

DESCRIPTION

The RH-P wheeled encoder, also known as a Pulse Position Indicator (PPI), converts shaft rotation into quadrature square wave output pulses to provide an accurate and reliable means of digitizing position, rate, or length of travel. It is ideally suited for linear measuring applications when used with the optional measuring wheels. The number of pulses per each revolution of the shaft is determined by setting switches. For conveyor applications, accessories are available for mounting either above or below the conveyor belt/roller.

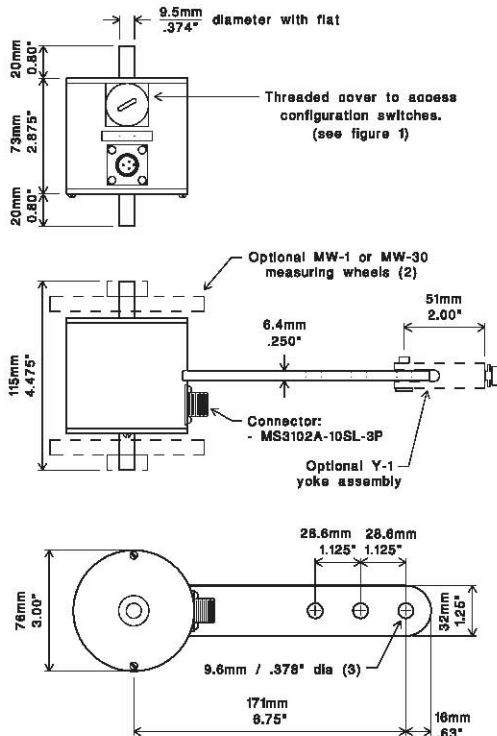
FEATURES

- Programmable Pulses per revolution
- A and B Outputs (quadrature)
- ESD Protection
- Short Circuit / Reverse Voltage Protected

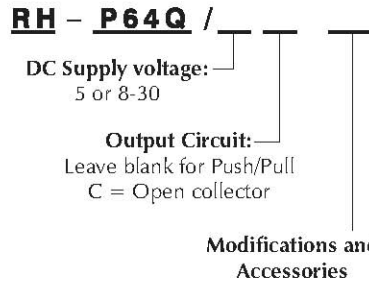


* Requires surge protection option if cable exceeds 100' / 30m or leaves the building.

DIMENSIONS



Configuration Options



Modifications and Accessories

Electrical

- Supply Voltage (V_{IN}):** (see configuration options) $5 \pm 5\%$ vdc or 8-30 vdc
- Supply Current:** 50ma maximum (no load)
- Output Current (I_O):** 50ma max source/sink
- Output circuit:** (See config. options and figure 2)
 - Push/Pull Combined sourcing/sinking output
 - Open collector NPN current sinking open collector output ($V_{CC}=30$ vdc max)

Operating temperature: -25° to $+85^\circ$ C

Maximum operating speed: 3,000 rpm

Outputs

Quadrature Outputs: Two outputs, A and B, have the selected number of pulses per revolution by setting switches 1 to 6 (see figure 1). A leads B by 90° for clockwise rotation when viewed from shaft end farthest from connector.

- Output Waveform:** 50/50 squarewave
- Pulse On-Off Ratio: $50\% \pm 10\%$
- Pulse Interval Jitter: $\pm 10\%$
- Quadrature Deviation: 30° (max)
- Pulse rise time: 2 μ sec (max)
- Pulse fall time: 5 μ sec (max)
- Voltage (high): $V_{in}-2.5$ vdc (min)
- Voltage (low): 1.5 vdc (max)

(600 rpm, $V_{IN}=24$ vdc, $10ma < I_O < 50ma$, 25° C)

SPECIFICATIONS

Electrical Connections

Pin No.	Function	Wire Color
A	Common	Black
B	Supply Voltage	Red
C	no connection	—
D	Output A	White
E	Output B	Green
F	no connection	—

Connector: MS3102A-14S-6P (6-pin)

Mating connector: MS3106A-14S-6S

Mechanical

Weight: 1.4 lbs. (650 grams)

Bearings: 25 lb. (11.3 kg) radial (max). 10 lb. (6.8 kg) axial (max.)

Materials:

- Case: Aluminum, anodized
- Shaft: 303 Stainless steel
- Switch cover: Plastic

Accessories

Cable assemblies, measuring wheels, and mounting hardware are available. Call or see our website for more information.

Pulses per Revolution Switches

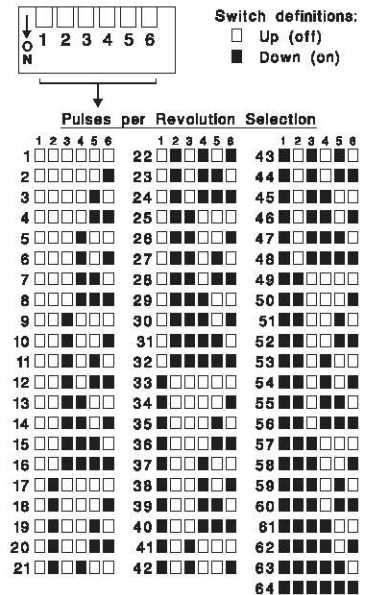
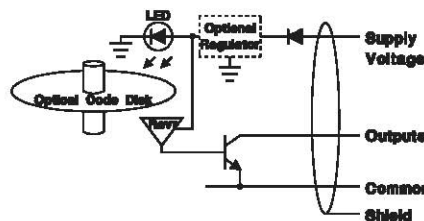


Figure 1 - Switches

NPN Open Collector Output (Current Sinking)



Push-Pull Output (Current Sourcing/Sinking)

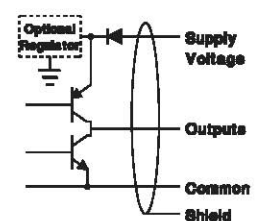
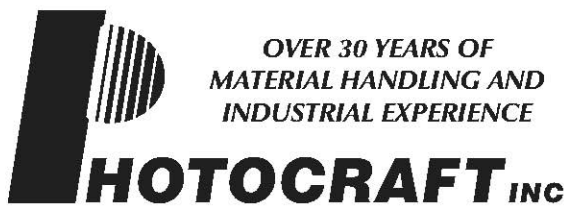


Figure 2 - Output Circuits



602 E. North Street Elburn, IL 60119, USA
 630-365-7148 Fax: 630-365-7149
 www.photocraftencoders.com