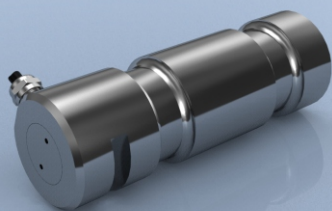




## TYPE: LPM



# LPM Stainless Steel Load Measuring Pin (Magtrol Equivalent)

## 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).

## 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

## Specification

Rated load (kN)	2.5, 5, 10, 20, 50, 100, 200, 500, 1000, 1250
Proof load	150% of rated load or higher
Ultimate breaking load	2.5 to 200kN = 500%
	500kN = 400%
	1000 to 1250kN = 350%
Output	1.0mV/V at rated load (nominal)
Non-linearity	<±1% of rated load (typically)
Non-repeatability	<±0.1% of rated load
Excitation voltage	10vdc recommended, 15vdc maximum
Bridge resistance	350Ω
Insulation resistance	>500MΩ @ 500vdc
Operating temperature range	-20 to +70°C (-20 to +55°C for Ex d versions)
Compensated temperature range	-10 to +50°C
Zero temperature coefficient	<±0.01% of rated load/°C
Span temperature coefficient	<±0.01% of rated load/°C
ATEX certification details	Ex i II 2G Ex ib IIC T4 Gb / II 2D Ex ib IIIC T135°C Db
	Ex d II 2G Ex d IIC T6 Gb / II 2D Ex tb IIIC T85°C Db Tamb -20 to +55°C
Environmental protection level	IP67
Connection type	5 metre 4-core screened PUR cable. Length as required
Wiring connections	+ve supply - Red    -ve supply - Blue
	+ve signal - Green    -ve signal - Yellow

## Typical Applications

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

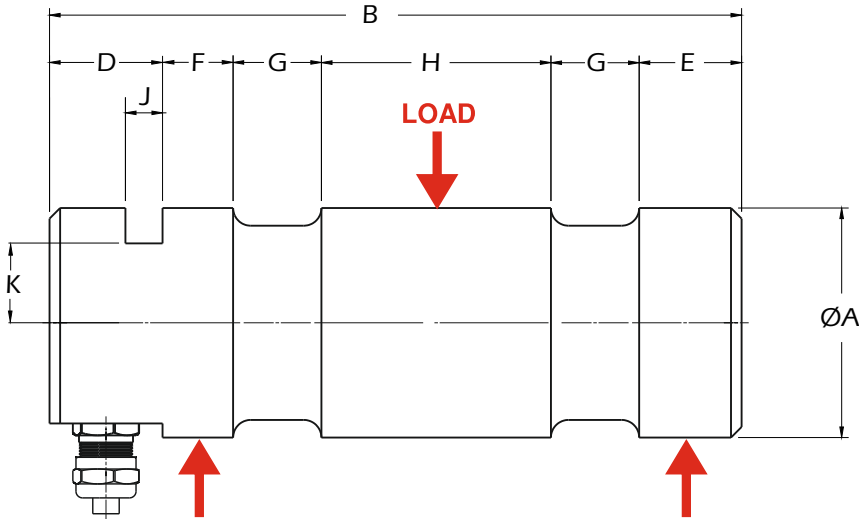
## Available Options

- Integral signal conditioning
- Special electrical connectors
- Hazardous Area certified - Explosion Proof (Ex d) and Intrinsically Safe (Ex i)
- Anti-rotation plate
- TEDS option when used with TR150 handheld display (Not available with Hazardous Area versions)



# LPM Stainless Steel Load Measuring Pin (Magtrol Equivalent)

## Dimensions

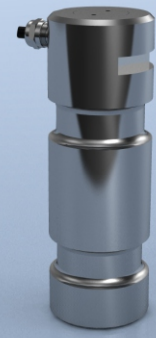


All dimensions are in mm

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

**Note 1:** Part numbers for ATEX versions will be suffixed with either -ATEX-D (explosion proof) or -ATEX-I (intrinsically safe) e.g. LPM-2.5KN-ATEX-D.

**Note 2:** Dimensions may change for hazardous area versions.



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

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