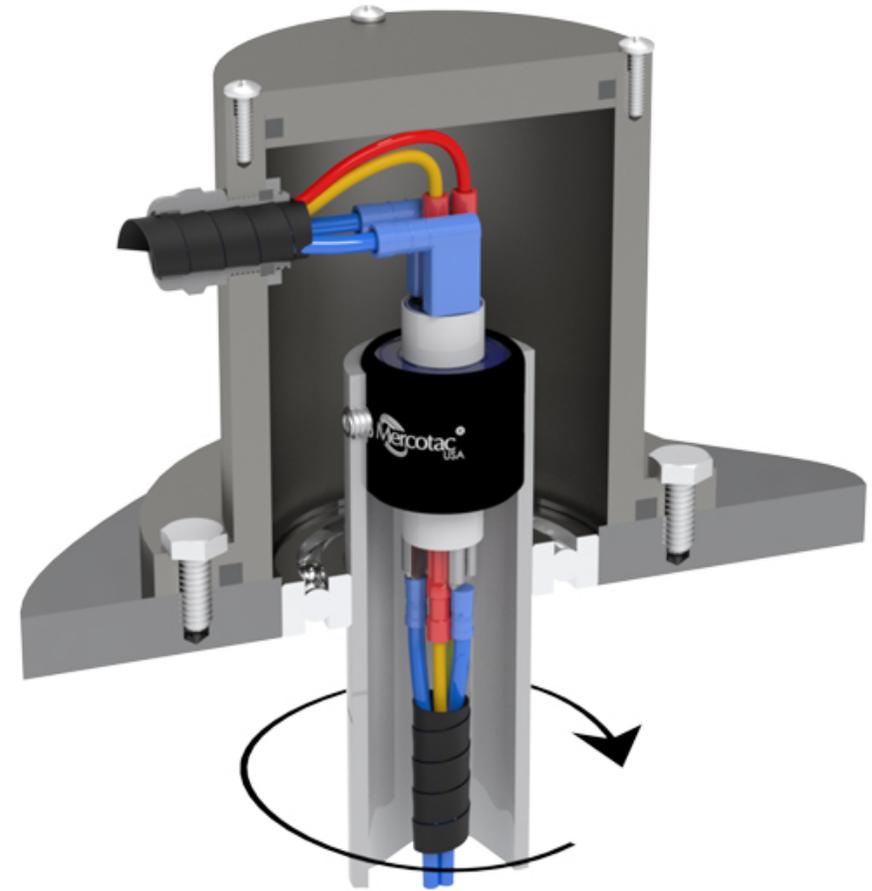
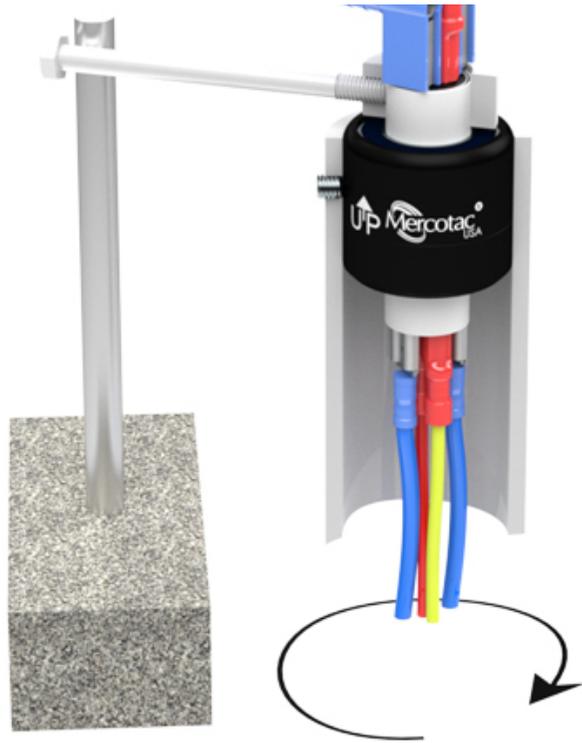
Best mounting method.



Floating Torque Arm Mount to Body



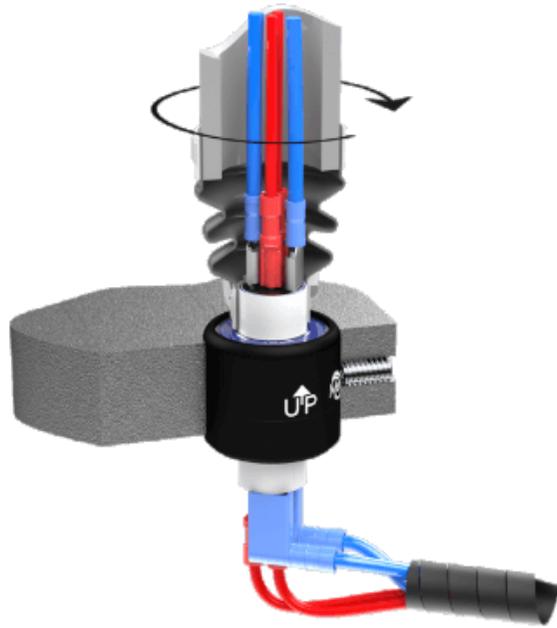
Protective Housing Mount to Body



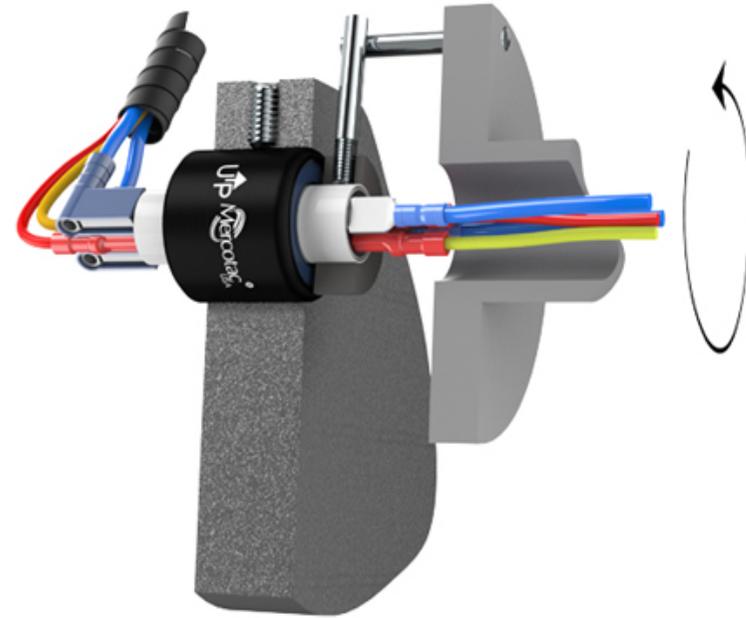
Recommended for wash-down or dirty environments.
Also recommended for food processing .

Vibration Isolation Mount to Body

Vibration Isolating Mount to Body



With flexible bellows.



With floating drive coupling.

Installation Notes:

- The up arrow should not point below horizontal.
- Do not solder to or bend terminals.
- Avoid lateral forces and mechanical loads (overly stiff or tight wires).
- Do not rigid mount both ends of the Mercotac.
- Limit the mounting eccentricity (runout / wobble) to .005" (.13mm).
- Provide overload protection within the circuit.
- Avoid vibration and bumping motions.

Connections

Model 830 Standard Wire Connections



1. Wire connections, mounted inside rotating shaft.
2. Stationary end showing standard wire connections.
3. Wires crimp to terminals.
(Suggested tool: Thomas & Betts #WT 112M)

Model 830 Wire Connections with Optional Boot Kit



Cutaway view.

Wire connections, mounted inside rotating shaft.

Stationary end showing optional boot kit.

Wire connections, mounted inside rotating shaft.

Stationary end showing optional boot kit.

Applications



The Mercotac model 830 brushless slip rings are a reliable, cost-effective, and versatile solution for demanding applications in industries such as defense, medical, industrial, and more. Made of high-quality materials, these slip rings are designed to withstand harsh environments. With a liquid metal conduction path, they provide consistent and uninterrupted connections throughout their lifespan, eliminating issues common with brush-type slip rings. Their applications include defense (tanks, ships, and military vehicles), medical (MRI machines and equipment), industrial (automation, wind turbines, robots, and machinery), and others. The Mercotac model 830 slip rings are essential for industries requiring reliable electrical connections.

Check out our [Applications](#) page for more examples of how Mercotac products are utilized.

Learning Center

Guidance for using Mercotac® Brushless Slip Rings in engineering designs.



Learn about our Mercotac® Construction & Materials: Body Materials, Bearing Types, Conductors/Terminals, Thread Sizes, Mounting Options.
[Learn More](#)



Learn about Mercotac® Electrical Characteristics: Voltage Rating, Current Rating, Contact Resistance, Circuit Separation, Operating Temperature, Frequency.
[Learn More](#)



Learn about Mercotac® Rotational Characteristics: Rotational Speed, Rotational Torque.
[Learn More](#)

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