

## Strain Gauge or Load Cell Hand Held Display



*The PSD portable display combines extremely high resolution and low power with the convenience of a hand held display and keypad*

### Introduction

The PSD is a completely portable (strain gauge) powered indicator, packaged in a small, robust IP65 / NEMA 4 enclosure. Two separate ranges are available, which enable the instrument to read and display two units of measure.

For simplified use, the operator only has access to six keys.

The menu options offer the ability to tailor the instruments response to the application. Gross, Net, Peak and Trough measurements are easily selected. An annunciator indicates which range has been selected. There is also a window, to insert a legend, describing each range. Once these parameters are set, it provides the user with the simplest of indicators.

### Specification at a Glance

- Powered by 2 x AA internal batteries
- Microprocessor based, allowing single pass calibration facility
- Accepts an input range of up to 50 mV/V
- Environmentally sealed to IP65 / NEMA 4
- 7 digit LCD display, with battery, peak, trough, net, error and shunt cal indication
- TEDS enabled for automatic sensor calibration (IEEE1451 - template 33)
- Auto sleep
- 1 year warranty
- The case is Registered Design No. 3021311
- Environmentally sealed to IP65 / NEMA 4 enclosure - dimensions 90 x 152 x 55 mm

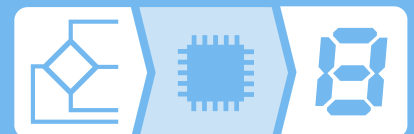


### User Benefits

- Battery life of 450 hrs in power save mode
- Dual range facility
- Tactile keyboard, with dual range selection, peak/valley hold, gross/net and on/off controls
- Available with RS232 output option
- Easy to carry only 250 grams

### Ideal Applications

- Civil Engineering
- Test & Measurement
- Lifting & Handling
- Silo & Weighing
- Chemical
- Process Industry



## Related Product



**PSD232**  
Portable digital load cell indicator  
with RS232 TEDS enabled



**TR100-CA Carry Case**  
Black carry case with clear viewing  
window and shoulder strap for both  
versions of PSD

## Specifications

<b>Performance</b>	Input Type:	Strain Gauge Full Bridge Sensors
	Input Range:	Up $\pm 5\text{mV/V}$ ( $\pm 50\text{mV/V}$ can be supplied, with factory set option)
	Non Linearity:	$\pm 50\text{ppm}$ of FR
	Thermal Drift:	$<25\text{ ppm}/^\circ\text{C}$
	Temperature effect on zero (MAX)	$\pm 7\text{ ppm}/^\circ\text{C}$
	Temperature effect on span (MAX)	$\pm 5\text{ ppm}/^\circ\text{C}$
	Offset stability	$\pm 80\text{ ppm}$ of FR*
	Gain stability	$\pm 100\text{ ppm}$ of FR**
	Excitation Voltage:	5Vdc ( $\pm 4\%$ ), 59mA maximum current
	Minimum Bridge Resistance:	85 $\Omega$ (4 off 350 $\Omega$ sensors in parallel) (350 $\Omega$ for power save mode)
	Internal Battery:	2off AA size alkaline, access via sealed rear compartment
	Battery Life:	45 hours (Typical 450 hours in low power mode), with 350 $\Omega$ sensor
	Update Rate:	Up to 40mS (can be set in configuration menu)
	*from original offset at any time @ 2.5mV/V ** 1 <sup>st</sup> year	
<b>Indication</b>	Display Type:	7½ digit LCD display, 8.8mm high digits
	Display Resolution:	1 part in 250,000 at 1Hz update rate 1 part in 65,000 at 10Hz update rate
	Annunciators:	Low Battery warning; peak; trough; hold; net; shunt cal; range
<b>Control Variables</b>	Front Panel User Keys:	Tactile Keys with recessed rims for:- ON/OFF Switches PSD power on/off RANGE Selects between two ranges HOLD Hold the current display value, press again to release GROSS/NET Zero's display ( $\pm 100\%$ range) SHUNT CAL Generates simulated input for indicator testing PEAK Enables peak hold TROUGH Enables valley/trough hold
	Settable Parameters:	Tare/Zero value; display resolution/decimal point position; display update rate; low power mode; auto power off;
<b>Mechanical</b>	Electrical Connection:	5 pin Binder socket (mating plug supplied)
	Physical Size:	See drawing below
	Weight:	250 grams
	Legends:	Insert legends for engineering unit identification (supplied)
<b>Environmental</b>	Operating Temperature:	$-10^\circ\text{C}$ to $+50^\circ\text{C}$ excluding batteries
	Storage Temperature:	$-40$ to $+65^\circ\text{C}$ excluding batteries
	Environmental Rating:	IP65 (when mating plug fitted)
	Enclosure Type:	ABS, dark grey (Leather Carry Case Optional)
	European EMC Directive	2004/108/EC
		BS EN 61326-1:2006 BS EN 61326-2-3:2006

### For more information contact us today...

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In the interests of continued product development, Mantracourt Electronics Limited reserves the right to alter product specifications without prior notice