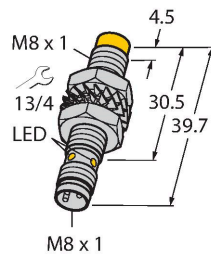


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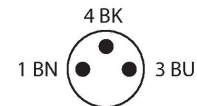
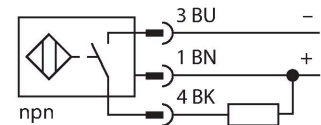
Inductive Sensor



Features

- Threaded barrel, M8 x 1
- Nickel-plated brass
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- M8 x 1 male connector

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.

Technical data

Type	NI3-M08-AN6X-V1131
ID	4602933
General data	
Rated switching distance	3 mm
Mounting conditions	Non-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	$\leq \pm 10 \%$
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{rs}	$\leq 10 \%$ U_{Bmax}
DC rated operating current I_o	≤ 150 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_o	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, NPN
Switching frequency	2.8 kHz

Technical data

Mechanical data	
Design	Threaded barrel, M8 x 1
Dimensions	39.7 mm
Housing material	Metal, CuZn, Nickel Plated
Active area material	Plastic, PP-GF20
Max. tightening torque of housing nut	7 Nm
Electrical connection	Connector, M8 × 1
Environmental conditions	
Ambient temperature	-25...+70 °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

The image contains three technical drawings illustrating the mounting of a sensor on a plate. The top drawing is a side view showing a sensor with a yellow cylindrical body and a threaded mounting arm, with dimension T indicating the distance from the plate to the sensor body. The middle drawing is a top view showing two sensors mounted on a plate, with dimension G indicating the distance between the sensor bodies. The bottom drawing is a perspective view showing a sensor mounted on a plate, with dimensions N, S, D, and W indicating various mounting parameters: N is the distance from the plate to the sensor body, S is the distance from the plate to the sensor body, D is the distance from the plate to the sensor body, and W is the distance from the plate to the sensor body.

Distance D	3 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Distance N	2 x Sn
Diameter active area B	Ø 8 mm

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