# Model 758 - Incremental Shaft Encoder

## Features
- **Standard Size 58 Mounting (58 mm Diameter)**
- Up to 30,000 CPR
- 80 lb Max. Axial and Radial Shaft Loading
- High Temperature Option (100° C)
- IP67 Sealing Available

The Model 758 Size 58 Accu-Coder™ is a heavy duty, extremely rugged, reliable, yet compact European standard size 58 millimeter diameter encoder, designed for harsh factory and plant floor environments. Shaft loading is no problem for the double-shielded ball bearings; their 80 lb load rating ensures a long operating life. With the optional heavy-duty shaft seal, the Model 758 is rated IP67. Two European standard mounting options are available: Clamping Flange (20 Type) or Synchro Flange (26 Type). The Model 758 is the perfect replacement encoder for units requiring the European mount.

## Common Applications
- Motion Control Feedback
- Machine & Elevator Controls
- Food Processing, Robotics, Material Handling, Conveyors, Textile Machines

## Model 758 Ordering Guide

Blue type indicates price adder options. Not all configuration combinations may be available. Contact Customer Service for details.

### Model 758 CPR Options

<table>
<thead>
<tr>
<th>CPR Value</th>
<th>Channel A</th>
<th>Channel B</th>
<th>Channel B Leads A</th>
<th>Channel A Leads B</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001</td>
<td>0002</td>
<td>0004</td>
<td>0005</td>
<td>0006</td>
</tr>
<tr>
<td>0012</td>
<td>0014</td>
<td>0020</td>
<td>0021</td>
<td>0024</td>
</tr>
<tr>
<td>0033</td>
<td>0034</td>
<td>0035</td>
<td>0038</td>
<td>0040</td>
</tr>
<tr>
<td>0064</td>
<td>0100</td>
<td>0120</td>
<td>0125</td>
<td>0128</td>
</tr>
<tr>
<td>0200</td>
<td>0240</td>
<td>0260</td>
<td>0264</td>
<td>0266</td>
</tr>
<tr>
<td>0400</td>
<td>0500</td>
<td>0600</td>
<td>0625</td>
<td>0635</td>
</tr>
<tr>
<td>0800</td>
<td>0889</td>
<td>1000</td>
<td>1024</td>
<td>1200</td>
</tr>
<tr>
<td>1500</td>
<td>1800</td>
<td>2000</td>
<td>2048</td>
<td>2400</td>
</tr>
<tr>
<td>3600</td>
<td>4000</td>
<td>4096</td>
<td>5000</td>
<td>6000</td>
</tr>
<tr>
<td>7200</td>
<td>7500</td>
<td>9000</td>
<td>10000</td>
<td>12000</td>
</tr>
<tr>
<td>12,000</td>
<td>12,500</td>
<td>14,400</td>
<td>15,000</td>
<td>18,000</td>
</tr>
<tr>
<td>20,000</td>
<td>20,480</td>
<td>25,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Contact Customer Service for High Temperature Option (H).*

**Notes:**
1. The shaft on 20 Type mountings includes a 15.58 mm flat. The shaft on 26 Type mountings is provided without a flat.
2. Low temperature option not available with resolutions of 3000 CPR or higher.
3. 0° to 85° C for certain resolutions, see CPR Options.
4. Contact Customer Service for index gating options.
5. 24 VDC max for high temperature option.
6. HS and PS outputs are not available with CE option, or any End Mount MS Connector.
7. Standard temperature, 60 to 3000 CPR only. Not available with 2540 CPR.
8. Line Driver Outputs not available with 5-pin M12 connector. Available with 7-pin MS connector only without Index Z.
10. For mating connectors, cables, and cordsets see Accessories at encoder.com.
11. For Connector Pin Configuration Diagrams, see Technical Information or see Connector Pin Configuration Diagrams at encoder.com.
12. For Non-Standard Cable Lengths add a forward slash (/) plus cable length expressed in feet. Example: SG12 = 6 feet of cable.

## Notes
- 10 kHz Standard
- 200 kHz ≤ 3000 CPR
- 250 kHz, >3000 CPR
- 500 kHz, >6000 CPR
- 1 MHz, >10,000 CPR

## Specifications
- **Shaft Size:** 0.250”, 1/4”, 6 mm
- **Temperature:** 0° to 70° C
- **Sealing:** IP67
- **Max. Axial and Radial Shaft Loading:** 80 lb
- **CPR Options:** 0001 to 30,000
- **Output Type:** 5-28V In/Out, Open Collector, Pull-Up Resistor
- **Operating Temperature:** 0° to 70° C
- **Mounting Type:** A - Clamping Flange (20 Type), B - Synchro Flange (26 Type)
- **Cycles Per Revolution:** 1-30,000
- **Maximum Frequency:** 100 kHz Standard
- **Encoder Dimensions:** Ø58 mm
**MODEL 758 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.
- **Output Types**: Open Collector – 100 mA max per channel.
  - Pull-Up – Open Collector with 2.2K ohm internal resistor, 100 mA max per channel.
  - Push-Pull – 20 mA max per channel.
- **Line Driver**: 20 mA max per channel.
- **Min Edge Sep**: 1 to 6000 CPR: 5.5° (±2.75°) electrical at 100 kHz output.
- **Quad Phasing**: 1 to 6000 CPR: 90° (±22.5°) electrical at 100 kHz output.
- **Min Edge Sep**: 6000 to 20,480 CPR: 2° (±1°) electrical at 100 kHz output.
- **Rise Time**: Less than 1 microsecond.
- **Accuracy**: Instrument and Quadrature Error: For 200 to 1999 CPR, 0.017° ± 0.0005°; other CPRs: 0.02° ± 0.0005°.
- **Shaft Rotation**: Bi-directional.
- **Radial Shaft Load**: 80 lb max. Rated load of 20 to 40 lb for bearing life of 1.5 x 10^6 revolutions.
- **Axial Shaft Load**: 80 lb max. Rated load of 20 to 40 lb for bearing life of 1.5 x 10^6 revolutions.
- **Starting Torque**: 1.0 oz-in typical with IP64 seal or no seal.
- **Moment of Inertia**: 5.2 x 10^-4 oz-in-sec^2.
- **Housing**: Black non-corrosive finish.
- **Bearings**: Precision ABEC ball bearings.
- **Weight**: 11 oz typ.

**Environmental**

- **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**: IP50 standard; IP64, IP66 or IP67 optional.

**WAVEFORM DIAGRAMS**

**WIRING TABLE**

For EPC-supplied mating cables, refer to wiring table provided with cable. Trim back and insulate unused wires.

**WIRING TABLE**

<table>
<thead>
<tr>
<th>Function</th>
<th>Gland Cable T</th>
<th>Wire Color</th>
<th>5-pin M12**</th>
<th>8-pin M12**</th>
<th>10-pin MS</th>
<th>T-pin MS</th>
<th>T-pin MS</th>
<th>12-pin M23</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Com</strong></td>
<td>Black</td>
<td>3</td>
<td>7</td>
<td>F</td>
<td>F</td>
<td>F</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td><strong>+VDC</strong></td>
<td>Red</td>
<td>1</td>
<td>2</td>
<td>D</td>
<td>D</td>
<td>D</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td><strong>A</strong></td>
<td>White</td>
<td>4</td>
<td>1</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>Brown</td>
<td>3</td>
<td>3</td>
<td>H</td>
<td>C</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>Blue</td>
<td>2</td>
<td>4</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td><strong>D</strong></td>
<td>Violet</td>
<td>5</td>
<td>5</td>
<td>I</td>
<td>E</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>E</strong></td>
<td>Orange</td>
<td>6</td>
<td>6</td>
<td>C</td>
<td>C</td>
<td>3</td>
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<td></td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>Yellow</td>
<td>5</td>
<td>5</td>
<td>J</td>
<td>J</td>
<td>J</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><strong>G</strong></td>
<td>Shield</td>
<td>Bare</td>
<td><strong>Standard</strong></td>
<td>8</td>
<td>J</td>
<td>J</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><strong>H</strong></td>
<td>Sense</td>
<td><strong>Standard</strong></td>
<td>8</td>
<td>J</td>
<td>J</td>
<td>J</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><strong>I</strong></td>
<td>Com Sense</td>
<td><strong>Standard</strong></td>
<td>8</td>
<td>J</td>
<td>J</td>
<td>J</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><strong>J</strong></td>
<td>Case</td>
<td>Green</td>
<td>8</td>
<td>J</td>
<td>J</td>
<td>J</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><strong>K</strong></td>
<td><strong>CE Option</strong></td>
<td>Cable shield (bare wire) is connected to internal case.</td>
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</tr>
</tbody>
</table>

*CE Option: Cable shield (bare wire) is connected to internal case.
**Standard cable is 24 AWG conductors with foil and braid shield.
†CE Option: Use cable cordset with shield connected to M12 connector coupling nut.