LPM Stainless Steel Load Measuring Pin (Magtrol Equivalent)

**Features**
- Alternative to Magtrol 210 load pin series
- Ideal for use in hostile environments
- Stainless steel construction
- Choice of environmental sealings
- Versions available to meet offshore, subsea and marine specifications
- Design support software available

**Typical Applications**
- Crane overload protection
- Winch force monitoring
- Cable and wire dynamometers
- Hoist overload protection
- Mooring load tension measurement

**Description**
The LPM range of load measuring pins are simple and versatile load cells ideal for use in a large variety of applications, including harsh industrial environments. They are also a direct equivalent to the Magtrol LB 210 series of load pins. As with any load pin type, they are easily installed into machines by replacing existing load bearing pins, so no modifications to the equipment required. This makes them very easy to install either new or to retrofit.

The LPM load pin range is available in ratings from 2.5kN to 1250kN and are manufactured from high tensile stainless steel. Built to exacting standards, they are proof loaded to 150% of normal rated load and are temperature compensated. The load pins employ a full strain gauge bridge as its measurement technology.

The LPM series can be supplied on its own or combined with our extensive range of instrumentation to provide a complete load monitoring system.

We also offer a standard load pin range (see separate LMP data sheet) and a custom designed load pin range (see LPB data sheet).

**Specification**

<table>
<thead>
<tr>
<th>Description</th>
<th>Rated load (kN)</th>
<th>Proof load</th>
<th>Ultimate breaking load</th>
<th>Output</th>
<th>Non-linearity</th>
<th>Non-repeatability</th>
<th>Excitation voltage</th>
<th>Bridge resistance</th>
<th>Insulation resistance</th>
<th>Operating temperature range</th>
<th>Compensated temperature range</th>
<th>Zero temperature coefficient</th>
<th>Span temperature coefficient</th>
<th>Environmental protection level</th>
<th>Connection type</th>
<th>Wiring connections</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.5, 5, 10, 20, 50, 100, 200, 500, 1000, 1250</td>
<td>150% of rated load or higher</td>
<td>2.5 to 200kN = 500% 500kN = 400% 1000 to 1250kN = 350%</td>
<td>1.0mV/V at rated load (nominal)</td>
<td>&lt;±1% of rated load (typically)</td>
<td>&lt;±0.1% of rated load</td>
<td>10vdc recommended, 15vdc maximum</td>
<td>350Ω</td>
<td>&gt;500MΩ @ 500vdc</td>
<td>-20 to +80°C</td>
<td>-10 to +50°C</td>
<td>&lt;±0.01% of rated load/°C</td>
<td>&lt;±0.01% of rated load/°C</td>
<td>IP67</td>
<td>5 metre 4-core screened PUR cable. Length as required</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5 metre 4-core screened PUR cable. Length as required</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+ve supply - Red, -ve supply - Blue</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+ve signal - Green, -ve signal - Yellow</td>
<td></td>
</tr>
</tbody>
</table>

**Available Options**
- Integral signal conditioning
- Special electrical connectors
- Anti-rotation plate
- TEDS option (when used with TR150 handheld display)
LPM Stainless Steel Load Measuring Pin (Magtrol Equivalent)

**Dimensions**

```
Rating (kN) ØA B D E F G H J K Weight (kg) Resolution (kN)
2.5 25 (h6) 84 18 18 10 7 24 5.2 9 0.2 0.01
5 25 (h6) 84 18 18 10 7 24 5.2 9 0.2 0.02
10 25 (h6) 84 18 18 10 7 24 5.2 9 0.2 0.05
20 25 (h6) 84 18 18 10 7 24 5.2 9 0.2 0.1
50 35 (h6) 112 25 16 12 12 35 6.3 11.5 0.65 0.2
100 50 (h6) 161 32 27 18 18 48 10.5 20 2 0.5
200 65 (h6) 196 32 29 20 25 65 10.5 22.5 4.4 1
500 85 (h6) 258 34 44 35 28 89 10.5 28 10.6 2
1000 100 (h6) 347 36 66 55 35 120 10.5 36 19.2 5
1250 120 (h6) 347 36 66 55 35 120 12.5 40 28.4 5
```

All dimensions are in mm

Due to continual product development, LCM Systems Ltd reserves the right to alter product specifications without prior notice.