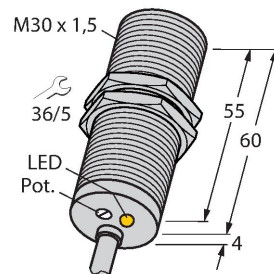


BI15-M30-LUAP6X

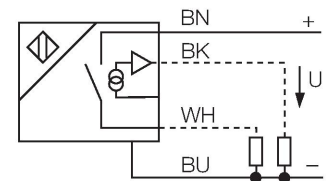
Inductive Sensor – With Analog and Switching Output



Features

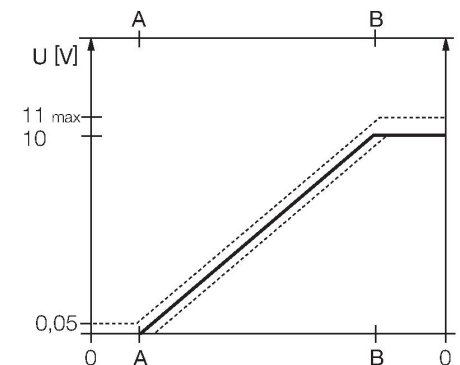
- M30 × 1.5 threaded tube
- Chrome-plated brass
- 4-wire, 15...30 VDC
- NO contact, PNP output
- Analog output
- 0...10 V
- Cable connection

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	BI15-M30-LUAP6X
ID	4618510
General data	
Measuring range	2...10 mm
	switch point adjustable via potentiometer
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	≤ 1 % of measuring range A - B
	0.5 %, after warm-up 0.5 h
Reproducibility	≤ 80 μ m
	≤ 40 μ m, after a warm-up time of 0.5 h
Linearity deviation	≤ 5 %
Temperature drift	$\leq \pm 0.06$ %/K
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	15...30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_o	≤ 200 mA
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, NO contact, PNP/Analog output
Voltage output	0...10 V
Load resistance voltage output	≥ 4.7 k Ω
Measuring sequence frequency	140 Hz

Technical data

Mechanical data	
Design	Threaded barrel, M30 x 1.5
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	75 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
Switching state	LED, Yellow

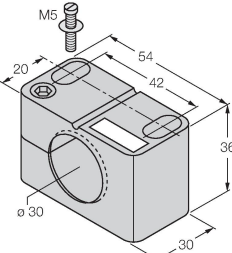
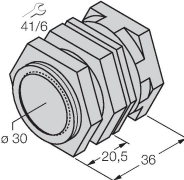
Mounting instructions

Mounting instructions/Description

The image contains three technical diagrams illustrating the mounting of a sensor. The top diagram is a side view of a square sensor with a central circular active area (highlighted in yellow) and a threaded mounting post. Dimension 'T' indicates the thickness of the sensor. The middle diagram shows two such sensors being mounted onto a rectangular plate. Dimension 'G' indicates the distance between the centers of the two sensors. The bottom diagram is a top view of two sensors mounted on a plate. Dimension 'D' is the distance between the centers of the two sensors. Dimension 'S' is the distance from the center of a sensor to the edge of the plate. Dimension 'W' is the width of the plate.

Distance D	60 mm
Distance W	27 mm
Distance T	3 x B
Distance S	45 mm
Distance G	54 mm
Diameter active area B	Ø 30 mm

Accessories

BST-30B	6947216	QM-30	6945103
	Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6		Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M36 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.
MW30	6945005	BSS-30	6901319
	Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)		Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene