

# Solar Panel Strength Testing

## Load Cells

Industry: Energy

### Summary

#### Customer Challenge

A solar panel manufacturer wants to test the strength and durability of their solar panels. Solar panels should be able to withstand objects and other debris flying 50 mph during storms and other kinds of weather.

#### Interface Solution

Interface suggests installing four SSB Load Beam Load Cells to the bottom four corners of the customer's solar panels, connected to a JB104SS Junction Box and a WTS-AM-1E Wireless Strain Bridge Transmitter Module. Drop tests of items with different weights are conducted, and the maximum load capacity has been reached, the results can be displayed, graphed, and recorded with the WTS-BS-4 Wireless Base Station connected to the customer's PC.

#### Results

Interface's SSB Load Beam Load Cells successfully measured the amounts of force their customer's solar panels were able to take during their drop test.

### Materials

- Four SSB Sealed Beam Load Cells
- JB104SS 4-Channel Stainless Steel Junction Box
- WTS-AM-1E Wireless Strain Bridge Transmitter Module
- WTS-BS-4 Wireless Base Station with Log100 Software
- Customer PC or Laptop

### How It Works

1. Four SSB Load Beam Load Cells are installed under the four corners of the customer's solar panels being tested. The load cells are connected to a JB104SS 4-Channel Stainless Steel Junction Box, which is then connected to a single WTS-AM-1E Wireless Strain Bridge Transmitter Module
2. Different objects are dropped onto the solar panels with different weights, or, at different speeds.
3. The WTS-AM-1E wirelessly transmits the force results of the WTS-BS-4 Wireless Base Station connected to the customer's PC, where the data is displayed, graphed, and recorded using Log100 software.

