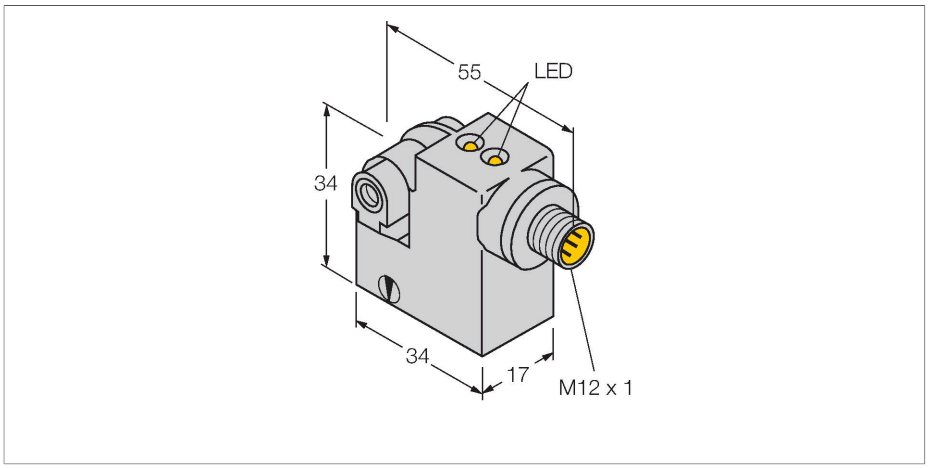
BIM-IKM-AP6X2-H1141/S34
Magnetic Field Sensor – for pneumatic cylinders (magnetic-field immune)



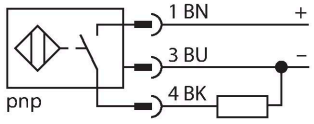
Technical data

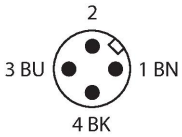
Type	BIM-IKM-AP6X2-H1141/S34
ID	46272
Special version	S34 Corresponds to:Resistant to magnetic fields
General data	
Pass speed	≤ 1 m/s
Repeatability	≤ ± 0.1 mm
Temperature drift	≤ 0.1 mm
Hysteresis	≤ 1 mm
Electrical data	
Operating voltage U_B	10…30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating 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	0.02 kHz
Mechanical data	
Design	Rectangular, IKM
Dimensions	34 x 17 x 34 mm
Housing material	Metal, GD-Zn
Active area material	Plastic, PA12-GF30

Features

- Rectangular, height 34 mm
- Metal, GD-Zn
- 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

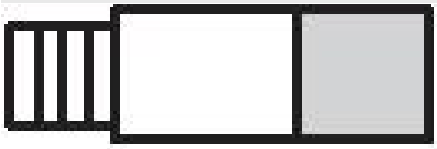
Magnetic field sensors are activated by magnetic fields and are used, in particular, for the detection of the piston position in pneumatic cylinders. As magnetic fields can permeate non-magnetizable metals, they detect a permanent magnet attached to the piston through the aluminium cylinder wall. Weld-field 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	◯ # #
Power-on indication	LED, Green
Switching state	LED, Yellow

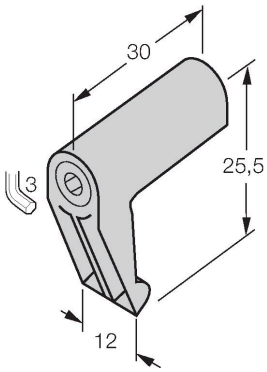
Mounting instructions

Mounting instructions/Description



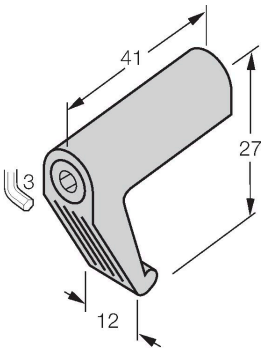
Accessories

KLI1	69710



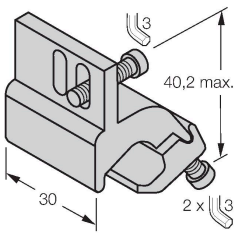
Mounting bracket for mounting magnetic field sensors on tie-rod cylinders; cylinder diameter: 32…100 mm; material: Die-cast Zinc

KLI3	69712



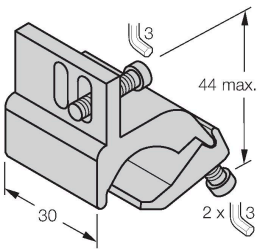
Mounting bracket for mounting magnetic field sensors on tie-rod cylinders; cylinder diameter: 63…160 mm; material: Die-cast Zinc

KLI5	6971802



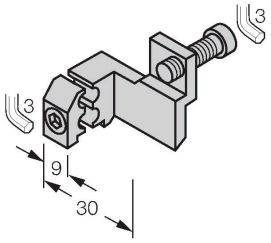
Mounting bracket for mounting magnetic field sensors on profile cylinders; cylinder diameter: 32…50 mm; material: Aluminum

KLI6	6971805



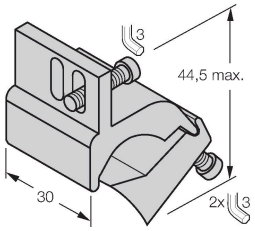
Mounting bracket for mounting magnetic field sensors on profile cylinders; cylinder diameter: 50…100 mm; material: Aluminum

KLI7	6971810



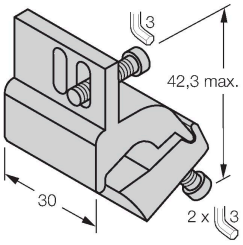
Mounting bracket for mounting magnetic field sensors on profile cylinders with external dovetail guide; cylinder diameter: 32…200 mm; material: Aluminum

KLI6Z	6971806



Mounting bracket for mounting magnetic field sensors on tie-rod cylinders; cylinder diameter: 50…125 mm; material: Aluminum

KLI5Z	6971803



Mounting bracket for mounting magnetic field sensors on tie-rod cylinders; cylinder diameter: 32…63 mm; material: Aluminum