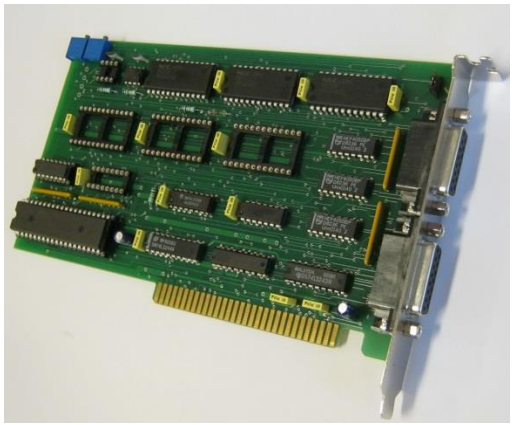
DTU Nutech
Center for Nuclear Technologies

External USB Interface

for Risø Beta Multicounter GM25-5A

The USB interface.

The Risø external USB interface allows the direct interfacing of older Beta Counters to a PC using a USB connection, without the need to insert an interface card in the computer.



PC-Card

USB Interface

The USB interface comes with the latest software version and will work with Win7 and Win8 as well as Windows XP.

Installation of the USB interface

Please install software and driver from the enclosed USB flash drive, before the USB cable in connected. (For installation instructions see ReadMe file on flash drive).

Connect the signal cable to the electronics box using the enclosed 15 pin cable (or 25pin to 15pin cable, if using an older electronics box), and the USB cable to one of the USB ports on your PC.

For more information about the software and the use of multiple USB interfaces, please see the Beta Counter manual.

On very old electronics boxes, with the 25 pin connector, it may be necessary to adjust the actual high voltage, to make sure it matches the voltage displayed by the software.

A description of how to do this is included here.

How to adjust an older electronics box for the new USB interface.

1.) Disconnect the HV. cable from the electronics box. (Black cable that goes to the Beta Counter)

2.) If you don't have a cable that fits the "1/1000 HV" BNC-connector, it will be a good idea to make one. Here you can measure the HV divided with 1000. (1 volt measured here = 1000V on the counter)

3.) Install the software first, and then connect the USB box to the pc and the electronics box, using the two enclosed cables.

4.) In the software, at the bottom of the screen (High Voltage Control) select "Manual", and set the voltage to 500 V.
(Counter Options – "View High Voltage Control" should be selected)

5.) Measure the voltage (on the "1/1000 HV" connector). If the voltage is around 0,5V. (0.48 to 0.52 V), you do not need to do anything. If not – continue to 6.

6.) You will have to adjust the HV potentiometer located in the electronics box.

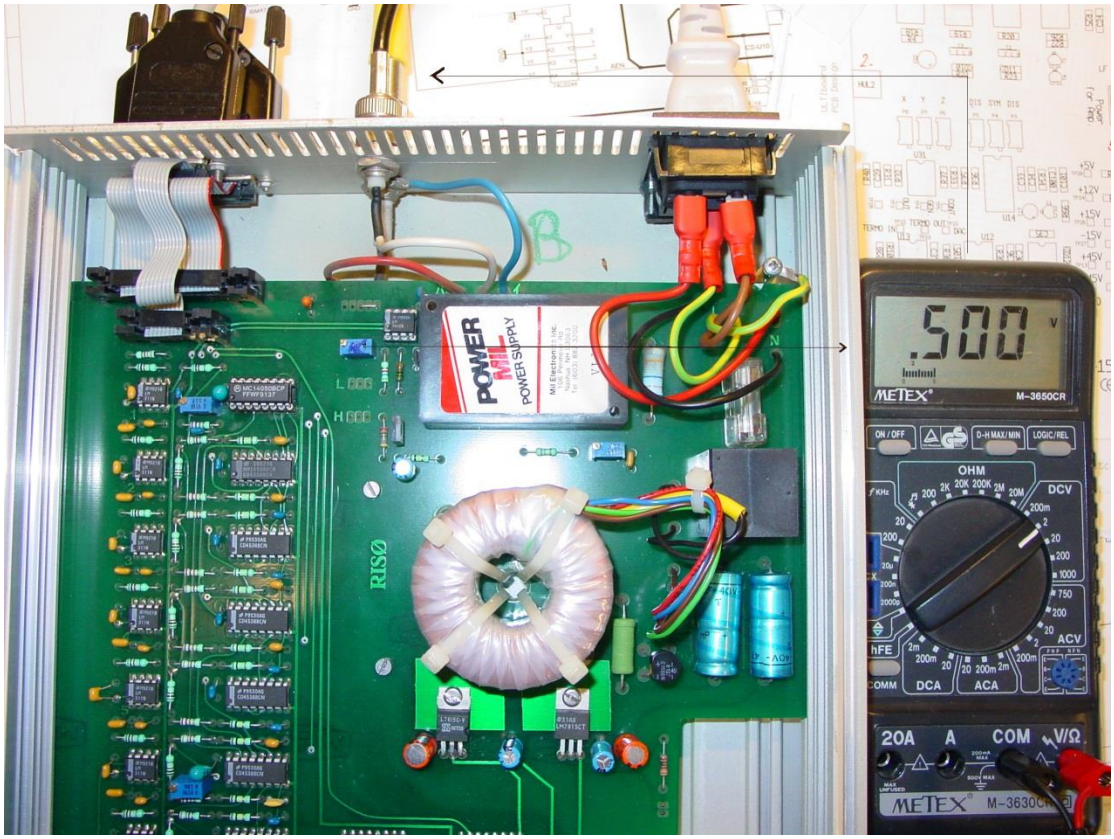
7.) Take the lid off the electronics box by removing the two grey plastic frames, and unscrew the four upper screws (2 at the front and 2 at the back)

8.) Adjust the potentiometer (Please see next page), until you measure 0,500 volt on the connector.
(You can then try to adjust the HV up and down from the software, just to see that it works.)

9.) Put together the electronics box, and connect the HV-cable again.

You can now use the counter.

The next thing to do is to insert a source in position 5, select HV mode = Auto, and let the software set up the HV. (See the manual page 8 "High Voltage mode & setup")



Turn on meter, and measure voltage on “1/1000” connector.
(Be sure to set the software to 500V first)