

PMD-STRAIN Load Cell/Strain Gauge Input Panel Mounting Display

Features

- Suitable for most standard wheatstone bridge sensors
- Menu free setup and calibration
- 14.2mm high red LED display.
- AC or DC powered versions
- Wide choice of analogue, relay or digital outputs
- All option boards are pluggable and can be retro-fitted
- IP65 sealed (option for IP67 sealing)

Typical Applications

- Vessel weighing
- Winch monitoring
- Crane weighing
- Module weighing
- General force measurement

Description

The PMD-STRAIN is a panel mounting display for use with strain gauge bridge based sensors, including load cells, load pins etc.

This series of display offers very simple operation and configuration. The PMD-STRAIN does not use a menu system to configure and calibrate the display, making installation and commissioning very straightforward.

To simplify commissioning even further, the product instruction manual provides step by step pictorial details for each function that you may want to configure, saving time searching through an overly complex manual trying to find that one parameter that you wish to change.

Options valuable for the PMD-STRAIN include:-

Power supply options available include 95-265vac, 11-30vdc and 48vac.

Output options available include 4-20mA, 0-10v, $\pm 10v$, 2 relay alarms, 4 relay alarms, RS232 or RS485.

The main application for the PMD-STRAIN is for simple crane weighing applications, hoist and winch monitoring, as well as many other force measurement applications.

Different input signals are available including Serial input (see PMD-SERIAL), process input (see PMD-PROCESS). LCM Systems engineers will be pleased to discuss your specific application requirements with you. They will be able to advise on the correct product selection, options required and advise on suitable sensors, where required.



Specifications

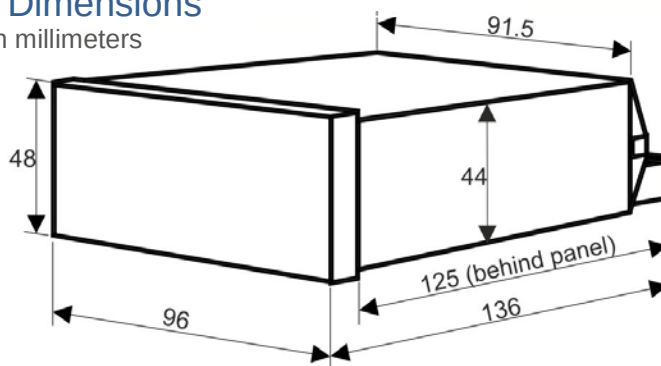
Power Supply:	95-265vac Optional 11-30vdc or 48vac
Power Rating:	10 watts maximum.
Load Cell Excitation Voltage:	5vdc (max. 40mA) or 10vdc (120mA max.)
Load Cell Bridge Resistance:	125ohms using 5vdc excitation, 83ohms using 10vdc excitation
Load Cell Sensitivity:	$\pm 4mV/V$ maximum
Input Resistance:	>10Megohms
Accuracy:	$< \pm 0.05\%$
Zero Temperature Coefficient:	$< 25ppm/^{\circ}C$
Span Temperature Coefficient:	$< 30ppm/^{\circ}C$
Filtering:	Selectable time constants from 0-25 seconds
Display Update Rate:	10 readings per second
Internal Resolution:	1 part in 400,000
Display Range:	-199999 to +199999
Connections:	All user/installation connections using detachable field screw terminals
Case Material:	Black Polycarbonate
Storage Temperature:	-20 to +70 $^{\circ}C$
Operating Temperature:	0 to +50 $^{\circ}C$
Environmental Sealing:	IP65 (optional cover, Part Number SPC4, increases sealing to IP67)

PMD-STRAIN Load Cell/Strain Gauge Input Panel Mounting Display

TYPE: PMD-STRAIN

Mechanical Dimensions

All dimensions in millimeters



Panel cutout should be 92mm wide x 45mm high, +1mm, -0mm
1/8 DIN. Depth behind panel 125mm max, including cables.

Example of Simple Manual Instructions

Direct Calibration - Full Scale Setting

This is when you connect the meter to your system and make the meter read what you want it to, at 2 different points. This is the preferred calibration method, because it allows you to calibrate the system as a whole.

How to do direct calibration:-

If you have not done so before, please select Direct Calibration mode from the previous page.

First we recommend you set the **FULL SCALE** calibration ...

This feature is available in Easy and Advanced Modes

1. **Lockout Switch must be OFF**
Display shows **direCt** followed by **Set HI**
Press 3 seconds
2. Apply the highest calibration signal you can achieve, ideally 100% of system capacity. You can use less, but you will get better accuracy with higher signals. Now press OK
3. Press Set2 for 3 seconds. You can now set your decimal point position using the UP or DOWN buttons. Press OK when done.
4. You can now set the display value you want to see - use DIGIT to select each digit in turn, and the UP or DOWN arrow to increase or decrease each digit's value, as required.
5. **Done!**
Press to accept

Direct Calibration - Zero Setting

How to calibrate the **ZERO** point.

This feature is available in Easy and Advanced Modes

1. **Lockout Switch must be OFF**
Press 3 seconds
2. Apply the lowest calibration signal you can achieve, ideally 0% of system capacity. Now press OK
3. You can now set the display value you want to see - use DIGIT to select each digit in turn, and the UP or DOWN arrow to increase or decrease each digit's value, as required.
4. **Done!**
Press to accept

You can set Zero first, if you prefer, but you will not be able to change the decimal point position in the ZERO calibration step.

This will not be an issue if your zero calibration reading is 0, but may become confusing otherwise.

When you have finished your calibration, please remember to put the calibration lockout switch in its ON position, to protect your settings.

Product Order Codes

Ordering Guide. Create a full part number like this:-

Model	Analogue Output	Alarm Output	Serial Data Output	Supply Voltage
PMD-STRAIN	No output -0 4-20mA -ANI 0-10V -ANV +/-10V -ANB	No alarms -0 2 alarms -AL2 4 alarms -AL4	No data -0 RS232 -232 RS485 -485	95-265VAC-AC 11-30VDC -DC 48VAC -48VAC

Example - PMD-STRAIN display with 4-20mA output, 2 alarms, RS485 output and 110vac powered.

Order Code will be PMD-STRAIN-ANI-AL2-485-AC

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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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