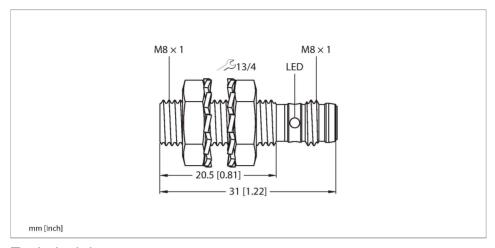


BI2-EG08K-AP6X-V1131 Inductive Sensor – With Increased Switching Distance



Technical data

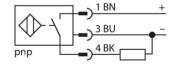
ID 4669450 General data Rated switching distance 2 mm Mounting conditions Flush Secured operating distance ≤ (0.81 × Sn) mm Correction factors St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 Repeat accuracy ≤ 2 % of full scale Hysteresis 20 % Electrical data Operating voltage U ₈ Operating voltage U ₈ 1030 VDC Ripple U ₈ ≤ 10 % U _{bmax} DC rated operating current I ₆ ≤ 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 ₆ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP Switching frequency 3 kHz Mechanical data Design Threaded barrel, M8 x 1	Туре	BI2-EG08K-AP6X-V1131
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 Hysteresis 20 % Electrical data 0perating voltage U ₈ Operating voltage U ₈ 1030 VDC Ripple U ₈ ≤ 10 % U _{Brinax} DC rated operating current I ₈ ≤ 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 ₈ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP Switching frequency 3 kHz Mechanical data	ID	4669450
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 Hysteresis 20 % Electrical data30 VDC Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} 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 Output function 3-wire, NO contact, PNP Switching frequency 3 kHz Mechanical data	General data	
Secured operating distance ≤ (0.81 × Sn) mm Correction factors St37 = 1; AI = 0.3; stainless steel = 0.7; Ms = 0.4 Repeat accuracy ≤ 2 % of full scale Hysteresis 20 % Electrical data Operating voltage U _s 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} 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 Output function 3-wire, NO contact, PNP Switching frequency 3 kHz Mechanical data	Rated switching distance	2 mm
Correction factors $\begin{array}{lll} St37 = 1; \ Al = 0.3; \ stainless \ steel = 0.7; \ Ms \\ = 0.4 \\ \hline \\ Repeat \ accuracy & \leq 2 \% \ of \ full \ scale \\ \hline \\ Hysteresis & 20 \% \\ \hline \\ Electrical \ data \\ \hline \\ Operating \ voltage \ U_s & 1030 \ VDC \\ \hline \\ Ripple \ U_{ss} & \leq 10 \% \ U_{Bmax} \\ \hline \\ DC \ rated \ operating \ current \ I_e & \leq 150 \ mA \\ \hline \\ No-load \ current & \leq 15 \ mA \\ \hline \\ Residual \ current & \leq 0.1 \ mA \\ \hline \\ Isolation \ test \ voltage & 0.5 \ kV \\ \hline \\ Short-circuit \ protection & yes/Cyclic \\ \hline \\ Voltage \ drop \ at \ I_e & \leq 1.8 \ V \\ \hline \\ Wire \ break/reverse \ polarity \ protection & yes/Complete \\ \hline \\ Output \ function & 3-wire, \ NO \ contact, \ PNP \\ \hline \\ Switching \ frequency & 3 \ kHz \\ \hline \\ Mechanical \ data \\ \hline \end{array}$	Mounting conditions	Flush
Electrical data	Secured operating distance	≤ (0.81 × Sn) mm
Hysteresis 20 % Electrical data Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} 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 Output function 3-wire, NO contact, PNP Switching frequency 3 kHz Mechanical data	Correction factors	
Electrical data Operating voltage U_B 1030 VDC Ripple U_{ss} $\leq 10 \% U_{Bmax}$ DC rated operating current I_e No-load current $\leq 150 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage 0.5 kV Short-circuit protection Voltage drop at I_e $\leq 1.8 \text{ V}$ Wire break/reverse polarity protection Output function 3 -wire, NO contact, PNP Switching frequency 3 kHz	Repeat accuracy	≤ 2 % of full scale
Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} 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 Output function 3-wire, NO contact, PNP Switching frequency 3 kHz Mechanical data	Hysteresis	20 %
Ripple U_{ss} ≤ 10 % U_{Bmax} 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 Output function 3-wire, NO contact, PNP Switching frequency 3 kHz Mechanical data	Electrical data	
DC rated operating current I₀ ≤ 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 break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP Switching frequency 3 kHz Mechanical data	Operating voltage U _B	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 Output function 3-wire, NO contact, PNP Switching frequency 3 kHz Mechanical data	Ripple U _{ss}	≤ 10 % U _{Bmax}
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 Output function 3-wire, NO contact, PNP Switching frequency 3 kHz Mechanical data	DC rated operating current I _e	≤ 150 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 Output function 3-wire, NO contact, PNP Switching frequency 3 kHz Mechanical data	No-load current	≤ 15 mA
Short-circuit protection Voltage drop at I₂ ≤ 1.8 V Wire break/reverse polarity protection Output function Switching frequency 3 kHz Mechanical data	Residual current	≤ 0.1 mA
Voltage drop at I _e ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP Switching frequency 3 kHz Mechanical data	Isolation test voltage	0.5 kV
Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP Switching frequency 3 kHz Mechanical data	Short-circuit protection	yes/Cyclic
Output function 3-wire, NO contact, PNP Switching frequency 3 kHz Mechanical data	Voltage drop at I _e	≤ 1.8 V
Switching frequency 3 kHz Mechanical data	Wire break/reverse polarity protection	yes/Complete
Mechanical data	Output function	3-wire, NO contact, PNP
	Switching frequency	3 kHz
Design Threaded barrel, M8 x 1	Mechanical data	
	Design	Threaded barrel, M8 x 1

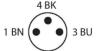


Features

- ■M8 × 1 threaded barrel
- Stainless steel, 1.4305 (AISI 303)
- ■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.

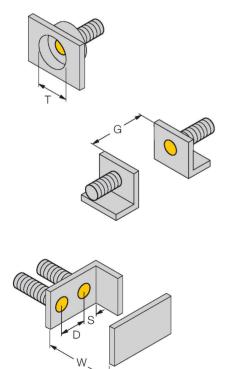


Technical data

Dimensions	31 mm
Housing material	Stainless steel, 1.4305 (AISI 303)
Active area material	Plastic, PA6.6
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

PA6

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

QM-08 6945100

M12 x 17.74

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.

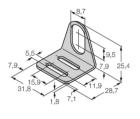
MW08 6945008

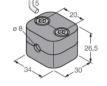
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)



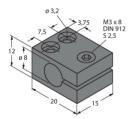
Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene

6901322





MBS80 69479



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

Wiring accessories

Dimension drawing Type ID
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