

# RH-P300M

# Programmable Wheeled Encoder

## DESCRIPTION

The RH-P300M encoder, also known as a Pulse Position Indicator (PPI), was designed for conveyor applications to ride directly on the belt or roller and generate output pulses; one pulse for each unit of linear movement of the conveyor. The unit of linear measure is determined by setting configuration switches at installation time. A pair of 30cm. circumference measuring wheels (MW-30-B) must be used to ensure accurate centimeter per pulse measurement. The RH-P also includes the Anti-Jitter feature that eliminates extraneous pulses generated if the conveyor stops on a pulse edge. Accessories are available for mounting either above or below the conveyor.

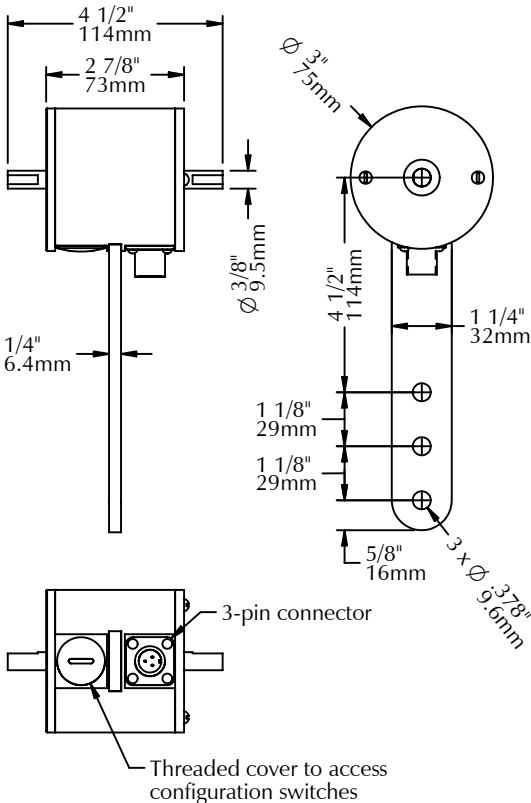
## FEATURES

- Selectable Linear Measurement per Pulse from 1 millimeter to 1 meter per pulse.
- Exclusive "Anti-Jitter" Circuit for Conveyor Applications
- Selectable Output Circuit
- ESD / Short Circuit / Reverse Voltage Protected

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



## DIMENSIONS



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## SPECIFICATIONS

### 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 x 1,000,000/rpm = hours
- Materials:**
  - Case: Aluminum, anodized
  - Shaft: 303 Stainless steel
  - Switch cover: Plastic
- Maximum Operating Speed:** 3,000 rpm

### Electrical Connections

MS 3-pin Pin No.	4-pin M12 Pin No.	Function	Wire Color
A	1	Supply Voltage	Red
B	4	Output A	White
C	3	Common	Black
-	2	not used	-

### Configuration Switches

**Output Circuit Selection**

6	7	8	Current sourcing (PNP)
6	7	8	Current sinking (NPN)
6	7	8	NPN open collector
6	7	8	Combined sourcing/sinking (push/pull)

**Centimeters per pulse (with MW-30 wheel)**

1	2	3	4	5	6.6	7	8	9	10	30	40	50	75	100
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6

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

### Electrical

- Supply Voltages (Vin):** (specify when ordering)  
5 ± 5% vdc or 8 to 30 vdc
- Supply Current:** 50 ma max (no load)
- Output Current:** 50 ma max source/sink
- Operating Temperature:** -25° to +85° C
- Output Protection:**
  - Short Circuit
  - ESD to 8KV direct and 25KV air
- Output Circuit:** Selectable by setting switches 6 to 8 (see configuration switches).
  - Current sinking NPN transistor with internal 3.3K pull-up resistor
  - Current sourcing PNP transistor with internal 3.3K pull-down resistor
  - NPN open collector (30vdc max)
  - Push/Pull (combined sourcing/sinking)

### Outputs

- Centimeters per Pulse:** Selectable by setting switches 1 to 5 (see configuration switches). Output is "low" when initially powered.
- Anti-Jitter:** Increases pulse output hysteresis to 1/2 of a pulse width eliminating the effects of mechanical vibration and the possible dither that results in false pulses.
- Output Waveform:**
  - Pulse On-Off Ratio: 50% ± 10%
  - Pulse Interval Jitter: ± 10%
  - Pulse rise time: 2 msec (max)
  - Pulse fall time: 5 msec (max)
  - Voltage (high): Vin-2.5 vdc (min)
  - Voltage (low): 1.5 vdc (max)

**Accessories:** See our website for cables, 30 cm. measuring wheels, and mounting brackets for above and under a conveyor.

## MODEL NUMBER

<b>RH</b>	<b>P300M</b>	<b>5 = 5vdc, 8-30 = 8-30vdc</b>	<b>Modification Number:</b> 3 pin MS style connector is standard. M131 = 4-pin 12mm connector Call or see our website for other modifications.	<b>Accessories:</b> leave blank for no accessories. Call or see our website for more information.
Model Number	Program Name Call or see our website for information about other available programs for this encoder model.	Supply Voltage		

Example: RH-P300M/8-30 - model RH, P300M program, 8-30vdc 3-pin MS style connector