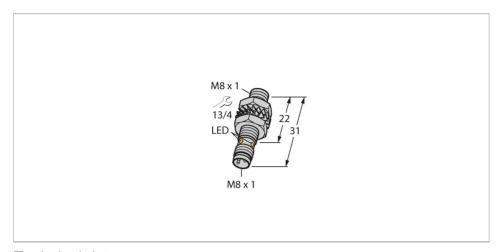


BI2-EG08K-AP6X-V1131/S1367 Inductive Sensor - With Increased Switching Distance



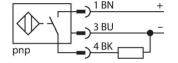
Technical data

ID 100013737 Special version \$1367 corresponds to: Old design before 2019 General data *** Rated switching distance 2 mm Mounting conditions Flush Secured operating distance ≤ (0.81 × Sn) mm Correction factors \$t37 = 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 1030 VDC Residual ripple ≤ 10 % U₂s DC rated operational current ≤ 150 mA No-load current 15 mA Residual current ≤ 0.5 kV Short-circuit protection yes / Cyclic Voltage drop at I₀ ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP Switching frequency 3 kHz	Туре	BI2-EG08K-AP6X-V1131/S1367
General data 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 1030 VDC Residual ripple ≤ 10 % U₂₅ DC rated operational current ≤ 150 mA No-load current 15 mA Residual current ≤ 0.1 mA Residual current ≤ 0.5 kV Short-circuit protection yes / Cyclic Voltage drop at I₅ ≤ 1.8 V Wire breakage/Reverse polarity protection Output function 3-wire, NO contact, PNP	ID	100013737
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 Operating voltage 1030 VDC Residual ripple ≤ 10 % U _{ss} DC rated operational current ≤ 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 I₀ ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP	Special version	
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 Operating voltage 1030 VDC Residual ripple ≤ 10 % U₅s DC rated operational current ≤ 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 I₅ ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP	General data	
Secured operating distance≤ $(0.81 \times Sn)$ mmCorrection factorsSt37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4Repeat accuracy≤ 2 % of full scaleTemperature drift≤ ±10 %Hysteresis315 %Electrical data 030 VDC Querating voltage1030 VDCResidual ripple≤ 10 % UssDC rated operational current≤ 150 mANo-load current15 mAResidual current≤ 0.1 mAIsolation test voltage≤ 0.5 kVShort-circuit protectionyes / CyclicVoltage drop at I_c ≤ 1.8 VWire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, PNP	Rated switching distance	2 mm
Correction factors $\begin{array}{ll} St37 = 1; Al = 0.3; stainless steel = 0.7; Ms \\ = 0.4 \\ \hline \\ Repeat accuracy & \leq 2 \% of full scale \\ \hline \\ Temperature drift & \leq \pm 10 \% \\ \hline \\ Hysteresis & 315 \% \\ \hline \\ Electrical data & & & \\ Operating voltage & 1030 VDC \\ \hline \\ Residual ripple & \leq 10 \% U_{ss} \\ \hline \\ DC rated operational current & \leq 150 mA \\ \hline \\ No-load current & 15 mA \\ \hline \\ Residual current & \leq 0.1 mA \\ \hline \\ Isolation test voltage & \leq 0.5 kV \\ \hline \\ Short-circuit protection & yes / Cyclic \\ \hline \\ Voltage drop at I_{o} & \leq 1.8 V \\ \hline \\ Wire breakage/Reverse polarity protection & yes / Complete \\ \hline \\ Output function & 3-wire, NO contact, PNP \\ \hline \end{array}$	Mounting conditions	Flush
= 0.4 Repeat accuracy ≤ 2 % of full scale Temperature drift ≤ ±10 % Hysteresis 315 % Electrical data Operating voltage 1030 VDC Residual ripple ≤ 10 % U _{ss} DC rated operational current ≤ 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 breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP	Secured operating distance	≤ (0.81 × Sn) mm
Temperature drift ≤ ±10 % Hysteresis 315 % Electrical data Operating voltage 1030 VDC Residual ripple ≤ 10 % U₅s DC rated operational current ≤ 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 I₀ ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP	Correction factors	
Hysteresis 315 % Electrical data Operating voltage 1030 VDC Residual ripple ≤ 10 % U _{ss} DC rated operational current ≤ 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 I₀ ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP	Repeat accuracy	≤ 2 % of full scale
Electrical data Operating voltage 1030 VDC Residual ripple ≤ 10 % U _{ss} DC rated operational current ≤ 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 I₀ ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP	Temperature drift	≤ ±10 %
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	Hysteresis	315 %
Residual ripple ≤ 10 % Uss DC rated operational current ≤ 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 breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP	Electrical data	
DC rated operational current ≤ 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 I₀ ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP	Operating voltage	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 I _e ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP	Residual ripple	≤ 10 % U _{ss}
Residual current ≤ 0.1 mA Isolation test voltage ≤ 0.5 kV Short-circuit protection yes / Cyclic Voltage drop at I₀ ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP	DC rated operational current	≤ 150 mA
Isolation test voltage ≤ 0.5 kV Short-circuit protection yes / Cyclic Voltage drop at I _e ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP	No-load current	15 mA
Short-circuit protection yes / Cyclic Voltage drop at I₀ ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP	Residual current	≤ 0.1 mA
Voltage drop at I₀ ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP	Isolation test voltage	≤ 0.5 kV
Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP	Short-circuit protection	yes / Cyclic
Output function 3-wire, NO contact, PNP	Voltage drop at I _e	≤ 1.8 V
	Wire breakage/Reverse polarity protection	yes / Complete
Switching frequency 3 kHz	Output function	3-wire, NO contact, PNP
	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
- ■M8 x 1 male connector

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.

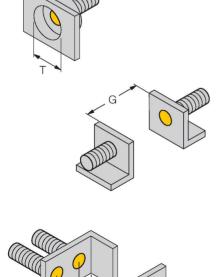


Technical data

Mechanical data	
Design	Threaded barrel, M8 x 1
Dimensions	31 mm
Housing material	Stainless steel, 1.4427 SO
Active area material	Plastic, PA12-GF20
Max. tightening torque of housing nut	5 Nm
Electrical connection	Connector, M8 × 1
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



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

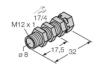
Accessories

BST-08B 6947210

6945100

6901322

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



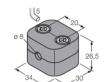
QM-08

BSS-08

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.

MW-08 6945008

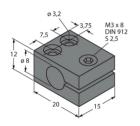
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)



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

MBS80

69479



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

Wiring accessories

ID Dimension drawing Type PKGV3M-2/TEL 6625385



Connection cable, M8 female connector, straight, 3-pin, stainless steel coupling nut, cable length: 2 m, jacket material: PVC, black; cULus approval