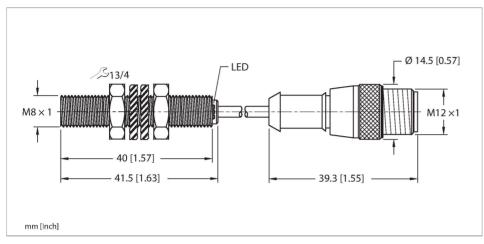


BI2-EG08-AP6X-0.2-RS4T Inductive Sensor – With Increased Switching Distance



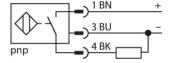
Technical data

ID	Type	BI2-EG08-AP6X-0.2-RS4T
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 _{ss} ≤ 10 % U _{mass} 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	ID	4602092
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 U₀ Operating voltage U₀ 1030 VDC Ripple U₃ ≤ 10 % U₃ 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	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 Hysteresis 20% Electrical data Operating voltage U_B 1030 VDC Ripple U_{SS} $\leq 10 \% U_{Bmax}$ 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 kV Short-circuit protection 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 Switching frequency 0.5 kHz Mechanical data	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 \\ Hysteresis & 20 \% \\ \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 \\ Output function & 3-wire, NO contact, PNP \\ \hline \\ Switching frequency & 3 kHz \\ \hline \\ Mechanical data & \\ \hline \end{array} $	Mounting conditions	Flush
$= 0.4$ Repeat accuracy $\leq 2 \%$ of full scale Hysteresis 20% Electrical data Operating voltage U_B 1030 VDC Ripple U_{ss} $\leq 10 \% U_{Bmax}$ 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 kV Short-circuit protection $yes/Cyclic$ Voltage drop at I_B $\leq 1.8 \text{ V}$ Wire break/reverse polarity protection $yes/Complete$ Output function 3 -wire, NO contact, PNP Switching frequency 3 kHz Mechanical 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 _B ≤ 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 _B ≤ 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 To30 VDC Ripple U_{ss} $\leq 10 \% U_{Bmax}$ DC rated operating current I_e No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic 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 I₀ ≤ 1.8 V Wire break/reverse polarity protection Output function Switching frequency 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

- ■Threaded barrel, M8 × 1
- Stainless steel, 1.4305 (AISI 303)
- Large sensing range
- ■DC 3-wire, 10...30 VDC
- ■NO contact, PNP output
- Pigtail with male end M12 x 1

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.

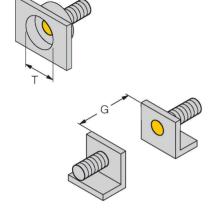


Technical data

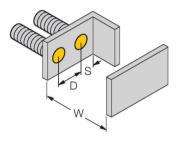
Dimensions	41.5 mm
Housing material	Stainless steel, 1.4305 (AISI 303)
Active area material	Plastic, PA6.6
End cap	Plastic, PP
Material coupling nut	metal, CuZn, nickel-plated
Max. tightening torque of housing nut	5 Nm
Electrical connection	Cable with connector, M12 × 1
Cable quality	Ø 3.3 mm, Gray, LifY-11Y, PUR, 0.2 m
Core cross-section	3 x 0.14 mm²
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

QM-08 6945100



MW08

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.





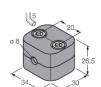
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



BSS-08 6901322

9,5 7,9 25,4 Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

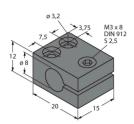
6945008



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



MBS80 69479



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