

## MOP for Replacing a CXCI with a CXCI+

### Summary

The procedure explains the steps for replacing a CXCI to a CXCI+ including exporting the config files and confirming calibration after doing the swap.

### Tools/Reference Documents required

- Various hand tools; #2 phillips screwdriver
- Laptop and a Cross-over Ethernet Cable
- 7400233-001, Assy,Crdx Ctrlr 650W,CXCI+,R/A DB25,RoHS

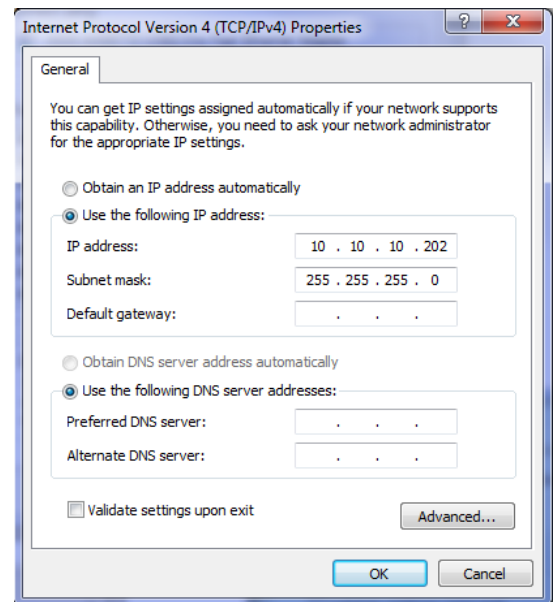
### Applicable Part Number

CXCI+ p/n 7400233-001 is only applicable for shelf 030-728-20-xxx.

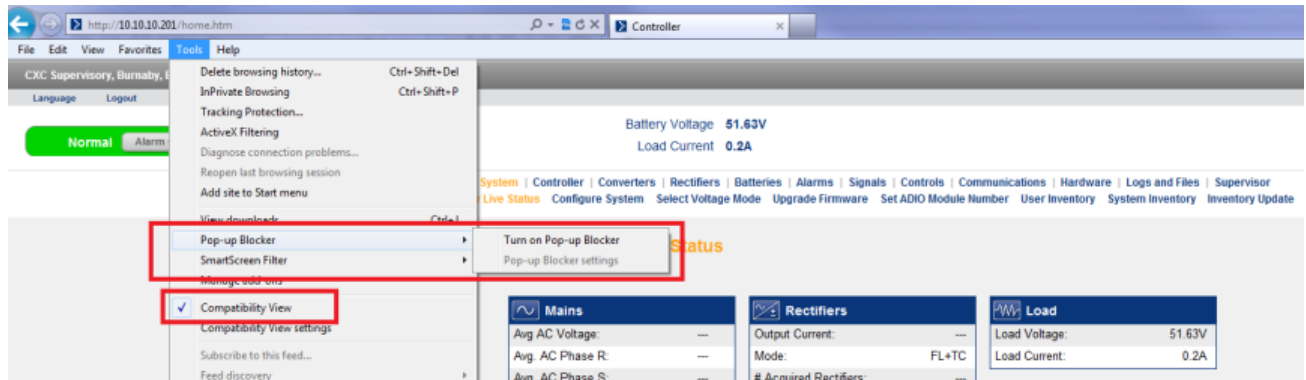
### Procedures

#### 1. Copying the Config File and Text File

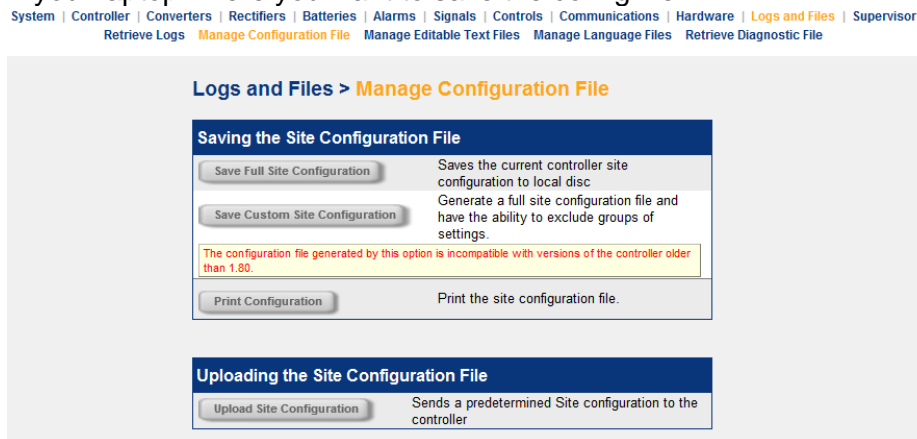
- 1.1. Connect a laptop to the CXCI controller via a cross-over Ethernet cable. Set the Laptop's LAN properties – Internet Protocol version 4 (TCP/IPv4) to IP address and Subnet Mask as shown on the right image.
- 1.2. Open Internet Explorer and type in “10.10.10.201”.
- 1.3. Username and password log-in window will pop up. Enter your name in the user name field. The default password is “1234” (without the quotes)



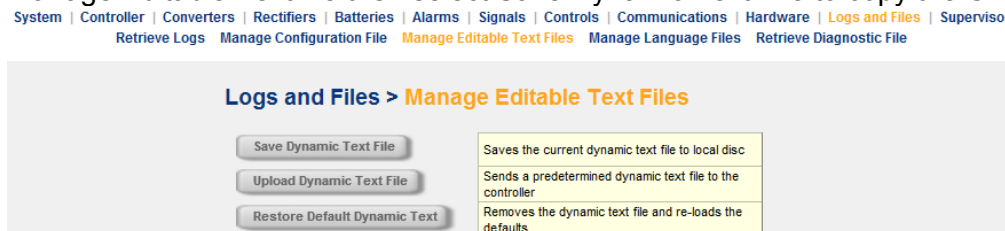
- Once logged-in, make sure pop-up blocker is off and that compatibility view is enabled. Compatibility view is only applicable when using Internet Explorer 8.0 or higher.



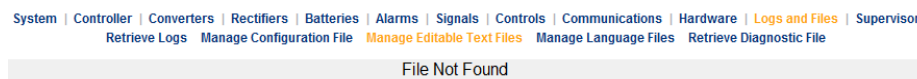
- Go to Logs and Files > Manage Configuration File then click on Save Full Site Configuration. Direct it to a folder in your laptop where you want to save the config file.



- Next, go to Manage Editable Text file then select Save Dynamic Text File to copy the CXCI's text file.



- If the text labels in the CXCI were still the factory default, you will get a "File Not Found" message. If this is the case you don't need to save the text file, otherwise, save the file into a known folder in your computer.



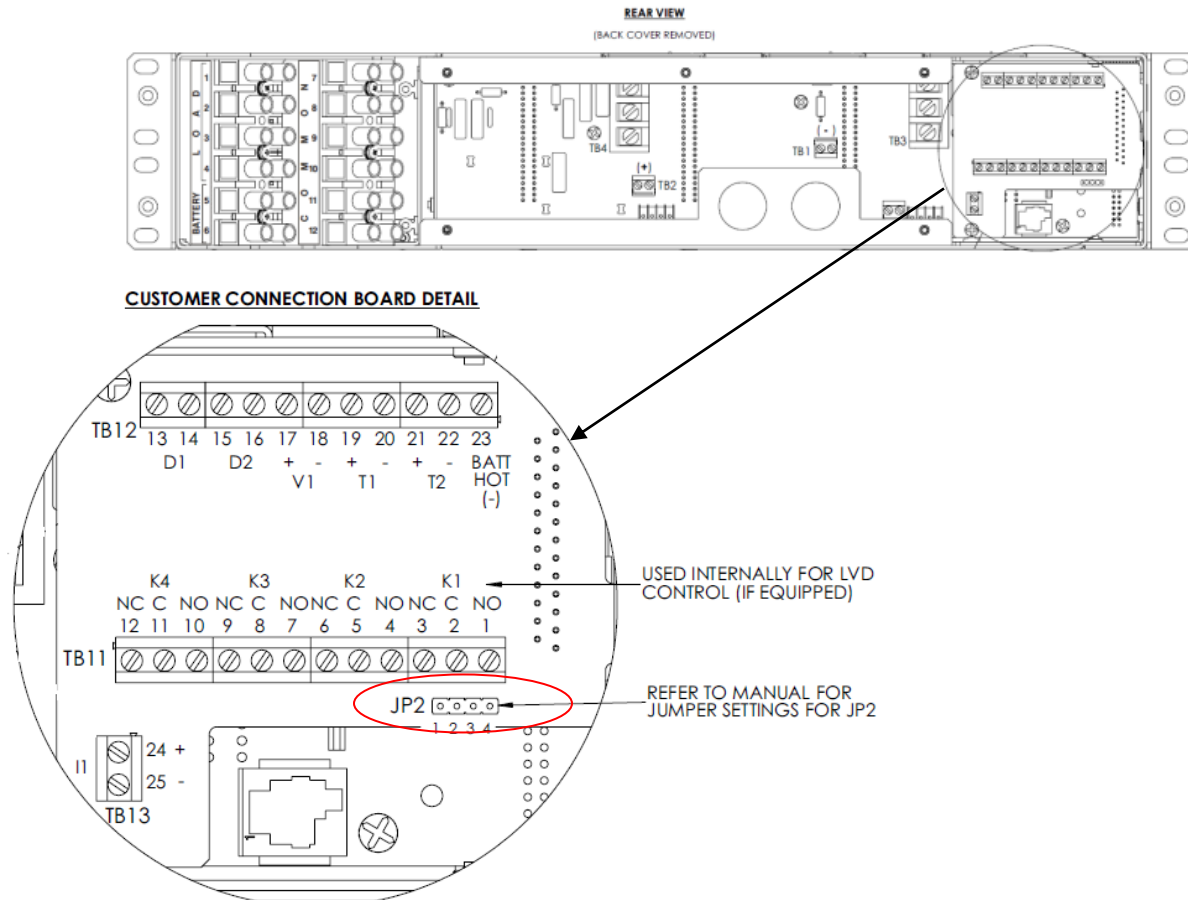
1.8. Once the config file and text files has been saved, go to Signals > View Live Status. Take note of the following readings:

V2, I1, T1 and T2 (whichever is applicable)

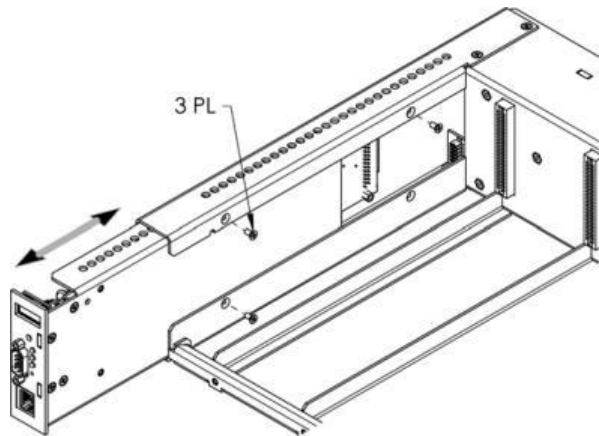
1.9. Log-out and disconnect the cross-over cable from the CXCI.

2. Removing the CXCI and Installing the CXCI+

2.1. Bypass system LVD as required; short the pins at JP2 (located above the CAN Out port) to inhibit (or override) the LVD Control function. If the LVD is controlled on NC contacts (factory default for LVD option, LVD is wired on TB11-3 and 2), then JP2 pins 1 and 2 must be shorted together to maintain LVD operation. If the LVD is controlled on NO contacts, then JP2 pins 2 and 3 must be shorted together. JP2 pin 4 (if equipped) is a neutral/resting position.



- 2.2. Remove the rectifier just beside the CXCI to access the screws that are securing it to the rectifier shelf. Remove the 3 screws securing the CXCI as shown below.



Once the screws are removed, pull the CXCI outward.

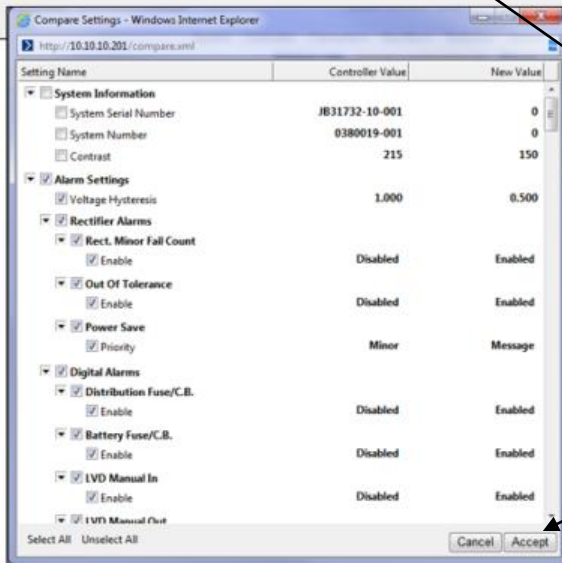
- 2.3. Push in the new CXCI+ controller and secure it using the screw location as shown in the picture below. If this is done live, the CXCI+ should start to power up.



Secure the CXCI+ using original screw used with the CXCI. Only one screw point.

3. Uploading backup site configuration to the Newly CXCI+

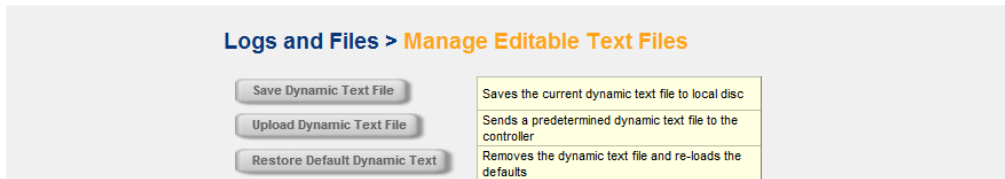
3.1. Log-in to the CXCI+ via web interface following steps 1.1 to 1.4. Proceed to Logs and Files > Manage Configuration File. Click on Upload Site Configuration then browse to where the original config file was saved then hit Submit.



3.2. Once the config file is loaded into the memory, click on Submit Changes button. The Compare Settings window will pop out and will show the list of settings that will be changed. If no issues with the changes, go ahead and click on Accept button.

3.3. Next upload the Text File to the CXCI+. Go to Logs and Files > Manage Editable Text File and select Upload Dynamic Text File.

System | Controller | Converters | Rectifiers | Batteries | Alarms | Signals | Controls | Communications | Hardware | **Logs and Files** | Supervisor  
 Retrieve Logs | Manage Configuration File | **Manage Editable Text Files** | Manage Language Files | Retrieve Diagnostic File



#### 4. Calibration Confirmation

4.1. Go to Signals > View Live Status and take note of the following readings: V2, I1, T1 and T2.

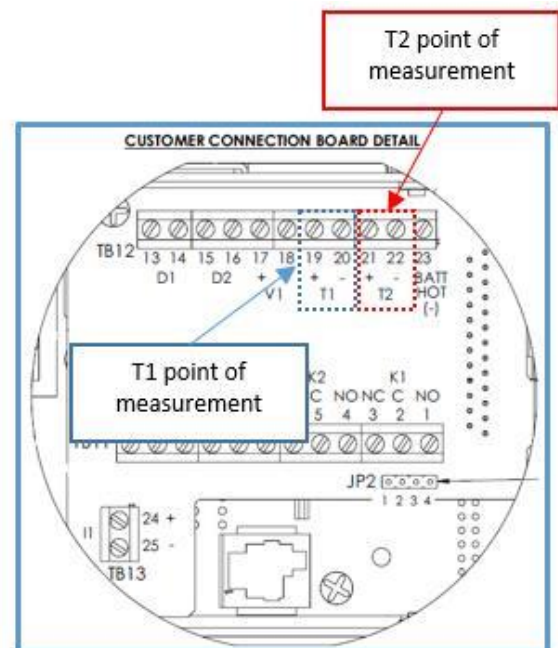
4.2. Compare these readings from the previous one with the CXCI taken under step 1.8. If readings are significantly different, calibrate the analog inputs.

4.3. **For Temperature Calibration on Analog Inputs T1 and T2.**

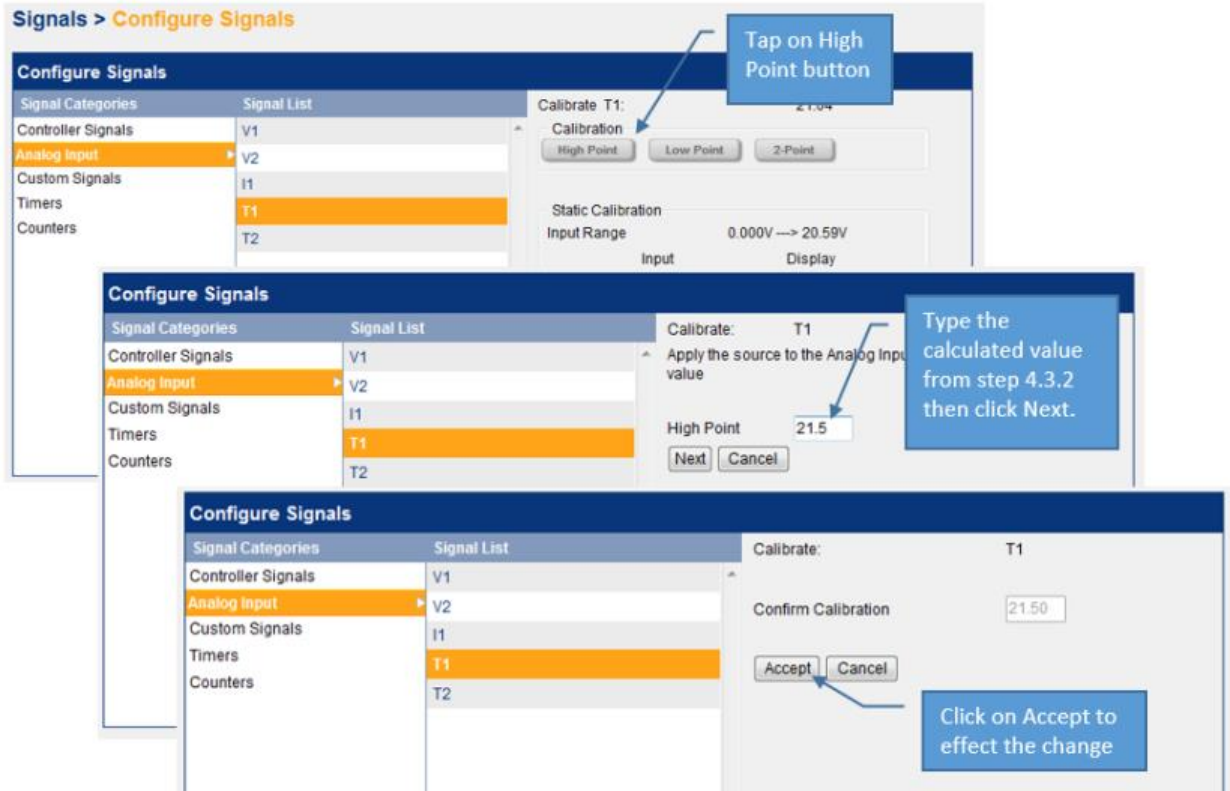
4.3.1. Proceed doing Highpoint Calibration. Go to Signals > Configure Signals. Then under Signal Categories, select Analog Input and select T1. With a digital voltmeter measure and record the voltage across T1

4.3.2. To convert the voltage reading to temperature, enter the measured voltage to the equation  
 $(V_{\text{reading}} - 2.73) * 100 = ^\circ\text{C}$

4.3.3. To calibrate T1, select T1 in the signal list. Follow steps illustrated below to calibrate T1.



### High Point Calibration for T1 and T2



4.3.4 Repeat steps 4.3.1 to 4.3.3 if there is a 2<sup>nd</sup> temperature probe connected at T2 analog input.

### 4.4 For Current Calibration on I1.

4.4.1 Set voltmeter to DC mV range, if meter is auto ranging set it to DC volts, and measure the voltage across I1. Take this mV-measured value and multiply it with the shunt ratio as shown in the formula below to calculate equivalent current reading. Use this to calibrate the Highpoint value.

Formula:

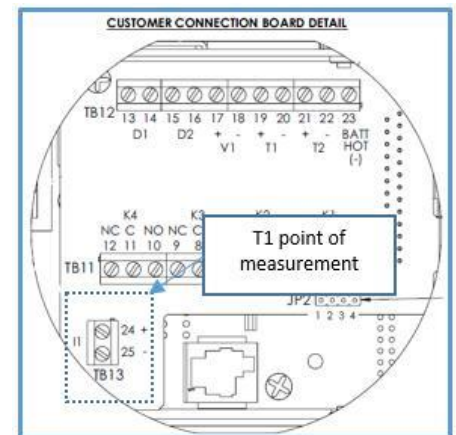
Current = Measure mV x Shunt Size

where: Shunt size = 75A/50 mV (for the 650W shelf only)

Example:

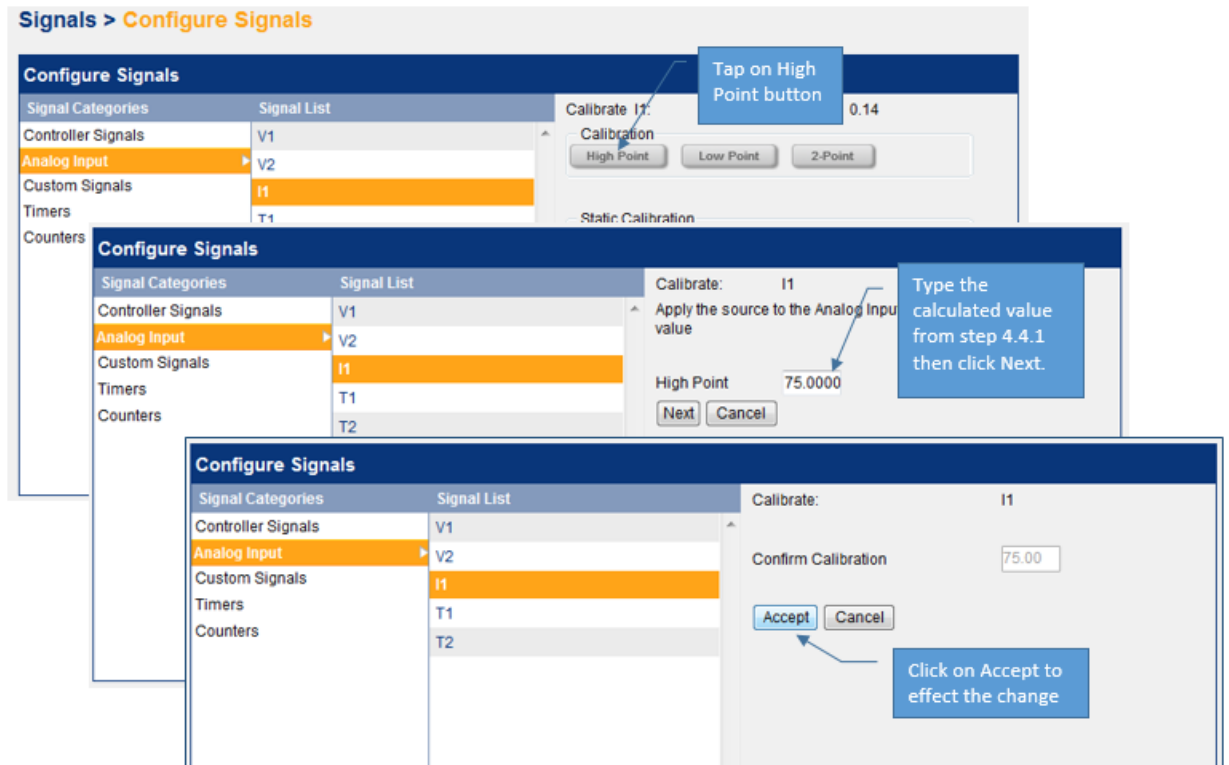
Measured Voltage: 11.3 mV

Current = 75/50 x 11.3 = 16.95 A



- 4.4.2 Go to Signals > Configure Signals then under Signal Categories, select Analog Input and then click on I1. Follow the illustrated steps below to do High point Calibration for I1.

#### High point calibration for I1



The image shows three sequential screenshots of the 'Configure Signals' interface, illustrating the steps for high point calibration of signal I1.

- Top Screenshot:** The 'Signal Categories' list is expanded to 'Analog Input', and 'I1' is selected in the 'Signal List'. The 'Calibrate I1' dialog is open, showing '0.14' and buttons for 'High Point', 'Low Point', and '2-Point'. A blue callout box says 'Tap on High Point button'.
- Middle Screenshot:** The 'High Point' button is pressed, and the 'High Point' value is set to '75.0000'. A blue callout box says 'Type the calculated value from step 4.4.1 then click Next.'.
- Bottom Screenshot:** The 'Confirm Calibration' dialog is open, showing '75.00' and buttons for 'Accept' and 'Cancel'. A blue callout box says 'Click on Accept to effect the change'.

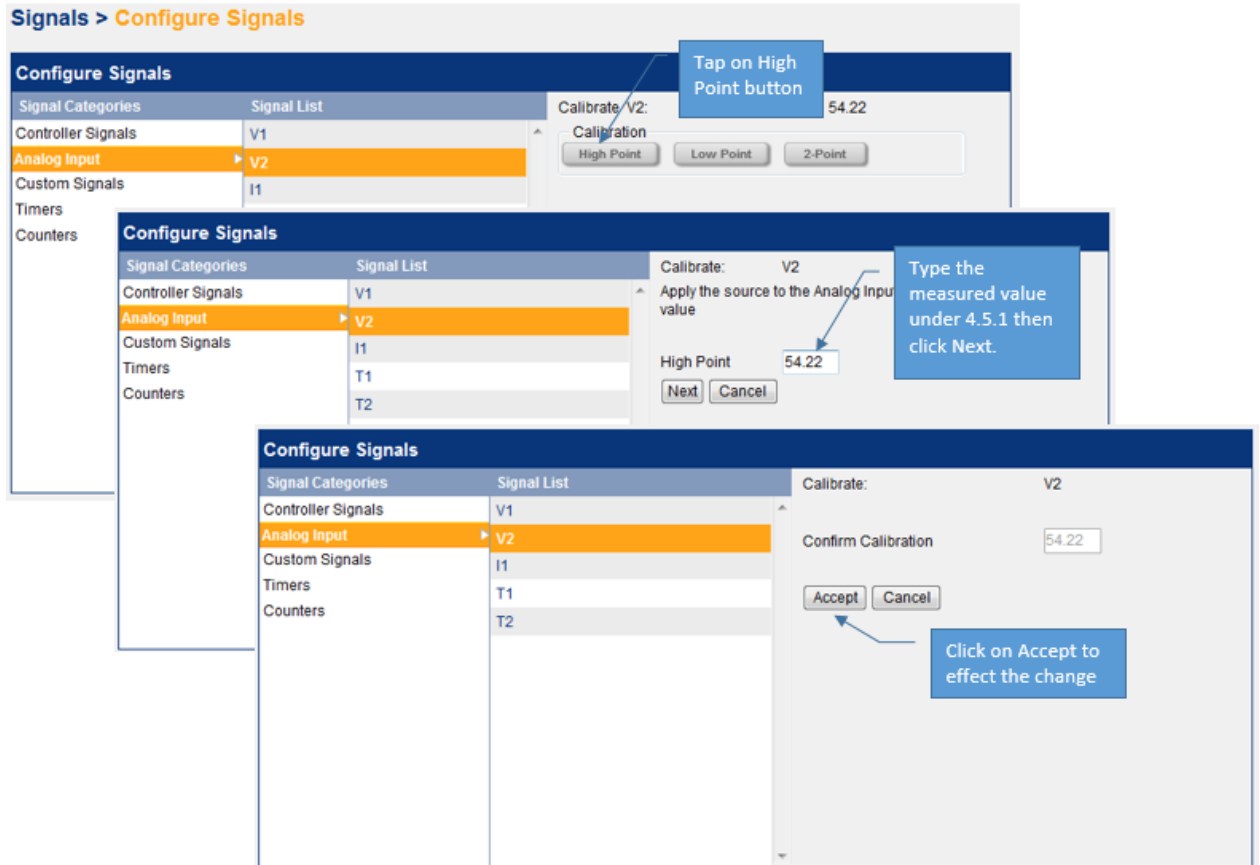
#### 4.5 For Voltage Calibration on V2.

- 4.5.1 First measure the system voltage. This can be done at the output connectors at the back of the shelf. Measure to a minimum of 1 decimal precision.
- 4.5.2 Next, proceed in doing a high point calibration for V2. Under Signals > Configure Signals, in the Signal Categories click on Analog Input then select V2.
- 4.5.3 Proceed in doing a High point calibration for V2, follow steps illustrated below.



## High Point Calibration for V2

Signals > Configure Signals



**Configure Signals**

Signal Categories	Signal List
Controller Signals	V1
Analog Input	V2
Custom Signals	I1
Timers	
Counters	

Calibrate V2: 54.22

Calibration

High Point Low Point 2-Point

Tap on High Point button

**Configure Signals**

Signal Categories	Signal List
Controller Signals	V1
Analog Input	V2
Custom Signals	I1
Timers	T1
Counters	T2

Calibrate: V2

Apply the source to the Analog Input value

High Point 54.22

Next Cancel

Type the measured value under 4.5.1 then click Next.

**Configure Signals**

Signal Categories	Signal List
Controller Signals	V1
Analog Input	V2
Custom Signals	I1
Timers	T1
Counters	T2

Calibrate: V2

Confirm Calibration 54.22

Accept Cancel

Click on Accept to effect the change

Sincerely,

Charlie Manson  
Manager, Customer Services  
Alpha Technologies Ltd.

Bill Killion  
Senior Product Manager  
Alpha Technologies Ltd.