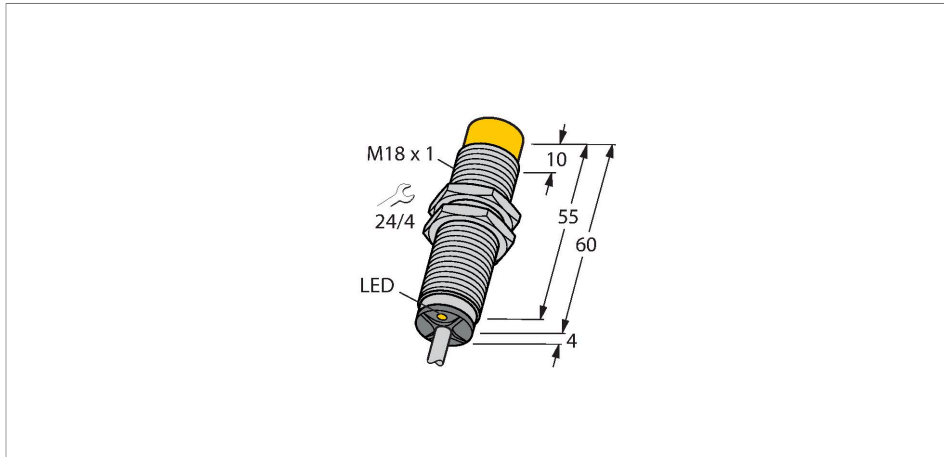


NI8-M18E-AP6X/S97

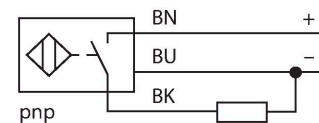
Inductive Sensor – With Extended Temperature Range



Features

- Threaded barrel, M18 x 1
- Chrome-plated brass
- Temperatures up to -40 °C
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

Wiring diagram



Technical data

| | |
|---|---|
| Type | NI8-M18E-AP6X/S97 |
| ID | 4614786 |
| Special version | S97 corresponds to: Minimum ambient temperature = -40 °C |
| General data | |
| Rated switching distance | 8 mm |
| Mounting conditions | Non-flush |
| Secured operating distance | ≤ (0.81 × 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 | ≤ ±10 % ≤ ± 20 %, ≤ -25 °C |
| Hysteresis | 3...15 % |
| Electrical data | |
| Operating voltage | 10...30 VDC |
| Residual ripple | ≤ 10 % U _{ss} |
| 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 I _o | ≤ 1.8 V |
| Wire breakage/Reverse polarity protection | yes / Complete |
| Output function | 3-wire, NO contact, PNP |

Functional principle

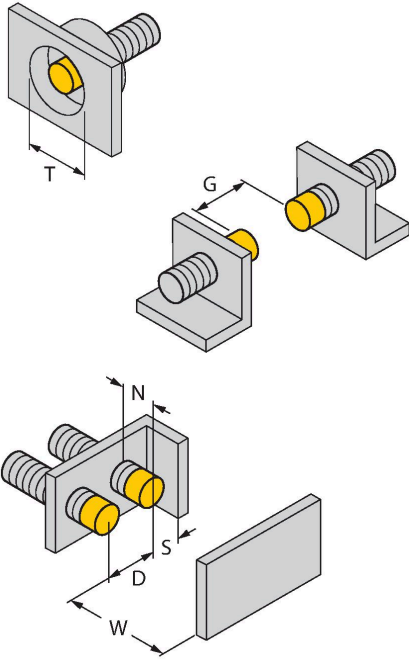
Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit. Special versions are available for ambient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

Technical data

| | |
|---------------------------------------|--|
| Switching frequency | 0.5 kHz |
| Mechanical data | |
| Design | Threaded barrel, M18 × 1 |
| Dimensions | 64 mm |
| Housing material | Metal, CuZn, Chrome-plated |
| Active area material | Plastic, PA12-GF30 |
| End cap | Plastic, EPTR |
| Max. tightening torque of housing nut | 25 Nm |
| Electrical connection | Cable |
| Cable quality | Ø 5.2 mm, LifYY, PVC, 2 m |
| Core cross-section | 3 x 0.34 mm ² |
| 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

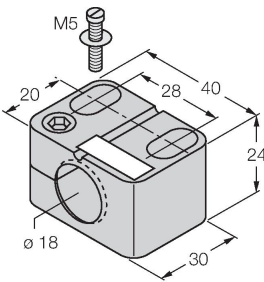


| | |
|------------------------|---------|
| Distance D | 3 x B |
| Distance W | 3 x Sn |
| Distance T | 3 x B |
| Distance S | 1.5 x B |
| Distance G | 6 x Sn |
| Distance N | 2 x Sn |
| Diameter active area B | Ø 18 mm |

Accessories

BST-18B

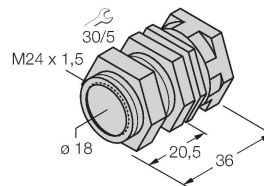
6947214



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

QM-18

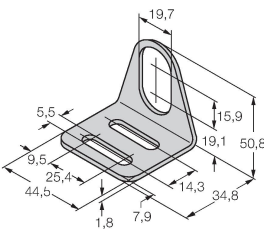
6945102



Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 x 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

MW-18

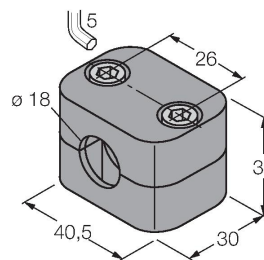
6945004



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