

The **MHL2624 Series** is an extremely robust magnetic hall linear position sensor, which is fitted with an external slider to provide maximum positional flexibility.

With the advantage of no external shaft, the slider moves with a very low operational force and 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 they are available in measurement ranges up to 300mm (12"). Typically, they are specified for industrial 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.

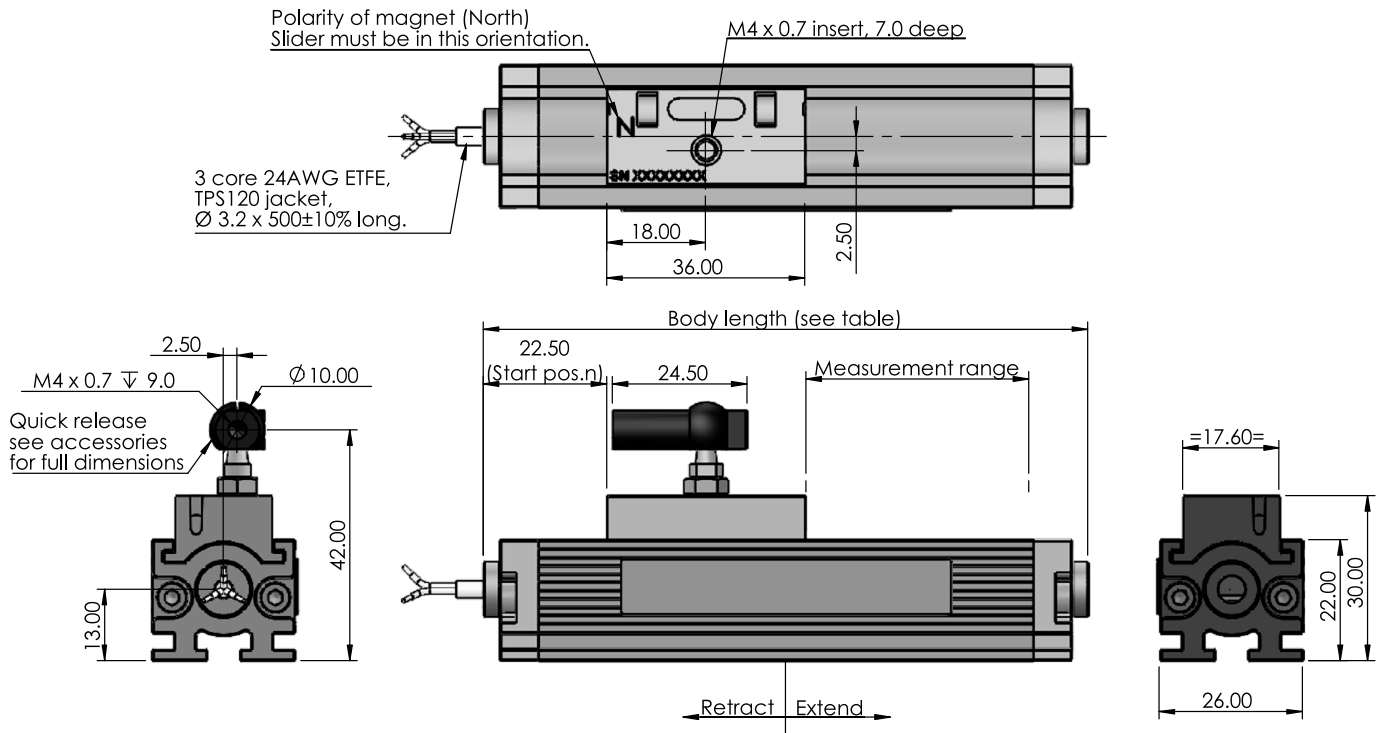
It is environmentally protected against the ingress of dust and water to IP68/IP69K.

Key features and benefits

- Measurement range from 50mm to 300mm (2" to 12")
- Low slider force <10 grams
- 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



MHL2624 – Body clamp mounting with external slider



Measurement range	Body length	Weight (grams) approx.
50	120	93
75	145	114
100	170	135
125	195	156
150	220	177
175	245	198
200	270	219
250	320	261
300	370	303

Ordering information

MHL2624 XV-XXX

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

Measurement range mm

Electrical and mechanical specification for MHL2624 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 (5000mV)/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 (nominal)	800		Hz
Max operating speed	1000		mm/s
General Specification			
IP rating	IP68 / IP69K		
Slider operating force (typical)	10		grams
Dither life	Contactless - no degradation		
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	
Storage temperature	-55 to +150		
Materials	Case - Anodised aluminium Shaft - Stainless steel 316 Clamps - Steel BZP Slider - Unfilled polymer QR ball joint - Body Nylon Ball joint - Steel BZP		

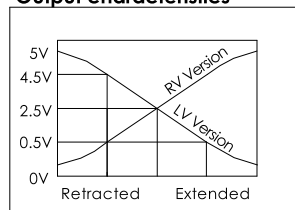
Notes:

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.

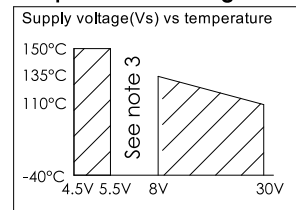
Electrical connections (see note 1)

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

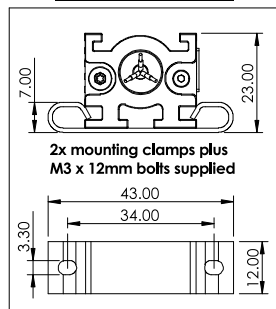
Output characteristics



Temperature de-rating



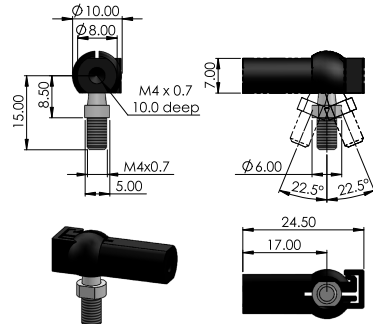
Clamping information



Accessories

Quick release ball joint

Part No: JN029-003



Material:

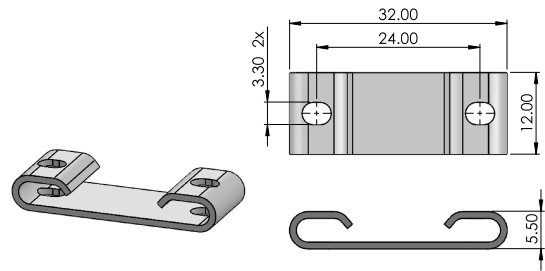
Body - PA66, Black

Ball Stud - Hardened Carbon

Steel - Zinc plated, clear passivated

Base clamp

Part No: PT2600-6109



Material:

Plain carbon steel

Finish - Bright zinc plate