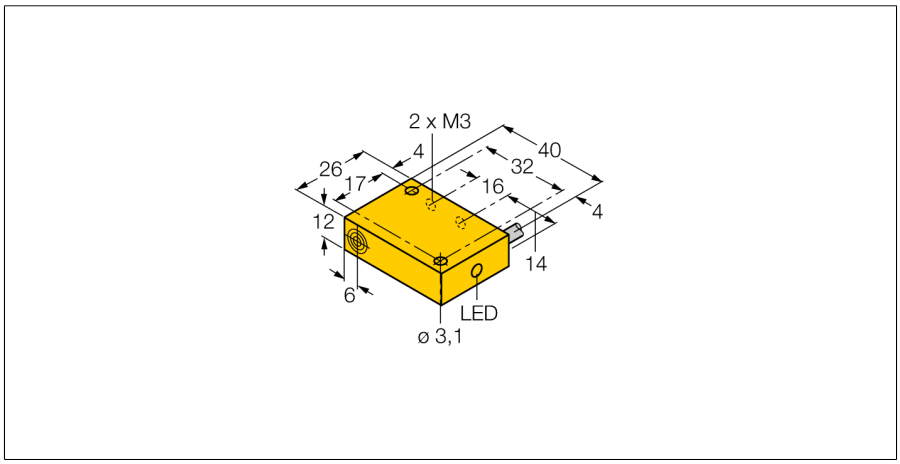
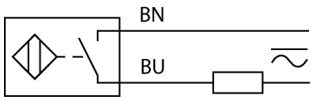
# Inductive sensor
# BI2-Q12-AZ31X




- **Rectangular, height 12 mm**
- **Active face, lateral**
- **Plastic, PBT-GF30-V0**
- **AC 2-wire, 20…250 VDC**
- **DC 2-wire, 10…300 VDC**
- **NO contact**
- **Cable connection**

### Wiring Diagram




| | |
|---|---|
| **Type designation** | BI2-Q12-AZ31X |
| Ident-No. | 13100 |

| | |
|---|---|
| **Rated switching distance Sn** | 2 mm |
| Mounting conditions | Flush |
| Secured operating distance | ≤ (0,81 x 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** | 20…250VAC |
| Operating voltage | 10…300 VDC |
| AC rated operational current | ≤ 100 mA |
| DC rated operational current | ≤ 100 mA |
| Frequency | ≥ 50…≤ 60 Hz |
| Residual current | ≤ 1.7 mA |
| Isolation test voltage | ≤ 1.5 kV |
| Surge current | ≤ 1 A (≤ 10 ms max. 5 Hz) |
| Voltage drop at $I_e$ | ≤ 6 V |
| Output function | 2-wire, NO contact |
| Smallest operating current $I_m$ | ≥ 3 mA |
| Switching frequency | 0.02 kHz |

| | |
|---|---|
| **Design** | Rectangular,Q12 |
| Dimensions | 40 x 26 x 12 mm |
| Housing material | Plastic, PA12-GF30 |
| Electrical connection | Cable |
| Cable quality | 5.2mm, LifYY, PVC, 2 |
| Cable cross section | 2 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,Red |

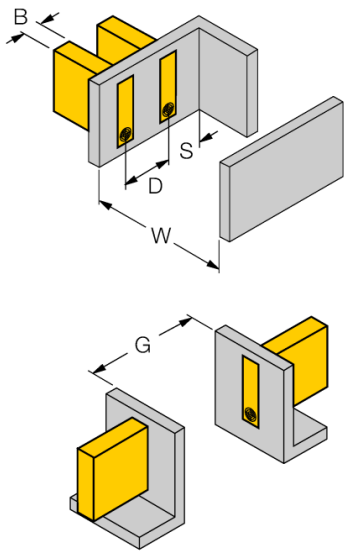
### Functional principle

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.

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| | |
|---|---|
| **Distance D** | 2 x B |
| Distance W | 3 x Sn |
| Distance S | 1 x B |
| Distance G | 6 x Sn |

| | |
|---|---|
| **Width active area B** | 12 mm |







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