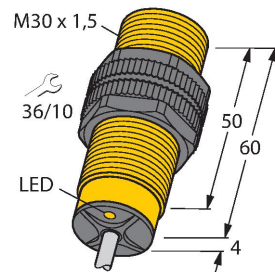


# NI15-S30-VP4X/S97

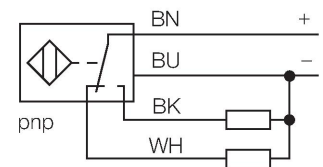
## Inductive Sensor – With Extended Temperature Range



### Features

- Threaded barrel, M30 x 1.5
- Plastic, PA12-GF30
- Temperatures up to -40 °C
- DC 4-wire, 10...65 VDC
- Changeover contact, PNP output
- Cable connection

### Wiring diagram



### Technical data

|                                        |                                                     |
|----------------------------------------|-----------------------------------------------------|
| Type                                   | NI15-S30-VP4X/S97                                   |
| ID                                     | 1514110                                             |
| General data                           |                                                     |
| Rated switching distance               | 15 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                      | $\leq \pm 10$ %<br>$\leq \pm 20$ %, $\leq -25$ °C   |
| Hysteresis                             | 3...15 %                                            |
| Electrical data                        |                                                     |
| Operating voltage $U_B$                | 10...65 VDC                                         |
| Ripple $U_{ss}$                        | $\leq 10$ % $U_{Bmax}$                              |
| DC rated operating current $I_o$       | $\leq 200$ mA                                       |
| No-load current                        | $\leq 15$ mA                                        |
| Residual current                       | $\leq 0.1$ mA                                       |
| Isolation test voltage                 | 0.5 kV                                              |
| Short-circuit protection               | yes/Cyclic                                          |
| Voltage drop at $I_o$                  | $\leq 1.8$ V                                        |
| Wire break/reverse polarity protection | yes/Complete                                        |
| Output function                        | 4-wire, Complementary contact, PNP                  |
| Switching frequency                    | 0.5 kHz                                             |
| Mechanical data                        |                                                     |
| Design                                 | Threaded barrel, M30 x 1.5                          |
| Dimensions                             | 64 mm                                               |

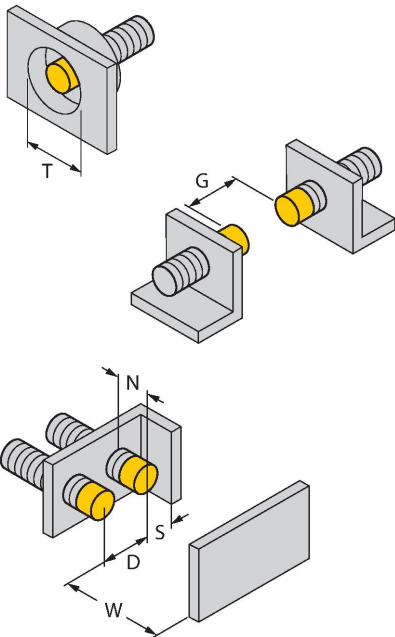
### Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit. Special versions are available for ambient temperatures between -60°C and +250°C.

Technical data

|                                       |                                            |
|---------------------------------------|--------------------------------------------|
| Housing material                      | Plastic, PA12-GF30                         |
| Active area material                  | Plastic, PA12-GF30                         |
| End cap                               | Plastic, EPTR                              |
| Max. tightening torque of housing nut | 5 Nm                                       |
| Electrical connection                 | Cable                                      |
| Cable quality                         | Ø 5.2 mm, SiHSi, Silicone, 2 m             |
| Core cross-section                    | 4 x 0.25 mm <sup>2</sup>                   |
| Environmental conditions              |                                            |
| Ambient temperature                   | -40...+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                                                   |                        |         |
|-------------------------------------------------------------------------------------|------------------------|---------|
|  | 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 30 mm |
|                                                                                     |                        |         |

