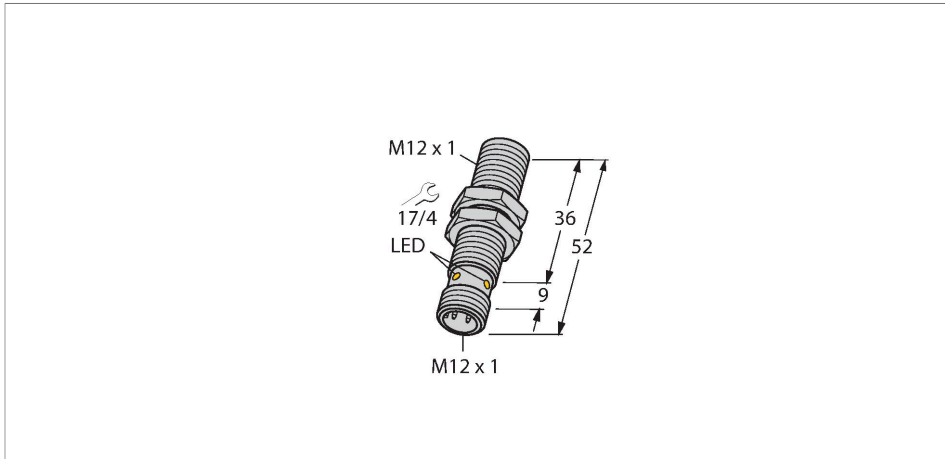


BI3-M12-AD4X-H1141

Inductive Sensor

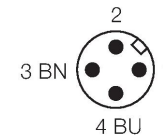
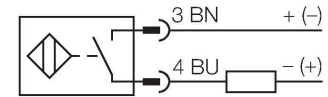


Technical data

Type	BI3-M12-AD4X-H1141
ID	4405041
General data	
Rated switching distance	3 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	$\leq 2\%$ of full scale
Temperature drift	$\leq \pm 10\%$
Hysteresis	1...15 %
Electrical data	
Operating voltage	10...65 VDC
Residual ripple	$\leq 10\% U_{ss}$
DC rated operational current	≤ 100 mA
Residual current	≤ 0.6 mA
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes / Cyclic
Voltage drop at I_o	≤ 5 V
Wire breakage/Reverse polarity protection	Complete
Output function	2-wire, NO contact, 2-wire
Smallest operating current	≥ 3 mA
Switching frequency	1 kHz

Features

- M12 x 1 threaded barrel
- Chrome-plated brass
- DC 2-wire, 10...65 VDC
- NO contact
- M12 x 1 male connector



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 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 x 1
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

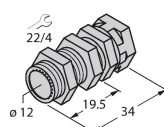
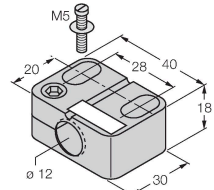
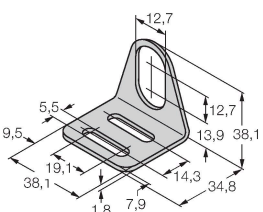
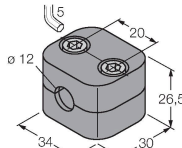
Mounting instructions

Mounting instructions/Description

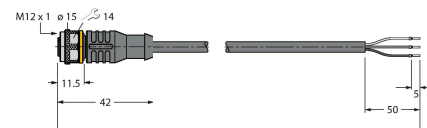


Distance D	24 mm
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 12 mm

Accessories

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	<p>Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, jacket material: PVC, black; cULus approval</p>