# RH-P1500AJB

# Bidirectional Programmable PPI

## DESCRIPTION

The RH-P encoder, also known as a Pulse Position Indicator (PPI), converts shaft rotation into square wave output pulses and is ideally suited for linear measuring applications when used with measuring wheels. The number of pulses per each revolution of the shaft is determined by setting configuration switches. A direction output indicates the shaft rotation direction, clockwise (CW) or counter-clockwise (CCW), as viewed from the shaft end farthest from the connector. For conveyor applications, accessories are available for mounting either above or below the conveyor belt or roller.

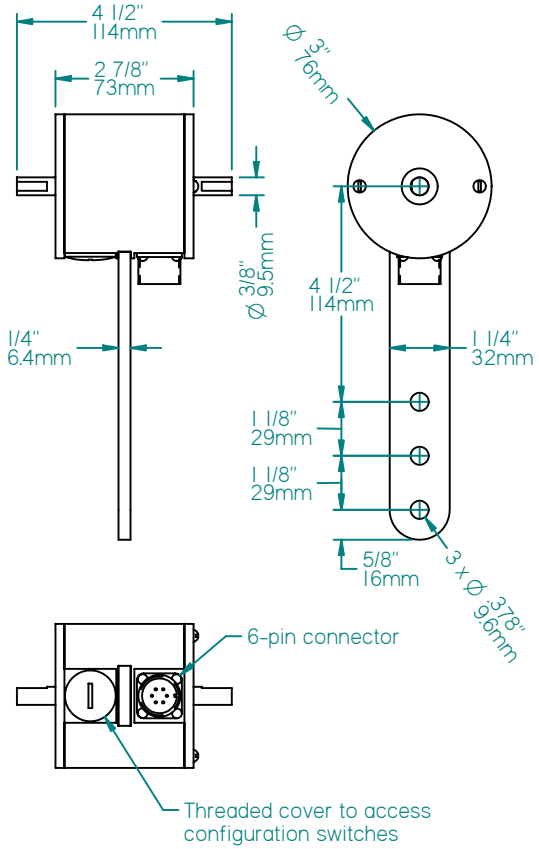
## FEATURES

CE*

- **Programmable Pulses/Revolution and Direction Output**
- **ESD / Short Circuit / Reverse Voltage Protected**
- **Exclusive "Anti-Jitter" Circuit for Conveyor Applications**

* CE marking requires Photocraft cable, and surge protection option if cable exceeds 100' (30m) or leaves the building.

## DIMENSIONS




## SPECIFICATIONS

### Outputs

**Pulses per Revolution:** (specify when ordering)
Fixed at 30, 240, 300, 360, 400, 480, 600, or 1500; or Selectable by setting configuration switches 1 to 3. Output is "low" when power is initially applied.

**Output Waveform:** 50/50 squarewave
- **Pulse On-Off Ratio:** 50%±20%
- **Pulse Interval Jitter:** ±20%
- **Pulse rise time:** 2 µsec (max)
- **Pulse fall time:** 5 µsec (max)
- **Voltage (high):** Vin-2.5 vdc (min)
- **Voltage (low):** 1.5 vdc (max)

*(600 rpm, Vin=24vdc, 10ma<Io<50ma, 25°C)*

**Anti-jitter:** Increases the pulse hysteresis to ½ of a pulse width, eliminating the effects of mechanical vibration and the possible dither that results in false output pulses. For example a 30 pulse per revolution output would have 6° hysteresis (360° ÷ 30 × ½ ).

**Direction output:** Indicates the direction of rotation by setting configuration switch 4, and is updated at each 1/1500th of a revolution. This output is "low" when power is initially applied. Non-programmable models are "low" for CW and "high" for CCW.

### Electrical Connections

| Pin No. | Function | Wire Color |
|---|---|---|
| A | Common | Black |
| B | Supply voltage | Red |
| C | no connection | — |
| D | Pulse output | White |
| E | Direction output | Green |
| F | no connection | — |
| — | Case Ground | Plain/Shield |

### Accessories

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

### Mechanical

**Weight:** 1.4 lbs (650 gm)
**Shaft Loading:** Radial: 25 lb. (11.3 kg.) max
Axial: 10 lbs. (6.8 kg.) max
**Bearing Life:** 70 x 1,000,000/rpm = hours
**Materials:**
- — Case: Aluminum, anodized
- — Shaft: 303 Stainless steel
- — Switch cover: Plastic

### Electrical

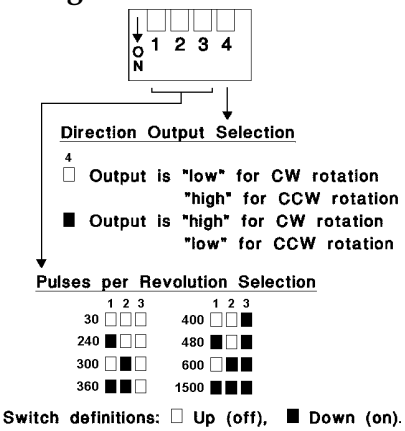
**Supply Voltages (Vin):** (specify when ordering)
- — 5 ± 5% vdc
- — 8 to 30 vdc

**Supply Current:** 50 ma max (no load)
**Output Current (Io):** 50ma max source/sink
**Output Circuit:** (specify when ordering)
- — Current sinking NPN open collector (30 vdc max)
- — Push/Pull output

**Output Protection:**
- — Short Circuit
- — ESD to 8KV direct and 25KV air

**Operating Temperature:** 0° to 70° C
**Maximum Operating Speed:** 1800 rpm

### Configuration Switches




## MODEL NUMBER

| RH | — | | AJB | / | | | | |
|---|---|---|---|---|---|---|---|---|
| **Model** | | **Pulses per Revolution** **P1500** = programmable (see configuration switches) or **30, 240, 360, 400, 480, 600, 1500** | **Features:** Anti-Jitter and Direction Output | | **Supply Voltage:** **5**=5vdc, **8-30**=8-30vdc | **Output Circuit:** leave blank for push/pull, **C**=NPN open collector | **Modification Number:** optional modification or special feature ID. Call or see our website. | **Accessories:** leave blank for no accessories. Call or see our website for more information. |

Example: **RH-P1500AJB/8-30** - Model RH encoder with programmable pulses, AJ and Direction features, 8-30vdc, push/pull output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