JB808S

Eight-Channel Signal Trim Junction Box

INSTALLATION MANUAL

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

ISO 9001 REGISTERED

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16939

Introduction

The JB808S Junction Box can accommodate two, four, six or eight load cells. This board cannot be used with an odd number of cells. Any unused channels will require modification. Load cell output can be trimmed with potentiometers either individually, or in pairs, by altering the jumpers to “section trim” position.

When correctly installed, the NEMA 4X fiberglass-reinforced polyester enclosure will withstand 40 psi water pressure. It is not, however, designed for high-pressure washdown applications, exposure to steam, or exposure to high-temperature liquids.

Mounting the Junction Box Enclosure

Mount the enclosure in a location convenient for servicing and away from standing water. Try to mount the enclosure in a location that will not require extending the load cell cables. Depending on the mounting surface, the enclosure is attached using the four bolts provided, or other suitable fasteners. Figure 1 below shows dimensions for mounting the enclosure.

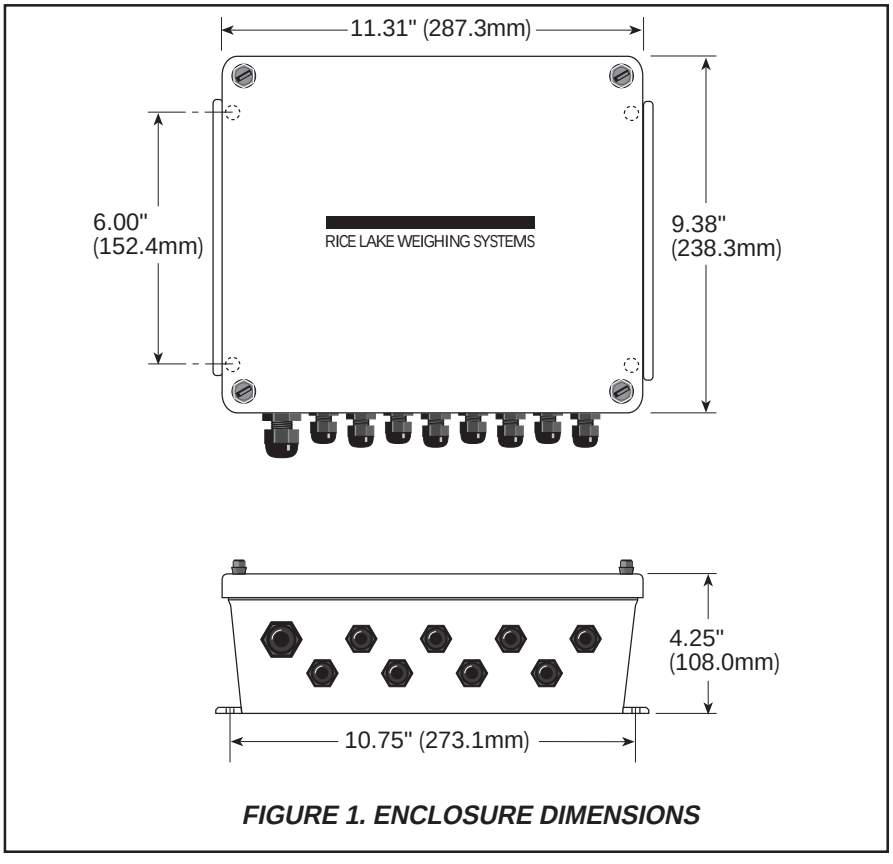

FIGURE 1. ENCLOSURE DIMENSIONS

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Wiring

NOTE ***LOAD CELLS***

CAUTION: DO NOT attempt to use an odd number of load cells with the JB808S.

The terminal strips are labeled “Cell 1” through “Cell 8” and are used to connect the individual load cells. Determine the number of load cells to be connected to the junction box. The JB808S has been designed to connect and trim two, four, six or eight load cells only. Load cell output can be trimmed with potentiometers either individually, or paired channels may be trimmed as a section. If using the paired-channel section trim, there must be two load cells attached to each section.

NOTE ***WIRING PATTERN***

See back cover of Rice Lake Weighing Systems Load Cell Product Selection Guide for wiring color codes.

After determining the wiring pattern, route the load cell cables through the nylon cord grip assemblies and leave the grips loose until final closure. Before connecting load cell cables to the terminals, check that all wire ends have been properly stripped and tinned.

Determine the color coding of the load cells used and connect each load cell cable to its terminal according to the labels by the terminals. For each cable, twist the woven shield into a single “wire” and attach it to the shield pin on its terminal strip. **Disable any unused channels by cutting the jumper corresponding to those channels.**

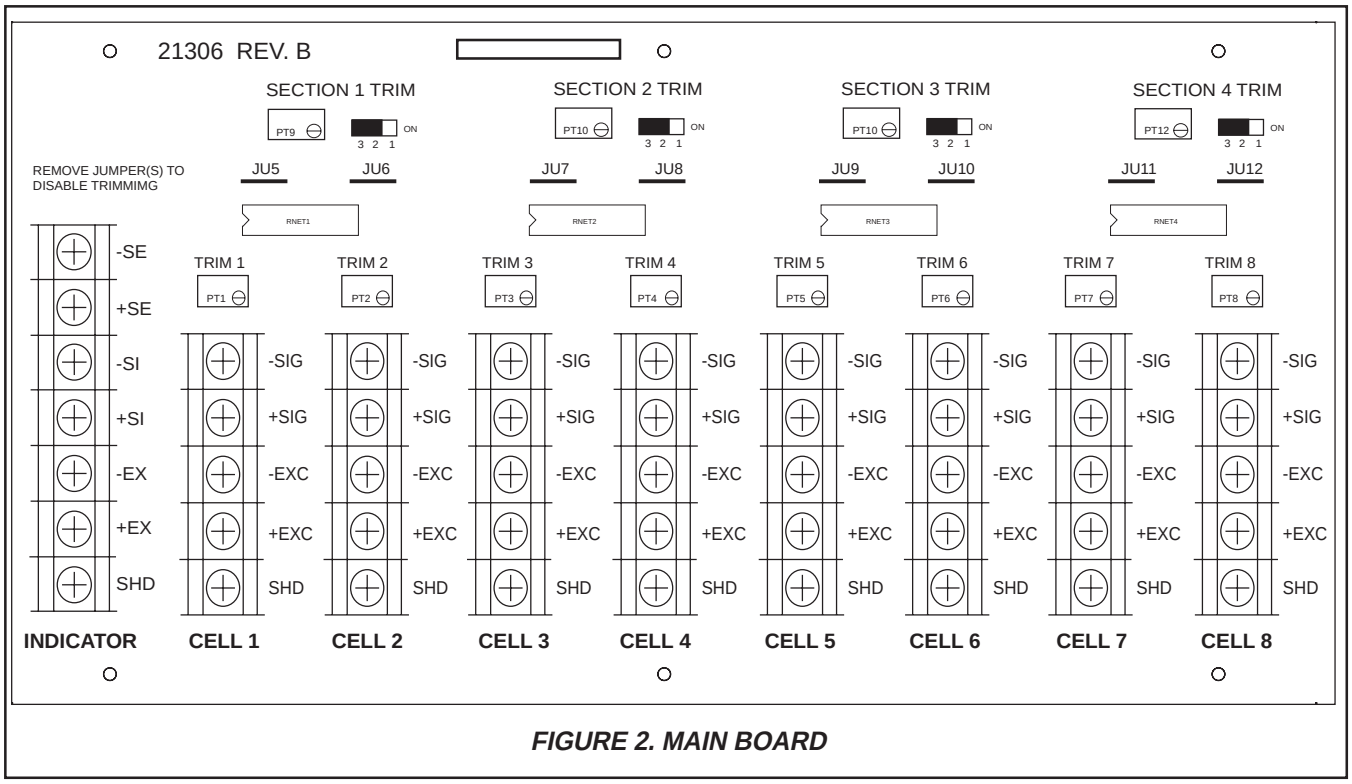

FIGURE 2. MAIN BOARD

TIP ***SENSE LEADS***

Use sense leads to correct small errors which can cause inaccurate readings and drifting problems, especially if the indicator is located far from the junction box.

The INDICATOR terminal strip is for connecting the main cable to the indicator. Determine the indicator’s load cell input connections from the operating manual. Run a cable from your indicator terminal into the junction box through the larger cord grip and make the connections on the INDICATOR terminal.

Trimming Procedure

TIP ***TRIMMING***

Whenever a substantial amount of trim seems necessary to equalize output (more than 5% of normal output), check for other possible problems. The best trim is always the least amount of trim.

Trimming is a process of equalizing the output from multiple individual load cells, or from pairs of cells if using the section trim format. When all errors except cell mismatch and cable extensions or reductions have been corrected, continue with the trimming procedure below.

1. Set all potentiometers fully clockwise to give maximum signal output from each cell.
2. Make sure jumpers corresponding to any unused terminals have been cut to disable use of these load cells.
3. Set jumpers to either individual trim or section trim. See Figures 3 and 4.

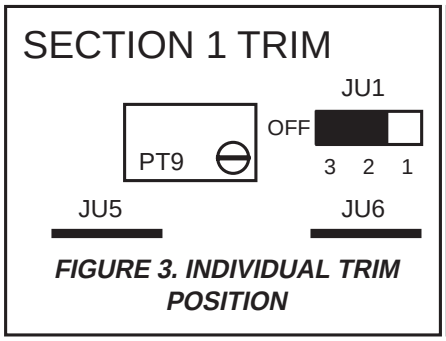

FIGURE 3. INDIVIDUAL TRIM POSITION

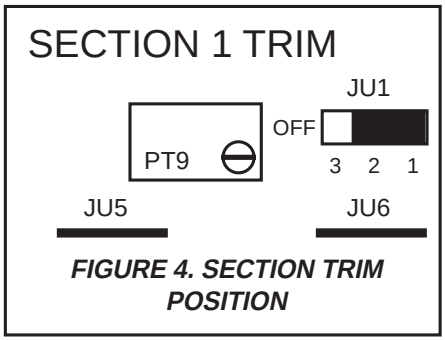

FIGURE 4. SECTION TRIM POSITION

TEST WEIGHTS

CAUTION: When loading the corners, do not exceed the concentrated load capacity (CLC) specified by the scale manufacturer.

4. Zero the indicator and place calibrated test weights over each load cell in turn (or over each section if section trim is enabled). The amount of test weights to be used will depend on the scale configuration; for specific recommendations, refer to *Handbook 44 Field Manual*, published by the Institute for Weights and Measures. For a four-cell platform, we recommend using 25% of scale capacity.
5. Record the value each time and allow the scale to return to zero to check for friction or other mechanical problems. Select the load cell or section which has the lowest value as your reference point—this cell or section will not be trimmed.
6. Now replace the same test load over each cell or section and trim each with its potentiometer down to the reference level cell or section. As corner corrections are somewhat interactive, check all cells or sections again for repeatability.

POST SCREW PLUGS

CAUTION: To prevent water and other contaminants from entering the J-Box, fill any unused cable grips with Post Screw Plugs.(Part Number 19538). Six are provided.

7. Tighten all wiring connections. Pull excess cable out of the enclosure and tighten the cord grip assemblies with a wrench. To be watertight, each cord grip must be tightened so the rubber sleeve begins to protrude from the hub.
8. Unused hubs must be plugged to prevent moisture entry. See the *Electronic Replacement Parts and Components* catalog to order extra hole plugs.
9. Insert a commercial desiccant having antioxidant properties into the junction box before closing. If the enclosure is in a damp or wet area, change the desiccant every four to six months.
10. Replace the cover and tighten the cover screws in an alternating pattern to be certain the gasket is compressed equally in all locations.

NOTE ***CABLE DRIP LOOPS***

If cables will be exposed to water or other liquids, bend a short downward loop in all cables near the cord grips so any fluids draining down the cables will drip off before reaching the junction box.