**Please check the following items if weights are reading incorrectly or scaling incorrectly:**

1) Mechanical interference of lifter plates – this is the most common issue. Check if the load cell deck has moved and is causing interference. This usually happens when the load cells rise up and hit the conveyor base or chain.

2) Overload protection screw interference – with a full load on the raised lifter plates, ensure that you are able to slide a piece of paper between the load cell overload protection screw and the frame. *(If the weight reading varies as you move a container or a weight from one side to another on the raised lifter plates, it is nearly always due to the overload protection screw needing adjustment)*

→
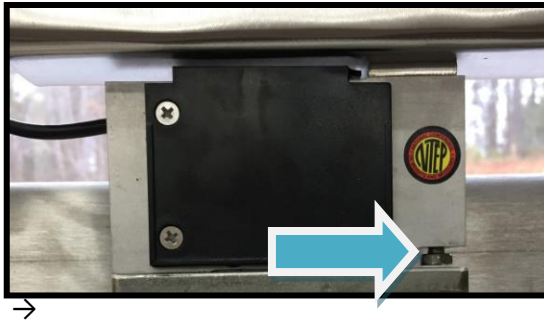
3) Run the software calibration routine, and if the problem persists, run the hardware calibration (which involves using a meter and following a written routine shown on page two). Please note, it is essential that the hardware calibration is run with a weight approximately 5 pounds heavier than the software calibration. If this is not done, then the "scaling" will be incorrect e.g. zero weight will read zero, 50 pounds will read 50 pounds, but weights in-between will be off.

4) To confirm the calibration is correct, go to the Analog Input screen and check that the scale reads under 20mA at full load e.g. 50 pounds. (Because 55 pounds will be 20mA)

1.1.1 Hardware Calibration
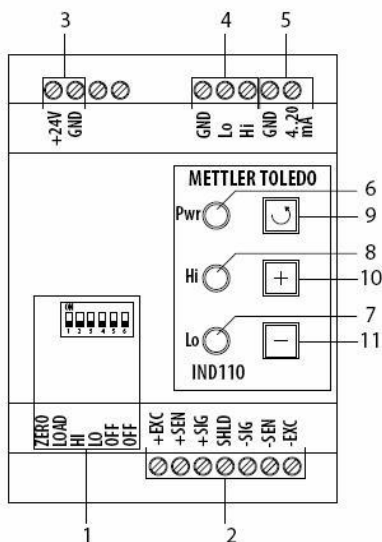
Mettler Toledo IND110

Hardware calibration on ABA Filling Machines

Required tools:

Small Screw driver.

A multimeter to measure 4 to 20 mA resistance.

Calibration weights for the scales.

In preparation:

Power up the filling machine with air supply connected.

Navigate to the calibration screen and raise the scales. (Typically Log On then calibration Menu)

Setting the Zero Load point (4 mA)
1. Remove the wire from the "4-20mA" [5] connection on the top edge of the IND110.
2. Attach the black multimeter probe to the "4-20mA" terminal connection using a short piece of wire as a jumper
3. Attach the red alligator clip to the red wire
4. Set the Multi-Meter to mA
5. Remove all weight from scales.
6. The Dip switches [1] should all be in the "OFF" Position (Down).
7. Set Dip switch 1 to the "ON" Position (Use a small screwdriver to lift up). The "Hi" LED [8] will start to flash.
8. Use the setting keys "+" [10] and "−" [11] until your multimeter reads as close to 4mA as you can get it. Use the selector key [9] to switch over to fine range ("Lo" LED starts to flash) and use the "+" and "−" keys for fine adjustment.
9. Return DIP switch 1 to "OFF".

Setting the Maximum Load point (20mA)
1. Add recommended Hardware weight as noted below to the scales.
2. The Dip switches [1] should all be in the "OFF" Position (Down).
3. Set Dip switch 2 to the "ON" Position. The "Hi" LED [8] should start to flash.
4. Use the setting keys "+" [10] and "−" [11] until your multimeter reads as close to 20mA as you can get it. If necessary, use the selector key [9] to switch over to fine range ("Lo" LED starts to flash) and use the "+" and "−" keys for fine adjustment.
5. Return DIP switch 2 to "OFF".
6. Return the red wire to its original "4-20mA" [5] position