## DESCRIPTION

The RH-P encoder, also known as a Pulse Position Indicator (PPI) or Tach, generates either 24 or 192 output pulses for each revolution of the shaft, and is typically used to measure linear movement on a conveyor system. It is typically fitted with a pair of $12^{\prime \prime}$ circumference measuring wheels, model MW-1-B, that allow it to ride directly on the conveyor belt. In this case 24 pulses yields 1 pulse for every $1 / 2^{\prime \prime}$, and 192 yields 1 pulse for every $1 / 16^{\prime \prime}$ of linear motion. The RH-P also includes the Unidirectional Feature that generates pulses in the forward direction only. If the direction of rotation reverses then pulse output ceases until it begins rotating again in the forward direction. The forward direction is determined by setting one of the configuration switches.

## FEATURES

## C

- User selectable $1 / 2^{\prime \prime}$ or $1 / 16^{\prime \prime}$ Resolution
- User selectable output type
- Generates pulses in one direction of rotation only
- ESD / Short Circuit / Reverse Voltage Protected
* CE marking requires Photocraft cable, and surge protection option if cable exceeds $100^{\prime}$ (30m) or leaves the building.




## SPECIFICATIONS

## Outputs

Counts per Revolution: Selectable by setting configuration switch 5. Output is "low" when power is initially applied.
Output Waveform: 50/50 squarewave

- Pulse On-Off Ratio: $50 \% \pm 10 \%$
- Pulse Interval Jitter: $\pm 10 \%$
- Pulse rise time: $2 \mu \mathrm{sec}$ (max)
- Pulse fall time: $5 \mu \mathrm{sec}$ (max)
— Voltage (high): Vin-2.5 vdc (min)
- Voltage (low): 1.5 vdc (max)
( 600 rpm , Vin $=24 \mathrm{vdc}, 10 \mathrm{ma}<l \mathrm{lo}<50 \mathrm{ma}, 25^{\circ} \mathrm{C}$ )
Unidirectional Feature: The RH-P generates pulses when rotating in the forward direction. If the direction of rotation reverses then pulse output ceases.
Pulse output begins immediately when forward rotation resumes. The forward direction, as viewed from the shaft end farthest from the connector, is determined by setting configuration switch 4.
For example, if the forward direction is configured as clockwise rotation, then pulses are only generated when rotating in the clockwise direction.


## Mechanical

Weight: 1.3 lbs ( 600 gm )
Shaft Loading: Radial: 25 lb . ( 11.3 kg .) max Axial: 10 lbs . ( 6.8 kg .) max
Bearing Life: $70 \times 1,000,000 / \mathrm{rpm}=$ hours
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.

## Electrical

Supply Voltages (Vin): (specify when ordering)
$5 \pm 5 \% \mathrm{vdc}$ or 8 to 30 vdc
Supply Current: 50 ma max (no load) Output Current (Io): 50ma max source/sink
Output Circuit: (See configuration switches)

- NPN current sinking transistor
with internal 3.3 K pull-up resistor
- NPN open collector (30 vdc max)
- PNP current sourcing transistor
with internal 3.3 K pull-down resistor
- Push/Pull (Combined sourcing/sinking) Output Protection:
- Short Circuit
- ESD to 8 KV direct and 25 KV air

Operating Temperature: $-25^{\circ}$ to $+85^{\circ} \mathrm{C}$
Maximum Operating Speed: 3000 rpm

## Electrical Connections

| Pin No. | Function | Wire Color |
| :---: | :---: | :---: |
| A | Supply voltage | Red |
| B | Pulse output | White |
| C | Common | Black |
| - | Case Ground |  |
|  | Plain/Shield |  |

## Configuration Switches





