



Series PRO8100

Strain Gage Hand Held Battery Powered Display



Description

The PRO8100 is a completely portable (strain gage) battery 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 ease of use, the operator has access to only six keys. The menu options offer the ability to tailor the instruments response to the application. Gross, Net, Peak and Valley 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.

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
- Lightweight... only 9 oz.

Applications

- Verification Testing
- Analog Gage Calibration
- Production Line Testing
- Field Calibration
- Punch Press Monitoring
- Cable Tension Verification

Standard Features

- Powered by 2, AA internal batteries
- Dual Range
- Accepts an input range of up to 50 mV/V
- Environmentally sealed to IP65 / NEMA 4
- 7 digit LCD display, with battery, peak, valley, net, error and shunt cal indication
- TEDS enabled for automatic sensor calibration (IEEE1451 - template 33)
- Auto Sleep (Power Save Mode)
- Environmentally sealed to IP65 / NEMA 4X enclosure
- Dimensions 3.5" x 6" x 2" (nominal)

Series PRO8100

Specifications

Baseline Configuration Specs Represented.
Modifications Encouraged - See Below
Custom Designs Available

Performance

Input Type

Strain Gage 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

$\pm 0.005\%$ of FS.

Thermal Drift

<45 ppm/ $^{\circ}\text{F}$.

Temperature Effect on Zero (MAX)

± 13 ppm/ $^{\circ}\text{F}$.

Temperature Effect on Span (MAX)

± 9 ppm/ $^{\circ}\text{F}$.

Offset Stability

± 80 ppm of FS.

Gain Stability

± 80 ppm of FS.

Mechanical Characteristics

Size

3.5" x 6" x 2" (nominal).

Enclosure

Environmentally sealed to IP65 /
NEMA 4X enclosure
ABS, dark grey.

Weight

Approximately 9 ounces.

Electrical Characteristics

Electrical Connection

5 pin Binder socket (mating plug supplied).
Mating plug and cable assembly with
mating plug for sensor (optional).

Excitation Voltage

5Vdc ($\pm 4\%$), 59mA maximum current.

Minimum Bridge Resistance

85 Ω (4off 350 Ω sensors in parallel).

Internal Battery

2- AA size alkaline, access via sealed
rear compartment.

Battery Life

45 hours (Typical 450 hours in low power
mode), with 350 Ω sensor.

Update Rate

Up to 40mS (25 readings per second)
(can be set in configuration menu).

Display / Controls

Display Type

7.5 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; valley; hold;
net; shunt cal; range.

Front Panel User Keys

Tactile Keys with recessed rims for:

ON/OFF Switches unit 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

VALLEY

Enables valley hold.

Settable Parameters

- Tare/Zero value
- Display resolution/decimal point position
- Display update rate
- Low power mode
- Auto power off.

Environmental Characteristics

Storage Temperature Range

-40 $^{\circ}\text{F}$ to +150 $^{\circ}\text{F}$. (excluding batteries)

Operating Temperature Range

+14 $^{\circ}\text{F}$ to +125 $^{\circ}\text{F}$. (excluding batteries)

Environmental Rating

IP65/NEMA 4X (when mating plug fitted)

European EMC Directive

2004/108/EC

BS EN 61326—1:2006

BS EN 61326-2-3:2006

Calibration

Front Panel Keypad Buttons

Protected by key sequence.



Modifications and Warranty

MODIFICATIONS: We realize transducer applications vary greatly and as such our designs are flexible. Choice of pressure port, electrical termination, material compatibility and performance characteristics are a few of the many options available. Specifications on this datasheet represent the standard configuration only. Product and company names listed are trademarks of their respective companies. Specifications subject to change without notice.

WARRANTY: Stellar Technology warrants that its product shall be free from defective workmanship and/or material for a twelve month period from the date of shipment, provided that Stellar Technology's obligation hereunder shall be limited to correcting any defective material FOB our factory. No allowance will be made for any expenses incurred for correcting any defective workmanship and/or material without written consent by Stellar Technology. This warranty is in lieu of all other warranties expressed or implied.



ISO 9001/AS9100

Due to the nature of technology, changes are inevitable. For latest technical specifications, see our website.

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Datasheet P/N: 249879C DCN 13436