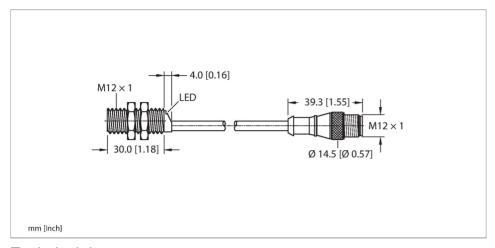


BI2-G12K-RP6X-0.2-RS4T Inductive Sensor



Technical data

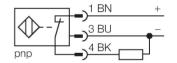
= 0.4 Repeat accuracy ≤ 2 % of full scale Hysteresis 315 % Electrical data Operating voltage U _B 1030 VDC Ripple U _{SS} ≤ 10 % U _{Bmax} DC rated operating current I _B ≤ 200 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _B ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NC contact, PNP Switching frequency 2 kHz	Туре	BI2-G12K-RP6X-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 315 % Electrical data Operating voltage U₀ Operating voltage U₀ 1030 VDC Ripple U₀ ≤ 10 % U₀ 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, NC contact, PNP Switching frequency 2 kHz Mechanical data	ID	4670282
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 315 % Electrical data Operating voltage Us 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 Issue Short-circuit protection ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NC contact, PNP Switching frequency 2 kHz Mechanical data	General data	
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 315 % Electrical data Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Brnax} 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, NC contact, PNP Switching frequency 2 kHz Mechanical data	Rated switching distance	2 mm
Correction factors $ \begin{array}{c} St37 = 1; \ Al = 0.3; \ stainless \ steel = 0.7; \ Ms = 0.4 \\ \hline Repeat \ accuracy & \leq 2 \% \ of \ full \ scale \\ \hline Hysteresis & 315 \% \\ \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 B} & \leq 200 \ 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 B} & \leq 1.8 \ V \\ \hline Wire \ break/reverse \ polarity \ protection & yes/Complete \\ \hline Output \ function & 3-wire, \ NC \ contact, \ PNP \\ \hline Switching \ frequency & 2 \ kHz \\ \hline Mechanical \ data \\ \hline \end{array} $	Mounting conditions	Flush
= 0.4 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 _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, NC contact, PNP Switching frequency 2 kHz	Secured operating distance	≤ (0.81 × Sn) mm
Hysteresis 315 % Electrical data Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _s ≤ 200 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection Voltage drop at I _s ✓ 1.8 V Wire break/reverse polarity protection Output function 3-wire, NC contact, PNP Switching frequency 2 kHz Mechanical data	Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Electrical data Operating voltage U_B 1030 VDC Ripple U_{ss} $\leq 10 \% U_{Bmax}$ DC rated operating current I_e No-load current $\leq 15 \text{ mA}$ 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, NC contact, PNP Switching frequency 2 kHz Mechanical data	Repeat accuracy	≤ 2 % of full scale
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, NC contact, PNP Switching frequency 2 kHz Mechanical data	Hysteresis	315 %
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, NC contact, PNP Switching frequency 2 kHz 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, NC contact, PNP Switching frequency 2 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, NC contact, PNP Switching frequency 2 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, NC contact, PNP Switching frequency 2 kHz Mechanical data	DC rated operating current I _e	≤ 200 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, NC contact, PNP Switching frequency 2 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 3-wire, NC contact, PNP Switching frequency 2 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, NC contact, PNP Switching frequency 2 kHz Mechanical data	Isolation test voltage	0.5 kV
Wire break/reverse polarity protection yes/Complete Output function 3-wire, NC contact, PNP Switching frequency 2 kHz Mechanical data	Short-circuit protection	yes/Cyclic
Output function 3-wire, NC contact, PNP Switching frequency 2 kHz Mechanical data	Voltage drop at I _e	≤ 1.8 V
Switching frequency 2 kHz Mechanical data	Wire break/reverse polarity protection	yes/Complete
Mechanical data	Output function	3-wire, NC contact, PNP
	Switching frequency	2 kHz
Design Threaded barrel M12 v 1	Mechanical data	
Design Tilleaded barrel, WHZ X T	Design	Threaded barrel, M12 x 1



Features

- ■Threaded barrel, M12 x 1
- ■Chrome-plated brass
- DC 3-wire, 10...30 VDC
- ■NC 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.

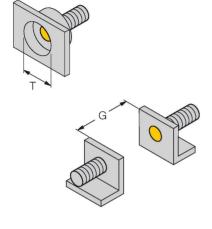


Technical data

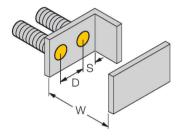
Dimensions	34 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PA12-GF30
End cap	Plastic, EPTR
Material coupling nut	metal, CuZn, nickel-plated
Max. tightening torque of housing nut	10 Nm
Electrical connection	Cable with connector, M12 × 1
Cable quality	Ø 5.2 mm, LifYY, PVC, 0.2 m
Core cross-section	3 x 0.34 mm ²
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

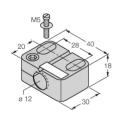


Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 12 mm



Accessories

BST-12B 6947212



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



QM-12

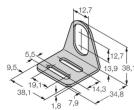
BSS-12

Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

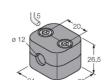
6945101

6901321

MW12 6945003 Mounting bracket for threaded ba



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



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

3|3