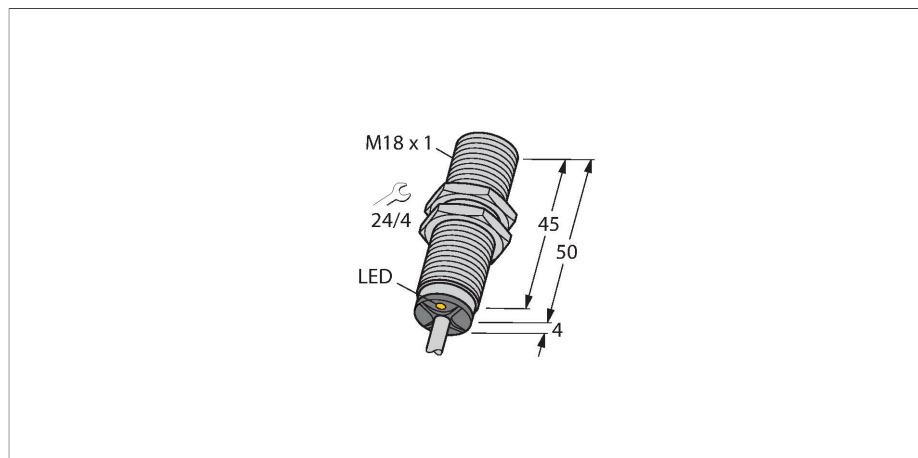


# BI8-M18-AP6X 7M

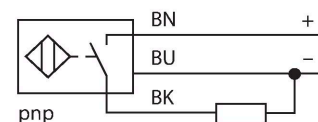
## Inductive Sensor – With Increased Switching Distance



### Features

- Threaded barrel, M18 x 1
- Chrome-plated brass
- Large sensing range
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

### Wiring diagram



### Technical data

|   |   |
|---|---|
| Type                                      | BI8-M18-AP6X 7M                                     |
| ID  | 4615031   |
| <b>General data</b>                       |   |
| Rated switching distance                  | 8 mm  |
| Mounting conditions                       | Flush   |
| Secured operating distance                | $\leq (0.81 \times S_n)$ mm                         |
| Correction factors                        | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| Repeat accuracy                           | $\leq 2$ % of full scale                            |
| Temperature drift                         | $\leq \pm 10$ %                                     |
| Hysteresis                                | 3...15 %  |
| <b>Electrical data</b>                    |   |
| Operating voltage                         | 10...30 VDC   |
| Residual ripple                           | $\leq 10$ % $U_{ss}$                                |
| DC rated operational current              | $\leq 200$ mA                                       |
| No-load current                           | 15 mA   |
| Residual current                          | $\leq 0.1$ mA                                       |
| Isolation test voltage                    | $\leq 0.5$ kV                                       |
| Short-circuit protection                  | yes / Cyclic  |
| Voltage drop at $I_o$                     | $\leq 1.8$ V  |
| Wire breakage/Reverse polarity protection | yes / Complete                                      |
| Output function                           | 3-wire, NO contact, PNP                             |
| Switching frequency                       | 0.5 kHz   |
| <b>Mechanical data</b>                    |   |
| Design                                    | Threaded barrel, M18 x 1                            |
| Dimensions                                | 54 mm   |
| Housing material                          | Metal, CuZn, Chrome-plated                          |

### 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.

## Technical data

|                                       |  |
|---------------------------------------|--|
| Active area material                  | Plastic, PA12-GF30                         |
| End cap                               | Plastic, EPTR                              |
| Max. tightening torque of housing nut | 25 Nm                                      |
| Electrical connection                 | Cable                                      |
| Cable quality                         | Ø 5.2 mm, Gray, LifYY, PVC, 7 m            |
| Core cross-section                    | 4 x 0.34 mm <sup>2</sup>                   |
| <b>Environmental conditions</b>       |  |
| Ambient temperature                   | -25...+70 °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             | 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 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

