

J140 40MM INCREMENTAL ENCODER

TOUGH, RUGGED-DUTY, DURABLE
HIGH RESOLUTION MAGNETIC ENCODER

J1 LINE OF RUGGED INCREMENTAL ENCODERS:
JORAL DEVICES HAS DEVELOPED A NEW LINE OF RUGGED-DUTY ROTARY ENCODERS TO MEET THE DEMANDS OF THE MOBILE HYDRAULICS AND INDUSTRIAL MARKETPLACE. THE ENCODER MARRIES A UNIQUE MECHANICAL DESIGN WITH ADVANCED DIGITAL SIGNAL PROCESSING TECHNOLOGY. THE RESULT IS AN EXTREMELY DURABLE AND VERSITILE ANGULAR MEASUREMENT SENSOR THAT PERFORMS IN A WIDE VARIETY OF TOUGH APPLICATIONS.

THE J1 ENCODER HAS PASSED MIL-STD 202 TESTING. ALL ELECTRONICS IS SEALED IN HIGH STRENGTH POTTING COMPOUND PROVIDING PROTECTION FROM SHOCK, VIBRATION AND EXTREME CONDITIONS. LED INDICATORS ARE GREAT FOR INSTALLATION OR TROUBLESHOOTING. THE FLEXIBLE DESIGN PROVIDES A WIDE RANGE OF OPERATING VOLTAGE, TEMPERATURE, AND RESOLUTIONS. BUILT-IN OVER VOLTAGE, MIS-WIRE AND SPIKE PROTECTION KEEP THIS ENCODER RUNNING.



J140 Encoder

SPECIFICATIONS

Mechanical

Enclosure: 40mm diameter aluminum
Mounting: Servo ring / 3 face mounting holes
Shaft: Stainless steel, non-magnetic. See Table for available size and style
Weight / Height: 4oz / 43mm body
Maximum RPM: 6000 PRM
Shaft Assembly: Internally supported by oversize dual ball bearings
Bearings: Chrome Steel
Exterior Finish: Anodized

Electrical

Supply Voltage: 6 to 30 VDC
Current Draw: 100 milliamps typical
Output Format: Incremental quadrature (Ch A and Ch B, with optional Marker)
Output Resolution: 10 to 2048 quadrature pulses per revolution (13 bit)
Output Driver: Push/Pull (OLP7272)
Protection: reverse polarity, spike, noise, open circuit, short circuit
Electrical Connections: 5 wire plug-able terminal strip (see Table)
LED Indicators: Power, Channel and Marker

Environmental

Temperature: -25 to +70 degrees C
Humidity: 100% relative humidity
Potting Compound: Non-porous, water and chemical resistant, RoHS compliant
Shock & Vibration: Meets MIL-STD-202 Specs (information available on web site)
Shock—half sine, 50g, 11ms Thermal Shock— -40 to + 125 one hour dwell
Vibration—10 to 500 hz at 10g
Enclosure Rating: IP65, 67 or 68 (depending on connection style)

ORDERING

J140 - PPR - SS - OP

PPR: QUAD PULSES PER REV (SEE TABLE)
SS: SHAFT STYLE (SEE TABLE)
OP: OPTIONAL FEATURES

OPTIONS AND CUSTOMS

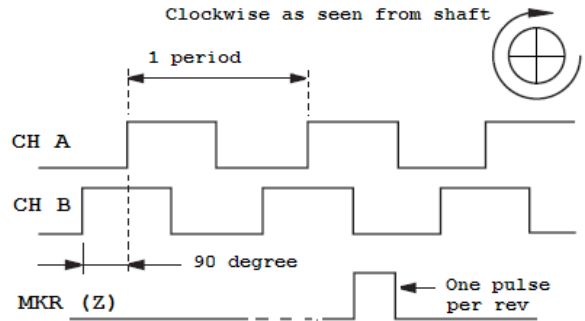
OPTIONS AND CUSTOMIZATIONS ARE AVAILABLE FOR CONNECTORS, SHAFT CONFIGURATION, MOUNTING, LABELING, COLOR AND SPECIAL ELECTRICAL CHARACTERISTICS. CONTACT JORAL DEVICES FOR DETAILS.

OUTPUT PULSES PER REVOLUTION (PPR)

The following standard resolutions are available. Consult the factory for any other resolutions. The resolution specifies the number of pulses per revolution per channel (CH A and CH B).

Decimal Resolutions: 10, 20, 25, 40, 50, 80, 100, 125, 200, 250, 400, 500

Binary Resolutions: 8, 16, 32, 64, 128, 256, 512, 1024, 2048



CONNECTIONS

Encoders come standard with 5 pin connector with M2 locking screws capable of terminating a 16 to 28 gauge wire. Connector simply plugs in for easy installation.

- Pin 1 : +V (6 to 30 VDC)
- Pin 2: Gnd
- Pin 3: Channel A output
- Pin 4: Channel B output
- Pin 5: Marker pulse M



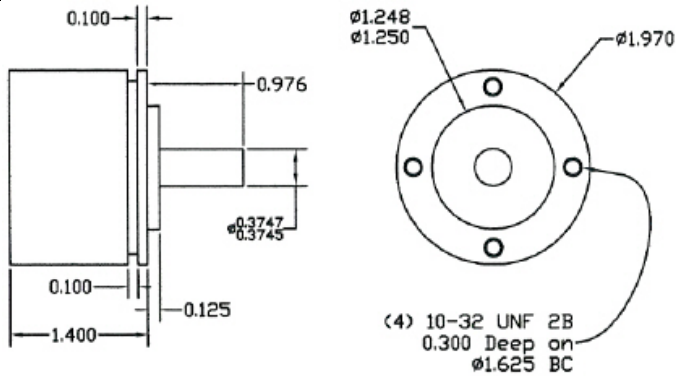
SHAFT OPTIONS

- 6R: 6mm round
- 6F: 6mm round with flat
- 6C: 6mm round with cross hole
- 10R: 10mm round
- 10F: 10mm round with flat

- 375R: 0.375" round
- 375F: 0.375" round with flat
- 375L: 0.375" round with slot
- 375X: 0.375" hex with .312 across flats

Consult the factory for additional styles or diameters.

MECHANICAL DETAILS



The J140 provides a servo ring and 3 face holes for mounting.

JORAL DEVICES ENCODERS:

JORAL OFFERS A VARIETY OF SHAFT DRIVEN INCREMENTAL AND ABSOLUTE ROTARY ENCODERS IN 30, 40, 50, AND 58 MM DIAMETERS AND VARIOUS CONFIGURATIONS. WE ALSO HAVE THE JORAL HOCKEY PUCK ENCODER FOR NON-CONTACT APPLICATIONS. CONTACT JORAL DEVICES OR YOUR DISTRIBUTOR FOR DETAILS.



The Joral Hockey Puck Encoder