Inductive sensor
With increased switching distance
BI2-EG08-AP6X-V1131

Type designation
Ident no.
BI2-EG08-AP6X-V1131
4602050

Rated switching distance Sn
2 mm

Secured operating distance
≤ (0.81 x Sn) mm

Correction factors
St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4

Repeat accuracy
≤ 2% of full scale

Temperature drift
≤ ± 10%

Hysteresis
3…15 %

Ambient temperature
-25…+70 °C

Operating voltage
10…30 VDC

Residual ripple
≤ 10% Uss

No-load current I0
≤ 15 mA

Residual current
≤ 0.1 mA

Isolation test voltage
≤ 0.5 kV

Short-circuit protection
yes/ Cyclic

Voltage drop at Ie
≤ 1.8 V

Wire breakage/Reverse polarity protection
yes/ Complete

Output function
3-wire, NO contact, PNP

Switching frequency
3 kHz

Design
Threaded barrel, M8 x 1

Dimensions
49 mm

Housing material
Stainless steel, 1.4427 SO

Active area material
Plastic, PA12-GF30

Max. tightening torque housing nut
5 Nm

Electrical connection
Connector, M8 x 1

Vibration resistance
55 Hz (1 mm)

Shock resistance
30 g (11 ms)

Protection class
IP67

MTTF
2283 years acc. to SN 29500 (Ed. 99) 40 °C

Wiring Diagram

Functional principle
Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.
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<table>
<thead>
<tr>
<th>Distance</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>$2 \times B$</td>
</tr>
<tr>
<td>W</td>
<td>$3 \times Sn$</td>
</tr>
<tr>
<td>T</td>
<td>$3 \times B$</td>
</tr>
<tr>
<td>S</td>
<td>$1.5 \times B$</td>
</tr>
<tr>
<td>G</td>
<td>$6 \times Sn$</td>
</tr>
</tbody>
</table>

Diameter active area $B$:

$\phi 8 \text{ mm}$
## Accessories

<table>
<thead>
<tr>
<th>Type code</th>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>QM-08</td>
<td>6945100</td>
<td>Quick-mount bracket with dead-stop, chrome-plated brass, male thread M12 x 1. Note: The switching distance of proximity switches may be reduced through the use of quick-mount brackets.</td>
</tr>
<tr>
<td>BST-08B</td>
<td>6947210</td>
<td>Fixing clamp for threaded barrel devices, with dead-stop; material: PA6</td>
</tr>
<tr>
<td>MW-08</td>
<td>6945008</td>
<td>Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)</td>
</tr>
<tr>
<td>BSS-08</td>
<td>6901322</td>
<td>Mounting bracket for smooth and threaded barrel devices; material: Polypropylene</td>
</tr>
<tr>
<td>MBS80</td>
<td>69479</td>
<td>Mounting bracket for threaded barrel devices; material mounting block: Anodized aluminium</td>
</tr>
</tbody>
</table>
## Wiring accessories

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</thead>
<tbody>
<tr>
<td>PKGV3M-2/TEL</td>
<td>6625385</td>
<td>Connection cable, female M8, straight, 3-pin, stainless steel coupling nut, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a></td>
</tr>
</tbody>
</table>