Simulyzer-Software Operating Help

-Seskion GmbH-

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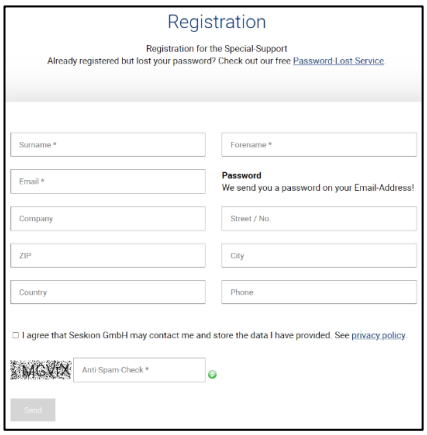
Version:	(1.0) 05.11.2021 - Creation
	(1.1) 03.12.2021 - Small improvement (Download)
	(1.2) 21.12.2021 – Connecting the Simulyzer
	(1.3) 28.06.2022 – Scaling, Saving and Exporting Data

Simulyzer-Software Operating Help

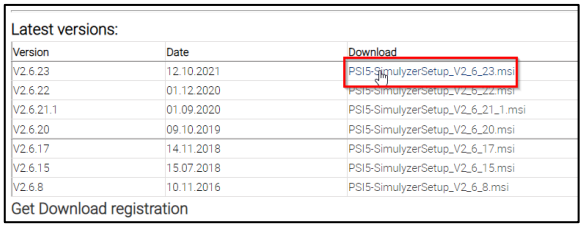
The software for our simulyzer boxes can be downloaded from our website without any problems. Here in the example this is illustrated with the PSI5 Simulyzer software. For any other software this process is identical. First go to https://www.seskion.de/produkte/ to select your hardware or software. If you have then selected one of our products, you will find the following overview on the page:

If you are downloading software from us for the first time, you will need to register for free. To do this, click on ***Get Download registration*** at the bottom left. You will now be forwarded to the registration page, where you can enter three mandatory details as well as other optional details.



To be able to download the latest software now, please go to the listed software versions as shown in the first screenshot. To download the latest version, please look at the version number and date. For the download please click on the respective version on the right side under Download.

Now you can download the latest version of our Software. Make sure that you have the newest one to get all the newest features. The software is continuously updated.



A login window will appear where you can log in with your registered e-mail address and the password we sent you.

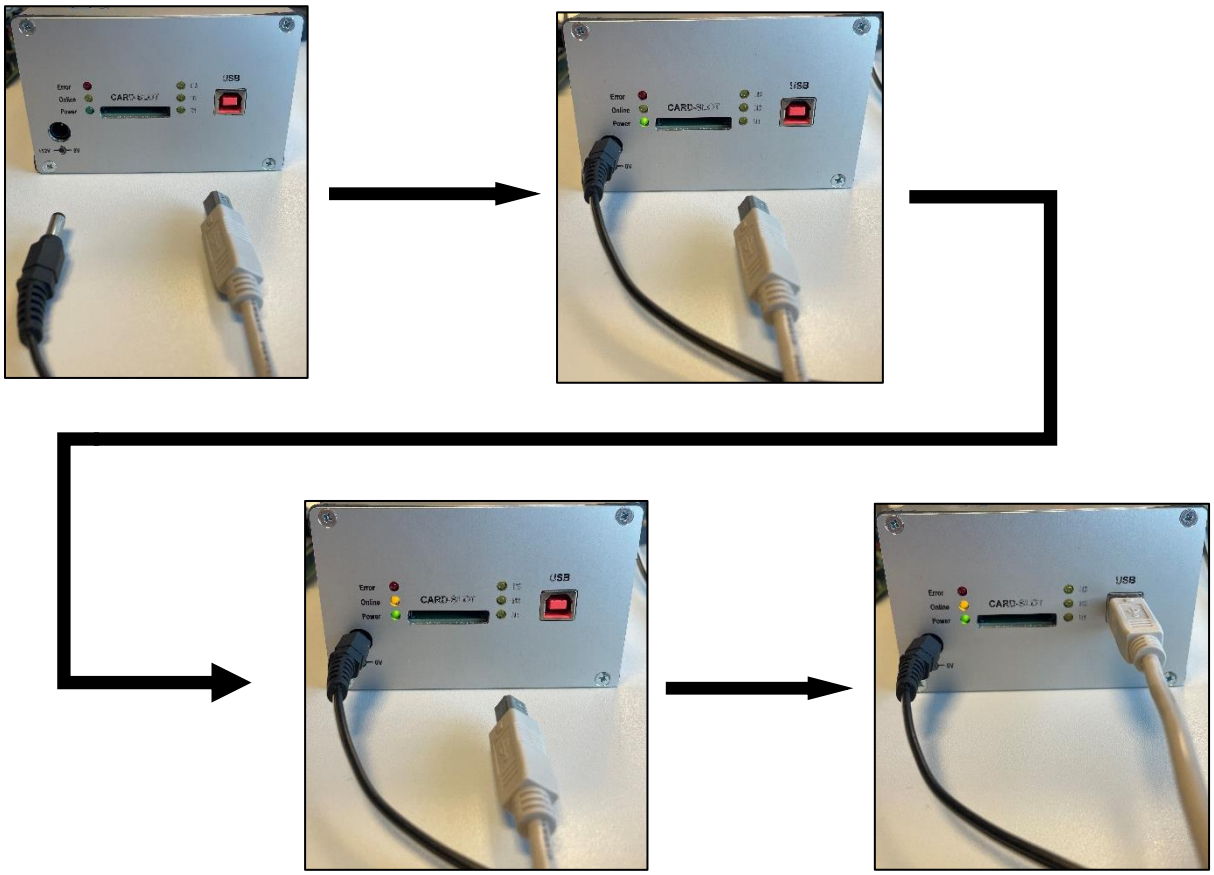
If the Microsoft Defender should report, you can ignore it and select ***Run anyway***.

Install the software as specified.
A desktop link will be created automatically.

All files can be found under:
„C:\Program Files (x86)\SesKion GmbH“

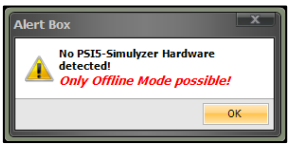
Simulyzer-Software Operating Help

If you have the Simulyzer Hardware Box, please make sure that you operate in the correct sequence:

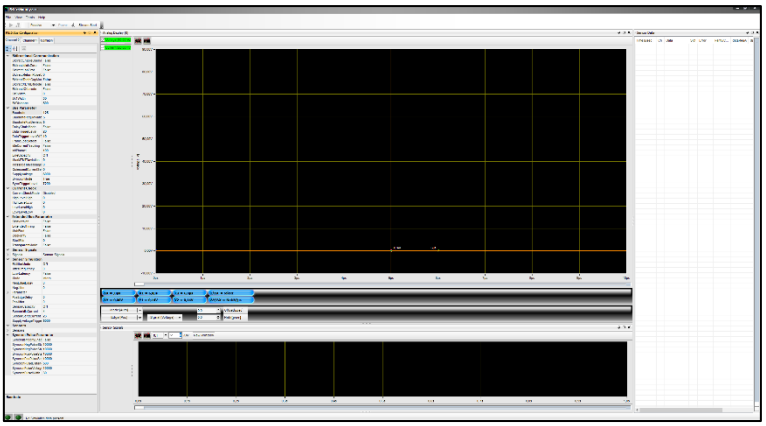


Now you can open the the matching Simulyzer Software.

If you have not yet connected a Simulyzer box to the PC, a short note will appear to inform you that no box has been detected and that the software will therefore only work in offline mode.

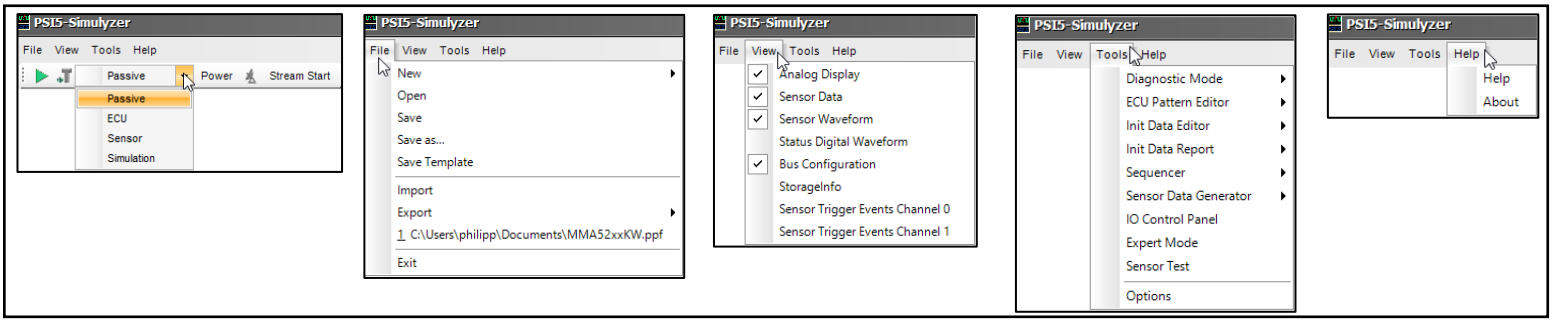


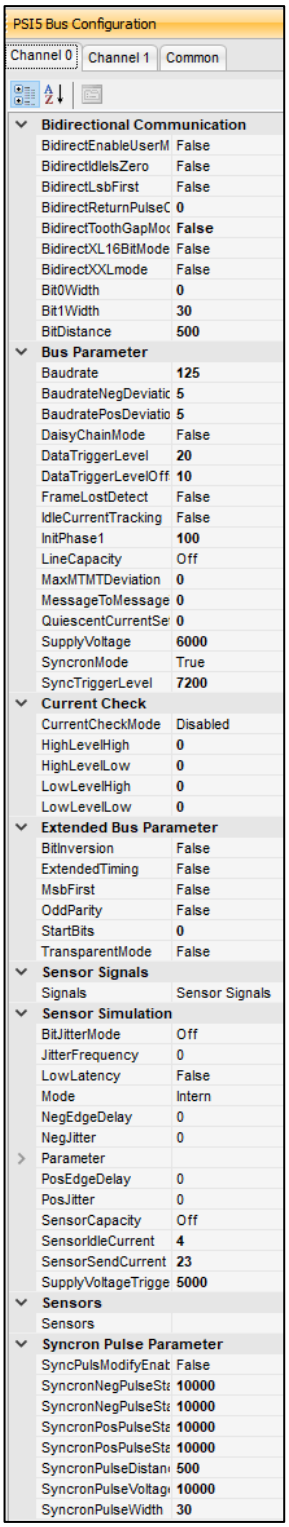
If a Simulyzer box is connected to the PC, or if you have closed the message box with ***OK***, you will now see the interface of the Simulyzer software:

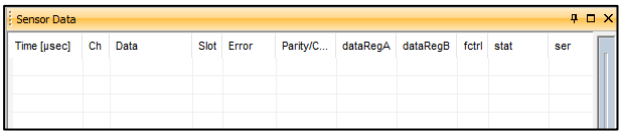


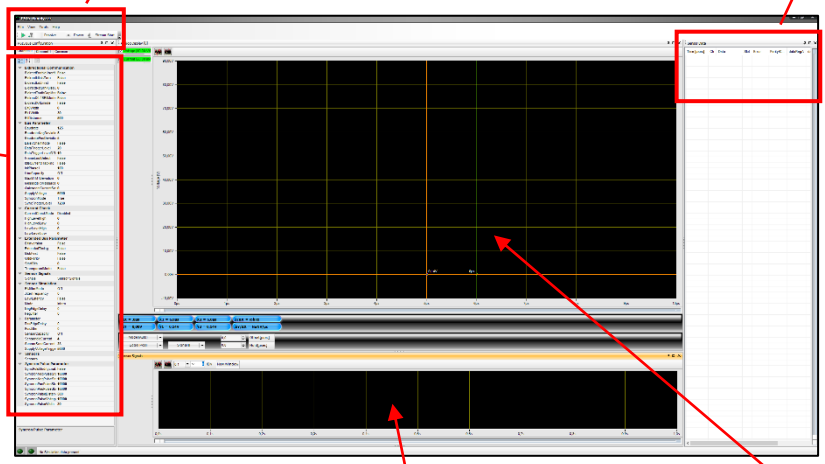
Without a corresponding software license, which is bound to either PC-ID or Simulyzer-Box, you can only view the interface and the individual menu items. For measurements and further functionalities a license is mandatory.

Overview of the graphical user interface







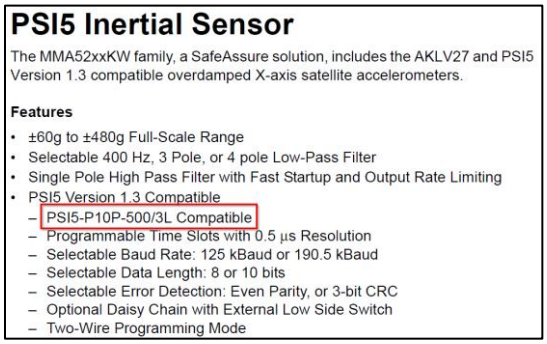


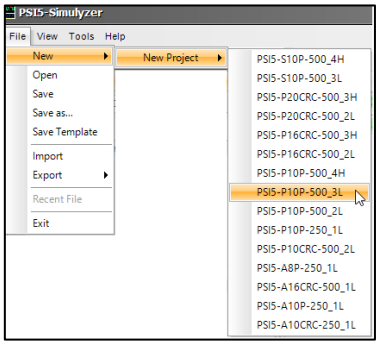
Graphical representation Sensor Signals

Graphical representation Analog Display

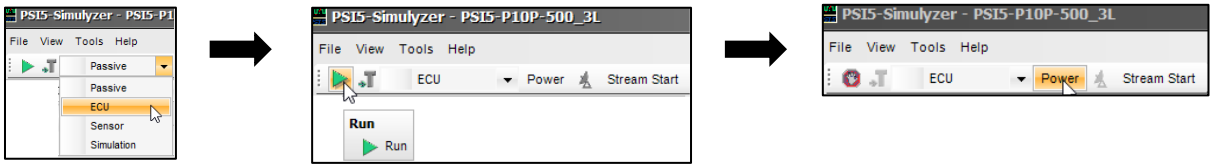
Simulyzer-Software Operating Help

In order to be able to work with the Simulyzer software, a new project must be created at the beginning after connecting the Simulyzer and the sensor. To do this, use the menu group ***File*** and the command ***New*** and ***New Project***. Which version your PSI5 sensor has you can read in the features from the manual of the respective sensor. In this example a NXP sensor of the MMA52xxKW family with a PSI5-P10P-500-3L compatibility is used.

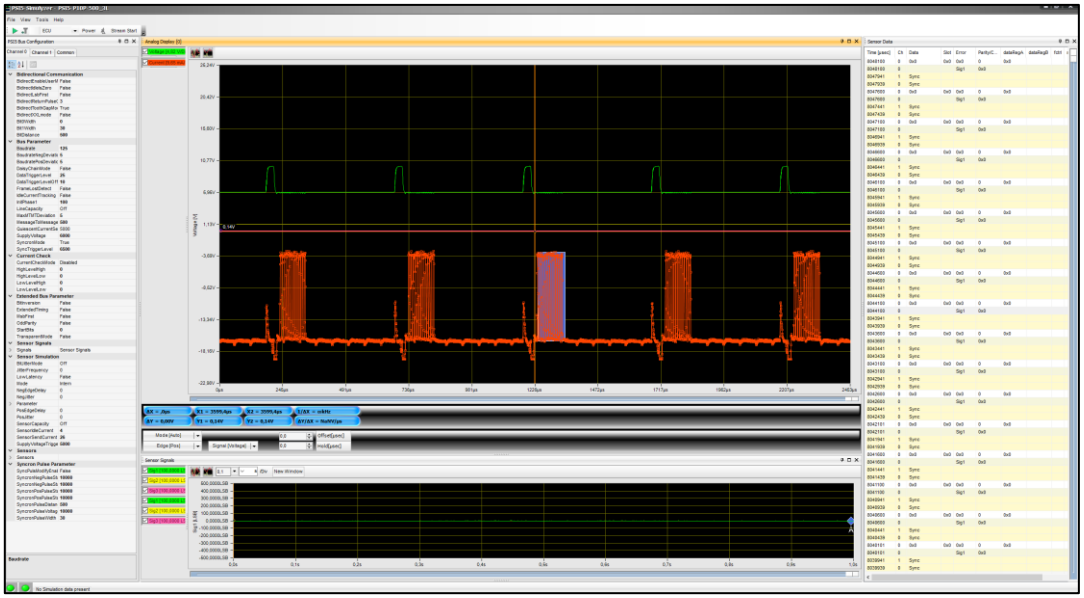




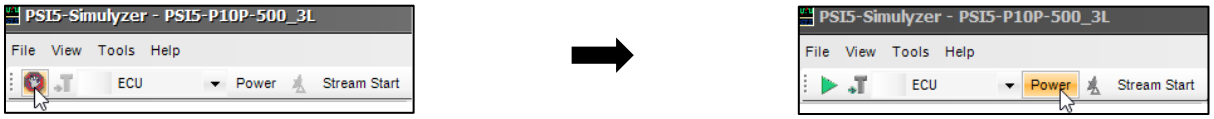
Next, start a measurement by first selecting the ***ECU mode*** and then selecting the ***green arrow*** and ***Power***.



You will now see that on the right side the individual data with time stamp are listed in tabular form. In the middle this is graphically represented.

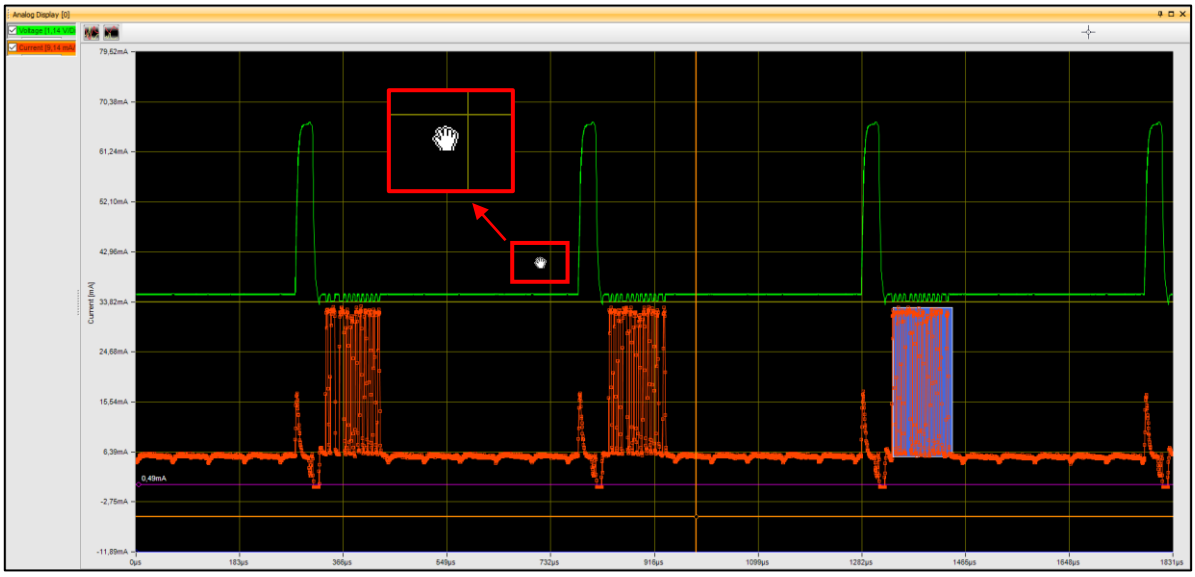


To stop the measurement, press the ***red symbol*** and then the ***power*** button to end the measurement completely.



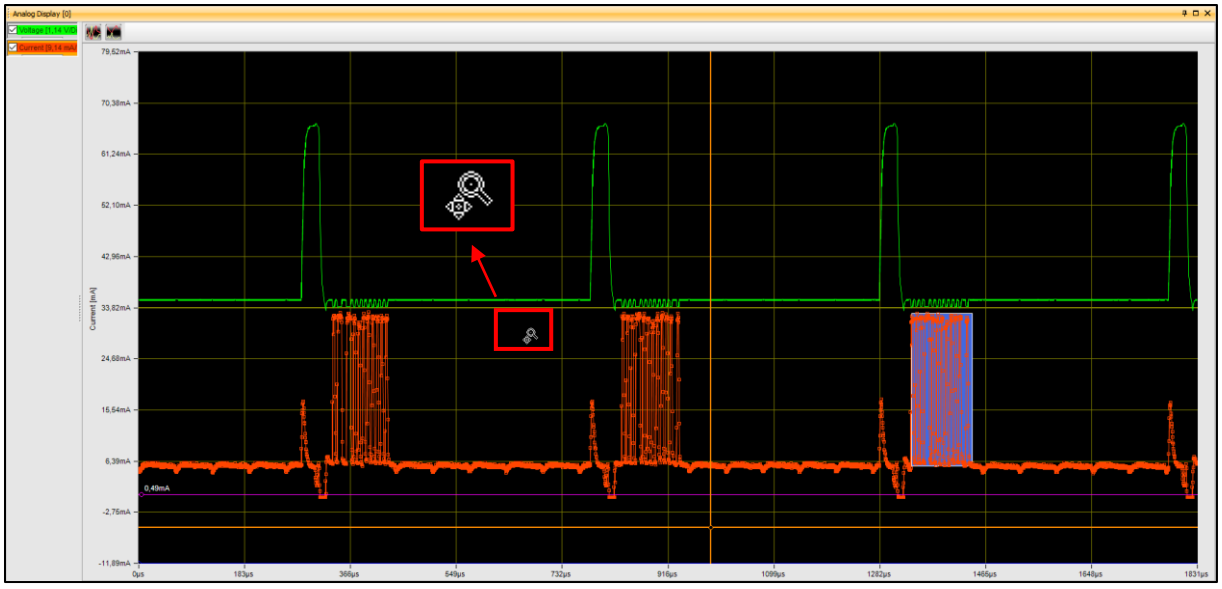
Shortcut: Moving the graphical measurement

If the Analog Display or Sensor Signals is selected and you are inside the diagram with your mouse, you can hold down ***CTRL*** to get a hand with which you can move the diagram back and forth as you like.

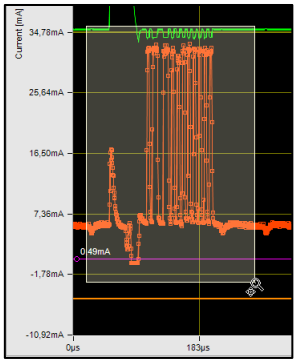


Shortcut: Zooming in the graphical measurement

If the Analog Display or Sensor Signals is selected and you are inside the diagram with your mouse, you can hold down ***SHIFT*** to zoom in or out with the mouse wheel.

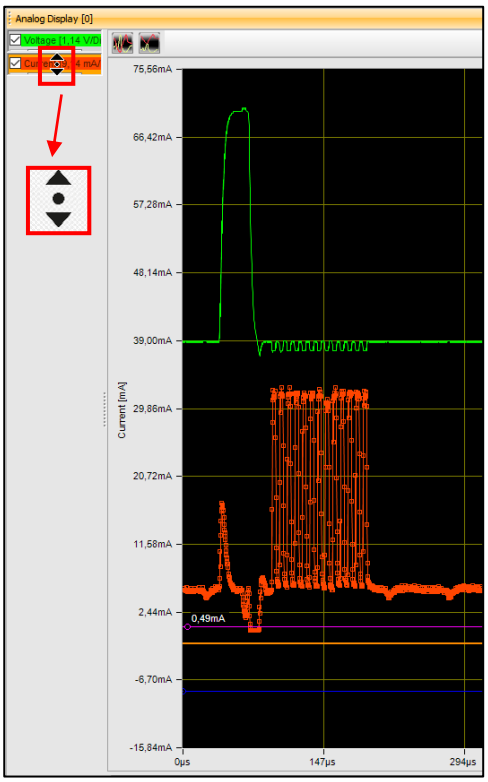


If you want to zoom in on a certain area, you can move around it with the ***left mouse button*** while holding down ***SHIFT***.

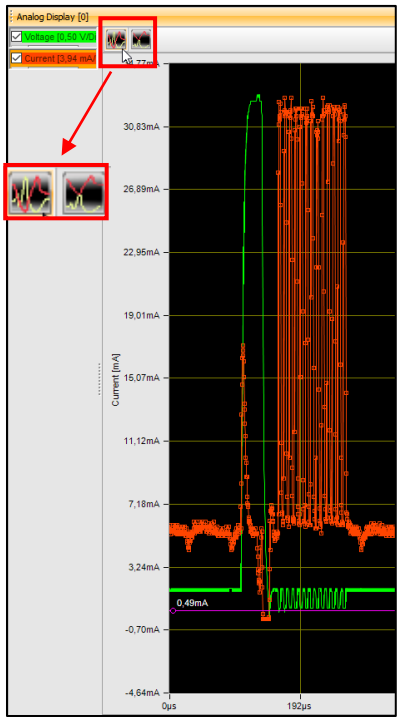


Shortcut: Shifting the graphical measurement

To be able to drag the green (Voltage) and the red (Currency) line apart or on top of each other, you can click with the ***Left Mouse Button*** in the upper left corner of the Analog Display and move it as you like. In addition, you can hide or show the individual lines by checking the respective box. The same applies to the Sensor Signals diagram field.

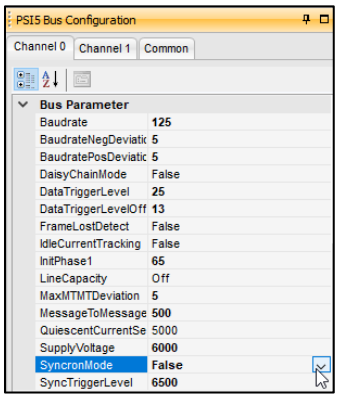


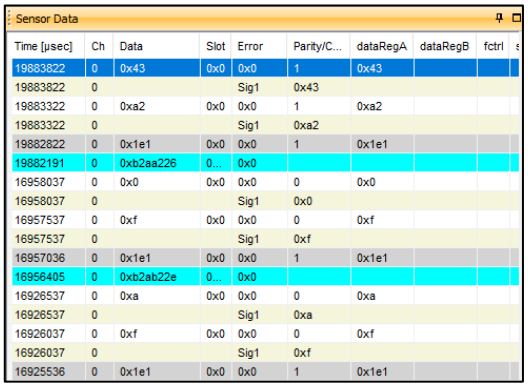
The buttons next to it offer a similar function.
Here you can place the measurements directly above or below each other with the predefined option.
As with the manual move function, this function also applies to the diagram field Sensor Signals.



Better Overview without Sync pulses

For a better overview in the Sensor Data you can set the ***SyncronMode*** in the Bus Configuration on the left on ***False.***
As a result, the Sync pulses are not displayed in the table.





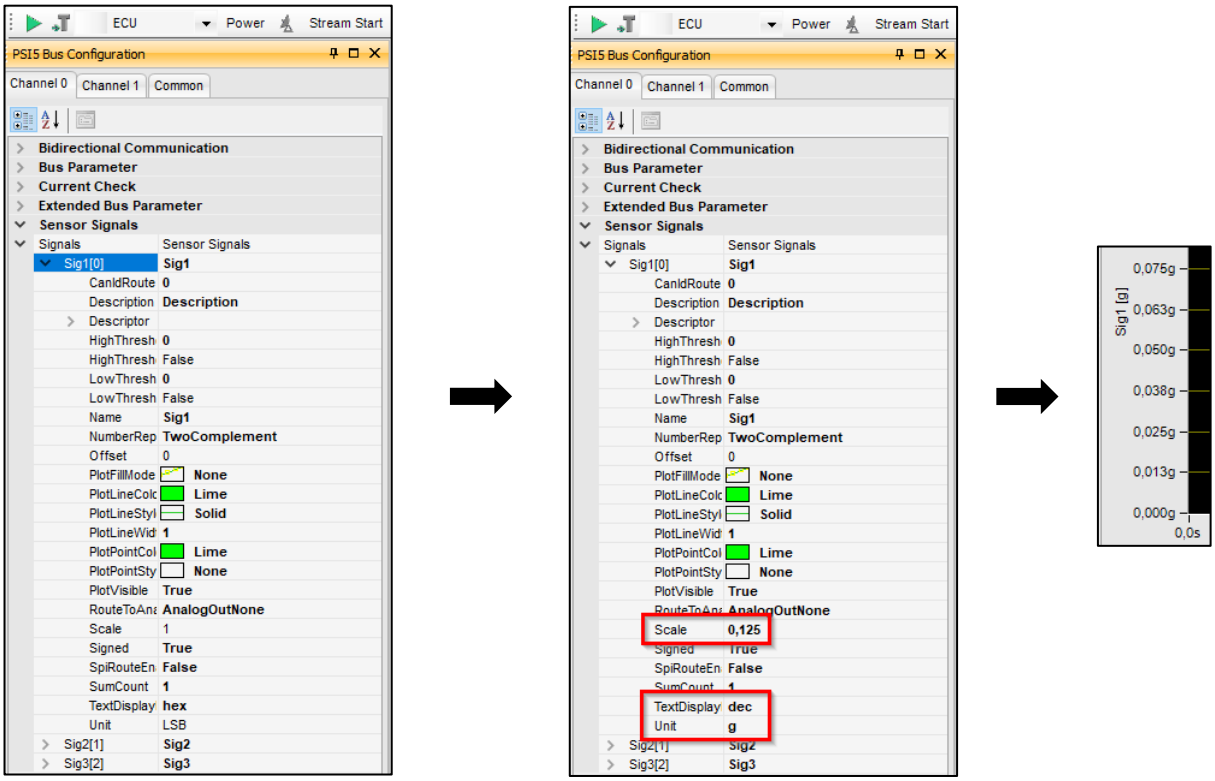
Scaling Data

To get the correct conversion of the displayed LSB (least significant bit) you have to look into the sensor specification first. In the specification the conversion can be found under the sensitivity. In our example the sensor is in normal mode, i.e. in a +-60g range. The table shows that 8 LSB correspond to one g (8LSB = 1g).

#	Characteristic		Symbol	Min	Typ	Max	Units
	Sensitivity (10-bit output @ 100 Hz, referenced to 0 Hz)						
54	±60g Range	*	SENS	—	8	—	LSB/g
55	±120g Range	*	SENS	—	4	—	LSB/g
56	±240g Range	*	SENS	—	2	—	LSB/g
57	±480g Range	*	SENS	—	1	—	LSB/g

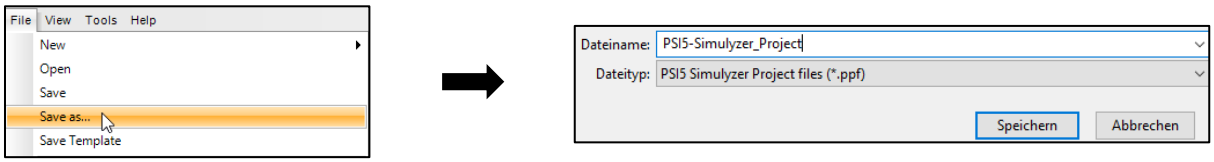
Now you can set the correct parameters in the software so that the physical values can be seen. For this you go in the left column under ***Sensor Signals*** to the ***Signals*** (Sig1, Sig2 or Sig3). There you can adjust and modify some details. In our case we need the ***Scale***. Here is always 1LSB entered. And because we know from the sensor specification that 8LSB = 1g, we have to enter 1/8 respectively 0,125 there.

In addition, the two points ***TextDisplay*** can now be changed to dec and the ***Unit*** can be changed to g. Finally you can see the changed values in the graph of the Sensor Signals.

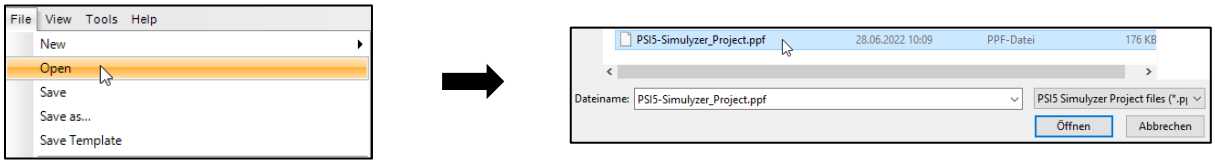


Saving Data

You can save your project and measurements by clicking ***File*** and ***Save as***. Then you can choose the location where you want to save the file and enter the file name. Click on ***Save*** and your file will be saved.

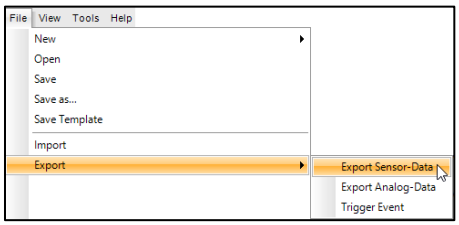


To load the file of your measurements back into the program, click on ***File*** and then on ***Open***. Now you can select the file you have saved into the chosen location and click ***Open*** to load the file back into the program.



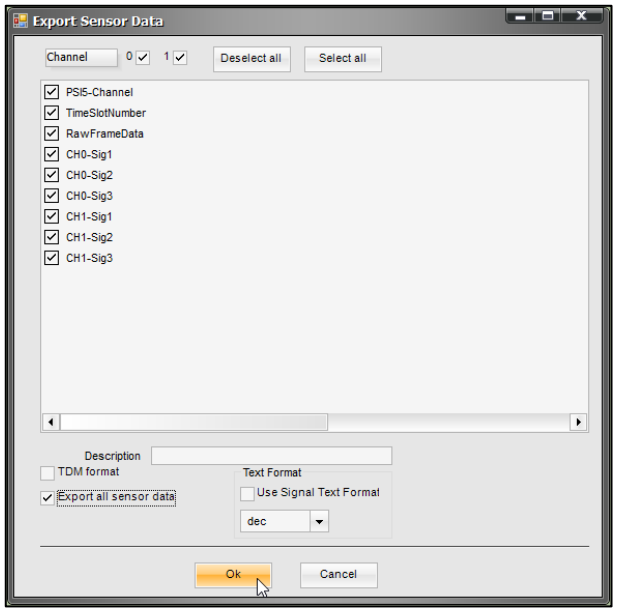
Exporting Data

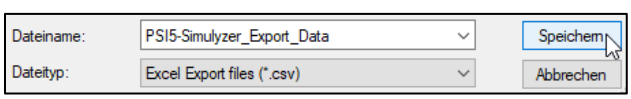
In order to open data in another program such as Microsoft Excel with a .csv file, you must export the project and your measurement data. To do this, click on ***File***, ***Export*** and ***Export Sensor Data***.



Afterwards a window opens where you can configure your data. You can select how the data should be exported. For example in TDM or in hexadecimal, decimal or physical format.

The most common variant is as shown on the right. The best way to do this is to check the ***Export all sensor data*** box and then click on ***Ok***.





Then you can choose the location where you want to save the file and enter the file name. Click on ***Save*** and your file will be saved.