Model 958 Single Turn
58mm Absolute

Features
• 58 mm Package
• Resolutions Up To 12 Bit (4096 PPR equivalent)
• Incorporates Opto-ASIC Technology
• Industrial Grade, Heavy Duty Housing
• Wide Range of Operating Voltages (4.75 to 24 VCC)

The Model 958 Single Turn Absolute is ideal for a wide variety of industrial applications requiring an encoder with Size 58 mm mounting and absolute positioning output. A rugged, industrial grade housing allows the Model 958 to be used in a wide variety of applications calling for a reliable, heavy-duty encoder. In addition, its innovative Opto-ASIC circuitry, coupled with its digital output, make it an excellent choice in those applications plagued by unusually high levels of electrical noise. Available with a choice of either type 20 or type 26 servo mounting, and a variety of connector and cabling options, the Model 958 is easily designed into a variety of applications. The Model 958 can also be ordered with stainless steel housing, heavy duty bearings, and an IP66 seal.

With so many options that make the Model 958 ultra-durable, this absolute encoder can tolerate the worst environments!

Common Applications
Machine Tools, Robotics, Telescopes, Antennas, Rotary & X-Y Positioning Tables, Medical Scanners

Model 958 Ordering Guide
Red type indicates price adder options. Not all configuration combinations may be available. Contact Customer Service for details.

Model 958 Resolution Table

<table>
<thead>
<tr>
<th>Output Code</th>
<th>Pulses Per Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>958/G Gray Code</td>
<td>0256 0512 1024 2048 4096</td>
</tr>
<tr>
<td>958/B Natural Binary</td>
<td>0256 0360 0500 0512 0720</td>
</tr>
<tr>
<td>958/X Excess Gray</td>
<td>0180 0250 0360 0500 0720 1000</td>
</tr>
</tbody>
</table>

For specification assistance call Customer Service at +44 (0)1978 262100

NOTES:
1 For additional connector styles - contact sales office for availability.
2 For non-standard cable lengths - contact the sales office.
3 For Stainless Steel options - contact the sales office.
4 Significantly increased torque.

BRITISH ENCODER PRODUCTS Co., UNIT 33 WHITEGATE INDUSTRIAL ESTATE, WREXHAM, LL13 8UG, UNITED KINGDOM
TEL: +44 (0)1978 262100 · FAX: +44 (0)1978 262101 · WEB: WWW.ENCODER.CO.UK · EMAIL: SALES@ENCODER.CO.UK
Page 52
Model 958 Specifications

Electrical
Input Voltage.............4.75 to 24 VCC max
Regulation.................100 mV peak-to-peak, max ripple at 0 to 100 kHz
Input Current .............100 mA max with no external load
Output Format ..........Absolute- Parallel Outputs
Output Type ..............Push-Pull- 20 mA max per channel
Max Frequency .........50 kHz (LSB)
Rise Time..................Less than 1 microsecond
Resolution ..............Up to 12 bit
Accuracy..................+1/6th LSB

Control
Directional Control.... Field selectable for increasing counts (CW or CCW)

Mechanical
Max Shaft Speed.....6000 RPM continuous
Shaft Size .................6mm, 10mm, 12mm
Radial Shaft Load ....15Kg max
Axial Shaft Load ....20Kg max
Starting Torque..........7.001 x 10^-3 Nm typical for no seal or IP64
Max Acceleration.......1 x 10^3 radians^2
Electrical Conn .........Gland with 2M cable (braid shield, 30 AWG conductors), 16 Pin, or 19-pin connector
Housing ..................Aluminum / Stainless Steel on request
Mounting ..................European Standard Clamping Flange (20 Type) and Synchro Flange (26 Type)
Weight .......................750gms typical

Environmental
Operating Temp ........0º to 70º C
Storage Temp ..........-20º to +85º C
Humidity ....................98% RH non-condensing
Vibration .................10 g @ 58 to 500 Hz
Shock .......................20 g @ 11 ms duration
Sealing ......................IP50 (standard)
                      IP64, IP65 or IP66**

** IP66 Significantly increased torque.

Model 958 Clamping Flange 20 Type (20)

Model 958 Synchro Flange 26 Type (26)

Wiring Table

<table>
<thead>
<tr>
<th>Function</th>
<th>19-PIN KPT03E14.1BP</th>
<th>16-PIN</th>
<th>Gland Cable or Matting Conn.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pin</td>
<td>Pin</td>
<td>Wire Col.</td>
<td>NOTES:</td>
</tr>
<tr>
<td>S1 MSB</td>
<td>A</td>
<td>3</td>
<td>Brown</td>
</tr>
<tr>
<td>S2</td>
<td>B</td>
<td>5</td>
<td>White</td>
</tr>
<tr>
<td>S3</td>
<td>C</td>
<td>6</td>
<td>Green</td>
</tr>
<tr>
<td>S4</td>
<td>D</td>
<td>7</td>
<td>Orange</td>
</tr>
<tr>
<td>S5</td>
<td>E</td>
<td>8</td>
<td>Blue</td>
</tr>
<tr>
<td>S6</td>
<td>F</td>
<td>9</td>
<td>Violet</td>
</tr>
<tr>
<td>S7</td>
<td>G</td>
<td>10</td>
<td>Grey</td>
</tr>
<tr>
<td>S8 LSB 8-bit</td>
<td>H</td>
<td>11</td>
<td>Pink</td>
</tr>
<tr>
<td>S9 LSB 8-bit</td>
<td>J</td>
<td>12</td>
<td>Red/Green</td>
</tr>
<tr>
<td>S10 LSB 10-bit</td>
<td>K</td>
<td>13</td>
<td>Red/Yellow</td>
</tr>
<tr>
<td>S11 LSB 11-bit</td>
<td>L</td>
<td>14</td>
<td>Turquoise</td>
</tr>
<tr>
<td>S12 LSB 12-bit</td>
<td>M</td>
<td>15</td>
<td>Yellow</td>
</tr>
<tr>
<td>Direction **</td>
<td>R</td>
<td>4</td>
<td>Red/Blue</td>
</tr>
<tr>
<td>Case Ground</td>
<td>S</td>
<td>16</td>
<td>Drain/Screen</td>
</tr>
<tr>
<td>OV Common</td>
<td>T</td>
<td>1</td>
<td>Black</td>
</tr>
<tr>
<td>Speed†</td>
<td>U</td>
<td>--</td>
<td>White/Red</td>
</tr>
<tr>
<td>ENCC</td>
<td>V</td>
<td>2</td>
<td>Red</td>
</tr>
</tbody>
</table>

* Where fitted
** Direction Control- Standard is CW increasing when viewed from the shaft end. Direction pin is pulled high normally to 5V internally. Direction pin must be pulled low (GND, Common) to reverse count direction. OV only should be applied to the direction pin.