

High Resolution Wheel Pulse Transducer

Model WPT/E_/S Wheel Pulse Transducer

- Easy installation
- Up to 5,000 ppr
- Up to IP67 protection
- NIST traceable calibration
- Used for precision speed measurement, vehicle brake testing, distance measurement, and map validation



Description

The *WPT/E_/S Wheel Pulse Transducer (WPT)* is a rotation sensor mounted outboard of a vehicle wheel. The rotation sensor is used to measure rotational velocity, angular position, and direction of rotation. The assembly consists of an encoder in a rugged housing, a wheel adapter plate, stator restraint, and cable. The assembly is mounted directly on the customer's wheel via *Quick Connect Lug Nuts* or *Extended Lug Nuts*. The output signals generated by the sensor can be used to determine wheel speed, acceleration, distance, and vehicle speed.

The *WPT* is very rugged and has been designed to accept contacting rotary seals. Units ordered with these seals are waterproof, with an IP67 rating. For higher speeds in clean and dry conditions, order units without the contacting rotary seals.

Specifications

Electrical Specifications	
Input Voltage	+5 to +20 Vdc
Input Current	60 mA
Output Type	0-5 V TTL
Reverse Voltage Protection	20 V
Encoder Accuracy (Maximum Cumulative Error)	0.25 °
Mechanical Specifications	
Size (W x D x H)	2.50 x 2.15 x 3.52 in (63.5 x 54.61 x 89.4 mm)
Weight (Sensor Only)	14.5 oz (410 g)
Temperature Range	Up to 2,000 ppr: -40° C to 100° C (-40° F to 212° F) Above 2,000 ppr: -25° C to 100° C (-13° F to 212° F)
Protection Rating	IP67, NEMA 6
Maximum Speed With Seals	3,000 rpm
Maximum Speed Without Seals	Under 2,000 ppr: 10,000 rpm Above 2,000 ppr: 8,500 rpm
Unit Torque With Seals	21 in-oz
Unit Torque Without Seals	3 in-oz

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01-5-22
Rev. A

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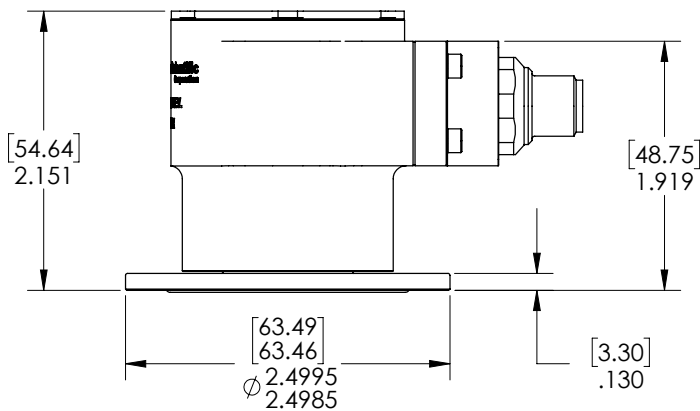
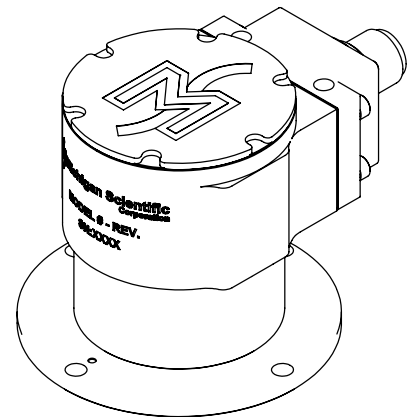
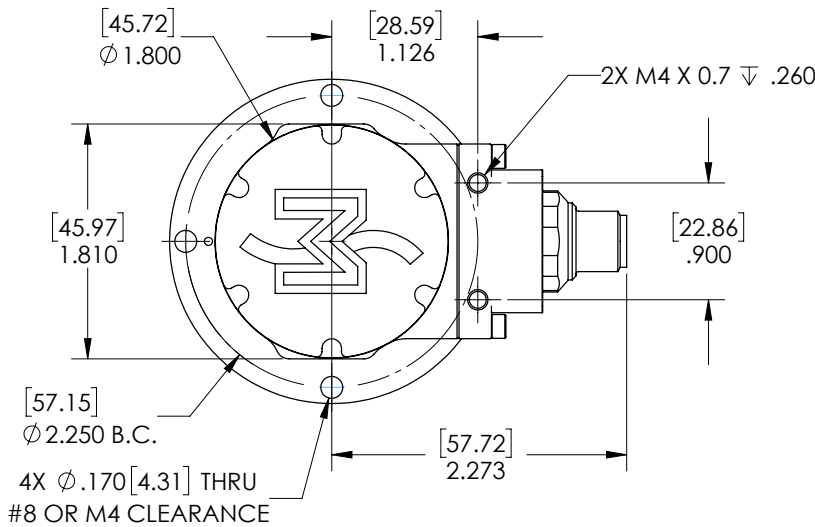
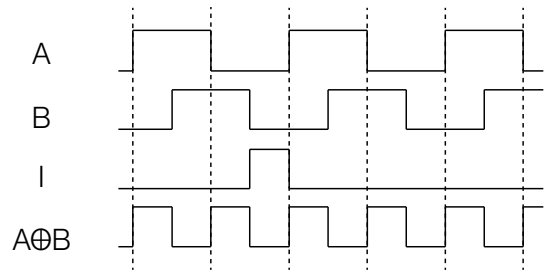
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High Resolution Wheel Pulse Transducer

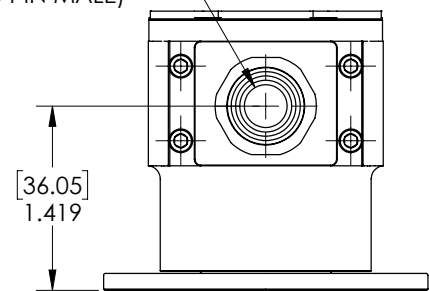
Encoder Output Options

Optical encoder resolutions ranging from 50 to 5,000 are offered. Each of these encoder choices have four outputs. Outputs A and B are in quadrature, meaning they are 90° out of phase. Output I is an index pulse. Output A⊕B is the exclusive OR of A and B, which doubles the basic resolution of the encoder. The outputs, 0 to 5 volt pulses, can drive TTL loads.

Encoder Outputs



M12 CONNECTOR (8-PIN MALE)



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