

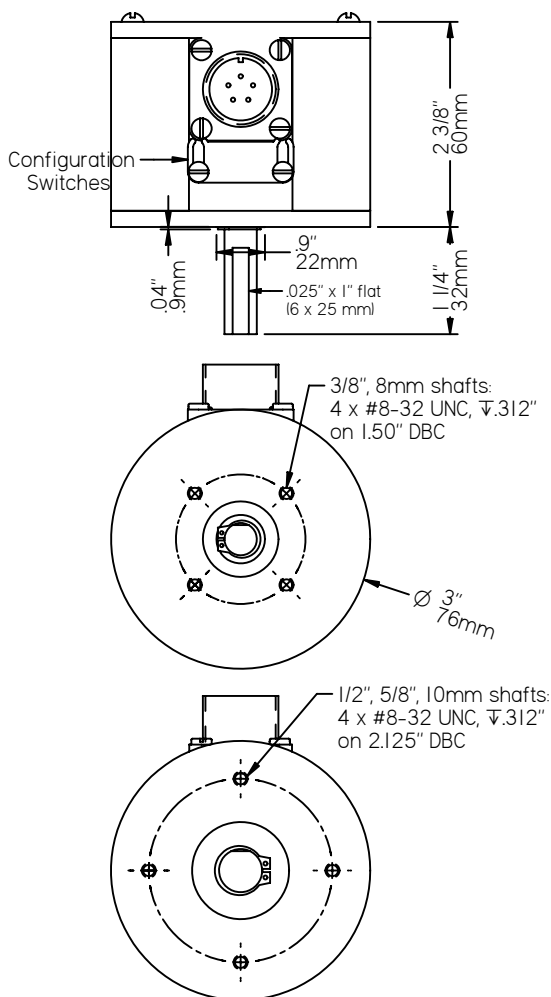
## FEATURES

- 3/8", 1/2", 5/8", or Metric Shaft Diameters
- Double ended 3/8" Shaft Option
- Hollow Shaft Available - see Model HRL
- Programmable via DIP switches at installation time
- User selectable pulses per revolution
- Exclusive "Anti-Jitter" Circuit for Conveyor Applications
- 5 vdc or 8-30 vdc supply voltages
- Single (A), Quadrature (A, B), and Index (Z) Outputs
- Short Circuit / ESD Protection on Most Models
- Custom Models Available

\* 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

Maximum speed: 6,000 rpm

Shaft Loading:

Shaft Diameter	Radial Lbs (kg)	Axial Lbs (kg)	Factor (BL)
3/8" / 8mm	40 (18.1)	30 (13.6)	32
1/2" / 10mm	45 (20.4)	35 (15.9)	37
5/8"	50 (22.7)	40 (18.1)	41

Bearing Life: BL x 1,000,000/rpm = hours

Materials:

- Case: 1/4" Aluminum, anodized
- Shaft: 303 Stainless steel
- Switch cover: ABS plastic

Weight: 16.8 oz. (475 grams)

### Programs

The RL-P is preconfigured at the factory with one of many predefined programs. Program options are selected at installation time by setting configuration switches. Call or see our website for details about available programs.

### Typical Program Features

**Selectable Pulses per Revolution:** pulses per revolution on one, two, or three outputs can be selected from a predefined set.

**Anti-jitter:** Increases the pulse 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.  $360^\circ \div 10 \times 1/2$ ).

**Direction Indicator:** Indicates direction of shaft rotation.

**Fractional Pulses per Revolution:** for example 2.5 pulses per revolution.

**Speed Indicator:** Sets the output when a predefined rotational speed is attained.

### Electrical

**Supply Voltages (Vin):** (specify when ordering)

- 5  $\pm$  5% vdc
- 8 to 30 vdc

**Supply Current:** 50 ma maximum (no load)

**Output Current (Io):** 50 ma max source/sink

**Output Circuits:**

- Push/Pull (combined sourcing/sinking)
- Current sinking NPN transistor with pull-up resistor\* (50 ma max)
- Current sinking NPN open collector (50 max, 30 vdc max)
- Current sourcing PNP with pull-down resistor\* (50 ma max)
- \* Load Resistor value is 3.3K ohms

Note: all are switch selectable for single output models; factory configured for 2 or 3 outputs

**Output Waveshape:** 50/50 squarewave

- Pulse On-Off Ratio: 50%  $\pm$  10%
- Pulse interval jitter:  $\pm$  10%
- Quadrature Deviation: 30° (max)
- Pulse rise time: 2  $\mu$ sec (max)
- Pulse fall time: 5  $\mu$ sec (max)
- Voltage (high): Vin - 2.5 vdc (min)
- Voltage (low): 1.5 vdc (max)
- Index Pulse: approximately the width of 1 pulse on output A or B

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

**Operating Temperature:** 0° to 70° C

**Pulse Rate:** 0 - 30 kHz

**Output Protection:**

- Short Circuit
- ESD to 8KV direct and 25KV air

### Electrical Connections

Connector	Function	Wire Color
A	+vdc	Red
B	Common	Black
C	Output A	White
D	Output B	Green
E	Output C or Z	Brown

### MODEL NUMBER

RL	Model Number	Program Name	Supply Voltage	Output Circuit	Modification Number	Accessories
	blank for 3/8", .5 = 1/2", .625 = 5/8", M8 = 8mm, M10 = 10mm, D = 3/8" double ended	the name of a predefined program. For example: P144AJ or P270AJB. Call or see our website for program information.	5 = 5vdc, 8-30 = 8-30vdc	single output models: leave blank 2 or 3 output models: leave blank for push/pull C = NPN open collector	optional modification or special feature ID. Call or see our website.	leave blank for no accessories. Call or see our website for more information.

Example: RL-P270AJ/8-30 - 3/8" shaft, P270AJ program, 8-30vdc