

FLANGE MOUNT ROTARY PULSE GENERATOR

HEAVY-DUTY PRECISION ENCODERS

NEW

ZDH Series



- High Precision Accuracy
- NPN Open Collector Output
- 9.5 mm (0.375") Shaft Diameter
- Quadrature Outputs with Indexing
- NEMA 4, 13 (IP66)

The ZDH Series of sensors are heavy-duty, extremely rugged, reliable, yet compact encoders designed for harsh factory and plant floor environments. These encoders are flange mount and conform to NEMA 4, and 13 (IP66) standards.

Applications

Typical applications include motion control feedback, machine control, process control, elevator controls, conveyors, textile equipment, robotics and food processing.

SPECIFICATIONS

ELECTRICAL

Supply Voltage: 4.75 to 28 Vdc, 100 mA maximum with no output load

Outputs: NPN open collector transistor, 100 mA maximum current

Maximum Frequency: Up to 1 MHz

Index: NPN open collector transistor. Positive pulse once per revolution, centered over output channel A

Input Ripple: 100 mV peak to peak at 0 to 100 KHz

Noise Immunity: Tested to BS EN61000-4-2; IEC801-3; BS EN61000-4-4; DDENV 50141; DDENV 50204; BS EN55022; BS EN61000-6-2; BS EN50081-2

Symmetry:

1 to 6000 CPR: 180° ($\pm 18^\circ$) electrical at 100 KHz output

6001 to 20,480 CPR: 180° ($\pm 36^\circ$) electrical

Quad Phasing:

1 to 6000 CPR: 90° ($\pm 22.5^\circ$) electrical

6001 to 20,480 CPR: 90° ($\pm 36^\circ$) electrical

Min Edge Separation:

1 to 6000 CPR: 67.5° electrical at 100 KHz output

6001 to 20,480 CPR: 54° electrical
>20,480 CPR: 50° electrical

Rise Time: Less than 1 microsecond

Accuracy:

200 to 1999 CPR: 0.017° mechanical (1.0 arc minutes)

2000 to 3000 CPR: 0.01° mechanical (0.6 arc minutes)

MECHANICAL

Maximum Mechanical Speed: 8000 RPM

Shaft Diameter: 9.5 mm (0.375")

Radial/Axial Shaft Load: 80 lbs. maximum rated load of 20 to 40 lbs. for bearing life of 1.5×10^9 revolutions

Starting Torque: 21.18 N-m (3.0 oz-in.)

Moment Of Inertia: 3.66×10^{-3} N-mm-sec² (5.2×10^{-4} oz-in-sec²)

Connector Type: 7-pin MS type (MIL-C-5015)

Housing: Black non-corrosive finish

Mounting: 2.0" flange mount

Weight: 311.8 g (11 oz)

ENVIRONMENTAL CONDITIONS

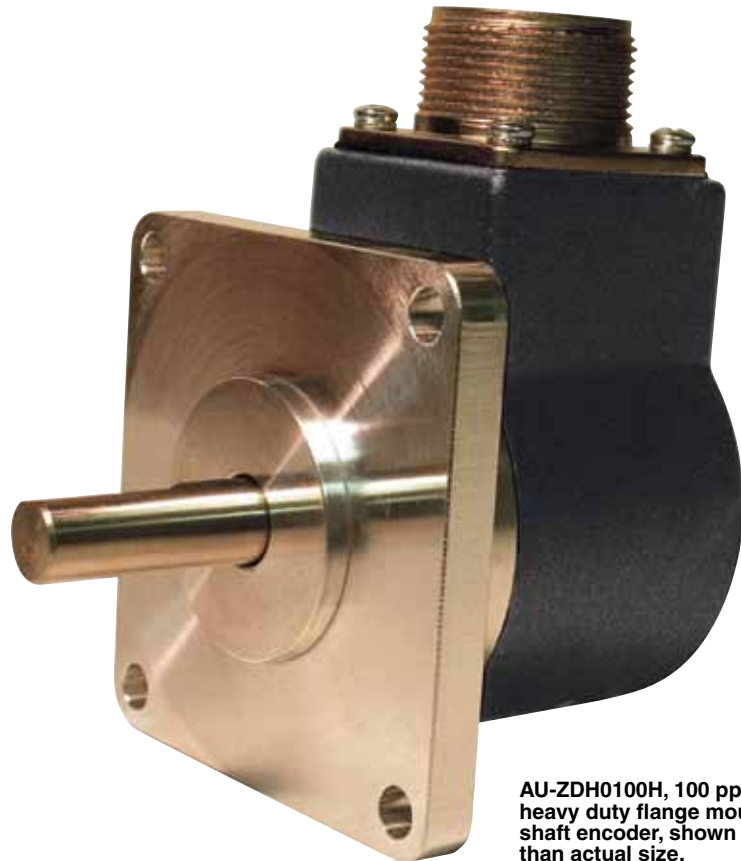
Operating Temperature: 0 to 70°C (32 to 158°F)

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

Humidity: 98% RH non-condensing

Shock: 75 g @ 11 msec duration

Sealing: NEMA 4, 13 (IP66) with shaft seal



AU-ZDH0100H, 100 ppr heavy duty flange mount shaft encoder, shown larger than actual size.



Open Collector Output Wiring

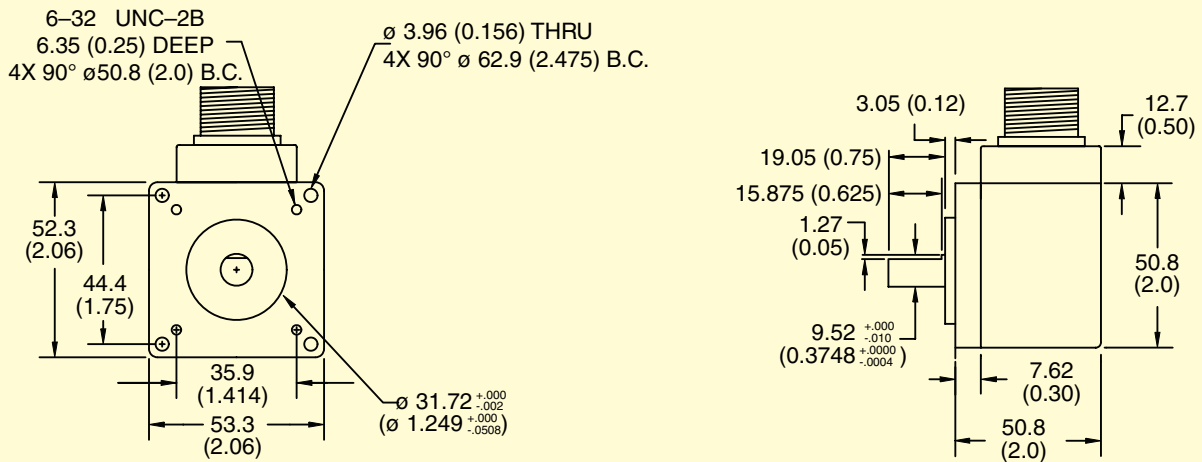
The ZDH Series of sensors have open collector outputs. An open collector output brings the uncommitted collector of the encoder switching device to the external world. Because the collector element is not associated with the sensor supply voltage, the sensor output collector may be "pulled up" to external voltages different than the encoder supply voltage (40 Vdc maximum).

FUNCTION	PIN	WIRE COLOR
+Vdc	A	RED
COMMON	B	BLACK
DATA A	C	WHITE
DATA B	D	GREEN
INDEX Z	E	ORANGE
CASE GROUND	F	BARE WIRE

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.

Dimensions: mm (inch)

ZDH



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

MODEL NUMBER	DESCRIPTION
AU-ZDH0100H	100 ppr, 51 mm (2") flange mount rotary pulse encoder
AU-ZDH1000H	1000 ppr, 51 mm (2") flange mount rotary pulse encoder

ACCESSORIES

MODEL NO.	DESCRIPTION
AU-CCBRPG00	7-pin MS connector
AU-CCBRPG02	7-pin MS connector with 3.05 m (10') long 24 AWG conductor with drain
AU-CCBRPG03	7-pin MS connector with 6.1 m (20') long 24 AWG conductor with drain
AU-RPGFC002	Flexible shaft coupling, 25 mm (1") long, 0.250 - 0.375"
AU-RPGFC003	Flexible shaft coupling, 25 mm (1") long, 0.375 - 0.375"
AU-RPGFC004	Flexible shaft coupling, 25 mm (1") long, 0.375 - 0.500"
AU-RPGFC006	Flexible shaft coupling, 25 mm (1") long, 0.375" - 6 mm

Ordering Example: AU-ZDH0100H, 2" flange mount rotary pulse generator, AU-RPGFC003, flexible shaft coupling, 0.375-0.375", and AU-CCBRPG00, 7-pin MS connector.