Load Cell Central
1-800-LOADCEL

LOAD CELL SIMULATOR
Model: PVS-10

1-800-562-3235

570-265-5015

FAX: 570-265-5148

www.800LOADCEL.COM

Email: sales@800loadcel.com

Product Specifications

Model#: PVS-10

Impedance: 350 ohms nominal

Output Ranges: *Fixed rotary switch*
0 to 3 mV/V in 6 steps of .5 mv/v
10 turn vernier with locking graduated dial*
OFF: Rotary selection + 0.0 mV/V
FINE: Rotary selection - 0.01 mV/V to +0.5 mV/V
MEDIUM: Rotary selection - 0.04 mV/V to +1.5 mV/V
COARSE: Rotary selection - 0.08 mV/V to +3.0 mV/V

Accuracy:

Typical	*Max*
+ 0.007% of full scale	+ 0.015% of full scale
+ 0.00021 mv/v	+ 0.00045 mv/v

or +1 microvolt, whichever is greater

Zero Offset:

Typical	*Max*
+ 0.00009 mv/v	+ 0.0005 mv/v

Temp. Coefficient: + 5 PPM/^{o}C

Calibration: *This instrument has been calibrated using standards with accuracies traceable to the National Institute of Standards and Technology, derived from natural physical constants, derived from ratio measurements, or compared to consensus standards.*

A Test Uncertainty Ratio of at least 4:1 is maintained, and complies with applicable requirements of ANSI/NCSL 2540-1, ISO 9002, and MIL-STD-45662A.

Excitation: 15v ac/dc max

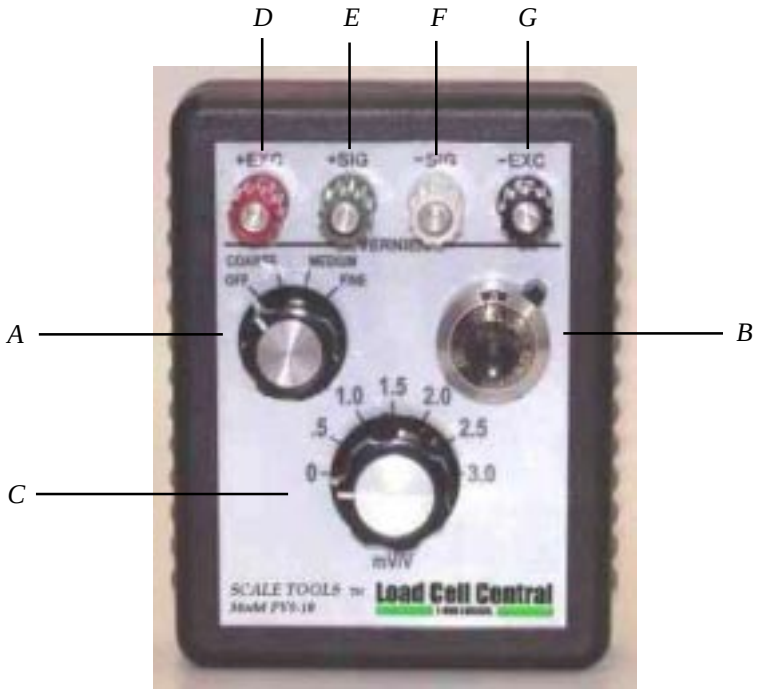
Termination: Binding posts - accepts standard banana plug or up to No. 14 wire

Weight: 1Lb.

Dimensions: 3.5"W x 4.5"L x 2.15"D

Enclosure: Flame retardant ABS plastic

Operation & Controls



A: **Vernier Selection***

OFF: Rotary selection with Calibrated Output
FINE: Rotary selection - 0.01 mV/V to +0.5 mV/V
MEDIUM: Rotary selection - 0.04 mV/V to +1.5 mV/V
COARSE: Rotary selection - 0.08 mV/V to +3.0 mV/V

B: **Locking Vernier Dial**

10 Turn adjustment of selected ranges listed above

C: **Rotary Selection**

Fixed Calibrated steps of 0.5mV/V from 0 to 3.0mV/V

D: **+Excitation Input**

E: **+Signal Output**

F: **-Signal Output**

G: **-Excitation Input**

The vernier is included as a diagnostic and setup tool, for example to simulate reaching setpoints in a batching application dry run. It is not designed to have the high accuracy as is specified for the rotary selection knob.

Sample Calculation

Pre-Calibration of Weight Indicator using Simulator

Load Cell Specifications: Load Cell Capacity: 1000lbs
Rated Output: 3mV/V
Actual Output: 3.0015mV/V

1) Calculate Units Per mV

$$\frac{\text{Load Cell Capacity}}{\text{Actual Output}} = \text{Units Per mV} \qquad \frac{1000\text{lbs}}{3.0015\text{mV/V}} = 333.1667\text{lbs}$$

2) Calculate Units Per Step of Rotary Selection

Units Per mV **X** Rotary Selection 333.1667 **X** 0.5 = 166.58335

Results: Rotary Selection	Reading on Weight Indicator
0.0	000.00000
0.5	166.58335
1.0	333.16670
1.5	499.75005
2.0	666.33340
2.5	832.91675
3.0	999.50010

3) Connect Excitation and Signal Terminals to Weight Indicator
Use Sense leads from indicator when possible
Connect +Sense to +EXC Terminal Post
Connect -Sense to -EXC Terminal Post

4) Power Up Weight Indicator and allow 5 to 10 minutes warm up time.

5) Refer to Weight Indicator's Service Manual and follow calibration instructions using the results from Steps 1 and 2

http://www.800LOADCEL.COM Email: sales@800loadcel.com