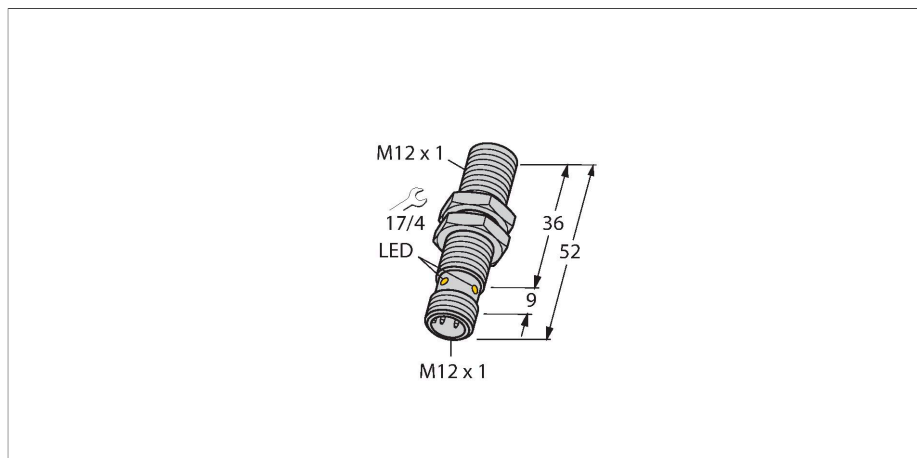


BI4-M12-AP6X-H1141

Inductive Sensor – With Increased Switching Distance



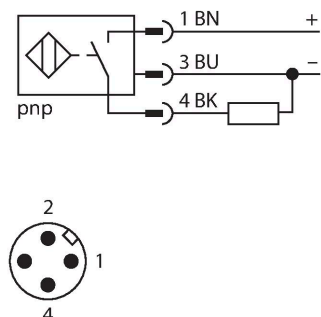
Technical data

Type	BI4-M12-AP6X-H1141
ID	46070
General data	
Rated switching distance	4 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	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
Insulation class	□
Switching frequency	2 kHz
Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	52 mm

Features

- M12 × 1 threaded barrel
- Chrome-plated brass
- Large sensing range
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 × 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

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
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
------------	---------

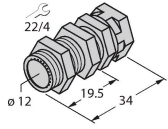
Distance G	6 x Sn
------------	--------

Diameter active area B	Ø 12 mm
------------------------	---------

Accessories

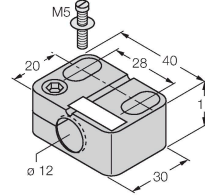
QM-12 **6945101**

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.



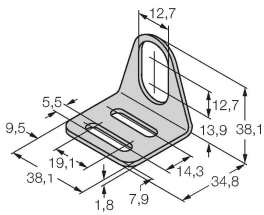
BST-12B **6947212**

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



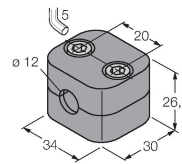
MW-12 **6945003**

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



BSS-12 **6901321**

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



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

