

ecoSYS

Site Supervisor

Refrigeration & Air

Conditioning Applications

Education You Can Build On



Presented By:

(Instructor Name)



Housekeeping

- Smile Card
- No Smoking
- Class Length
- Portable Phones and Beepers
- Rest Rooms
- Fire Safety



Course Reference Materials

- Participant Manual
- *ecoSYS Site Supervisor Controller User Guide*
- *ecoSYS Site Supervisor Quick Setup Guide*

Course Agenda

- Changing Setpoints
- Creating an HVAC/AHU Application
- Creating Refrigeration (XR75) Control
- Creating Refrigeration Monitoring and Alarm
- **Creating an Anti-Sweat Application**
- **Creating Exhaust/Supply Fan Control**
- Override HVAC



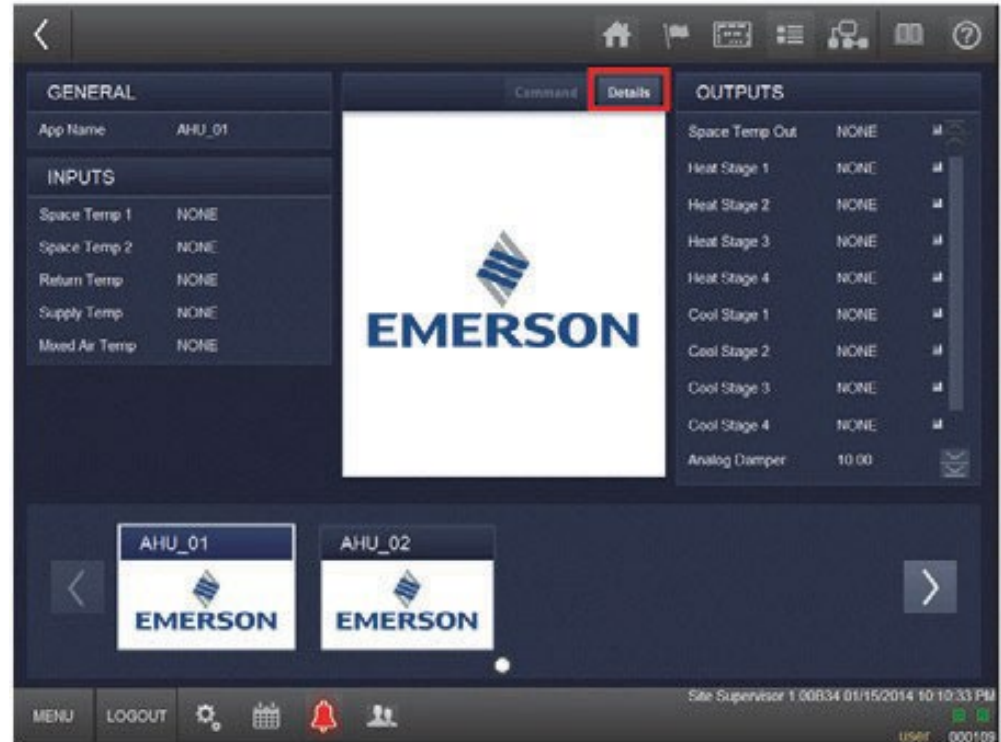
Changing Setpoints

Education You Can Build On



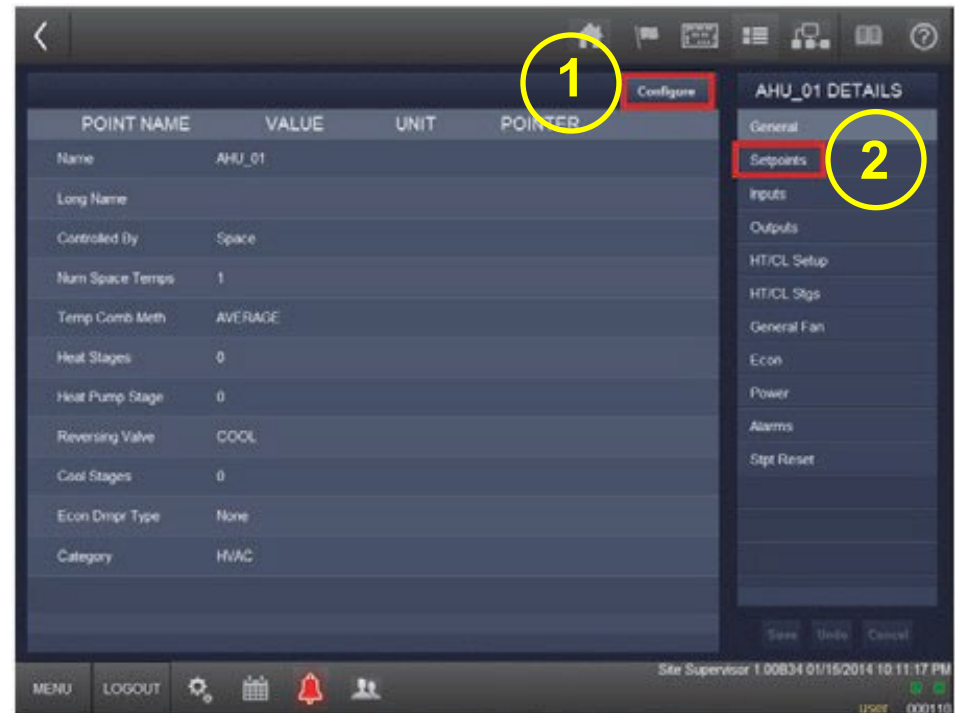
Changing Setpoints

- Go to the control status screen of the application you want to modify.
- Click on **Details**.



Changing Setpoints

- Select **Configure**, then choose **Setpoints** from the panel on the right side of the screen.



Changing Setpoints

- Make any necessary changes to the setpoints.

The screenshot displays a configuration screen for AHU_01. The main area contains a table with the following data:

| POINT NAME | VALUE | UNIT | POINTER |
|-----------------|-------|------|---------|
| SUMMER COOL OCC | 70.00 | °F | |
| SUMMER COOL UOC | 80.00 | °F | |
| SUMMER HEAT OCC | 65.00 | °F | |
| SUMMER HEAT UOC | 60.00 | °F | |
| WINTER COOL OCC | 70.00 | °F | |
| WINTER COOL UOC | 80.00 | °F | |
| WINTER HEAT OCC | 65.00 | °F | |
| WINTER HEAT UOC | 60.00 | °F | |
| STAT Deadband | 1.00 | Δ°F | |

The right-hand side of the interface shows a sidebar menu for 'AHU_01 DETAILS' with options: General, Setpoints, Inputs, Outputs, HT/CL Setup, HT/CL Stgs, General Fan, Econ, Power, Alarms, and Stpt Reset. At the bottom, there are 'Save', 'Undo', and 'Cancel' buttons, and a status bar indicating 'Site Supervisor 1.00B34 01/15/2014 10:1'.

Changing Setpoints

- After making changes, select **Save**, then **Exit Configure**.

The screenshot displays a control interface for AHU_01. The main area contains a table of setpoints with columns for POINT NAME, VALUE, UNIT, and POWER. The right-hand side features a menu with options like General, Setpoints, Inputs, Outputs, HT/CL Setup, HT/CL Stgs, General Fan, Econ, Power, Alarms, and Stgt Reset. The bottom navigation bar includes MENU, LOGOUT, and several icons. A status bar at the bottom right shows the date and time: 01/15/2014 10:14:28 PM, and the user ID: user: 000110.

| POINT NAME | VALUE | UNIT | POWER |
|-------------------|-------|------|-------|
| > SUMMER COOL OCC | 71.00 | 'F | |
| > SUMMER COOL UOC | 81.00 | 'F | |
| > SUMMER HEAT OCC | 65.00 | 'F | |
| > SUMMER HEAT UOC | 60.00 | 'F | |
| > WINTER COOL OCC | 70.00 | 'F | |
| > WINTER COOL UOC | 80.00 | 'F | |
| > WINTER HEAT OCC | 65.00 | 'F | |
| > WINTER HEAT UOC | 60.00 | 'F | |
| TSTAT Deadband | 1.00 | Δ'F | |



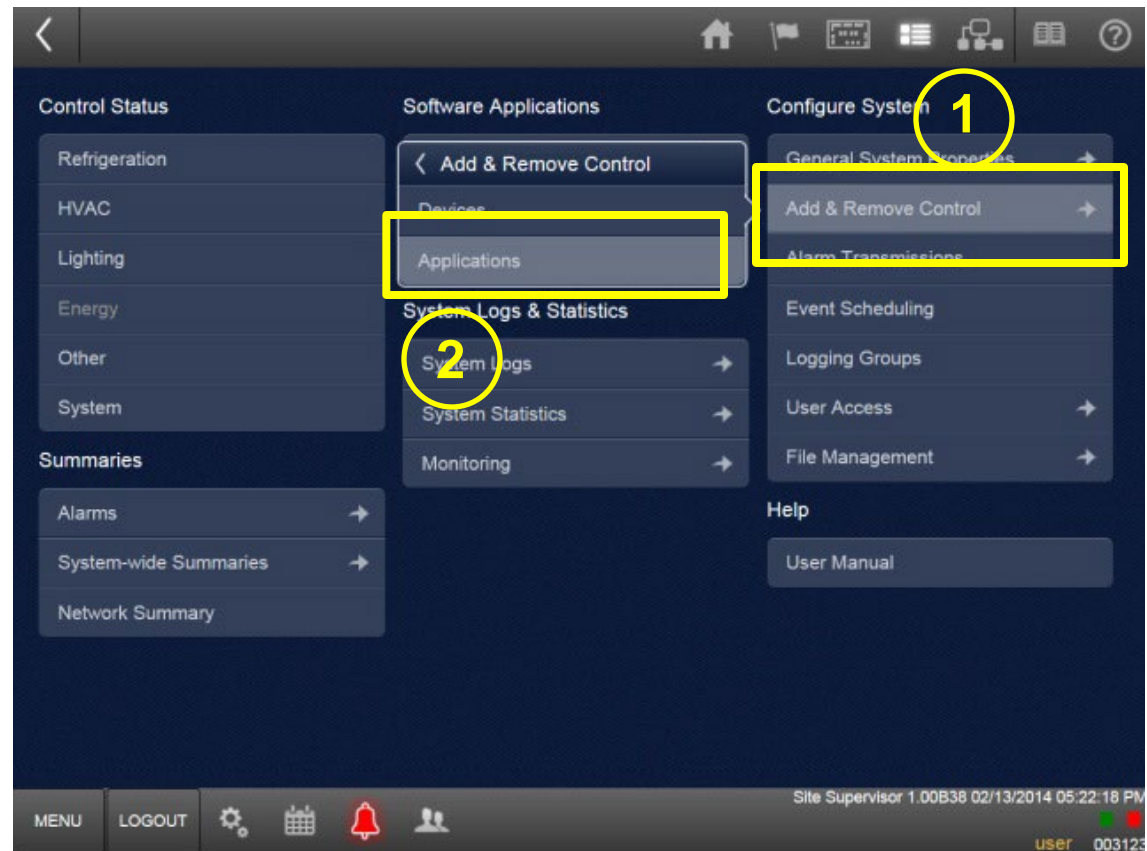
Creating an HVAC/AHU Application

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Creating an HVAC/AHU Application

- Login to Site Supervisor Controller and go to the **Site Map**
- Choose **Add & Remove Control**, then **Applications**



Creating an HVAC/AHU Application

- Select **Configure**
- Select **Application Type** and **Number to Add** from dropdown

The top screenshot shows the 'Add & Remove Applications' screen. A yellow arrow points to the 'Configure' button. A yellow circle with the number '1' is around the 'Application Type' dropdown menu. The 'APPLICATIONS' table on the right contains the following data:

| Name | Application Type |
|----------------|------------------|
| AHU_01 | AHU |
| AHU_02 | AHU |
| Analog Sens_01 | Analog Sensor |
| Dig Sensor_01 | Digital Sensor |
| Lights_01 | Lighting |
| Lights_02 | Lighting |

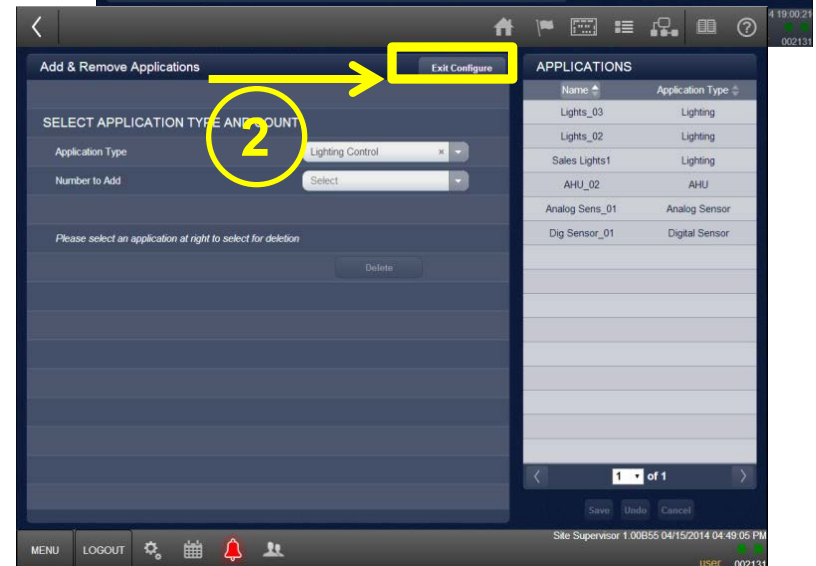
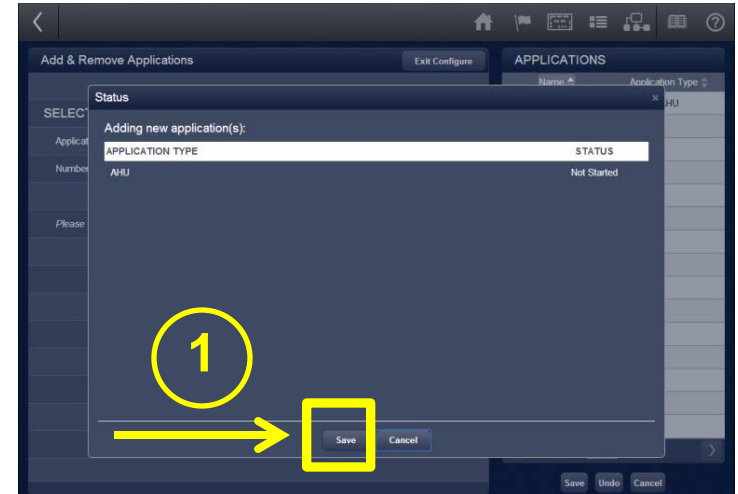
The bottom screenshot shows the 'Add & Remove Applications' screen with the 'Application Type' dropdown menu open. A yellow arrow points to the dropdown menu. A yellow circle with the number '2' is around the dropdown menu. The dropdown menu lists the following options: AHU, Analog Sensor Control, Demand Control, Digital Sensor Control, Lighting Control, and Utility Monitoring. The 'APPLICATIONS' table on the right contains the following data:

| Name | Application Type |
|--------|------------------|
| AHU_01 | AHU |

The bottom navigation bar includes the following items: MENU, LOGOUT, a settings icon, a calendar icon, a notification icon, and a user icon. The status bar at the bottom right shows 'Site Supervisor 1.00B55 15/04/2014 18:58:00' and 'user 002131'.

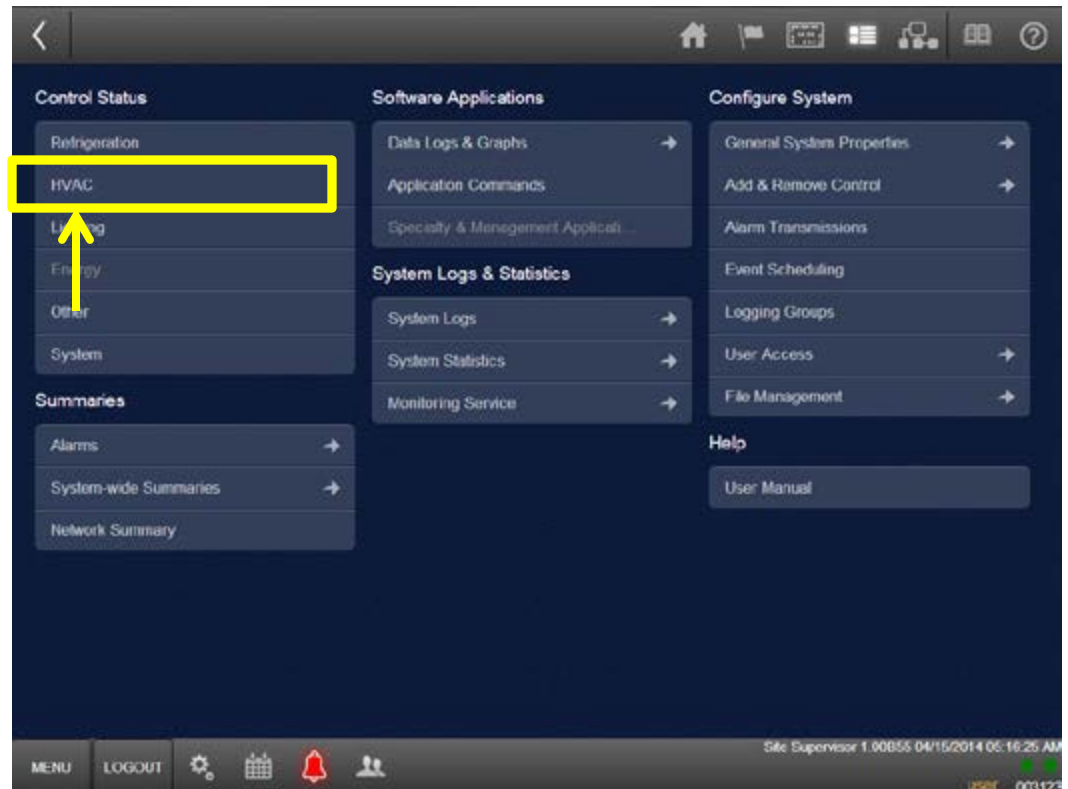
Creating an HVAC/AHU Application

- Click on **Save**
- Select **Exit Configure**



Basic Setup for AHU

- From the **Site Map**, under **Control Status**, select **HVAC**.



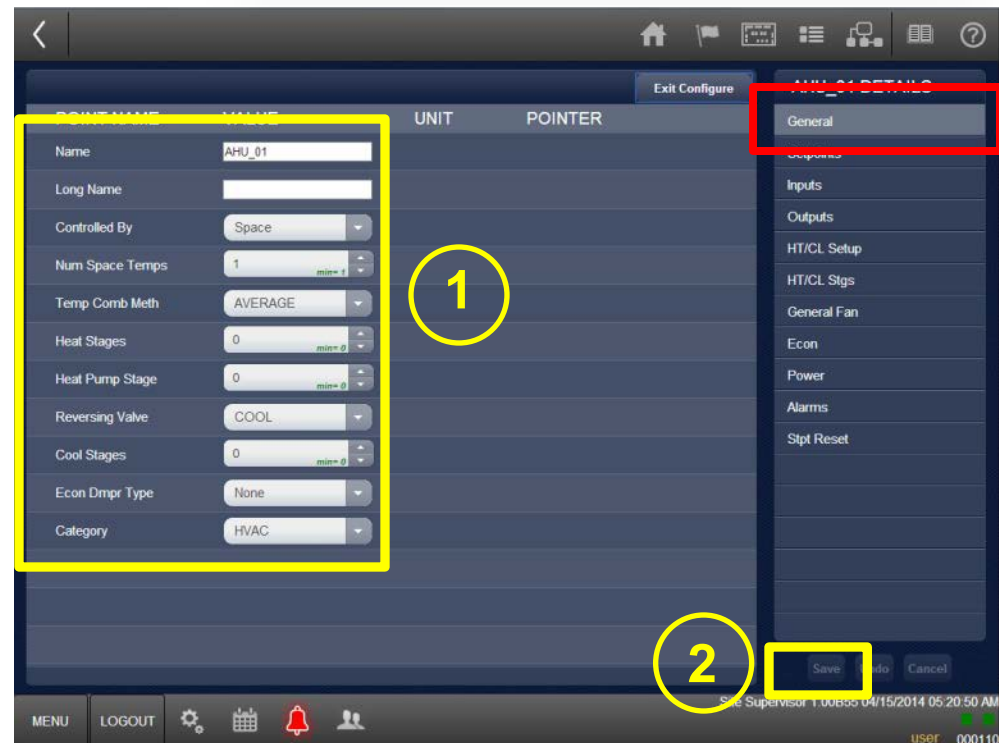
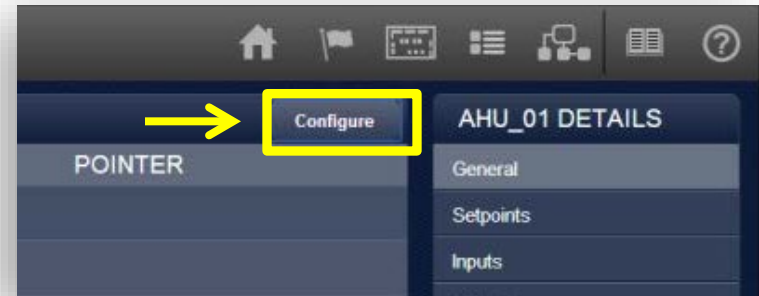
Basic Setup for AHU

- Select HVAC Application, then select **Details**



Basic Setup for AHU

- Select **Configure** in upper right
- On the General Tab, enter details for:
 - Name of AHU
 - Number of control sensors
 - Number of heating and cooling stages
- Select **Save** to continue



Basic Setup for AHU

- On the Setpoints tab, enter details for:
 - Occupied and unoccupied set points
 - Control dead band
- Select Save to continue

The screenshot displays the 'AHU_01 DETAILS' configuration interface. A table lists various setpoints with their current values and units. A yellow box highlights the table, and a yellow circle with the number '1' is placed next to it. A red box highlights the 'Setpoints' tab in the right-hand menu. A yellow circle with the number '2' is placed over the 'Save' button at the bottom right of the screen.

| POINT NAME | VALUE | UNIT | POINTER |
|-------------------|-------|------|---------|
| > SUMMER COOL OCC | 70.00 | *F | |
| > SUMMER COOL UOC | 80.00 | *F | |
| > SUMMER HEAT OCC | 65.00 | *F | |
| > SUMMER HEAT UOC | 60.00 | *F | |
| > WINTER COOL OCC | 70.00 | *F | |
| > WINTER COOL UOC | 80.00 | *F | |
| > WINTER HEAT OCC | 65.00 | *F | |
| > WINTER HEAT UOC | 60.00 | *F | |
| TSTAT Deadband | 1.00 | Δ°F | |

Site Supervisor 1.00855 04/15/2014 05:26:43 AM
user 000110

Basic Setup for AHU

- On the Inputs tab (temperature sensor setup):
 - Select the arrow next to the sensor to adjust settings (e.g., SPACE TEMP 1).
 - Set the Target and Property where the sensor is connected (e.g., Target of IPX 25 Relay_01 and Property A102).



| POINT NAME | VALUE | UNIT | POINTER |
|----------------|----------|------|---------|
| > OCCUPANCY | OCCUPIED | | |
| > SPACE TEMP 1 | NONE | °F | |
| > SPACE TEMP 2 | NONE | °F | |



| POINT NAME | VALUE | UNIT | POINTER |
|------------------|------------|------|-----------------------|
| > OCCUPANCY | UNOCCUPIED | | Sched_01⇒SCHED OUTPUT |
| ✓ SPACE TEMP 1 | NONE | °F | IPX 25 Relay_01⇒AI02 |
| > SPACE TEMP 2 | NONE | °F | |
| > RETURN TEMP | NONE | °F | |
| > SUPPLY TEMP | NONE | °F | |
| > MIXED AIR TEMP | NONE | °F | |

Basic Setup for AHU

- Using the same procedure, proceed to associate the rest of the sensors with the corresponding inputs in the IPX board or on-board I/O.

The screenshot displays the 'AHU_01 DETAILS' configuration screen. The main area is a table with columns for POINT NAME, VALUE, UNIT, and POINTER. The 'VALUE' column contains dropdown menus, some with 'NONE' selected. The 'POINTER' column contains dropdown menus with values like 'Sched_01=SCHED OUTPUT', 'AI01', 'AI02', 'AI03', and 'AI04'. A 'Save' button is highlighted with a red box at the bottom right of the configuration area. The bottom status bar shows 'Site Supervisor 1.00B55 04/13/2014 02:33:25 AM' and 'user 000110'.

| POINT NAME | VALUE | UNIT | POINTER |
|----------------|-------------------|----------|-----------------------|
| OCCUPANCY | UNOCCUPIED | | Sched_01=SCHED OUTPUT |
| SPACE TEMP 1 | NONE | *F | IPX 25 Relay_01=AI02 |
| TARGET | IPX 25 Relay_01 * | PROPERTY | AI01 |
| SPACE TEMP 2 | NONE | *F | IPX 25 Relay_01=AI01 |
| TARGET | IPX 25 Relay_01 * | PROPERTY | AI02 |
| RETURN TEMP | NONE | *F | |
| TARGET | IPX 25 Relay_01 * | PROPERTY | AI03 |
| SUPPLY TEMP | NONE | *F | |
| TARGET | IPX 25 Relay_01 * | PROPERTY | AI04 |
| MIXED AIR TEMP | NONE | *F | |

Basic Setup for AHU

- Verify the inputs associated.
- Select **Save**, then **OK**.

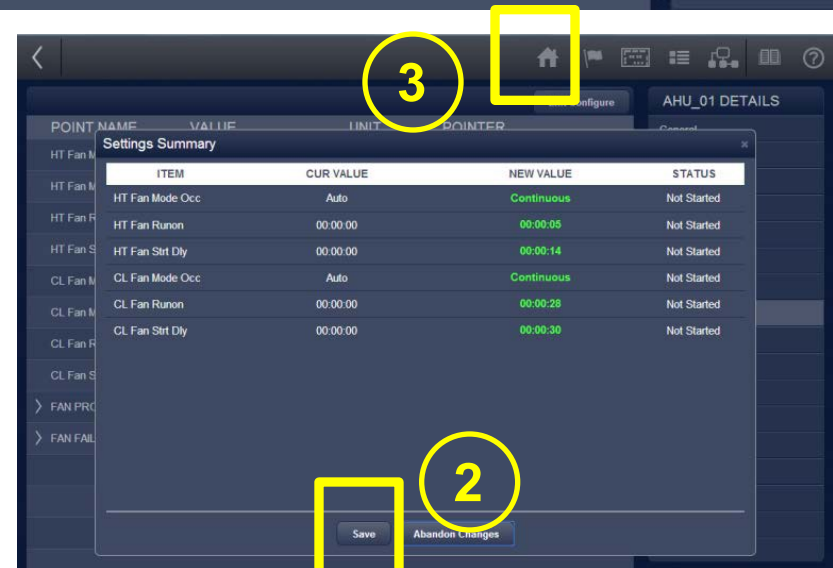
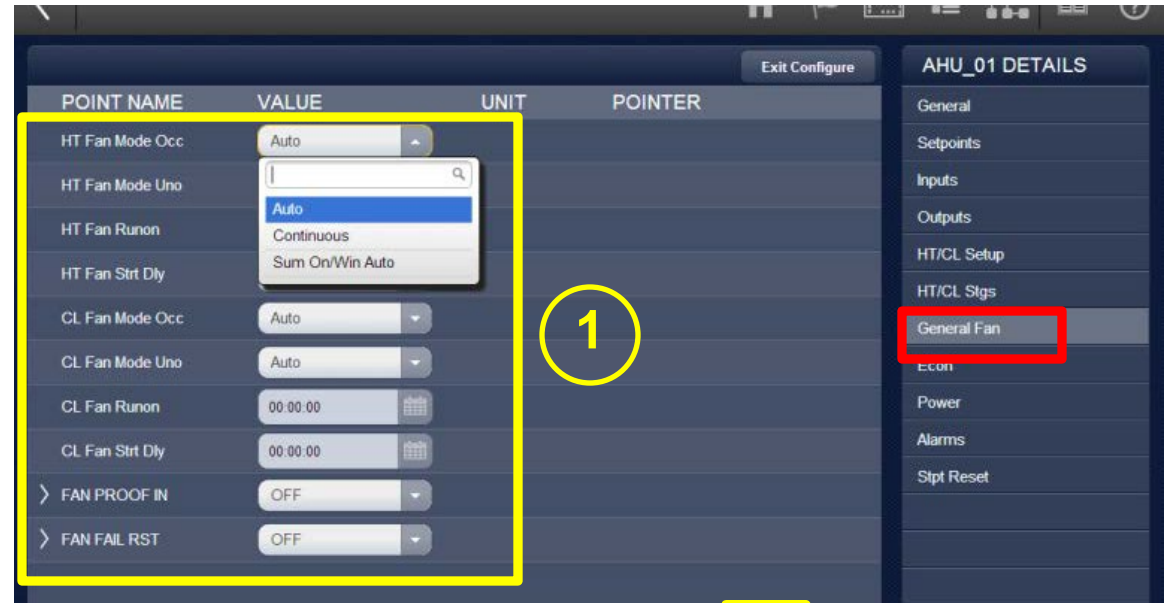
The screenshot displays a 'Settings Summary' dialog box for 'AHU_01 DETAILS'. The dialog contains a table with the following data:

| ITEM | CUR VALUE | NEW VALUE | STATUS |
|----------------|----------------------|----------------------|-------------|
| SPACE TEMP 1 | IPX 25 Relay_01⇒AI02 | IPX 25 Relay_01⇒AI01 | Not Started |
| SPACE TEMP 2 | IPX 25 Relay_01⇒AI01 | IPX 25 Relay_01⇒AI02 | Not Started |
| RETURN TEMP | | IPX 25 Relay_01⇒AI03 | Not Started |
| SUPPLY TEMP | | IPX 25 Relay_01⇒AI04 | Not Started |
| MIXED AIR TEMP | | IPX 25 Relay_01⇒AI05 | Not Started |

At the bottom of the dialog, there are two buttons: 'Save' (highlighted with a red box) and 'Abandon Changes'. The background interface shows a navigation menu on the left and a status bar at the bottom with the text 'Site Supervisor 1.00B55 04/13/2014 02:32:22 AM' and 'user 000110'.

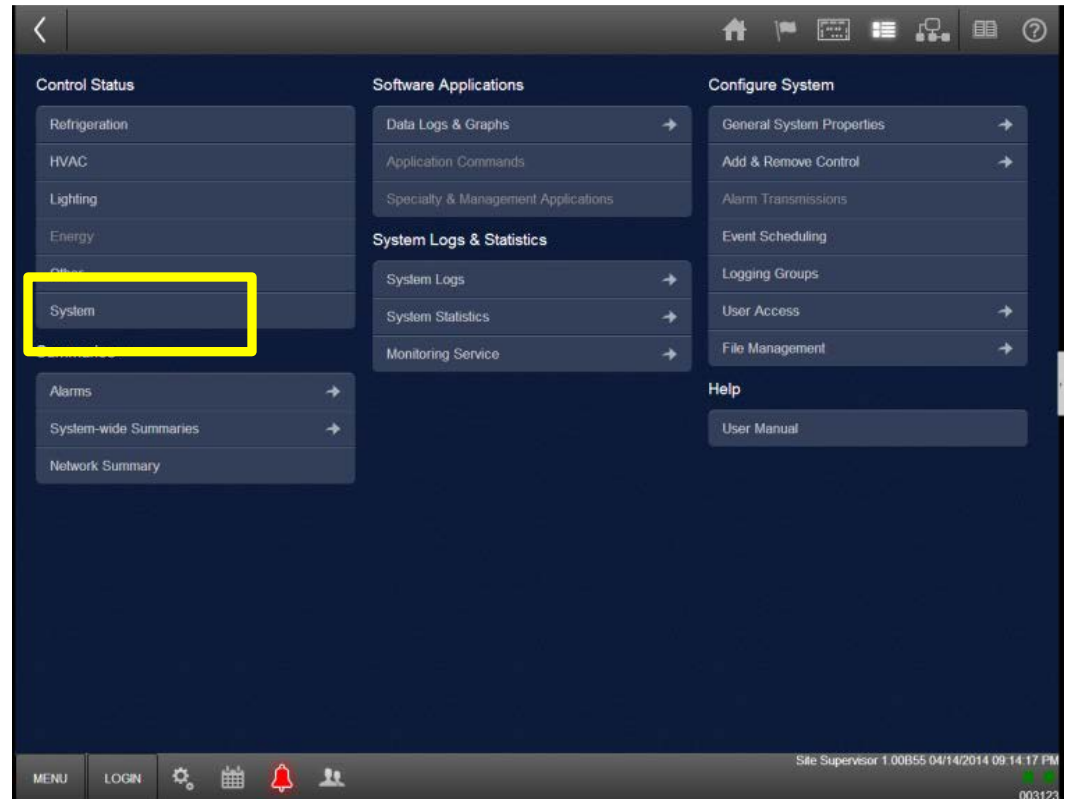
Basic Setup for AHU

- On the General Fan tab:
 - Enter required modes and time delays for the supply fan.
 - Select **Save**.
- Return to the Home screen.



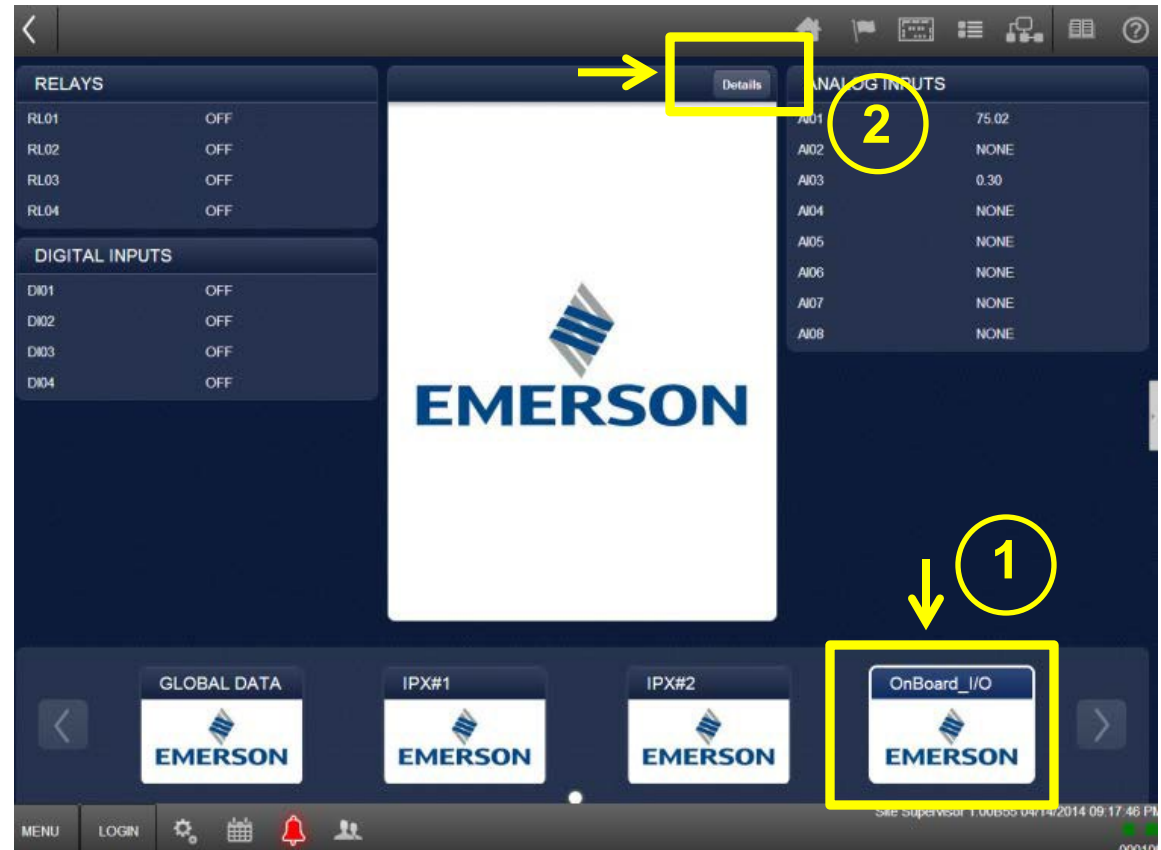
Basic Setup for AHU – Associate to Relays

- Go to the Site Map and choose **System** under Control Status.



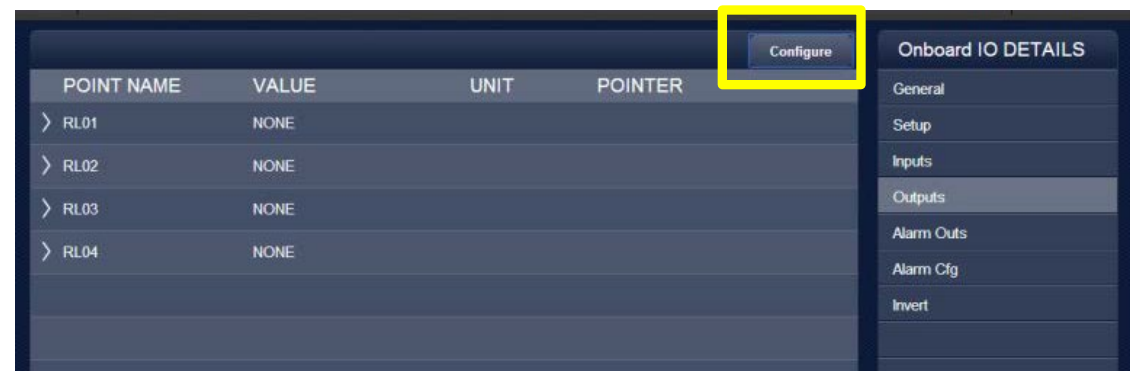
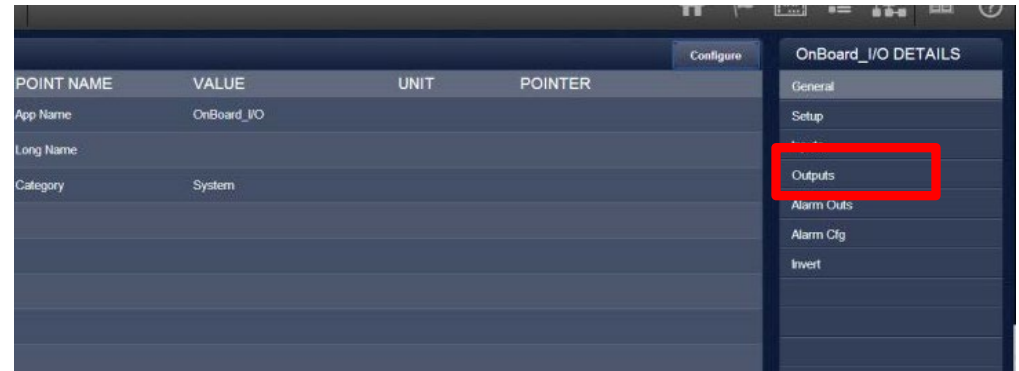
Basic Setup for AHU – Associate to Relays

- Select the hardware device that has the relay output (in the example, the Onboard I/O is used).
- Click on the **Details** button.



Basic Setup for AHU – Associate to Relays

- Select Outputs tab on the right.
- Select **Configure**



Basic Setup for AHU – Associate to Relays

- Use arrow next to relay (RL0X) to open the panel.

| POINT NAME | VALUE | UNIT | POINTER |
|------------|--------|------|----------|
| RL01 | NONE | | |
| TARGET | AHU_01 | | PROPERTY |
| SS FAN OUT | | | |
| RL02 | NONE | | |

- For Target, from the dropdown select the AHU application.
- For Property, from the dropdown select the out from within the AHU application that will be controlled at this location.

Basic Setup for AHU – Associate to Relays

- In the same way, associate other relays.

| POINT NAME | VALUE | UNIT | POINTER |
|------------|----------|----------|--------------|
| ✓ RL01 | ON | | |
| TARGET | AHU_01 × | PROPERTY | SS FAN OUT |
| ✓ RL02 | ON | | |
| TARGET | AHU_01 × | PROPERTY | COOL STAGE 1 |
| ✓ RL03 | ON | | |
| TARGET | AHU_01 × | PROPERTY | HEAT STAGE 1 |
| > RL04 | NONE | | |

Basic Setup for AHU – Associate to Relays

- Select **Save** and exit to the **Home** screen.

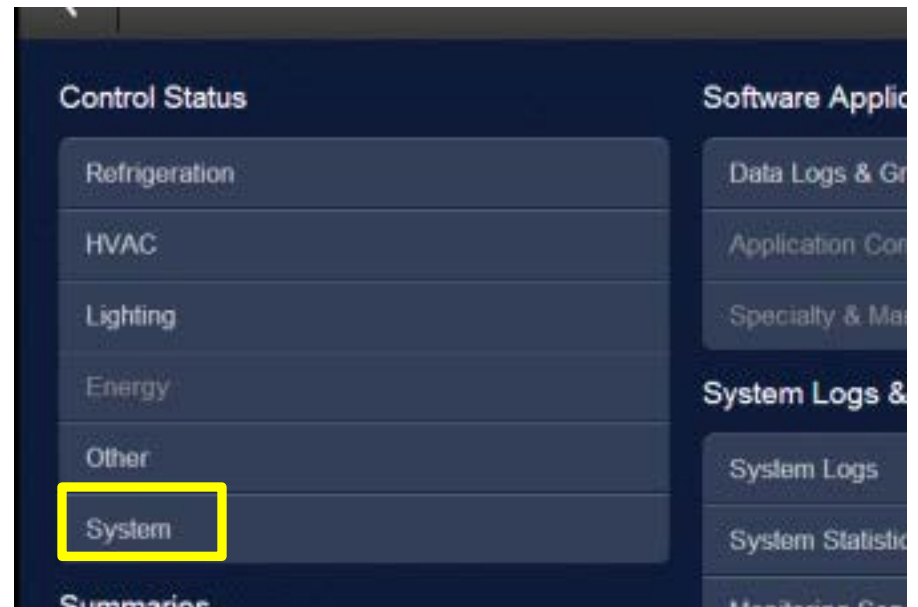
The screenshot displays a 'Settings Summary' dialog box over a configuration screen. The dialog box contains the following table:

| ITEM | CUR VALUE | NEW VALUE | STATUS |
|------|-----------|----------------------|-------------|
| RL01 | NONE | ON | Not Started |
| RL01 | | AHU_01->SS FAN OUT | Not Started |
| RL02 | NONE | ON | Not Started |
| RL02 | | AHU_01->COOL STAGE 1 | Not Started |
| RL03 | | AHU_01->HEAT STAGE 1 | Not Started |

The 'Save' button at the bottom of the dialog box is highlighted with a yellow box and a circled '1'. The 'Home' icon in the top navigation bar is highlighted with a yellow box and a circled '2'. The background interface shows a list of relay targets (RL01, RL02, RL03, RL04) and a status bar at the bottom with 'MENU', 'LOGOUT', and system information.

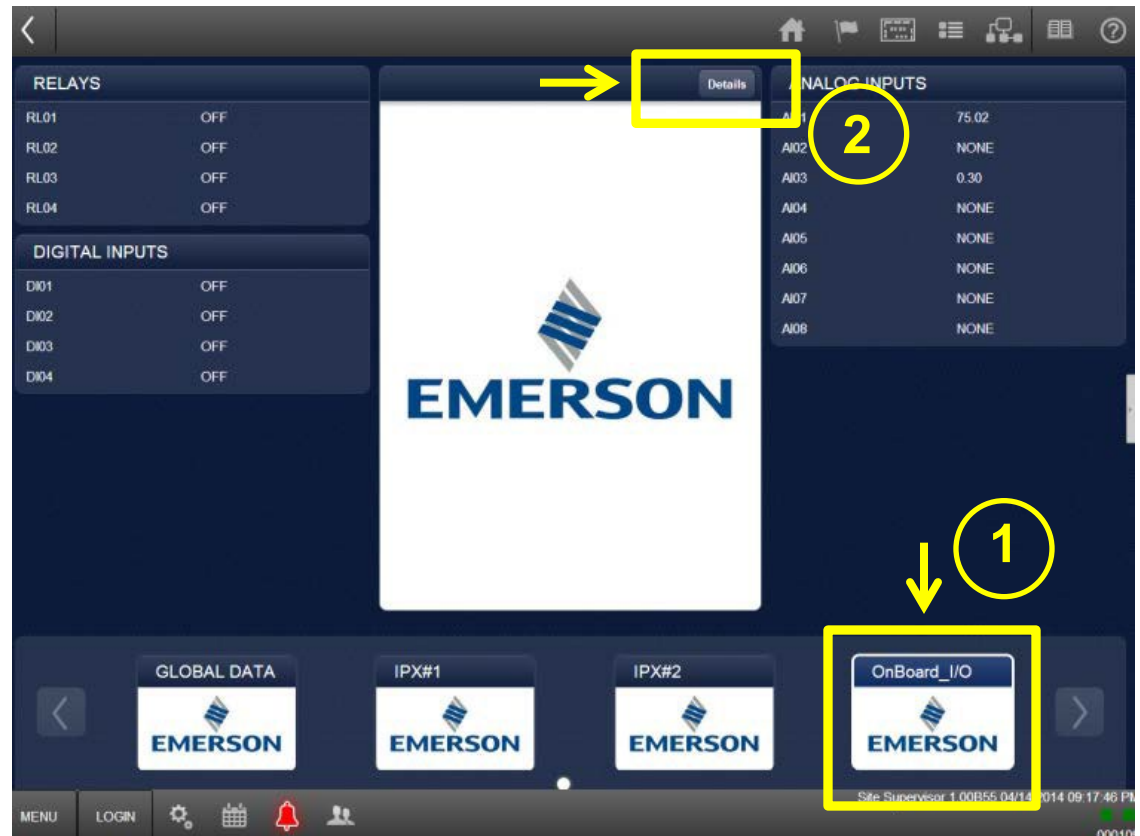
Basic Setup for AHU – Analog Input Definitions

- Go to the **Site Map** and under **Control Status**, choose **System**.



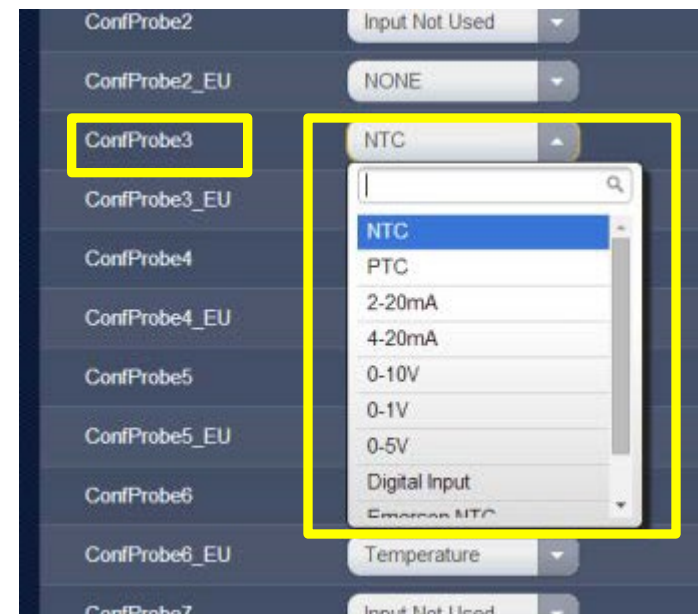
Basic Setup for AHU – Analog Input Definitions

- Select the hardware device with analog inputs (e.g., Onboard I/O).
- Click on **Details**.



Basic Setup for AHU – Analog Input Definitions

- Select **Setup**, then **Configure**.
- In the dropdown next to **ConfProb3**, select type of probe being used (e.g., NTC).



Basic Setup for AHU – Analog Input Definitions

- In the dropdown next to **ConfProb3_EU**, select type of units being used (e.g., Temperature).

| POINT NAME | VALUE | UNIT | P |
|---------------|----------------|------|---|
| ConfProbe1 | Input Not Used | | |
| ConfProbe1_EU | NONE | | |
| ConfProbe2 | Input Not Used | | |
| ConfProbe2_EU | NONE | | |
| ConfProbe3 | NTC | | |
| ConfProbe3_EU | Temperature | | |
| ConfProbe4 | | | |
| ConfProbe4_EU | | | |
| ConfProbe5 | | | |
| ConfProbe5_EU | | | |
| ConfProbe6 | Input Not Used | | |
| ConfProbe6_EU | Temperature | | |
| ConfProbe7 | Input Not Used | | |
| ConfProbe7_EU | Temperature | | |

Basic Setup for AHU – Analog Input Definitions

- Select **Save** and exit to the **Home** screen.

The screenshot displays a 'Settings Summary' dialog box over a configuration screen. The dialog box contains the following table:

| ITEM | CUR VALUE | NEW VALUE | STATUS |
|------------|----------------|-----------|-------------|
| ConfProbe1 | Input Not Used | NTC | Not Started |
| ConfProbe2 | Input Not Used | NTC | Not Started |

The 'Save' button at the bottom of the dialog is highlighted with a yellow box and labeled '1'. The 'Home' icon in the top navigation bar is highlighted with a yellow box and labeled '2'. The background screen shows a list of points with columns for POINT NAME, VALUE, UNIT, and POINTER. The bottom status bar includes 'MENU', 'LOGOUT', and system information: 'Site Supervisor 1.00B55 15/04/2014 20:50:59' and 'user 000110'.



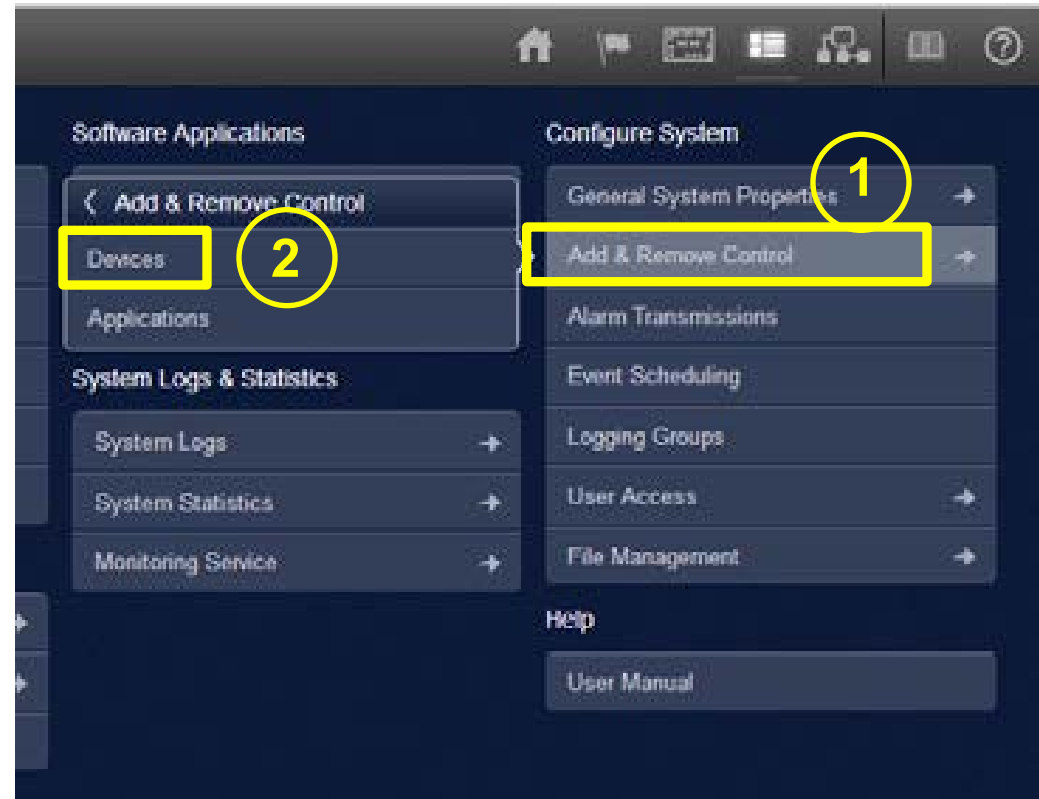
Creating Refrigeration (XR75) Control

Education You Can Build On



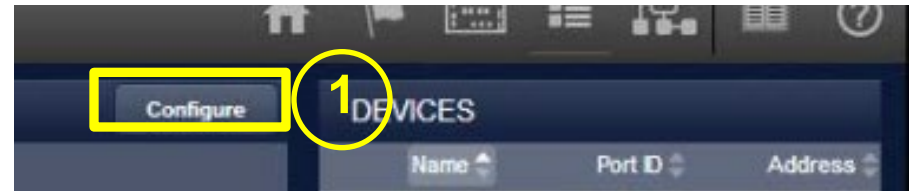
Creating Refrigeration (XR75) Control

- Go to **Site Map**.
- Choose **Add and Remove Control**, then **Devices**.



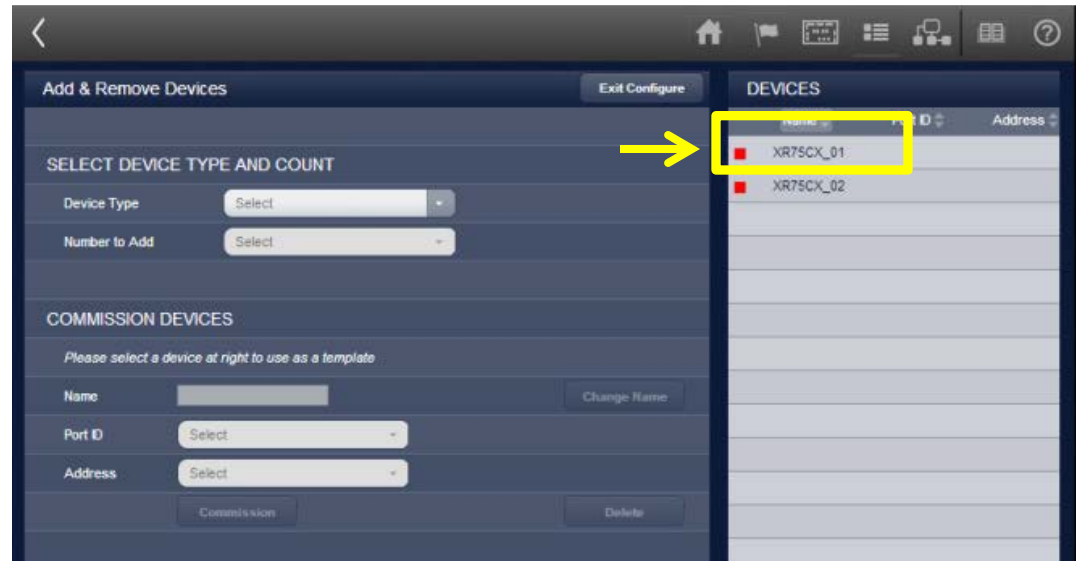
Creating Refrigeration (XR75) Control

- Select **Configure**.
- Select **Device Type** and **Number to Add** from dropdown (e.g., XR75CX 5.6)
- Select **Save**.



Creating Refrigeration (XR75) Control

- From the list of devices on the right side of screen, choose the device to commission (e.g., XR75CX).
- On the left side, choose **Change Name** and enter the system name.



Creating Refrigeration (XR75) Control

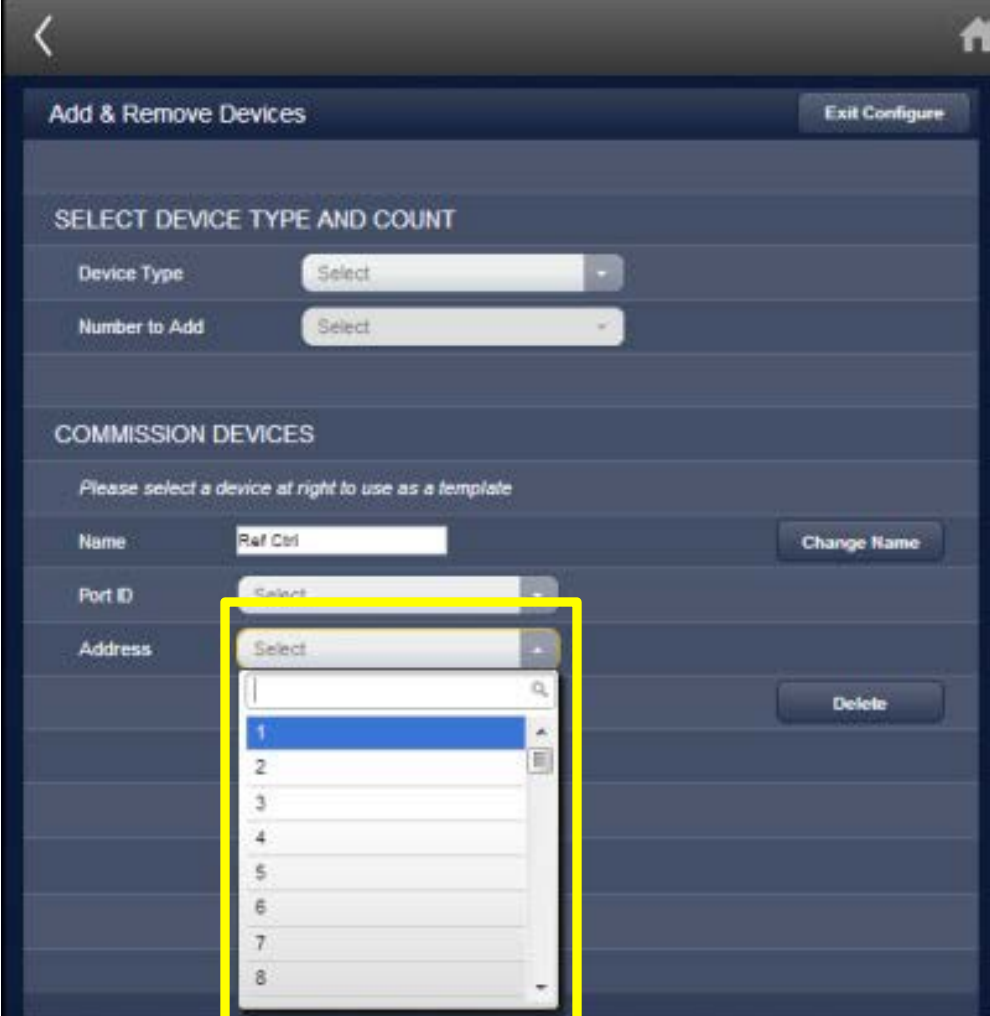
- Select the **Port ID** dropdown and choose communications.

The screenshot shows a mobile application interface for configuring a refrigeration control device. The interface is titled "Add & Remove Devices" and includes an "Exit Configure" button. It has sections for selecting device type and count, and a "COMMISSION DEVICES" section. In the "COMMISSION DEVICES" section, a device named "Ref Ctrl" is shown with a "Port ID" dropdown menu open, displaying "Modbus-1" and "Modbus-2" options. The dropdown is highlighted with a yellow box.

| Name | Port ID | Address | Change Name | Delete |
|----------|--------------------------------|---------|-------------|--------|
| Ref Ctrl | Select Modbus-1 Modbus-2 | | Change Name | Delete |

Creating Refrigeration (XR75) Control

- Select the **Address** dropdown and select the network address of the device.



The screenshot shows a mobile application interface for configuring devices. The title bar at the top reads "Add & Remove Devices" with an "Exit Configure" button on the right. Below the title bar, there is a section titled "SELECT DEVICE TYPE AND COUNT" with two dropdown menus: "Device Type" and "Number to Add", both currently set to "Select".

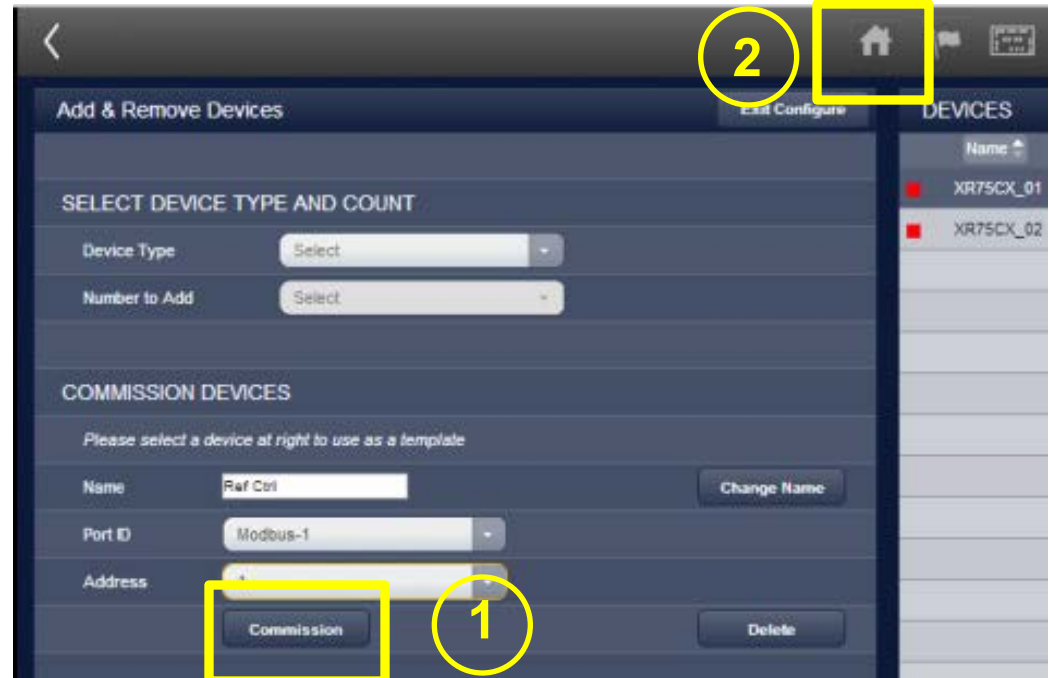
Below this is a section titled "COMMISSION DEVICES" with the instruction "Please select a device at right to use as a template". There are three rows of fields for commissioning a device:

- Name:** A text input field containing "Ref Ctrl" and a "Change Name" button.
- Port ID:** A dropdown menu set to "Select".
- Address:** A dropdown menu set to "Select". This dropdown is open, showing a list of numbers from 1 to 8. The number 1 is selected and highlighted in blue. The dropdown is enclosed in a yellow rectangular box.

At the bottom right of the commissioning section, there is a "Delete" button.

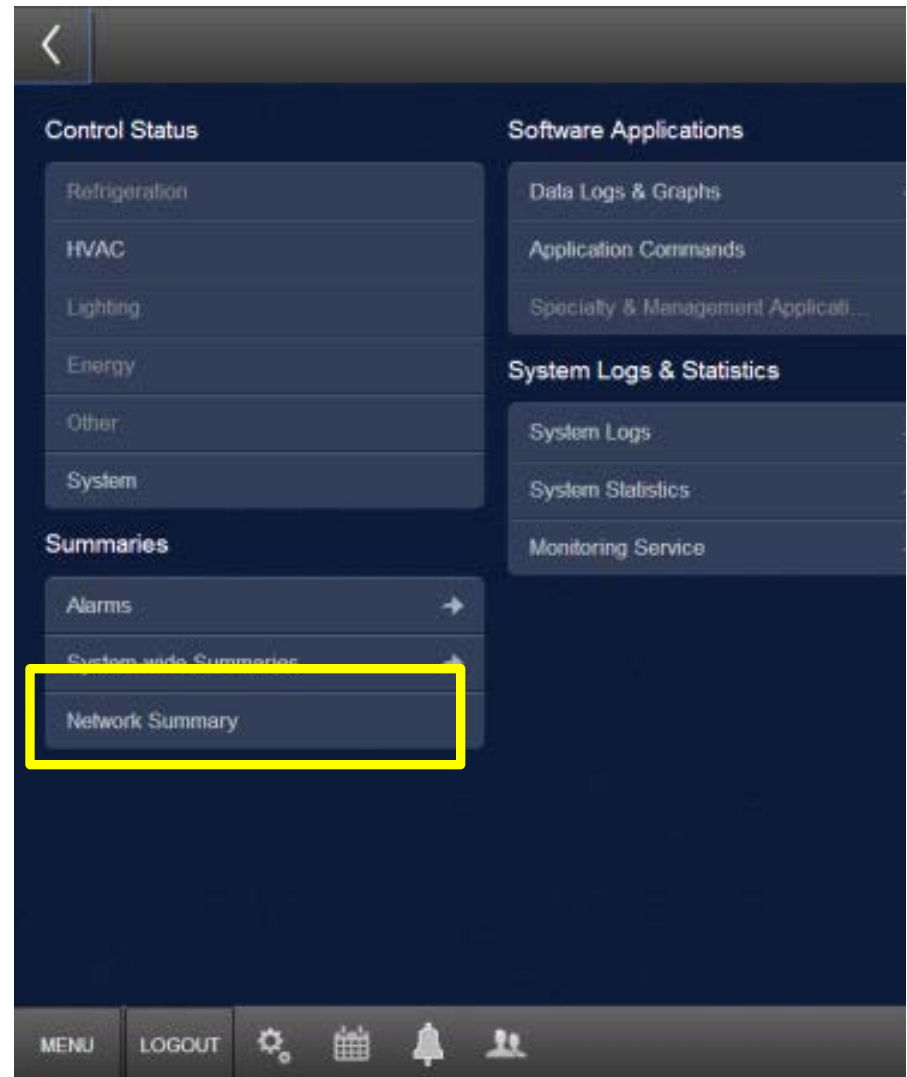
Creating Refrigeration (XR75) Control

- Click on the **Commission** button and exit to the **Home** screen.



Creating Refrigeration (XR75) Control

- To verify the device is online, go to **Site Map**, then under Summaries, choose **Network Summary**.



Creating Refrigeration (XR75) Control

- Online status of all devices is displayed.

The screenshot displays a web interface for a refrigeration control system. The main section is titled "Network Summary" and contains a table of device status. A yellow box highlights the table. Below the table is a "Local System Settings" section with "SYSTEM INFORMATION" and "NTP (TIME) INFORMATION".

| DEVICE NAME | DEVICE TYPE | PHYSICAL ADDRESS | REVISION | STATUS |
|--------------------------------|-----------------|-------------------------|----------|------------|
| Site Supervisor | Site Supervisor | Ethernet 1 1 | 1.00B58 | This Supvr |
| Ref_Cln | XR75CX | Modbus Modbus-1 1 | 5.6 | Offline |
| XR75CX_02 | XR75CX | Modbus Uncommissioned 0 | | Unknown |
| PX_25 Relay_01 | IPX 25 Relay | CANBus CANBus-1 1 | | Offline |

Local System Settings

SYSTEM INFORMATION

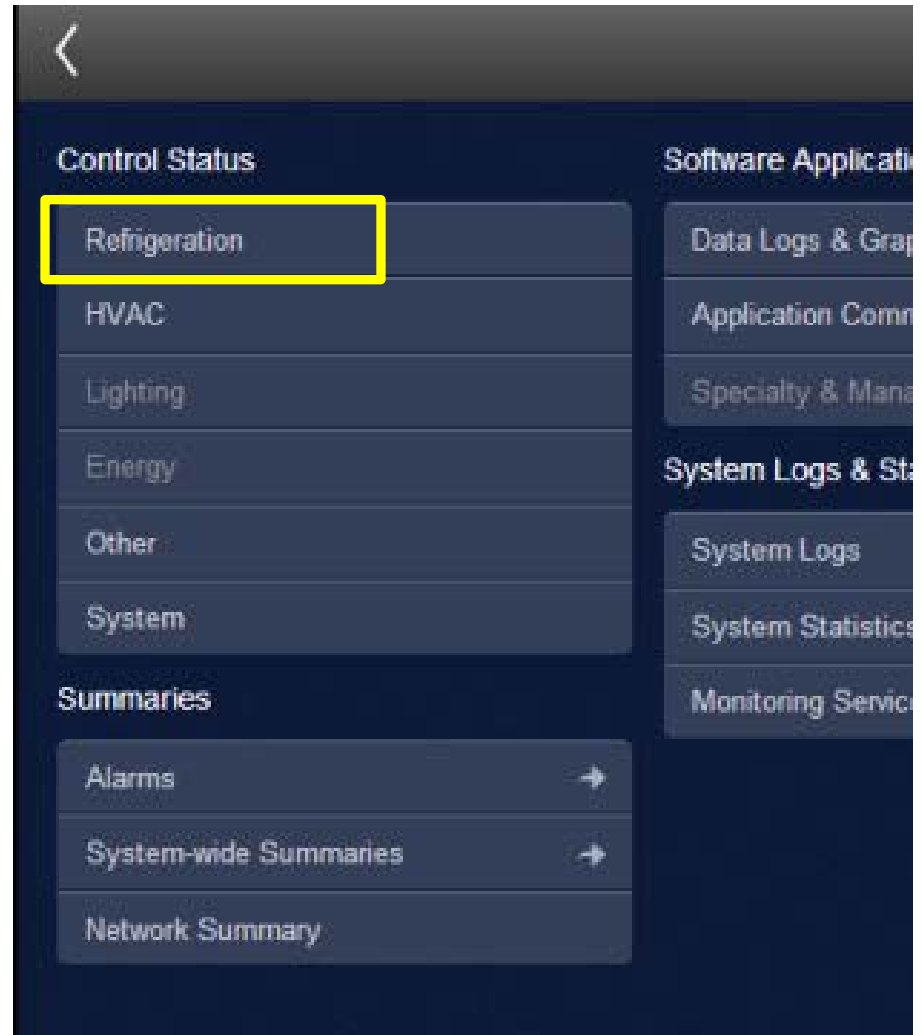
ETH 0 MAC Address: 00:0A:F6:81:E4:83 ETH 0 DHCP Enabled: No
ETH 0 IP: 10.161.92.198 ETH 0 Netmask: 255.255.255.0
ETH 0 Gateway: 10.161.92.1 Default Language: American English
DNS1: 8.8.8.8 DNS2: 8.8.4.4

NTP (TIME) INFORMATION

Site Supervisor 1.00B58 04/16/2014 05:47:10 AM
user 000725

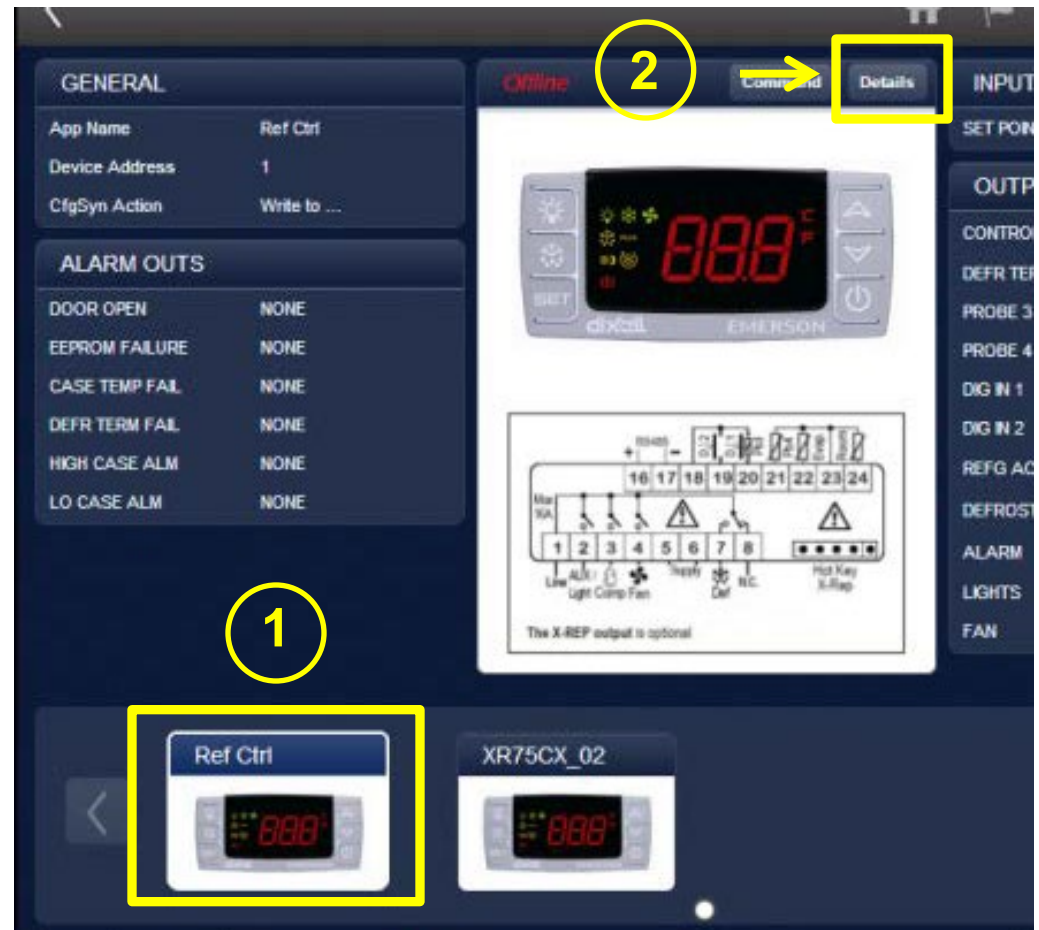
XR75 Basic Setup

- Go to **Site Map** and choose **Refrigeration** under **Control Status**.



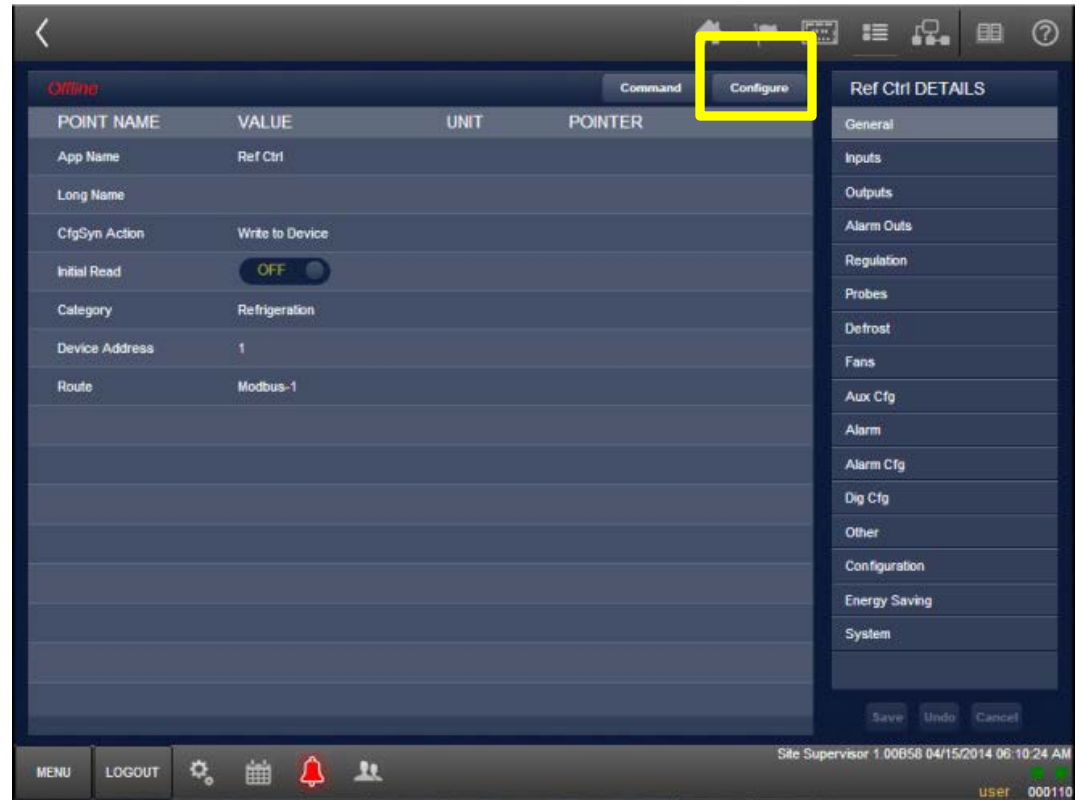
XR75 Basic Setup

- Select the XR75 controller to be configured, then select **Details**.



XR75 Basic Setup

- Select **Configure**.



The screenshot displays the XR75 Basic Setup interface. At the top, there is a navigation bar with a back arrow, a home icon, a list icon, a network icon, and a help icon. Below this, the status 'Offline' is shown in red. A 'Command' menu is open, with the 'Configure' option highlighted in a yellow box. The main area contains a table with the following data:

| POINT NAME | VALUE | UNIT | POINTER |
|----------------|------------------------------|------|---------|
| App Name | Ref Ctrl | | |
| Long Name | | | |
| CfgSyn Action | Write to Device | | |
| Initial Read | <input type="checkbox"/> OFF | | |
| Category | Refrigeration | | |
| Device Address | 1 | | |
| Route | Modbus-1 | | |

On the right side, there is a 'Ref Ctrl DETAILS' panel with a list of categories: General, Inputs, Outputs, Alarm Outs, Regulation, Probes, Defrost, Fans, Aux Cfg, Alarm, Alarm Cfg, Dig Cfg, Other, Configuration, Energy Saving, and System. At the bottom of this panel are 'Save', 'Undo', and 'Cancel' buttons. The bottom navigation bar includes 'MENU', 'LOGOUT', a settings gear, a calendar, a notification bell, and a user icon. The bottom right corner shows the text 'Site Supervisor 1.00858 04/15/2014 06:10:24 AM' and 'user 000110'.

XR75 Basic Setup

- On the **General** tab, enter details for:
 - Application Name
 - Category

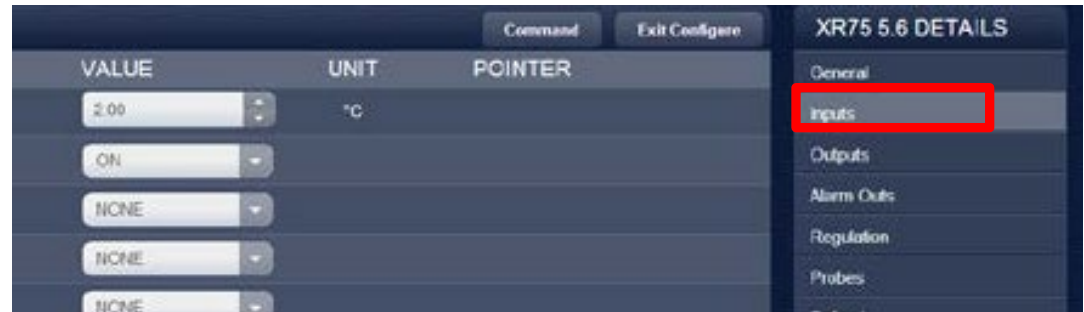
The image shows two overlapping screenshots of a configuration interface. The top screenshot shows a table with columns 'POINT NAME', 'VALUE', 'UNIT', and 'POINTER'. The 'POINT NAME' is 'Ref Ctrl' and the 'VALUE' is 'Ref Ctrl'. A red box highlights the 'General' tab in the 'Ref Ctrl DETAILS' sidebar. The bottom screenshot shows a detailed configuration form for the 'Ref Ctrl' point, with a yellow box highlighting the 'App Name' (Ref Ctrl), 'Category' (Refrigeration), and 'Initial Read' (OFF) fields.

| POINT NAME | VALUE | UNIT | POINTER |
|---------------|-----------------|------|---------|
| App Name | Ref Ctrl | | |
| Long Name | | | |
| CfgSyn Action | Write to Device | | |
| Initial Read | OFF | | |

| POINT NAME | VALUE |
|----------------|-----------------|
| App Name | Ref Ctrl |
| Long Name | |
| CfgSyn Action | Write to Device |
| Initial Read | OFF |
| Category | Refrigeration |
| Device Address | 1 |
| Route | Modbus-1 |

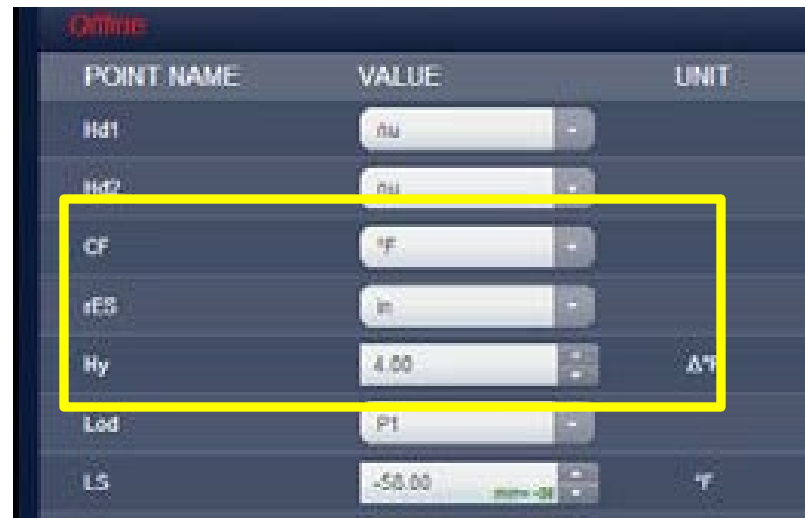
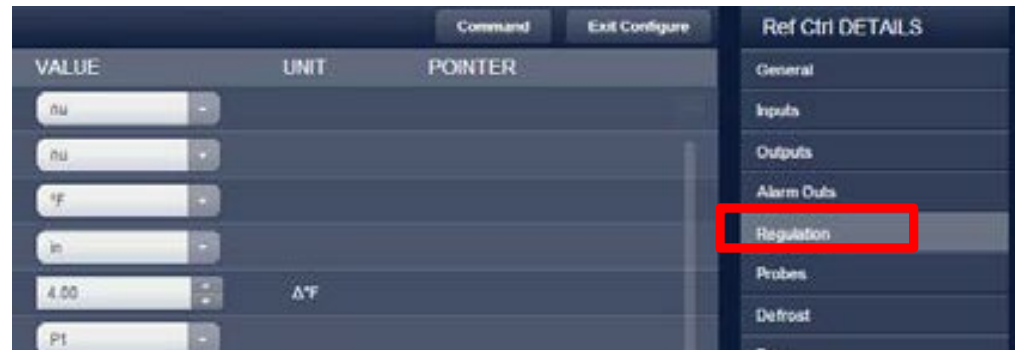
XR75 Basic Setup

- On the **Inputs** tab, enter detail for:
 - Setpoint



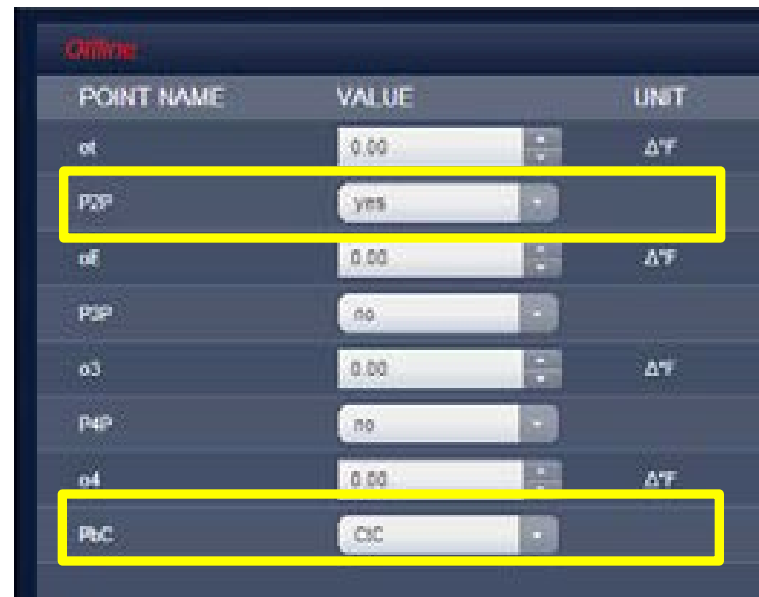
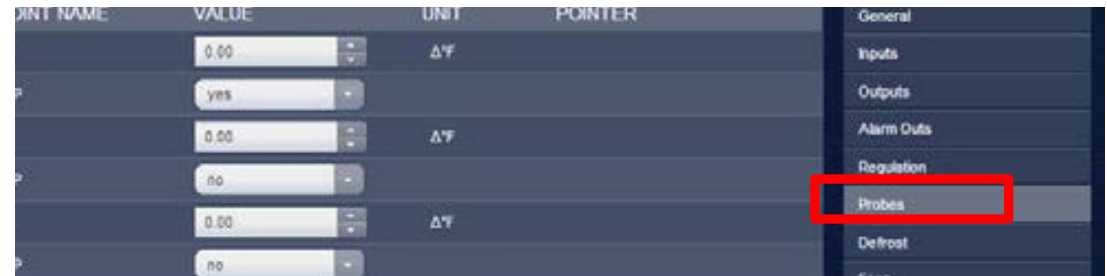
XR75 Basic Setup

- On the **Regulation** tab, enter details for:
 - CF
(Temperature Measurement Unit)
 - Hy
(Differential)



XR75 Basic Setup

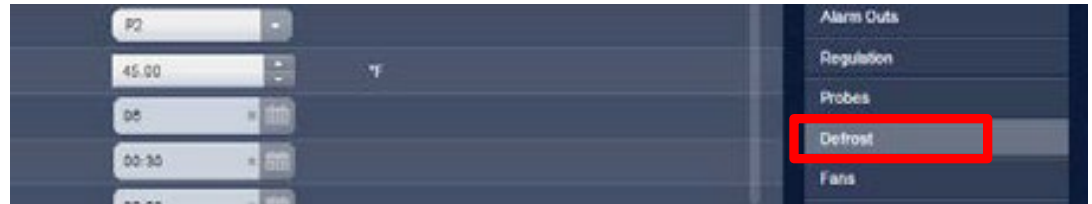
- On the **Probes** tab, enter details for:
 - P2P (if evaporator is present)
 - PbC (probe type)



XR75 Basic Setup

- On the **Defrost** tab:

- **EdF** (defrost mode)
- **dFp** (probe selection DEF term)
- **idF** (defrost interval)
- **MdF** (defrost length)
- **dFd** (defrost display)
- **Fdt** (drip)
- **Defr Term SP** (Defrost Termination)

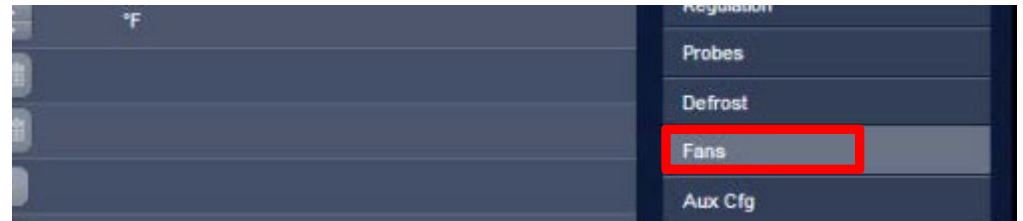


A screenshot of the XR75 control panel showing the Defrost parameter configuration table. The table is highlighted with a yellow border and contains the following data:

| POINT NAME | VALUE | UNIT |
|--------------|-------|------|
| EdF | rTC | |
| tdF | EL | |
| dFP | P2 | |
| Defr Term SP | 45.00 | °F |
| idF | 05 | min |
| MdF | 00:30 | min |
| dFd | 00:00 | min |
| dFd | 8 | |
| dAd | 00:30 | min |
| Fdt | 00:00 | min |
| dPo | no | |
| dAF | 0.00 | |
| Ld1 | 6.00 | |
| Ld2 | 13.00 | |
| Ld3 | 21.00 | |

XR75 Basic Setup

- On the **Fans** tab:
 - **FnC** (fan operating mode)
 - **Fnd** (fan delay after defrost)
 - **FST** (fan stop temperature)
 - **FAT** (fan probe selection)



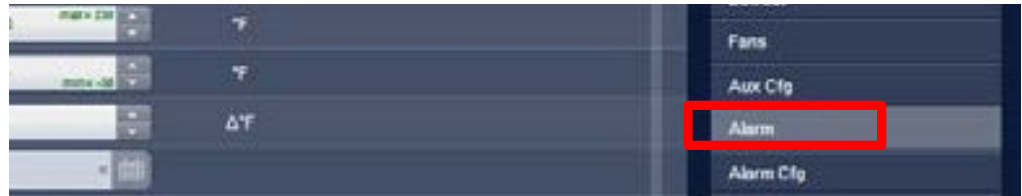
Offline

| POINT NAME | VALUE | UNIT |
|------------|-------|------|
| FnC | 0_n | |
| Fnd | 00:10 | |
| FCt | 20.00 | Δ°F |
| FSt | 32.00 | °F |
| Fon | 00:00 | |
| FoF | 00:00 | |
| FAP | nP | |
| FSU | Std | |

XR75 Basic Setup

- On the **Alarm** tab:

- **ALP** (probe selection for alarm)
- **ALC** (alarms configuration)
- **ALU** (temperature high alarm)
- **ALL** (temperature low alarm)
- **AFH** (alarm diff)
- **ALd** (alarm delay)



A screenshot of the XR75 Alarm configuration screen. The screen displays a list of parameters with their current values and units. A yellow rectangular box highlights the entire configuration area.

| PARAMETER | VALUE | UNIT |
|-----------|--------|------|
| tbA | yes | |
| ADP | CL | |
| rnd | yes | |
| ALP | P1 | |
| ALC | Ab | |
| ALU | 230.00 | °F |
| ALL | -58.00 | °F |
| AFH | 4.00 | Δ°F |
| ALd | 00:15 | |
| tbAo | 1.30 | |
| AP2 | P4 | |
| AL2 | -40.00 | °F |
| AU2 | 230.00 | °F |
| AH2 | 10.01 | Δ°F |
| A42 | 00:15 | |

XR75 Basic Setup

- Select Save, then **Exit Configure**

The screenshot displays the XR75 Basic Setup interface. At the top, there is a navigation bar with a back arrow, a home icon, a signal strength indicator, a battery icon, and a help icon. Below this, the status 'Online' is shown in red. A 'Command' button is visible, and the 'Exit Configure' button is highlighted with a yellow box. The main area contains a table with columns for POINT NAME, VALUE, UNIT, and POINTER. The table lists various parameters such as BA, AOP, rrd, ALP, ALC, ALU, ALL, AFH, ALd, dAa, AP2, AL2, AU2, AH2, and Ad2. The right sidebar shows a 'Ref Ctrl DETAILS' menu with options like General, Inputs, Outputs, Alarm Outs, Regulation, Probes, Defrost, Fans, Aux Cfg, Alarm, Alarm Cfg, Dig Cfg, Other, Configuration, Energy Saving, and System. At the bottom, there is a status bar with 'MENU', 'LOGOUT', a settings icon, a calendar icon, a notification bell icon, and a user icon. The status bar also displays 'Site Supervisor 1.00056 04/16/2014 11:45:04 PM' and 'USER 000110'.

| POINT NAME | VALUE | UNIT | POINTER |
|------------|--------|------|---------|
| BA | yes | | |
| AOP | CL | | |
| rrd | yes | | |
| ALP | P1 | | |
| ALC | Ab | | |
| ALU | 230.00 | °F | |
| ALL | -58.00 | °F | |
| AFH | 4.00 | Δ°F | |
| ALd | 00.15 | | |
| dAa | 1.30 | | |
| AP2 | P4 | | |
| AL2 | -40.00 | °F | |
| AU2 | 230.00 | °F | |
| AH2 | 10.01 | Δ°F | |
| Ad2 | 00.15 | | |



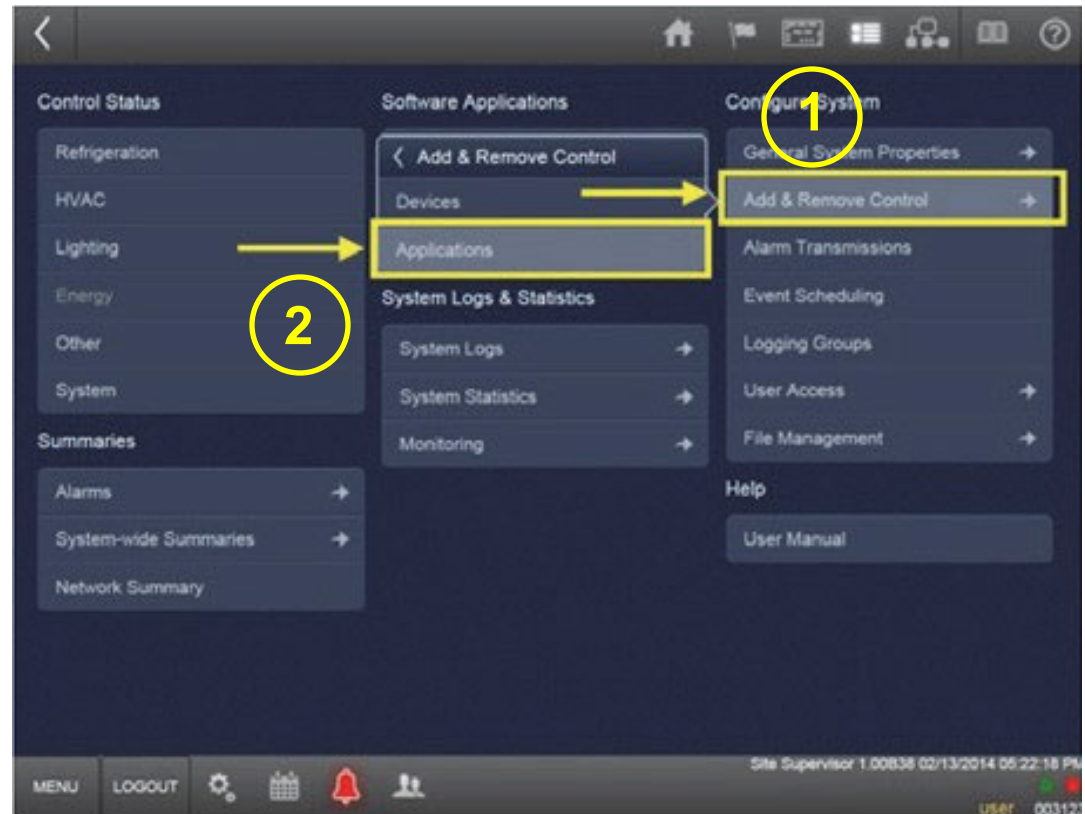
Creating Refrigeration Monitoring & Alarm

Education You Can Build On



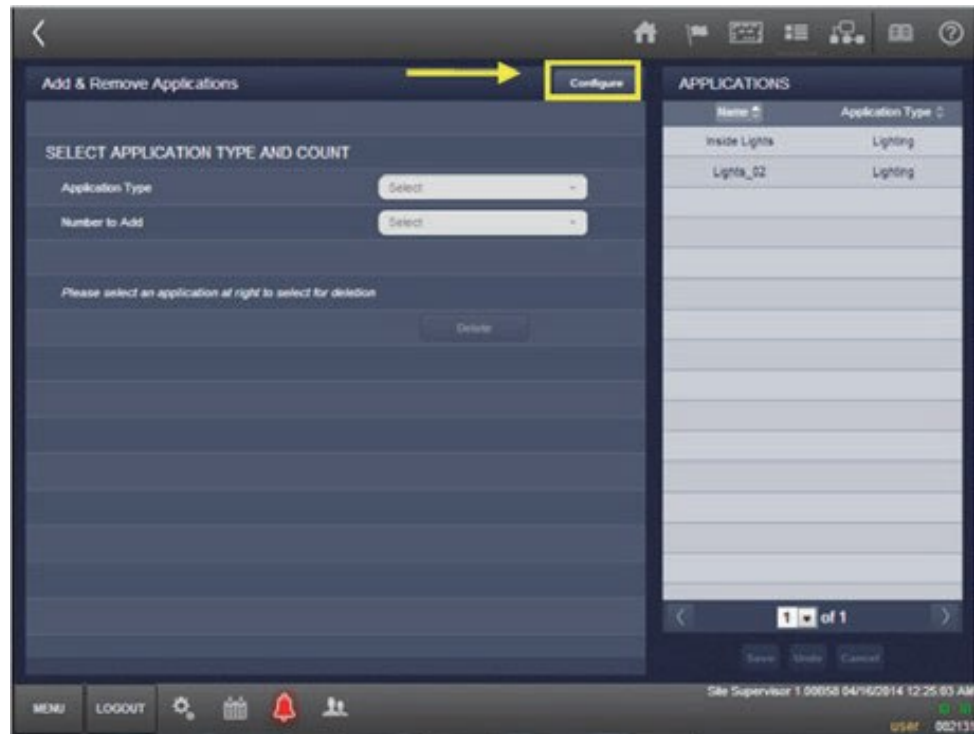
Refrigeration Monitoring & Alarm

- Login, go to **Site Map**.
- Choose **Add & Remove Control**, then **Applications**



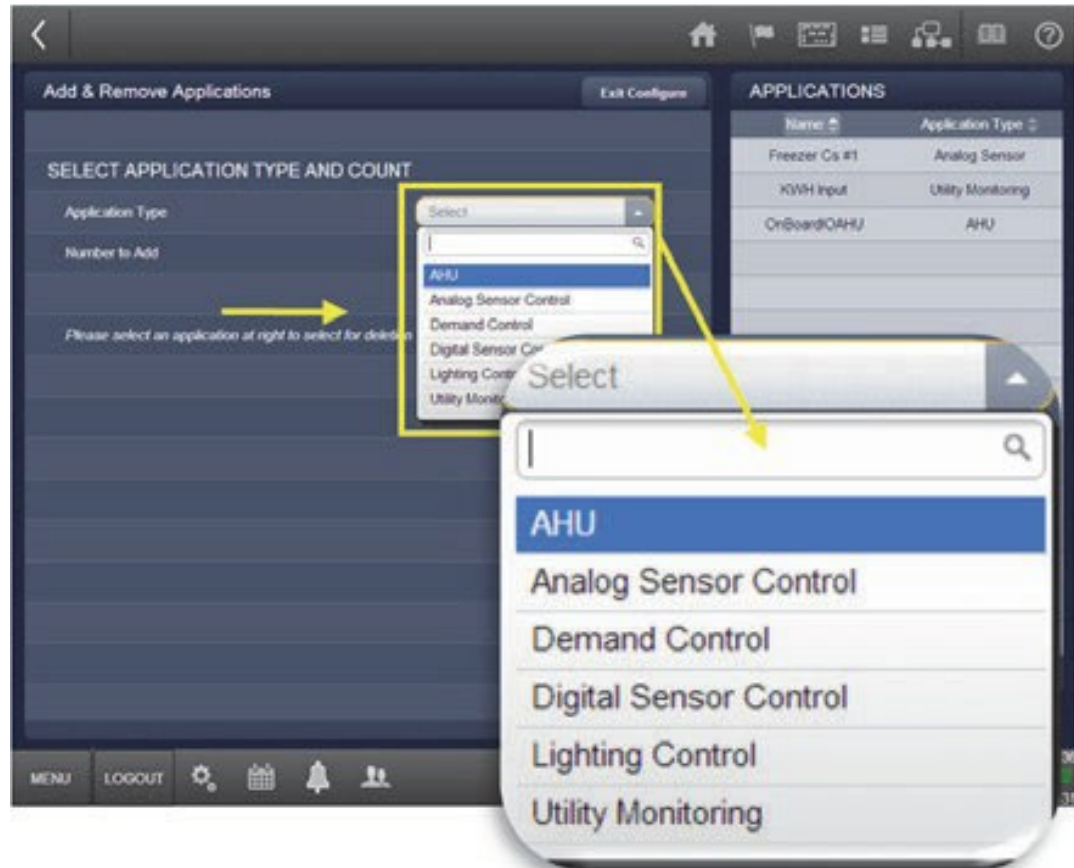
Refrigeration Monitoring & Alarm

- Select
Configure



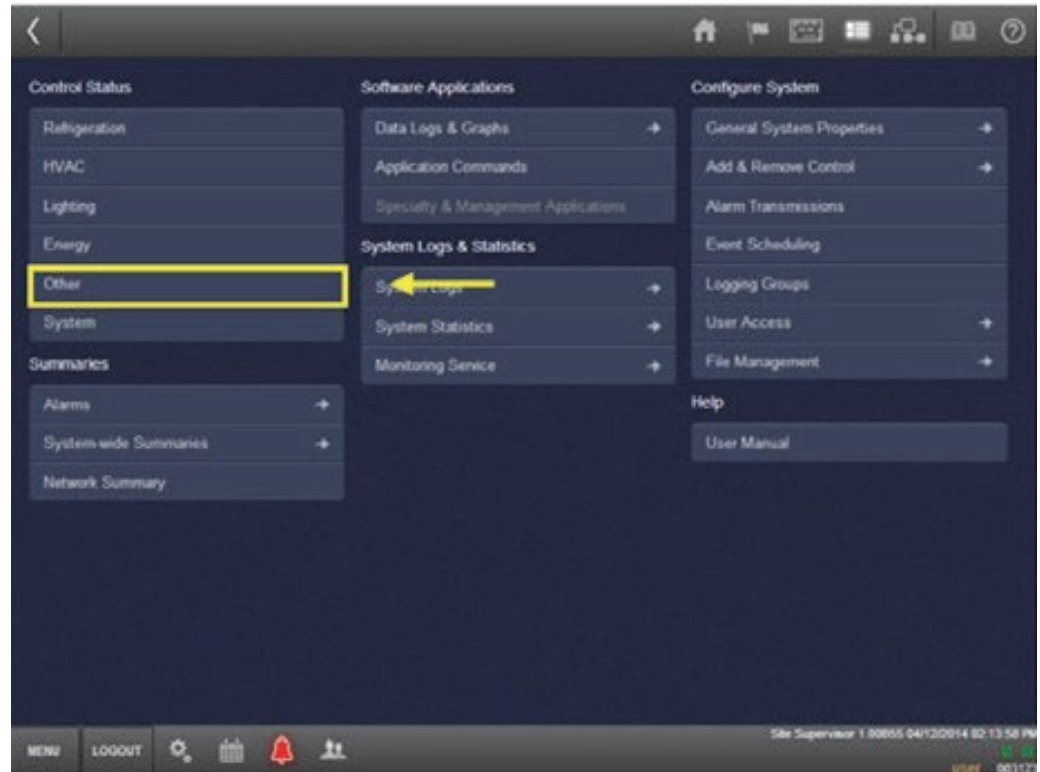
Refrigeration Monitoring & Alarm

- For Application Type, choose **Analog Sensor Control**.
- For **Number to Add**, select number of applications to be added.
- Click **Save**, then **Save** again and exit to **Home** screen.



Refrigeration Monitoring & Alarm

- Return to **Site Map**.
- Under Control Status, choose **Other**.



Refrigeration Monitoring & Alarm

- Select the Analog Sensor application that was created, then select **Details**.



Refrigeration Monitoring & Alarm

- Click the **Configure** button.

The screenshot displays a mobile application interface for refrigeration monitoring. The main content area is a table with the following columns: POINT NAME, VALUE, UNIT, and POINTER. The table contains several rows of sensor data. A yellow box highlights the 'Configure' button in the top right corner of the table, and a yellow arrow points to it from the 'POINTER' column header.

| POINT NAME | VALUE | UNIT | POINTER |
|----------------|--|------|---------|
| Name | Analog Sens_02 | | |
| Long Name | | | |
| Num Inputs | 1 | | |
| Units | Temperature | | |
| Comb Method | AVERAGE | | |
| All Comb Mode | AVERAGE | | |
| Comb LO Limit | NONE | °C | |
| Comb HI Limit | NONE | °C | |
| Mix Ratio | 50.00 | | |
| Disable Filter | <input checked="" type="checkbox"/> ON | | |
| Factor Time | 00:01:00 | | |
| Filter Factor | 100.00 | | |
| Emerg Cmd Out | OFF | | |
| Emerg Ctrl Out | NONE | °C | |

At the bottom of the screen, there is a navigation bar with icons for MENU, LOGOUT, settings, calendar, notifications, and users. The status bar at the very bottom shows 'Site Supervisor 1.00855 18/04/2014 08:11:48' and 'user 000110'.

Refrigeration Monitoring & Alarm

- On the **General** tab, enter details for:
 - **Name** (system name)
 - **Num Probes** (enter case qty)
 - **Category** (Refrigeration)

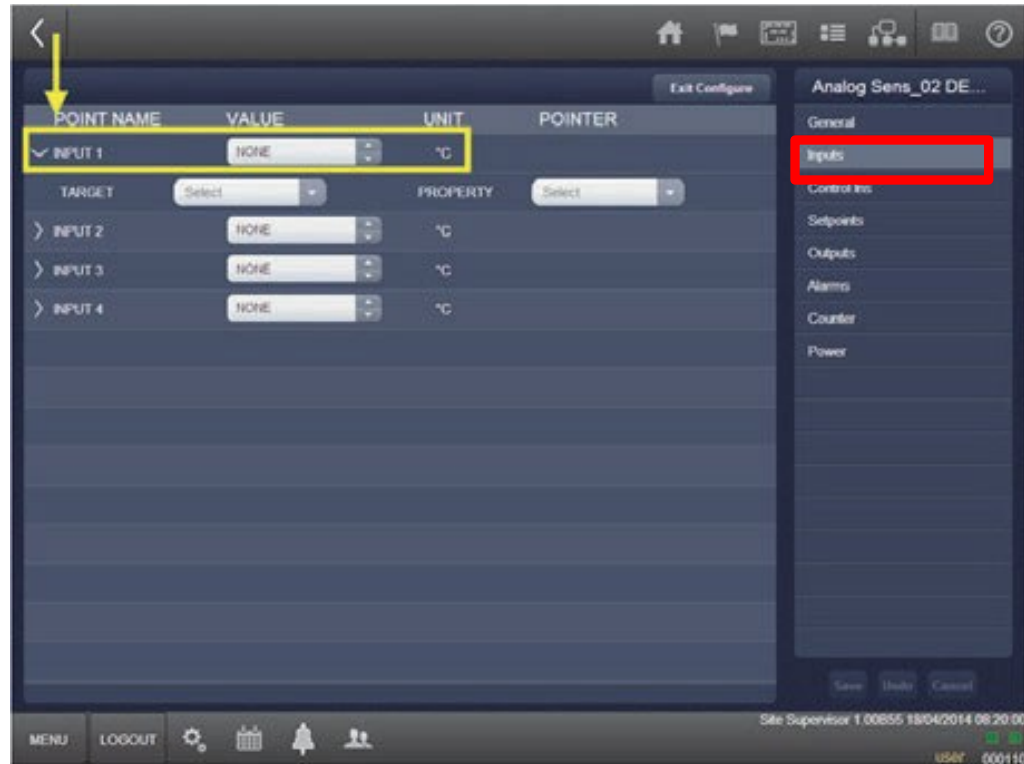
The image shows two overlapping screenshots of a mobile application interface. The left screenshot displays a list of configuration fields for a monitoring point, with a yellow box highlighting the 'Name', 'Num Probes', and 'Category' fields. The right screenshot shows a detailed view of the configuration for 'Ice Cream Cases'.

| POINT NAME | VALUE | UNIT |
|----------------|-------------|---------|
| Name | Cook Temp | |
| Long Name | | |
| Num Probes | 1 | |
| Units | Temperature | |
| Comb Method | AVERAGE | |
| All Comb Mode | AVERAGE | |
| Comb LO Limit | NONE | |
| Comb HI Limit | NONE | |
| Mix Ratio | 50.00 | |
| Disable Filter | ON | |
| Factor Time | 00:01:00 | |
| Filter Factor | 100.00 | max=100 |
| Emerg Cmd Out | OFF | |
| Emerg Ctrl Out | NONE | |
| Category | Other | |
| Update Rate | 00:00:10 | |

| | |
|----------------|--------------------------|
| Name | Ice Cream Cases |
| Long Name | Ice Cream Case Near Dock |
| Num Inputs | 2 |
| Units | Temperature |
| Comb Method | AVERAGE |
| All Comb Mode | AVERAGE |
| Comb LO Limit | NONE |
| Comb HI Limit | NONE |
| Mix Ratio | 50.00 |
| Disable Filter | ON |
| Factor Time | 00:01:00 |
| Filter Factor | 100.00 |
| Emerg Cmd Out | OFF |
| Emerg Ctrl Out | NONE |

Refrigeration Monitoring & Alarm

- **Inputs** tab: For each probe selected, an expansion board point number needs to be assigned.



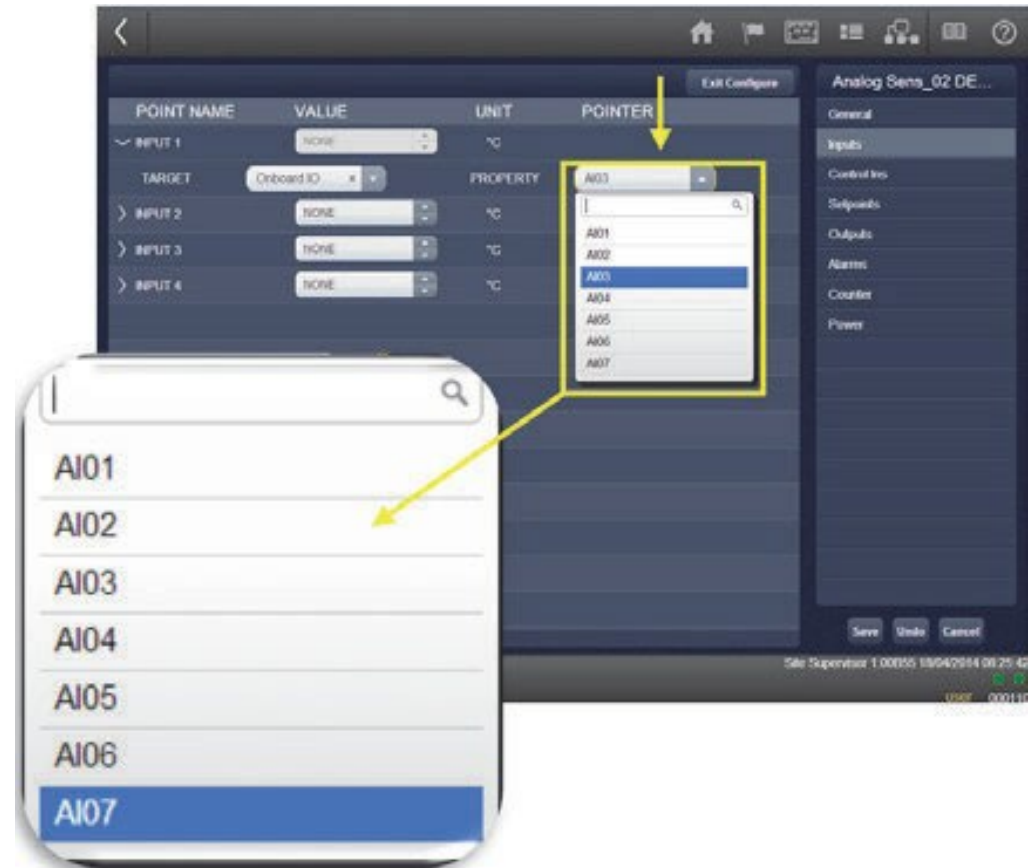
Refrigeration Monitoring & Alarm

- **Target** dropdown: select location or board number into which the probe is wired (e.g., Onboard I/O).



Refrigeration Monitoring & Alarm

- **Property** dropdown: select point number into which the probe is wired (e.g., Onboard I/O).



Refrigeration Monitoring & Alarm

- **Alarm** tab: set high alarms, low alarms, alarm duration.
- Set the alarm message and category.



Refrigeration Monitoring & Alarm

- Select Save and exit to **Home**

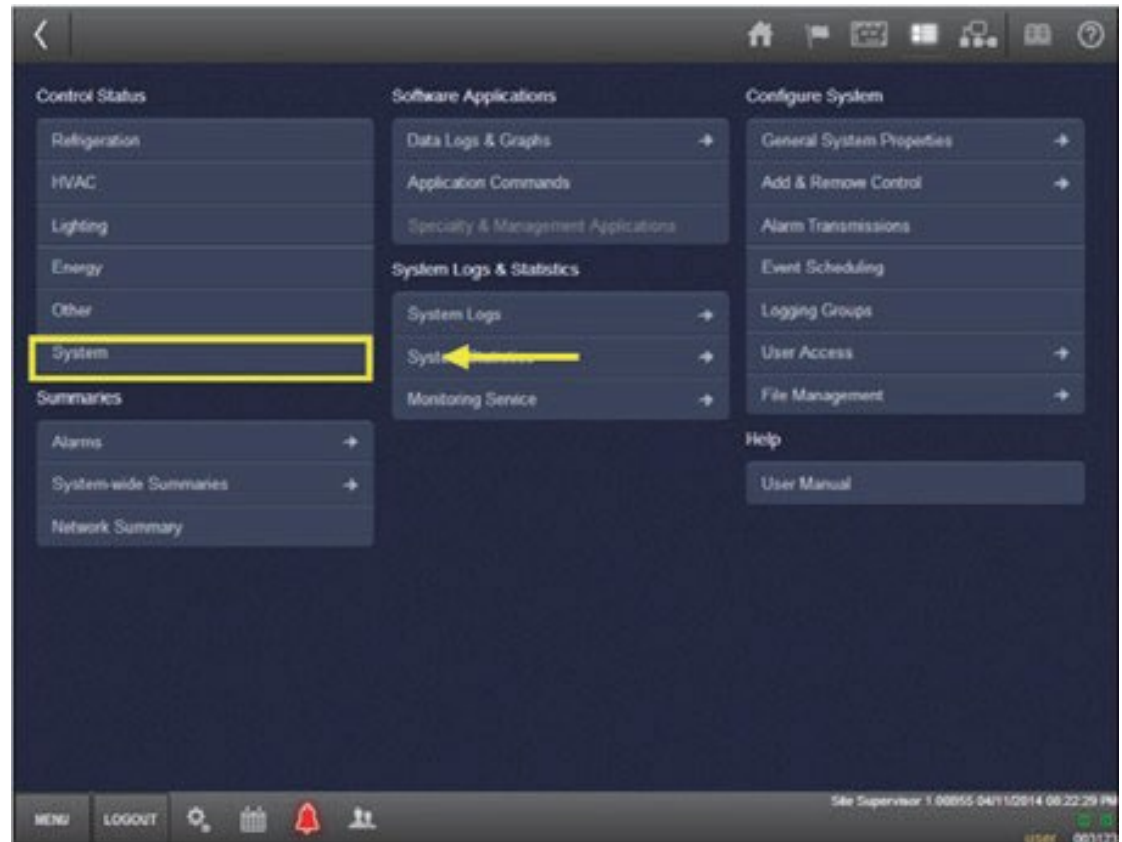
The screenshot shows a mobile application interface for refrigeration monitoring. A 'Settings Summary' dialog is open, displaying a table of parameters. A yellow circle '1' highlights the 'Save' button at the bottom of the dialog, and a yellow circle '2' highlights the 'Home' icon in the top navigation bar.

| ITEM | CUR VALUE | NEW VALUE | STATUS |
|----------------|--------------|---------------|-------------|
| Alarm LO Limit | NONE | -6.00 | Not Started |
| Alarm HI Limit | NONE | 6.50 | Not Started |
| Alarm Delay | 00:00:00 | 00:01:00 | Not Started |
| Alarm Type | Non-Critical | Critical | Not Started |
| Alarm Cat | Other | Refrigeration | Not Started |

Site Supervisor: 1 00855 18/04/2014 08:35:23
USER: 000111

Refrigeration Monitoring & Alarm

- Go to Site Map.
- Under Control Status, select **System**.



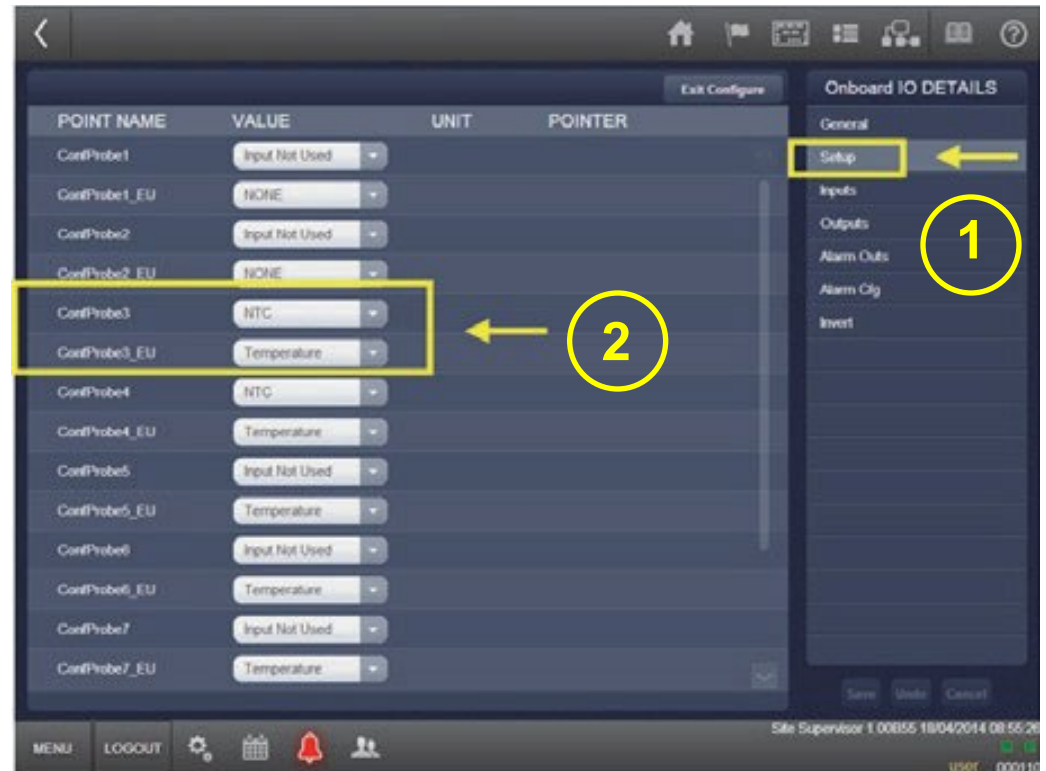
Refrigeration Monitoring & Alarm

- Select the I/O board with probe inputs and then select **Details**.



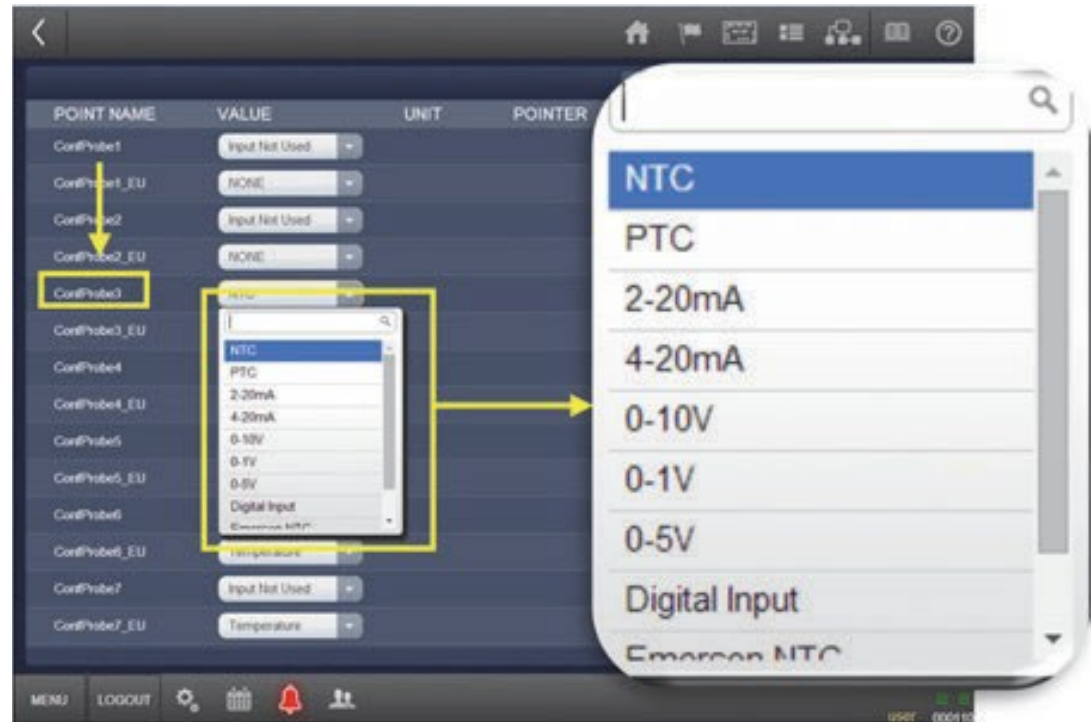
Refrigeration Monitoring & Alarm

- Select Configure.
- Select the **Setup** tab.
- Locate the analog input point(s) programmed as probes.



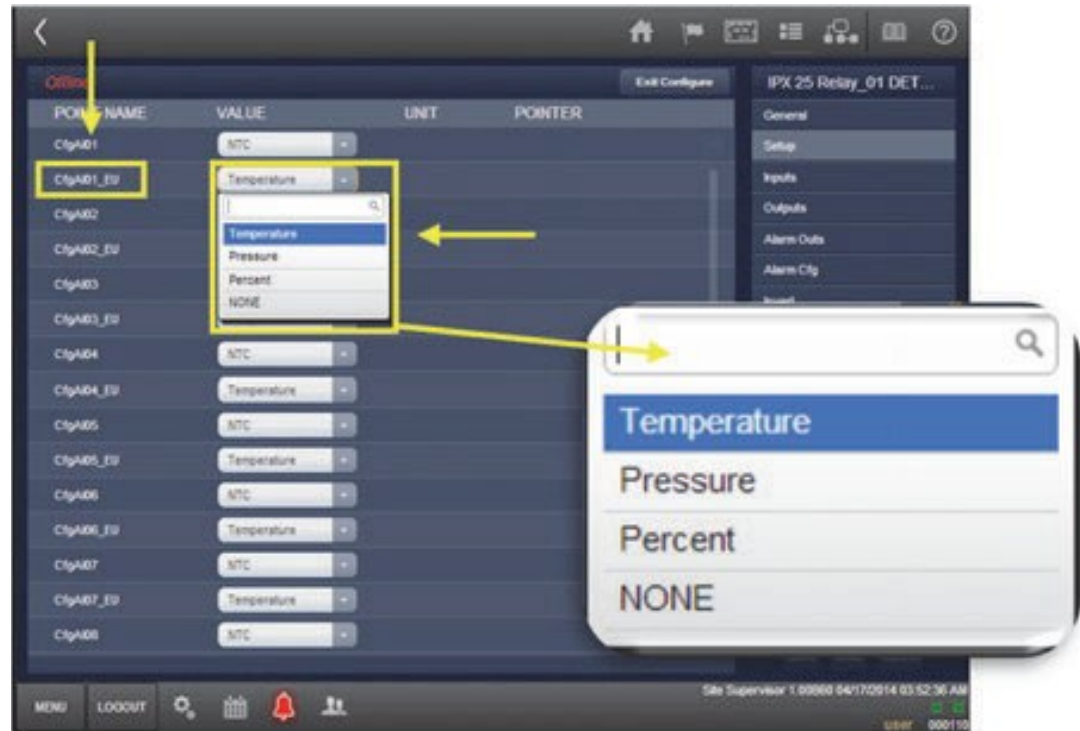
Refrigeration Monitoring & Alarm

- From the dropdown menu for ConFProb3, select the type of probe being used.



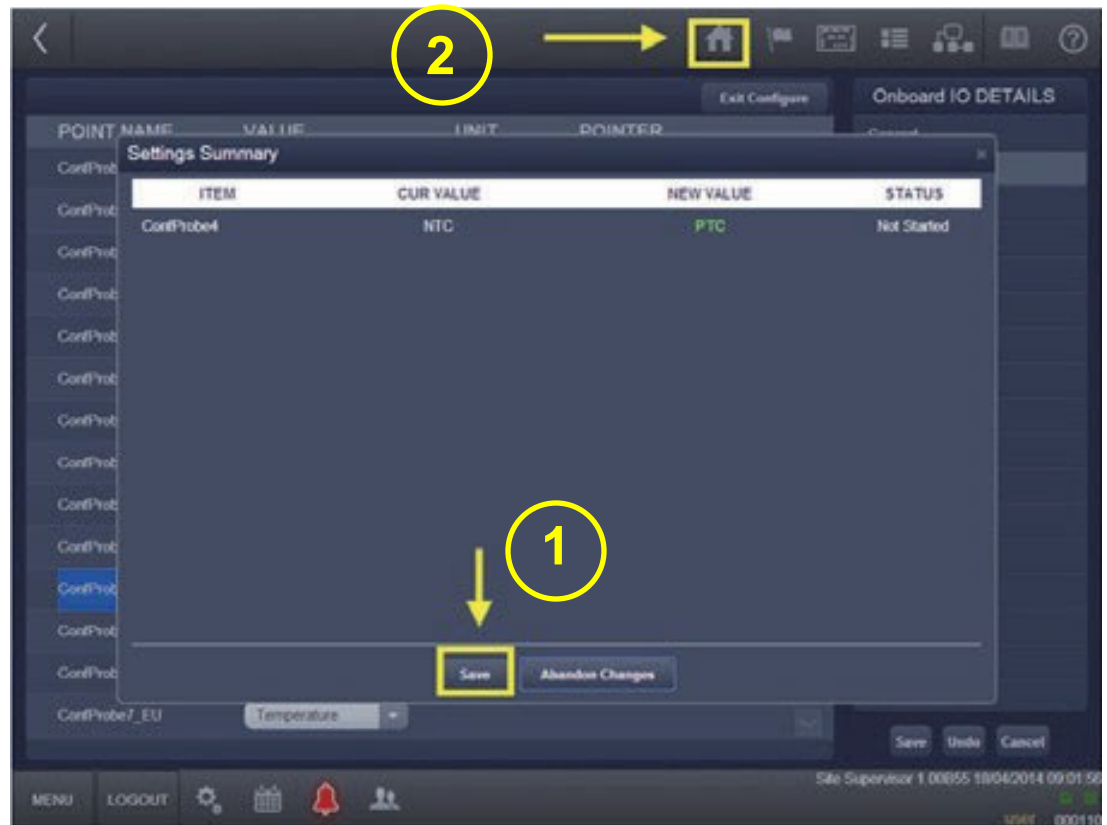
Refrigeration Monitoring & Alarm

- From the dropdown menu for ConFProb3_EU, select the units being used.



Refrigeration Monitoring & Alarm

- Click **Save**, and return to the **Home** screen.





Creating an Anti-Sweat Application

Education You Can Build On



Creating an Anti-Sweat Application

- **INFORMATION
NEEDED**



Creating Exhaust/Supply Fan Control

Education You Can Build On



Creating Exhaust/Supply Fan Control

- **INFORMATION
NEEDED**



Override HVAC

Education You Can Build On



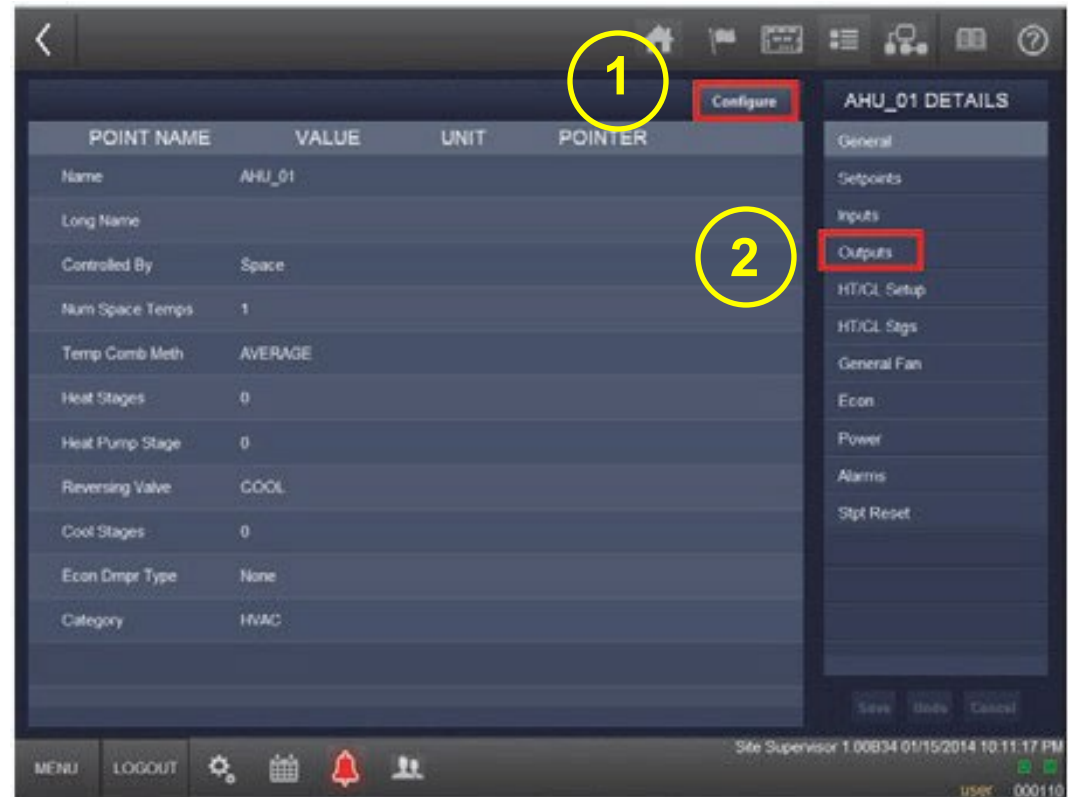
Override HVAC

- Go to the Control Status screen of the application you want to override.
- Click on **Details**.



Override HVAC

- Select **Configure**, then choose **Outputs** from application details panel on the right.



Override HVAC

- Click the arrow to the left of the name of the output that you want to override.

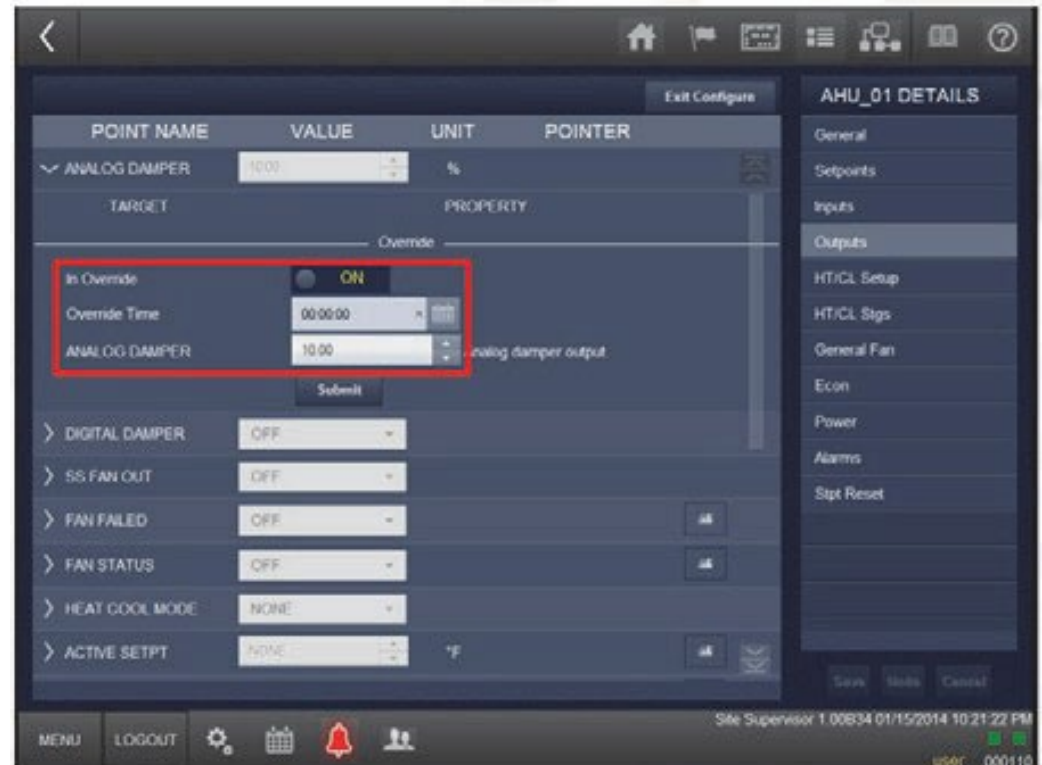
The screenshot displays a control interface for an AHU (Air Handling Unit). The main area is a table with columns for POINT NAME, VALUE, UNIT, and POINTER. The first row, 'ANALOG DAMPER', has its first column cell highlighted with a red box. To the right of the table is a sidebar menu titled 'AHU_01 DETAILS' with various sub-sections. At the bottom, there is a status bar with navigation icons and system information.

| POINT NAME | VALUE | UNIT | POINTER |
|------------------|------------|------|---------|
| > ANALOG DAMPER | 1000 | % | |
| > DIGITAL DAMPER | OFF | | |
| > SS FAN OUT | OFF | | |
| > FAN FAILED | OFF | | id |
| > FAN STATUS | OFF | | id |
| > HEAT COOL MODE | NONE | | |
| > ACTIVE SETPT | NONE | °F | id |
| > OCC STATE | UNOCCUPIED | | id |
| > SUM WINTR MODE | SUMMER | | |
| > SPACE TEMP OUT | NONE | °F | id |
| > AHU STATUS | No Out | | |
| > HEAT ACTIVE | INACTIVE | | |

Site Supervisor 1 00834 01/15/2014 10:19:32 PM
user: 000110

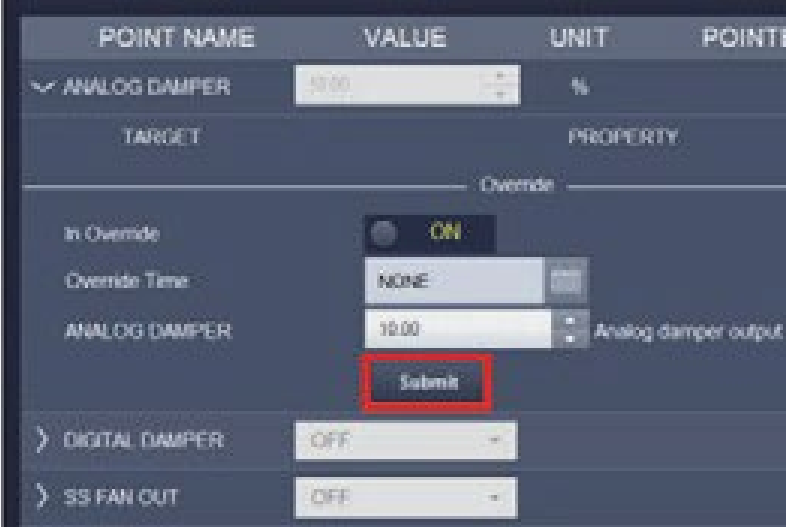
Override HVAC

- Override settings appear.
 - Set **In Override** to **ON**
 - Can also set an override time and enter override value



Override HVAC

- Select **Submit**.
- When pop-up screen appears with notification that override was successful, click **OK**.



The screenshot displays a control interface for HVAC equipment. At the top, there is a table with columns for POINT NAME, VALUE, UNIT, and POINT ID. Below this, there is a section for 'ANALOG DAMPER' with a value of 10.00 and a unit of %. A 'TARGET' and 'PROPERTY' section is also visible. The 'Override' section is active, showing 'In Override' as ON, 'Override Time' as NONE, and 'ANALOG DAMPER' as 10.00. A red box highlights the 'Submit' button. Below the override section, there are controls for 'DIGITAL DAMPER' (OFF) and 'SS FAN OUT' (OFF).

| POINT NAME | VALUE | UNIT | POINT ID |
|---------------|-------|------|----------|
| ANALOG DAMPER | 10.00 | % | |

TARGET: _____ PROPERTY: _____

Override

In Override: ON

Override Time: NONE

ANALOG DAMPER: 10.00 Analog damper output

Submit

DIGITAL DAMPER: OFF

SS FAN OUT: OFF

Questions?

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