
SUPPLEMENTAL INSTRUCTIONS

LV1000, HR35/36/58 FUSION-TEC® Software Update

These instructions detail the software update process for the following products:

- LV1000 supervisory controller
- HR35/36/58 FUSION-TEC wall-mount unit

Tools and Supplies Needed

- Laptop computer
- Appropriate USB cable (see Figure 1)
- TEC-EYE™ hand-held diagnostic tool
- Personal anti-static grounding strap

FIGURE 1



USB Cable Male A to Micro Male B (Wall-Mount Unit without Adapter)



USB Cable Male A to Male A (Supervisory Controller and Wall-Mount Units with Adapter)



TEC-EYE Diagnostic Tool with Cable

Software Versioning Guide

SoftwareName.X.Y.Z_Core#

Software Name: The name of the software is the base part number used to identify which product the software is used in (see Table 1).

TABLE 1

Product	Software Name
LV1000	LVS1000
FUSION-TEC (HR)	FTS1000

- X The letter X represents a major change to the software effecting product compatibility or function of the equipment.
- Y The letter Y represents a minor change to the software that either adds, removes, or alters a feature of the equipment without effecting compatibility with other products.
- Z The letter Z represents a change to the software that fixes existing features or user interface.

Core#: This identifier is only shown in the software download package. It identifies the processor core type of the PLC and can only be used in a PLC with the corresponding processor core type.

PLC Identification Labeling

The easiest way to identify the Core type of the PLC please refer to the labeling on the PLC board. The Core 0 boards are labeled with white software version and part number labels. Core 2 PLC boards are labeled with



Climate Control Solutions

Bard Manufacturing Company, Inc.
Bryan, Ohio 43506
www.bardhvac.com

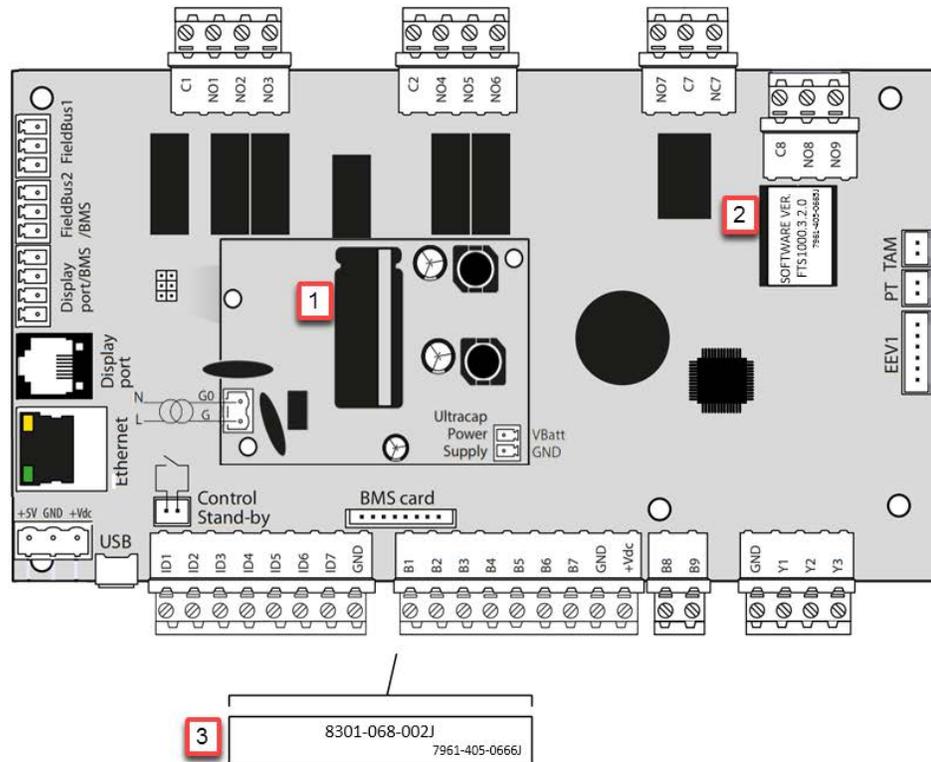
Manual: 7960-798E
Supersedes: 7960-798D
Date: 12-13-21

yellow software version, core type, and part number labels (see Figure 2).

FIGURE 2

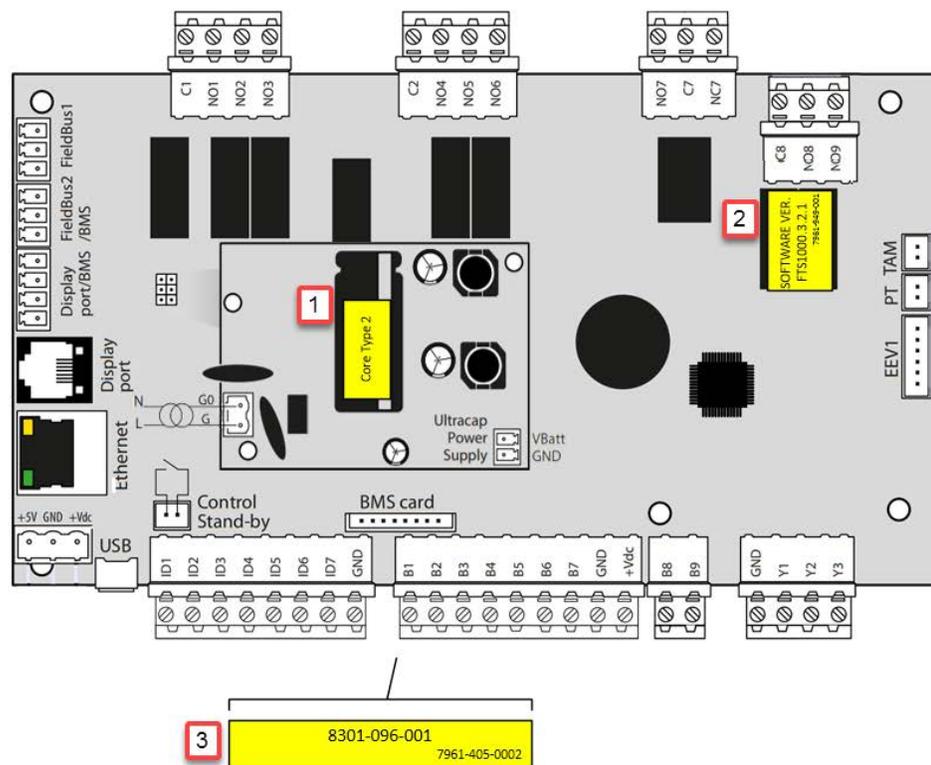
Core 0 Identifiers

1. No Core Type ID on Capacitor or Core Type ID printed on white paper label
2. Software Version Label is printed on white paper Label
3. PLC Part Number Label is printed on white paper label



Core 2 Identifiers

1. Core Type ID Label on Capacitor printed on yellow paper label
2. Software Version Label is printed on yellow paper Label
3. PLC Part Number Label is printed on yellow paper label

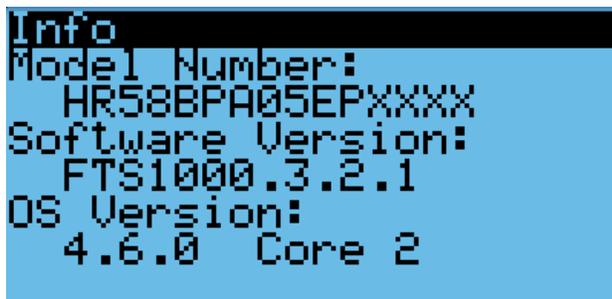


Instructions

IMPORTANT: Bard recommends the use of personal grounding straps to prevent static electricity shorts to electronic controls.

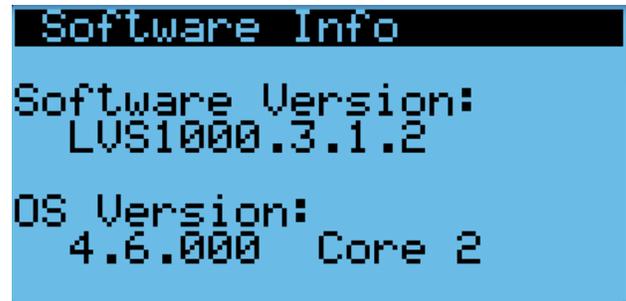
1. Begin the software update process by downloading the update from the Bard website.
 - A) Go to <http://bardhvac.com/software-download/> and select the link for appropriate software download.
 - B) Click on selected link; download will begin. The files that are downloaded will be in a zipped folder. Once downloaded, right click on the zipped file, and select "extract all". If a window prompt appears, select "OK" or "EXTRACT" and press Enter.
 - C) The files have now been extracted and a new window with the files should automatically open. These files are ready to be transferred to the controller. (It may help to leave this window open and separate until the update is complete.)
2. In this step, the board OS version and core will be determined. This information will be used to determine if an OS update needs to be applied prior to applying the software update. For any core 2 board with an OS that is not 4.8.3 or above, the OS will need to be updated prior to updating the product software.
 - A) FUSION-TEC Software Information
 - i. Connect the TEC-EYE diagnostic tool to the control board located in the unit.
 - ii. From the Main screen, press UP or DOWN button until Quick Menu displays the "I" icon. Press ENTER button.
 - iii. Press UP or DOWN button until the software version screen is displayed (see Figure 3).

FIGURE 3



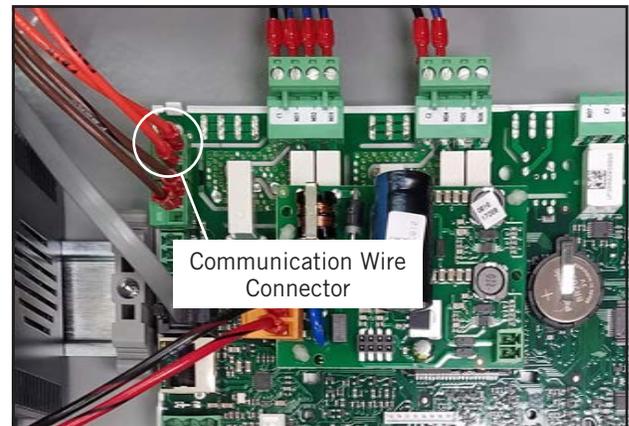
- B) LV1000 Software Information
 - i. From the Main screen, press UP or DOWN button until Quick Menu displays the "I" icon. Press ENTER button.
 - ii. Press UP or DOWN button until the cursor highlights the System Info Menu. Press the ENTER button.
 - iii. Press UP or DOWN button until the software version screen is displayed (see Figure 4).

FIGURE 4



3. **IMPORTANT:** Disconnect communication wires (unplug the connector) from controller PLC board (see Figure 5).

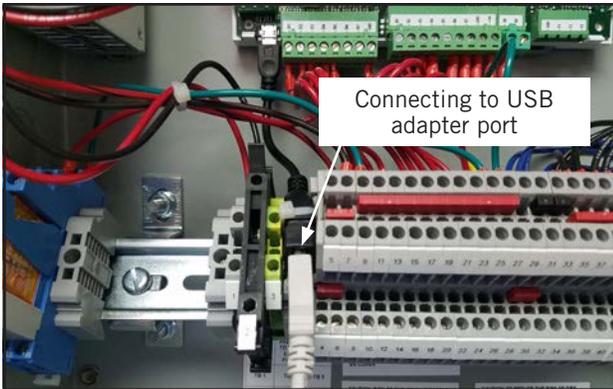
FIGURE 5



NOTE: For the following steps, use caution when connecting micro USB directly to micro USB port on wall-mount units without a USB adapter. Too much stress on the port being pulled in any direction can lead to damage of the board.

4. Connect the USB cable to the PLC requiring software update.
 - A. LV1000: Connect proper USB cable from laptop computer to the USB adapter port (see Figure 6 on page 4).

FIGURE 6



B. FUSION-TEC Wall Mount Unit: Connect TEC-EYE to the modular connector on wall-mount unit control board. Connect proper USB cable from laptop computer to micro USB port on control board (see Figure 7) or USB adapter port (see Figure 8), depending on whether the wall-mount unit control board is equipped with a short USB adapter cable. The recommended method is to connect using the short USB adapter cable, if provided.

FIGURE 7

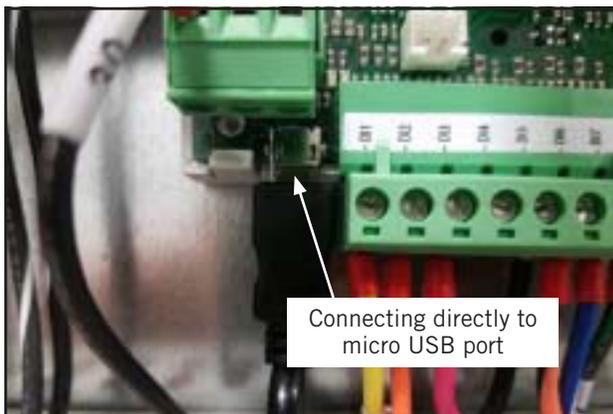
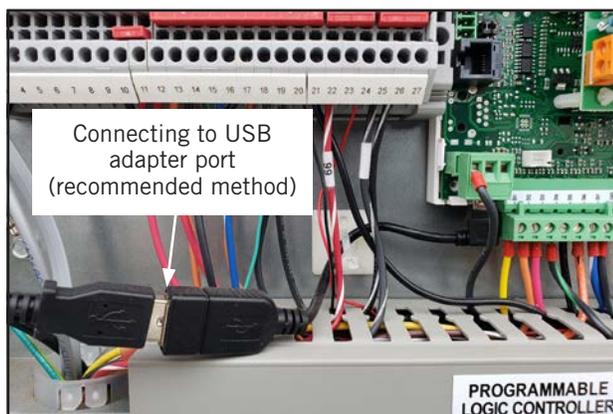


FIGURE 8



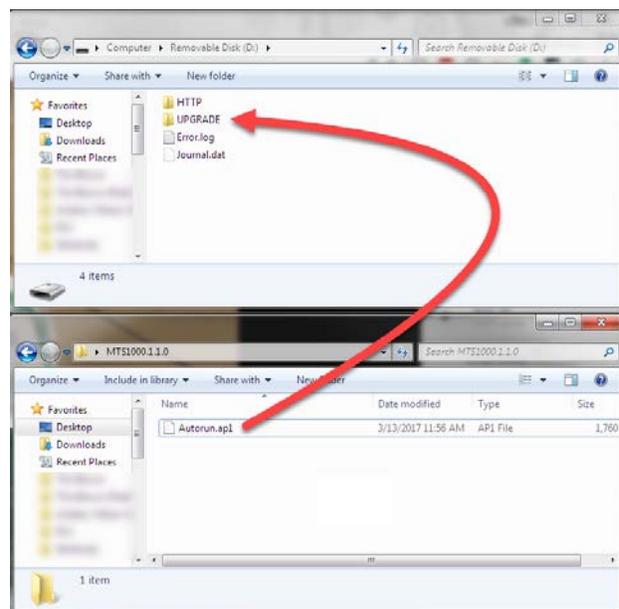
5. When USB Autoplay window appears on laptop screen, select "Open folder to view files" (see Figure 9).

FIGURE 9



6. If the controller being updated is core 2 and does not have an OS version above 4.8.3, drag and drop the file labeled "autorun.ap1" in the folder labeled "4.8.3 OS Update" before installing software update. If the board is not Core 0 or the board is Core 2 with an OS above 4.8.3 proceed to step 8.
7. Drag and drop new software (filename Autorun.ap1) from local computer, located in folder with software name "LVS1000" or "FTS1000", into the UPGRADE folder on control board (see Figure 10).

FIGURE 10

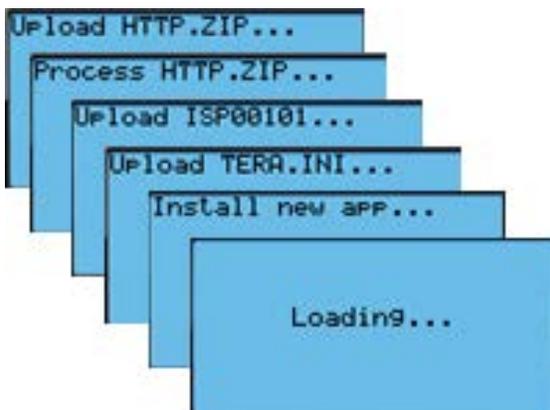


8. Once file transfer has completed, disconnect the USB cable from laptop computer and control board and wait for new program to install; this will happen automatically. The TEC-EYE or controller screen will display many different install status messages as it updates (see Figure 11). Continue to wait until the Bard logo appears. When the Bard logo is no longer present, the controller has been updated and will start running the new program.

NOTE: Before the Bard logo screen appears, a screen that reads "IO Board Fault" may appear. This is a normal message when board operating packages are updated in specific updates.

NOTE: If the Bard logo does not appear after 5 minutes or the screen gets stuck on Loading, unplug the telephone connector from the display and plug back in. The screen will then refresh and display the main screen of the software being installed.

FIGURE 11



9. **Wall-Mount Units Only:** After the software update is complete, verify that the model number and serial number in the program match the model number and serial number on the wall-mount unit nameplate (see Figure 12 on page 6). If they do not match, change the model/serial numbers to match, as some program features are dependent on these values. See appropriate wall-mount unit installation instructions for information on model nomenclature.

The model and serial numbers can be found in the program main menu under **Adv Sys Config**. Accessing this information in the TEC-EYE requires the engineer level password to change. Consult the appropriate wall-mount unit manual for default passwords.

10. Verify the new software has been loaded into the PLC controller (see Step 1 on page 3), all system parameters are correct and change passwords if required.

11. Disconnect TEC-EYE from wall-mount unit control board (if applicable).
12. Disconnect power for 10 seconds to PLC boards of controller and/or wall-mount units that were updated. Reconnect power.
13. Reconnect communication wire connector to controller PLC board that was disconnected in Step 3 on page 3 (see Figure 5).

This completes the software update process.

FIGURE 12



BARD MANUFACTURING CO. INC. 1914 RANDOLPH DRIVE BRYAN, OHIO 43505 U.S.A.

MODEL	(1) APPROVED HEATER PACKAGE	VAC	HZ	PH	SINGLE MINIMUM CIRCUIT CAPACITY	CIRCUIT MAX. FUSE OR CKT. BREAKER
()HR58APA02	901324-09A	230/208	60	1	43	60
(X)HR58APA05EPXXS	901324-A05	230/208	60	1	43	60

Model Number: Note the selection of the (X)

Serial Number

SHORT-CIRCUIT CURRENT: 5KA RMS SYMMETRICAL
 BRANCH CIRCUIT SELECT CURRENT 27.0 OPERATING VOLTAGE RANGE: 197 VAC MIN. 253 VAC MAX.
 SERIAL NUMBER 385C173420674-01 ASSEMBLED IN THE U.S.A.
 SUITABLE FOR OUTDOOR USE ALL MOTORS ARE THERMALLY OR ELECTRICALLY PROTECTED

	VAC	HZ	PH	ELECTRICAL RATINGS		LRA	RLA
				HP	FLA		
COMPRESSOR	230/208	60	1			152	9/152 9
OUTDOOR MOTOR	230/208	60	1	1/3	4.6	28	4/23 3
INDOOR MOTOR	230/208	60	1	1/2	3.8		