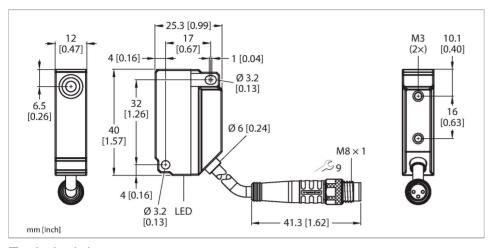


BI5U-Q12-AP6X2-0.2-PSG3M Inductive Sensor – With Extended Switching Distance





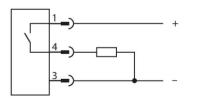
Technical data

ID	Туре	BI5U-Q12-AP6X2-0.2-PSG3M	
Rated switching distance 5 mm Mounting conditions Flush Secured operating distance ≤ (0.81 × Sn) mm Repeat accuracy ≤ 2 % of full scale Hysteresis 315 % Electrical data Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Benax} DC rated operating current I _e ≤ 200 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 DC field stability 300 mT AC field stability 300 mT Switching frequency 1 kHz Mechanical data	ID	1635598	
Mounting conditions Flush Secured operating distance ≤ (0.81 × Sn) mm Repeat accuracy ≤ 2 % of full scale Hysteresis 315 % Electrical data 0perating voltage U _B Operating voltage U _B 1030 VDC Ripple U _{SB} ≤ 10 % U _{Bmax} DC rated operating current I _B ≤ 200 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 DC field stability 300 mT AC field stability 300 mT _{SS} Switching frequency 1 kHz Mechanical data	General data		
Secured operating distance ≤ (0.81 × Sn) mm Repeat accuracy ≤ 2 % of full scale Hysteresis 315 % Electrical data 0 Operating voltage Us 1030 VDC Ripple Uss ≤ 10 % Usmax DC rated operating current Is ≤ 200 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 Is ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mTss Switching frequency 1 kHz Mechanical data	Rated switching distance	5 mm	
Repeat accuracy ≤ 2 % of full scale Hysteresis 315 % Electrical data Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _o ≤ 200 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 _o ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mT _{ss} Switching frequency 1 kHz	Mounting conditions	Flush	
Hysteresis 315 % Electrical data Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _e ≤ 200 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 DC field stability 300 mT AC field stability 300 mT Switching frequency 1 kHz Mechanical data	Secured operating distance	≤ (0.81 × Sn) mm	
Electrical data Operating voltage U_B 1030 VDC Ripple U_{ss} $\leq 10 \% U_{Bmax}$ DC rated operating current I_s $\leq 200 \text{ mA}$ 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_s $\leq 1.8 \text{ V}$ Wire break/reverse polarity protection Output function S -wire, NO contact, PNP DC field stability S 300 mT AC field stability S 300 mT Switching frequency S KHz Mechanical data	Repeat accuracy	≤ 2 % of full scale	
$\begin{array}{llllllllllllllllllllllllllllllllllll$	Hysteresis	315 %	
Ripple U _{ss} $\leq 10 \% U_{\text{Bmax}}$ DC rated operating current I _e $\leq 200 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $= 0.5 \text{ kV}$ Short-circuit protection $= 0.5 \text{ kV}$ Voltage drop at I _e $= 0.5 \text{ kV}$ Wire break/reverse polarity protection $= 0.5 \text{ kV}$ Wire break/reverse polarity protection $= 0.5 \text{ kV}$ DC field stability $= 0.5 \text{ kV}$ AC field stability $= 0.5 \text{ kV}$ Mechanical data	Electrical data		
DC rated operating current I₀ ≤ 200 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 DC field stability 300 mT AC field stability 300 mTss Switching frequency 1 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 DC field stability 300 mT AC field stability 300 mT₀ss Switching frequency 1 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 I_e ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mTss Switching frequency 1 kHz Mechanical data	DC rated operating current I _e	≤ 200 mA	
	No-load current	≤ 15 mA	
Short-circuit protection Voltage drop at I₀ View break/reverse polarity protection Output function DC field stability AC field stability Switching frequency Mechanical data yes/Cyclic	Residual current	≤ 0.1 mA	
Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mTss Switching frequency 1 kHz Mechanical data	Isolation test voltage	0.5 kV	
Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mT _{ss} Switching frequency 1 kHz Mechanical data	Short-circuit protection	yes/Cyclic	
Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mT _{ss} Switching frequency 1 kHz Mechanical data	Voltage drop at I _e	≤ 1.8 V	
DC field stability 300 mT AC field stability 300 mT _{ss} Switching frequency 1 kHz Mechanical data	Wire break/reverse polarity protection	yes/Complete	
AC field stability 300 mT _{ss} Switching frequency 1 kHz Mechanical data	Output function	3-wire, NO contact, PNP	
Switching frequency 1 kHz Mechanical data	DC field stability	300 mT	
Mechanical data	AC field stability	300 mT _{ss}	
	Switching frequency	1 kHz	
Design Rectangular, Q12	Mechanical data		
	Design	Rectangular, Q12	

Features

- Rectangular, height 12mm
- Active face, lateral
- Plastic, PA12-GF30
- 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





Functional principle

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



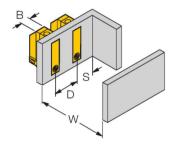
Technical data

Dimensions	40 x 26 x 12 mm	
Housing material	Plastic, PA12-GF30	
Active area material	PA12-GF30	
Electrical connection	Cable with connector, M8 × 1	
Cable quality	Ø 4 mm, LifYY-11Y, PUR, 0.2 m	
Core cross-section	3 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	IP68	
MTTF	874 years acc. to SN 29500 (Ed. 99) 40 °C	
Power-on indication	LED, Green	
Switching state	LED, Yellow	

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

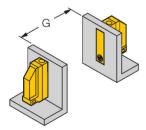
Mounting instructions

Mounting instructions/Description





Distance D	48 mm
Distance W	25 mm
Distance S	12 mm
Distance G	50 mm
Width active area B	12 mm



The sensors can be mounted directly side by side if a sensor with offset oscillation frequency Bi5U-Q12.../F2 is used.