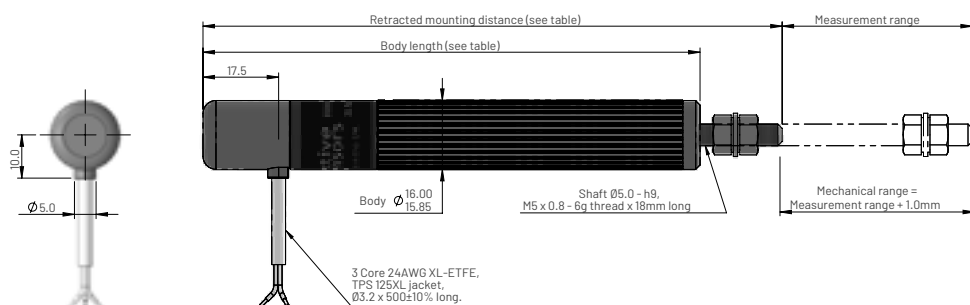


MHL1600 Series - Magnetic Hall linear position sensor (50mm to 300mm range)

Contactless Technology. 16mm Ø Body. 5mm Ø Operating shaft.

Active
sensors

Dimensions for MHL1621 - Body clamp mounting



Measurement range	Body length	Retracted mounting distance	Approx. weight (grams)
50	140	159	50
75	165	184	56
100	190	209	62
125	215	234	68
150	240	259	74
175	265	284	80
200	290	309	86
250	340	359	98
300	390	409	110

Ordering code

MHL1621 XV-XXX

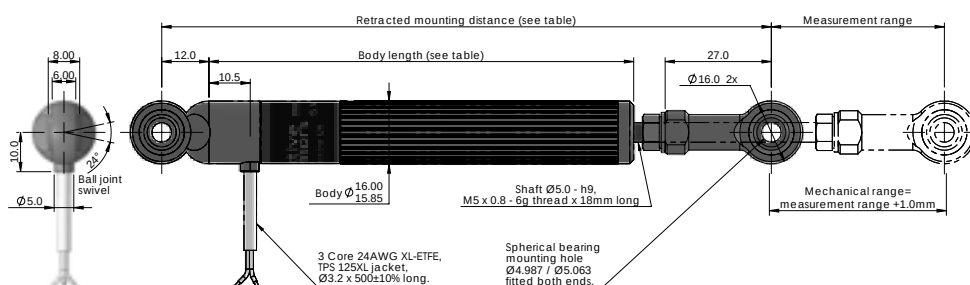
Output option (see graph)

L = Retracted output increases

R = Extended output increases

Measurement range in mm

Dimensions for MHL1622 - Rod end mounting



Measurement range	Body length	Retracted mounting distance	Approx. weight (grams)
50	145	180	70
75	170	205	80
100	195	230	90
125	220	255	109
150	245	280	115
175	270	305	121
200	295	330	127
250	345	380	139
300	395	430	151

Ordering code

MHL1622 XV-XXX

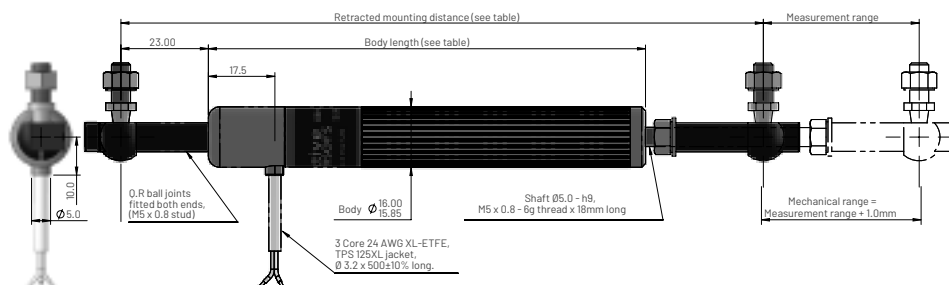
Output option (see graph)

L = Retracted output increases

R = Extended output increases

Measurement range in mm

Dimensions for MHL1626 - Quick release ball joint



Measurement range	Body length	Retracted mounting distance	Approx. weight (grams)
50	138.7	178.7	54.5
75	163.7	203.7	60.5
100	188.7	228.7	66.5
125	213.7	253.7	72.5
150	238.7	278.7	78.5
175	263.7	303.7	84.5
200	288.7	328.7	90.5
250	338.7	378.7	102.5
300	363.7	403.7	108.5

Ordering code

MHL1626 XV-XXX

Output option (see graph)

L = Retracted output increases

R = Extended output increases

Measurement range in mm

MHL1600 Series - Magnetic Hall linear position sensor (50mm to 300mm range)

Contactless Technology. 16mm Ø Body. 5mm Ø Operating shaft.

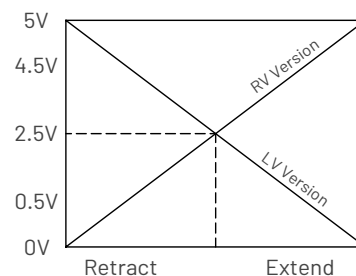
Electrical and mechanical specification for MHL1600

Parameters		Values		Units
Input specification				
Supply voltage (Vs)	5.0±5% regulated	8 to 30 unregulated	Vdc	
Over voltage protection	Up to 50		Vdc	
Supply current	During power on settlement <100, normal operation up to 50mm = 30. Add 10 for each extra 25mm of sensor range		mA	
Reverse polarity protection	Up to -50		Vdc	
Power on settlement time	<250		ms	
Input voltage rise time	0.25 minimum		V/ms	
Output specification				
Output type	Analogue voltage			
Output direction	See output characteristics graph			
Voltage output (Vout)	0 to Vs	0 to 5	Vdc	
Line regulation	Ratiometric with Vs	<0.01	%FS	
Monotonic range	1 to 99% measurement range			
Load resistance	>10K		Ohms	
Output noise	<5		mV RMS	
Performance specification				
Resolution	0.025		% of measurement range	
Sensitivity (Note 2)	Ideal span (5000mV) / Measurement range(mm)		mV/mm	
Sensitivity tolerance	<±2.5		%FS	
Non-Linearity (Note 2)	<±0.5		%FS	
Temperature coefficient (Vout)	<±0.003	<±0.011	%FS/°C	
Update rate (nominal)	800		Hz	
General specification				
IP rating	IP68 and IP69K			
Shaft operation force (typical)	20		grams	
Life (shaft in bush bearing)	>20 million cycles		dependent on environment	
Dither life	Contactless - no degradation			
Operational temperature	-40 to +125	See de-rating graph	°C	
Storage temperature	-55 to +150		°C	
Materials	Sensor	Case: Anodised aluminium 6063 T5, Shaft: Stainless steel 303		
	Rod-ends	Body: Anodised aluminium 6026, Spherical ball: Nickel plated steel		
	QR ball joints	Body: Nylon, Ball joint: Steel BZP		

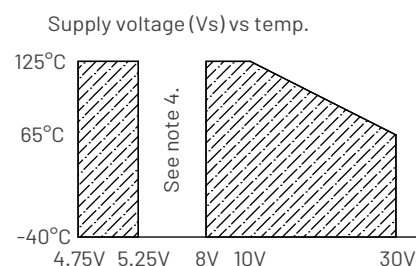
Electrical connections (see note 1)

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

Output characteristics



Temperature de-rating

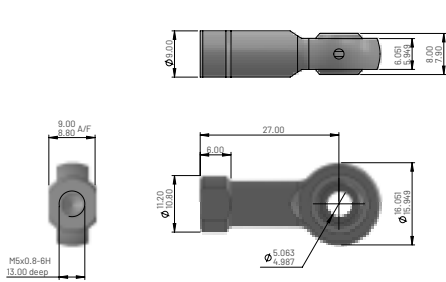


Notes

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.

MHL1600 Series - Magnetic Hall linear position sensor (50mm to 300mm range)
Contactless Technology. 16mm Ø Body. 5mm Ø Operating shaft.

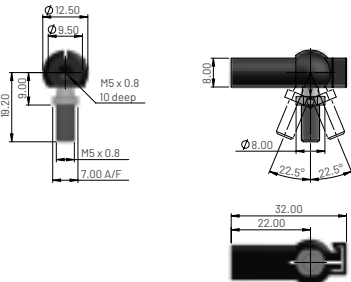
Accessories



5mm rod end

Order code: PT1922-0104-19

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



Quick release ball joint

Order code: JN029-007

Material	
Body	PA66, Black
Ball stud	Hardened carbon steel
Coating	Zinc plated, clear passivated