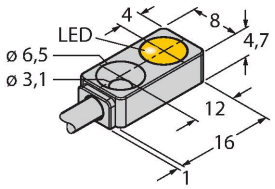
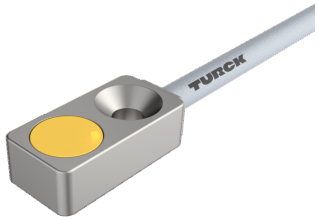
BI2-Q4.7-RN6X
Inductive Sensor





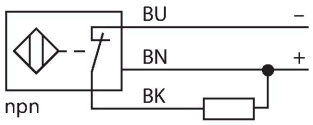
Technical data

Type	BI2-Q4.7-RN6X
ID	1614003
General data	
Rated switching distance	2 mm
Mounting conditions	Flush
Secured operating distance	≤ (0.81 × Sn) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	≤ 2 % of full scale
Temperature drift	≤ ±10 %
Hysteresis	3…15 %
Electrical data	
Operating voltage U_B	10…30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_e	≤ 100 mA
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, NC contact, NPN
Switching frequency	1 kHz

Features

- Rectangular, height 4.7 mm
- Active face on top
- Metal housing, GD-ZnAl
- DC 3-wire, 10…30 VDC
- NC contact, NPN output
- Cable connection

Wiring diagram



Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

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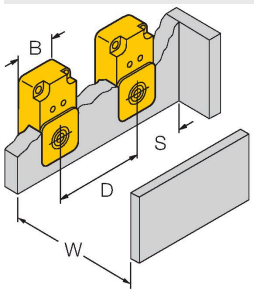
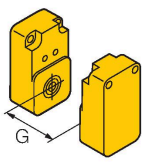
Technical data

Mechanical data	
Design	Rectangular, Q4,7
Dimensions	16 x 8 x 4.7 mm
Housing material	Metal, GD-ZnAl
Active area material	Plastic, PA12
Tightening torque fixing screw	0.5 Nm
Electrical connection	Cable
Cable quality	Ø 3 mm, Gray, LifY-11Y, PUR, 2 m
Core cross-section	3 x 0.14 mm^2
Environmental conditions	
Ambient temperature	0…+85 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED, Yellow

Mounting instructions

Mounting instructions/Description

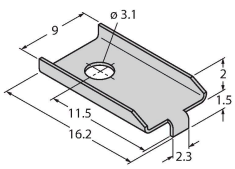




Distance D	2 x B
Distance W	3 x Sn
Distance S	1.5 x B
Distance G	6 x Sn
Width active area B	8 mm

Accessories

MW-Q4.7/Q5.5	6945013
	Mounting bracket for rectangular Q4.7 or Q5.5; material VA 1.4401



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