

DESCRIPTION

The RH wheeled encoder 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 shaft revolution is either preconfigured at the factory or determined by setting configuration switches. An index pulse or zero marker reference is generated on the index output occurring once per revolution. For conveyor applications, accessories are available for mounting either above or below the conveyor belt/roller.

FEATURES



Fixed or Programmable Pulses per revolution

Optional Index Output (Zero Marker)

* Requires Photocraft cable, and surge protection option if cable exceeds 100' / 30m or leaves the building.

MODEL NUMBER

RH - AJZ /

Pulses per Revolution:

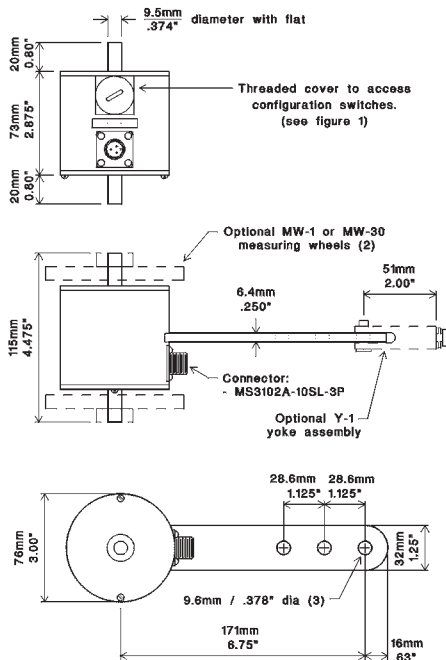
P144 = programmable (see fig 1) or one of the following:
1, 2, 3, 4, 6, 8, 9, 12, 16, 18, 24, 36, 48, 72, 144

Output Circuit:

Push/Pull is standard
C=Open Collector
NP=Push/Pull

Supply Voltage: 5 or 8-30

DIMENSIONS



Electrical

Supply Voltage: (specify when ordering)

- 5 ± 5% vdc
- 8 to 30 vdc:

Output circuit: (specify when ordering, figure 2)

- Source/Sink
Combined sourcing/sinking output (Push/Pull output)
- Open collector
NPN Open collector sinking output ($V_{CC}=30$ vdc maximum)

Output Protection: ESD and Short Circuit

Supply Current: 50ma maximum (no load)

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

Operating temperature: -25° to +85° C

Maximum operating speed: 2,500 rpm

Outputs

Pulses per Revolution: (specify when ordering)

- 1, 2, 3, 4, 6, 8, 9, 12, 16, 18, 24, 36, 48, 72, 144.
- Or, specify "P144" to select the pulses at installation time using the switches shown in figure 1.
- Output is "low" when power is initially applied.

Pulse Output Waveform: 50/50 squarewave

- Pulse On-Off Ratio: 50% ± 10%
- Pulse Interval Jitter: ±10%
- Pulse rise time: 2 µsec (max)
- Pulse fall time: 5 µsec (max)
- Voltage (high): $V_{in}-2.5$ vdc (min)
- Voltage (low): 1.5 vdc (max)

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

Anti-jitter: The anti-jitter feature increases the pulse output hysteresis to 1/2 of a pulse width, eliminating the effects of mechanical vibration and the possible dither that results in false output pulses. For example, a 10 pulse per revolution output would have 18° hysteresis (i.e. $360° \div 10 \times 1/2$).

Index output: An approximately 2° duty cycle pulse generated once per revolution with fixed position relative to the shaft. Its position relative to the pulse output will be determined when power is applied.

Index output hysteresis: .07 approx.

SPECIFICATIONS

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 10⁶/RPM = hours

Materials:

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

Electrical Connections

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

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

Mating connector: MS3106A-14S-6S

Accessories

Cable Assembly (C6-4Z-10): 10 ft. (3m) of 4 conductor, shielded cable with mating connector.

Other lengths are available.

See our web site for measuring wheels and other accessories.

Configuration Switches

Only applies for pulses per revolution = P144

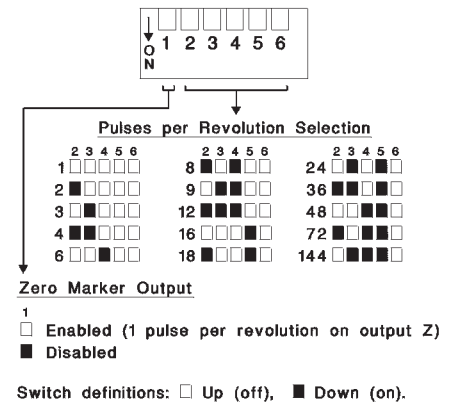
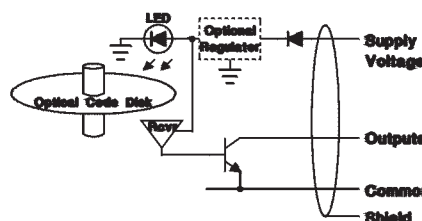


Figure 1 - Configuration Switches

NPN Open Collector Output (Current Sinking)



Push-Pull Output (Current Sourcing/Sinking)

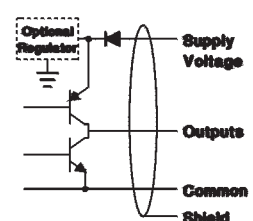


Figure 2 - Output Circuits

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