Trimming Procedure

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.

The EL604-AL junction box is a signal trimming device. Trimming is a process of equalizing the output from multiple individual load cells. 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 channels. See Figure 3.

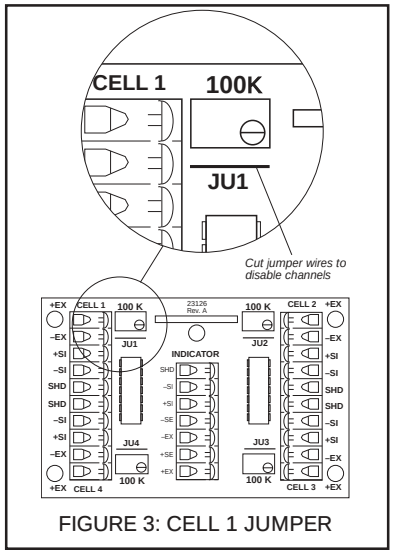


FIGURE 3: CELL 1 JUMPER

3. Zero indicator and place calibrated test weights over each load cell in turn. The amount of test weights to be used depends 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 at least 25% of scale capacity.

TEST WEIGHTS

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

4. Record value displayed on indicator after test weight is placed in turn on each corner (directly over load cell) without allowing the weights to overhang the sides. Allow scale to return to zero each time to check for friction or other mechanical problems. Select load cell with lowest value as your reference load cell. This cell is not trimmed.
5. Replace same test load over each cell in turn. Using corresponding potentiometer, trim each cell down to equal reference load cell. As corner corrections are somewhat interactive, check all cells again for repeatability. If necessary, repeat steps 4 and 5.
6. Tighten all wiring connections. Pull excess cable out of enclosure and tighten cord grip assemblies with a wrench. To be watertight, each cord grip must be tightened so rubber sleeve begins to protrude from hub.

POST SCREW PLUGS

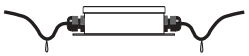
CAUTION: To prevent water and other contaminants from entering the junction box, fill any unused cable grips with post screw plugs, PN 19538.

7. Cord grip hex fittings must be turned so a hex flat, rather than a hex tip, is toward cover. If a hex tip points toward cover, it prevents cover from closing fully.
8. Cover has a concave cutout to provide clearance for indicator cable cord grip. Be certain to place cover so concave cutout is on side where cord grip is located.

CABLE DRIP LOOPS

If cables are 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 drip off before reaching the junction box.

9. Unused hubs must be plugged to prevent moisture entry. See latest *Electronic Replacement Parts and Components* catalog to order extra hole plugs if necessary.
10. Insert enclosed desiccant bag into junction box before closing. If enclosure is located in a damp or wet area, change desiccant every four to six months.



11. Replace cover and tighten cover screws in an alternating pattern to be certain gasket is compressed equally in all locations.

EL604-AL

Four-Channel Signal Trim Junction Box

Installation Manual

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

ISO 9001 REGISTERED

69524

Introduction

The EL604-AL is a signal trim junction box that can accommodate two, three or four cells. Any unused channels require modification. Load cell output can be individually trimmed with potentiometers.

The aluminum NEMA 4 enclosure is not designed for high-pressure washdown applications, exposure to steam, or exposure to high-temperature liquids.

Mounting the Junction Box Enclosure

CHANGING CABLE LENGTH

Locate the junction box so load cell cables need not be cut, nor length added. Load cell output is temperature-compensated for the supplied cable length. Altering that length can change the cell's signal output.

Mount the enclosure in a location convenient for servicing and away from standing water. Try to mount the enclosure in a location that does not require extending the load cell cables. Refer to Figure 1 below for the dimensions of the junction box enclosure.

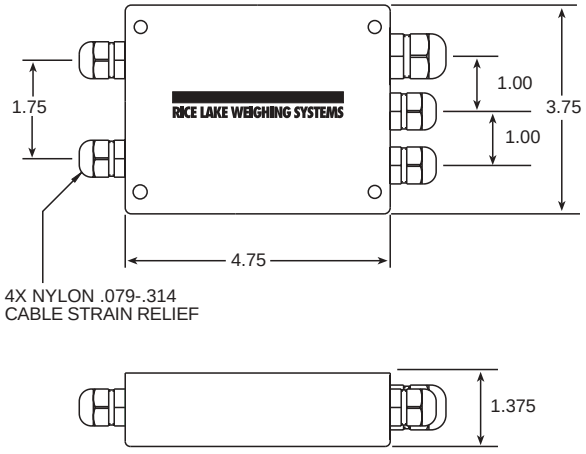


FIGURE 1. ENCLOSURE DIMENSIONS

Wiring

The terminal strips are labeled "Cell 1" through "Cell 4" and are used to connect the individual load cells. Determine the number of load cells to be connected to the junction box. The EL604-AL has been designed to connect and trim two, three, or four load cells only. Do not attempt to connect more than four load cells to the EL604-AL.

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 wires to the terminals, strip the wire insulation back 1/4" to expose the wire. The spring-loaded terminals accommodate 14 to 26 gauge wire.

WIRING PATTERN

Wire per manufacturer's specifications included with load cell documentation.

To connect the load cell and indicator wires to the appropriate connectors, push in the quick-connect lever with a small screwdriver or ball point pen. While holding in the lever, insert the appropriate wire into the exposed wire opening. Release the screwdriver or ball point pen to allow the spring-loaded gate to close and lock the wire in place.

If less than four load cells are used, cut the jumper traces on the unused terminals to disable their use. See Figure 3 on next page.

QUICK-CONNECT LEVERS

Push in corresponding lever to expose wire opening.

Insert wire and release lever.

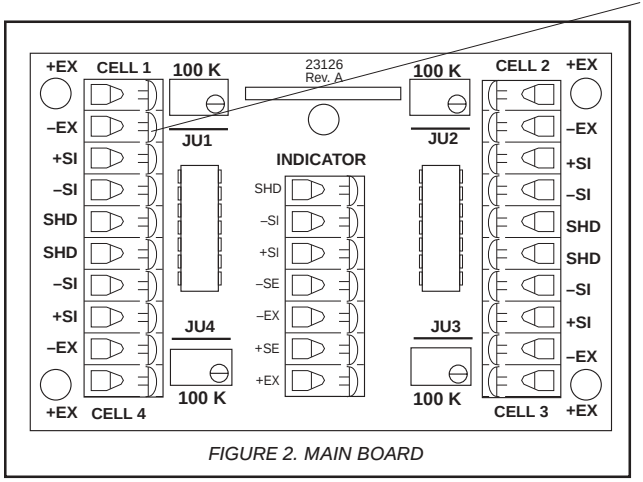


FIGURE 2. MAIN BOARD

SENSE LEADS

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

The indicator terminal strip is used to connect the main cable to the indicator. Determine the indicator's load cell input connections from the operating manual. Run a cable from the indicator terminal into the junction box through the larger cord grip and make the connections on the indicator terminal.