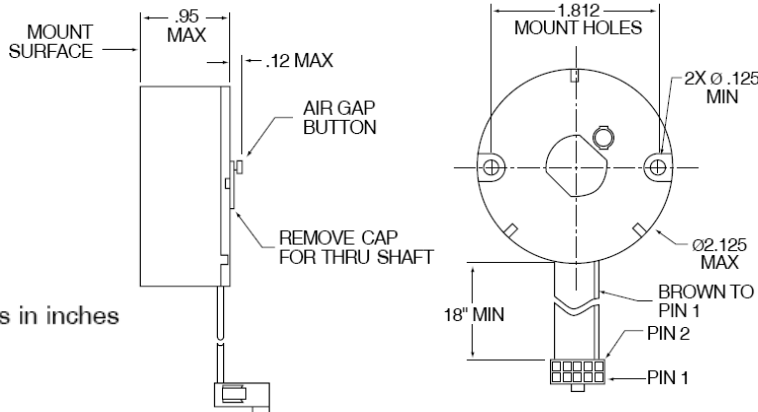




# MX21 INSTA-MOUNT™ Series—Modular Incremental Rotary Optical Encoder

BEI Industrial Encoders

## Dimensions

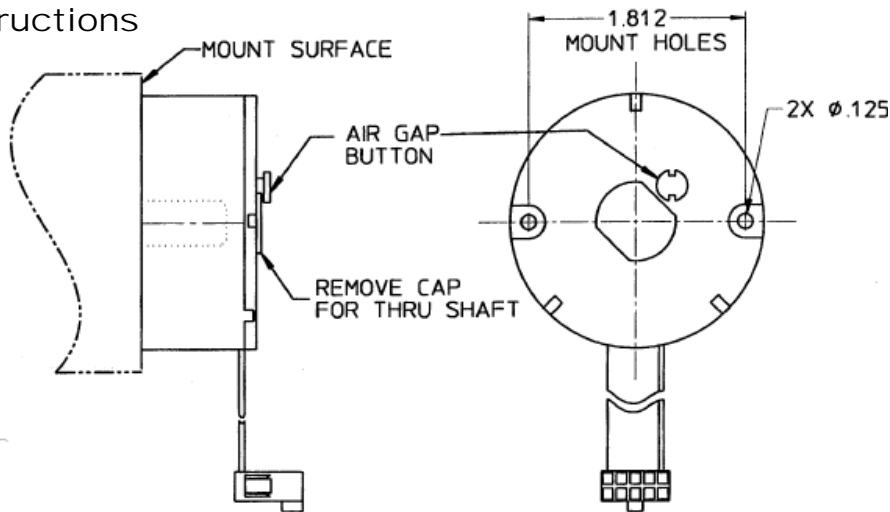


All dimensions in inches

.xx = ±.02  
.xxx = ±.005

## Installation

### Instructions



### Preparation:

1. Inspect motor interface per MX21 Data Sheet or specification drawing.
2. Motor shaft must be free of burrs & other surface defects.

### Installation:

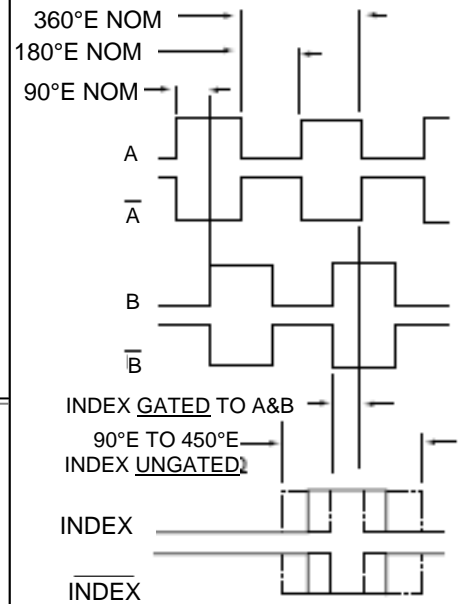
1. Motor shaft should NOT be rotating during initial encoder installation.
2. Hold encoder perpendicular to motor shaft. Guide the encoder onto the motor shaft, pushing encoder STRAIGHT on until it is flush against the mount surface. Do NOT rock side to side.
3. Install two #4-40 mount screws. Do not 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.)
6. 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.

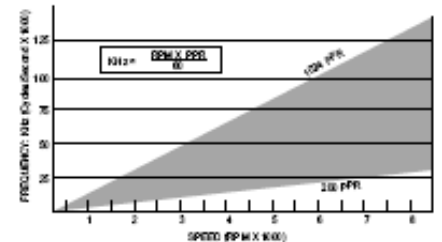
## Output

### Waveform



→ CCW ROTATION OF SHAFT →  
MX212 outputs A & B ONLY  
MX213 outputs A, B & INDEX ONLY  
MX216 outputs as shown

Figure 3



## Terminations

### Pinout MX212/213

Pin #	Signal	Pin #	Signal
1	channel A	6	NC
2	+5 volts	7	NC
3	ground	8	channel B
4	NC	9	NC
5	NC	10	index (213)

### Pinout MX216

Pin #	Signal	Pin #	Signal
1	NC	6	channel A
2	+5 volts	7	channel B
3	ground	8	channel B
4	NC	9	index
5	channel A	10	index



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