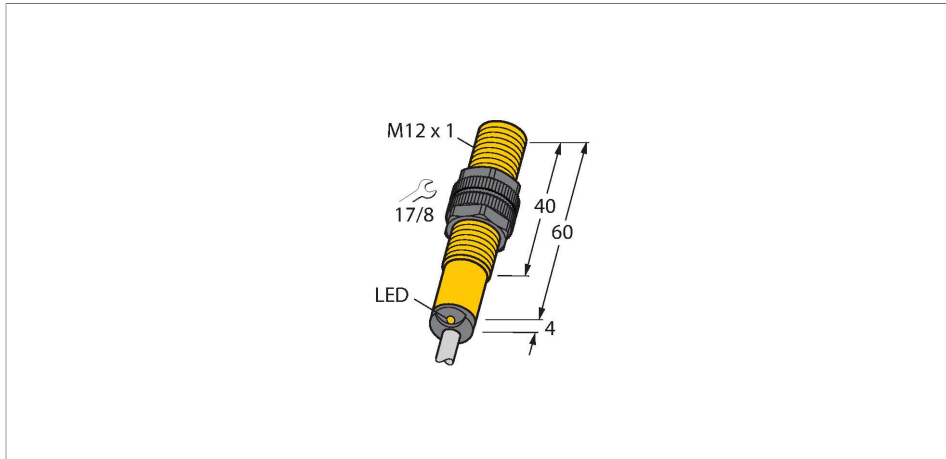


NI4-S12-AP7X/S100 7M

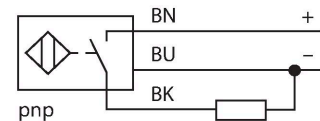
Inductive Sensor – With Increased Temperature Range



Features

- Threaded barrel, M12 x 1
- Plastic, PA12-GF30
- Temperatures up to +100 °C
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

Wiring diagram

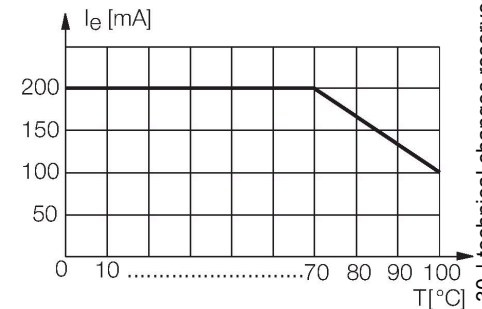


Technical data

| | |
|---|--|
| Type | NI4-S12-AP7X/S100 7M |
| ID | 1768107 |
| Special version | S100 corresponds to: Maximum ambient temperature = 100 °C |
| General data | |
| Rated switching distance | 4 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 ≤ ± 20 %, ≥ +70 °C |
| Hysteresis | 3...15 % |
| Electrical data | |
| Operating voltage | 10...30 VDC |
| Residual ripple | ≤ 10 % U _{ss} |
| DC rated operational current | ≤ 200 mA |
| Rated operational current | See derating curve |
| No-load current | 10 mA |
| Residual current | ≤ 0.1 mA |
| Isolation test voltage | ≤ 0.5 kV |
| Short-circuit protection | no |
| Voltage drop at I _o | ≤ 0.7 V |
| Wire breakage/Reverse polarity protection | yes / yes (voltage supply) |
| 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.



NI4-S12-AP7X/S100 7M | 11/07/2023 14-30 | technical changes reserved

Technical data

| | |
|---------------------------------------|--|
| Switching frequency | 2 kHz |
| Mechanical data | |
| Design | Threaded barrel, M12 x 1 |
| Dimensions | 64 mm |
| Housing material | Plastic, PA12-GF30 |
| Active area material | Plastic, PA12-GF30 |
| End cap | Plastic, EPTR |
| Max. tightening torque of housing nut | 1 Nm |
| Electrical connection | Cable |
| Cable quality | Ø 5.2 mm, LifYY-T105, PVC, 7 m |
| Core cross-section | 3 x 0.5 mm ² |
| Environmental conditions | |
| Ambient temperature | -25...+100 °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



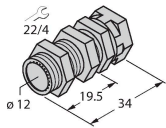
| | |
|------------------------|---------|
| Distance D | 3 x B |
| Distance W | 3 x Sn |
| Distance T | 3 x B |
| Distance S | 1.5 x B |
| Distance G | 6 x Sn |
| Distance N | 2 x Sn |
| Diameter active area B | Ø 12 mm |

Accessories

QM-12

6945101

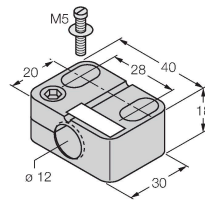
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



BST-12B

6947212

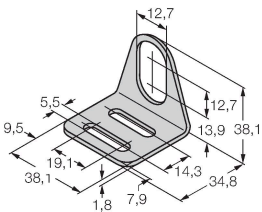
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



MW-12

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

