

VersaTenn V Revision History

Introduction

The VersaTenn V's control software is field upgradeable. Over time, new versions are released to add features, improve usability and fix problems. The purpose of this application note is to identify the different versions that have been released to date and describe the significant differences and improvements.

The production versions covered by this application note are:

1.2.19 (Base line)

1.3.5

1.3.8

For instructions on updating your VersaTenn V software contact Lunaire Limited or Tidal Engineering.

VersaTenn V Version 1.3.5

The VersaTenn V's upgrade from 1.2.19 to 1.3.5 consists mostly of minor bug fixes and feature additions. Some of the notable feature additions include: an increased communication command set, streamlined execution, some Graphical User Interface (GUI) changes and improved logging and alarm reporting.

Communications Command Set Revisions

1. PID parameters with a maximum range less than 10.0 are now displayed with 3 decimal places instead of 1 decimal place.
2. UUTR queries are now indexed from 1-8 instead of 0-7.
3. PID process values can now be queried using the PID1H, PID1C, PID2H, PID2C, PID3H and PID3C commands.
4. The UUT temperature reading query "? UUTR" now returns values scaled in C or F, depending on the units of measure setting of the controller.
5. Added "? Run" command to query the current state of the controller. (returns an integer value: 0 = running, 1 = stopped and 2 = paused).
6. The setpoint command "= SP" is now checked for out of range values.
7. The setpoint command can now be used to set a channel to Off. "=sp1 -1000" and "= sp2 -1000" turn their respective channels channel off.
8. The operator can no longer turn on CH2 or CH3 when CH1 is Off.
9. Turning off CH1 will now turn off the chamber.
10. The "? Events" command returns a 32bit hex number representing the status of all the events. i.e. 00FF0CC0"
11. Alarms can now be monitored using the "? alm" command.

Execution

1. After the last Jump Step in a program, the counter now resets itself to zero instead of remaining at 1.
2. When running a profile with the outputs off (Run Off), the status bar at the bottom of the screen now reads "Run and Hold (off)" when in Run and Hold mode so the user knows the outputs are off.
3. After a profile runs to completion, the final Stop step will now remain highlighted, confirming that the program ran its full course and is done.
4. The progress bar now returns to its original state after a profile is finished.
5. The VT V now reports an error if CH2 is on while CH1 is Off while loading a profile.
6. Profiles will now display CH2 as Off in Temp Only chambers.
7. Profile execution routines now ignore any channel 2 Setpoint or Wait For commands On Temp Only chambers.

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8. The VT V profile parsing routine now accepts any CH2 Off settings instead of issuing a warning on Temp Only chambers.
9. The add step wizard now displays a detailed description of the problem instead of simply reporting Unknown Error when it encounters an invalid parameter.
10. A program can no longer be put into Pause mode if it is not running.
11. The VT V profile parsing routine now apply more stringent rules to the copy steps, insert steps and edit steps.
12. The VT V now has a nested loop depth limit of 200 levels during execution.
13. You now must first stop or pause the program before changing from "Run" to "Run Off" mode, or vice versa.

GUI

1. The \Event\Digital Output Screen's LEDs are now yellow in Time Proportioning mode even if the percent output is 0.
2. The operator can no longer turn on CH2 or CH3 when CH1 is Off. If you click in the set point box to turn on channel 2, a message window will alert the user that channel 2 can not be activated unless channel 1 is enabled.
3. Channel 2 has been removed from the Main Screen and the Run screen On Temp Only chambers.
4. The Help information has been updated.
5. The Open and Save file windows now have a more robust and consistent file display.
6. Channel 2 High and Low Range settings are no longer scaled incorrectly when the controller switches from Celsius to Fahrenheit.

Logging and Alarms

1. Clearing a "channel out of range" alarm now records the message "Channel Out of Range Corrected" in the history file.
2. Clearing a "bad sensor" alarms now records the message "Bad Sensor Corrected" in the history file.
3. A low memory warning window is now displayed when the low memory alarm is triggered.
4. Header lines are now written more efficiently and no longer include trailing garbage characters in the history file.
5. The Machine Inputs and UUT's they are now indexed from 1-8 instead of 0-7.
6. All popup dialog windows now retain focus until acknowledged. In version 1.2.19, if a user pressed the screen behind a popup window, it would receive focus and the popup window would be lost. User interaction with the dialog window then becomes impossible.

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7. Machine Temperatures are now scaled before they are logged instead of logging the raw voltage based values.
8. The controller now correctly logs disabled channels as off in Fahrenheit mode.
9. Alarm checking on Channel 2 is now disabled if channel 2 is Off.
10. The VT V now logs UUT's to one decimal place instead of three.

Other

1. The Bad Sensor Threshold for 0-5v inputs has been raised to 5.25V from 5V.
2. The controller now recalls the correct UUT setting when rebooted. In version 1.2.19, the controller always rebooted with UUT 1 on.
3. The Machine Input values are now scaled properly.
4. The web server now starts consistently and reliably.
5. The Change Chamber Type button on the chamber type screen is now enabled and can be used to change chamber configuration.
Warning These settings should only be changed by a qualified technician, incorrect settings could damage the chamber.
6. The controller now prompts the user to reset the controller before activating any Chamber Type setting change. The user is also warned that the output settings have been changed and has the option of saving their old settings or adopting the settings for the new chamber type after the controller is restarted.
7. The graph settings are now saved and restored when the controller is restarted.
8. Version 1.3.5 fixes several memory leaks associated with opening and closing screens.

Version 1.3.8

1. Events and Logical Events settings are now saved and restored when the chamber is reset.
2. The Temp Only chamber configuration now includes outputs for cascade condenser device on output 10.
3. The Export History routine now finds the floppy disk faster and instructs the export history file to use all the available space on the floppy if necessary.
4. The default Log File Size is now 1.40MB, down from 4.00MB. This change eliminates nuisance low storage card alarm problems.
5. The default CH2 Humidity High Alarm is now 104%, up from 100%. This change eliminates nuisance alarms that could occur if humidity sensor overshoots 100%.
6. An open thermocouple sensor is now indicated when a UUT reading is above 399.0 degrees C. The display will read: "Open Sensor".
7. Steady state setpoints are now restored to their previous value when controller power is cycled.