

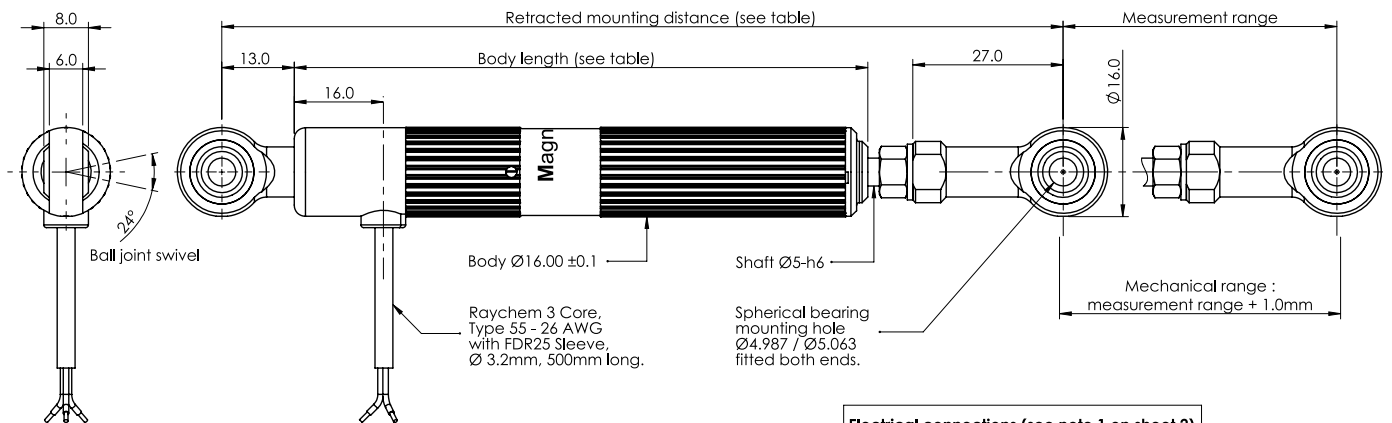
MHL1600 Magni-Hall® Linear Position Sensors are robust and available with a choice of mounting options for ease of installation - spherical rod-ends, quick release ball joints or body clamps. Models available with single or dual outputs and a measurement range from 50mm (2") up to 300mm (12"). The sensor is lightweight, rugged and waterproof.

Key Features & Benefits

- Measurement range 50mm (2") up to 300mm (12")
- Single and dual output options
- Choice of mounting options
- Operating temperature up to 130°C (266°F)
- Waterproof - sealed to **IP67 & IP69K**
- Superior **Magni-Hall®** contactless technology
- Compact and lightweight



MHL1622 - Model dimensions and mounting



Electrical connections (see note 1 on sheet 2)

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

| Measurement range | Body length | Retracted mounting distance | Weight (g) approx. |
|-------------------|-------------|-----------------------------|--------------------|
| 50 | 138 | 186 | 81 |
| 75 | 163 | 211 | 92 |
| 100 | 188 | 236 | 103 |
| 125 | 213 | 261 | 114 |
| 150 | 238 | 286 | 125 |
| 175 | 263 | 311 | 136 |
| 200 | 288 | 336 | 147 |
| 225 | 313 | 361 | 158 |
| 250 | 338 | 386 | 169 |
| 300 | 363 | 411 | 180 |

Ordering information

MHL1622 XV-XXX

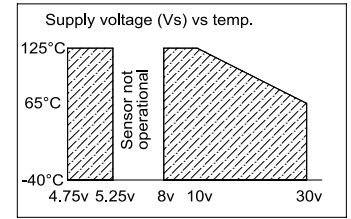
Output option (see graph)
 L = Retract output increases
 R = Extend output increases

Measurement range mm

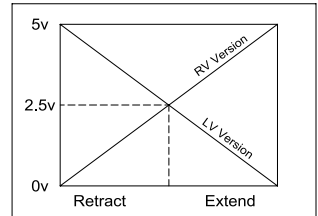
MHL1600 - Electrical & mechanical specification

| Input Specification | | | |
|--------------------------------|---|---------------------|------------------|
| Supply voltage (Vs) | 5.0±5% regulated | 8 to 30 unregulated | V DC |
| Over voltage protection | Up to 50 | | V DC |
| Supply current | During power on settlement <100, normal 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 | | |
| Output direction | See output characteristics graph | | |
| Voltage output (Vout) | 0 - Vs | 0 - 5 | V DC |
| Line regulation | Ratiometric with Vs | <0.01% FS/V | |
| Monotonic range | 1 - 99% measurement range | | |
| Load resistance | >10K | | Ohms |
| Output noise | <5 | | mV rms |
| Performance Specification | | | |
| Resolution | 0.025 | | % of measurement |
| Sensitivity (see note 2) | Ideal span (5000mV) / Measurement range(mm) | | mV/mm |
| Sensitivity tolerance | <±2.5% | | FS |
| Non-Linearity (see note 2) | <±0.5% | | FS |
| Temperature coefficient (Vout) | <±0.003% | <±0.011% | FS/°C |
| Update rate | 800 Nom | | Hz |
| 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 6063, sulphur anodised. Rod Ends - Aluminium 6026, sulphur anodised / Spherical Ball - BS970 230M07 Electroless Nickel Plated. Shaft - Stainless steel 303 S21/S31. | | |

Temperature de-rating



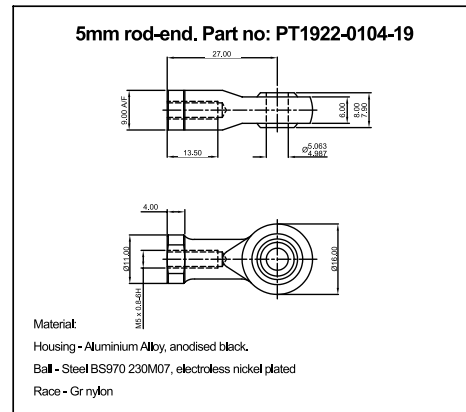
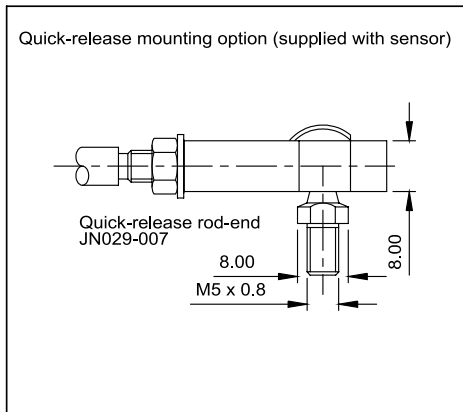
Output characteristics



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 Magni-Hall® technology used in this device, close proximity of ferrous materials and magnetic fields may influence output.

Accessories



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