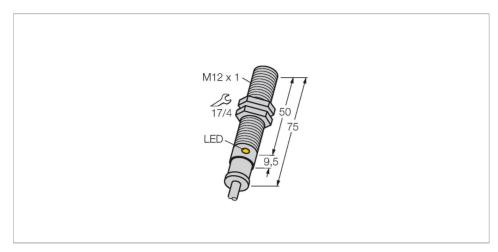


BI4-M12T-AP6X 7M Inductive Sensor - With Increased Switching Distance



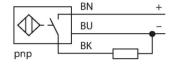
Technical data

ID 16582 General data Rated switching distance 4 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 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 ves / Cvclic	Туре	BI4-M12T-AP6X 7M
Rated switching distance 4 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	ID	16582
Mounting conditionsFlushSecured operating distance $\leq (0.81 \times Sn) \text{ mm}$ Correction factors $St37 = 1$; Al = 0.3; stainless steel = 0.7; Ms = 0.4Repeat accuracy $\leq 2 \% \text{ of full scale}$ Temperature drift $\leq \pm 10 \%$ Hysteresis 315% Electrical data 1030 VDC Residual ripple $\leq 10 \% \text{ U}_{ss}$ DC rated operational current $\leq 200 \text{ mA}$ No-load current $\leq 0.1 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$	General data	
Secured operating distance $\leq (0.81 \times Sn) \text{ mm}$ Correction factorsSt37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4Repeat accuracy $\leq 2 \% \text{ of full scale}$ Temperature drift $\leq \pm 10 \%$ Hysteresis 315% Electrical data0perating voltage 1030 VDC Residual ripple $\leq 10 \% \text{ U}_{ss}$ DC rated operational current $\leq 200 \text{ mA}$ No-load current 15 mA Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$	Rated switching distance	4 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 \end{array} $	Mounting conditions	Flush
$= 0.4$ Repeat accuracy $\leq 2 \%$ of full scale Temperature drift $\leq \pm 10 \%$ Hysteresis 315% Electrical data Operating voltage 1030 VDC Residual ripple $\leq 10 \% \text{ U}_{ss}$ DC rated operational current $\leq 200 \text{ mA}$ No-load current 15 mA Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$	Secured operating distance	≤ (0.81 × Sn) mm
Temperature drift ≤ ±10 % Hysteresis 315 % Electrical data 1030 VDC 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	Correction factors	
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	Repeat accuracy	≤ 2 % of full scale
Electrical data Operating voltage 1030 VDC Residual ripple ≤ 10 % U₅ѕ DC rated operational current ≤ 200 mA No-load current 15 mA Residual current ≤ 0.1 mA Isolation test voltage ≤ 0.5 kV	Temperature drift	≤ ±10 %
Operating voltage 1030 VDC Residual ripple $\leq 10 \% \text{ U}_{ss}$ DC rated operational current $\leq 200 \text{ mA}$ No-load current 15 mA Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$	Hysteresis	315 %
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	Electrical data	
DC rated operational current ≤ 200 mA No-load current 15 mA Residual current ≤ 0.1 mA Isolation test voltage ≤ 0.5 kV	Operating voltage	1030 VDC
No-load current 15 mA Residual current ≤ 0.1 mA Isolation test voltage ≤ 0.5 kV	Residual ripple	≤ 10 % U _{ss}
Residual current ≤ 0.1 mA Isolation test voltage ≤ 0.5 kV	DC rated operational current	≤ 200 mA
Isolation test voltage ≤ 0.5 kV	No-load current	15 mA
	Residual current	≤ 0.1 mA
Short-circuit protection ves / Cyclic	Isolation test voltage	≤ 0.5 kV
,	Short-circuit protection	yes / Cyclic
Voltage drop at I _e ≤ 1.8 V	Voltage drop at I _e	≤ 1.8 V
Wire breakage/Reverse polarity protection yes / Complete	Wire breakage/Reverse polarity protection	yes / Complete
Output function 3-wire, NO contact, PNP	Output function	3-wire, NO contact, PNP
Switching frequency 2 kHz	Switching frequency	2 kHz

Features

- ■Threaded barrel, M12 x 1
- Chrome-plated brass
- Large sensing range
- ■DC 3-wire, 10...30 VDC
- ■NO contact, PNP output
- Cable connection

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.

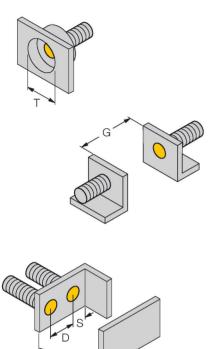


Technical data

Mechanical data	
Design	Threaded barrel, M12 × 1
Dimensions	75 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PA12-GF30
Max. tightening torque of housing nut	10 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, LifYY, PVC, 7 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

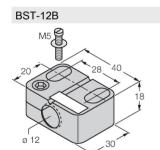
Mounting instructions/Description



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

URCK

Accessories



6947212

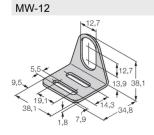
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



6945101

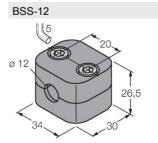
6901321

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.



6945003

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



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