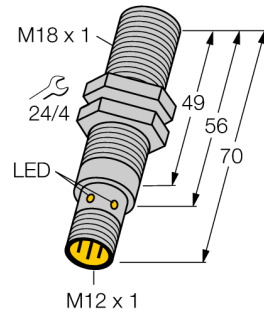


# **Inductive sensor with selective targeting BI5FE-M18FE-AP6X-H1141**

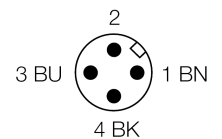
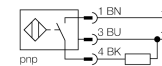
**TURCK**

Industrial  
Automation



- Threaded barrel, M18 x 1
- Optalloy-coated brass
- Detects only ferromagnetic metals
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 connector

## **Wiring diagram**



## **Functional principle**

Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target.

Inductive sensors of the FE series with selective features can only detect ferrous metals.

|                                             |                              |
|---------------------------------------------|------------------------------|
| <b>Type</b>                                 | BI5FE-M18FE-AP6X-H1141       |
| Ident-No.                                   | 1615009                      |
| <b>Rated operating distance Sn</b>          | 5 mm                         |
| Mounting condition                          | flush                        |
| Assured sensing range                       | $\leq (0,81 \times S_n)$ mm  |
| Repeatability                               | $\leq 2 \%$                  |
| Temperature drift                           | $\leq \pm 10 \%$             |
| Hysteresis                                  | 3...15 %                     |
| Ambient temperature                         | 0...+60 °C                   |
| <b>Operating voltage</b>                    | 10...30 VDC                  |
| Residual ripple                             | $\leq 10 \% U_{SS}$          |
| DC rated operational current                | $\leq 200$ mA                |
| No-load current $I_0$                       | $\leq 15$ mA                 |
| Residual current                            | $\leq 0.1$ mA                |
| Rated insulation voltage                    | $\leq 0.5$ kV                |
| Short-circuit protection                    | yes/ cyclic                  |
| Voltage drop at $I_e$                       | $\leq 1.8$ V                 |
| Wire breakage / Reverse polarity protection | yes/ complete                |
| Output function                             | 3-wire, NO contact, PNP      |
| Protection class                            | □                            |
| Switching frequency                         | $\leq 0.025$ kHz             |
| <b>Design</b>                               | threaded barrel, M18 x 1     |
| Dimensions                                  | 70 mm                        |
| Housing material                            | Metal, CuZn, optalloy coated |
| Material active face                        | Metal, A2 1.4305 (AISI 303)  |
| Tightening torque of housing nut            | 25 Nm                        |
| Connection                                  | connector, M12 x 1           |
| Vibration resistance                        | 55 Hz (1 mm)                 |
| Shock resistance                            | 30 g (11 ms)                 |
| Protection class                            | IP67                         |
| <b>Switching state</b>                      | LED yellow                   |

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with selective targeting  
BI5FE-M18FE-AP6X-H1141**

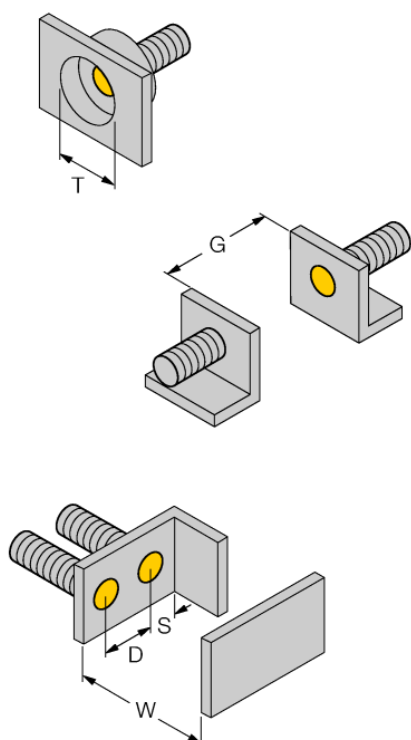
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| Mounting instructions | minimum distances |
|-----------------------|-------------------|
| Distance D            | 2 x B             |
| Distance W            | 3 x Sn            |
| Distance T            | 3 x B             |
| Distance S            | 1.5 x B           |
| Distance G            | 6 x Sn            |

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|                                      |         |
|--------------------------------------|---------|
| <b>Diameter of the active area B</b> | Ø 18 mm |
|--------------------------------------|---------|

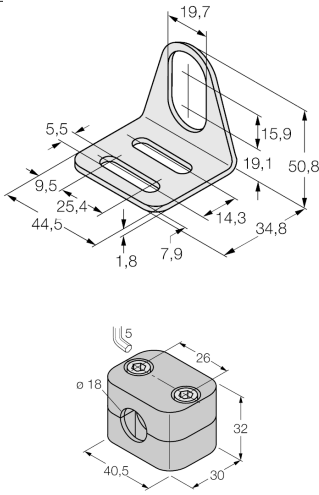


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**Accessories**

| Type code | Ident-No. | Short text                                                                                   | Dimension drawing                                                                   |
|-----------|-----------|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| MW-18     | 6945004   | Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304) |  |
| BSS-18    | 6901320   | Mounting bracket for smooth and threaded barrel devices; material: Polypropylene             |                                                                                     |