Ind. angular measuring system

Technical data

General specifications
- Measurement range: max. 360°, min. 45°
- Adjustment range: 360°
- Rotational speed: ≤ 100 min⁻¹

Nominal ratings
- Operating voltage U_B: 18 ... 30 V DC
- Reverse polarity protection: reverse polarity protected
- Repeat accuracy R: ≤ 0.25°
- Resolution: 0.2°
- Temperature drift: 0.02°/°C (-25 °C ... 70 °C)
- No-load supply current I_0: ≤ 45 mA

Functional safety related parameters
- MTTF_d: 450 a
- Mission Time (T_M): 20 a
- Diagnostic Coverage (DC): 0 %

Indicators/operating means
- LED PWR/ERR: LED green / red
- LED UI: Activator within measuring range

Analog output
- Output type: current output or voltage output (load dependend)
  - 4 ... 20 mA (R_L < 400 Ω)
  - 0 ... 10 V (R_L > 3.3 kΩ)
- Linearity error: ± 0.6°, (with original actuator)

Ambient conditions
- Ambient temperature: -25 ... 70 °C (-13 ... 158 °F)

Connection type: 5-pin, M12 x 1 connector

Material
- Housing: PBT
- Target: mild steel, e.g. 1.0037, SR235JR (formerly St37-2)

Mass: 180 g

Compliance with standards and directives

Approvals and certificates
- UL approval: cULus Listed, General Purpose, Class 2 Power Source
- CCC approval: CCC approval / marking not required for products rated ≤36 V

Dimensions

Model Number
PMI360DV-F130-IU-V15

Features
- Analog output, load-dependent voltage or current
- Parameterisable measuring range
Using a different actuating element

You can use a different actuator instead of the BT-F130-A actuator provided, which must be positioned centrally in the sensor opening. When using a different actuating element, the element must fulfill all requirements relating to the material, dimensions and distance to the sensitive surface on the sensors (see table). Failing to fulfill all of these requirements may reduce the accuracy/resolution of the sensor or even cause the sensor to stop functioning.

Dimensions when using a different actuating element
A Drive shaft
B Insulation ring made from non-conductive material
C Separate actuator (L ≥ 23 mm)
D Sensitive surface on the sensors (black, cylindrical inner surface)
E Sensor

Actuator (C) can be placed on the insulating ring made from non-conductive material (B) or inserted in this ring.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>t</th>
<th>w</th>
<th>L</th>
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</thead>
<tbody>
<tr>
<td>t</td>
<td>2 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>w</td>
<td>7.5 mm</td>
<td></td>
<td></td>
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<tr>
<td>L</td>
<td>≥ 23 mm</td>
<td></td>
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</tbody>
</table>

d1 Depending on the drive shaft material
S235JR+AR (previously St37-2): max. 19 mm
Stainless steel 1.4435 / AISI 316L (V4A): max. 21 mm
Stainless steel 1.4305 / AISI 303 (V2A): max. 23 mm

d2 Select so that the distance between the edges of the actuator and the sensitive surface on the sensor is 1 ... 2 mm.

d3 41.5 mm

Actuator material Mild steel such as S235JR+AR (previously St37-2)