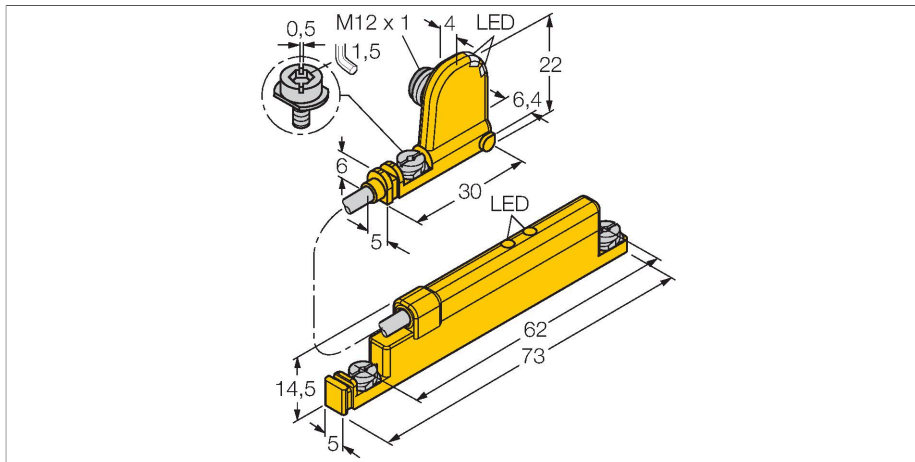


# WIM45-UNTL-0.3-BIM-UNT-LUAP6X4-H1141

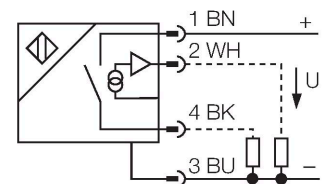
## Linear Position Sensor – For Analog Monitoring of Pneumatic Cylinders



### Features

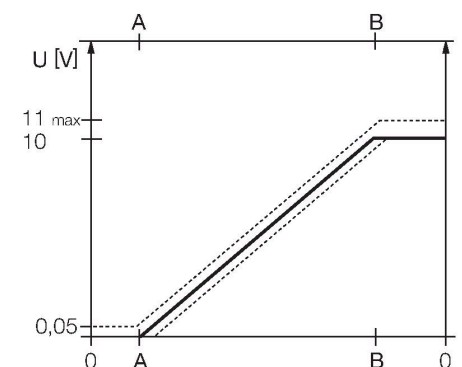
- Plastic, PA12-GF30
- For direct mounting on pneumatic T-groove cylinders
- Magnetic field status displayed via two LEDs
- Measured value storage
- Hardly affected by external magnetic fields
- 4-wire, 15...30 VDC
- NO contact, PNP output
- Analog output
- 0...10 V
- Cable with male end M12 x 1

### Wiring diagram



### 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.



### Technical data

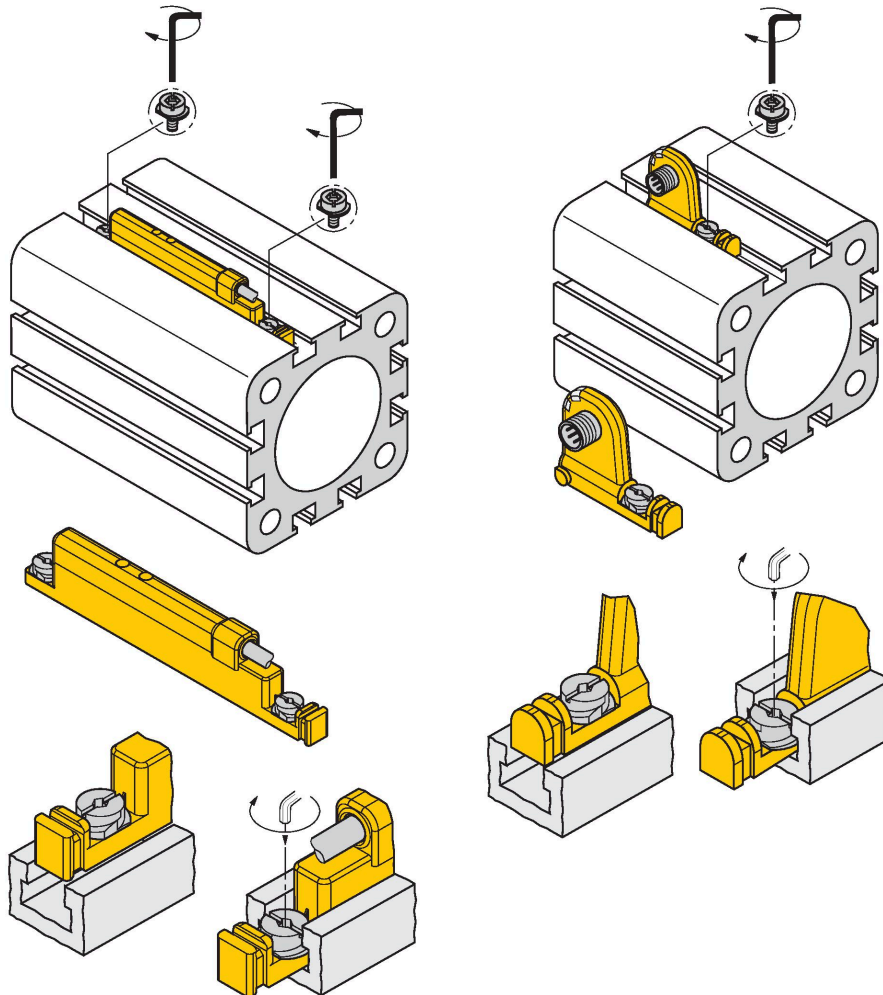
Type	WIM45-UNTL-0.3-BIM-UNT-LUAP6X4-H1141
ID	1536623
Measuring principle	Magnetic
<b>General data</b>	
Measuring range	45 mm
Resolution	10 bit
Pass speed	≤ 10 m/s
Repeatability	≤ 0.1% of measuring range IA - BI
	with non-rotatable piston rod
Reproducibility	≤ 45 µm
Linearity deviation	≤ 1 %
Temperature drift	≤ ± 0.006 %/K
Hysteresis	3...15 %
<b>Electrical data</b>	
Operating voltage $U_B$	15...30 VDC
Ripple $U_{ss}$	≤ 10 % $U_{Bmax}$
DC rated operating current $I_o$	≤ 150 mA
No-load current	≤ 23 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes
Wire break/reverse polarity protection	no/Complete
Output function	4-wire, NO contact, PNP/Analog output
Voltage output	0...10 V
Load resistance voltage output	≥ 4.7 kΩ
Output recovery time	≤ 15 ms

## Technical data

Switching frequency	1 kHz
<b>Mechanical data</b>	
Design	UNT <sub>L</sub>
Dimensions	73 x 5 x 14.5 mm
Housing material	Plastic, PA12-GF30/PP
Tightening torque fixing screw	0.4 Nm
Electrical connection	Cable with connector, M12 × 1
Cable quality	Ø 3 mm, Gray, Lif9Y-11Y, PUR
	Suited for E-ChainSystems® acc. to manufacturers declaration H1063M
Core cross-section	3 x 0.14 mm <sup>2</sup>
<b>Environmental conditions</b>	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
Power-on indication	LED, Green
Switching state	LED, Yellow
Display magnetic-field status	2x LED, yellow
Included in delivery	Cable clip

## Mounting instructions

### 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.

Function of LEDs on analog device:  
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.