

## SPECIFICATIONS

### Mechanical

**Shaft dia.:** .3745" dia. with flat

**Weight:** 10 oz. (284 grams)

**Maximum speed:** 6,000 rpm

**Shaft Loading:** Radial: 25 lb. (11.3 kg.) max.  
Axial: 10 lb. (4.5 kg.) max.

**Bearing Life (L<sub>10</sub>):** 36 x 10<sup>6</sup>/RPM = hours

*Note: to allow for axial and angular misalignment, a flexible shaft coupling is recommended.*

### Materials:

- Case: Aluminum, anodized
- Shaft: 303 Stainless steel

### Connectors:

No. of Pins	Encoder <sup>2</sup> Connector	Mating <sup>1</sup> Connector
6	97-3102E14S-6P	97-3106A14S-6S
10 <sup>3</sup>	97-3102E18-1P	97-3106A18-1P

1. A mating connector with cable must be purchased separately.
2. Other connectors are available.
3. Not available as side connector.

### Electrical

**Power Input:**(specify voltage when ordering)

Supply <sup>1</sup> (Vdc)	R Values <sup>2,3</sup> (Kohms)
5	1
12 or 15	2.2
24	3.3
7 to 20 ("5R" supply voltage)	2.2
12 to 27 ("12R" supply voltage)	3.3
8 to 30 ("8-30" supply voltage)	3.3

- (1) Others available on special order
  - (2) See output circuit figure 1 below
  - (3) R is removed for open collector
- **Current:** 50 ma max (no load)  
100 ma max (line driver)
  - **Ripple:** 2% max
  - **Regulation:** ±5%
  - Reverse polarity protected (except for 5 vdc)

**Operating temperature:** 0° to 70°C

**Pulse rate:** 0 to 30 kHz

**Pulses per Revolution:** 1 to 1200.  
(Specify when ordering)

**Output Circuit** (Figure 1, specify when ordering):

- Current sinking NPN transistor with pull-up resistor (50 ma max)
- Current sinking NPN open collector (50 ma, 30 vdc max)
- Current sourcing PNP with pull-down resistor (50 ma max)
- RS422 differential line driver (MC3487 device; must be ordered with 5, 5R or 8-30 Supply Voltage)

**Output Waveshape:** (See Figure 2)

- 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(A): 180°±30%
- Pulse interval jitter(B): 30% max
- Quadrature(C): 90°±30% max
- Phase jitter (D): 30% max
- Index pulse (E)

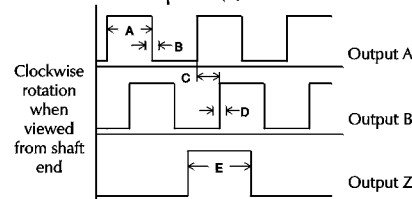


Figure 2

### Electrical Connections

**NPN or PNP transistor outputs:**

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

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

**Line Driver outputs:**

6-Pin	10-Pin <sup>1</sup>	Function	Wire Color
A	F	Common	Black
B	D	+vdc	Red
C	A	Output A	White
D	H	Output A	Blue <sup>2</sup>
E	B	Output B <sup>4</sup>	Green
F	I	Output B <sup>4</sup>	Brown
-	C	Output Z	Yellow <sup>3</sup>
-	J	Output Z	Orange <sup>3</sup>

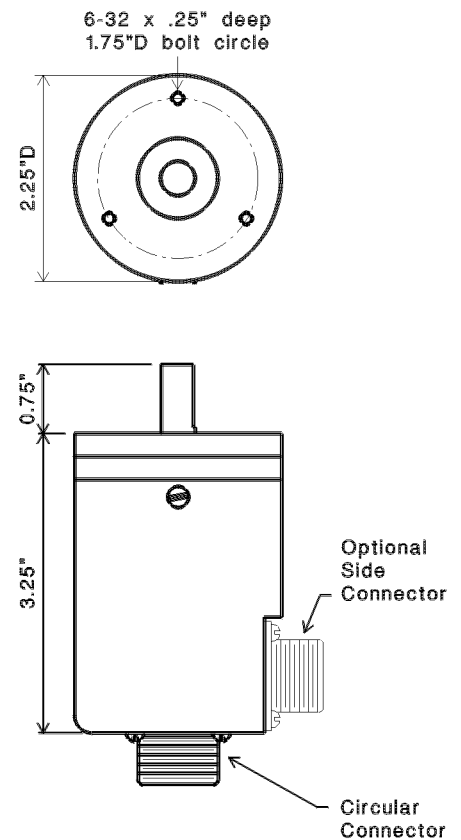
<sup>1</sup> Only used if A, B, and Z are required.

<sup>2</sup> Output A is green if Output B is not used.

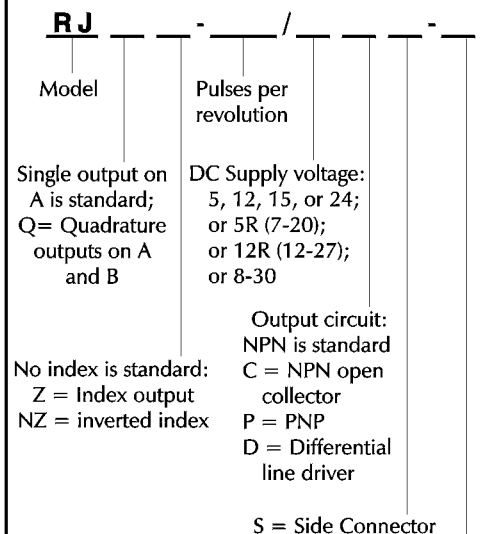
<sup>3</sup> Output Z is green and Z is brown if outputs B and B are not used.

<sup>4</sup> These are Outputs Z/Z if B/B are not used.

## DIMENSIONS



## ORDERING INFORMATION



Modification Number: refers to special order features (consult factory)

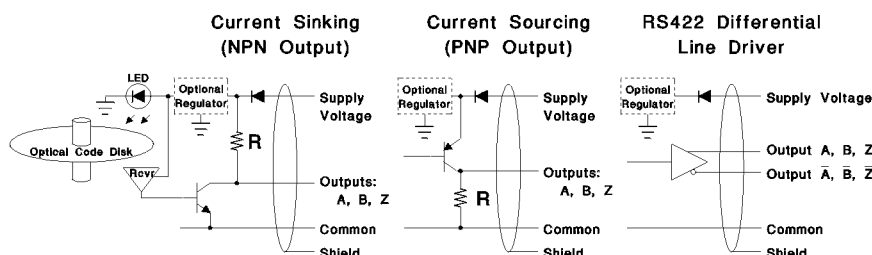


Figure 1 - Output Circuits

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