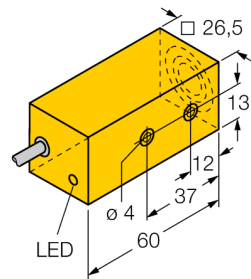


# Inductive sensor magnetic field immune BI10F-Q26-AD4X/S34

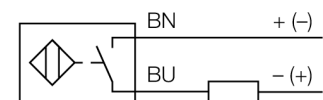
**TURCK**

Industrial  
Automation



- Rectangular, height 26 mm
- Active face in front
- Plastic, PBT-GF30-V0
- Magnetic field immune (weld-resistant) to DC and AC fields
- DC 2-wire, 10...65 VDC
- NO contact
- Cable connection

## 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. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit. Magnetic field sensors incorporate a special ferrite core making them immune to magnetic AC and DC fields. Hence, they can be applied in welding systems.

|                                           |                                                     |
|-------------------------------------------|-----------------------------------------------------|
| <b>Type code</b>                          | BI10F-Q26-AD4X/S34                                  |
| Ident no.                                 | 44700                                               |
| <b>Rated operating distance Sn</b>        | 10 mm                                               |
| Mounting condition                        | flush                                               |
| Assured sensing range                     | ≤ (0,81 x Sn) mm                                    |
| Correction factors                        | St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4 |
| Repeatability                             | ≤ 2 % of full scale                                 |
| Temperaturdrift                           | 10 %                                                |
| Hysteresis                                | 1...15 %                                            |
| Ambient temperature                       | -25...+70 °C                                        |
| <b>Operating voltage</b>                  | 10...65VDC                                          |
| Residual ripple                           | ≤ 10 % U <sub>ss</sub>                              |
| DC rated operational current              | ≤ 100 mA                                            |
| Residual current                          | ≤ 0.8 mA                                            |
| Rated insulation voltage                  | ≤ 0.5 kV                                            |
| Short-circuit protection                  | yes/ cyclic                                         |
| Voltage drop at I <sub>a</sub>            | ≤ 5 V                                               |
| Smallest operating current I <sub>m</sub> | ≤ 3 mA                                              |
| Switching frequency                       | 0.03 kHz                                            |
| <b>Design</b>                             | rectangular, Q26                                    |
| Dimensions                                | 60x 26x 26 mm                                       |
| Housing material                          | Plastic, PBT                                        |
| End cap                                   | Plastic, PA66-GF25                                  |
| Connection                                | cable                                               |
| Cable quality                             | 5.2 mm, LifYY, PVC, 2 m                             |
| Cable cross section                       | 2 x 0.34 mm <sup>2</sup>                            |
| 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          |
| <b>Switching state</b>                    | ● yellow                                            |

**Inductive sensor  
magnetic field immune  
BI10F-Q26-AD4X/S34**

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Industrial  
Automation

|            |                |
|------------|----------------|
| Distance D | $3 \times B$   |
| Distance W | $3 \times S_n$ |
| Distance S | $1.5 \times B$ |
| Distance G | $6 \times S_n$ |

|                            |       |
|----------------------------|-------|
| Width of the active face B | 26 mm |
|----------------------------|-------|

