MDE 231

IMVS2000v2 – Biffi Assistant User Manual

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BIFFI ITALIA has taken every care in collecting and verifying the documentation contained in this Installation and User Manual.
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SUMMARY

Warning: For any information regarding actuator parameters or settings please refer to the relevant IMVS2000v2 and Actuator documentation.
Wrong parameter settings may cause actuator malfunctions.

Warning: All parameters changes not saved into the internal application database or sent to the actuator will be lost once the application is closed.

Warning: It is assumed that the installation, setting, commissioning, maintenance and repair works are carried out by qualified personnel and checked by responsible Specialists. Operating the actuator and the IMVS2000v2 could damage the actuator and cause personal injury.

Warning: Any repair work other than the operations outlined in this manual will be strictly reserved to qualified BIFFI ITALIA personnel or to personnel directly authorized by the Company itself.

Warning: Whenever the PC will be used in HAZARDOUS AREA as defined by the applicable rules, it is mandatory to check whether the PC nameplates indicate their suitability to an hazardous area, and the appropriate protection degree.

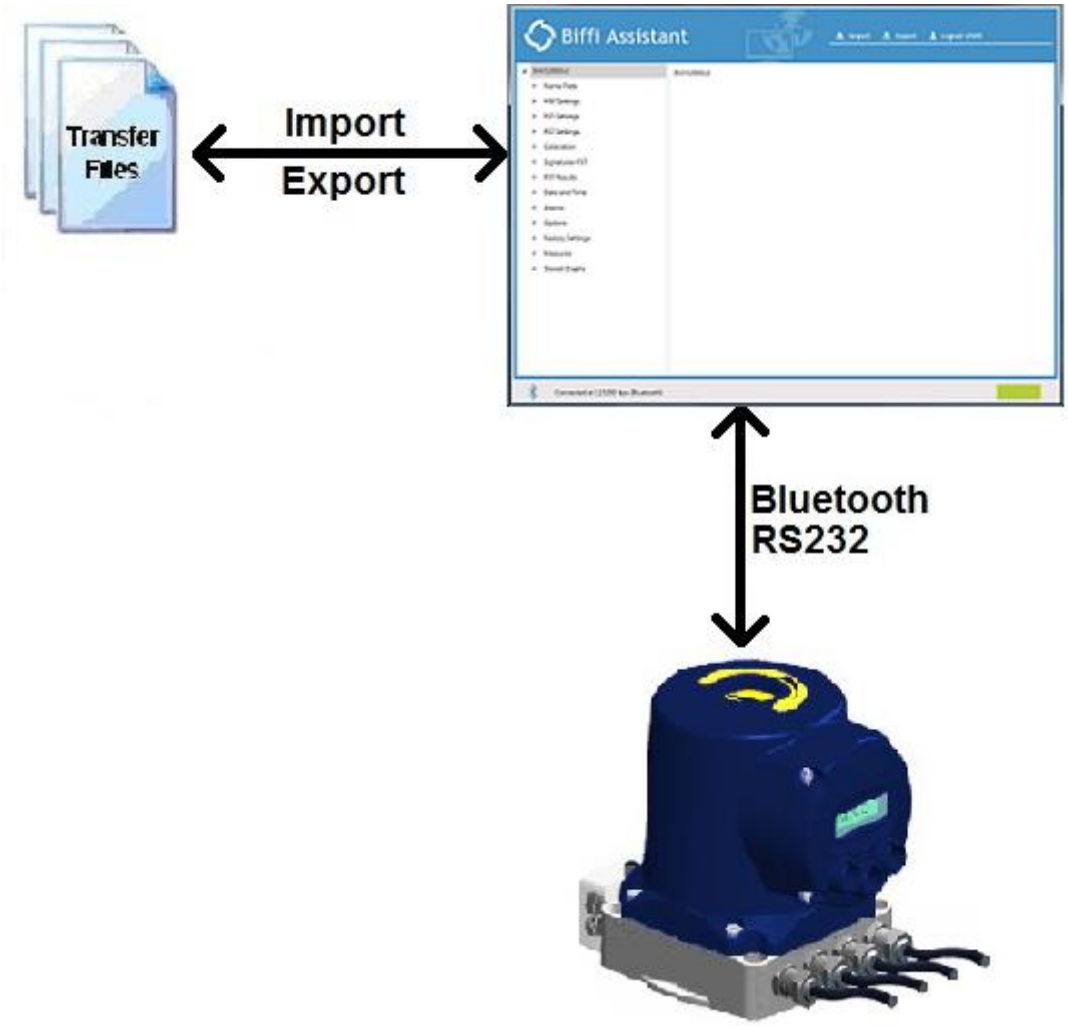
1 Reference Documents

[1]: IMVS2000v2 Installation and Operation Manual, BIFFI document MAN720

2 Introduction

The **Biffi Assistant** software tool is a software application for the PC that creates a versatile tool for configuring and maintaining multiple IMVS2000v2 devices.

The **Biffi Assistant** provides the ability to configure, diagnose and collect data for IMVS2000v2 devices on the PC / Windows platform (see APPENDIX C).



3 Communication Interface Selection and Login

Users may connect directly to an IMVS2000v2 device by using Biffi Assistant through Bluetooth and RS232.

A direct connection with Biffi Assistant is convenient for users that need to configure or diagnose many IMVS2000v2 devices or users who require immediate detailed analysis on a large screen on-site. Note that Biffi Assistant may save "transfer files" to review at a later time.

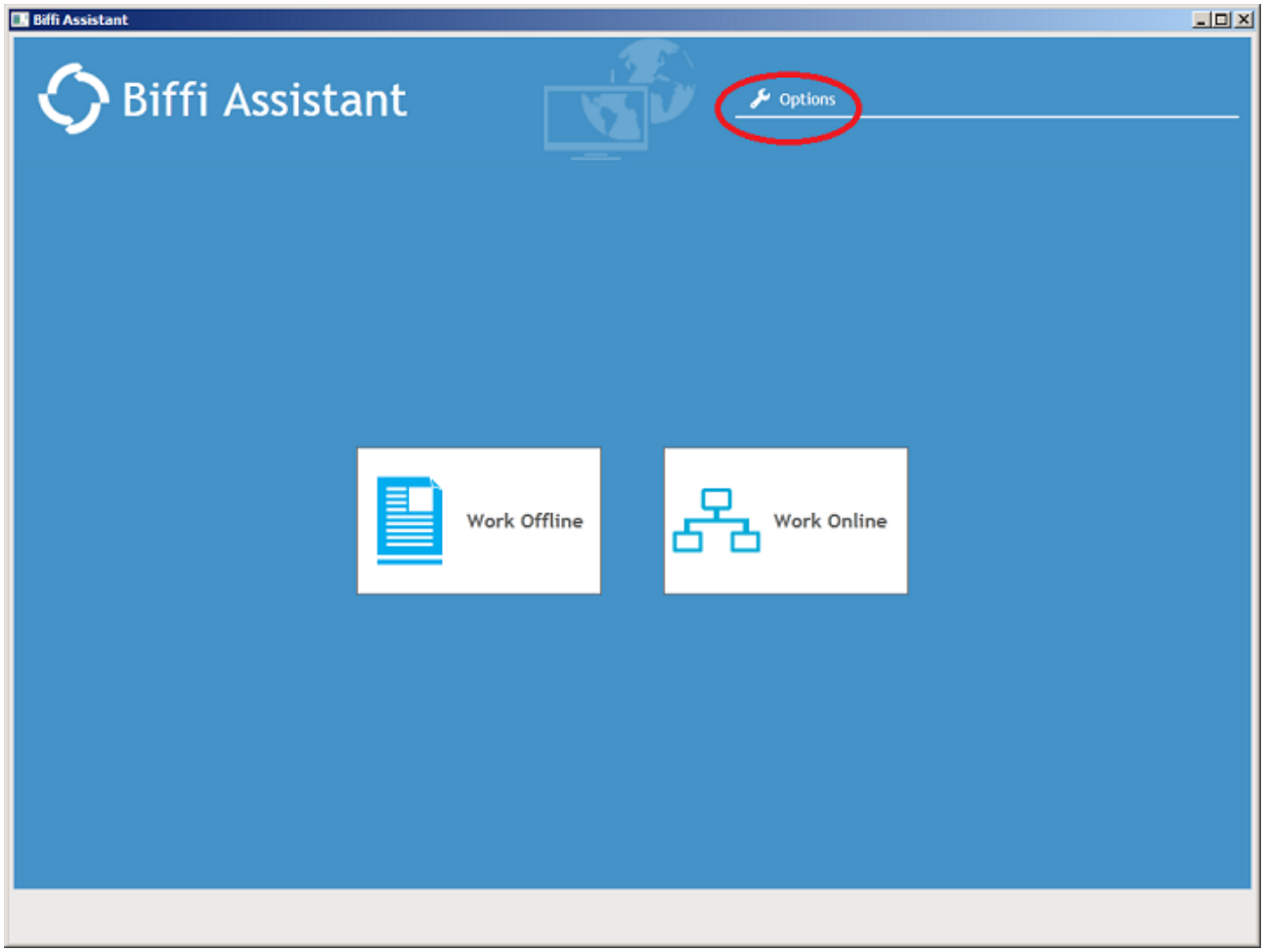
Warning: It is recommended to use only one Serial Communication Interface (RS232 or Bluetooth) per time to avoid configuration errors.

Important: When Biffi Assistant connection (RS232 or Bluetooth) is active, the IMVS2000v2 automatically inhibits the using of the Local Operator Interface and the display shows the sentence “Biffi Assistant Connected”.

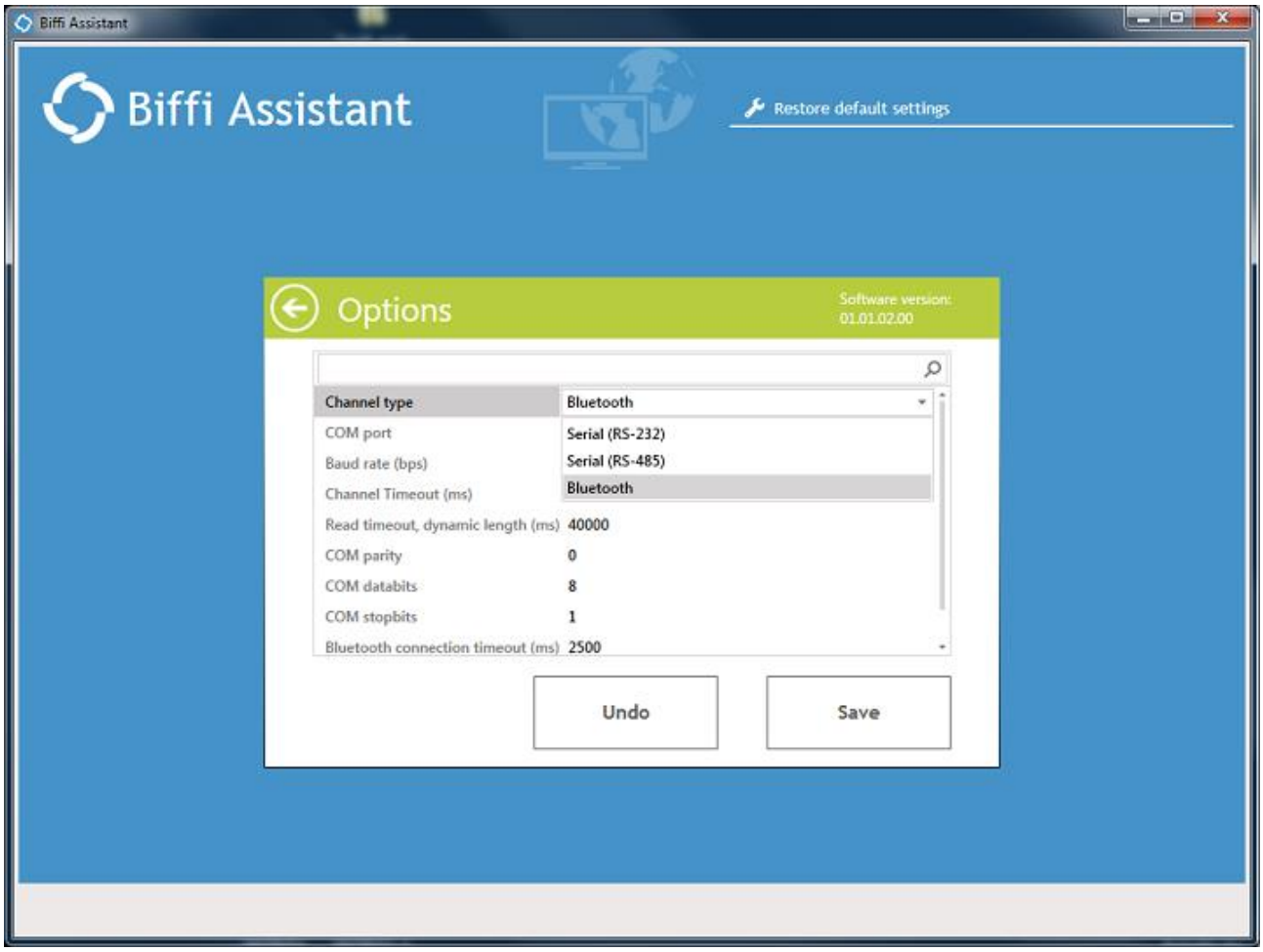
3.1 Interface Selection and Settings

When the Biffi Assistant starts, the following screen appears.

Left-Left-click of the mouse on “Options”, for setting the Communication Interface.



Select the Communication Interface/Channel Type (RS232 or Bluetooth).
On the right corner of “Options” it is indicated the SW version of Biffi Assistant.



According to the selected “Channel Type”, set the parameters as follows (*):

	RS232	Bluetooth
COM port	set the used COM	-
Baud Rate (bps)	115200 (fixed)	115200 (fixed)
Channel Timeout (ms)	6000	6000
Read timeout, dynamic length (ms)	100000	100000
COM parity	0 (fixed)	0 (fixed)
COM databits	8 (fixed)	8 (fixed)
COM stopbits	1 (fixed)	1 (fixed)
Bluetooth connection timeout (ms)	-	6000
Language	en (fixed)	en (fixed)

Left-click of the mouse on “Save” for applying the setting otherwise left-click of the mouse on “Undo”.
The selected Interface, with its settings, will be used by the Biffi Assistant, for the connection with the device.

Before starting the connection, verify that the selected interface is enabled (see [1]).
For restoring the default settings, left click of the mouse on “Restore default settings”.

(*) it is indicated the typical value of the parameters. In some cases (PC with low performance) it could be necessary to increase the value of the following parameters: “Channel Timeout”, “Read timeout, dynamic length” and “Bluetooth connection timeout”.

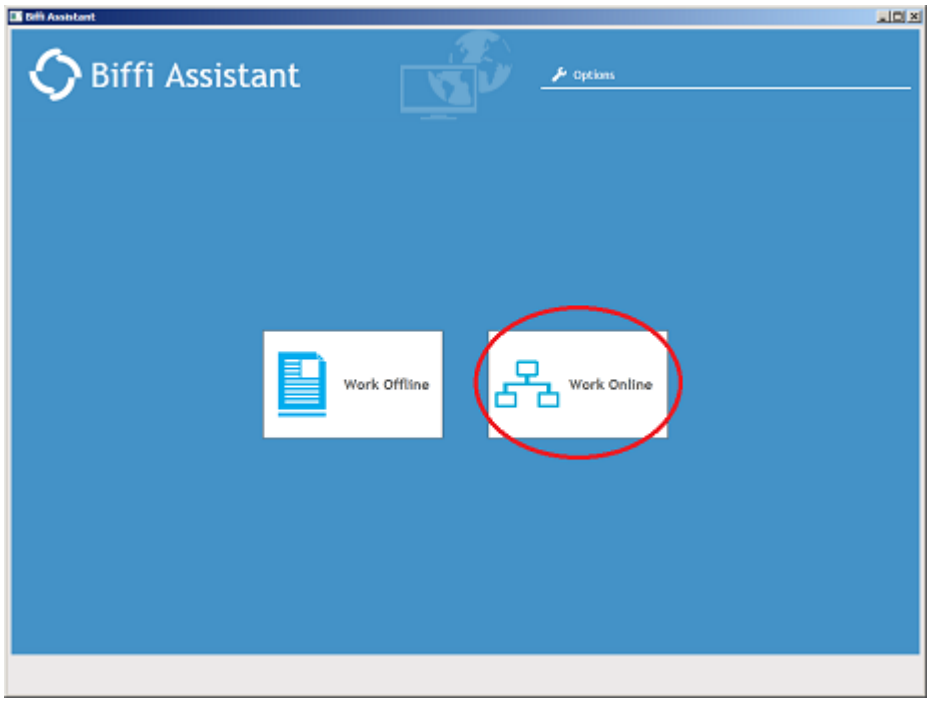
3.2 Login and Connection

See 3.1 to select the Communication Interface and to set it correctly.

3.2.1 RS232 connection

It is supposed that the cable connection is correctly made.
For the RS232 connection see **Error! Reference source not found.** and [1].

Left-click of the mouse on “Work Online“, for starting the connection with the IMVS2000v2.



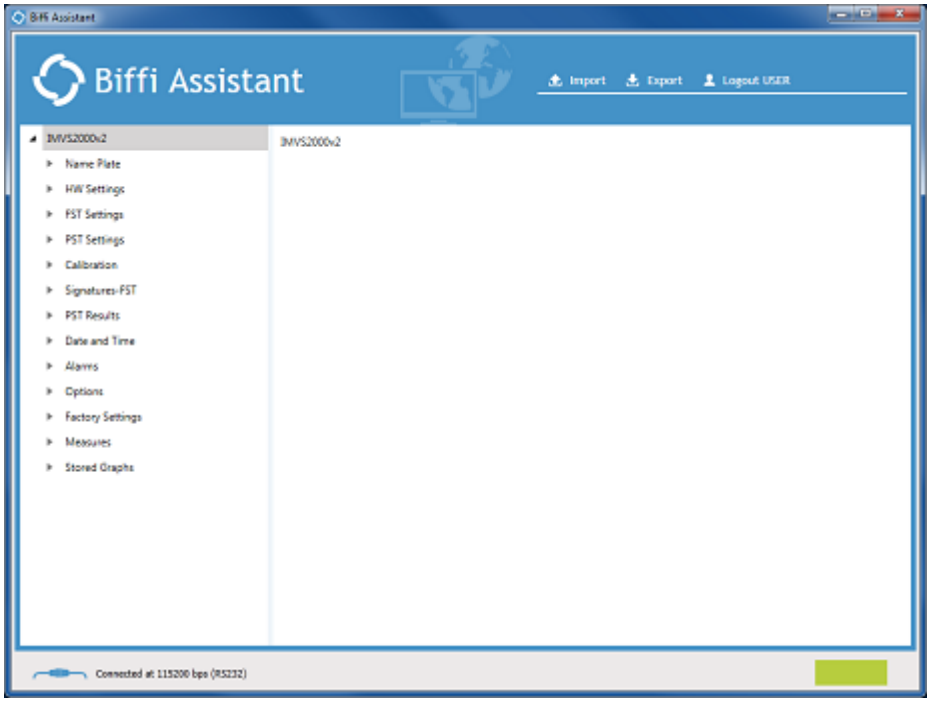
The “preliminary” connection starts.

Wait for the end of the “preliminary” connection until the Login screen queries the user for a “User” and a “Password”.

To login, select the “User” (see 3.3 for details), insert the password and left-click of the mouse on “Login” (or press ENTER). To cancel the Login, left-click of the mouse on the left arrow.

If the password is correct the connection with the IMVS2000v2 starts.

When the IMVS2000v2 is connected (“User” = USER) the following screen appears.

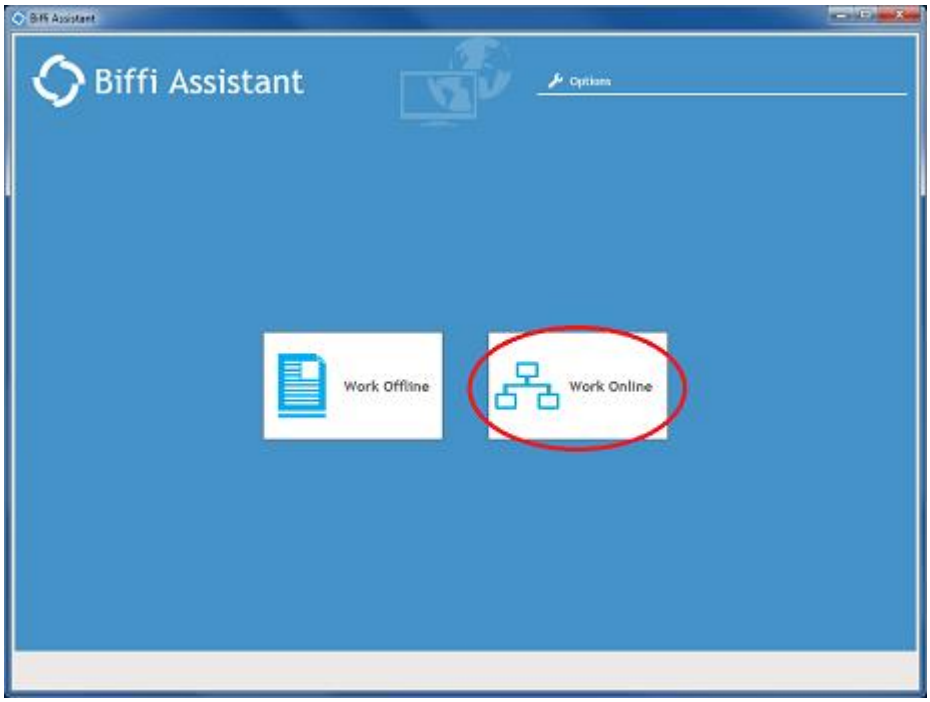


For Logging out, left-click of the mouse on “Logout *User Level*”.

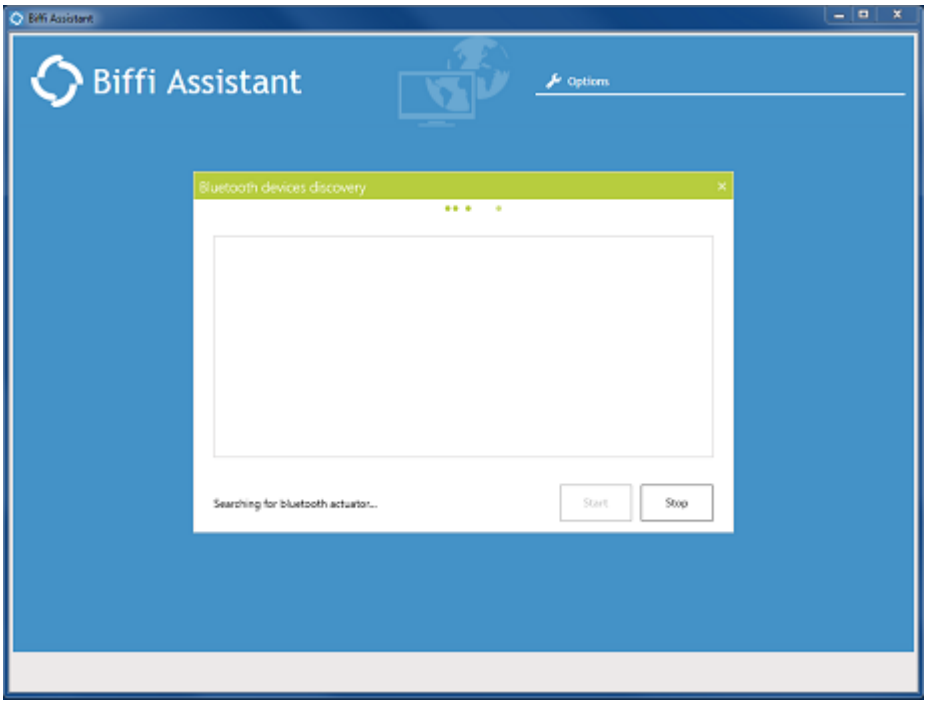
3.2.2 Bluetooth connection

For the Bluetooth, to operate properly, bring the PC to within 10 meters of the IMVS2000v2 device. Note that Bluetooth configuration is provided by your Bluetooth hardware manufacturer (see APPENDIX B for the approved USB/Bluetooth adapters).

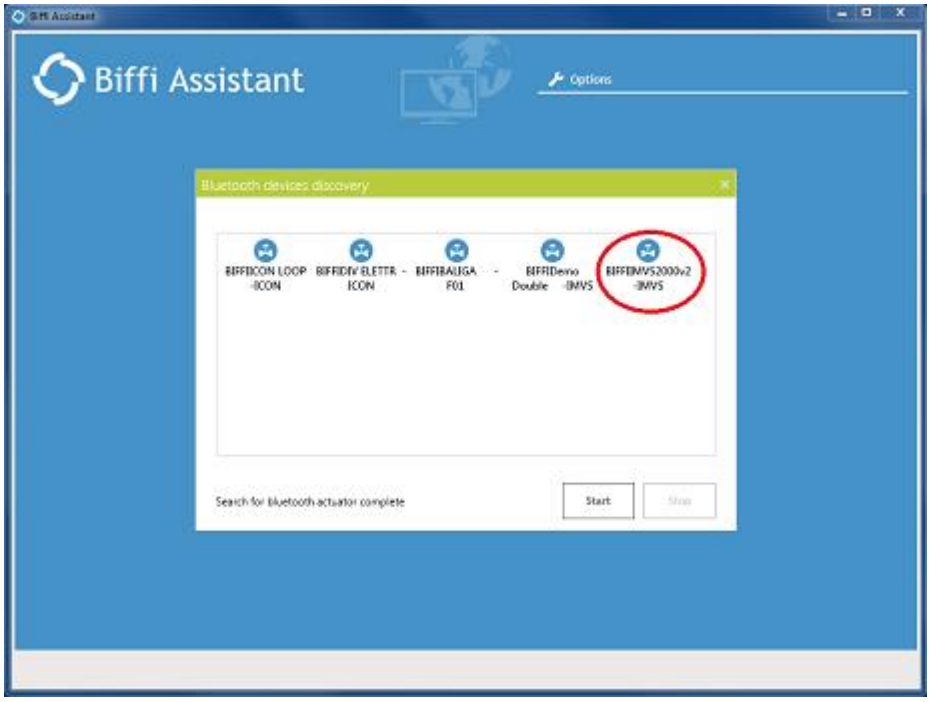
1) Left-click of the mouse on “Work Online“, for starting the connection with the IMVS2000v2.



2) Left click of the mouse on “Start”, for searching the Bluetooth devices.



3) Double Left-click of the mouse on the desired device, for starting the connetion.



At this point, depending on the Bluetooth stack of the laptop and on the Bluetooth module installed into the device, the following three different connection sequences can occur:

- Direct connection to the Device Password page (paragraph 3.2.2.1)
- Notice of the Bluetooth Connection before Device Password page (paragraph 3.2.2.2)
- Request of Bluetooth password before Device Password page (paragraph 3.2.2.3)

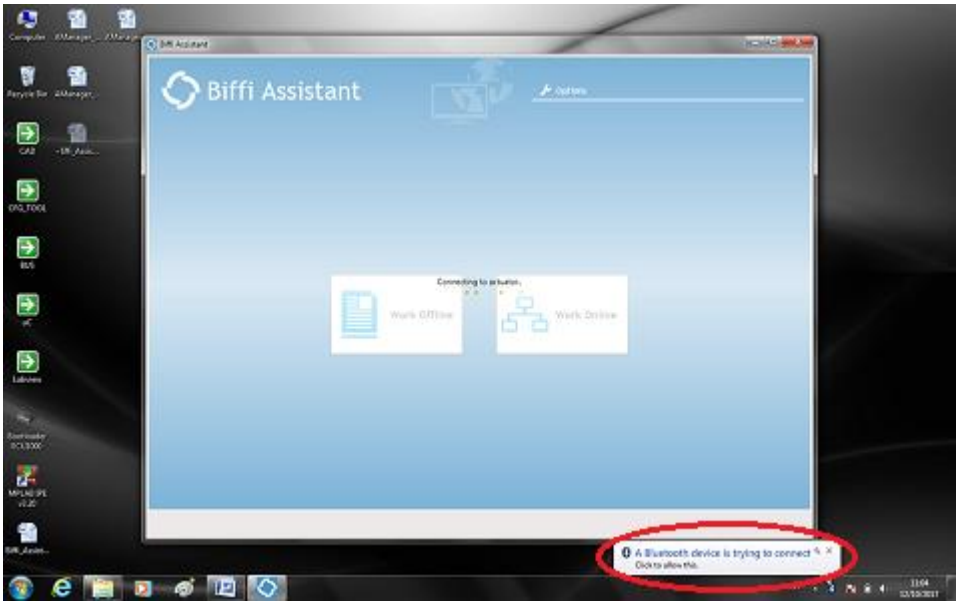
3.2.2.1 Direct connection to the Device Password page

The “preliminary” connection starts.

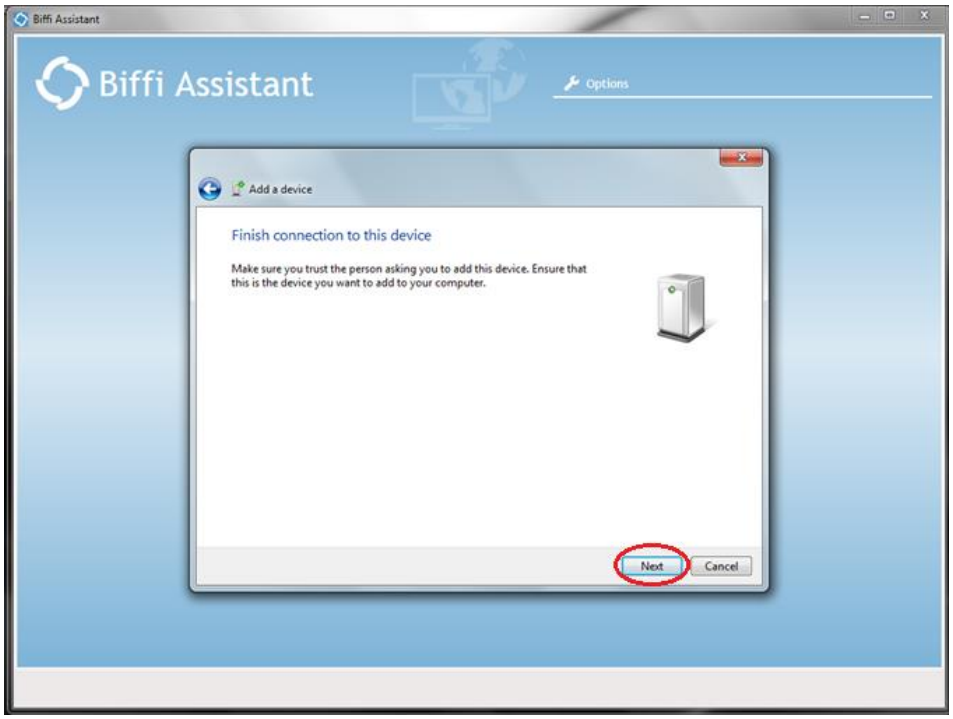
Go to step 4).

3.2.2.2 Notice of the Bluetooth Connection before Device Password page

Left click of the mouse on the message that appear in the bottom on the right.



Left click of the mouse on the “Next” button.

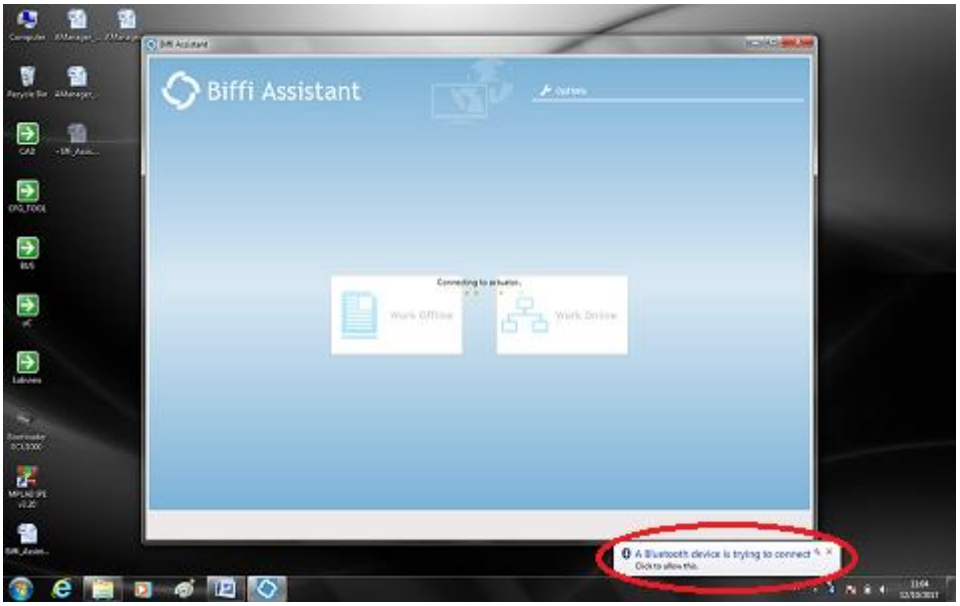


Left click of the mouse on the “Close” button.

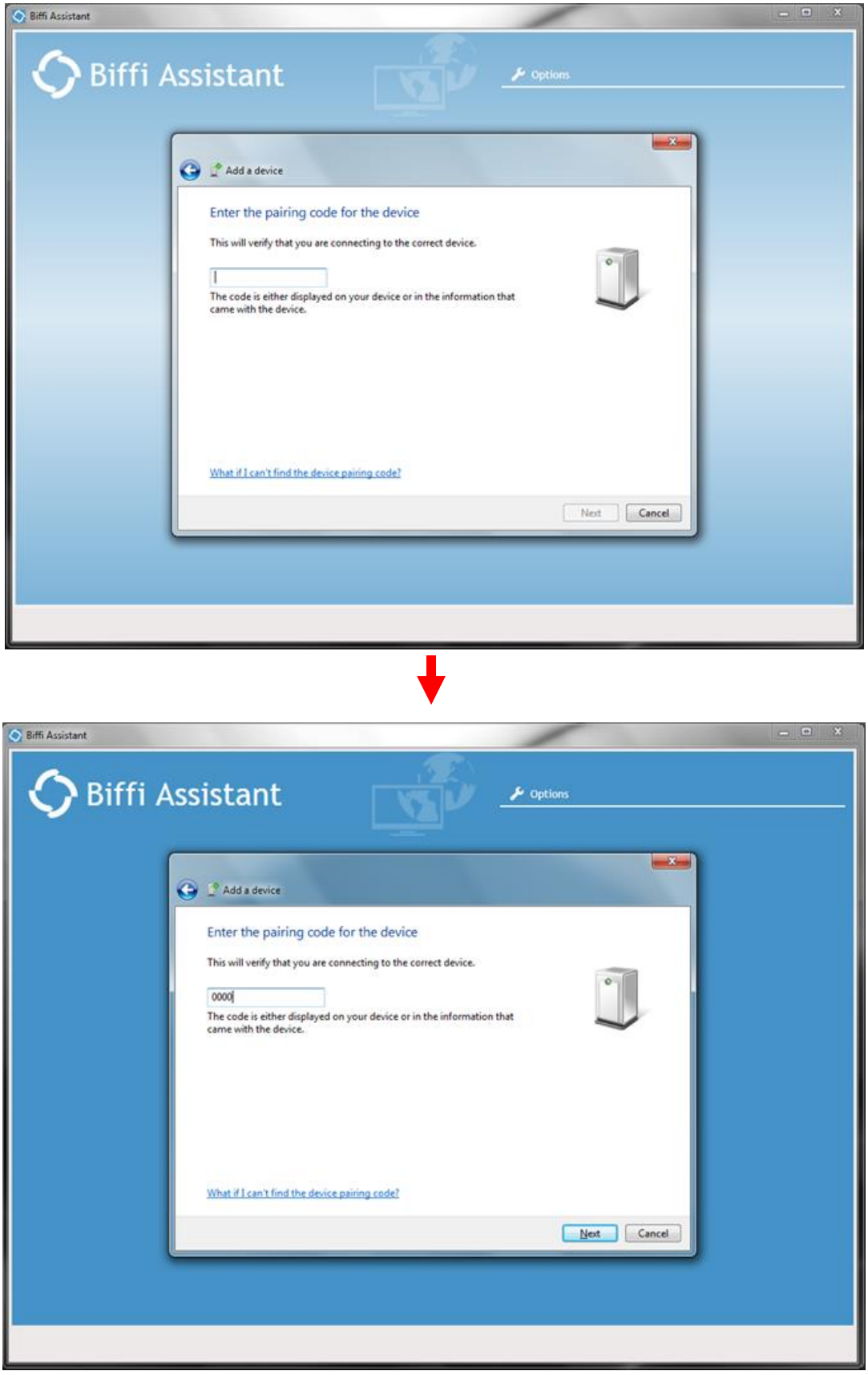
Go to step 4).

3.2.2.3 Request of Bluetooth password before Device Password page

Left click of the mouse on the message that appear in the bottom on the right.



Insert the password “0000” and then click on the “Next” button.



Left click of the mouse on the “Close” button.

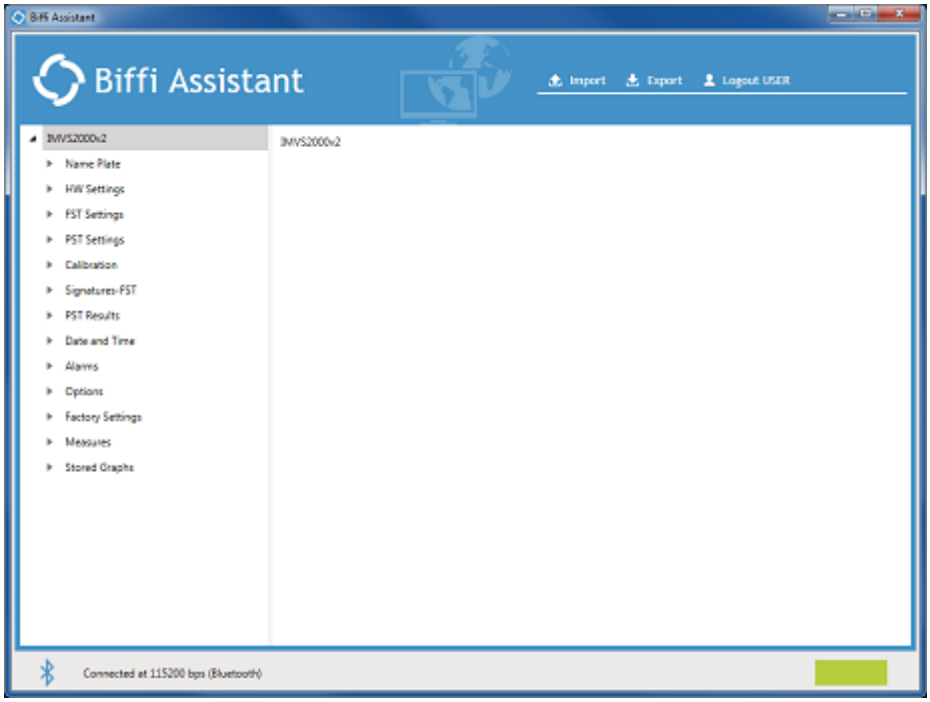
Go to step 4).

4) Wait until the end of the “preliminary” connection and the Login screen queries the user for a “User” and a “Password”.

5) To login, select the “User” (see 3.3 for details), insert the password and left-click of the mouse on “Login” (or press ENTER). To cancel the Login left-click of the mouse on the left arrow.

6) If the password is correct the connection with the IMVS2000v2 starts.

7) When the IMVS2000v2 is connected (“User” = USER) the following screen appears.



For Logging out, left-click of the mouse on “Logout *User Level*”.

3.3 User Levels (Login)

For logging in with the IMVS2000v2, it is possible to select four different “User”: **User** (Actuator’s users), **VAC** (Actuator’s users), **FACTORY** (Actuator’s users), **Observer** (Special users) and **Guest_S** (Special User).

OBSERVER:	Observer level may not configure or alter device in any way but is allowed to export all the configuration parameters stored on the IMVS2000v2. This authorization level is ideal for technicians with little or no training or authority for changing configurations. This is the lowest level of authorization and does not allow the device configuration to be changed.
GUEST_S:	Special authorization appropriate for Biffi authorized technician. This level allows a representative of Biffi to modify all the configuration parameters of the IMVS2000v2.
USER:	User level may configure the device. A subset of parameters is available. User level authority is typically the technician with responsibility for maintaining and updating IMVS2000v2 configuration. It is possible to export the configuration parameters (subset) and the graphs stored on the IMVS2000v2.
VAC:	Special authorization appropriate for Biffi authorized technician. This level allows a representative of Biffi to modify all the configuration parameters of the IMVS2000v2.
FACTORY:	Special authorization appropriate for Biffi Factory personnel. This authorization allows the user to use specific utilities and should never be used by the end customer.

4 Biffi Assistant Functions

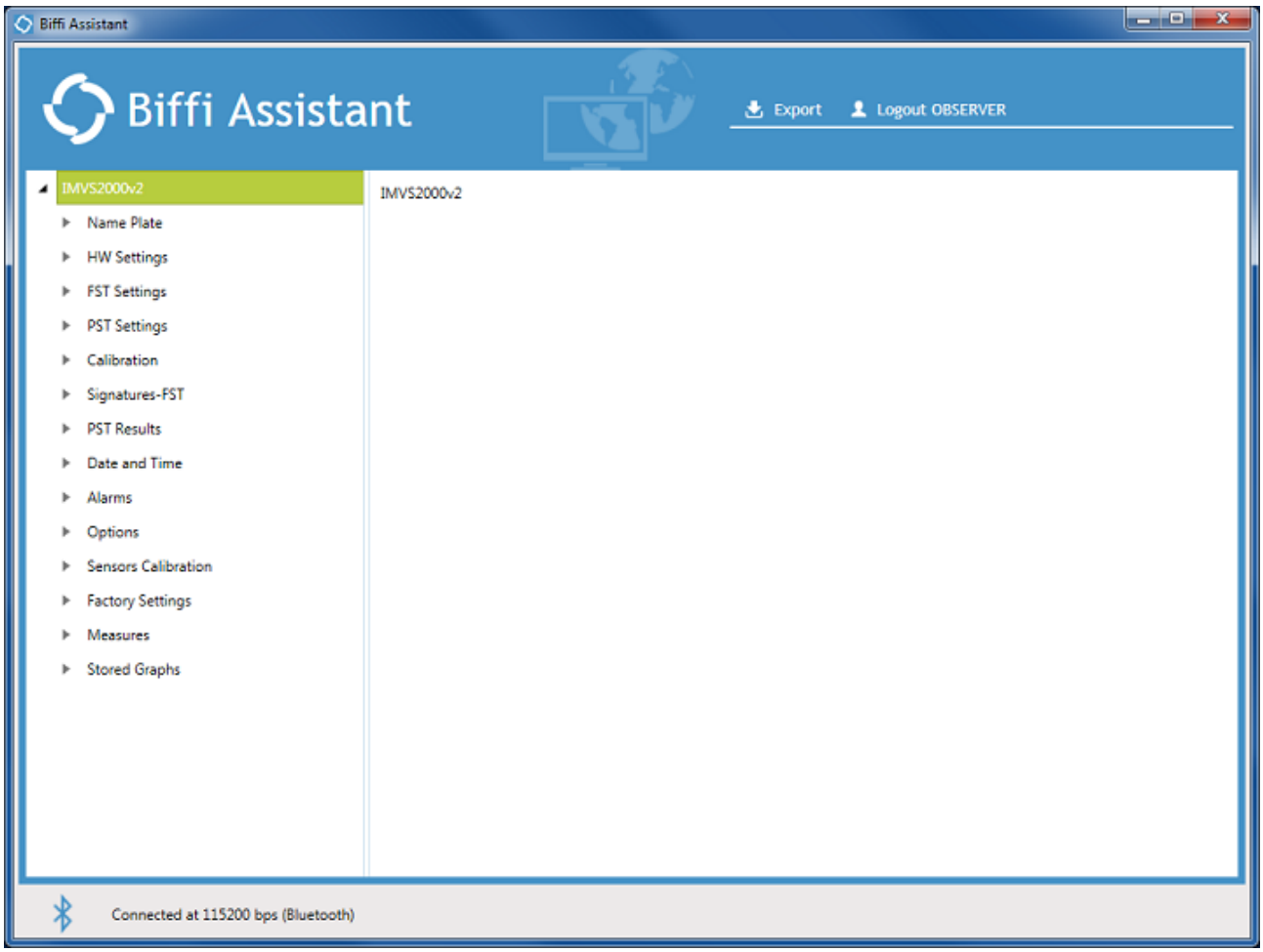
Important: It is recommended to use only one Serial Communication Interface (RS232 or Bluetooth) per time to avoid configuration errors.

Important: The IMVS2000v2 automatically inhibits the using of the Local Operator Interface when one Biffi Assistant connection (RS232 or Bluetooth) is active.

4.1 Navigate through the Biffi Assistant Menus

4.1.1 Main Menu Name

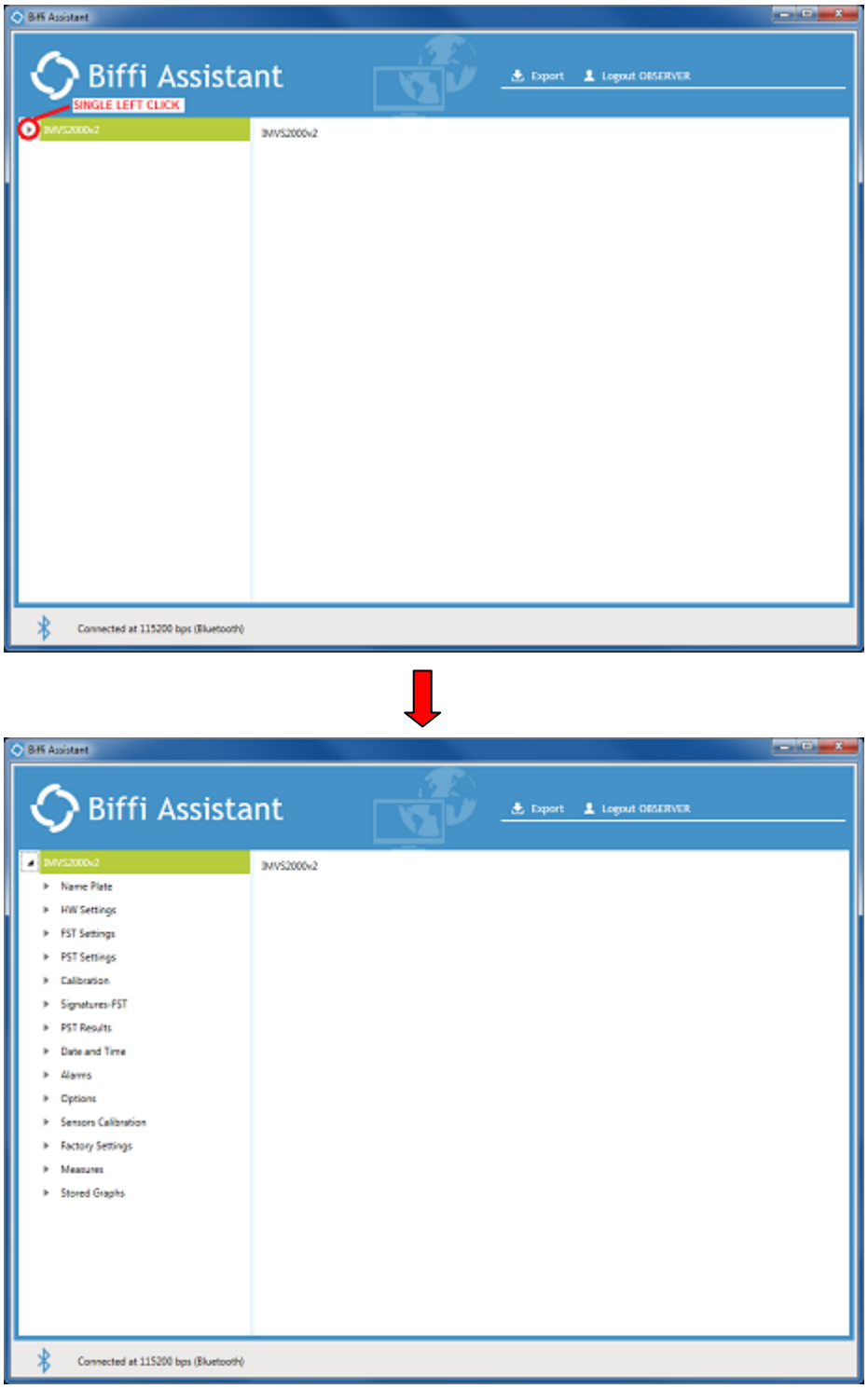
The name of the Main Menu is determined by the “Dev. Tag” parameter (see 6 and [1]).
In the screen below it is “IMVS2000v2“.

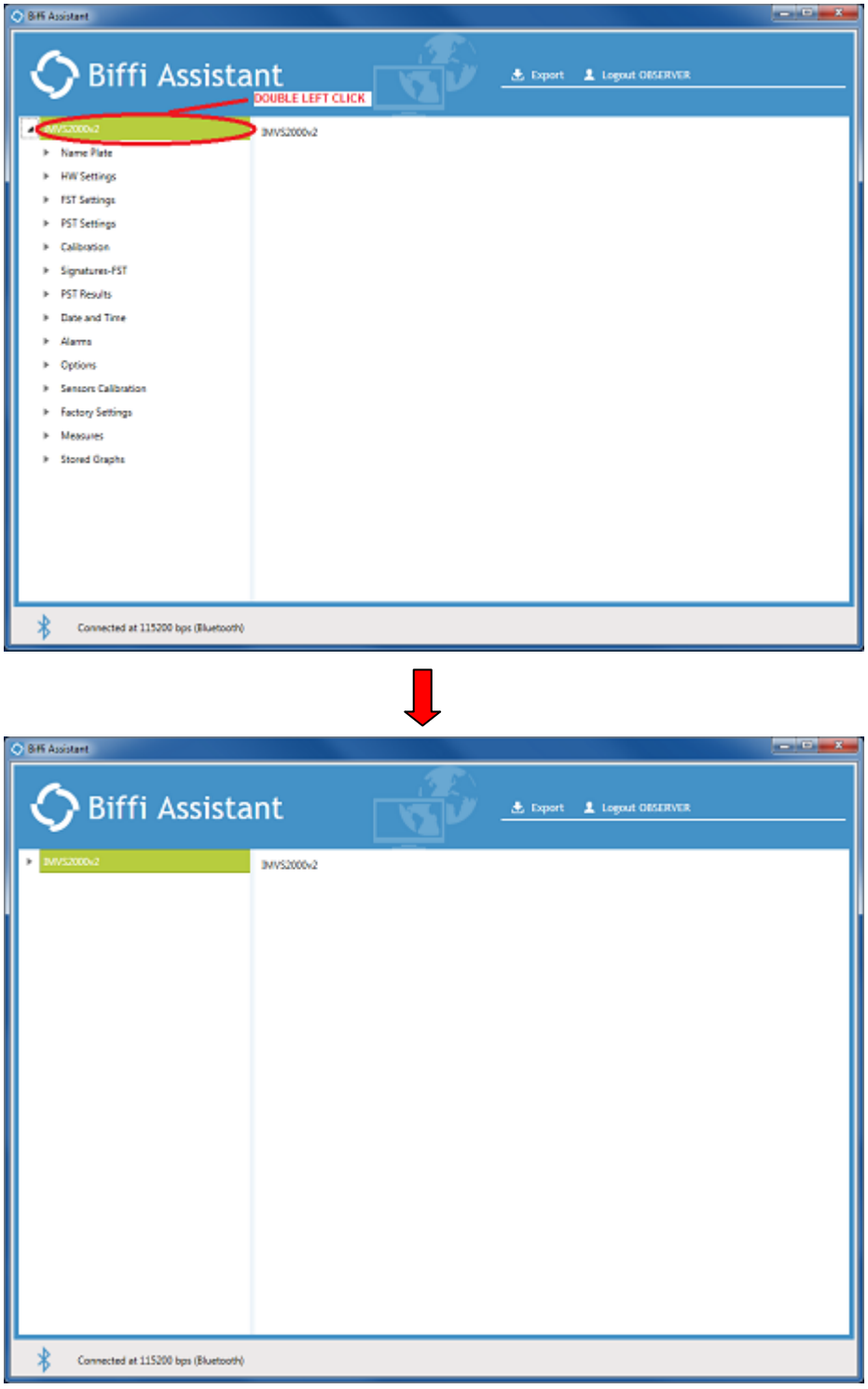


4.1.2 Minimize/Maximize Menus

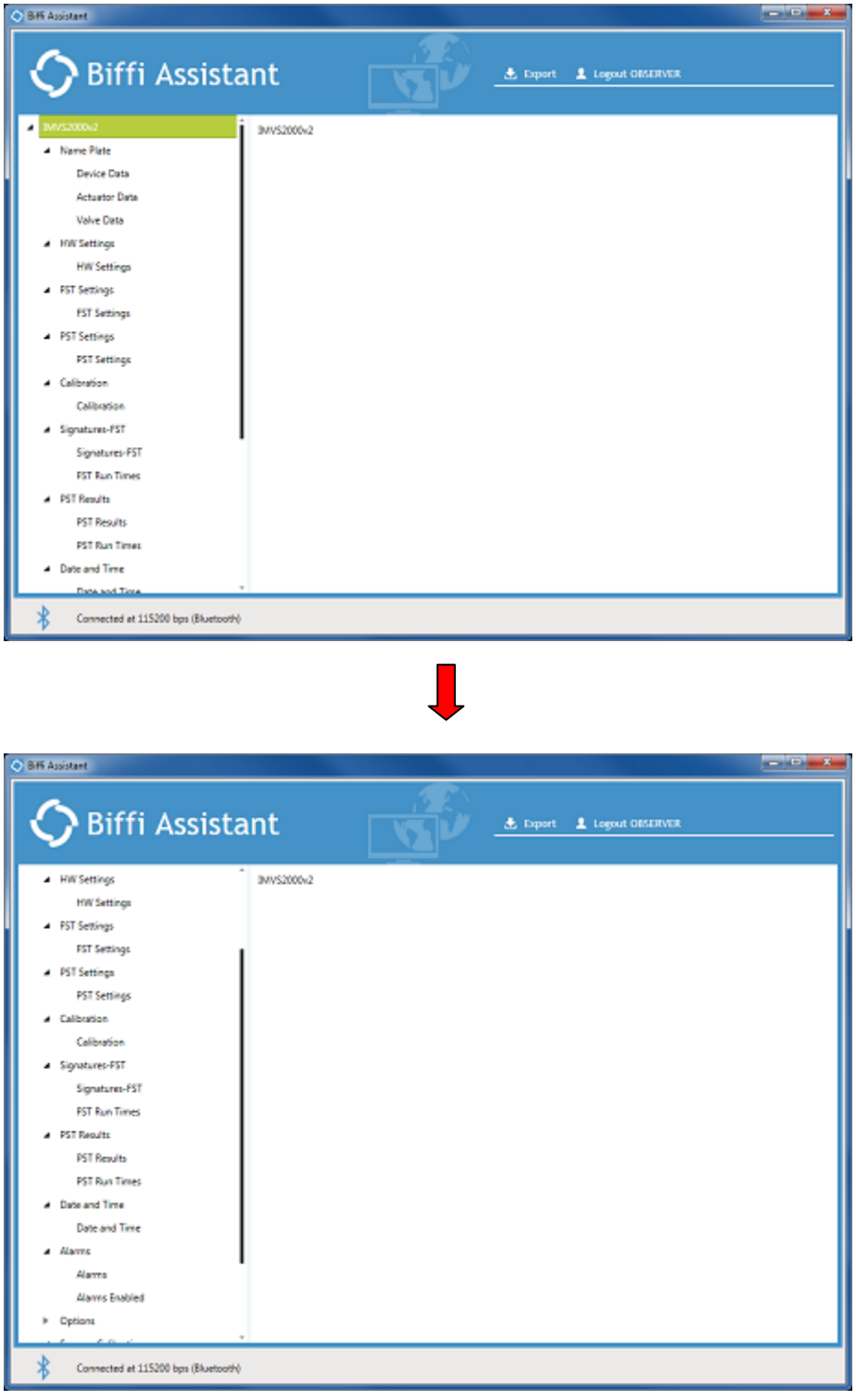
For minimizing or maximizing the Menus of the Biffi Assistant there are two possible ways:

- Single left-click of the mouse on the arrow on the left of the Menu Name
- Double left-click of the mouse on the Menu Name




Biffi Assistant
Export
Logout OBSERVER
DOUBLE LEFT CLICK
IMVS2000v2
Name Plate
HW Settings
FST Settings
PST Settings
Calibration
Signatures-FST
PST Results
Date and Time
Alarms
Options
Sensors Calibration
Factory Settings
Measures
Stored Graphs
Connected at 115200 bps (Bluetooth)

For moving inside a Menu, use the scroll bar.

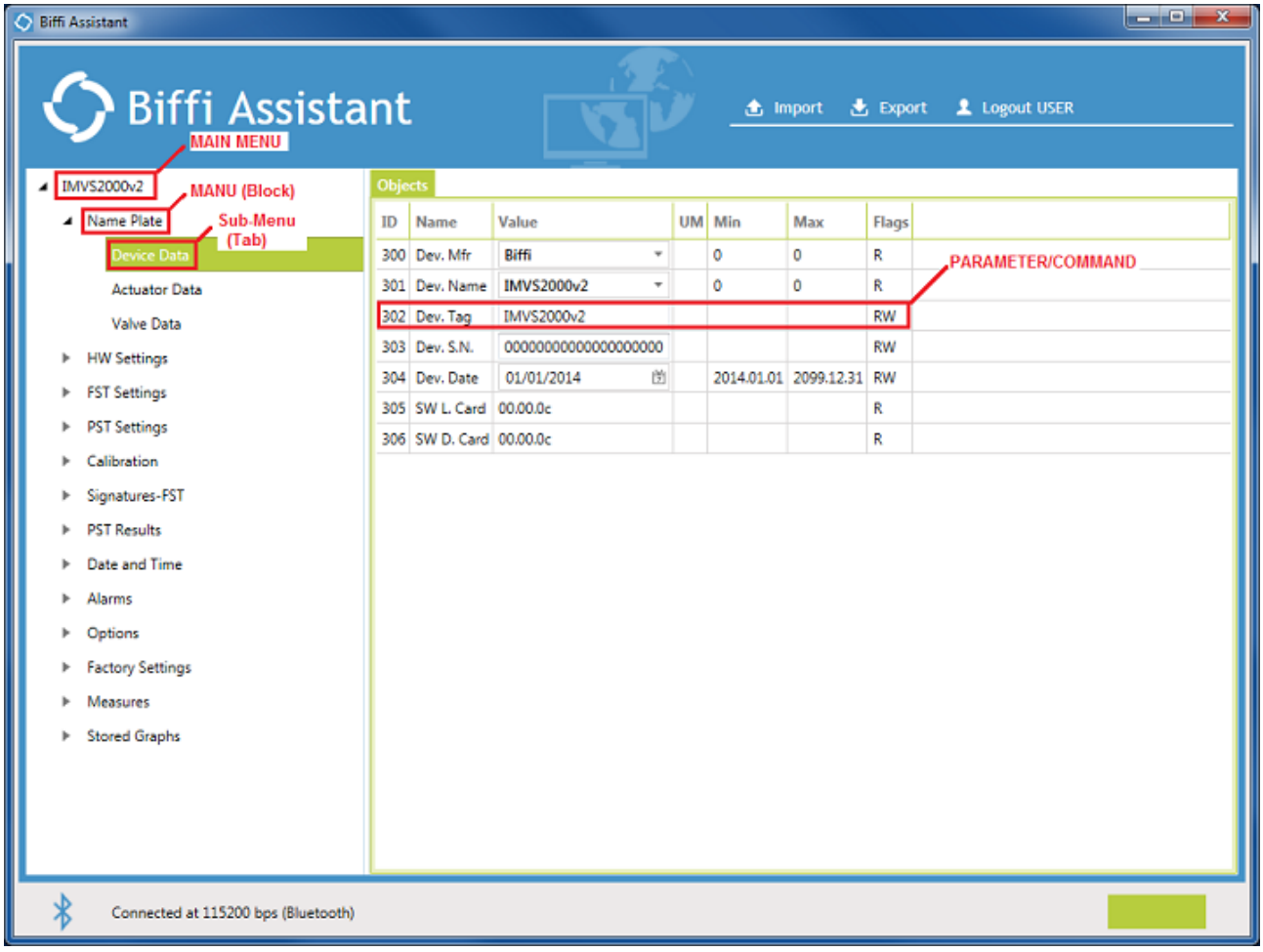


4.1.3 Biffi Assistant's Structure

The Biffi Assistant structure is organized as follows:

- MAIN MENU
  - MENU 1
  - …
  - …
  - MENU #N
    - Sub-Menu N_1
    - …
    - ….
    - Sub-Menu N_x
      - Parameter / Command N_x_1
      - …
      - …
      - Parameter / Command N_x_y

The MAIN MENU can contain several MENUs (Blocks).
Each MENU (block) can contain several Sub-Menus (Tabs).
Each Sub-Menu (Tab) can contain several Parameters / Commands.
For each parameter are defined: Name, Value, UM (Unit Measure), Min (Minimum value), Max (Maximum value) and the Flags (R, R/W).



See 6 and [1] for details about the parameters.
See paragraph from 4.2 to 4.5 for reading/writing parameters and launching commands.

4.2 Read/Update parameters

During the connection process (see 3.2) the value of the parameters is not updated.

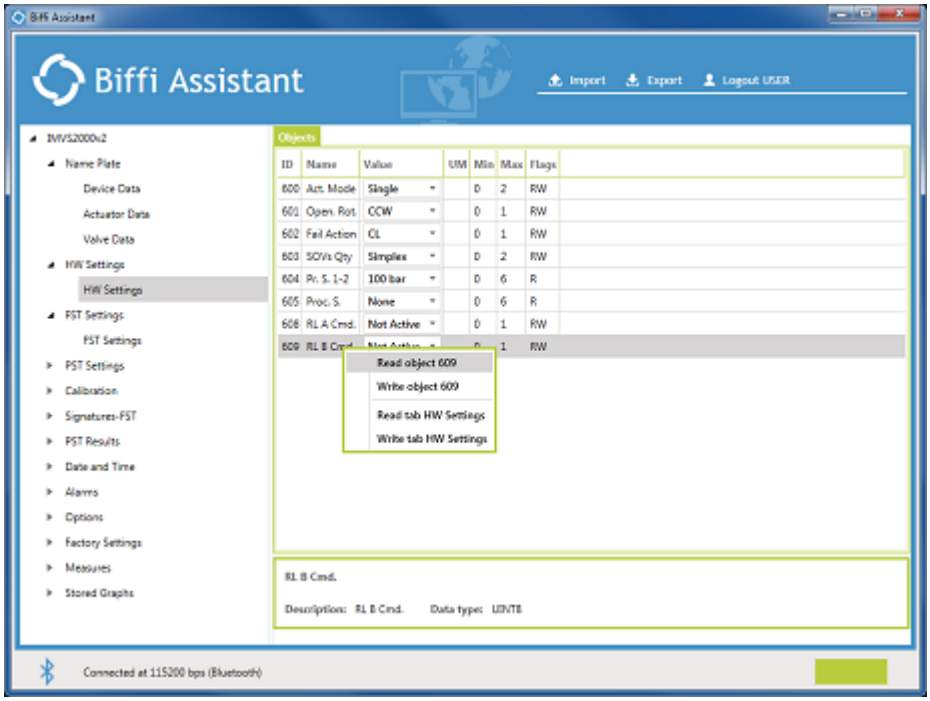
The parameters of a single Sub-Menu (Tab) are automatically updated at first access to the Sub-Menu (Tab); for the further accesses, the updating of the parameters must be done manually.
It is possible to manually update all the parameters of a Sub-Menu (Tab) simultaneously (see 4.2.2), to update them individually (see 4.2.1), to update all the parameters of a Menu (Block) (see 4.2.3) or to update all the parameters of the device at the same time (see 4.2.4).

The readable parameters are the ones classified as “RW” or “R” into the “Flags” field that are not commands (see 6).

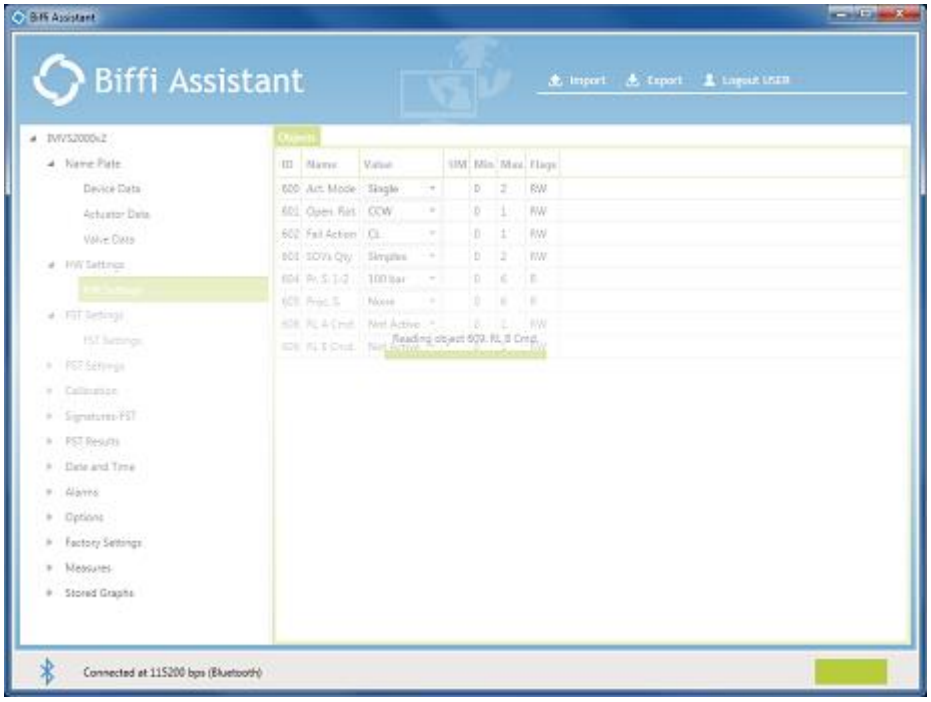
For reading the value of the parameters of the “Measures” Menu see 4.2.5.
For launching a command see 4.4.

4.2.1 Read/Update a single parameter

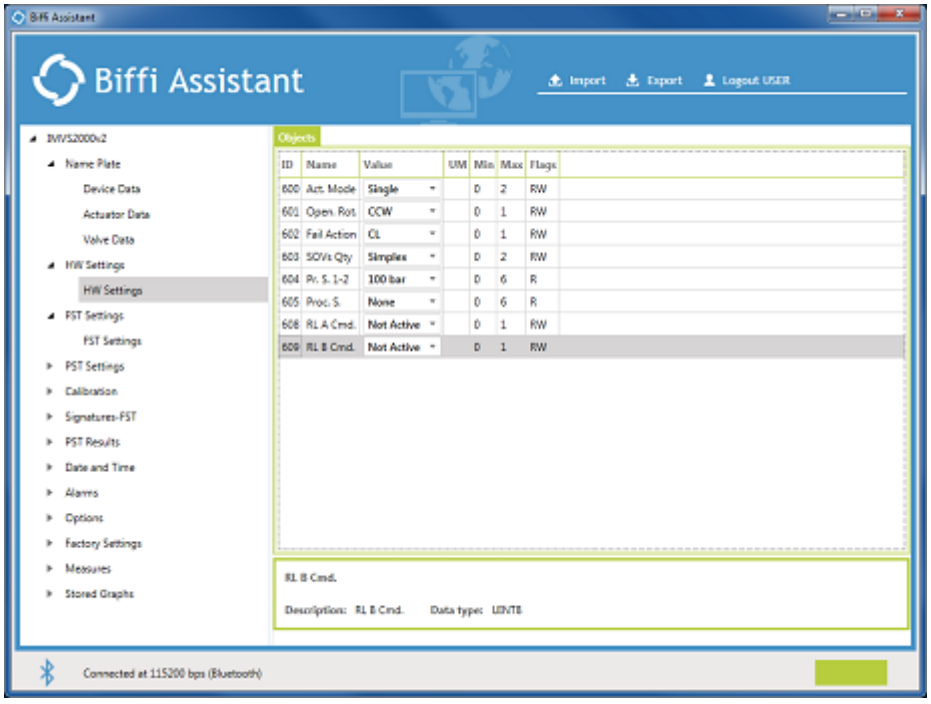
Right-click of the mouse on the row of the parameter that must be updated and then left-click of the mouse on “Read Object *object ID*”.



The updating of the parameter starts.



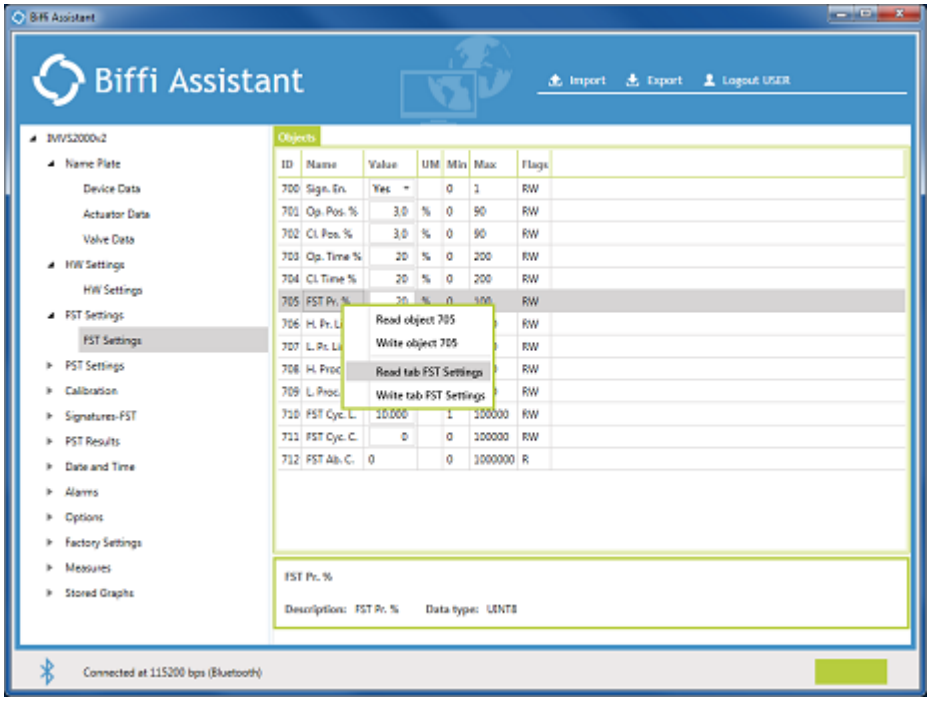
Wait Until the updating process stops.



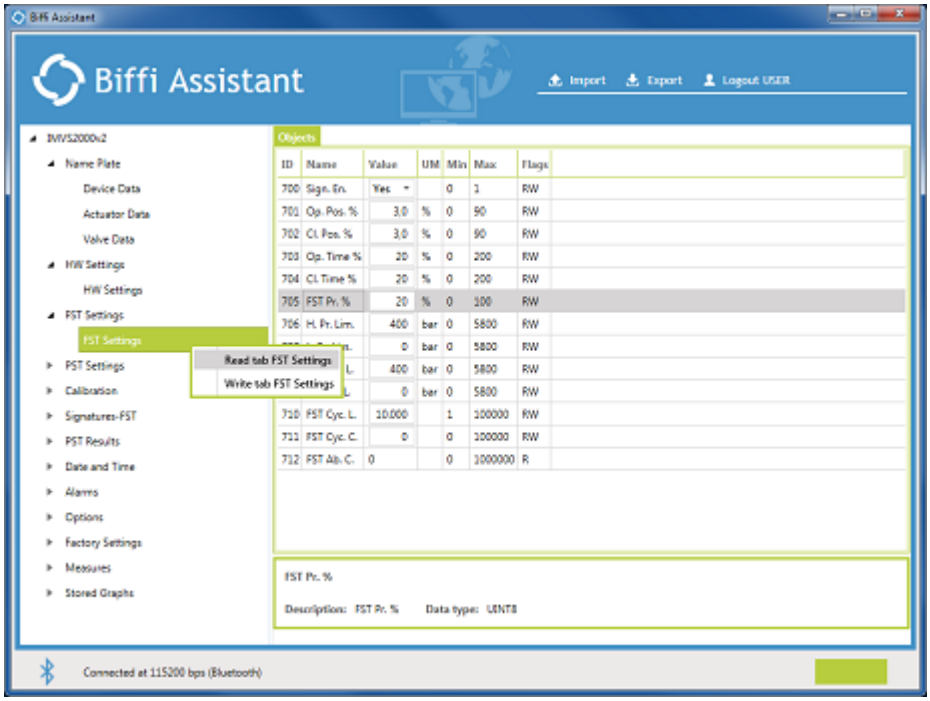
4.2.2 Read/Update all the parameters of a single Sub-menu (Tab)

There are two ways for reading/updating all the parameters of a single tab:

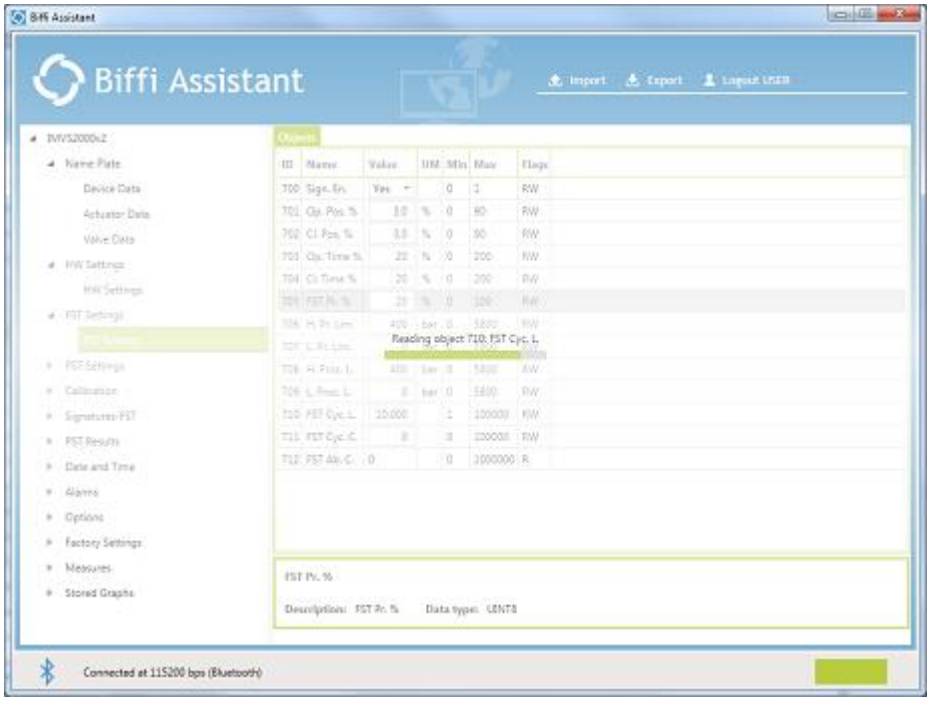
1. Right-click of the mouse on the row of any parameter of the Sub-Menu (Tab) that must be updated and then left-click of the mouse on “Read tab *Tab Name*”.



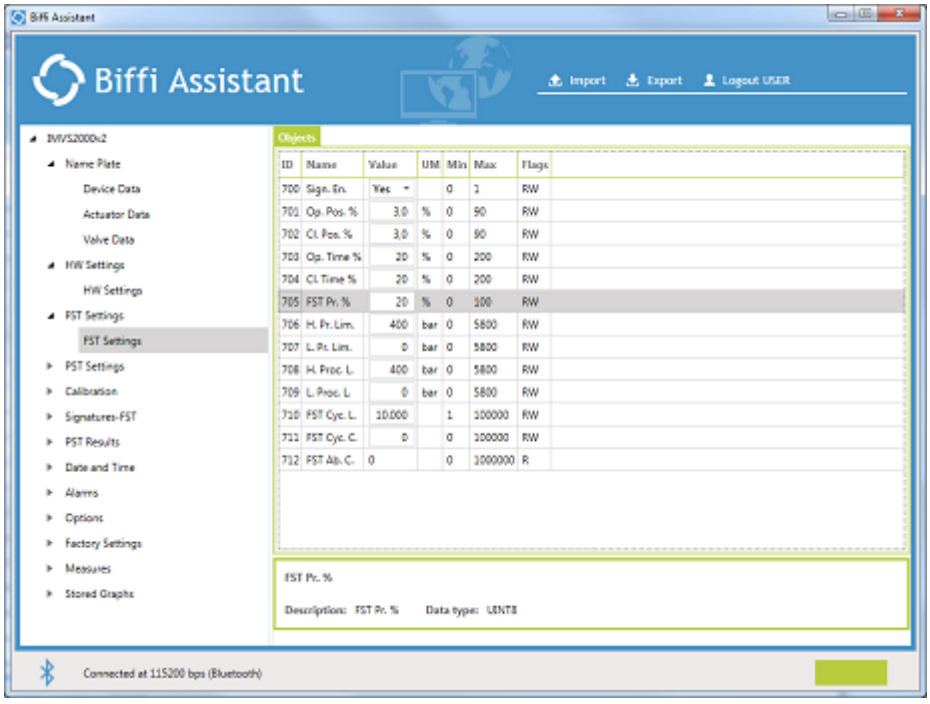
2. Right-click of the mouse on the name of the Sub-Menu (Tab) that must be updated and then left-click of the mouse on “Read tab *Tab Name*”.



The updating of the parameter starts.

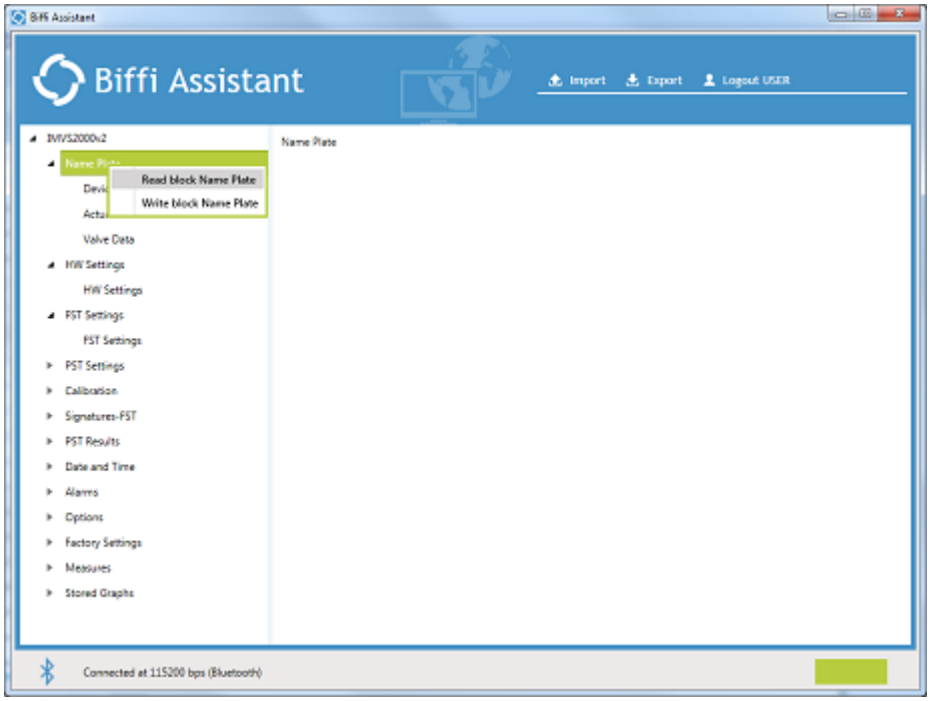


Wait Until the updating process stops.

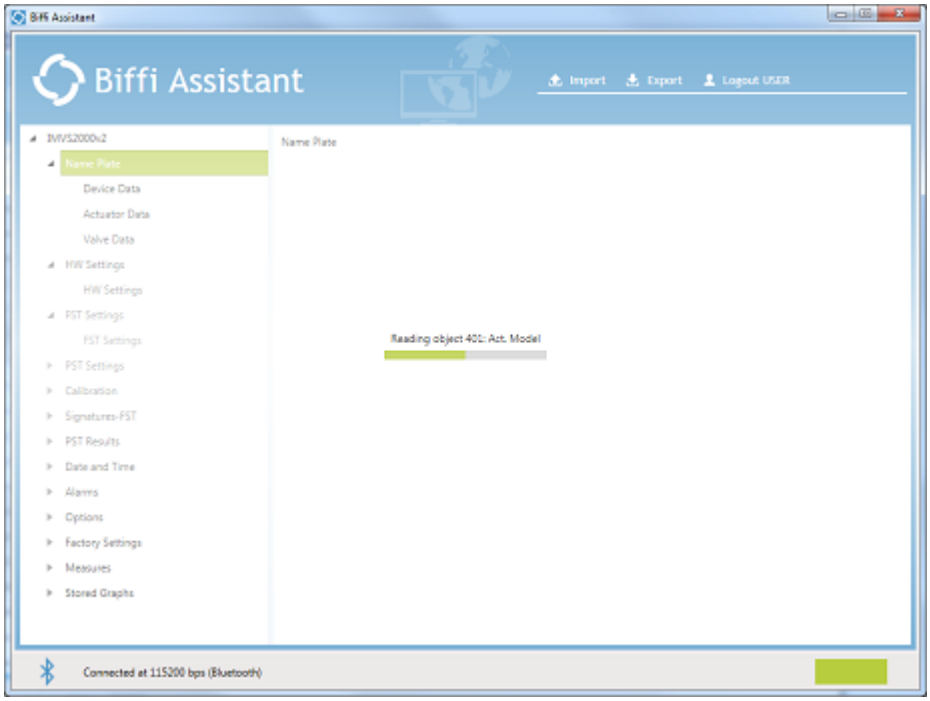


4.2.3 Read/Update all the parameters of single Menu (Block)

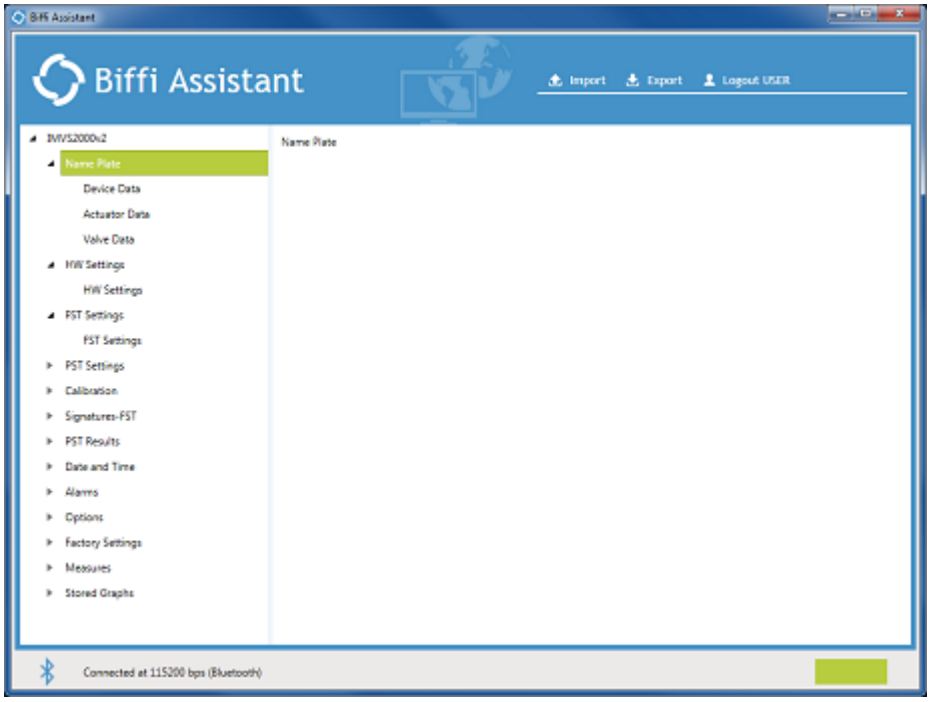
Right-click of the mouse on the name of the Menu (Block) that must be updated and then left-click of the mouse on “Read block *Block Name*”.



The updating of the parameter starts.

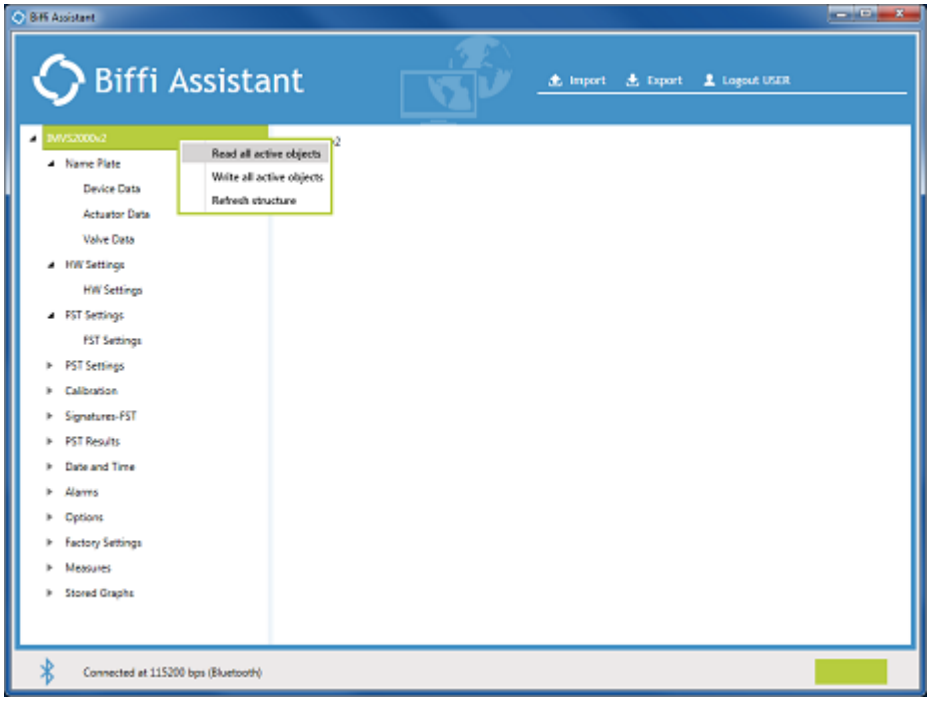


Wait Until the updating process stops.

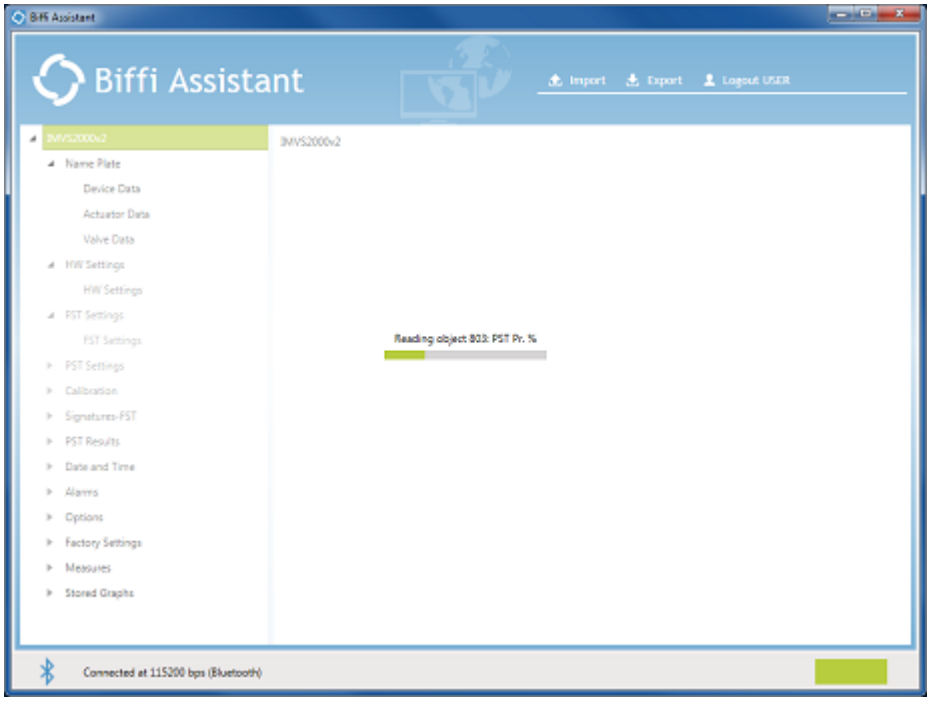


4.2.4 Read/Update all the parameters of the Device.

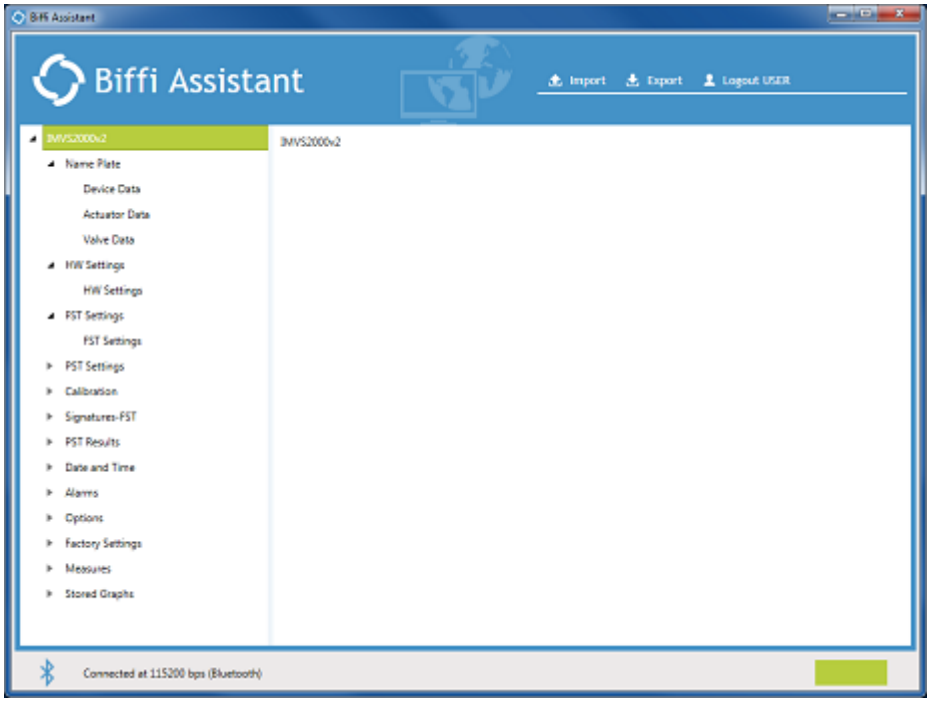
Right-click of the mouse on the name of the Main Menu then left-click of the mouse on “Read all active objects” and confirm the writing operation (a confirmation window appears).



The updating of the parameter starts.

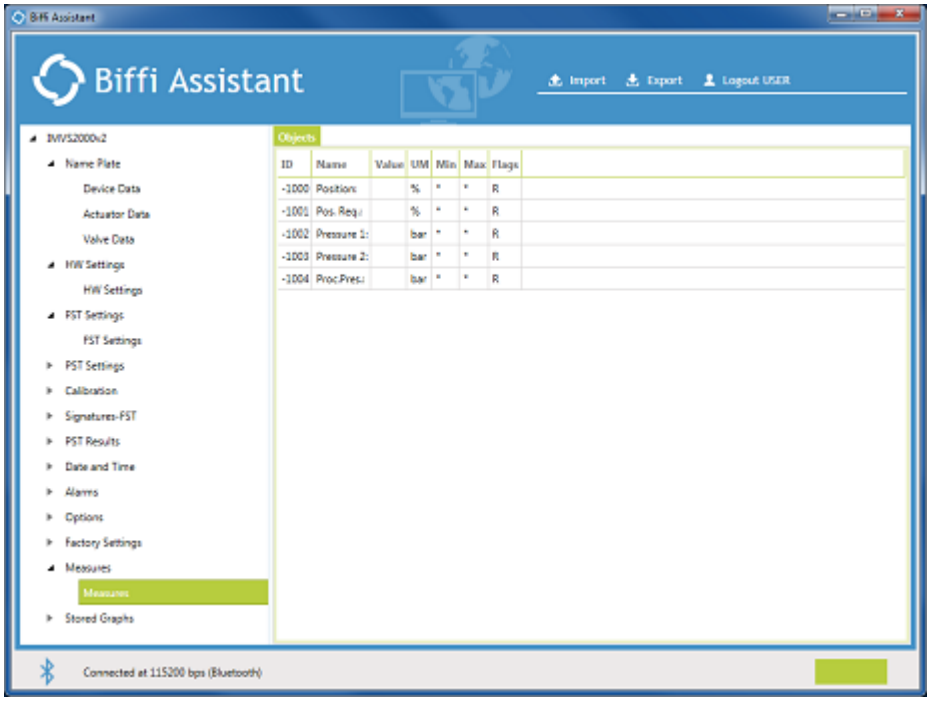


Wait Until the updating process stops.

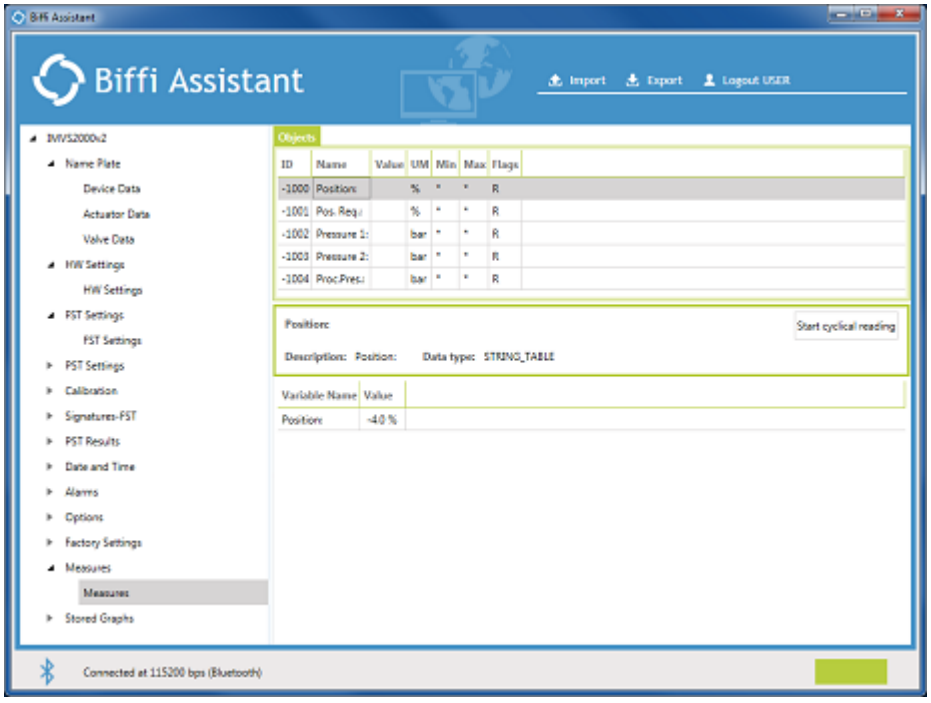


4.2.5 Read Measures Menu

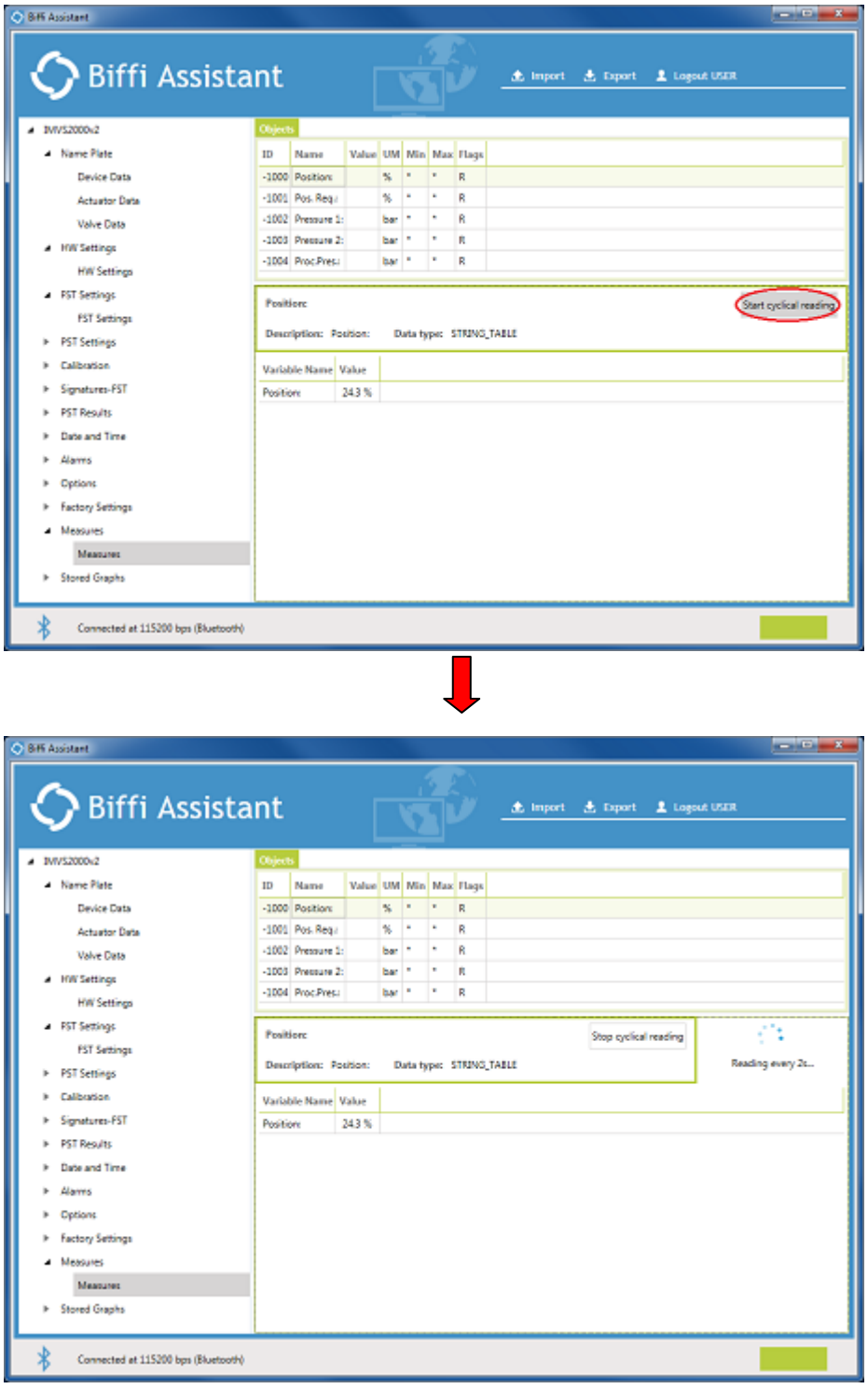
Open the “Measures” Menu (Block) and select the “Measures” Sub-Menu (Tab).



Left-click of the mouse on the row of the parameter to be read (“Position” in the screen below).



Left-click of the mouse on “Start cyclical reading”, for reading/updating the value of the parameter every two seconds.



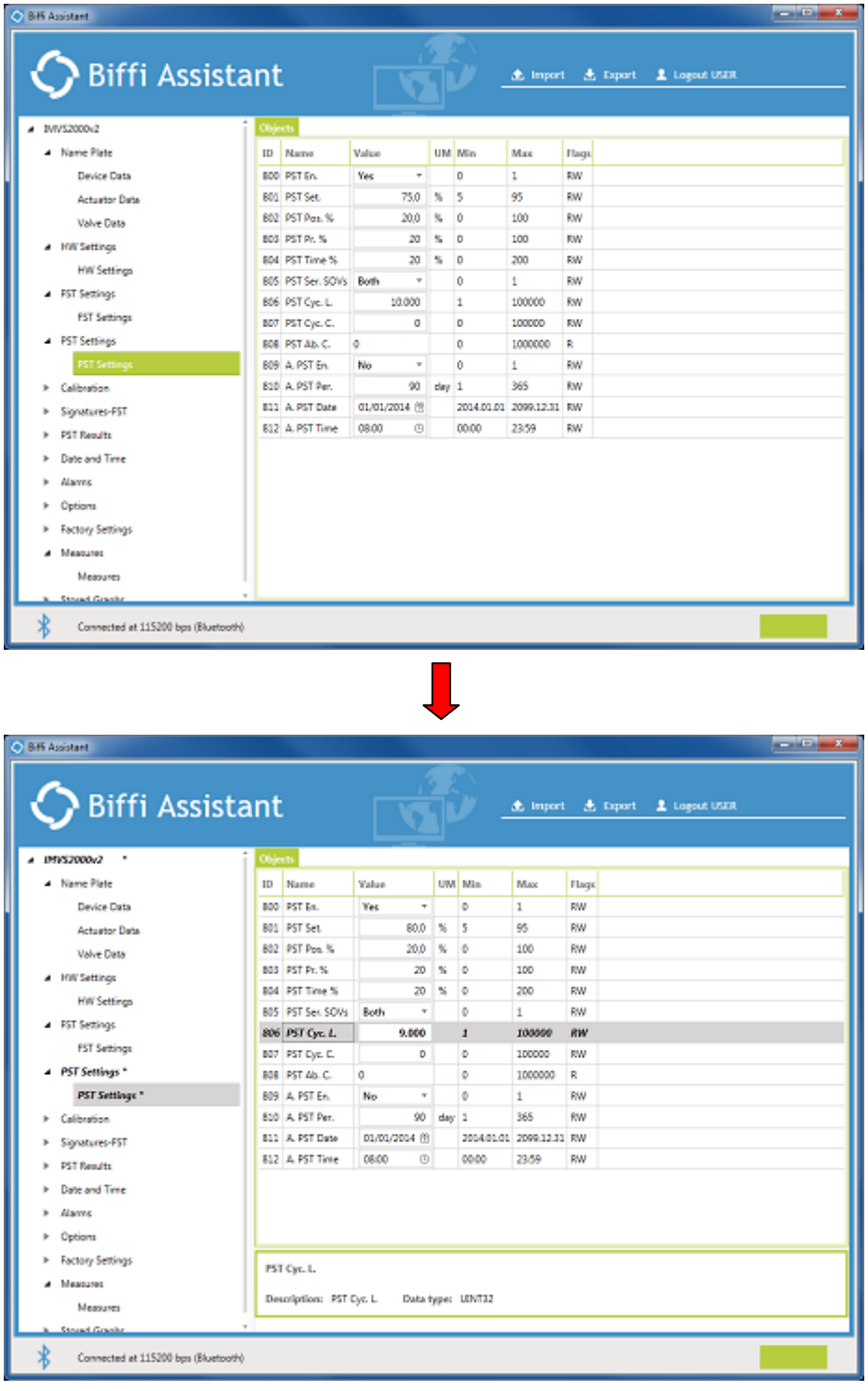
Left-click of the mouse on “Stop cyclical reading” for stopping the cyclical reading. The cyclical reading is automatically stopped by selecting another parameter or by exiting from the Sub-Menu (Tab).

4.3 Write Parameters

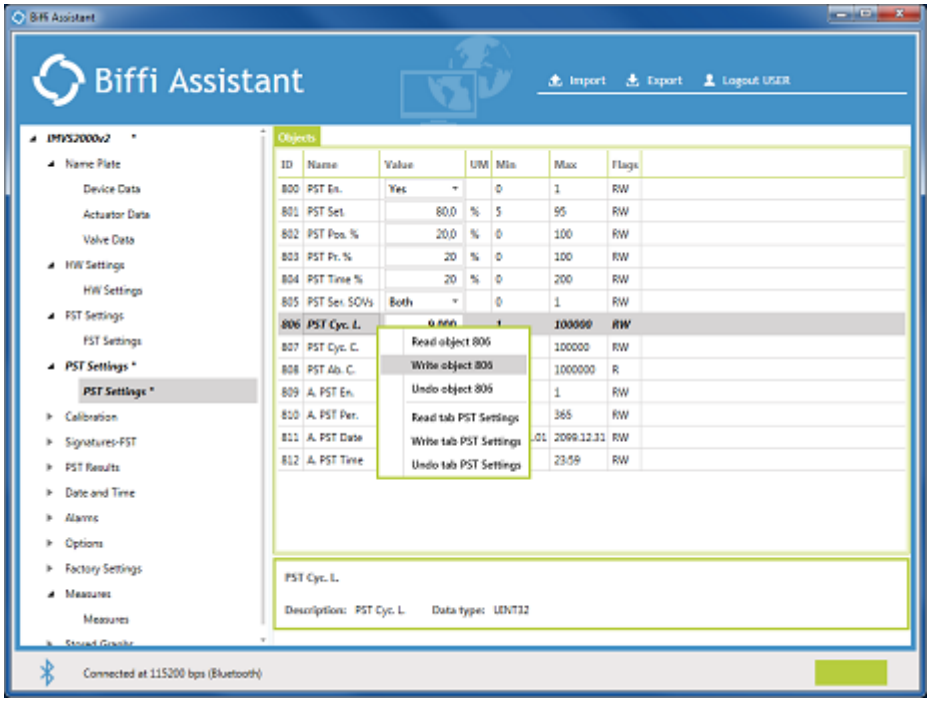
The Biffi Assistant allows writing all the parameters of a Sub-Menu (Tab) simultaneously (see 4.3.2), writing them individually (see 4.3.1), writing all the parameters of a Menu (Block) (see 4.3.3) or writing all the parameters of the device at the same time (see 4.3.4).
The writable parameters are the ones classified as “RW” into the “Flags” field that are not commands (see 6).

4.3.1 Write a single parameter

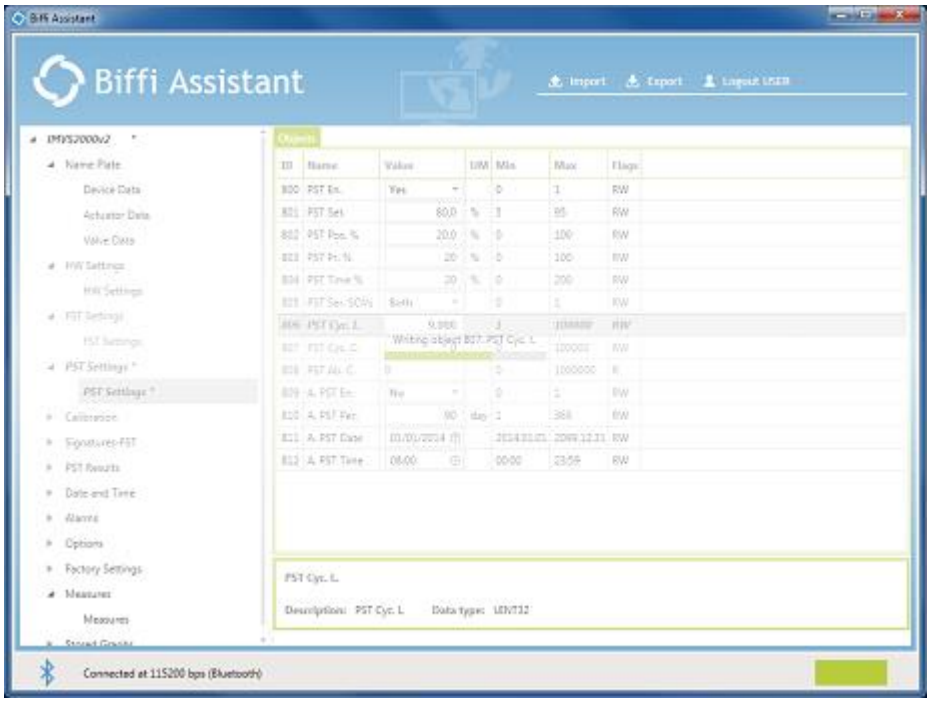
Select, through the mouse, the “Value” field of the parameter that must be written and type the new value or select the new value from the available list (it depends on the type of parameter).



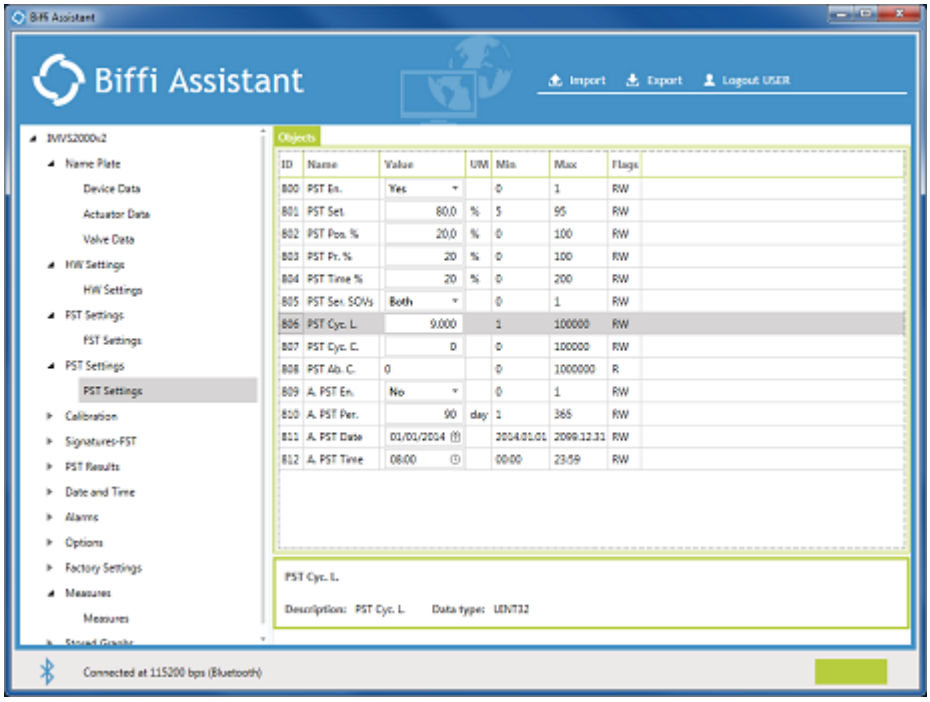
Right-click of the mouse on the row of the parameter that must be updated and then left-click of the mouse on “Write Object *object ID*” and confirm the writing operation (a confirmation window appears).
Left-click of the mouse on “Undo object *object ID*” to cancel the writing operation.



The writing process starts.



Wait Until the writing process stops.

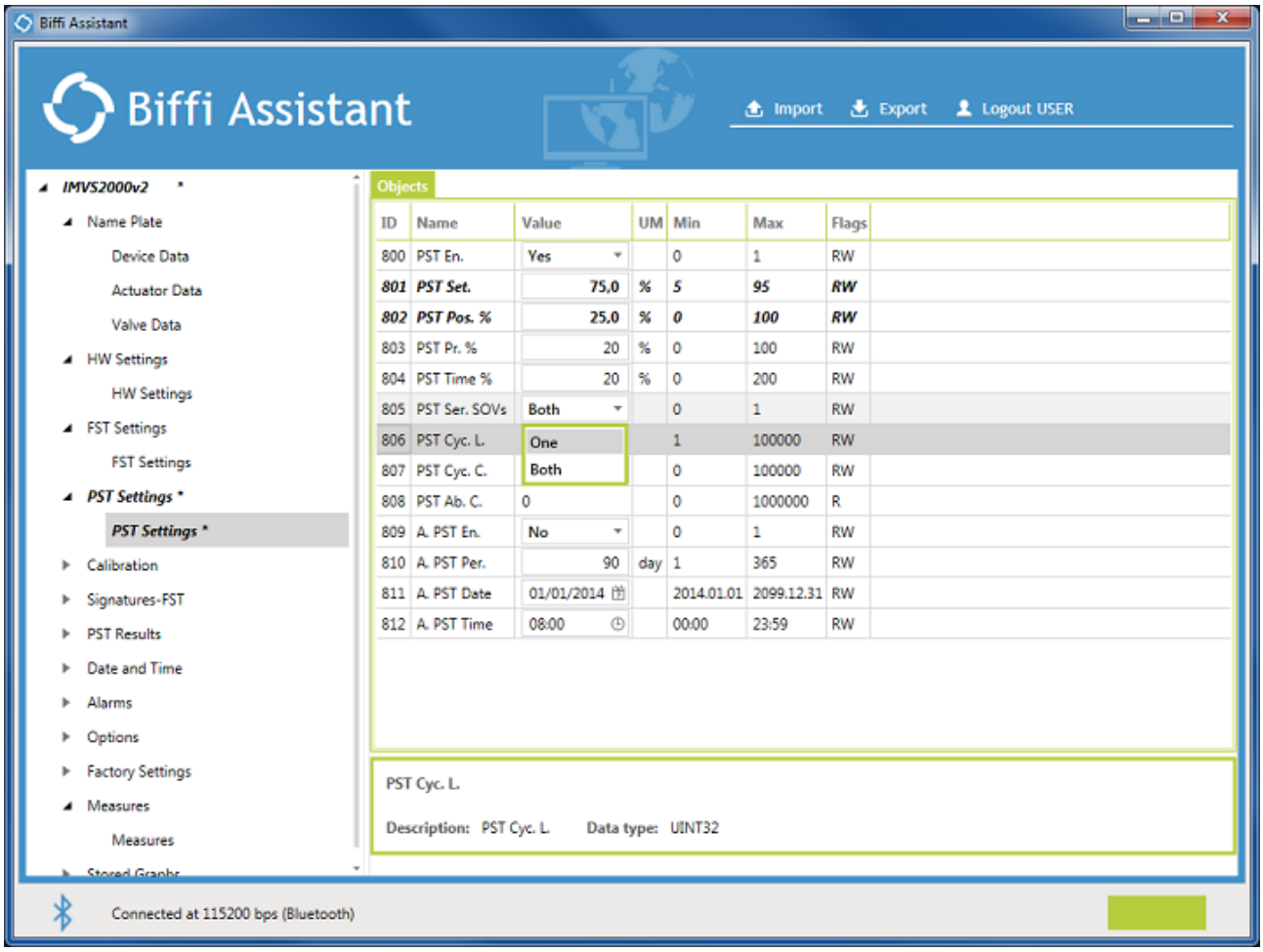


4.3.2 Write all the parameters of a single Sub-Menu (Tab)

Warning:

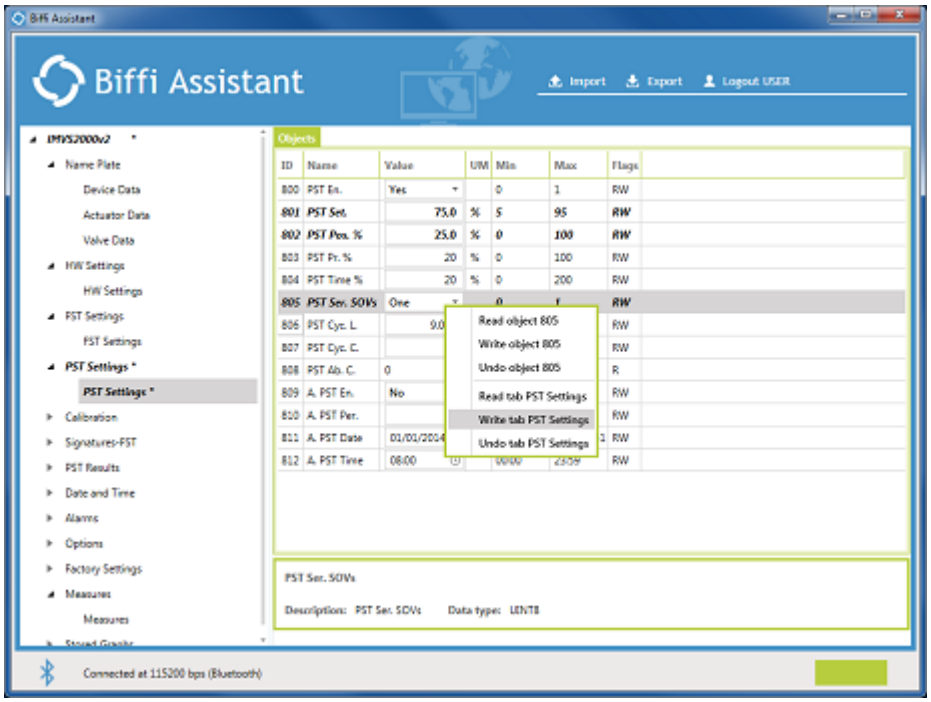
During the connection process (see 3.2) the value of the parameters is not updated.
Before performing the writing of all the parameters of a Sub-Menu (Tab) it is necessary to verify that all the parameters of the Tab have the correct value.
Before performing the writing command, it is suggested to update the value of all the parameters of the Tab (see 4.2.2) or to import a valid file (see 5).

Select, through the mouse, the “Value” field of the parameters that must be written and type the new values or select the new values from the available list (it depends on the type of parameter).

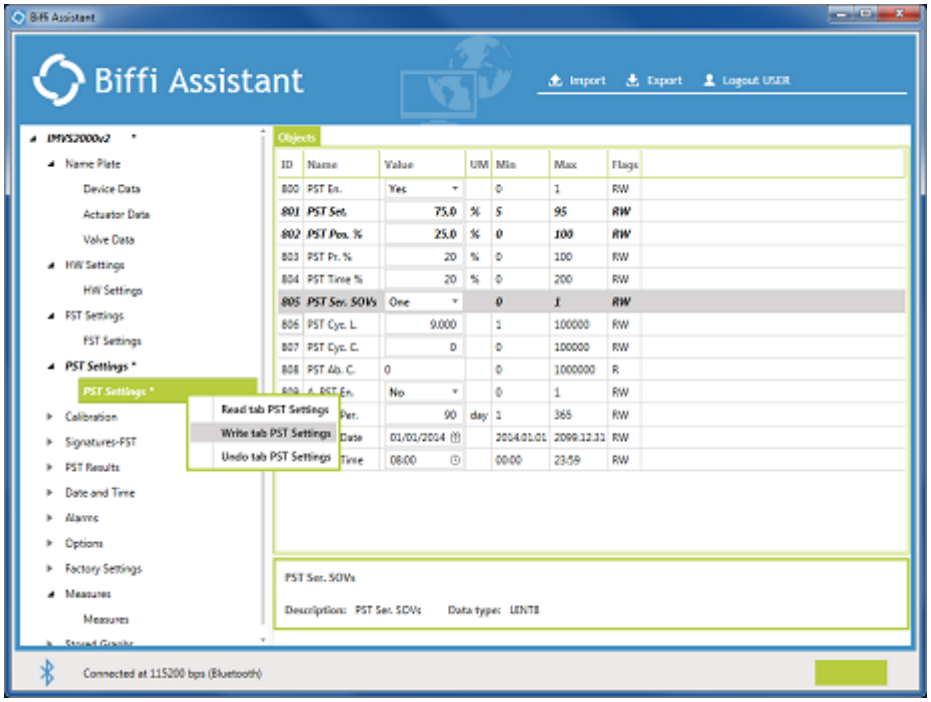


There are two ways for writing all the parameters of a single tab:

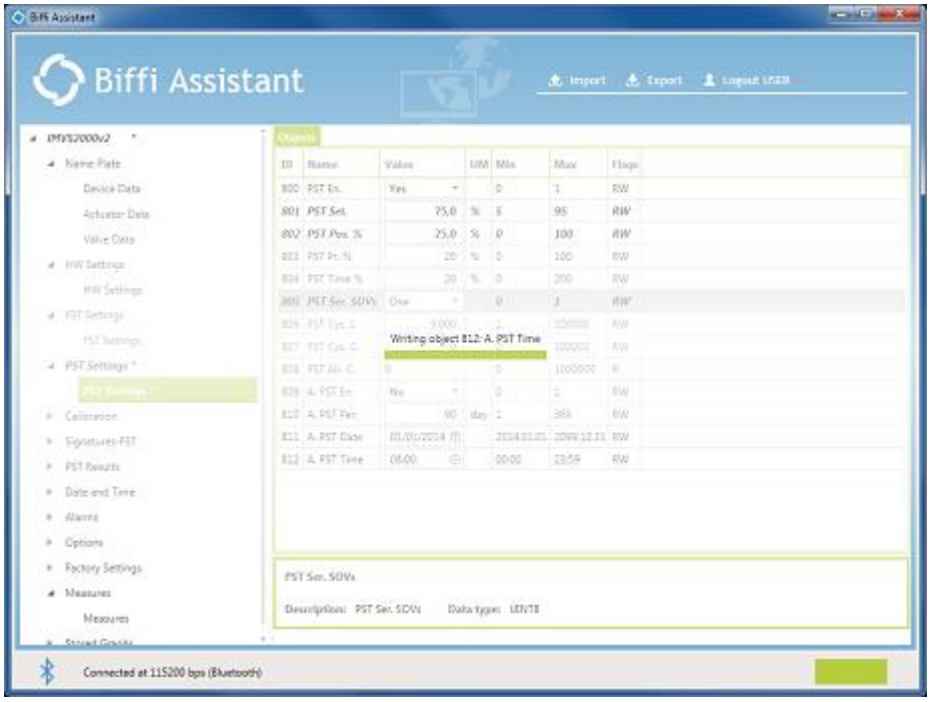
1. Right-click of the mouse on the row of any parameter of the Sub-Menu (Tab) that must be written and then left-click of the mouse on “Write tab *Tab Name*” and confirm the writing operation (a confirmation window appears). Left-click of the mouse on “Undo object *Tab Name*” to cancel the writing operation.



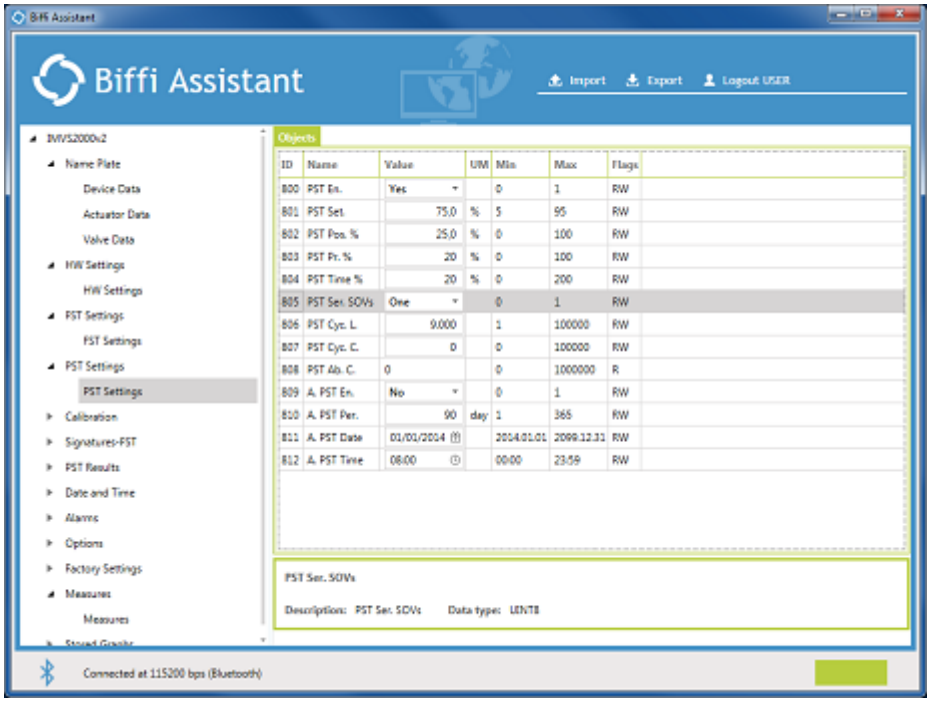
2. Right-click of the mouse on the name of the Sub-Menu (Tab) that must be written and then left-click of the mouse on “Write tab *Tab Name*” and confirm the writing operation (a confirmation window appears). Left-click of the mouse on “Undo tab *Tab Name*” to cancel the writing operation.



The writing of the parameters starts.



Wait until the updating process stops.

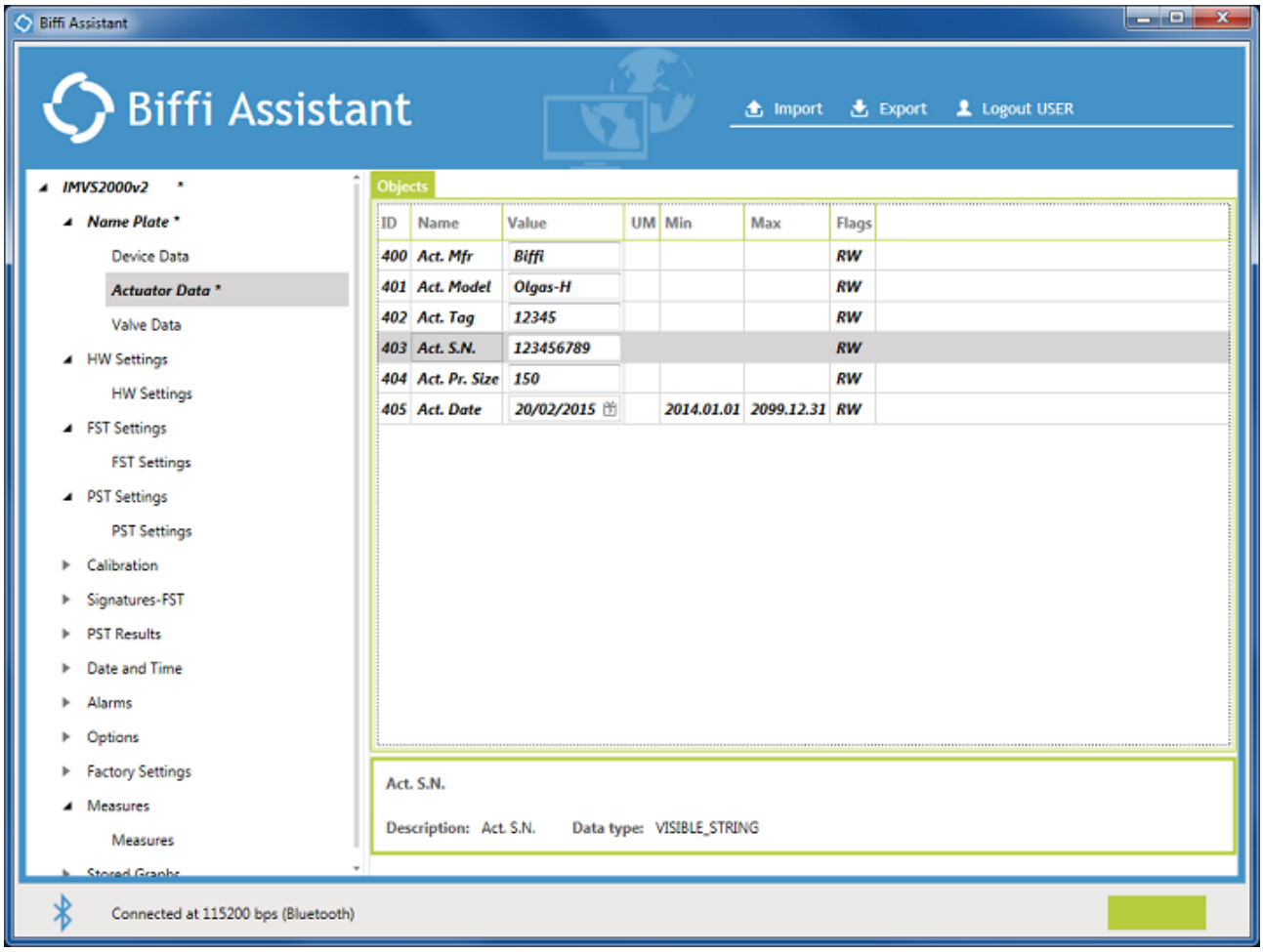


4.3.3 Write all the parameters of a single Menu (Block)

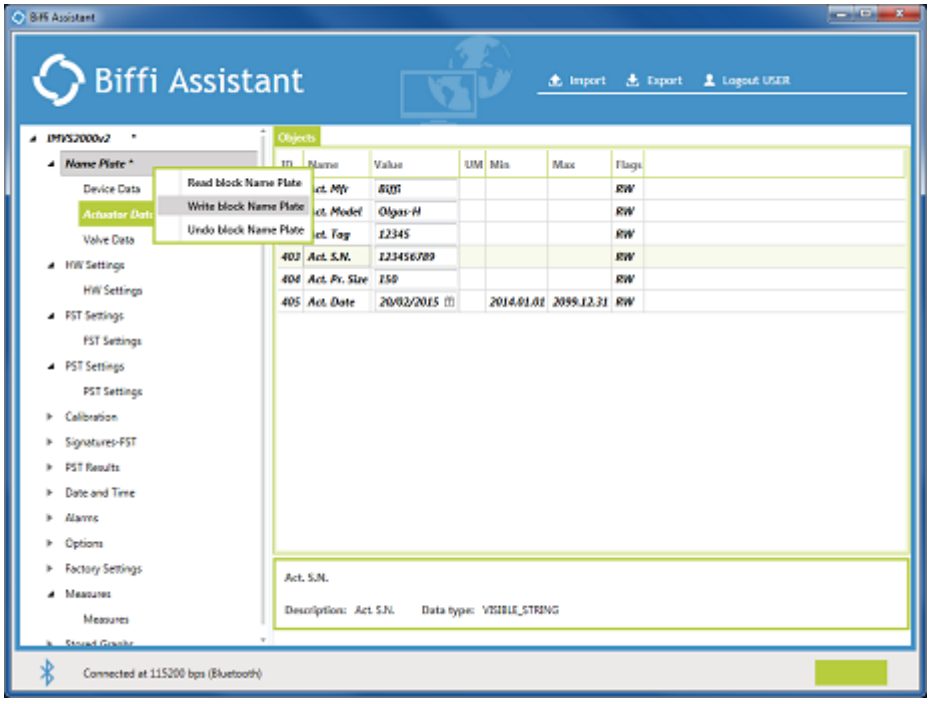
Warning:

During the connection process (see 3.2) the value of the parameters is not updated.
Before performing the writing of all the parameters of a Menu (Block) it is necessary to verify that all the parameters of the Block have the correct value.
Before performing the writing command, it is suggested to update the value of all the parameters of the Block (see 4.2.3) or to import a valid file (see 5).

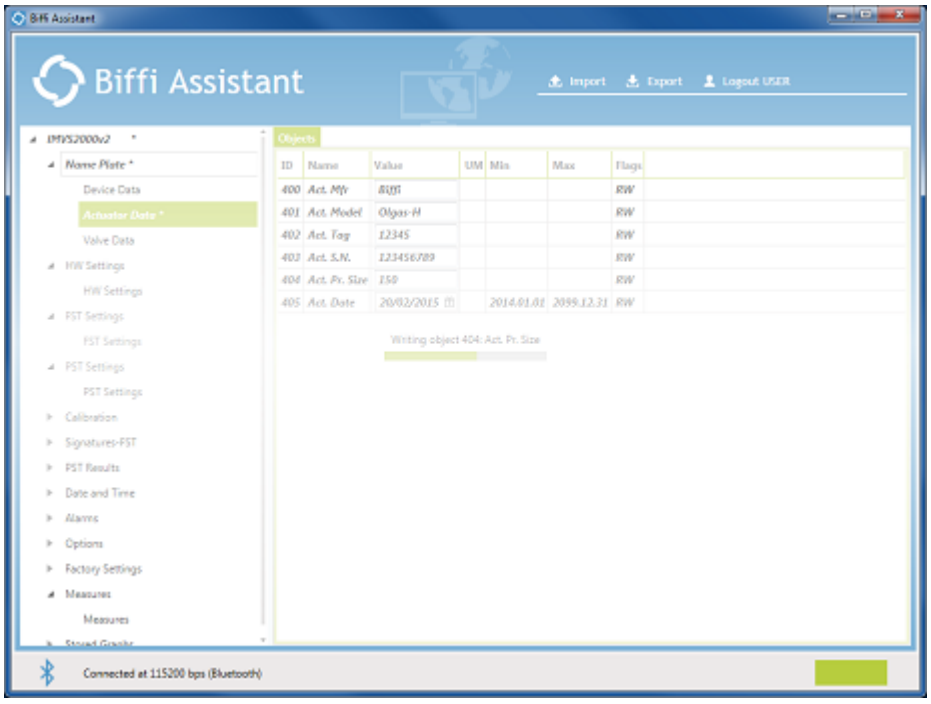
Select, through the mouse, the “Value” field of the parameters that must be written and type the new values or select the new values from the available list (it depends on the type of parameter).



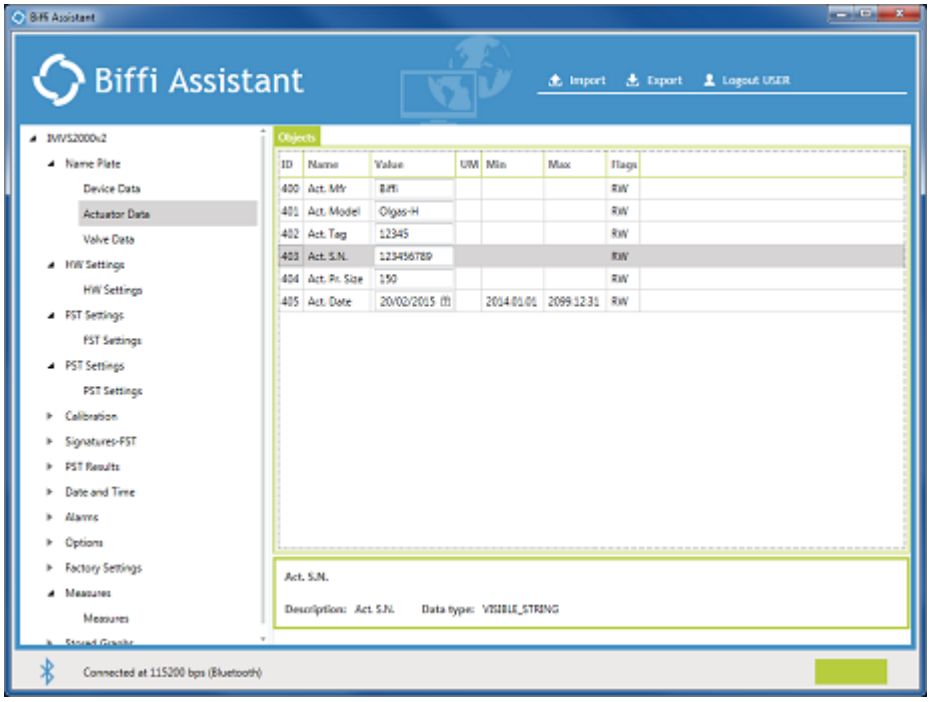
Right-click of the mouse on the name of the Menu (Block) that must be updated and then left-click of the mouse on “Write block *Block Name*” and confirm the writing operation (a confirmation window appears).
Left-click of the mouse on “Undo block *Block Name*” to cancel the writing operation.



The writing of the parameters starts.



Wait Until the writing process stops.

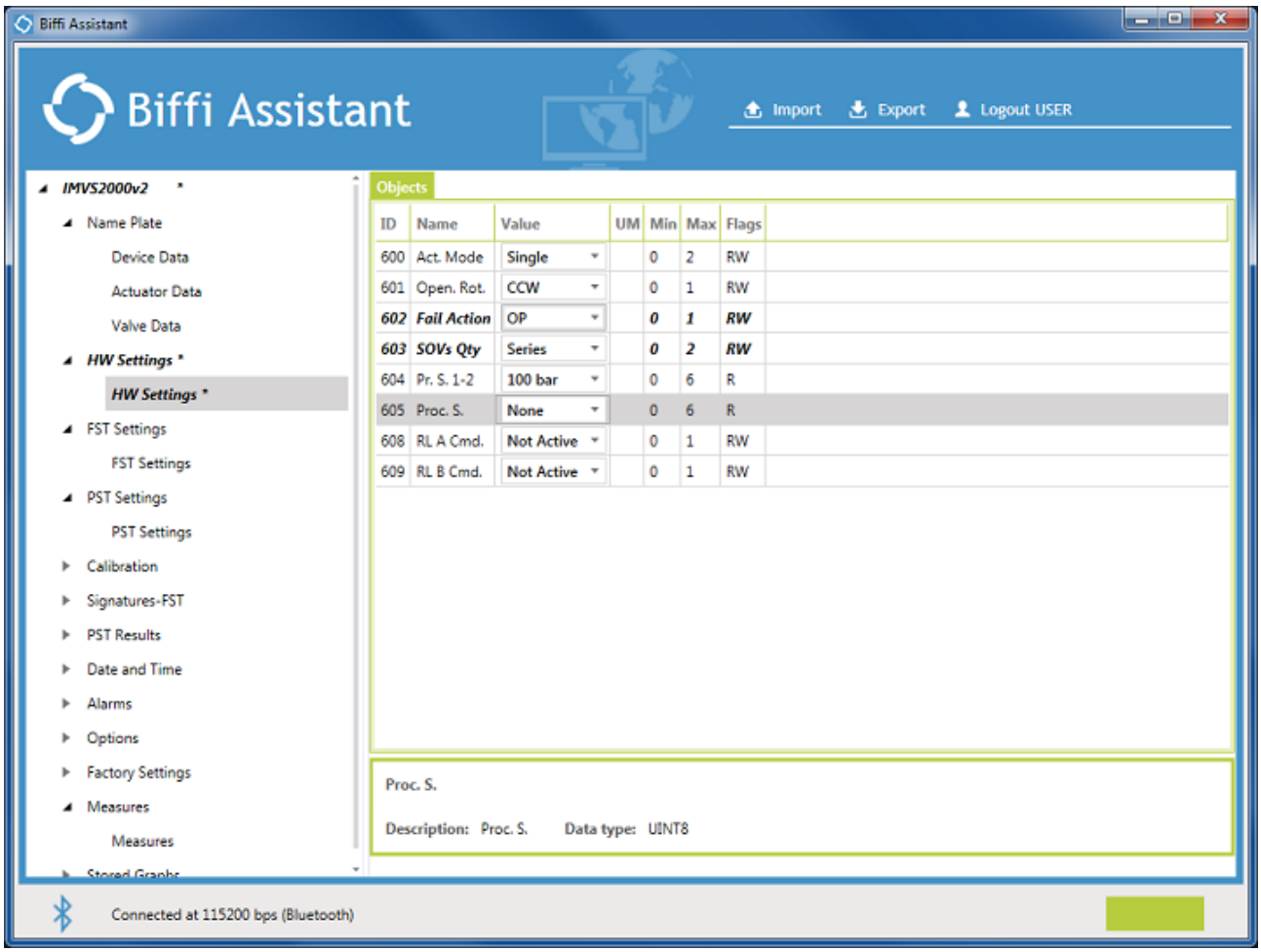


4.3.4 Write all the parameters of the Device

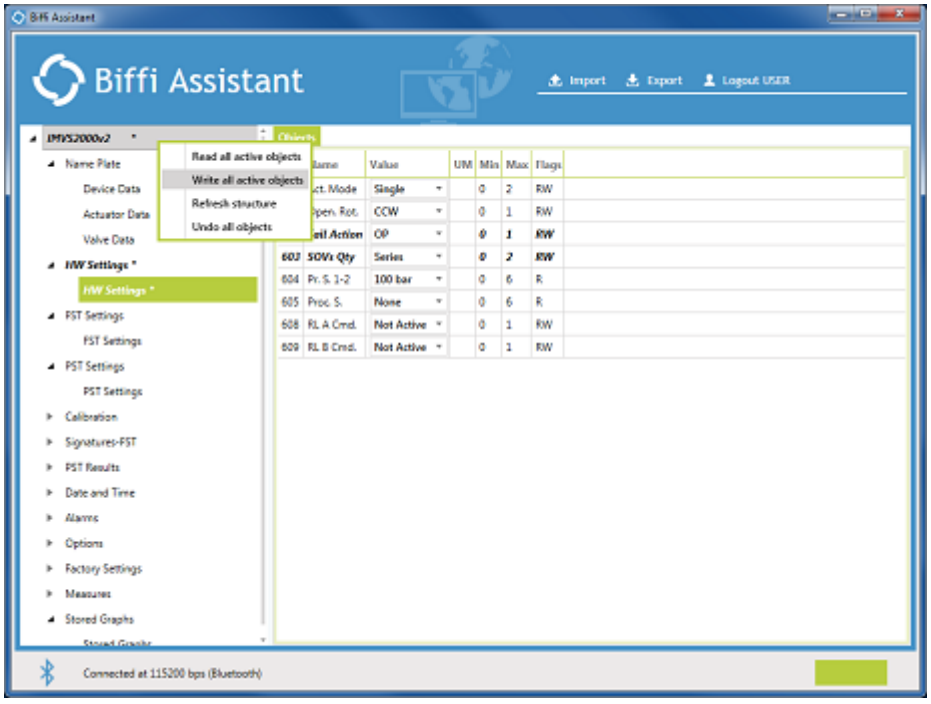
Warning:

During the connection process (see 3.2) the value of the parameters is not updated.
Before performing the writing of all the parameters of the Device it is necessary to verify that all the parameters of the Device have the correct value.
Before performing the writing command, it is suggested to update the value of the parameters (see 4.2.4) or to import a valid file (see 5).

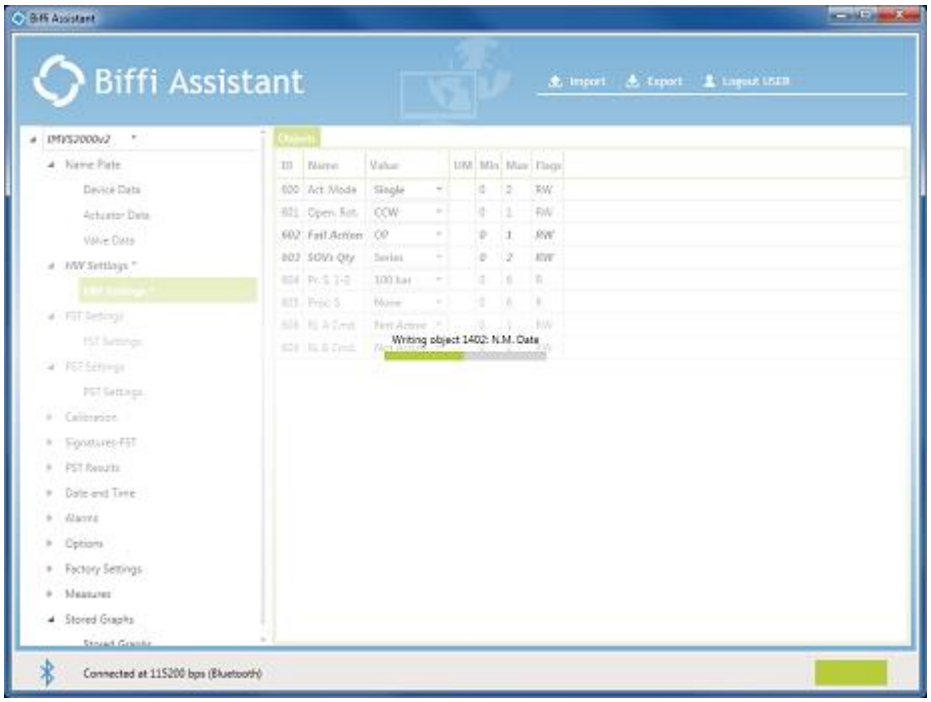
Select, through the mouse, the “Value” field of the parameters that must be written and type the new values or select the new values from the available list (it depends on the type of parameter).



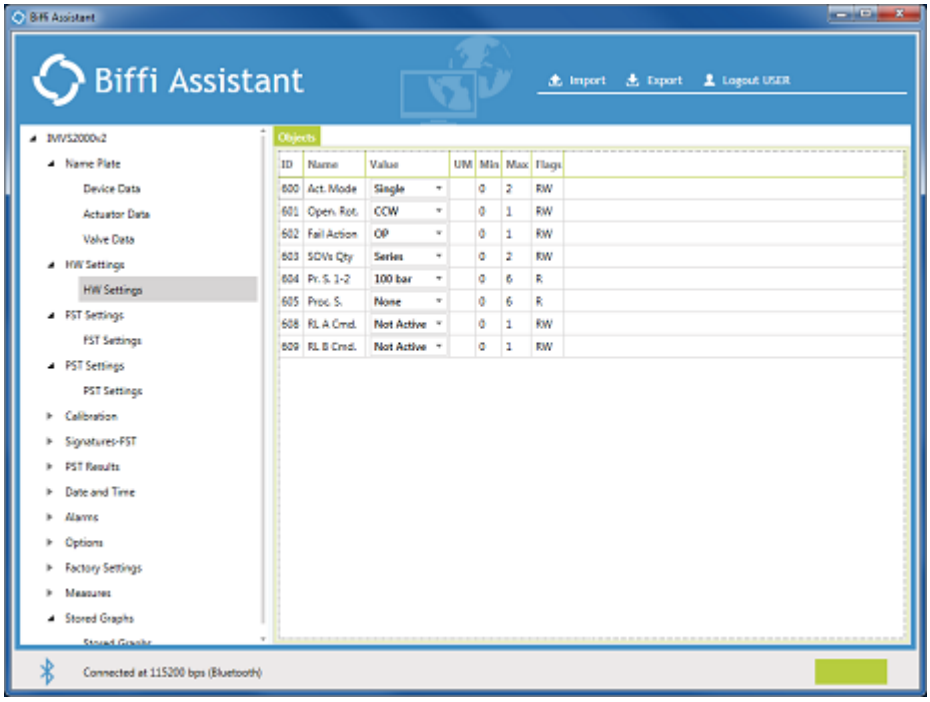
Right-click of the mouse on the name of the Main Menu then left-click of the mouse on “Write all active objects” and confirm the writing operation (a confirmation window appears).
Left-click of the mouse on “Undo all objects” to cancel the writing operation.



The writing of the parameter starts.



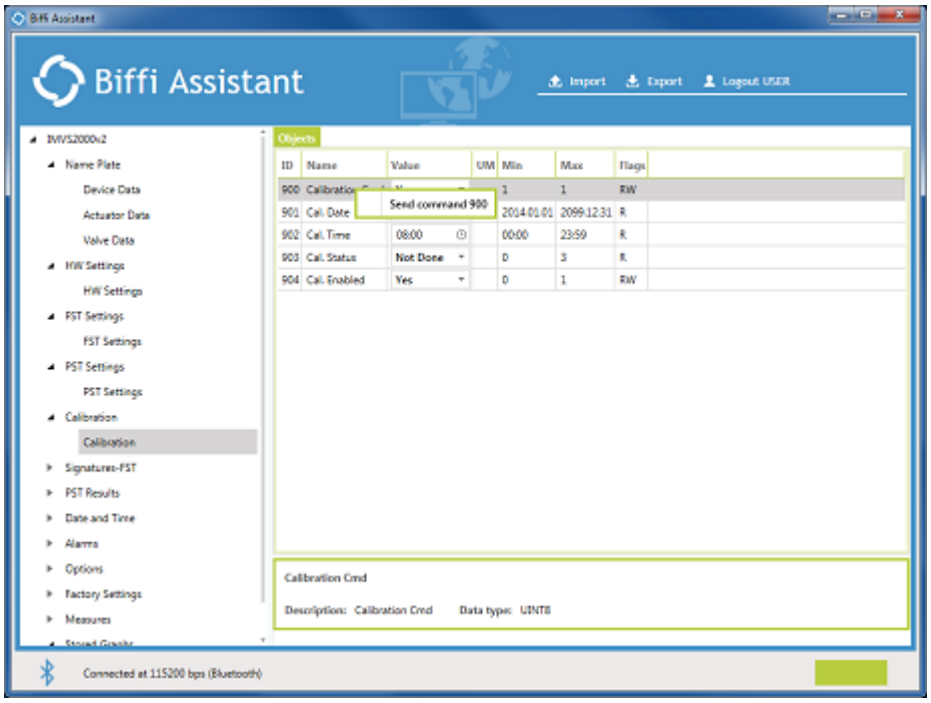
Wait Until the updating process stops.



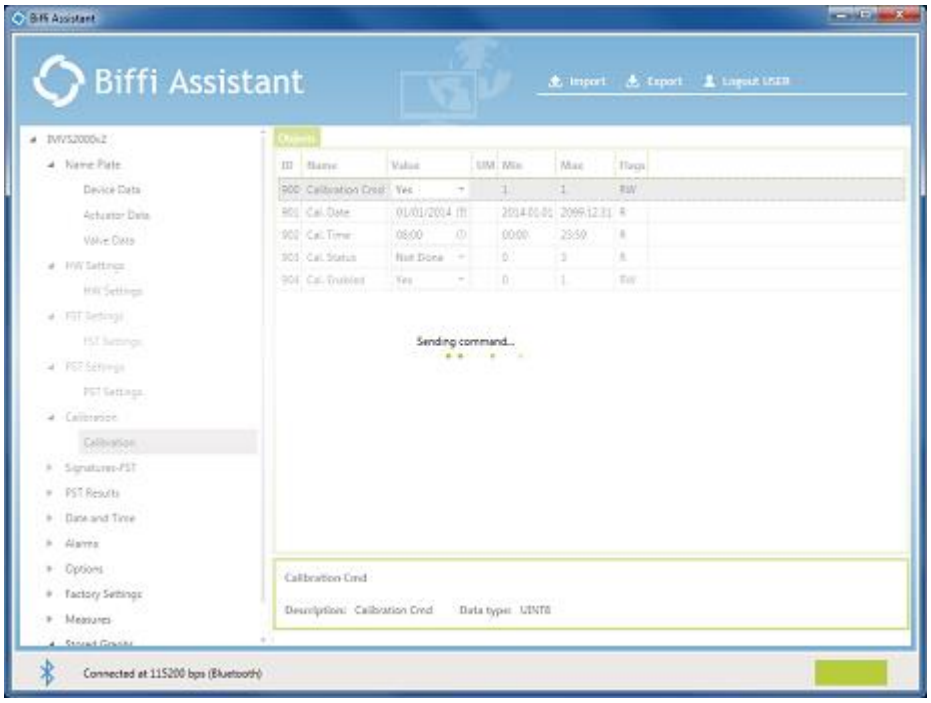
4.4 Launch/Send a command

The commands are classified as “RW” into the “Flags” field (see 6 for the full list of commands).

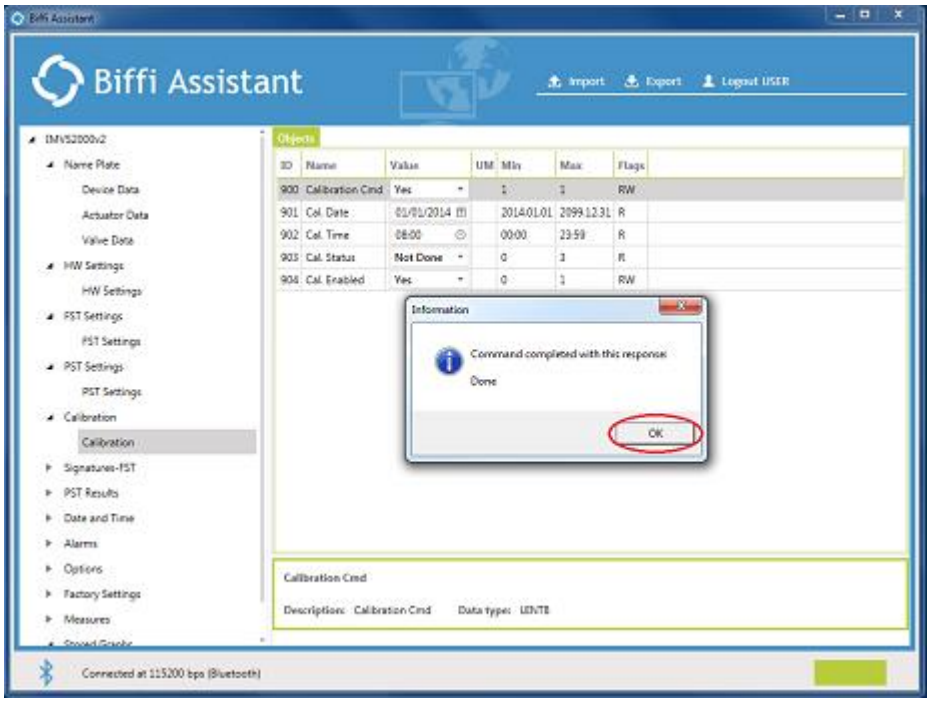
Right-click of the mouse on the row of the command that must be sent and then left-click of the mouse on “Send command *Command ID”*.



The command is performed.



Wait Until the command is completed and left-click of the mouse on the “OK” button of the Information Window that appears.



4.5 Change Password

4.5.1 Change “Online” Password

The IMVS2000v2 has four levels of Password for working online (see 3.3); the only one that can be changed by the User is the “User” password.
The IMVS2000v2 does not allow changing the “User” password through the Biffi-Assistant; it is necessary to use the Local Operator Interface (see [1]) for performing this operation.

4.5.2 Change “Offline” Password

See 5.1.2.1.

5 Import/Export File

Warning: It is recommended to use only one Serial Communication Interface (RS232 or Bluetooth) per time to avoid configuration errors.

Important: The IMVS2000v2 automatically inhibits the using of the Local Operator Interface when one Biffi Assistant connection (RS232 or Bluetooth) is active.

The Biffi Assistant provides the possibility to import and export the configuration files (parameters) and to export the stored graph of the IMVS2000v2.
It is also possible to work off-line to analyse/modify the exported files.

The Biffi Assistant allows exporting the files in two different ways:

- Biffi Assistant file (.biffia)
- Text file (.txt)

The Biffi Assistant allows importing only the Biffi Assistant files (.biffia).

5.1 Import File

The Biffi Assistant allows importing a configuration file in two ways:

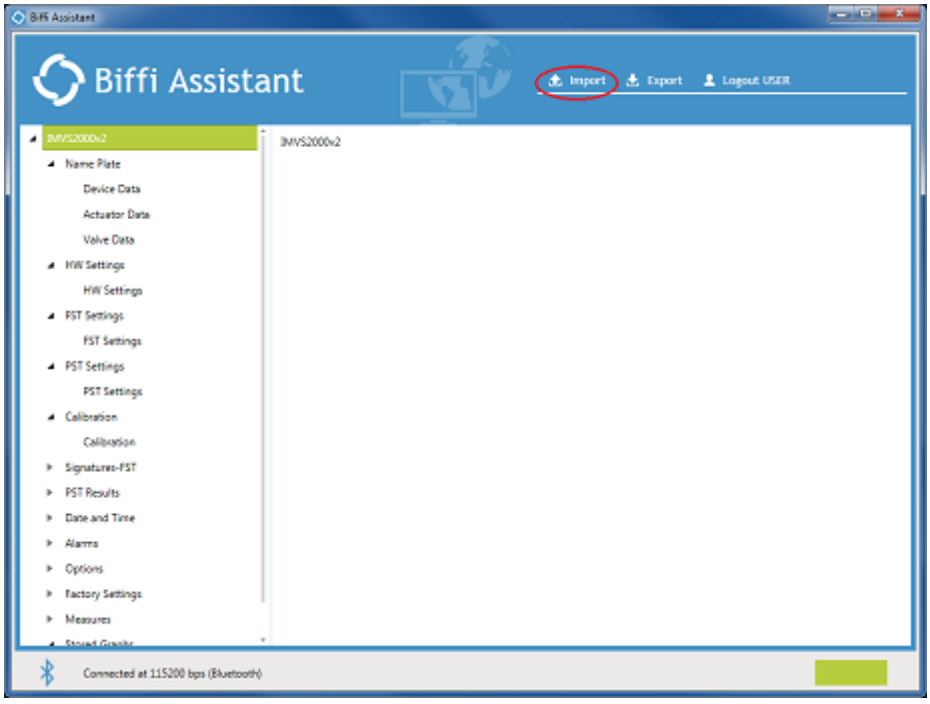
- Online (see 5.1.1)
- Offline (see 5.1.2)

5.1.1 Import File - Online

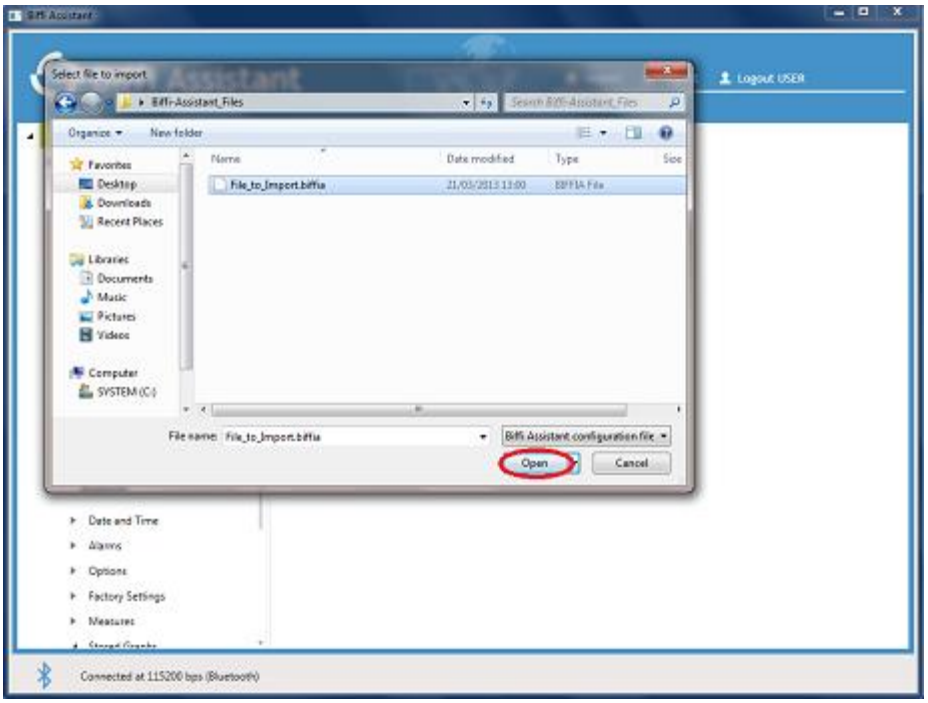
The importation of a configuration file trough Biffi Assistant is normally used for changing some or all the parameters of the device that is connected (Online).
For importing a file Online the following steps must be performed:

1. Establish a connection with the device (see 3).

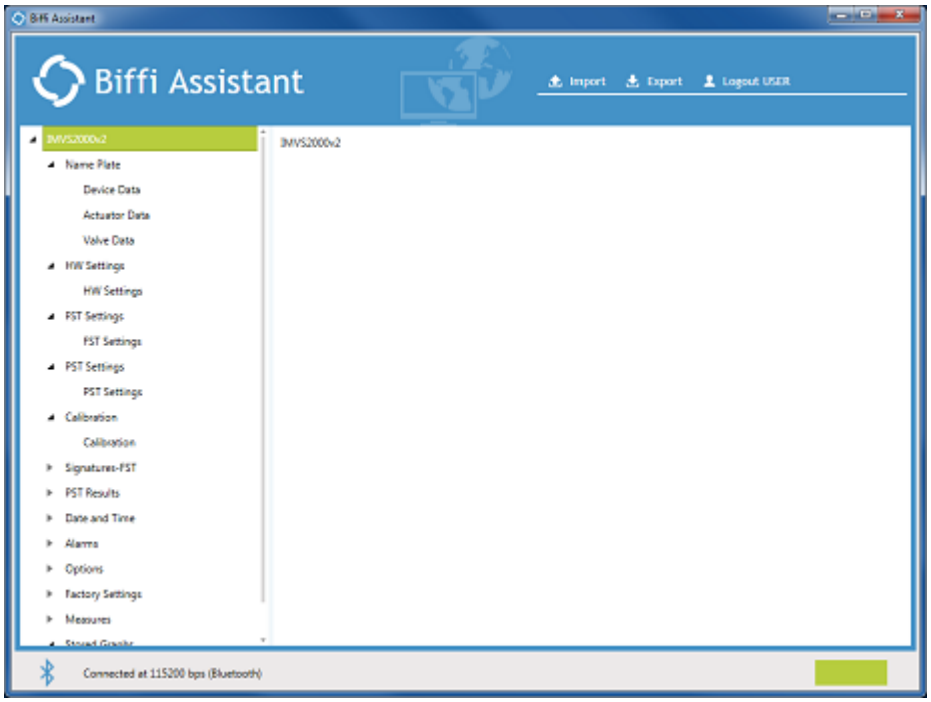
2. Left-click of the mouse on “Import”.



3. A “Windows Explorer” window is automatically opened. Browse for finding the file to import. Select the file to import and left click of the mouse on “Open”.



4. Wait until the file is imported.



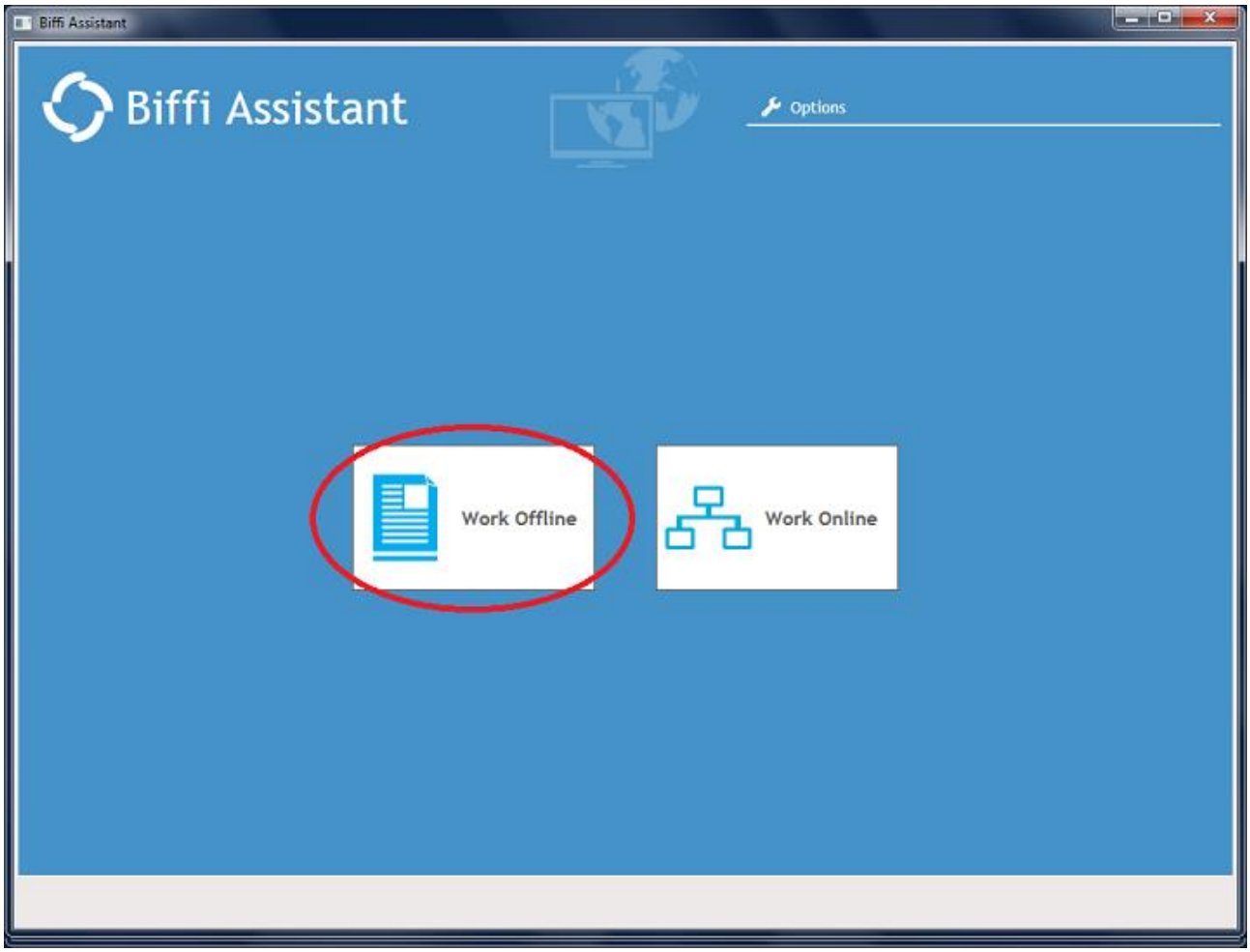
Now it is possible to download to the device the data imported by using one of the available writing procedures (see 4.3).

5.1.2 Import File – Offline

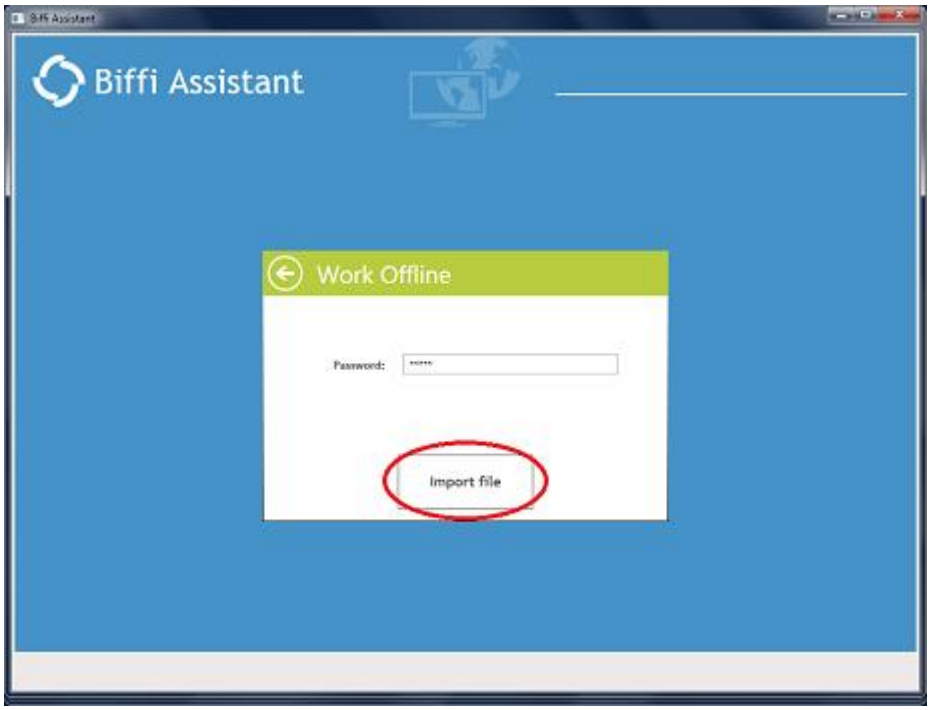
The Offline importation of Biffi Assistant file is normally used to analyse/modify the exported files.

For importing a file Offline the following steps must be performed:

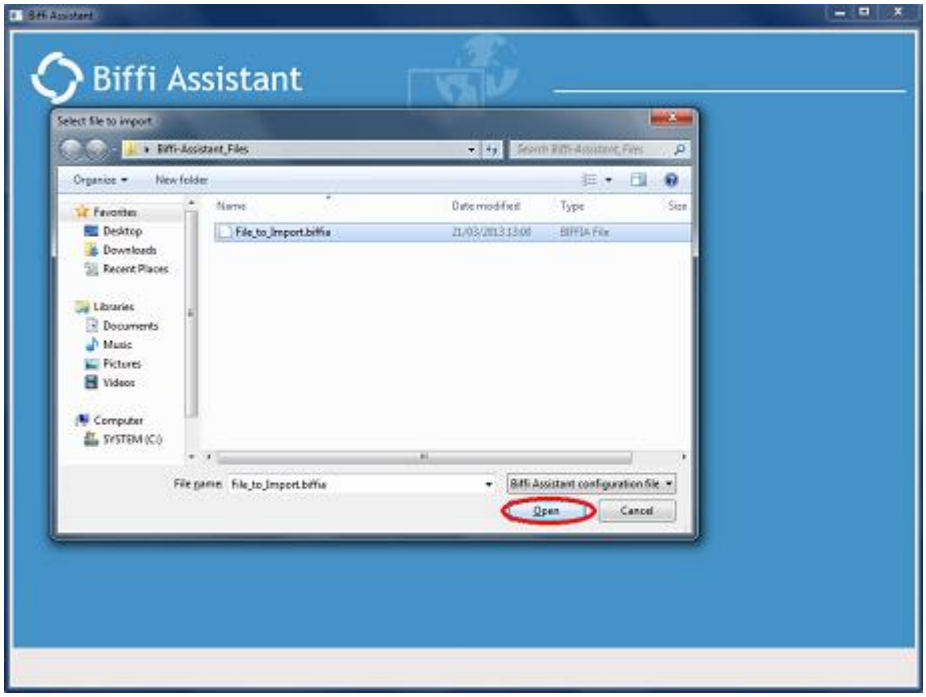
1. Open Biffi Assistant and left-click of the mouse on the “Work Offline” button.



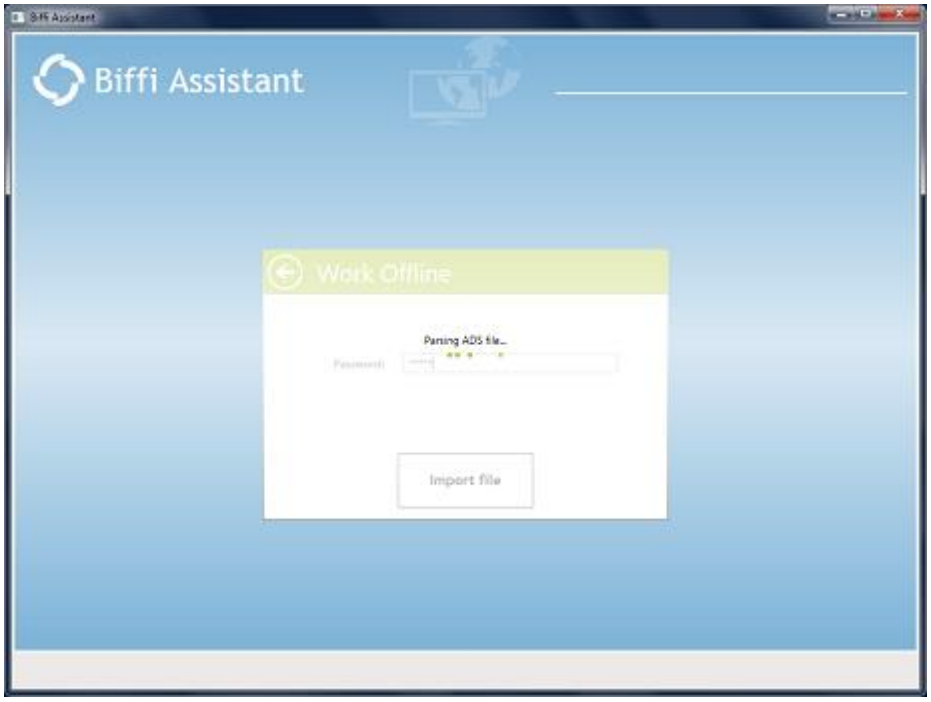
2. Insert the password and left-click of the mouse on “Import file”.
   To cancel the importation, left-click of the mouse on the left arrow.

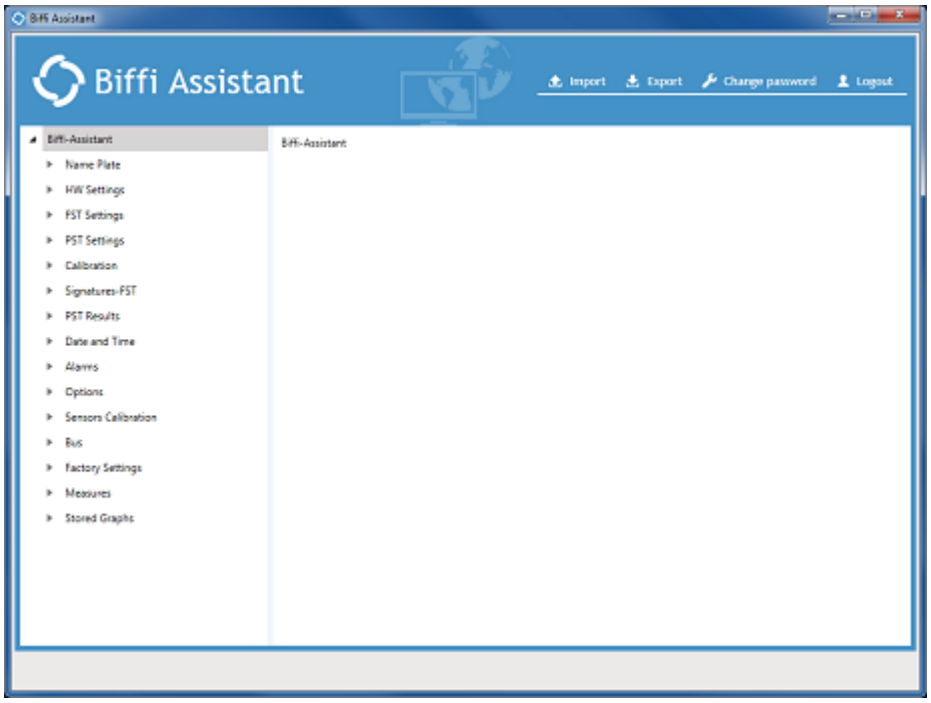


3. A “Windows Explorer” window is automatically opened. Browse for finding the file to import.
   Select the file to import and left click of the mouse on “Open”.



5. Wait until the file is imported.





Now it is possible to analyse Offline the imported data and to modify their value for creating a “new” Biffi Assistant file (see 5.2.2). For Logging Out, left-click of the mouse on “Logout”.

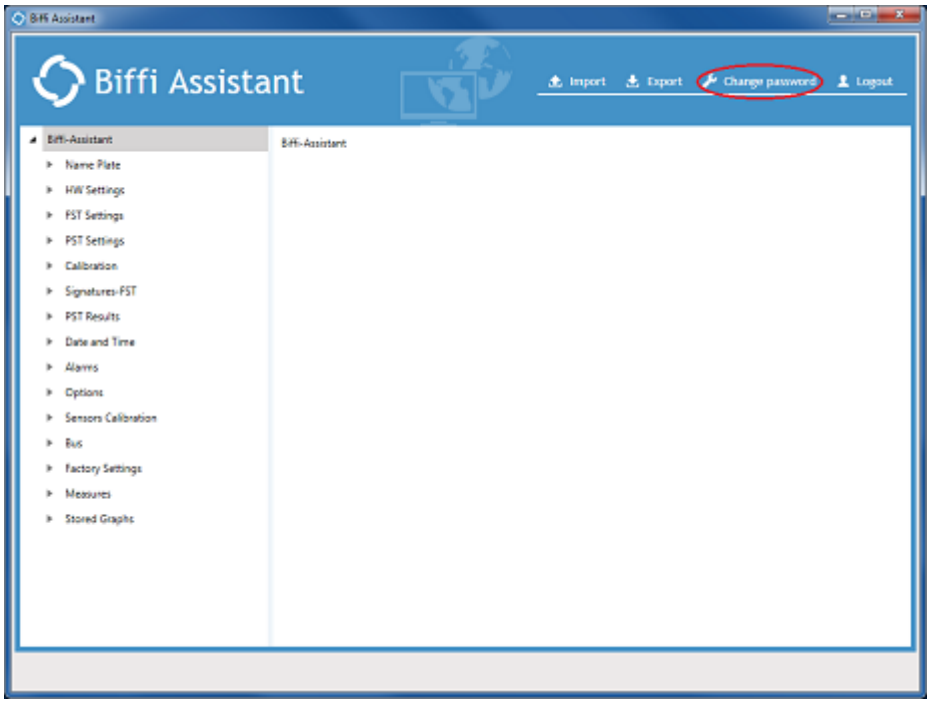
The type of data imported (parameters, graphs and parameters + graph) depends on how the exportation of the file was performed (see 5.2.1 and 5.2.2).

5.1.2.1 Change the Offline Password

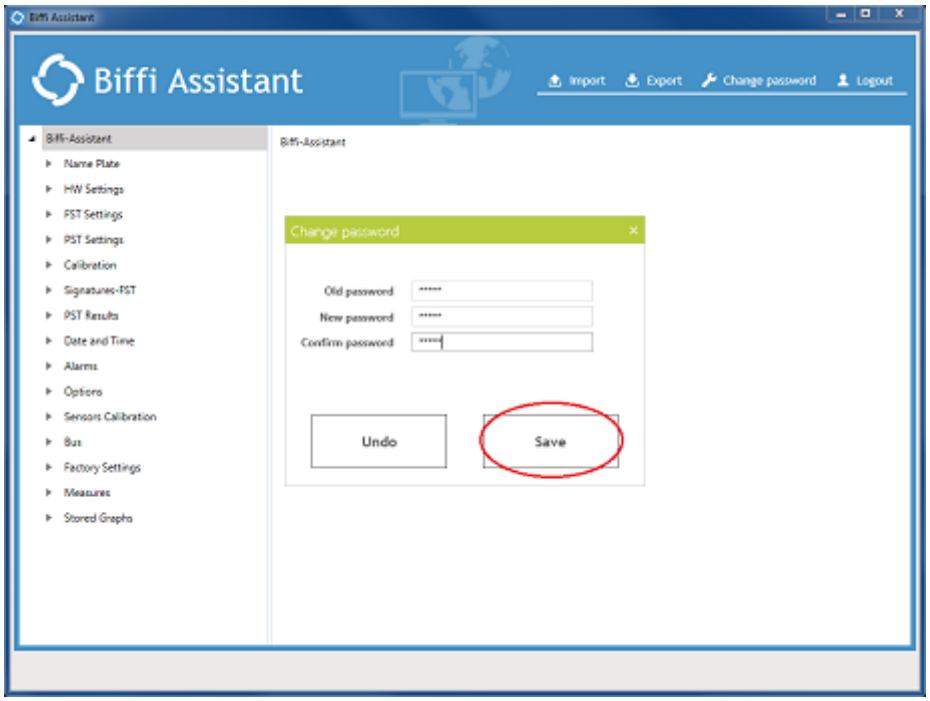
For changing the Offline password the following steps must be performed:

1. Import a file Offline (see 5.1.2).

2. Left-click of the mouse on “Change password”.



3. Write the Old password and the new one (twice) then left-click of the mouse on the “Save” button.



For re-establishing the default Offline password, the default settings must be restored (see 3.1).

5.2 Export File

The Biffi Assistant allows exporting the data of device in two ways:

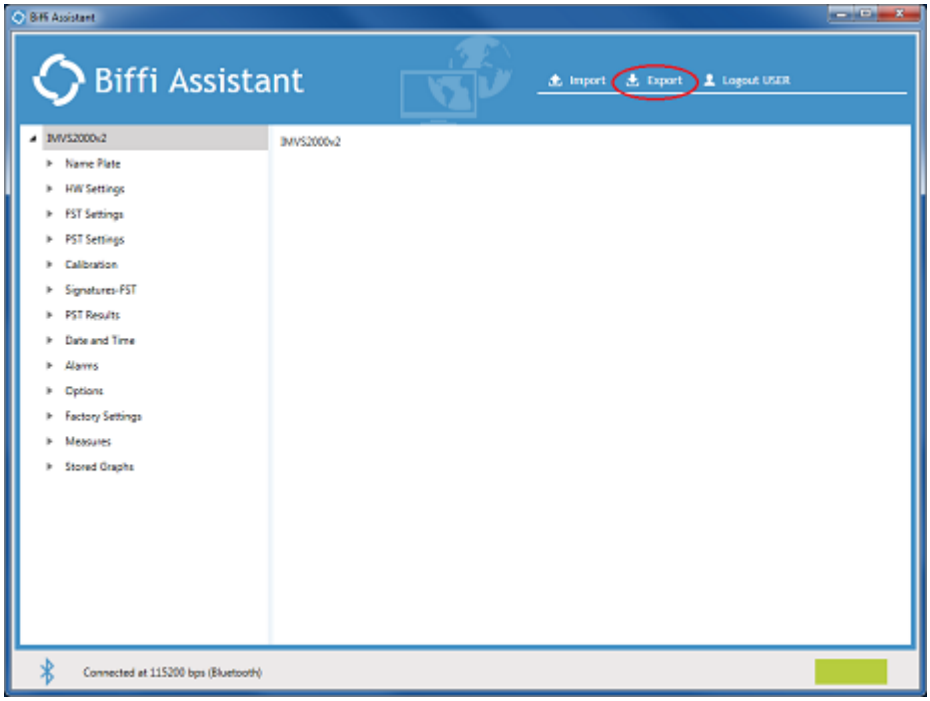
- Online (see 5.2.1)
- Offline (see 5.2.2)

5.2.1 Export File - Online

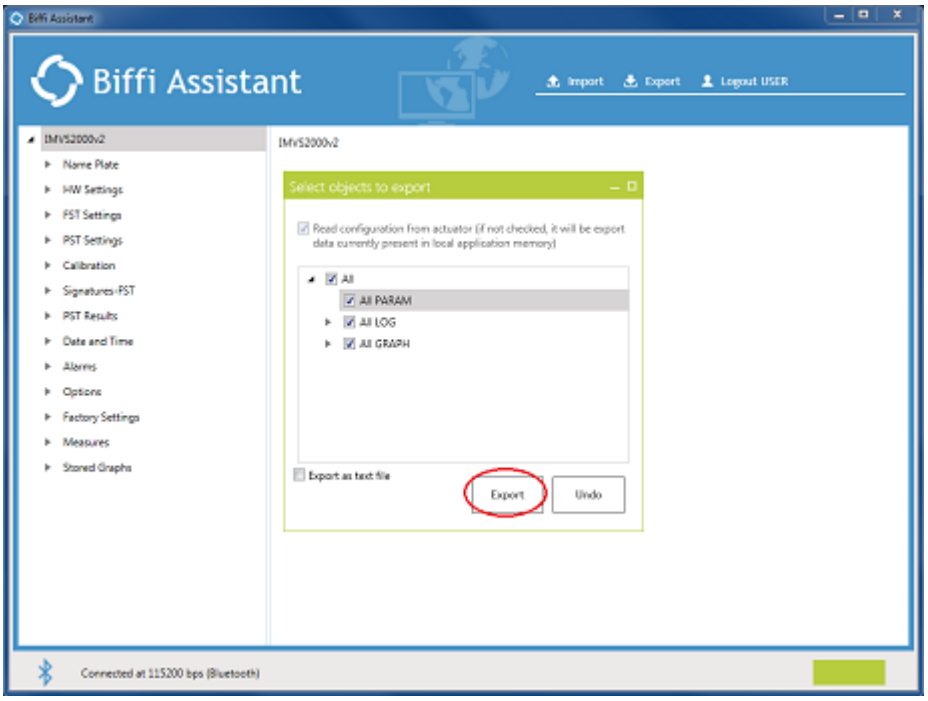
For exporting a file Online the following steps must be performed:

1. Establish a connection with the device (see 3).

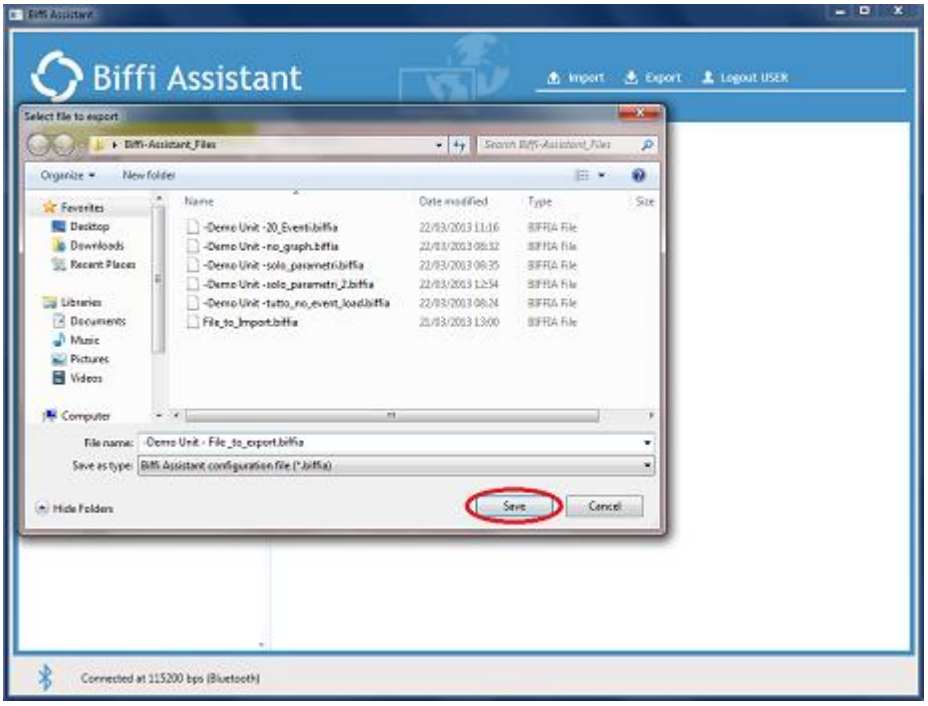
2. Left-click of the mouse on “Export”.



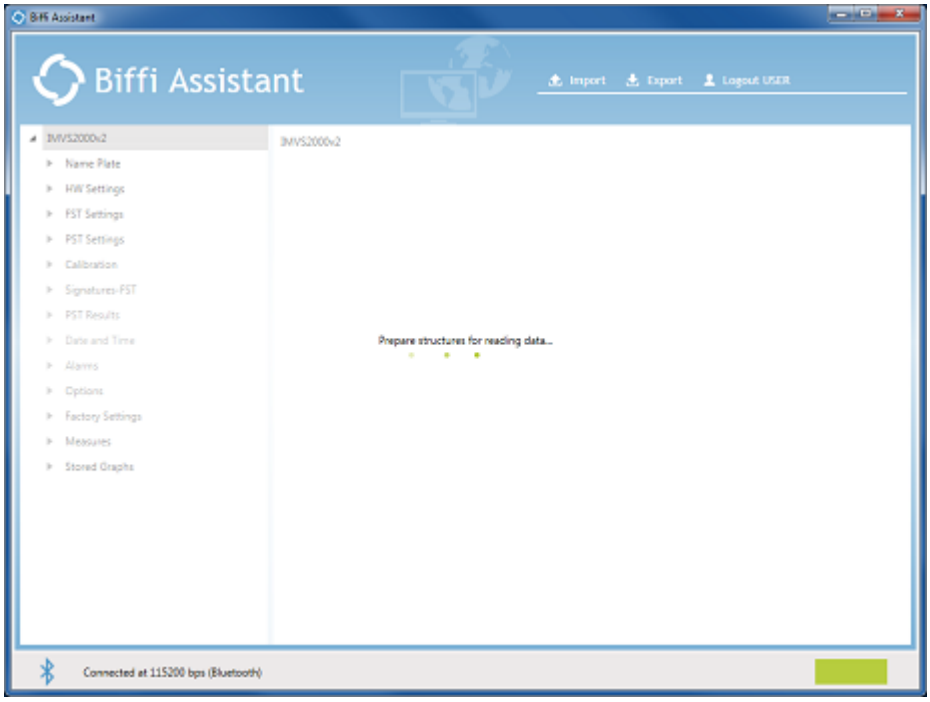
3. Select the Objects to export and left-click of the mouse on the “Export” button.
   Left-click of the mouse on the “Undo” button to cancel the exportation.
   Objects to export:
   - All PARAM: if checked, all the parameters of the IMVS2000v2 are exported
   - All LOG: it does not affect the exportation of the IMVS2000v2
   - All GRAPH: if checked, all the loaded graphs are exported (see **Error! Reference source not found.** and **Error! Reference source not found.**)
   - Export as text file: if checked the file is exported as a text file otherwise as a Biffi Assistant file.



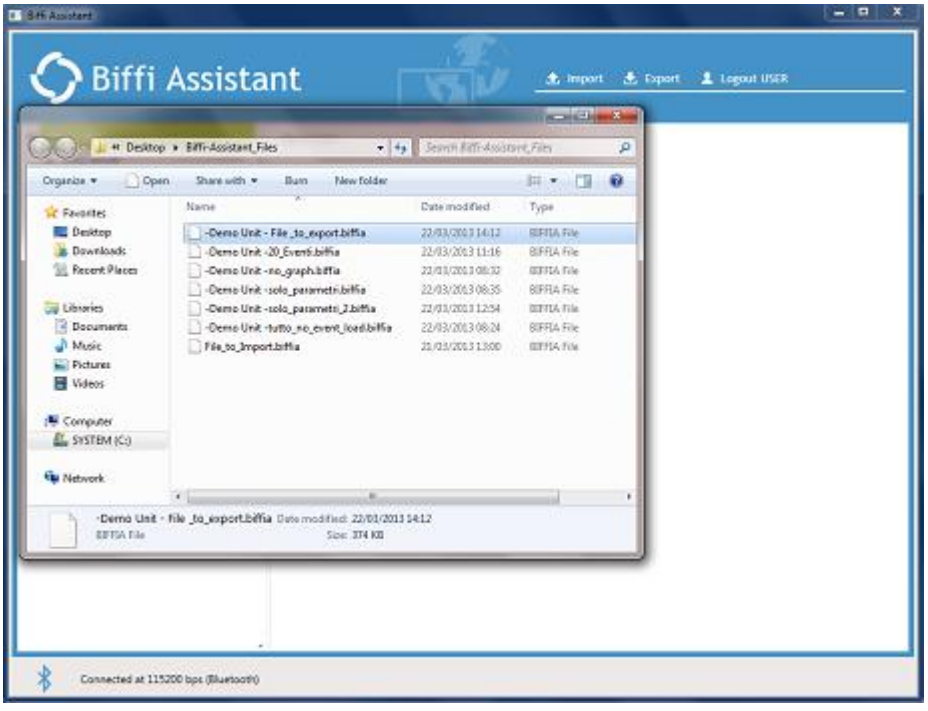
4. A “Windows Explorer” window is automatically opened. Browse for finding the folder to export the file. Write the name of the file and left-click of the mouse on “Save”. The file extension must be “.biffia” or “.txt”.



5. The exporting procedure starts.



6. A “Windows Explorer” window is automatically opened for verifying that the file is correctly saved. Close the “Windows Explorer” window to continue to work Online.



5.2.2 Export File – Offline

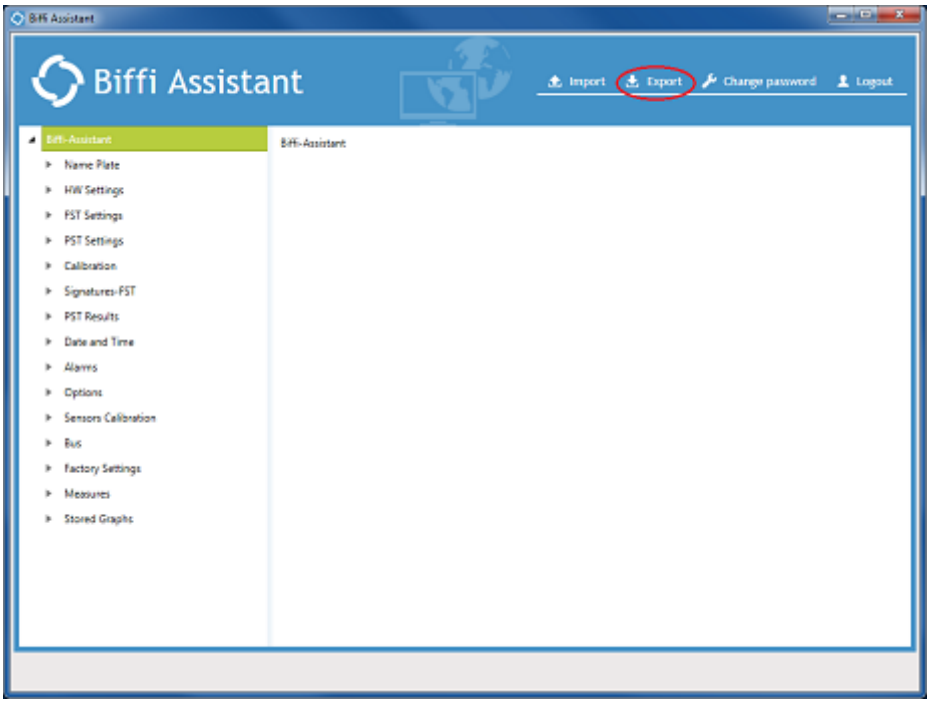
For exporting a file Offline the following steps must be performed:

1. Import a file Offline (see 5.1.2)

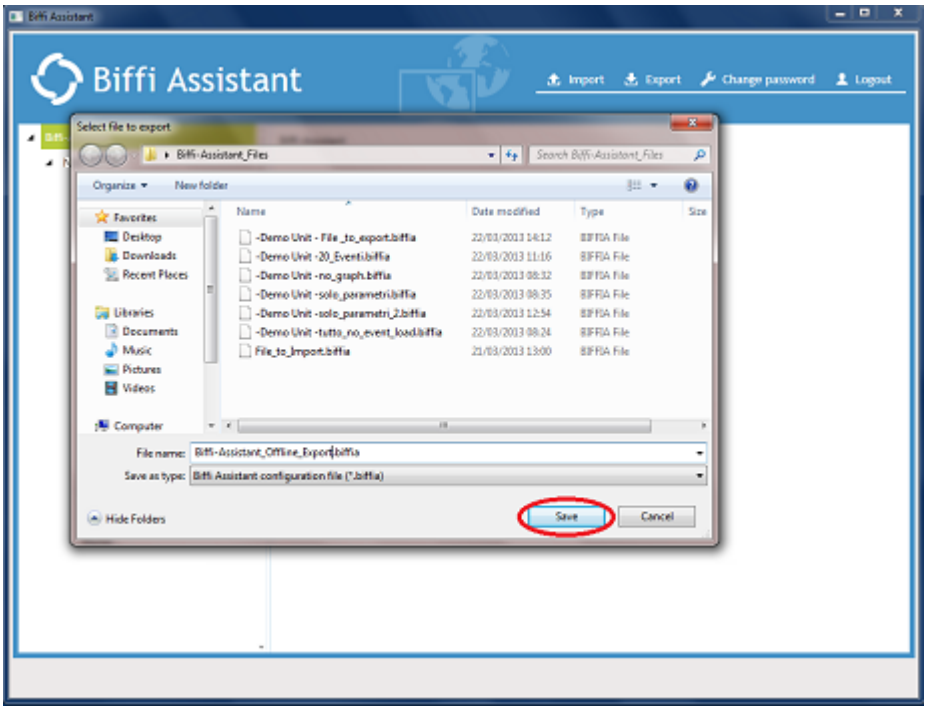
2. If it is necessary, modify the value of some parameters.

3. “Write all the parameters” of the device (see 4.3.4). This operation must be performed to correctly export the file.

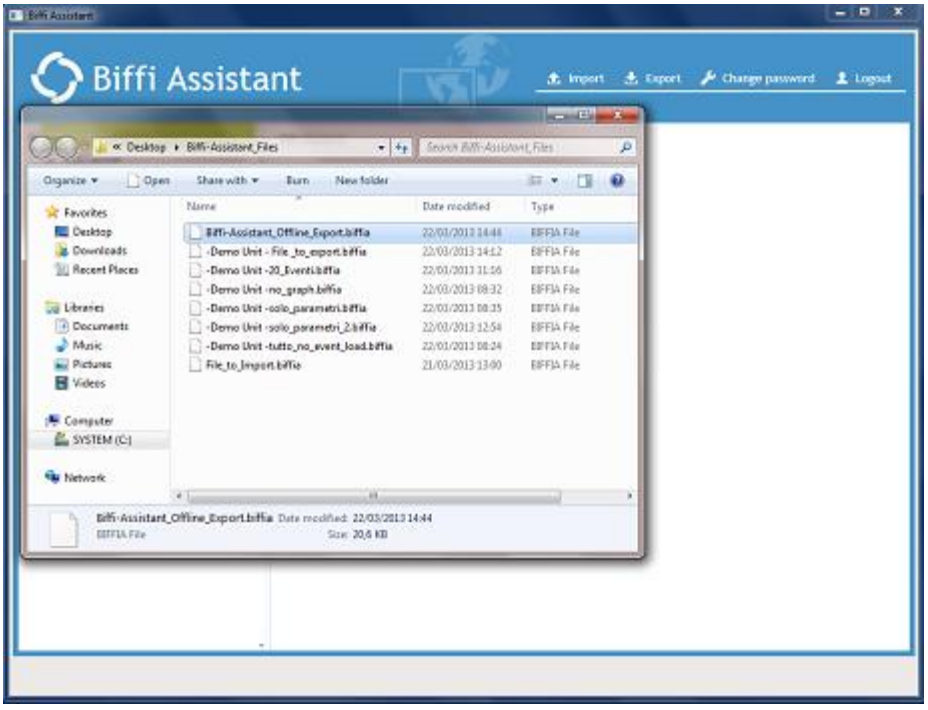
4. Left-click of the mouse on “Export”.



5. A “Windows Explorer” window is automatically opened. Browse for finding the folder to export the file. Write the name of the file and left-click of the mouse on “Save”. The file extension must be “.biffia”.



6. A “Windows Explorer” window is automatically opened for verifying that the file is correctly saved. Close the “Windows Explorer” window to continue to work Offline.



For Logging Out, left-click of the mouse on “Logout”.

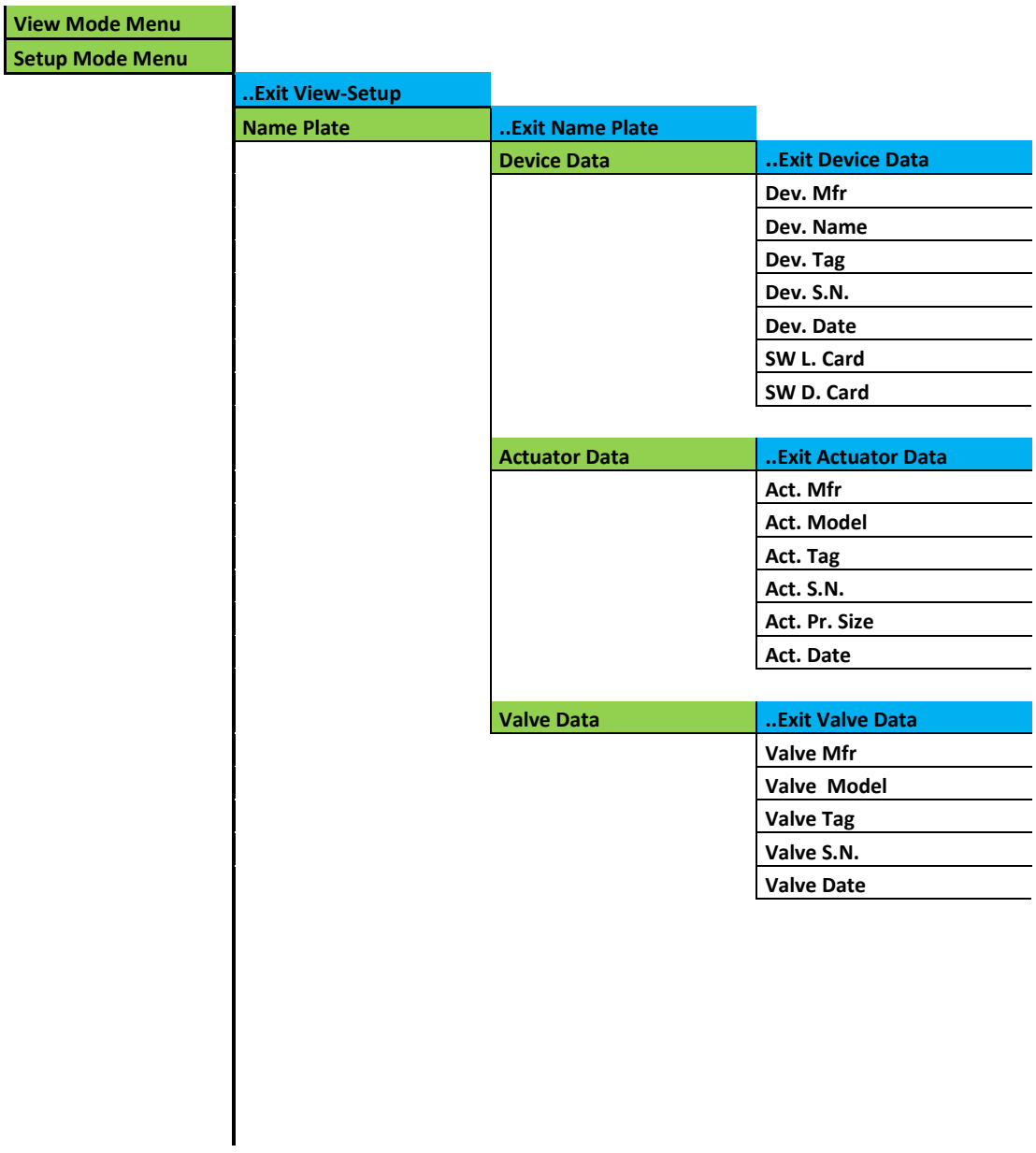
6 List of parameters

For details about all the parameters excepting the ones of the “Graphs Menu”, see [1].
For details about the parameters of the “Graphs Menu”, see **Error! Reference source not found.**.

6.1 View Graph of the Biffi Assistant Menu

For making easier the reading of the View Graph, a different color is associated to the different entries of the menus.

	Menu and Sub-Menu
	Exit of Menu and Sub-Menu
	Available Parameter
	Available Command/Calibration
	Available Command/Parameter for VAC only (for Biffi use only)
	Unavailable Command/Parameter (for Biffi use only)



HW Settings	..Exit HW Settings
	Act. Mode
	Open. Rot.
	Fail Action
	SOVs Qty
	Pr. S. 1-2
	Proc. S.
	Set Pr. 1-2
	Set Proc.
	RL A Cmd.
	RL B Cmd.

FST Settings	..Exit FST Settings
	Sign. En.
	Op. Pos. %
	Cl. Pos. %
	Op. Time %
	Cl. Time %
	FST Pr. %
	H. Pr. Lim.
	L. Pr. Lim.
	H. Proc. L.
	L. Proc. L.
	FST Cyc. L.
	FST Cyc. C.
	FST Ab. C.

PST Settings	..Exit PST Settings
	PST En.
	PST Set.
	PST Pos. %
	PST Pr. %
	PST Time %
	PST Ser. SOVs
	PST Cyc. L.
	PST Cyc. C.
	PST Ab. C.
	A. PST En.
	A. PST Per.
	A. PST Date
	A. PST Time

Calibration	..Exit Calibration
	Calibration Cmd
	Cal. Date
	Cal. Time
	Cal. Status
	Cal. Enabled

Signatures-FST	..Exit Signatures-FST
	Base. Sig. Cmd
	Mnt. Sig. Cmd
	Op. Cal. T.
	Op. Max. T.
	Cl. Cal. T.
	Cl. Max. T.
	Base. S. St.
	B.S. Date
	B.S. Time
	Op. Status
	Cl. Status
	Mnt S. St.
	M.S. Date
	M.S. Time
	FST Stored
	FST ID
	FST Info

FST Run Times	..Exit FST Run Times
	B. Op. B. T.
	M. Op. B. T.
	B. Op. T. T.
	M. Op. T. T.
	B. Op. B. P.
	M. Op. B. P.
	B. Cl. B. T.
	M. Cl. B. T.
	B. Cl. T. T.
	M. Cl. T. T.
	B. Cl. B. P.
	M. Cl. B. P.

PST Results	..Exit PST Results
	Base. PST Cmd
	Manual PST Cmd
	PST Set.
	PST Cal. T.
	PST Max. T.
	B. PST St.
	B. PST Date
	B. PST Time
	PST St.
	M. PST Date
	M. PST Time
	PST Stored
	PST ID
	PST Info
	PST Run Times

..Exit PST Run Times
B. PST B. T.
M. PST B. T.
B. PST T. T.
M. PST T. T.
B. PST B. P.
M. PST B. P.

Date and Time	..Exit Date and Time
	Date
	Time
	N.M. Date

Alarms	..Exit Alarms	
	CFA. St.	
	Alarms Status	
	Alarms List	
	Clear Alarms List	
	Reset Alarms	
	Alarms Enabled	..Exit Alarms Enabled
		Al. PSCL En.
		Al. PSCT En.
		Al. PSSB En.
		Al. PSFB En.
		Al. PSST En.
		Al. PSFT En.
		Al. PSSP En.
		Al. PSSR En.
		Al. PSLB En.
		Al. PSHB En.
		Al. PSNM En.
		Al. PSA En.
		Al. PSB En.
		Al. SISA En.
		Al. SISB En.
		Al. OPOS En.
		Al. CPOS En.
		Al. LSP En.
		Al. HSP En.
		Al. LPP En.
		Al. HPP En.
		Al. OPNM En.
		Al. CLNM En.
		Al. OPCT En.
		Al. CLCT En.
		Al. FSCL En.
		Al. SOBT En.
		Al. FOBT En.
		Al. SOTT En.
		Al. FOTT En.
		Al. SCBT En.
		Al. FCBT En.
		Al. SCTT En.
		Al. FCTT En.
		Al. OHBP En.
		Al. OLBP En.
		Al. CHBP En.
		Al. CLBP En.
		Al. PS1 En.
		Al. PS2 En.
		Al. PPS En.
		Al. POS En.
		Al. BUS En.
		Al. MNT En.

- Options
  - ..Exit Options
  - RS232 Baud
  - Pres. M.U.
  - CFA Mode
  - Op. Cl. Mode
  - Bus Type
  - Blue. En.
  - Change User PWD
  - M.FST Al. En.
- Sensors Calibration
- Bus (*)
- Factory Settings
  - ..Exit Factory Settings
  - Pressure Calib.
  - Memory Check
  - AO Calibration
  - Digital Inputs
    - ..Exit Digital Inputs
    - DI_SOVA St.
    - DI_SOVB St.
    - DI_PST St.
    - DI_SIS_A St.
    - DI_SIS_B St.
  - Check DOs
  - Restore Defaults
- Stored Graphs
  - ..Exit Stored Graphs
  - Graph Type
  - Graph ID
  - Slot Address
  - Store Graph
  - Clear Slots
  - Graph Info

(*): Menu available only if a bus card is present. See the manual dedicated to the specific bus card for details.

7 Graphs

The following paragraph explains how to visualize the FST and PST graphs.

The FST Graphs have the following path: **FST Signatures > FST Signatures > FST Graphs**
The PST Graphs have the following path: **PST Results > PST Results > PST Graphs**
Stored PST and/or FST graphs have the following path: **Stored Graphs > Stored Graphs > Graphs Info** (see

The “Graph” parameter is organized in three “Views”:

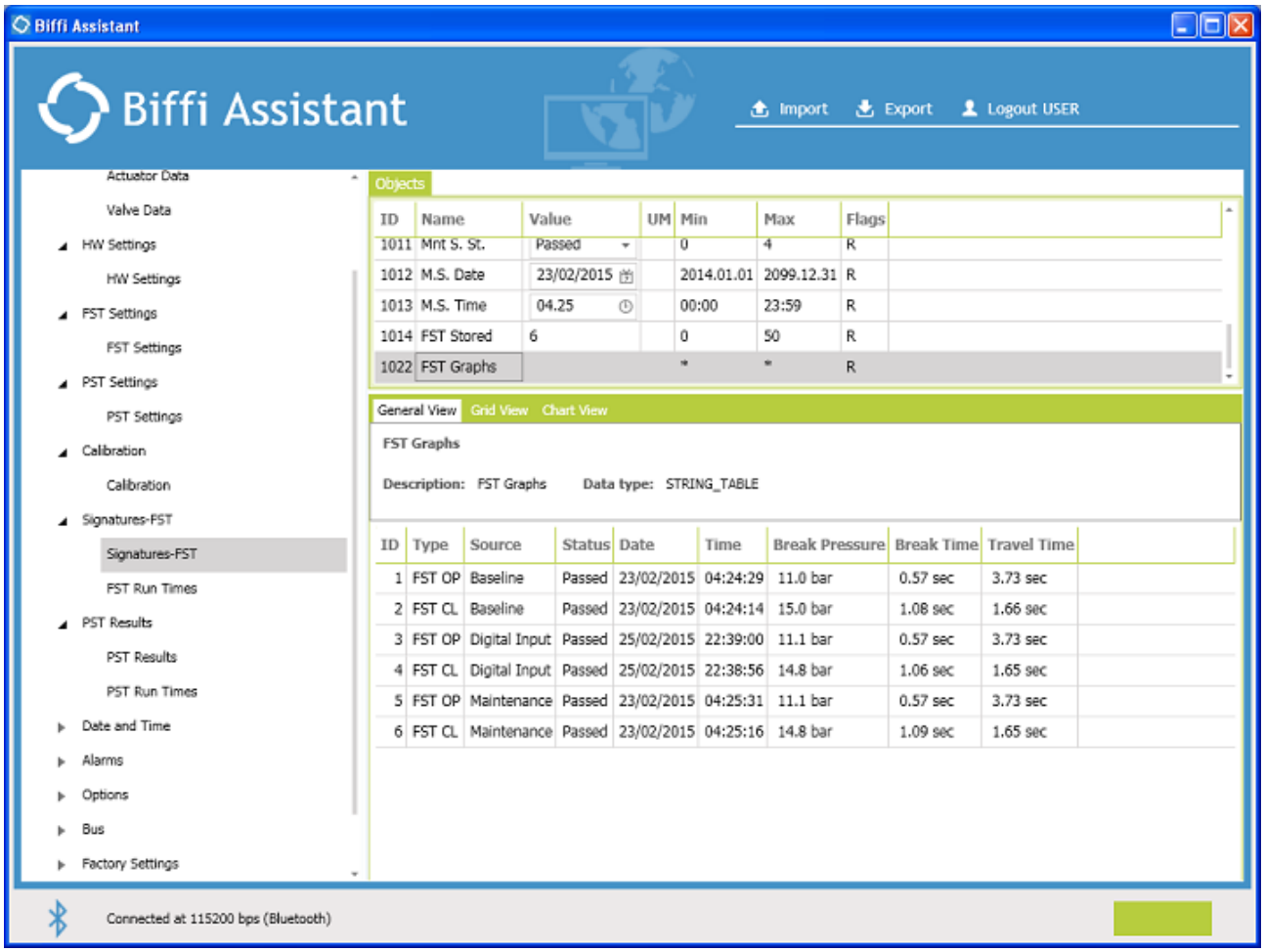
- General View
- Grid View
- Chart View

7.1 General View – Graphs

The General View of the “PST graphs” has the additional field “SOVs” that indicates which SOVs are used during the PST.

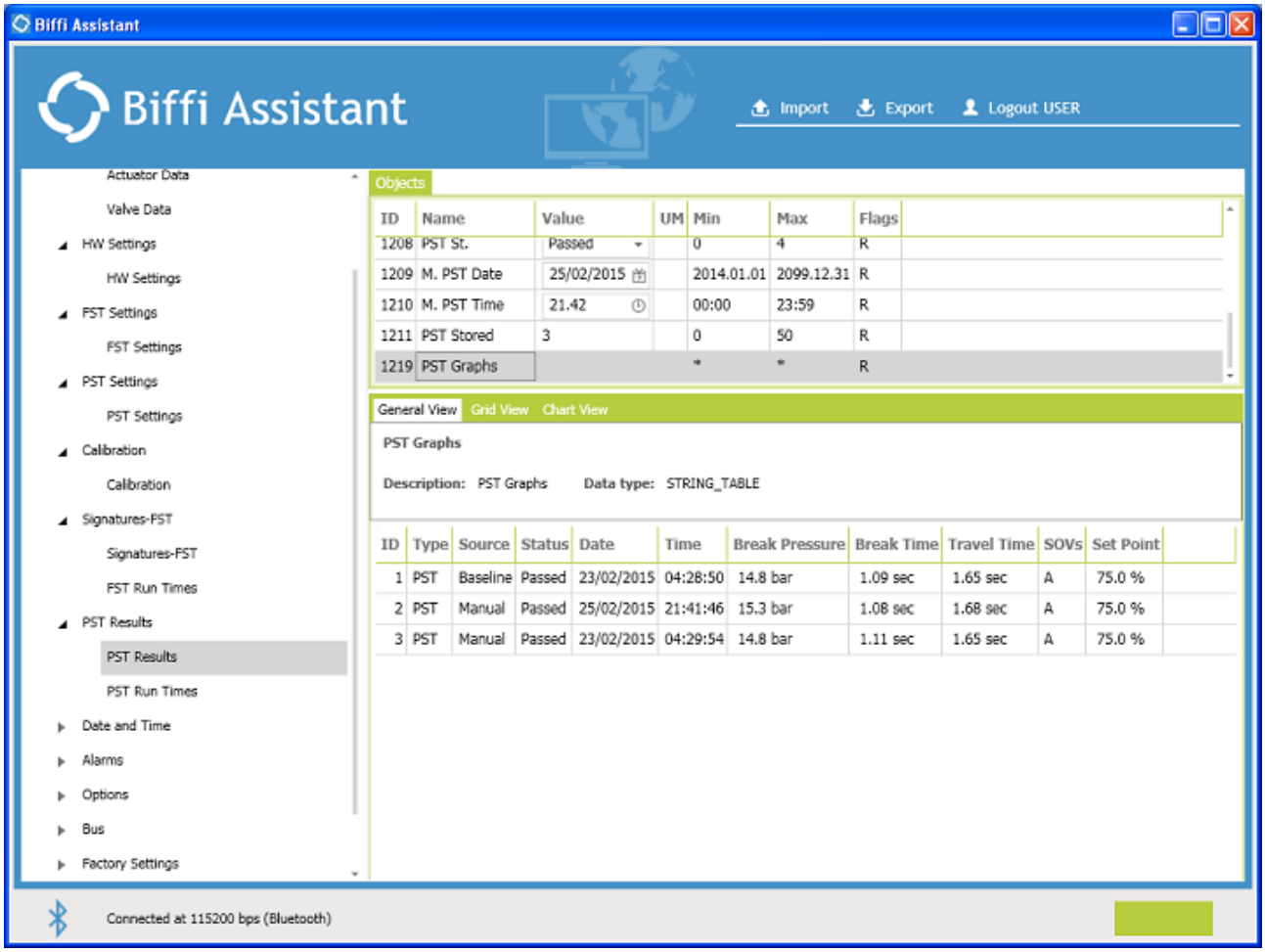
7.1.1 General View – FST Graphs

Use the scroll bar for viewing all the loaded graphs.



7.1.2 General View – PST Graphs

Use the scroll bar for viewing all the loaded graphs.

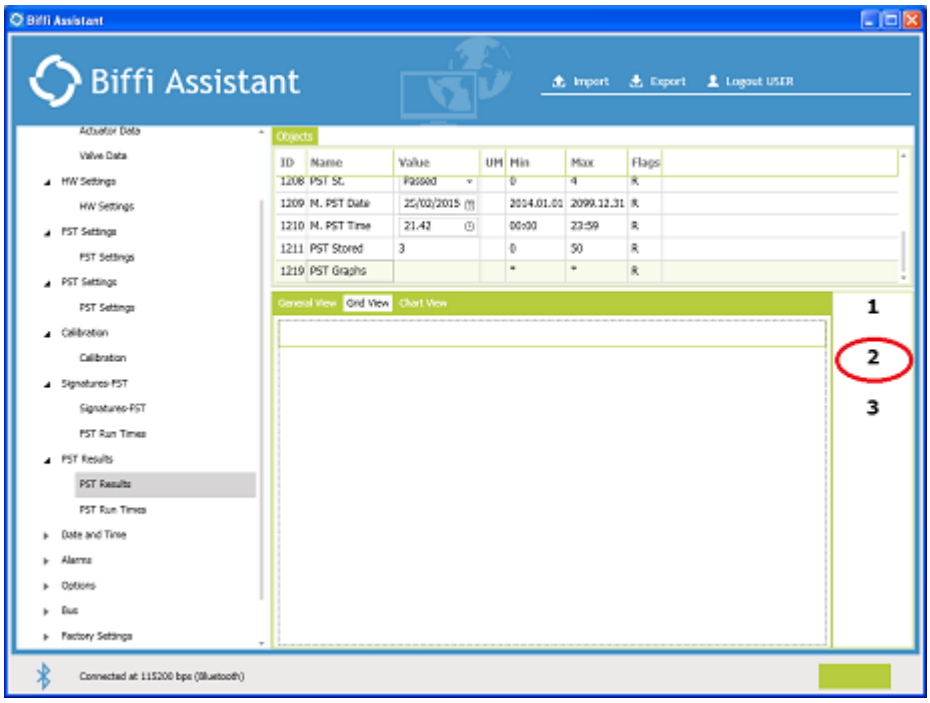


7.2 Grid View – Graphs

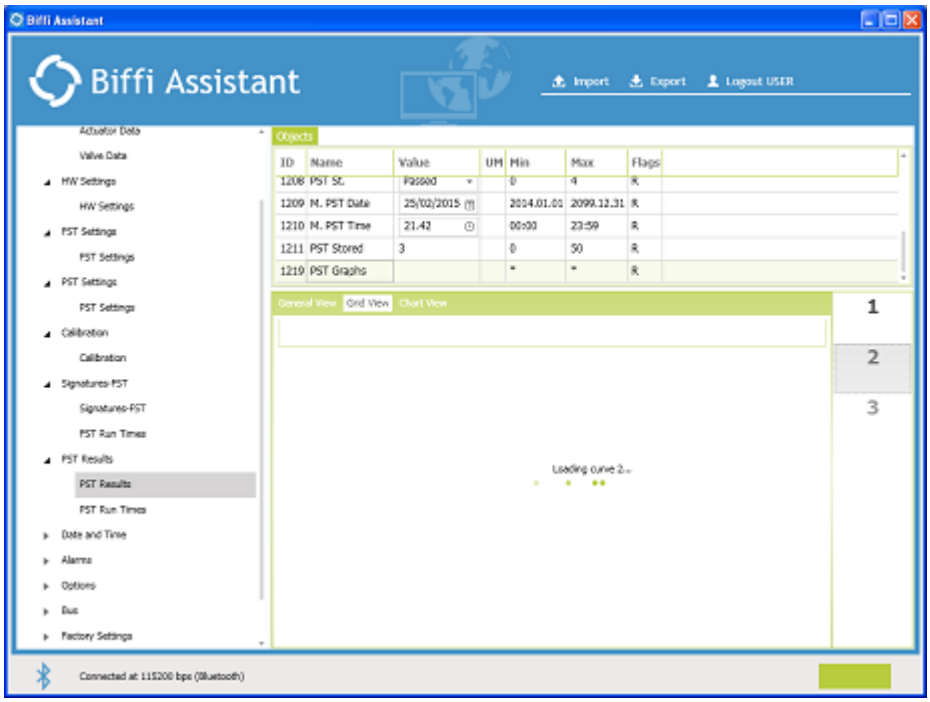
The Grid View allows displaying all the stored values (pressure and optionally position) of a single graph. See [1] for details.

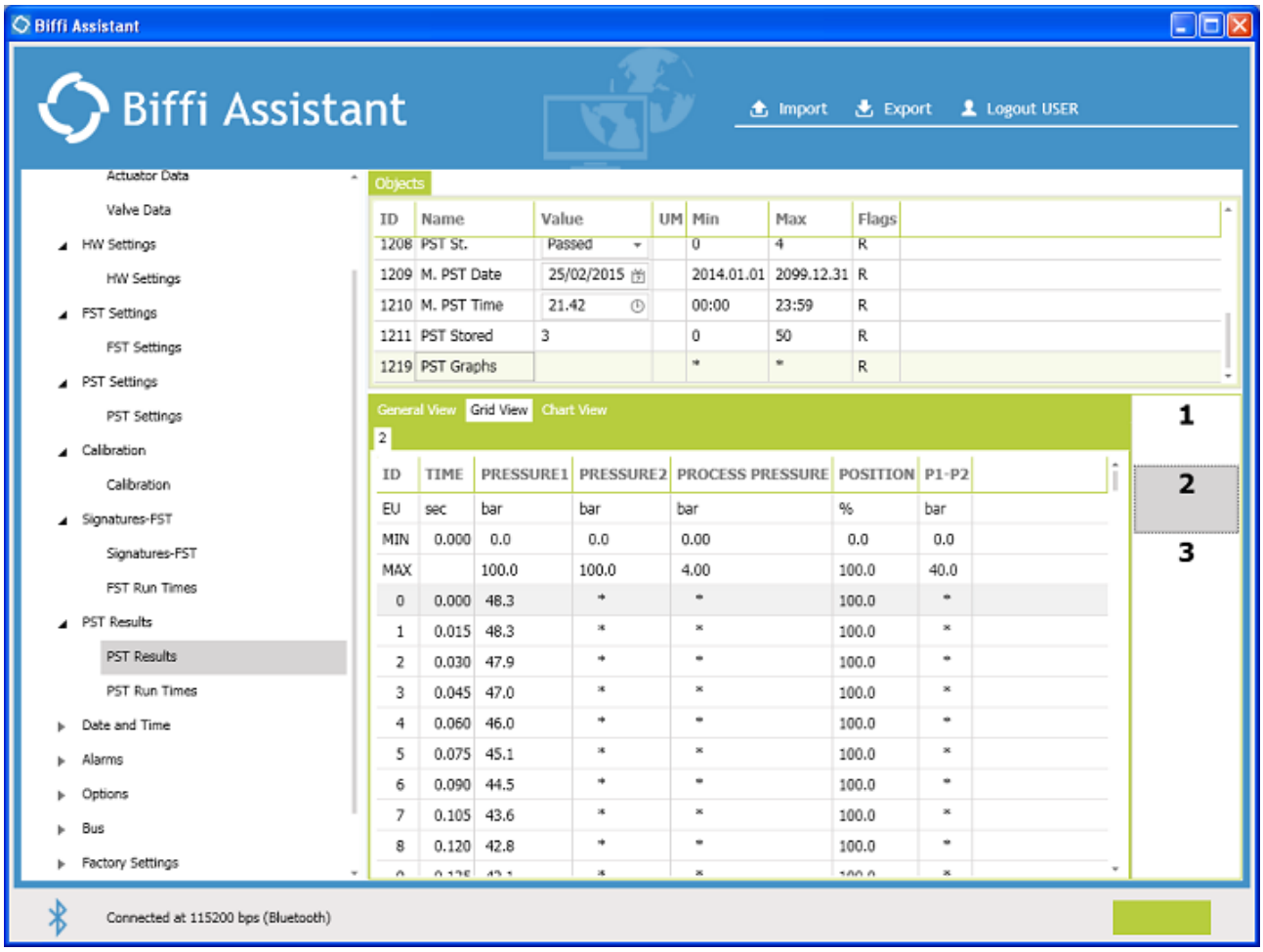
For adding a graph, left-click of the mouse on the button corresponding to the Graph ID of the graph that has to be loaded (2 in the screen below).

Use the scroll bar for viewing all the loaded graphs.



Wait until the graph is loaded.





On the “ID” column, there is the progressive number of the samples of the graph.
On the “TIME” column, the time is reported in seconds.
On the “PRESSURE 1” column, the pressure of the pressure sensor 1 is reported in bar/psi.
On the “PRESSURE 2” column, the pressure of the pressure sensor 2 (optional) is reported in bar/psi.
On the “PROCESS PRESSURE” column, the pressure of the process pressure sensor (optional) is reported in bar/psi.
On the “P1-P2” column, the differential pressure of the pressure sensors 1 and 2 (optional) is reported in bar/psi.
On the “POSITION” column, the position is reported in %.

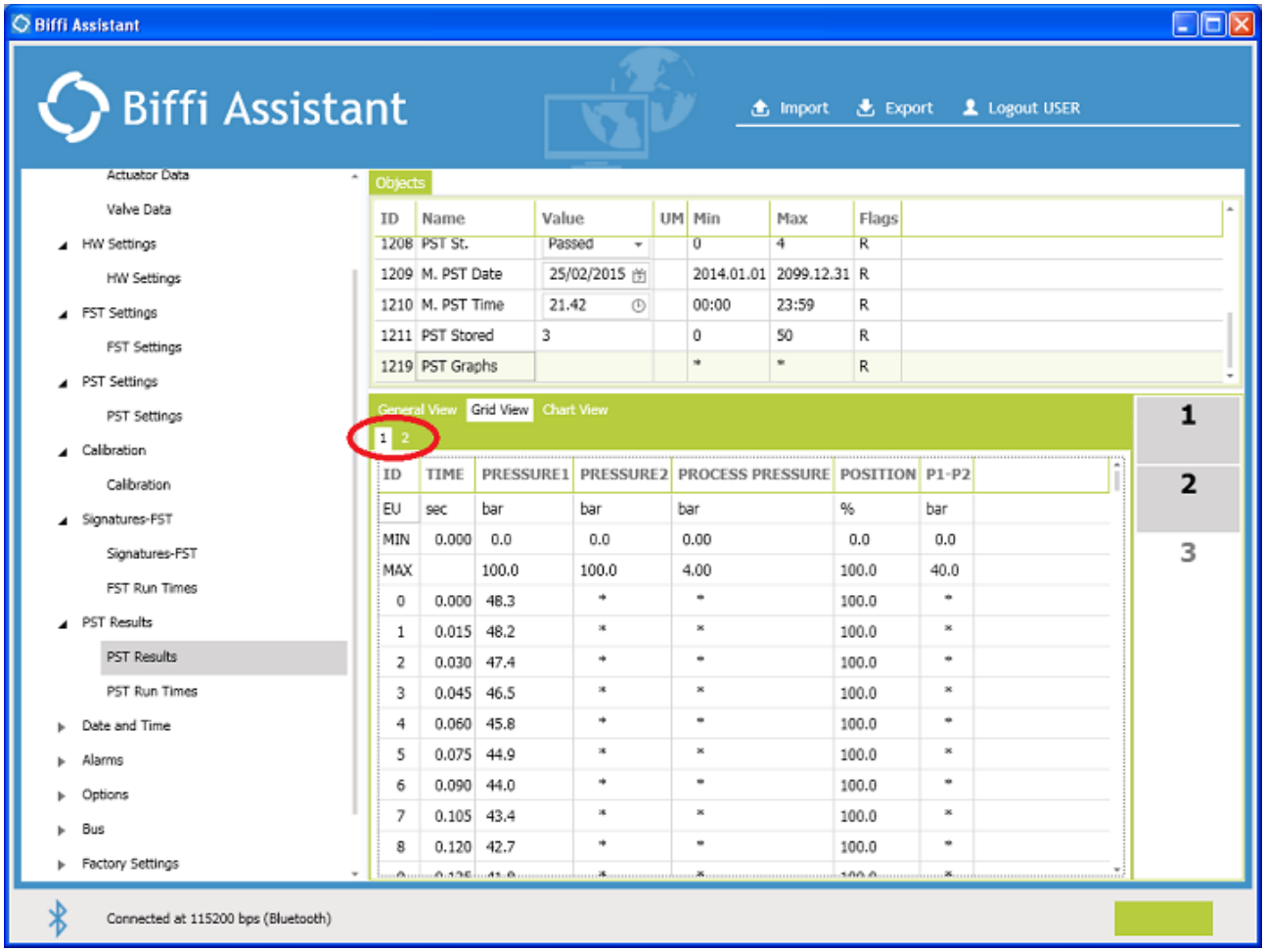
The three first lines of the Tab resumes the general data relevant to the limit values of pressures and position (see [1]).

Each row reports the time and the value of on sample of pressure and position.

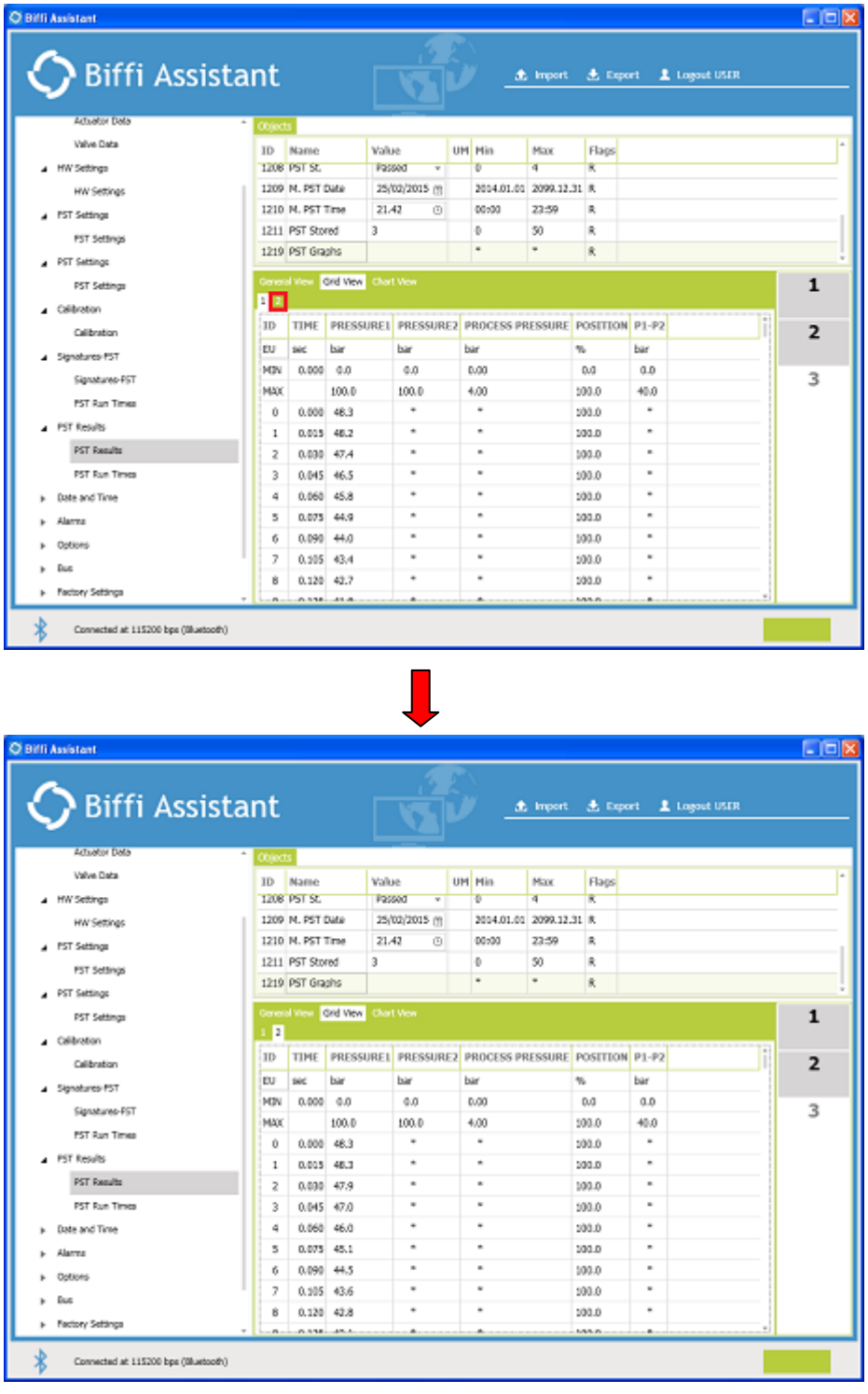
The data not sampled (sensors not present) are shown as “*”.

See [1] for additional details about the graphs.

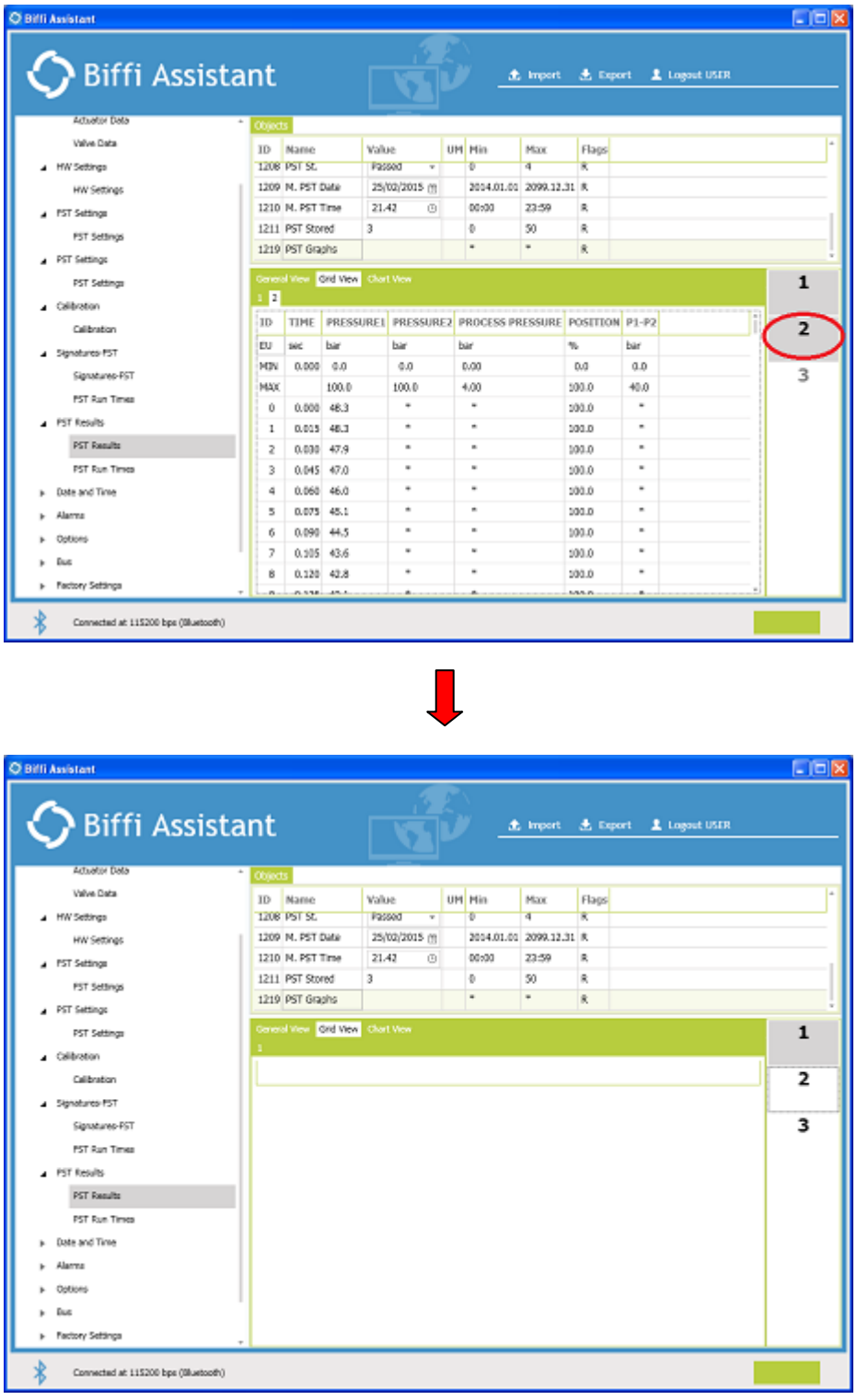
It is possible to load up to two graphs per time (1 and 2 in the screen below) and to view one graph per time.



Left click of the mouse on the desired Graph ID for viewing the corresponding graph.

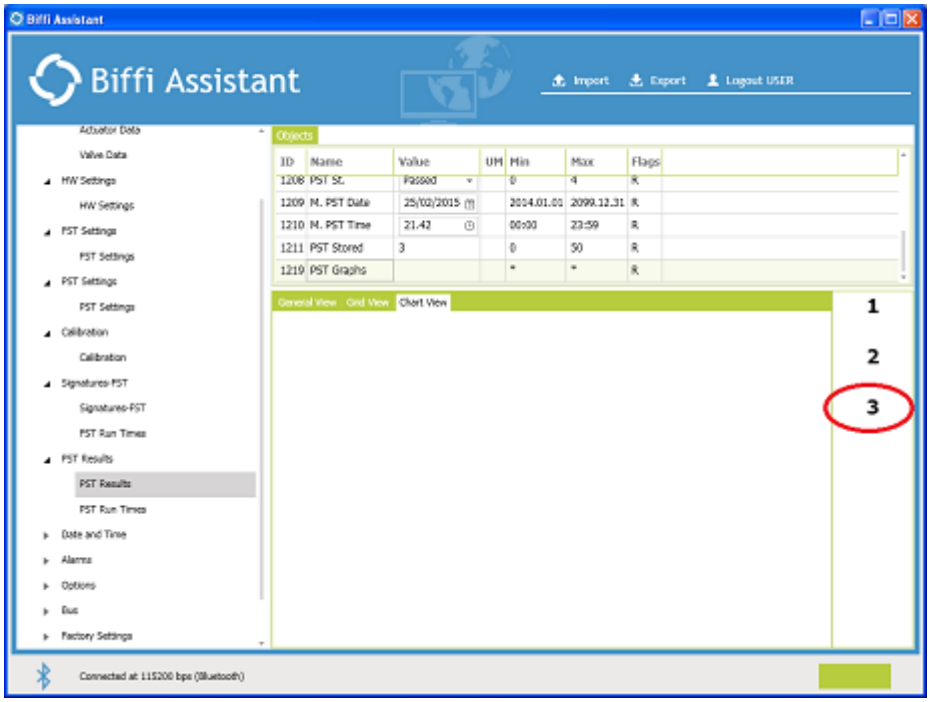


For removing a loaded graph, left click of the mouse on the button corresponding to the Graph ID of the graph that has to be removed (4 in the screen below).

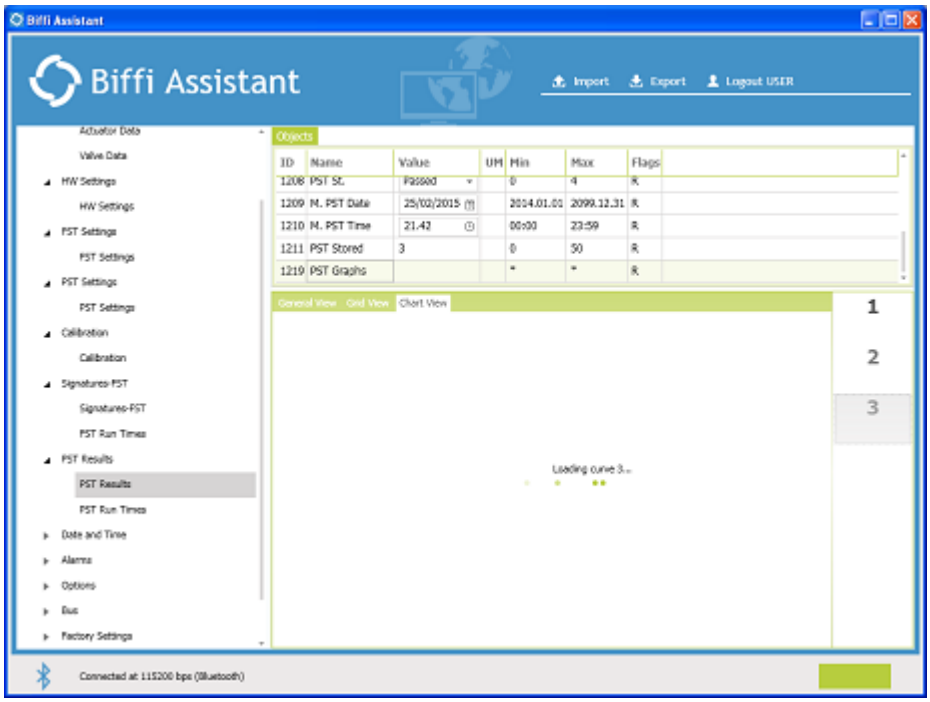


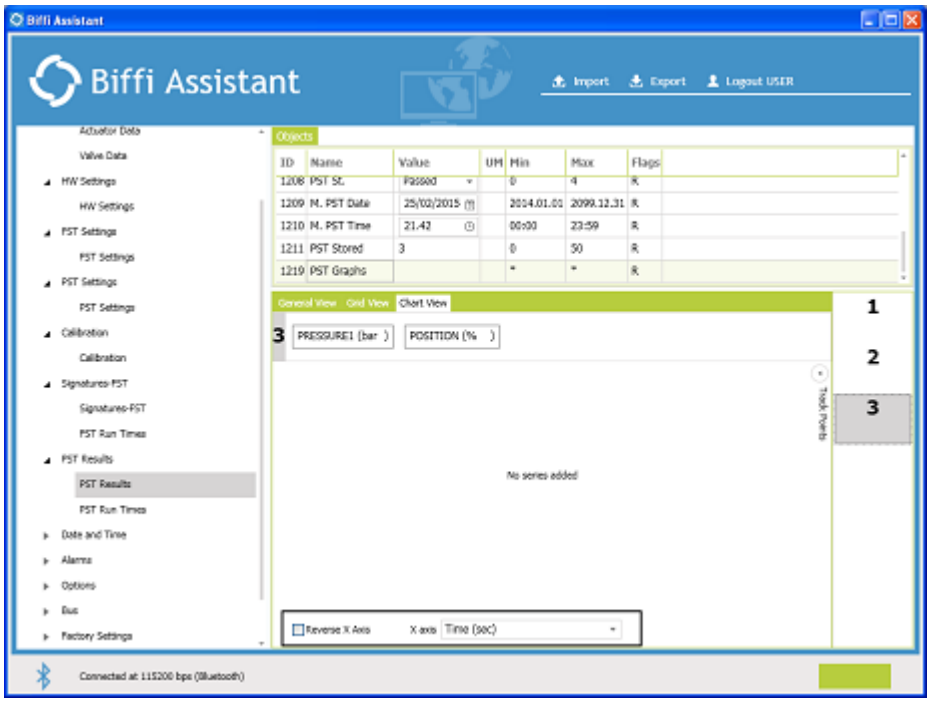
7.3 Chart View

For adding a graph, left-click of the mouse on the button corresponding to the Graph ID of the graph that has to be loaded (3 in the screen below).



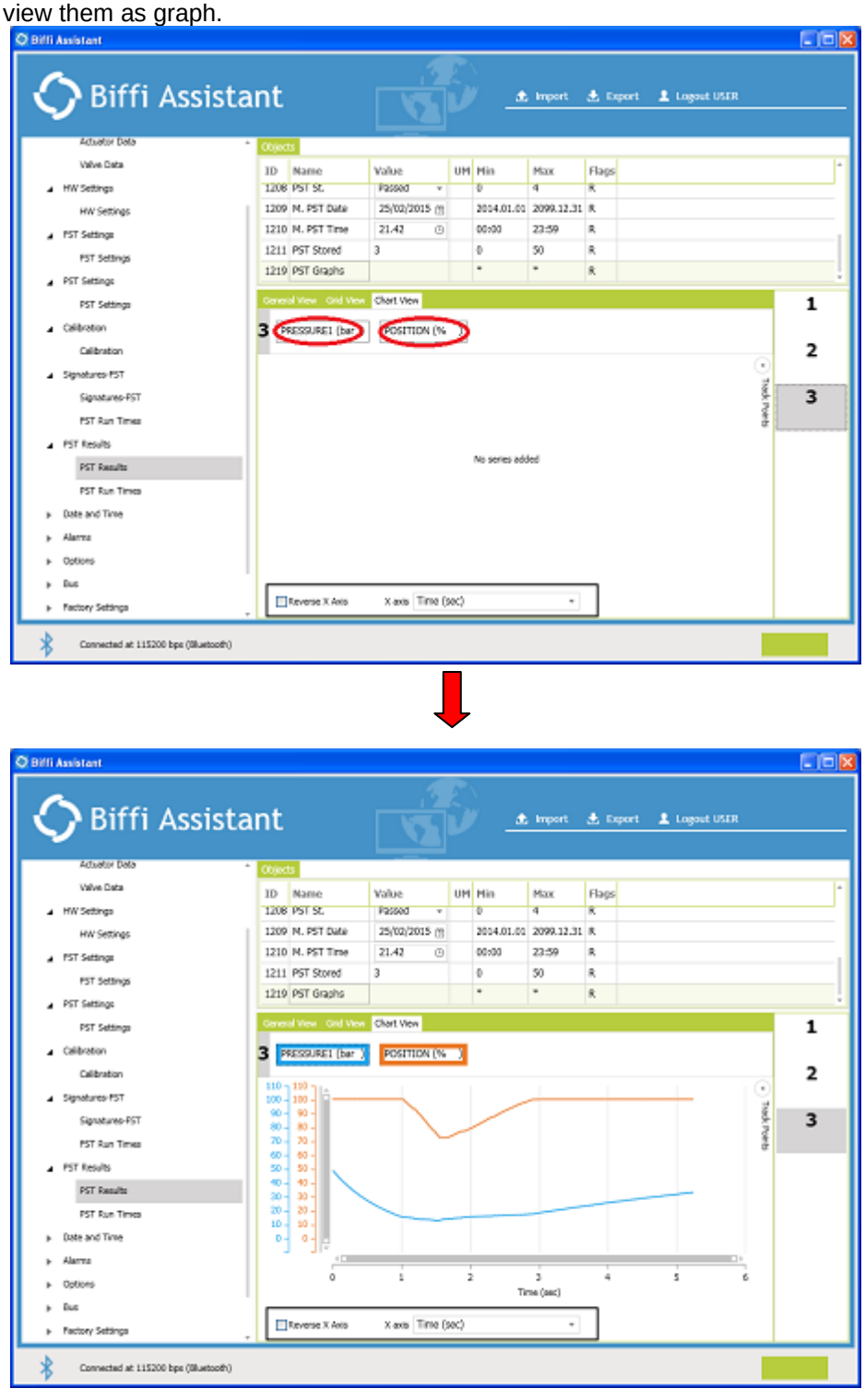
Wait until the graph is loaded.



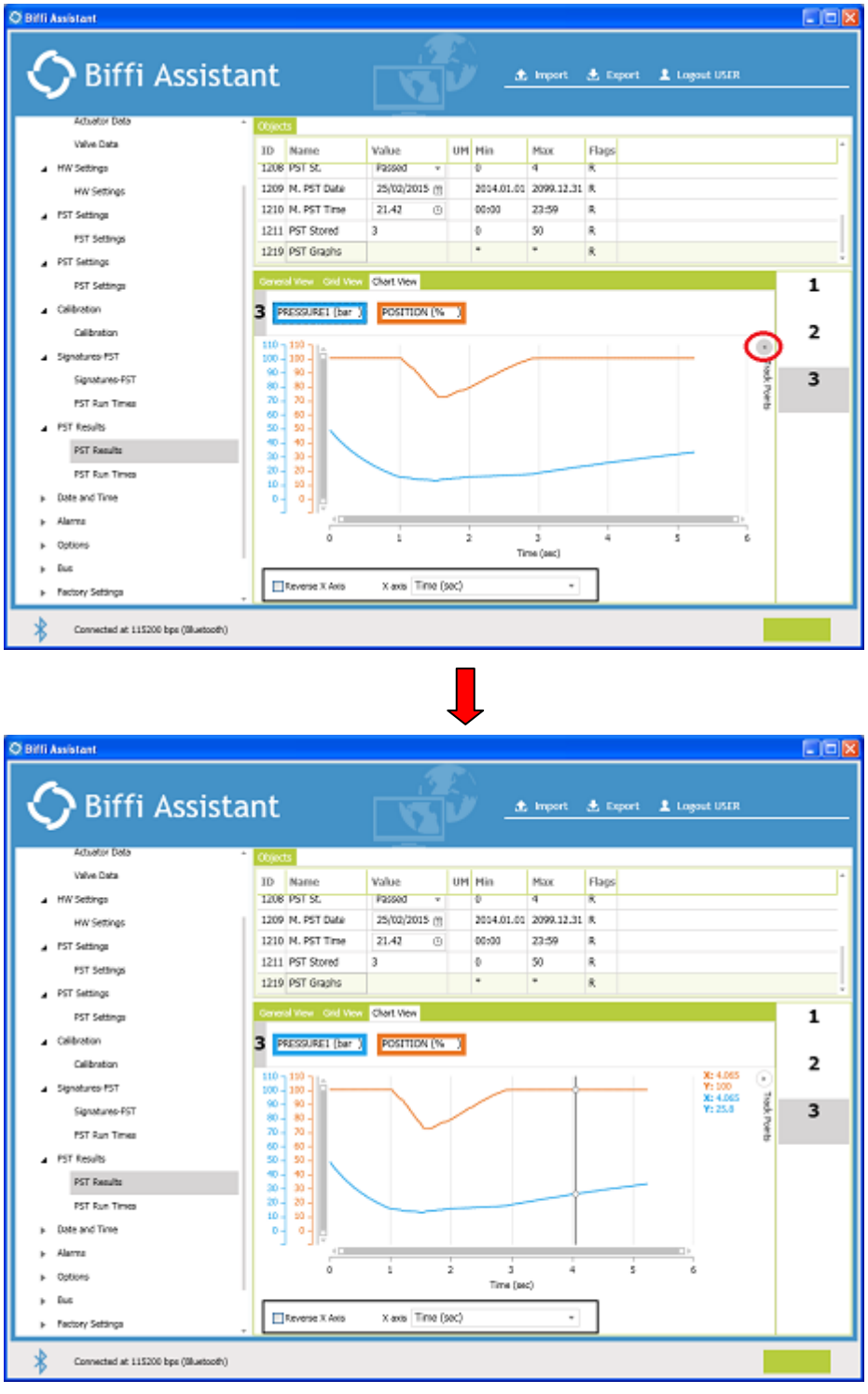


The Reverse X Axis and X axis bar is present starting from Biffi Assistant 1.03.00.00 or further versions.

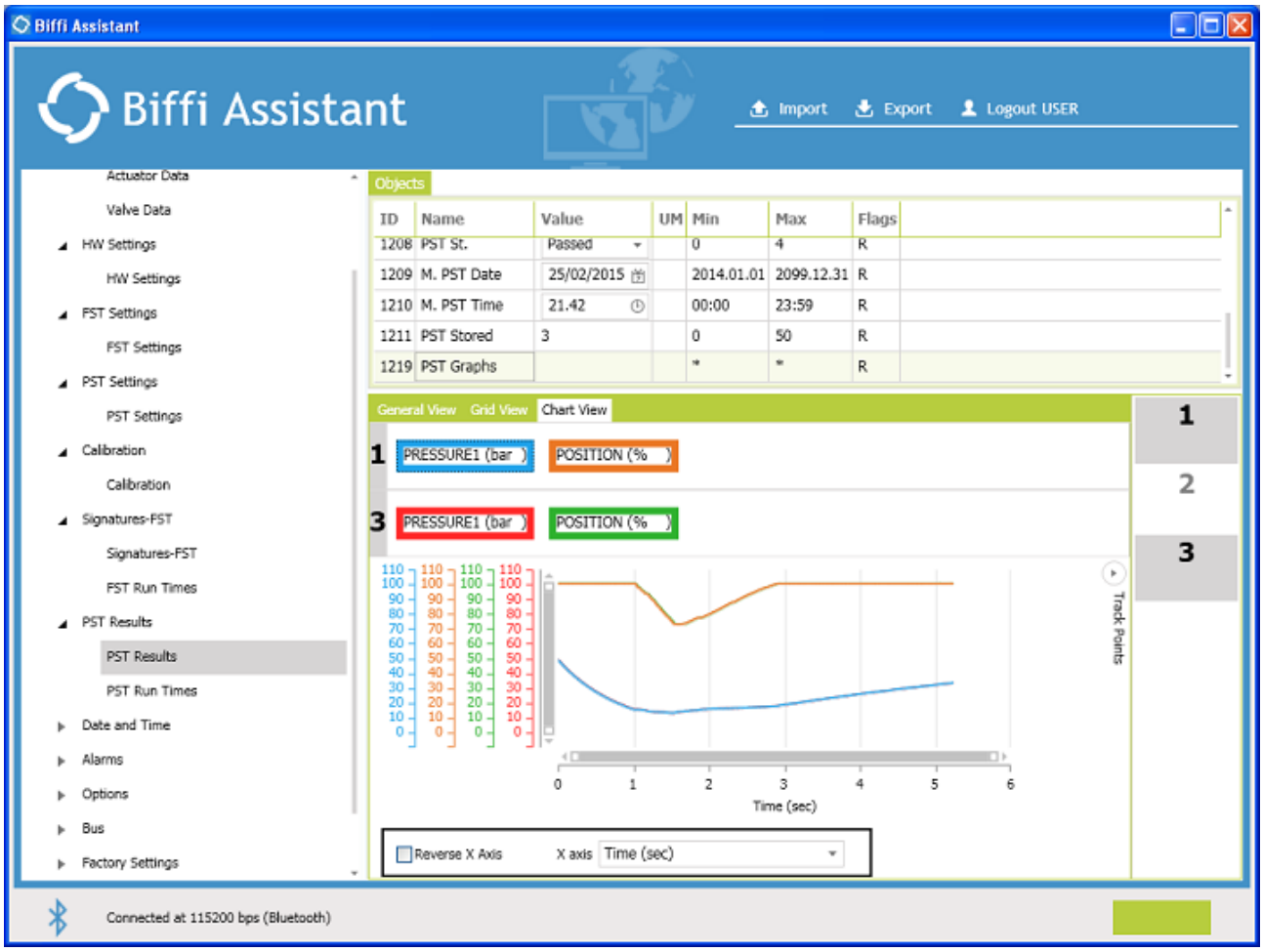
Left click of the mouse on the available samples (in the picture below are available PRESSURE 1 and POSITION) to view them as graph.



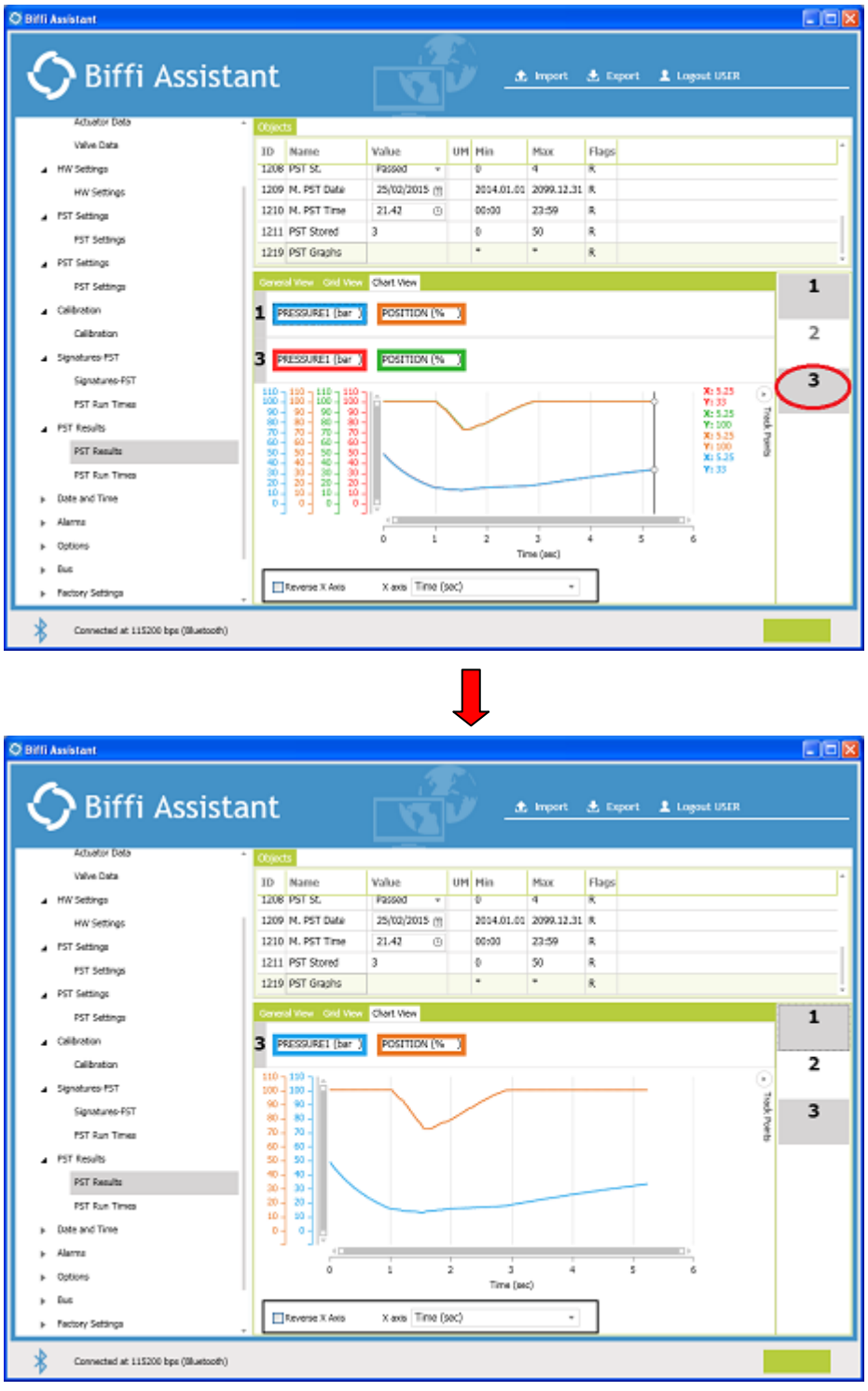
Left click of the mouse on “Track Points” to view the details of each single sample of the graph.



It is possible to load up to two graphs per time (1 and 3 in the screen below) and viewing the pressure and position graphs of the loaded graphs.

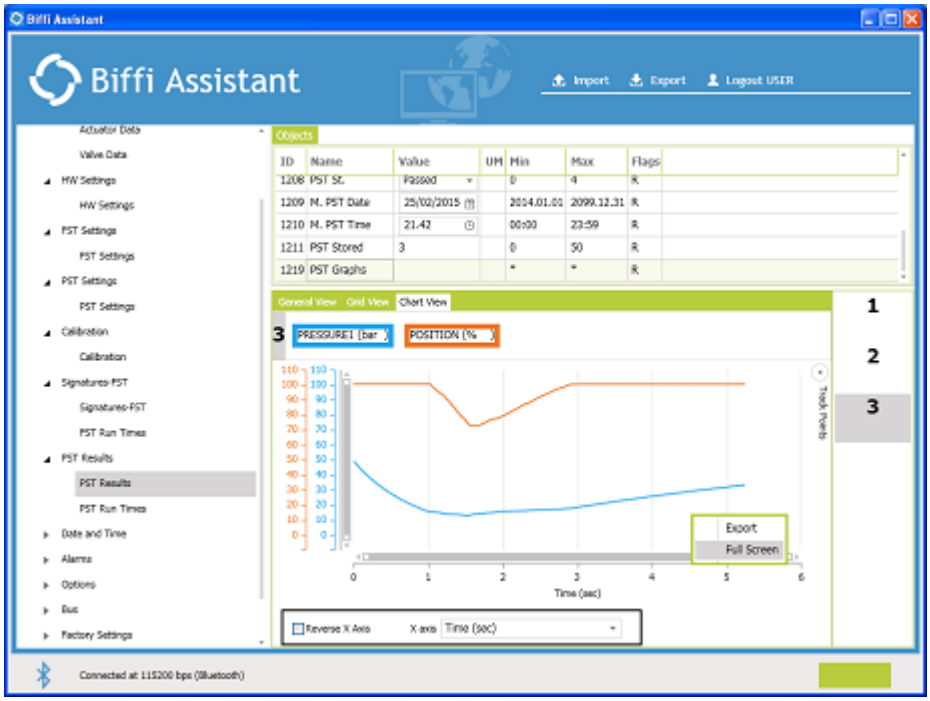


For removing a loaded graph, left click of the mouse on the button corresponding to the Graph ID of the graph that has to be removed (2 in the screen below).

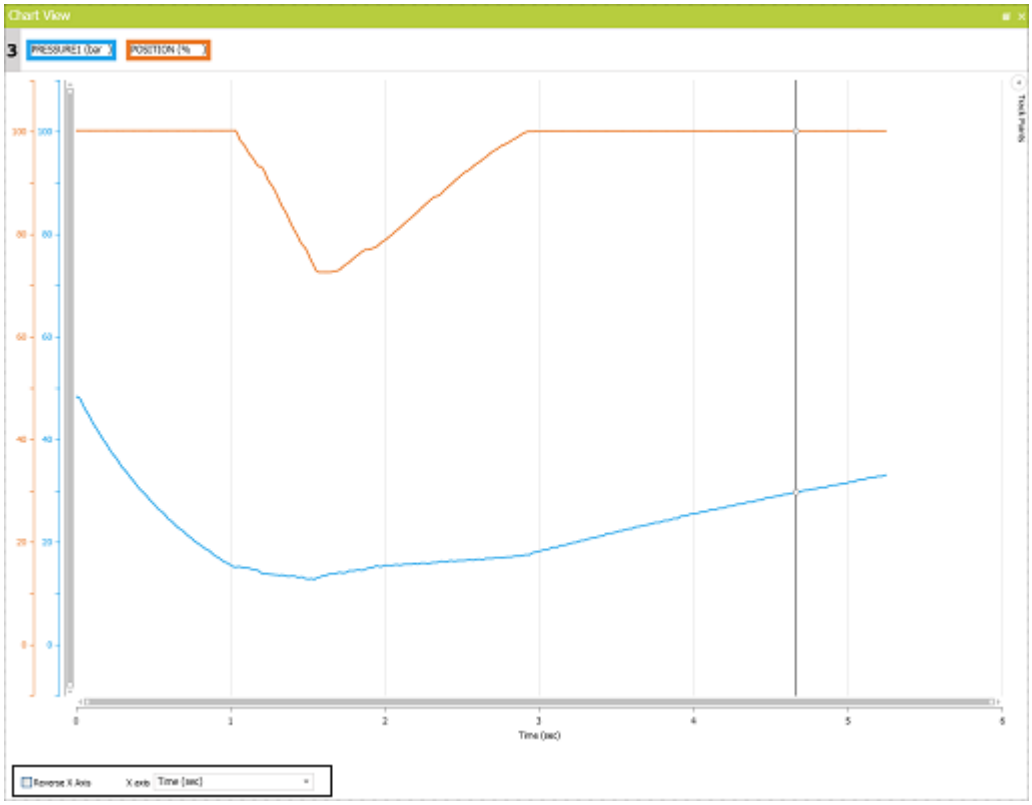


7.3.1 Chart View – Full Screen

Right click of the mouse on the opening graph and left click of the mouse on “Full Screen” for viewing the graph on the full screen.



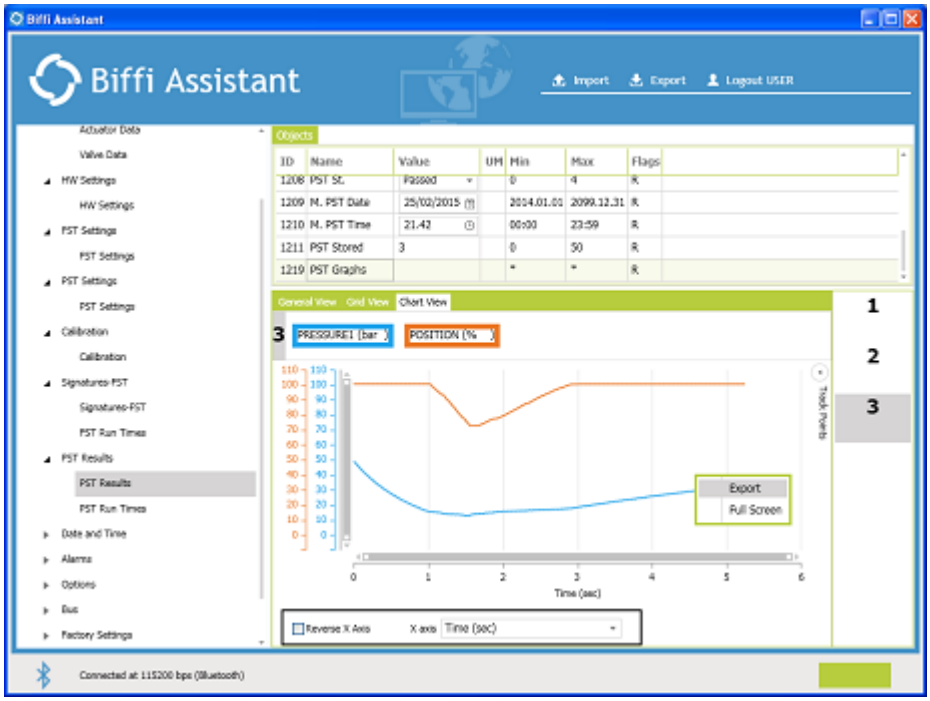
A window dedicated to the graph is opened and it is possible to apply all the options of the “Chart View” (see 7.3).



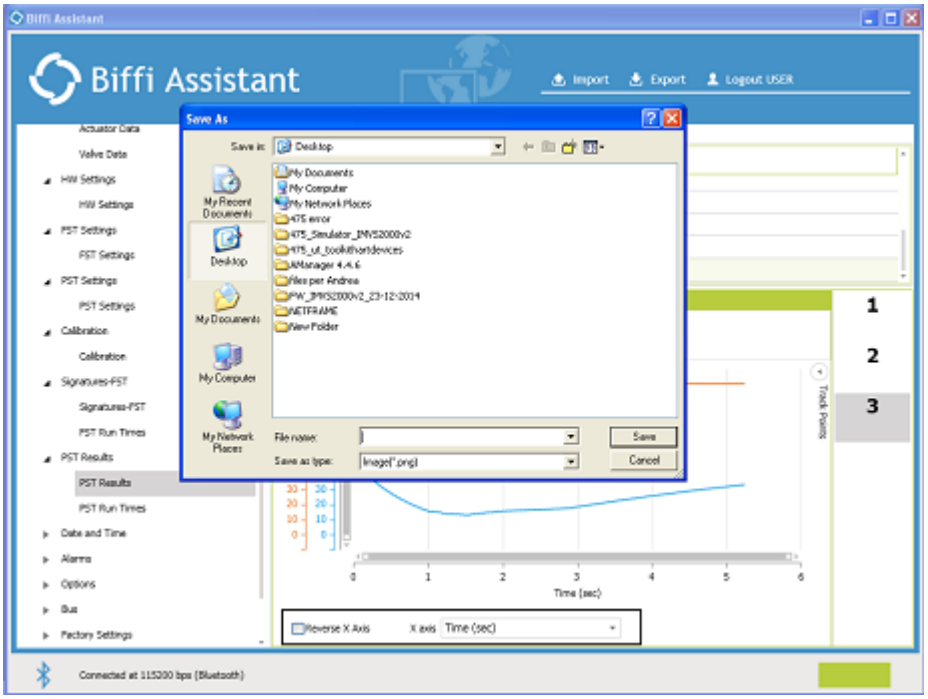
It is possible to minimize, maximize or close the window dedicated to the graph by using the buttons on right the corner on the top.

7.3.2 Chart View – Export Graph

Right click of the mouse on the opening graph and left click of the mouse on “Export” for exporting the graph into an image file (.png).

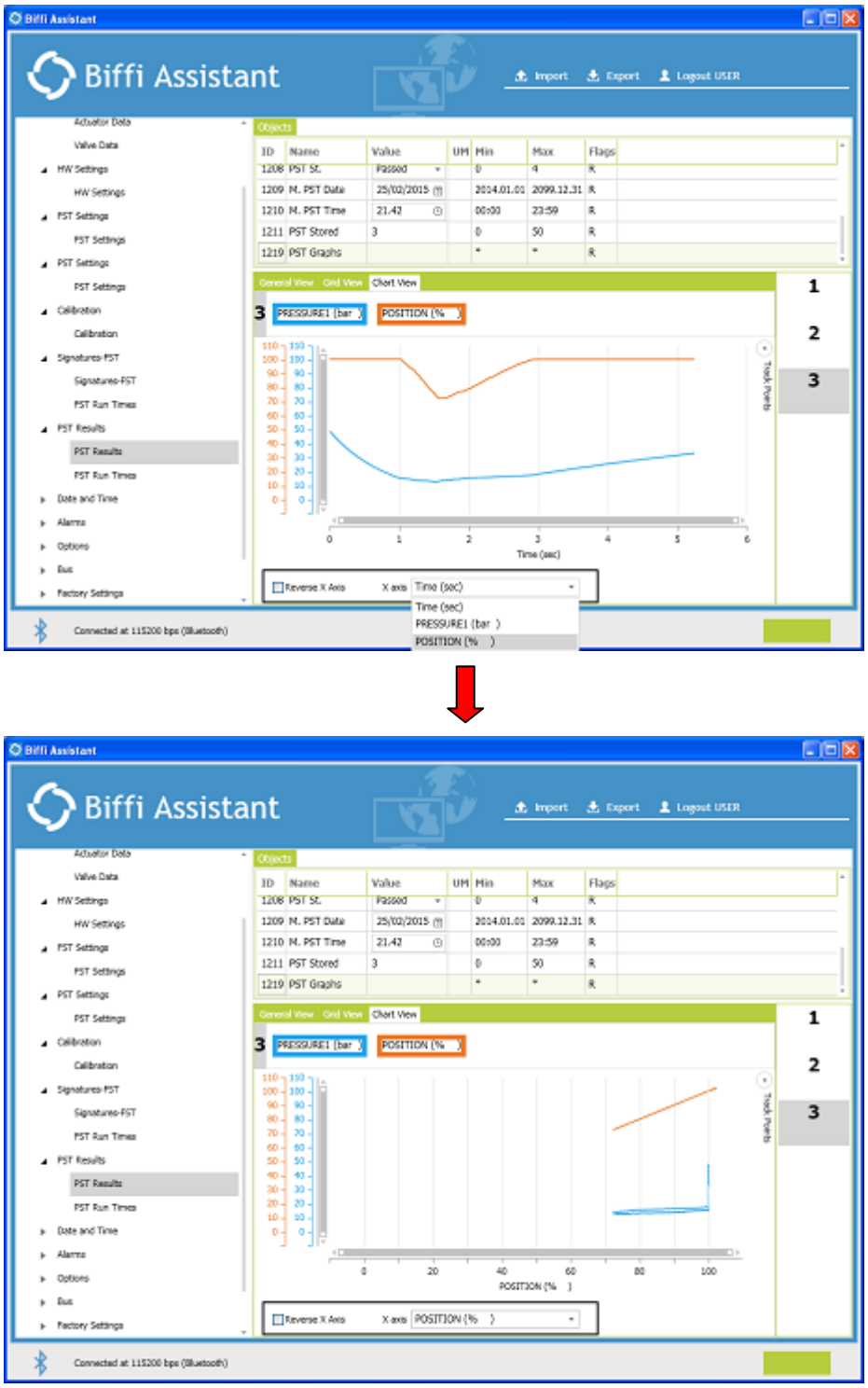


Select the File Name and the folder and then left click of the mouse on Save.

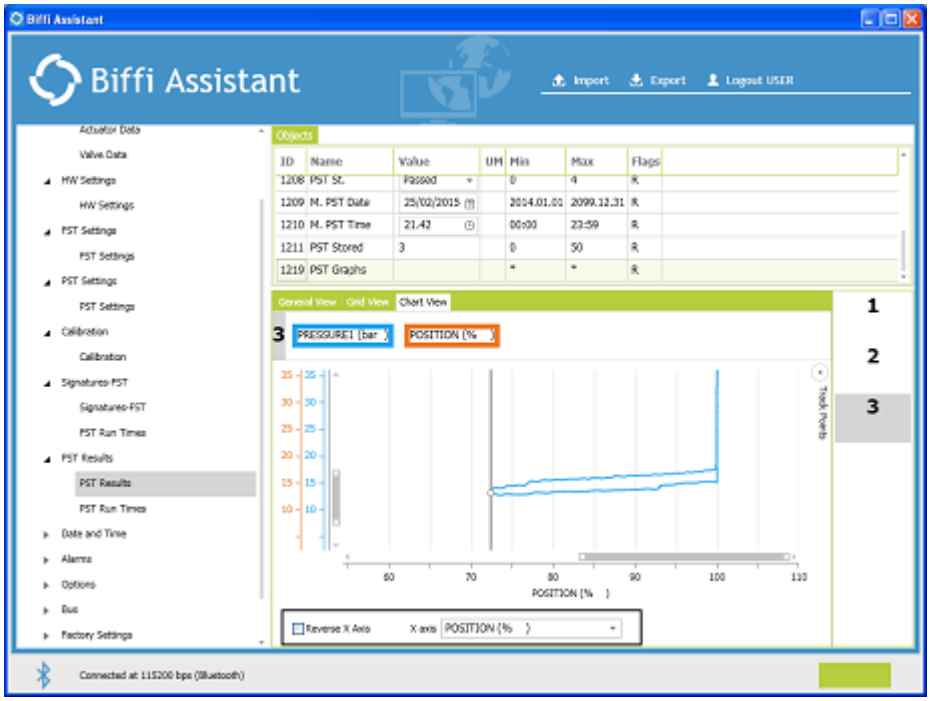


7.3.3 Chart View – Select X Axis and Reverse X Axis

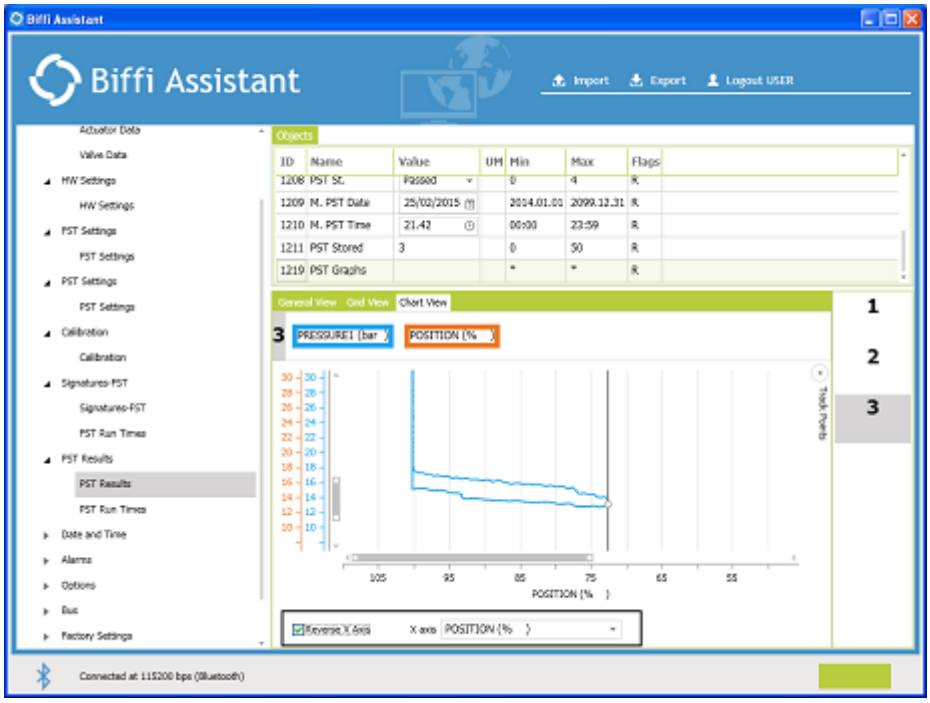
It is possible to select the X axis. The default is Time (sec). In the picture below, PRESSURE 1 and POSITION are available and POSITION is selected.



Through the scroll bar it is possible “to stretch” the graph.

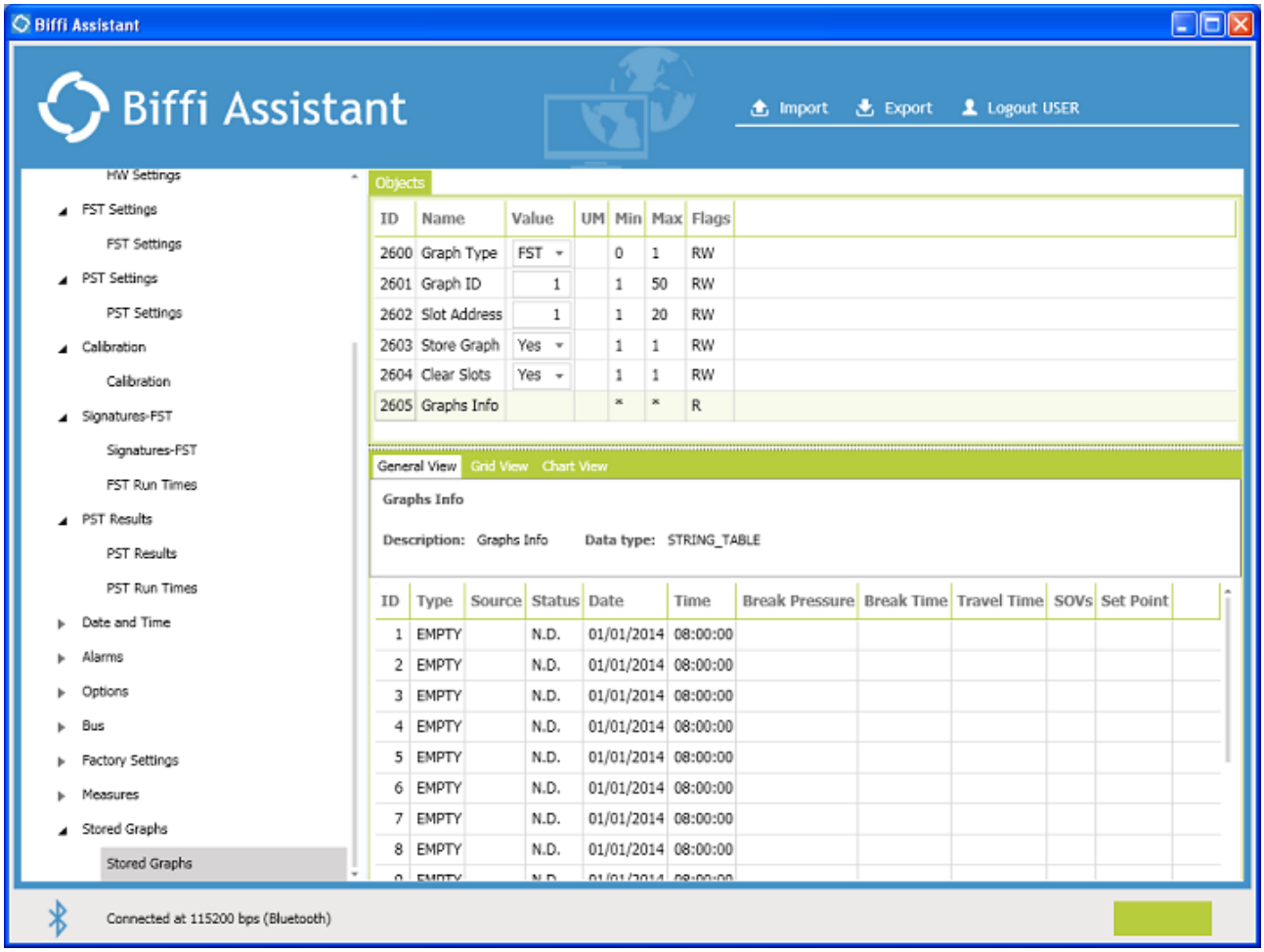


Select “Reverse X Axis” for inverting the scale of the X axis.



7.4 STORED GRAPHS

Through the “Stored Graphs” Menu it is possible to permanently memorize up to 20 FST and/or PST graphs.



Graph Type: it indicates the type of graph to store (FST or PST).

Graph ID: it indicates the ID of the graph to store (from 1 to 50). The ID must correspond to an existing graph.

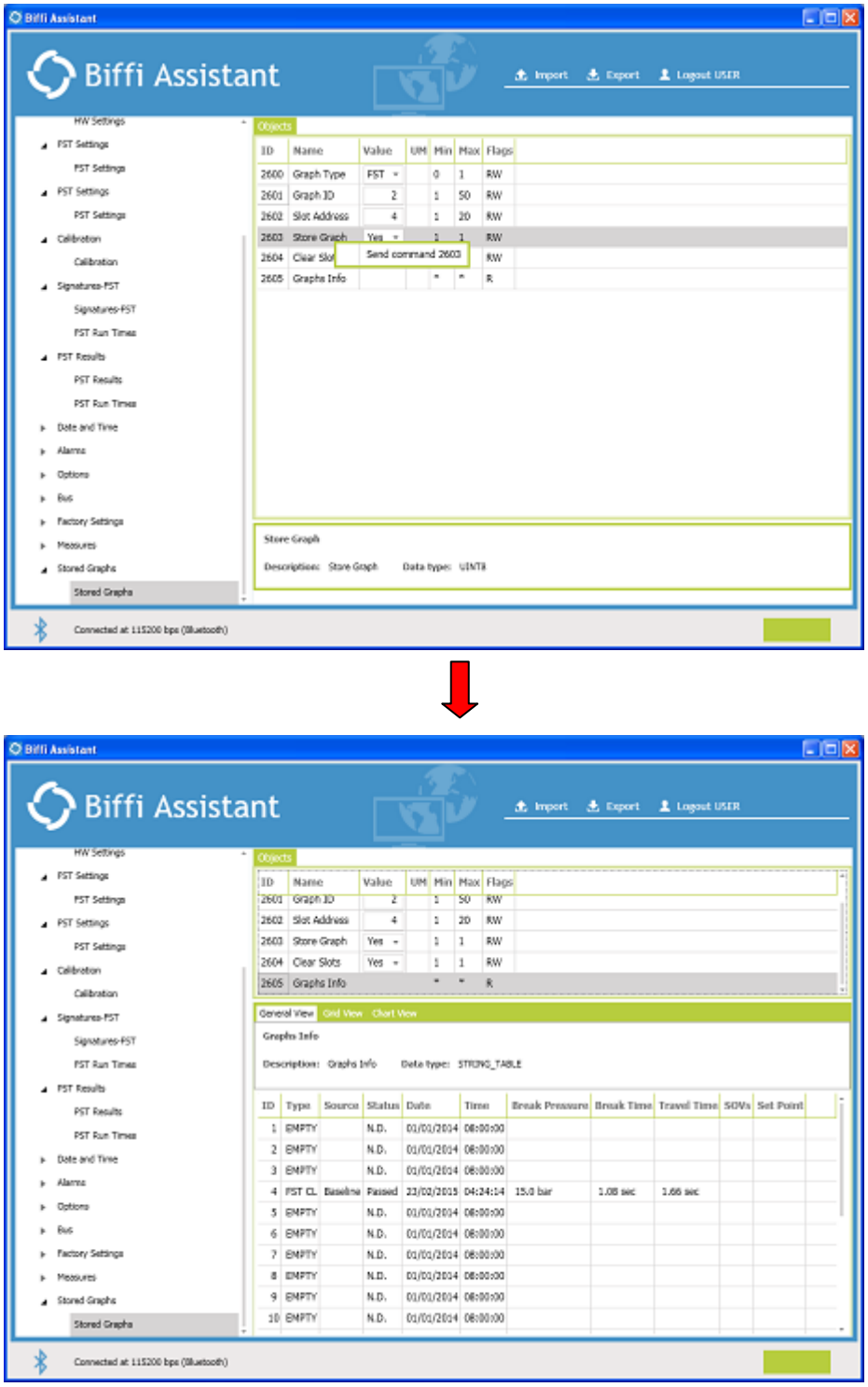
Slot Address: it indicates the slot where to store the graph (from 1 to 20).

Store Graph: it is the command for storing the graph, selected through “Graph Type” and “Graph ID” into the slot = “Slot Address”.

Clear Slots: it is the command to clear the whole memory (all the 20 slots).

Graph Info: it contains the data of the stored graphs (see 7 for details).

EXAMPLE OF GRAPH STORAGE
Select “Graph Type” and “Graph ID” (FST and 2 in the example).
Select “Slot Address” (4 in the example).
Launch the “Store Graph” command.

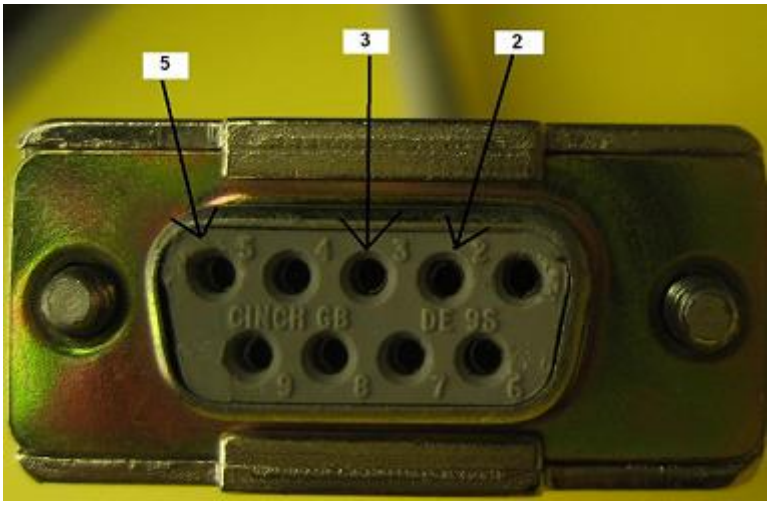


APPENDIX A – RS232 Cable

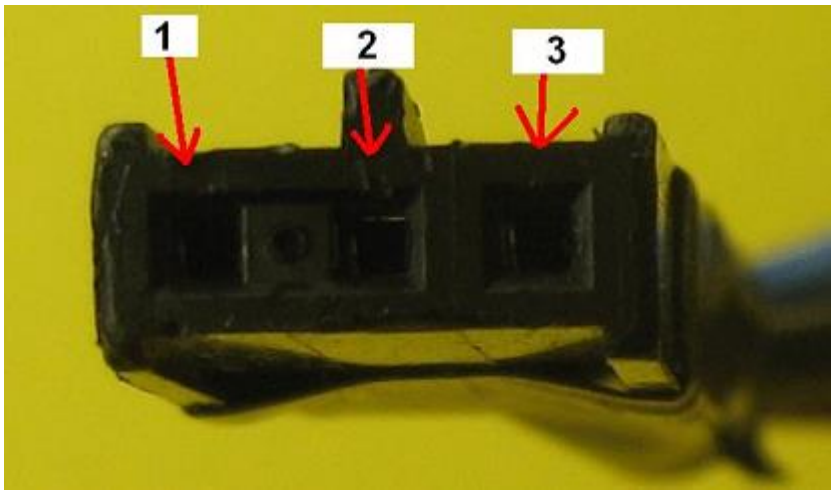
Biffi P/N: 480CABPROG

Maximum cable length: 10 meters

9 PIN D-SUB	90156-0143	PIN FUNCTION
Pin 1		
Pin 2	Pin 2	RX
Pin 3	Pin 3	TX
Pin 4		
Pin 5	Pin 1	GROUND - SHIELD
Pin 6		
Pin 7		
Pin 8		
Pin 9		



9 PIN D-SUB



90156-0143

APPENDIX B – Approved Bluetooth adapters list

In this appendix is reported a list of the approved Bluetooth adapters for the Biffi Assistant software.
These adapters must use the Windows Bluetooth software and drivers (stack) included with Windows XP Professional Service Pack 2 or 3 or Windows 7 Enterprise. No driver installation is required. Here below is the list of USB/Bluetooth adapters working with Windows Bluetooth software.

USB/Bluetooth adapter	Windows XP	Windows 7
HAMLET EXAGERATE XBTUS100 2.0 cl. 1	ok	ok
BELKIN F8T017 Bluetooth Adapter cl. 1	**no ***	ok
SITECOM CN-523 USB microadapter Bluetooth 2.1version 100m	ok	ok
ATLANTIS Mobile Life mini Bluetooth 2.1 30metri, POO8-BT-038	ok	ok
KENSINGTON Bluetooth 2.1 USB Micro Adapter PN/MN:K33902 / M01011	ok	ok
DIGICOM PALLADIO USB Bluetooth EDR 100	**no ***	ok
TARGUS Mod.ACB10-US	**no ***	ok

If you have other third-party Bluetooth adapter, the required Windows drivers may not be used by the adapter and it may not be able to communicate with the Biffi Assistant. In this case it needs to install the appropriate driver supplied with the Bluetooth adapter. Refer to installation manual of driver for detailed instruction. Administrator account is required to install a new driver.
* The Bluetooth adapters indicated with "**no**" can work only after installing the appropriate driver

APPENDIX C – Biffi Assistant PC Requirements

The Biffi Assistant is tested for working with the following OS:

- Windows XP - 32bit service pack 2 or 3 and .NET Framework >= 4.0
- Windows 7 - 32bit
- Windows 7 - 64bit

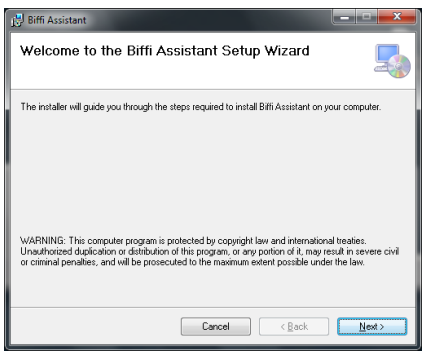
APPENDIX D – Biffi Assistant Install/Uninstall

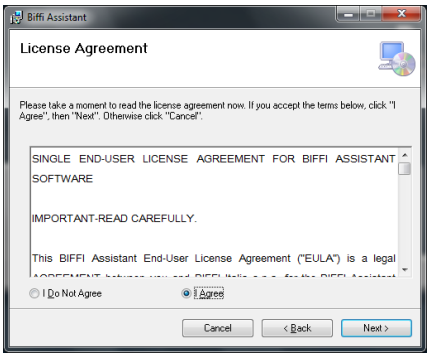
Warning: Installation can be done only by the administrator of PC

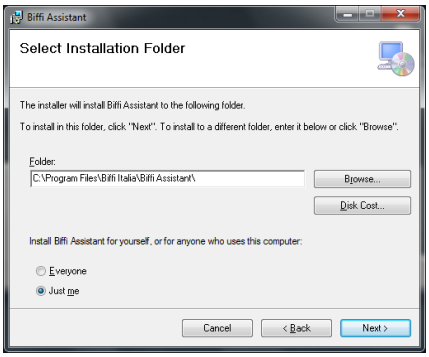
Important: "BIFFI-Assistant" for PC installation software consists of two files:
- BiffiAssistant.msi
- setup.exe

INSTALL BIFFI ASSISTANT

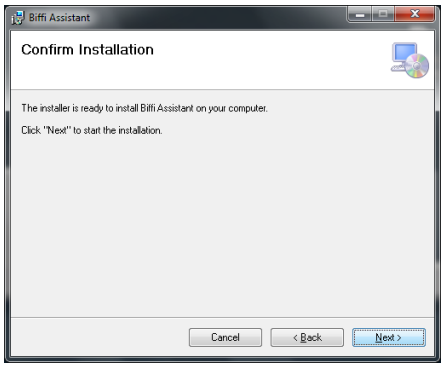
Before initiating the installation procedure of a new version of BIFFI-Assistant remove any previously installed version.
The installation process starts by a double click of the left key of mouse on "setup.exe".
A simple wizard will guide through the installation process:

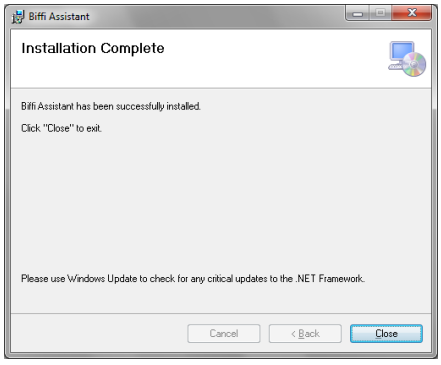






Click Next and then agree to End User License Agreement
Select installation folder and then click Next

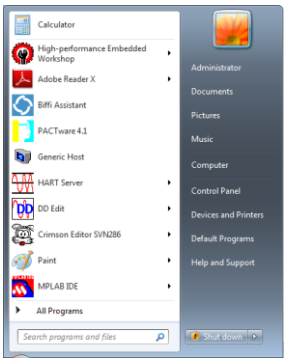


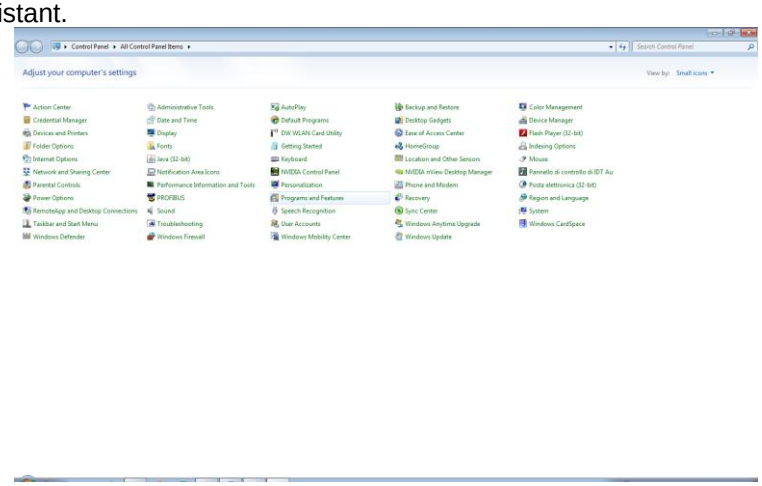


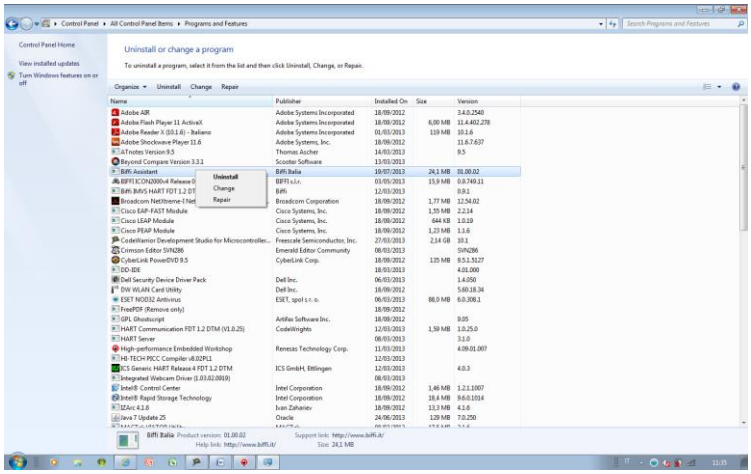
Left click of mouse on "Next" to begin the program installation
When the message "Installation complete" appears left click on Close.
An icon with BIFFI logo, named **BIFFI-Assistant** will be created on the desktop and a new program folder, named "Biffi", will be added to Start Menu\Program folder.
The program starts by a double left click of mouse.

UNINSTALL BIFFI ASSISTANT

In the taskbar click “Start”. Left click of mouse on “Control Panel” and then double left click on “Programs and Features”. Left click on BIFFI-Assistant.







Right click of mouse on Biffi Assistant. Left click on “Uninstall” and then “YES”. BIFFI-Assistant will be removed and PC is ready to re-install a new version.

BIFFI ITALIA s.r.l.
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E_mail: biffi_italia@biffi.it

