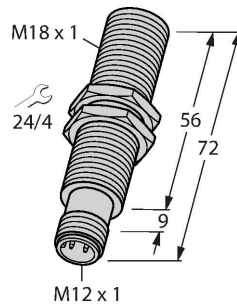


BI7-EM18EWD-LI-H1143

Inductive Sensor – For the Food Industry with Analog Output



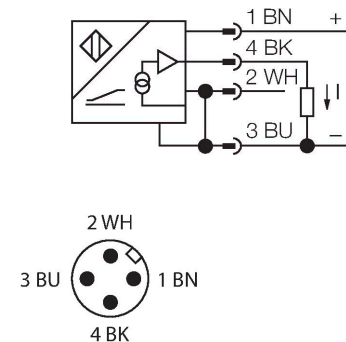
Features

- Threaded barrel, M18 x 1
- Stainless steel, 1.4404
- Front cap made of liquid crystal polymer
- High protection class IP69K for harsh environments
- Special double-lip seal
- Protection against all common acidic and alkaline cleaning agents
- Laser engraved label, permanently legible
- Suitable for applications in the food industry
- 3-wire, 15...30 VDC
- Analog output
- 0...20 mA
- M12 x 1 male connector

Technical data

Type	BI7-EM18EWD-LI-H1143
ID	1535568
General data	
Measuring range	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	$\leq 30 \mu\text{m}$
	$\leq 15 \mu\text{m}$, after a warm-up time of 0.5 h
Linearity deviation	$\leq 5 \%$
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	3-wire, Analog output
Current output	0...20 mA
Load resistance current output	$\leq 0.4 \text{ k}\Omega$

Wiring diagram

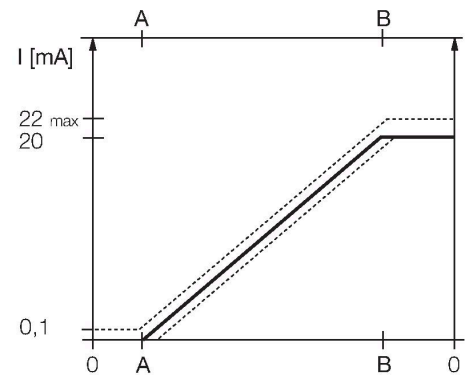


Functional principle

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

Measuring sequence frequency	200 Hz
Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	72 mm
Housing material	Stainless steel, 1.4404 (AISI 316L)
Active area material	Plastic, LCP
Connector housing	plastic, PP
Admissible pressure on front cap	≤ 15 bar
Max. tightening torque of housing nut	25 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

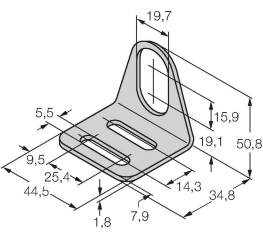


Mounting instructions

Mounting instructions/Description	
	Distance D
	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

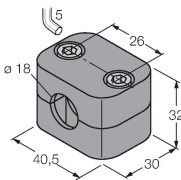
Accessories

MW186945004



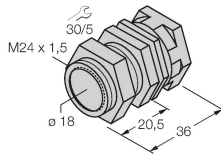
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-186901320



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

QM-186945102



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.