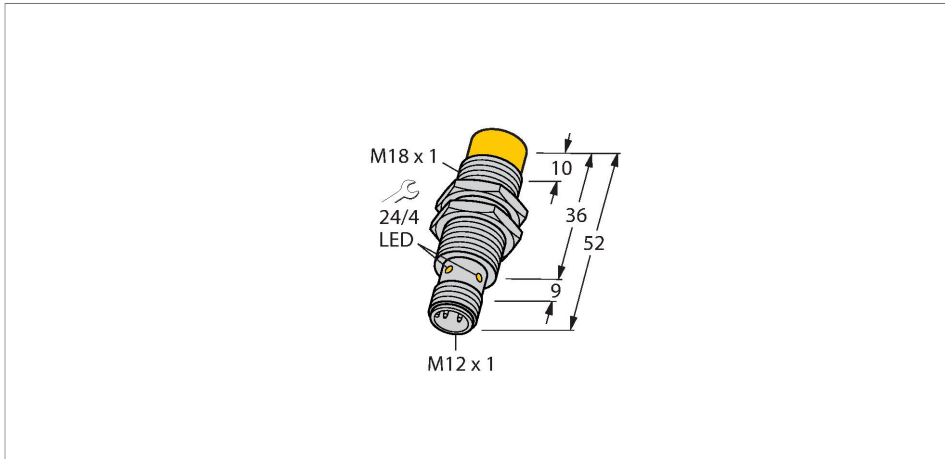


NI12U-M18-AP6X-H1141

Inductive Sensor



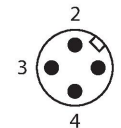
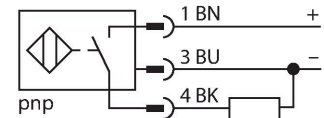
Technical data

| | |
|---|--|
| Type | NI12U-M18-AP6X-H1141 |
| ID | 1645140 |
| General data | |
| Rated switching distance | 12 mm |
| Mounting conditions | Non-flush |
| Secured operating distance | $\leq (0.81 \times S_n)$ mm |
| Repeat accuracy | $\leq 2\%$ of full scale |
| Temperature drift | $\leq \pm 10\%$ $\leq \pm 15\%$, $\leq -25\text{ °C}$ 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 | $\leq 200\text{ mA}$ |
| No-load current | 25 mA |
| Residual current | $\leq 0.1\text{ mA}$ |
| Isolation test voltage | $\leq 0.5\text{ kV}$ |
| Short-circuit protection | yes / Cyclic |
| Voltage drop at I_o | $\leq 1.8\text{ V}$ |
| 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 | □ |

Features

- Threaded barrel, M18 x 1
- Chrome-plated brass
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

Wiring diagram



Functional principle

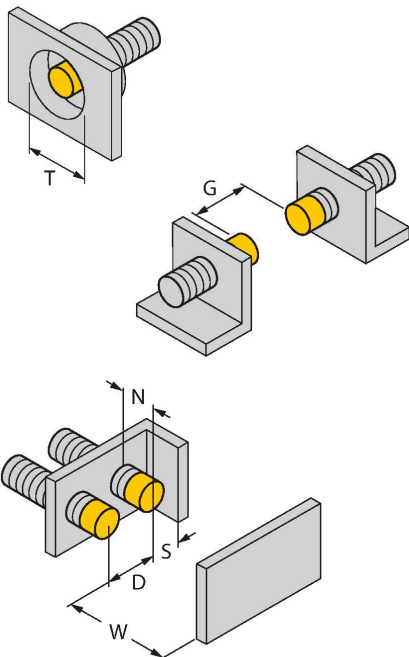
Inductive sensors are designed for wear-free and contactless detection of metal objects. Approx Factor 1 sensors have significant advantages due to their patented ferrite-coreless multi-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

Technical data

| | |
|---------------------------------------|---|
| Switching frequency | 1 kHz |
| Mechanical data | |
| Design | Threaded barrel, M18 × 1 |
| Dimensions | 52 mm |
| Housing material | Metal, CuZn, Chrome-plated |
| Active area material | Plastic, PBT |
| Max. tightening torque of housing nut | 25 Nm |
| Electrical connection | Connector, M12 × 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 | 0.5 x B |
| Distance G | 6 x Sn |
| Distance N | 2 x Sn |
| Diameter active area B | Ø 18 mm |

Accessories

BST-18B

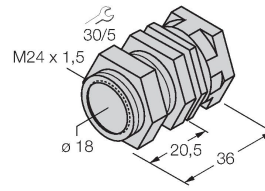
6947214



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 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

MW-18

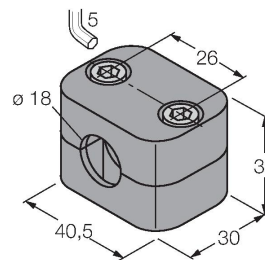
6945004



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

Wiring accessories

Dimension drawing

Type

ID

RKC4T-2/TEL

6625010

Connection cable, female M12, straight, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com

