

Weatherproof Tubular Slip Ring Assembly

Model BA-T-1.2W

- Ideal for automotive half shaft
- Mounts on shafts up to 1.2" in diameter*
- Optional 60 pulse encoder
- Built-in strain gage amplifier
- Rugged stainless steel construction
- Permanently lubricated bearings
- Instrumentation quality rings and brushes
- High level signal output



*Larger diameter bores available, consult factory

Description

Michigan Scientific's *BA-T-1.2W* Weatherproof Slip Ring Assembly is ideal for applications that require a slip ring to be mounted directly on a rotating shaft. Designed to make long-term, all-weather (not submersible), torque measurements on automotive half shafts, the *BA-T-1.2W* can be used in other applications with shafts up to 1.2 inch diameter. The slip ring sealing system protects against water spray, grit, dust, mud, slush, and snow.

A major feature of the *BA-T-1.2W* is its built-in strain gage amplifier located on the spinning side of the slip ring. This arrangement greatly improves the signal quality of the system by reducing errors due to long lead wires, connector resistance variations, and electro-magnetic interference.

Four of the seven slip ring circuits in the *BA-T-1.2W* are used to power and control the built-in model *AMP-SG1-M1* amplifier (see product literature of model *AMP-SG1-M1* for features and specifications). Two additional ring circuits are used to transmit a high-level data signal. The seventh ring is for use with an optional configuration that utilizes two built-in amplifiers to provide two high-level data signals. Connections from the strain gage bridge to the amplifier are made via color-coded solder terminals located on the slip ring rotor. Each slip ring assembly includes a 15 ft stator cable with a protective rubber boot for the connector at the slip ring; electronics to power and control the built-in amplifier are sold separately.

Specifications

Circuits	7
Data Channels	2 (high- level output)
Temperature Range, slip ring	-40°F to 300°F (-40°C to 149°C)
Encoder operating temperature range	-40°F to 300°F (-40°C to 149°C)
Amplifier operating temperature range	-67°F to 257°F (-55°C to 125°C)
RPM Rating	3500 RPM
Width	2.375 in (60.3 mm)
Diameter	3.285 in (83.5 mm)
Weight	2.3 lbs (1.0 kg)

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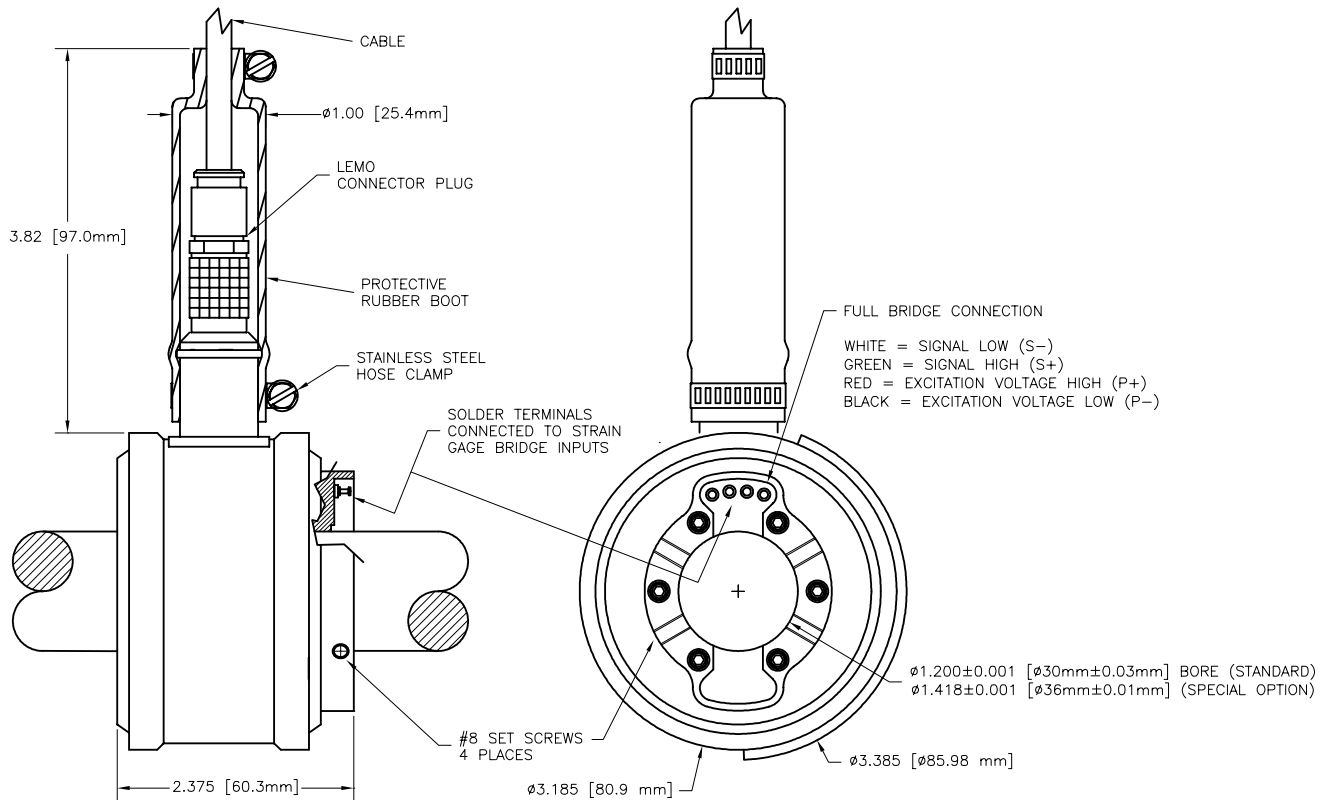
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BA-T-1.2W Configuration



NOTE: THE AMPLIFIER BUILT INTO THE ROTOR OF THE SLIP RING ASSEMBLY PROVIDES EXCITATION TO THE STRAIN GAGE BRIDGE

C566028A
BA-T-1.2W
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Encoder option

The encoder included in the *BA-T-1.2W/E60* tubular slip ring produces a 60 pulse/revolution 5-volt square wave. The TTL compatible signal is produced by a hall-effect sensor, which allows speed to be determined down to 0 rpm. The voltage required to drive the encoder can range from 5.5 to 45 DC volts.

Thermocouple amplifier option is available

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