

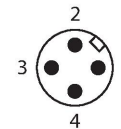
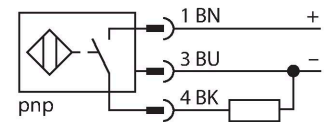
# BI4-MT12HE-AP6X-H1141

## Inductive Sensor – With Increased Switching Distance

### Features

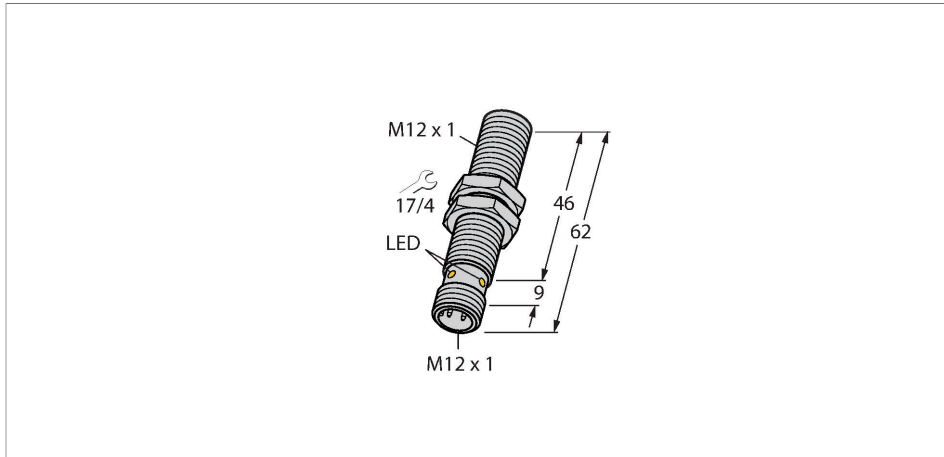
- Threaded barrel, M12 x 1
- Brass, PTFE-coated
- Duroplast front cap, very resistant to thermal and mechanical load
- Large sensing range
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

### 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-MT12HE-AP6X-H1141
ID	4608093
<b>General data</b>	
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
Hysteresis	3...15 %
<b>Electrical data</b>	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10$ % $U_{ss}$
DC rated operational current	$\leq 200$ mA
No-load current	15 mA
Residual current	$\leq 0.1$ mA
Isolation test voltage	$\leq 0.5$ kV
Short-circuit protection	yes / Cyclic
Voltage drop at $I_o$	$\leq 1.8$ V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP
Switching frequency	2 kHz
<b>Mechanical data</b>	
Design	Threaded barrel, M12 x 1

## Technical data

Dimensions	62 mm
Housing material	Metal, CuZn, PTFE-coated
Active area material	Plastic, Duroplast, PTFE-coated
Max. tightening torque of housing nut	7 Nm
Electrical connection	Connector, M12 × 1
<b>Environmental conditions</b>	
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



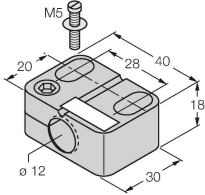
Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 12 mm

## Accessories

BST-12B

6947212

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



QMT-12

6945106

Quick-mount bracket with dead-stop; material: brass, PTFE-coated; Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



BSS-12

6901321

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

