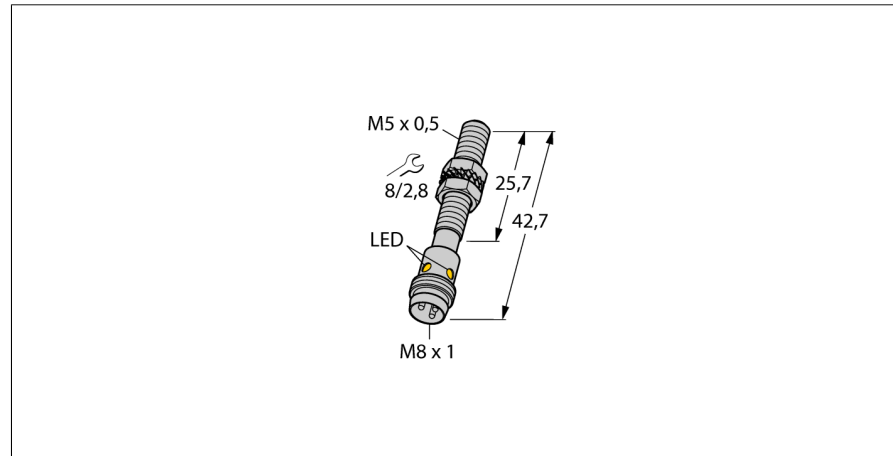
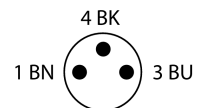
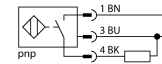


**Inductive sensor**  
**BI1-EG05-AP6X-V1331**



- M5 × 0.5 threaded barrel
- Stainless steel, 1.4427 SO
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M8 × 1 male connector

**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.

|   |   |
|---|---|
| <b>Type designation</b>                   | BI1-EG05-AP6X-V1331                                 |
| Ident no.                                 | 4608640   |
| <b>Rated switching distance Sn</b>        | 1 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  |
| <b>Operating voltage</b>                  | 10...30 VDC   |
| Residual ripple                           | ≤ 10 % U <sub>ss</sub>                              |
| DC rated operational current              | ≤ 100 mA  |
| No-load current I <sub>0</sub>            | ≤ 15 mA   |
| Residual current                          | ≤ 0.1 mA  |
| Isolation test voltage                    | ≤ 0.5 kV  |
| Short-circuit protection                  | yes/ Cyclic   |
| Voltage drop at I <sub>0</sub>            | ≤ 1.8 V   |
| Wire breakage/Reverse polarity protection | yes/ Complete                                       |
| Output function                           | 3-wire, NO contact, PNP                             |
| Switching frequency                       | 3 kHz   |
| <b>Design</b>                             | Threaded barrel, M5 × 0.5                           |
| Dimensions                                | 42.7 mm   |
| Housing material                          | Stainless steel, 1.4427 SO                          |
| Max. tightening torque housing nut        | 5 Nm  |
| Electrical connection                     | Connectors, M8 × 1                                  |
| 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          |
| Packaging unit                            | 1   |
| <b>Switching state</b>                    | LED, Yellow   |

**Inductive sensor**  
**BI1-EG05-AP6X-V1331**

|                        |         |
|------------------------|---------|
| 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  |
| <hr/>                  |         |
| Diameter active area B | Ø 5 mm  |

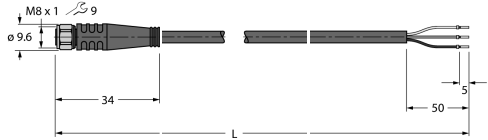


# Inductive sensor BI1-EG05-AP6X-V1331

**TURCK**

Industrial  
Automation

## Wiring accessories

| Type code   | Ident no. | Description   |   |
|-------------|-----------|---|---|
| PKG3M-2/TEL | 6625385   | Connection cable, female M8, straight, 3-pin, stainless steel coupling nut, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a> |  |