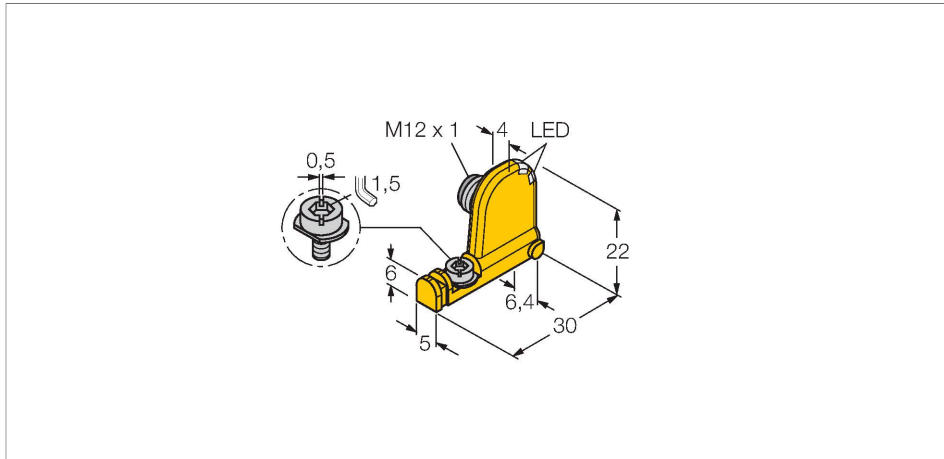# BIM-UNT-AP6X2-H1141
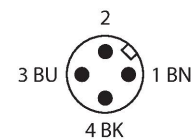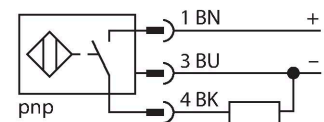# Magnetic Field Sensor – For Pneumatic Cylinders

Features

- For T-groove cylinders without mounting accessories
- Optional accessories for mounting on other cylindrical housings.
- One-hand mounting possible
- 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
- Male connector, M12 x 1
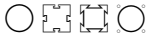
Wiring diagram

Technical data

| Type	BIM-UNT-AP6X2-H1141
Ident. no.	4685726
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	≤ 15 mA
Residual current	≤ 0.1 mA
Isolation test 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	30 x 5 x 22 mm
Housing material	Plastic, PP
Active area material	Plastic, PP
Tightening torque fixing screw	0.4 Nm
Electrical connection	Connector, M12 × 1

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.

Technical data

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	◯ ⬚ ⬚ ◯
Power-on indication	LED, Green
Switching state	LED, Yellow

## Mounting instructions

Mounting instructions/Description
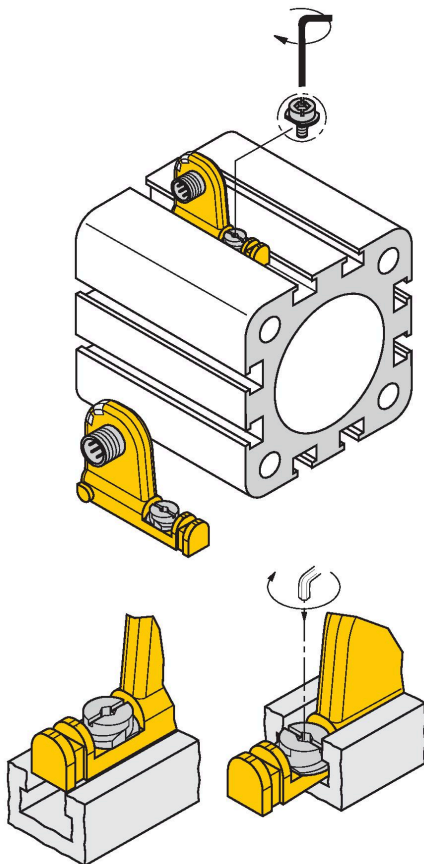
Insert the sensor laterally in the groove with the tip first. Once the correct postion is attained click the sensor in the groove. Finally, screw the sensor tight. Mount the sensors as follows using the patented wing screw: The wing screw features a left-hand female thread. Two small plastic lips keep 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. Mounting accessories for other cylinder sizes have to be ordered separately.
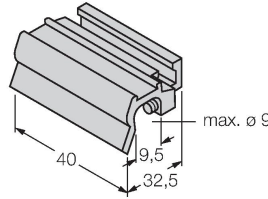
Accessories

KLZ1-INT	6970410
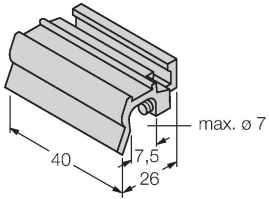
Accessories for mounting the sensors BIM-INT and BIM-UNT on tie-rod cylinders; Cylinder diameter: 32…40 mm; material: Aluminium; Further mounting accessories for other cylinder diameters on request
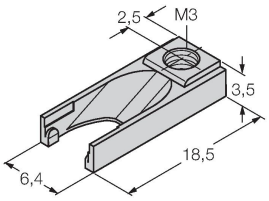
max. ø 7
40   7,5   26

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
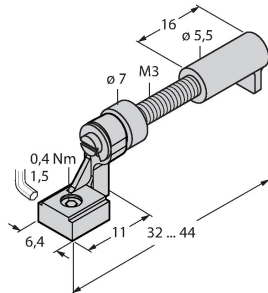
max. ø 9
40   9,5   32,5

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
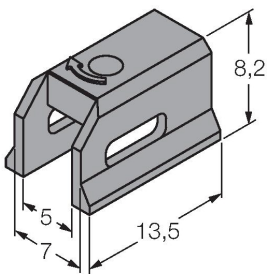
2,5   M3   3,5   6,4   18,5

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
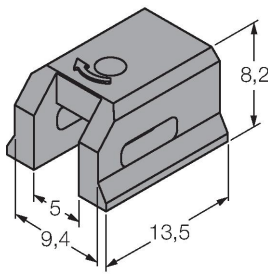
16   ø 5,5   ø 7   M3   0,4 Nm   1,5   6,4   11   32 … 44

KLDT-UNT2	6913351

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

8,2   5   7   13,5

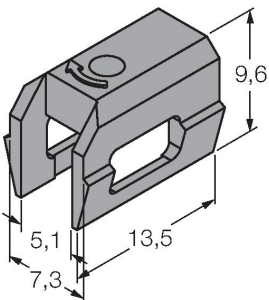| KLDT-UNT3	6913352

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

8,2   5   9,4   13,5

KLDT-UNT6	6913355

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

9,6   5,1   7,3   13,5