EdWin – EwinView quick users guide

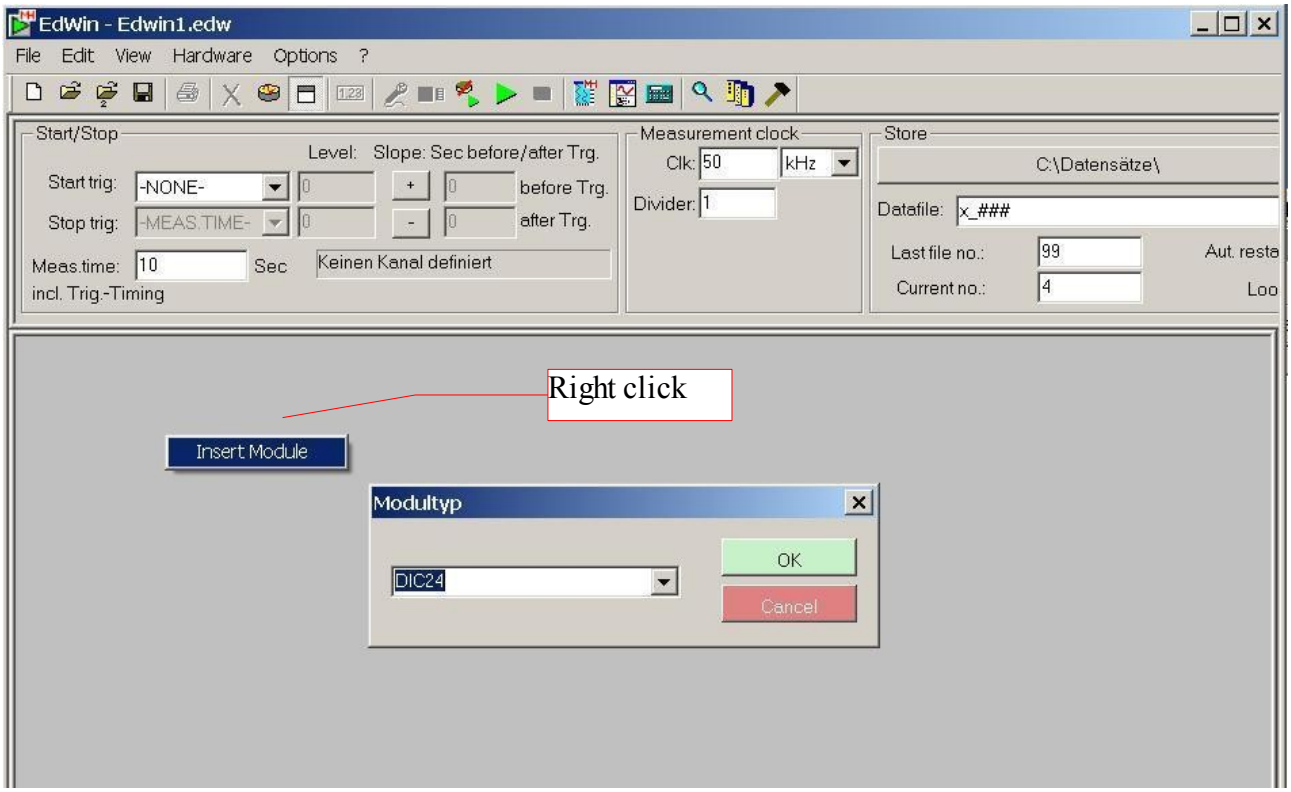
1 Overview

EdWin and EwinView are two software packages for data acquisition and visualisation. **EdWin** controls the connected Hardware, manages all needed settings for the hardware, samples the data after starting the measurement, stores them on the selected storage media and provides them for EwinView which shows the data in realtime.
EwinView takes the data from EdWin in realtime and shows them in different, user selectable ways. For the analysis after measurement we have a powerfull software package named **EdasWin**.

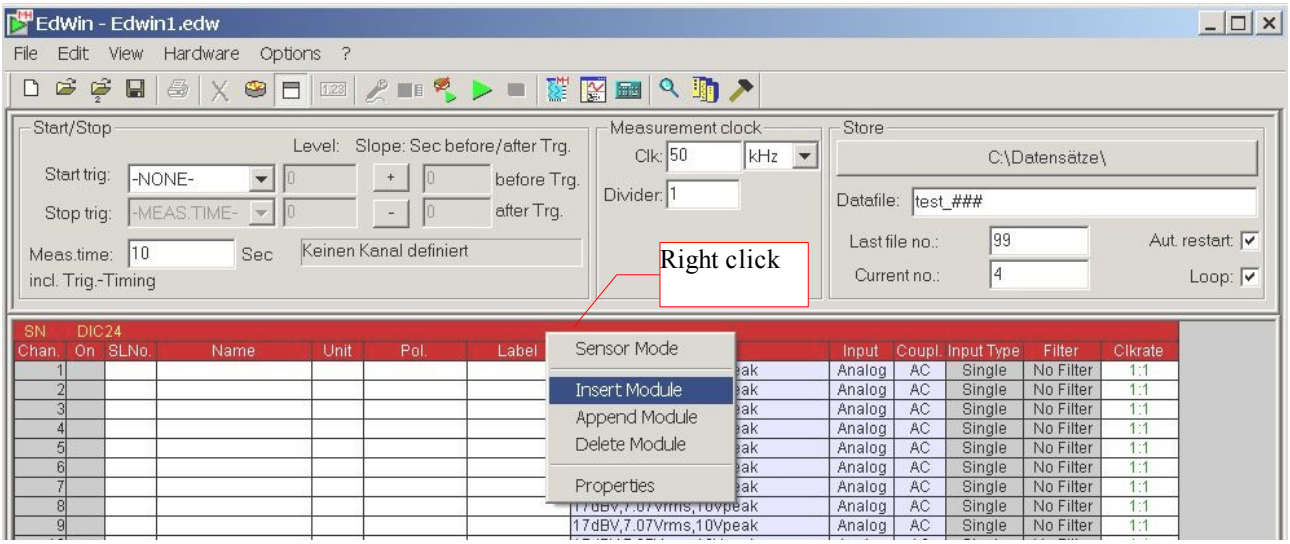
Inhaltsverzeichnis

2 Work without connected Modules

Working without hardware is always necessary if the hardware is not available, but a measurement has to be prepared
A right click in the empty EdWin table range shows a popup menu. „Insert Module“ shows the „Module type“ dialog. Please select a module from the combo box and confirm with ok.



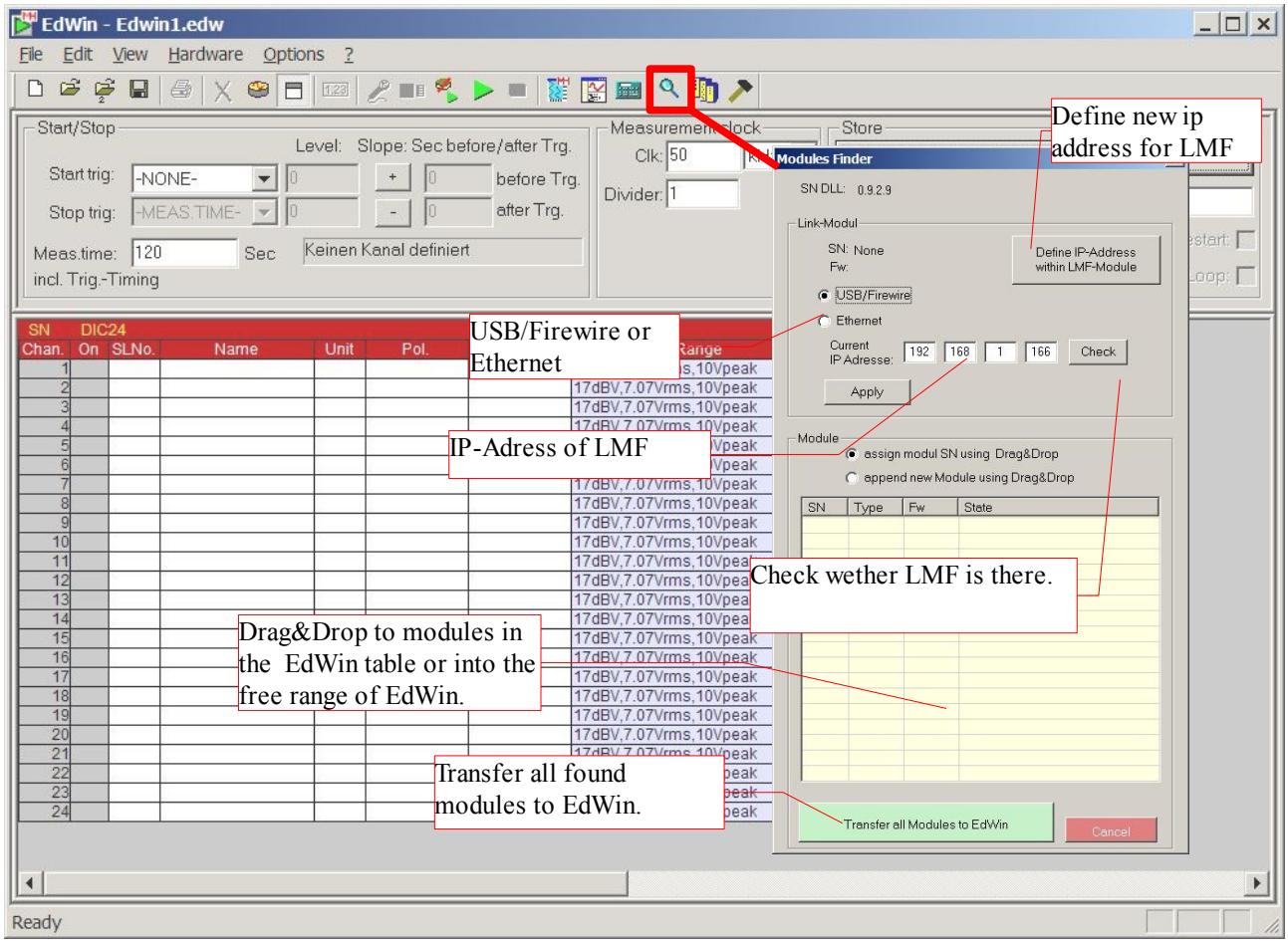
You can insert or append more modules by right clicking in the header of a module.



Later if you connect real modules to the system, you can assign the real modules to the defined modules per drag&drop. Look at 3.

3 Working with connected modules

You can connect the modules to the PC with USB, Firewire or Ethernet. Please select the desired interface.
If you select ethernet you must enter the ip-address of the Link Module (LMF). With the button „Check“ you can check wether there is a LMF at the entered address.



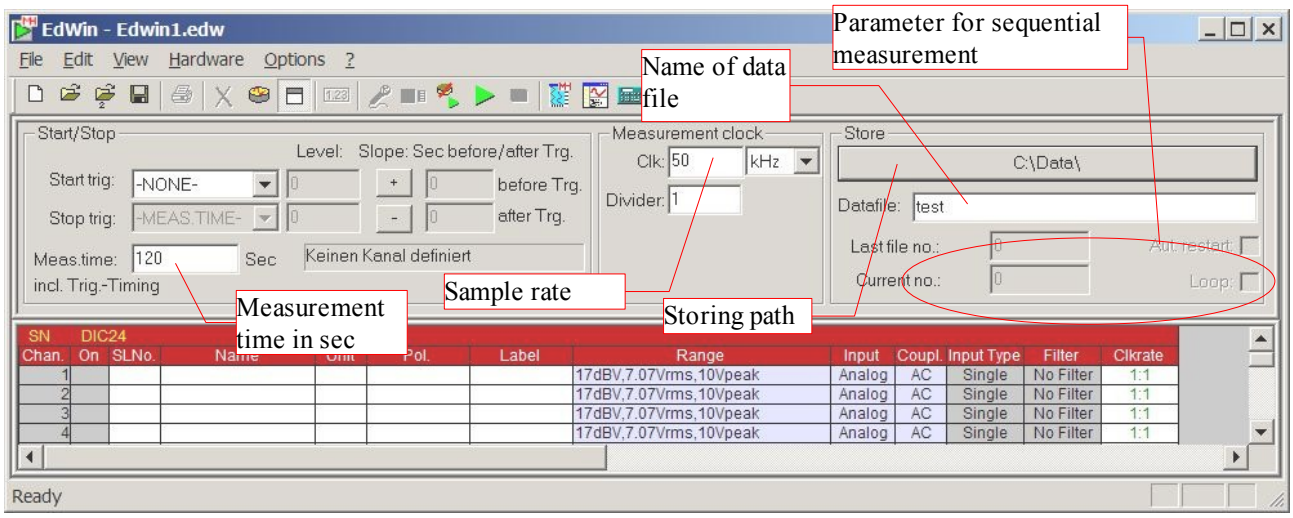
If modules are connected, you can assign them in two ways.

1. If modules are already defined (look at 2.1) you must assign the real modules, found with the „Module Finder“, by drag&drop.
2. If no modules are defined in EdWin, you can define them in EdWin by drag&drop or you can define all found modules with the button „Transfer all Modulesd to EdWin“.

4 Measuring time, Sample rate and Storing

The sampe rate depends from your application and must be twice as big as the highest frequency you want to measure. The minimum measurement time is 10sec. The maximum measurement time is only limited by the free space on your storage media.
You must define your storage location (for example :Harddisk, Net device or USB stick).

Additionaly you must define a file name. If „#“ characters are defined it is a sequential measurement. If so you must additionaly define the biggest number and the starting sequential number.



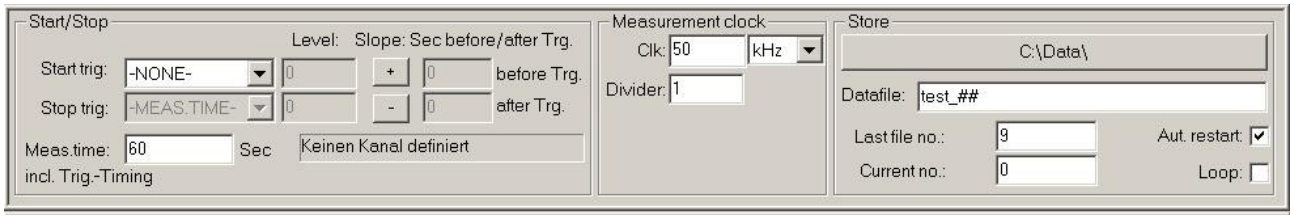
5 Definition of sequential measurement

Instead of one big data file you can store the same data without loss of measurement points in many small files. This is useful if there is a possibility that modules or pc crashes. For example in a test drive session.

First example:

Measurement task:
you shall measure 10 minutes.

Settings:

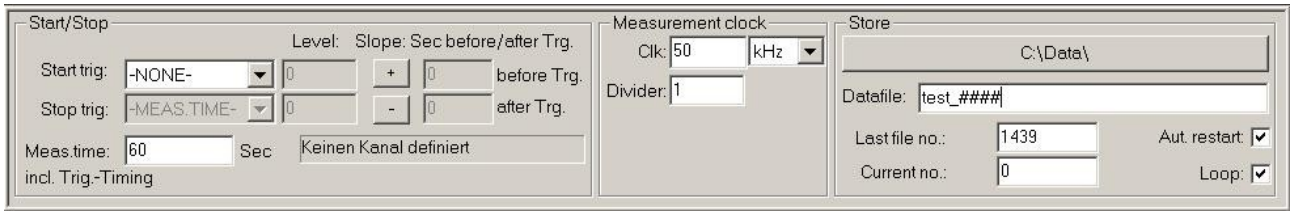


After start of the Measurement the file **test_00.edt** will be streamed After 60 sec this file will be closed, and the next data file named **test_01.edt** will be opened and streamed. And so on until data file **test_09.edt**. Because the Check box „Loop“ is not set the measurement will be stopped. Now you have 10 files one for every minute. In **EdasWin** you can process these files as one big file. For example: if there was a failure after 7 minutes the files named 1 to 7 would be safe and closed, the files 8-10 may be lost depending on the state of the PC

Second example:

Measurement task:
The production of glass panes should be continuously monitored. The data of the last 24 hours will be analyzed at any time.

Settings:



After 1440 files (equivalent to 24 hours) the measurement starts again at test_0000.edt. (Ring buffer = on). The analysis has access to all files, except those that are currently open for writing. Thus, the analysis of data in near real time (t - 1 minute) measurement îs possible. This runs until you stop measurement with F5 or the Stop button.

6 Channel setting

6.1 Sensor location number

The sampling number is used to uniquely identify a measurement signal. It can be used in real-time visualization and also in the offline analysis. The name of a channel can be changed by the user.

For example, as a sampling number of the vehicle speed 133 is selected, then a subsequent calculation of this number can be defined. If the name of the channel changed, for example: depending on the user's native language, it remains the pre-defined calculations still valid. A change of channel allocation is therefore without effect. Edwin supports the definition of sensor location numbers associated with the name, unit and measuring range with the program SignalDB. These entries can be transferred by drag & drop to Edwin.

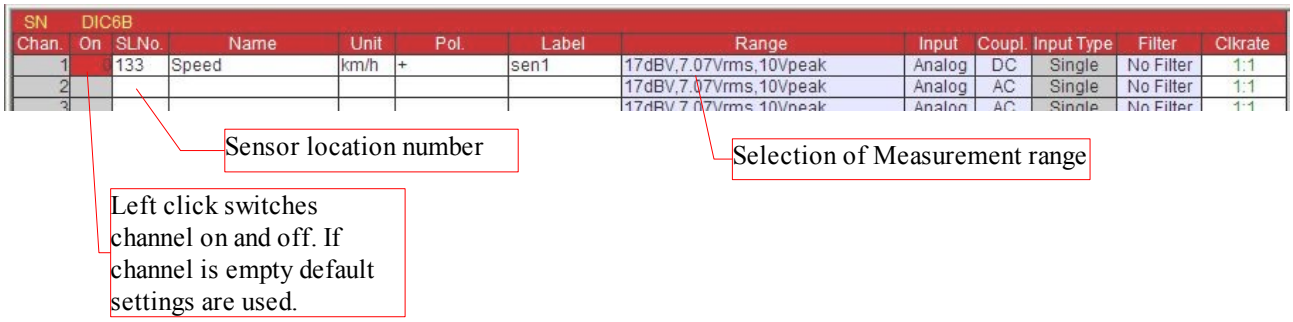
6.2 Polarity

Polarity describes how a positive signal is to be understood. For example: An accelerometer for longitudinal acceleration of a vehicle. If it is installed in the wrong direction it delivers a negativ signal if you speed up and delvers a positiv signal if you slow down. The polarity documents this behavior. EdasWin can operate with the specified polarity.

6.3 Setting in standardmode

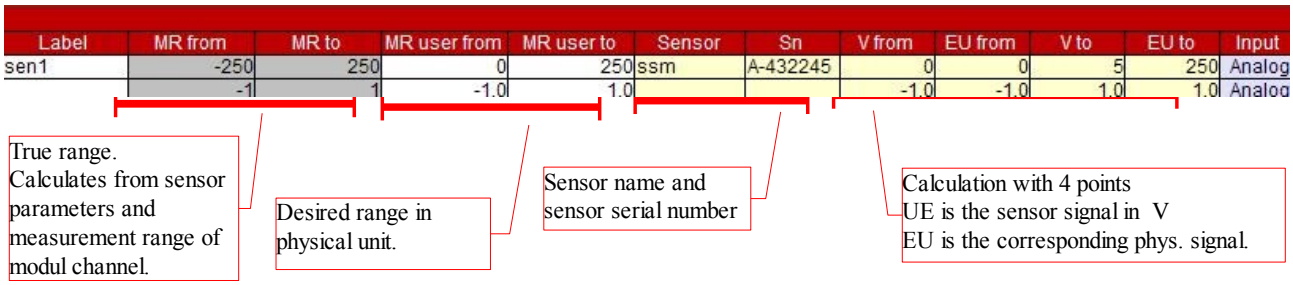
Edwin offers two types of measuring definitions:

Easy mode in which you define the measuring range in volts. You are responsible for the conversion into other physical units.



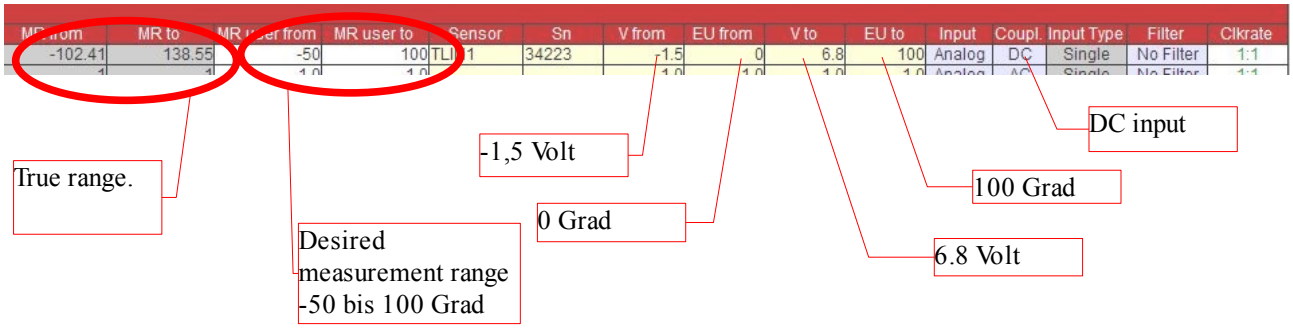
6.4 Sensor mode

Right-click on the module header opens a popu menu. Here you can select the sensor mode.



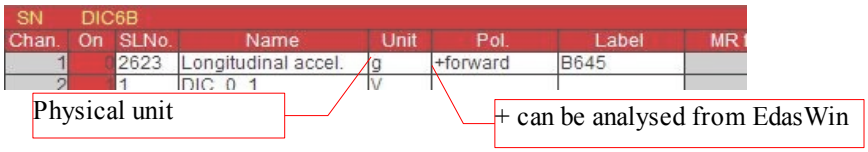
In sensor mode, you define the signal from the sensor, and the physical equivalent.
Therefore you define a voltage range your sensor delivers and according to the pair of values of the physical area. The real-time visualization and offline analysis shows the values in the right physical range.

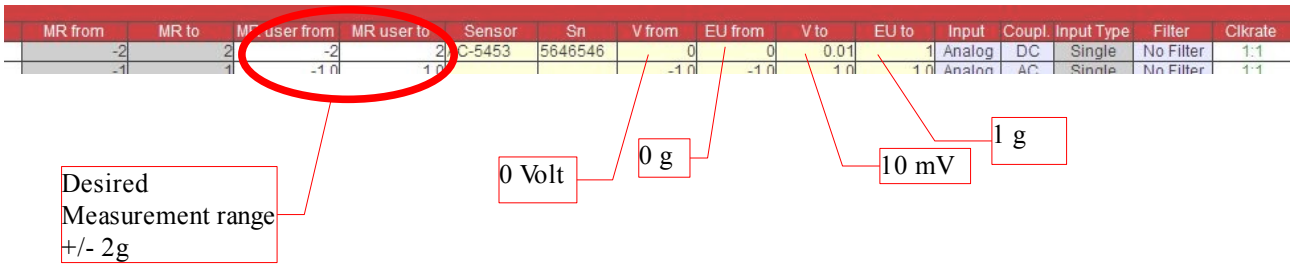
First example:
You have a temperature sensor which delivers at 0 Grad -1.5 Volt and at 100 Grad 6.8 Volt.



Edwin calculates the amplifier setting from the given the range. The amplifier setting and the sensor parameters define the true range.

Second example:
You have a acceleration sensor with a data sheet stating the sensitivity of 10mV/g





6.5 Setting with sensor location number and sensor definituion list with the program SignalDB.

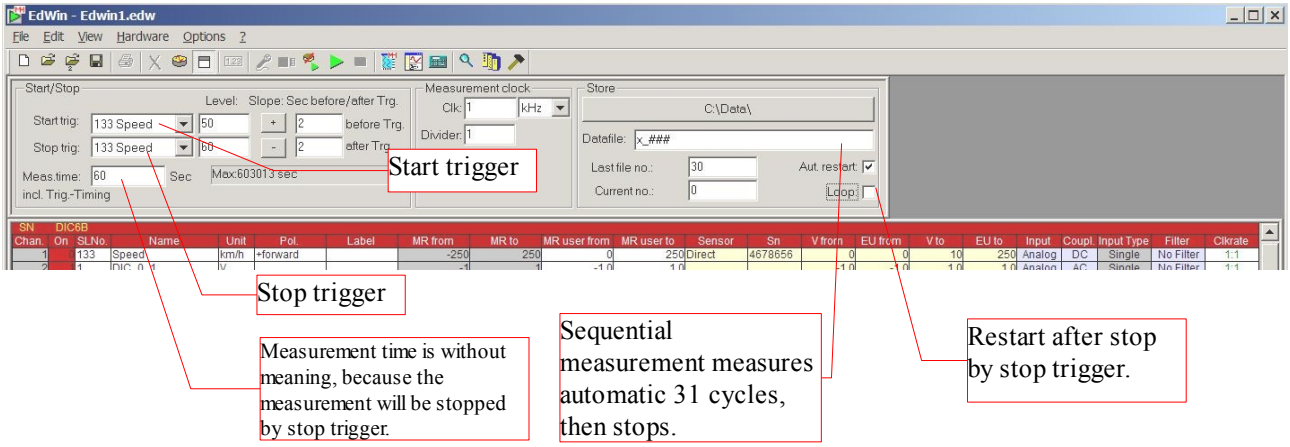
The program SignalDB manages sensor location lists ans sensors. You can insert them into EdWin by drag&drop. This makes channel setting very fast and flawless. Diese Methode bietet sich immer dann an, wenn wiederkehrende Messstellen und Sensoren in verschiedenen Messaufgaben verwendet werden.

7 Triggered measurement

Edwin allows the definition of a start trigger and a stop trigger. The measuring time before and after the trigger can be defined. In addition, it may be defined, whether after triggering the measurement should be started again. (see 4)

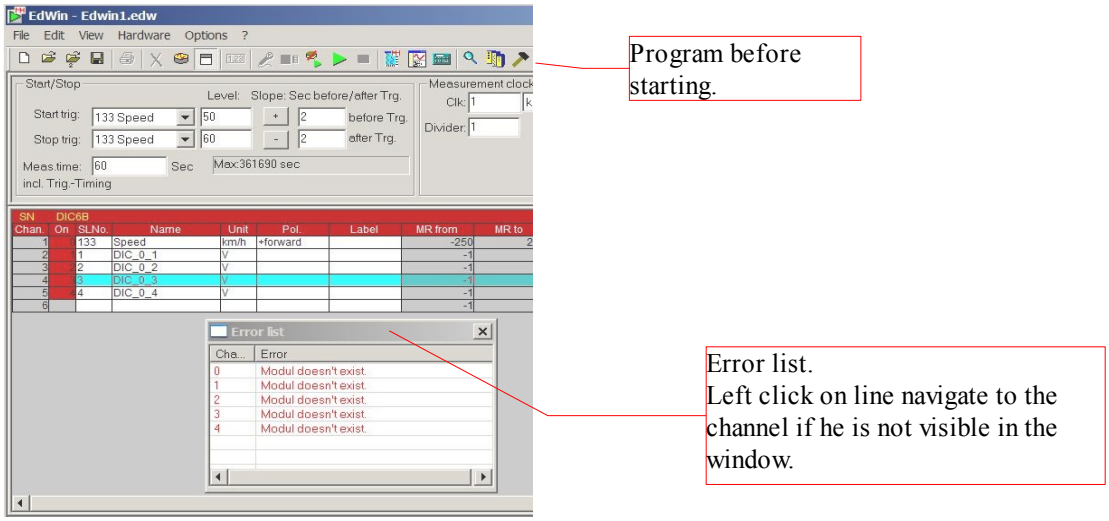
Example:

A measurement in a ground vehicle: Data should only be measured when the speed of 50km / h is exceeded. The measurement shall be stopped when the speed drops below 40km / h. As this occurs repeatedly in the cycle, a sequential measurements will be defined and the "Aut. Restart "= on is setted to restart the measurement after triggered stop.



8 Programing the amplifier modules

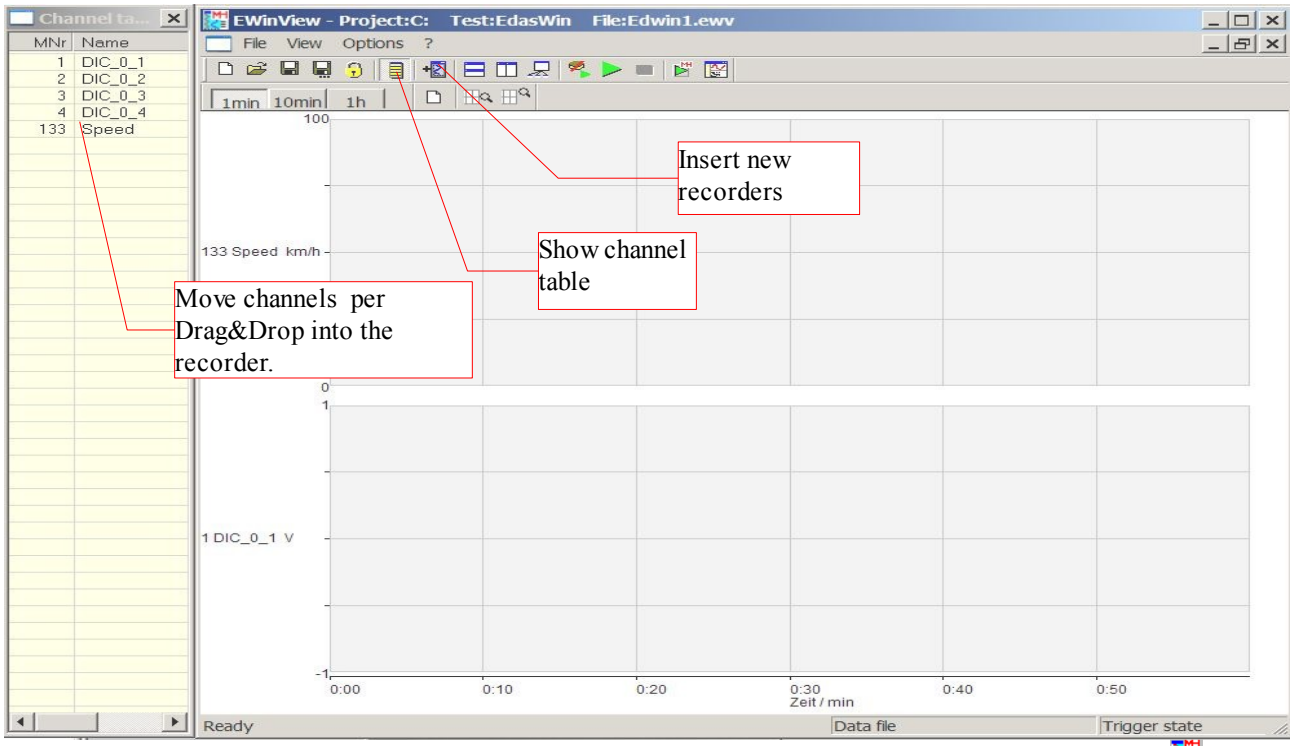
The modules will be programmed with starting the measurement. If something is wrong an error log dialog pops up.
Alternativly you can program the modules with the before starting measurement. The advantage is, that all bugs can be eliminated before starting the measurement.. Pressing the start button starts the measurement ensuring its correct and reliable.



9 Starting and stoping the masurement

Measurement will be started with the function key „F4“ or the button.
Measurement will be stopped after the defined measurement time intervall or the stop trigger or with function key „F5“ or with button.

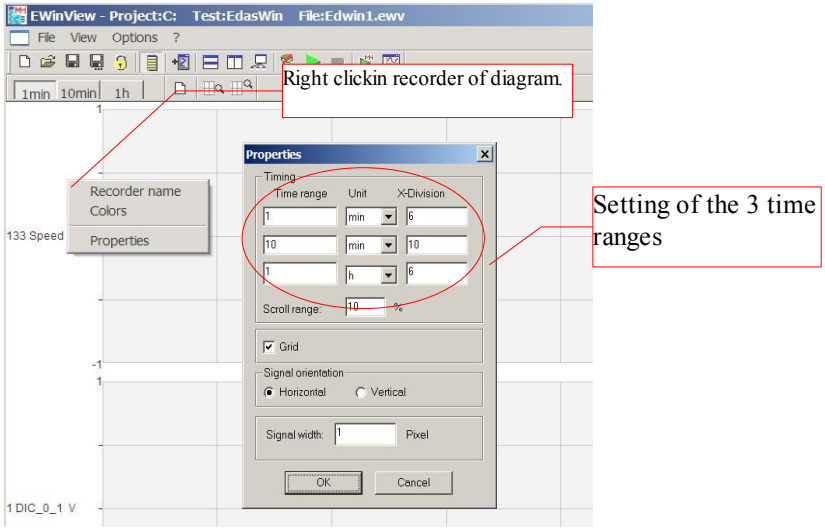
10 Setting the realtime visualization



The real time visualization software EwinView will come to front with pressing the button . EwinView represents you any number of different recorders. By default EwinView starts with the synchronous data recorder. Here you can insert signals from the channle table by drag & drop. You can do this before or during the measurement.

10.1 Setting the time axis

There are 3 definable time ranges. You must define them before starting measurement.



10.2 Setting the Y-axis

You can define the y-axis before or during the measurement.