

LIBERTY SCALES INC

LS-720
WEIGHING KIT

INSTALLATION MANUAL



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OVERVIEW

Our LS-720 floor scale weighing kit has everything you need to build your own weighing scale. It enables you to use any platform of your choice (platform not included with the kit). This weighing kit is mostly used for floor scale, livestock scale applications or to turn any object, platform into a scale with Maximum capacity of 10,000 lbs.

You can increase the kit's weighing capacity by adding more load cells or buy higher capacity kits. The kit can also be customized to Accessories such as printer, scoreboard, software, custom ramps, stands & much more! All load cells come with 200% overload protecton.

Our LS-720 weighing kit comes with all the accessories you need for installation.

ACCESSORIES

- x 4 load cells with 10' cable
- x 4 load spacers (installed in-between the load cell & the mounting block)
- x 4 load cell Mounting blocks (typically welded to steel structures) or bolted to wood.
- x 8 Hexagon bolts
- x 8 washers
- x 8 lock washers
- x 1 Junction Box (Plastic or Stainless steel)
- x 1 Quick Connect Cable (you will hard wire it to the Junction Box, Refer to wiring diagram with in this Manual.
- x 1 Digital Weight Indicator (Either in mild steel or Stainless steel LCD or LED, depends on your purchase.



Once you've ensured these items are included in your kit, proceed with the installation.

OVERALL INSTALLATION

FOR WOODEN PLATFORMS

Step 1: Make sure the wooden platform you've built – or are in the process of building – can withstand the maximum weight you'll put on it.

Step 2: Turn the platform upside down.

Step 3: Drill 2 holes (Same size & spacing between the holes as the mounting block. Use the mounting block to draw out the holes first & then drill. Ultimately they need to match up to the load cells, be sure to take time to do it correctly. This can impact readings if load cells are not positioned correctly.

NOTE: At all four corners of the platform (x 2 holes should be drilled on every corner). Each hole should be drilled as close to its respective edge as possible. You need to purchase longer bolts for thicker platforms. Measure the mounting block & load cell along with the thickness of the platform & purchase the correct length of bolts. So that the load cell, mounting block & the platform are all connected firmly.

Step 4: Use the 1/16" load spacers to bolt the load cells onto the platform. The spacers should be placed between the load cell & the mounting block. This is necessary to give the load cells adequate room for accurate readings. (refers to the picture in this manual)

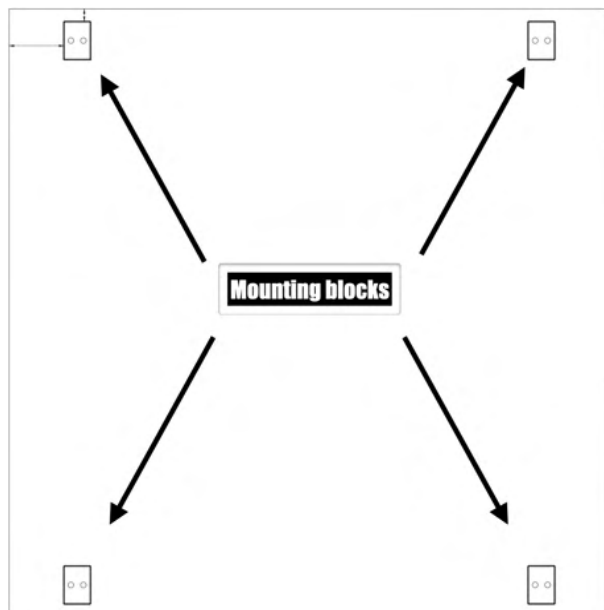
Step 5: Take out the junction box. See the below diagram to understand where each of the 4 load cell cables will need to go into the junction box.



IF YOU'RE USING A STEEL PLATFORM:

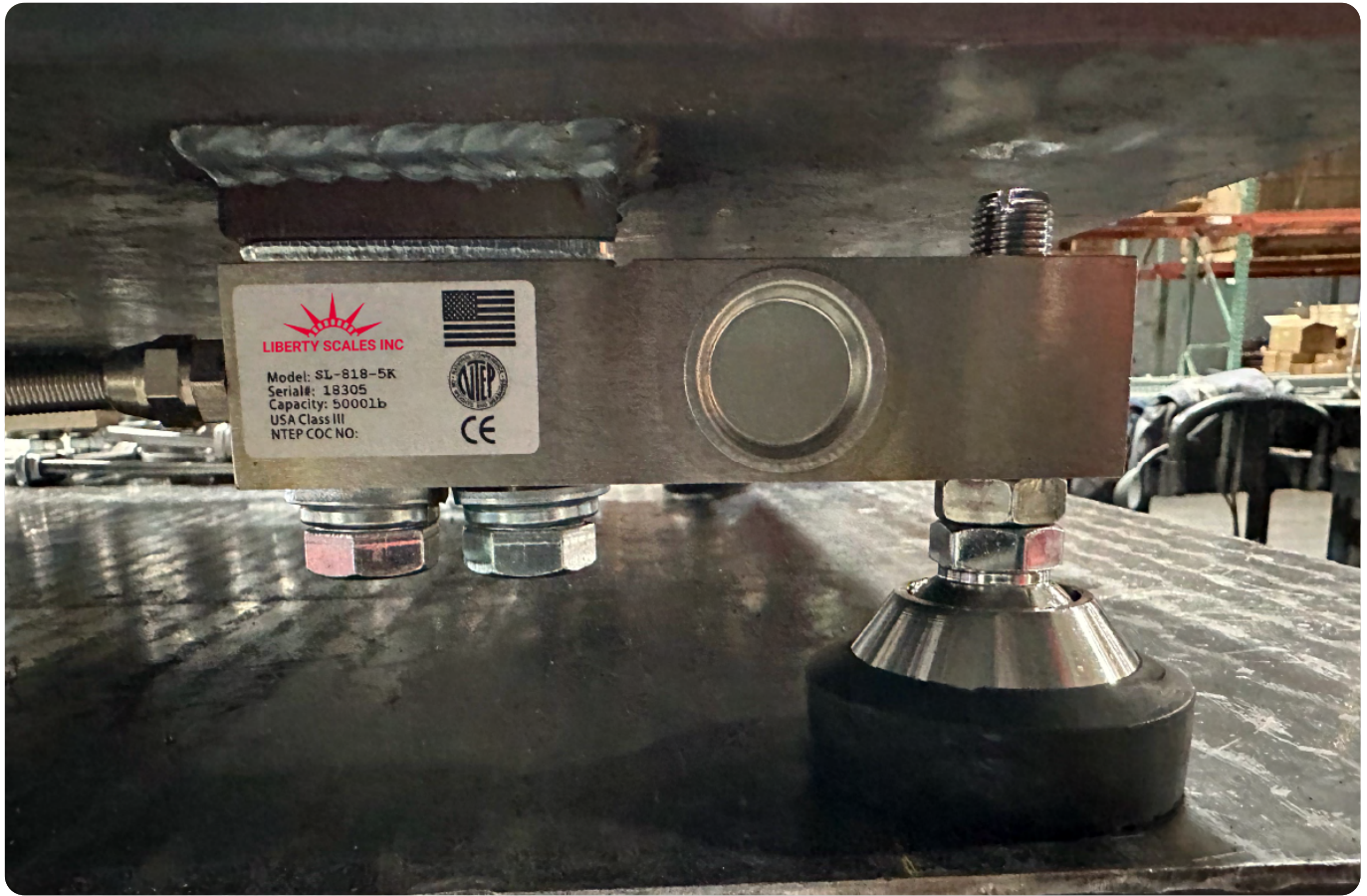
You will need to weld each mounting block to the corner of the platform. Only weld on the outside of the mounting block & ensure that all blocks are positioned in the same way, with the feet of the load cell located in the corner of the platform (not facing inside the platform).

Picture below demonstrates the correct installation format.

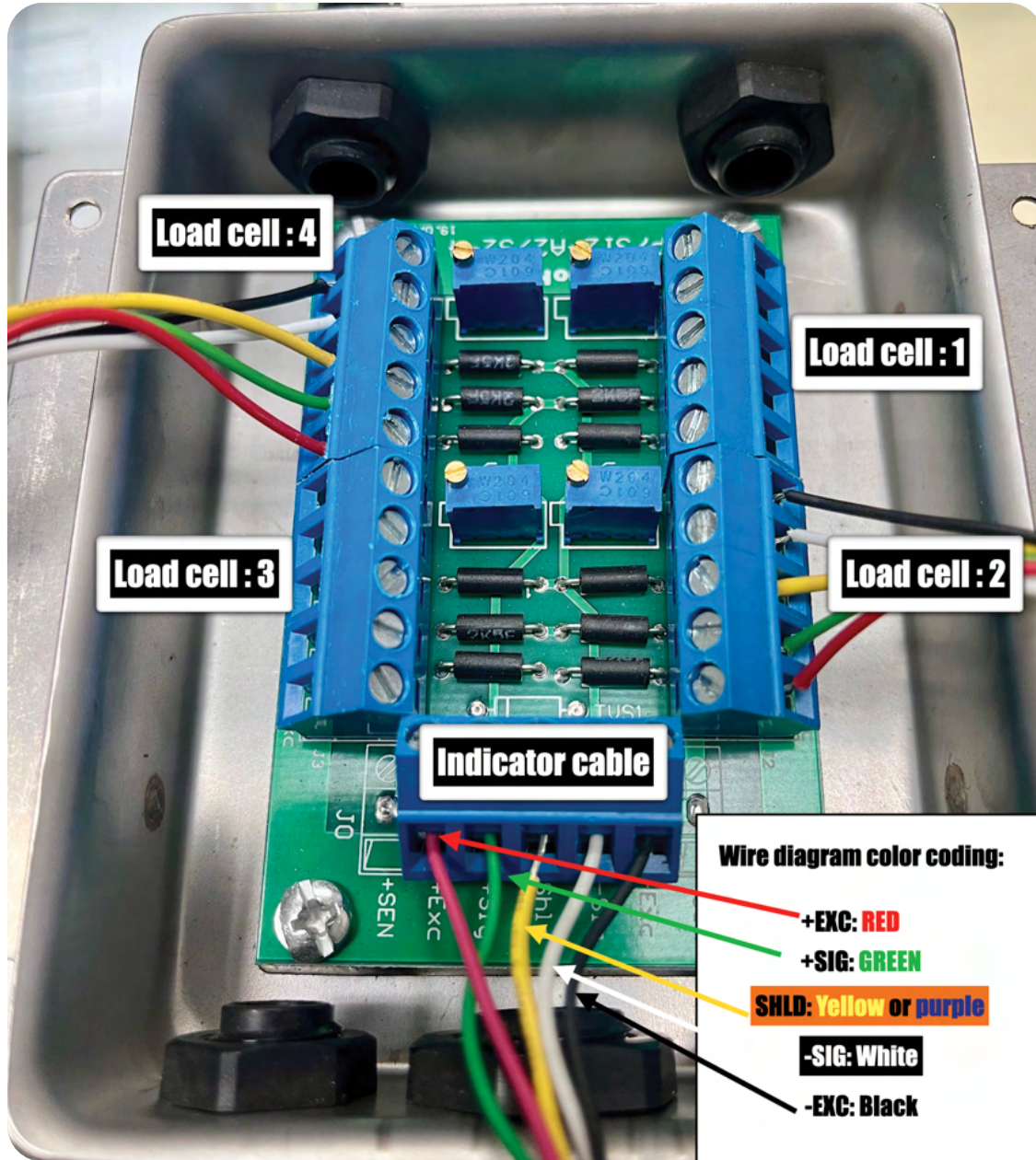


WARNING:

Do not weld the mounting blocks to the platform with the load cell attached to it, it will damage the load cells.



Please refer to the diagram below for the indicator cable & load cell wiring:



CAPACITY & ACCURACY CHOICES:

- 1000 lb Capacity x .2 lb Accuracy
- 2500 lb Capacity x .5 lb Accuracy
- 5000 lb Capacity x 1 lb Accuracy
- 10,000 lb Capacity x 1 lb Accuracy

CALIBRATION PROCEDURE

1. Turn on the scale by holding ON/OFF \cup for 2 seconds.
2. Press HOLD \rightarrow and PRINT \leftarrow together to access the setup menu.
3. If done correctly, the display should now show $\llbracket 01$.
4. Press PRINT \leftarrow to access the C1 channel. The display should show $\llbracket C1 \#$.
5. Press ZERO \blacktriangle to choose which unit you want to calibrate in (1 = kg, 2 = lb).
6. Press PRINT \leftarrow to set the value. The display will now show $\llbracket 02$.
7. Press PRINT \leftarrow to access the C2 channel. The display should show $\llbracket C2 \#$.
8. Press ZERO \blacktriangle to change the setting to the decimal places desired (The C2 channel is used to adjust the decimal point on the scale. A value of 1 means there is one digit behind the decimal point.)
9. Press PRINT \leftarrow to set the value. The display will now show $\llbracket 03$.
10. Press PRINT \leftarrow to access the C3 channel. The display should show $\llbracket C3 \#$.
11. Press ZERO \blacktriangle to cycle through the values until the desired graduation appears. (The C3 channel adjusts the divisions on the scale. A value of 1 selected and C2 set to 1, the scale will read in 0.1 lb increments.)
12. Press PRINT \leftarrow to set the value. The display will now show $\llbracket 04$.
13. Press PRINT \leftarrow to access the C4 channel. The display will show $\llbracket #####$.
14. Enter in the maximum capacity you want to use for this scale by using UNIT \blacktriangleleft and COUNT \blacktriangleright to move the cursor left and right, and TARE \blacktriangledown and ZERO \blacktriangle to move the values down and up. (The C4 channel is used to enter in the max capacity of the scale; Make sure this doesn't exceed the max capacity of the scale; Max capacity divided by the increment set in C02 and C03 above cannot exceed 5000.)
15. Press PRINT \leftarrow to set the value. The display will now show $\llbracket 05$.
16. Press PRINT \leftarrow to access the CS channel. The display should show $\llbracket C5 0$.
17. The CS channel calibrates zero on the scale. Make sure the scale is empty.

18. Press ZERO ▲ to change the value to 1.
19. Press PRINT ← The display will count down from 10-1 while the scale is calibrating zero. When the display shows 0 the zero calibration is complete.

LS-7510 offers 2 calibration methods, Single Point which uses one weight to calibrate or Linear Calibration, which uses multiple (2-7) weights for a more accurate calibration.

To Calibrate using only 1 calibration weight (Single Point Calibration)

20. Press PRINT ← to continue. The display will now show [C6].
21. Press PRINT ← to access the C06 channel. The display will show [C6 0].
22. The C6 channel is used to calibrate the scale with a known weight. Press ZERO ▲ to set the value of C6 to [C6 1]. Press PRINT ← . The display will flash **SPAN**, and then show [#####].

TROUBLESHOOTING

Error Codes

Error	Reason	Solution
UUUUUU	<ol style="list-style-type: none"> 1. Overload 2. Wrong connection with load cell 3. Load cell has quality problem 	<ol style="list-style-type: none"> 1. Reduce the weight 2. Check load cell connection 3. Inspect load cell; Check the input/output 4. See Q&A section
NNNNNN	<ol style="list-style-type: none"> 1. Calibration is no good 2. Wrong connection with load cell 3. Load cell has quality problem 	<ol style="list-style-type: none"> 1. Make sure scale is level 2. Check load cell connection 3. Check load cell input and output resistance 4. See Q&A section
Err 1	During calibration, weight is not used or the weight is above the max. capacity	Use correct weight within the defined range
Err2	During calibration the weight is below the minimum required weight	The calibration weight minimum is 10% of the max. capacity set in C04. Recommended to use 60%-80% of max. capacity if possible
Err3	During calibration, the input signal is negative	<ol style="list-style-type: none"> 1. Check all wire connections 2. Check load cell 3. Recalibrate 4. PCB replacement needed if steps 1-3 fail
Err4	During calibration signal is unstable	After the platform is stable start calibration
Err5	EEPROM Error	Change PCB
Err6	Exceed Zero Range	See Q&A section

For Additional support please reach out to info@libertyscales.com
or Call 661-888-1919.



LIBERTY SCALES INC

Liberty Scales is a premier provider of scales tailored for commercial and industrial usage. We specialize in assisting businesses to seamlessly integrate scales and measuring devices into their workflows, guaranteeing exceptional reliability and enhanced efficiency.

Our mission is clear — to offer businesses exceptionally precise scales at a cost-effective price!

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