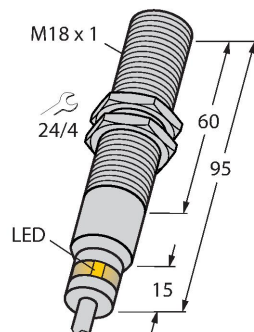


BI5-EM18D-VP6X/S120

Inductive Sensor – For Harsh Environments and Temperatures up to 120°C



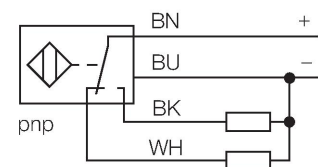
Features

- Threaded barrel, M18 x 1
- Stainless steel, 1.4571
- Viton sealing ring
- Protection class IP68/IP69K
- For temperatures up to +120 °C
- PTFE front cap
- Climate-proof
- Resistance to cooling lubricants, cutting and grinding oils
- Suitable for applications in the food industry
- DC 4-wire, 10...30 VDC
- Changeover contact, PNP output
- Cable connection

Technical data

Type	BI5-EM18D-VP6X/S120
ID	4614900
Special version	S120 Corresponds to: Maximum ambient temperature = 120 °C
General data	
Rated switching distance	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
Repeat accuracy	$\leq 2 \%$ of full scale
Temperature drift	$\leq \pm 10 \%$ $\leq \pm 20 \%, \geq +70 \text{ °C}$
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{ss}	$\leq 10 \%$ U_{Bmax}
DC rated operating current I_e	≤ 200 mA
Rated operational current	See derating curve
No-load current	≤ 15 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_e	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	4-wire, Complementary contact, PNP
Switching frequency	0.1 kHz

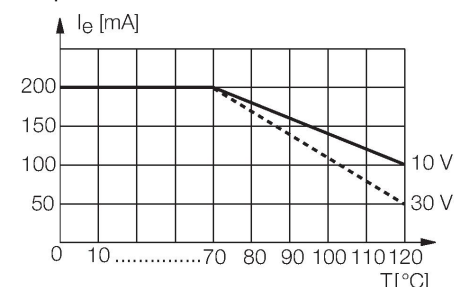
Wiring diagram



Functional principle

TURCK offers leak-proof sensors for the food industry and machine engineering that are resistant to cleaning agents, cooling lubricants, cutting and grinding oils. They are made for rough environmental conditions and not only meet but even exceed the requirements of the protection classes IP68 and IP69.

Special versions are available for ambient temperatures between -60°C and +250°C.



Technical data

Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	95 mm
Housing material	Stainless steel, 1.4571 (AISI 316Ti)
Active area material	Plastic, PTFE
End cap	Plastic, PTFE
Admissible pressure on front cap	≤ 10 bar
Max. tightening torque of housing nut	25 Nm
Electrical connection	Cable
Cable quality	Ø 3.7 mm, PTFE, FEP, 2 m
Core cross-section	4 x 0.25 mm ²
Environmental conditions	
Ambient temperature	-25...+120 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68 IP69K
MTTF	2615 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED, Yellow

Mounting instructions

Mounting instructions/Description

Diagram showing the side view of a mounting bracket. Dimension T is indicated as the distance from the mounting surface to the center of the active area.

Diagram showing the top view of two mounting brackets. Dimension G is indicated as the distance between the centers of the active areas.

Diagram showing the front view of a mounting bracket. Dimensions D, S, W, and B are indicated. D is the distance from the mounting surface to the center of the active area. S is the distance from the center of the active area to the edge of the bracket. W is the width of the bracket. B is the diameter of the active area.

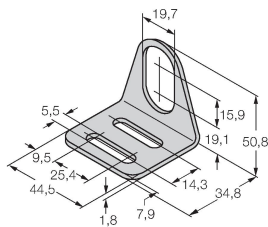
Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 18 mm

Accessories

MW18

6945004

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



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.

