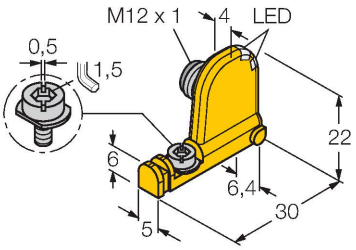
BIM-UNT-AP6X2-H1141
Magnetic Field Sensor – For Pneumatic Cylinders



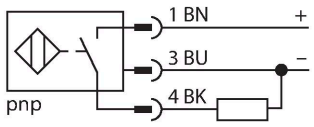
Technical data

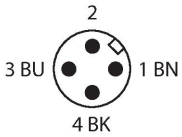
Type	BIM-UNT-AP6X2-H1141
ID	4685726
General data	
Pass speed	≤ 10 m/s
Repeatability	≤ ± 0.1 mm
Temperature drift	≤ 0.1 mm
Hysteresis	≤ 1 mm
Electrical data	
Operating voltage U_B	10…30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_e	≤ 150 mA
No-load current	≤ 15 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_e	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
Switching frequency	1 kHz
Mechanical data	
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

Features

- For T-groove cylinders without mounting accessories
- Optional accessories for mounting on other cylinder designs
- One-hand mounting possible
- Stable mounting
- Magneto-resistive sensor
- DC 3-wire, 10…30 VDC
- NO contact, PNP output
- Male connector, M12 x 1

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 magnet attached to the piston through the aluminium cylinder wall.

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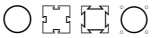
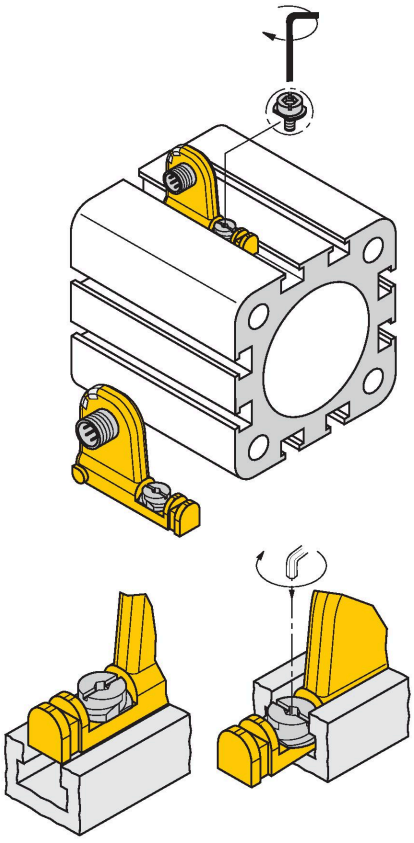
Technical data

Environmental conditions	
Ambient temperature	-25…+70 °C
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
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.

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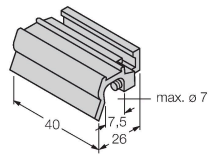
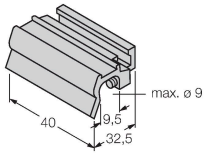
Accessories

KLZ1-INT	6970410



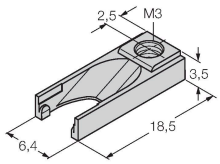
Accessories for mounting the sensors BIM-INT and BIM-UNT on tie-rod cylinders; cylinder diameter: 32… 40 mm; material: Aluminum; further mounting accessories for other cylinder diameters on request

KLZ2-INT	6970411



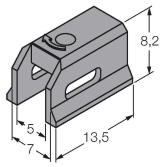
Accessories for mounting the sensors BIM-INT and BIM-UNT on tie-rod cylinders; Cylinder diameter: 50… 63 mm; material: Aluminium; Further mounting accessories for other cylinder diameters on request

UNT-STOPPER	4685751



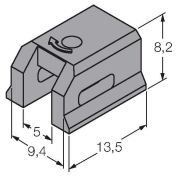
Accessories for finetuning the switchpoint on T-groove cylinders; snap-locked in the BIM-UNT fixture; suited for multiple use; material: plastic

KLDT-UNT2	6913351



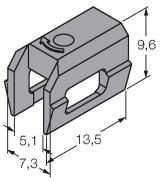
Mounting bracket for mounting magnetic field sensors on dovetail groove cylinders; groove width: 7 mm; material: PPS

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

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