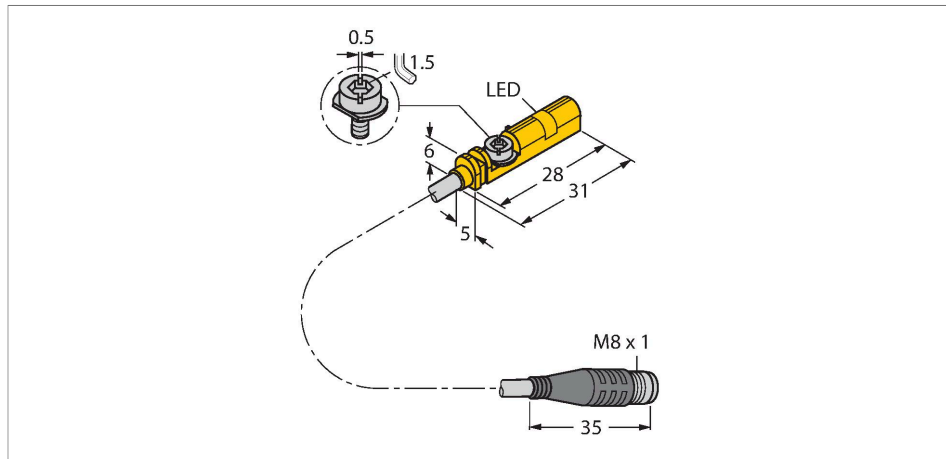


# BIM-UNT-AP6X-0.3-PSG3S/S1139

## Magnetic Field Sensor – For Pneumatic Cylinders



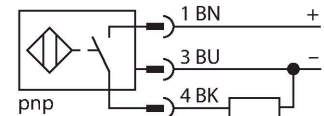
### Features

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

### Technical data

Type	BIM-UNT-AP6X-0.3-PSG3S/S1139
ID no.	4685743
Special version	S1139 corresponds to: Long overtravel
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 <sub>ss</sub>
DC rated operational current	≤ 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 <sub>o</sub>	≤ 1.8 V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP
Switching frequency	1 kHz
<b>Design</b>	<b>Rectangular, UNT</b>
Dimensions	28 x 5 x 6 mm
Housing material	Plastic, PP
Active area material	Plastic, PP

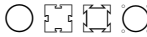
### Wiring diagram



### Functional principle

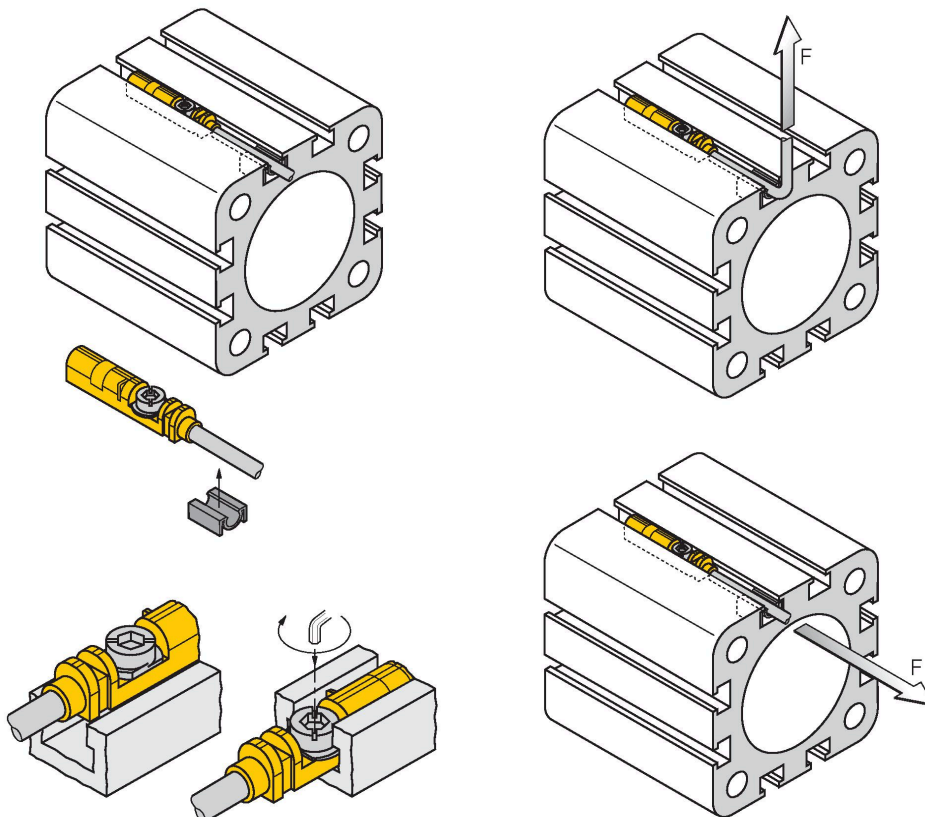
Magnetic field sensors are activated by magnetic fields and are especially suited for piston position detection in pneumatic cylinders. Based on the fact that magnetic fields can permeate non-magnetizable metals, it is possible to detect a permanent magnet attached to the piston through the aluminium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

## Technical data

Tightening torque fixing screw	0.4 Nm
Electrical connection	Cable with connector, Ø 8 mm
Cable quality	Ø 3 mm, Gray, Lif9Y-11Y, PUR, 0.3 m
	Suited for E-ChainSystems® acc. to manufacturers declaration H1063M
Core cross-section	3 x 0.14 mm <sup>2</sup>
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C
<b>Mounting on the following profiles</b>	
Cylindrical design	
Switching state	LED, Yellow
Included in delivery	cable clip

## Mounting instructions

### Mounting instructions/Description



Thanks to the mounting lip, the sensor can be inserted into the groove from above with one hand. Mount the sensors as follows using the patented wing screw: The wing screw and the female thread feature a left-hand 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 in position. A few degrees up to approximately 1.5 turns of the screw with a slotted screwdriver (blade width 0.5 mm) or a 1.5 mm Allen key are sufficient to ensure vibration-proof fastening, depending on the shape of the slot. A tightening torque of 0.4 Nm is sufficient for safe mounting without damaging the cylinder. The sensor can now withstand an axial and radial tensile load of  $F=100\text{N}$  applied on the cable. A cable clip is included in the scope of delivery. It enables smooth cable routing in the groove and ensures that the cable is fastened as securely as possible. The corresponding accessories for mounting on other cylindrical housings must 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: 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 fine-tuning of the switching point on T-groove cylinders; snap-lock mounting in the BIM-UNT sensor fixture; suited for multiple use; material: Metal/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

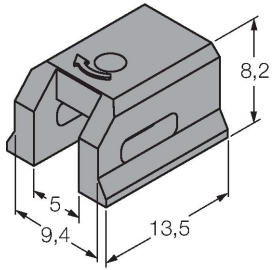
**KLDT-UNT2** 6913351

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

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**KLDT-UNT3**

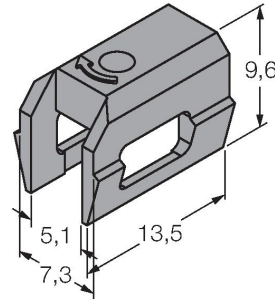
6913352



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