

Ten-Channel Signal Trim Junction Box

JB1010ST Installation Instructions

The JB1010ST Junction Box accommodates two, four, six, eight or ten load cells with transient protection components. Load cell output can be trimmed with potentiometers either individually or in pairs by section.

Mount the Enclosure

Mount the enclosure in a location convenient for servicing and away from standing water. Ensure load cell cables reach enclosure without extensions. Attach enclosure to mounting surface with four suitable fasteners.

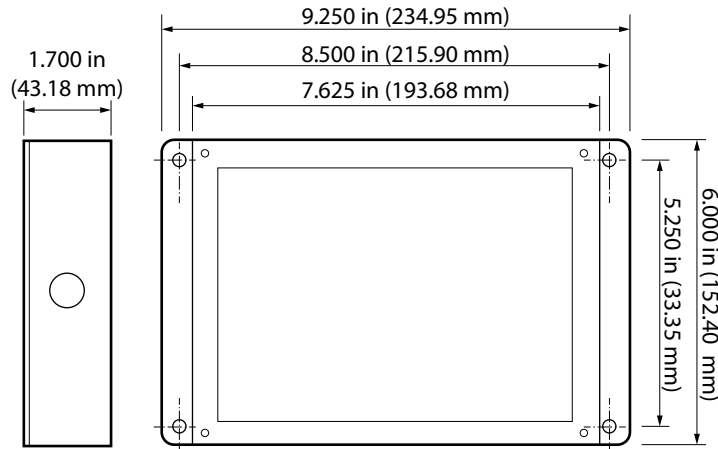


Figure 1. Enclosure Mounting Dimensions

Wire Junction Box

1. Route the load cell cables through the nylon cord grip assemblies and leave the grips loose.
2. Check all wire ends are properly stripped and tinned.
3. Twist the woven shield of each cable into a single “wire” and attach it to the cell terminal strip shield pin.
4. Connect load cells to terminal strips “Cell 1” through “Cell 10”.



NOTE: Disable unused channels by cutting corresponding isolation resistors.



IMPORTANT: The JB1010ST only functions with an even number of load cells. Both Channels must be used in each section.

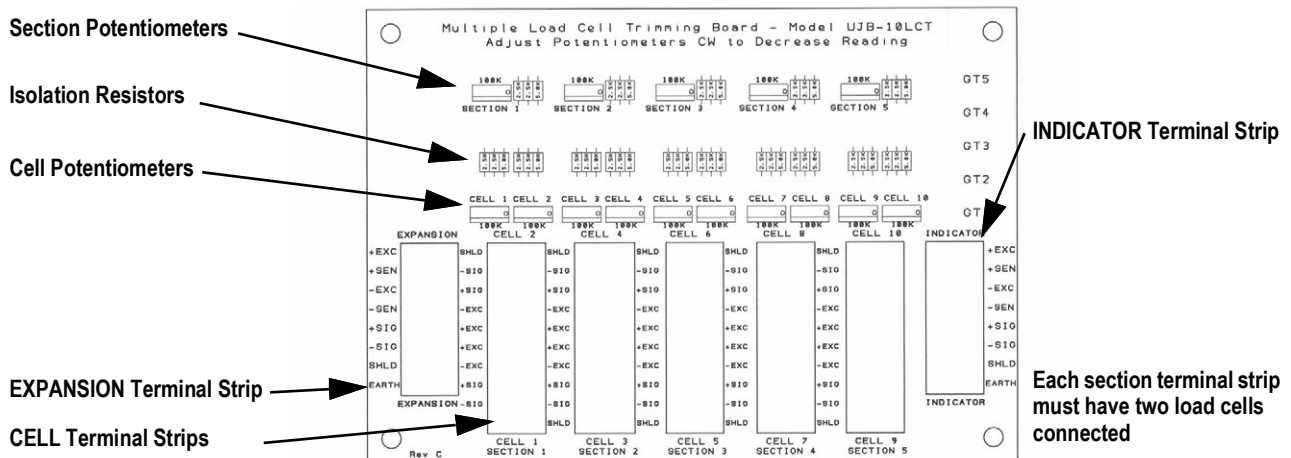


Figure 2. Main Board Layout

Terminal Strip	Connection To	Description
EXPANSION	J-Box INDICATOR terminal	Use expansion terminal block to connect junction box to multiple junction boxes.
CELL	Load Cells	See the load cell wiring guide at www.ricelake.com for wiring colors. Two cells must be connected to each section.
INDICATOR	Indicator or J-Box EXPANSION terminal	Determine load cell input connections from indicator technical manual. Run a cable from INDICATOR terminal into junction box through the larger cord grip. To connect multiple junction boxes together wire secondary junction box INDICATOR terminal to primary junction box Expansion terminal.

Table 1. Terminal Blocks



NOTE: Use sense leads to compensate for temperature changes, especially if the indicator is far from the junction box.

Trim Junction Box

Ensure isolation resistors corresponding to any unused terminals are cut to disable use of these channels.

1. Turn all potentiometers fully counter-clockwise to give maximum signal output from each cell.
2. Zero the indicator.
3. Place a calibrated test weight equal approximately 25% of scale capacity centered over each load cell (or over each section) and record the value each time the weight is placed on the scale.
4. Record the load cell or section with the lowest value as the reference value. This cell or section will not be trimmed.
5. Place test load over each cell or section and trim corresponding potentiometer until indicator matches reference value.
6. Check all cells or sections again for repeatability.
7. Repeat Steps 3 through 6 until the weight display at all cells or sections match.



NOTE: If a substantial amount of trim is necessary to equalize values, check for friction or other mechanical problems. Allow the indicator to return to zero after each weighing.

8. Perform standard calibration.

Seal Junction Box

1. Tighten all wiring connections.
2. Pull excess cable out of enclosure and torque cord grips. Plug all unused cord grips with post screw plugs (PN 19568).
3. Insert a commercial desiccant packet into the junction box.
4. Replace the cover and tighten the cover screws in an alternating pattern.



IMPORTANT: If cables are exposed to water or other liquids, bend a short downward loop in all cables outside of the junction box, near the cord grips to create a drip point that sheds water away from the cord grip. If enclosure is in a damp or wet area, change desiccant every four to six months.

Apply the following torque during installation and the hardware replacement to ensure IP ratings are maintained.

Hardware	Where Used	Torque (in-lb)
Screw, 1/4-20 UNC	Front Panel	22
PG9 Cord Grip Nut	Metal Cord Grips	55
PG13.5 Cord Grip Nut	Metal Cord Grips	55
PG9 Cord Grip Cap	Metal Cord Cap	37
PG13.5 Cord Grip Cap	Metal Cord Cap	37

Table 2. Torque Values



© Rice Lake Weighing Systems Content subject to change without notice.

230 W. Coleman St. • Rice Lake, WI 54868 • USA USA: 800-472-6703 • International: +1-715-234-9171