



! Our Explosion Proof encoder is a combination of our standard encoder installed within an approved instrument housing. It is not an FM approved assembly. The individual user is responsible for FM's approval of the assembly per the individual installation.

FEATURES

- Non-Contact for Easy Installation
- No Mechanical Coupling Required
- No Shaft Seal or Bearings to Wear-out
- Increment or Absolute Position
- Diagnostic LED Indicators
- Extreme Rugged Duty Package and Electronics
- Perfect for the Oil and Gas Industry

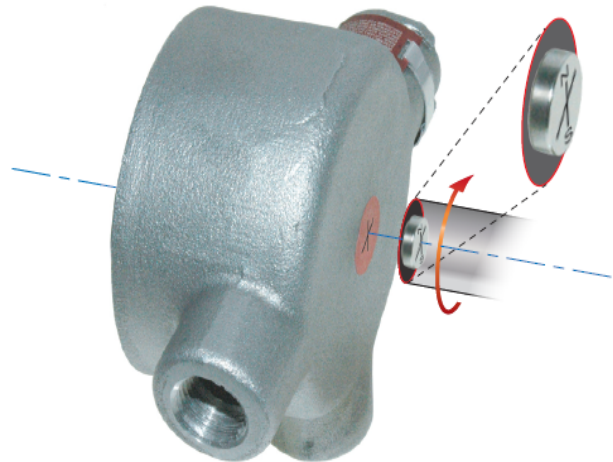
DESCRIPTION

Joral has introduced a revolutionary non-contact rotary encoder for explosion proof applications. The encoder does not have a shaft or bearings but senses rotary motion through a magnetic sensing technology proven throughout the Hockey Puck product lines.

Without ridged mechanical couplings, the XPHP is easy to install by attaching a magnet to the rotation item. Simply position the encoder close to the center of the magnet. No shaft seals to worry about and no bearings to wear out. The encoder is able to compensate for mechanical misalignments due to wear, machine damage or installation. The XPHP is available as incremental or absolute position in a wide variety of resolutions and features.

APPLICATION

Non-Contact means that you do not have to mechanically couple the encoder to your machine. Just mount a magnet on the end of your rotating shaft and install the center of the XPHP in front of the magnet. Our encoder actually senses the rotating magnet without touching it.



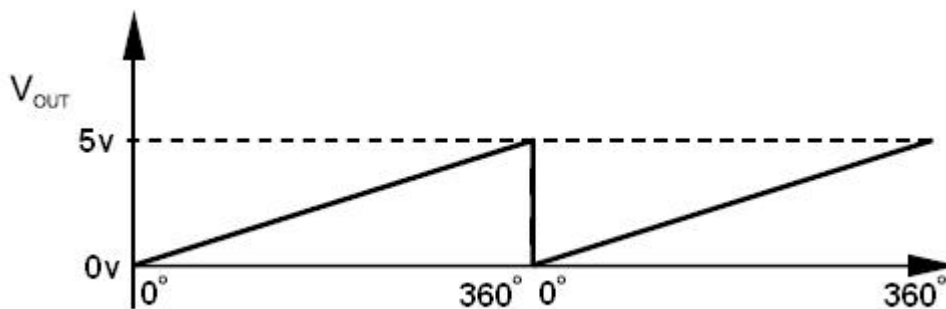
- Explosion proof high-grade cast aluminum housing
- Three ½" NPT conduit feed-through hubs for power and signal wires
- Wires easily land to the plugable connector block
- Handy mounting bracket makes installation a breeze
- Electronic components are completely sealed
- Resists mechanical shock, vibration, temperature and contaminants.

GENERAL INFORMATION

The Joral Analog output provides a signal that is proportional to the absolute angular position of the encoder. The 0 to 5 VDC output voltage is directly proportional to the 0 to 360 degree measured angle.

ANALOG VOLTAGE OUTPUT

The voltage output of the encoder varies proportionally to the measured angle over the entire 360 degree rotation.



OUTPUT SPECIFICATIONS

Parameter	Value
Output Voltage	0 to 5VDC
Output Loading	10mA maximum
Nonlinearity	< 1 %
Maximum Speed	3000 RPM

MATING CONNECTOR

The Analog Output function is available with the 5 pin terminal connector. Following are the pin designations:

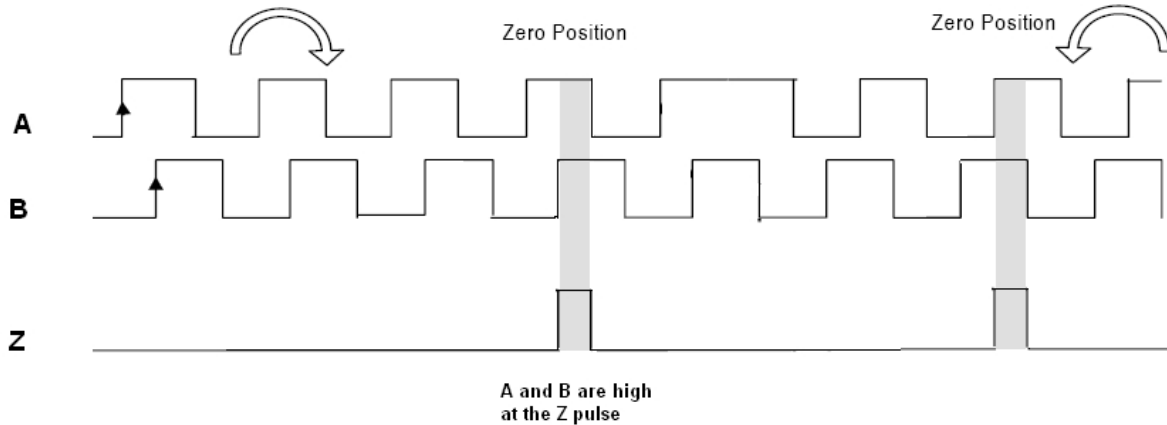
Pin	Function
1	Power (+V)
2	Common
3	Output +
4	Output -
5	Unused



GENERAL INFORMATION

Incremental output of the encoder provides count and direction information through pulses and a phase shift between output channel A and channel B. Channel A leads channel B at a clockwise rotation of the magnet (shaft view) by 90 degrees. Channel B leads channel A at counter-clockwise rotation. In addition, an index output (called Z) is provided once per rotation. The incremental output can be single ended (A, B, and Z) or differential output (A, B, Z and A'B'Z').

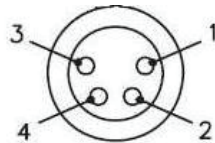
OUTPUT TIMING



AB Output

4 pin M8 male (model designation: M8)

Pin	Encoder Function
1	Power (+V)
2	Common
3	Data A
4	Data B

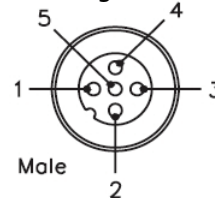


ABZ Output

5 pin M12 male (model designation: 5M12)

5 pin M12 male on Pigtail (model designation: 5M12P)

Pin	Encoder Function
1	Power (+V)
2	Data B
3	Common
4	Data A
5	Data Z



5 pin cable with flying leads (model designation: 5C)

Pin	Encoder Function
Brown	Power (+V)
Blue	Common
Black	Data A
White	Data B
Gray	Data Z

5 pin terminal strip (model designation: 5T)

Pin	Encoder Function
1	Power (+V)
2	Common
3	Data A
4	Data B
5	Data Z

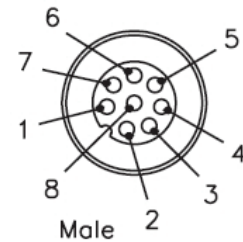


ABZ A'B'Z' Output

8 pin M12 male (model designation: 8M12)

8 pin M12 male on Pigtail (model designation: 8M12P)

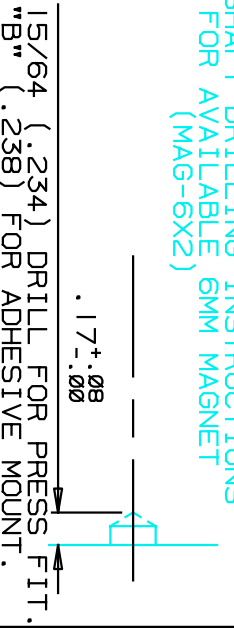
Pin	Encoder Function
1	Data A
2	Power (+V)
3	Data A'
4	Data B
5	Data B'
6	Data Z
7	Common
8	Data Z'



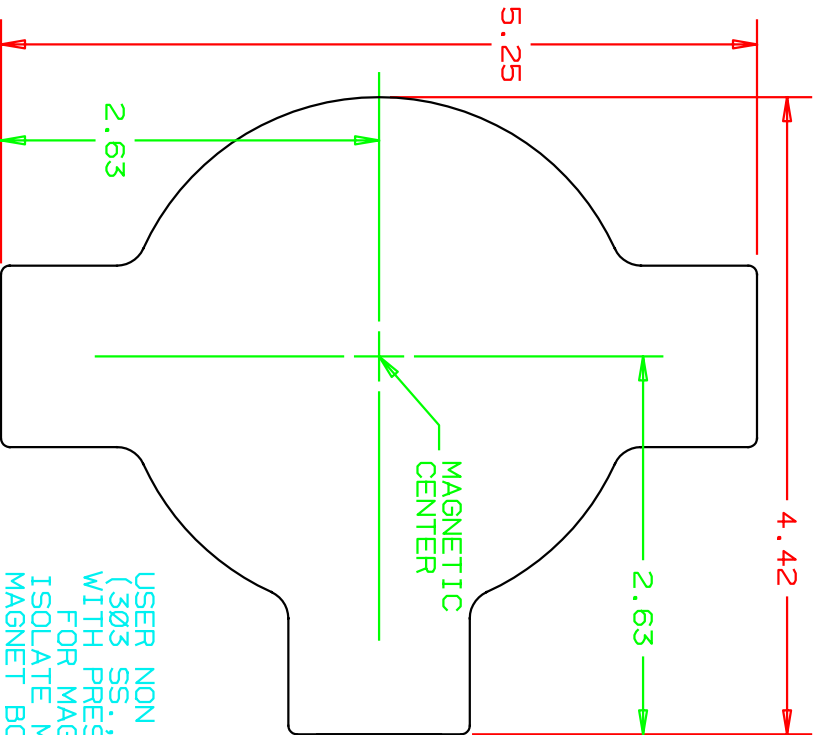
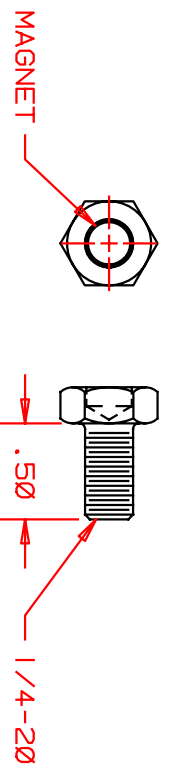
8 pin cable with flying leads (model designation: 8C)

Pin	Encoder Function
Brown	Power (+V)
Blue	Common
White	Data A
Green	Data B
Gray	Data Z
Yellow	Data A'
Red	Data B'
Pink	Data Z'

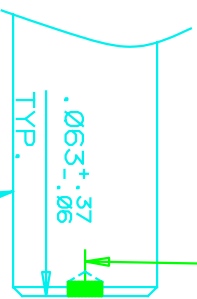
SHAFT DRILLING INSTRUCTIONS
FOR AVAILABLE 6MM MAGNET
(MAG-6X2)



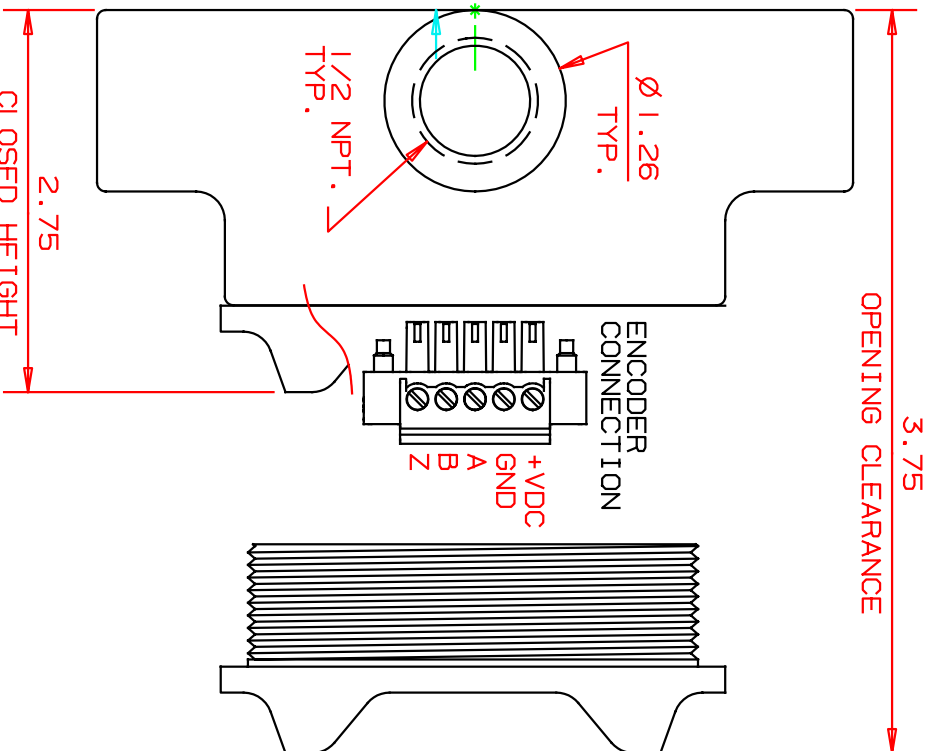
AVAILABLE MAGNET BOLT.
(ALUMINUM #MAG-AL1) (NYLON #MAG-NY1)



AXIAL ALIGNMENT
SHAFT MAGNET
CENTER TO
ENCLOSURE
MAGNETIC CENTER
±0.10 MAX.



USER NON MAGNETIC SHAFT
(303 SS., BRONZE, ETC.)
WITH PRESSED FIT MAGNET.
FOR MAGNETIC SHAFT
ISOLATE MAGNET BY USE OF
MAGNET BOLT DESCRIBED
ABOVE OR SIMILAR METHOD.



USER MAGNETS MUST HAVE BOTH POLES ON SAME FACE.

CONFIDENTIAL-ALL RIGHTS RESERVED
DISCLOSURE OR DUPLICATION PROHIBITED
UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE DECIMAL INCH

MANUFACTURING TOLERANCES
X .XX .XXX ANGLE
±.015 ±.005 ±.001

DESIGN: C. SCHRUBBE	DATE: 04/15/07	DRAFTING: R. BLANK	DATE: 04/25/08
CHECKED: R. BLANK	DATE: 04/25/08	APPROVED:	DATE: 00/00/00
B.O.M.		RELEASED: R. BLANK	DATE: 04/25/08

CUSTOMER:	SIZE	SCALE
	AL	NONE

TITLE: XP HOCKEY PUCK CUSTOMER VIEW	DWG NO.:	REV. SHEET:
XPHP-CUSTOMER-R0		1 OF 1



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