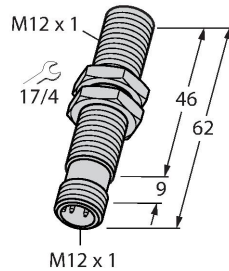


BI2-M12-LIU-H1141

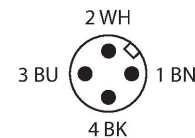
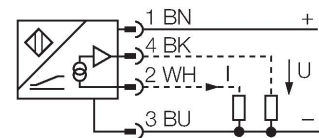
Inductive Sensor – With Analog Output



Features

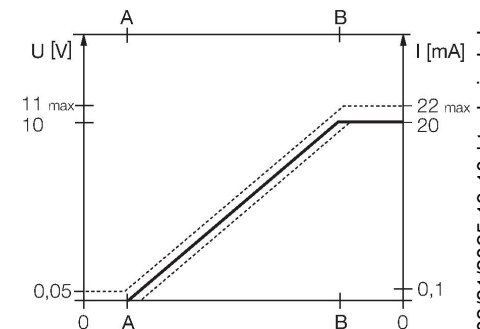
- M12 × 1 threaded barrel
- Chrome-plated brass
- 4-wire, 15...30 VDC
- Analog output
- 0...10 V and 0...20 mA
- M12 x 1 male connector

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	BI2-M12-LIU-H1141
ID	1535533
General data	
Measuring range	1...2.5 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	$\leq 15 \mu\text{m}$
	$\leq 7.5 \mu\text{m}$, after a warm-up time of 0.5 h
Linearity deviation	$\leq 3 \%$
Temperature drift	$\leq \pm 0.06 \%$ /K
Electrical data	
Operating voltage U_B	15...30 VDC
Ripple U_{ss}	$\leq 10 \%$ U_{Bmax}
No-load current	$\leq 8 \text{ mA}$
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

Technical data

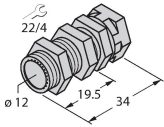
Load resistance voltage output	$\geq 4.7 \text{ k}\Omega$
Load resistance current output	$\leq 0.4 \text{ k}\Omega$
Measuring sequence frequency	200 Hz
Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	62 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PA12-GF30
Max. tightening torque of housing nut	10 Nm
Electrical connection	Connector, M12 × 1
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

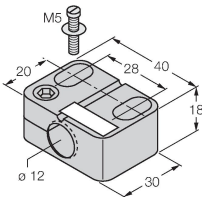
Accessories

QM-12 6945101



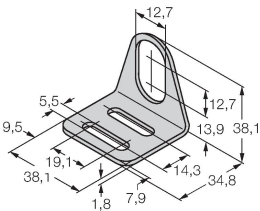
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BST-12B 6947212



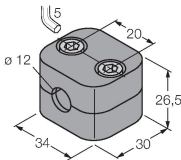
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

MW12 6945003



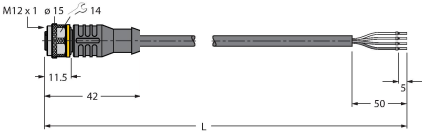
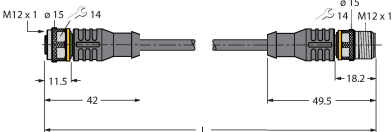
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-12 6901321



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

Wiring accessories

Dimension drawing	Type	ID	
	RKC4.4T-2/TEL	6625013	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval
	RKC4.301T-0.15-RSC4.334T/TXL	6631382	Extension cable, M12 female/male, straight, 4-pin, cable length: 0.15m, jacket material: PUR, black; cULus approval; Adapter cable for sensors with analog output on pin 2, for connection to analog inputs of fieldbus modules with 4-wire technology