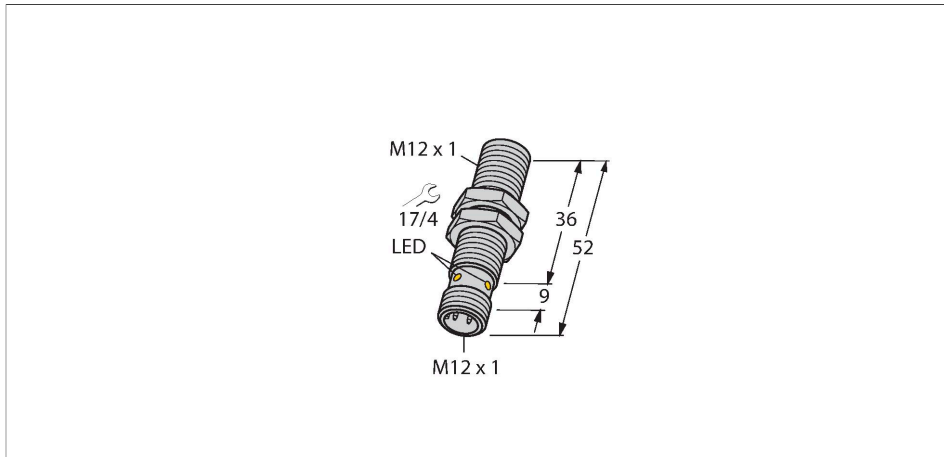


BI4-M12-AP6X-H1141/S1751

Inductive Sensor

With FM Approval



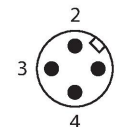
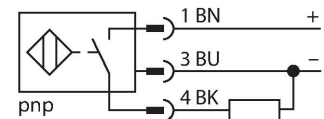
Technical data

Type	BI4-M12-AP6X-H1141/S1751
ID	4607075
Remark to product	Sensor has received approval FM Class I Div 2
Special version	S1751 corresponds to: FM — Class I Div 2 approval

Features

- M12 × 1 threaded barrel
- Chrome-plated brass
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

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.

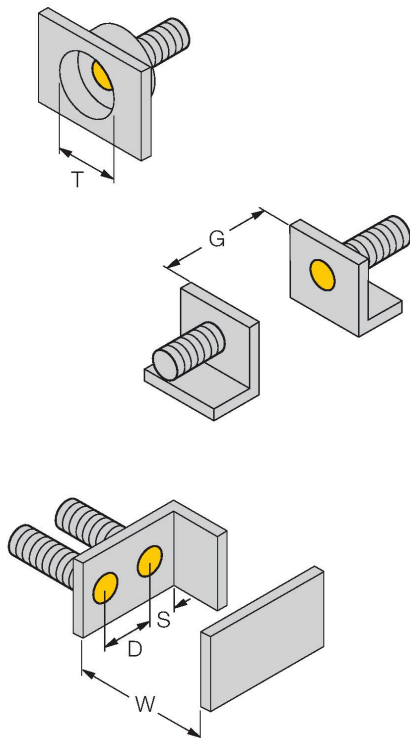
General data	
Rated switching distance	4 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2\%$ of full scale
Hysteresis	3...15 %
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10\% U_{ss}$
DC rated operational current	≤ 200 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_o	≤ 1.8 V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP

Technical data

Insulation class	□
Switching frequency	2 kHz
Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	52 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PA12-GF30
Max. tightening torque of housing nut	10 Nm
Electrical connection	Connector, M12 × 1
Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
Switching state	LED, Yellow

Mounting instructions

Mounting instructions/Description



Distance D	24 mm
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Distance W	3 x Sn
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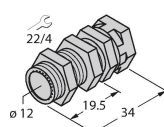
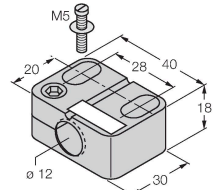
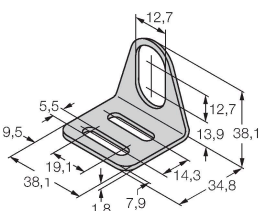
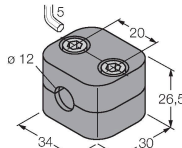
Distance T	3 x B
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Distance S	1.5 x B
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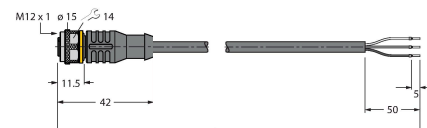
Distance G	6 x Sn
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Diameter active area B	Ø 12 mm
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Accessories

QM-12	6945101	BST-12B	6947212
 <p>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.</p>		 <p>Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6</p>	
MW-12	6945003	BSS-12	6901321
 <p>Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)</p>		 <p>Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene</p>	

Wiring accessories

Dimension drawing	Type	ID	
	RKC4T-2/TEL	6625010	Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, jacket material: PVC, black; cULus approval