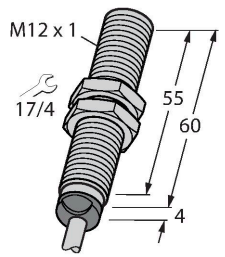
BI2-M12-LIU
Inductive Sensor – With Analog Output



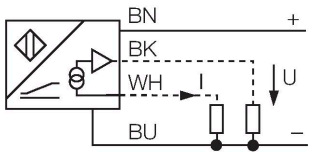
Technical data

Type	BI2-M12-LIU
ID	1535534
General data	
Measuring range	1…2.5 mm
Mounting conditions	Flush
Secured operating distance	≤ (0.81 × Sn) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	≤ 1 % of measuring range |A - B|
	0.5 %, after warm-up 0.5 h
Reproducibility	≤ 15 µm
	≤ 7.5 µm, after a warm-up time of 0.5 h
Linearity deviation	≤ 3 %
Temperature drift	≤ ± 0.06 %/K
Electrical data	
Operating voltage U_B	15…30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
No-load current	≤ 8 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes
Wire break/reverse polarity protection	no/Complete
Output function	4-wire, Analog output
Voltage output	0…10 V
Current output	0…20 mA

Features

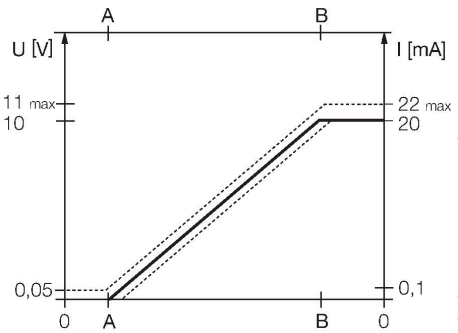
- M12 × 1 threaded barrel
- Chrome-plated brass
- 4-wire, 15…30 VDC
- Analog output
- 0…10 V and 0…20 mA
- Cable connection

Wiring diagram



Functional principle

Inductive TURCK sensors with analog output accomplish simple control tasks. They provide a current, voltage or frequency signal proportional to the target's distance. The output signal is linear to the distance of the target over the entire sensing range.



BI2-M12-LIU| 02/21/2025 13-10 | technical changes reserved

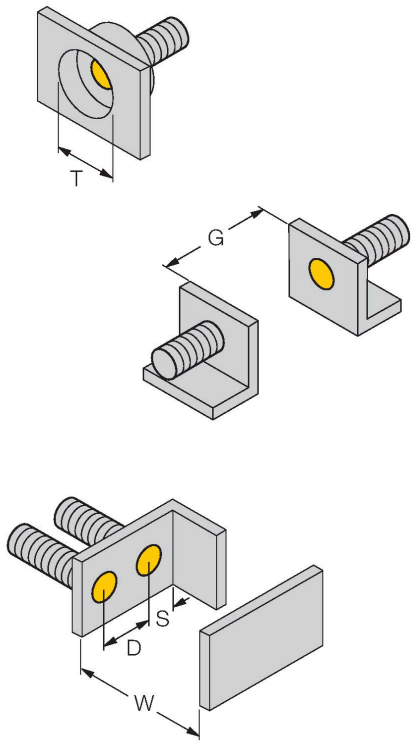
Technical data

Load resistance voltage output	≥ 4.7 kΩ
Load resistance current output	≤ 0.4 kΩ
Measuring sequence frequency	200 Hz
Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	64 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PA12-GF30
End cap	Plastic, EPTR
Max. tightening torque of housing nut	10 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, Gray, LifYY, PVC, 2 m
Core cross-section	4 x 0.34 mm^2
Environmental conditions	
Ambient temperature	-25…+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	751 years acc. to SN 29500 (Ed. 99) 40 °C

BI2-M12-LIU| 02/21/2025 13-10 | technical changes reserved

Mounting instructions

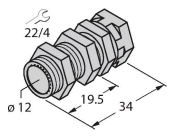
Mounting instructions/Description



Distance D	24 mm
Distance W	9 mm
Distance T	3 x B
Distance S	18 mm
Distance G	18 mm
Diameter active area B	Ø 12 mm

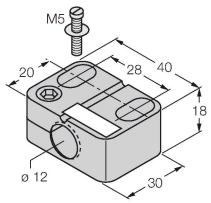
Accessories

QM-12	6945101



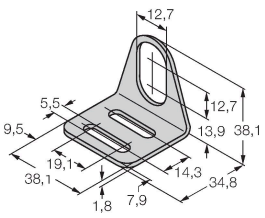
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BST-12B	6947212



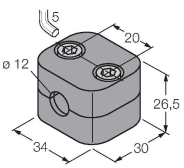
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

MW12	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