

# High Resolution Wheel Pulse Transducer

## Model WPT/E\_/S Wheel Pulse Transducer

- Easy installation
- Up to 5,000 ppr
- 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.

## Specifications

Electrical Specifications	
Input Voltage	+5 Vdc to +20 Vdc
Input Current	60 mA
Output Type	0 V to 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 in x 2.15 in x 3.52 in (63.5 mm x 54.6 mm 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	2,000 r/min
Unit Torque	21 in · oz

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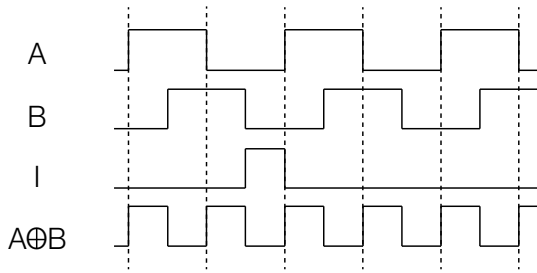
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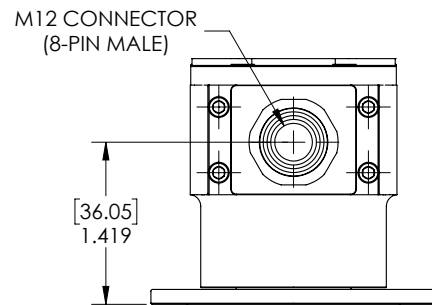
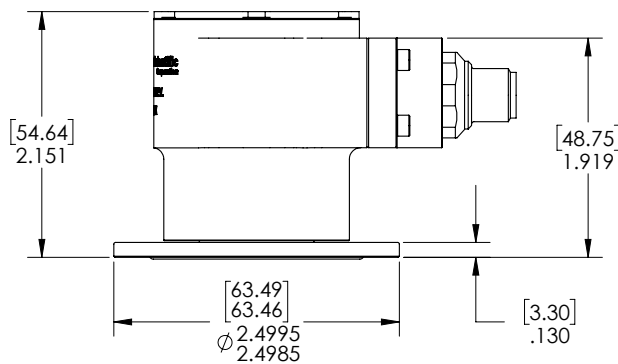
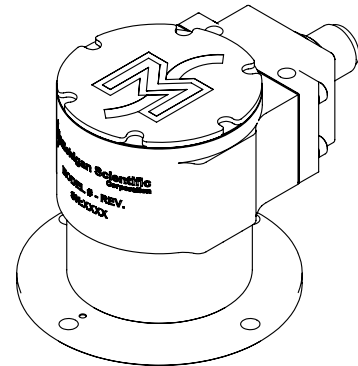
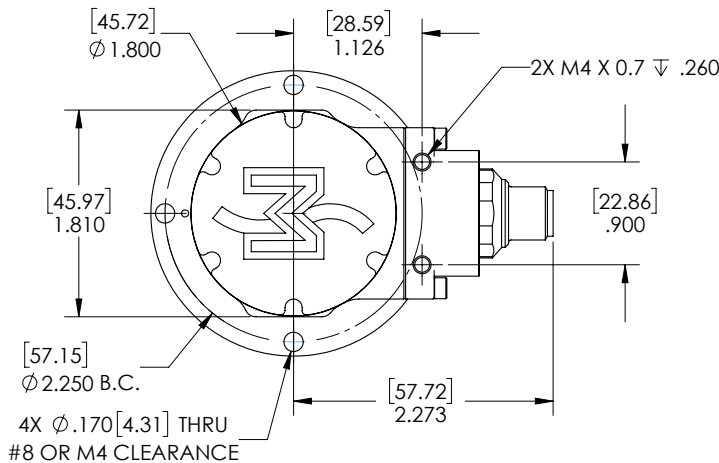
## Encoder Output Options

Standard resolutions are listed in the table below. Custom resolutions are available upon request. 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



Standard Resolutions	Output Channels: Pulses Per Revolution			
	A	B	I	A⊕B
E360	360	360	1	720
E512	512	512	1	1024
E1024	1024	1024	1	2048
E5000	5000	5000	1	10000



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