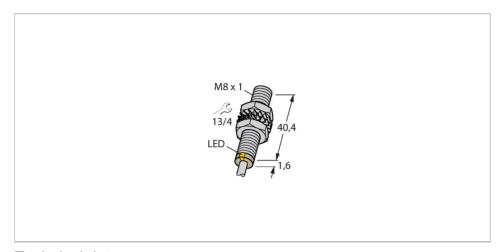


# BI2-EG08-AP6X/S1367 Inductive Sensor – With Increased Switching Distance



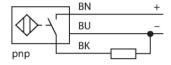
#### Technical data

ID	Туре	BI2-EG08-AP6X/S1367
Rated switching distance   2 mm	ID	100013733
Rated switching distance         2 mm           Mounting conditions         Flush           Secured operating distance         ≤ (0.81 × 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         315 %           Electrical data         Operating voltage U <sub>s</sub> Operating voltage U <sub>s</sub> 1030 VDC           Ripple U <sub>ss</sub> ≤ 10 % U <sub>smax</sub> DC rated operating current I <sub>s</sub> ≤ 150 mA           No-load current         ≤ 15 mA           Residual current         ≤ 0.1 mA           Isolation test voltage         0.5 kV           Short-circuit protection         yes/Cyclic           Voltage drop at I <sub>s</sub> ≤ 1.8 V           Wire break/reverse polarity protection         yes/Complete	Special version	•
Mounting conditions       Flush         Secured operating distance       ≤ $(0.81 \times Sn)$ 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       315 %         Electrical data       0perating voltage Us       1030 VDC         Ripple Uss       ≤ 10 % Usnax         DC rated operating current Is       ≤ 150 mA         No-load current       ≤ 15 mA         Residual current       ≤ 0.1 mA         Isolation test voltage       0.5 kV         Short-circuit protection       yes/Cyclic         Voltage drop at Is       ≤ 1.8 V         Wire break/reverse polarity protection       yes/Complete	General data	
Secured operating distance $\leq (0.81 \times Sn) \text{ mm}$ Correction factors $St37 = 1$ ; Al = 0.3; stainless steel = 0.7; Ms = 0.4  Repeat accuracy $\leq 2 \%$ of full scale  Temperature drift $\leq \pm 10 \%$ Hysteresis $315 \%$ Electrical data  Operating voltage $U_B$ $1030 \text{ VDC}$ Ripple $U_{BB}$ $\leq 10 \% U_{BMBA}$ DC rated operating current $I_B$ $\leq 150 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $0.5 \text{ kV}$ Short-circuit protection $0.5 \text{ kV}$ Wire break/reverse polarity protection $0.5 \text{ kV}$ Wire break/reverse polarity protection $0.5 \text{ kV}$	Rated switching distance	2 mm
Correction factors $\begin{array}{c} St37 = 1; \ Al = 0.3; \ stainless \ steel = 0.7; \ Ms \\ = 0.4 \\ \hline Repeat \ accuracy & \leq 2 \ \% \ of \ full \ scale \\ \hline Temperature \ drift & \leq \pm 10 \ \% \\ \hline Hysteresis & 315 \ \% \\ \hline Electrical \ data & \\ \hline Operating \ voltage \ U_{\scriptscriptstyle B} & 1030 \ VDC \\ \hline Ripple \ U_{\scriptscriptstyle Ss} & \leq 10 \ \% \ U_{\scriptscriptstyle Bmax} \\ \hline DC \ rated \ operating \ current \ I_{\scriptscriptstyle e} & \leq 150 \ mA \\ \hline No-load \ current & \leq 15 \ mA \\ \hline Residual \ current & \leq 0.1 \ mA \\ \hline Isolation \ test \ voltage & 0.5 \ kV \\ \hline Short-circuit \ protection & yes/Cyclic \\ \hline Voltage \ drop \ at \ I_{\scriptscriptstyle e} & \leq 1.8 \ V \\ \hline Wire \ break/reverse \ polarity \ protection & yes/Complete \\ \hline \end{array}$	Mounting conditions	Flush
$= 0.4$ Repeat accuracy $\leq 2 \%$ of full scale  Temperature drift $\leq \pm 10 \%$ Hysteresis $315 \%$ Electrical data  Operating voltage $U_B$ $1030 \text{ VDC}$ Ripple $U_{as}$ $\leq 10 \% U_{Bmax}$ DC rated operating current $I_C$ $\leq 150 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $0.5 \text{ kV}$ Short-circuit protection $yes/Cyclic$ Voltage drop at $I_C$ $\leq 1.8 \text{ V}$ Wire break/reverse polarity protection $yes/Complete$	Secured operating distance	≤ (0.81 × Sn) mm
Temperature drift $\leq \pm 10 \%$ Hysteresis       315 %         Electrical data       0perating voltage U <sub>B</sub> 1030 VDC         Ripple U <sub>ss</sub> $\leq 10 \% U_{Bmax}$ DC rated operating current I <sub>s</sub> $\leq 150 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $0.5 \text{ kV}$ Short-circuit protection       yes/Cyclic         Voltage drop at I <sub>s</sub> $\leq 1.8 \text{ V}$ Wire break/reverse polarity protection       yes/Complete	Correction factors	
Hysteresis $315\%$ Electrical data $1030 \text{ VDC}$ Operating voltage $U_B$ $1030 \text{ VDC}$ Ripple $U_{ss}$ $\leq 10\% U_{Bmax}$ DC rated operating current $I_e$ $\leq 150 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $0.5 \text{ kV}$ Short-circuit protection       yes/Cyclic         Voltage drop at $I_e$ $\leq 1.8 \text{ V}$ Wire break/reverse polarity protection       yes/Complete	Repeat accuracy	≤ 2 % of full scale
Electrical data         Operating voltage $U_B$ $1030 \text{ VDC}$ Ripple $U_{ss}$ $\leq 10 \% U_{Bmax}$ DC rated operating current $I_e$ $\leq 150 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $0.5 \text{ kV}$ Short-circuit protection       yes/Cyclic         Voltage drop at $I_e$ $\leq 1.8 \text{ V}$ Wire break/reverse polarity protection       yes/Complete	Temperature drift	≤ ±10 %
$\begin{array}{llllllllllllllllllllllllllllllllllll$	Hysteresis	315 %
Ripple Uss       ≤ 10 % Usmax         DC rated operating current $I_e$ ≤ 150 mA         No-load current       ≤ 15 mA         Residual current       ≤ 0.1 mA         Isolation test voltage       0.5 kV         Short-circuit protection       yes/Cyclic         Voltage drop at $I_e$ ≤ 1.8 V         Wire break/reverse polarity protection       yes/Complete	Electrical data	
DC rated operating current $I_e$ $\leq$ 150 mA         No-load current $\leq$ 15 mA         Residual current $\leq$ 0.1 mA         Isolation test voltage       0.5 kV         Short-circuit protection       yes/Cyclic         Voltage drop at $I_e$ $\leq$ 1.8 V         Wire break/reverse polarity protection       yes/Complete	Operating voltage U <sub>в</sub>	1030 VDC
No-load current       ≤ 15 mA         Residual current       ≤ 0.1 mA         Isolation test voltage       0.5 kV         Short-circuit protection       yes/Cyclic         Voltage drop at I₀       ≤ 1.8 V         Wire break/reverse polarity protection       yes/Complete	Ripple U <sub>ss</sub>	≤ 10 % U <sub>Bmax</sub>
Residual current       ≤ 0.1 mA         Isolation test voltage       0.5 kV         Short-circuit protection       yes/Cyclic         Voltage drop at I₀       ≤ 1.8 V         Wire break/reverse polarity protection       yes/Complete	DC rated operating current I <sub>e</sub>	≤ 150 mA
Isolation test voltage $0.5 \text{ kV}$ Short-circuit protection       yes/Cyclic         Voltage drop at I $_{\circ}$ $\leq 1.8 \text{ V}$ Wire break/reverse polarity protection       yes/Complete	No-load current	≤ 15 mA
Short-circuit protection yes/Cyclic  Voltage drop at I₀ ≤ 1.8 V  Wire break/reverse polarity protection yes/Complete	Residual current	≤ 0.1 mA
Voltage drop at I <sub>e</sub> ≤ 1.8 V  Wire break/reverse polarity protection yes/Complete	Isolation test voltage	0.5 kV
Wire break/reverse polarity protection yes/Complete	Short-circuit protection	yes/Cyclic
	Voltage drop at I <sub>e</sub>	≤ 1.8 V
Output function 3-wire, NO contact, PNP	Wire break/reverse polarity protection	yes/Complete
	Output function	3-wire, NO contact, PNP
Switching frequency 3 kHz	Switching frequency	3 kHz

### **Features**

- ■Threaded barrel, M8 x 1
- Stainless steel, 1.4427 SO
- Large sensing range
- ■DC 3-wire, 10...30 VDC
- ■NO contact, PNP output
- Cable connection

## 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.



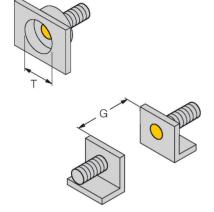
# Technical data

Mechanical data	
Design	Threaded barrel, M8 x 1
Dimensions	42 mm
Housing material	Stainless steel, 1.4427 SO
Active area material	Plastic
End cap	Plastic, PA12-GF30
Max. tightening torque of housing nut	5 Nm
Electrical connection	Cable
Cable quality	Ø 4 mm, LifYY-11Y, PUR, 2 m
Core cross-section	3 x 0.25 mm <sup>2</sup>
Environmental conditions	
Ambient temperature	-25+70 °C
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
Switching state	LED, Yellow

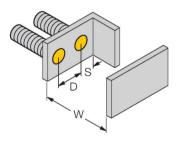
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# Mounting instructions

#### Mounting instructions/Description



Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 8 mm



### Accessories

QM-08 6945100



Quick-mount bracket with deadstop, chrome-plated brass, male thread M12 x 1. Note: The switching distance of proximity switches may be reduced through the use of quickmount brackets.

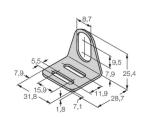




7.4 M3 4 4 12 8 8 20 16

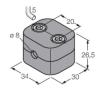
sensors, with dead-stop; material: PA6

MW08 6945008



Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304) BSS-08

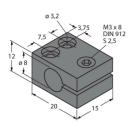
6901322



Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene



MBS80 69479



Mounting clamp for smooth barrel sensors; mounting block material: Anodized aluminum