**AWI 40**

- Incremental rotary encoder with shaft
- For simple industrial requirements
- Small design and high degree of protection
- Also available in stainless steel for aggressive environmental conditions
- Accessories from page 70

### Mechanical specifications

- Flange/Housing: Aluminium
- Shaft: stainless steel
- Shaft seal: Oil/Salt-water resistant
- Bearing: Deep groove ball bearing
- Weight: approx. 0.3 kg
- Protection type: IP 65
- Max. speed: 6000 U/min
- Torque:
  - axial 5 N
  - radial 5 N

### Electrical specifications

- max. pulse frequency: 25 kHz
- Perm. temperature range: -30°...+70°C
- Power supply: 10V...30V DC
- Max. current consumption: 80mA (without load)
- Max. output load: 30mA (per channel)
- Residual ripple: max. ± 5% Uᵦ
- Power supply: 5V DC ± 5%
- Max. current consumption: 40mA
- Max. output load: 30mA (per channel)

### Mechanical dimensions

![Mechanical dimensions diagram]

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>#10</td>
<td>78</td>
</tr>
<tr>
<td>#9</td>
<td></td>
</tr>
<tr>
<td>M 18x1</td>
<td>6 *)</td>
</tr>
<tr>
<td>5,5</td>
<td></td>
</tr>
<tr>
<td>PG 7</td>
<td></td>
</tr>
<tr>
<td>17,5</td>
<td>34</td>
</tr>
<tr>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

*) Tolerance = j 6
**Output circuits**

![Diagram of output circuits]

**Signal outputs**

A Two square pulse trains offset by 90° el, with channel A lagging in clockwise rotation.

B Reference pulse 0 once per revolution, position and length optional.

C design 0 pulse optional All channels can also be executed inversely.

**Tolerances** (at 25 kHz)

Phasenversatz: 90° ± 20° el Tastverhältnis: 180° : 180° ± 18° el

**Pin configuration**

<table>
<thead>
<tr>
<th>Connection type 00</th>
<th>GND</th>
<th>+ U_B</th>
<th>A</th>
<th>B</th>
<th>Â</th>
<th>ˆB</th>
<th>0</th>
<th>ˆ0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color code according to DIN 47100</td>
<td>white</td>
<td>brown</td>
<td>green</td>
<td>yellow</td>
<td>grey</td>
<td>blue</td>
<td>grey</td>
<td>blue</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Connection type 01</th>
<th>GND</th>
<th>+ U_B</th>
<th>A</th>
<th>B</th>
<th>Â</th>
<th>ˆB</th>
<th>0</th>
<th>ˆ0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>brown</td>
<td>beige</td>
<td>yellow</td>
<td>green</td>
<td>pink</td>
<td>blue</td>
<td>red</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Connection type 08, 09</th>
<th>GND</th>
<th>+ U_B</th>
<th>A</th>
<th>B</th>
<th>Â</th>
<th>ˆB</th>
<th>0</th>
<th>ˆ0</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>(5)</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Connection type 10, 11</th>
<th>GND</th>
<th>+ U_B</th>
<th>A</th>
<th>B</th>
<th>Â</th>
<th>ˆB</th>
<th>0</th>
<th>ˆ0</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>(5)</td>
<td>(6)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Order reference**

AWI 40 [ ] 0.6 [ ] [ ] C

Housing Shaft Signal output Connection position/Connection type Output circuit

S = Standard 6 = 6 mm
E = Stainless steel

1 = A
2 = A, B
3 = A, B, 0
4 = A, Â
5 = A, B / Â, B
6 = A, B, 0 / Â, B, 0
7 = A, 0
8 = A, 0 / Â, 0
9 = A, B, 0, 0

Standard 00, 01, 08, 09, 10, 11
R = radial 00, 01

Impulszahl 1... 500

with declaration of conformity (higher pulse numbers upon request)

1 = Push-pull 30mA
3 = TTL