

quick start guide

E2 Setup with LOCHINVAR Water Heater Model AWN501PM MODBUS Device for 527-0369

This document will guide you through setting up and commissioning the water heater model AWN501PM third-party controller MODBUS device in the E2 controller.

STEP 1: Upload the Description File to the E2.

1. Connect to your E2 using UltraSite (refer to *UltraSite32 User's Guide P/N 026-1002*).
2. Right-click the E2 icon and select **Description File Upload**.
3. Browse to the location of the description file and click **Upload**.
4. Once upload is complete, reboot the E2 controller.

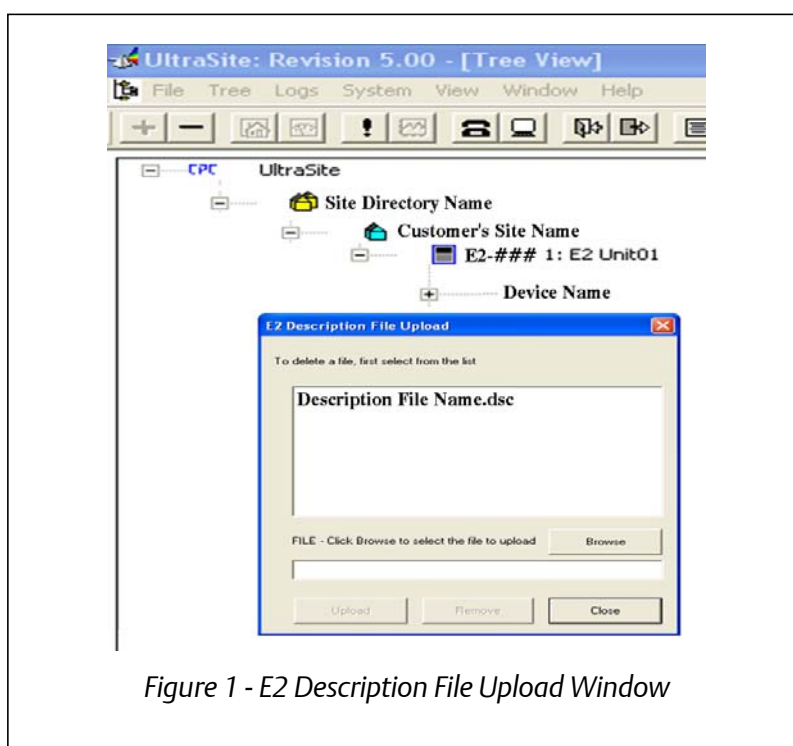


Figure 1 - E2 Description File Upload Window

STEP 2: Activate the License of the Device.

1. Log in to the E2 controller.
2. From the E2 front panel (or via Terminal Mode), press , ,  (Licensing).

- Press **F1** (*ADD FEATURE*) and enter the license key.

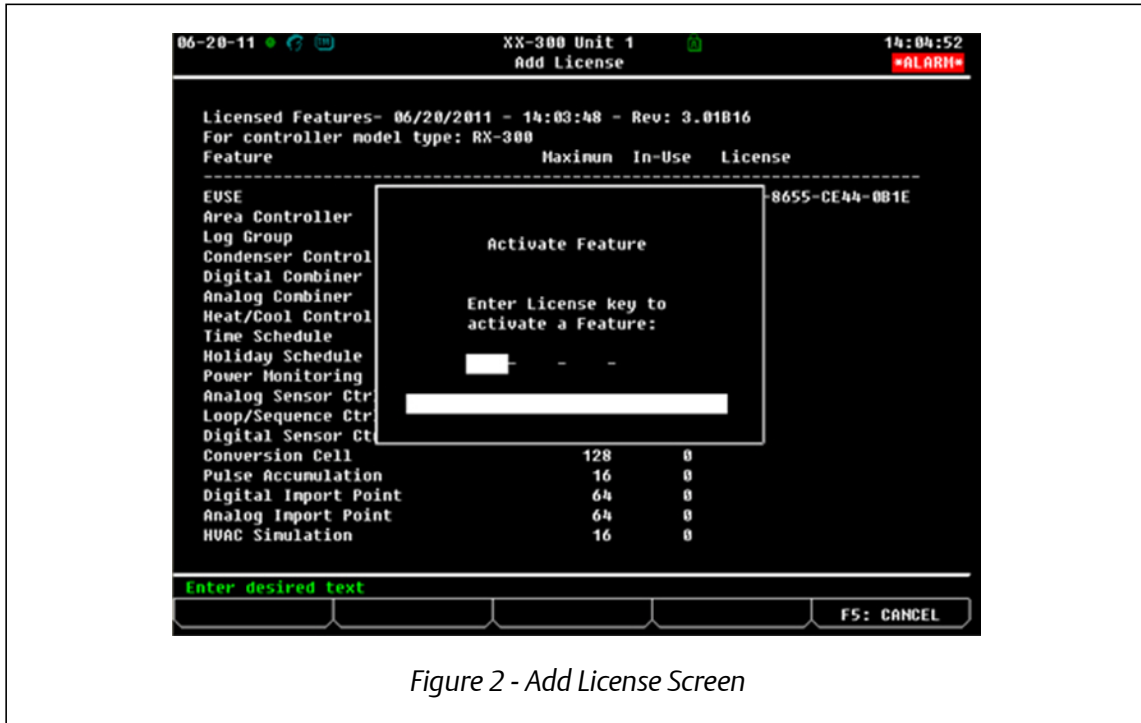
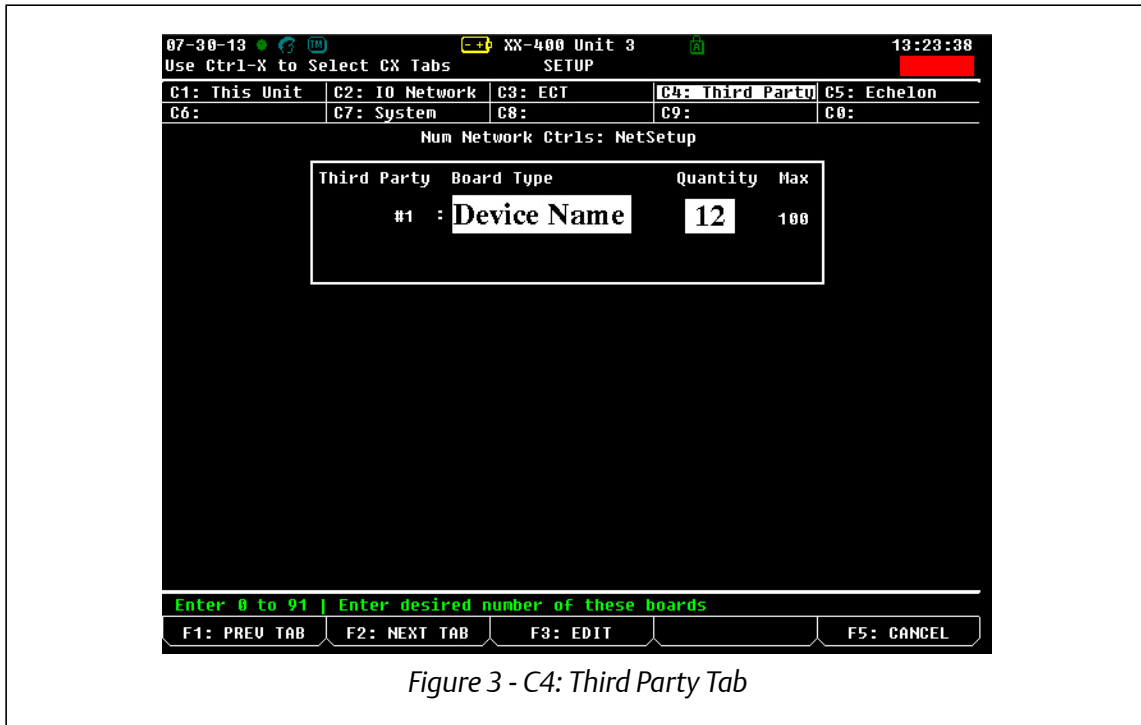


Figure 2 - Add License Screen


STEP 3: Add the Device in the E2.

- Press **Menu**, **&7**, **&7**, **@2** (*Connected I/O Boards & Controllers*).
- Press **F2** to shift over to the *C4: Third Party* tab. The name of the device will display in the list. Highlight the device name and enter the number of devices to add under the **Quantity** field.

3. Press  to save the changes.



STEP 4: Set Up the Device in the E2 Serial Port.

1. Log in to the E2 controller.
2. Press , **7**, **3**, **1** (*General Controller Information*).
3. Select **F2** to go to the C3: Serial tab. Highlight the physical COM Connection Port that will be assigned to the device and set up the manufacturer's communication configurations as follows:
 - COM# Baud: **9600 kb**
 - COM# Data Size: **8**
 - COM# Parity: **None**
 - COM# Stop Bits: **1**

4. Press  to save the changes.

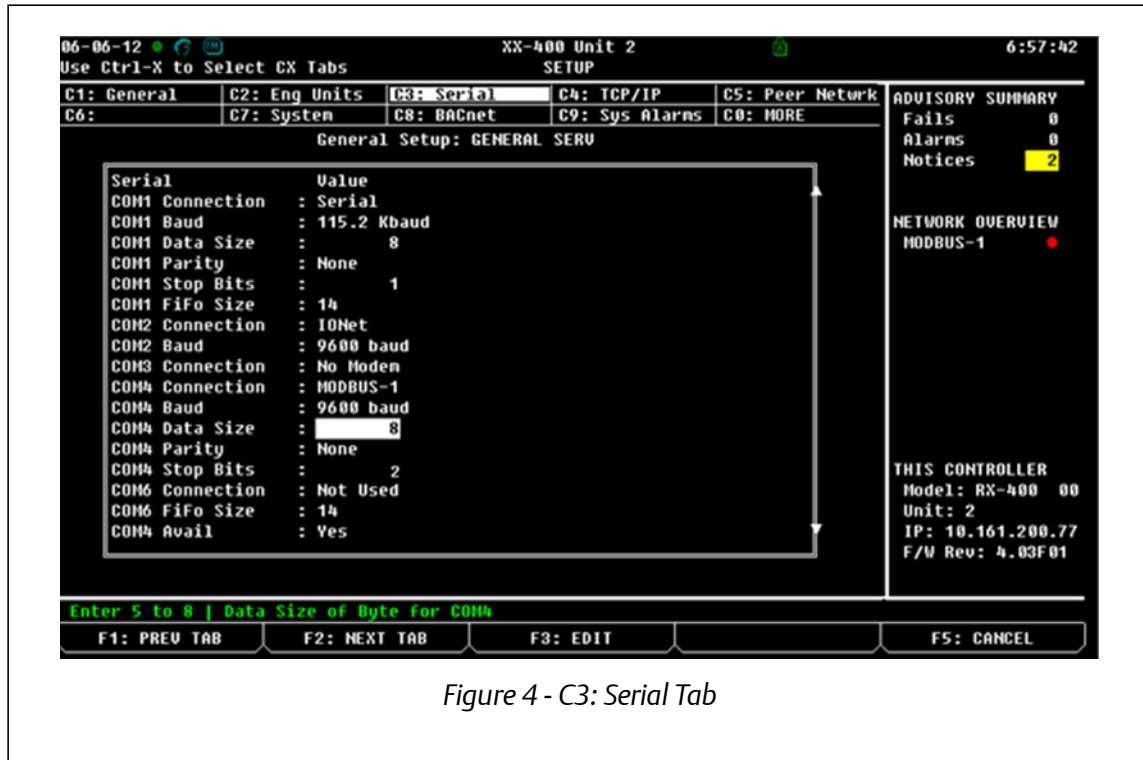
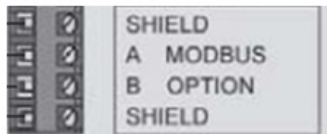


Figure 4 - C3: Serial Tab

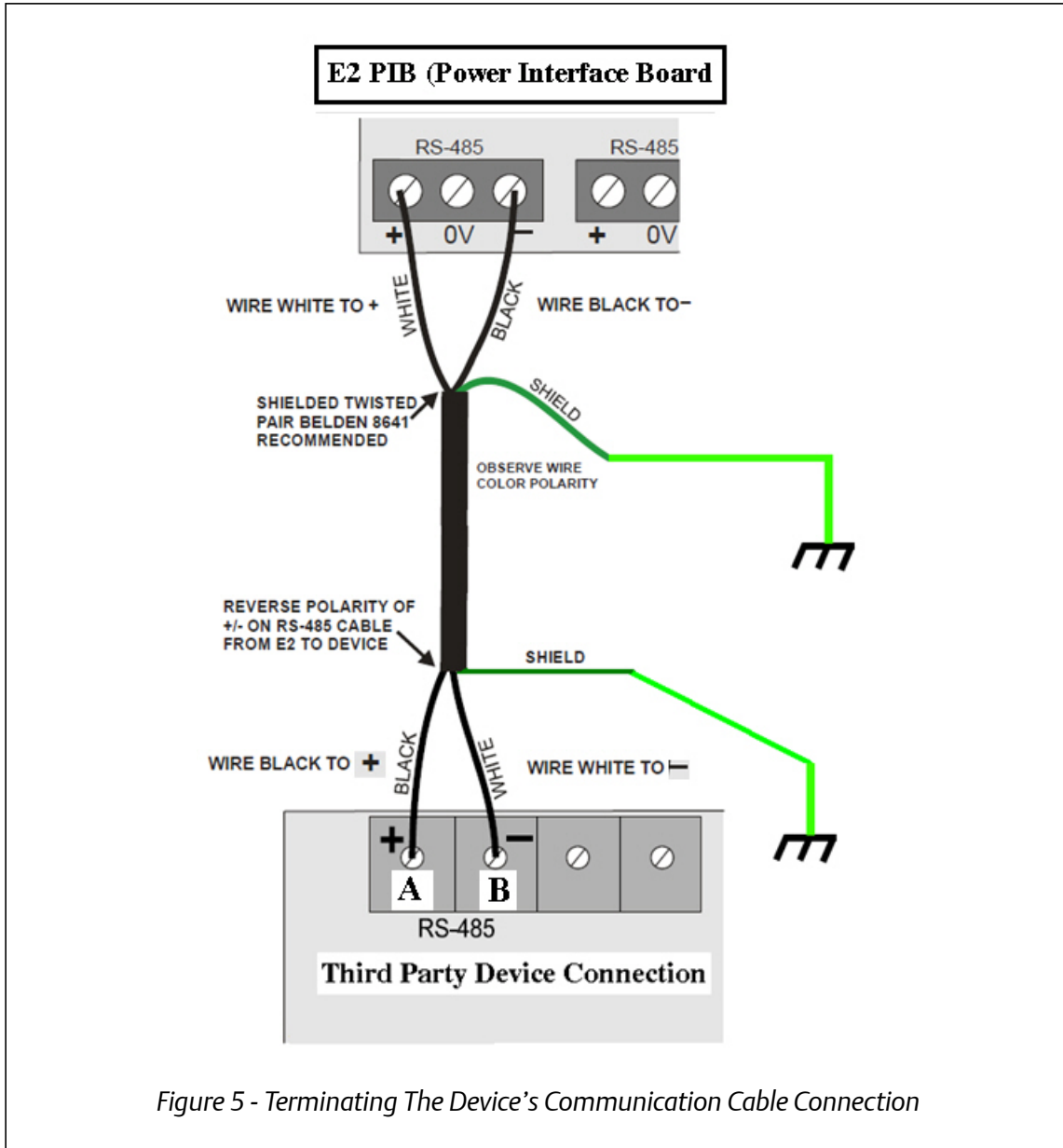


The water heater model AWN501PM has a MODBUS board that has a 10 Dip switch setting. Dip switch #1 through #8 is the address setting. Dip switch #9 is the baud rate setting (ON is 19200 bps, OFF is 9600 bps). Dip switch #10 is the parity setting (ON is Even parity, OFF is No parity).

If Dip switch #10 is set for No parity, there must be 2 Stop Bits, otherwise there will be one.

STEP 5: Terminate the Device’s MODBUS RS-485 Communication Cable as Shown in *Figure 5*.

NOTE: Reverse the polarity of the device communication cable connection.



STEP 6: Commission the Device.

Selecting the Device's MODBUS Network

1. Log in to the E2 controller.
2. Select **Menu**, **7**, **7**, **1** (*Network Summary*).
3. On the *Network Summary* screen, highlight the device name, press **F4** (*COMMISSION*), and select the preferred MODBUS Network (**Figure 6**). (Note that multiple MODBUS Networks appear in the list if more than one serial ports were setup initially.)
4. Press **Enter**.

*NOTE: If there is only one MODBUS-1 Network in the list and **F4** (*COMMISSION*) is pressed, the MODBUS device addressing list will display.*

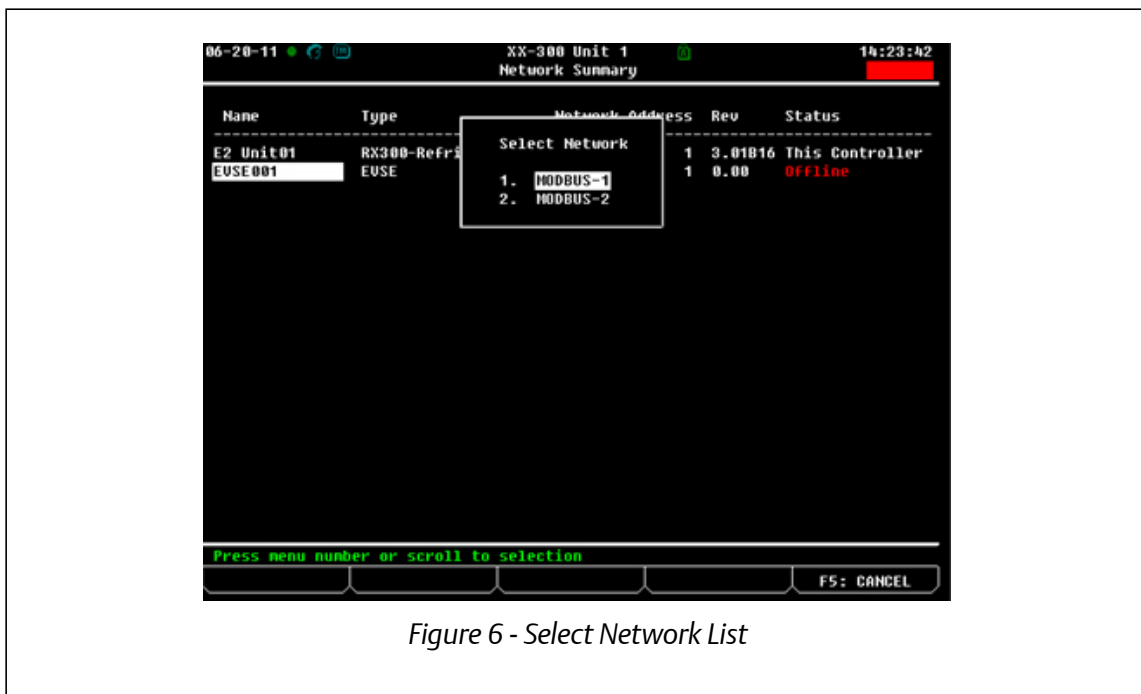


Figure 6 - Select Network List

Setting Up the Device's MODBUS Address in E2

1. Select **Menu**, **7**, **7**, **1** (*Network Summary*).
2. Using the E2 arrow keys, select the desired MODBUS device and press **F4** (*COMMISSION*). The E2 MODBUS addressing list will display. Select the desired MODBUS addressing slot for the device from the list (**Figure 7**).

NOTE: The MODBUS addressing slot pertains to the device address on the E2 controller only. The MODBUS address must be the same with the address assigned on the device. The actual device

address must be configured at the local third party MODBUS Remote Terminal Unit (RTU) to enable communication with the E2 controller.



Figure 7 - MODBUS Address Selection

3. Next, press  and the MODBUS address will be set as shown:



Figure 8 - MODBUS Address Setting

NOTE: After a few seconds the device will appear online (Figure 9) to confirm that the commissioning process has completed. If the device still appears offline, re-check the RS-485 cable terminations and repeat the commissioning process.

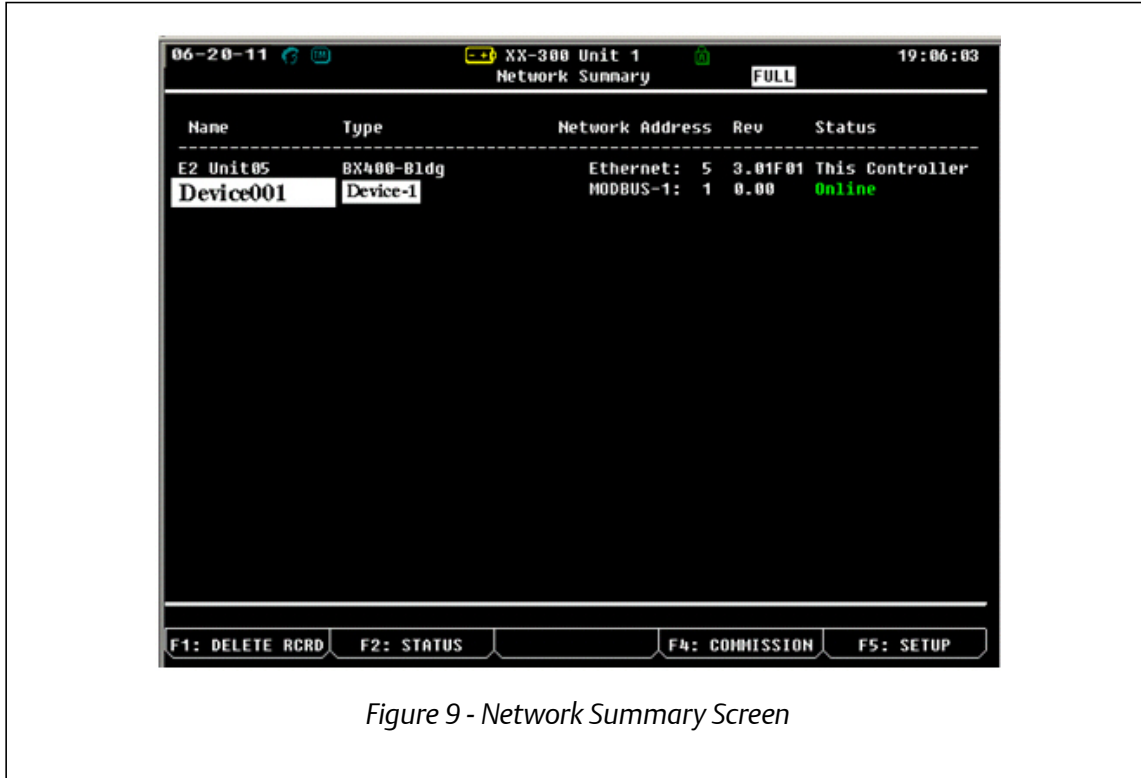






Figure 9 - Network Summary Screen

STEP 7: Once Commissioning is Complete, View the Status of the Device.

NOTE: The commissioning process is completed once the RTU is online.

1. Press , ,  (Configured Applications). The Configured Applications list displays.
2. Highlight the name of the water heater device in the list using the arrow keys and press  to view the Status screen of the device.

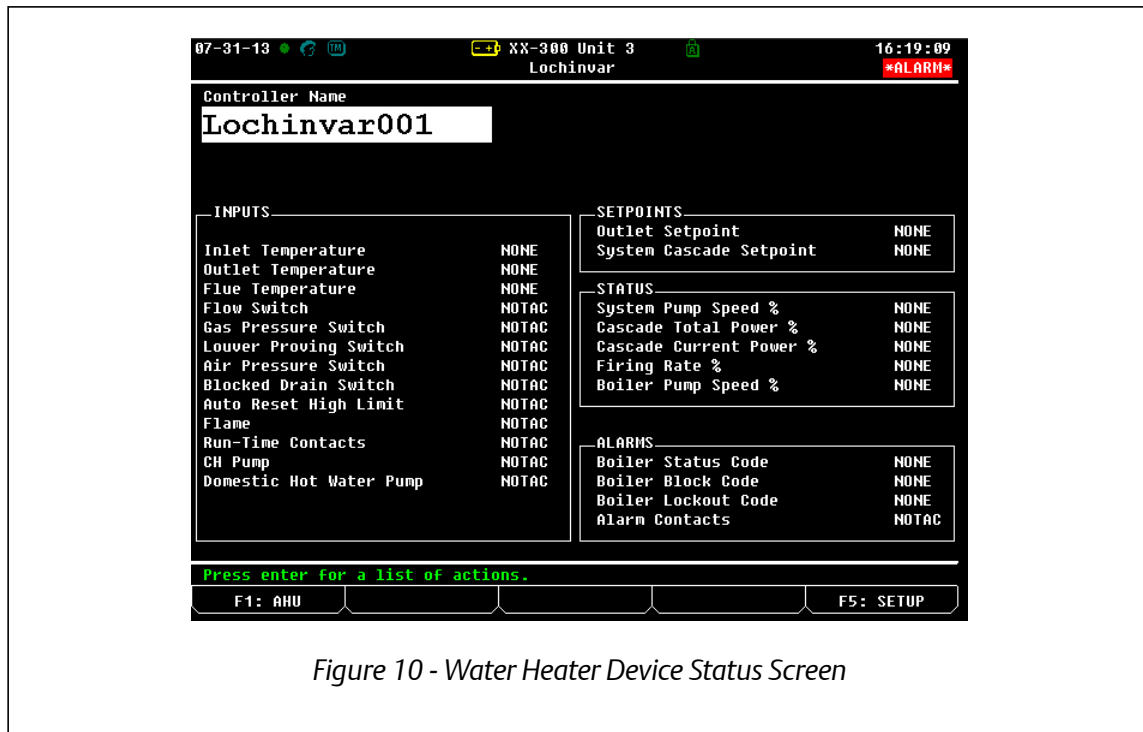


Figure 10 - Water Heater Device Status Screen

LOCHINVAR is a trademark and/or registered trademark of Lochinvar, LLC, in the United States and other countries.