



**sylvac**

**User guide**

**Manuel utilisateur**

**Bedienungsanleitung**



Sylcom 1.5.X

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## PREAMBULE

Sylcom is the latest software product to be launched by Sylvac and has been designed to process information from instruments connected via Bluetooth® Wireless technology or via a USB cable. It creates an almost limitless number of display characteristics spread over one or several pages. Several display modes are available so that the status of the variable measured (GO/NG) can be visualised instantaneously. Sylcom can also be used to measure components sequentially, to collect all values simultaneously and to define a time interval in order to save values automatically. The data can be saved in Sylcom and then exported to an Excel file.

The concept is to offer a modular software application based on the specific functionalities required.



## 1. MINIMUM HARDWARE & SOFTWARE REQUIREMENT

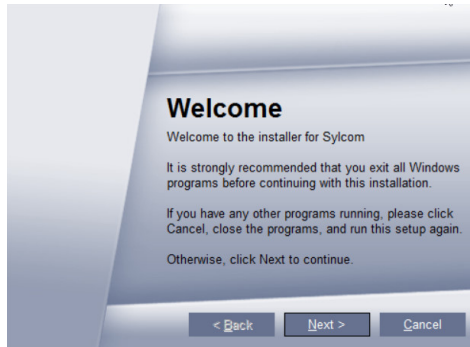
The minimum hardware and software requirement are listed as below :

- Software requirements : Windows 7 or 10 multicore 64-bit processor (Intel strongly recommended)
- Hardware requirements : 4GB RAM (8 GB recommended)
- Harddisk (free space 200 MB required)
- Minimum display resolution 1280x800 (recommended 1920x1080)

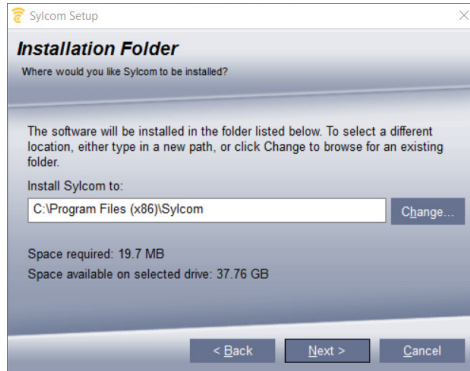
## 2. INSTALLATION

1. Run install file as administrator.

2. Click "Next" on the Welcome page.



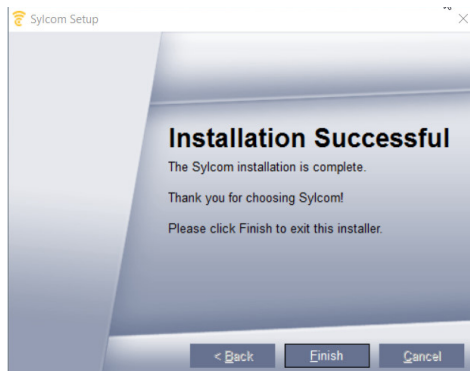
3. Select installation folder or leave as default.



4. Option for single or multiple user's accounts.



5. Install FTDI driver to connect USB Sylvac instruments.



During Sylcom installation, Redistributable .NET 2013 and Framework .Net 4.5 will be installed on your computer if not present.



## 3. LICENSES

There are 4 different license packages that you can choose between : Lite, Standard, Advanced, PRO.

To activate the license, you can choose between a physical USB dongle or a software license. For more information, see [About screen](#).

### 3.1 Packages

#### Lite package

The free version of Sylcom limited to one connection can be downloaded **free of charge** from our website. It lasts 60 days.

#### Standard package

The standard version of Sylcom with the capacity to connect up to **16 instruments** can be purchased online from our website or from the Sylvac distributor in your country.

It allows for **Advanced functions** such as **custom formula** (e.g. TAN, COS, EXP, LOG, SQRT, etc.) and **flatness** with automatic selection of instruments (see Measurement screen/Characteristic panel/Edit characteristic for more information) as well as **connections to M-Bus modules**.

By connecting one master module M-BUS RS to the computer with an USB cable, you can as of now connect to Sylcom our Sylvac inductive probes through the M-BUS 8i modules, as well as capacitive probes through MB-4C, air gauges through the M-BUS AG, P12D absolute digital probes through M-BUS 4P, Input or Output connection through MB-IO or temperature sensors through MB-TP.

#### Pro package

The solution for all multi-gauging measurements and control stations with fixation jigs!

The Pro version of Sylcom with the capacity to connect up to **128 instruments** (max. 40 instruments with Bluetooth® Wireless technology, i.e max. 5 dongles Bluetooth® 4.0 / 8 instruments per dongle) can be purchased online from our website or from the Sylvac distributor in your country.

This package contains all the features of the "Standard package" plus some extra functions such as **Control Plans, Batch management, Monitoring graphs, Programs, Traceability fields, characteristic sampling for MIN/MAX..., "Skip characteristic" option, 1/N Sampling when using a control plan, Hi-Cal pre-positioning, Instruments categories, SPC export, Q-DAS export, ...**

#### Expert package

This package contains all the features of the "Pro package" plus some extra functions such as the new **On the Fly** mode that can read hundreds of instruments without connecting them, **Part management** to import and synchronize a

configuration from Excel , **OPC-UA protocol to communicate with an automate or a robot.**



Softwares SYLCOM	Order number Dongle licence	Order number Digital licence	Accessories	Order number
Sylcom LITE	-	<b>FREE</b>	Dongle Smart	981-7100
Sylcom Standard	981-7132	981-7129	USB pedal	926-7020
Sylcom Pro	981-7240	981-7245	USB pedal robust	926-7021
Sylcom Expert	981-7250	981-7255	Footpedal Smart	926-7022
Upgrade Sylconnect to Sylcom*	981-7139	-		

\* contact us to get the procedure for the update

### 3.2 License support

#### Dongle licence

By default, when you order the software from Sylvac, you will receive the software box with a USB dongle containing your license.

#### Software license

You can also ask your Sylvac agent for a software license that is not using any physical dongle and then download our software on the website. For more information, see [About screen](#).

## 4. LOGIN SCREEN

By default, 2 users are available.

**Supervisor** : User having all rights to set hardware and software parameters.

**Operator** : User with restricted access, e.g. to use only existing configurations and data export.





**Default password for users : 123**


In the "Settings/[Users](#)" interface, you will be able to create and manage users' accounts, including changing passwords.

## 5. HOME SCREEN

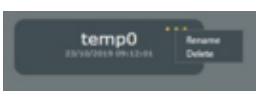
This page allows you to access and manage your different parts.

The current version of Sylcom is indicated just below the "Welcome" message.

The **right panel** contains all the recent parts configurations that you can easily find by **sorting** them by **date/name**, or via the "**Search**" text box, as well as a "**Browse**" button that can load parts configurations from your PC. The "**Save as...**" button allows to save your part configuration, or to copy it.

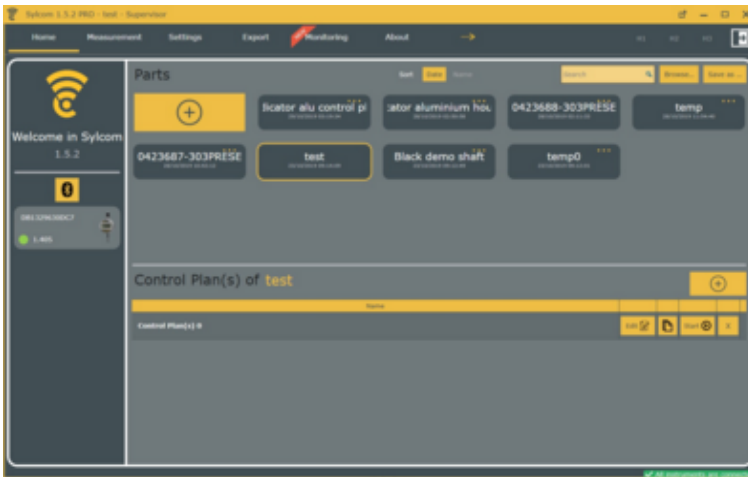
Press the  button to create a **new part** configuration.

On the top right of the non-selected parts names, there's a menu to **Rename** or **Delete** the configuration:



In the "PRO" version of Sylcom, there is also the "Control Plan" panel just under the "Recent" parts one. You could add and use one or several control plans to measure the same part (e.g. different aspects of a part, controlling all the features or only part of them, inspecting the raw part or the rectified one, ...). This will be discussed in a further chapter (see [Control Plan screen](#)).

The **left panel** displays a connection button to connect a new Bluetooth instrument, and, below, the list of the actual connected instruments (green for connected instruments of the selected part configuration, red for missing instruments and green with a white border for connected instruments that are not in use for the selected part configuration)

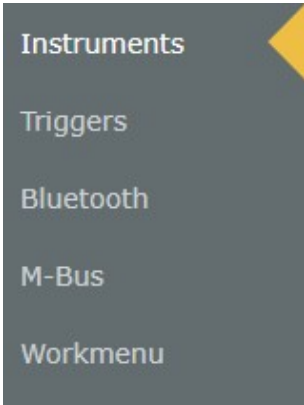


## 6. INSTRUMENTS SCREEN

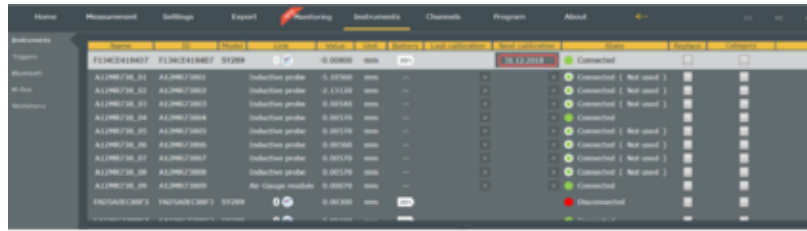
This menu gives all information about connected instruments and Bluetooth® management.



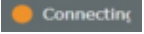

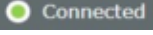
It is divided in 5 sub-menus :

- [Instruments](#)
- [Triggers](#)
- [Bluetooth](#)
- [M-Bus](#)
- [Workmenu](#)





**6.1 Instruments** This sub-menu displays all instruments details (listed as below).



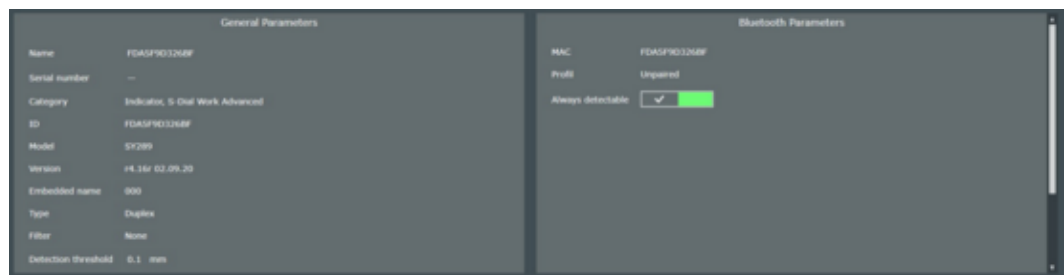
- **Name** : You can edit and customize the name of your instrument (by default, the name is the same as the ID).
- **ID** : The ID is a unique mix of letters and numbers that is used for example for the Bluetooth pairing (used as a MAC address in this case).
- **Model** : It is an internal name used for differentiating the Sylvac instruments
- **Link** : The connection type of the instrument. Can be either USB, M-Bus or Bluetooth. In the last case, an extra icon  will show if the instrument supports IOT connection (IOT is only on recent Bluetooth device and includes 3 profiles : simple, paired, HID).
- **Value** : The instantaneous value of the instrument.
- **Unit** : The unit of the measurement.
- **Battery** : The Battery level of the instrument. In case the "warn on low battery" setting is enabled (see [Settings](#) tab) , an explicit message will be displayed in the upper zone of Sylcom window.
- **Last calibration** : Enter the last calibration date (just for information).
- **Next calibration** : Enter the next calibration date. In case the "Instrument usage if calibration expired" setting is set to "Warn" or "Block" (see [Settings](#) tab), and the calibration date is expired, this date text will be displayed with a red frame, and you'll be warned by a message in the upper zone of Sylcom window. In addition, the instrument will either display a "CAL" message, or will be blocked if configured that way.
- **State** : The connection status of the instrument. Can be either red, orange, green or "white and green".  means that the instrument is used by the current part configuration but is disconnected,  means that the instrument is getting connected (working),  means that the instrument is connected and used by the current part configuration,  means that the instrument is connected but not used by the current part configuration.

- **Replace** : Allows you to replace the instrument used in the current part configuration with a new instrument. It will automatically do the change on every configuration where the "old" instrument was used. e.g. when an instrument is broken and you want to replace it with a new one without doing the job manually on every configuration using this instrument.



If the new instrument is already connected, you can either select it in the scrolling list menu or with the "autodetect button"  by moving the sensor manually. If the instrument is not connected yet, connect it physically to the computer to make it appear on the scrolling list menu (for USB or M-Bus instruments), or press the Bluetooth button  and click on the "Connect button" of your instrument.

When pressing on an instrument line, different parameters of the selected instrument will show on two new windows (lower part of the screen). The window at the left is for **General Parameters** while the window at the right is for connection parameters (**Bluetooth, M-Bus, USB**).



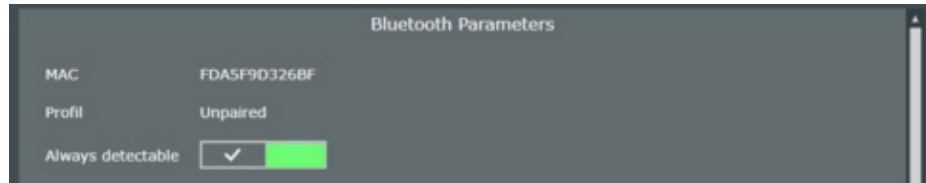
### General Parameters

Remind essential information about the instrument and allow the user to change parameters :



- **Detection threshold** : threshold value used to determine whether the instrument has moved or not, before selecting its characteristic automatically.
- **Commands** : To send different kind of messages to the instrument (e.g. MIN? = What is the Min value).

## Bluetooth Parameters



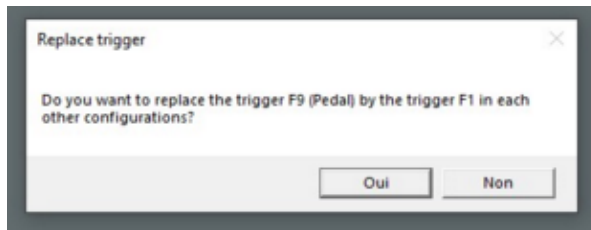
- **MAC** : The unique address used by the bluetooth device to communicate with the computer.
- **Profil** : The connexion mode of the instrument. It can be either Paired or Unpaired. **Paired** means that the instrument is linked to the PC (Sylcom) even when the instrument is not needed by any part configuration. **Unpaired** means that the instrument is connected only when the part configuration is open in Sylcom. After closing the configuration, it will be detectable by other PCs as well.
- **Always detectable** : When enabled, the instrument must continuously emit Bluetooth signals even when it isn't connected, in order to remain detectable. Set it to Disable if you want to save the battery life.

## 6.2 Triggers

This sub-menu allows to see and replace quickly one or several triggers of your configuration(s) by another trigger  
e.g. replace the F9 (pedal) trigger by F1 or by a Bluetooth pedal on all the characteristics of all the configurations.

Instruments	Name	ID	Trigger type	Replace
Triggers			No trigger	...
Bluetooth	HotKey1	HotKey1	Hotkey	...
M-Bus	HotKey2	HotKey2	Hotkey	...
Workmenu	HotKey3	HotKey3	Hotkey	...
	F1	F1	Keyboard	...
	F2	F2	Keyboard	...
	F3	F3	Keyboard	...
	F4	F4	Keyboard	...
	F5	F5	Keyboard	...
	F6	F6	Keyboard	...
	F7	F7	Keyboard	...
	F8	F8	Keyboard	...
	F9 (Pedal)	F9 (Pedal)	Keyboard	...
	F10	F10	Keyboard	...
	F11	F11	Keyboard	...
	F12	F12	Keyboard	...
	Ctrl+Enter	Ctrl+Enter	Keyboard	...

When pressing the "..." button, you'll be asked to replace the trigger on all configurations or only on the current one:



### 6.3 Bluetooth

This sub-menu is dedicated to Bluetooth® management. It is divided in two panel : **Bluetooth dongles** and **Bluetooth instruments**.



#### Bluetooth dongle

This tab lists the available dongles on your PC and is dedicated to the interactions between the instruments connected and the internal or external dongles. You can select the master dongle on which you will be able to connect your instruments (white background).

In this table, you can see the Scanning steps as well as the Connecting steps after plugging the dongle(s). You can check the compatibility of your dongle with the "Compatible" field. If the dongle's firmware is too old, the bullet will show red and you will need to update it before connecting the instruments.


You can also see the number of instrument that are already "Paired" and/or "Connected" and the "Capacity" (max number of instruments) of each dongle.

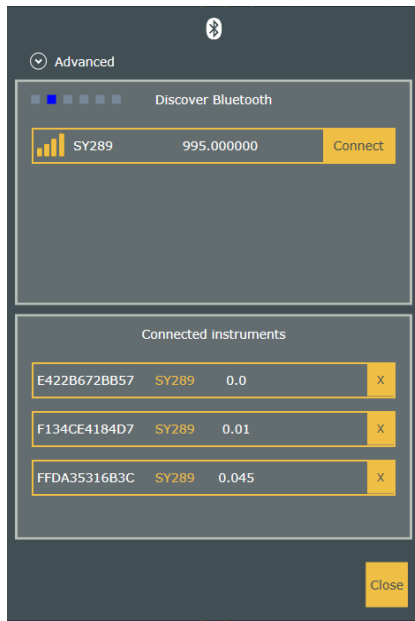
Bluetooth card	Port	Firmware	Connected	Paired	Capacity	Scanning	Connecting	Compatible
Internal	---	---	0	0	99	■■■■■■■■	■■■■■■■■	●
Dongle	COM4	1.7	1	1	8	■■■■■■■■	■■■■■■■■	●

To connect a Bluetooth® device, at least one dongle must be present on the PC and recognized by Sylcom. Generally, you have to connect one or several external Bluetooth® dongle(s) to the PC to ensure reliable connections with the devices.

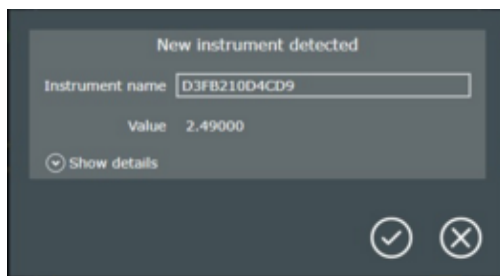
Yet, if you have a Windows 10 (or higher) version of Windows, Sylcom could also use the internal Bluetooth® of your PC to connect the different instruments. But be careful : the connections could be less reliable depending on your PC hardware and on the operating system processes in use.

Ensure the Bluetooth® on your instrument is turned on and blinking (otherwise, press on the instrument

menu buttons to enable "bt on"), then run a scan to pair it (with ).

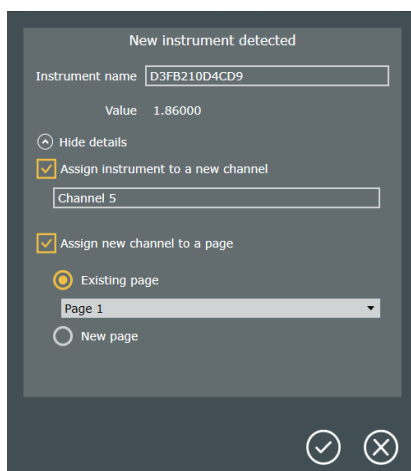


In case the "Show popup on new instrument" setting is enabled (see [Settings](#)), a prompt window appears as soon as a connection process is successful.



Click on "Show details" to set instrument/characteristic parameters.


- **Assign instrument to a new characteristic** : If checked, will create a new characteristic (characteristic name can be modified just below) which will display value of the device.
- **Assign new characteristic to a page** : If checked, you will be able to choose on which page you want your characteristic ("Existing page" or "New page").



Then, click on .

At bottom of interface a blue bar shows the connection status.

14:27:37 Connected Instrument E998B76F18AE to dongle 9A961E800700.

The "Reset" button (  ) allows you to make a total reset on the selected dongle.

### Bluetooth instruments


This tab lists the Bluetooth® instruments available. You can see the "Instrument name" and "Mac address" of your device (same name by default) as well as its internal Name and its actual Value. You can check the State of your instrument with the "State" field. The bullet can be either green (the instrument is ready), orange (the instrument is connecting) or red (the instrument is not connected). The "Profil" field (only available with recent instruments) allows the user to choose if he wants the device to be "Paired" or not ("Simple"). **Paired** means that the instrument is linked to the PC (Sylcom) even when the instrument is not needed by any part configuration. **Simple** means that the instrument is connected only the duration of the part configuration. Then it will be detectable by other PC. Use the "Reset" button to reset your device to its defaulted Bluetooth® parameters. The "Paired but not connected" field indicate the instruments paired to your PC that are not connected.


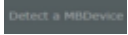
Reset						
Instrument name	Mac address	Name	Value	State	Profil	
E422B672BB57	E422B672BB57	SY289	0.0	<span style="color: green;">●</span> Ready	Simple <input type="checkbox"/>	Paired <input checked="" type="checkbox"/>
FFDA35316B3C	FFDA35316B3C	SY289	0.015	<span style="color: green;">●</span> Ready	Simple <input type="checkbox"/>	Paired <input checked="" type="checkbox"/>
F134CE4184D7	F134CE4184D7	SY289	-0.007	<span style="color: red;">●</span>	Simple <input type="checkbox"/>	Paired <input checked="" type="checkbox"/>

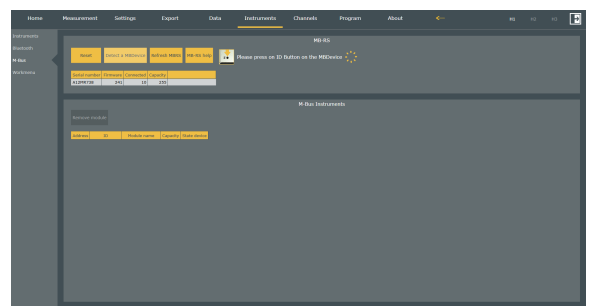
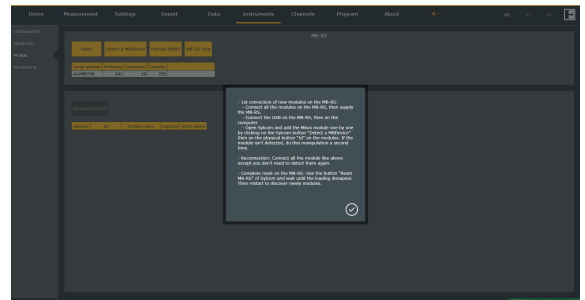
### 6.4 M-Bus

If you need to connect any specific instruments like M8 P5 probs, or an air gauge, or a temperature sensor, etc, you can use M-Bus modules.

The specific M-Bus modules will be chained to a MB-RS module, which will be itself connected to the PC by a USB cable.


You can access an extra help window with the "MB-RS help" button , to know how to connect the M-Bus modules. It is important to follow it precisely to ensure a good usage of the M-Bus devices.

- **Reset** : Press this button  if you need to restart a clean configuration of the M-Bus modules connected to your MB-RS.
- After having connected a new M-Bus module on the MB-RS, you can detect it by pressing the **"Detect a MBDevice"** button . Then, press the "Id" physical



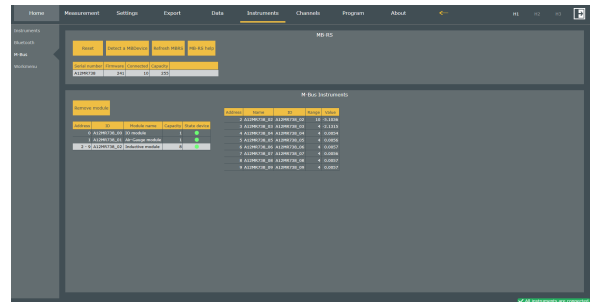


detection button on the M-Bus module. If the connection succeeded then, a new line will be displayed in the M-Bus instruments panel below.

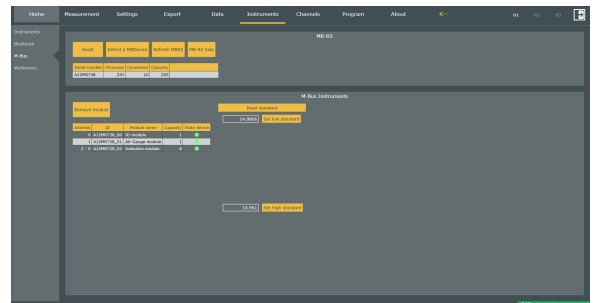
- **Refresh MBRS** : Press this button  to update the list of the modules connected and detected by the MB-RS.

Under these buttons, you can see information about the MB-RS module such as its 'Serial number', the number of devices 'Connected' to it,...

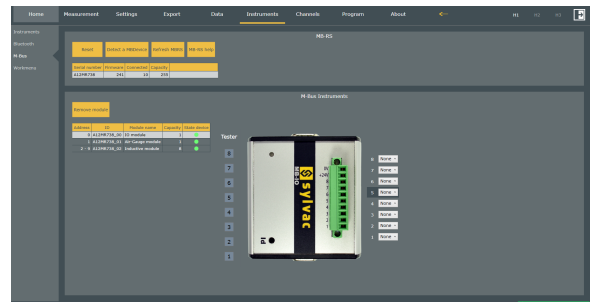
**MB-8i module display** : You will have 8 probes connection reserved, even if less than 8 probes are really connected. A green bullet will be displayed on the 'State device' column if the device is connected correctly. In the table on the right side, you can see the instant value of the probes and the range (e.g. 10 = -5 to +5mm).



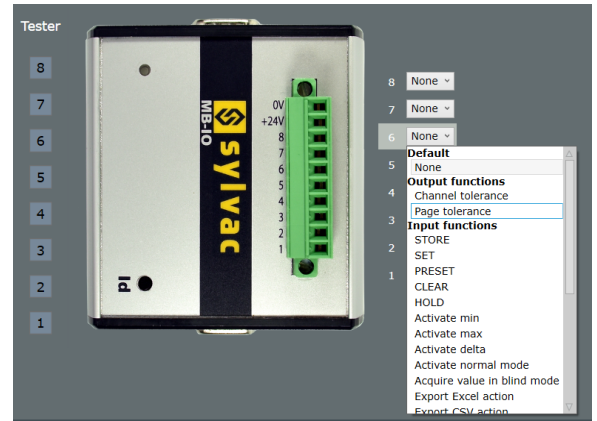
**MB-AG module display** : You can calibrate the low and high masters by pressing the "Set low/high standard" buttons.



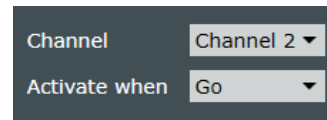
**MB-IO module display** : After connecting and detecting your MB-IO module, you can check each of the 8 outputs by pressing one of the "Tester" buttons on the left : it will send a "1" (24V) signal on the related output.



On the right side, you can configure the 8 slots as inputs or outputs, depending on the action type you select in the list.

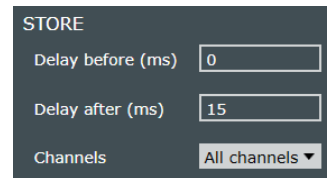


**Output :** 0V or 24V signal is sent to an external system (e.g. red or green lamp,...) after a specific Sylcom result (e.g. characteristic result success or failure).



For example on slot 1, select 'Characteristic tolerance' 'Go' result of 'Characteristic 2' to turn on a green light when the measurement succeeds (inside tolerances).


**Input :** When a 24V signal is read from an external trigger (e.g. pedal, switch,...) it executes a specific action (e.g. STORE/PRESET a characteristic, export to CSV format,...).

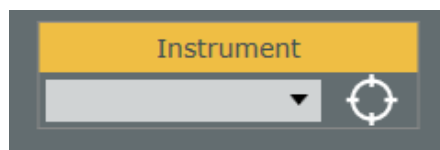


For example when pressing a switch on slot 2, select 'STORE' 'All characteristics'.

The list of available input actions, is the same as in Program screen/[Actions](#).


## 6.5 Workmenu

This sub-menu is dedicated to instrument management. First, you need to select an instrument with either the "autodetect button"  or with the scrolling list menu.



A tab will show with information about the selected instrument. In the "Actions" field, three buttons are available :

- **Read All :** read the information about the menus and the settings of the selected device.
- **Write All :** when having set the different Menus and Settings, click this button to write these changes on the device.
- **Reset instrument :** reset the Menus and Settings of your instrument.

Instrument	Instrument name	Type	Version	Device	Actions
FFDA35316B3C 	FFDA35316B3C	Bluetooth	r4.09r 21.03.19	SY289	Read All Write All Reset instrument


When pressing the "Read All" button, a window that repertories all the different instrument **Menus and Settings** will show.




Three buttons are available under the device picture :

- **Load button** : to load an already existing file.
- **Save as button** : to save your actual Menus and Settings and choose a directory to save it.
- **Default configuration button** : to go back to initial configuration.



The instrument **Menus** allows the user to manage the different menus that will be accessible on the device by clicking on the

yellow check boxes . It is possible to set

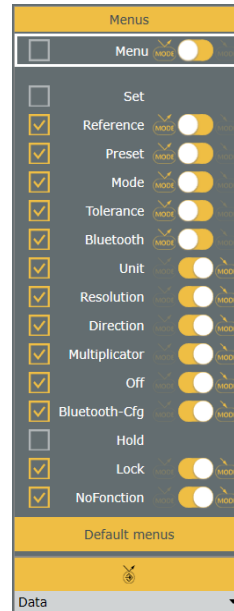
the way we access a menu on the device by clicking on the  (left for "simple pressure" , right for "long pressure" ).

To enable or disable everything at once, use the first line ("Menu") check boxes

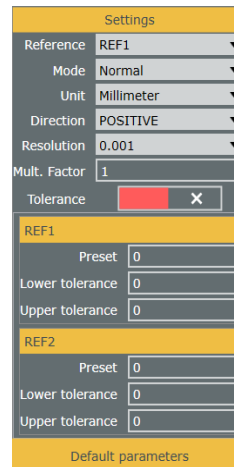


To recover the defaulted menus, click on the "Default menus" button.

To give a function to the **centre button** of your device, click on the scrolling list below the "Default menus" button and choose which function you want.

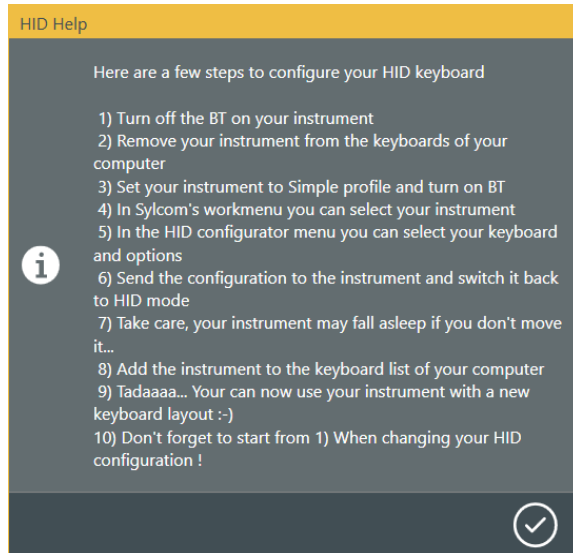


This panel details you the different device settings. For more information, refer to your Instrument Manual.

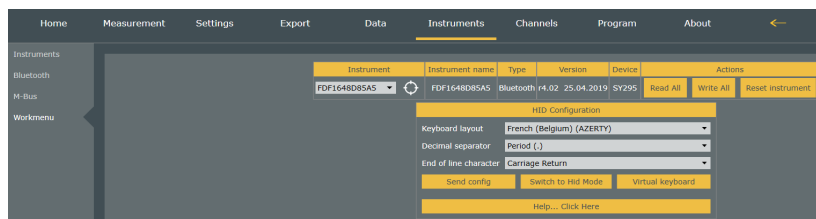


**6.6 HID configuration** When connecting a recent Sylvac Bluetooth instrument (S CAL-EVO firmware from 4.02 or Universal firmware from 4.10), you will be able to configure the HID keyboard to be compatible with the real keyboard you are using to export the measured values from the instrument to an application on your PC, tablet or smartphone.

**HID configuration steps :**



When connecting the Sylvac Bluetooth instrument, you can configure the HID keyboard by selecting a language "Keyboard layout", the "Decimal separator" and the "End of line character". You can also display a virtual keyboard to check your current keyboard layout. Press the "Help... Click Here" button to display the HID configuration steps like displayed above.



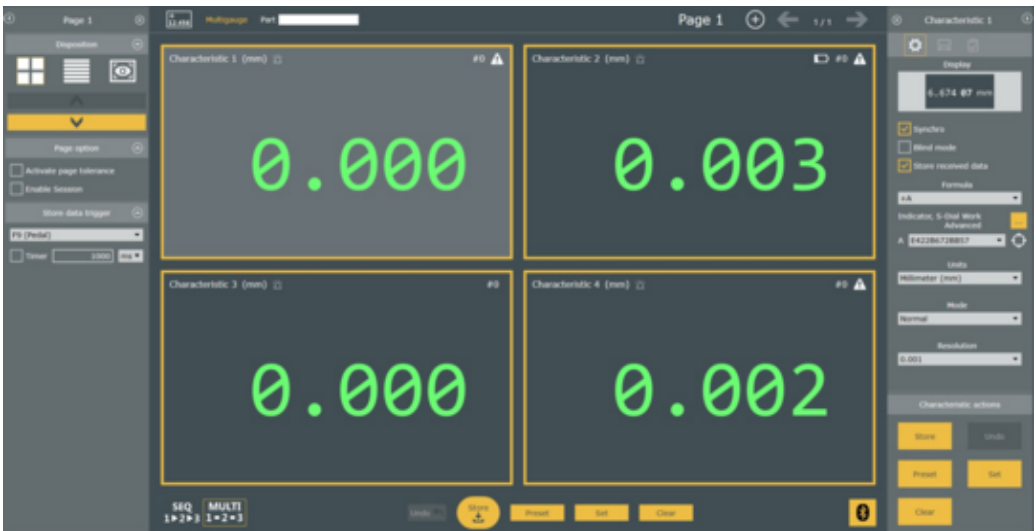
## 7. MEASUREMENT SCREEN


The measurement screen is divided in 5 sections :

- [Measurement panel](#)
- [Page panel](#)
- [Characteristic panel](#)
- [Sequence](#)
- [Multigauge](#)

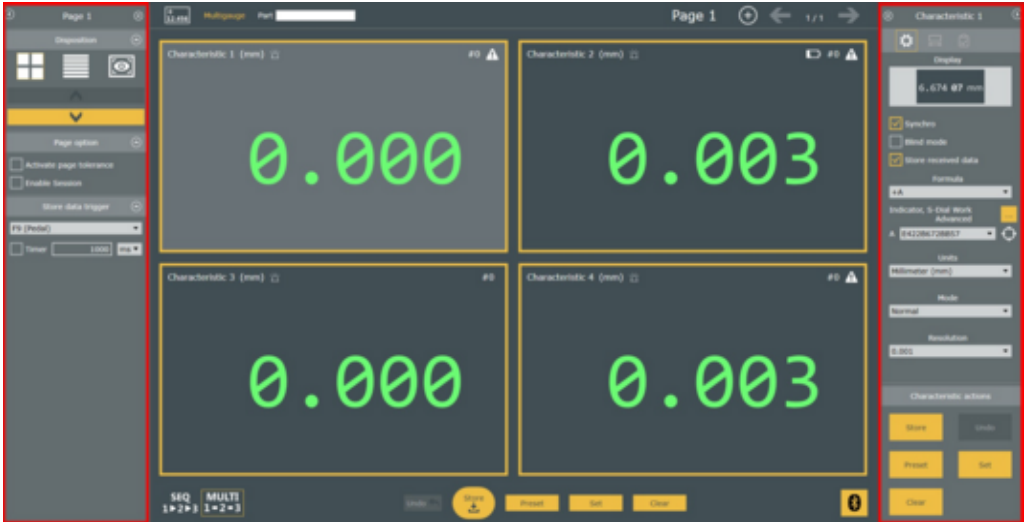
Sylcom interface is designed to connect your Sylvac instruments and configure characteristics in One-click. If you log in as a supervisor user, you'll have lots of settings available in this window. Otherwise, as an operator, this window will be very simple with the minimum user interface only.


**Supervisor interface :**



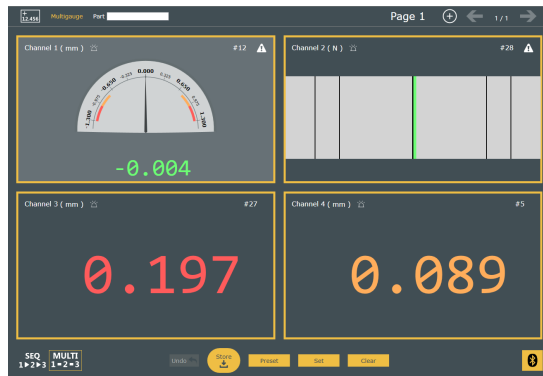
USB instruments are automatically connected to your PC. For Bluetooth® devices, you can use the Bluetooth® button . Please refer to chapter Instruments screen/[Bluetooth](#) for more information about the Bluetooth connection.

The [left panel](#) is dedicated to page functions and settings.  
 The [right panel](#) is dedicated to the selected **characteristic**. All characteristic parameters can be set from here.



**Note :** you can use this button  in the upper right corner to hide the status bar.

**7.1 Measurement panel** This panel shows a general view of your work.



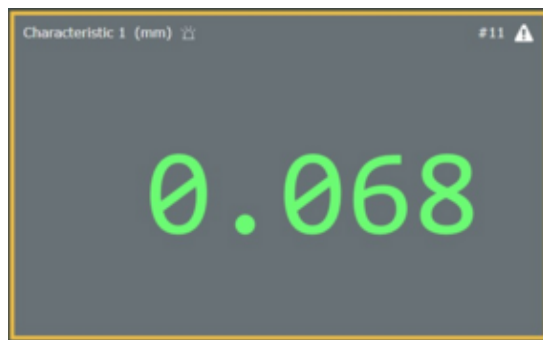
**Note** : Green/Red/Yellow : colour is related to the result's classification : Go/NoGo/Warning.



In the top bar, you can find consecutively : the "Add new characteristic" button, the measurement mode (Mutigauge or Sequence), the Part name, the Active characteristic (only in Sequence mode), the current page, the "Add a new page" button and the "page navigator".



In the central field, a complete view of the characteristics is displayed. You can change the layout configuration from the [Page panel](#) and change the characteristics' displays from the [Characteristic panel](#).

A characteristic is presented as below :



On the top left, we can see its name and its unit followed by a little button ("Blink instruments" button ). When pressing this button, the device(s) used by the characteristic will blink a few seconds to help finding it. On the top right, we can see the "Store counter" that shows the number of measurements that are already stored. If "Blind mode" button is active, a little icon () shows up on the top right too (see [Characteristic panel](#) for more info. about this mode).

By double clicking on a characteristic, you will access the characteristic edition page : '[General Edit characteristic](#)'.

Under the Characteristics' displays, there are 6 buttons available :



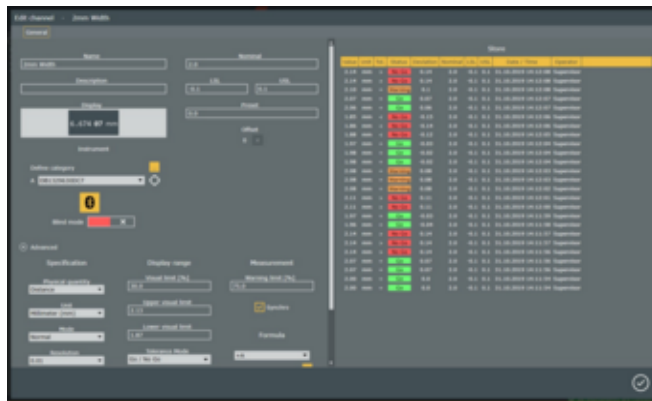
- **Skip** : Skip current measurement. Only available when executing a "Control plan", if "skippable setting" was enabled (needs a PRO license).
- **Undo** : Delete the last stored value (only available in "Sequence" mode).
- **Store** : Store the value of the active characteristic(s) into an internal database before classification and, if needed, for later display or export.

- **Preset** : Preset active characteristics (configure the preset value in Characteristic panel/[Edit characteristic](#)).
- **Set** : Set (preset to 0) active characteristics.
- **Clear** : Clear min, max, mean (midrange) and delta values of active characteristic(s).

**Note** : each button acts differently depending on the current mode ("Sequence" or "Multigaugage"). In "Sequence" mode, it will only affect the current characteristic whereas in "Multigaugage" mode, it will affect every characteristic of a page. E.g. in "Multigaugage" mode, a "Set" will preset to 0 each characteristic of a page.


### 7.1.1 Edit characteristic

This page allows you to manage basic characteristic's parameters (discussed in Measurement screen/Characteristic settings panel/[Basic edit characteristic](#)) as well as 'Advanced' parameters. On the right side of the page, the last stored measurements are displayed (you can change the order of the columns with a drag/drop).



In the upper left, you can manage information about the characteristic : its name, a little description of what it does and its display.

Underneath, you can configure the characteristic's instrument:

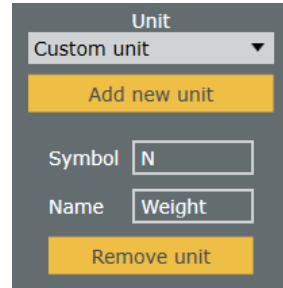
- Define the category of the instrument (type / range / resolution) . **Needs a PRO license**
- Select the **instrument(s)** used by the characteristic in the list of already connected instruments or use the "target" icon and move your instrument to select it automatically.
- **Bluetooth button**  to connect a new Bluetooth device
- **"Blind mode"** check box, which is the same as in the [Basic edit characteristic](#): don't refresh characteristic display while adjusting the instrument, but only when the final data is stored. Also useful to allow sending data from a non-Bluetooth instrument button.

In the centre of the page, you can manage the tolerances which are the same as the ['Tolerance'](#) panel in the Characteristic settings panel with an extra information about the Offset. The Offset is managed only by Sylcom (not at the device level), it is used when the device is not synchronized ("Synchro" button not enabled  Synchro).

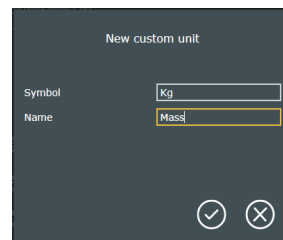
When pressing the 'Advanced' button, you will access a panel with 3 sections : **Specification**, **Display range** and **Measurement**. Almost each of these parameters can be set with the ['Basic edit characteristic'](#) or the ['Tolerance'](#) panel in the 'Measurement screen'. Only the 'Physical quantity' is specific to this page.



To choose a particular **'Physical quantity'** select the one you need in the list menu or create your own by selecting "Custom definition". It will display a custom unit menu where you can choose between your already created units or create a new one with the "Add new unit" button.

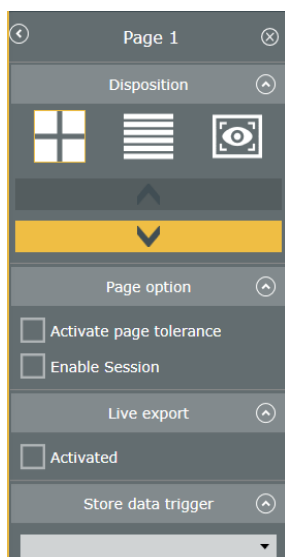



A window will open and you will be able to complete it with your custom unit symbol and name.




## 7.2 Page settings panel

This panel is dedicated to the pages management.




You can delete a page with the cross button on the upper right  and hide the page panel




with the "hide" button .


There are **3 layouts** available :




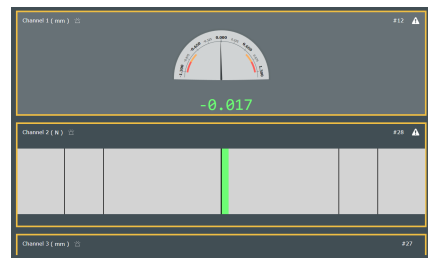
- **Grid Layout :**  Automatic characteristic sizing and positioning of all the characteristics on the interface (possibility of arranging a lot of characteristics on a single page).



The yellow buttons  move the selected characteristic to the next/previous position.

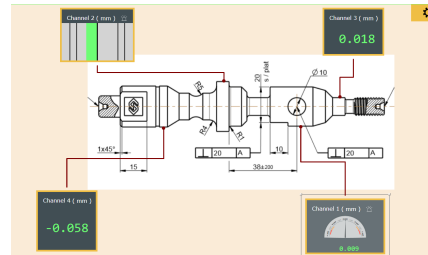



- **Stack Layout :**  Automatic characteristic stacking of the characteristics, like a pile.

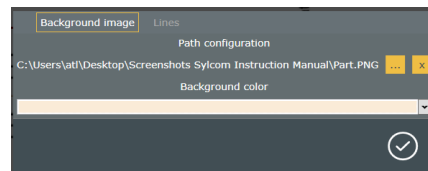
The yellow buttons  move the selected characteristic to the next/previous position.



- **Drawing Layout :**  Free layout configuration mode. All characteristics can be resized and placed on the interface when the "Edit" check box is enabled .



By pressing the "settings" button , you can add your customized part drawing in the background and link the characteristics to it. You can also configure the general background colour as well as the characteristics' links lines colour (even transparent if needed).





The **Page options** are listed as below :


- **Activate page tolerance :** If enabled, compute tolerance of the whole page. If at least one measurement is out of tolerance, the page background will appear red. Same for green (every measurement are inside tolerances) and yellow (at least one measurement is in the [warning limits](#)).
- **Enable Session :** Needs a PRO license. If enabled, the stored measurement will be gathered in a session (the number of measurements of the session is displayed in the upper bar in parenthesis). Then, you will be able to print/export/clear all the measurements of the session by means of [programs](#) (e.g. use F3 Key to execute "print session" action).

**Live export :** If Activated, you will be able to export data after each characteristic measurement or after each page measurement. To configure the export data format, see [Export screen](#).

**Store data trigger** : Allows you to choose between different kind of triggers to take a measurement (USB Pedal [F9 or Ctrl+Enter], Bluetooth Pedal, Keyboard, HotKeys [H1, H2, H3]).

Pressing the trigger has the same effect as pressing the "Store" button .

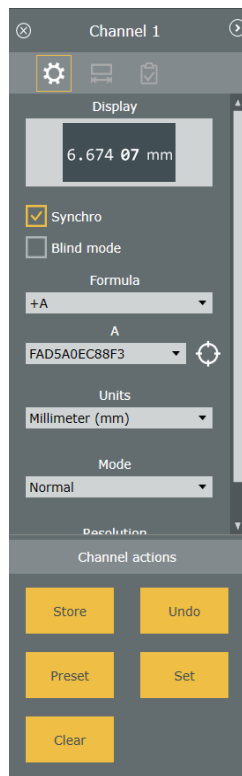
In case of "Sequence mode" , pressing the trigger will store the selected characteristic.

Otherwise, in case of "Multigauge mode" , it will store all the characteristics of the page at once.

If the "Timer" is enabled, measurements will be taken at a specified period from when the trigger was pressed (press it a second time to stop the measurements).


### 7.3 Characteristic settings panel

This panel is dedicated to the characteristic management.



Three menus are available on the top : [Edit characteristic](#), [Tolerance](#), [Store](#).



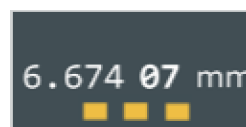
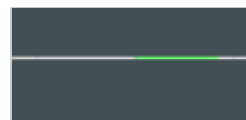
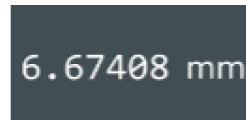
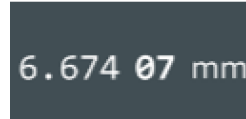
To remove a characteristic, use the "cross button"  on the upper left of the panel.

#### 7.3.1 Basic edit characteristic

You can customize the measurements display by selecting a control in the "Display" list (top of the Edit characteristic panel) :



- **Numeric Microns** : Digital value, with highlighted microns digits.
- **Numeric** : Digital value.
- **Manual** : Enter the value with the keyboard (e.g. for external instruments).
- **Go/NoGo** : This display doesn't work the same as the others. It is a manual control of an aspect that cannot be measured by an instrument connected to Sylcom (e.g. the colour or a scratch on a part). You can use the mouse to select the "Go" or "NoGo" result, or optionally, define two triggers. e.g. H1 for "Go" and "Pedal" for "NoGo".
- **Analog** : Looks like an analog device, with warnings and out of tolerance limits, and the measured value displayed below.
- **Bargraph** : The measurement is represented by the size of the horizontal coloured rectangle.
- **Small bargraph** : Small horizontal coloured rectangle, to view lots of characteristics in the same page.
- **Numeric with buttons (Complete)** : Digital value, and access to some commands directly (Store, Preset, Set, Clear).
- **Chart** : Diagram that shows every value that the device sends to Sylcom, the current value of the instrument. These values are not stored unless you press the "Stored" button.



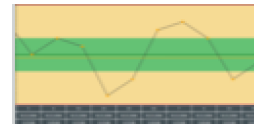
- **Vertical bargraph** : The measurement is represented by the size of the vertical coloured rectangle.



- **Formatted display** : Display the unit of the measurement, especially for displaying angles. You can also choose a custom unit by double clicking on the selected characteristic and access the "Advanced" settings. Then choose the "Custom definition" in the "Physical quantity" and Add a new unit.



- **SPC display** : Display the 10 last values on a diagram.



For almost all the different displays (except for the "Go/NoGo"), same parameters can be set on the "Edit characteristic" :

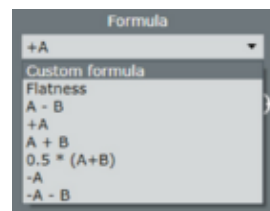
- **Synchro** : If enabled, synchronise the different devices with the current characteristic parameters.
- **Blind Mode** : If enabled, the value displayed on the characteristic window will be refreshed only when pressing the centre button of the device (or Sylcom "Store" button). Another option will also be available : "**Store received data**", to allow the operator to use the centre button of the device as a "Store button". This Mode could be useful if you don't want the operator to "cheat" on the measurement by adapting the instrument position until the characteristic displays a green color.  
Note: In case of a **cabled instrument** (non-Bluetooth), the Blind mode must be enabled if you want to use the middle button of your instrument to store the data.
- **Store received data** : If enabled, ???

### Formula

Choose between basic formulas in the list menu or choose **Custom formula** or **Flatness**.

- **Custom formula** :

To use a Custom formula on a characteristic, first select a characteristic in the Pages tab, and choose "Custom formula" in the list :




Then press the Edit button that shows up below, and start typing your formula in the formula editor text box :



By displaying the "Usage" panel, you'll have some examples of allowed functions and calculator buttons :



When writing your formula, you may want to combine the results of several other existing characteristics or instruments. To select each

instrument, you can press the target button: , then move the instrument of interest. e.g: to display the sum of 3 existing instruments, write "(", then press the target and move your 1st instrument, then write "+", then press the target and move your 2nd instrument, and so on.. In the formula, your instruments will be named A, B and C by default.



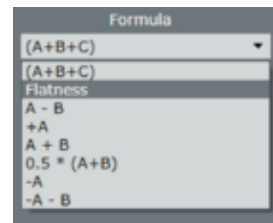
You can also type your formula directly in the text box by using letters (e.g A, B, C...) or names (e.g. diameter1) , and then map the names to real instruments or characteristics later.



Please note the green bullet at the left of your formula text box, which indicates that your formula is valid. In case it isn't, then the bullet will be red.

- **Flatness :**

To calculate a flatness you can select « Flatness » in the formula's list :



Then press the Edit button that shows up below, and select the instruments or characteristics by clicking the check boxes or using the "target" button for each instrument you need.

The result of a flatness is the difference between the Max of the Max instruments values and the Min of the Min.

In the "Mode" list menu, you can choose between two different modes :



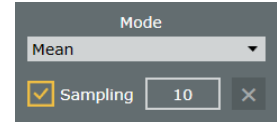
- **Static** : This mode will collect the flatness values and output the **cumulated** result of all the values.
- **Dynamic** : This mode will collect the flatness values and output the **instantaneous** value.

### Units

Choose between basic units (inch, mm, m,...) or create a custom units. To create one, double click on the selected measure and access the "Advanced" settings. Then choose the "Custom definition" in the "Physical quantity" and Add a new unit.

## Mode

List menu where you can choose the measurement mode that will be displayed on the screen (Normal [current value], Min, Max, Delta [Max - Min], Mean [Max+Min/2]).



With a **PRO licence** of Sylcom, in all the modes except the 'Normal' mode, the "**sampling**" check box will allow to take values such as 'Max' or 'Min' at specific positions. You need to specify the number of measurements you want to take. When you will measure your part, you just need to press the "Store" button until your "Number of samples" is reached, then, you will be able to take the next characteristic measurement (e.g. in case you need to find the 'Max' value of an interrupted cylinder by skipping the interruptions).

## Resolution

List menu where you can choose the resolution of the the measurement. In the case you are in "Synchro" mode, this parameter will automatically change the instrument's resolution.

### 7.3.2 Tolerance

This menu is dedicated to the **Tolerance, Warning limit, Preset and Visual limit.**

#### Tolerance

- **Nominal** : The nominal value.
- **LSL** : The Lower Specification Limit.
- **USL** : The Upper Specification Limit.

**Warning limit [%]** : The percentage of the "USL" from which the displayed colour will be yellow.

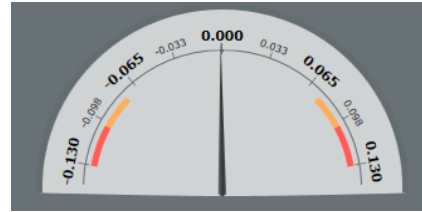
**Preset** : Enter the preset value that you want.

#### Visual limit

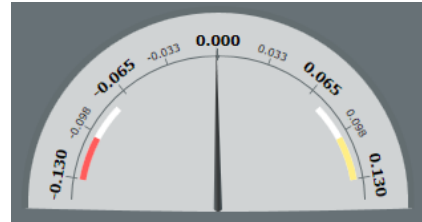
- **Visual limit [%]** : Choose a percentage of the USL that will be visible in red above the USL/ below the LSL on some display modes (Bargraphs, Analog, SPC, Chart).
- **Upper visual limit** : You can also select a more custom visual limit by choosing directly the 'Upper visual limit'.
- **Lower visual limit** : You can also select a more custom visual limit by choosing directly the 'Lower visual limit'.

**Tolerance mode** : 4 modes can be chosen in the list menu :

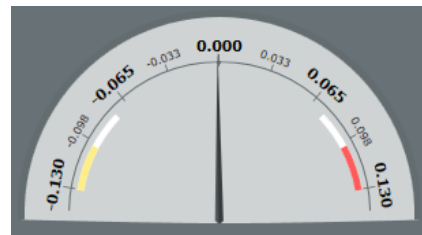
- **Go/NoGo** : This is the basic mode, with red and/or orange zones in both sides.



- **Rework** : This mode shows only a red zone in the lower side. It means that the part measured can still be adjusted when above the USL but not when below the LSL (e.g. an external cylinder diameter).



- **Rework (internal)** : This mode shows only a red zone in the upper side. It means that the part measured can still be adjusted when below the LSL but not when above the USL (e.g. an internal hole diameter).



- **None** : the result is not classified, and doesn't have a specific color

### 7.3.3 Store




This panel shows you the 100 last values taken by the current characteristic. You can see information about the Value, Unit, Status, Tolerance and Deviation that you can move with a drag/drop.

Value	Unit	Tol.	Status	Deviation
-0.001	No unit	=	Go	-0.00
0.018	No unit	=	Go	0.01
0.017	No unit	=	Go	0.01
0.004	No unit	=	Go	0.00
0.004	No unit	=	Go	0.00
0.02	No unit	=	Go	0.02
0.032	No unit	=	Go	0.03
0.199	No unit	>	No Go	0.19
0.581	No unit	>	No Go	0.58
0.336	No unit	>	No Go	0.33
0.138	No unit	>	No Go	0.13
0.072	No unit	=	Go	0.07
0.044	No unit	=	Go	0.04
0.022	No unit	=	Go	0.02
-0.003	No unit	=	Go	-0.00
0.185	No unit	>	No Go	0.18


### 7.4 Sequence

Sequences are for measurements that have to be made in a particular order due to the impossibility to take all measurements at the same time.

To do that, you have to construct your configuration part the same way as usual, but, select the


"SEQ" option  (Lower part of the screen). Once done, press the "Start" button  to begin the sequence. You are now able to take the first measurement of your configuration by clicking on the "Store" button  or, if you are in "Blind mode", by clicking manually on the "centre button" of your device. The value will appear in the current characteristic window, and it will automatically switch to the next characteristic.



When every measurements of a sequence have been taken, it will automatically come back to the first measurement to begin the second sequence. You can see in which sequence you are thanks to the "Store counter"  (upper right corner).

### 7.5 Multigauche

Multigauche allows to take simultaneously all the measurements. It is the default mode and it is recommended when conditions permit.

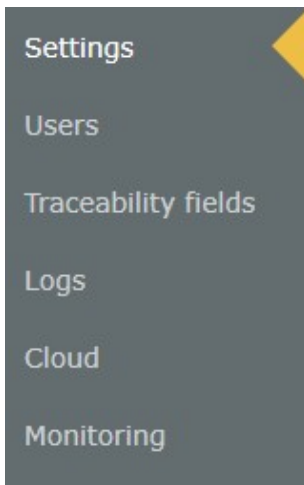
To record the measurements in this mode, just press the "Store" button  once you have done your part configuration. It will store all the current measurement values.





## 8. SETTINGS SCREEN

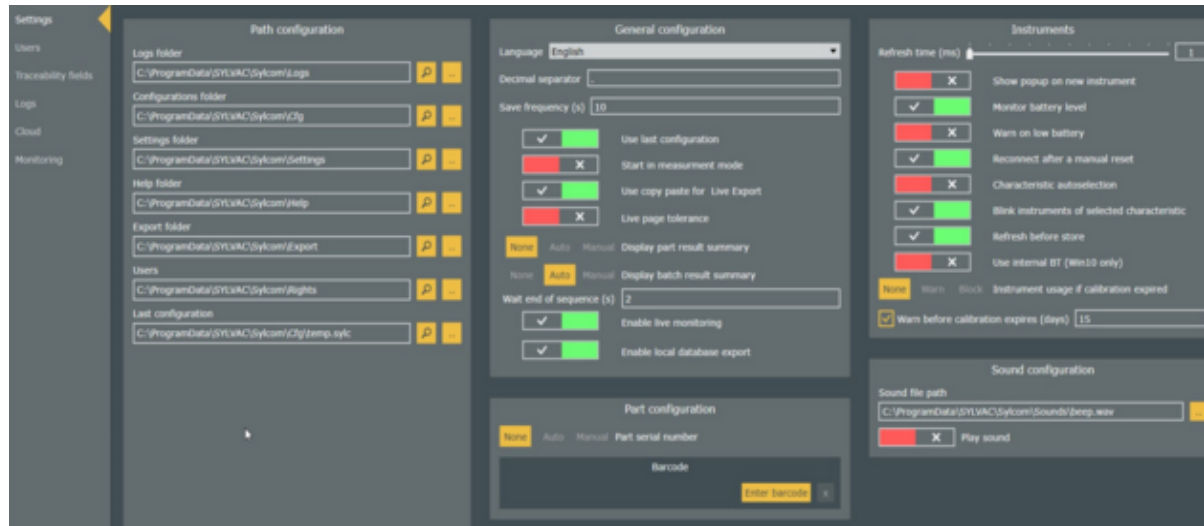
Menu to manage [Settings](#), [Users](#), [Traceability fields](#), [Logs](#), [Cloud](#) and [Monitoring](#).



### 8.1 Settings

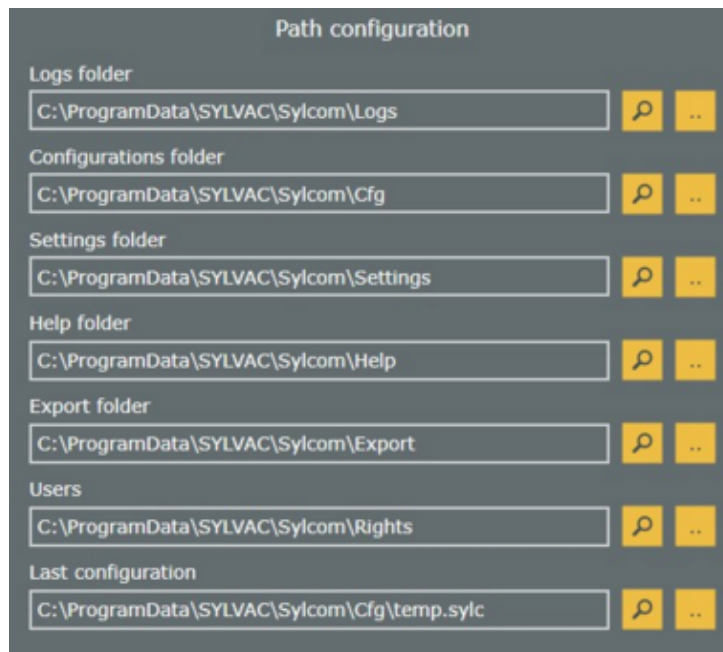
This menu is divided in 5 panels :

- [Path configuration](#)
- [General configuration](#)
- [Instruments configuration](#)
- [Sound configuration](#)
- [Part configuration](#)



#### 8.1.1 configuration

**Path** Use this tab to access those directories where you want to store your folders.



- **Logs folder** : Where the logs folder are stored.
- **Configurations folder** : Where the configurations folder are stored.
- **Settings folder** : Where the settings folder are stored.
- **Help folder** : Where the help folder is stored.
- **Export folder** : Where the exports folder are stored.
- **Users** : Where the users' rights are stored.
- **Last configuration** : Where the last configuration is stored.

**8.1.2 General configuration** In this panel, you can configure parameters such as "Language", "Decimal separator", "Save frequency (s)" and "Wait end of sequence (s)". Those settings are global to the application.

General configuration

Language

Decimal separator

Save frequency (s)

Use last configuration

Start in measurement mode

Use copy paste for Live Export

Live page tolerance

None  Auto  Manual Display part result summary

None  Auto  Manual Display batch result summary

Wait end of sequence (s)

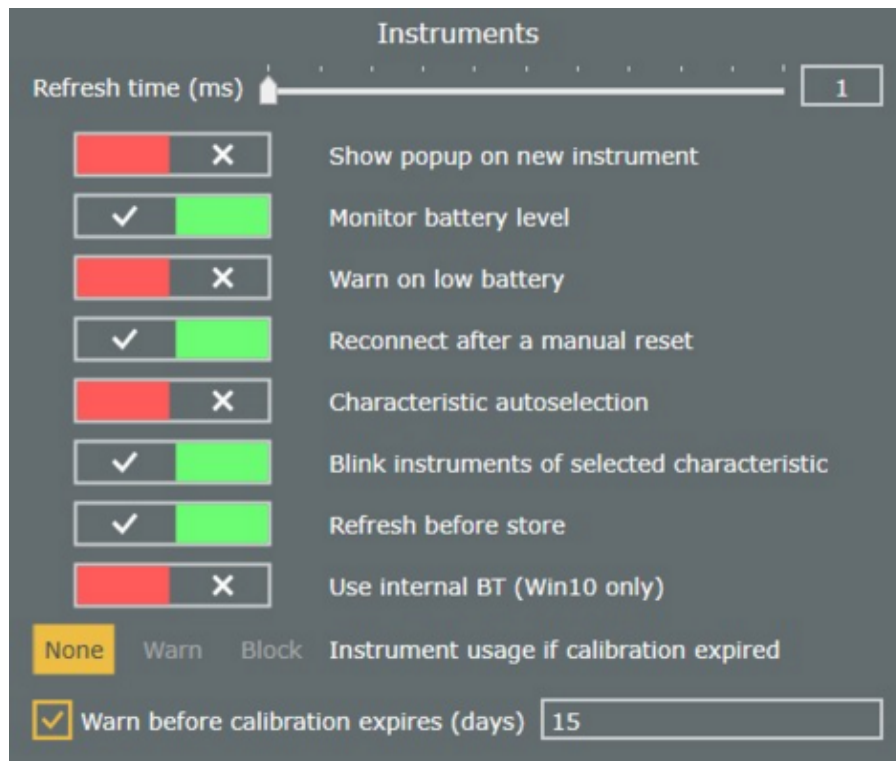
Enable live monitoring

Enable local database export

Underneath, check box parameters can be set :

- **Use last configuration** : Load the last used configuration at startup.
- **Start in measurement mode** : Open Measurement tab instead of Home tab, to be able to start measurements directly
- **Use copy paste for Live Export** : Use an integral data copy paste instead of individual characters during Live Export. Faster but less reliable.
- **Live page tolerance** : Refresh page tolerance when moving the instrument.
- **Display part result summary** : If "Auto" mode or "Manual" mode selected, will display a summary of the characteristics' measurements at the end of each sequence. In "Auto" mode, the summary box will disappear after a few seconds to begin the next sequence (this time parameter "Wait end of sequence(s)" can be set just below). In "Manual mode", you have to press manually on either the "Continue" or "Stop" button after each sequence.
- **Display batch result summary** : If "Auto" mode or "Manual" mode selected, will display a summary of the characteristics' measurements at the end of each batch. In "Auto" mode, the summary box will disappear after a few seconds to begin the next batch (this time parameter "Wait end of sequence(s)" can be set just below). In "Manual mode", you have to press manually on either the "Continue" or "Stop" button after each batch.
- **Enable live monitoring** : Enable it if you need to monitor your measurement data (in the "Monitoring" tab). Attention: In that case, the data storage process will be slower.
- **Enable local database export** : By default the measurement data are stored in a local database, but if you want to save space on your disk and don't need to store those data, you can disable this option.

**8.1.3 Instruments configuration** In this panel, you can configure parameters related to the instruments. You can also set the "Refresh time (ms)" parameter which is the time between two data request, and the "Warn before calibration expires (days)" parameter.

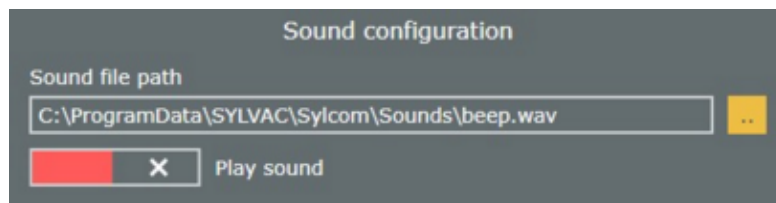


Underneath, check box parameters can be set :

- **Show popup on new instrument** : Show a popup window when an unassigned instrument is connected.
- **Monitor battery level** : Ask the battery level of the instruments at regular intervals.
- **Warn on low battery** : Display a message when the battery level of an instrument is low.
- **Reconnect after a manual reset** : Reconnect the instrument when the user makes a bluetooth reset manually on the instrument.
- **Characteristic autoselection** : Automatically switch to the first characteristic linked to the moving instrument.
- **Blink instruments of selected characteristic** : When selecting a characteristic, make its instruments blink.
- **Refresh before store** : Refresh characteristic value just before storing it. Useful in blind mode.
- **Use internal BT (Win10 only)** : Allow to use the Bluetooth internal card to connect instruments. You need to restart Sylcom to take into account the changes.  
**Attention** : internal Bluetooth depends on your PC hardware and Windows management (processes that are running at the same time, CPU usage,...), so connections may not be as reliable as with an USB Bluetooth dongle.

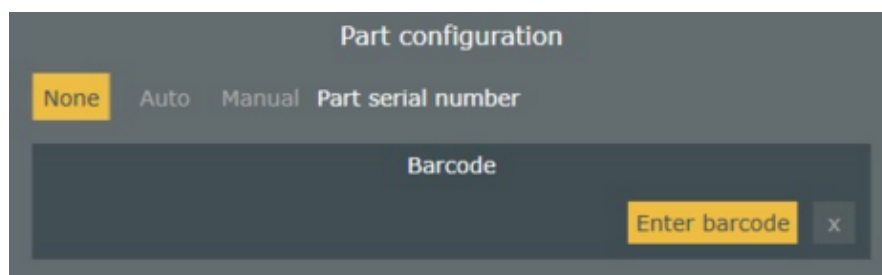
- **Instruments usage if calibration expired** : Choose what happens when the "Next calibration" date (set in Instruments/[Instruments](#)) is exceeded. "None" will do nothing, "Warn" will warn you each time the instrument is used with a "CAL" message displayed on the instrument but you will be able to use it, "Block" will block the instrument when the date is exceeded (not possible to use the instrument).
- **Enable tool correction** : Allow to calculate the correction needed for the tools of the CNC machine (option, on demand only).

**8.1.4 configuration** **Sound** If enabled, emit a sound when a measurement is stored. You can browse the sound you want to play with the ".." button.

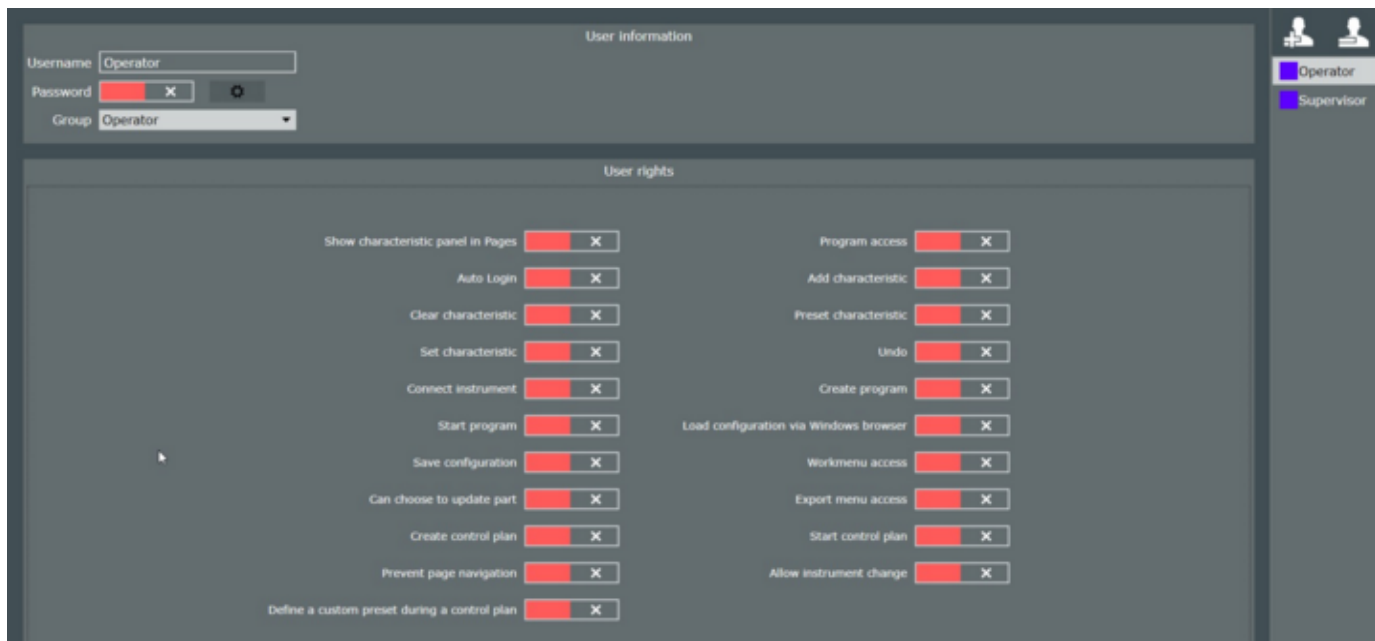


**8.1.5 configuration** **Part** In this panel, you can configure specific parameters for the current part.

- **Part serial number** : In "Auto" and "Manual" mode, a pop up will be displayed before starting each 'Sequence', asking you to enter the part 'Serial number'. In "Auto" mode, a default 'Serial number' will be displayed but it is also possible to modify it.
- **Barcode** : If you have a barcode reader available, you can use it to open your configurations quickly. You'll just need to configure the barcode in the window below by pressing "Enter barcode" and reading the specific barcode with your reader.



**8.2 Us** Use this tab to add or modify the users accounts, including the passwords. You can also define their user rights.



## Users

Use this to manage users.

## User information

Use this tab to change the different user informations, including the Password and the Group type.


## User rights

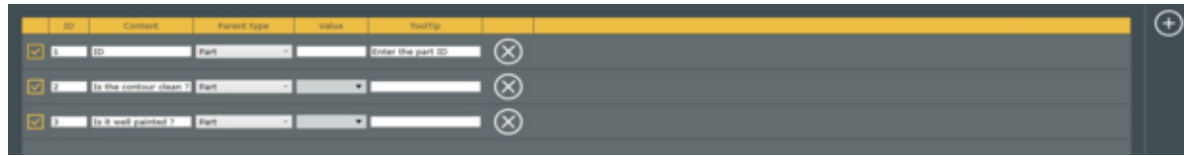
Use this tab to define the user rights.

- **Show characteristic panel in Pages** : Let the operator see the 'Characteristic panel' in the 'Measurements' tab.
- **Auto Login** : Open Sylcom application without a login window and password.
- **Clear characteristic** : Let the operator clear one or several characteristic(s) of the part configuration via the "Clear" button in Measurements tab. e.g. useful for Min or Max mode, to clear the stored data in the instrument buffer
- **Set characteristic** : Let the operator Set to 0 one or several characteristic(s) of the part configuration via the "Set" button in Measurements tab.
- **Connect instrument** : Let the operator connect new instrument(s).
- **Start program** : Let the operator start a program (previously defined in "Programs" tab).Needs Sylcom "PRO" package.
- **Start configuration** : Let the operator start a part configuration.
- **Can choose to update part** : Let the operator accept or deny an update from an automatic CSV/Excel configuration import at Sylcom startup (see "Part" tab, when "Auto import when file changes" option is enabled). Needs Sylcom "Expert" package.

- **Create control plan** : Let the operator create and edit control plan(s).Needs Sylcom "PRO" package.
- **Prevent page navigation** : when a configuration has several pages, prevent the operator from changing the page selection
- **Define a custom preset during a control plan** : ???
- **Program access** : Let the operator access the 'Program" tab, e.g. to create or modify a program. Needs Sylcom "PRO" package.
- **Add characteristic** : Let the operator add one or several characteristic(s) to the part configuration.
- **Preset characteristic** : Let the operator Preset one or several characteristic(s) of the Page via the "Preset" button in Measurements tab.
- **Undo** : Let the operator use the "Undo" button (to remake a measurement in "Sequence" mode).
- **Create program** : Let the operator create a part configuration.Needs Sylcom "PRO" package.
- **Load configuration via Windows browser** : Let the operator load a part configuration from its Windows Explorer rather than only the ones filtered from the "Cfg" folder ("Browse" button in Home tab).
- **Workmenu access** : Let the operator access the 'Workmenu' in the 'Instruments" tab.
- **Export menu access** : Let the operator access the 'Export" tab.
- **Start control plan** : Let the operator start a "Control plan" configuration. Needs Sylcom "PRO" package.
- **Allow instrument change** : Let the operator change the default instrument in a characteristic

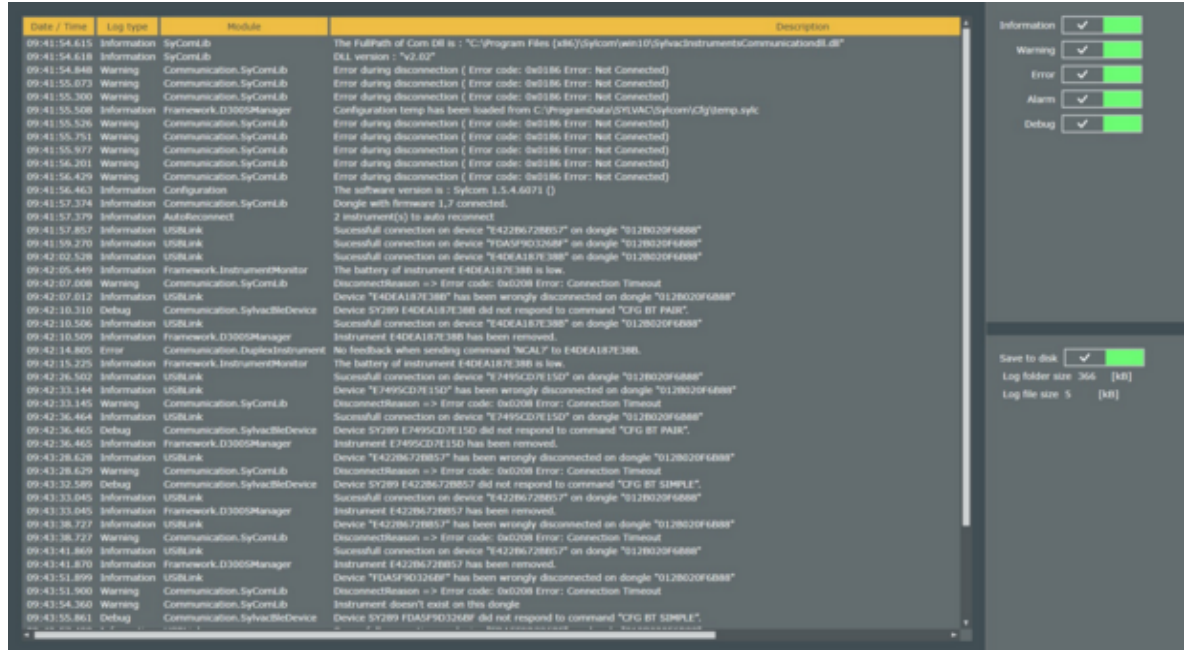
**8.3 Traceability fields** This tab is only available with a **PRO license**. Use it to display SPC (Statistical Process Control) traceability fields for the operator to fill before each sequence.

First, use the plus button  to add the different items you want. Then, choose if you want either a text or a list box and enter its "Content" (by default). Repeat it for each item and fill their ID, Content, Value (with the "Edit..." item in the list menu) and ToolTip boxes. Make sure that your items are well selected with the "Check button" in the left.



### 8.4 Logs

The Logs tab displays the history of the program, with several levels that you can filter: information, warning, error, alarm, debug.



If the "Save to disk" check box is enabled, Logs will automatically be saved on the disk of your computer.

### 8.5 Cloud

Cloud configuration. Work in progress... Not available yet.



Activate Cloud

Server address

ID

Password

State : ● Connect

### 8.6 Monitoring

Monitoring configuration, to display data in Dat/Monitoring" tab (mostly available with Sylcom "PRO" package

Monitoring

Display zones  
 Display lines  
 Color points  
 Display sigmas  
 Display Gauss curve

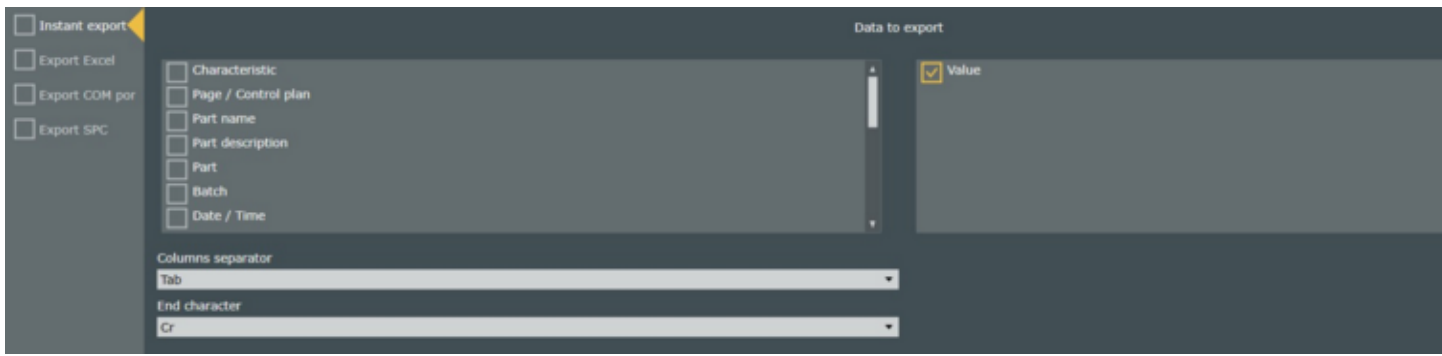
those settings are the same as in the context menu in Data/Monitoring" tab, when right-clicking with the mouse.

Display options of a part's statistics graphic :

- Display zones: display or hide red/green/yellow colors of the part tolerances zones
- Display lines: display or hide the lines of the graphic
- Color points: display the points with red/green/yellow colors depending on the value of the points
- Display points: display or hide the points of the graphic
- Display sigmas : display the lines of N sigmas in the "Distribution" graphic

## 9. EXPORT SCREEN

To enable this menu, you have to activate it with the check box  Activated (same button as in the Measurement screen page panel). The screen will then be composed of 5 exports choices :



- [Export focus](#)
- [Export in file](#)
- [Export Excel](#)
- [Export COM port](#)
- [Export SPC](#)

They all share the "Data to export" bar. Check the different information that you want to see in your export file here. The 'Columns separator' and the 'End character' have to be specified in the list menu.

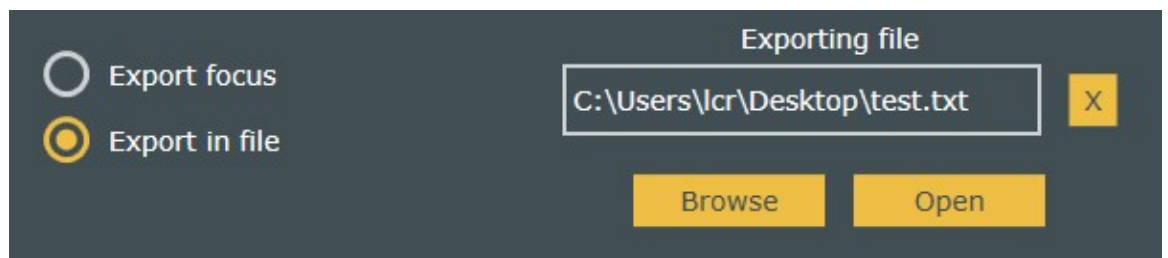
The 'Export focus', 'Export in file', 'Export Excel' and the 'Export COM port' are instantaneous exports as the 'Export SPC' is a cumulated export.

Refer to the [Export data issues](#) page if you have any problem with the export.


**9.1 Export focus** Export the data on the document where the mouse focus is. If the focus is on the Sylcom application, an error will occur.

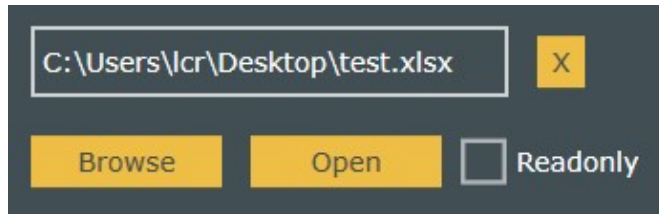
**9.2 Export in file** Export the data on a document already existing on your computer.

Select the file in which you want to export your data with the "Browse" button. You can also open it with the "Open" button.




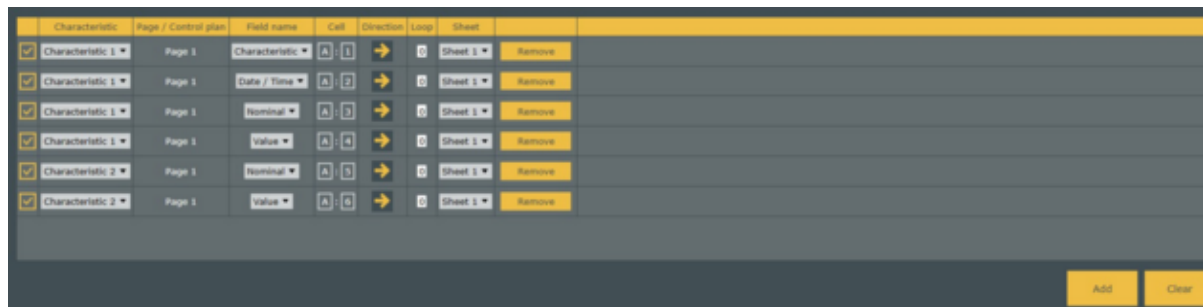
### 9.3 Export Excel

Export the data to an Excel document that already exists on your computer. Select it with the "Browse" button . You can also open it with the "Open" button. If the "Readonly" check box is enabled, you will be asked a new name for your document when you save it.



Then, use the "Add" button to add information to your Excel file (future stored information will be on the file). Fill the different fields with the information you want.

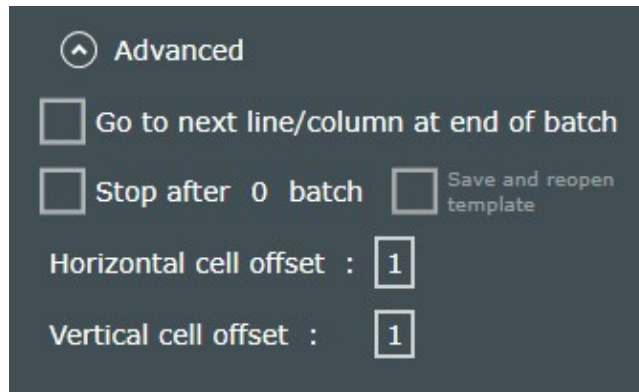
- The **check box**  allows you to export or not the information to your Excel file.
- Choose the characteristic you want to export the information from with the "**Characteristic**" list menu.
- "**Page / Control plan**" field: information about where the characteristic comes from (e.g Page 2 or Control Plan).
- Choose which information you want to export with the "**Field name**" list menu.
- Enter the first Excel cell where your data will be exported with the "**Cell**" field.
- Select the direction you want your information to be added in the Excel file with the "**Direction**" field. To avoid ambiguities, choose the same direction for all the lines to export. You can also choose the "=" sign to export to single cell for data that don't need to be repeated (e.g. same operator name or part number).
- Specify the number of parts of one batch in the "**Loop**" entry box. In case you don't have any batch, just specify 1.
- If you have more than one sheet in your excel document, you need to specify it in the "**Sheet**" list menu.
- To remove one characteristic's information (one line), press the "**Remove**" button (to remove all the lines, press the "**Clear**" button).



Once you have done your measurements, specified characteristic's information will be written on your Excel document.

	A	B	C	D	E	F	G
1	Supervisor	Supervisor	Supervisor	Supervisor	Supervisor		
2	30.04.2019 12:02	30.04.2019 12:02	30.04.2019 12:03	30.04.2019 12:03	30.04.2019 12:04		
3	1	1	1	1	1		
4	1.191	1.123	1.019	1.207	1.354		
5	3.2	3.2	3.2	3.2	3.2		
6	3.181	3.199	3.181	3.227	3.142		
7							
8							

The advanced tab accessible with the little  **Advanced** allows you to set batch parameters and "Cell offset".



- **Go to next line/column at end of batch** : If enabled, at the end of a batch, the export will continue on the first line/column but shifted right/underneath.
- **Stop after ... batch** : If enabled, after the specified number of batches, the export will stop.
- **Save and reopen template** : If enabled (only if "Stop after ... batch" is enabled), will save the document once the specified number of batches is reached and will save next data on a new document. By default, documents will have the name of the first document with the date and hour added to differentiate them.
- **Horizontal cell offset** : Choose the number of horizontal cells that are skipped between each loop (If "Loop" = 0, it will be between each part).
- **Vertical cell offset** : Choose the number of vertical cells that are skipped between each loop (If "Loop" = 0, it will be between each part).

#### 9.4 Export COM port

Export the data to an external application using COM port(s).

Sylcom will export data of one characteristic to the selected COM port.

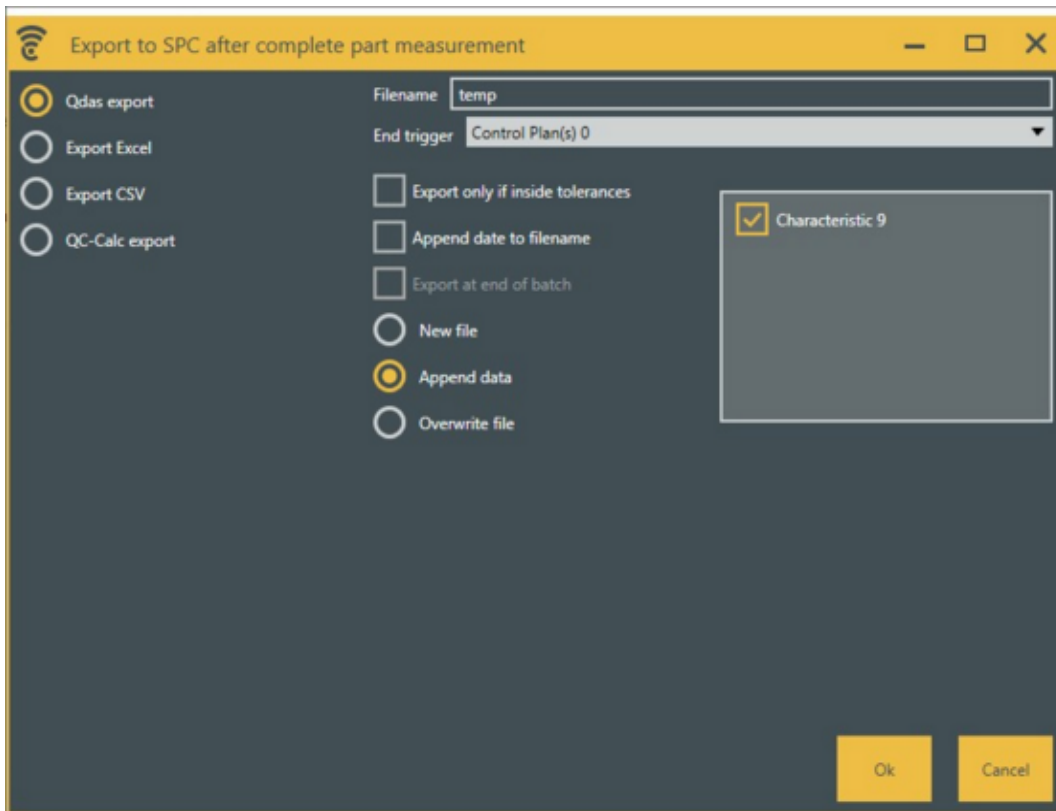
Characteristic	Exported name	COM port		
Characteristic 1	CHA1	COM0 - Free ▼	X	
Characteristic 2	CHA2	COM1 - Free ▼	X	
Characteristic 3	CHA3	COM2 - Free ▼	X	
Characteristic 4	CHA4	COM3 - Used ▼	X	
Characteristic 5	CHA5	▼	X	
Characteristic 6	CHA6	▼	X	
Characteristic 7	CHA7	▼	X	
Characteristic 8	CHA8	▼	X	
Characteristic 9	CHA9	▼	X	

9.5 With a **PRO licence** of Sylcom, you can export the data after each part execution (can be after a sequence, a multigauged measurement or a control plan) to a file.

**Export SPC**

Click on the "Add" button (bottom right) to add an SPC export. It will open a window to set the export parameters. On the left, choose your export format. On the right, choose which characteristics you want to export.

- **Filename** : Enter the filename.
- **End trigger** : Choose the trigger event that marks the end of the part measurement before exporting the data (can be either end of a page or of a control plan).
- **Export only if inside tolerances** : If enabled, it will export only the measurements that are classified as good.
- **Append date to filename**: If enabled, the date/time will be added to the filename.
- **Export at end of batch** : ???
- **New file**: If enabled, a new file is created after each export, with a "\_N" appended to the original filename (N = 1, 2, 3...).
- **Append Data**: If enabled, the new data are appended to the same file after each export.
- **Overwrite file** : If enabled, overwrite the previous file (if existing) after each export.



The overview of your export file(s) are displayed on the 'Export screen'. You can edit them with the "Edit" button



Export type	Selected End trigger	Filename	File format	Export only if inside tolerances	Append date to filename	Export at end of batch	Selected Characteristics
Export Excel End of page trigger (Page 1)		temp	Append data	<span style="color: green;">●</span>	<span style="color: red;">●</span>	<span style="color: red;">●</span>	Characteristic 1, Characteristic 2, Characteristic 3, Characteristic 4, Characteristic 5, Charac
Qdas export End of control plan trigger (Control Plan(s) 0)		temp	Append data	<span style="color: green;">●</span>	<span style="color: red;">●</span>	<span style="color: red;">●</span>	Characteristic 9
Qdas export End of page trigger (Page 1)		temp	Append data	<span style="color: red;">●</span>	<span style="color: red;">●</span>	<span style="color: red;">●</span>	Characteristic 1, Characteristic 2, Characteristic 3

## 9.6 Export data issues

When data are exported by the function "Live export" to an existing excel sheet, Sylcom will open it as soon as the user is logged in.

If by mistake the document is closed, go to export menu and select click on OPEN button.

Compatibility with Microsoft Excel from version 2003 to latest.

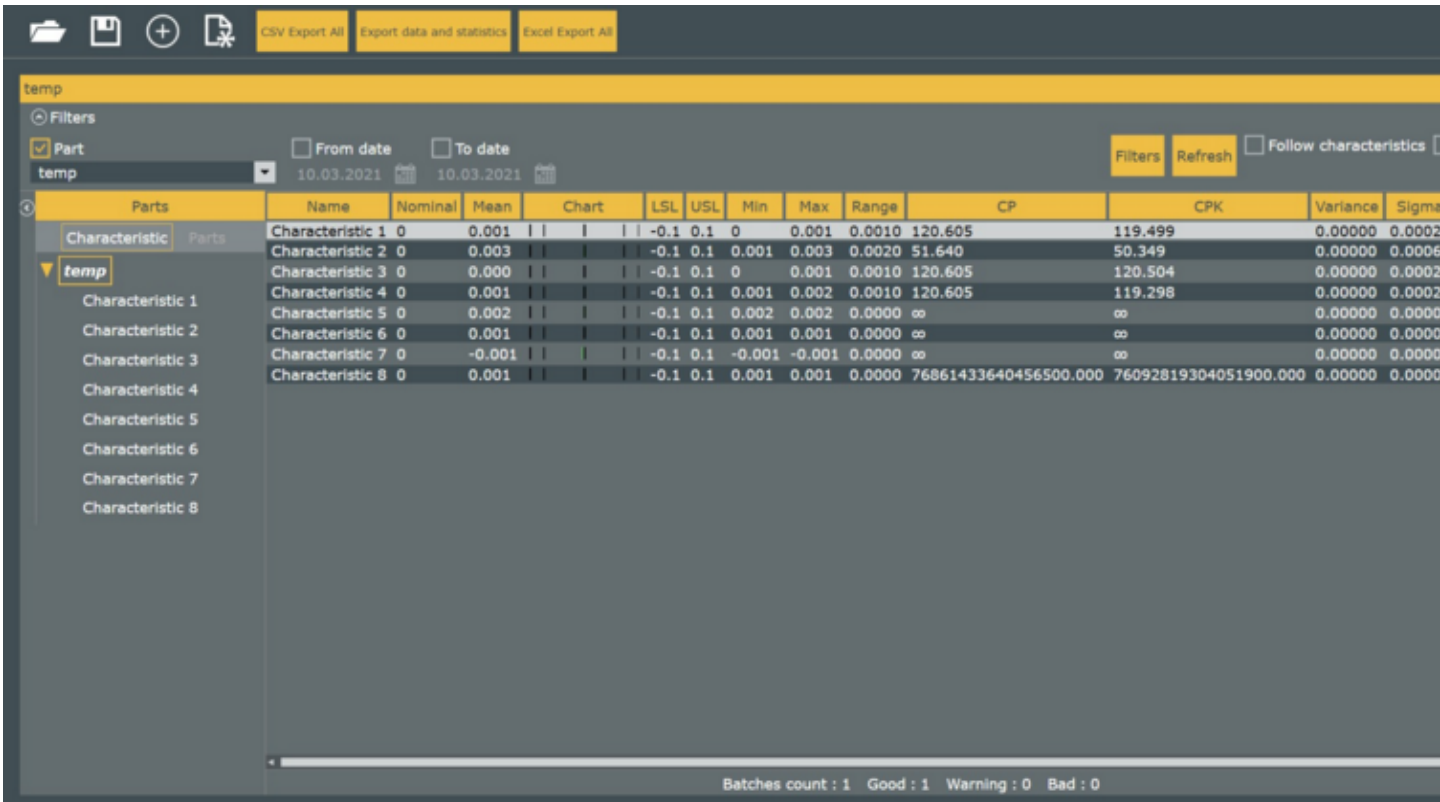
Please note Excel Mobile is not compatible with Sylcom and Live export function activated.


When measurements are done with a timer, please ensure that your computer is not configured to turn off or go to sleeping mode automatically. Otherwise Sylcom will stop running and data will not be stored.

## 10. DATA/MONITORING SCREEN


This screen is divided in 3 sections :

- [Manage data](#) (upper part of the screen)
- [Filters](#) (centre of the screen)
- [Data display](#) (main part of the screen)




10. The "Open button"  allows to open a previously exported data file.

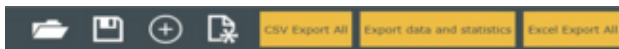
1 The "Save button"  allows to save the data in a file.

Ma The "Add a new chart" button  allows to display multiple charts on the screen.

ag The "Create a new and empty configuration" button  allows to create a new configuration with no data.


e The "CSV Export All" button, "Export data and statistics" button and "Excel Export All" button will generate the results file and allow to change the filename.

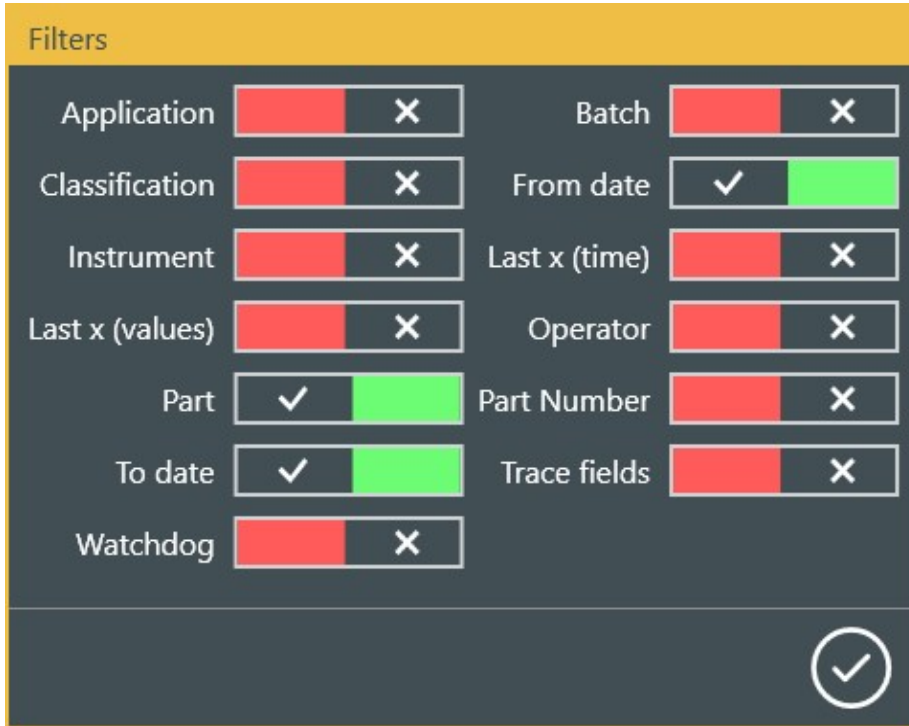
dat The "Floating window" button  will put the current interface in a separate window.



10. This section allows you to manage filtering of your data.  
2



First, you can choose which filters you want to display with the "Filters" button . Then you can manage each one of the filters you activated.




**Filters :**

- **Application** : Reserved (only Sylcom for now)
- **Classification** : Ok, Not Ok, Warning, ...
- **Instrument** : select in the list of available instruments. Only the data tmeasured with this-these instruments will be displayed
- **Last x (values)** : select only the last X measurements
- **Part** : select 1 or several parts
- **To date** : display data until a certain date only
- **Watchdog** : select a percentage of the tolerance range When a measurement is bigger than this percentage, it is considered as non-sense (e.g. error of manipulation) and will not be displayed
- **Batch** : select the measurements of a specific Batch ID
- **From date** : display data from a certain date only
- **Last x (time)** : select only the more recent measurements
- **Operator** : select measurement taken by a specific operator
- **Part Number** : select the measurements of a specific Part ID



- **Trace fields** : select the measurements only if they were were stored with a specific trace field

To do a general "Refresh" ("Characteristic" + filters applied), use the "Refresh" button . If enabled, the "Auto refresh" button will automatically refresh the screen when a "Characteristic" modification occurs (can be long enough depending on the number of displayed data). If enabled, the "Follow characteristics" button ???

10. This section gives you an overview of the data by **part** and **batch of parts**.



3 If at least one measurement is out of tolerance, a red box is displayed next to the part name with a "NoGo" message on it. Inverse, if every measurement are inside tolerance, a green box is displayed with a "Go" message on a it.

dis Likewise, if at least one part of a batch is out of tolerance ("NoGo"), a red box is displayed next to the batch name **pla** with a "NoGo" message on it. Inverse, If every part of a batch is inside tolerance ("Go"), a green box is displayed **y** with a "Go" message on it.

Parts		Summary		Trace fields												
Characteristic	Parts	Name	Value	Chart	Nominal	LSL	Lsl warning	Usl warning	USL	Date	Unit	Resolution	Part	Part Number	Classification	Tol
temp		Characteristic 4	0.002		0	-0.1	-0.075	0.075	0.1	2021-03-10 12:29:03.877	mm	0.001	temp	UndefinedPart	Go	Go
		Characteristic 4	0.001		0	-0.1	-0.075	0.075	0.1	2021-03-12 16:29:28.603	mm	0.001	temp	UndefinedPart	Go	Go
	UndefinedBatch	Characteristic 4	0.001		0	-0.1	-0.075	0.075	0.1	2021-03-12 16:29:29.203	mm	0.001	temp	UndefinedPart	Go	Go
	UndefinedPart	Characteristic 4	0.001		0	-0.1	-0.075	0.075	0.1	2021-03-12 16:29:30.643	mm	0.001	temp	UndefinedPart	Go	Go
		Characteristic 4	0.001		0	-0.1	-0.075	0.075	0.1	2021-03-12 16:29:30.883	mm	0.001	temp	UndefinedPart	Go	Go
		Characteristic 4	0.001		0	-0.1	-0.075	0.075	0.1	2021-03-12 16:29:31.123	mm	0.001	temp	UndefinedPart	Go	Go
		Characteristic 4	0.001		0	-0.1	-0.075	0.075	0.1	2021-03-12 16:29:31.363	mm	0.001	temp	UndefinedPart	Go	Go
		Characteristic 4	0.001		0	-0.1	-0.075	0.075	0.1	2021-03-12 16:29:31.603	mm	0.001	temp	UndefinedPart	Go	Go
		Characteristic 4	0.001		0	-0.1	-0.075	0.075	0.1	2021-03-12 16:29:31.963	mm	0.001	temp	UndefinedPart	Go	Go
		Characteristic 4	0.001		0	-0.1	-0.075	0.075	0.1	2021-03-12 16:29:32.203	mm	0.001	temp	UndefinedPart	Go	Go
		Characteristic 4	0.001		0	-0.1	-0.075	0.075	0.1	2021-03-12 16:29:33.163	mm	0.001	temp	UndefinedPart	Go	Go
		Characteristic 4	0.001		0	-0.1	-0.075	0.075	0.1	2021-03-12 16:29:34.243	mm	0.001	temp	UndefinedPart	Go	Go
		Characteristic 4	0.002		0	-0.1	-0.075	0.075	0.1	2021-03-10 12:29:03.877	mm	0.001	temp	UndefinedPart	Go	Go
		Characteristic 2	0.001		0	-0.1	-0.075	0.075	0.1	2021-03-10 12:29:03.877	mm	0.001	temp	UndefinedPart	Go	Go
		Characteristic 2	0.002		0	-0.1	-0.075	0.075	0.1	2021-03-12 16:29:04.590	mm	0.001	temp	UndefinedPart	Go	Go
		Characteristic 2	0.003		0	-0.1	-0.075	0.075	0.1	2021-03-12 16:29:06.090	mm	0.001	temp	UndefinedPart	Go	Go
		Characteristic 2	0.003		0	-0.1	-0.075	0.075	0.1	2021-03-12 16:29:07.527	mm	0.001	temp	UndefinedPart	Go	Go

## 11. CHARACTERISTICS SCREEN

Characteristics menu overview and parameter settings like characteristic name, nominal, tolerance range and preset value.

From there, you can change the "Name", filter the control plans, export data with the "Export" button  and refresh data with the "Refresh" button .

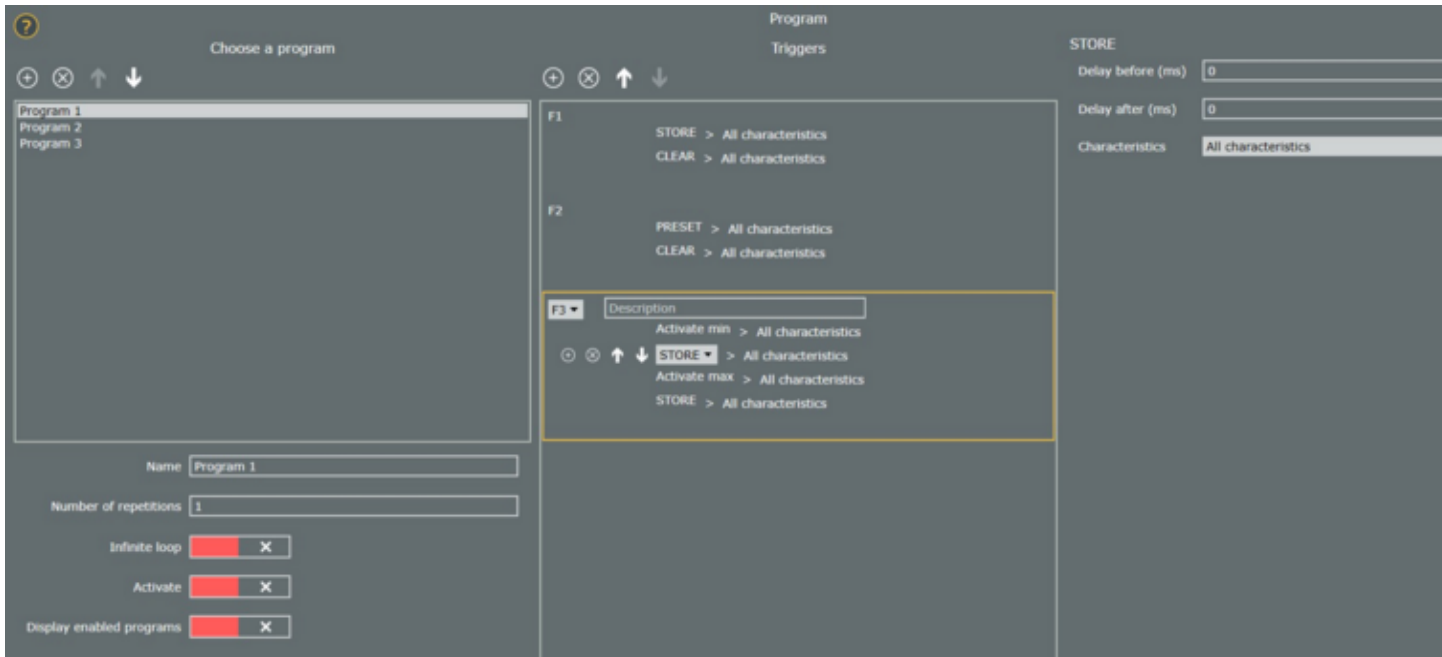
Control Plan(s) <span>All</span>									
Name	Nominal	Lower limit	Upper limit	Preset	Value	Source	Page	Control Plan(s)	
Characteristic 1	0	-0.1	0.1	0	NaN		Page 1		
Characteristic 2	0	-0.1	0.1	0	0,00000	E422B672B857	Page 1		
Characteristic 3	0	-0.1	0.1	0	0,00100	E4DEA187E38B	Page 1		
Characteristic 4	0	-0.1	0.1	0	NaN		Page 1		
Characteristic 5	0	-0.1	0.1	0	-0,00100	E7495CD7E15D	Page 1		
Characteristic 6	0	-0.1	0.1	0	0,00100	FDASF9D326BF	Page 1		
Characteristic 7	0	-0.1	0.1	0	NaN		Page 1		
Characteristic 8	0	-0.1	0.1	0	NaN		Page 1		
Characteristic 9	0	-0.1	0.1	0	NaN		Schem	Control Plan(s)	

## 12. PROGRAM SCREEN

This facility is only available with a **PRO license**. It could be useful when :

- you need to execute specific actions during a part measurement. An action is then mapped to a trigger, e.g. a Bluetooth pedal can be configured to export a specific characteristic's data into Excel format.
- you need to execute specific actions in a certain order, e.g. first, presetting a characteristic with a pedal, secondly, activating automatically Min mode, then Max mode, and finally, printing a session of measurements with a shortcut key (see image below).

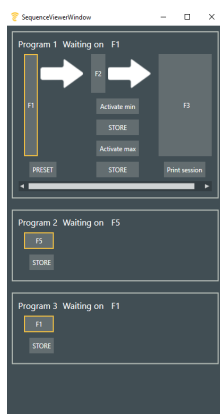
The screen is divided in 3 parts : 'Choose a program', 'Triggers' and the selected action.



### Choose a program :

Use these 2 buttons to add/delete program(s) . To move a program above/below use the two arrows .

- **Name** : Change the name of the selected program.
- **Number of repetitions** : Choose the number of times the selected program can be used.
- **Infinite loop** : If enabled, the program can be used an infinite number of times.
- **Activate** : If enabled, the program is usable.
- **Display enabled programs** : If enabled, a window shows with information about the progress of the program (see image below).

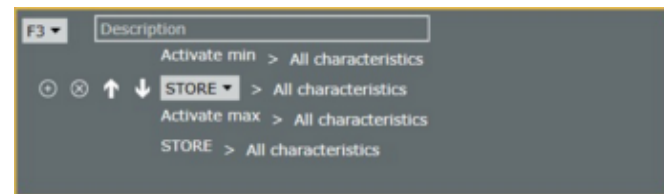


## Triggers :



Use these 2 buttons to add/delete trigger(s)' action(s) . To move a trigger(s)' action(s) above/below use the two arrows .

When selecting a trigger's action(s), you will be able to choose the trigger you want with the list menu next to the trigger's action number. Triggers are described as below :

- **F1 - F12 and Ctrl+Enter** : Keyboard function keys.
- **F9 (Pedal)** : F9 function key or USB pedal.
- **Data received** : Whenever a measurement data is received by Sylcom.
- **Threshold (state)** : When a measurement data exceeds the specified threshold.
- **Threshold (transition)** : When a measurement data value exceeds the specified threshold (only the transitions).
- **Bluetooth pedal (only if connected)** : When pressing on the pedal.
- **Data Store Trigger** : When a measurement data **which is explicitly stored** exceeds the specified threshold.
- **String trigger** : start action when the specified string defined in "Condition" text box is found in the specified "COM port"
- **Continue actions** : start next action just after the previous was finished, without the need of pressing a trigger



A little description can be added in the 'Description' field.

Add or delete an action with the 2 buttons . To move an action above/below use the two arrows .

Then, choose which action you want to execute at this moment with the list menu.

- **STORE** : Store the value(s).
- **SET** : Set the characteristic(s).
- **PRESET** : Preset the characteristic(s).
- **CLEAR** : Clear the value(s).
- **HOLD ON** : Hold the value(s).
- **HOLD OFF** : Stop holding the value(s).
- **Activate min** : Activate min mode on the characteristic(s)' instrument(s).
- **Activate max** : Activate max mode on the characteristic(s)' instrument(s).
- **Activate delta** : Activate delta mode on the characteristic(s)' instrument(s).
- **Activate normal mode** : Activate normal mode on the characteristic(s)' instrument(s).
- **Acquire value in blind mode** : Same as pressing the "Send data" button of the instrument.
- **Export Excel action** : Export in Excel as it is currently configured in Export/Export Excel.
- **Export CSV action** : Export as it is currently configured in Export/Export CSV.
- **Custom command** : Execute the command that you have prior

written in the "Define command" field.

- **Output MB-IO** : select the software output to send to the hardware output of the MB-IO (see chapter 6.4 M-BUS)
- **Start / Stop timer** : Execute periodically a sequence of actions like periodic measurements (e.g. Store selected characteristic and Select next characteristic every 2 seconds)  
At first trigger execution (e.g. F1), a timer is started and the actions are executed periodically at the selected delay (e.g. 2000 ms)  
At second trigger execution (e.g. F1), the timer is stopped. You can also configure it to stop by itself by enabling the "Automatic stop" check box with a timing, or you can select a different "Stop trigger" in the list on the right side (e.g. F2).
- **Print session** : Print all the measurements of the current session in case "Enable Session" is enabled (see Measurement screen/[Page settings panel](#)).
- **Excel export session** : Export on an Excel file all the measurements of the current session in case "Enable Session" is enabled (see Measurement screen/[Page settings panel](#)).
- **CSV export session** : Export on CSV file all the measurements of the current session in case "Enable Session" is enabled (see Measurement screen/[Page settings panel](#)).
- **Clear session** : Clear the current session in case "Enable Session" is enabled (see Measurement screen/[Page settings panel](#)).
- **Select characteristic** : Select the selected characteristic.
- **Go to page** : Go to the selected page.
- **Next page** : Go to the next page.
- **Start the control plan** : Start the selected control plan.
- **Select next characteristic** : Select the next characteristic.

#### Selected action :

This part is specific to the selected action (in the 'Triggers' part). You can choose the delays before and after the action as well as the characteristic(s) where the action will execute.

## 13. CONTROL PLAN SCREEN

With a **PRO licence** of Sylcom, it is possible to add one or several control plan to a part configuration.

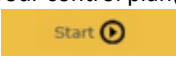
A control plan defines the sequence of measurements for controlling a part with more options than a simple measurement page (e.g. batch management, group characteristics to be measured simultaneously,...).

The Supervisor will be guided through a wizard to create the control plans, and the operator will have a simple user interface to execute them on the parts.

First you need to create a part configuration from the 'Home' screen. Then, you will be able to add control plans to it by

pressing the  button.

Once you did the [Edit Part info](#) and the [Edit schematics](#), your control plan(s) will be displayed on the 'Home' screen. You are

now able to [Execute control plan](#) with the "Start" button .

Control Plan(s) of temp			
Name			
Control Plan(s) 0	Edit	Duplicate	Start
Control Plan(s) 1	Edit	Duplicate	Start

**13.1 Edit Part info** When editing a control plan, you will access this page where you can manage part information.


**Information tab** : Choose the "Name" of your control plan and, if one, enter its BarCode with a press on your USB device after pressing the "Enter BarCode" button.

**Store data trigger** : Choose the trigger that the operator will use to store data.

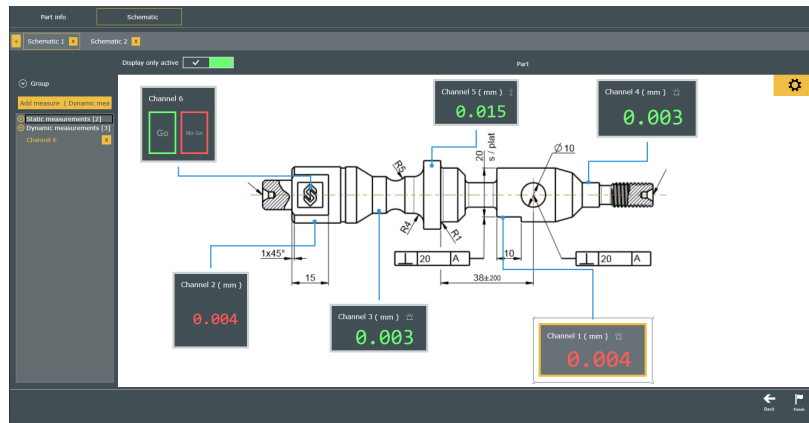
**Part** : Choose if you want either an "Auto" or a "Manual" 'Part serial number'.



**Batch** : This tab allow you to manage the Batch settings.

- **Use batch** : Enable it to manage batch(es).
- **Number of parts** : Enter the number of parts of one batch.
- **Can change number of parts** : If enabled, the operator will have the possibility to change the number of parts of one batch.
- **Batch serial number** : Choose if you want either an "Auto" or a "Manual" 'Batch serial number'.

When you have finished, just press the "Next" button  (bottom left).

**13.2 Edit schematics** This page is about the schematic of the measurements and the characteristics' edition.



On the top left, you can manage the Schematics. Add a schematics with the plus button  or delete it with the cross button  (e.g. if you need more than one drawing to show every measurement of a part you can add a schematic for each drawing). Schematics will execute one after the other.

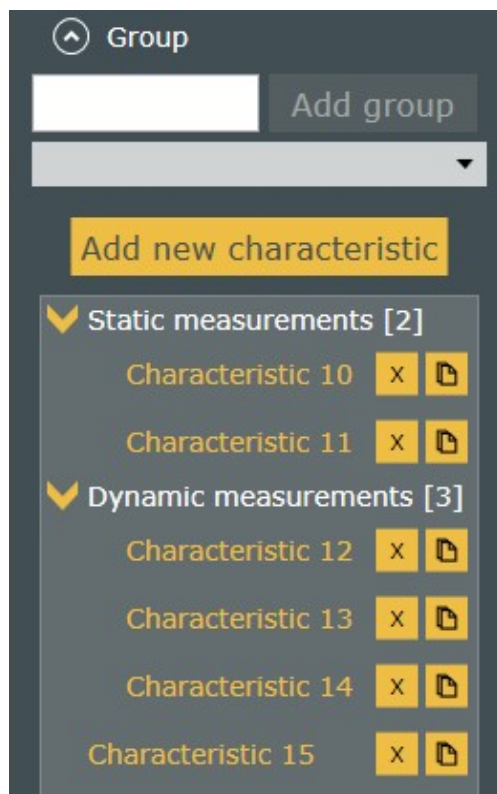


Just underneath, you can manage the group(s) and the characteristic(s).

Open the 'Group' tab to add a new group with the "Add group" button or change the current group with the list menu just below. A group can be useful if some characteristics need to be measured together (like in 'Multigauge' mode). It offers you the possibility to mix the 'Multigauge' mode with the 'Sequence' mode.

It is also possible to have characteristic(s) that are not in a group. They are just going to be executed sequentially (like in 'Sequence mode').

You can easily change the position of your characteristics with a drag/drop.

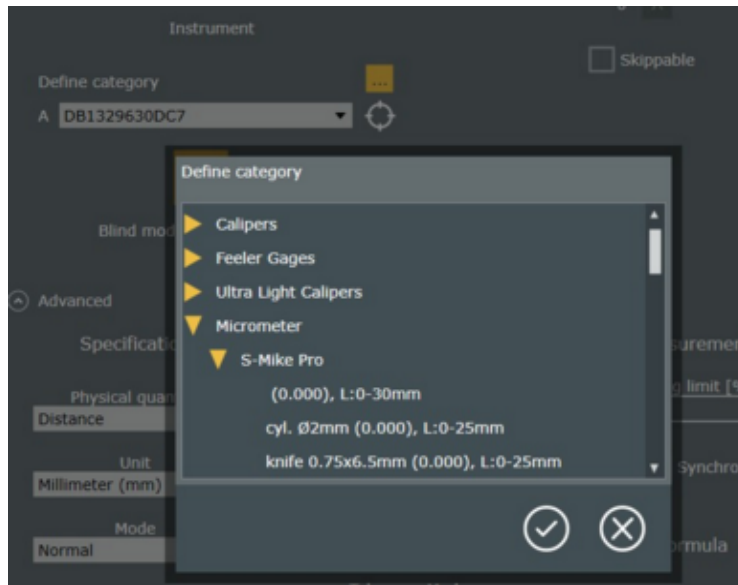


To add a new characteristic in the current group, click on the "Add new characteristic" button. It will open the characteristic Edition.

To edit an existing characteristic, double-click on the characteristic text in the left panel, or on the characteristic rectangle on the right panel.

The characteristic edition is mostly the same as for a basic part configuration (see Measurement screen/Characteristic settings panel/[Basic Edit characteristic](#)), with some extra options ("Define category" (...) button and "Skippable" check box).


"Define category" (...) button to pre-define an instrument family on the characteristic (e.g. S-Mike Pro, range:30mm, resolution:micron). This facility could be useful for a supervisor to select the type of instrument needed for each characteristic of this control plan, even without having the instruments in his office. Then he could deploy the control plans at several places at the Production line, and it will be the operator task to really affect the actual available instruments at his own working place. For now this category will only be a displayed information, but later on, this parameter could be used to filter and show the available and compatible instruments in a list before selecting the right one.

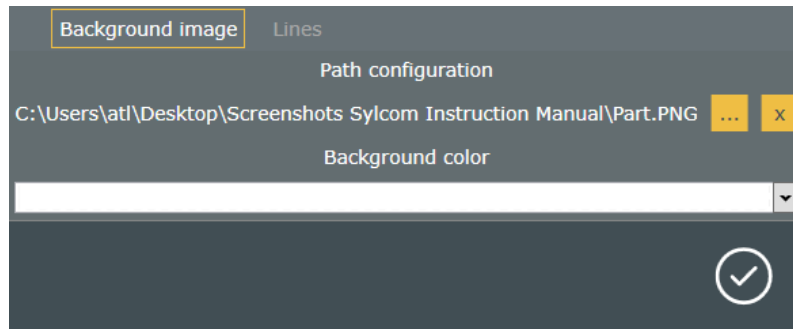


"Skippable" check box : if enabled, it will display a new **Skip button** when the control plan is executed and only for the related characteristic. This button gives the operator the choice to either "Store" a measurement or "Skip" it.

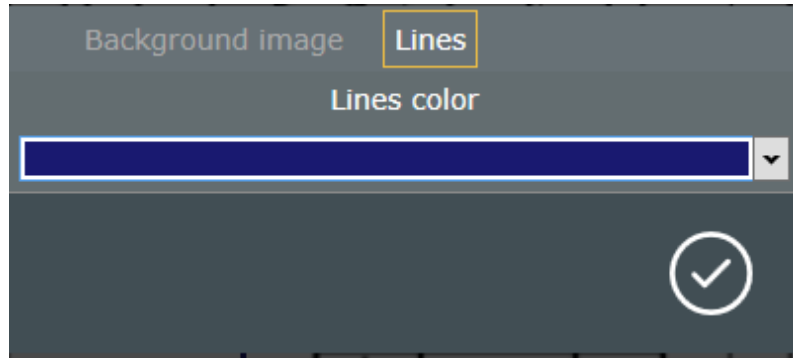




**Display only active (check box on top right)** : If enabled, during the execution of the control plan, only the characteristic that is measured (or the characteristic of a group if in a group) will appear on the screen which makes it cleaner and easier for the operator.

With the "Settings button" , access the 'Background image' and 'Lines' management. From the 'Background image' menu, you can choose the background image from your PC and choose the background color.



From the 'Lines' menu, you can choose the Lines color.



When you have finished the 'Schematic' just press the "Finish" button  on bottom right, or press the "Back" button  to modify the 'Part info'.

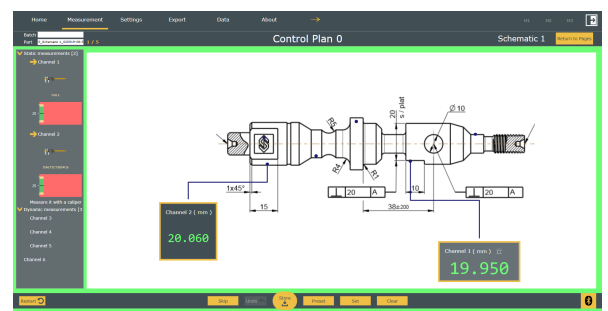
### 13.3 Execute control plan

When starting the control plan, you will access a screen with the view that you edit with the [Schematic page](#).

Given that for this example, the "Display only active" button is enabled, only characteristics of the first group are displayed. On the left, a panel displaying a follow-up of the control plan helps you seeing the progress. Information such as devices that are used, names, descriptions are displayed there.

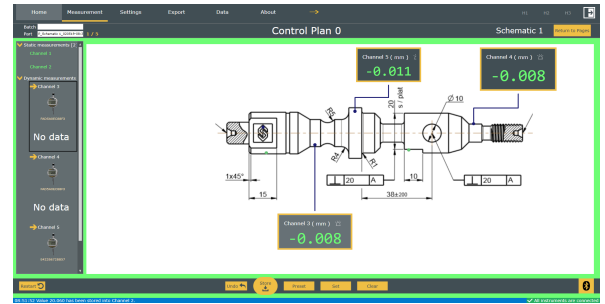
The green contour informs that for now, all measurements are inside tolerance for the current part. If, at some point, a measurement is out of tolerance, the contour will be red (until the beginning of a new part measurement).

Once ready, just press the "Store" button to go to the next group measurement, or the "Skip" button if available for these measurements.

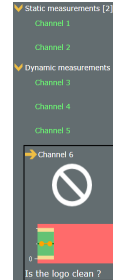




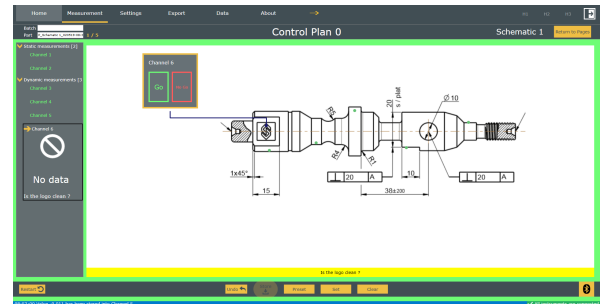
You can now see the second group characteristics. Little green dots are displayed on the positions of the first group measurements meaning that the values were inside tolerance. If they were out of tolerance, little red dots would be displayed instead (orange if in warning zone). Blue dots are for measurements that are not already taken.



On the follow-up panel, colours (green here) summary the past characteristics' measurements.



Yellow description bar is displayed (bottom of the screen) for measurements that have a description.



The "Return to Pages" button [Return to Pages](#) allows you to quit the control plan execution.

## 14. ABOUT SCREEN

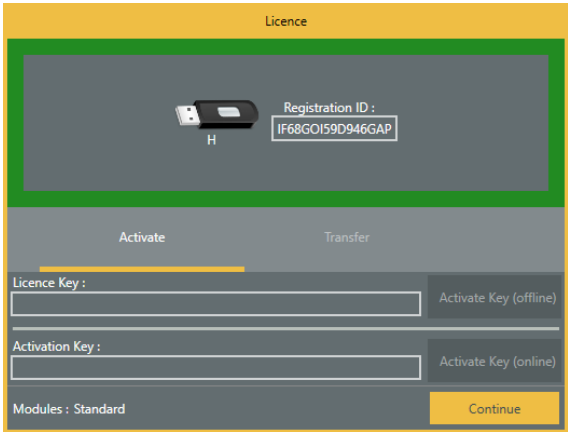
Check your Sylcom version as well as your licence status, [or open the user guide for some help.](#)



There are **2 ways** of activating your software licence when pressing the "Licence" button :

**Activation Key** : The user asks for an Activation Key that he will receive by mail (**needs the Internet connection on the PC**). Then, after filling the "Activation Key" field, press the "Activate Key (online)" button.

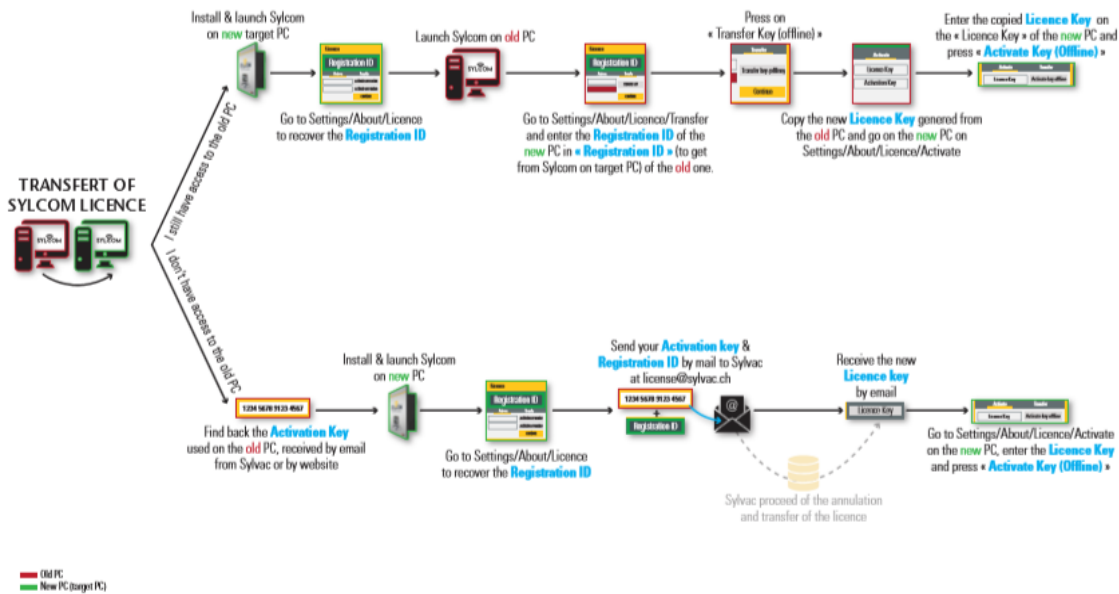
**Licence Key** : The user first sends his Registration ID to Sylvac by mail from another PC. After a check, the user will receive a Licence Key (**in case the PC cannot be connected to the Internet**). Then, after filling the "Licence Key" field, press the "Activate Key (offline)" button.



You can transfer your software licence to another PC by using the transfer tab :



## SYLCOM : TRANSFERT OF A LICENCE FROM A PC TO ANOTHER PC



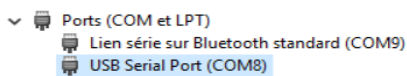
## 15. CONNECTIONS ISSUES

- For serial USB cabled instruments
- Instrument with Bluetooth® Wireless Technology
- Upgrade of the Dongle with Bluetooth® Wireless Technology
- Instruments connected on M-Bus modules, via MB-RS
- Windows 10 internal Bluetooth

### For serial USB cabled instruments

The maximum number of USB instruments connections depends on the PC hardware and Operating System : 8 (recommended), 15 (Win 64, USB 3.0), 36 (Win32, USB 2.0, with Sylcom “Advanced” option).

Please insure the cable is well plugged and instrument is switched on. Under devices manager the cable appears in section COM/LPT ports as USB serial port.



If it is not present, check the points below :

- Proximity-USB : Blue LED must be on
- Power-USB : as this cable power supplies the instrument, your device should be switched on.

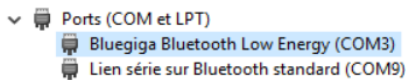
- Opto-USB : Red LED must be on

### Instrument with Bluetooth® Wireless Technology

For Bluetooth® instrument connection, a Sylvac BT dongle is necessary. Windows driver is supplied with the hardware or can be downloaded at [www.sylvac.ch](http://www.sylvac.ch).

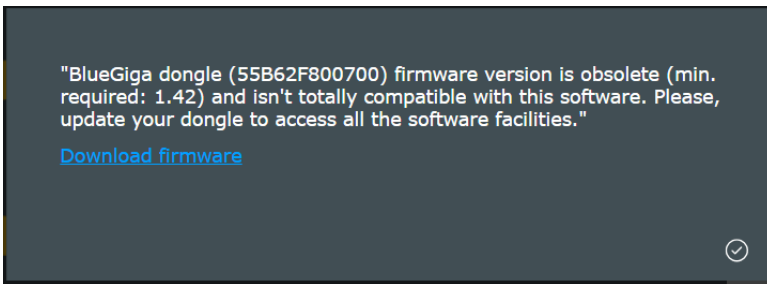
Please note that when plugging several Bluetooth® dongles, there may be some signal interferences between them, that disturb the data communications. Ideally, you should use USB extenders to keep a minimal distance of 10 cm between each dongle.

To communicate with Bluetooth® devices a dongle (981.7100) is mandatory. Drivers are available on CD-Rom supplied in the dongle box or available on [www.sylvac.ch](http://www.sylvac.ch)



### Upgrade of the Dongle with Bluetooth® Wireless Technology

At start the software checks the dongle compatibility and lets you download manually the firmware update if required. Click on "Download firmware" to access the download section.



To update your dongle Smart, please quit Sylcom, otherwise the update application is not able to communicate with the dongle with Bluetooth® Wireless Technology.

### Instruments connected on M-Bus modules, via MB-RS (available with "Advanced" package only)

Just after power on, in case of lots of connected M-BUS modules and instruments, the hardware may take a while to initialize. If starting Sylcom application too early, the initialization phase may be incomplete and some instruments not detected.

In that case, make sure the blue leds on all the modules are no more blinking (initialization finished), before starting Sylcom application.

### Windows 10 internal Bluetooth

Since this Bluetooth hub depends on the PC hardware and on the Windows processed management, the instruments connections may be less reliable than with an external USB Bluetooth dongle. It is necessary to restart Sylcom for this option to be taken into account.

## 16. NOTES



Changes without prior notice  
Sous réserve de toute modification  
Änderungen vorbehalten

Edition : 2019.04 /