

# EC Series Encoder Specifications

## MECHANICAL

Dimensions .....	(See drawing below)
Weight .....	2.1 oz.
BoreSize .....	0.5" or 0.375"
Torque .....	Starting ..... < 0.2 oz. in.
	Running ..... < 0.1 oz. in..
Acceleration .....	500,000 rad/sec <sup>2</sup>
Inertia .....	2.6 x 10 <sup>-5</sup> oz. in/sec

## MOTOR INTERFACE

Shaft Runout .....	0.005" max
Shaft Endplay .....	+/-0.010"
Shaft Tolerance .....	nominal -.0002"/- .0007"
Shaft Length .....	0.56" min

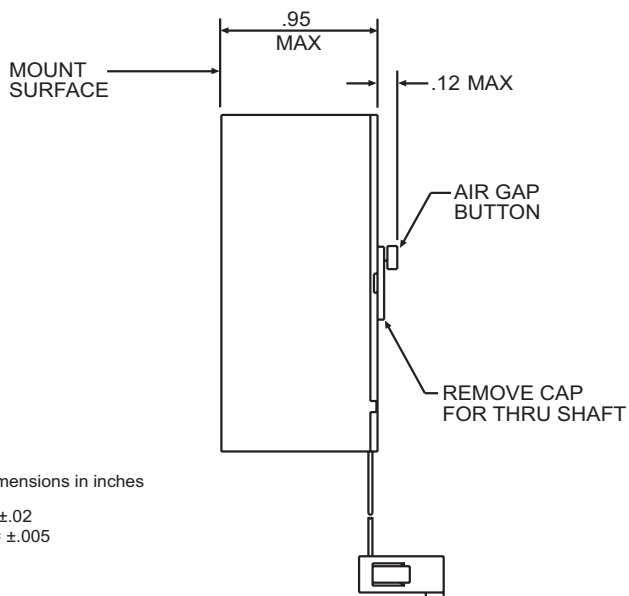
## ELECTRICAL

Code .....	Incremental
Supply Voltage .....	+5 +/-5% @ 80mA max.
Output .....	Dual channel quadrature plus index
Output Type .....	square wave TTL
Maximum Sink Current .....	16 mA
Frequency Response .....	100 kHz Data
Temperature .....	-10° C to 70° C operating
	-40° C to 125° C storage

WIRING TABLE	
NO.	FUNCTION
1	channel A
2	+5 volts
3	ground
4	NC
5	NC
6	NC
7	NC
8	channel B
9	NC
10	index

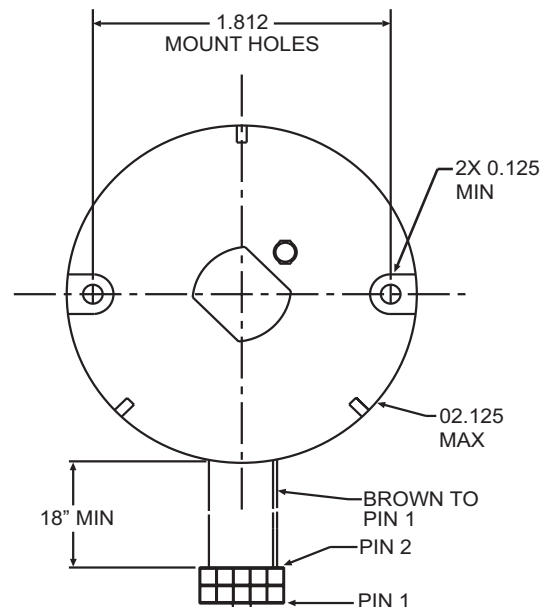
## TERMINATION

Header .....	10 pin dual row PC board header
Mating Connector .....	Berg P/N65863-165 or equivalent



All dimensions in inches

.xx = ±.02  
.xxx = ±.005



Mechanical Diagram

## MOUNTING INSTRUCTIONS

### INSTALLATION:

1. Motor shaft must be free of burrs & other defects, and should NOT be rotating during initial encoder installation.
  2. Hold encoder perpendicular to motor shaft. Guide the encoder onto the motor shaft, pushing encoder STRAIGHT on until it is flush against the mount surface. **Do NOT rock side to side.**
  3. Install two #4-40 mount screws. Do not fully tighten at this point.  
(Note: A thread sealant should be applied to the screw threads.)
  4. Rotate the motor shaft (300 RPM, minimum). Press the air-gap button until it bottoms to the top of the encoder momentarily, then release.  
**CAUTION: DO NOT press air-gap button while motor shaft is stationary. Button should only be pressed for one or two seconds while shaft is rotating.**
  5. Tighten mounting screws fully. (recommended torque is 30 to 40 ounce inches)
- This completes the mechanical installation. Proceed with electrical connections as indicated on product data sheet / or specification drawing.

### REMOVAL:

1. Motor shaft may be stationary or rotating up to 1000 RPM during encoder removal.
2. Remove two mounting screws.
3. Grasp encoder firmly and pull STRAIGHT off of the motor shaft. **Do NOT rock side to side.**