The Accu-Coder® Direct Replacement Encoder DR580 is an exact substitute for the Dynapar H23 used on Magnetek Vector/Inverter Duty motors. Available with CPRs of 1024, 2048, or 2500, the DR580 is a heavy duty, rugged industrial encoder capable of withstanding higher temperatures and shock than the Dynapar H23. With either a body mount, or in-line connector option, the DR580 will provide a simple direct fit installation with superior performance for your motor mount application.

Features:

- Rugged 2” industrial encoder with 2.25” flex mount and 5/8” bore
- Able to withstand temperatures up to 100°C
- Quadrature with index
- Line Driver output
- 5 to 28 VDC
- 10-pin inline or body mount MS connectors
- Frequency up to 200 kHz
- Sealing of IP64

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

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 DR580 SPECIFICATIONS

**Electrical**
- Input Voltage: 4.75 to 28 VDC max for temperatures up to 70°C; 4.75 to 24 VDC for temperatures between 70°C to 100°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 B leading A for clockwise shaft rotation, as viewed from the encoder mounting face. See Waveform Diagrams below.
- Output Type: Line Driver: 20 mA max per channel (Meets RS 422 at 5 VDC supply)
- Index: Occurs once per revolution. See Waveform Diagram below.
- Freq Response: 200 kHz
- Noise Immunity: Tested to BS EN61000-4-2; IEC801-3; BS EN61000-4-3; BS EN50081-2; BS EN50082-1
- 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: Instrument and Quadrature Error: 0.017° mechanical (1.0 arc minutes) from one cycle to any other cycle. (Total Optical Encoder Error = Instrument + Quadrature + Interpolation)

**Mechanical**
- Max Shaft Speed: 8000 RPM. Higher shaft speeds may be achievable, contact Customer Service.
- Bore Size: 0.625"
- Bore Tolerance: +0.0006" / -0.0000"
- User Shaft Tolerances:
  - Radial Runout: 0.007" max
  - Axial Endplay: 0.030" max
- Starting Torque: 1.0 oz-in in typical with IP64 seal
- Moment of Inertia: 5.2 x 10^-4 oz-in-sec^2
- Max Acceleration: 1 x 10^4 rad/sec^2
- Electrical Conn.: 10-pin M5 on 15" of cable, or body mount
- Housing: All metal construction with black protective coating
- Bearings: Precision ABEC ball bearings
- Mounting:
  - Ø2.250" flex mount
  - 4-40 or 6-32 clearance for Ø2.600" body
- Weight: 11 oz typical

**Environmental**
- Operating Temp: 0° to 100°C
- Storage Temp: 25° to 85°C
- Humidity: 98% RH non-condensing
- Vibration: 20 g @ 58 to 500 Hz
- Shock: 75 g @ 11 ms duration
- Sealing: IP64

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**DR580 Dimensions**

**DR580 Waveform Diagram**

**DR580 Wiring Table**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Function</th>
<th>Cable Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>A</td>
<td>Violet</td>
</tr>
<tr>
<td>B</td>
<td>B</td>
<td>Brown</td>
</tr>
<tr>
<td>C</td>
<td>Z</td>
<td>Orange</td>
</tr>
<tr>
<td>D</td>
<td>+VDC</td>
<td>Red</td>
</tr>
<tr>
<td>E</td>
<td>Shield</td>
<td>Black Tube</td>
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<tr>
<td>F</td>
<td>COM</td>
<td>Black</td>
</tr>
<tr>
<td>G</td>
<td>Case</td>
<td>Green</td>
</tr>
<tr>
<td>H</td>
<td>A'</td>
<td>Blue</td>
</tr>
<tr>
<td>I</td>
<td>B'</td>
<td>White</td>
</tr>
<tr>
<td>J</td>
<td>Z'</td>
<td>Yellow</td>
</tr>
</tbody>
</table>

**Line Driver**

The Line Driver output waveform is shown in the figure above. Output A leads Output B for clockwise rotation, as viewed from the encoder mounting face.

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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.