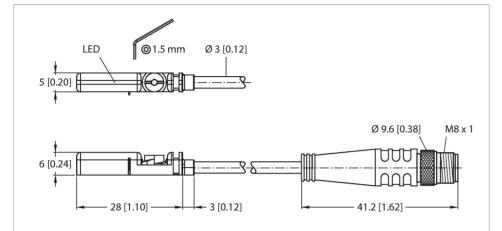


# BIM-UNT-AN6X-0.3-PSG3M Magnetic Field Sensor – For Pneumatic Cylinders



### 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, NPN output
- Pigtail with male end, M8 x 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 nonmagnetizable metals, they detect a permanent magnet attached to the piston through the aluminium cylinder wall.

# Technical data

ID no.4685706Pass speed $\leq 10 \text{ m/s}$ Repeatability $\leq \pm 0.1 \text{ mm}$ Temperature drift $\leq 0.1 \text{ mm}$ Hysteresis $\leq 1 \text{ mm}$ Ambient temperature $-25+70 \text{ °C}$ Operating voltage $1030 \text{ VDC}$ Residual ripple $\leq 10 \% U_{ss}$ DC rated operational current $\leq 150 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$ Short-circuit protectionyes / CyclicVoltage drop at I_s $\leq 1.8 \text{ V}$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function $3$ -wire, NO contact, NPNSwitching frequency1 kHzDesignRectangular, UNTDimensions $28 \times 5 \times 6 \text{ mm}$	Туре	BIM-UNT-AN6X-0.3-PSG3M
Repeatability $\leq \pm 0.1 \text{ mm}$ Temperature drift $\leq 0.1 \text{ mm}$ Hysteresis $\leq 1 \text{ mm}$ Ambient temperature $-25+70$ °COperating voltage $1030 \text{ VDC}$ Residual ripple $\leq 10 \% \text{ U}_{ss}$ DC rated operational current $\leq 150 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$ Short-circuit protectionyes / CyclicVoltage drop at I_s $\leq 1.8 \text{ V}$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function $3$ -wire, NO contact, NPNSwitching frequency $1 \text{ kHz}$ DesignRectangular, UNTDimensions $28 \times 5 \times 6 \text{ mm}$	ID no.	4685706
Temperature drift $\leq 0.1 \text{ mm}$ Hysteresis $\leq 1 \text{ mm}$ Ambient temperature $-25+70$ °COperating voltage $1030 \text{ VDC}$ Residual ripple $\leq 10 \% U_{ss}$ DC rated operational current $\leq 150 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$ Short-circuit protectionyes / CyclicVoltage drop at Is $\leq 1.8 \text{ V}$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function $3$ -wire, NO contact, NPNSwitching frequency $1 \text{ kHz}$ DesignRectangular, UNTDimensions $28 \times 5 \times 6 \text{ mm}$	Pass speed	≤ 10 m/s
Hysteresis $\leq 1 \text{ mm}$ Ambient temperature $-25+70 ^{\circ}\text{C}$ Operating voltage $1030 \text{VDC}$ Residual ripple $\leq 10 ^{\circ}\text{W} ^{ss}$ DC rated operational current $\leq 150 \text{mA}$ No-load current $\leq 15 \text{mA}$ Residual current $\leq 0.1 \text{mA}$ Isolation test voltage $\leq 0.5 \text{kV}$ Short-circuit protectionyes / CyclicVoltage drop at I_a $\leq 1.8 \text{V}$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, NPNSwitching frequency1 kHzDesignRectangular, UNTDimensions28 x 5 x 6 \text{mm}	Repeatability	≤ ± 0.1 mm
Ambient temperature $-25+70$ °COperating voltage1030 VDCResidual ripple $\leq 10 \% U_{ss}$ DC rated operational current $\leq 150 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$ Short-circuit protectionyes / CyclicVoltage drop at I_s $\leq 1.8 \text{ V}$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, NPNSwitching frequency1 kHzDesignRectangular, UNTDimensions28 x 5 x 6 mm	Temperature drift	≤ 0.1 mm
Operating voltage1030 VDCResidual ripple $\leq 10 \% U_{ss}$ DC rated operational current $\leq 150 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$ Short-circuit protectionyes / CyclicVoltage drop at I_o $\leq 1.8 \text{ V}$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, NPNSwitching frequency1 kHzDesignRectangular, UNTDimensions28 x 5 x 6 mm	Hysteresis	≤ 1 mm
Residual ripple $\leq 10 \% U_{ss}$ DC rated operational current $\leq 150 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$ Short-circuit protection $yes / Cyclic$ Voltage drop at I_o $\leq 1.8 \text{ V}$ Wire breakage/Reverse polarity protection $yes / Complete$ Output function $3$ -wire, NO contact, NPNSwitching frequency $1 \text{ kHz}$ DesignRectangular, UNTDimensions $28 \times 5 \times 6 \text{ mm}$	Ambient temperature	-25+70 °C
DC rated operational current $\leq 150 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$ Short-circuit protectionyes / CyclicVoltage drop at I_o $\leq 1.8 \text{ V}$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, NPNSwitching frequency1 kHzDesignRectangular, UNTDimensions28 x 5 x 6 mm	Operating voltage	1030 VDC
No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$ Short-circuit protectionyes / CyclicVoltage drop at I <sub>o</sub> $\leq 1.8 \text{ V}$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, NPNSwitching frequency1 kHzDesignRectangular, UNTDimensions28 x 5 x 6 mm	Residual ripple	≤ 10 % U <sub>ss</sub>
Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $\leq 0.5 \text{ kV}$ Short-circuit protectionyes / CyclicVoltage drop at I <sub>o</sub> $\leq 1.8 \text{ V}$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, NPNSwitching frequency1 kHzDesignRectangular, UNTDimensions28 x 5 x 6 mm	DC rated operational current	≤ 150 mA
Isolation test voltage $\leq 0.5 \text{ kV}$ Short-circuit protectionyes / CyclicVoltage drop at I <sub>e</sub> $\leq 1.8 \text{ V}$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, NPNSwitching frequency1 kHzDesignRectangular, UNTDimensions28 x 5 x 6 mm	No-load current	≤ 15 mA
Short-circuit protectionyes / CyclicVoltage drop at I_o $\leq 1.8 \text{ V}$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, NPNSwitching frequency1 kHzDesignRectangular, UNTDimensions28 x 5 x 6 mm	Residual current	≤ 0.1 mA
Voltage drop at I. $\leq 1.8 \ V$ Wire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, NPNSwitching frequency1 kHzDesignRectangular, UNTDimensions28 x 5 x 6 mm	Isolation test voltage	≤ 0.5 kV
Wire breakage/Reverse polarity protectionyes / CompleteOutput function3-wire, NO contact, NPNSwitching frequency1 kHzDesignRectangular, UNTDimensions28 x 5 x 6 mm	Short-circuit protection	yes / Cyclic
Output function3-wire, NO contact, NPNSwitching frequency1 kHzDesignRectangular, UNTDimensions28 x 5 x 6 mm	Voltage drop at I <sub>e</sub>	≤ 1.8 V
Switching frequency1 kHzDesignRectangular, UNTDimensions28 x 5 x 6 mm	Wire breakage/Reverse polarity protection	yes / Complete
Design Rectangular, UNT   Dimensions 28 x 5 x 6 mm	Output function	3-wire, NO contact, NPN
Dimensions 28 x 5 x 6 mm	Switching frequency	1 kHz
	Design	Rectangular, UNT
	Dimensions	28 x 5 x 6 mm
Housing material Plastic, PP	Housing material	Plastic, PP
Active area material Plastic, PP	Active area material	Plastic, PP
Tightening torque fixing screw 0.4 Nm	Tightening torque fixing screw	0.4 Nm
Electrical connection Cable with connector, M8 × 1	Electrical connection	Cable with connector, M8 × 1

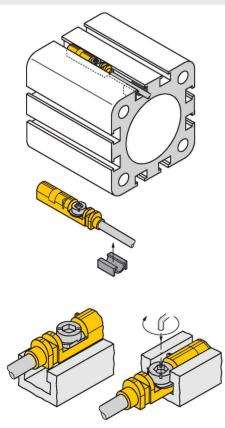


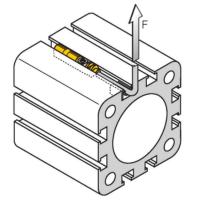
### Technical data

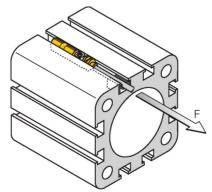
Cable quality	Ø 3 mm, Gray, Lif9Y-11Y, PUR, 0.3 m
	Suited for E-ChainSystems® acc. to manufacturers declaration H1063M
Core cross-section	3 x 0.14 mm <sup>2</sup>
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C
Mounting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

# Mounting instructions

#### Mounting instructions/Description





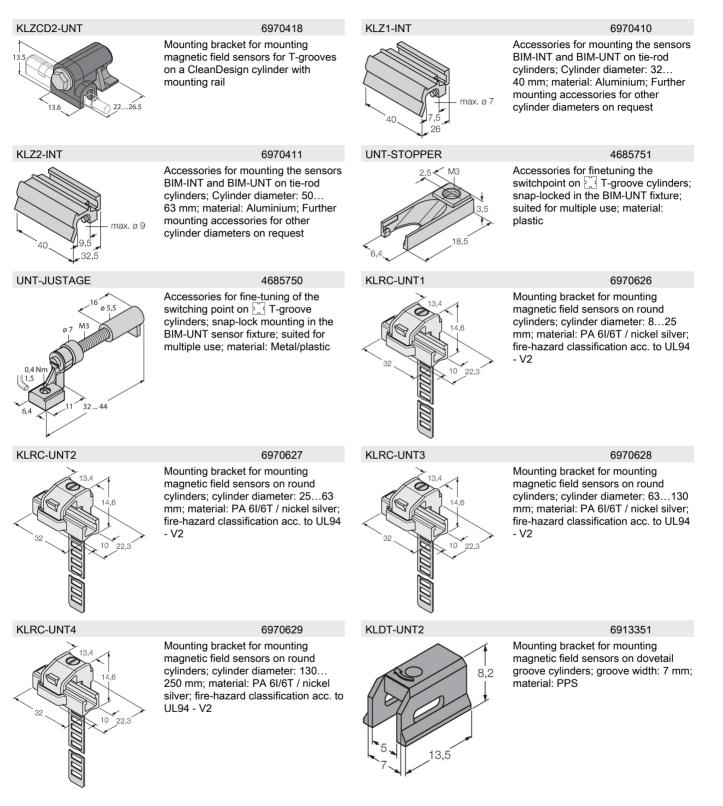


Thanks to the mounting lip, the sensor can be inserted into the groove from above with one hand. Mount the sensors as follows using the patented wing screw: The wing screw and the female thread feature a left-hand thread. Two small plastic lips keep the screw in position, small plastic lips keep the 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=100N 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. ready-to-install. Turn the screw clockwise. The

2|4



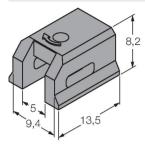
### Accessories



3|4



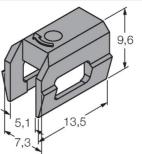
#### KLDT-UNT3



#### 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