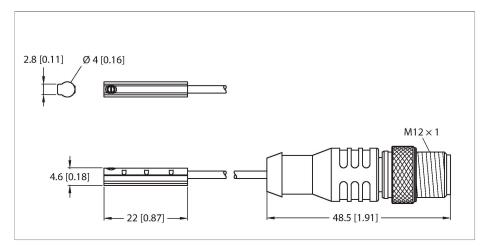
BIM-UNC-AP6X-0.3-RS4| 15-05-2025 16-26 | Technical modifications reserved



BIM-UNC-AP6X-0.3-RS4 Magnetic Field Sensor – For Pneumatic Cylinders



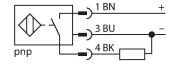
Technical data

ID 100001906 General data Pass speed ≤ 0.3 m/s Repeatability ≤ ± 0.1 mm Temperature drift ≤ 0.3 mm Hysteresis ≤ 1 mm Electrical data Operating voltage U _s 1130 VDC Ripple U _{ss} ≤ 10 % U _{Brouse} DC rated operating current I _e ≤ 100 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 0.02 kHz Mechanical data Design Rectangular, UNC Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1 Cable quality Ø 2 mm, Gray, Lif9Y-11Y, PUR, 0.3 m	Туре	BIM-UNC-AP6X-0.3-RS4
Pass speed ≤ 0.3 m/s Repeatability ≤ ± 0.1 mm Temperature drift ≤ 0.3 mm Hysteresis ≤ 1 mm Electrical data Operating voltage U _s 1130 VDC Ripple U _s ≤ 10 % U _{senax} DC rated operating current I _e ≤ 100 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 0.02 kHz Mechanical data Design Rectangular, UNC Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Active area material plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1	ID	100001906
Repeatability ≤ ± 0.1 mm Temperature drift ≤ 0.3 mm Hysteresis ≤ 1 mm Electrical data 1130 VDC Ripple U _{sc} ≤ 10 % U _{Bmax} DC rated operating current I _c ≤ 100 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 _c ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP Switching frequency 0.02 kHz Mechanical data Rectangular, UNC Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Active area material plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1	General data	
Temperature drift ≤ 0.3 mm Hysteresis ≤ 1 mm Electrical data Operating voltage U _B 1130 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _s ≤ 100 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 _s ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP Switching frequency 0.02 kHz Mechanical data Design Rectangular, UNC Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Active area material plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1	Pass speed	≤ 0.3 m/s
Hysteresis ≤ 1 mm Electrical data Operating voltage U _B 1130 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _e ≤ 100 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 0.02 kHz Mechanical data Design Rectangular, UNC Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Active area material plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1	Repeatability	≤ ± 0.1 mm
Electrical data Operating voltage U _B 1130 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _B × 100 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection Voltage drop at I _B Wire break/reverse polarity protection Output function 3-wire, NO contact, PNP Switching frequency Mechanical data Design Rectangular, UNC Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Active area material Plastic, PP-GF20 Tightening torque fixing screw Electrical connection Cable with connector, M12 x 1	Temperature drift	≤ 0.3 mm
Operating voltage Us 1130 VDC Ripple Uss ≤ 10 % Usmax DC rated operating current Is ≤ 100 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 Is ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP Switching frequency 0.02 kHz Mechanical data Eestangular, UNC Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Active area material plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 x 1	Hysteresis	≤ 1 mm
Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _e ≤ 100 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 0.02 kHz Mechanical data Design Rectangular, UNC Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Active area material plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1	Electrical data	
DC rated operating current I _e ≤ 100 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 0.02 kHz Mechanical data Design Rectangular, UNC Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Active area material plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1	Operating voltage U _B	1130 VDC
No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP Switching frequency 0.02 kHz Mechanical data Pesign Design Rectangular, UNC Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Active area material plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1	Ripple U _{ss}	≤ 10 % U _{Bmax}
Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP Switching frequency 0.02 kHz Mechanical data Pesign Design Rectangular, UNC Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Active area material plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1	DC rated operating current I _e	≤ 100 mA
Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP Switching frequency 0.02 kHz Mechanical data Rectangular, UNC Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Active area material plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1	No-load current	≤ 15 mA
Short-circuit protection Voltage drop at I₀ Wire break/reverse polarity protection Output function Switching frequency Mechanical data Design Rectangular, UNC Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Active area material Plastic, PP-GF20 Tightening torque fixing screw Cable with connector, M12 × 1	Residual current	≤ 0.1 mA
Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP Switching frequency 0.02 kHz Mechanical data Pesign Design Rectangular, UNC Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Active area material plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1	Isolation test voltage	0.5 kV
Wire break/reverse polarity protection Output function 3-wire, NO contact, PNP Switching frequency 0.02 kHz Mechanical data Design Rectangular, UNC Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Active area material Plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1	Short-circuit protection	yes/Cyclic
Output function 3-wire, NO contact, PNP Switching frequency 0.02 kHz Mechanical data Design Rectangular, UNC Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Active area material plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1	Voltage drop at I _e	≤ 1.8 V
Switching frequency 0.02 kHz Mechanical data Design Rectangular, UNC Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Active area material Plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1	Wire break/reverse polarity protection	yes/Complete
Mechanical data Design Rectangular, UNC Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Active area material plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1	Output function	3-wire, NO contact, PNP
Design Rectangular, UNC Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Active area material plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1	Switching frequency	0.02 kHz
Dimensions 22 x 4 x 4.6 mm Housing material Plastic, PP-GF20 Active area material plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1	Mechanical data	
Housing material Plastic, PP-GF20 Active area material plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1	Design	Rectangular, UNC
Active area material plastic, PP-GF20 Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1	Dimensions	22 x 4 x 4.6 mm
Tightening torque fixing screw 0.1 Nm Electrical connection Cable with connector, M12 × 1	Housing material	Plastic, PP-GF20
Electrical connection Cable with connector, M12 × 1	Active area material	plastic, PP-GF20
	Tightening torque fixing screw	0.1 Nm
Cable quality Ø 2 mm, Gray, Lif9Y-11Y, PUR, 0.3 m	Electrical connection	Cable with connector, M12 × 1
	Cable quality	Ø 2 mm, Gray, Lif9Y-11Y, PUR, 0.3 m

Features

- For SMC C-groove cylinders without mounting accessories
- ■One-hand mounting possible
- Stable mounting
- Magneto-resistive sensor
- ■DC 3-wire, 11...30 VDC
- ■NO contact, PNP output
- Pigtail with M12 × 1 male connector

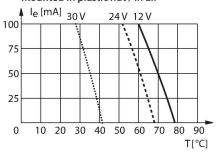
Wiring diagram



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.

mounted in plastic nut / in air



mounted in metal nut 100 75 50 25 0 10 20 30 40 50 60 70 80 90 TI°C

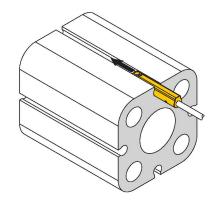


Technical data

Core cross-section	3 x 0.08 mm ²
Litz wire	40 x0.05 mm
Environmental conditions	
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
Mounting on the following profiles	
Cylindrical design	#
Switching state	LED, Yellow
Included in delivery	Cable clip

Mounting instructions

Mounting instructions/Description



The sensor is mounted in the groove from the side. If the screw is turned clockwise, it moves out of the thread and pushes the sensor upwards towards the cylinder. This fixes the sensor in place. A quarter turn of the screw with a slotted screwdriver is sufficient to fasten the sensor so that it doesn't vibrate. A tightening torque of 0.1 Nm is sufficient for safe mounting without damaging the cylinder. 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.