

DBL60/DRL26 stem increment sensor – battery replacement

	<p>Generally, the following operation can be done (gently) without removing the sensor from its original position on tree trunk.</p> <p>Unscrew all six screws securing the white plastic lid.</p> <p>Note: Please use the proper Phillips screwdriver.</p>
	<p>The parts we're interested in are:</p> <ul style="list-style-type: none">• desiccant bag• Li-ion battery LS14250 CN• sealing o-ring in the groove of the sensor body (52 x 2.5 mm)



Loosen the battery terminal plug screws and remove the old battery.

Don't forget to recycle it. Make sure you can't confuse it with a new one!



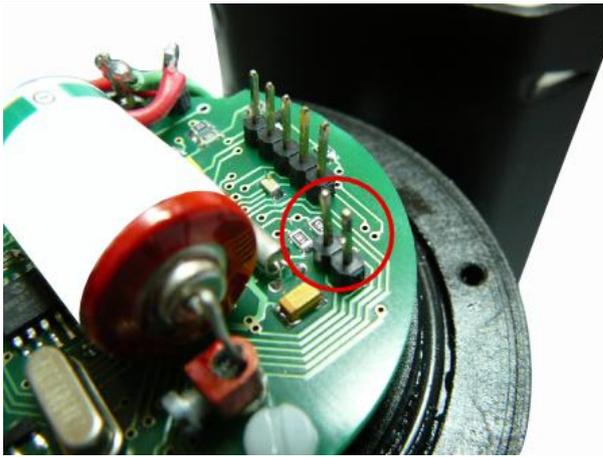
Printed board without a battery.
The positive terminal is red.



Important!
Thoroughly short circuit the battery terminals for a few seconds (better twice) with a metal tool (screwdriver, knife, piece of wire) after removing the old battery, in order to discharge the remaining energy in capacitors. It is necessary for resetting the battery life counter!
On the contrary to the picture, short circuit directly the soldered parts, not screws!



Insert new battery (watch polarity!) and screw down the terminal screws. Correct battery position is shown on the image.
(Positive battery terminal must be placed closer to measuring pins **1**)
Activate the system with a magnet. The LED must light up and turn off after around 15 seconds.
If not, the electronics is broken and it has to be replaced.



For technicians:

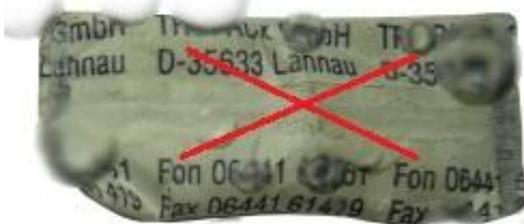
After the battery replacement, the idle power consumption measurement should be performed.

For this purpose, the voltage between two pins marked with the red circle should be measured. During the measurement the LED has to be off! The voltage should be less than 20 μ V. If there is no sensitive multimeter available, check whether the value is below 0.1 mV at least.



If you have spare parts, replace the o-ring in groove with a new one (52 x 2.5 mm).

Remove the new desiccant bag from the package, put it on the printed board beside the battery and immediately replace the cover. Note that the desiccant bag takes water from the air very fast!



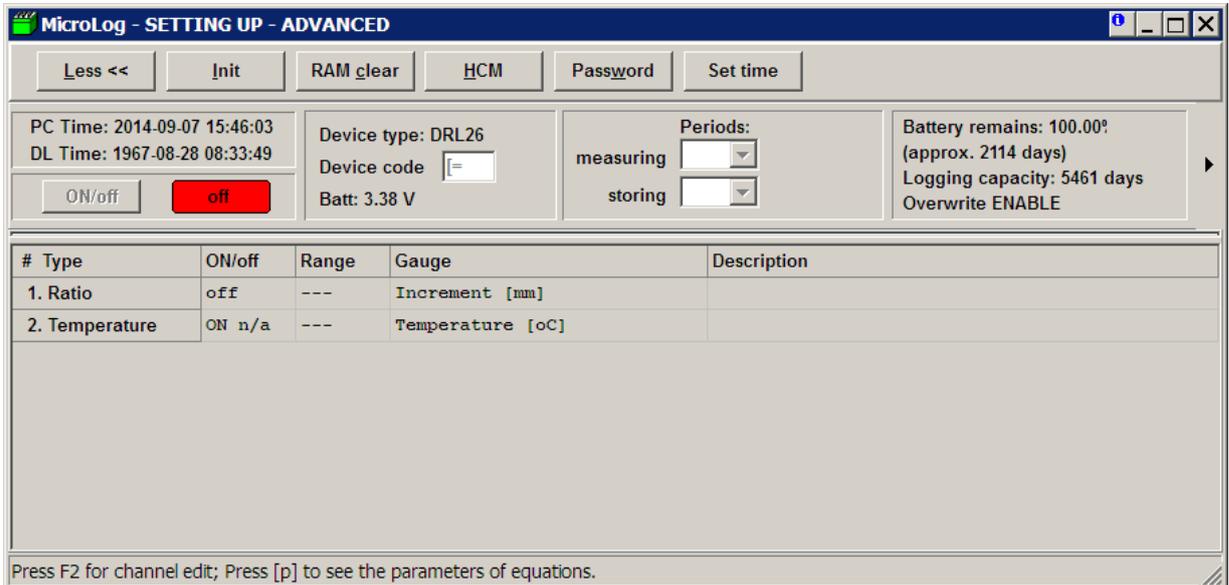
	<p>Put the metal ring over the lid and place the lid on the sensor.</p> <p>If there is a label showing the IrDA access point on the lid, make sure to turn the lid such a way that the center of the label "IrDA access point and magnetic activation area" is located above the red LED on the PC board.</p>
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	<p>Screw up six new M3x12 mm screws with a moderate momentum. It is a good idea to tighten the screws according to the sequence in the picture.</p>
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Run Mini32 software and click on the "Configuration" button. Activate IR connection with magnet if the red LED below the lid is off.

Ignore some possible error messages until you reach "**More>>**" window.

The screen will probably look strange - for instance like this:



Push “HCM” for downloading and saving the whole memory content to file for later decoding.

Since the filename does include (possibly wrong) device code, rename the file for later identification. Add also the new extension “.HEX”.

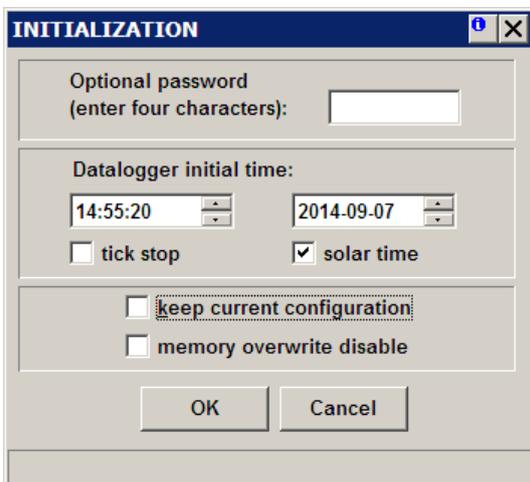
(Example: mydevice_0812.hcm.hex) .

Try to convert this file by Mini32 as a standard HEX file.

If you doubt about the decoded file, send the original (“HEX” or “HCM”) file to manufacturer for decoding. The best together with an older HEX or DCV file if they are available.

Push “Init” button to reset the data logging system. This is absolutely necessary for the next proper operation.

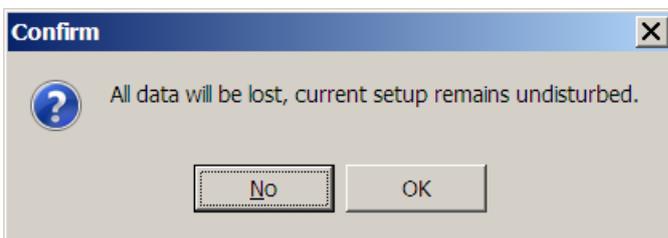
Uncheck the check box “keep current configuration”:



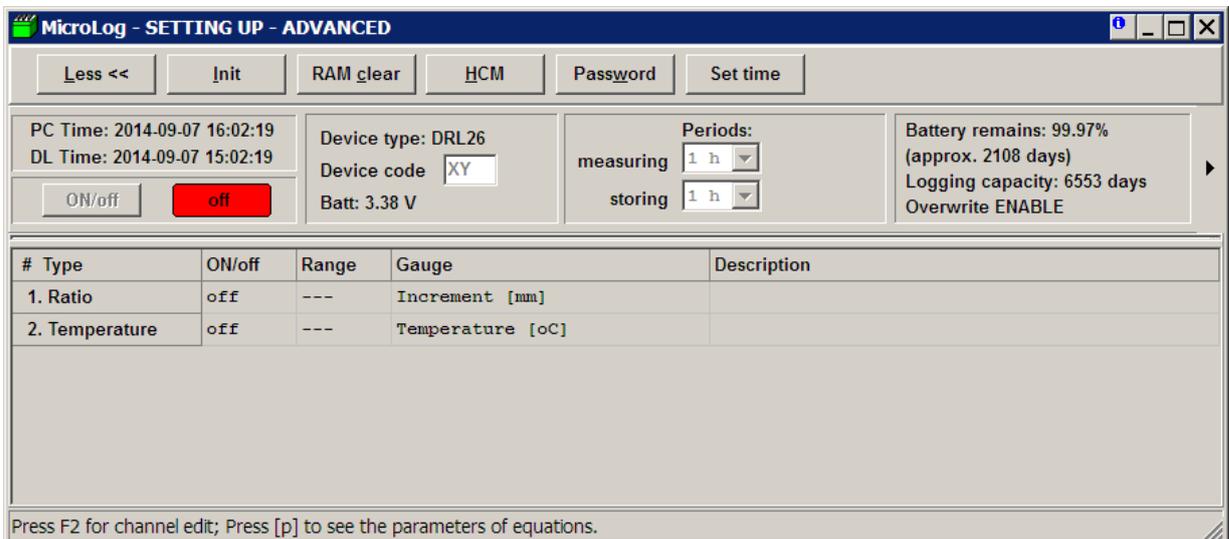
If you haven't entered a password protecting the configuration, confirm the window:



And push OK to continue:

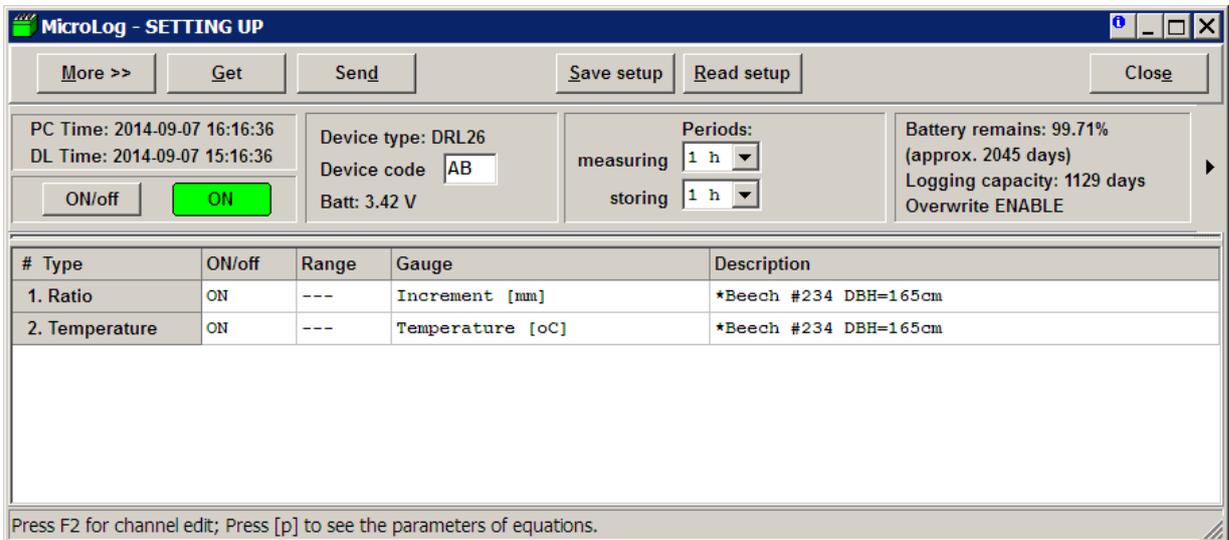


After the system confirms that the initialization is completed, the logger will have the factory setting:



Push "Less<<" button to get the previous screen and reconfigure the logger. You can do it manually or to take the setting from an older HEX or DCV file (push "Read setup" and find a relevant file).

The configuration of the sensor should look like this:



Push "Send" button to send the configuration to the sensor/datalogger.

As a last step, close "Configuration" and open "On-line". Run "Actual values" and check the measured value.

Refer to Mini32 user's manual for necessary details.

In Brno, September 2014