

Multizone Heat Trace Control Panel

Valin's Accutrace™ control panel incorporates the latest technology and is packed with features designed to help optimize your heat trace system.



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SAFETY INFORMATION

Various symbols are used across this User Manual to caution the reader on potential safety hazards and additional operation information. These symbols must be followed to reduce the risk of injury or damage. Below is an index containing definitions of each symbol.



WARNING - Refer to supplemental information listed next to this symbol for details on specific hazard.



ELECTRICAL HAZARD - Hazards referring to electrical conditions such as high voltage. Refer to specific details listed next to symbol.



WARNING! Hazardous voltage can cause severe injury or death. Turn OFF power before servicing the circuit.



WARNING! Maximum total load shall not exceed rated capacity of the panel as listed in the equipment ratings section.

Pre-Start Up Inspection

Before installing the AccuTrace™ panel, take time to check the wiring and connections on the unit. Some components can be affected during shipping by environmental factors, so it is important to inspect the panel before power is applied.

SAFETY INFORMATION

Storage Guidelines

If this unit is not intended for operation upon receipt, follow the guidelines below to aid in preventing damage from common environmental factors.

- Storage in a clean, environmentally controlled area is advised.
- To prevent warping during storage, unit must be placed on a solid, even surface.
- Outdoor storage of indoor units is not recommended. The packaging used for shipment of indoor units is not appropriate for outdoor storage. Provide coverage for the unit to prevent damage from dust, dirt, and corrosive elements. The jacketing must protect the assembly while providing sufficient ventilation.
- If the storage area is affected by humidity and temperature fluctuation, utilize the anti-condensation enclosure heater provided in the unit, or add heat from an external source to prevent condensation inside the unit. The internal temperature must be at least 9°F (5°C) above ambient. If storage temperatures fall below 32°F (0°C), utilize the enclosure heater provided, or add sufficient heat from a separate source to keep the internal temperature of the panel at least 32°F (0°C). Inspect the equipment regularly, and add additional heat if necessary, to keep the equipment dry.
- Remove remaining packing material, paper documents, and other flammable items before operating the enclosure heater.

Pre-Start Up Inspection

Before installing the AccuTrace™ panel, take time to check the wiring and connections on the unit. Some components can be affected during shipping by environmental factors, so it is important to inspect the panel before power is applied. For your safety, please review the Operation Manual prior to start up.

Warranty

For information on Valin assembly warranties and Terms and Conditions Related to Engineered Systems, please visit: <https://www.valin.com/terms-conditions>

OVERVIEW

ACCUTRACE™

Multizone Zone Heat Trace Control Panel

The AccuTrace™ panel utilizes PID algorithms designed to maintain temperature in the most challenging applications, for both ambient sensing and line sensing. The panel has 30-amp Solid State Relay controls and GFEP (30mA) trip protection. a multitude of alarms, including high temp, low temp, high current, low current, sensor failure and Ground Fault Equipment Protection, creating a package of unrivaled performance.

For extreme cold starts and long circuit lengths, the AccuTrace™ panel employs a soft start feature, reducing the inrush current. This helps mitigate potential high current alarms that are a known problem during startups.

The AccuTrace™ multiloop has a 10", full color, easy-to-navigate touch screen display. The control interface is intuitive and simple to program, allowing for fast, accurate setup and commissioning. We also offer 3 levels of password protection, to further ensure the highest security while allowing quick access in the field, as appropriate.

FEATURES

Input

- Sensor Type 3-wire RTD, 100 Ω PT, 0.00385 $\Omega/\Omega^{\circ}\text{C}$, 20 Ω balanced lead wire (-200 $^{\circ}\text{C}$ – 850 $^{\circ}\text{C}$)

Output

- SSR Power Switching
- 4-48 circuits
- Up to 30 Amps per Circuit

Control Modes

- Auto PID
- On/Off-Control mode. Dead band, ($^{\circ}\text{F}$) Range: +/- 100 $^{\circ}\text{F}$
- Manual-Range: 0 – 100%
- Soft Start

Settings

- Alarm Types: Low & High Temperature, Low & High Current, High GFEP, Sensor Failure
- Alarm Access: Via Modbus. General Alarm contact option available.
- Warning;-ElectricityOutput on Sensor Failure, Range: 0–100%, Auto Transfer to Manual Mode
- 3 Levels of password protected security

OVERVIEW

Display, HMI, Indication

- 10" Full Color Resistive Touch Screen
- Resolution 800 x 480px
- Optional sunshade protection*

Alarms

- Temperature (PV) Range: 0°F to 720°F (-18°C to 382°C)
- Low Temperature Alarm, Range: 0°F to 720°F, Off (-18°C to 382°C, Off)
- High Temperature Alarm, Range: 0°F to 720°F, Off (-18°C to 382°C, Off)
- Low Current Alarm, Range: 1A – 30A, Off
- High Current Alarm, Range: 1A – 30A, Off
- GFEP, Range: 20mA – 80mA
- GFEP Alarm Condition, Alarm and Trip at GFEP Setpoint

Communications

- Modbus TCP
- Other protocols available upon request (contact factory)

Operating & Environmental

- Operating Temperature: -4°F to 104°F
- Power Supply: Up to 480VAC, 50/60Hz
- Enclosure rating: UL type 3R, 4, 12 (4X optional)
- Approvals: UL508A for ordinary areas, UL/cUL NNNY Class I, Division II optional with purged pressurization system.



*ACCUTRACE™ WITH SUNSHADE
HMI PROTECTION.

ADVANCED CONFIGURATION OPTIONS

Remote Terminal Unit (RTU) Expansion Panel

Each AccuTrace™ RTU expansion panel adds an additional 4 loops of heat trace circuits to the system. They are controlled via Modbus communications by the AccuTrace™ multiloop panel, so an additional HMI is not necessary for the expansion unit, lowering cost.

OVERVIEW

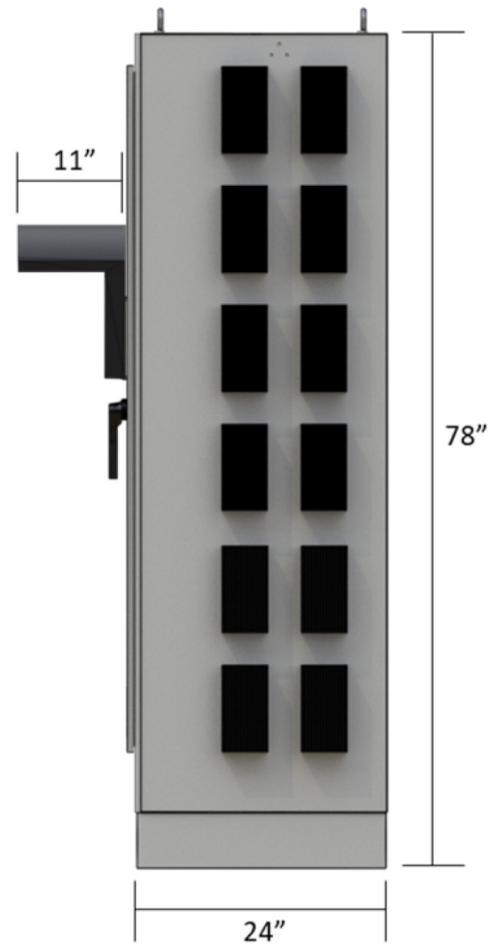
Purged Enclosure

Selecting the purged enclosure option will allow the AccuTrace™ multiloop to be installed and operated in hazardous areas rated Class I Div II Groups A, B, C, and D.

Dimensions (4-24 Circuit Models)



FRONT VIEW



SIDE VIEW
*WITH OPTIONAL SUNSHADE

OVERVIEW

CONTROL METHODS

The AccuTrace™ multiloop is capable of PID control, on/off control, and manual control for 48 loops locally, and up to 224 loops remotely through the use of the RTU Expansion Panels. Each circuit may be rated up to 30A.

Auto PID Mode

A closed loop control method that will control the power output to the heat trace circuit based on a PID algorithm. The proportional, integral, and derivative variables can be modified via the touchscreen HMI for process optimization.

Manual Mode

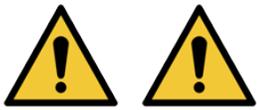
An open loop control method that sets the power output to a user-specified percentage. As a safety feature, manual mode is also the failover mode from Auto PID or On/Off if the temperature sensor fails. This way, the integrity of the process may be automatically maintained.

On/Off Mode

A closed loop control method that utilizes Deadband hysteresis values to determine the power output. The output will turnoff once the process temperature reaches the deadband's high setpoint and turns on when the process temperature reaches the deadband's low setpoint.

INSTALLATION

1. INSTALLATION



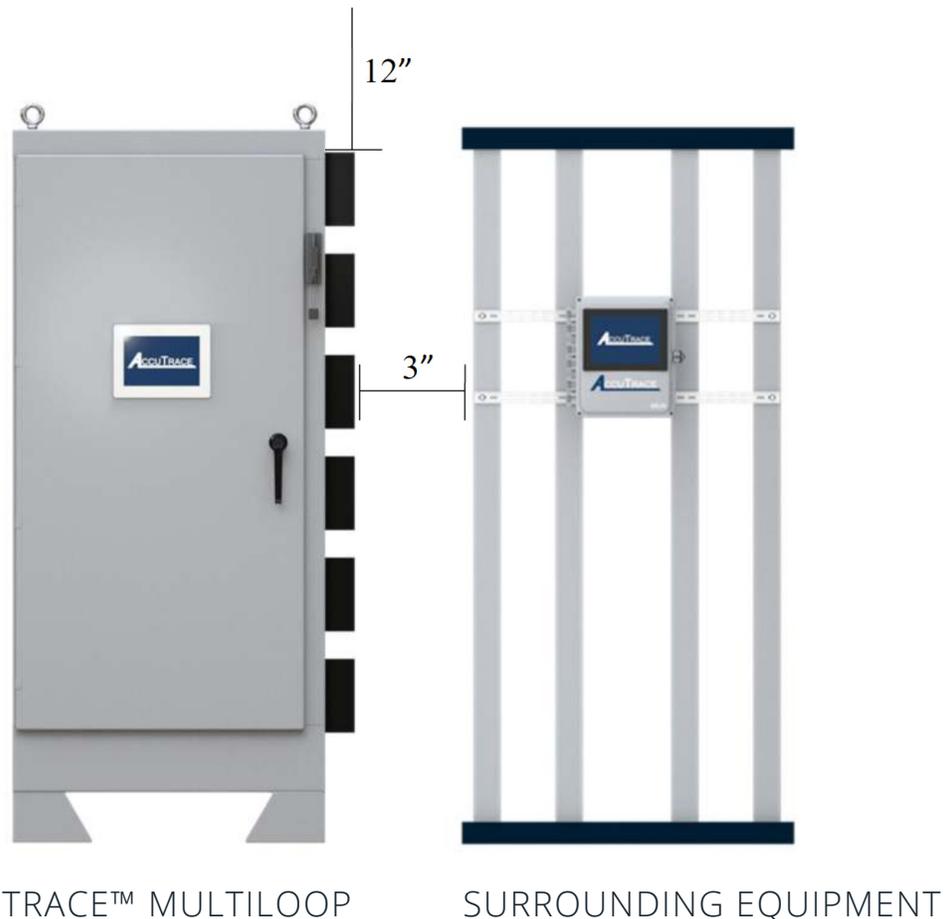
WARNING! AccuTrace™ utilizes Solid State Relay (SSR) power switching. To dissipate the heat generated from the SSR's, the heat sink located on the back of the enclosure must be in an upright position. The panel must be mounted vertically as shown below in Figure 1-1 to accomplish proper heat dissipation.

WARNING! Installation of equipment must be performed by qualified and experienced personnel.

Installation Location

The heat sink side of the AccuTrace™ Multiloop panel is designed to provide the necessary airflow for heat dissipation. Ensure that airflow is not blocked or restricted in any way. Refer to Figure 1-1 below. Allow 3 inches of clearance between heat sink assemblies and surrounding equipment or walls. Allow 12 inches of clearance above heat sink assemblies. The heat sink assemblies must be inspected every season to confirm that no debris or objects are in contact with the heat sink. To dislodge debris, use high pressure blasts of clean air that will not damage the fins.

FIGURE 1.1



INSTALLATION



WARNING! Failure to comply with Valin instructions on proper heat sink clearances or panel mounting can result in impaired panel performance, personal injury, or damage.

Outdoor Installation

Environmental factors must be assessed when installing your AccuTrace™ system outdoors. Both Solar Gain and UV Ray Exposure can adversely affect the unit.

Solar Gain

The panel ratings, per UL/cUL, are based on operating the panel within the listed Ambient Environmental temperatures and without exposure to direct sunlight. It is advised to install an appropriately designed solar shield to provide shade across the entire top of the panel to prevent added heat from solar gain. This shield will also provide a measure of protection to the HMI Touchscreen.

UV Ray Exposure

AccuTrace™ Heat Trace Panels utilize a Touch Screen HMI with LED backlit technology. UV rays are known to adversely affect these types of touch screens. Valin advises on installing HMI Sunscreens in all outdoor applications to protect the HMI Touch Screen from damage due to UV ray exposure. See the appendix for the HMI Sunscreen configuration offered by Valin.

2. CUSTOMER WIRING



WARNING! Equipment is rated for use in Class I, Div II, Groups A, B, C, and D hazardous environments. Follow all local and national codes applicable to the installation site.



WARNING! Explosion Hazard. If equipment is installed in a hazardous environment, do not perform any work until the area has been confirmed to be safe for such activities or power has been disconnected.



WARNING! Hazardous voltage. Installation and wiring must be performed by qualified and experienced personnel. All wiring must be in accordance with the all local and National Electric Codes. Failure to do so may result in damage to equipment, injury, and/or death.

INSTALLATION

Equipment Ratings

Voltage Rating	Up to 480VAC, 50/60 Hz
Current Rating	30A per circuit
Number of Circuits	Configurable to 48
Ambient Temperature Rating	-4°F to +104°F
Enclosure Rating	UL type 3R, 4, 12 (4X optional)

Refer to **Figure 2-1** below for terminal locations. Each section will have an electrical schematic for specific wiring. **Dashed lines signify customer wiring.**

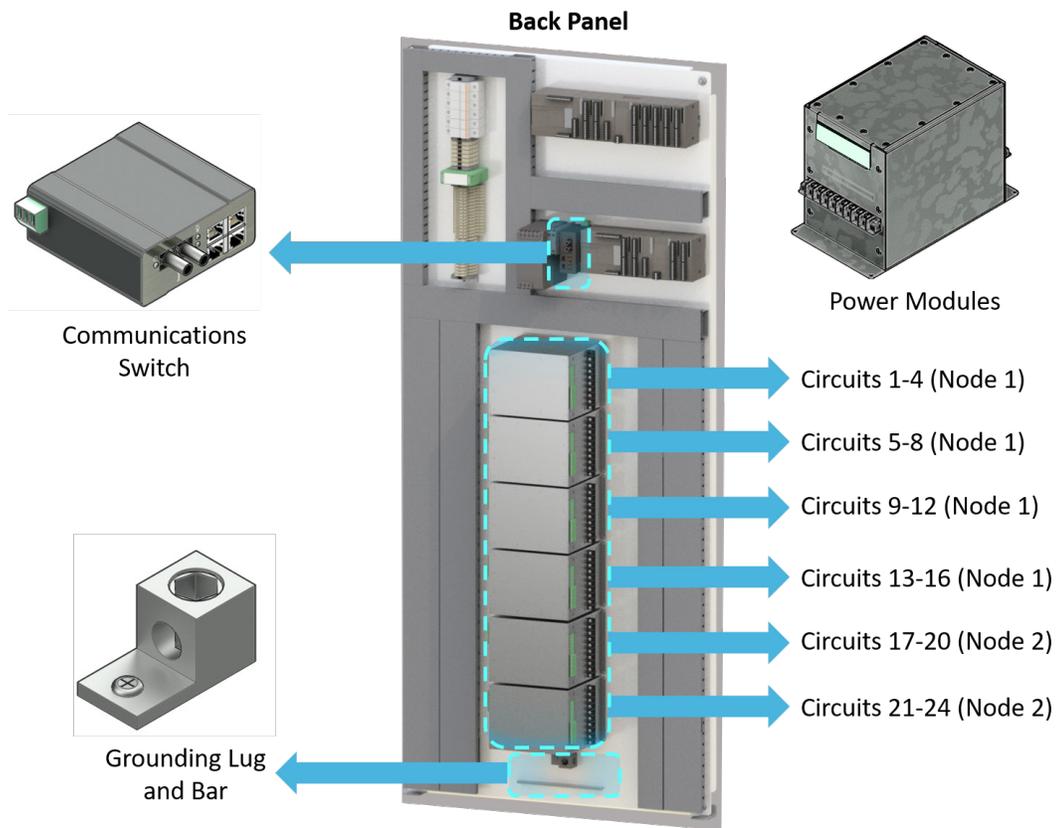
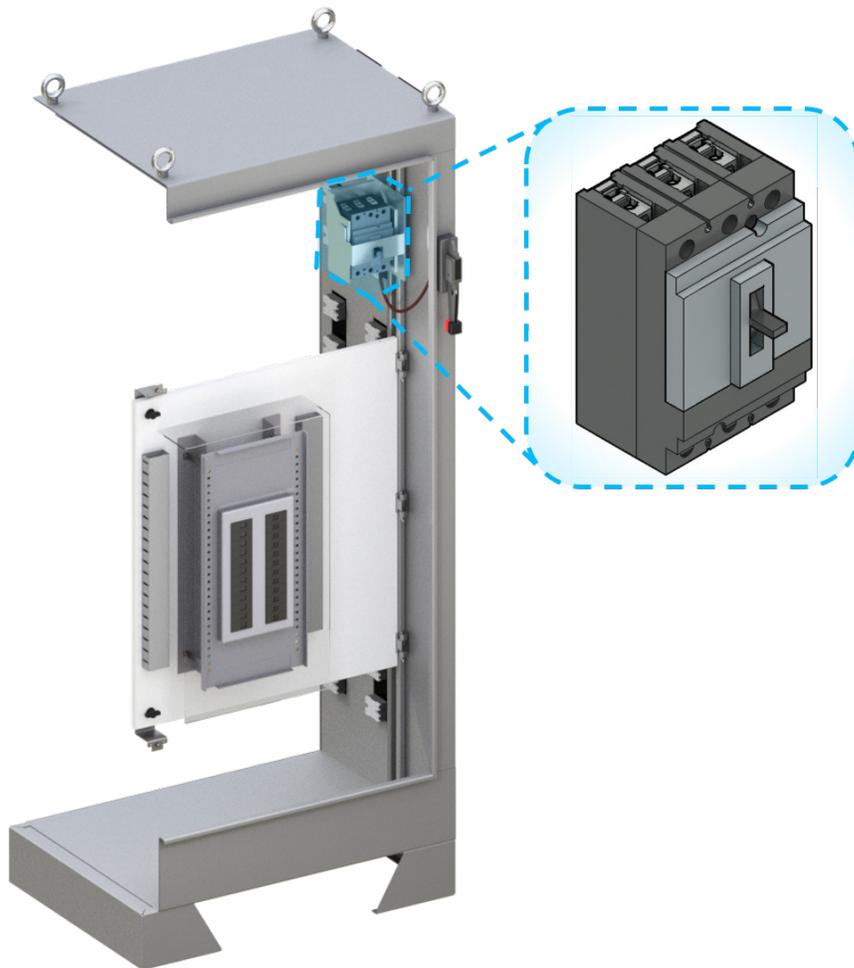


FIGURE 2-1

INSTALLATION

Supply Power Wiring (Figure 2-2)

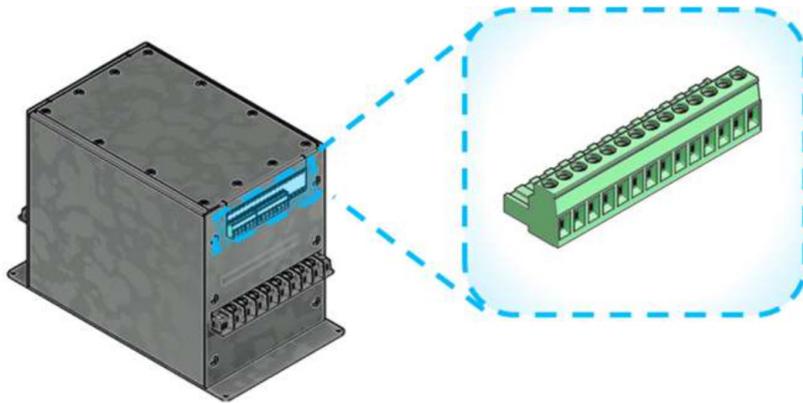
- Torque value 120 lb-in (13.5 Nm) for MCB lugs, neutral distribution bar, and ground lugs.
- Use min 1/0 AWG copper conductors for feeder circuit only. Use 2 AWG min for ground. Minimum 75°C.
- Power Input provided by customer.



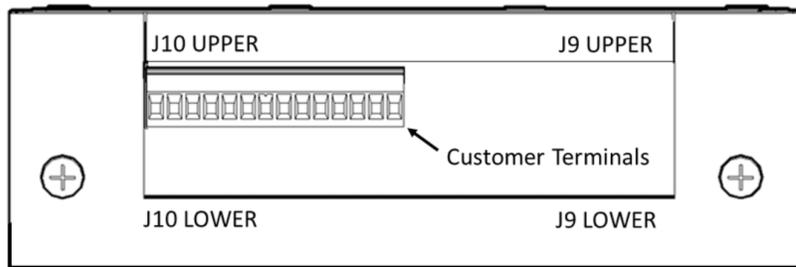
*REFER TO ELECTRICAL SCHEMATIC PROVIDED BY VALIN FOR POWER SUPPLY WIRING, PER CONFIGURED MODEL.

INSTALLATION

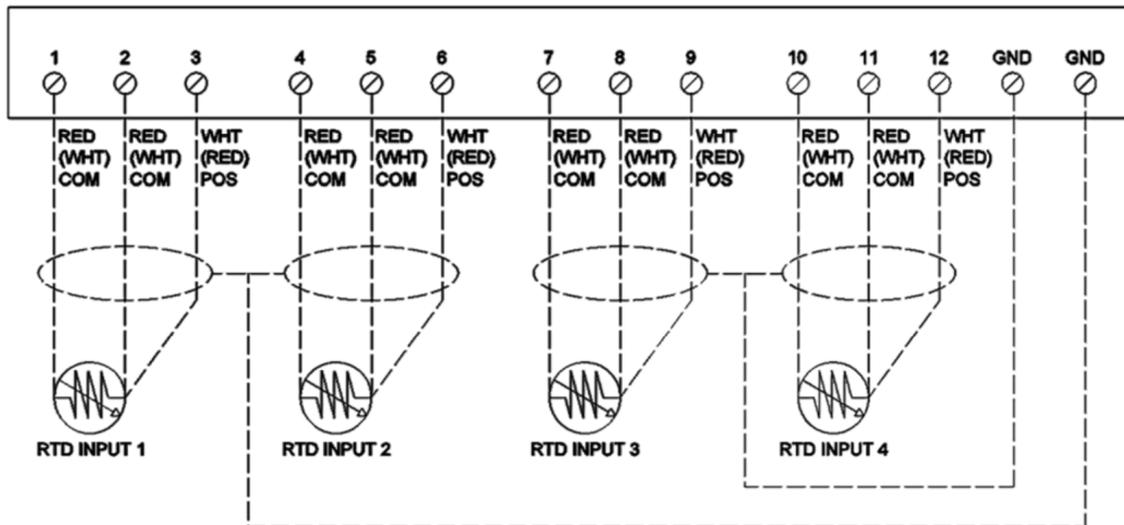
RTD Wiring (Figure 2-3)



- Torque value 4.5 lb-In (0.5 Nm).
- Use copper conductors only, 300V min, 75°C min.
- Wire strip length 7.5mm.
- 30-14 AWG.
- RTD 3 wire, platinum 100 Ω.



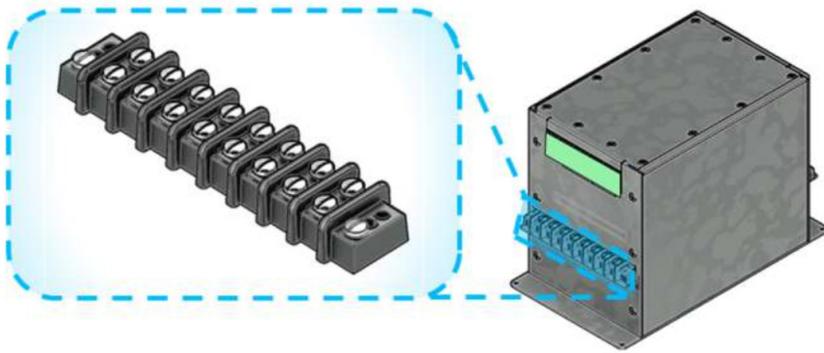
J10 UPPER



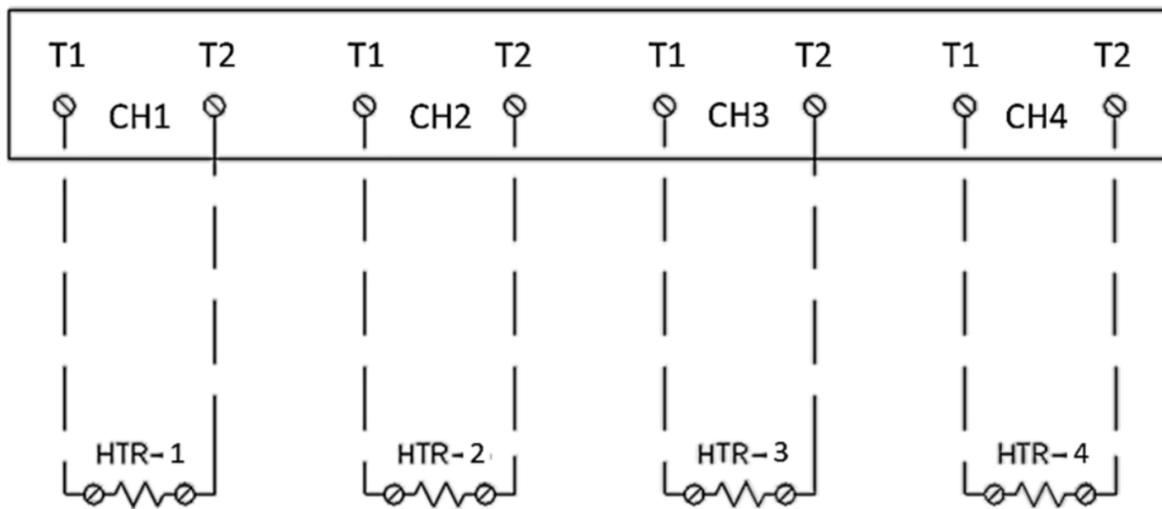
ELECTRICAL SCHEMATIC

INSTALLATION

Load Wiring (Figure 2-4)



- Torque value 16 lb-in (1.8 Nm).
- Use copper conductors only, 300V min, 75°C min.
- 8-22 AWG Cu, per application rating



ELECTRICAL SCHEMATIC

INSTALLATION

Ethernet Communications

- Full IEEE 802.3 Compliance
- Four 10/100BaseTX RJ-45 Ports
- Standard shielded connector RJ-45 female jack, with speed and link activity LED indicators.
- Up to 1.0Gb/s Maximum Throughput

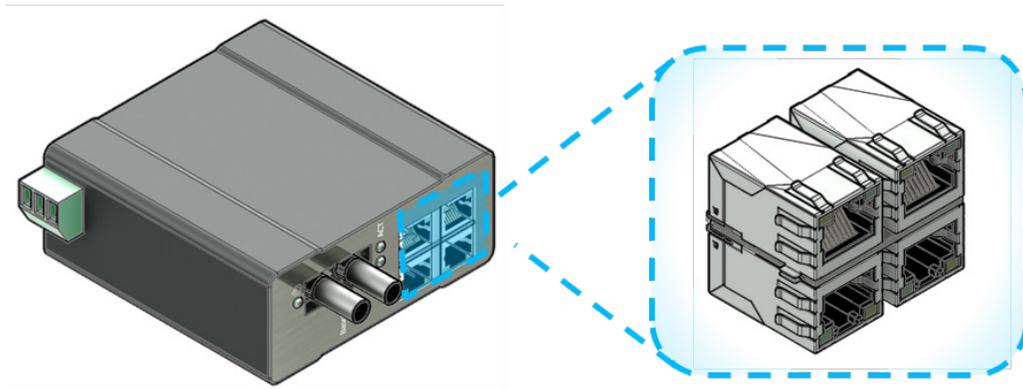


FIG. 2-5

Fiberoptic Communications

Fiber Length	2km*	15km**	40km**	80km**
TX Power Min	-19dBm	-15dBm	-5dBm	-5dBm
RX Sensitivity Max	-31dBm	-31dBm	-34dBm	-34dBm
Wavelength	1310nm	1310nm	1310nm	1550nm

* Multimode Fiber Optic Cable

** Singlemode Fiber Optic Cable

OPERATION

3. OPERATION

Getting Started

Upon powering up, the AccuTrace™ HMI will display a splash screen (Figure 3-1). Once initialization is complete, the Home Screen (Figure 3-2) will appear.

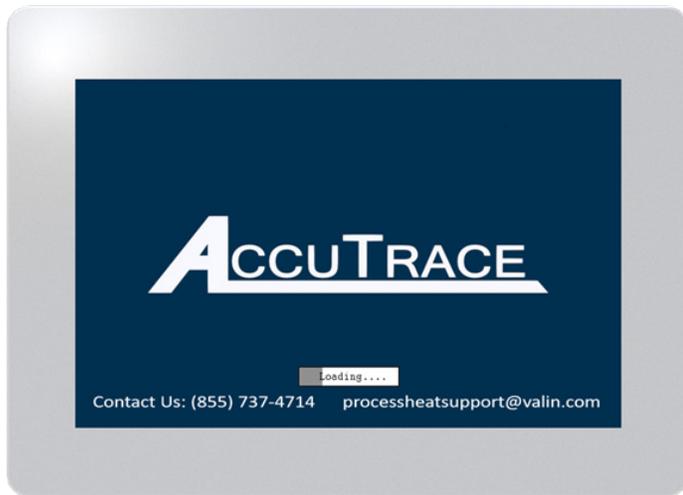


FIG 3-1



FIG 3-2

Security and Logging In

In order to view or edit the parameters, AccuTrace™ requires a log in based on the personnel accessing it. There are 3 levels of access available. Below is a chart describing the security levels. Only the Home Screen may be viewed without logging in.

Security Levels			
Menu	Administrator	Maintenance	Operations
Process Control	Full access	Full access	No access to Setup
Alarms	Full access	Full access	No access to Setup
Date & Time	Full access	Full access	No access
GFEP Test	Full access	Full access	No access
Communications	Full access	No access	No access
Password Settings	Full access	No access	No access

OPERATION

1. To log in, press the “**LOG IN**”  button on the **Home Screen**. This will display the **Password Entry Window**.



FIG. 3-3

2. In the **Password Entry Window**, enter the password required for the security level being accessed.

The default passwords are listed below.

Some menus require a specific security level to access. This level will be listed next to the password entry field.

It is recommended that the administrator changes the passwords upon first start up. Refer to **Password Settings Menu** section on page 28 for instructions.

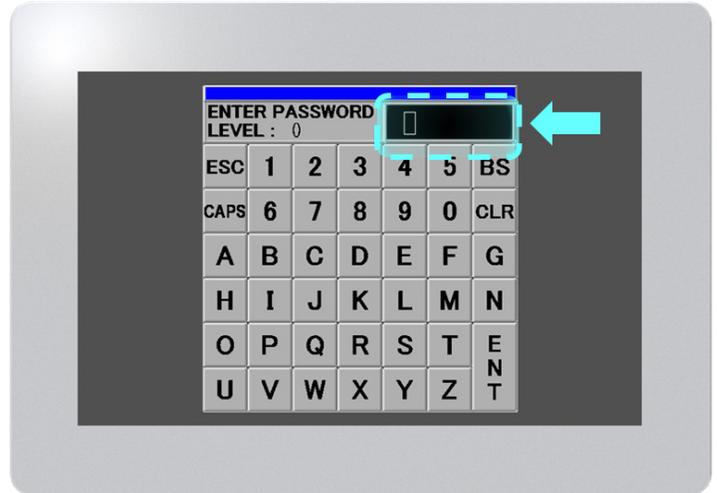


FIG. 3-4

Default Passwords

Administration	Maintenance	Operations
3333	2222	1111

OPERATION

3. Press “**ENT**”  on the keypad after the password has been entered. If login was successful, this will return the user to the **Home Screen**.

If no changes occur and the Password Entry Window remains, incorrect credentials were entered.

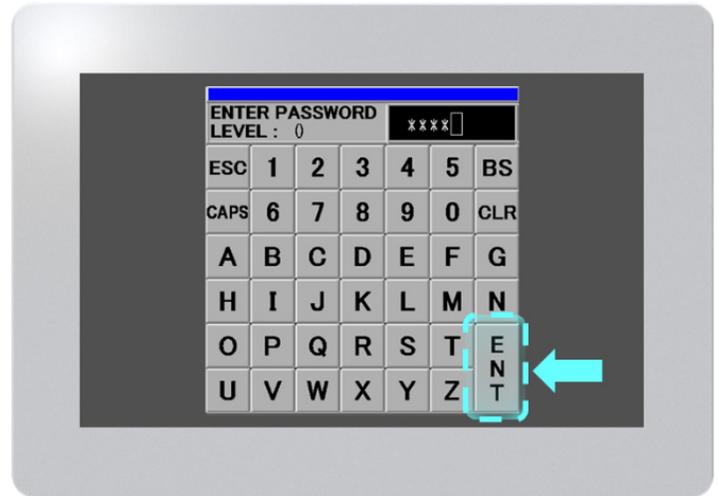


FIG. 3-5

4. To log out, press the “**LOG OUT**”  button in the bottom right corner of the **Home Screen**.

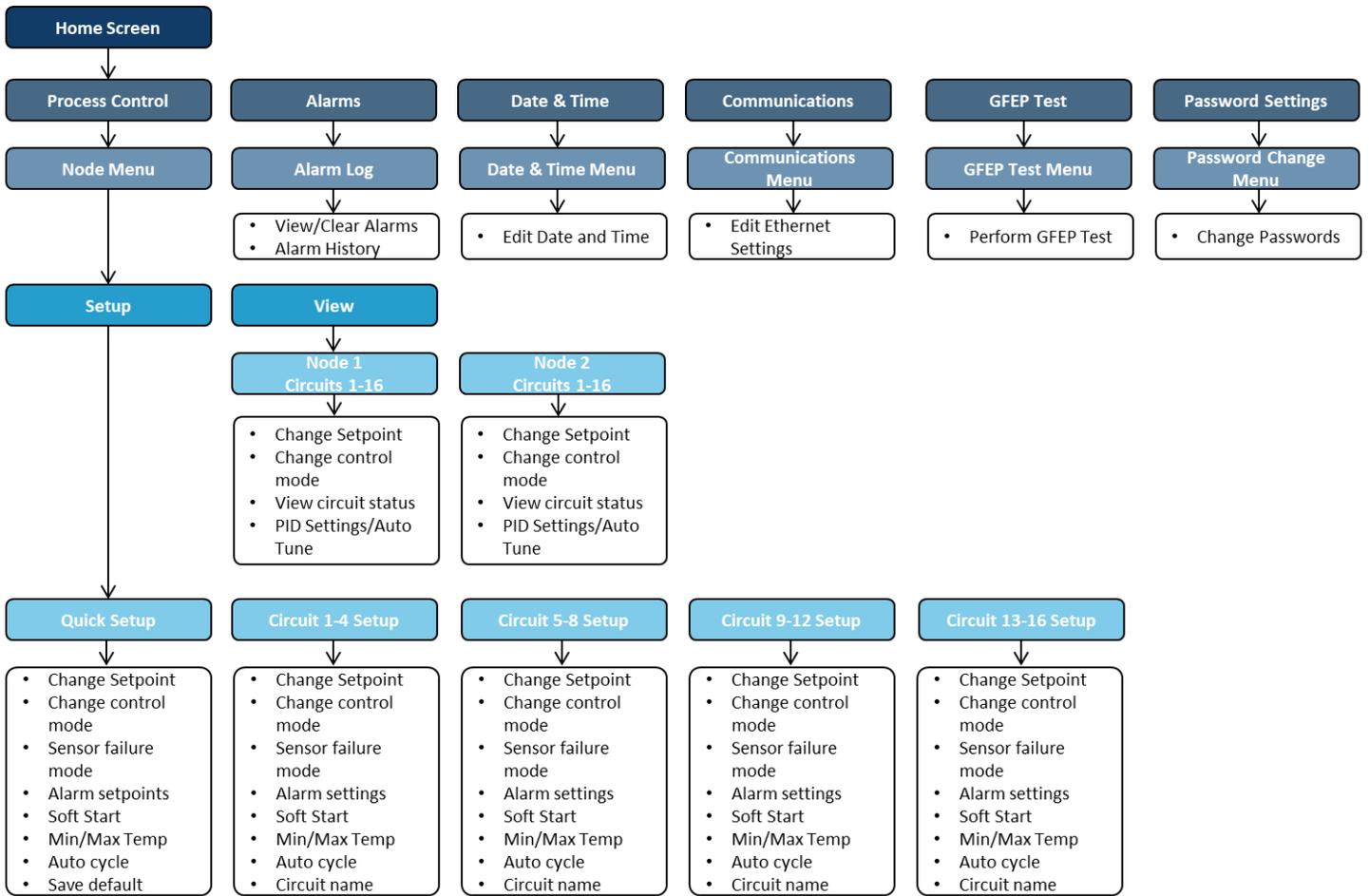
It is strongly recommended to log out after operation on the HMI is complete.



FIG. 3-6

OPERATION

Menu Hierarchy



SET UP

The Home Screen

- **Process Control** - Navigates to the **Node Menu**, where a user with level 1 access can view the circuits within the selected node. Level 1 users may also edit basic settings, such as, temperature setpoint and control method. Level 2 users can access the **Setup Menu** for the selected node, where parameters for alarms and min/max temperatures can be set.
- **Alarms** - Navigates to the **Alarms Log**, where the user may view and reset alarms. Alarm history may also be viewed and cleared here.
- **Date & Time** - User may edit the date and time. This will affect the **Auto Cycle** schedule, if enabled.
- **Communications** - Edit the Ethernet Settings for the AccuTrace™ nodes.
- **GFEP Test** - Performs GFEP circuit testing for configured circuits that are in Auto or Manual control mode.
- **Password Settings** - Enables level 3 users the edit passwords for all user levels.



FIG. 3-7

Node Menu

- **Node Name** - Use up to 20 characters to name available Nodes.
- **Setup** - Brings up Setup Popup.
 - » Configure the number of circuits being used in the selected Node. This is essential for accessing menus and GFEP circuit testing.
 - » Access Quick Setup for easy transfer of basic settings to multiple circuits.
 - » Access Circuit Setup Menus for more detailed settings and the **Alarm Settings Menu**.
- **View** - View the **Circuit Screens**, starting with the circuits within the selected Node.

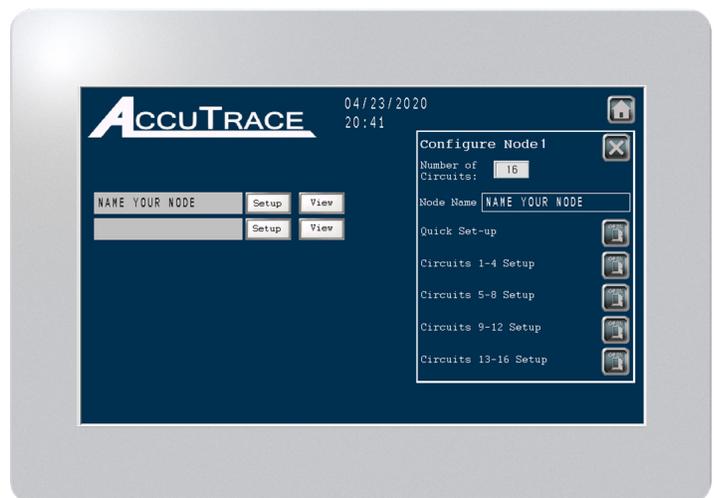


FIG. 3-8

SET UP

Circuit Screen

- **Control Method** - The user may select Auto, Manual, or Off. Auto Control can be set to PID or On/Off in the Setup menu for the circuit. Manual control is based on a user set percentage.
- **Circuit Status** - Status of “Off” or “OK” is displayed for a circuit operating within normal boundaries. When an alarm state is triggered, the status message will display the condition. Review the Alarms section on page 43 for more details.
- **Process Temp**- Displays the process temperature of the circuit displayed.
- **Temp Setpoint**- Upon selecting the entry field, a pop-up window is generated for the user to adjust the temperature setpoint. The range is set by the Temperature Min/Max parameters located in the Setup Menu. From this pop-up the user may also enable PID Auto Tune, if the Auto control method is set to PID.
 - » PID Auto Tune- Enable or cancel PID Auto Tuning.
 - » Proportional Gain- Set proportional gain % value, establishes proportional band hysteresis.
 - » Integration Factor-Set integral factor (seconds), applies integral value to correct error in output curve.
 - » Derivation Factor-Set derivation factor (seconds) stabilizes output curve to minimize over-correction from integral factor.
- **Load (kW)** - Displays the power generated by the circuit.
- **Current (A)** - Displays the current utilized by the circuit
- **Power (%)**- Displays the power output to the circuit.



FIG. 3-9

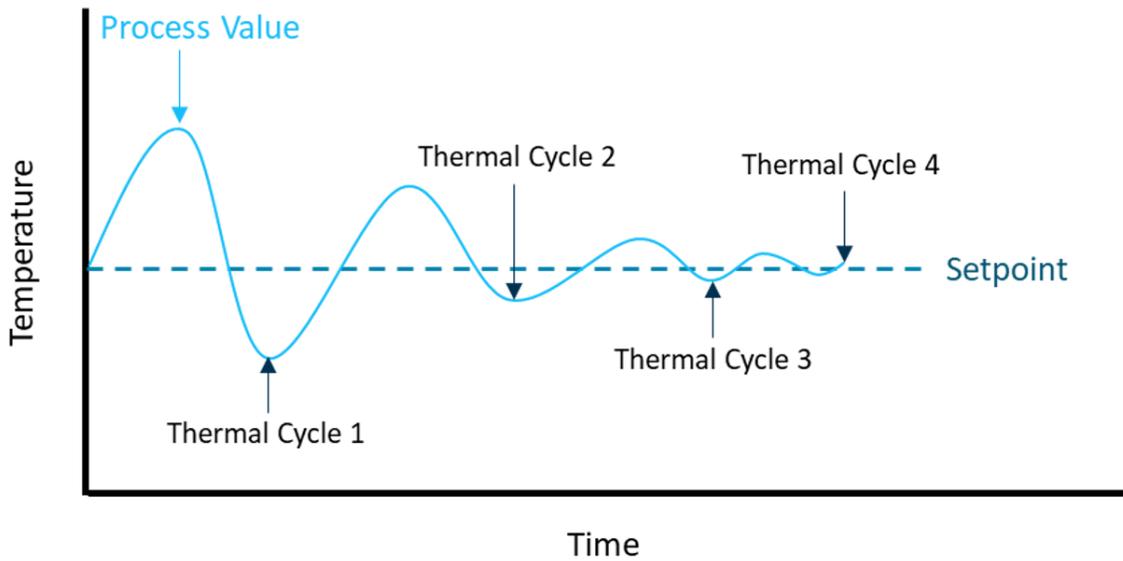
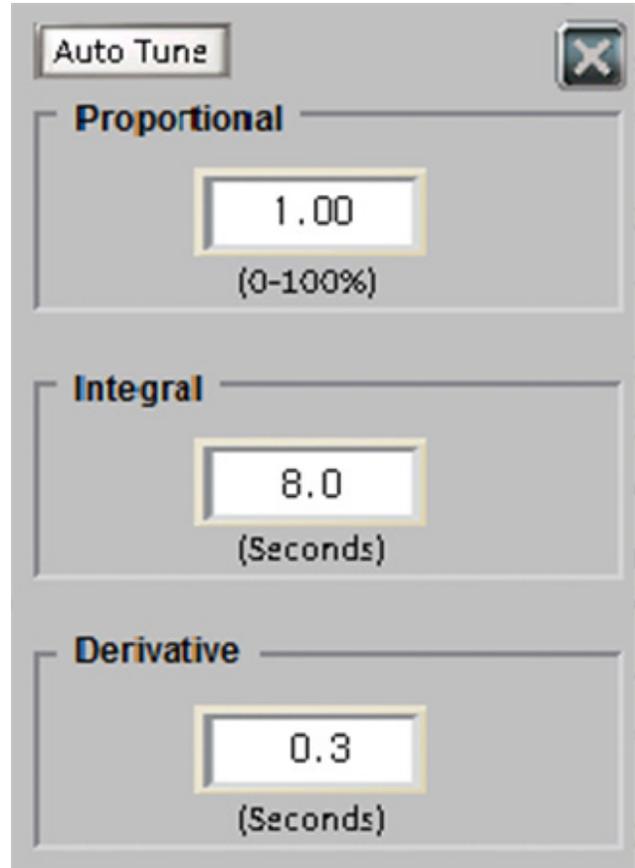
- **Alarms** - Navigates to the Alarm Log.
- **Navigation Arrow** - Cycles to the next set of circuits, user can cycle between configured nodes.
- **Home Button** - Returns to the Home Screen.

SET UP

PID Auto Tune

The PID Auto Tune feature analyzes the temperature curve of your process and sets the ideal PID parameters after four temperature cycles. This takes the guesswork out of establishing efficient PID control.

Auto Tuning lasts the duration of 4 thermal cycles to accurately establish appropriate PID parameters. When tuning is complete, the message **AT Done** will be displayed in the PID pop-up window.



SET UP

Set Up Menu

- **Control Type** - Establish the Auto Control Type, PID or On/Off.
- **Failure Mode** - Set failure mode to turn the circuit Off, keep it On, or go into Manual mode upon sensor failure.
 - » **Failure Mode** If Manual Mode is selected as the sensor failure mode, the last output percentage entered in the Circuit Screen for the specified circuit will be used.
- **Temp Units** - Change the temperature units to Fahrenheit or Celsius.
- **Auto Cycle/Auto Cycle Calendar** - Enable or disable Auto Cycle and set the time it will occur.
 - » **Auto Cycling** – Auto Cycling is used in cases where the circuit output is off for an extended length of time. To check for alarm conditions, the Auto Cycle feature will enable the circuits for the specified duration, according to the set schedule.
- **Soft Start** - Enable or disable soft start for the specified circuit.
 - » **Soft starting** - On start-up, in-rush current levels could exceed the nominal load current particularly with self-regulating cable. To manage this potentially harmful occurrence, AccuTrace™ has been designed with a Soft Start feature. Soft Starting gradually ramps the output to the circuits during start-up, mitigating high-current events.
- **Min Temp Setpoint** - Sets the minimum temperature setpoint for the specified circuit. This will restrict level 1 users from entering a low setpoint temperature.
- **Max Temp Setpoint** - Sets the maximum temperature setpoint for the specified circuit. This will restrict level 1 users from entering a high setpoint temperature.
- **Temp Setpoint** - Sets the temperature setpoint for the specified circuit. The range is restricted by the minimum and maximum temperature setpoints.

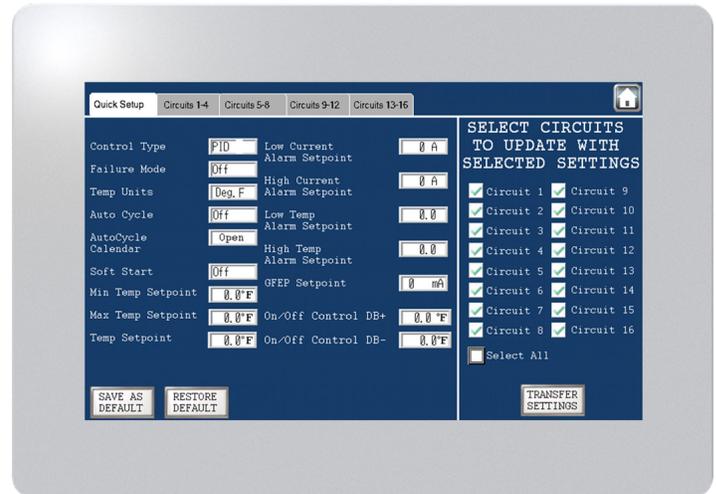


FIG. 3-10

- **Low Current Alarm Setpoint** - Establish setpoint for Low Current Alarm. The value will trigger the Low Current Alarm once the process value is below it.
- **High Current Alarm Setpoint** - Establish setpoint for High Current Alarm. This value will trigger the High Current Alarm once it is exceeded by the process value.
- **Low Temp Alarm Setpoint** - Establish setpoint for Low Temperature Alarm. The value will trigger the Low Temperature Alarm once the process value is below it.
- **High Temp Alarm Setpoint** - Establish setpoint for High Temperature Alarm. This value will trigger the High Temperature Alarm once it is exceeded by the process value.
- **GFEP Setpoint** - Establish setpoint for High GFEP Level Alarm. Range is 20-80mA. This value will trigger the High GFEP Level Alarm once it is exceeded by the process value.

SET UP

- » **Circuit Shutdown** - When GFEP leakage is detected at or above the user level, the circuit will immediately shut off output power until the condition and alarm is cleared. To establish a delay, select “Enabled” and the desired delay time (minutes) in the GFEP window in the Alarm Settings Menu.

- **On/Off Control DB+** - Set the deadband high setpoint. Once the process reaches this setpoint plus this value, the output will turn off, 0% power.
- **On/Off Control DB-** - Set the deadband low setpoint. Once the process reaches the setpoint minus this value, the output will turn on, 100% power.
- **Save as Default** - Uses the currently set parameters as the default settings.
- **Restore Default** - Restores default settings to parameter fields.
- **Transfer Settings** - Select circuits within the node to transfer entered parameter settings to.
- **Circuit Name** - Use up to 20 character to name available circuits. Accessible through circuit setup menu tabs.
- **Home Button** - Returns to the Home Screen.
- **Alarms** - Navigates to the Alarm Log.
- **Navigation Arrow** - Cycles to the next set of circuits, user can cycle between configured nodes.
- **Home Button** - Returns to the Home Screen.

SET UP

Alarm Settings

- **High Temperature Alarm** - When enabled, this alarm occurs when process temperature exceeds High Process Temp Alarm setpoint for a period of time defined in the Alarm Delay field.
- **Low Temperature Alarm** - When enabled, this alarm occurs when process temperature is below Low Process Temp Alarm setpoint for a period of time defined in the Alarm Delay field.
- **High Current Alarm** - Occurs when load current exceeds High Current Alarm setpoint for a period of time defined in the Alarm Delay field.
- **Low Current Alarm** - Occurs when load current is below Low Current Alarm setpoint for a period of time defined in the Alarm Delay field.
- **Output** - When set to Inhibited, the circuit will shut down upon alarm condition for High Temperature alarm or High Current Alarm. When set to Enabled, the circuit will remain on during these alarms.
- **Alarm Reset** - Toggle alarm latching. When set to Manual Reset (latching), the alarm must be reset from the Alarm Log after the process is within parameters. If set to Auto Reset (non-latching), the alarm will clear automatically when alarm condition clears.
- **GFEP Setpoint** - Establish setpoint for High GFEP Level Alarm. Range is 20-80mA. This value will trigger the High GFEP Level Alarm once it is exceeded by the process value.
 - » **Circuit Shutdown** - When GFEP leakage is detected at or above the user level, the circuit will immediately shut off output power until the condition and alarm is cleared. To establish a delay, select "Enabled" and the desired delay time (minutes) in the GFEP window.

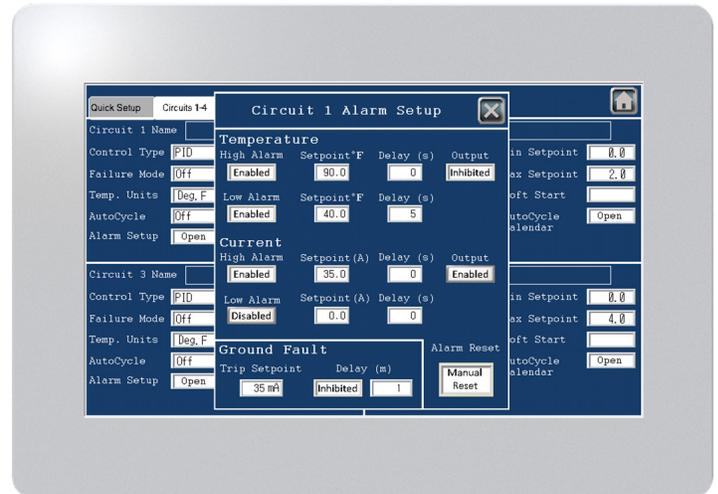


FIG. 3-11

SET UP

GFEP Circuit Test

- The purpose of this testing screen is to determine if any faults exist in the Ground Fault test loop. To detect current leakage in the heat trace line, set the GFEP Alarm setpoint to the mA value appropriate for the application, and enable the circuit by setting the control method to “Auto” or “Manual”.
- **Node** - Select the Node that will be tested for Ground Fault test loop errors.
- **Test** - Enables the test output and displays the results for each circuit within the selected Node.
- **Circuit Results:**

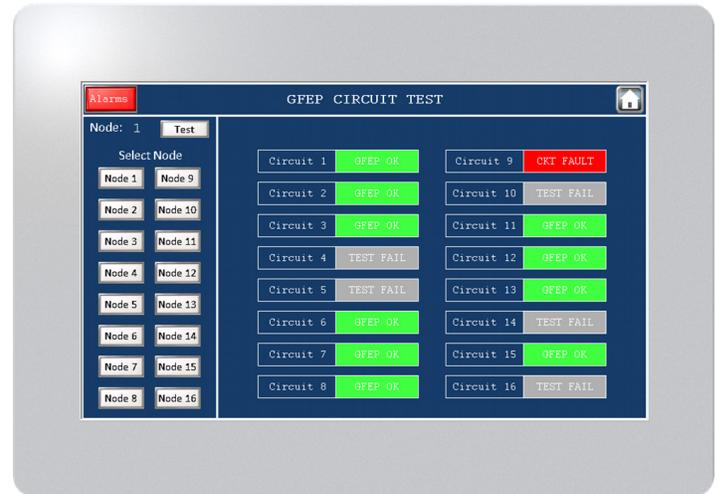


FIG. 3-12

GFEP OK

No faults detected. Ground Fault test loop is receiving proper feedback for GFEP function.

CKT FAULT

Fault detected. Ground Fault test loop is not receiving proper feedback for GFEP function. Contact Valin for further support.

TEST FAIL

Circuit is either in “Off” mode or not configured. Circuit must be enabled to be tested. Configure the number of circuits from the **Node Menu Setup Pop-up, Figure 3-8** to include the circuit to be tested.

SET UP

Password Settings

- **Password** - Navigate to the password level to be edited using the arrow keys. Select “Edit” and use the pop-up keypad for entry. Access to the Password Settings Menu requires level 3 credentials. Default passwords are listed below:

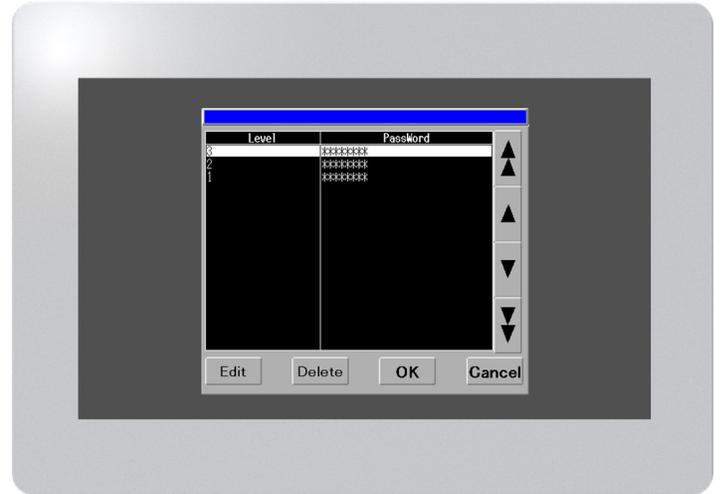


FIG. 3-13

Default Passwords

Administration Level 3	Maintenance Level 2	Operations Level 1
3333	2222	1111

COMMUNICATIONS

4. COMMUNICATIONS

- **Select Node** – Select the Node you wish to edit the ethernet settings on.
- **Node X Settings** - This window displays the current ethernet settings of the selected node. From here, you can select Edit to enter new settings.
- **New Settings** - Once entered, select Apply to establish these settings. Select Cancel to lose changes. Review page 30 for address change instructions.
 - » **IP Address**-Set address to the device. Range: (1-254).(0-255).(0-255).(1-254). Last octet must be unique to avoid IP conflict. Default Settings:
 - ◆ **Node 1: 192.168.1.1**
 - ◆ **Node 2: 192.168.1.2**
 - » **Subnet Mask**-The Subnet mask should be set according to the network configuration. Default Settings: 255.255.255.0. Range: (0-255).(0-255).(0-255).(0-255)
 - » **Default Gateway**-The Default Gateway should be set according to the network configuration. Default Settings: 0.0.0.0 , undefined. Range: (1-254).(0-255).(0-255).(1-254)
 - » **Preferred DNS Server**- The Preferred DNS Server should be set according to the primary choice to handle protocol mapping. Default Settings: 0.0.0.0 , undefined. Range: (1-254).(0-255).(0-255).(1-254)
 - » **Alternate DNS Server**- The Alternate DNS Server should be set according to the secondary choice to handle protocol mapping. If the Preferred DNS Server should time out, the system will attempt the Alternate DNS Server. Default Settings: 0.0.0.0 , undefined. Range: (1-254).(0-255).(0-255).(1-254)
- **Home Button** - Returns to the Home Screen.

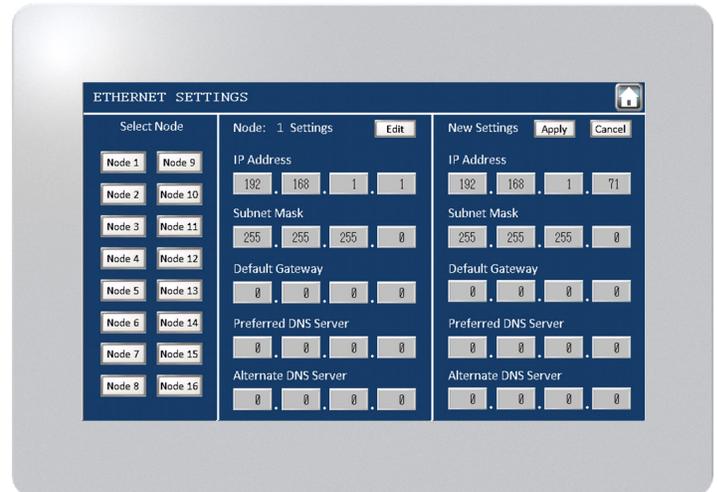


FIG. 4-1

COMMUNICATIONS

Changing Ethernet Settings

- To edit your devices' ethernet settings, select **"Edit"** in the Ethernet Settings Screen. After entering the new settings in the editing window, select **"Apply"** .

Communications between the HMI and the PLC's will not be established until the Device Settings are changed. To do this, Press the **Home Button** to return to the **Home screen**.

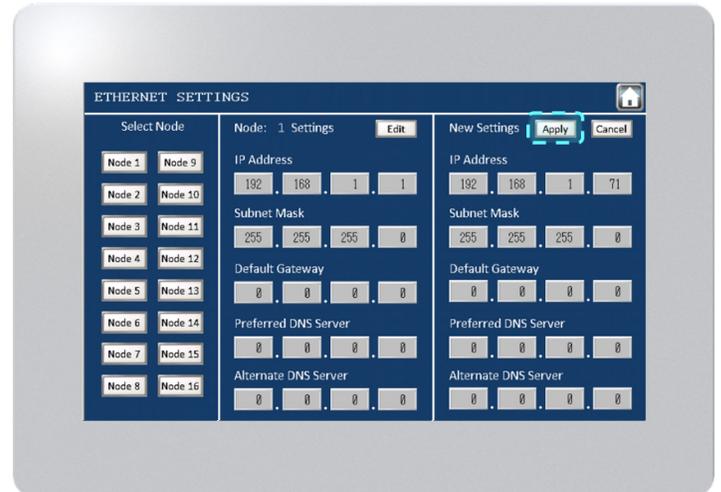


FIG. 4-2 ETHERNET SETTINGS SCREEN

- To edit the **Device Settings** to match the new **Ethernet Settings**, start by resetting the operator interface by pressing the **Reset Switch** located on the **Home Screen** shown in **Figure 4-3**.



FIG. 4-3 RESET SWITCH - CYCLES POWER TO THE OPERATOR INTERFACE

COMMUNICATIONS

3. After resetting, the **Boot Screen (Figure 4-4)** will appear.

After the loading bar is full, the screen will go dark (**Figure 4-5**). Immediately press and hold the upper right-hand corner of the screen.

Immediately after the image on-screen changes, press and hold the bottom left corner of the screen shown below in **Figure 4-6**. Continue pressing the corners until the **Offline Menu** appears.

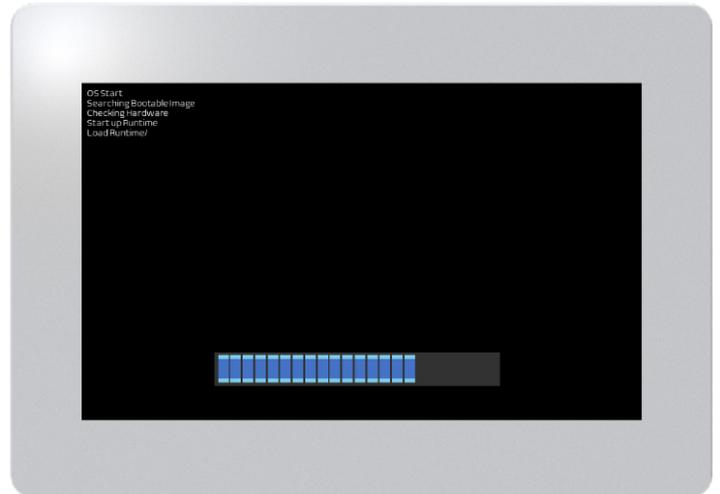
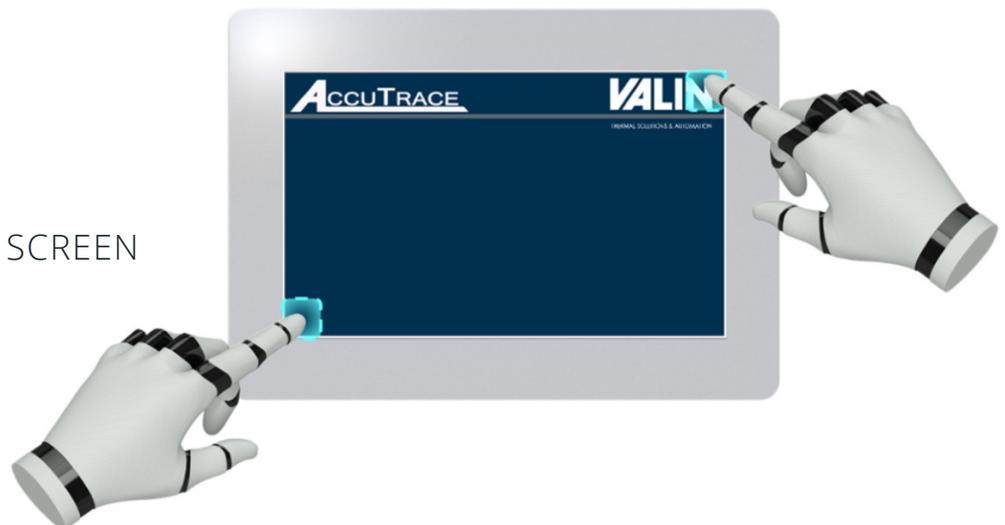


FIGURE 4-4 BOOT SCREEN



FIGURE 4-5 RUNTIME SCREEN

FIGURE 4-6 INITIALIZE SCREEN



COMMUNICATIONS

Changing PLC Ethernet Settings

1. From the Offline Menu screen, select:

Peripheral Settings (Figure 4-7)

Peripheral Settings



Device/PLC Settings (Figure 4-8)

Device/PLC Settings



Modbus-IDA (Figure 4-9)

Modbus-IDA
General Modbus TCP Master
TCP



Device (Figure 4-10)

Device

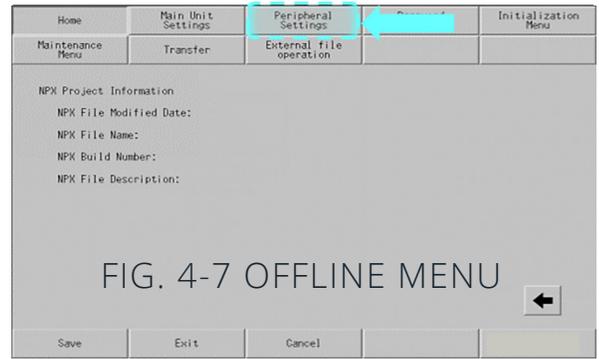


FIG. 4-7 OFFLINE MENU

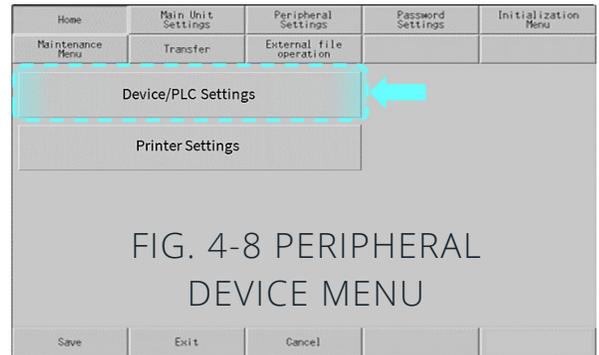


FIG. 4-8 PERIPHERAL DEVICE MENU

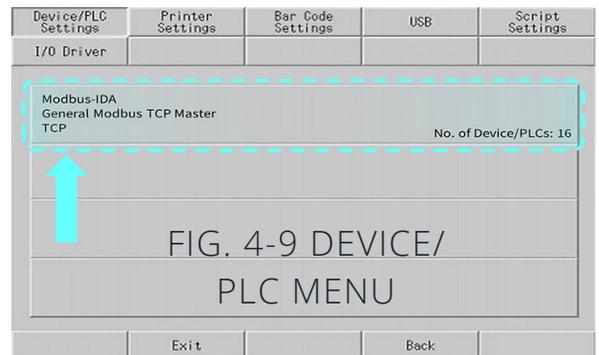


FIG. 4-9 DEVICE/PLC MENU

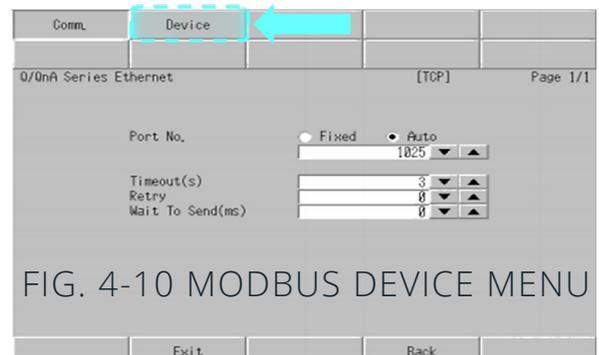


FIG. 4-10 MODBUS DEVICE MENU

COMMUNICATIONS

1. In the **Device Settings Menu**, select the drop-down menu to select the Node that has had the Ethernet Settings changed (**Figure 4-11**).

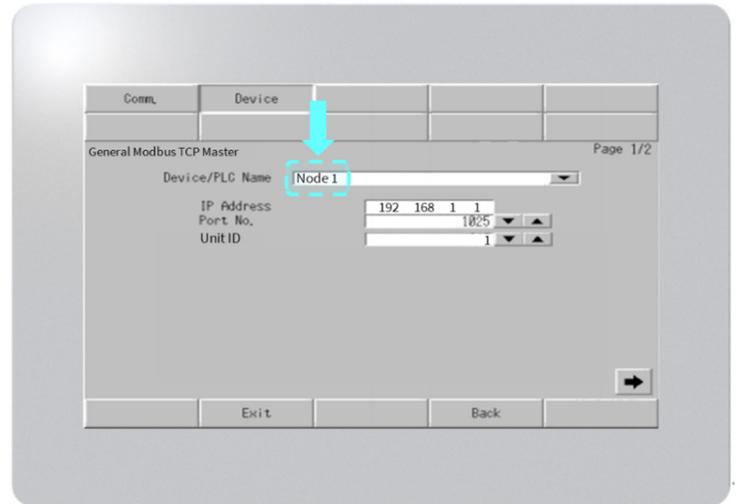


FIGURE 4-11 OFFLINE MENU

Then select the IP address field to enter the same settings established in the **Ethernet Settings Menu**.

(**Figure 4-12**) Press **Exit** and save changes to establish communications between HMI and PLC's. This will bring the user back to the **Boot Screen** to start the system normally. To verify the connection is established, refer to the **Ethernet Settings Menu** for the current settings.

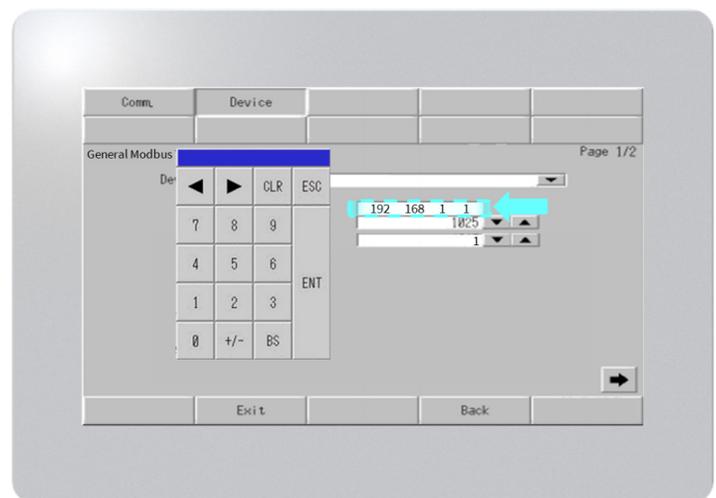


FIGURE 4-12 OFFLINE MENU

COMMUNICATIONS

Changing HMI Ethernet Settings

1. From the **Offline Menu** screen, select **Main Unit Settings:**
(Figure 4-13)

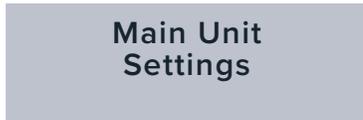


FIGURE 4-13 OFFLINE MENU

2. Select **Ethernet Local Settings**
(Figure 4-14)

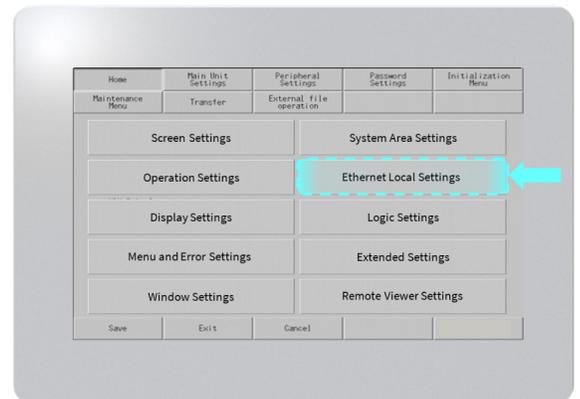


FIGURE 4-14 MAIN UNIT SETTINGS MENU

3. Select the field next to the parameter that is being edited and use the pop-up keypad for entry. Note that the HMI and PLC devices must be on the same network for communications to be establish.

After settings have been edited, press Exit and save changes. This will return the user to the **Boot Screen** to start the system normally.

HMI default IP address: 192.168.1.51. To avoid IP conflict, do not use this address in other devices on the network.

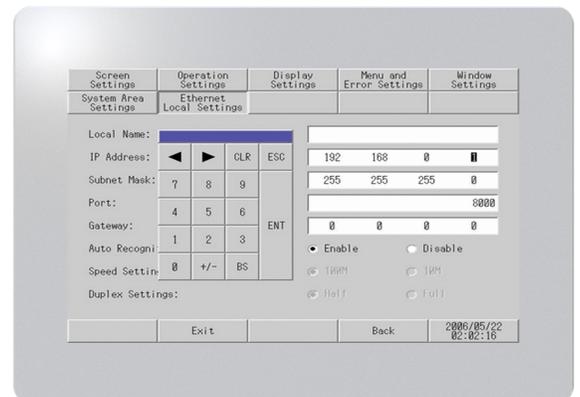


FIGURE 4-15

COMMUNICATIONS

Modbus Registers

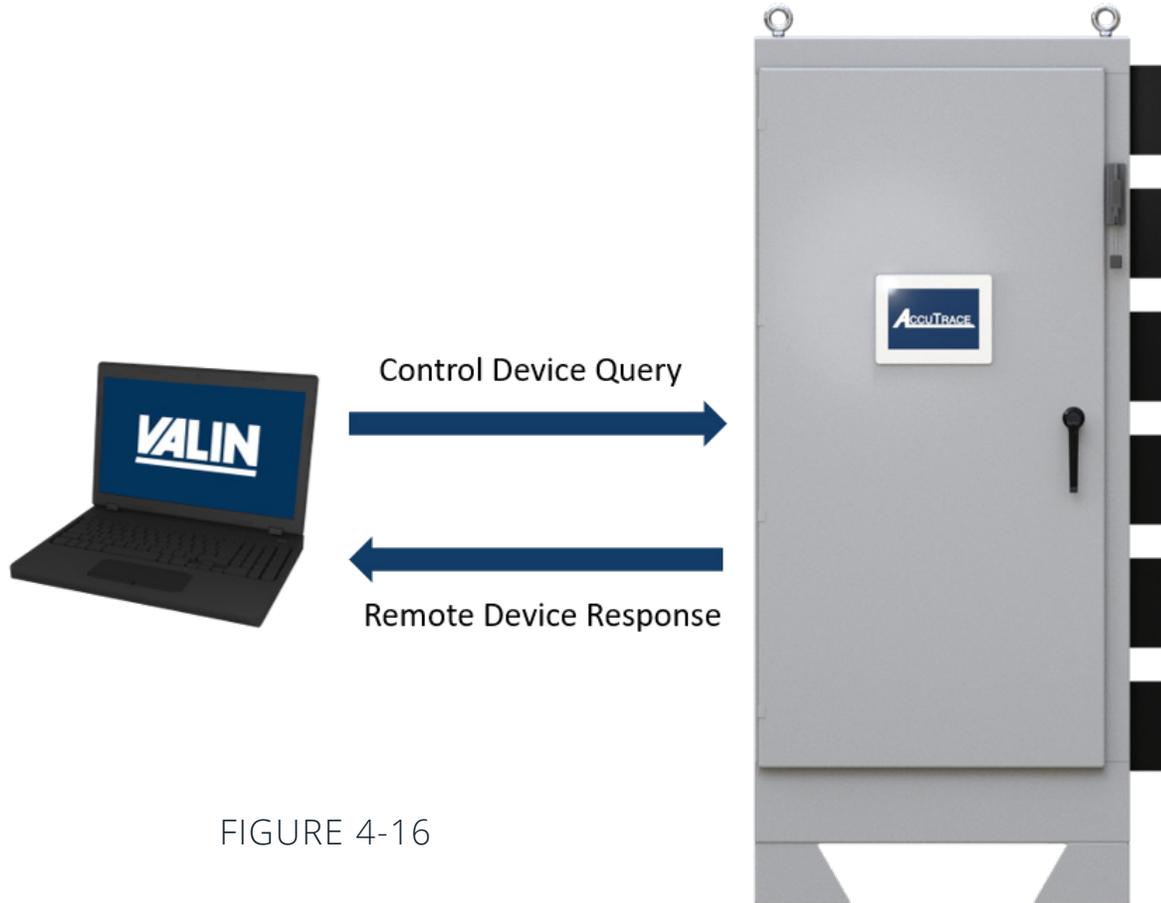


FIGURE 4-16

In Modbus protocol, the control device will send a query to the remote device and read data from its registers (**Figure 4-16**). The Modbus register tables below are grouped by query range. Ensure that the Modbus master device polls only address in the ranges specified below.

Node Information

Node 1	Circuits 1-16	Default IP Address 192.168.1.1
Node 2	Circuits 17-24	Default IP Address 192.168.1.2

COMMUNICATIONS

Node 1
 Node 2
Circuits 1-8 (Node 1) & Circuits 17-24 (Node 2) Boolean Values

PARAMETER NAME	RANGE	MODBUS ADDRESS PER CIRCUIT															
		1	17	2	18	3	19	4	20	5	21	6	22	7	23	8	24
HEATING ON	0= ON 1=OFF	001802		001882		001962		002042		002122		002202		002282		002362	
PID INITIALIZATION	0= ON 1=OFF	001803		001883		001963		002043		002123		002203		002283		002363	
PID CONTROL ACTION	0= ON 1=OFF	001804		001884		001964		002044		002124		002204		002284		002364	
PID AUTO/MAN MODE	0= ON 1=OFF	001805		001885		001965		002045		002125		002205		002285		002365	
PID OUTPUT LIMIT ENABLE	0= ON 1=OFF	001806		001886		001966		002046		002126		002206		002286		002366	
PID ALARM 1 OUTPUT	0= ON 1=OFF	001807		001887		001967		002047		002127		002207		002287		002367	
PID ALARM 2 OUTPUT	0= ON 1=OFF	001808		001888		001968		002048		002128		002208		002288		002368	
CONTROL OUTPUT	0= ON 1=OFF	001809		001889		001969		002049		002129		002209		002289		002369	
AUTO TUNE EXECUTION	0= ON 1=OFF	001810		001890		001970		002050		002130		002210		002290		002370	
AUTO TUNE COMPLETE	0= ON 1=OFF	001811		001891		001971		002051		002131		002211		002291		002371	
ALARM - GFEP TRIP	0= ON 1=OFF	001825		001905		001985		002065		002145		002225		002305		002385	
ALARM - LOW TEMP	0= ON 1=OFF	001826		001906		001986		002066		002146		002226		002306		002386	
ALARM - HIGH TEMP	0= ON 1=OFF	001827		001907		001987		002067		002147		002227		002307		002387	
ALARM -LOW CURRENT	0= ON 1=OFF	001828		001908		001988		002068		002148		002228		002308		002388	
ALARM -HIGH CURRENT	0= ON 1=OFF	001829		001909		001989		002069		002149		002229		002309		002389	
ALARM -TEMP SENSOR FAULT	0= ON 1=OFF	001830		001910		001990		002070		002150		002230		002310		002390	
ALARM -CURRENT SENSOR FAULT	0= ON 1=OFF	001831		001911		001991		002071		002151		002231		002311		002391	
ALARM - GFEP CIRCUIT FAULT	0= ON 1=OFF	001832		001912		001992		002072		002152		002232		002312		002392	
CIRCUIT_OK	0= ON 1=OFF	001833		001913		001993		002073		002153		002233		002313		002393	
CIRCUIT_OFF	0= ON 1=OFF	001834		001914		001994		002074		002154		002234		002314		002394	
CIRCUIT ON/OFF ENABLE	0= ON 1=OFF	001835		001915		001995		002075		002155		002235		002315		002395	
HI_TEMP_SHUTDOWN	0= ON 1=OFF	001837		001917		001997		002077		002157		002237		002317		002397	
HI_AMP_SHUTDOWN	0= ON 1=OFF	001838		001918		001998		002078		002158		002238		002318		002398	
ALARM_LATCHING SELECTED	0= ON 1=OFF	001839		001919		001999		002079		002159		002239		002319		002399	
CIRCUIT IN HAND MODE	0= ON 1=OFF	001840		001920		002000		002080		002160		002240		002320		002400	
OUTPUT_OFF_CKT(2-24)	0= ON 1=OFF	N/A		001921		002001		002081		002161		002241		002321		002401	
HI TEMP ALARM ENABLED	0= ON 1=OFF	001842		001922		002002		002082		002162		002242		002322		002402	
LO TEMP ALARM ENABLED	0= ON 1=OFF	001843		001923		002003		002083		002163		002243		002323		002403	
HI AMP ALARM ENABLED	0= ON 1=OFF	001844		001924		002004		002084		002164		002244		002324		002404	
LO AMP ALARM ENABLED	0= ON 1=OFF	001845		001925		002005		002085		002165		002245		002325		002405	

COMMUNICATIONS

Node 1
 Node 2
Circuits 1-8 (Node 1) & Circuits 17-24 (Node 2) Integer Values

PARAMETER NAME	RANGE	MODBUS ADDRESS PER CIRCUIT															
		1	17	2	18	3	19	4	20	5	21	6	22	7	23	8	24
CURRENT (A)	0-40.0 A	401028	401128	401228	401328	401428	401528	401628	401728								
ON/OFF CONTROL DEADBAND +	0-500.0 F/C	401035	401135	401235	401335	401435	401535	401635	401735								
ON/OFF CONTROL DEADBAND -	-500.0-0 F/C	401036	401136	401236	401336	401436	401536	401636	401736								
AUTO CYCLE START HOUR	0-23	401039	401139	401239	401339	401439	401539	401639	401739								
AUTO CYCLE START MINUTE	0-59	401040	401140	401240	401340	401440	401540	401640	401740								
AUTO CYCLE STOP HOUR	0-23	401041	401141	401241	401341	401441	401541	401641	401741								
AUTO CYCLE STOP MINUTE	0-59	401042	401142	401242	401342	401442	401542	401642	401742								
AUTO CYCLE DAY	SUNDAY- SATURDAY	401043	401143	401243	401343	401443	401543	401643	401743								
OUTPUT PERCENTAGE	0-100%	401050	401050	401250	401350	401450	401550	401650	401750								
PROCESS TEMPERATURE	-999.9 F/C - 999.9 F/C	401051	401151	401251	401351	401451	401551	401651	401751								
TEMPERATURE SET POINT	0-500.0 F/C	401058	401158	401258	401358	401458	401558	401658	401758								
PROPORTIONAL BAND	0-999.99	401059	401159	401259	401359	401459	401559	401659	401759								
INTEGRAL TIME	0-65535.0 SEC	401060	401160	401260	401360	401460	401560	401660	401760								
DERIVATIVE TIME	0-65535.0 SEC	401061	401161	401261	401361	401461	401561	401661	401761								
MANUAL MODE OUTPUT %	0-100%	401068	401168	401268	401368	401468	401568	401668	401768								
GFEP ALARM DELAY	0-1000 MIN	401091	401191	401291	401391	401491	401591	401691	401791								
HIGH TEMP ALARM DELAY	0-9999 SEC	401093	401193	401293	401393	401493	401593	401693	401793								
LOW TEMP ALARM DELAY	0-9999 SEC	401094	401194	401294	401394	401494	401594	401694	401794								
HIGH CURRENT ALARM DELAY	0-9999 SEC	401095	401195	401295	401395	401495	401595	401695	401795								
LOW CURRENT ALARM DELAY	0-9999 SEC	401096	401196	401296	401396	401496	401596	401696	401796								

COMMUNICATIONS

Circuits 9-16 Boolean Values

PARAMETER NAME	RANGE	MODBUS ADDRESS PER CIRCUIT							
		9	10	11	12	13	14	15	16
CURRENT (A)	0-40.0 A	002442	002522	002602	002682	002762	002842	002922	003002
ON/OFF CONTROL DEADBAND +	0-500.0 F/C	002443	002523	002603	002683	002763	002843	002923	003003
ON/OFF CONTROL DEADBAND -	-500.0-0 F/C	002444	002524	002604	002684	002764	002844	002924	003004
AUTO CYCLE START HOUR	0-23	002445	002525	002605	002685	002765	002845	002925	003005
AUTO CYCLE START MINUTE	0-59	002446	002526	002606	002686	002766	002846	002926	003006
AUTO CYCLE STOP HOUR	0-23	002447	002527	002607	002687	002767	002847	002927	003007
AUTO CYCLE STOP MINUTE	0-59	002448	002528	002608	002688	002768	002848	002928	003008
AUTO CYCLE DAY	SUNDAY- SATURDAY	002449	002529	002609	002689	002769	002849	002929	003009
OUTPUT PERCENTAGE	0-100%	002450	002530	002610	002690	002770	002850	002930	003010
PROCESS TEMPERATURE	-999.9 F/C -999.9 F/C	002451	002531	002611	002691	002771	002851	002931	003011
TEMPERATURE SET POINT	0-500.0 F/C	002465	002545	002625	002705	002785	002865	002945	003025
PROPORTIONAL BAND	0-999.99	002466	002546	002626	002706	002786	002866	002946	003026
INTEGRAL TIME	0-65535.0 SEC	002467	002547	002627	002707	002787	002867	002947	003027
DERIVATIVE TIME	0-65535.0 SEC	002468	002548	002628	002708	002788	002868	002948	003028
MANUAL MODE OUTPUT %	0-100%	002469	002549	002629	002709	002789	002869	002949	003029
GFEP ALARM DELAY	0-1000 MIN	002470	002550	002630	002710	002790	002870	002950	003030
HIGH TEMP ALARM DELAY	0-9999 SEC	002471	002551	002631	002711	002791	002871	002951	003031
LOW TEMP ALARM DELAY	0-9999 SEC	002472	002552	002632	002712	002792	002872	002952	003032
HIGH CURRENT ALARM DELAY	0-9999 SEC	002473	002553	002633	002713	002793	002873	002953	003033
LOW CURRENT ALARM DELAY	0-9999 SEC	002474	002554	002634	002714	002794	002874	002954	003034
CIRCUIT ON/OFF ENABLE	0= ON 1=OFF	002475	002555	002635	002715	002795	002875	002955	003035
HI_TEMP_SHUTDOWN	0= ON 1=OFF	002477	002557	002637	002717	002797	002877	002957	003037
HI_AMP_SHUTDOWN	0= ON 1=OFF	002478	002558	002638	002718	002798	002878	002958	003038
ALARM_LATCHING_SELECTED	0= ON 1=OFF	002479	002559	002639	002719	002799	002879	002959	003039
CIRCUIT IN HAND MODE	0= ON 1=OFF	002480	002560	002640	002720	002800	002880	002960	003040
OUTPUT_OFF_CKT(2-24)	0= ON 1=OFF	002481	002561	002641	002721	002801	002881	002961	003041
HI TEMP ALARM ENABLED	0= ON 1=OFF	002482	002562	002642	002722	002802	002882	002962	003042
LO TEMP ALARM ENABLED	0= ON 1=OFF	002483	002563	002643	002723	002803	002883	002963	003043
HI AMP ALARM ENABLED	0= ON 1=OFF	002484	002564	002644	002724	002804	002884	002964	003044
LO AMP ALARM ENABLED	0= ON 1=OFF	002485	002565	002645	002725	002805	002885	002965	003045

COMMUNICATIONS

Circuits 9-16 Integer Values

PARAMETER NAME	RANGE	MODBUS ADDRESS PER CIRCUIT							
		9	10	11	12	13	14	15	16
CIRCUIT NAME	20 CHARACTERS	401801	401901	402001	402101	402201	402301	402401	402501
		401802	401902	402002	402102	402202	402302	402402	402502
		401803	401903	402003	402103	402203	402303	402403	402503
		401804	401904	402004	402104	402204	402304	402404	402504
		401805	401905	402005	402105	402205	402305	402405	402505
		401806	401906	402006	402106	402206	402306	402406	402506
		401807	401907	402007	402107	402207	402307	402407	402507
		401808	401908	402008	402108	402208	402308	402408	402508
		401809	401909	402009	402109	402209	402309	402409	402509
		401810	401910	402010	402110	402210	402310	402410	402510
HOA	0= OFF 1=HAND 2= AUTO	401811	401911	402011	402111	402211	402311	402411	402511
SOFTSTART	0 = OFF 1 = ON	401813	401913	402013	402113	402213	402313	402413	402513
TEMP UNITS	0= DEGF 1=DEGC	401815	401915	402015	402115	402215	402315	402415	402515
GFEP SETPOINT	20-80MA	401816	401916	402016	402116	402216	402316	402416	402516
LOW TEMP ALARM SETPOINT	0-999.9 F/C	401817	401917	402017	402117	402217	402317	402417	402517
HIGH TEMP ALARM SETPOINT	0-999.9 F/C	401818	401918	402018	402118	402218	402318	402418	402518
LOW CURRENT ALARM SETPOINT	0-999.9 A	401819	401919	402019	402119	402219	402319	402419	402519
HIGH CURRENT ALARM SETPOINT	0-999.9 A	401820	401920	402020	402120	402220	402320	402420	402520
FAIL MODE	0= OFF 1= ON 2= MAN	401821	401921	402021	402121	402221	402321	402421	402521
AUTO CYCLE	0 = OFF 1 = ON	401822	401922	402022	402122	402222	402322	402422	402522
ALARM WORD	1= GFEP 2= LOW TEMP 3=HIGH TEMP 4= LOW CURRENT 5= HIGH CURRENT 6= SENSOR FAULT	401824	401924	402024	402124	402224	402324	402424	402524
TEMP MIN SETPOINT	0-500.0 F/C	401825	401925	402025	402125	402225	402325	402425	402525
TEMP MAX SETPOINT	0-500.0 F/C	401826	401926	402026	402126	402226	402326	402426	402526
POWER (KW)	0-65.535 KW	401827	401927	402027	402127	402227	402327	402427	402527
CURRENT (A)	0-40.0 A	401828	401928	402028	402128	402228	402328	402428	402528

COMMUNICATIONS

Circuits 9-16 Integer Values

PARAMETER NAME	RANGE	MODBUS ADDRESS PER CIRCUIT							
		9	10	11	12	13	14	15	16
ON/OFF CONTROL DEADBAND +	0-500.0 F/C	401835	401935	402035	402135	402235	402335	402435	402535
ON/OFF CONTROL DEADBAND -	-500.0-0 F/C	401836	401936	402036	402136	402236	402336	402436	402536
AUTO CYCLE START HOUR	0-23	401839	401939	402039	402139	402239	402339	402439	402539
AUTO CYCLE START MINUTE	0-59	401840	401940	402040	402140	402240	402340	402440	402540
AUTO CYCLE STOP HOUR	0-23	401841	401941	402041	402141	402241	402341	402441	402541
AUTO CYCLE STOP MINUTE	0-59	401842	401942	402042	402142	402242	402342	402442	402542
AUTO CYCLE DAY	SUNDAY- SATURDAY	401843	401943	402043	402143	402243	402343	402443	402543
OUTPUT PERCENTAGE	0-100%	401850	401950	402050	402150	402250	402350	402450	402550
PROCESS TEMPERATURE	-999.9 F/C - 999.9 F/C	401851	401951	402051	402151	402251	402351	402451	402551
TEMPERATURE SET POINT	0-500.0 F/C	401858	401958	402058	402158	402258	402358	402458	402558
PROPORTIONAL BAND	0-999.99	401859	401959	402059	402159	402259	402359	402459	402559
INTEGRAL TIME	0-65535.0 SEC	401860	401960	402060	402160	402260	402360	402460	402560
DERIVATIVE TIME	0-65535.0 SEC	401861	401961	402061	402161	402261	402361	402461	402561
MANUAL MODE OUTPUT %	0-100%	401868	401968	402068	402168	402268	402368	402468	402568
GFEP ALARM DELAY	0-1000 MIN	401891	401991	402091	402191	402291	402391	402491	402591
HIGH TEMP ALARM DELAY	0-9999 SEC	401893	401993	402093	402193	402293	402393	402493	402593
LOW TEMP ALARM DELAY	0-9999 SEC	401894	401994	402094	402194	402294	402394	402494	402594
HIGH CURRENT ALARM DELAY	0-9999 SEC	401895	401995	402095	402195	402295	402395	402495	402595
LOW CURRENT ALARM DELAY	0-9999 SEC	401896	401996	402096	402196	402296	402396	402496	402596

ALARMS

5. ALARMS

Alarm Annunciation

In order to clear alarm messages, you must be logged into the system and the alarm condition must be cleared. If alarms are set to **“Auto Reset”**, as described in **Figure 3-11** on page 26, the alarm will automatically clear when the trigger condition is resolved. When an alarm is triggered the **Circuit Screen** will display an alarm message in the circuit window it pertains to, shown in **Figure 5-1** below. In configurations with the General Alarm option, the panel mount buzzer will sound during an active alarm **Figure 5-2**. The buzzer can be silenced by turning off the affected circuit(s) or clearing active alarm(s).

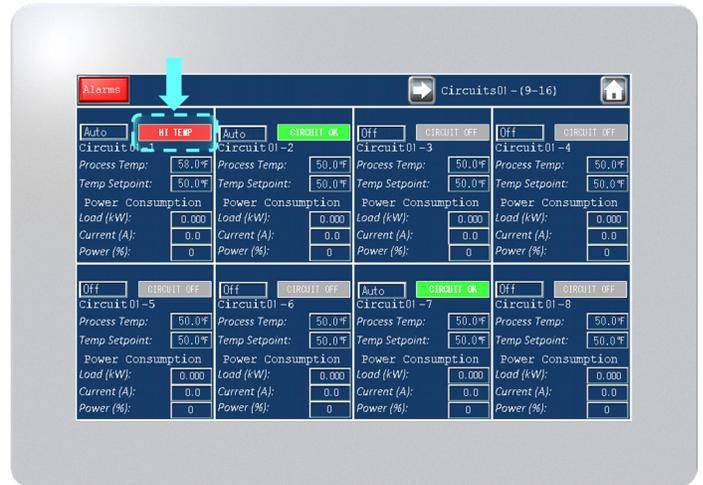


FIGURE 5-1



FIGURE 5-2
GENERAL ALARM BUZZER

Clearing Alarms

To clear an alarm, select the **“Alarms”** button shown in **Figure 5-3** to navigate to the **Alarms Log**.



FIGURE 5-3

ALARMS

The activated alarm will be highlighted as shown in **Figure 5-4**. The time and date it occurred and the circuit and node it pertains to will be displayed.

Select it on the screen and press the **“ALARM ACKNOWLEDGE”** button. If the alarm is set to latching, the process condition must be within set parameters or acceptable range before the alarm status will be cleared.



FIGURE 5-4

The history for the cleared alarm will be displayed. Press **“Clear Alarm Log”** to remove the history from the log.

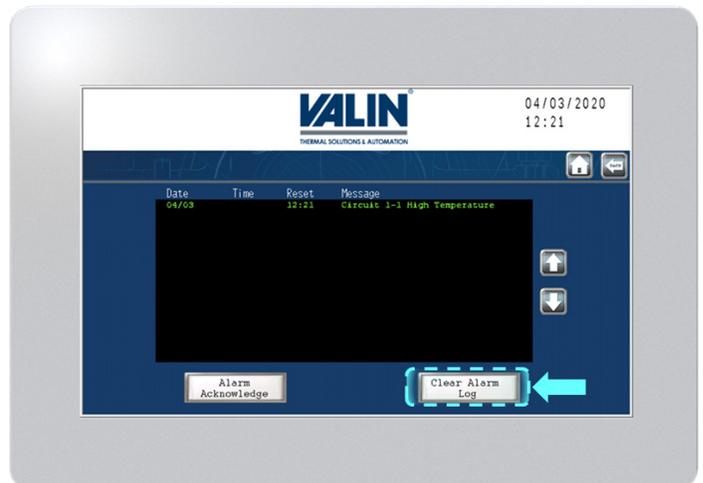


FIGURE 5-5

ALARMS

Active Alarm	Explanation	Solution
High Current Alarm 	Active when amperage value is above High Current Level Alarm setpoint value.	<ul style="list-style-type: none"> Establish correct High Current Level Alarm setpoint. Refer to heat trace cable manufacturer maximum current. Enable Soft Start for cases of in-rush current. This can be identified by repeated alarms at start up. Increase High Current Level Alarm delay time.
Low Current Alarm 	Active when amperage value is below Low Current Level Alarm setpoint value.	<ul style="list-style-type: none"> Establish correct Low Current Level Alarm setpoint. Refer to heat trace cable manufacturer maximum current. Examine heat trace cable for signs of damage. Low current can be indicative of heater failure. Examine heat trace cable connections for damage or improper installation.
High Temp Alarm 	Active when process temperature value is above High Temperature Level Alarm setpoint value.	<ul style="list-style-type: none"> Establish correct High Temperature Level Alarm setpoint. If in PID Control Mode: Adjust PID settings. If in Manual Control Mode: Adjust power output. If in On/Off Control Mode: Adjust deadband hysteresis. Examine process for alternate causes of high temperature. Disable the circuit affected. If the SSR Alarm is active after doing this, the SSR has failed closed. Contact factory.
Low Temp Alarm 	Active when process temperature value is below Low Temperature Level Alarm setpoint value.	<ul style="list-style-type: none"> Establish correct Low Temperature Level Alarm setpoint. If in PID Control Mode: Adjust PID settings. If in Manual Control Mode: Adjust power output. If in On/Off Control Mode: Adjust deadband hysteresis. Examine heat trace cable and connections Examine process for alternate causes of low temperature. Consider insulation to minimize heat losses.
GFEP Trip Alarm 	Active when GFEP detects current leakage during testing or when above High GFEP Level Alarm setpoint.	<ul style="list-style-type: none"> Establish correct High GFEP Level Alarm setpoint. Examine cable connections and verify it is receiving power. Examine heat trace cable for signs of damage. Disconnect heat trace from panel and perform megohm testing.
RTD Error Alarm 	Active when RTD sensor input signal has failed.	<ul style="list-style-type: none"> Examine RTD for signs of damage. If necessary, replace sensor. Examine RTD connections for damage, loose connections, or improper installation.
Current Sensor Fail Alarm 	Active when current sensor has failed.	<ul style="list-style-type: none"> Contact Valin. Do not energize circuit.

TROUBLESHOOTING

Issue	Explanation	Solution
Alarm message will not clear	Alarm message is displayed even after process is within set parameters.	<ul style="list-style-type: none"> If Alarm is set to Manual Reset in the Alarm Settings Menu, Alarms must be reset in the Alarm Log. Set Alarm to Auto Reset if Alarm messages may be automatically cleared when process is within set parameters.
Alarm will not reset	Alarm will not reset, but is set to Auto Reset.	<ul style="list-style-type: none"> Process must be within set parameters for alarms to be reset. Check the Alarm Settings Menu to ensure setpoint values are correct.
Unable to access menu	Menu will not display after being selected.	<ul style="list-style-type: none"> Log into security level required for the menu. Refer to Security Levels chart on page 17.
System is not generating an output	Circuit is enabled, setpoint is above the process value, but no output is detected.	<ul style="list-style-type: none"> If SSR switches are indicating switching (green LED indicator), then ensure that branch circuit breaker is in the on position. If SSR switches are not indicating switching (green LED indicator), and soft starting is enabled, examine the SSR indicators for a period of 1 minute. If there are no power switching indications in that time, contact Valin. Evaluate heat trace connections. Refer to diagram on page 15.
Ethernet Communications Error	Cannot connect to AccuTrace™ via Ethernet communications. Cannot view Node. Options within Node are not able to be selected.	<ul style="list-style-type: none"> Start by resetting the operator interface (Figure 6-1), prompting the AccuTrace™ to re-scan. Verify that peripheral devices (devices other than AccuTrace™ and PC/PLC) do not have the same IP Address as AccuTrace™. This will create an IP conflict error. Route communication wiring separately from power wiring. Establish correct communications port on external device. Examine communications connections. Refer to Communications Wiring section on page 16. Examine Device Settings, refer to Changing
Lost Password	Password is lost or invalid	<ul style="list-style-type: none"> Refer to default passwords on page 18. Contact Valin



FIGURE 6-1 RESET SWITCH- CYCLES POWER TO OPERATOR INTERFACE

AGENCY APPROVALS



CONTROL PANEL FOR HAZARDOUS LOCATIONS
E503604

CONTACT US

Valin Corporation Engineering Department: **866-351-4328**