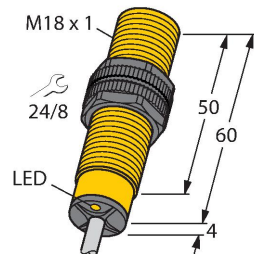


# NI8-S18-AZ3X

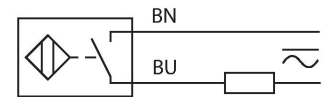
## Inductive Sensor



### Features

- Threaded barrel, M18 x 1
- Plastic, PA12-GF30
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NO contact
- Cable connection

### Wiring diagram

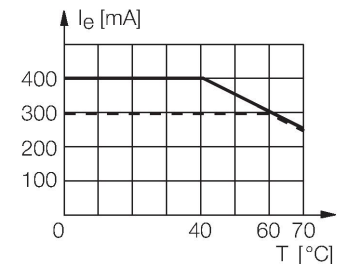


### Technical data

|                                  |                                                     |
|----------------------------------|-----------------------------------------------------|
| Type                             | NI8-S18-AZ3X                                        |
| ID                               | 43505                                               |
| General data                     |                                                     |
| Rated switching distance         | 8 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 %                                            |
| Electrical data                  |                                                     |
| Operating voltage $U_B$          | 20...250 VAC                                        |
| Operating voltage $U_B$          | 10...300 VDC                                        |
| AC rated operational current     | $\leq 400$ mA                                       |
| DC rated operating current $I_o$ | $\leq 300$ mA                                       |
| Frequency                        | $\geq 50... \leq 60$ Hz                             |
| Residual current                 | $\leq 1.7$ mA                                       |
| Isolation test voltage           | 1.5 kV                                              |
| Surge current                    | $\leq 8$ A ( $\leq 10$ ms max. 5 Hz)                |
| Voltage drop at $I_o$            | $\leq 6$ V                                          |
| Output function                  | 2-wire, NO contact, 2-wire                          |
| Smallest operating current       | $\geq 3$ mA                                         |
| Switching frequency              | 0.02 kHz                                            |
| Mechanical data                  |                                                     |
| Design                           | Threaded barrel, M18 x 1                            |
| Dimensions                       | 64 mm                                               |

### Functional principle

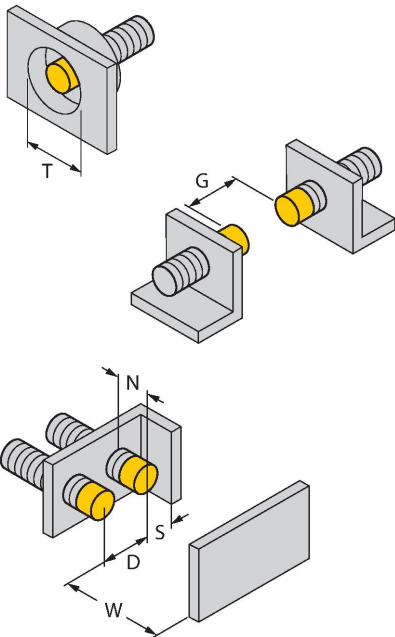
Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.



Technical data

|                                       |                                            |
|---------------------------------------|--------------------------------------------|
| Housing material                      | Plastic, PA12-GF30                         |
| Active area material                  | Plastic, PA12-GF30                         |
| End cap                               | Plastic, EPTR                              |
| Max. tightening torque of housing nut | 2 Nm                                       |
| Electrical connection                 | Cable                                      |
| Cable quality                         | Ø 5.2 mm, LifYY, PVC, 2 m                  |
| Core cross-section                    | 2 x 0.34 mm <sup>2</sup>                   |
| 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, Red                                   |

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 18 mm |
|                                                                                     |                        |         |

Accessories

|                                                                                   |         |                                                                                                                                                                                              |                                                                                    |         |                                                                                |
|-----------------------------------------------------------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------|--------------------------------------------------------------------------------|
| QM-18                                                                             | 6945102 | Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets. | BST-18B                                                                            | 6947214 | Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6      |
|  |         |                                                                                                                                                                                              |  |         |                                                                                |
| MW18                                                                              | 6945004 | Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)                                                                                                 | BSS-18                                                                             | 6901320 | Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene |
|  |         |                                                                                                                                                                                              |  |         |                                                                                |