

RH-P1500QB

Bidirectional Programmable PPI

DESCRIPTION

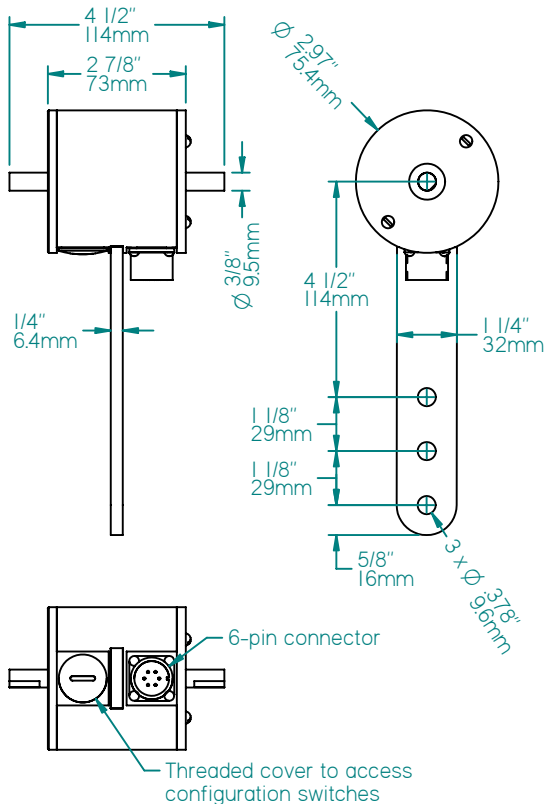
The RH-P encoder, also known as a Pulse Position Indicator (PPI), converts shaft rotation into square wave output pulses and is ideally suited for linear measuring applications when used with measuring wheels. The number of pulses per each revolution of the shaft is determined by setting configuration switches. These pulses are generated on 2 outputs (A and B), where A leads B by 90° nominal for clockwise rotation as viewed from the shaft end farthest from the connector. A direction output (output C) indicates the shaft rotation direction, clockwise (CW) or counter-clockwise (CCW). For conveyor applications, accessories are available for mounting either above or below the conveyor belt or roller.

FEATURES

- Programmable Pulses/Revolution and Direction Output
- ESD / Short Circuit / Reverse Voltage Protected
- Quadrature outputs (A and B)
- Push/pull or NPN open collector

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

DIMENSIONS



MATERIAL HANDLING AND INDUSTRIAL EXPERIENCE SINCE 1974

HOTOCRAFT INC

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

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% ± 10%
— **Pulse Interval Jitter:** ± 10%
— **Quadrature deviation:** ± 30°
— **Pulse rise time:** 1 µsec (max)
— **Pulse fall time:** 1 µsec (max)
— **Voltage (high):** Vin-2.5 vdc (min)
— **Voltage (low):** 1.5 vdc (max)

(1500 ppr, 600 rpm, 24vdc, Io=50ma, 25°C)

Quadrature Outputs: Outputs A and B have the selected number of pulses. A lead B by 90° nominal for clockwise rotation when viewed from shaft end farthest from the connector.

Direction output: Indicates the direction of rotation by setting configuration switch 4, and is updated at each 1/3000th of a revolution. "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	Direction output C	Brown
D	Pulse output A	White
E	Pulse output B	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 to 26 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

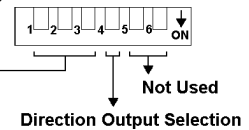
Output Protection: Short Circuit and ESD

Operating Temperature: 0° to 70° C

Maximum Operating Speed:

- 2000 rpm for 1500 ppr
- 1000 rpm for all other ppr

Configuration Switches



4
□ Output is "low" for CW rotation
"high" for CCW rotation
■ Output is "high" for CW rotation
"low" for CCW rotation

Pulses per Revolution

1	2	3	1	2	3
30	□	□	400	□	□
240	■	■	480	■	■
300	□	■	600	□	■
360	■	□	1500	■	■

Switch definitions: □ Up (off), ■ Down (on).

MODEL NUMBER

RH	QB
Model	
Pulses per Revolution P1500 = programmable (see configuration switches) or 30, 240, 360, 400, 480, 600, 1500	Features: Quadrature Pulse Outputs (A and B), and a Direction Output (C)
Supply Voltage: 5-26=5-26vdc, 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-P1500QB/8-30 - Model RH encoder with programmable pulses, quadrature pulses (A and B) and direction (C) outputs, 8-30vdc, push/pull output