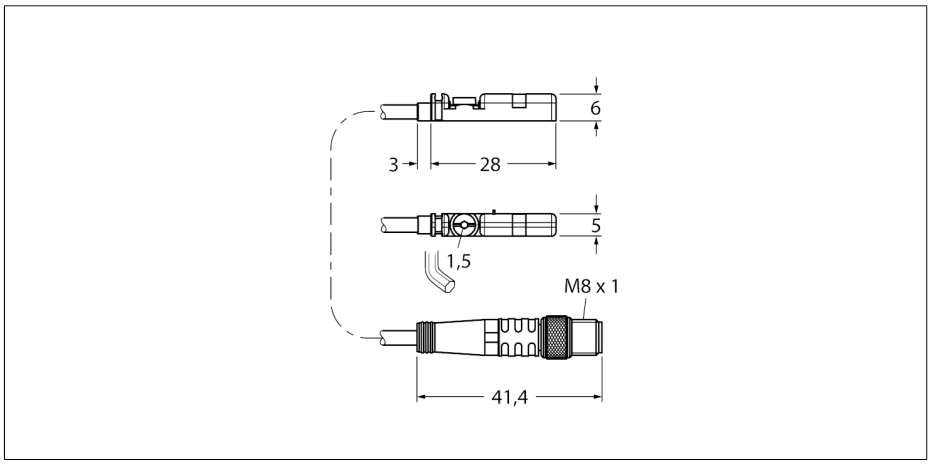
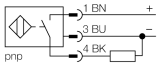
magnetic field sensor
for pneumatic cylinders
BIM-UNT-AP6X-0,3-PSG3M

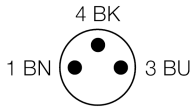


- **For T-groove cylinders without mounting accessories**
- **Optional accessories for mounting on other cylindrical housings.**
- **One-hand mounting possible**
- **Fine adjustment tool and stopper directly mountable on the sensor**
- **Stable mounting**
- **Magneto-resistive sensor**
- **DC 3-wire, 10…30 VDC**
- **NO contact, PNP output**
- **Plug connection, Ø 8 mm**

Type	BIM-UNT-AP6X-0,3-PSG3M
Ident-No.	4685723
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…30 VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 150 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
Design	rectangular, UNT
Dimensions	28 x 5 x 6 mm
Housing material	Plastic, PP
Material active face	Plastic, PP
Tightening torque fixing screw	0.4 Nm
Connection	connector, rotatable thread, M8 x 1
Cable quality	3 mm, grey, Lif9Y-11Y, PUR, 0.3 m Suited for E-ChainSystems® acc. to manufacturers declaration H1063M
Cable cross section	3 x 0.14 mm^2
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
Mounting on the following profiles	.
Switching state	LED yellow
Included in scope of supply	cable clip

Wiring diagram





Functional principle

Magnetic field sensors are activated by magnetic fields. They are applied to detect the position of pneumatic cylinders. Magnetic fields can permeate non-magnetizable metals. A permanent magnet attached to the piston is thus detected through the aluminium wall of the cylinder.

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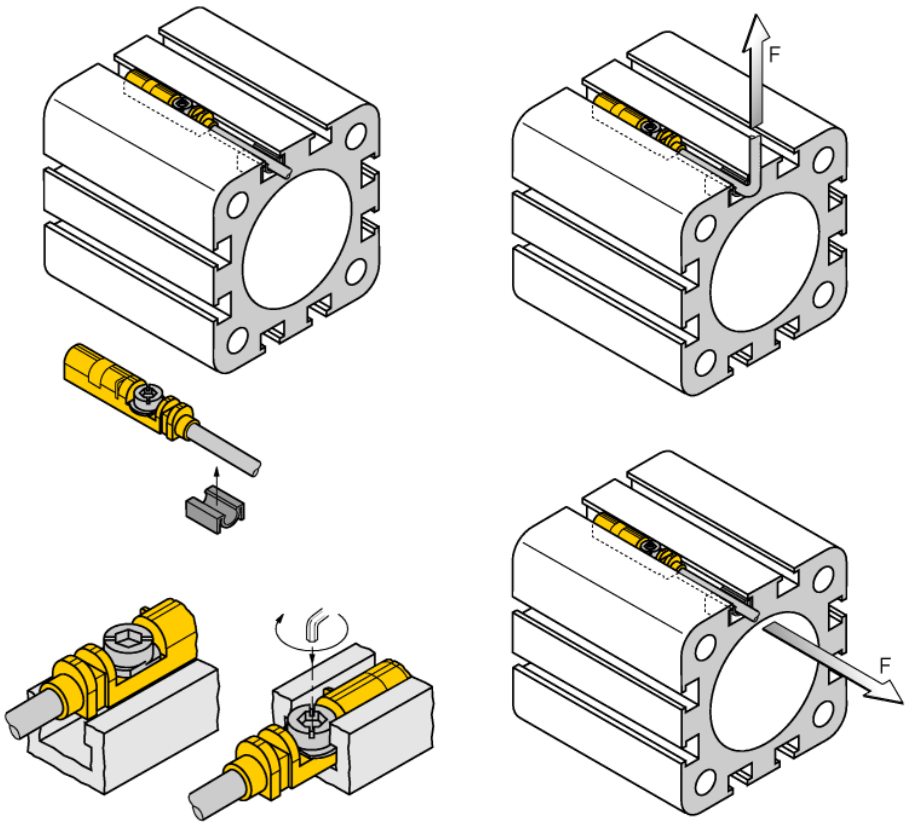
Mounting instructions mounting instructions



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=100N 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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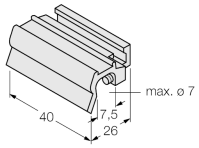
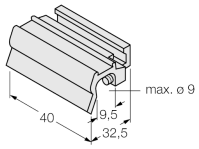
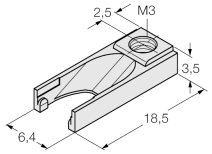
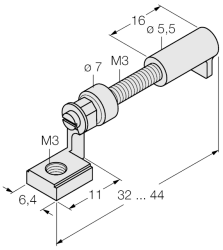
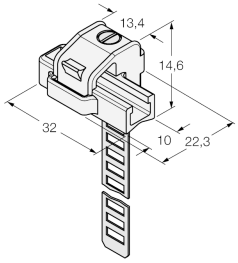
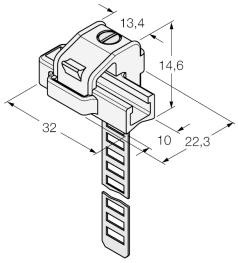
Accessories

Type code	Ident-No.	Short text	Dimension drawing
KLZ1-INT	6970410	Accessories for mounting the BIM-UNT sensor on ◯ tie-rod cylinders; diameter: 32…40 mm; material: Aluminium; further mounting accessories for other cylinder diameters on request	
KLZ2-INT	6970411	Accessories for mounting the BIM-UNT sensor on ◯ tie-rod cylinders; diameter: 50…63 mm; material: Aluminium; further mounting accessories for other cylinder diameters on request	
UNT-Stopper	4685751	Accessories to secure the switchpoint on ⊡ T-groove cylinders; snap-lock mounting in the BIM-UNT sensor fixture; material: Plastic	
UNT-Justage	4685750	Accessories for fine-tuning of the switch-point on ⊡ T-groove cylinders; snap-lock mounting in the sensor 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	
KLRC-UNT2	6970627	Accessories for mounting on ◯ cylinders; diameter: 25…63 mm; material: PA 6I/6T / nickel silver; Fire-hazard classification acc. to UL94 - V2	

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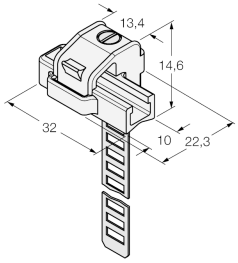
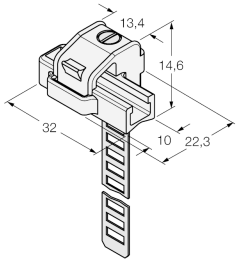
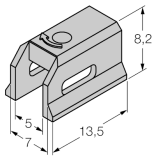
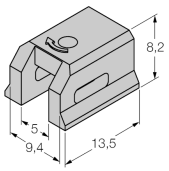
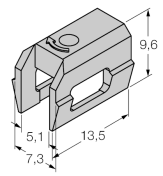
Accessories

Type code	Ident-No.	Short text	Dimension drawing
KLRC-UNT3	6970628	Accessories for mounting the BIM-UNT sensor on ◯ 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 ◯ 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 ⬚ dove-tail groove cylinders; groove width: 7 mm; material: PPS	
KLDT-UNT3	6913352	Accessories for mounting the BIM-UNT sensor on ⬚ dove-tail groove cylinders; groove width: 9.4 mm; material: PPS	
KLDT-UNT6	6913355	Accessories for mounting on ⬚ dovetail groove cylinders; groove width: 7.35 mm; material: PPS	

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