

MINIATURE LENGTH SENSOR CONTACT ROTARY SENSOR



ZMD Series



AU-ZMD0250B, 250 ppr length sensor with AU-W100060F, 152 mm (6") circumference urethane wheel. Shown smaller than actual size.

- Compact Size
- Quadrature Output
- Built-In Spring Tensioning
- Mounts in Any Position
- 4.75 to 28 Vdc Input Voltage
- NPN Open Collector Output

The ZMD Series miniature length sensor is compact in size and easy-to-use, designed for light to medium duty sensing applications. It features a built-in spring-loaded torsion arm that provides a simple-to-adjust torsion load, allowing the unit to be mounted in almost any orientation, including upside down. Using a 152 mm (6") circumference wheel, the ZMD can be used on almost any surface, while operating at speeds up to 3000 feet per minute. The housing is a durable, conductive composite material that will eliminate static build up. Whether you need to measure speed, position, or distances, the ZMD series sensor is the ideal solution.

SPECIFICATIONS

ELECTRICAL

Input Voltage: 4.75 to 28 Vdc maximum for temperatures up to 85°C; 4.75 to 24 Vdc for temperatures between 85 to 100°C (185 to 212°F), reverse polarity protected

Input Current: 100 mA max (65 mA typical) with no output load

Outputs: NPN open collector transistor, 20 mA maximum current

Maximum Frequency: 200 KHz standard

Noise Immunity: Tested to BS EN61000-6-2; BS EN50081-2; BS EN61000-4-2; BS EN61000-4-3; BS EN61000-4-6, BS EN500811 [Tested with 2 m (6.6') cable]

Symmetry: 180° (±18°) electrical

Quad. Phasing: 90° (±22.5°) electrical

Minimum Edge Sep: 67.5° electrical

Accuracy: Within 0.017° mechanical or 1 arc-minute from true position (for PPR>189)

MECHANICAL

Maximum Mechanical Speed: 6000 RPM. Higher speeds may be achievable, contact the factory

Shaft Material: Stainless Steel

Shaft Tolerance: +0.0000/-0.0004" (+0.000/-0.010 mm)

Radial Shaft Load: 5 lb. maximum rated load of 2 to 3 lb for bearing life of 1.2 x 10¹⁰ revolutions

Axial Shaft Load: 5 lb. maximum rated load of 2 to 3 lb for bearing life of 1.2 x 10¹⁰ revolutions

Starting Torque: 0.05 oz-in IP50; 0.4 oz-in IP65

Electrical Connection: 2 m (6.6') cable, (foil and braid shield, 24 AWG conductors). Drain wire internally connected to case

Mounting: Pivot Shaft can be mounted from either side of the housing and is field reversible

Housing: Stainless steel fibers in a high temperature nylon composite

Weight: 142 g (5 oz) typical

ENVIRONMENTAL

Operating Temperature: -20 to 85°C (-4 to 185°F)

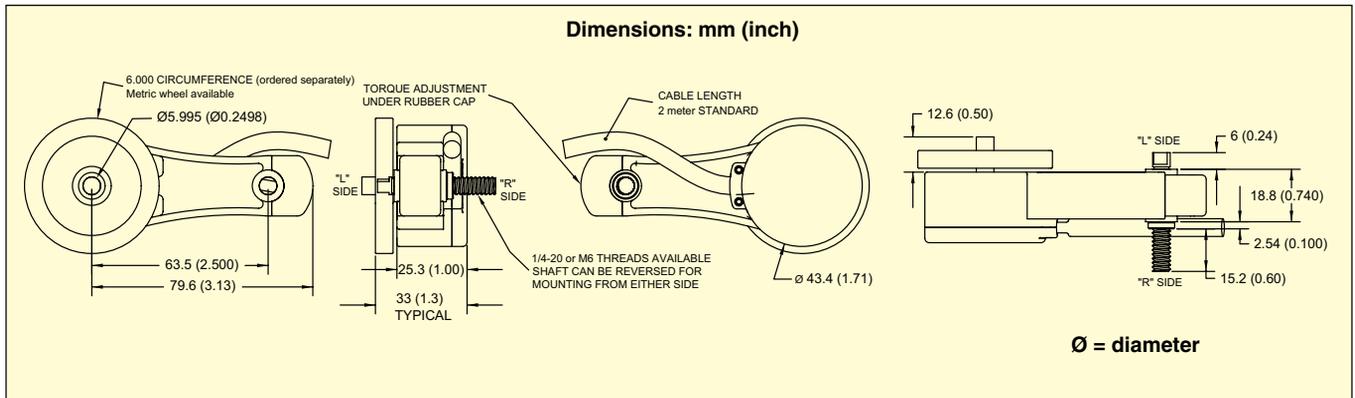
Storage Temperature: -25 to 85°C (-13 to 185°F)

Humidity: 98% RH non-condensing

Vibration: 10 g @ 58 to 500 Hz

Shock: 80 g @ 11 msec duration

Sealing: IP50



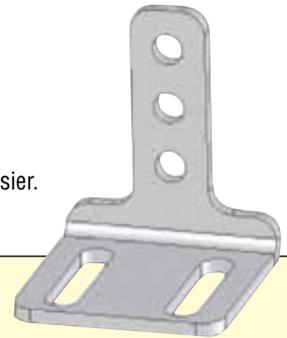
Open Collector Output Wiring

The ZMD Series length sensors have open collector outputs. An open collector output brings the uncommitted collector of the encoder switching device to the external world. Because the collector element is not associated with the sensor supply voltage, the sensor output collector may be "pulled up" to external voltages different than the encoder supply voltage (30 Vdc maximum). NPN open collector outputs are current sinking devices. An output signal will not be generated unless a pull-up resistor is connected from the open-collector to the positive side of an external supply. The same supply can be used for powering the unit and for the pull-up resistor.

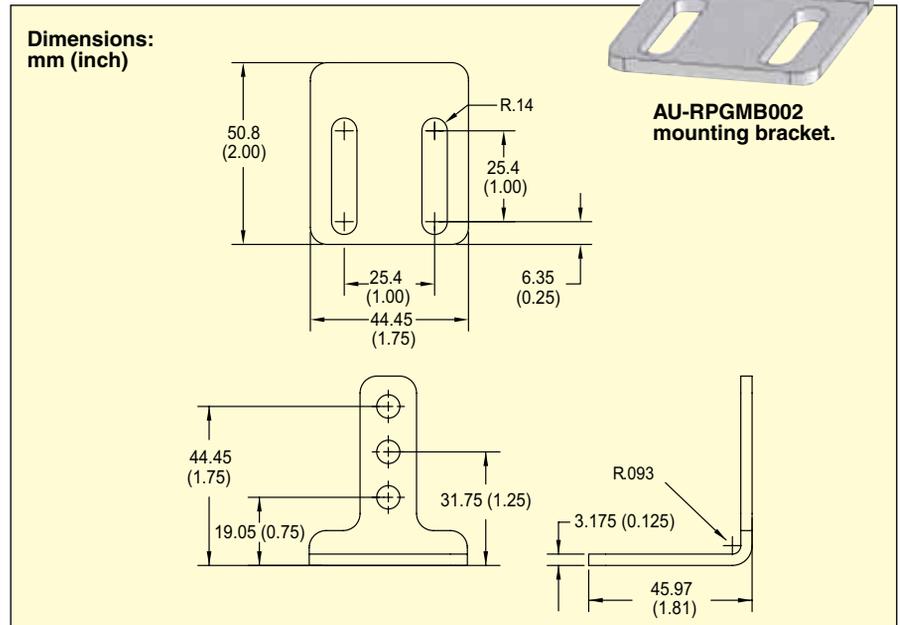
FUNCTION	CABLE WIRE COLOR
+Vdc	Red
Com	Black
A	White
B	Green
Shield	Bare

Mounting Bracket

This accessory angle mounting bracket allows for a variety of mounting positions and makes installation of the ZMD even easier.



AU-RPGMB002
mounting bracket.



To Order Visit omega.com/zmd_series for Pricing and Details

MODEL NO.	DESCRIPTION
AU-ZMD0250B	Miniature length sensor with quadrature output, 250 ppr.
AU-ZMD1000B	Miniature length sensor with quadrature output, 1000 ppr.
AU-W100060F	152 mm (6") circumference urethane measuring wheel
AU-W100060K	152 mm (6") circumference knurled measuring wheel
AU-RPGMB002	Mounting bracket

Ordering Example: **AU-ZMD0250B** miniature length sensor with 250 ppr and **AU-W100060K** 6" circumference knurled measuring wheel. **AU-ZMD1000B** quadrature length sensor with 1000 ppr, **AU-W100060F** 6" urethane measuring wheel, **AU-RPGMB002** mounting bracket.