Inductive Sensors
BES M12MI-PSC40B-S04G
Order Code: BES0068

Basic features
Approval/Conformity
- CE
- cULus
- EAC
- WEEE
Basic standard
- IEC 60947-5-2
Trademark
- Global

Display/Operation
Function indicator
- yes
Power indicator
- no

Electrical connection
Connection
- M12x1-Male, 3-pin, A-coded
Polarity reversal protected
- yes
Protection against device mix-ups
- yes
Short-circuit protection
- yes

Electrical data
Load capacitance max. at Ue
- 1 µF
Min. operating current Im
- 0 mA
No-load current Io max., damped
- 5 mA
No-load current Io max., undamped
- 2 mA
Operating voltage Ub
- 10...30 VDC
Output resistance Ra
- 33.0 kOhm + D
Protection class
- II
Rated insulation voltage Ui
- 250 V AC
Rated operating current Ie
- 200 mA
Rated operating voltage Ue DC
- 24 V
Rated short circuit current
- 100 A
Ready delay tv max.
- 21 ms
Residual current Ir max.
- 10 µA
Ripple max. (% of Ue)
- 15 %
Switching frequency
- 2500 Hz
Utilization category
- DC -13
Voltage drop static max.
- 1.5 V

Environmental conditions
Ambient temperature
- -25...70 °C
Contamination scale
- 3
EN 60068-2-27, Shock
- Half-sinus, 30 gn, 11 ms
EN 60068-2-6, Vibration
- 55 Hz, amplitude 1 mm, 3x30 min
Protection degree
- IP68

Functional safety
MTTF (40 °C)
- 640 a
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Material

<table>
<thead>
<tr>
<th>Housing material</th>
<th>Brass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material sensing surface</td>
<td>PBT</td>
</tr>
<tr>
<td>Surface protection</td>
<td>Nickel-free coated</td>
</tr>
</tbody>
</table>

Mechanical data

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Ø 12 x 65 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation</td>
<td>for flush mounting</td>
</tr>
<tr>
<td>Size</td>
<td>M12x1</td>
</tr>
<tr>
<td>Tightening torque</td>
<td>10 Nm</td>
</tr>
</tbody>
</table>

Output/Interface

| Switching output | PNP normally open (NO) |

Range/Distance

<table>
<thead>
<tr>
<th>Assured operating distance Sa</th>
<th>3.2 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hysteresis H max. (% of Sr)</td>
<td>15.0 %</td>
</tr>
<tr>
<td>Rated operating distance Sn</td>
<td>4 mm</td>
</tr>
<tr>
<td>Real switching distance sr</td>
<td>4 mm</td>
</tr>
<tr>
<td>Repeat accuracy max. (% of Sr)</td>
<td>5.0 %</td>
</tr>
<tr>
<td>Switching distance marking</td>
<td>■ ■</td>
</tr>
<tr>
<td>Temperature drift max. (% of Sr)</td>
<td>10 %</td>
</tr>
<tr>
<td>Tolerance Sr</td>
<td>±10 %</td>
</tr>
</tbody>
</table>

Remarks

The sensor is functional again after the overload has been eliminated. For more information about MTTF and B10d see MTTF / B10d Certificate

Indication of the MTTF-/B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.

Connector Drawings

Wiring Diagrams