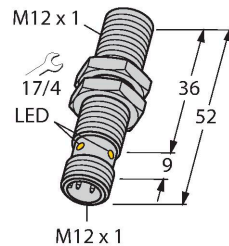


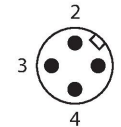
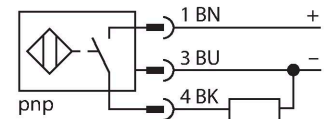
BI4-M12-AP6X-H1141/S1751 Inductive Sensor With FM Approval



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.

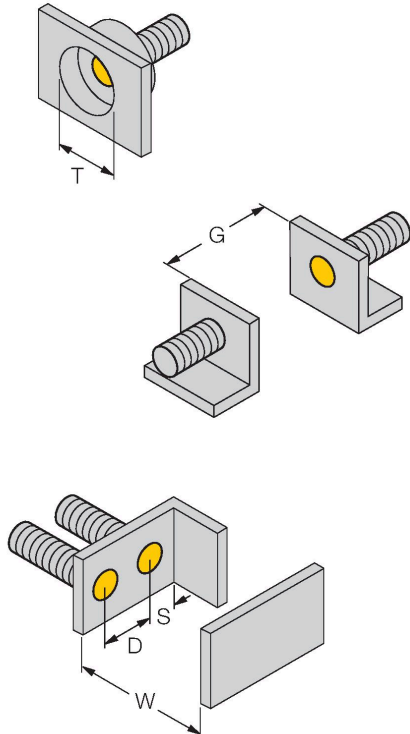
Technical data

Type	BI4-M12-AP6X-H1141/S1751
Ident. no.	4607075
Remark to product	Sensor has received approval FM Class I Div 2
Special version	S1751 corresponds to: FM approval
Rated switching distance	4 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n) \text{ mm}$
Repeat accuracy	$\leq 2 \%$ of full scale
Temperature drift	$\leq \pm 10 \%$
Hysteresis	3...15 %
Ambient temperature	-25...+70 °C
Operating voltage	10...30 VDC
Residual ripple	$\leq 10 \% U_{ss}$
DC rated operational current	$\leq 200 \text{ mA}$
No-load current	$\leq 15 \text{ mA}$
Residual current	$\leq 0.1 \text{ mA}$
Isolation test voltage	$\leq 0.5 \text{ kV}$
Short-circuit protection	yes / Cyclic
Voltage drop at I_o	$\leq 1.8 \text{ V}$
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP
Insulation class	□

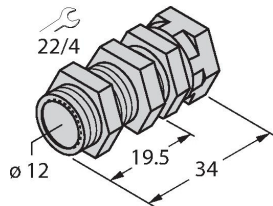
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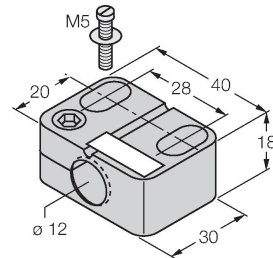
Switching frequency	2 kHz
Design	Threaded barrel, M12 × 1
Dimensions	52 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PA12-GF30
Max. tightening torque of housing nut	10 Nm
Electrical connection	Connector, M12 × 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
Switching state	LED, Yellow

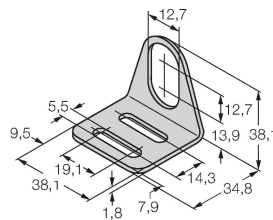
Mounting instructions

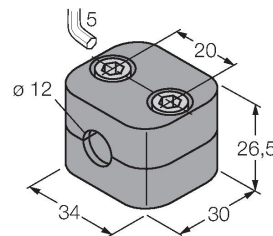
Mounting instructions/Description	
	Distance D
	24 mm
	Distance W
	3 x Sn
	Distance T
	3 x B
	Distance S
	1.5 x B
	Distance G
	6 x Sn
	Diameter active area B
	Ø 12 mm

Accessories

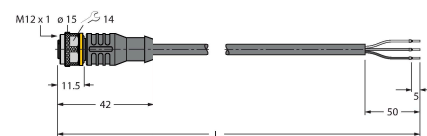
<p>QM-12</p> 	<p>6945101</p> <p>Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.</p>
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<p>BST-12B</p> 	<p>6947212</p> <p>Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6</p>
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<p>MW-12</p> 	<p>6945003</p> <p>Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)</p>
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<p>BSS-12</p> 	<p>6901321</p> <p>Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene</p>
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Wiring accessories

Dimension drawing	Type	Ident. no.	
	RKC4T-2/TEL	6625010	Connection cable, female M12, straight, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com