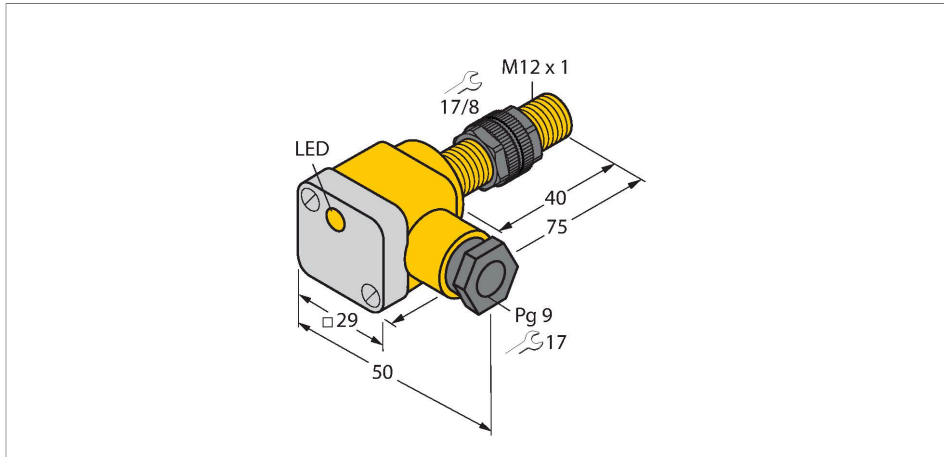


# NI5-P12SK-AP6X2

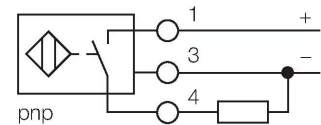
## Inductive sensor



### Features

- Threaded barrel, M12 x 1
- Plastic, PA12-GF30
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Terminal chamber

### Wiring diagram



### Technical data

|   |   |
|---|---|
| <b>Type</b>                               | NI5-P12SK-AP6X2                                     |
| Ident. no.                                | 4654100   |
| Rated switching distance                  | 5 mm  |
| Mounting conditions                       | Non-flush   |
| Secured operating distance                | ≤ (0,81 x 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 %  |
| Ambient temperature                       | -25...+70 °C  |
| Operating voltage                         | 10...30 VDC   |
| Residual ripple                           | ≤ 10 % U <sub>ss</sub>                              |
| DC rated operational current              | ≤ 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                           | ≤ 1.8 V   |
| Wire breakage/Reverse polarity protection | yes / Complete                                      |
| Output function                           | 3-wire, NO contact, PNP                             |
| Switching frequency                       | 1.5 kHz   |
| <b>Design</b>                             | Threaded barrel, M12 x 1                            |
| Dimensions                                | 75 mm   |
| Housing material                          | Plastic, PA12-GF30                                  |

### Functional principle

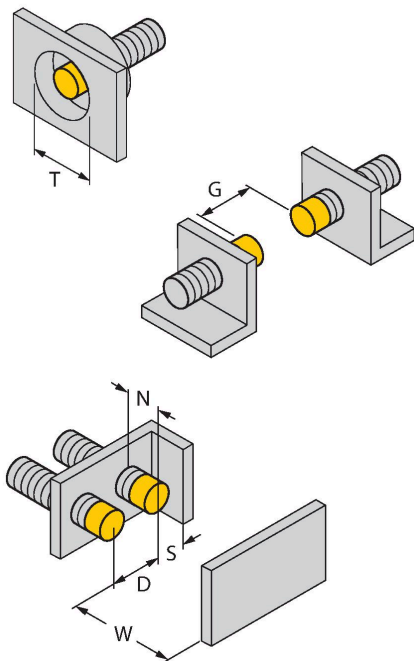
Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

## Technical data

|                                    |  |
|------------------------------------|--|
| Terminal chamber cover material    | plastic, Ultem                             |
| Terminal chamber housing material  | plastic, plastic, PA12-GF20                |
| Active area material               | Plastic, PA12-GF30                         |
| Max. tightening torque housing nut | 1 Nm                                       |
| Electrical connection              | Terminal chamber                           |
| Clamping ability                   | $\leq 2.5 \text{ mm}^2$                    |
| Cable external diameter            | 4.5...8 mm                                 |
| 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>Power-on indication</b>         | LED, Green                                 |
| Switching state                    | LED, Yellow                                |
| Included in delivery               | cable gland; 2x rubber seals               |

## Mounting instructions

### Mounting instructions/Description

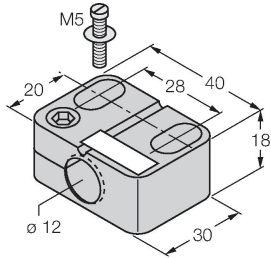


|                           |         |
|---------------------------|---------|
| Distance D                | 3 x B   |
| Distance T                | 3 x B   |
| Distance N                | 2 x Sn  |
| Diameter active area<br>B | Ø 12 mm |

## Accessories

**BST-12B**

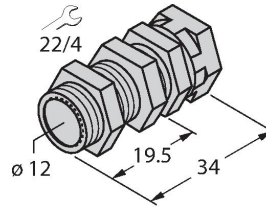
**6947212**



Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

**QM-12**

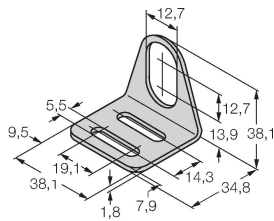
**6945101**



Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 x 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

**MW12**

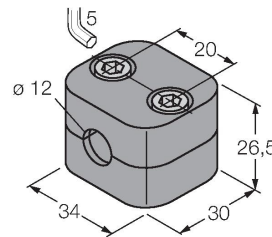
**6945003**



Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

**BSS-12**

**6901321**



Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene