



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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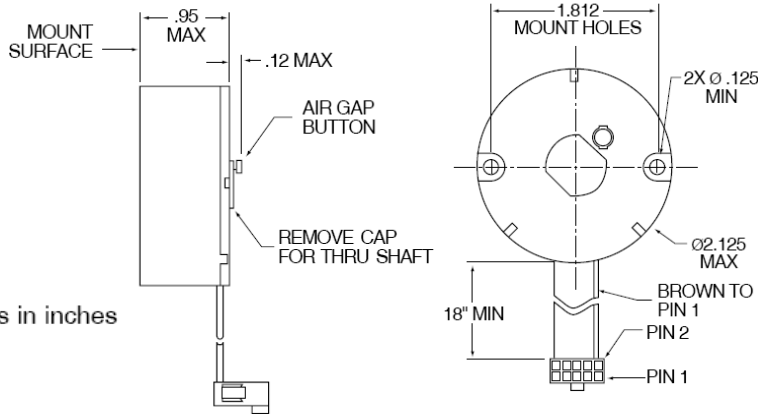
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



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

BEI Sensors

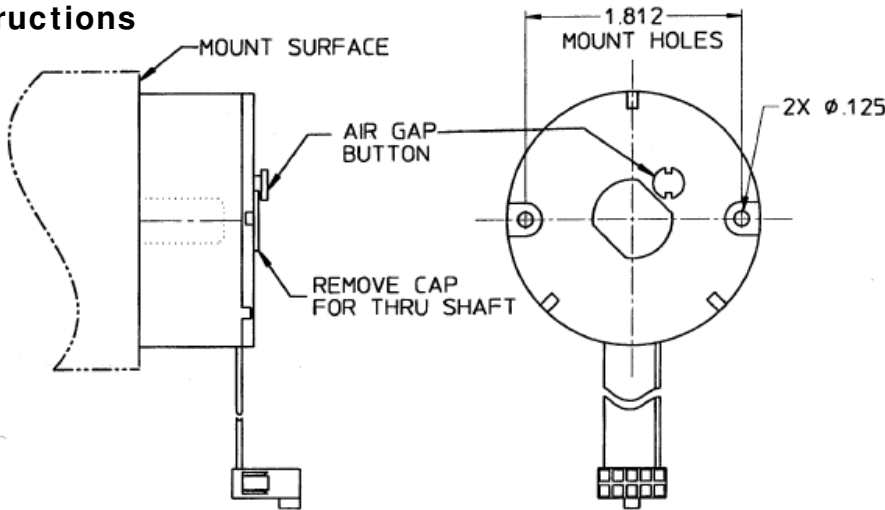
Dimensions



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.

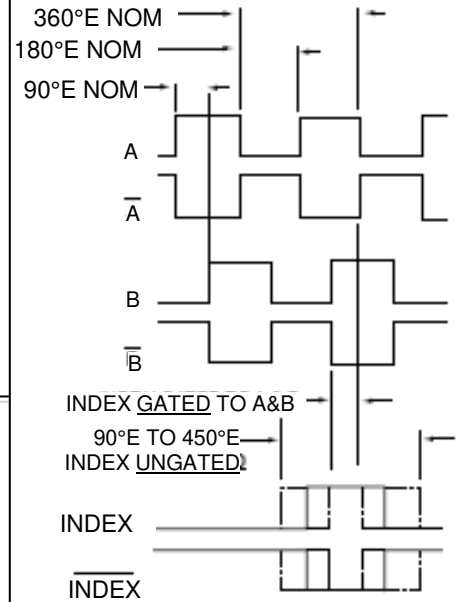
Removal:

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.

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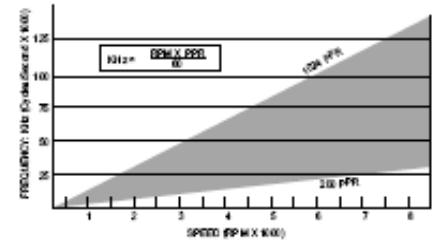
Output

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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Color Codes	
RED	+5V
BLACK	GROUND
WHITE	A
GREEN	B
ORANGE	INDEX
BLUE	\bar{A}
WHT/BLK	\bar{B}
RED/BLK	\bar{INDEX}