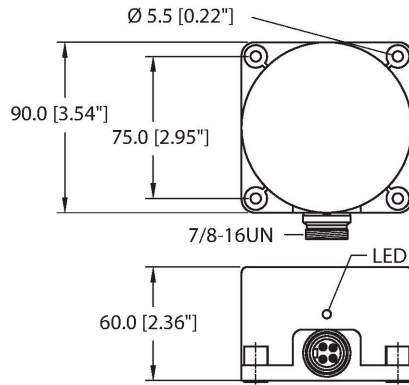


NI60-K90-VN4X-B2141

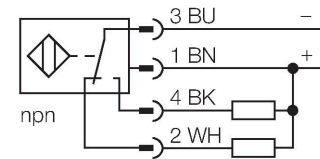
Inductive Sensor



Features

- Rectangular, height 60 mm
- Plastic, PBT-GF30-V0
- DC 4-wire, 10...65 VDC
- Changeover contact, NPN output
- 7/8" male connector

Wiring diagram



Technical data

Type	NI60-K90-VN4X-B2141
ID	15203
General data	
Rated switching distance	60 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	≤ 2 % of full scale
Temperature drift	$\leq \pm 10$ %
Hysteresis	3...15 %
Electrical data	
Operating voltage U_b	10...65 VDC
Ripple U_{rs}	≤ 10 % U_{bmax}
DC rated operating current I_o	≤ 200 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	4-wire, Complementary contact, NPN
Switching frequency	0.06 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	Rectangular, K90
Dimensions	103.7 x 75 x 60 mm
Housing material	Plastic, PBT-GF30-V0
Active area material	PBT-GF30-V0
Electrical connection	Connector, 7/8"
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 five technical diagrams illustrating the mounting of a yellow K90 sensor on a grey surface. 1. Top-left: A side view of the sensor mounted on a surface, with dimension 'A' indicating the distance from the sensor's front face to the mounting surface. 2. Top-middle: A top-down view of the sensor mounted on a surface, with dimensions 'C' and 'G' indicating the spacing between the sensor and the mounting surface. 3. Top-right: A side view of two sensors mounted on a surface, with dimensions 'B' (sensor width), 'S' (sensor height), 'D' (distance between sensors), and 'W' (distance from sensor to mounting surface). 4. Bottom-left: A perspective view of a single sensor, with dimensions 'G' (width) and 'N' (height) indicated. 5. Bottom-right: A perspective view of two sensors, with dimensions 'G' (width) and 'N' (height) indicated.

Distance D	3 x B
Distance W	3 x Sn
Distance S	1.5 x B
Distance G	6 x Sn
Distance N	2 x Sn
Distance A	1 x Sn
Distance C	2 x Sn
Width active area B	90 mm

NI60-K90-VN4X-B2141 | 02/21/2025 13-34 | technical changes reserved