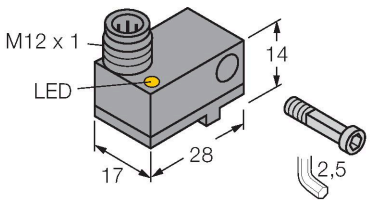
BIM-NST-AP6X-H1141/S34
Magnetic Field Sensor – for pneumatic cylinders (magnetic-field immune)



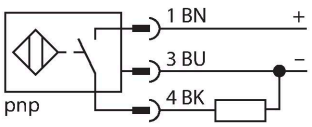
Technical data

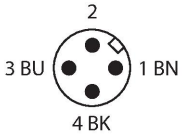
Type	BIM-NST-AP6X-H1141/S34
ID	4685401
Special version	S34 Corresponds to:Resistant to magnetic fields
General data	
Pass speed	≤ 1 m/s
Repeatability	≤ ± 0.1 mm
Temperature drift	≤ 0.1 mm
Hysteresis	≤ 1 mm
Electrical data	
Operating voltage U_B	10…30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_e	≤ 200 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	0.015 kHz
Mechanical data	
Design	Rectangular, NST
Dimensions	28 x 17 x 14 mm
Housing material	Plastic, PA12-GF30
Active area material	Plastic, PA12-GF30

Features

- Plastic, PA12-GF30
- Magnetic-inductive sensor
- Weld resistant to AC fields of 50…60 Hz
- DC 3-wire, 10…30 VDC
- NO contact, PNP output
- Male connector, M12 x 1

Wiring diagram





Functional principle

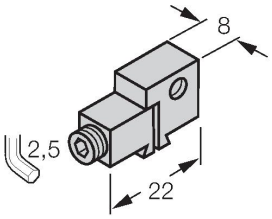
Magnetic field sensors are activated by magnetic fields and are used, in particular, for the detection of the piston position in pneumatic cylinders. As magnetic fields can permeate non-magnetizable metals, they detect a permanent magnet attached to the piston through the aluminium cylinder wall. Weld-field immune permaprox sensors "freeze" the switching status when detecting a magnetic AC field (50…60 Hz). In this way, false switching operations are prevented during the welding process. When the AC field disappears, the sensors resume standard operation.

Technical data

Electrical connection	Connector, M12 × 1
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	1 x screw M3x20, 1 x tension bolt, 1 x spring washer

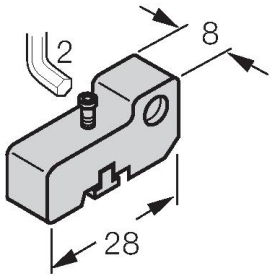
Accessories

KLN3 6970504



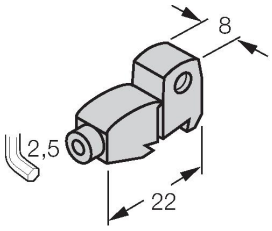
Mounting bracket for mounting magnetic field sensors on dovetail groove cylinders or T-groove cylinders; clamping width: 5.2… 13.5 mm; material: Anodized aluminum

KLN-SMC 6970503



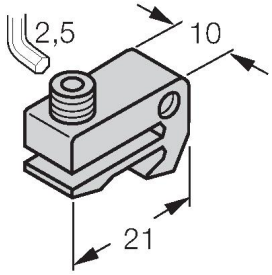
Mounting bracket for mounting magnetic field sensors on SMC cylinders; clamping width 4 mm; material: Anodized aluminum

KLF1 6970401



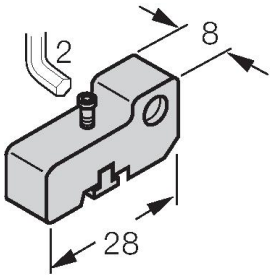
Mounting bracket for mounting magnetic field sensors on profile cylinders with external dovetail guide; for all cylinder diameters, material: Anodized aluminum

KLF2 6970402



Mounting bracket for mounting magnetic field sensors on profile cylinders (IMI Norgren); cylinder diameter: 32…100 mm; material: Anodized aluminum

SMC-325 A3106



Mounting bracket for mounting magnetic field sensors on SMC cylinders; clamping width 4 mm; material: Anodized aluminum