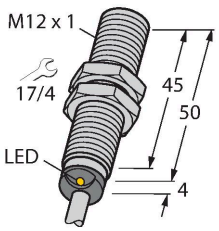
# BI2-EM12-VP6X 7M
# Inductive Sensor



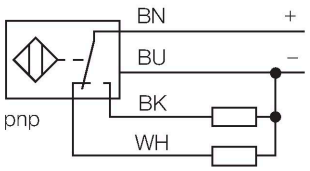

## Technical data

| | |
|---|---|
| Type | BI2-EM12-VP6X 7M |
| Ident. no. | 1630230 |
| Rated switching distance | 2 mm |
| Mounting conditions | Flush |
| Secured operating distance | ≤ (0.81 × Sn) mm |
| Correction factors | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| Repeat accuracy | ≤ 2 % of full scale |
| Temperature drift | ≤ ± 10 % |
| Hysteresis | 3…15 % |
| Ambient temperature | -25…+70 °C |
| 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 $I_e$ | ≤ 1.8 V |
| Wire breakage/Reverse polarity protection | yes / Complete |
| Output function | 4-wire, Complementary contact, PNP |
| Switching frequency | 2 kHz |
| Design | Threaded barrel, M12 × 1 |
| Dimensions | 54 mm |

## Features

- Threaded barrel, M12 x 1
- Stainless steel, 1.4301
- DC 4-wire, 10…30 VDC
- Changeover contact, PNP output
- Cable connection

## Wiring diagram




## Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

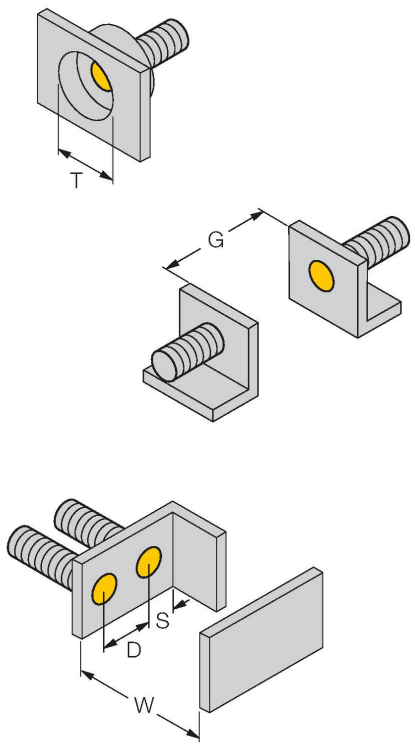
BI2-EM12-VP6X 7M| 09/09/2020 15-10 | technical changes reserved

## Technical data

| | |
|---|---|
| Housing material | Stainless steel, 1.4301 (AISI 304) |
| Active area material | Plastic, PA12-GF30 |
| End cap | Plastic, EPTR |
| Max. tightening torque housing nut | 10 Nm |
| Electrical connection | Cable |
| Cable quality | Ø 5.2 mm, Gray, LifYY, PVC, 7 m |
| Core cross-section | 4 x 0.34 mm$^2$ |
| 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

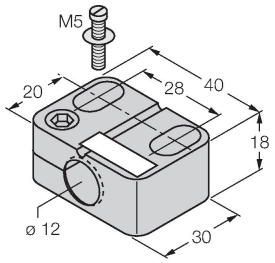



| | |
|---|---|
| Distance D | 2 x B |
| Distance W | 3 x Sn |
| Distance T | 3 x B |
| Distance S | 1.5 x B |
| Distance G | 6 x Sn |
| Diameter active area B | Ø 12 mm |

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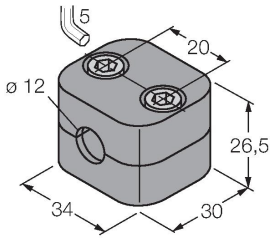
## Accessories

| BST-12B | 6947212 |
|---|---|



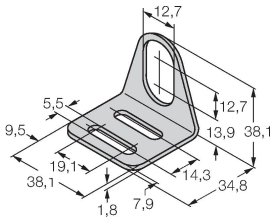

Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

| BSS-12 | 6901321 |
|---|---|




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

| MW-12 | 6945003 |
|---|---|




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