

Magnetostrictive Linear Position Sensor

Outside cylinder Analog Output

L5 - BXXXX-1A



Profile

- Outside installation, easy to use
- Absolute position output, without zero operation
- Contactless sensing with highest durability
- High resolution, analog output 16bit D/A, unlimited resolution
- Design of low power consumption, reduce the temperature drift
- Starting point, end point and range can be programmed

CE UL RoHS Analog

Features

- Status LEDs for indicating operating status and diagnostics
- Modular design, easy repairing
- Linearity deviation $< \pm 0.01\%$ rated length
- Repeatability $< \pm 0.001\%$ rated length

Parameter of measurement	
Measuring Length	25~3500mm
Output	0~20mA (Min./Max.Load: 0/500Ω) 4~20mA (Min./Max.Load: 0/500Ω) 0~10V (Min.Load > 5kΩ) -10~+10V (Min.Load > 5kΩ)
Resolution	16 bit D/A
Linearity	$< \pm 0.01\%$ F.S. (Min. $\pm 50\mu\text{m}$)
Repeatability	$< \pm 0.001\%$ F.S. (Min. $\pm 1\mu\text{m}$)
Update time	0.5ms (F.S. < 1m) 1.0ms (1m < F.S. < 2m) 2.0ms (2m < F.S. < 4m) 4.0ms (4m < F.S. < 7.6m)

Electrical characteristics	
Connection	Cable or M16, 6pin Connector
Voltage	24VDC (-15 / +20%)
Current	$< 50\text{mA}$ (depend on Measuring range)
Polarity protection*	Max.-30VDC
Overvoltage protection*	Max. 36VDC
Electric strength	500V (DC ground to machine ground)
Error indicator	Red and Green LED indicator

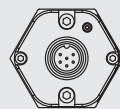
* Max. 5mins

Design & Material	
Sensor head	Aluminium alloy
Protective shell	Aluminium alloy
Mounting holder	304LStainless

Installation & Accessories	
Installation direction	Any orientation
Installation	Mounting holder, M5×20
Magnet	Round rail slide magnet L5-0000-ACMB-0003, Not included in delivery Square floating magnet L5-0000-ACMB-0001, Not included in delivery U-Magnet L5-0000-ACRI-0005, Not included in delivery
Mounting holder	L5-0000-ACMT-0002, Not included in delivery (At lease two)
Connector	E1-2206-0100, Not included in delivery

Operation condition	
Magnet speed	Any
Operating temperature	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
Humidity/Dew point	R.H.90%, No Condensation
Temperature coefficient	$< 30\text{ppm}/^{\circ}\text{C}$
Protection Level	IP67

Sensor diagnostic display



Indicator	Description
Green ON	Normal function
Green Flash	Programming mode
Red Flash	Magnet out of measuring range
Red ON	Magnet not detected or damaged magnet

Wiring

Signal	Ub	GND	Analog Output	SignalGND	(+) Comm.	(-) Comm.
Cable(color)	Brown	White	Gray	Pink	Yellow	Green
M16, 6 pin Connector	5	6	1	2	3	4

M16, 6 pins Pin top view (sensor)

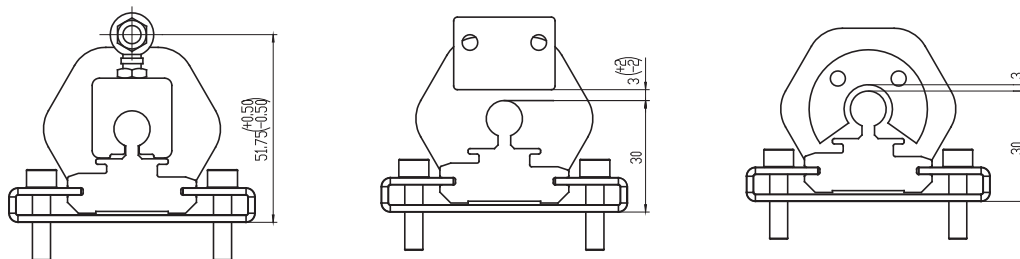


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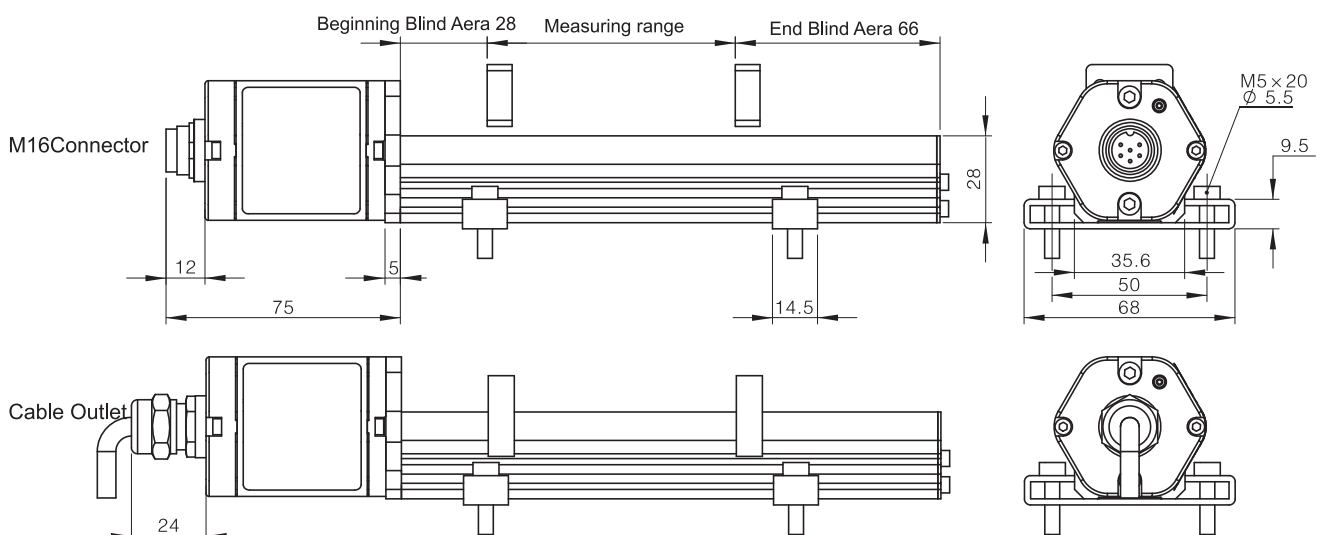
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Ordering example Outside Cylinder	L5 - B 0 1 0 0 - 1 A 1 5 - XXXX 0 P - S						
	Serise	a	b	c	d	e	f
a Measuring range 0100 = 100 mm Max.3500 mm in 5-mm increments	c Operation Voltage 1 = 24 VDC	e Output V010 = 0~10VOutput V011 = 10~0VOutput A010 = 4~20mAOutput A011 = 20~4mAOutput V020 = -10~+10VOutput V021 = +10~-10VOutput A020 = 0~20mAOutput A021 = 20~0mAOutput		f Blind Aera (Bignning+End) S = 28 + 66 (mm)			
b Output 1A = Analog Output	d wiring 5 = M16, 6 pinsConnector PXX = Standard cable outlet, XX meters TXX = High temperature cable outlet, XX meters						

Installation



Dimensions



Note: Position measurement is via floating magnets travelling along the sensing rod without any mechanical contact.
 Square floating magnet : Max.Horizontal offset upto ±3mm, Max.Vertical distance upto 5mm