

The **MHL1324** Magnetic hall linear position sensor is an extremely robust contactless design, which is fitted with an external slider to provide maximum positional flexibility.

With the advantage of no external shaft, the slider is threaded to allow the method of coupling to be adaptable to customer applications. It is supplied with a quick release rod end, as standard.

Produced with a rectangular aluminium case for maximum strength, it is specified for industrial monitoring and motion control measurement systems, where total reliability and performance are necessary during high temperature, vibration and fluid conditions.

The sensor is designed to be installed onto a flat surface using two mounting clamps, which provide the optimum method of securing the sensor in position.

It is environmentally protected against the ingress of dust and water to IP68/IP69K.

Key features and benefits

- Measurement range from 50mm to 150mm (2" to 6")
- Maximum operating temperature 125°C (257°F)
- Superior magnetic hall contactless technology
- Sensor operates from either 5 VDC or 8 to 30 VDC
- Output direction can be specified at time of order
- Supplied with mounting kit and quick release rod end
- Sealed up to IP68/IP69K



Europe

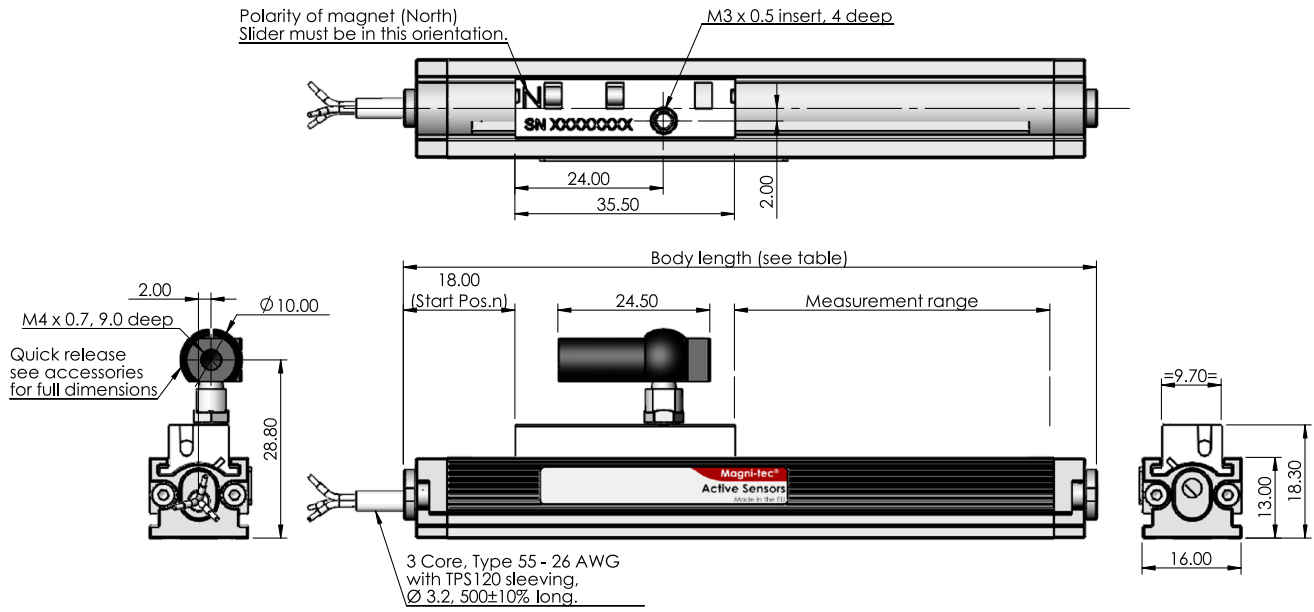
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MHL1324 – Body clamp mounting with external slider



Measurement range	Body length	Weight (grams) approx.
50	112	55
75	137	60
100	162	65
125	187	70
150	212	75

Ordering information

MHL1324 XV-XXX

Output Option (see graph)
L = Retract output increases
R = Extend output increases

Measurement range mm



Electrical and mechanical specification for MHL1324 Contactless Series

Input Specification			
Supply voltage (Vs)	5.0±10% regulated	8 to 30 unregulated	VDC
Over voltage protection	Up to 50		VDC
Supply current	During power on settlement <100, nominal operation <45		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 - Vs	0 - 5	VDC
Line regulation	Ratiometric with Vs	<0.01% FS	
Monotonic range	1 - 99% measurement range		
Load resistance	>10K		Ohms
Output noise	<5		mV RMS
Performance Specification			
Resolution	0.025		% of measurement range
Sensitivity (see note 2)	Ideal span (500mV)/measurement range		mV/mm
Sensitivity tolerance	<±2.5		%FS
Non-linearity (see note 5)	<±0.5		%FS
Temperature coefficient (Vout)	<±0.003	<±0.011	%FS/°C
Update rate	800 Nom		Hz
Max operating speed	1000		mm/s
General Specification			
IP rating	IP68 / IP69K		
Dither life	Contactless - no degradation		
Operational temperature	-40 to +125	See de-rating graph	°C
Storage temperature	-55 to +150		°C
Materials	Case - Aluminium anodised Shaft - Stainless steel 316 Clamps - Steel BZP Slider - Unfilled polymer QR ball joint - Body Nylon Ball joint - Steel BZP		

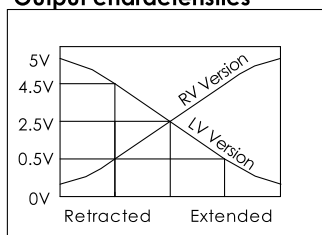
Notes:

1. Incorrect wiring may cause internal damage.
2. Sensitivity and non-linearity are calculated from least squares best fit method.
3. Do not operate between 5.5V and 8V.
4. Due to hall effect technology used in this device, ferrous materials or magnetic fields close to the sensor may influence output.
5. General dimension tolerance is ±0.25mm.

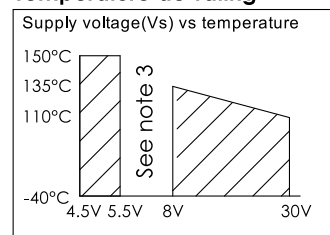
Electrical connections (see note 1)

Wire colour	Function
Red	Supply voltage (Vs)
White	Output voltage (Vout)
Black	Ground

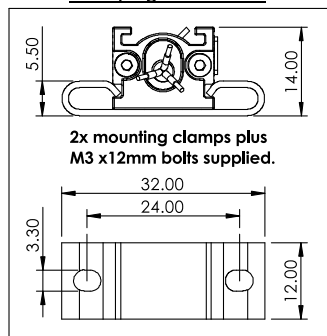
Output characteristics



Temperature de-rating



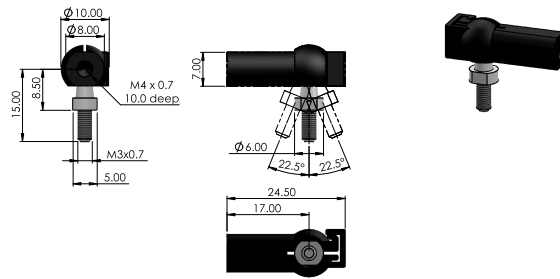
Clamping information



Accessories

Quick release ball joint

Part No: SA1324-6104



Material:

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

