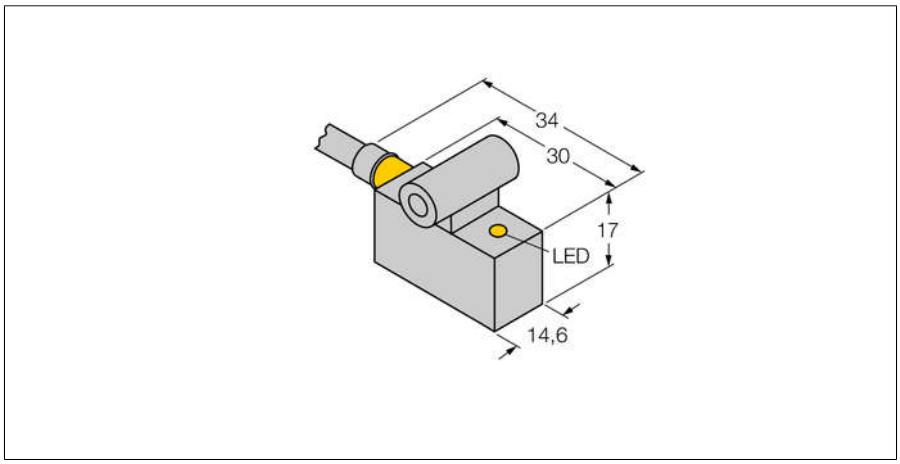
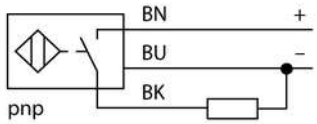
# Magnetic field sensor
# for pneumatic cylinders
# BIM-IKT-AP6X




- **Rectangular, height 17 mm**
- **Metal, GD-Zn**
- **Magnetic-inductive sensor**
- **DC 3-wire, 10…30 VDC**
- **NO contact, PNP output**
- **Cable connection**

### Wiring Diagram




| | |
|---|---|
| **Type code** | BIM-IKT-AP6X |
| Ident no. | 46200 |
| **Pass speed** | ≤ 10 m/s |
| Repeatability | ≥ ± 0.1 mm |
| Temperature drift | ≤ 0.1 mm |
| Hysteresis | ≤ 1 mm |
| Ambient temperature | -25…+70 °C |
| **Operating voltage** | 10… 30VDC |
| Residual ripple | ≤ 10 % $U_{ss}$ |
| DC rated operational current | ≤ 200 mA |
| No-load current $I_0$ | ≤ 15 mA |
| Residual current | ≤ 0.1 mA |
| Rated insulation voltage | ≤ 0.5 kV |
| Short-circuit protection | yes/ cyclic |
| Voltage drop at $I_e$ | ≤ 1.8 V |
| Wire breakage / Reverse polarity protection | yes/ complete |
| Output function | 3-wire, NO contact, PNP |
| Switching frequency | 1 kHz |
| **Construction** | rectangular, IKT |
| Dimensions | 30 x 14.6 x 17 mm |
| Housing material | Metal, GD-Zn |
| Active area material | Plastic, PA |
| Connection | cable |
| Cable quality | 5.2 mm, LifYY, PVC, 2m |
| Cable cross section | 3 x 0.34 mm² |
| 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 |
| Mounting on the following profiles | . |
| Cylindrical design | ◯ ▢ ⬡ |
| **Switching state** | LED yellow |

### Functional principle

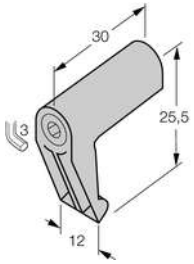
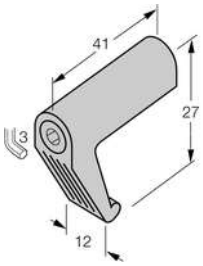
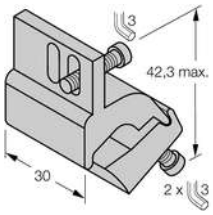
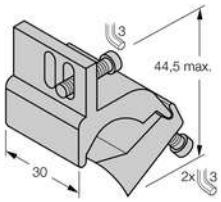
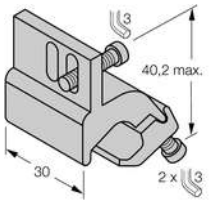
Magnetic field sensors are activated by magnetic fields and are especially suited for piston position detection in pneumatic cylinders. Based on the fact that magnetic fields can permeate non-magnetizable metals, it is possible to detect a permanent magnet attached to the piston through the aluminium wall of the cylinder.

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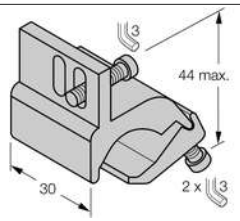
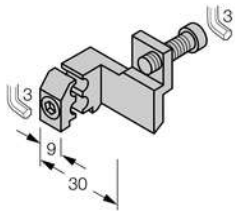
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## Accessories

| Type code | Ident no. | Description | Design |
|---|---|---|---|
| KLI 1 KLEMMSTÜCK | 69710 | Mounting on ◯ tie-rod cylinders; cylinder diameter 32…100 mm; material: Die-cast zinc |  |
| KLI 3 KLEMMSTÜCK | 69712 | Mounting on ◯ tie-rod cylinders; cylinder diameter 63…160 mm; material: Die-cast zinc |  |
| KLI 5Z KLEMMSTÜCK | 6971803 | Mounting on ◯ tie-rod cylinders; cylinder diameter 32…63 mm; material: Aluminum |  |
| KLI 6Z KLEMMSTÜCK | 6971806 | Mounting on ◯ tie-rod cylinders; cylinder diameter 50…125 mm; material: Aluminum |  |
| KLI 5 KLEMMSTÜCK | 6971802 | Mounting on ⬚ profile cylinder; cylinder diameter 32…50 mm; material: Aluminium |  |

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## Accessories

| Type code | Ident no. | Description | Design |
|---|---|---|---|
| KLI 6 KLEMMSTÜCK | 6971805 | Mounting on ⬚ profile cylinder; cylinder diameter 50…100 mm; material: Aluminium |  |
| KLI 7 KLEMMSTÜCK | 6971810 | Mounting on ⬚ profile cylinder with external dovetail grooves; diameter 32…200 mm; material: Aluminium |  |

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