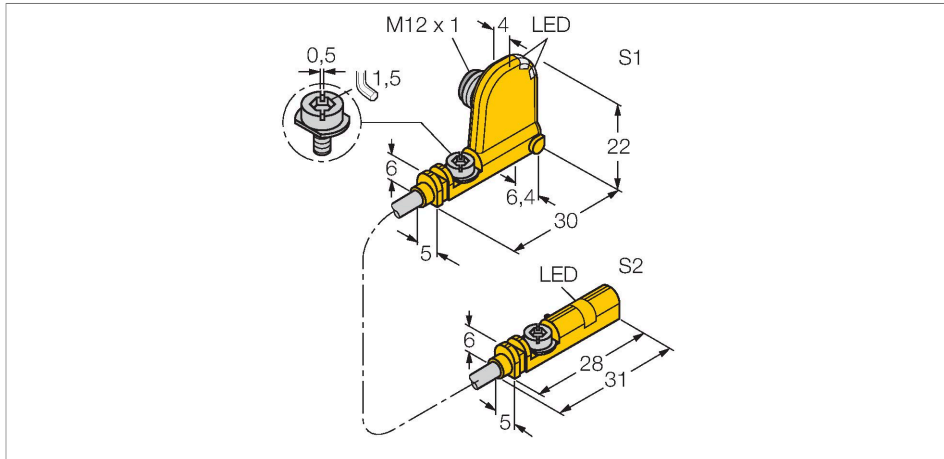


# BIM-UNT-0.5-UNT-2AP6X3-H1141

## Magnetic Field Sensor – For Pneumatic Cylinders



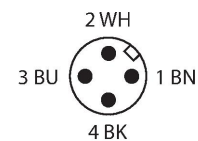
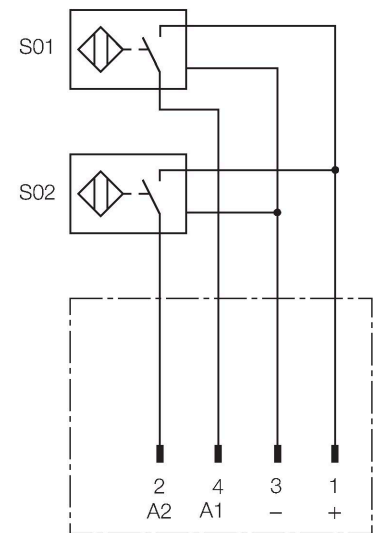
### Features

- For T-groove cylinders without mounting accessories
- Optional accessories for mounting on other cylindrical housings.
- One-hand mounting possible
- Tool for fine adjustment and stopper for direct mounting on the sensor
- Stable mounting
- Optimally suited for monitoring two switching points on a cylinder
- No Y-splitter required
- Magneto-resistive sensor
- 2x NO contacts, PNP output
- DC 4-wire, 10...30 VDC

### Technical data

Type	BIM-UNT-0.5-UNT-2AP6X3-H1141
ID	4685719
<b>General data</b>	
Pass speed	≤ 10 m/s
Repeatability	≤ ± 0.1 mm
Temperature drift	≤ 0.1 mm
Hysteresis	≤ 1 mm
<b>Electrical data</b>	
Operating voltage $U_B$	10...30 VDC
Ripple $U_{ss}$	≤ 10 % $U_{Bmax}$
DC rated operating current $I_B$	≤ 150 mA
No-load current	≤ 15 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at $I_B$	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	4-wire, NO contact, PNP
Switching frequency	1 kHz
<b>Mechanical data</b>	
Design	Rectangular, UNT
Dimensions	30 x 5 x 22 mm
Housing material	Plastic, PP
Active area material	Plastic, PP

### 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

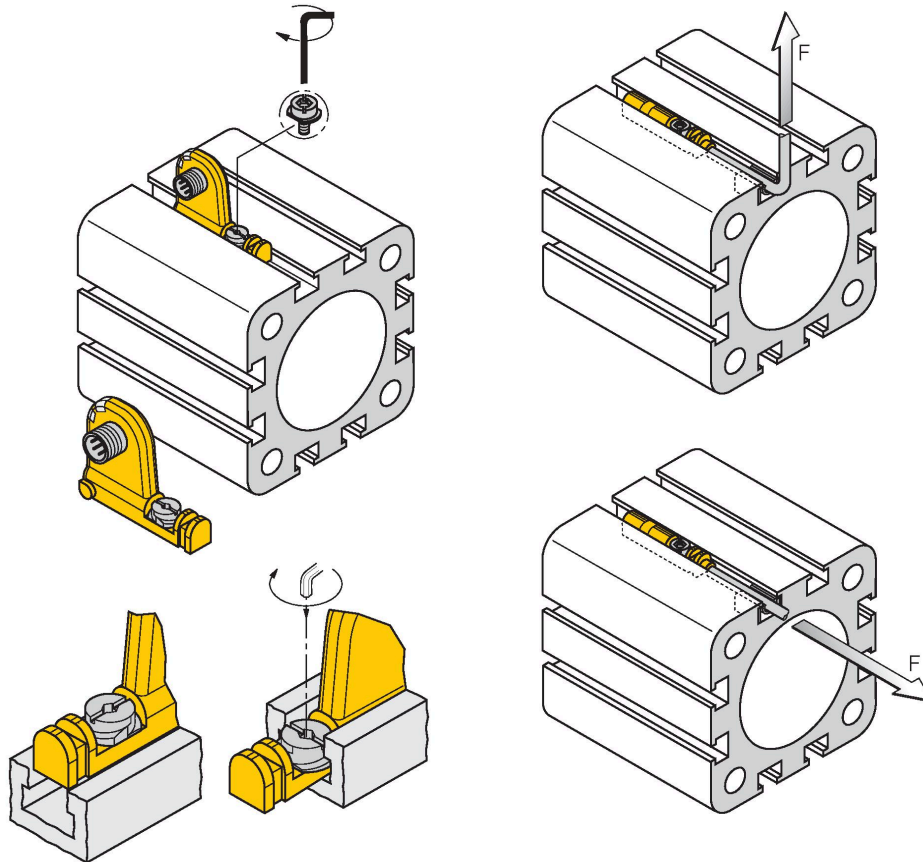
## Technical data

magnet attached to the piston through the aluminium cylinder wall.

Tightening torque fixing screw	0.4 Nm
Electrical connection	Connector, M12 × 1
Cable quality	Ø 3 mm, Gray, Lif9Y-11Y, PUR, 0.5 m
	Suited for E-ChainSystems® acc. to manufacturers declaration H1063M
Core cross-section	3 x 0.14 mm <sup>2</sup>
<b>Environmental conditions</b>	
Ambient temperature	-25...+70 °C
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
<b>Mounting on the following profiles</b>	
Cylindrical design	
Power-on indication	LED, Green
Switching state	2 × LEDs, Yellow/yellow
Included in delivery	2x cable clip

## Mounting instructions

### Mounting instructions/Description



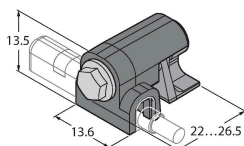
Insert sensor S2 from above; insert sensor S1 laterally in the groove with the tip first, then click-in. Mount the sensors as follows using the patented wing screw: The wing screw features a left-hand female thread. Two small plastic lips keep the screw in position, ready-to-install. Turn the screw clockwise. 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 1.5 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.

## Accessories

KLZCD2-UNT

6970418

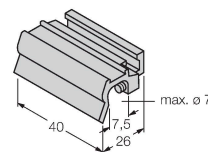
Mounting bracket for mounting magnetic field sensors for T-grooves on a CleanDesign cylinder with mounting rail



KLZ1-INT

6970410

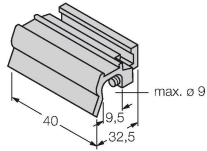
Accessories for mounting the sensors BIM-INT and BIM-UNT on tie-rod cylinders; cylinder diameter: 32... 40 mm; material: Aluminum; further mounting accessories for other cylinder diameters on request



## KLZ2-INT

6970411

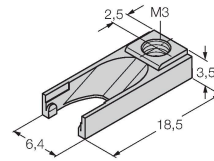
Accessories for mounting the sensors BIM-INT and BIM-UNT on tie-rod cylinders; Cylinder diameter: 50... 63 mm; material: Aluminium; Further mounting accessories for other cylinder diameters on request



## UNT-STOPPER

4685751

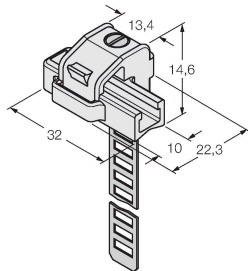
Accessories for finetuning the switchpoint on T-groove cylinders; snap-locked in the BIM-UNT fixture; suited for multiple use; material: plastic



## KLRC-UNT1

6970626

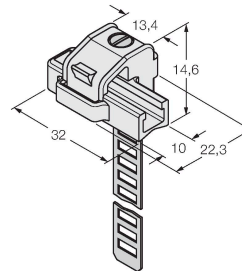
Mounting bracket for mounting magnetic field sensors on round cylinders; cylinder diameter: 8...25 mm; material: PA 6I/6T / nickel silver; fire-hazard classification acc. to UL94 - V2



## KLRC-UNT2

6970627

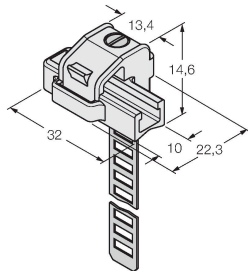
Mounting bracket for mounting magnetic field sensors on round cylinders; cylinder diameter: 25...63 mm; material: PA 6I/6T / nickel silver; fire-hazard classification acc. to UL94 - V2



## KLRC-UNT3

6970628

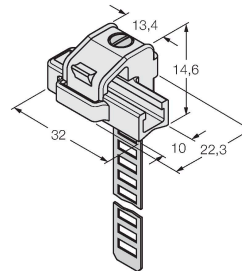
Mounting bracket for mounting magnetic field sensors on round cylinders; cylinder diameter: 63...130 mm; material: PA 6I/6T / nickel silver; fire-hazard classification acc. to UL94 - V2



## KLRC-UNT4

6970629

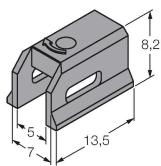
Mounting bracket for mounting magnetic field sensors on round cylinders; cylinder diameter: 130...250 mm; material: PA 6I/6T / nickel silver; fire-hazard classification acc. to UL94 - V2



## KLDT-UNT2

6913351

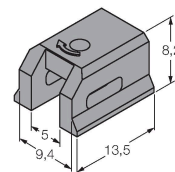
Mounting bracket for mounting magnetic field sensors on dovetail groove cylinders; groove width: 7 mm; material: PPS



## KLDT-UNT3

6913352

Mounting bracket for mounting magnetic field sensors on dovetail groove cylinders; groove width: 9.4 mm; material: PPS



## KLDT-UNT6

6913355

Mounting bracket for mounting magnetic field sensors on dovetail groove cylinders; groove width: 7.35 mm; material: PPS

