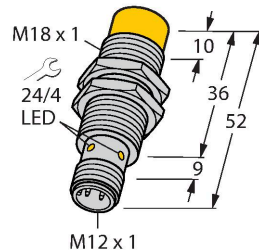


NI12U-EM18-AP6X-H1141

Inductive Sensor



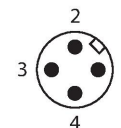
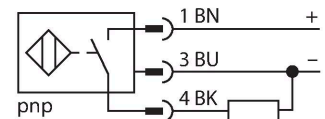
Features

- Threaded barrel, M18 x 1
- Stainless steel, 1.4301
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- Auto-compensation protects against pre-damping
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

Technical data

| | |
|---|--|
| Type | NI12U-EM18-AP6X-H1141 |
| ID | 1645340 |
| General data | |
| Rated switching distance | 12 mm |
| Mounting conditions | Non-flush, partially embeddable |
| Secured operating distance | $\leq (0.81 \times S_n)$ mm |
| Repeat accuracy | $\leq 2 \%$ of full scale |
| Temperature drift | $\leq \pm 10 \%$ |
| | $\leq \pm 20 \%$, $\leq -25 \text{ °C}$ v $\geq +70 \text{ °C}$ |
| Hysteresis | 3...15 % |
| Electrical data | |
| Operating voltage | 10...30 VDC |
| Residual ripple | $\leq 10 \%$ U_{ss} |
| DC rated operational current | ≤ 200 mA |
| No-load current | 25 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 |
| DC field stability | 300 mT |
| AC field stability | 300 mT _{ss} |
| Insulation class | □ |
| Switching frequency | 1 kHz |

Wiring diagram



Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. approx Factor 1 sensors have significant advantages due to their patented ferrite-coreless multi-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

Technical data

| Mechanical data | |
|---------------------------------------|---|
| Design | Threaded barrel, M18 x 1 |
| Dimensions | 52 mm |
| Housing material | Stainless steel, 1.4301 (AISI 304) |
| Active area material | Plastic, PBT |
| Max. tightening torque of housing nut | 25 Nm |
| Electrical connection | Connector, M12 x 1 |
| Environmental conditions | |
| Ambient temperature | -30...+85 °C |
| Vibration resistance | 55 Hz (1 mm) |
| Shock resistance | 30 g (11 ms) |
| Protection class | IP68 |
| MTTF | 874 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state | LED, Yellow |

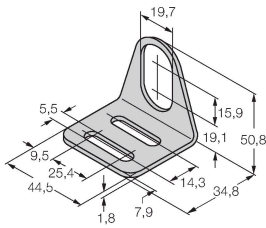
Mounting instructions

| Mounting instructions/Description | | |
|-----------------------------------|------------------------|---------|
| | Distance D | 3 x B |
| | Distance W | 3 x Sn |
| | Distance T | 65 mm |
| | Distance S | 1.5 x B |
| | Distance G | 6 x Sn |
| | Distance N | 2 x Sn |
| | Diameter active area B | Ø 18 mm |

Accessories

MW-18

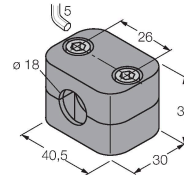
6945004



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

BSS-18

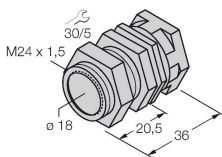
6901320



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

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.

Accessories

| Dimension drawing | Type | ID | |
|-------------------|------------|---------|--|
| | RKH4-2/TFE | 6935482 | Connection cable, M12 female connector, straight, 3-pin, stainless steel coupling nut, cable length: 2 m, jacket material: PVC, gray; temperature range: -25...+80 °C |
| | RKH4-2/TFG | 6934384 | Connection cable, M12 female connector, straight, 3-pin, stainless steel coupling nut, cable length: 2 m, jacket material: TPE, gray; temperature range: -40...+105 °C |