

# MODEL PLR-100 INSERT-A-CELL SYSTEM



Model PLR-100



The **PLR-100 Insert-A-Cell system** is a continuous level measurement system designed to monitor the product level in storage bins, silos and tanks. The unique system does this by measuring the strain on the support structure as the weight changes within vessel.

The PLR-100 Insert-A-Cell System is uniquely different and suitable to monitor the level in various types of storage vessels. This is done by utilizing cylindrical strain sensors that become part of the support structure.

These sensors, when installed in the bin support structure then accurately measure the strain or weight acting on the support beams or columns. When these sensors are wired to the indicator and the systems is calibrated, it will display and output the level at the PLR-100 control. The precision strain sensors provide excellent level accuracy and temperature stability.

The **PLR-100 Insert-A-Cell System** is suitable to monitor storage bins, vessels and tanks with an independent support structure. In some cases it may also be used on a shared support structure if angle support gussets are utilized. Two vessels sharing the same support structure is not recommended.

The level is displayed on a vertical LED array on the front cover of the PLR-100 indicator and is accurate to within  $\pm 2\%$  or better. The indicator provides an analog output and two (2) programmable discrete outputs that provide useful information to the user's existing control system.

The PLR-100 indicator is designed with the end user in mind. It has all the necessary features of a continuous level system, it is user friendly, easy to set-up and calibrate. The PLR-100 continuous level system will eliminate the headaches commonly associated with intrusive type level controls.

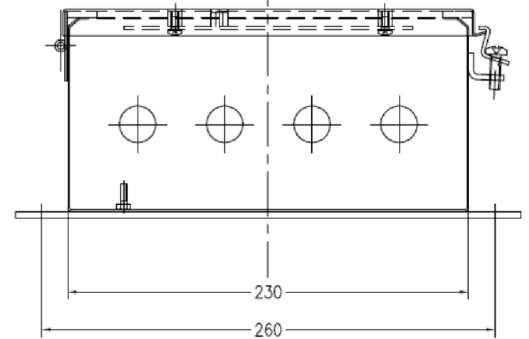
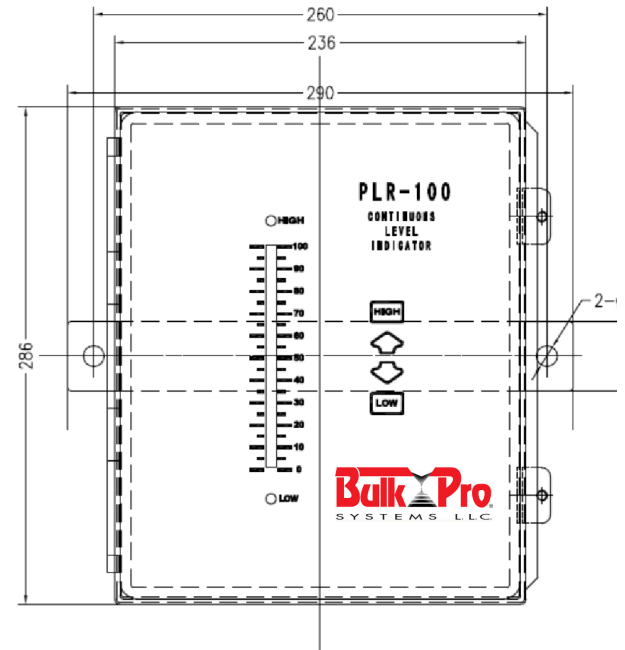
# SPECIFICATIONS

## Model PLR-100 Indicator

- Power Supply: 110/220 VAC Switch Selectable
- Frequency 48-62Hz
- Power Consumption: Less than 10VA
- Output Type: SPDT Dry Contact
- Output Rating: 5Amp @ 250VAC or 5Amp @ 30VDC
- Current Output: 0-20mA or 4-20mA, 400 Ohms max, selectable/
- Field Mount Enclosure: Stainless Steel, NEMA-4X (IP-67)
- Dimensions: 11-1/4" X 11-1/2" X 4-3/4"  
286mm X 290mm X 120mm
- Temperature Range:  
Storage: -40°F to 158°F (-40°C to 70°C)  
Operating: 14°F to 122°F (-10° to 50°C)
- Relative Humidity: 95%
- Display: Red LED column bar graph, 50 LED's, visible from 8' (2.5m)
- Microprocessor: 8-bit, C8051F350
- Clock Frequency: 22.1184MHz
- Memory: Flash, A/D 16-bit resolution, linearity <0.1%
- Weight: 11lbs (5kg)



## Outline & Mounting Dimensions Dimensions in mm



## Strain Sensor

- Excitation Voltage: 5VDC
- Max Per System: 8 sensors
- Resistance: 700 Ohms,  $\pm 10\%$
- Input Signal Range:  $\pm 5\text{mV}$
- Full Scale Output: 11.0mV
- Stress Range: 1500 to 14,800 PSI



## Installation Accessories

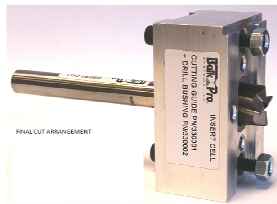
### Strain Sensor Junction Box

- Rating: NEMA-4X (IP-67)
- One (1) per strain sensor
- Terminal Strip



### Installation Tool & Counterbore Drill Bit

- Counterbore Drill Bit
- Installation tool
- Hardware



## Features:

- Simple, reliable construction
- Easy installation
- Simple to calibrate
- Not subject to rat-holing, bridging or angles of repose
- Less expensive than tank weighing assemblies
- More accurate than Ultrasonic, Radar and Yo-Yo type systems,  $\pm 2\%$
- Easily retrofitted onto existing or new vessels