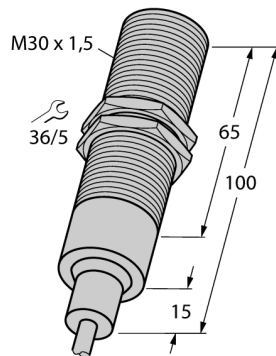


Inductive Sensor

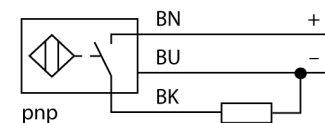
With Increased Temperature Range

BI10-EM30-AP6/S907 7M



- Threaded barrel, M30 x 1.5
- Stainless steel, 1.4571
- Temperatures up to +160 °C
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

Wiring Diagram



Type	BI10-EM30-AP6/S907 7M
ID	4614527

Special version	S907 Corresponds to: Maximum ambient temperature = 160 °C
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General data	
Rated switching distance S_n	10 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	$\leq \pm 20\%$
Hysteresis	3...15 %

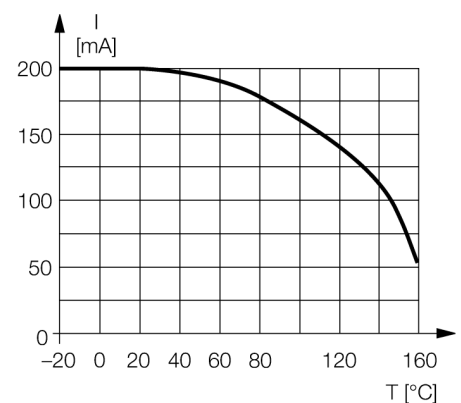
Electrical data	
Operating voltage U_o	10...30 VDC
Ripple U_{rs}	$\leq 10\%$ U_{Bmax}
DC rated operating current I_o	≤ 200 mA
Rated operational current	See derating curve
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_o	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.2 kHz

Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit.

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

Derating Curve



Mechanical data	
Design	Threaded barrel, M30 x 1.5
Dimensions	100 mm
Housing material	Stainless steel, 1.4571 (AISI 316Ti)
Active area material	Plastic, PEEK
End cap	Plastic, PTFE
Admissible pressure on front cap	≤ 10 bar
Max. tightening torque of housing nut	40 Nm
Electrical connection	Cable
Cable quality	Ø 3.7mm, PTFE, FEP, 7 m
Core cross-section	3 x 0.34 mm ²
Environmental conditions	
Ambient temperature	-25...+160 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68 IP69K

Accessories

Type code	Ident-No.		Dimension drawing
MW-30	6945005	Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)	