After updating the firmware you will need to reset the device and re-enter all settings and parameters including the lambda probe calibration parameters.

Before you start to update the firmware remember to save the parameters you need, especially the ones you set yourself, the lambda probe calibration parameters found in the SETTINGS1 tab and calibration parameters found in the CALIBRATION tab. It is best to do screenshots of the mentioned tabs and save them on your disk as .jpg or .bmp files so later you can easily read the parameters you need from these files. The parameters in the CALIBRATION tab should not get erased under any circumstances but there is always a chance that during the firmware update the voltage may disappear and these parameters could be accidentally overwritten. The chance of this happening is minimal but saving a screenshot of the tab will allow us to re-enter these parameters. You can also write these parameters to a file or on a piece of paper.

How to update the firmware?

The device has it's own and independent firmware besides having the software you use on your computer. This firmware needs to be updated from time to time.

Shown below are ways of updating the firmware in two versions of the device – one with a green PCB and one with a blue PCB.

How to check what PCB color does your device have?

To check the PCB color you need to unscrew the lower part of the device's casing. The PCB is visible on both sides of the connectors. It can be green or dark blue. You need to use the appropriate update file accordingly to the PCB color. There are only two files, one for the green PCB and one for the blue PCB.
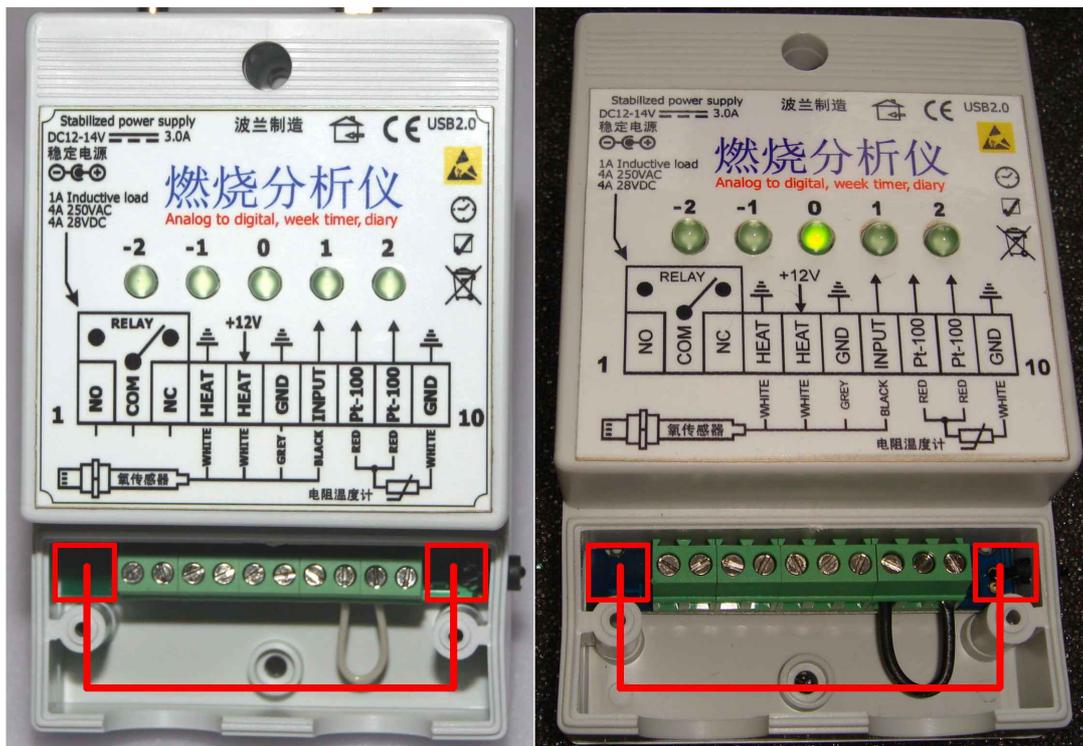
GREEN   BLUE

THE COLOUR OF THE PRINTED CIRCUIT BOARD

Firmware update

1. Turn off the power supply by unplugging the PSU. **The USB cable should remain plugged.**
2. Build a 'bridge' between pins 8 and 10 – it will put the device into firmware update mode.


If you are not using the Pt-100 sensor then you should already have a 'bridge'. In this case simply disconnect the 'bridge' from pin 9 and instead connect it to pin 10. If you are using a Pt-100 sensor then you need to disconnect the sensor and build a 'bridge' as seen on the picture above. Other cords are unimportant.

3. Turn on the power by plugging the PSU back in. The middle LED should turn on and stay on until the update is completed and the bridge is removed.

4. Run the software on the computer.

5. Wait 30-40 seconds until the software unblocks itself (during this time it will seem as if the software has frozen)

6. Go to the 'CONSOLE' tab

7. Enter the PIN code (147) in the small textbox found in the lower left corner of the CONSOLE tab.
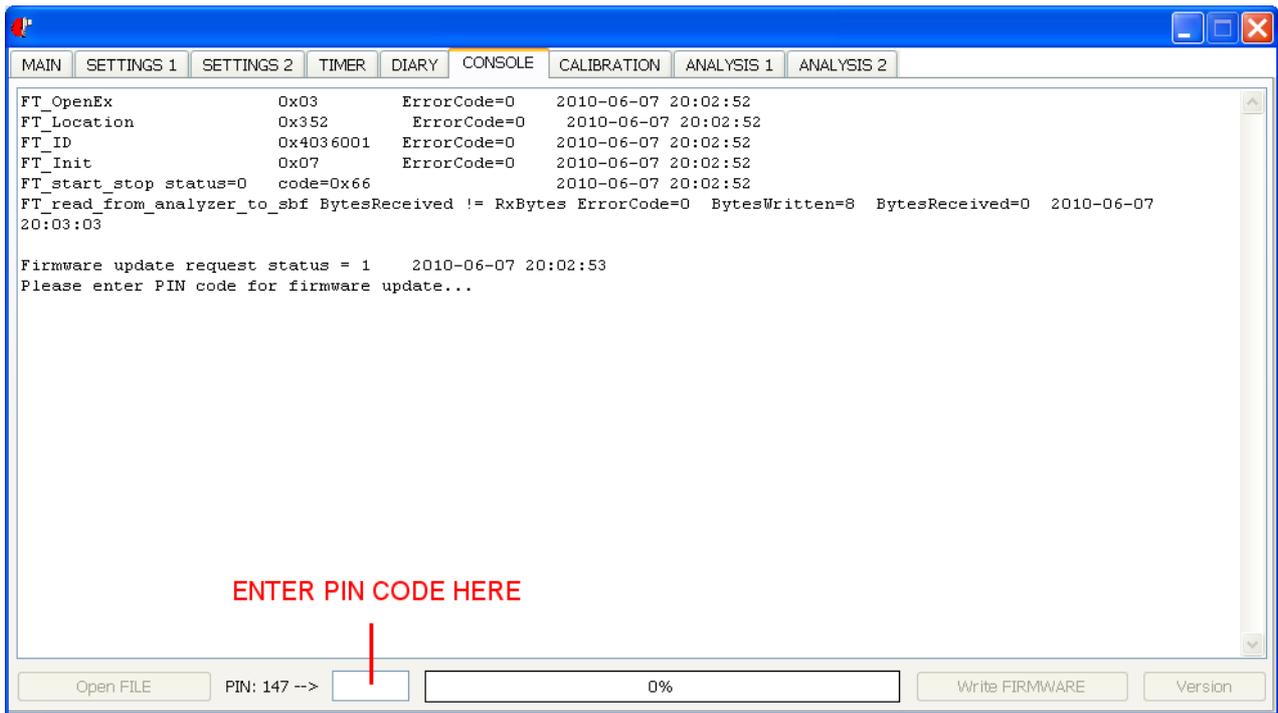
After you enter the code the following buttons will be activated

OPEN FILE
UPDATE FIRMWARE
VERSION
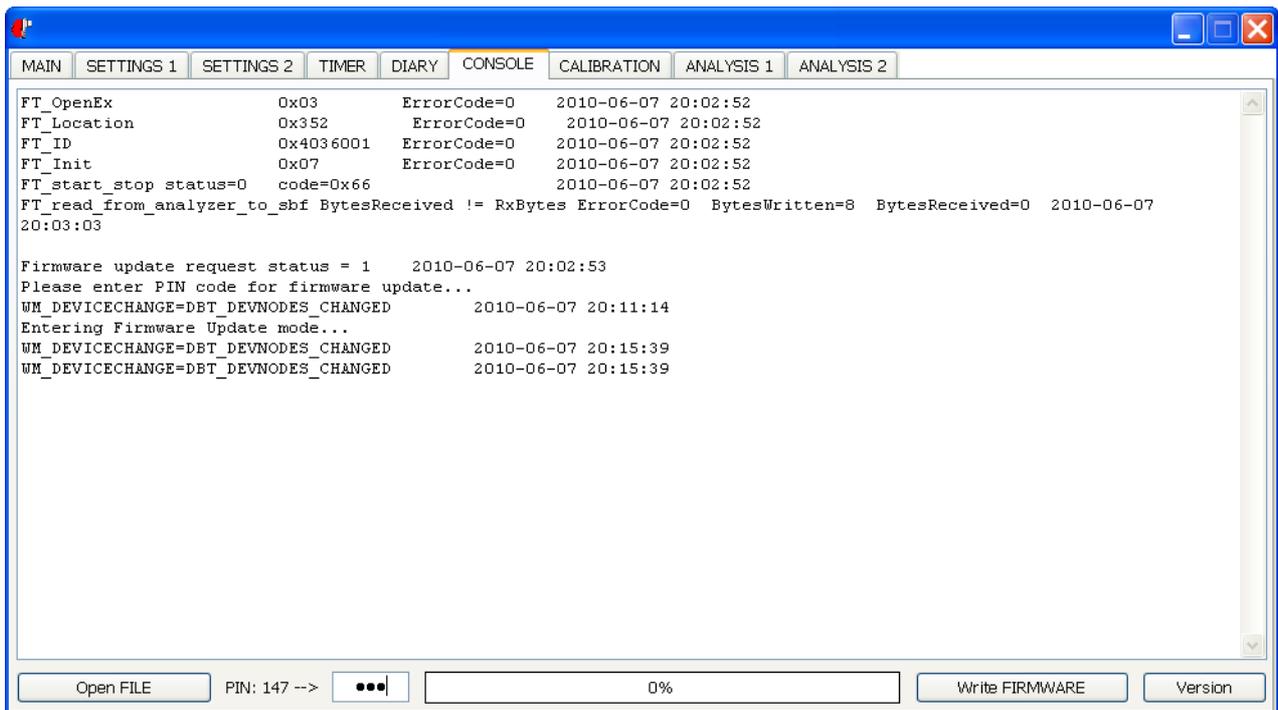
8. Press the 'Open file' button.

9. From the list pick the update file (*.bin extension) appropriate to the PCB color.

10. Press the 'Update Firmware' button.

11. Wait until the progress bar reaches 100%.

12. Close the software.

13. Disconnect the PSU and the USB cable.

14. Dismount the 'bridge' between pins 8 and 10.

15. Reconnect the Pt-100 sensor or, if you are not using one, connect pins 8 and 9 as shown on the picture below.

16. Before you turn the device on again read this instruction on how to turn the device on after updating the firmware.

If you saved all needed information you can start to configure the device.

1. Connect the device to the PSU.
2. Connect the device to the computer with a USB cable.
3. Run the software on the computer.

4. <u>Open the SETTINGS 1 tab</u>
Press the 'Restore defaults and do not save' button. This will cause the reset of all the parameters in the SETTINGS 1 and SETTINGS 2 tabs. Next you should re-enter in these tabs all the parameters we modified ourselves, the lambda probe parameters etc, check their correctness and save them using the 'SAVE parameters to the Analyzer' button. The 'Restore defaults and do not save' and the 'SAVE parameters to the Analyzer' buttons refer to both the SETTINGS 1 and the SETTINGS 2 tab and it does not make any difference in what tab do you use them.

5. <u>Open the TIMER tab</u>
You need to reset the timer settings using the 'Erase settings' button. Then you need turn on and off the RELAY and BUZZER switches respectively. Next you need to press the 'Write settings' button. Now you can set up the timer however you want.
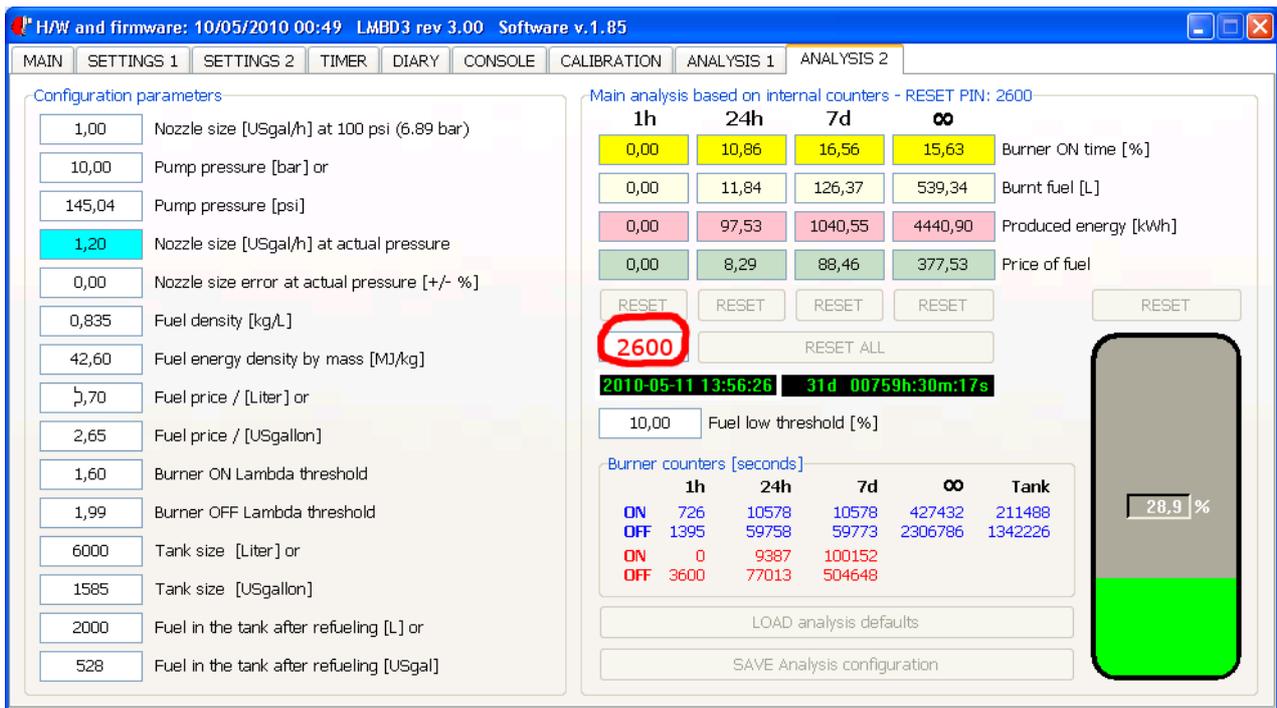
6. <u>Open the ANALYSIS 2 tab</u>
Reset the parameters using the 'LOAD analysis defaults' button and then

save them using the 'SAVE analysis configuration' button.
The device should re-communicate but if that does not happen you should try again after unplugging and re-plugging the PSU and closing and re-opening the software.

Next reset the counters:

To do this enter the PIN code 2600 in the designated area (as shown on the picture above.
Next press the 'RESET ALL' button.
The device should re-communicate but if that does not happen you should try again after unplugging and re-plugging the PSU and closing and re-opening the software.
Now you can start entering the appropriate parameters.
The actions restoring the default values mentioned above must be carried out with no exceptions. There might be a need to repeat the attempt for a given tab as the device with the new firmware does not yet have the data in a separate memory where the configuration is kept. This may lead to the device actings unpredictably until we save the configuration again for all the tabs and the unplug and re-plug the PSU. It is good to take care of one tab at a time, load it's default values, save and disconnect the PSU so that after you connect the PSU back again the device will start with the new

settings for this tab. You can also close and re-open the software.

The software for the v.133 version will not work with the new firmware as vast changes have been made in the way of communication and operation.