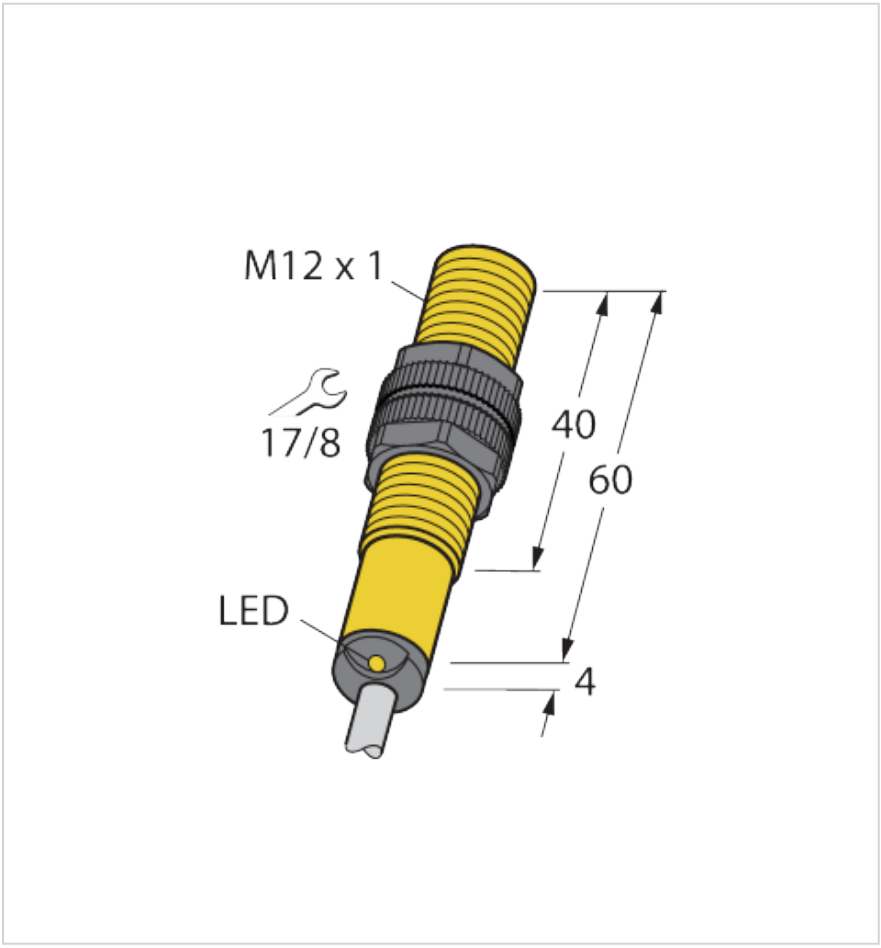
BI2-S12-AD4X

Inductive Sensor



Type designation	BI2-S12-AD4X
Ident-No.	44530

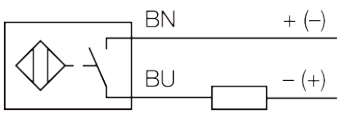
Technical data

General data	
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Detection area/measuring range	
Rated switching distance	2 mm
Secured operating distance	≤ (0.81 × Sn) mm
Power supply	
Operating voltage U_B	10...65 VDC
Voltage drop at I_e	≤ 5 V

Features

- Threaded barrel, M12 x 1
- Plastic, PA12-GF30
- DC 2-wire, 10…65 VDC
- NO contact
- Cable connection

Wiring Diagram



Technical data

Electrical data	
Output function	2-wire, NO contact, 2-wire
Short-circuit protection	yes/Cyclic
Wire break/reverse polarity protection	Complete
DC rated operational current	≤ 100 mA
Isolation test voltage	≤ 0,5 kV
Residual current	≤ 0,6 mA
Residual ripple	≤ 10 % U_{SS}
Smallest operating current	≥ 3 mA
Switching frequency	1 kHz
Accuracy/deviation	
Hysteresis	1 % v. E...15 % v. E.
Temperature drift	10 %
Repeat accuracy	≤ 2 % v. E.
Mechanical data	
Design	Threaded barrel, M12 x 1
Construction type designation	S12
	⌀ 12 mm
Housing material	Plastic, PA12-GF30
Active area material	Plastic, PA12-GF30
End cap	Plastic, EPTR
Max. tightening torque of housing nut	1 Nm
Electrical connection	Cable
Pressure resistant	no
Thread length	40 mm
Thread size	M12 × 1
Mounting conditions	Flush
Cable	
Cable length	2 m
Core cross-section	2 x 0,34 mm²
Cable type	LifYY
External Diameter of the Cable	Ø 5,2 mm
Cable Jacket Material	PVC
Ambient conditions	
Ambient temperature	-25...+70 °C
Pollution degree	3
Shock resistance	30 g (11 ms)

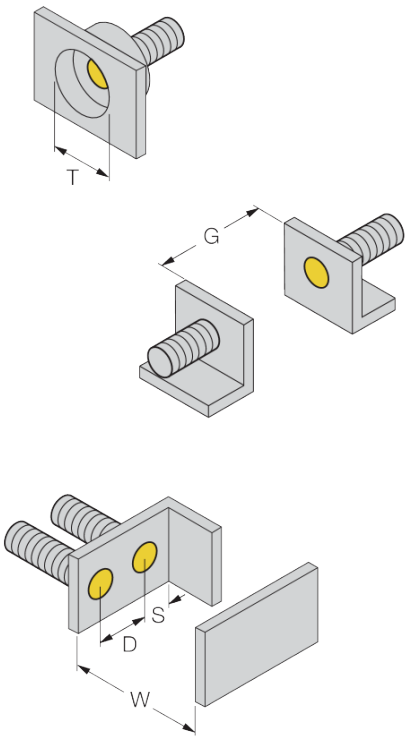
Functional principle

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

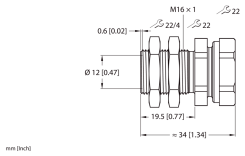
Vibration resistance	55 Hz (1 mm)
Protection class	IP67
Tests/approvals	
MTTF	2283 Years acc. to SN 29500 (Ed. 99) 40 °C
Displays/controls	
Switching state	LED, Yellow

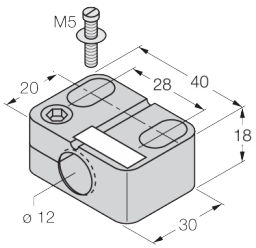
Assembly instructions

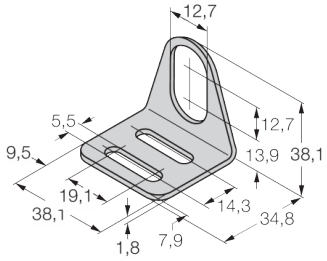


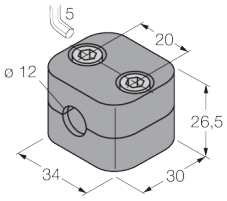
Distance D: 2 x B
Distance W: 3 x Sn
Distance T: 3 x B
Distance S: 1.5 x B
Distance G: 6 x Sn
Diameter active area B: 12 mm

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

MW12	6945003
	Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-12	6901321
	Mounting bracket for smooth and threaded barrel sensors; material: Polypropylene