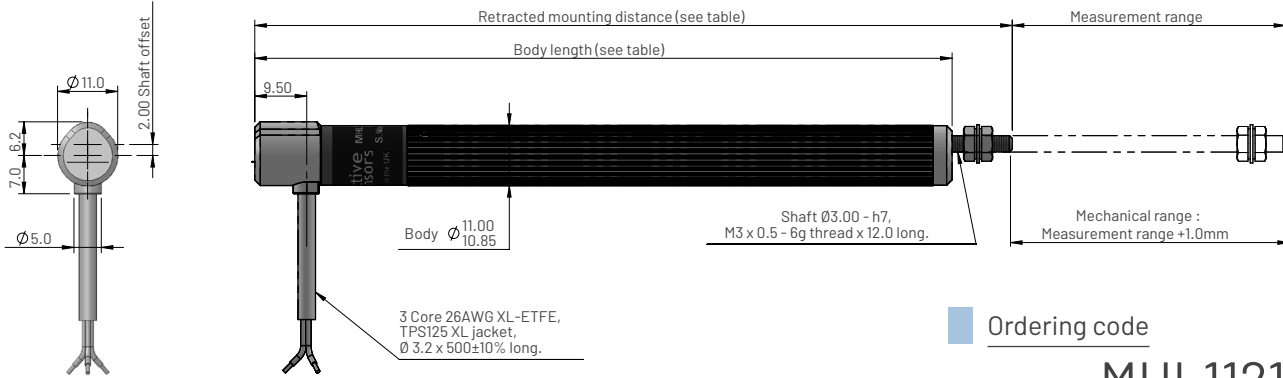


MHL1100 Series - Magnetic Hall linear position sensor (50mm to 150mm range)

Contactless Technology. 11mm Ø Body. 3mm Ø Operating shaft.

Dimensions for MHL1121 - Body clamp mounting



Measurement range	Body length	Retracted mounting distance	Approx. weight (grams)
50	127.5	138.5	25
75	152.5	163.5	27
100	177.5	188.5	29
125	202.5	213.5	31
150	227.5	238.5	33

Ordering code

MHL1121 XV-XXX

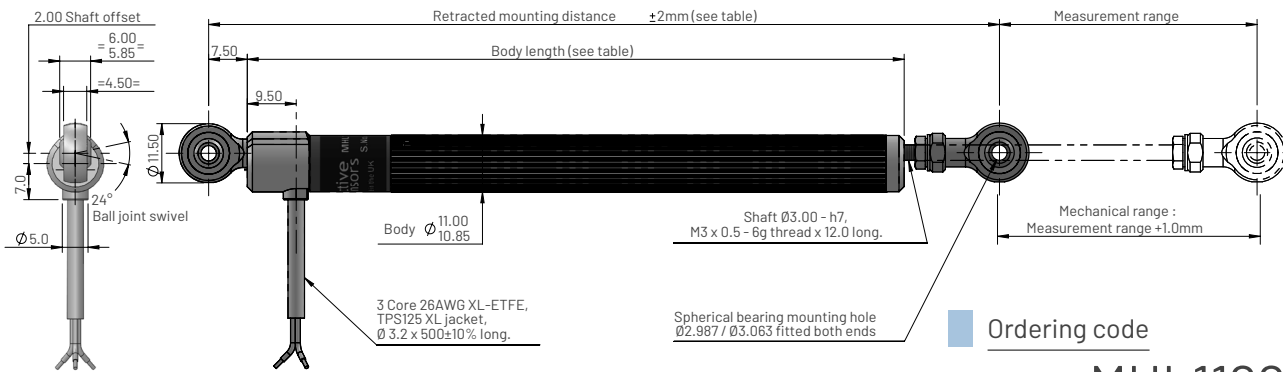
Output option (see graph)

L = Retracted output increases

R = Extended output increases

Measurement range in mm

Dimensions for MHL1122 - Rod end mounting



Measurement range	Body length	Retracted mounting distance	Approx. weight (grams)
50	127.5	153.5	31
75	152.5	178.5	33
100	177.5	203.5	35
125	202.5	228.5	37
150	227.5	253.5	39

Ordering code

MHL1122 XV-XXX

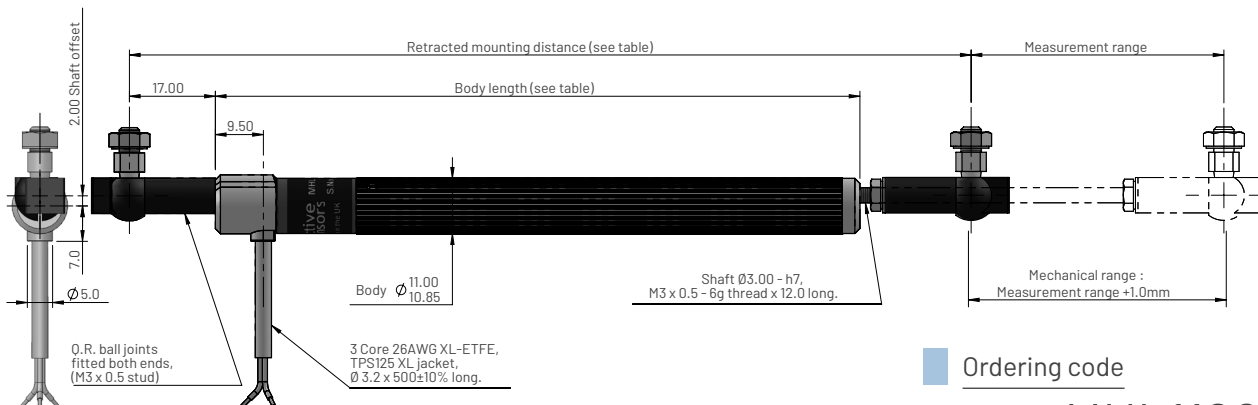
Output option (see graph)

L = Retracted output increases

R = Extended output increases

Measurement range in mm

Dimensions for MHL1126 - Quick release ball joint



Measurement range	Body length	Retracted mounting distance	Approx. weight (grams)
50	127.5	166.5	31
75	152.5	191.5	33
100	177.5	216.5	35
125	202.5	241.5	37
150	227.5	266.5	39

Ordering code

MHL1126 XV-XXX

Output option (see graph)

L = Retracted output increases

R = Extended output increases

Measurement range in mm

MHL1100 Series - Magnetic Hall linear position sensor (50mm to 150mm range)

Contactless Technology. 11mm Ø Body. 3mm Ø Operating shaft.

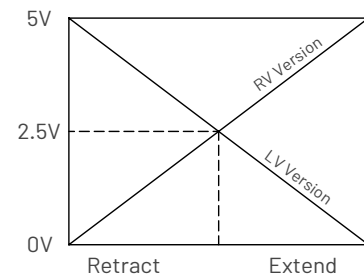
Electrical and mechanical specification for MHL1100

Input specification		
Supply voltage (Vs)	5.0±5% regulated	8 to 30 unregulated
Over voltage protection	Up to 50	
Supply current	<40	
Reverse polarity protection	Up to -50	
Power on settlement time	<250	
Input voltage rise time	0.25 minimum	
Output specification		
Output type	Analogue voltage	
Output direction	See output characteristics graph	
Voltage output (Vout)	0 to Vs	0 to 5
Line regulation	Ratiometric with Vs	<0.01 %FS
Monotonic range	1 to 99% measurement range	
Load resistance	>10K	
Output noise	<5	
Performance specification		
Resolution	0.025	% of measurement range
Sensitivity (Note 2)	Ideal span (5000mV) / Measurement range(mm)	
Sensitivity tolerance	<±2.5	
Non-Linearity (Note 2)	<±0.5	
Temperature coefficient (Vout)	<±0.003	<±0.011
Update rate (nominal)	800	
General specification		
IP rating	IP68 and IP69K	
Shaft operation force (typical)	15	
Life (shaft in bush bearing)	>20 million cycles	
Dither life	Contactless - no degradation	
Operational temperature	-40 to +125	See de-rating graph
Storage temperature	-55 to +150	
Materials	Sensor	Case: Anodised aluminium 6063 T5, Shaft: Stainless steel 316
	Rod-ends	Body: Anodised aluminium 6026, Spherical ball: Nickel plated steel
	QR ball joints	Body: Nylon, Ball joint: Steel BZP

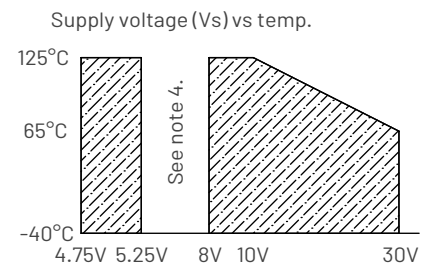
Electrical connections (see note 1)

Wire Colour	Function
Red	Supply Voltage (Vs)
White	Output Voltage (Vout)
Black	Ground (0V)

Output characteristics



Temperature de-rating



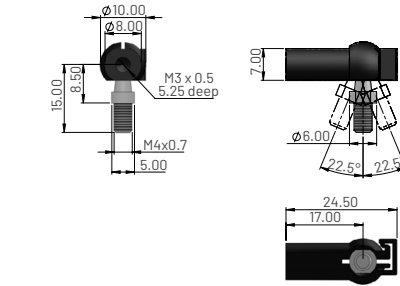
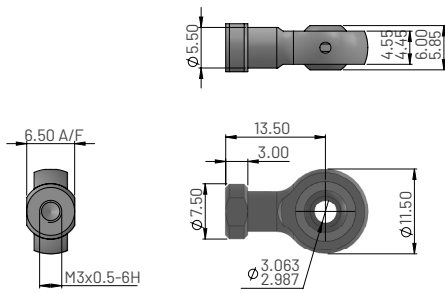
Notes

1. Incorrect wiring may cause internal damage.
2. Sensitivity and non-linearity are calculated from least squares best fit method.
3. Due to the Hall effect technology used in this device, close proximity of ferrous materials and magnetic fields may influence output.
4. Do not operate sensor between 5.25V and 8V.
5. General dimension tolerance is ±0.25mm.

MHL1100 Series - Magnetic Hall linear position sensor (50mm to 150mm range)

Contactless Technology. 11mm Ø Body. 3mm Ø Operating shaft.

Accessories



3mm rod end

Ordering code: PT0952-0104-19

Material	
Housing	Aluminium alloy, anodised black
Ball	Steel BS970 230M07, electroless nickel plated
Race	Gr nylon

Quick release ball joint

Ordering code: SA0950-4104

Material	
Body	PA66, Black
Ball stud	Hardened carbon Steel, zinc plated, clear passivated