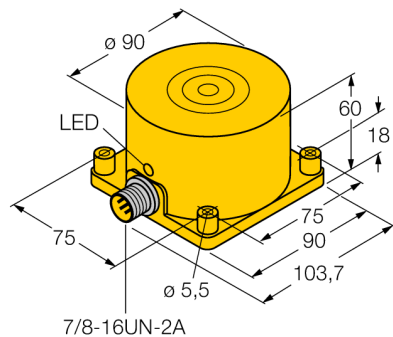


# Inductive sensor NI60-K90-VN4X-B2141

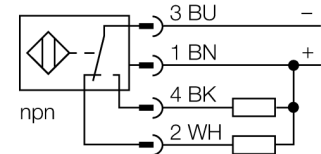
**TURCK**  
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Industrial  
Automation



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

|                                           |                                                     |
|-------------------------------------------|-----------------------------------------------------|
| <b>Type designation</b>                   | NI60-K90-VN4X-B2141                                 |
| Ident-No.                                 | 15203                                               |
| <b>Rated switching distance Sn</b>        | 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                           | $\leq 2\%$ of full scale                            |
| Temperature drift                         | $\leq \pm 10\%$                                     |
| Hysteresis                                | 3...15 %                                            |
| Ambient temperature                       | -25...+70 °C                                        |
| <b>Operating voltage</b>                  | 10...65 VDC                                         |
| Residual ripple                           | $\leq 10\% U_{ss}$                                  |
| DC rated operational current              | $\leq 200$ mA                                       |
| No-load current $I_0$                     | $\leq 15$ mA                                        |
| Residual current                          | $\leq 0.1$ mA                                       |
| Isolation test voltage                    | $\leq 0.5$ kV                                       |
| Short-circuit protection                  | yes/ Cyclic                                         |
| Voltage drop at $I_0$                     | $\leq 1.8$ V                                        |
| Wire breakage/Reverse polarity protection | yes/ Complete                                       |
| Output function                           | 4-wire, Complementary contact, NPN                  |
| Switching frequency                       | 0.06 kHz                                            |
| <b>Design</b>                             | Rectangular, K90                                    |
| Dimensions                                | 103.7 x 75 x 60 mm                                  |
| Housing material                          | Plastic, PBT-GF30-V0                                |
| Electrical connection                     | Connector, 7/8"                                     |
| 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          |
| <b>Switching state</b>                    | LED, Yellow                                         |

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|                            |         |
|----------------------------|---------|
| <b>Distance D</b>          | 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  |
| <b>Width active area B</b> | 90 mm   |

