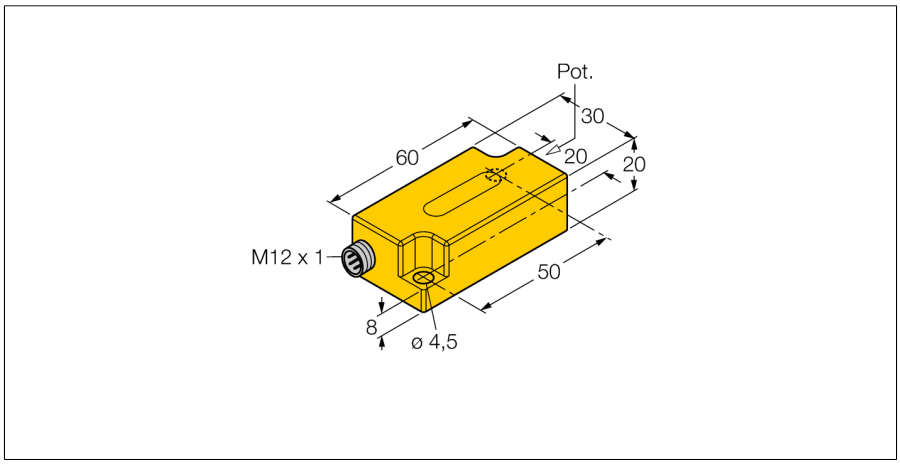
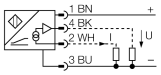
Magnetic Inductive Linear Position Sensor for pneumatic cylinders
WIM40-Q20L60-LIU5- H1141

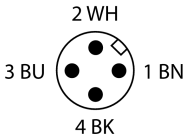


- **Plastic, PC**
- **Hardly affected by external magnetic fields**
- **Analog output (current and voltage)**
- **The measuring range changes depending on the magnetic field**
- **Potentiometer to adjust the characteristic slope**
- **4-wire, 15…30 VDC**
- **Analog output**
- **0…10 V and 4…20 mA**
- **Male connector, M12 x 1**

Type designation	WIM40-Q20L60-LIU5- H1141
Ident-No.	1539280
Measuring range	10…50 mm mm
Mounting conditions	Non-flush
Blind zone connector end L3	10 mm
Blind zone non-connector end L4	10 mm
Repeatability	≤ 0.5 % of measuring range |A - B|
	≤ depending on positioning element
Linearity deviation	≤ 2 %
Temperature drift	≤ ± 0.06 % / K
Ambient temperature	-25…+70 °C
Operating voltage	15…30 VDC
Residual ripple	≤ 10 % U_{ss}
No-load current I_0	≤ 23 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…10V
Current output	4…20 mA
Load resistance voltage output	≥ 4.7 kΩ
Load resistance, current output	≤ 0.4 kΩ
Measuring sequence frequency	1000 Hz
Design	Rectangular,Q20L60
Dimensions	60 x 30 x 20 mm
Housing material	Plastic, PC
Electrical connection	Connector, M12 × 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67

Wiring Diagram

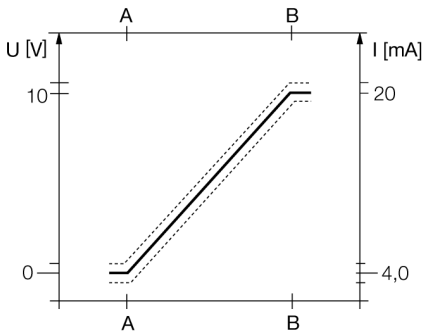




Functional principle

Magnetic inductive linear position sensors with analog output accomplish control tasks by providing a signal proportional to the location of the positioning element. They feature excellent reproducibility, resolution and linearity.

Due to their extremely robust design, they are especially suited for industrial applications. They also excel in their high electromagnetic compatibility and stability over a wide temperature range.



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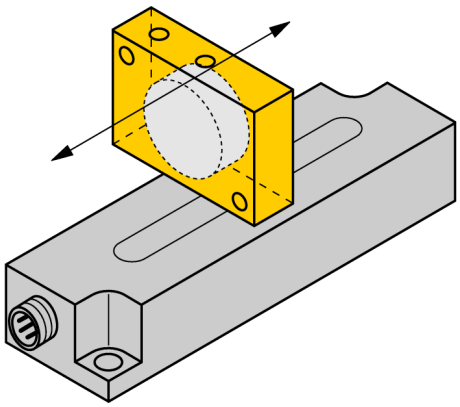
Mounting instructions/Description	Mounting instructions
Width active area B	30 mm



In order to guarantee proper operation of the sensor, it is important that the sensor and the magnet are correctly mounted. The magnet has to be aligned in a certain angle to the sensor (see photo). The connector end of the sensor and the south pole of the magnet must point in the same direction. Between the surface of the sensor and the bottom edge of the magnet a defined maximum distance should not be exceeded. This distance depends on the size and strength of the magnet. If a DM-Q12 or DMR20-10-4 is applied the maximum distance is 5 mm. Neighbouring magnets may have an influence on the output signal of the sensor. The gradient of the analog output characteristic can be adjusted via the potentiometer at the front. One clockwise turn increases the gradient.

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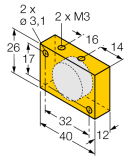
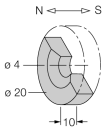
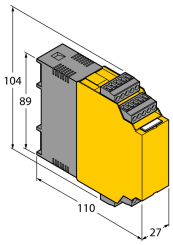
Accessories

Type code	Ident-No.	Description	
DM-Q12	6900367	Actuation magnet; rectangular, plastic; attainable switching distance 58 mm on BIM-(E)M12 sensors resp. 49 mm on BIM-EG08 sensors; in combination with Q25L linear position sensors: recommended distance between the sensor and magnet: 3…5 mm	
DMR20-10-4	6900214	Actuation magnet; Ø 20 mm (Ø 4 mm), h: 10 mm; sensing range 59 mm on BIM-(E)M12 sensors resp. 50 mm on BIM-EG08 sensors; in combination with Q25L: Recommended distance between sensor and magnet: 3 … 4 mm	
IM43-13-SR	7540041	Trip amplifier; 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 "Interface Technology" catalog.	

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