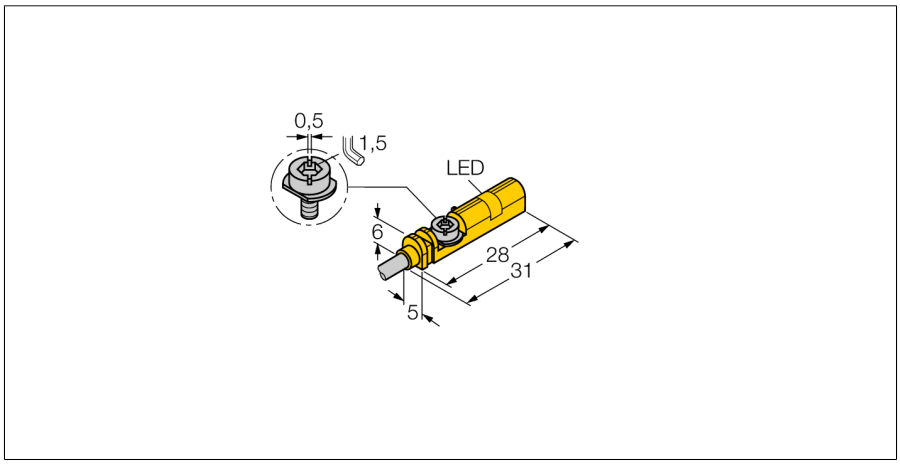
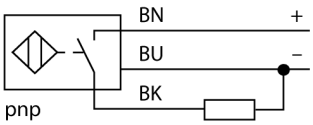
Magnetic field sensor for pneumatic cylinders BIM-UNT-AP7X 3M



- **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**
- **Cable connection**

Type code	BIM-UNT-AP7X 3M
Ident no.	4685828
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	≤ 100 mA
No-load current I_0	≤ 10 mA
Residual current	≤ 0.1 mA
Rated insulation voltage	≤ 0.5 kV
Short-circuit protection	no
Voltage drop at I_e	≤ 1.4 V
Wire breakage / Reverse polarity protection	yes/ yes (voltage supply)
Output function	3-wire, NO contact, PNP
Switching frequency	1 kHz
Construction	rectangular, UNT
Dimensions	28 x 5 x 6 mm
Housing material	plastic, PP
Material active area	plastic, PP
Tightening torque fixing screw	0.4 Nm
Connection	cable
Cable quality	3 mm, grey, Lif9Y-11Y, PUR, 3m Suited for E-ChainSystems® acc. to manufacturers declaration H1063M
Cable cross section	3 x 0.14 mm²
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
IP Rating	IP67
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C
Mounting on the following profiles	.
Cylindrical design	○ ▭ ▭ ○
Switching state	LED yellow
Included in delivery	cable clip

Wiring diagram

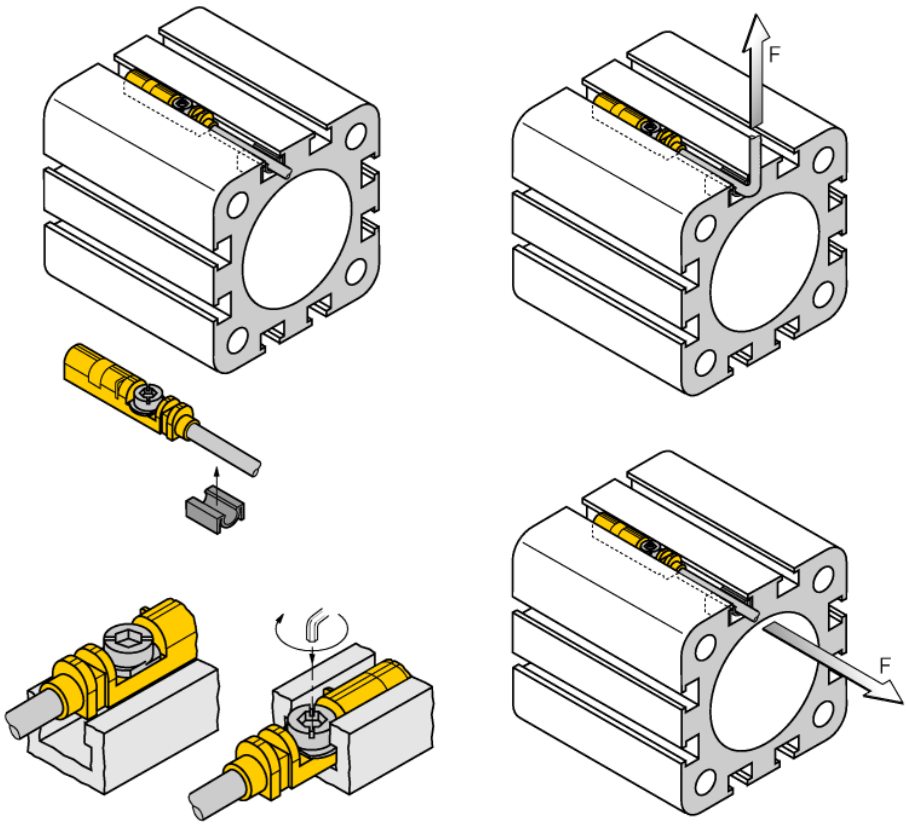


Functional principle

Magnetfeld-Sensoren werden durch Magnetfelder betätigt und insbesondere zur Erfassung der Kolbenposition in Pneumatikzylindern eingesetzt. Da Magnetfelder nichtmagnetisierbare Metalle durchdringen können, ist es möglich, mit dem Sensor einen am Kolben angebrachten Dauermagneten durch die Aluminium-Zylinderwand hindurch zu detektieren.

Edition • 2015-07-28T01:40:17+02:00

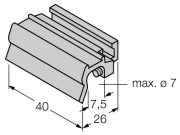
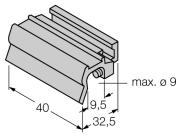
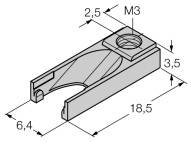
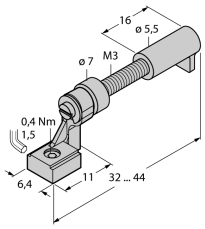
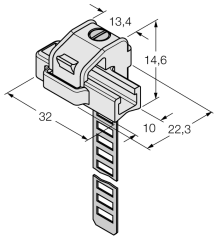
Mounting instructions / Description mounting instructions



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=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.

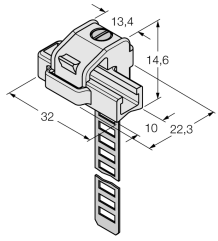
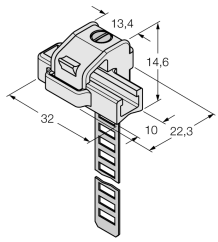
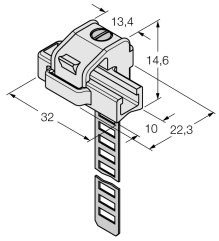
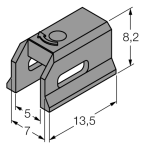
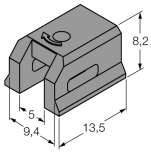
Edition • 2015-07-28T01:40:17+02:00

Accessories

Type code	Ident no.	Description	Design
KLZ1-INT	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	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-Justage	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	

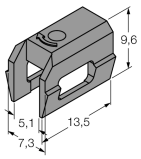
Edition • 2015-07-28T01:40:17+02:00

Accessories

Type code	Ident no.	Description	Design
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	
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 dovetail cylinders; groove width: 7 mm; material: PPS	
KLDT-UNT3	6913352	Accessories for mounting the BIM-UNT sensor on ⬚ dovetail groove cylinders; groove width: 9.4 mm; material: PPS	

Edition • 2015-07-28T01:40:17+02:00

Accessories

Type code	Ident no.	Description	Design
KLDT-UNT6	6913355	Accessories for mounting on dovetail groove cylinders; groove width: 7.35 mm; material: PPS	

Edition • 2015-07-28T01:40:17+02:00