

# BI8U-Q08-AP6X2-0.2-PSG3M Inductive Sensor – With Increased Switching Distance





### Technical data

ID no.16620942Rated switching distance8 mmMounting conditionsFlushSecured operating distance $\leq (0.81 \times Sn)$ mmRepeat accuracy $\leq 2 \%$ of full scaleTemperature drift $\leq \pm 10 \%$ Hysteresis $315 \%$ Ambient temperature $-25+70 \ ^{\circ}C$ Operating voltage $1030 \ VDC$ Residual ripple $\leq 10 \% \ U_{ss}$ DC rated operational current $\leq 200 \ mA$ No-load current $\leq 15 \ mA$ Residual current $\leq 0.1 \ mA$ Isolation test voltage $\leq 0.5 \ kV$ Short-circuit protectionyes / CyclicVoltage drop at $l_s$ $\leq 1.8 \ V$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function $3$ -wire, NO contact, PNPInsulation class $\Box$ Switching frequency $0.25 \ kHz$ DesignRectangular, Q08Dimensions $32 \times 20 \times 8 \ mm$ Housing materialMetal, Zamak, Nickel-plated	Туре	BI8U-Q08-AP6X2-0.2-PSG3M
Mounting conditionsFlushSecured operating distance $\leq (0.81 \times Sn) mm$ Repeat accuracy $\leq 2 \%$ of full scaleTemperature drift $\leq \pm 10 \%$ Hysteresis $315 \%$ Ambient temperature $-25+70 \ ^{\circ}C$ Operating voltage $1030 \ VDC$ Residual ripple $\leq 10 \% \ U_{ss}$ DC rated operational current $\leq 200 \ mA$ No-load current $\leq 15 \ mA$ Residual current $\leq 0.1 \ mA$ Isolation test voltage $\leq 0.5 \ kV$ Short-circuit protectionyes / CyclicVoltage drop at $I_o$ $\leq 1.8 \ V$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function $3-wire$ , NO contact, PNPInsulation class $\Box$ Switching frequency $0.25 \ kHz$ DesignRectangular, Q08Dimensions $32 \times 20 \times 8 \ mm$	ID no.	16620942
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Repeat accuracy $\leq 2 \%$ of full scaleTemperature drift $\leq \pm 10 \%$ Hysteresis $315 \%$ Ambient temperature $-25+70 \degree$ COperating voltage $1030 \lor$ VDCResidual ripple $\leq 10 \% U_{ss}$ DC rated operational current $\leq 200 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$ Short-circuit protectionyes / CyclicVoltage drop at I_s $\leq 1.8 \lor$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function $3$ -wire, NO contact, PNPInsulation class $\Box$ Switching frequency $0.25 \text{ kHz}$ DesignRectangular, Q08Dimensions $32 \times 20 \times 8 \mod$	Mounting conditions	Flush
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Hysteresis $315 \%$ Ambient temperature $-25+70 °C$ Operating voltage $1030 VDC$ Residual ripple $\leq 10 \% U_{ss}$ DC rated operational current $\leq 200 mA$ No-load current $\leq 15 mA$ Residual current $\leq 0.1 mA$ Isolation test voltage $\leq 0.5 kV$ Short-circuit protection $yes / Cyclic$ Voltage drop at $I_o$ $\leq 1.8 V$ Wire breakage/Reverse polarity protection $yes / Complete$ Output function $3$ -wire, NO contact, PNPInsulation class $\Box$ Switching frequency $0.25 kHz$ DesignRectangular, Q08Dimensions $32 \times 20 \times 8 mm$	Repeat accuracy	≤ 2 % of full scale
Ambient temperature-25+70 °COperating voltage1030 VDCResidual ripple $\leq 10 \% U_{ss}$ DC rated operational current $\leq 200 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$ Short-circuit protectionyes / CyclicVoltage drop at I_s $\leq 1.8 \text{ V}$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, PNPInsulation class $\Box$ Switching frequency $0.25 \text{ kHz}$ DesignRectangular, Q08Dimensions $32 \times 20 \times 8 \text{ mm}$	Temperature drift	≤ ± 10 %
Number temperatureTerm is a constraint of the constraint o	Hysteresis	315 %
Residual ripple $\leq 10 \% U_{ss}$ DC rated operational current $\leq 200 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$ Short-circuit protectionyes / CyclicVoltage drop at I_e $\leq 1.8 \text{ V}$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, PNPInsulation class $\Box$ Switching frequency $0.25 \text{ kHz}$ DesignRectangular, Q08Dimensions $32 \times 20 \times 8 \text{ mm}$	Ambient temperature	-25+70 °C
DC rated operational current $\leq 200 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$ Short-circuit protectionyes / CyclicVoltage drop at I. $\leq 1.8 \text{ V}$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, PNPInsulation class $\Box$ Switching frequency $0.25 \text{ kHz}$ DesignRectangular, Q08Dimensions $32 \times 20 \times 8 \text{ mm}$	Operating voltage	1030 VDC
No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$ Short-circuit protectionyes / CyclicVoltage drop at I <sub>e</sub> $\leq 1.8 \text{ V}$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, PNPInsulation class $\Box$ Switching frequency $0.25 \text{ kHz}$ DesignRectangular, Q08Dimensions $32 \times 20 \times 8 \text{ mm}$	Residual ripple	≤ 10 % U <sub>ss</sub>
Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$ Short-circuit protectionyes / CyclicVoltage drop at I. $\leq 1.8 \text{ V}$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, PNPInsulation class $\Box$ Switching frequency0.25 kHzDesignRectangular, Q08Dimensions $32 \times 20 \times 8 \text{ mm}$	DC rated operational current	≤ 200 mA
Isolation test voltage $\leq 0.5 \text{ kV}$ Short-circuit protectionyes / CyclicVoltage drop at I. $\leq 1.8 \text{ V}$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, PNPInsulation class $\Box$ Switching frequency0.25 kHzDesignRectangular, Q08Dimensions32 x 20 x 8 mm	No-load current	≤ 15 mA
Short-circuit protectionyes / CyclicVoltage drop at I. $\leq 1.8 \text{ V}$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, PNPInsulation class $\Box$ Switching frequency0.25 kHzDesignRectangular, Q08Dimensions32 x 20 x 8 mm	Residual current	≤ 0.1 mA
Voltage drop at I₀≤ 1.8 VWire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, PNPInsulation class□Switching frequency0.25 kHzDesignRectangular, Q08Dimensions32 x 20 x 8 mm	Isolation test voltage	≤ 0.5 kV
Wire breakage/Reverse polarity protection   yes / Complete     Output function   3-wire, NO contact, PNP     Insulation class   Image: Switching frequency     Switching frequency   0.25 kHz     Design   Rectangular, Q08     Dimensions   32 x 20 x 8 mm	Short-circuit protection	yes / Cyclic
Output function3-wire, NO contact, PNPInsulation classImage: Switching frequencySwitching frequency0.25 kHzDesignRectangular, Q08Dimensions32 x 20 x 8 mm	Voltage drop at I	≤ 1.8 V
Insulation classImage: Constraint of the sector	Wire breakage/Reverse polarity protection	yes / Complete
Switching frequency0.25 kHzDesignRectangular, Q08Dimensions32 x 20 x 8 mm	Output function	3-wire, NO contact, PNP
DesignRectangular, Q08Dimensions32 x 20 x 8 mm	Insulation class	
Dimensions 32 x 20 x 8 mm	Switching frequency	0.25 kHz
	Design	Rectangular, Q08
Housing material Metal, Zamak, Nickel-plated	Dimensions	32 x 20 x 8 mm
	Housing material	Metal, Zamak, Nickel-plated

### Features

- Rectangular, height 8 mm
- Active face on topMetal, Zamak, nickel-plated
- Factor 1 for all metals
- Increased switching distance
- Protection class IP68
- Resistant to magnetic fields
- Mountable on metal
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Pigtail with male end M8 x 1

## Wiring diagram



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### Functional principle

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Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox+ sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching



Technical data

distances, maximum flexibility and operational reliability as well as efficient standardization.

Active area material	Plastic, PP, yellow
Electrical connection	Cable with connector, M8 × 1
Cable quality	Ø 3 mm, Gray, LifY-11Y, PUR, 0.2 m
Core cross-section	3 x 0.14 mm <sup>2</sup>
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68
MTTF	874 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Switching state	LED, Yellow

### Mounting instructions

#### Mounting instructions/Description



