### Linear Position Sensor
For Analog Monitoring of Pneumatic Cylinders
WIM45-UNTL-LIU5X2-0.3-PSG4M

#### Type designation
- WIM45-UNTL-LIU5X2-0.3-PSG4M
- Ident no.: 1536620

#### Measuring range
- 45 mm
- Resolution: 10 bit
- Repeatability: ≤ 0.1% of measuring range IA - BI
- ≤ with non-rotatable piston rod
- Reproducibility: ≤ 45 µm
- Linearity deviation: ≤ 1%
- Temperature drift: ≤ ± 0.006 % / K
- Ambient temperature: -25...+70 °C

#### Operating voltage
- 15...30 VDC
- Residual ripple: ≤ 10 % Uₗ
- No-load current Iₗ: ≤ 15 mA
- Isolation test voltage: ≤ 0.5 kV
- Short-circuit protection: yes
- Wire breakage/Reverse polarity protection: yes/Complete
- Output function: 4-wire, Analog output
- Voltage output: 0...10 V
- Current output: 4...20 mA
- Load resistance voltage output: ≥ 4.7 kΩ
- Load resistance, current output: ≤ 0.4 kΩ

#### Design
- Dimensions: 73 x 5 x 14.5 mm
- Housing material: Plastic, PA12-GF30
- Tightening torque fixing screw: 0.4 Nm
- Electrical connection: Cable with connector, M8 × 1
- Vibration resistance: 55 Hz (1 mm)
- Shock resistance: 30 g (11 ms)
- Protection class: IP67
- Packaging unit: 1

#### Display magnetic-field status
- 2x LED, yellow

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- Plastic, PA12-GF30
- For direct mounting on pneumatic T-groove cylinders
- Magnetic field status displayed via two LEDs
- Measured value storage
- Hardly affected by external magnetic fields
- 4-wire, 15...30 VDC
- 0...10 V and 4...20 mA
- Pigtail with male end, M8 x 1

### Wiring Diagram

![Wiring Diagram Image]

**Functional principle**

Magnetic inductive linear position sensors with analog output accomplish control tasks by providing a signal proportional to the position of the piston rod. The polarity of the magnet has no effect on the output signal. The outstanding features of these robust sensors are excellent repeatability, resolution and linearity, excellent electromagnetic capability and a broad temperature range.

### Characteristic

![Characteristic Graph Image]
Mounting instructions/Description

Thanks to the mounting lip, the sensor can be inserted into the groove from above with one hand. The sensor is mounted as follows: Turn the screw clockwise. The sensor is pressed down and thus locked. A quarter turn of the screw with a slotted screwdriver (blade thickness 0.5 mm) or 1.5 mm Allen key is sufficient to fasten the sensor so that it doesn't vibrate. A tightening torque of 0.4 Nm is sufficient for secure 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.

LEDs:
If both LEDs are on, the magnet is in the measuring range of the sensor and the magnetic field has optional magnetizing force; accuracy and linearity of the output curve are within the specified range.
If only one LED is on, the magnet is within the measuring range, but the magnetizing force is not ideal; the output characteristic may be outside the specified range.
If both LEDs are off, no magnet is in the measuring range of the sensor.
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## Accessories

<table>
<thead>
<tr>
<th>Type code</th>
<th>Ident no.</th>
<th>Description</th>
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<tr>
<td>IM43-13-SR</td>
<td>7540041</td>
<td>Triamplifier; 1-channel; input 0/4...20 mA or 0/2...10 V; supply of 2- or 3-wire transmitters/sensors; limit value adjustment via teach button; three relay outputs with one NO contact each; removable terminal blocks; 27 mm wide; universal voltage supply 20...250 VUC; further Limit value indicators are described in our &quot;Interface Technology&quot; catalog.</td>
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