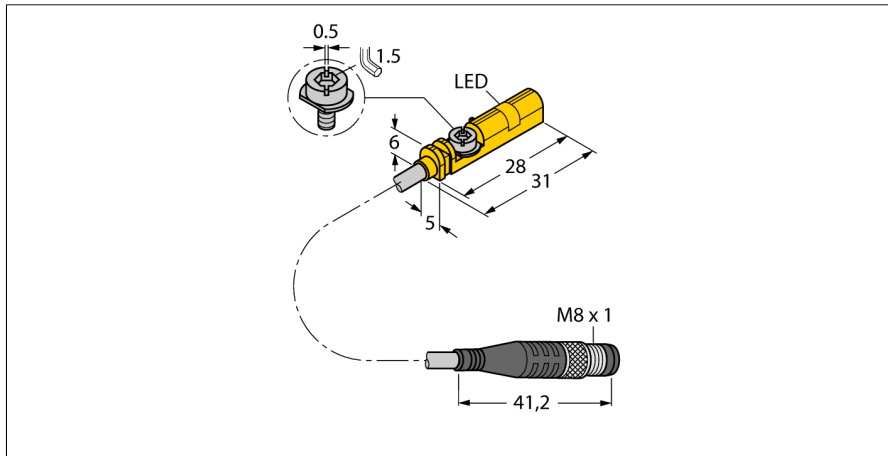


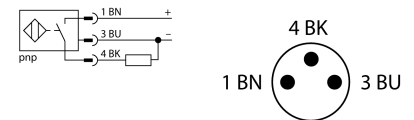
# Magnetic field sensor for pneumatic cylinders BIM-UNT-AP6X-0.3M-PSG 3M



- For T-groove cylinders without mounting accessories
- Optional accessories for mounting on other cylindrical housings.
- One-hand mounting possible
- Fine adjustment tool and stopper directly mountable on the sensor
- Stable mounting
- Magneto-resistive sensor
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Pigtail with male end, M8 x 1

|   |   |
|---|---|
| <b>Type designation</b>                   | BIM-UNT-AP6X-0.3M-PSG 3M  |
| Ident-No.                                 | 4685723   |
| Ident-No (TUSA)                           | S4685723  |
| <b>Pass speed</b>                         | ≤ 10 m/s  |
| Repeatability                             | ≥ ± 0.1 mm  |
| Temperature drift                         | ≤ 0.1 mm  |
| Hysteresis                                | ≤ 1 mm  |
| Ambient temperature                       | -25...+70 °C  |
| <b>Operating voltage</b>                  | 10...30 VDC   |
| Residual ripple                           | ≤ 10 % U <sub>s</sub>   |
| DC rated operational current              | ≤ 150 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   |
| Reverse polarity protection               | Complete  |
| Switching frequency                       | 1 kHz   |
| <b>Design</b>                             | Rectangular, UNT  |
| Dimensions                                | 28 x 5 x 6 mm   |
| Housing material                          | Plastic, PP   |
| Active area material                      | Plastic, PP   |
| Tightening torque fixing screw            | 0.4 Nm  |
| Electrical connection                     | Cable with connector, M8 x 1  |
| Cable quality                             | 3mm, Gray, Lif9Y-11Y, PUR, 0.3<br>Suited for E-ChainSystems® acc. to manufacturers declaration H1063M |
| Cable cross section                       | 3 x 0.14 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  |
| Mounting on the following profiles        | .   |
| Cylindrical design                        |   |
| <b>Switching state</b>                    | LED yellow  |
| Included in delivery                      | cable clip  |

## Wiring Diagram



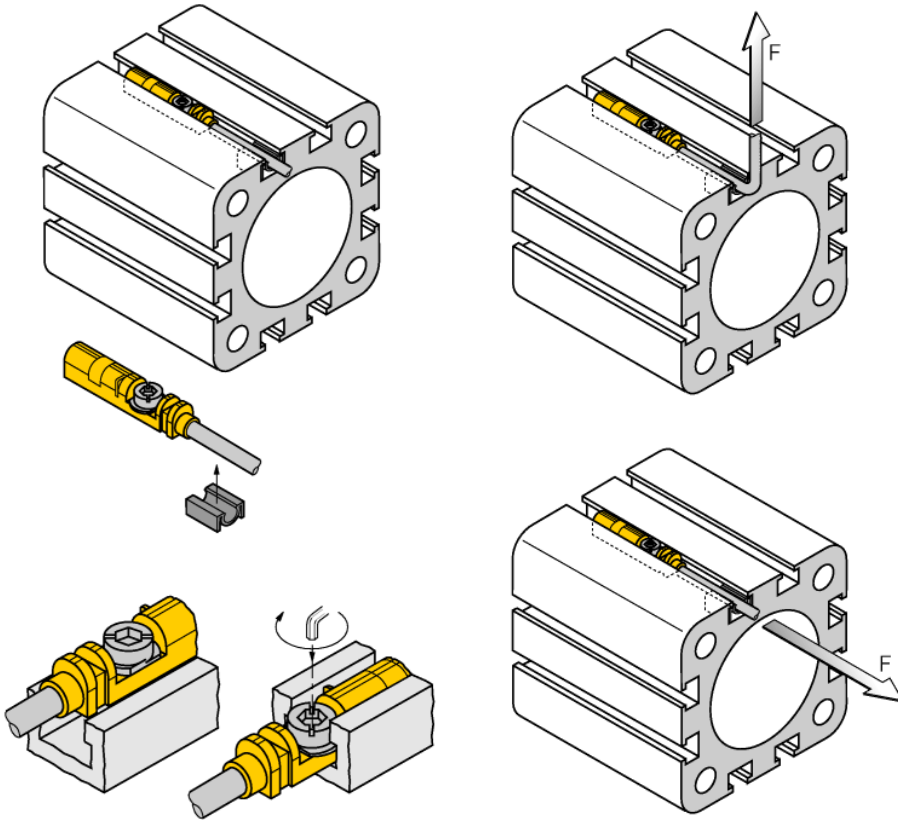
## Functional principle

Magnetic field sensors are activated by magnetic fields and are used, in particular, for the detection of the piston position in pneumatic cylinders. As magnetic fields can permeate non-magnetizable metals, they detect a permanent magnet attached to the piston through the aluminium cylinder wall.

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Mounting instructions/Description

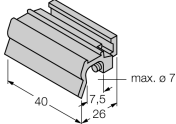
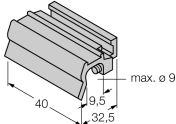
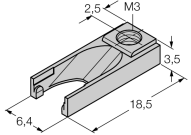
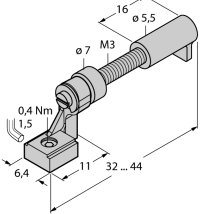
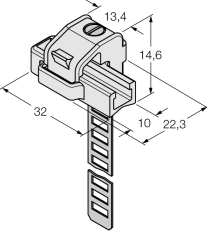
Mounting instructions



Insert the sensor in the groove from above. Mount the sensors as follows using the patented wing screw: The wing screw features a left-hand female thread. Two small plastic lips keep the screw in position, ready-to-install. Turn the screw clockwise. The screw moves out of the thread and hits the upper grooves with the wings. The sensor is thus pressed down and locked. Use a standard screw driver or a 2.5 mm Allen key to fasten the screw with a quarter turn. A fixing torque of 0.4 Nm is sufficient for safe mounting without damaging the cylinder. The sensor now withstands axial and radial tensile load of  $F=100\text{N}$  applied on the cable. Cable clips are included in the scope of delivery. They enable smooth cable routing in the groove. Mounting accessories for other cylinder sizes have to be ordered separately.

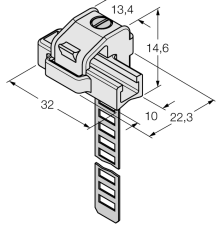
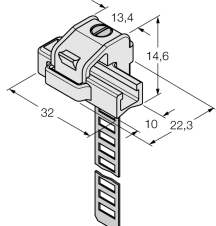
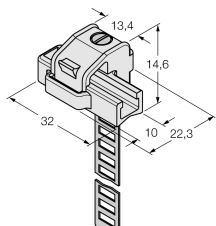
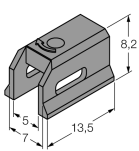
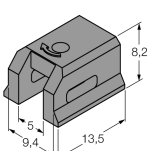
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**Accessories**

| Type code             | Ident-No. | Description   |   |
|-----------------------|-----------|---|---|
| KLZ1-INT CLAMP        | 6970410   | Accessories for mounting the sensors BIM-INT and BIM-UNT on tie-rod cylinders; Cylinder diameter: 32...40 mm; material: Aluminium; Further mounting accessories for other cylinder diameters on request |    |
| KLZ2-INT CLAMP        | 6970411   | Accessories for mounting the sensors BIM-INT and BIM-UNT on tie-rod cylinders; Cylinder diameter: 50...63 mm; material: Aluminium; Further mounting accessories for other cylinder diameters on request |    |
| UNT-STOPPER           | 4685751   | Accessories for finetuning the switchpoint on T-groove cylinders; snap-locked in the BIM-UNT fixture; suited for multiple use; material: plastic  |  |
| UNT-ADJUSTING BRACKET | 4685750   | Accessories for finetuning the switchpoint on T-groove cylinders; snap-locked in the BIM-UNT fixture; suited for multiple use; material: metal/plastic  |  |
| KLRC-UNT1             | 6970626   | Accessories for mounting on cylinders; diameter: 8...25 mm; material: PA 6I/6T / nickel silver; Fire-hazard classification acc. to UL94 - V2  |  |

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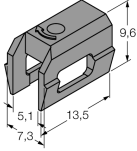
**Accessories**

| Type code | Ident-No. | Description   |   |
|-----------|-----------|---|---|
| KLRC-UNT2 | 6970627   | Accessories for mounting on $\bigcirc$ cylinders; diameter: 25...63 mm; material: PA 6I/6T / nickel silver; Fire-hazard classification acc. to UL94 - V2                            |    |
| KLRC-UNT3 | 6970628   | Accessories for mounting the BIM-UNT sensor on $\bigcirc$ round cylinders; diameter: 63...130 mm; material: PA 6I/6T / nickel silver; Fire-hazard classification acc. to UL94 - V2  |    |
| KLRC-UNT4 | 6970629   | Accessories for mounting the BIM-UNT sensor on $\bigcirc$ round cylinders; diameter: 130...250 mm; material: PA 6I/6T / nickel silver; Fire-hazard classification acc. to UL94 - V2 |  |
| KLDT-UNT2 | 6913351   | Accessories for mounting the BIM-UNT sensor on dovetail cylinders; groove width: 7 mm; material: PPS  |  |
| KLDT-UNT3 | 6913352   | Accessories for mounting the BIM-UNT sensor on $\square$ dovetail groove cylinders; groove width: 9.4 mm; material: PPS   |  |

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**Accessories**

| Type code | Ident-No. | Description  |   |
|-----------|-----------|--|---|
| KLDT-UNT6 | 6913355   | Accessories for mounting on  dovetail groove cylinders;<br>groove width: 7.35 mm; material: PPS |  |