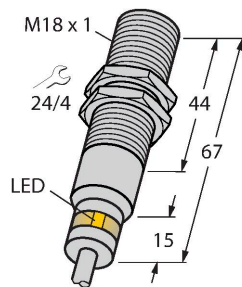# BI5-EM18WD-AP6X/S929
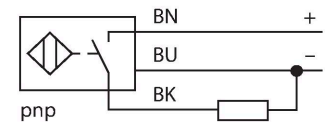# Inductive Sensor –   For Harsh Environments and Temperatures up to -60 °C

Features

- Threaded barrel, M18 x 1
- Stainless steel, 1.4571
- Protection class IP68/IP69K
- For temperatures up to -60 °C
- PTFE front cap
- Resistant to cleaning agents
- Resistance to cooling lubricants, cutting and grinding oils
- Suitable for applications in the food industry
- DC 3-wire, 10…30 VDC
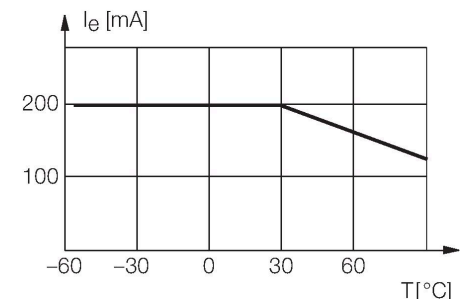- NO contact, PNP output
- Cable connection

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

Type	BI5-EM18WD-AP6X/S929
ID	4614902
Special version	S929 corresponds to: Minimum ambient temperature = -60 °C
General data	
Rated switching distance	5 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times Sn)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	≤ 2 % of full scale
Temperature drift	$\leq \pm 10$ %
	≤ 20 %, ≤ -25 °C
Hysteresis	3…15 %
Electrical data	
Operating voltage	10…30 VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 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 breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP

Technical data

Switching frequency	1 kHz
Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	67 mm
Housing material	Stainless steel, 1.4571 (AISI 316Ti)
Active area material	Plastic, PTFE
End cap	Plastic, PTFE
Admissible pressure on front cap	≤ 15 bar
Max. tightening torque of housing nut	25 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, FEP, FEP, 2 m
Core cross-section	3 x 0.34 mm^2
Environmental conditions	
Ambient temperature	-60…+60 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68 IP69K
Switching state	LED, Red

Mounting instructions
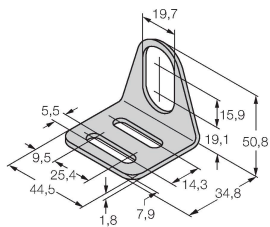
Mounting instructions/Description	

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

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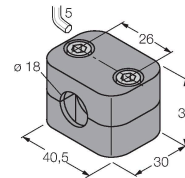
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-18   6901320

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

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.