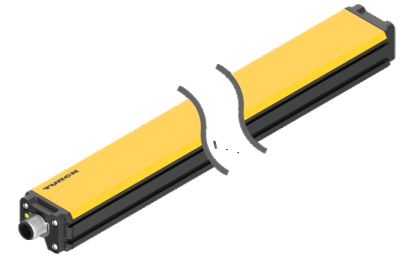
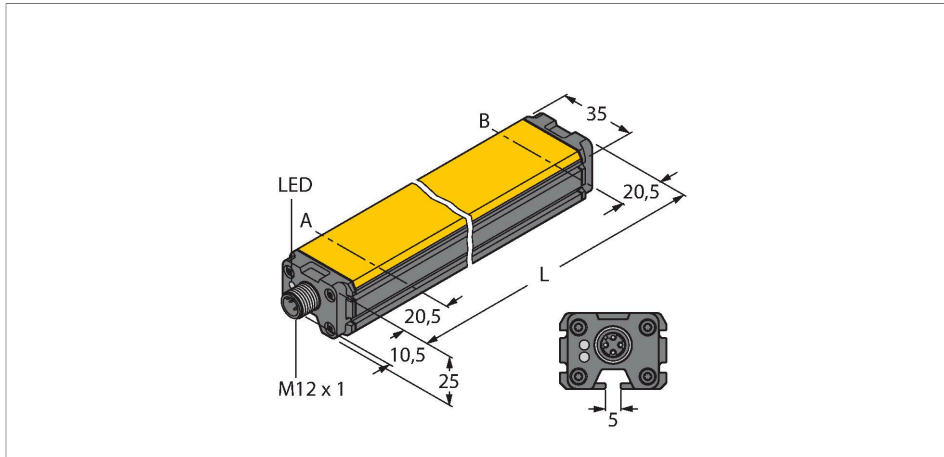


WIM160-Q25L-LIU5X2-H1141

Magnetically Actuated Linear Position Sensor



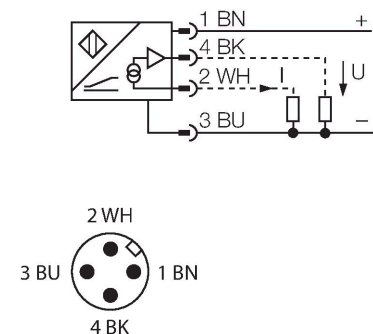
Technical data

Type	WIM160-Q25L-LIU5X2-H1141
Ident. no.	1536632
Measuring principle	Magnetic
Measuring range	160 mm
Resolution	0.16 mm/10 bit
Repeatability	≤ 0.1% of measuring range IA - BI depending on positioning element
Linearity deviation	≤ 1 %
Temperature drift	≤ ± 0.006 % / K
Ambient temperature	-25...+75 °C
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
Design	Profile, Q25L
Dimensions	201 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

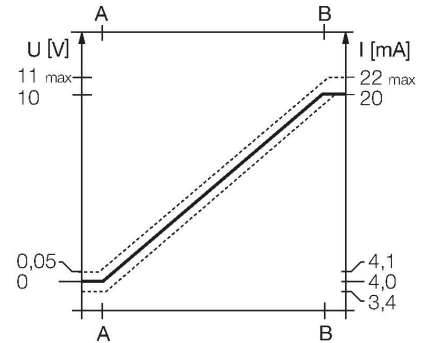
Linear position sensors operate on the Hall principle and accomplish simple control tasks. They provide an output signal proportional to the actuating magnet. The polarity of the magnet has no effect on the output signal. The outstanding features of these robust sensors are excellent repeatability, resolution and

WIM160-Q25L-LIU5X2-H1141 | 12/03/2020 06-40 | technical changes reserved

Technical data

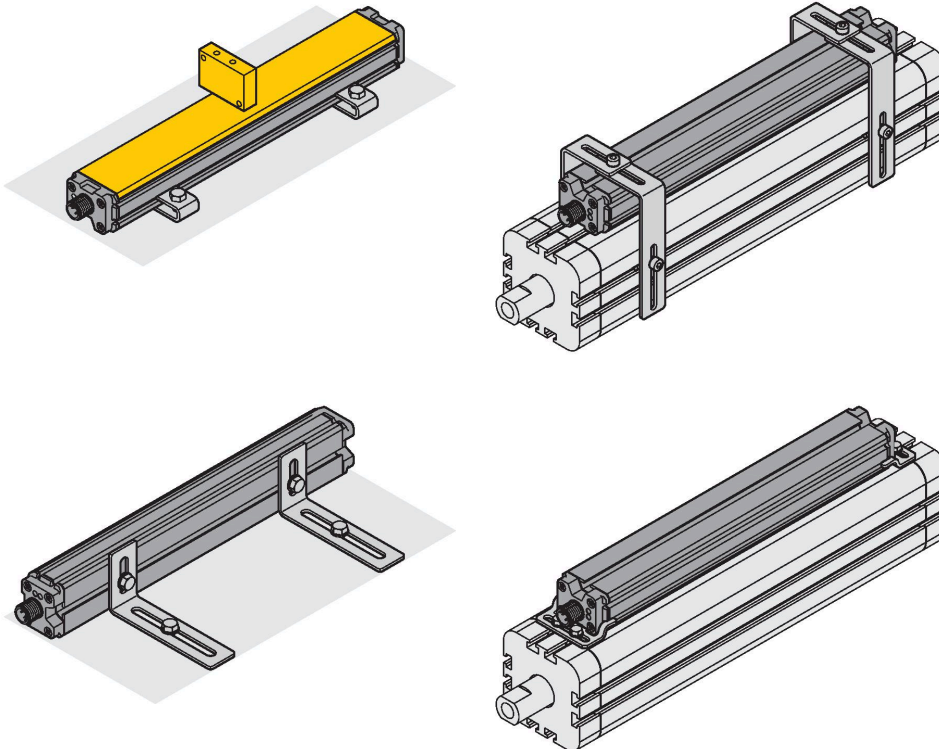
Housing material	Aluminum/plastic, PA6-GF30
Active area material	Plastic, PA6-GF30
Electrical connection	Connector, M12 × 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	131 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Measuring range display	LED, yellow, positioning element in measuring range yellow flashing, no positioning element in measuring range after power reset

linearity, excellent electromagnetic capability and a broad temperature range.



Mounting instructions

Mounting instructions/Description



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 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 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, \varnothing 15 mm (\varnothing 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; \varnothing 20 mm (\varnothing 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, \varnothing 31 mm (\varnothing 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.

Wiring accessories

Dimension drawing	Type	Ident. no.	
	RKC4.4T-2/TEL	6625013	Connection cable, female M12, straight, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com
	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