CB3
Moisture Probe Interface

	Note	*The CB3 interfaces with moisture probes by other manufactures. Please consult the specific manufacturer for installation and calibration instructions.*

The Hydronix Hydro-Probes require their own 24 VDC power supply. This power source is used to source the 4-20 mA current loop, simplifying the connections between the PLC and probe, requiring only two wires between them.

Installing the Probes

Use the Hydronix installation and documentation guides to install and wire the Hydro-Probes.

- Hydro-Prove IV Installation Guide:
  https://www.hydronix.com/downloads/user_guides/hydro_probe/hp04/hd0675_1_3_1.pdf

- Hydro-Probe IV Calibration and Configuration:
  https://www.hydronix.com/downloads/user_guides/all_sensors/calibration/hd0679_1_4_0.pdf

- Hydronix Product Downloads:
  https://www.hydronix.com/downloads/products.php

Wire the Probes

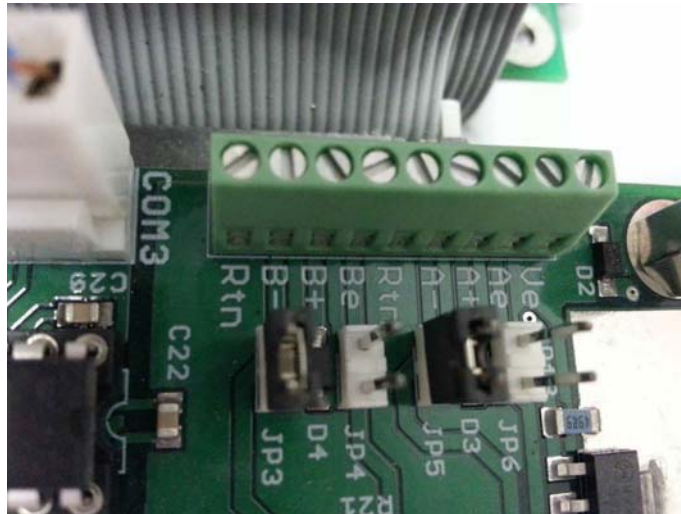Wire the probes to the PLC CPU Analog section. This board has a 9-pin header for analog inputs.

Figure 1. PLC CPU Analog Section

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Hydro-Probe 1

1. Connect wire E (black) to terminal **A-**.
2. Connect wire D (blue) to terminal **A+**.
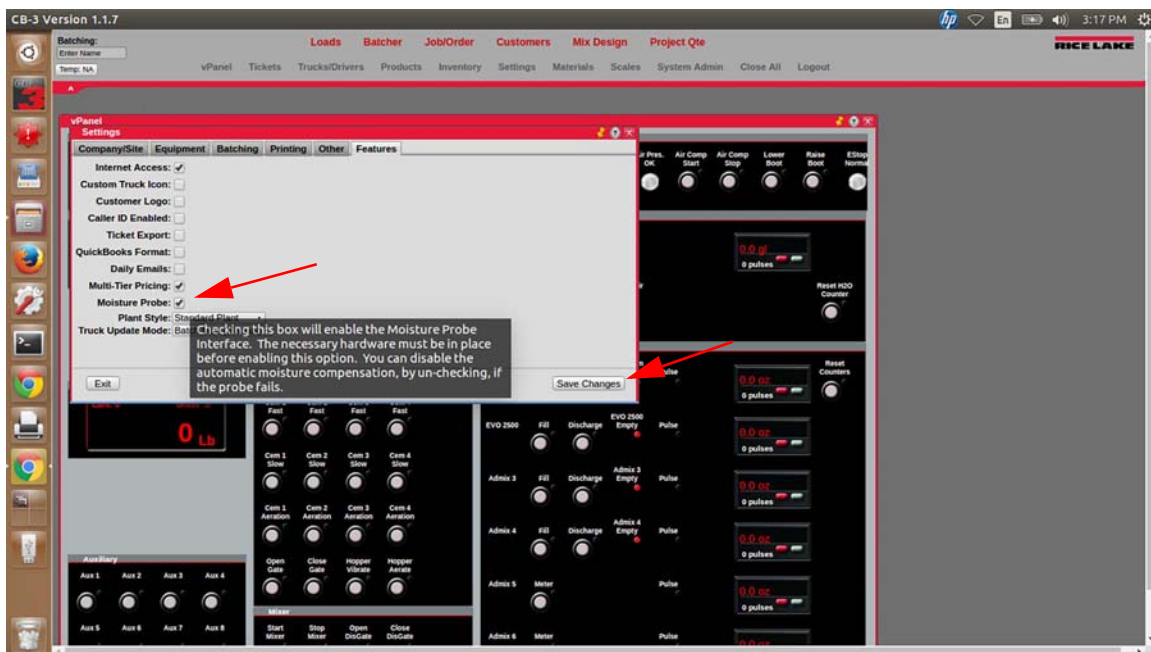3. Connect the shorting jumper to **JP5**.

Hydro-Probe 2

1. Connect wire E (black) to terminal **B-**.
2. Connect wire D (blue to terminal **B+**.
3. Connect the shorting jumper to **JP3**.

📝**Note** *A+ is Current +, A- is Current -*

B+ is Current +, B- is Current -

CB-3 Configuration

1. Select *vPanel*. This will be used in Step 12.
2. Open the *Settings* menu.
3. Select the *Features* tab.
4. Check the Moisture Probe checkbox.

5. Press [Save Changes].
6. Press [Exit].
7. Open the *Materials* menu.
8. Press [Bins].
9. Select the Bin the probe will be on.

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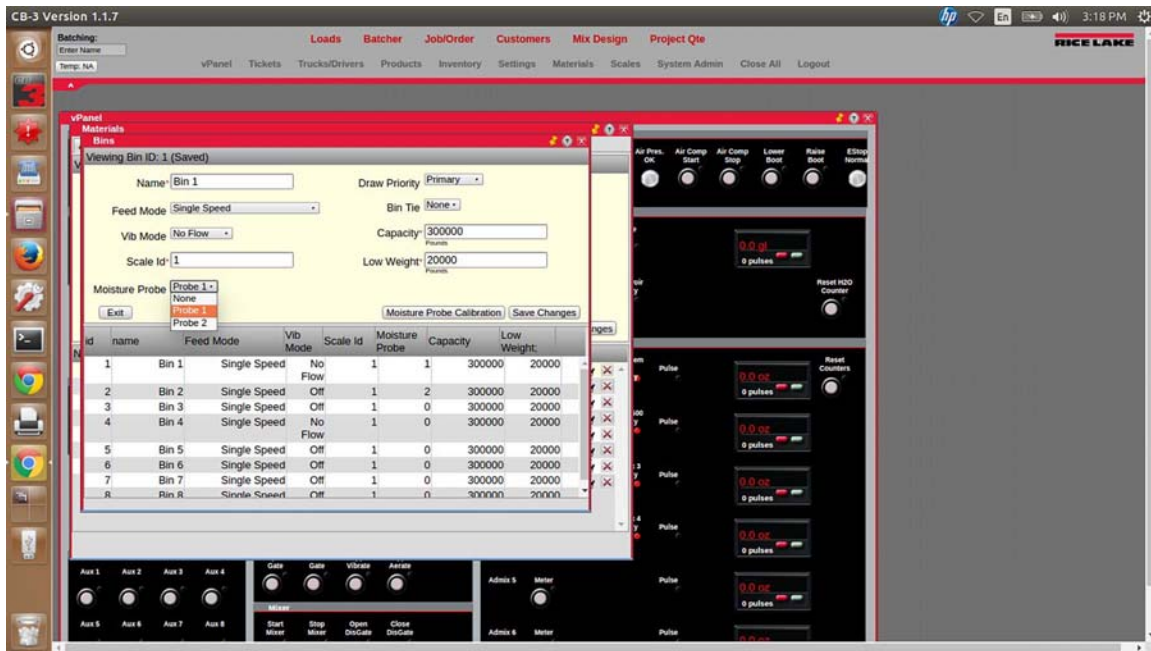10. Select the probe from the drop down menu.

Figure 2. Bins Menu - Select Probe

11. Press [Save Changes] .

12. Move the *Materials* menu and the *Bins* menu to the right of the display to view the *Raw Counts* in the *vPanel*.
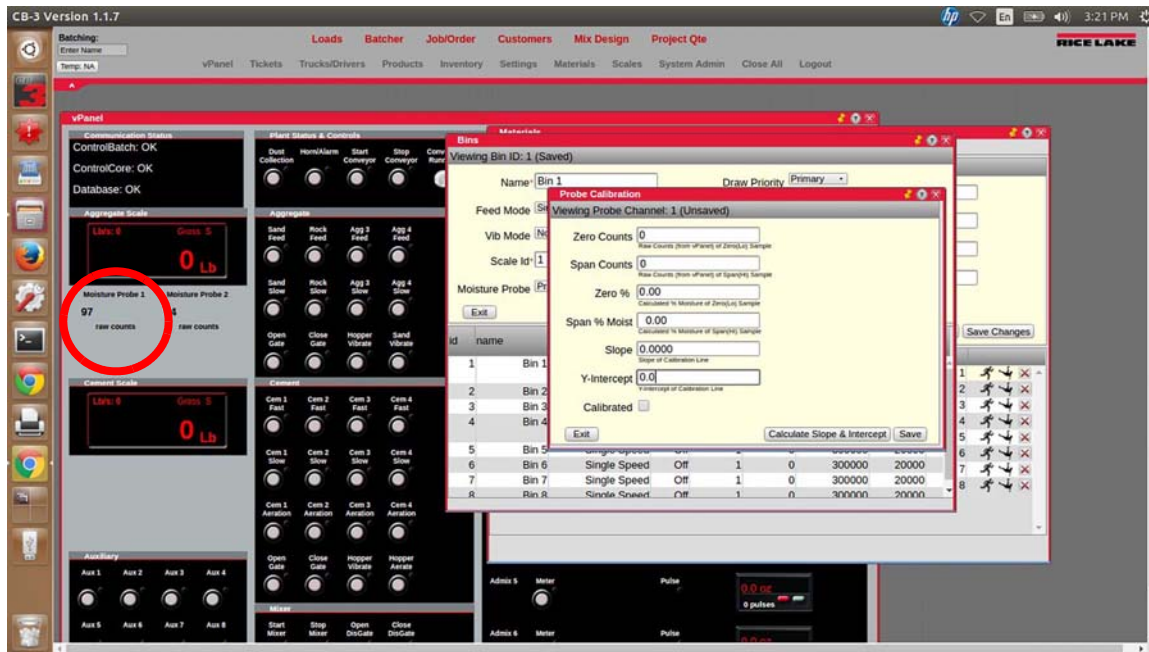

Figure 3. vPanel Raw Counts

13. To calculate the zero, apply the desired zero or low reference to the moisture probe.

14. Review the *Raw Counts* on the *vPanel* and enter that value in the *Zero Counts* field of the *Probe Calibration* menu.

15. Enter the actual moisture percentage of the zero reference in the *Zero%* field.
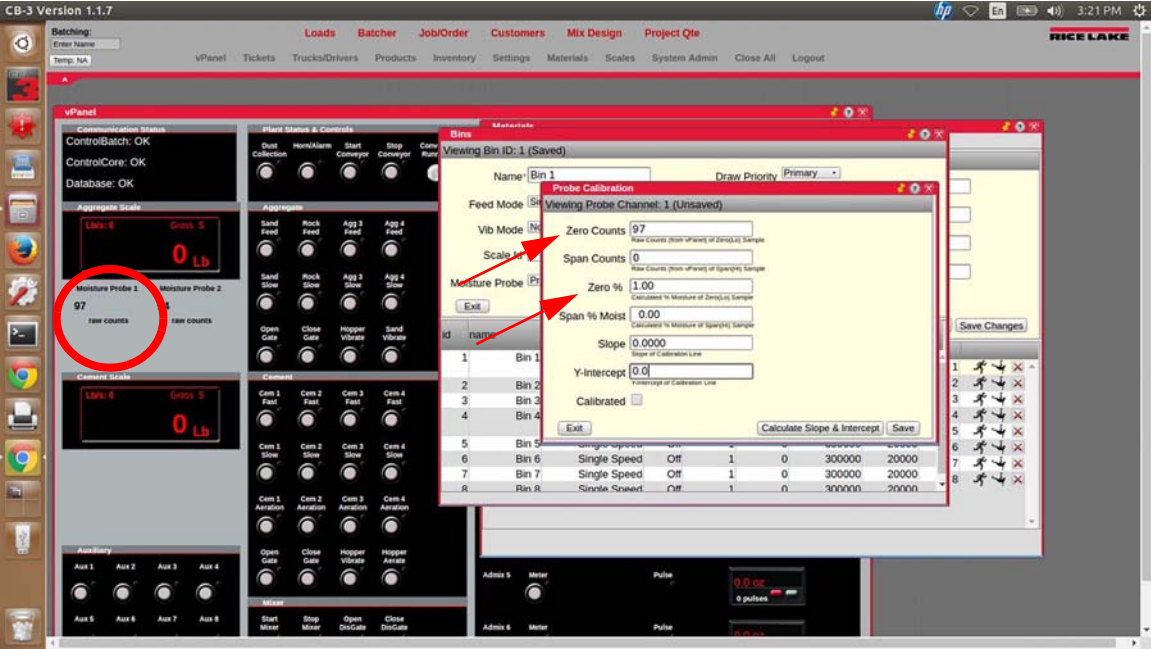

Figure 4. Probe Calibration - Zero Count

16. To calculate the span, apply the desired span or high reference to the moisture probe.

17. Review the *Raw Counts* on the *vPanel* and enter that value in the *Span Counts* field of the *Probe Calibration* menu.

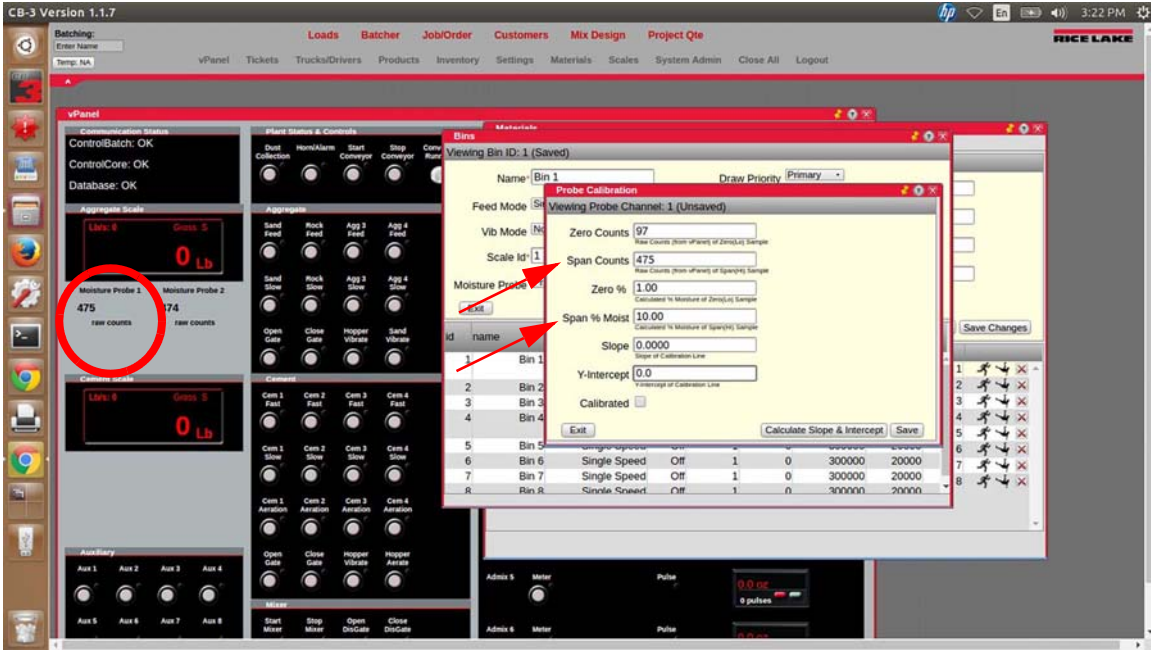*Figure 5. Probe Calibration - Span Count*

18. Enter the actual moisture percentage of the span reference in the *Span % Moist* field.

19. Press Calculate Slope and Intercept . The *Slope* and *Y-Intercept* fields autofill and the *Calibrated* box is checked.
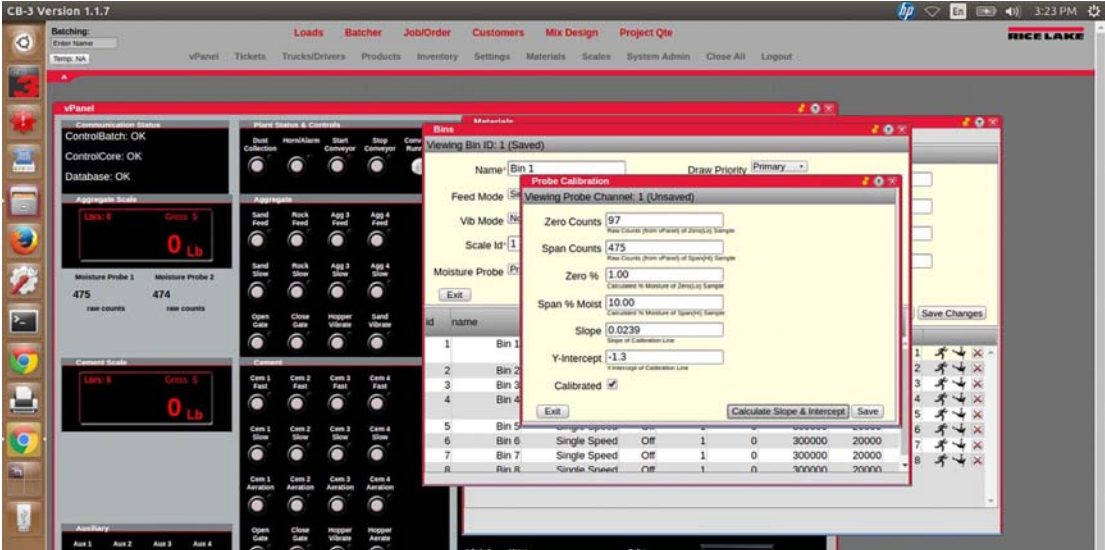

Figure 6. Probe Calibration Complete

20. Press Save .

21. Close the *Probe Calibration*, *Bins* and *Materials* menus.

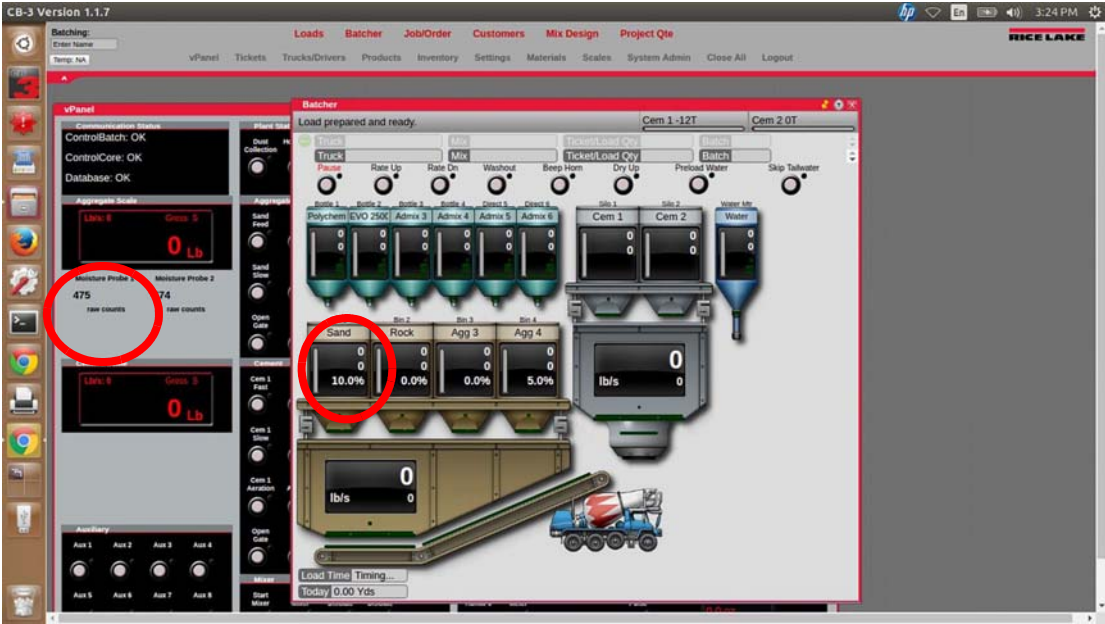22. Open the *Batcher* menu and the span moisture percentage are displayed (if the probe is in the span material).

Figure 7. Batcher Menu

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