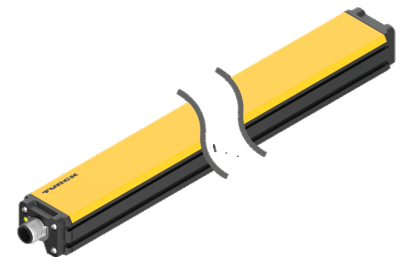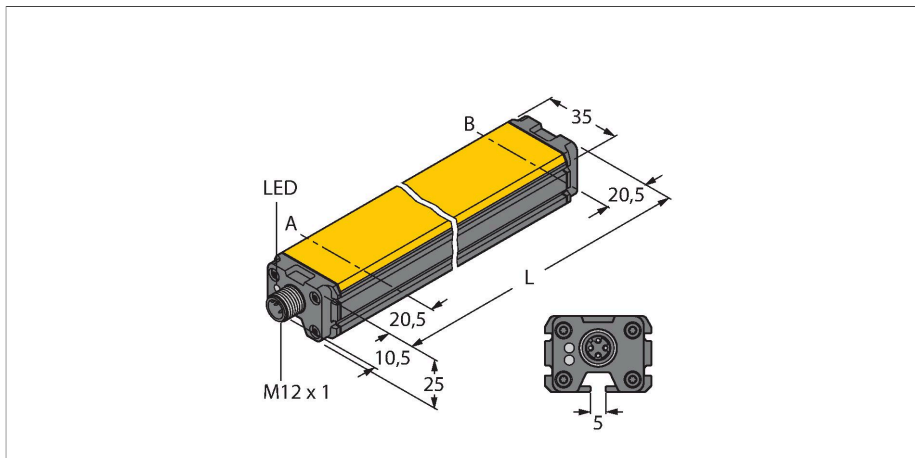# WIM100-Q25L-LIU5X2-H1141
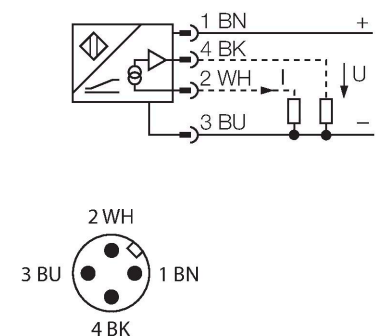# Magnetically Actuated Linear Position Sensor

Technical data

Type	WIM100-Q25L-LIU5X2-H1141
ID	1536630
Measuring principle	Magnetic
General data	
Measuring range	100 mm
Resolution	0.1 mm/10 bit
Repeatability	≤ 0.1% of measuring range IA - BI
	depending on positioning element
Linearity deviation	≤ 1 %
Temperature drift	≤ ± 0.006 %/K
Electrical data	
Operating voltage	15…30 VDC
Residual ripple	≤ 10 % U_{ss}
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes
Wire breakage/Reverse polarity protection	yes / Complete
Output function	4-pin, 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
Sample rate	200 Hz
Current consumption	< 50 mA
Mechanical data	
Design	Profile, Q25L
Dimensions	141 x 35 x 25 mm

Features

- Rectangular, aluminium / plastic
- Many mounting possibilities
- Measuring range indication via LED
- Immune to external magnetic fields
- Extremely short blind zones
- 4-wire, 15…30 VDC
- Analog output
- 0…10 V and 4…20 mA
- Male connector, M12 x 1

Wiring diagram

Functional principle

Linear position sensors operate on the Hall principle and accomplish simple control tasks. They provide an output signal proportional to the actuating magnet. 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

Housing material	Aluminum/plastic, PA6-GF30
Active area material	Plastic, PA6-GF30
Electrical connection	Connector, M12 × 1
Environmental conditions	
Ambient temperature	-25…+75 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	131 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Measuring range display	LED, yellow, positioning element in measuring range yellow flashing, no positioning element in measuring range after power reset
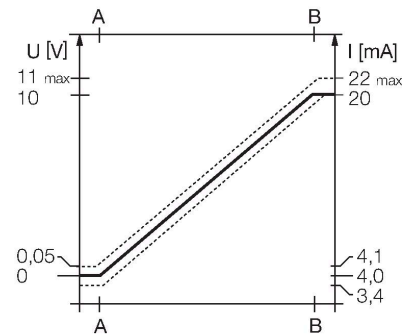
Mounting instructions
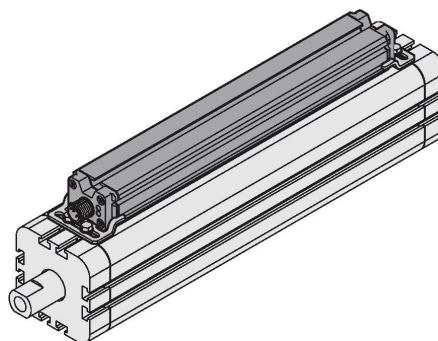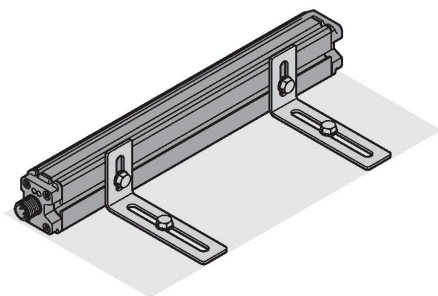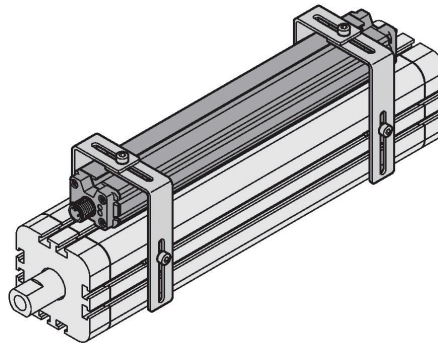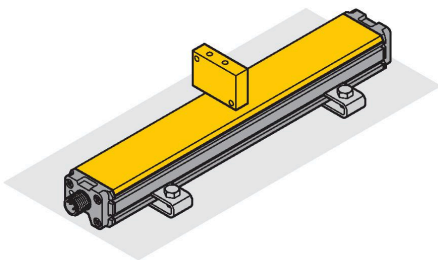
Numerous accessories allow the sensor to be mounted in various positions. Opposite to the active face, the sensor housing features a mounting groove for which sliding blocks are available. The lateral slot profiles can be used for mounting, too.
When used with an external positioning element, the sensor can either be mounted with the active face located opposite or laterally to the mounting surface. Drilling slots guarantee highest flexibility for fine adjustment.
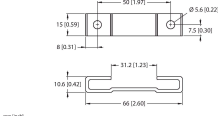The mounting accessories for linear position sensors can be adjusted to the respective cylinder sizes. The stainless steel accessories guarantee safe and robust mounting as well as highest flexibility. .

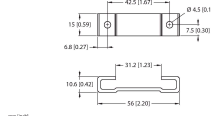# Accessories

M1-Q25L (2 PCS)	6901045

Mounting foot for linear position sensors LI-Q25L; material: aluminum; 2 pcs. per bag
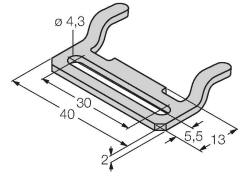
M2-Q25L	6901046

Mounting foot for linear position sensors LI-Q25L; material: aluminum; 2 pcs. per bag
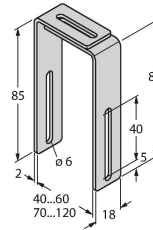
MB1-Q25	6901026

Mounting clip for linear position sensor Q25L; material Stainless steel; 2 pcs. per bag

MB2.1-Q25(4PCS)	6901027

Mounting bracket for linear position sensors Q25L for mounting on pneumatic cylinders (40…60 mm); material: Stainless steel; 4 pcs. per bag

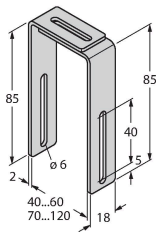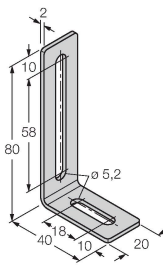| MB2.2-Q25(4PCS)	6901028

Mounting bracket for linear position sensors Q25L, for mounting on pneumatic cylinders (70…120 mm); material: Stainless steel; 4 pcs. per bag
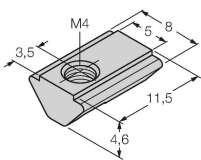
M4-Q25L	6901048

Mounting bracket and sliding block for linear position sensors LI-Q25L; material: Stainless steel; 2 pcs. per bag
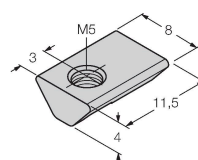
MN-M4-Q25	6901025

Sliding block with M4 thread for the backside profile of the LI-Q25L; material: galvanized steel; 10 pcs. per bag

MN-M5-Q25	6901039

Sliding block with M5 thread for the backside profile of the LI-Q25L; material Stainless steel; 10 pcs. per bag
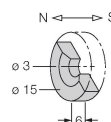
DM-Q12	6900367

Actuator, rectangular, plastic, attainable switching distance 58 mm on BIM-(E)M12 magnetic field sensors or 49 mm on BIM-EG08 magnetic field sensors; for Q25L linear position sensors: recommended distance between the sensor and magnet: 3…5 mm
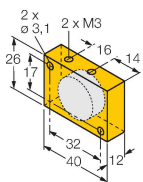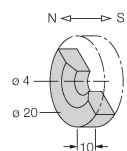
DMR15-6-3	6900216

Actuation magnet, Ø 15 mm (Ø 3 mm), h: 6 mm; attainable switching distance 36 mm on BIM-(E)M12 magnetic field sensors or 32 mm on BIM-EG08 magnetic field sensors; for Q25L linear position sensors: recommended distance between the sensor and magnet: 3…4 mm

DMR20-10-4	6900214

Actuation magnet; Ø 20 mm (Ø 4 mm), h: 10 mm; attainable switching distance 59 mm on BIM-(E)M12 magnetic field sensors or 50 mm on BIM-EG08 magnetic field sensors; for Q25L linear position sensors: recommended distance between the sensor and magnet: 3…4 mm
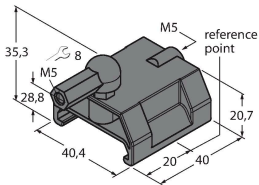
DMR31-15-5	6900215

Actuation magnet, Ø 31 mm (Ø 5 mm), h: 15 mm; attainable switching distance 90 mm on BIM-(E)M12 magnetic field sensors or 78 mm on BIM-EG08 magnetic field sensors; for Q25L linear position sensors: recommended distance between the sensor and magnet: 3…5 mm
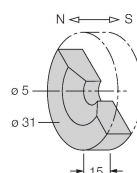
P1-WIM-Q25L   6901088

Guided positioning element for WIM-Q25L, inserted in the sensor groove.

Accessories

Dimension drawing	Type	ID	
	RKC4.4T-2/TEL	6625013	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval
	RKC4.301T-0.15-RSC4.334T/TXL	6631382	Extension cable, M12 female/male, straight, 4-pin, cable length: 0.15m, jacket material: PUR, black; cULus approval; Adapter cable for sensors with analog output on pin 2, for connection to analog inputs of fieldbus modules with 4-wire technology

Accessories

Dimension drawing	Type	ID	
	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.