Magnetic Field Sensor
for pneumatic cylinders
BIM-UNR-AP6X-0.3-PSG3M

Type designation
Ident no.
Pass speed
Repeatability
Temperature drift
Hysteresis
Ambient temperature
Operating voltage
Residual ripple
DC rated operational current
No-load current I₀
Residual current
Isolation test voltage
Short-circuit protection
Voltage drop at I₀
Wire breakage/Reverse polarity protection
Output function
Switching frequency
Design
Dimensions
Housing material
Active area material
Tightening torque fixing screw
Electrical connection
Cable quality
Cable cross section
Litz wire
Vibration resistance
Shock resistance
Protection class
MTTF
Packaging unit
Mounting on the following profiles
Cylindrical design
Switching state
Included in delivery

- For C-groove cylinders without mounting accessories
- Optional accessories for mounting on other cylindrical housings.
- One-hand mounting possible
- Stable mounting
- Magneto-resistive sensor
- DC 3-wire, 11…30 VDC
- NO contact, PNP output
- Pigtail with M8 × 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.

Derating Curve

- mounted in plastic nut / in air
- mounted in metal nut

<table>
<thead>
<tr>
<th>Temperature (°C)</th>
<th>IE (mA)</th>
<th>30 V</th>
<th>24 V</th>
<th>12 V</th>
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<tbody>
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<td>0</td>
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<tr>
<td>100</td>
<td>0</td>
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</tr>
</tbody>
</table>

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Mounting instructions/Description

The sensor is mounted in the groove from above. 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 1.5 mm Allen key to fasten the screw with a quarter turn. A fixing torque of 0.2 Nm is sufficient for safe mounting without damaging the cylinder. Cable clips are included in the scope of delivery. They enable smooth cable routing in the groove. Mounting accessories for other cylinder sizes have to be ordered separately.
## Accessories

<table>
<thead>
<tr>
<th>Type code</th>
<th>Ident no.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KLR2-UNR</td>
<td>100000596</td>
<td>Mounting of a sensor in INR or UNR design on a round cylinder</td>
</tr>
<tr>
<td>ASB-4</td>
<td>6965104</td>
<td>Clip collar to mount brackets for magnetic field sensors on round cylinders with diameters of 28…39 mm. Other lengths are available under designations ASB-1 to ASB-9.</td>
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</table>