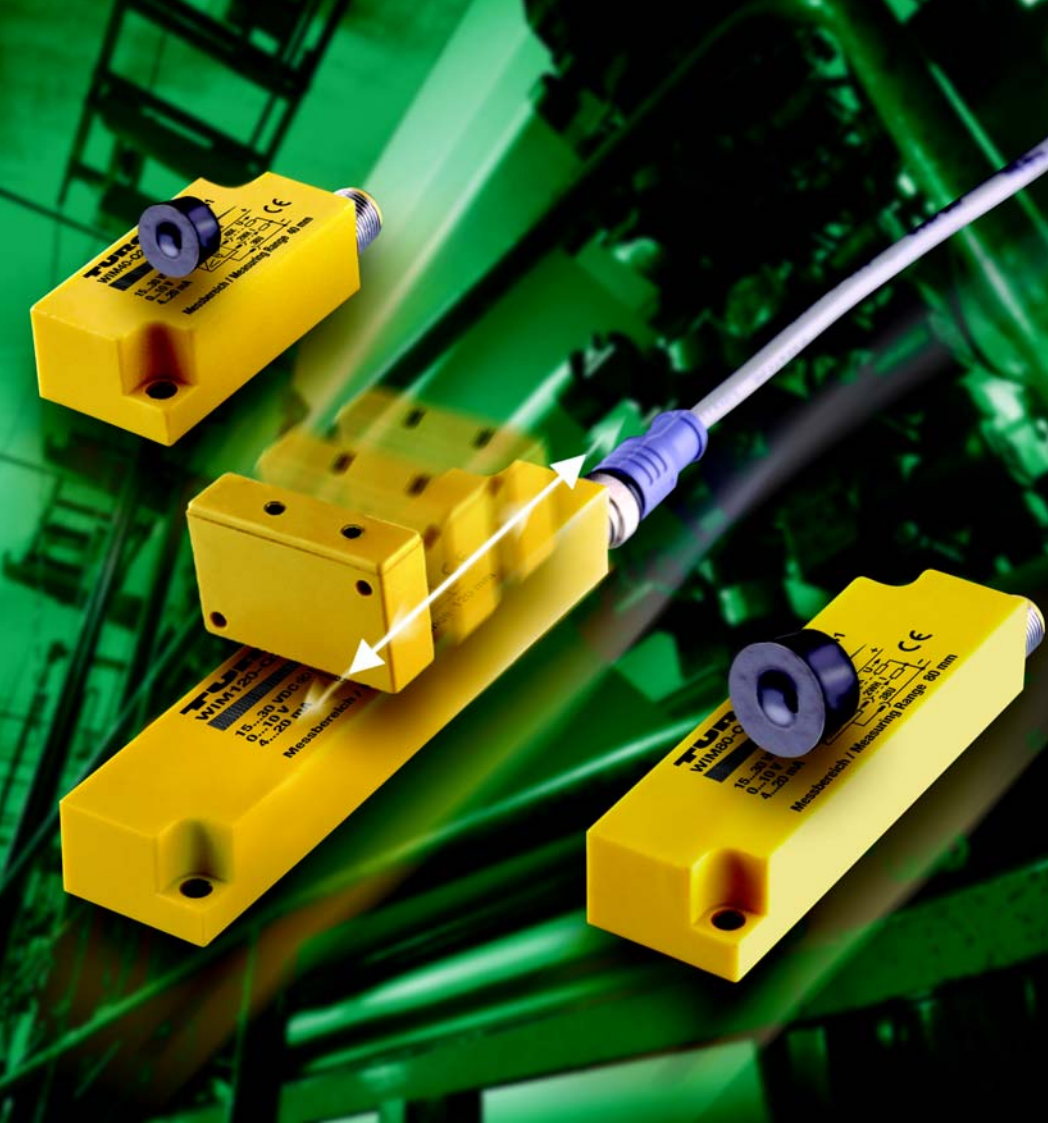


### MAGNET-INDUCTIVE LINEAR POSITION SENSORS



The new type of magnet-inductive linear position sensor, series WIM, operates on a completely new inductive function principle. It provides a current or voltage signal (4...20 mA, 0...10 V) that is proportional to the distance of the positioning magnet.

This new line features an extremely compact design and is capable of compensating slight lateral offset of the positioning magnet. The excellent repeat accuracy rating of 0.5 % of the measuring length clearly shows that the sensor provides very precise position values. The device's temperature drift of 0.09 %/°C also meets highest demands. With these first-class ratings, the new series really closes the gap between pure digital positioning and high precision measuring systems.

WIM type sensors are not only capable of solving manifold conventional engineering applications, e.g. in clamping cylinders, but are also suited for robotics and handling.

The sensor is not susceptible to an offset of the positioning magnet due to axial magnetising of the positioning magnet. The new line is also suited for applications with a specific positioning magnet that is magnetised in the direction of detection, e.g. flow rate monitoring via rotameters or globe valves.

In most cases it is possible to continue using the existing actuation magnet, so that retrofitting is very simple.



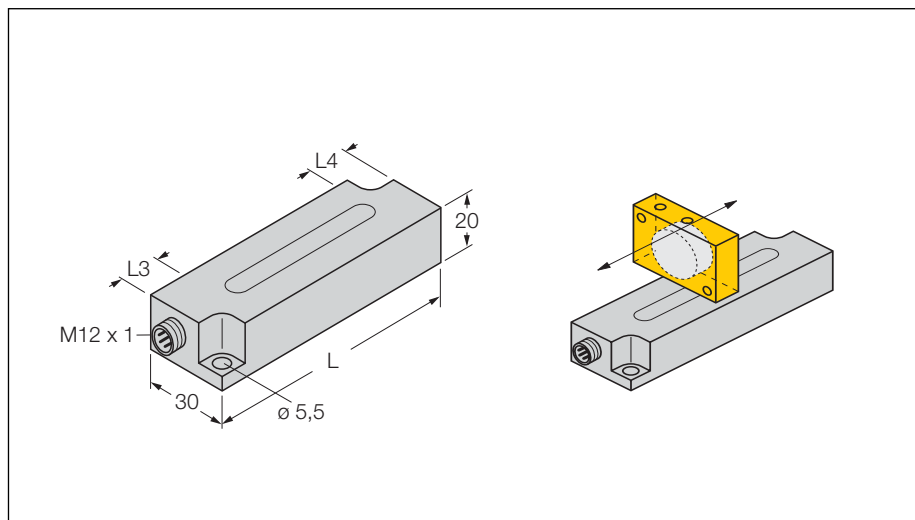
The magnet-inductive linear position sensors come in three different measuring lengths (30, 70 and 110 mm) and with four different positioning magnets. It features a robust mechanical design and is universally applicable due to its non-contact and wear-free operation principle.

- Compact housing
- Excellent repeat accuracy
- Non-contact and wear-free detection
- Small blind zone
- Sensing range adjustable via potentiometer
- Large distance between positioning magnet and sensor
- Immune to external magnetic field of positioning magnet
- Axially polarised positioning magnet, offset compensation
- Current and voltage output (4... 20 mA, 0 ... 10 V) in a single device
- Protection degree IP67
- Robust M12 x 1 connector

# Magnet-inductive linear position sensor

## Types and data

Type	WIM30-Q20L60-LiU5-H1141	WIM70-Q20L100-LiU5-H1141	WIM110-Q20L140-LiU5-H1141
Ident. number	1539275	1539276	in preparation
Length L	60 mm	100 mm	140 mm
Measuring range	30 mm	70 mm	110 mm

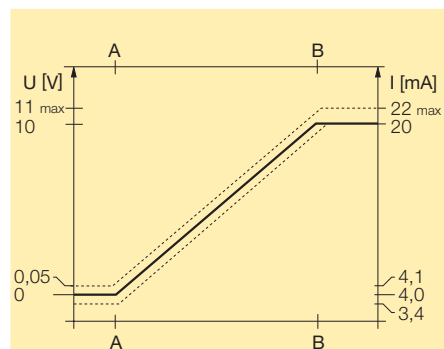


Blind zone connector end (L3)	5 mm
Blind zone non-connector end (L4)	25 mm
Repeat accuracy	≤ 0.5 % of measuring range   A - B   depending on positioning magnet

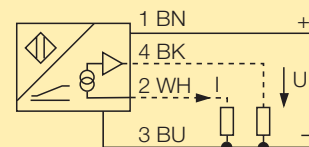
Linearity tolerance	≤ 3 % of final value
Temperature drift	0.09 % °C
Operating temperature	0 ... + 60 °C

<b>Operating voltage <math>U_B</math></b>	15... 30 VDC
Ripple	≤ 10 % $U_{SS}$
No-load current $I_0$	≤ 10 mA
Nominal insulation voltage	0.5 kV
Output function	4-wire, analogue output
Short-circuit protection	yes
Wire-break/ Reverse polarity protection	yes / complete
Voltage output	0... 10 V
Current output	4... 20 mA
Load resistance voltage output	≥ 4.7 Ω
Load resistance current output	≤ 0.4 Ω
Reading rate	80 Hz

<b>Housing</b>	rectangular, Q20L
Dimensions	L x 30 x 20 mm
Material	plastic, PBT-GF20-V0
Active face material	plastic, PBT-GF20-V0
Connection	connector, M12 x 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 x g (11 ms)
Degree of protection	IP67

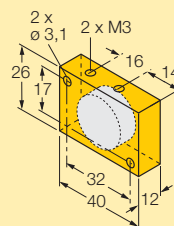


### Wiring diagram

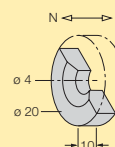


### Positioning magnet

Type DM-Q12  
Ident.-no. 6900367



Type DMR20-30-4  
Ident.-no. 6900214



Nominal distance  
between sensor and magnet 5 mm

