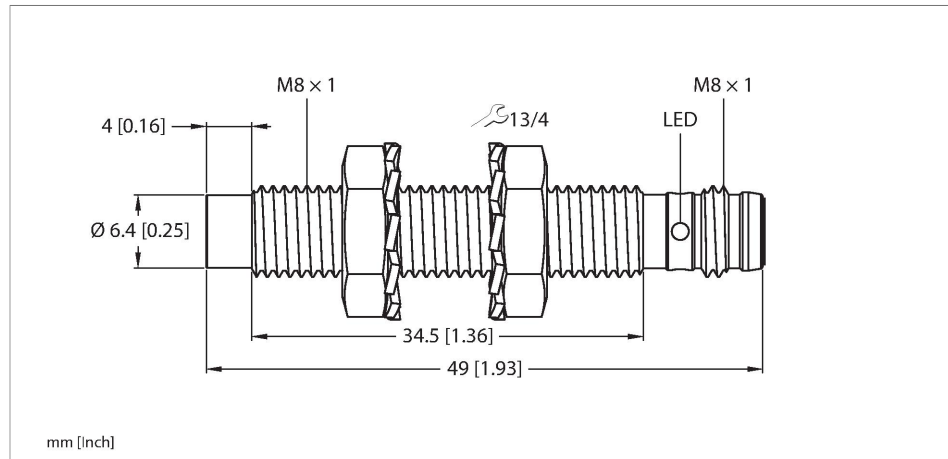


NI3-EG08-RP6X-V1131

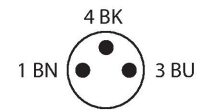
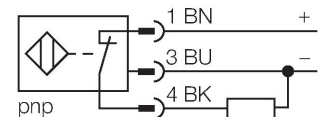
Inductive Sensor



Features

- M8 × 1 threaded barrel
- Stainless steel, 1.4305 (AISI 303)
- DC 3-wire, 10...30 VDC
- NC contact, PNP output
- M8 x 1 male connector

Wiring diagram



Technical data

Type	NI3-EG08-RP6X-V1131
ID	4602751
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	20 %
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, NC contact, PNP
Switching frequency	3 kHz

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

Mechanical data	
Design	Threaded barrel, M8 x 1
Dimensions	49 mm
Housing material	Stainless steel, 1.4305 (AISI 303)
Active area material	Plastic, PBT
Max. tightening torque of housing nut	5 Nm
Electrical connection	Connector, M8 x 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 diagrams illustrating the mounting of a sensor. The top diagram is a side view showing a sensor with a yellow cylindrical active area, mounted on a grey plate with a circular hole. Dimension T is indicated as the distance from the center of the active area to the edge of the plate. The middle diagram is a top view showing two sensors mounted on a grey plate. Dimension G is indicated as the distance between the centers of the two sensors. The bottom diagram is a perspective view showing a sensor mounted on a grey plate. Dimensions N, S, D, and W are indicated: N is the distance from the top edge of the plate to the center of the sensor; S is the distance from the bottom edge of the plate to the center of the sensor; D is the distance from the left edge of the plate to the center of the sensor; and W is the distance from the right edge of the plate to the center of the sensor.

Distance D	$3 \times B$
Distance W	$3 \times S_n$
Distance T	$3 \times B$
Distance S	$1.5 \times B$
Distance G	$6 \times S_n$
Distance N	$2 \times S_n$
Diameter active area B	$\varnothing 8 \text{ mm}$

