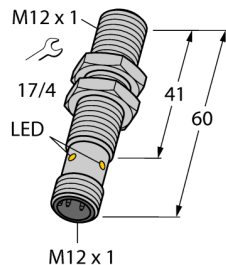


Inductive sensor
Stainless steel front
Bi6-EG12FE-AP6X-H1141

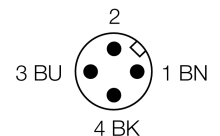
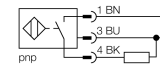
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- Threaded barrel, M12x1
- Stainless steel, 1.4305
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 connector

Wiring diagram



Functional principle

The inductive all-metal switches operate on the basis of the electromagnetic pulse method. Unlike standard inductive sensors, the magnetic field is not generated through oscillation but through short, periodic current pulses flowing through the coil. The magnetic field induces voltage in the object to be detected, which, for its part creates a current flow in this object. After switching off the current pulse, the current in the object also drops, now inducing voltage back in the emitter coil. This voltage is the wanted signal and remains unaffected by energy dissipation in the magnetic field. Only non-ferromagnetic or poorly conductive metals provide a low signal.

Type	Bi6-EG12FE-AP6X-H1141
Ident-No.	4614706
Rated operating distance Sn	6 mm
Mounting condition	flush
Assured sensing range	≤ (0,81 x Sn) mm
Correction factors	St 37=1; Cu=0,85; Al=1; Ms=1.3; stainless steel 1mm=0.5; stainless steel 2mm=0.9
Repeatability	≤ 5 %
Static pressure	≤ 80 bar
Temperaturdrift	10 %
Hysteresis	15 %
Ambient temperature	-25...+70 °C
Operating voltage	10...30VDC
Residual ripple	≤ 20 % U _{ss}
DC rated operational current	≤ 200 mA
No-load current I ₀	≤ 10 mA
Residual current	≤ 0.1 mA
Rated insulation voltage	≤ 0.5 kV
Short-circuit protection	yes/ cyclic
Voltage drop at I ₀	≤ 2 V
Wire breakage / Reverse polarity protection	yes/ complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.6 kHz
Design	threaded barrel, M12 x 1
Dimensions	60 mm
Housing material	Metal, V2A (1.4305)
Admissible pressure on front cap	≤ 80 bar
Max. tightening torque housing nut	20 Nm
Connection	male, M12 x 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68 / IP69K
Switching state	LED yellow LED flashing: 0,8 s, < s ≤ s,

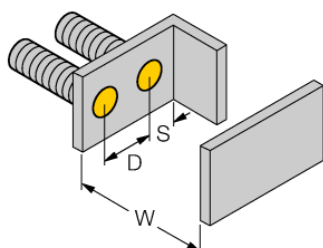
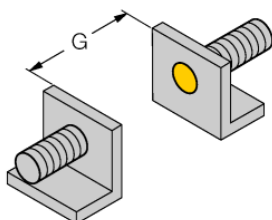
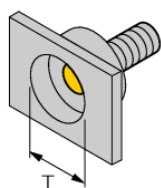
Inductive sensor
Stainless steel front
Bi6-EG12FE-AP6X-H1141

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Mounting instructions	minimum distances
Distance D	40 mm
Distance W	18 mm
Distance T	36 mm
Distance S	12 mm
Distance G	36 mm

Diameter of the active area B	Ø 12 mm
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The following reduction factors apply when flush-mounted in:

Steel: 0.7

Aluminium: 1.15

Brass: 1.05

Stainless steel: 0.8

Inductive sensor
 Stainless steel front
 Bi6-EG12FE-AP6X-H1141



Accessories

Type code	Ident-No.		Dimension drawing
MW-12	6945003	Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)	
BSS-12	6901321	Mounting bracket for smooth and threaded barrel devices; material: Polypropylene	