

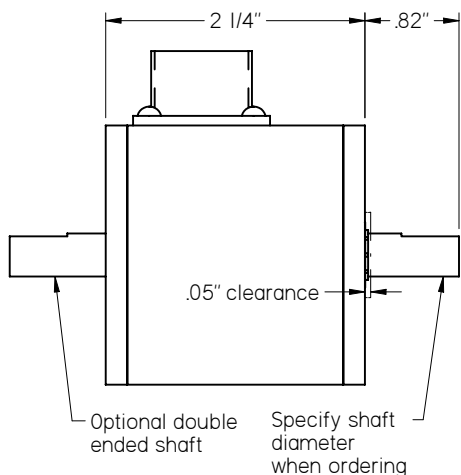
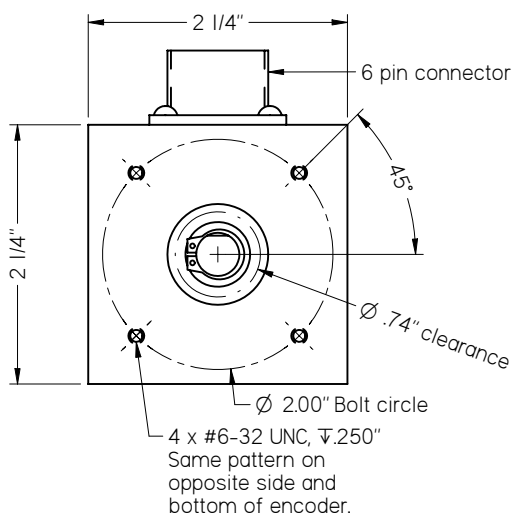
## FEATURES

- 1/4", 5/16", 3/8", and 1/2" Shaft Diameters
- Double ended Shaft Option
- Hollow Shaft Available - see Model HRS
- Programmable Model Available - see Model RS-P
- Exclusive "Anti-Jitter" Circuit for Conveyor Applications
- Single (A), Quadrature (A, B), and Index (Z) Outputs
- Dual or Triple output Models with different pulses per revolution on each output (A, B, C)
- 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)
1/4, 5/16, 3/8"	25 (11.3)	15 (6.8)	36
M182 option*	40 (18.1)	30 (13.6)	32
1/2"	45 (20.4)	35 (15.9)	37

\* Call for details

Note: a flexible shaft coupling is recommended

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

Materials:

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

Weight: 13 oz. (370 grams)

### Electrical Connections

NPN or PNP transistor outputs:

6-Pin Connector	Function	Wire Color
A	Common	Black
B	+vdc	Red
C	Output C or Z	Brown*
D	Output A	White
E	Output B	Green
F	not used	-

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

Line Driver Outputs:

6-Pin Connector	Function	Wire Color
A	Common	Black
B	+vdc	Red
C	Output A	White
D	Output A <sup>1</sup>	Blue <sup>1</sup>
E	Output B <sup>2</sup>	Green
F	Output B <sup>2</sup>	Brown

<sup>1</sup> Output A<sup>1</sup> is green if Output B is not used.

<sup>2</sup> These are Outputs Z / Z<sup>1</sup> if B / B<sup>2</sup> are not used.

### 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")	2.2K
12 to 27 ("12R")	3.3K
8 to 30 ("8-30")	3.3K

Current: 50 ma max (no load)

100 ma max (line driver)

Pulse Rate: 0 - 30 kHz

Pulses per Revolution: 1 to 1200

1 to 600 for RS,5D

(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 ma 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)

\* see Load Resistor value in DC Supply Voltage table

Output Waveshape:

- Square wave; outputs A, B, and C 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

RS	Model Number	Shaft Diameter: A = 5/16", B = 3/8", C = 1/4", .5 = 1/2" (call for others)	Shaft Type: leave blank for single ended, D = double ended	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	Pulses Per Revolution: a number from 1 to 1200, enter dual and triple output values separated by "m"	Anti-jitter option: leave blank for no anti-jitter, AJ = anti-jitter option (single output models only)	Supply Voltage: 5, 12, 15, 24, 5R, 12R, or 8-30 (see the Supply Voltages table above)	Output Circuit: leave blank for NPN, P = PNP, C = NPN open collector, D = line driver	Modification Number: optional modification or special feature ID. Call or see our website.	Accessories: leave blank for no accessories. Call or see our website for more information.
Example:	RSBQ-100/8-30										

Example: RSBQ-100/8-30 - 3/8" shaft, quadrature outputs, 100 ppr, 8-30vdc, NPN output