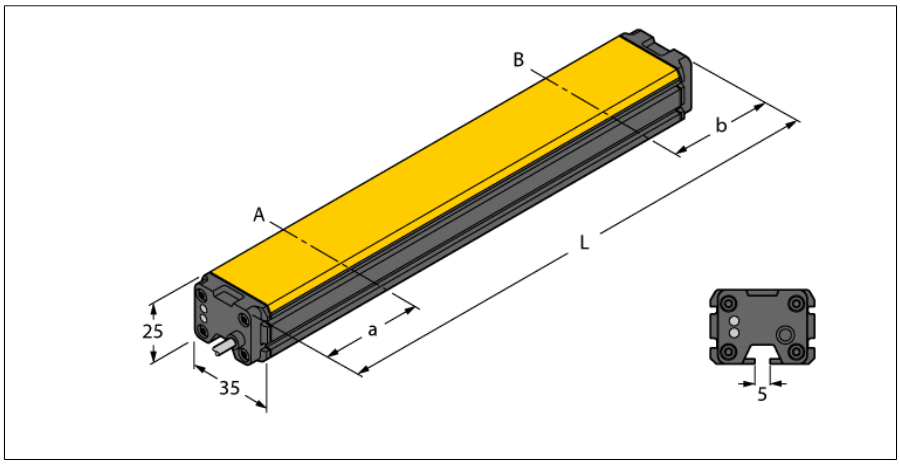
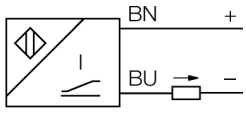
Magnetically actuated angle sensor
WIM200-Q25L-Li-Exi/S1285

Industrial Automation



- **ATEX category II 2 G, Ex Zone 1**
- **ATEX category II 2 D, Ex Zone 21**
- **Rectangular, aluminium / plastic**
- **Many mounting possibilities**
- **Immune to external magnetic fields**
- **Extremely short blind zones**
- **2-wire, 14…30 VDC**
- **Analog output**
- **4 … 20 mA**
- **Cable connection**

Wiring diagram

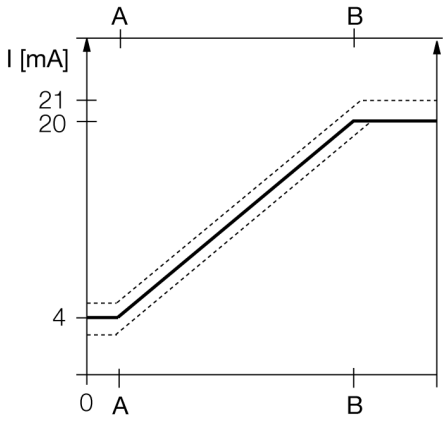


Type code	WIM200-Q25L-Li-Exi/S1285
Ident no.	1536652
Special features	stainless steel screws for the closure caps, special cable outlet (customized closure caps), cliché printing on the rear side
Measuring range [A…B]	200mm
Auflösung	10 bit
Blind zone a	20.5 mm
Blind zone b	20.5 mm
Repeatability	≤ 1 % of measuring range |A - B| ≤ 0.5 %, after warm-up 0.5 h
Linearity deviation	≤ 1 %
Temperature drift	≤ ± 0.06 % / K
Ambient temperature	-25…+65 °C
Operating voltage	14…30VDC an der Anschlussstelle des Sensors
Residual ripple	≤ 10 % U_{ss}
Rated insulation voltage	≤ 0.5 kV
Short-circuit protection	yes
Wire breakage / Reverse polarity protection	yes/ complete
Output function	2-wire, analog output
Current output	4…20mA
Load resistance current output	≤ [(U_B -14 V) / 20 mA] kΩ
Approval acc. to	KEMA 03 ATEX 1122 X Edition no. 2
Internal capacitance (C_i) / inductance (L_i)	0 nF / 0 µH
Device designation	Ⓔx II 2 G Ex ia IIC T6 Gb / II 2 D Ex ia IIIC T85°C Db (max. Ui = 30V, Ii = 120mA, Pi = 675mW)
Construction	rectangular, Q25L
Dimensions	241 x 35 x 25 mm
Housing material	aluminium
Material active area	plastic, PA
Connection	cable
Cable quality	4 mm, blue, LifYY, PVC, 2m
Cable cross section	2 x 0.25 mm²
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
IP Rating	IP67

Functional principle

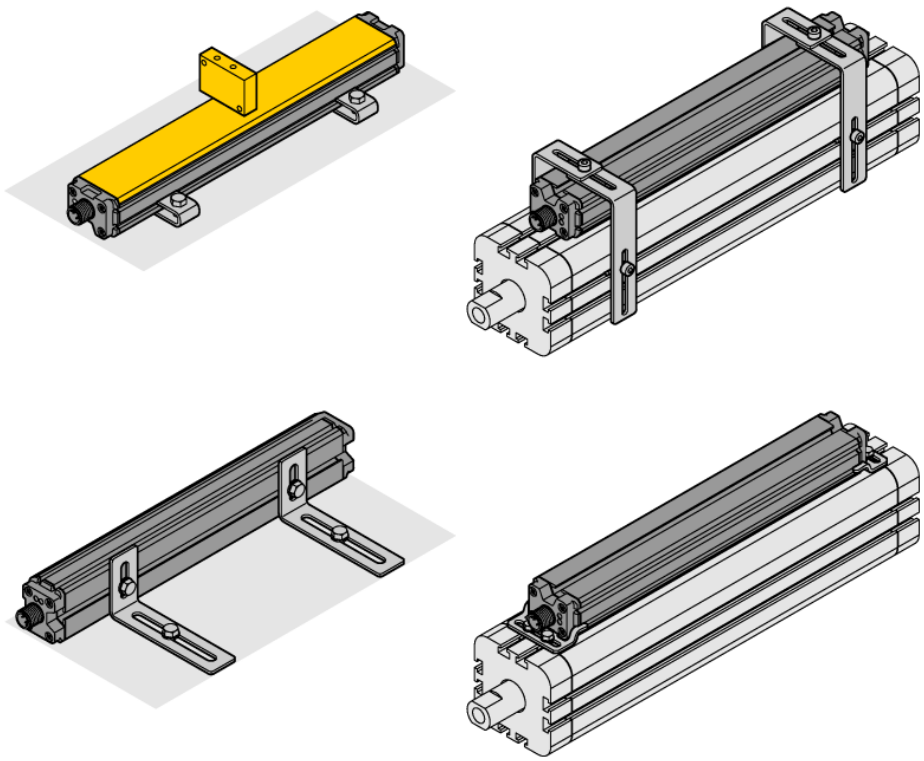
Linear position sensors operate on the Hall principle and accomplish simple control tasks. They provide an output signal proportional to the actuating magnet. The polarity of the magnet has no effect on the output signal. The rugged sensors have an optimal repeatability, resolution and linearity and offer a high electromagnetic compatibility, as well as a wide temperature range.

Characteristic



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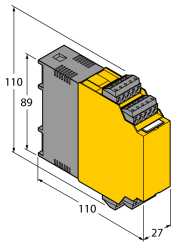
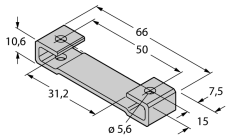
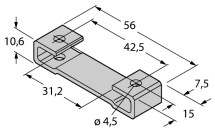
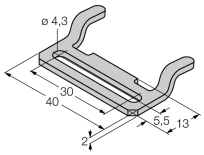
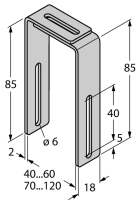
Mounting instructions / Description



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. .

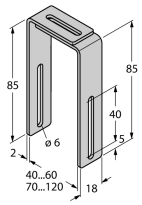
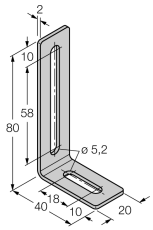
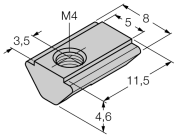
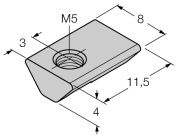
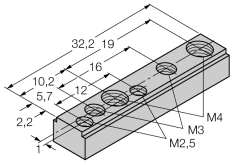
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Accessories

Type code	Ident no.	Description	Design
IM33-11EX-HI	7506443	Isolating transducers; 1-channel; power supply of 2-wire measuring transducers with HART® communication as well as connection of active 2-wire and passive 3-wire transmitters	
M1-Q25L	6901045	Mounting foot for linear position sensor Q25L; aluminium; 2 pcs. per bag	
M2-Q25L	6901046	Mounting foot for linear position sensor Q25L; aluminium; 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; mounting on pneumatic cylinders (40…60mm); material: Stainless steel; 4 pcs. per bag	

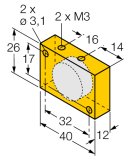
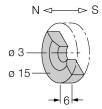
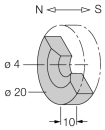
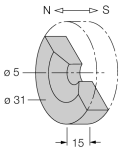
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Accessories

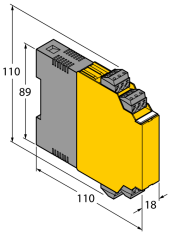
Type code	Ident no.	Description	Design
MB2.2-Q25	6901028	Mounting bracket for linear position sensors Q25L; mounting on pneumatic cylinders (70…120mm); material: Stainless steel; 4 pcs. per bag	
M4-Q25L	6901048	Mounting bracket for linear position sensor Q25L; material Stainless steel; 2 pcs. per bag	
MN-M4-Q25	6901025	Sliding block with M4 thread for the backside profile of the Q25L; material Brass; 10 pcs. per bag	
MN-M5-Q25	6901039	Sliding block with M5 thread for the backside profile of the Q25L; material Stainless steel; 10 pcs. per bag	
MN-C	6901024	Sliding block for T-groove cylinder 5-8mm; 1 pcs. per bag	

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Accessories

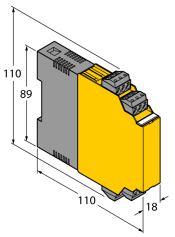
Type code	Ident no.	Description	Design
DM-Q12	6900367	Actuation magnet, rectangular, plastic, attainable switching distance 58 mm on BIM-(E)M12 sensors resp. 49 mm on BIM-EG08 sensors; in combination with Q25L: recommended distance between the sensor and magnet: 3…5 mm	
DMR15-6-3	6900216	Actuation magnet, Ø 15 mm (Ø 3 mm), h: 6 mm; sensing range 36 mm on BIM-(E)M12 sensors resp. 32 mm on BIM-EG08 sensors; in combination with Q25L: Recommended distance between sensor and magnet: 3 … 4 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	
DMR31-15-5	6900215	Actuation magnet, Ø 31 mm (Ø 5 mm), h: 15 mm; sensing range 90 mm on BIM-(E)M12 sensors resp. 78 mm on BIM-EG08 sensors; in combination with Q25L: Recommended distance between sensor and magnet: 3 … 5 mm	

Function accessories

Type code	Ident no.	Description	Design
IM33-11EX-HI/24VDC	7506440	Isolating transducers; 1-channel; power supply of 2-wire measuring transducers with HART® communication as well as connection of active 2-wire and passive 3-wire transmitters, SIL2 acc. to IEC61508	

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Function accessories

Type code	Ident no.	Description	Design
IM33-22EX-HI/24VDC	7506441	Isolating transducers; 2-channel; power supply of 2-wire measuring transducers with HART® communication as well as connection of active 2-wire and passive 3-wire transmitters, SIL2 according to IEC6150	

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Industrial Automation

Operating manual

Intended use

This device fulfills the directive 94/9/EC and is suited for use in explosion hazardous areas according to EN60079-0:2009, -11:2012, -26:2007.
In order to ensure correct operation to the intended purpose it is required to observe the national regulations and directives.

For use in explosion hazardous areas conform to classification

II 2 G and II 2 D (Group II, Category 2 G, electrical equipment for gaseous atmospheres and category 2 D, electrical equipment for dust atmospheres)

Marking (see device or technical data sheet)

Ex II 2 G and Ex ia IIC T6 Gb acc. to EN60079

Local admissible ambient temperature

-25…+65 °C

Installation / Commissioning

These devices may only be installed, connected and operated by trained and qualified staff. Qualified staff must have knowledge of protection classes, directives and regulations concerning electrical equipment designed for use in explosion hazardous areas.
Please verify that the classification and the marking on the device comply with the actual application conditions.

This device is only suited for connection to approved Exi circuits compliant to EN60079-0 and -11. Please observe the maximum admissible electrical values.
After connection to other circuits the sensor may no longer be used in Exi installations. When interconnected to (associated) electrical equipment, it is required to perform the "Proof of intrinsic safety" (EN60079-14).

Installation and mounting instructions

Avoid static charging of cables and plastic devices. Please only clean the device with a damp cloth. Do not install the device in a dust flow and avoid build-up of dust deposits on the device.
If the devices and the cable could be subject to mechanical damage, they must be protected accordingly. They must also be shielded against strong electro-magnetic fields.
The pin configuration and the electrical specifications can be taken from the device marking or the technical data sheet.
In order to avoid contamination of the device, please remove possible blanking plugs of the cable glands or connectors only shortly before inserting the cable or opening the cable socket.

Special conditions for safe operation

The device must be protected against any kind of mechanical damage, avoid static charging.

service / maintenance

Repairs are not possible. The approval expires if the device is repaired or modified by a person other than the manufacturer. The most important data from the approval are listed.

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