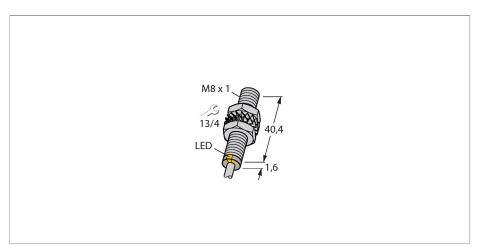


BI2-EG08-AG6X Inductive Sensor



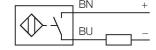
Technical data

ID	Туре	BI2-EG08-AG6X
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 115 % Electrical data Operating voltage U₀ Operating voltage U₀ 1030 VDC Ripple U₀ ≤ 10 % U₀ DC rated operating current I₀ ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 4.2 V Wire break/reverse polarity protection Polarized Output function NO contact, 2-wire Smallest operating current ≥ 3 mA Switching frequency 0.3 kHz Mechanical data Design Threaded barrel, M8 x 1 Dimensions 42 mm	ID	100017999
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 115 % Electrical data Operating voltage Us Operating voltage Us 1030 VDC Ripple Us ≤ 10 % Usmax DC rated operating current Is ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at Is ≤ 4.2 V Wire break/reverse polarity protection Polarized Output function NO contact, 2-wire Smallest operating current ≥ 3 mA Switching frequency 0.3 kHz Mechanical data Design Threaded barrel, M8 x 1 Dimensions 42 mm	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 $\leq 2 \text{ % of full scale}$ Temperature drift $\leq \pm 10 \text{ %}$ Hysteresis 115 % Electrical data Operating voltage U_{B} 1030 VDC Ripple U_{ss} $\leq 10 \text{ % } U_{\text{bmax}}$ DC rated operating current I_{e} $\leq 100 \text{ mA}$ Residual current $\leq 0.6 \text{ mA}$ Isolation test voltage 0.5 kV Short-circuit protection 0.5 kV Wire break/reverse polarity protection 0.5 kV Wire break/reverse polarity protection 0.5 kV Wire break/reverse polarity protection 0.5 kV Smallest operating current 0.5 kV Smallest operating current 0.5 kV Mechanical data Design 0.5 kV Threaded barrel, M8 x 1 Dimensions 0.5 kV	Rated switching distance	2 mm
Correction factors $ \begin{array}{ll} St37 = 1; \ AI = 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 & 115 \ \% \\ \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 100 \ mA \\ \hline Residual \ current & \leq 0.6 \ mA \\ \hline Isolation \ test \ voltage & 0.5 \ kV \\ \hline Short-circuit \ protection & yes/Cyclic \\ \hline Voltage \ drop \ at \ I_{\scriptscriptstyle e} & \leq 4.2 \ V \\ \hline Wire \ break/reverse \ polarity \ protection & Polarized \\ \hline Output \ function & NO \ contact, \ 2-wire \\ \hline Smallest \ operating \ current & \geq 3 \ mA \\ \hline Switching \ frequency & 0.3 \ kHz \\ \hline Mechanical \ data \\ \hline Design & Threaded \ barrel, \ M8 \ x \ 1 \\ \hline Dimensions & 42 \ mm \\ \hline \end{array}$	Mounting conditions	Flush
Ms = 0.4 Repeat accuracy ≤ 2 % of full scale Temperature drift ≤ ±10 % Hysteresis 115 % Electrical data Operating voltage U _B Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _e ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _e ≤ 4.2 V Wire break/reverse polarity protection Polarized Output function NO contact, 2-wire Smallest operating current ≥ 3 mA Switching frequency 0.3 kHz Mechanical data Design Threaded barrel, M8 x 1 Dimensions 42 mm	Secured operating distance	≤ (0.81 × Sn) mm
Temperature drift Hysteresis 115 % Electrical data Operating voltage U _B Ripple U _B DC rated operating current I _B Esidual current ≤ 0.6 mA Isolation test voltage Short-circuit protection Voltage drop at I _B Vire break/reverse polarity protection Output function Smallest operating current ≥ 3 mA Switching frequency Dimensions 115 % 110 %	Correction factors	
Hysteresis 115 % Electrical data Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _B ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _B ≤ 4.2 V Wire break/reverse polarity protection Polarized Output function NO contact, 2-wire Smallest operating current ≥ 3 mA Switching frequency 0.3 kHz Mechanical data Design Threaded barrel, M8 x 1 Dimensions 42 mm	Repeat accuracy	≤ 2 % of full scale
Electrical data Operating voltage U _B 1030 VDC Ripple U _{SS} ≤ 10 % U _{Bmax} DC rated operating current I _B Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection Voltage drop at I _B Wire break/reverse polarity protection Output function NO contact, 2-wire Smallest operating current ≥ 3 mA Switching frequency 0.3 kHz Mechanical data Design Threaded barrel, M8 x 1 Dimensions 1030 VDC 10.	Temperature drift	≤ ±10 %
Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _e ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _e ≤ 4.2 V Wire break/reverse polarity protection Polarized Output function NO contact, 2-wire Smallest operating current ≥ 3 mA Switching frequency 0.3 kHz Mechanical data Threaded barrel, M8 x 1 Design Threaded barrel, M8 x 1 Dimensions 42 mm	Hysteresis	115 %
Ripple U _{es} ≤ 10 % U _{Bmax} DC rated operating current I _e ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _e ≤ 4.2 V Wire break/reverse polarity protection Polarized Output function NO contact, 2-wire Smallest operating current ≥ 3 mA Switching frequency 0.3 kHz Mechanical data Design Threaded barrel, M8 x 1 Dimensions 42 mm	Electrical data	
DC rated operating current I₀ ≤ 100 mA Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 4.2 V Wire break/reverse polarity protection Polarized Output function NO contact, 2-wire Smallest operating current ≥ 3 mA Switching frequency 0.3 kHz Mechanical data Threaded barrel, M8 x 1 Dimensions 42 mm	Operating voltage U _B	1030 VDC
Residual current ≤ 0.6 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 4.2 V Wire break/reverse polarity protection Polarized Output function NO contact, 2-wire Smallest operating current ≥ 3 mA Switching frequency 0.3 kHz Mechanical data Threaded barrel, M8 x 1 Dimensions 42 mm	Ripple U _{ss}	≤ 10 % U _{Bmax}
Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 4.2 V Wire break/reverse polarity protection Polarized Output function NO contact, 2-wire Smallest operating current ≥ 3 mA Switching frequency 0.3 kHz Mechanical data Design Threaded barrel, M8 x 1 Dimensions 42 mm	DC rated operating current I _o	≤ 100 mA
Short-circuit protection Voltage drop at I₀ Wire break/reverse polarity protection Output function Smallest operating current Switching frequency Mechanical data Design Threaded barrel, M8 x 1 Dimensions yes/Cyclic yes/Cyclic ≤ 4.2 V Polarized Polarized Output function NO contact, 2-wire ≥ 3 mA 0.3 kHz Threaded barrel, M8 x 1	Residual current	≤ 0.6 mA
Voltage drop at I₀ ≤ 4.2 V Wire break/reverse polarity protection Polarized Output function NO contact, 2-wire Smallest operating current ≥ 3 mA Switching frequency 0.3 kHz Mechanical data Design Threaded barrel, M8 x 1 Dimensions 42 mm	Isolation test voltage	0.5 kV
Wire break/reverse polarity protection Polarized Output function NO contact, 2-wire Smallest operating current ≥ 3 mA Switching frequency 0.3 kHz Mechanical data Design Threaded barrel, M8 x 1 Dimensions 42 mm	Short-circuit protection	yes/Cyclic
Output function NO contact, 2-wire Smallest operating current ≥ 3 mA Switching frequency 0.3 kHz Mechanical data Threaded barrel, M8 x 1 Design Threaded barrel, M8 x 1 Dimensions 42 mm	Voltage drop at I _e	≤ 4.2 V
Smallest operating current ≥ 3 mA Switching frequency 0.3 kHz Mechanical data Threaded barrel, M8 x 1 Design 42 mm	Wire break/reverse polarity protection	Polarized
Switching frequency 0.3 kHz Mechanical data Design Threaded barrel, M8 x 1 Dimensions 42 mm	Output function	NO contact, 2-wire
Mechanical data Design Threaded barrel, M8 x 1 Dimensions 42 mm	Smallest operating current	≥ 3 mA
Design Threaded barrel, M8 x 1 Dimensions 42 mm	Switching frequency	0.3 kHz
Dimensions 42 mm	Mechanical data	
	Design	Threaded barrel, M8 x 1
Housing material Stainless steel, 1.4427 SO	Dimensions	42 mm
	Housing material	Stainless steel, 1.4427 SO

Features

- ■Threaded barrel, M8 x 1
- Stainless steel, 1.4427 SO
- ■DC 2-wire, 10...30 VDC
- ■Polarized version
- ■NO contact
- 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.

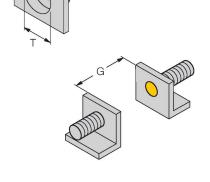


Technical data

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	2 x 0.25 mm ²
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

Mounting instructions

Mounting instructions/Description





Accessories

QM-08 6945100

M12 x 1 77/4 17/4 17/5 32

MW08

MBS80

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.

Mounting bracket for threaded barrel

sensors; material: Stainless steel A2

BST-08B

BSS-08

6947210

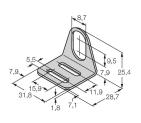
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



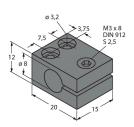
6945008

6901322

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



1.4301 (AISI 304)



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

69479