

QuantumTMR™

Custom TMR Position Sensors



Typical Application Examples



Suspension Rocker Positon Sensor

F1 Pushrod Sensor



WEC Brake Master Cylinder Sensor

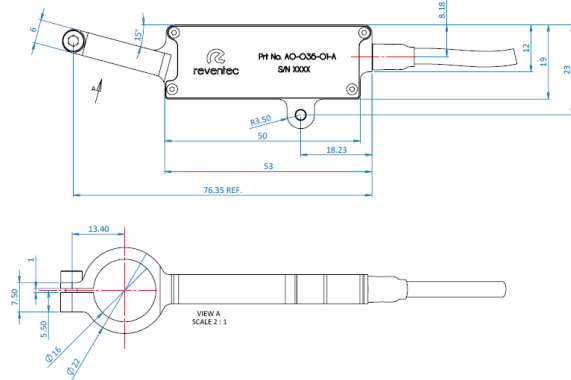
Our proprietary QuantumTMR™ position technology can be custom designed to your exact requirements. We can accurately and reliably detect both linear and angular displacement through non-ferrous wall thicknesses up to 40mm. Standard motorsport measurement applications include: hydraulic piston travel, suspension component monitoring, steering position and throttle position sensing.

- Solid-state, non-contacting displacement measurement
- Typical $\pm 0.5\%$ of measurement accuracy
- 12bit Resolution
- Designed for long-term reliability in harsh environments
- FIA F1 homologation certified
- Adaptable packaging for restricted space envelopes
- Remote sensing options for extended temperature operation above $+125^{\circ}\text{C}$

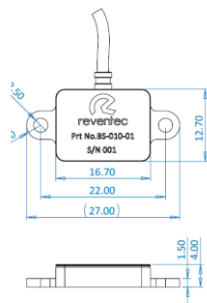
Reventec's Remote Sensing Micro TMR Technology



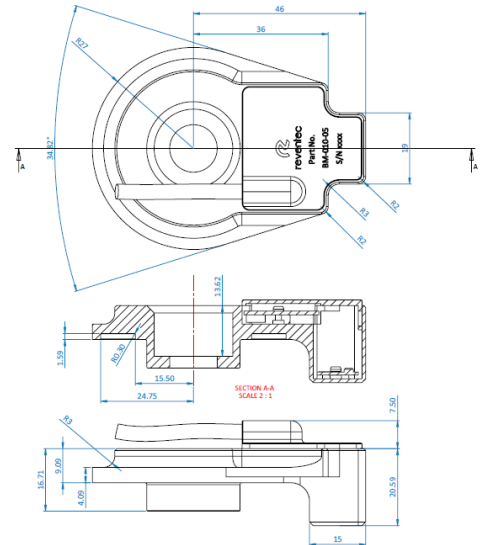
Example Custom Sensor Dimensions



Pushrod Sensor: +/- 30mm of linear measurement



Remote Sensing Head: +/- 40mm of linear measurement



Rocker Position Sensor: +/- 45° of rotary measurement



Measurement

Type	Angular and Linear Displacement
Typical Accuracy	±0.5% of measurement
Measurement Rate	5kHz
Measurement Range	±40mm linear and 0-360° rotatory (Application specific)

Electrical

Supply Voltage	+6VDC to +40VDC
Typical Operating Current	<12mA at +12VDC
Overvoltage Protection	+45 VDC continuous
Reverse Polarity Protection	-45 VDC continuous

Analogue Output

Type	Voltage
Voltage Output Range	0-5V or 0-10V
Typical Output Calibration	+0.5V to +4.5V (Fully Configurable)
Resolution	12 bit
Stability	±0.1% over full temperature range

Dimensions

Sensor	Customer Specific
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Environmental

Environmental protection	IP67, IP68 (sensor only)
Vibration	Designed to meet: 10Hz to 2000Hz sine sweep @10G (24hrs per each axis)
Shock	Designed to meet: 50G half sine wave for 11ms, 10 times each axis
Remote Sensing Head Operating Temperature	-40°C to +150°C
Processing Electronics Operating Temperature	-40°C to +125°C

Configuration Interface

Type	RS-232 via FTDI USB cable. See accessories
GUI	Available on request

Mechanical

Construction Material	Anodised Aluminium, Stainless-Steel, Titanium, PEEK or a combination
Mass	From 15g

Wiring Specification

Connector Options	Flying lead. Deutsch ASL 5 Way Connector Deutsch ASX 5 Way Connector Custom (Contact Us)
Sleeve Elastomer	To customer specification; Typically DR-25 or RW-200E
Boot Elastomer	Viton FEP
Wire Type	5 core, Type 55, 26 AWG or 28AWG

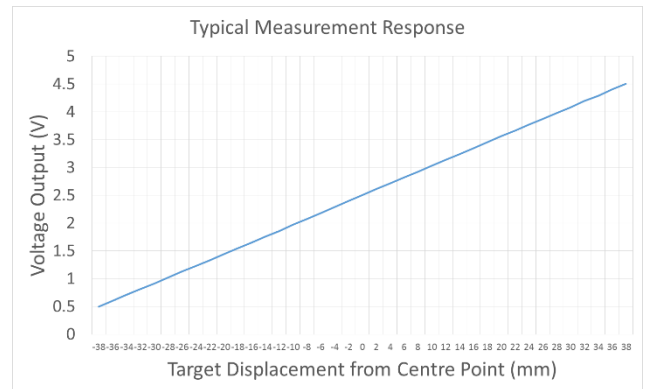
Wiring Definition

Description	Wire Colour	Pin Out
Supply (+)	Red	1
Ground (GND)	Black	2
Signal (0.25-4.75V)	Yellow	3
Tx Comms (Transmit)	White	4
Rx Comms (Receive)	Green	5

Accessories

USB calibration cable	P/N: 07-003-01
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Typical Measurement Performance



Specifications may be subject to change without prior notice

Product Code: QuantumTMR | Document: QuantumTMR-GEN- | Version 1

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