BI5-M18-LIU
Inductive Sensor – With Analog Output



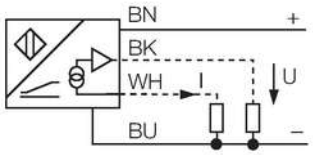
Technical data

Type	BI5-M18-LIU
ID	1536000
General data	
Measuring range	2…4 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	≤ 20 µm
	≤ 10 µm, after a warm-up time of 0.5 h
Linearity deviation	≤ 3 %
Temperature drift	≤ ± 0.06 %/K
Electrical data	
Operating voltage	15…30 VDC
Residual ripple	≤ 10 % U_{ss}
No-load current	8 mA
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes
Wire breakage/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	≥ 4.7 kΩ
Load resistance current output	≤ 0.4 kΩ
Measuring sequence frequency	200 Hz

Features

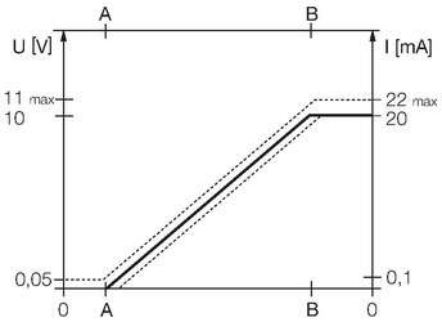
- Threaded barrel, M18 x 1
- Chrome-plated brass
- 4-wire, 15…30 VDC
- Analog output
- 0…10 V and 0…20 mA
- Cable connection

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.



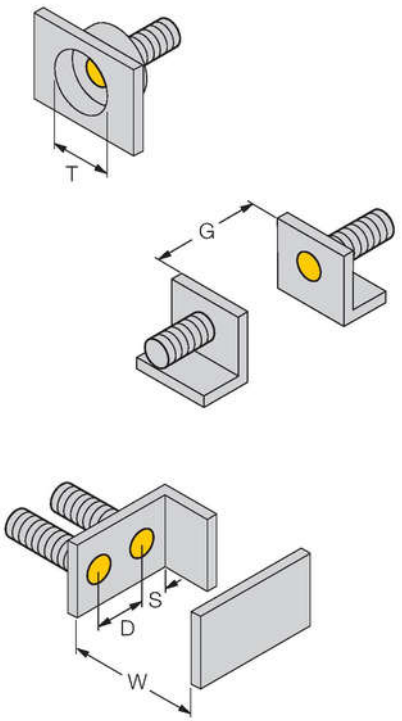
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Technical data

Mechanical data	
Design	Threaded barrel, M18 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	25 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

Mounting instructions

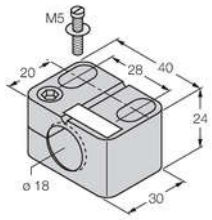
Mounting instructions/Description

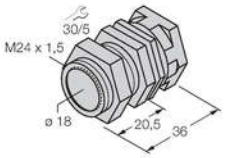


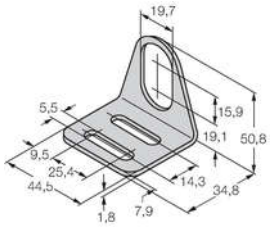
Distance D	2 x B
Distance W	12 mm
Distance T	3 x B
Distance S	1.5 x B
Distance G	24 mm
Diameter active area B	Ø 18 mm

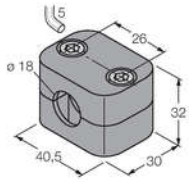
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Accessories

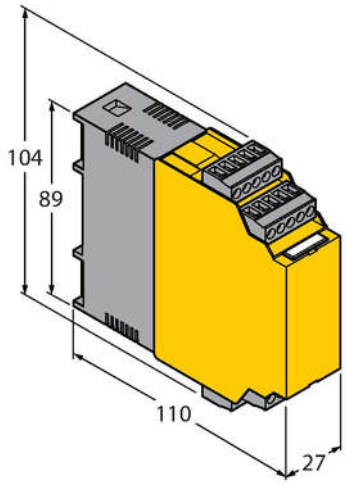
BST-18B	6947214
	Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

QM-18	6945102
	Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

MW-18	6945004
	Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-18	6901320
	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.

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