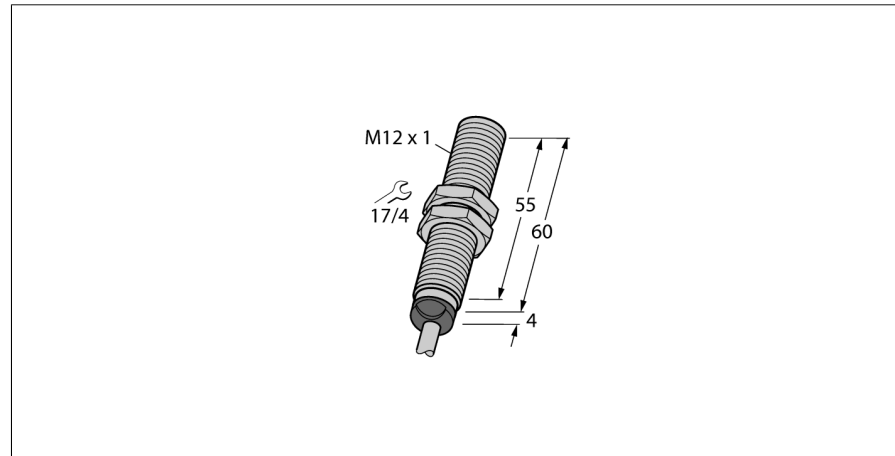
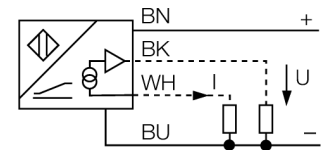


**Inductive sensor
with analog output
BI4-M12-LIU**



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

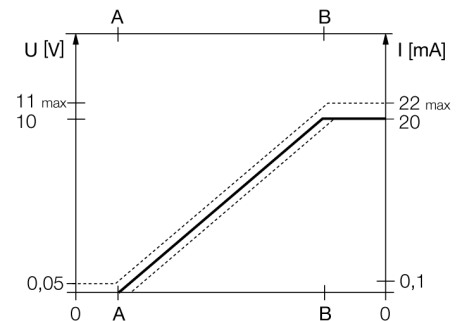
Wiring diagram



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.

Measuring range



Type code	BI4-M12-LIU
Ident no.	1535532
Measuring range [A...B]	0.5...3mm
Mounting condition	flush
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	≤ 25 μm
	≤ 12.5 μm, after a warm-up time of 0.5 h
Linearity deviation	≤ 5 %
Temperature drift	≤ ± 0.06 % / K
Ambient temperature	-25...+70 °C
Operating voltage	15...30VDC
Residual ripple	≤ 10 % U _{ss}
No-load current I ₀	≤ 8 mA
Rated insulation voltage	≤ 0.5 kV
Short-circuit protection	yes
Wire breakage / Reverse polarity protection	yes/ complete
Output function	4-wire, analog output
Voltage output	0...10V
Current output	0...20mA
Load resistance voltage output	≥ 4.7 kΩ
Load resistance current output	≤ 0.4 kΩ
Measuring sequence frequency	200 Hz
Design	threaded barrel, M12 x 1
Dimensions	64 mm
Housing material	metal, CuZn, chrome-plated
Material active area	Plastic, PA
End cap	Plastic, EPTR
Max. tightening torque housing nut	10 Nm
Connection	cable
Cable quality	5.2 mm, LifYY, PVC, 2 m
Cable cross section	4 x 0.34 mm ²
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

**Inductive sensor
with analog output
BI4-M12-LIU**

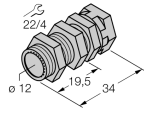
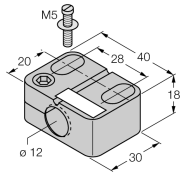
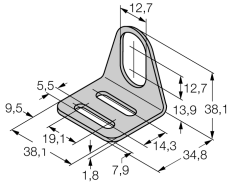
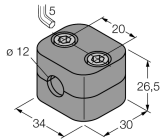
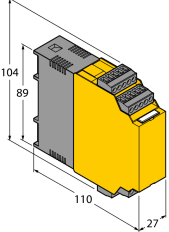
Distance D	24 mm
Distance W	9 mm
Distance T	3 x B
Distance S	18 mm
Distance G	18 mm

Diameter of the active area B Ø 12 mm



**Inductive sensor
with analog output
BI4-M12-LIU**

Accessories

Type code	Ident no.	Description	Dimension drawing
QM-12	6945101	Quick-mount bracket with dead-stop; material: Chrome-plated brass Male thread M16 x 1. Note: The switching distance of proximity switches can be reduced by the use of quick-mount brackets.	 A technical drawing of a quick-mount bracket. It is a cylindrical component with a male thread on one end. Dimensions shown: diameter is 12 mm, length is 19.5 mm, and total length including the thread is 34 mm. A note indicates a thread of 22/4.
BST-12B	6947212	Fixing clamp for threaded barrel devices, with dead-stop; material: PA6	 A technical drawing of a rectangular fixing clamp. It has a circular opening on one side. Dimensions shown: diameter of opening is 12 mm, width is 20 mm, length is 40 mm, height is 18 mm, and total width including the opening is 30 mm. An M5 screw is shown being used to secure it.
MW-12	6945003	Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)	 A technical drawing of a U-shaped mounting bracket. Dimensions shown: height of the vertical part is 12.7 mm, width of the base is 34.8 mm, and the distance between the vertical parts is 14.3 mm. Other dimensions include 5.5, 9.5, 19.1, 38.1, 7.9, 1.8, 13.9, and 38.1 mm.
BSS-12	6901321	Mounting bracket for smooth and threaded barrel devices; material: Polypropylene	 A technical drawing of a cylindrical mounting bracket. Dimensions shown: diameter is 12 mm, length is 20 mm, height is 26.5 mm, and width is 34 mm.
IM43-13-SR	7540041	Limit value monitor; 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 monitors are described in our "Interface Technology" catalog.	 A technical drawing of a rectangular limit value monitor. Dimensions shown: height is 104 mm, width is 110 mm, and depth is 27 mm. A teach button is visible on the top surface.