**Series AWI 40**

- Incremental rotary-encoder with a solid shaft diameter of 6 mm
- Housing diameter 40 mm, small design and high degree of protection
- Maximum 500 pulses / revolution
- For simple industrial requirements
- Also available in stainless steel for aggressive Ambient conditions
- Accessories from page 78

**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:** 6.000 U/min
- **Torque:** approx 3 Ncm
- **Max. shaft load:**
  - axial 5 N
  - radial 5 N

**Electrical specifications**

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

**Mechanical dimensions**

![Mechanical dimensions diagram]
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)

Phase offset: 90° ± 20° el
Duty cycle: 180° : 180° ± 18° el

Pin configuration

<table>
<thead>
<tr>
<th>Connection type 00 (Colour code according to DIN 47100)</th>
<th>GND</th>
<th>+ U_b</th>
<th>A</th>
<th>B</th>
<th>A</th>
<th>B</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>white brown green yellow gray pink blue red</td>
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<th>B</th>
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<tr>
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</thead>
<tbody>
<tr>
<td>1 black blue brown beige yellow</td>
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<th>B</th>
<th>A</th>
<th>B</th>
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<th>GND</th>
<th>+ U_b</th>
<th>A</th>
<th>B</th>
<th>A</th>
<th>B</th>
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Order reference

AWI 40 0 6 C

Numbers of pulses 1... 500

with declaration of conformity
(higher numbers of pulses on request)

Housing Shaft Signal output Connection position/Connection type Output circuit

S = Standard 06 = 6 mm
E = Stainless steel

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

Standard
A = axial: 00, 01, 08, 09, 10, 11
R = radial: 00, 01

Stainless steel
A = axial: 00, 01, 08, 09, 10, 11
R = radial: 00, 01

1 = Push-pull 30 mA
3 = TTL