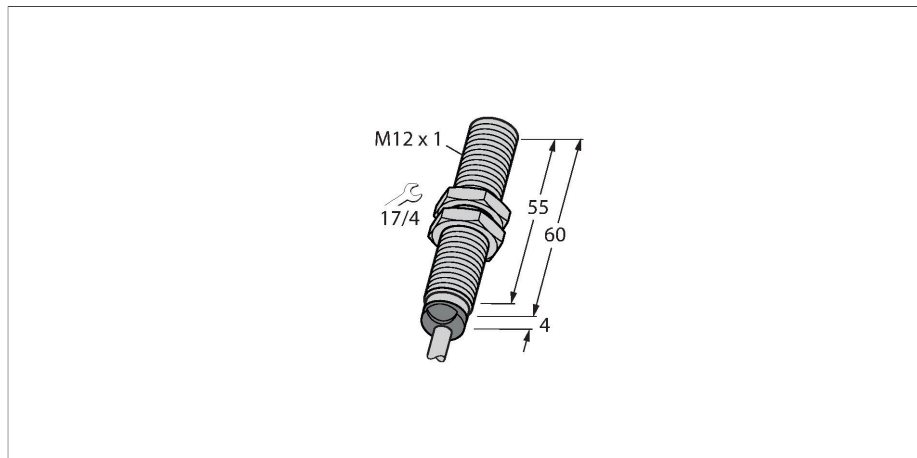


# BI4-M12-LIU

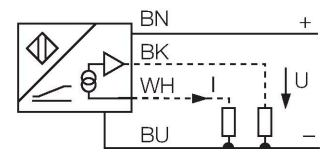
## Inductive Sensor – With Analog Output



### Features

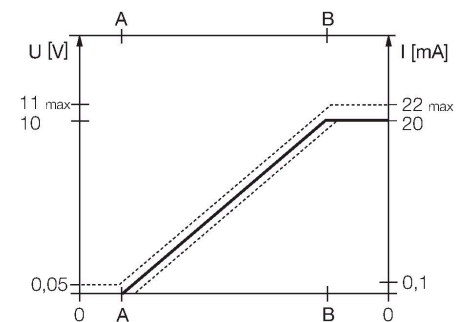
- M12 × 1 threaded barrel
- Chrome-plated brass
- 4-wire, 15...30 VDC
- Analog output
- 0...10 V and 0...20 mA
- Cable connection

### 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.



### Technical data

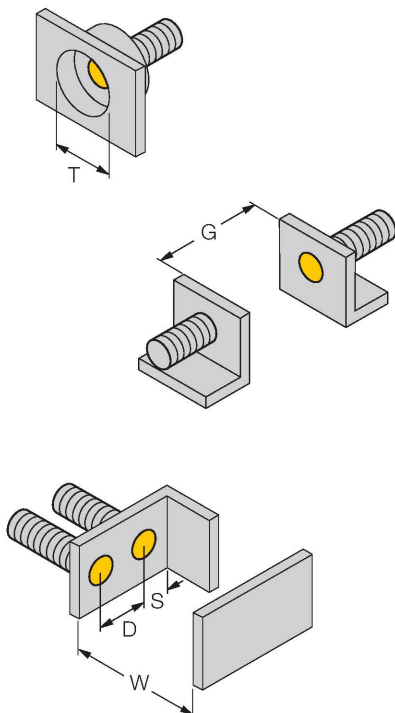
Type	BI4-M12-LIU
ID	1535532
<b>General data</b>	
Measuring range	0.5...3 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	$\leq 1$ % of measuring range  A - B
	0.5 %, after warm-up 0.5 h
Reproducibility	$\leq 25$ $\mu$ m
	$\leq 12.5$ $\mu$ m, after a warm-up time of 0.5 h
Linearity deviation	$\leq 5$ %
Temperature drift	$\leq \pm 0.06$ %/K
<b>Electrical data</b>	
Operating voltage $U_b$	15...30 VDC
Ripple $U_{ss}$	$\leq 10$ % $U_{Bmax}$
No-load current	$\leq 8$ 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
Load resistance voltage output	$\geq 4.7$ k $\Omega$
Load resistance current output	$\leq 0.4$ k $\Omega$
Measuring sequence frequency	200 Hz

## Technical data

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 <sup>2</sup>
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

## Mounting instructions

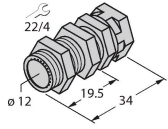
### Mounting instructions/Description



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

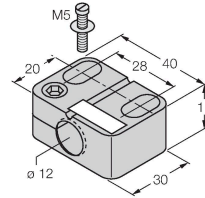
Accessories

QM-12 6945101



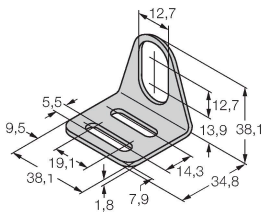
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BST-12B 6947212



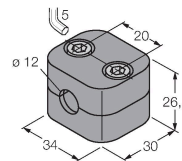
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

MW12 6945003



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

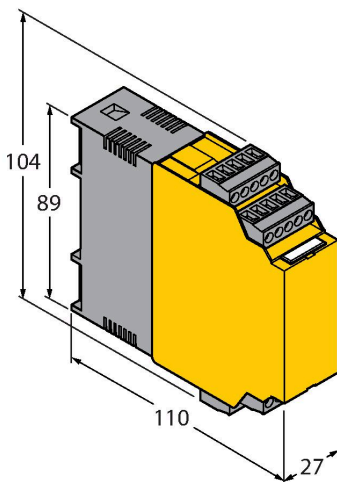
BSS-12 6901321



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

Accessories

Dimension drawing Type ID



IM43-13-SR

7540041

Trip amplifier; 1-channel; input 0/4... 20 mA or 0/2...10 V; supply of 2- or 3-wire transmitters/sensors; limit value adjustment via teach button; three relay outputs with one NO contact each; removable terminal blocks; 27 mm wide; universal voltage supply 20...250 VUC; further Limit value indicators are described in our "Interface Technology" catalog.