

Magnetostrictive Linear Position Sensor

Split Body Analog Output

L5 - DXXXX-1A



Profile

- Split body, compact design
- Separated sensor head, replace easily
- Contactless sensing with highest durability
- Absolute position output, without zero operation
- Design of low power consumption, reduce the temperature drift
- Direct stroke measurement inside the cylinder, protect level IP69K



Features

- Status LEDs for indicating operating status and diagnostics
- Split body design, high protection level and shock resistance
- Linearity deviation <math>< \pm 0.01\%</math> rated length
- Repeatability <math>< \pm 0.002\%</math> rated length

Parameter of measurement	
Measuring Length	25-2500mm
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	<math>< \pm 0.01\%</math> F.S. (Min. $\pm 50\mu\text{m}$)
Repeatability	<math>< \pm 0.002\%</math> F.S. (Min. $\pm 2\mu\text{m}$)
Update time	>1kHz

Design & Material	
Sensor head	Aluminium alloy
Mounting holder	Aluminium alloy
Mounting flange	304L Stainless

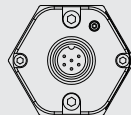
Installation & Accessories	
Installation direction	Any orientation
Installation	Threaded flange M18x1.5 or on demand
Magnet	L5-0000-ACRI-0001, Not included in delivery
Antimagnetical Spacer	L5-0000-ACMT-0001, Not included in delivery
Connector	E1-2206-0100, Not included in delivery

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

Operation condition	
Magnet speed	Any
Operating temperature	-40°C ~ +85°C
Humidity/Dew point	R.H.90%, No Condensation
Temperature coefficient	<math>< 30\text{ppm}/^\circ\text{C}</math>
Protection Level	Inside rod IP69K, Sensor head IP67
Pressure rating	35MPa (Continuously) / 70MPa (Peak value)

* Max. 5mins

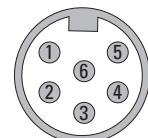
Sensor diagnostic display		
Indicator	Description	
Green ON	Normal function	
Green Flash	Programming mode	
Red Flash	Magnet out of measuring range	
Red ON	Magnet not detected or damaged magnet	



Wiring

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

M16, 6 pins Pin top view (sensor)



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Ordering example
Split Body

L5 - D 0 1 0 0 - 1 A 1 5 - XXXX 0 P - S - R1

 Serie a b c d e f g h

a Measuring range

0100 = 100 mm
.....
Max.2500 mm
in 5-mm increments

b Flange type

1 = Flange M8*1.5, Hexagon 46 mm
2 = Flange M8*1.5, Hexagon 23 mm
3 = Flange

c Output

A = Analog Output

d Operation Voltage

1 = 24 VDC

e Wiring

5 = M16, 6 pins Connector
PXX = Standard cable outlet, XX meters
TXX = High temperature cable outlet, XX meters

f 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

g Blind Aera (Bignning+End)

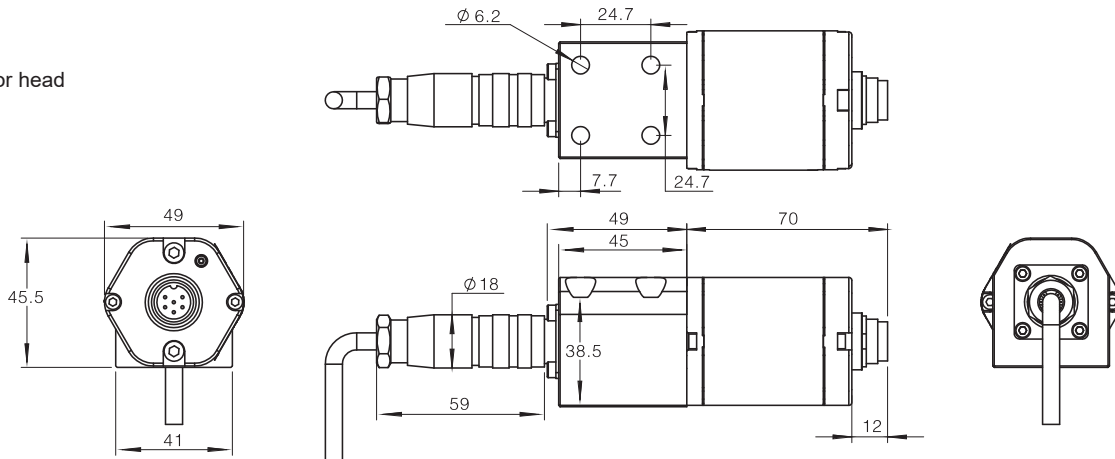
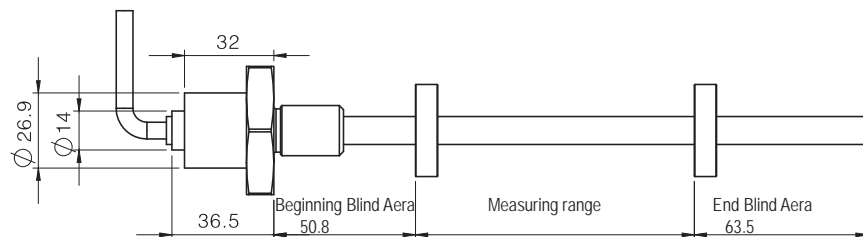
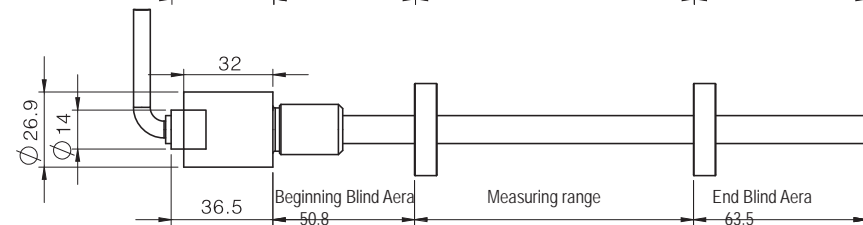
S = 50.8 + 63.5 (mm)
Mounting with flange
Beginning 21.4 mm

h Cable between sensor head and rod

R1 = 250 mm PUR
R2 = 400 mm PUR
R3 = 600 mm PUR

Dimensions

Sensor head

Mounting type 1
Flange M8*1.5,
Hexagon 46 mmMounting type 2
flange M8*1.5,
Hexagon 23 mmMounting type 3
Flange