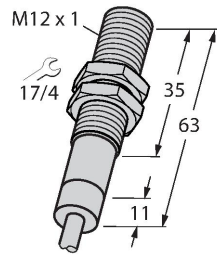


BI2-EM12WD-AP6/S929

Inductive Sensor – For Harsh Environments and Temperatures up to -60 °C



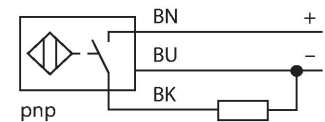
Features

- Threaded barrel, M12 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

Technical data

Type	BI2-EM12WD-AP6/S929
ID	4614515
Special version	S929 Corresponds to: Minimum ambient temperature = -60 °C
General data	
Rated switching distance	2 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	$\leq \pm 10 \%$ $\leq 20 \%, \leq -25 \text{ °C}$
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	3-wire, NO contact, PNP
Switching frequency	1 kHz

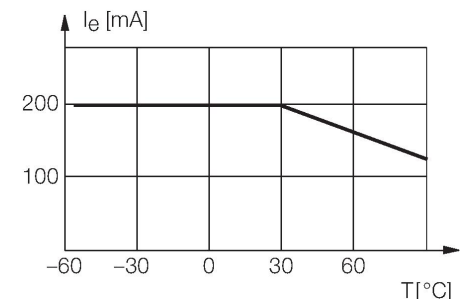
Wiring diagram



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, M12 x 1
Dimensions	63 mm
Housing material	Stainless steel, 1.4571 (AISI 316Ti)
Active area material	Plastic, PTFE
End cap	Plastic, PTFE
Admissible pressure on front cap	≤ 20 bar
Max. tightening torque of housing nut	10 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

Mounting instructions

Mounting instructions/Description

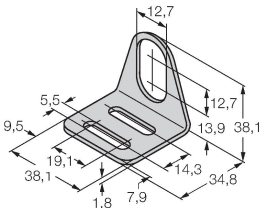
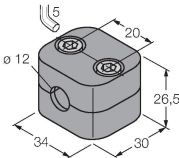
A 3D perspective view of a square mounting bracket with a central circular hole. A dimension line labeled 'T' indicates the thickness of the bracket.

A 3D perspective view showing two square mounting brackets. A dimension line labeled 'G' indicates the distance between the centers of the two brackets.

A 3D perspective view of a mounting bracket with two circular holes. A dimension line labeled 'D' indicates the distance between the centers of the two holes. A dimension line labeled 'S' indicates the distance from the center of the left hole to the left edge of the bracket. A dimension line labeled 'W' indicates the width of the bracket.

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 12 mm

Accessories

MW12	6945003	BSS-12	6901321
	Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)		Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene