The **DR011** is the smart direct replacement choice for the BEI EX152 encoder commonly used on postal sorting equipment, baggage systems, and packaging/conveying equipment. This exact replacement has the added benefit of an attached cable, saving a technician time by not having to solder wires to a circuit board. Improved sealing means a longer life with increased protection.

### Features
- High precision 1.50” incremental encoder
- Stainless steel 1/4” OD shaft
- Quadrature A & B channels
- 1000 CPR
- Push-Pull output
- Servo mount encoder with 4-40 x 0.30” deep mounting holes on a 1.100” bolt circle
- 18” cable with strain relief
- IP50 sealing
- Shaft speeds up to 7,500 RPM

*Contact Customer Service for pricing. Discounts available for volume orders.*

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**The Accu-Coder® Advantage**
- US-based since 1969
- Industry-best 3-year warranty
- Exceptional customer service
- Fast lead times – contact us for lead times and expedite options
### MODEL DR011 SPECIFICATIONS

**Electrical**
- Input Voltage: 4.75 to 28 VDC max for temperatures up to 70° C
- Input Current: 100 mA max with no output load
- Input Ripple: 100 mV peak-to-peak at 0 to 100 kHz
- Output Format: Incremental – Two square waves in quadrature with channel A leading B for clockwise shaft rotation, as viewed from the encoder mounting face. See Waveform Diagrams below.
- Output Type: Push-Pull – 20 mA max per channel
- Freq Response: 100 kHz
- Noise Immunity: Tested to BS EN61000-4-2; IEC801-3; BS EN61000-4-4; DDENV 50141; DDENV 50204; BS EN55022 (with European compliance option); BS EN61000-6-2; BS EN50081-2
- Symmetry: 180° (±18°) electrical at 100 kHz output
- Quad Phasing: 90° (±22.5°) electrical at 100 kHz output
- Min Edge Sep: 67.5° electrical at 100 kHz output
- Rise Time: Less than 1 microsecond
- Accuracy: 0.017° mechanical (0.0 arc minutes) from one cycle to any other cycle.

**Mechanical**
- Max Speed: 7500 RPM. Higher shaft speeds may be achievable, contact Customer Service.
- Shaft Size: 0.250" outside diameter
- Shaft Rotation: Bi-directional
- Radial Shaft Load: 5 lb
- Axial Shaft Load: 3 lb
- Starting Torque: 0.14 oz-in typical
- Moment of Inertia: 2.8 x 10^-4 oz-in-sec^2
- Max Acceleration: 1 x 10^5 rad/sec^2
- Electrical Conn: 18" cable (foil and braid shield, 24 AWG conductors)
- Housing: Black non-corrosive finish
- Bearings: Precision ABEC ball bearings
- Mounting: 1.3115" Servo Mounting face, see dimensions
- Weight: 3.10 oz typical

**Environmental**
- Operating Temp: 0° to 70° C
- Storage Temp: -25° to 85° C
- Humidity: 98% RH non-condensing
- Vibration: 10 g @ 58 to 500 Hz
- Shock: 50 g @ 11 ms duration

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### DR011 Dimensions

**4-40 UNC-2B 0.30 DEEP**

- Ø0.8745 ±0.0005
- Ø0.250 ONLY
- Ø1.3115 ±0.0005

**CABLE LENGTH 18" STANDARD**

**SSA-5M3**

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### DR011 Waveform Diagram

**CLOCKWISE ROTATION**

**NOTE:** ALL DEGREE REFERENCES ARE ELECTRICAL DEGREES

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### DR011 Wiring Table

<table>
<thead>
<tr>
<th>Function</th>
<th>Cable Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM</td>
<td>Black</td>
</tr>
<tr>
<td>+VDC</td>
<td>White</td>
</tr>
<tr>
<td>A</td>
<td>Brown</td>
</tr>
<tr>
<td>B</td>
<td>Red</td>
</tr>
<tr>
<td>Shield</td>
<td>Bare</td>
</tr>
</tbody>
</table>

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**Don't see the exact encoder you need?**

Call *(800) 366-5412* and our Technical Sales Department will cross-reference your encoder to the correct EPC model.