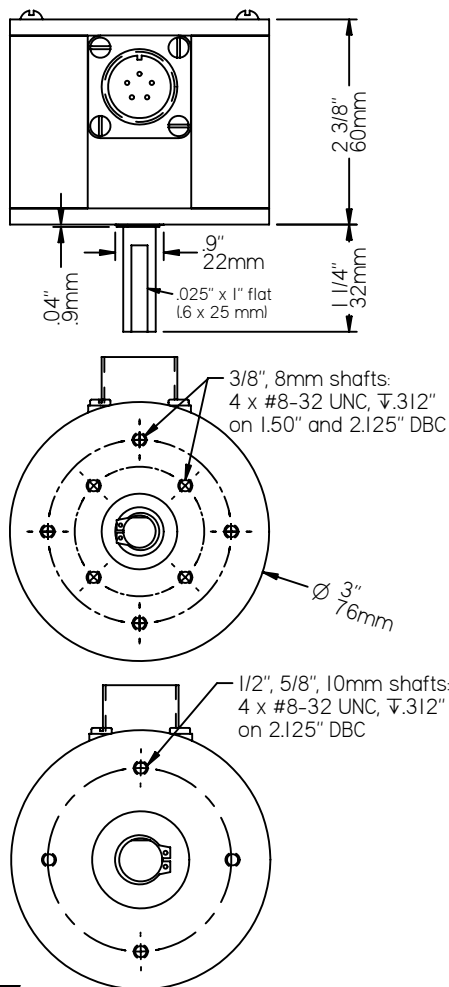


FEATURES

- 3/8", 1/2", 5/8", or Metric Shaft Diameters
- Double ended 3/8" Shaft Option
- Hollow Shaft Available - see Model HRL
- Programmable Model Available - see Model RL-P
- Exclusive "Anti-Jitter" Circuit for Conveyor Applications
- DC or AC Supply Voltages Available
- Single (A), Quadrature (A, B), and Index (Z) Outputs
- Dual or Triple output Models with different pulses per revolution on each output
- 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**

OVER 30 YEARS OF
MATERIAL HANDLING AND
INDUSTRIAL EXPERIENCE

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

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

Note: 120AC power requires 3/8" shaft, and shaft loading is reduced to 25 radial, 10 axial, BL=36.

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

Materials:

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

Electrical Connections

NPN or PNP Transistor Outputs:

5-Pin Connector	Function	Wire Color
A	+vdc	Red
B	Common	Black
C	Output A	White
D	Output B	Green
E	Output Z	Brown*

* Output Z is green if Output B is not used.

Line Driver Outputs:

Connector	6-pin	10-pin ³	Function	Wire Color
A	F	Common	Black	
B	D	+vdc	Red	
C	A	Output A	White	
D	H	Output A	Blue ¹	
E	B	Output B ²	Green	
F	I	Output B ²	Brown	
-	C	Output Z	Yellow	
-	J	Output Z	Orange	

¹ Output A is green if Output B is not used.

² These are Outputs Z / Z if B / B are not used.

³ 10-pin only applies when all outputs (A / A, B / B, Z / Z) are required.

Electrical

Supply Voltages: (specify when ordering)

DC Supply Voltages	Load Resistor
5	1K
12 or 15	2.2K
24	3.3K
7 to 12 ("5R")	1K
12 to 27 ("12R")	2.2K
8 to 30 ("8-30")	3.3K

AC Voltage: 120vac (see 120ACT datasheet)

Current: 50 ma max (no load)

100 ma max (line driver)

Pulse Rate: 0 - 30 kHz

Pulses per Revolution: 1 to 1200 (specify when ordering)

Operating Temperature: 0° to 70° C

Output Circuit: (specify when ordering)

- 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)
- RS422 differential line driver (requires 5, 5R, or 8-30 supply)
- Triac (see 120ACT datasheet)

* see Load Resistor value in DC Supply Voltage table

Output WaveShape:

- Square wave; outputs A and B are 50/50 duty cycle nominal; output Z (index output) is approximately the width of one cycle on outputs A or B.
- Pulse symmetry: 180° ± 30%
- Pulse interval jitter: 30% max
- Quadrature: 90° ± 30% max
- Phase jitter: 30% max

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° ÷ 10 × 1/2).

MODEL NUMBER

RL	Model Number	Pulses Per Revolution	Anti-jitter option	Supply Voltage	Output Circuit	Modification Number	Accessories
	Shaft Diameter: blank for 3/8", .5=1/2", .625=5/8", M8=8mm, M10=10mm, D=3/8" double ended	enter dual and triple output values separated by "/"	leave blank for no anti-jitter, AJ=anti-jitter option (single output models only)	5, 12, 15, 24, 5R, 12R, 8-30, or 120AC (see the supply voltage table above)	leave blank for NPN, P=PNP, C=NPN open collector, D=line driver, T=Triac	optional modification or special feature ID. Call or see our website.	leave blank for no accessories. Call or see our website for more information.
	Output Type: leave blank for single output on A, Q=quadrature outputs on A and B						
	Index Output: leave blank for no index, Z=index output, NZ=inverted index						

Example: RL5Q-100/8-30 - .5" shaft, quadrature outputs, 100 ppr, 8-30vdc, NPN output