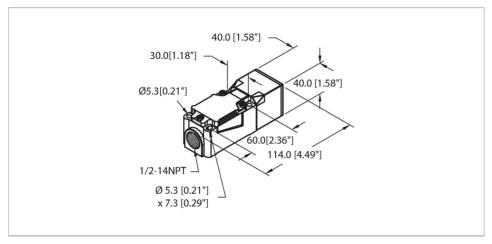


BI15-CP40-AP6X2/S10 Inductive Sensor



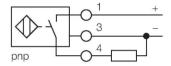
Technical data

ID 16030 Special version \$10 corresponds to: Mounting base with 1/2-14NPT thread General data *** Rated switching distance 15 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 % U₂, DC rated operational current ≤ 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 breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP Switching frequency 0.15 kHz	Туре	BI15-CP40-AP6X2/S10
Mounting base with 1/2-14NPT thread General data Image: square squar	ID	16030
Rated switching distance 15 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 ≤ 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 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 ≤ 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 I₅ ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP	General data	
Secured operating distance $\leq (0.81 \times Sn) \text{ mm}$ Correction factors $\begin{array}{l} St37 = 1; \text{Al} = 0.3; \text{ stainless steel} = 0.7; \text{ Ms} = 0.4 \\ \hline \text{Repeat accuracy} & \leq 2 \% \text{ of full scale} \\ \hline \text{Temperature drift} & \leq \pm 10 \% \\ \hline \text{Hysteresis} & 315 \% \\ \hline \text{Electrical data} \\ \hline \text{Operating voltage} & 1030 \text{ VDC} \\ \hline \text{Residual ripple} & \leq 10 \% \text{ U}_{ss} \\ \hline \text{DC rated operational current} & \leq 200 \text{ mA} \\ \hline \text{No-load current} & 15 \text{ mA} \\ \hline \text{Residual current} & \leq 0.1 \text{ mA} \\ \hline \text{Isolation test voltage} & \leq 0.5 \text{ kV} \\ \hline \text{Short-circuit protection} & \text{yes / Cyclic} \\ \hline \text{Voltage drop at I}_c & \leq 1.8 \text{ V} \\ \hline \text{Wire breakage/Reverse polarity protection} & \text{yes / Complete} \\ \hline \text{Output function} & 3-wire, \text{ NO contact, PNP} \\ \hline \end{array}$	Rated switching distance	15 mm
Correction factors $\begin{array}{ll} St37 = 1; Al = 0.3; stainless steel = 0.7; Ms \\ = 0.4 \\ \hline \\ Repeat accuracy & \leq 2 \% of full scale \\ \hline \\ Temperature drift & \leq \pm 10 \% \\ \hline \\ Hysteresis & 315 \% \\ \hline \\ Electrical data & & & \\ Operating voltage & 1030 VDC \\ \hline \\ Residual ripple & \leq 10 \% U_{ss} \\ \hline \\ DC rated operational current & \leq 200 mA \\ \hline \\ No-load current & 15 mA \\ \hline \\ Residual current & \leq 0.1 mA \\ \hline \\ Isolation test voltage & \leq 0.5 kV \\ \hline \\ Short-circuit protection & yes / Cyclic \\ \hline \\ Voltage drop at I_{o} & \leq 1.8 V \\ \hline \\ Wire breakage/Reverse polarity protection & yes / Complete \\ \hline \\ Output function & 3-wire, NO contact, PNP \\ \hline \end{array}$	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 ≤ 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 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 ≤ 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 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 ≤ 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 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 ≤ 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 breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP	Temperature drift	≤ ±10 %
Operating voltage 1030 VDC Residual ripple ≤ 10 % U₅₅ DC rated operational current ≤ 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 breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP	Hysteresis	315 %
Residual ripple ≤ 10 % Uss DC rated operational current ≤ 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 breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP	Electrical data	
DC rated operational current ≤ 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 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	≤ 200 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
<u> </u>	Wire breakage/Reverse polarity protection	yes / Complete
Switching frequency 0.15 kHz	Output function	3-wire, NO contact, PNP
	Switching frequency	0.15 kHz

Features

- Rectangular, height 40 mm
- Variable orientation of active face in 9 directions
- Plastic, PBT-GF30-V0
- High luminance corner LEDs
- Optimum view on supply voltage and switching state from any position
- ■DC 3-wire, 10...30 VDC
- ■NO contact, PNP output
- ■Terminal chamber

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.

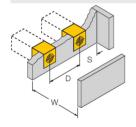


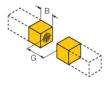
Technical data

Mechanical data	
Design	Rectangular, CP40
Dimensions	114 x 40 x 40 mm
Housing material	Plastic, PBT-GF30-V0, Black
Active area material	Plastic, PBT-GF30-V0, yellow
Electrical connection	Terminal chamber
Clamping ability	≤ 2.5 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
Power-on indication	2 × LEDs, Green
Switching state	2 × LEDs, Yellow

Mounting instructions

Mounting instructions/Description





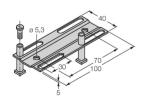
Distance D	2 x B
Distance W	3 x Sn
Distance S	1 x B
Distance G	6 x Sn
Width active area B	40 mm

6901318

Accessories

JS025/037 69429

Adjusting bar for rectangular housings CK/CP40; material: VA 1.4301





Mounting clamp for rectangular housings 40 x 40 mm; material: Polypropylene