

# Magnetostrictive Linear Position Sensor

Square housing /floating magnet Analog Output

L5 - MXXXX-1A



CE UL RoHS **Analog**

## Profile

- Outside installation, easy to use
- Absolute position output, without zero operation
- Contactless sensing with highest durability
- Compact housing
- Suitable for vibration control equipment
- Starting point, end point and range can be programmed

## Features

- Compact housing, installation height <27mm
- Floating magnet, maximum vertical distance 6mm

- Linearity deviation < ±0.02% rated length
- Repeatability < ±0.002% rated length

Parameter of measurement	
Measuring Length	50~2000mm
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	14bit D/A
Linearity	< ±0.02% F.S.
Repeatability	< ±0.002% F.S.
Update time	> 1.5kHz

Design & Material	
Sensor head	Inside
Sensor stroke	Aluminium alloy
Mounting holder	304LStainless

Electrical characteristics	
Connection	Cable or M12,5pin Connector
Voltage	24VDC (-15 / +20%)
Current	< 50mA (depend on Measuring range)
Polarity protection*	Max.-30VDC
Overvoltage protection*	Max. 36VDC
Electric strength	500V (DC ground to machine ground)

Installation & Accessories	
Installation direction	Any orientation
Installation	Mounting holder, M5×20Specified screw
Magnet	Trapezoid Floating Magnet L5-0000-ACMB-0005, Not included in delivery Rectangle Floating Magnet L5-0000-ACMB-0006, Not included in delivery
Mounting holder	L5-0000-ACMT-0002, Not included in delivery (At least 2)
Connector	E1-1205-0001, Not included in delivery

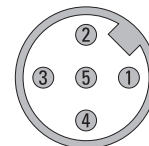
\* Max. 5mins

Operation condition	
Magnet speed	Any
Operating temperature	-40°C ~ +85°C
Humidity/Dew point	R.H.90%, No Condensation
Temperature coefficient	< 30ppm/°C
Protection Level	IP65

## Wiring

Signal	Ub	GND	Analog output	Communication	Signal GND
Cable(color)	Brown	Blue	White	Black	Gray
M12, 5 Pins Connector	1	3	2	4	5

M12, 5 pins Pin top view (sensor)



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**Ordering example  
Outside Cylinder**

L5 - M 1 0 0 0 - 1 A 1 1 - XXXX 0 P - S

**a** Measuring range  
1000 = 1000 mm  
.....  
Max.2000 mm  
in 5-mm increments

**b** Output  
1A = Analog Output

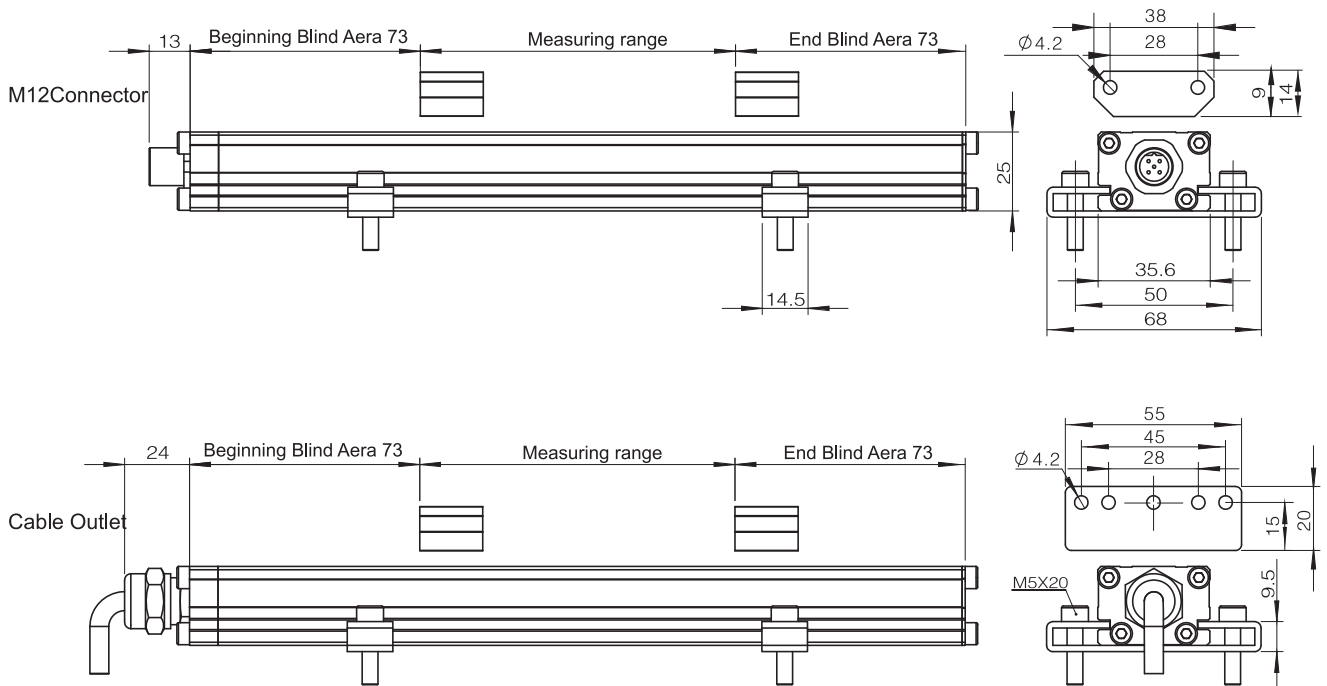
**c** Operation Voltage  
1 = 24 VDC

**d** wiring  
1 = M12, 5 pinsConnector  
PXX = Standard cable outlet, XX meters  
TXX = High temperature cable outlet, XX meters

**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 Area (Beginning+End)  
S = 73 + 73 (mm)

**Dimensions**



Note:(1) Default delivery 2pcs mounting clamps, there will be more one each 500mm longer than 1000mm.  
(2) 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 6mm.