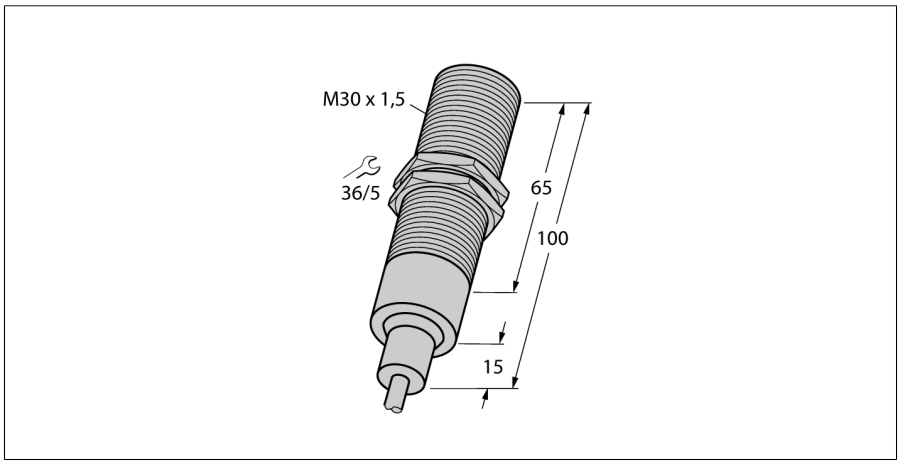
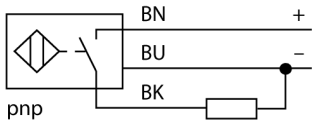
Inductive sensor
with extended temperature range
BI10-EM30-AP6/S907 10M

Industrial Automation



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

Wiring diagram



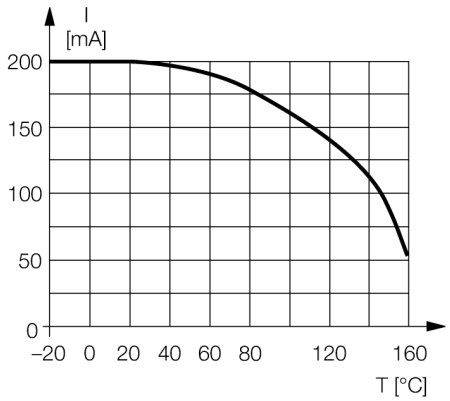
Type code	BI10-EM30-AP6/S907 10M
Ident no.	4614517
Rated operating distance Sn	10 mm
Mounting condition	flush
Assured sensing range	≤ (0,81 x Sn) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	≤ 2 % of full scale
Temperaturdrift	20 %
Hysteresis	3…15 %
Ambient temperature	-25…+160 °C
Operating voltage	10…30VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 200 mA
Rated operational current	see derating curve
No-load current I_0	≤ 15 mA
Residual current	≤ 0.1 mA
Rated insulation 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
Switching frequency	0.2 kHz
Design	threaded barrel, M30 x 1.5
Dimensions	100 mm
Housing material	stainless steel, V4A (1.4571)
Material active face	Plastic, PEEK
End cap	Plastic, PTFE
Admissible pressure on front cap	≤ 10 bar
Max. tightening torque housing nut	75 Nm
Connection	cable
Cable quality	3.7 mm, PTFE, FEP, 10 m
Cable cross section	3 x 0.34 mm²
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68 / IP69K

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

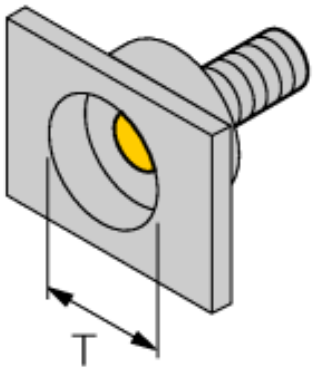


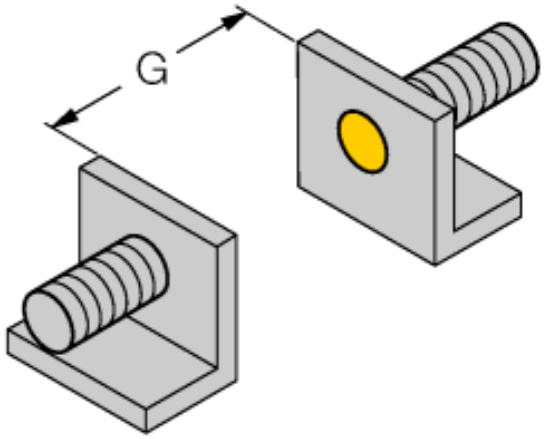
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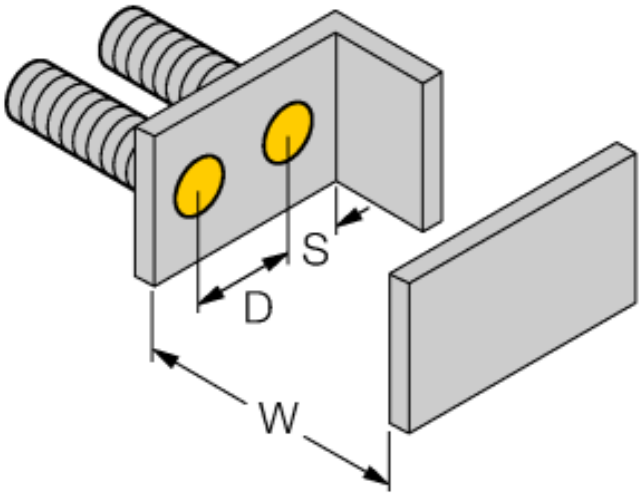
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Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn

Diameter of the active area B	Ø 30 mm

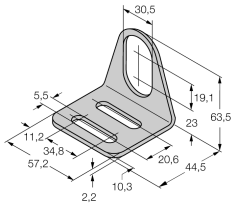






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Accessories

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

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