RH-P600AJQ CE Quadrature Programmable PPI

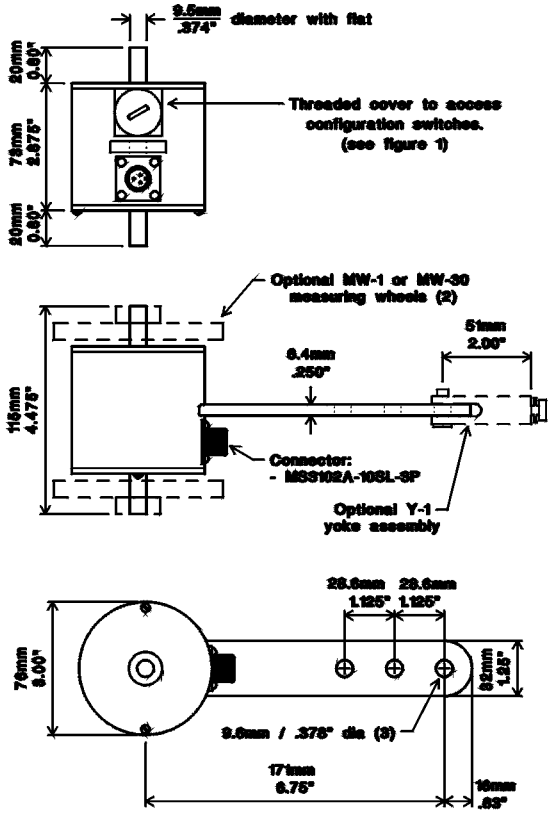
DESCRIPTION

The RH-P encoder, also known as a Pulse Position Indicator (PPI), is ideally suited for material handling sortation applications. It converts shaft rotation into square wave output pulses to provide an accurate and reliable means of digitizing position, rate, or length of travel. The number of pulses per each revolution of the shaft and type of pulses are selectable by setting configuration switches. When used with measuring wheels, it generates a fixed number of pulses per inch, foot, yard, centimeter, or meter. For conveyor applications, accessories are available for mounting either above or below the conveyor belt/roller.

FEATURES

- Programmable Pulses per Revolution
- Selectable output type:
  - — Quadrature A and B outputs
  - — Dual Anti-Jitter Pulse outputs
  - — Dual high resolution outputs with Anti-Jitter
- ESD / Short Circuit / Reverse Voltage Protected

DIMENSIONS



OVER 25 YEARS OF MATERIAL HANDLING AND INDUSTRIAL EXPERIENCE

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SPECIFICATIONS

Electrical

Configuration:

Model	Supply/V_{IN} (vdc)	Output Circuit
RH-P600AJQ/5	5±5%	push/pull
RH-P600AJQ/8-30	8-30	push/pull
RH-P600AJQ/5C	5±5%	open collector
RH-P600AJQ/8-30C	8-30	open collector

Output Circuit: (See figure 2)
- — Push/Pull
  Combined sourcing/sinking output
- — Open collector
  NPN Open collector sinking output (V_{CC}=30 vdc maximum)

Supply Current: 50ma maximum (no load)

Output Current (I_O): 50ma max source/sink

Operating temperature: 0° to 70° C

Maximum operating speed: 1,200 rpm

Outputs (see Figure 1)

Anti-Jitter Outputs: Outputs A and B have identical pulses per revolution. Pulse output hysteresis is increased to ½ of a pulse width (15° for 12 pulses per revolution), eliminating the effects of mechanical vibration and the possible dither that results in false outputs.

Quadrature Outputs: Two outputs, A and B, have the selected number of pulses per revolution. A leads B by 90° for clockwise rotation when viewed from shaft end farthest from connector.

Dual High Resolution Outputs: Output A generates 1200 square wave pulses per revolution. Output B generates 2400 fixed size pulses per revolution: the output is normally high and goes low for 5microseconds for each pulse. Pulse output hysteresis is increased to 21% of a revolution. That is, the encoder generates pulses as long as it rotates in one direction. If the direction reverses then pulse output ceases until the encoder returns to its original direction of rotation and to its position before reversing. If the reverse direction exceeds 21% of a revolution then the encoder resets itself.

Output Waveform: 50/50 squarewave
- — **Pulse On-Off Ratio:** 50% ± 10%
- — **Pulse Interval Jitter:** ±15%
- — **Quadrature Deviation:** 30° (max)
- — **Pulse rise time:** 1 µsec (max)
- — **Pulse fall time:** 2 µsec (max)
- — **Voltage (high):** V_{in}-2.5 vdc (min)
- — **Voltage (low):** 1.5 vdc (max)

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

Electrical Connections

Pin No.	Function	Wire Color
A	Common	Black
B	Supply voltage	Red
C	not used	—
D	Output A	White
E	Output B	Green
F	not used	—
—	Case Ground	Plain/Shield

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

Mechanical

Weight: 1.3 lb (600 gm) without accessories

Shaft Loading: Radial: 25 lb. (11.3 kg.) max.
Axial: 10 lb. (6.8 kg.) max.

Bearing Life (L_{10}): 70 x 10^6/RPM = hours

Materials:
- — Case: 1/4" Aluminum, anodized
- — Shaft: 303 Stainless steel

Accessories

Call or visit the web site for more information about these and other accessories:
- — C6-4-10 CF cable
- — MW-1-B or MW-30-B wheels
- — Y-1 or Y-3 yoke
- — MB-UB1 or MB-UB2 mounting

Configuration Switches

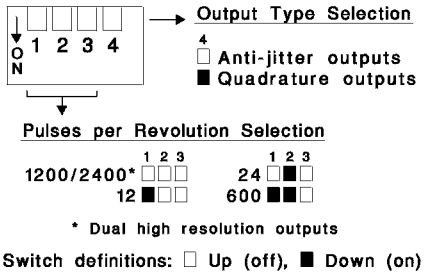

Figure 1 - Configuration Switches

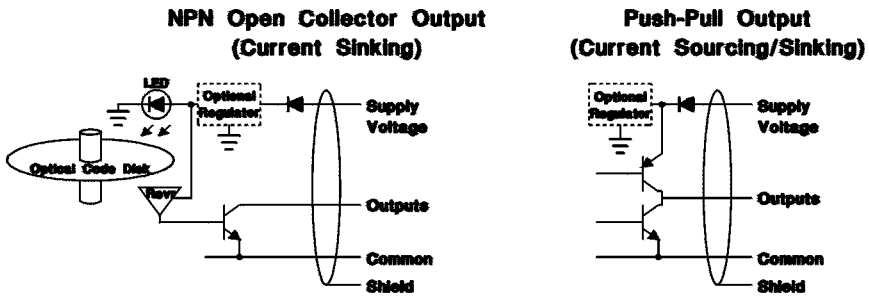

Figure 2 - Output Circuits