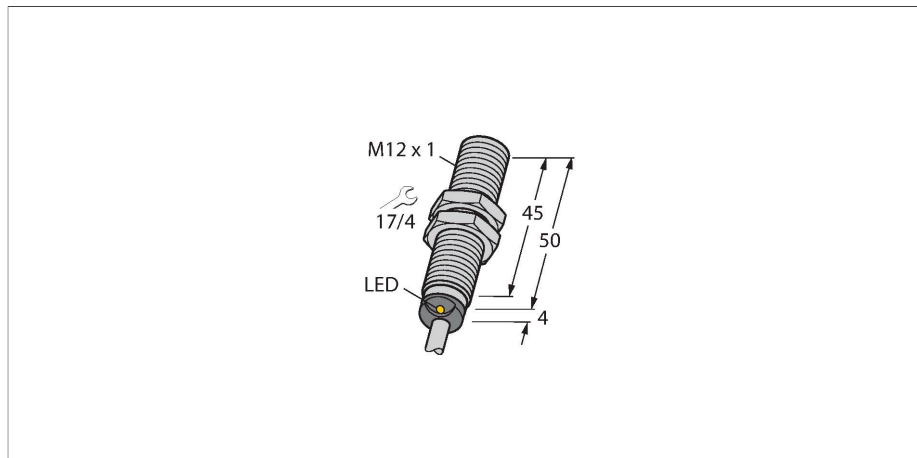


BI6U-M12-VN6X Inductive Sensor



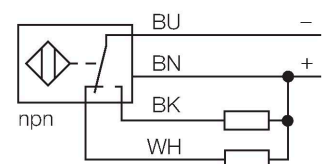
Technical data

| | |
|--|------------------------------------|
| Type | BI6U-M12-VN6X |
| ID | 1644809 |
| General data | |
| Rated switching distance | 6 mm |
| Mounting conditions | Flush |
| Secured operating distance | $\leq (0.81 \times S_n)$ mm |
| Repeat accuracy | $\leq 2\%$ of full scale |
| Temperature drift | $\leq \pm 10\%$ |
| Hysteresis | 3...15 % |
| Electrical data | |
| Operating voltage U_B | 10...30 VDC |
| Ripple U_{ss} | $\leq 10\% U_{Bmax}$ |
| DC rated operating current I_o | ≤ 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 break/reverse polarity protection | yes/Complete |
| Output function | 4-wire, Complementary contact, NPN |
| DC field stability | 300 mT |
| AC field stability | 300 mT _{ss} |
| Switching frequency | 2 kHz |
| Mechanical data | |
| Design | Threaded barrel, M12 x 1 |
| Dimensions | 54 mm |
| Housing material | Metal, CuZn, Chrome-plated |

Features

- M12 × 1 threaded barrel
- Chrome-plated brass
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Large switching distance
- DC 4-wire, 10...30 VDC
- Complementary, NPN output
- Cable connection

Wiring diagram



Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox3 sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

Technical data

| | |
|---------------------------------------|---|
| Active area material | Plastic, LCP |
| End cap | Plastic, EPTR |
| Max. tightening torque of housing nut | 7 Nm |
| Electrical connection | Cable |
| Cable quality | Ø 5.2 mm, Gray, LifYY, PVC, 2 m |
| Core cross-section | 4 x 0.34 mm ² |
| Environmental conditions | |
| Ambient temperature | -25...+70 °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 | 24 mm |
|------------|-------|

| | |
|------------|--------|
| Distance W | 3 x Sn |
|------------|--------|

| | |
|------------|-------|
| Distance T | 3 x B |
|------------|-------|

| | |
|------------|---------|
| Distance S | 1.5 x B |
|------------|---------|

| | |
|------------|--------|
| Distance G | 6 x Sn |
|------------|--------|

| | |
|------------------------|---------|
| Diameter active area B | Ø 12 mm |
|------------------------|---------|

The sensor along with the BSS-12 half-shell clamp can be mounted with a torque of up to 0.5 Nm in any orientation.

Accessories

BST-12B

6947212

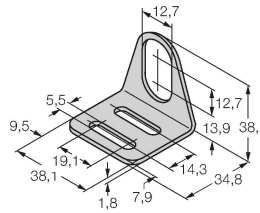
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



MW12

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

