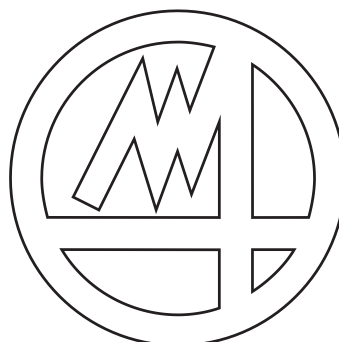




**GENERAL INFORMATION ABOUT THE  
PROGRAMMING ENVIRONMENT**



**MARPOSS**

**CONTENTS**

<b>1 GENERAL INSTALLATION.....</b>	<b>5</b>
1.1 MAIN NAVIGATION CHART .....	6
<b>2 USING THE HUMAN MACHINE INTERFACE (H.M.I.) .....</b>	<b>6</b>
2.1 H.M.I. LAYOUT .....	7
2.1.1 STATUS AND NAVIGATION MENU .....	7
2.1.2 MESSAGES AND DESCRIPTIONS AREA.....	8
2.1.3 NAVIGATION PATH AREA.....	9
2.1.4 FUNCTION ICONS IN THE WORKING AREA.....	10
2.1.5 WORKING AREA.....	11
2.1.6 LIST OF FAVOURITE PARAMETERS.....	14
2.2 NUMERICAL/ALPHANUMERIC KEYPAD .....	15
2.3 MANAGING POP-UP MESSAGES.....	16
<b>3 SETTINGS .....</b>	<b>17</b>
3.1 OPTIONS.....	18
3.1.1 LANGUAGE.....	19
3.1.2 DATE AND TIME.....	20
3.1.3 UNIT OF MEASUREMENT .....	21
3.1.4 CONNECTION PARAMETERS .....	22
3.1.5 SERVER SETTINGS (MASTER NODE) .....	24
3.1.6 H.M.I. SETTINGS (HUMAN MACHINE INTERFACE) CLIENT.....	26
3.1.7 EXIT .....	29
3.2 HARDWARE & MECHANICAL PROGRAMMING.....	30
3.2.1 MEASUREMENT HEAD PARAMETERS SET-UP .....	31
3.2.2 NODE PARAMETER SETTINGS.....	38
3.2.3 FIELDBUS SETTINGS.....	39
3.2.4 FAST I/O SETTINGS .....	40
3.3 NOTIFICATION MANAGEMENT.....	41
3.3.1 LOG INFORMATION SETTINGS .....	42
3.3.2 SHOW MASTER NODE LOG INFORMATION.....	43
3.3.3 SHOW LOG INFORMATION ON H.M.I. ....	44
3.3.4 DELETE LOG INFORMATION .....	45
3.4 USERS .....	46
3.4.1 USER PROFILES.....	47
3.4.2 LOGIN .....	48
3.4.3 USER INFORMATION.....	49
3.4.4 CREATE NEW USER.....	50
3.4.5 DELETE USER.....	51
3.4.6 MODIFY PASSWORD.....	52
3.4.7 MODIFY PERMISSIONS.....	53
3.4.8 RESET ORIGINAL PASSWORDS .....	56
3.4.9 AUTOMATIC LOGIN.....	57
3.4.10 LOG OUT.....	58
3.5 BACKUP & RESTORE.....	59
3.5.1 NEW BACKUP.....	60
3.5.2 LIST OF BACKUPS.....	61
3.5.3 COPY BACKUPS FROM EXTERNAL MEMORY.....	63
3.5.4 DELETE ALL BACKUPS .....	64
3.5.5 RESTORE FACTORY DATA .....	65
3.5.6 RESTORE FACTORY DATA (HARDWARE CONFIGURATION ONLY) .....	66
3.5.7 RESET ACQUISITION ON MMSB .....	67

3.5.8	CANCEL LIST OF DASHBOARDS FOR AUTOMATIC DISPLAY .....	68
3.5.9	RESET MARPOSS DASHBOARD FOLDERS.....	69
3.6	FILE MANAGEMENT.....	70
3.6.1	SYSTEM FILES AND APPLICATIONS.....	71
3.6.2	DASHBOARD FOLDERS.....	73
3.7	INFORMATION.....	74
3.8	EXPORTING AND IMPORTING APPLICATION SETS .....	76
4	PROGRAMMING .....	79
4.1	CREATING A SET.....	80
4.2	MODIFYING/DELETING A SET.....	81
4.3	GENERAL PROGRAMMING .....	83
4.3.1	PIECE TO BE MEASURED.....	83
5	DASHBOARDS .....	85
5.1	SELECTING A MARPOSS/OEM PAGE.....	85
5.2	CREATING A NEW DASHBOARD.....	86
5.3	MODIFYING A DASHBOARD.....	87
5.4	RENAMING A DASHBOARD.....	89
5.5	DUPLICATING A DASHBOARD.....	90
5.6	DELETING A DASHBOARD .....	90
5.7	WIDGETS AND DASHBOARDS.....	91
5.7.1	MARPOSS DASHBOARDS.....	91
5.7.2	OEM WIDGETS.....	92
6	ERRORS - WARNINGS - ALARMS.....	99
6.1	ERRORS .....	99
6.2	WARNINGS.....	102
6.3	ALARMS .....	103

This page has been intentionally left blank

## 1 GENERAL INSTALLATION

The **BIÚ LT** system operator interface is highly customisable. The final configuration is the result of the elements selected by the OEM or the end user, based on the which system functions are to be monitored, and what level of interaction is to be granted to the operators. Use of the **BIÚ LT** system is normally regulated by the access levels assigned to the individual operators. Each operator is assigned a profile (Account), which is identified by a User name, a User Level and a password. In order get the best out of the device, we recommend that the operator completes the Login procedure after switching the **BIÚ LT** system on. To enter the password, access the following screen:

Home > Settings > Users > Login

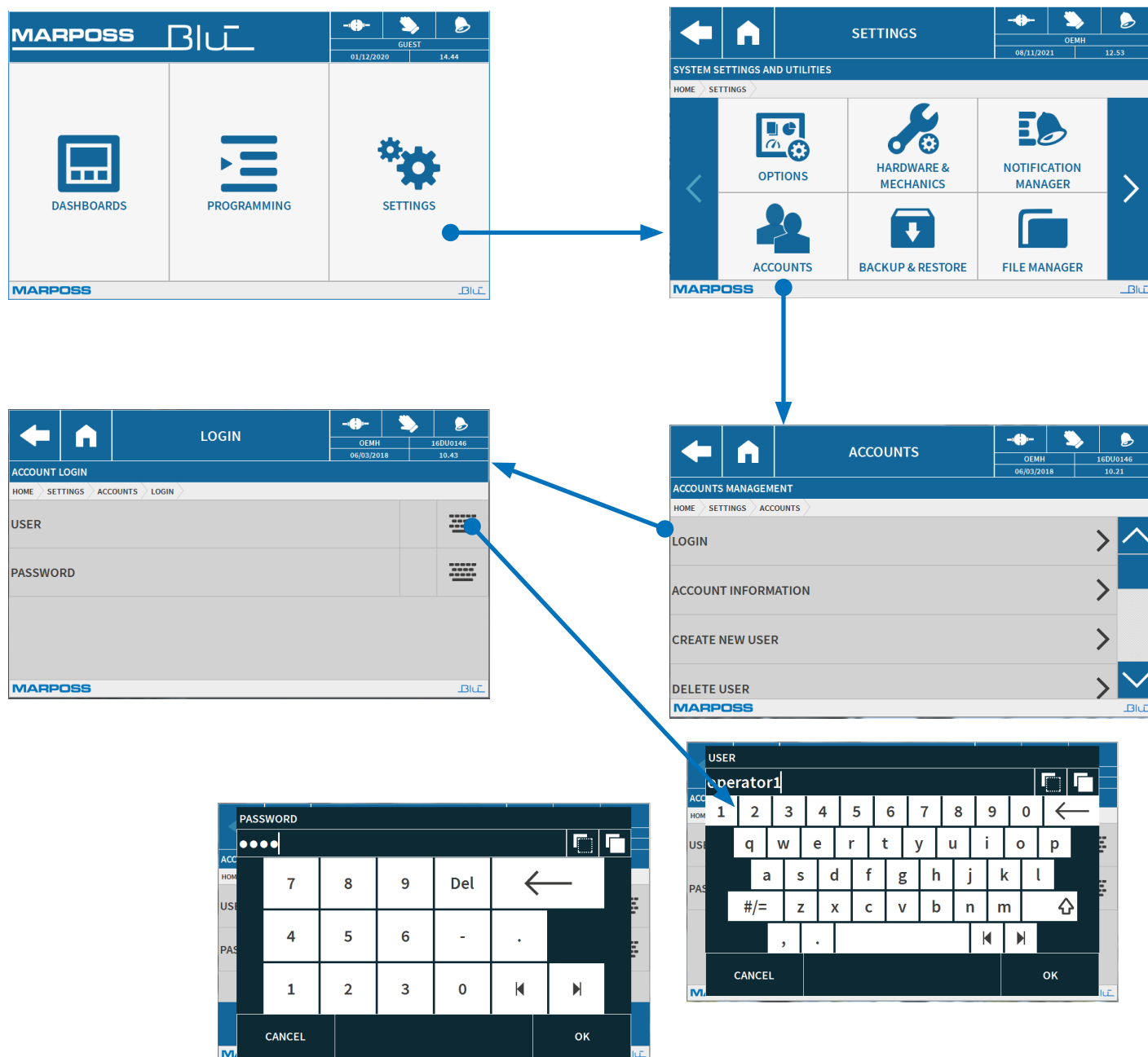


Fig.1. Entering User/Password level

## 1.1 Main navigation chart

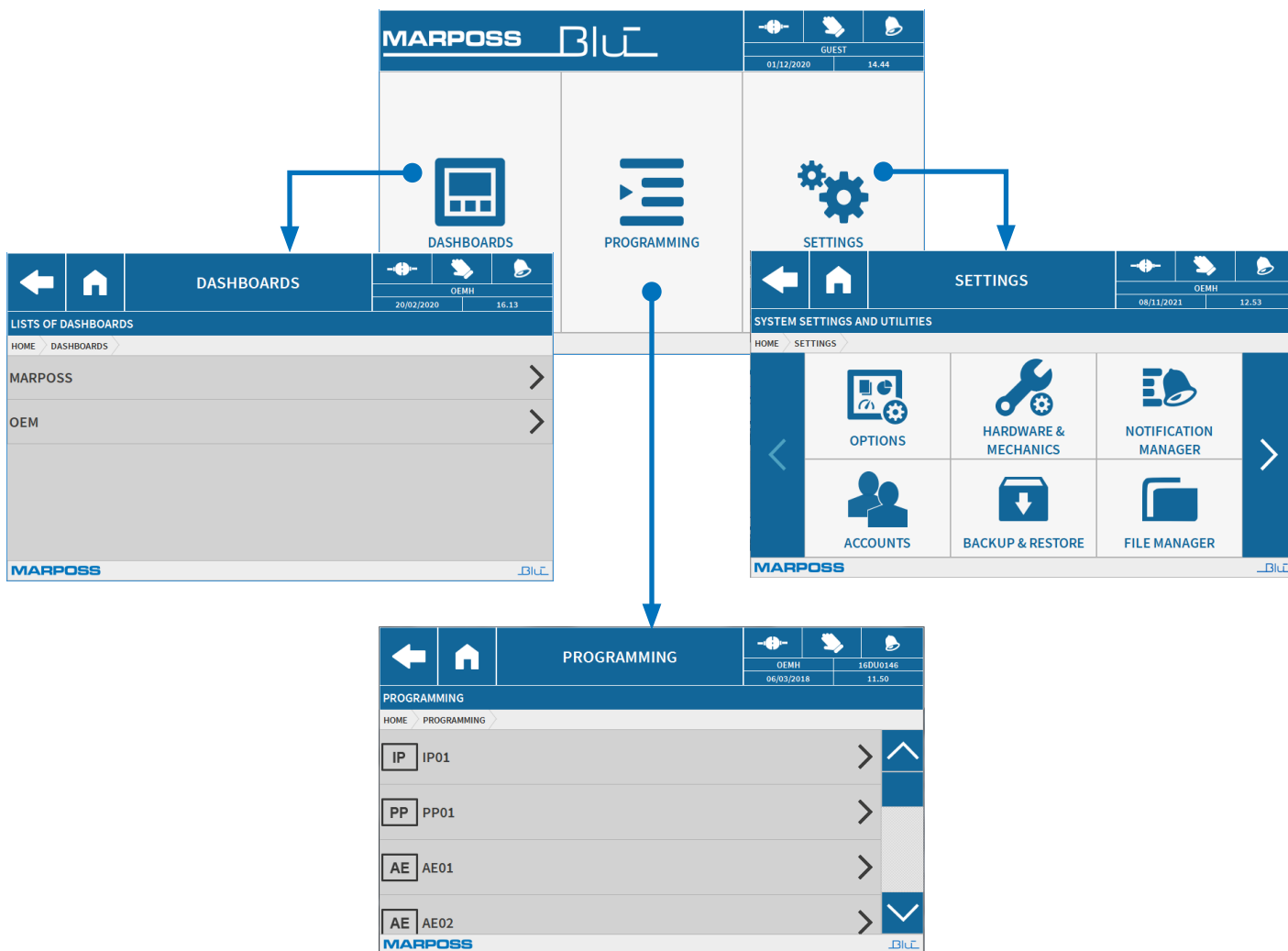
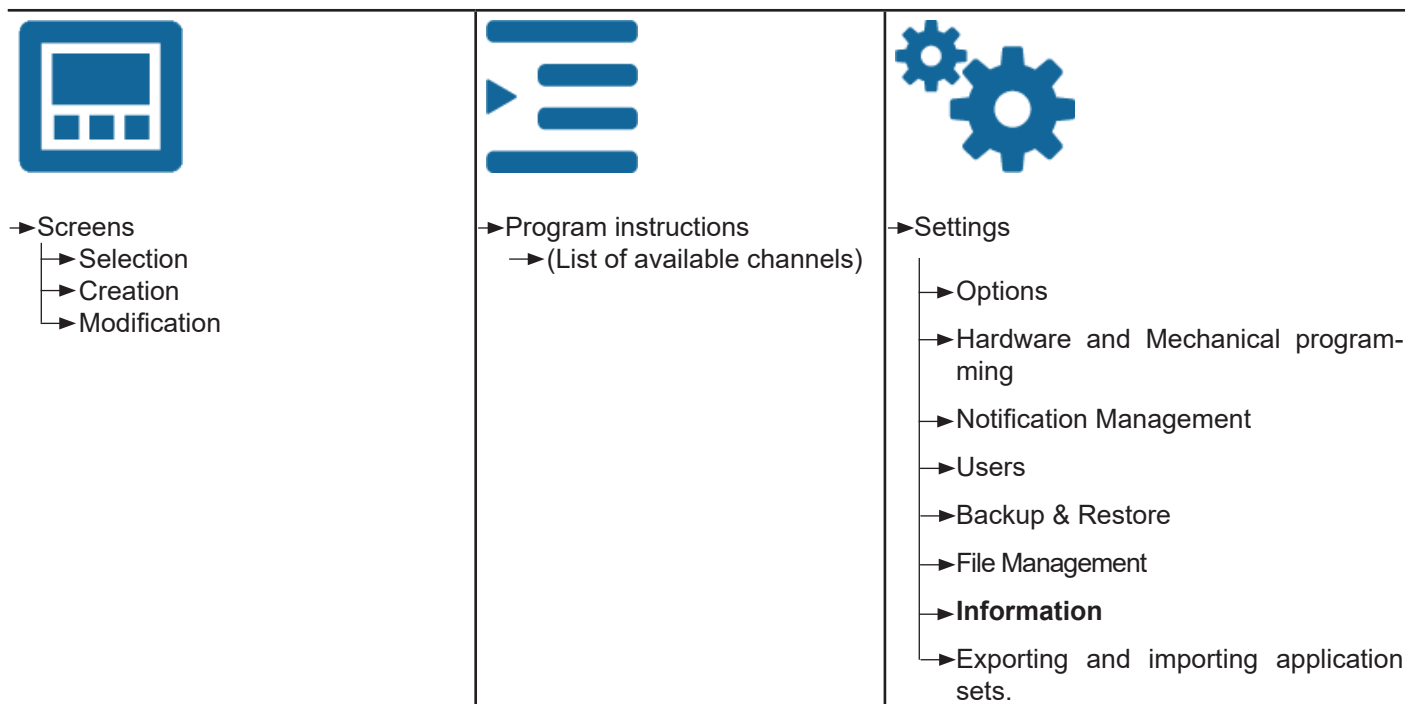


Fig.2. Main menus map



## 2 USING THE HUMAN MACHINE INTERFACE (H.M.I.)

### 2.1 H.M.I. Layout

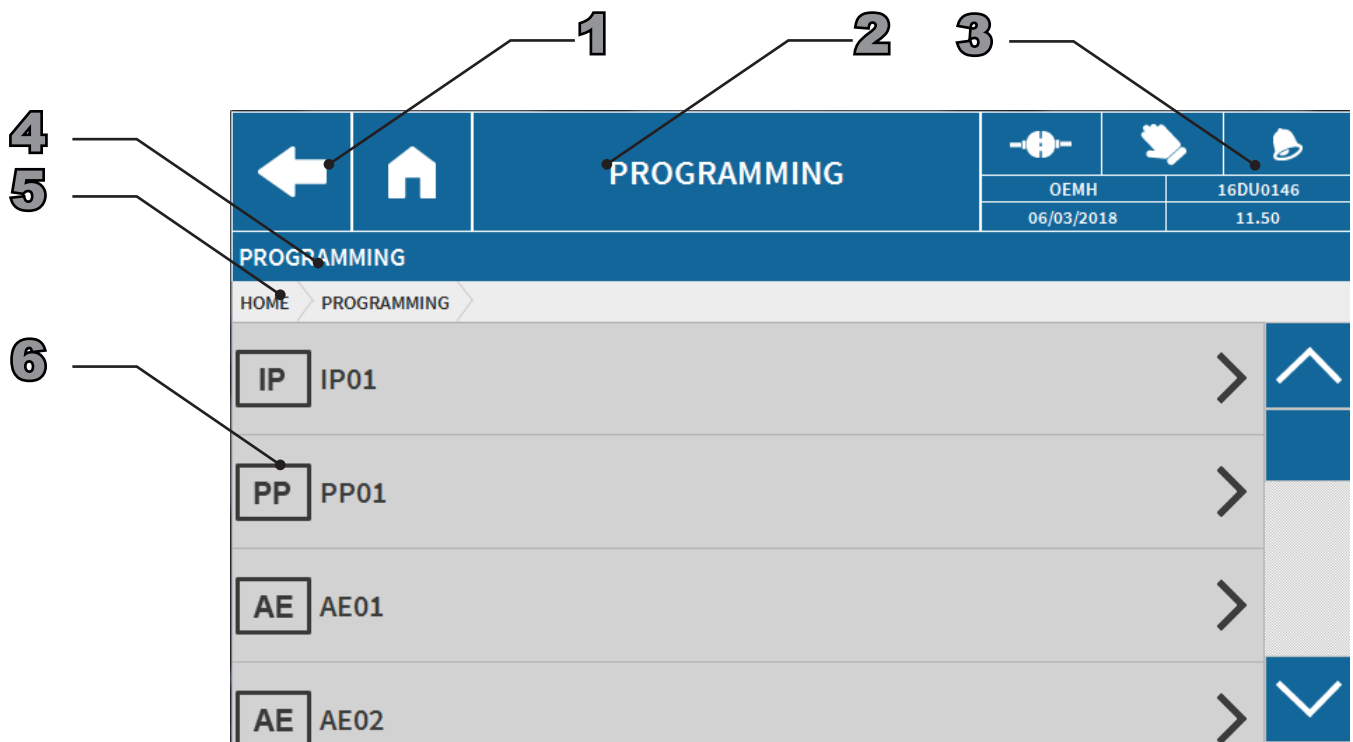

















Fig.3. Main operator interface areas

1. Main navigation.
2. Dashboard title.
3. Status and identification of the tool.
4. Message area. May contain:
  - The description of the screen.
  - The explanation of a selected value
  - Warning and alarm messages
5. Navigation path.
6. Working area.

### 2.1.1 Status and navigation menu

The main interface is divided into three macro areas (1, 2, and 3).

#### 1. Area dedicated to the main navigation functions. Sub-divided into:

Press this key to return to the previous screen			
Press this key to return to the Home screen			
Creating: Sets, Program instructions, Settings, etc.			
Creating: Dashboards, Program instructions, Settings, etc.			
Modifying: Dashboards, Program instructions, Settings, etc.			

#### 2. Area dedicated to the dashboard title.

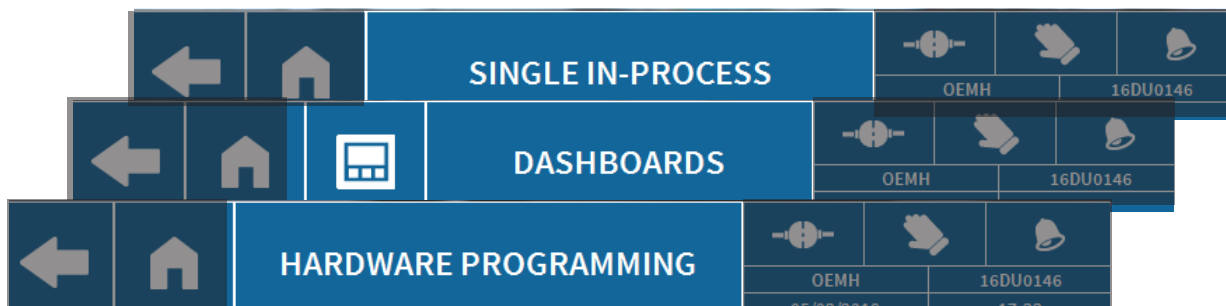

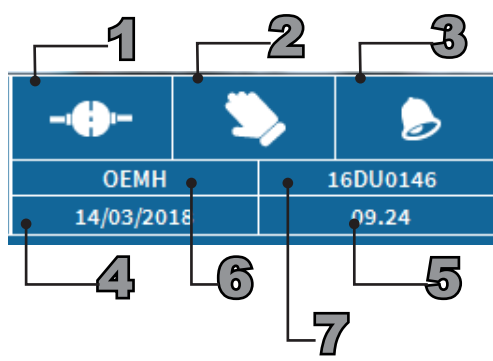









Fig.4. Area dedicated to the dashboard title

#### 3. Area dedicated to information and icons that refer to the system status, the serial number and the current user profile.

Table 1. Area dedicated to the system status

Table 1. Area dedicated to the system status						
1		H.M.I. connected to the Master Node		3		Normal operation
		H.M.I. Not connected to the Master Node				Warning
2		Manual				Alarm
		Automatic		4	14/03/2018	Date
		Set-up		5	09.24	Time
				6	OEMH	Current user
				7	16DU0146	Serial No.



## 2.1.2 Messages and descriptions area

The messages and descriptions area may contain:

- The description of the screen.

LIST OF THE NODES MENTIONED IN THE CONFIGURATION FILE

Fig.5. Messages and descriptions area. Description of the screen

- The explanation of a selected value In this case it is also possible to enter an **“absolute reference”** (ref.1) for the same value, if **“visible data code”** has also be enabled (*Home > Settings > Options > H.M.I. Client Settings> Display options> Data code visible*). The **“absolute reference”** remains the same, even when a different language is selected.

N.B.

The use of the **“absolute reference”** is fundamentally important for resolving problematic situations. Always provide Marposs customer service personnel with this information.

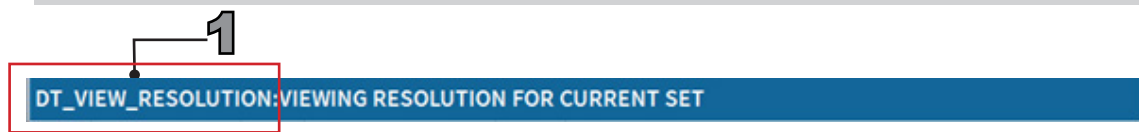


Fig.6. Messages and descriptions area. Information string regarding the selected item

- Yellow warning and alarm messages referring to incorrect value setting errors, for example.

OUT OF RANGE

Fig.7. Messages and descriptions area. Warning message

N.B.

The **“messages and description”** area is non-interactive and the user may decide whether or not to display it (see Part B2). If it becomes necessary to highlight an alarm in the **“messages and descriptions”** area, it will appear automatically, even if its presence has not been activated.

## 2.1.3 Navigation path area















The **“Navigation path”** area displays the steps that the operator has performed in order to reach the current dashboard from the Home screen. Also, the **“Navigation path”** area is non-interactive and the user may decide whether or not to display it.

HOME > PROGRAMMING > IP01 > SINGLE IN-PROCESS >

Fig.8. Navigation path area

### 2.1.4 Function icons in the working area

The function icons present in the working area can be used to perform a series of actions described below:

	" <b>Favourites</b> " function. Use this command to insert the value from the selected line in the " <b>Favourites</b> " list
	" <b>Delete</b> " action. Use this command to delete the value present in the corresponding line. The icon is greyed out when the current operator is not permitted to perform the corresponding action.
	Action - " <b>Backup</b> ". Create a backup (only in HMI for PC). Open Resource File Explorer and save to a folder. E.g. "C:\folder\subfolder\file name".
	" <b>Export</b> " Action Press this key to copy the selected backup to and external (USB) memory.
	" <b>Copy</b> " action. Use this command to create a new element identical to the one present in the corresponding line.
	" <b>Modify</b> " action. Use this command to modify the text or number of the corresponding object.
	" <b>Modify Number</b> " action. The " <b>Set-up list</b> " dashboard may be used to change the number of the selected cycle before it is copied to the dashboard that includes all the cycles associated within a given channel. In order to change this value, the " <b>Modify</b> " action must be selected first.
	" <b>Vertical/horizontal Scrolling Buttons</b> " function. Use this command to view an image that does not fit completely within the working area-
	" <b>Numerical/Alphanumeric Keypad</b> " action. This keypad may be used to enter values in the corresponding line.
	" <b>List</b> " action. Use this command to select a value from a predefined list. Use the " <b>Selection</b> " function to confirm the selected value.
	" <b>Selection</b> " action. Use this value to confirm the selection of a value from predefined list, displayed using the the " <b>List</b> " action.
	" <b>Enable</b> " action. Use this command to enable the operating modes of the nodes and certain parameters,
In addition to the icons described above, the following symbol is also present:	
	Indicates the presence of an error in the selection or a data error.
	Indicates that the selection or the value that has been enter is correct.

2.1.5 Working area

The contents of the working area may vary, depending on the context in which it appears. The operator makes a series of selections and programs a series of values designed to execute the desired action. The following examples illustrate how the working area appears when the user selects “Dashboards”, “Program instructions” and “Settings” starting from the initial Home condition:

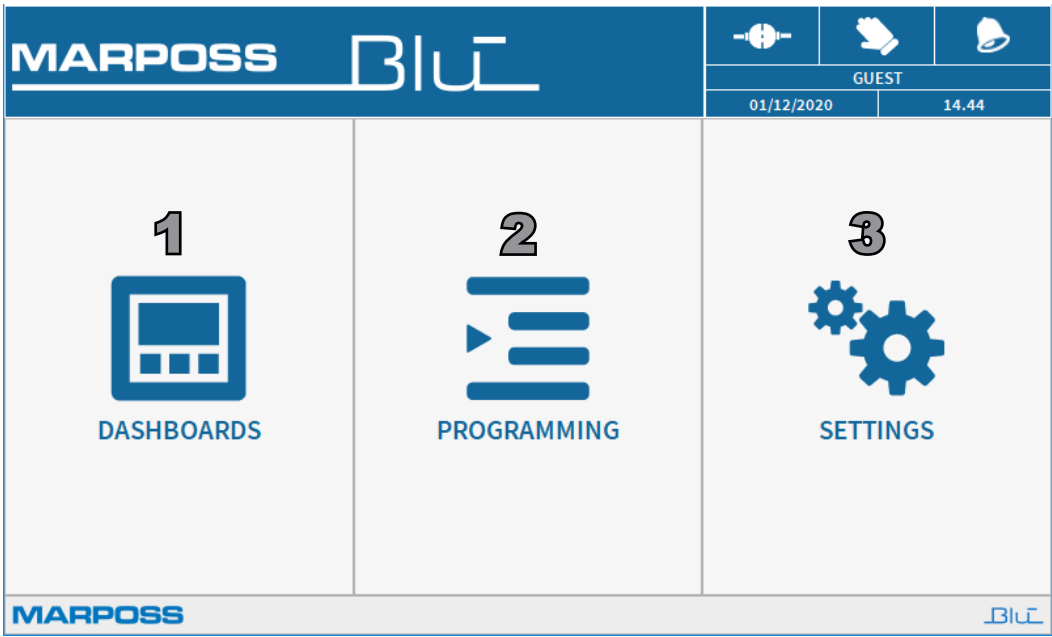


Fig.9. Home

1. Screens

The working area contains a list of dashboards that the operator can call up, in order to view measurements, for example, or simplify the sensor set-up procedure.

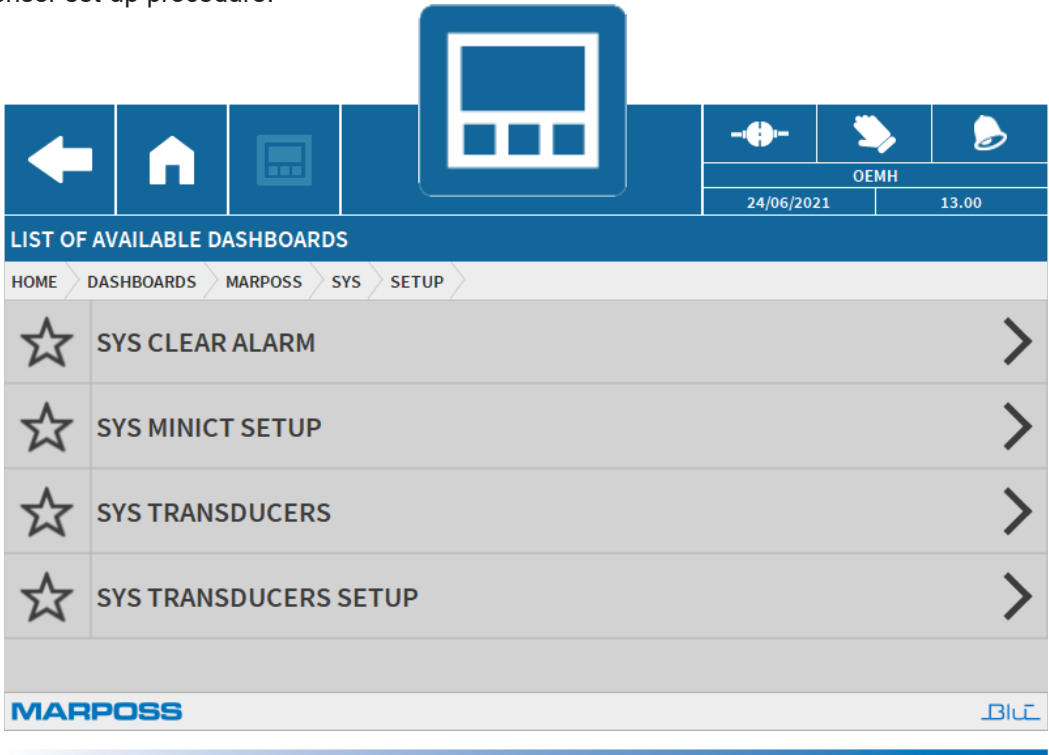


Fig.10. Working area - Dashboards: Widget functions

2. Program instructions

The working area contains the list of channels available in the application. Once the operator has selected one of these channels, a series of dashboards appears, enabling him/her to program the values for the corresponding channel.

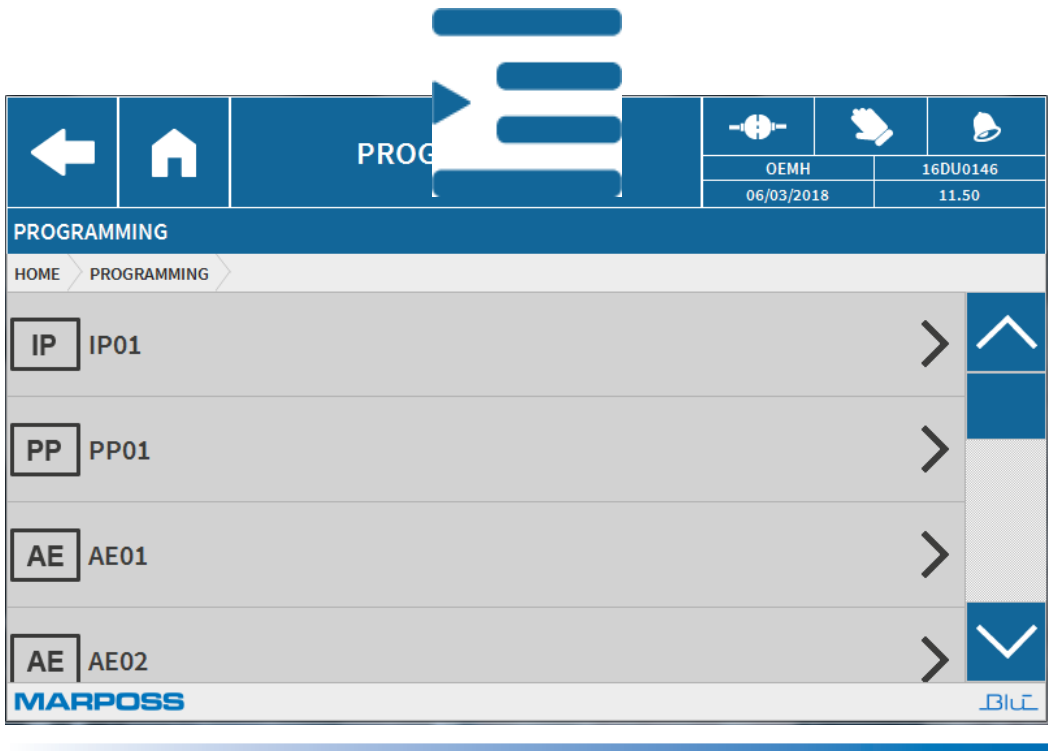




Fig.11. Working area - Program instructions

3. Settings


The working area permits the user to make an initial selection between the step sequences that can be used to perform auxiliary measurement action service functions.




LANGUAGE	>
DATE AND TIME	>
CONNECTION PARAMETERS	>
SERVER SETTINGS	>




NODES	>
HEADS	>
FIELDBUS SETTINGS	>




NEW BACKUP	>
BACKUPS LIST	>
BACKUPS IMPORT	>
SELECTIVE RESTORING FROM BACKUP LIST	>




LOG SETTINGS	>
BLÚ LOG INFORMATION	>
HI LOG INFORMATION	>
DELETE LOG INFORMATION	>




LOGIN	>
ACCOUNT INFORMATION	>
CREATE NEW USER	>
DELETE USER	>



SYS	SYS
SC	SC01
SC	SC02



MASTER NODE INFORMATION	>
FUNCTION NODES INFORMATION	>
NODES UPDATE	>
CONFIGURATION INFO	>



IP01	
AE01	
WB01	
PP01	
MO01	

Fig.12. Working area - Settings

2.1.6 List of favourite parameters

It is possible to create a list of the most frequently used parameters, or “Favourites”, in each set so that they can be called up more rapidly.

- Each parameter is accompanied by a “star” icon (see Fig.13);
- When this icon is selected, the star changes colour to black, confirming that the parameter has been inserted in the “Favourites” list;
- When the system returns to the previous page, the “Favourites” icon will be appear in the first line (see Fig.14). Select this icon to display the list containing only the data that have been inserted as ‘favourites’.
- To remove a parameter from the favourites list, deselect the star icon. The “Favourites” list will disappear if all the parameters it contained have been removed.

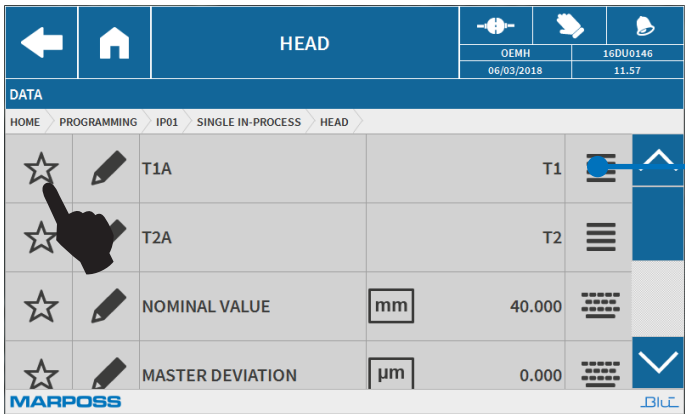


Fig.13. Assigning a parameter to the “Favourites” list.

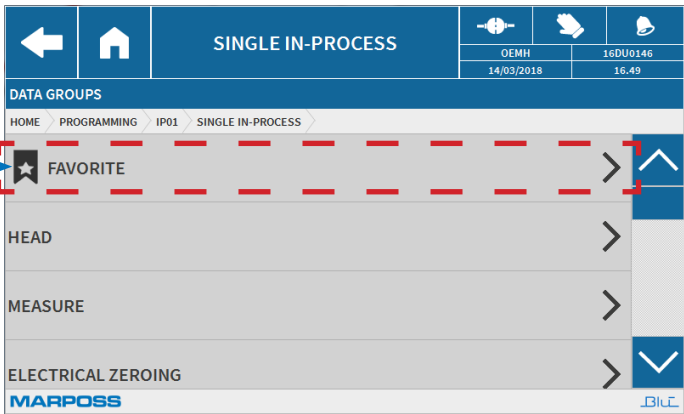


Fig.14. “Favourites” list in a parameter set.

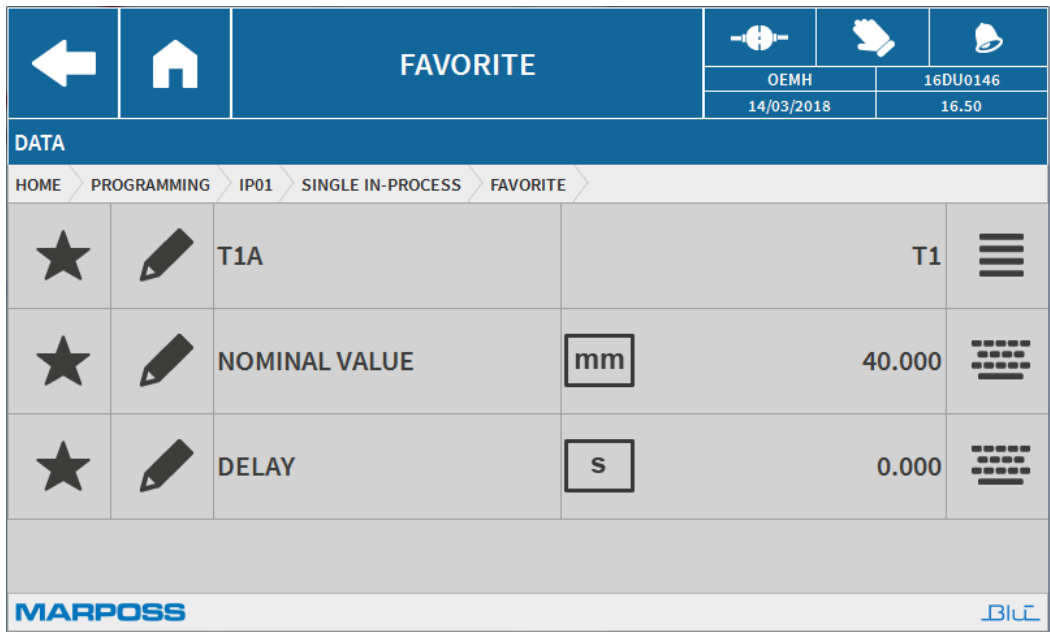


Fig.15. Example of a “Favourites” list.

## 2.2 Numerical/Alphanumeric Keypad



This function, which permits the user to enter and/or modify data, is activated whenever he/she interacts with the "keypad" icon. This function freezes all other current interactions with the interface momentarily until the user has finished inserting and confirming the data, or cancels the operation, and is characterised by the following areas/icons:

1. Name of text to be entered.
2. Area where inserted text/number is displayed.
3. Copy/paste key.
4. Text/number keys.
5. "Confirm" inserted text/number keys.
6. Keypad "delete" key.

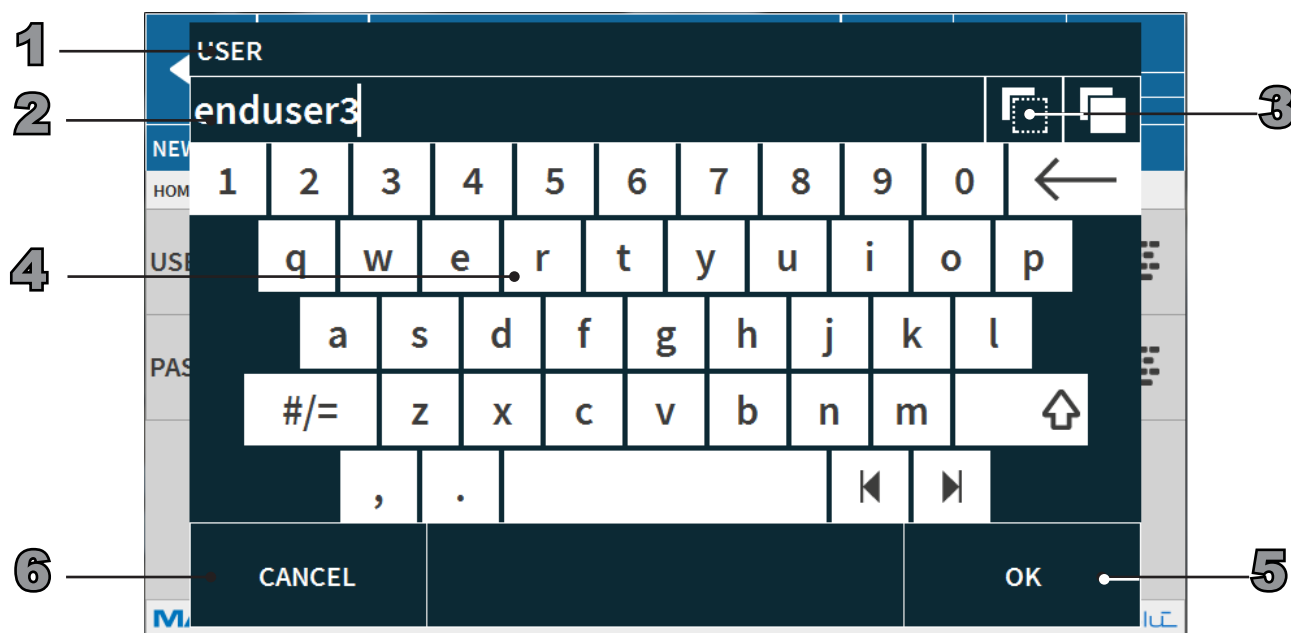


Fig.16. Virtual alphanumeric keypad

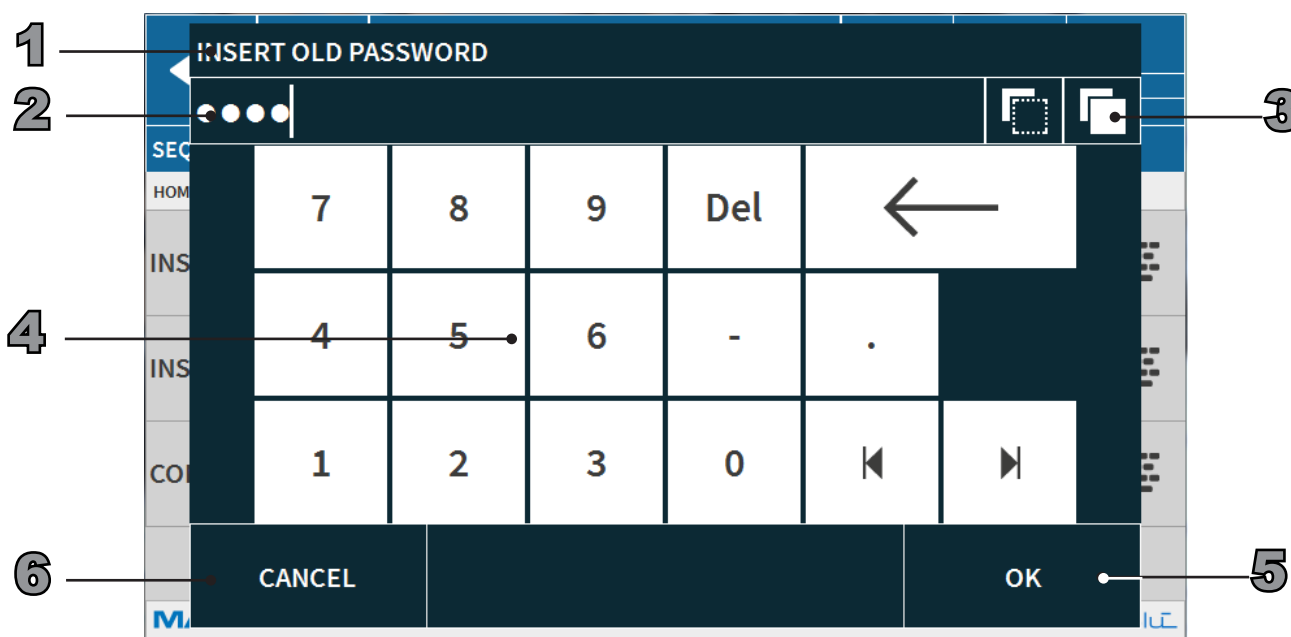




Fig.17. Virtual numerical keypad

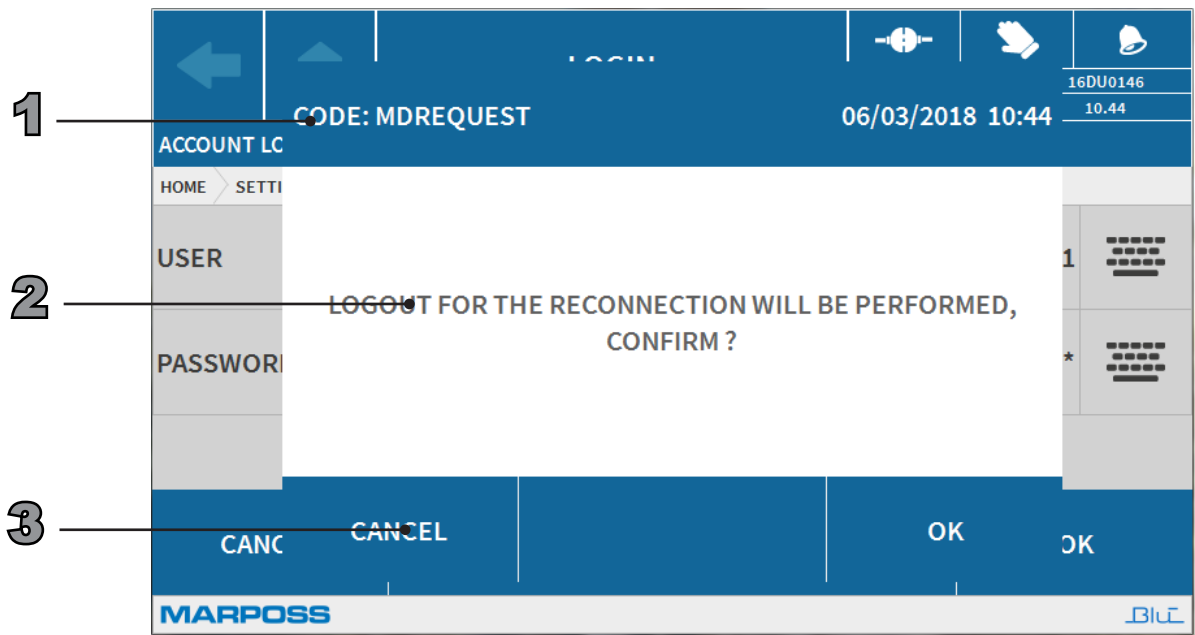
2.3 Managing pop-up messages

The **Blü LT** system communicates with the operator by means of messages that appear in “pop-up” type messages. These messages are divided into two functional macro-categories:

- Automatic pop-up message (opens automatically in the event of an alarm).
- Pop-up message called up by the user. These messages may be opened by clicking on the icon in the top, right corner of the dashboard (   ) in the event of a warning/alarm.

The message windows are divided into three main sections:

1. Heading with code/date/time
2. Area containing the pop-up description text.
3. Save/Confirm/Cancel functions



Standard message	Warning message	Alarm message
CODE: INF	CODE: WARNINGMISSING PEAKS	CODE: ERR
Link ERROR! - Link.On failed	Fewer peaks than expected were detected	Error during the update procedure!
CLOSE	CANCELCLEAR	CLOSE

Fig.18. Message window: type

The pop-up windows that appear on the dashboard may be saved to a file by clicking on the “Save” key. In the case of HMI on PC, the file is saved to the folder specified in the following path: *Home/Settings/Options/HMI client Settings/General Options/Alarm Screenshot Directory*

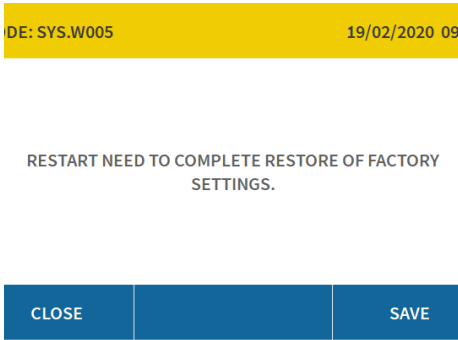


Fig.19. Message window: “Save” button



### 3 SETTINGS



The **Settings** may be used to assign the appropriate values to the programmable data and set-up the **Blü LT** operating modes through a series of screens, described below, starting with the Home screen, which may be set to “Standard” or “Expanded” mode.

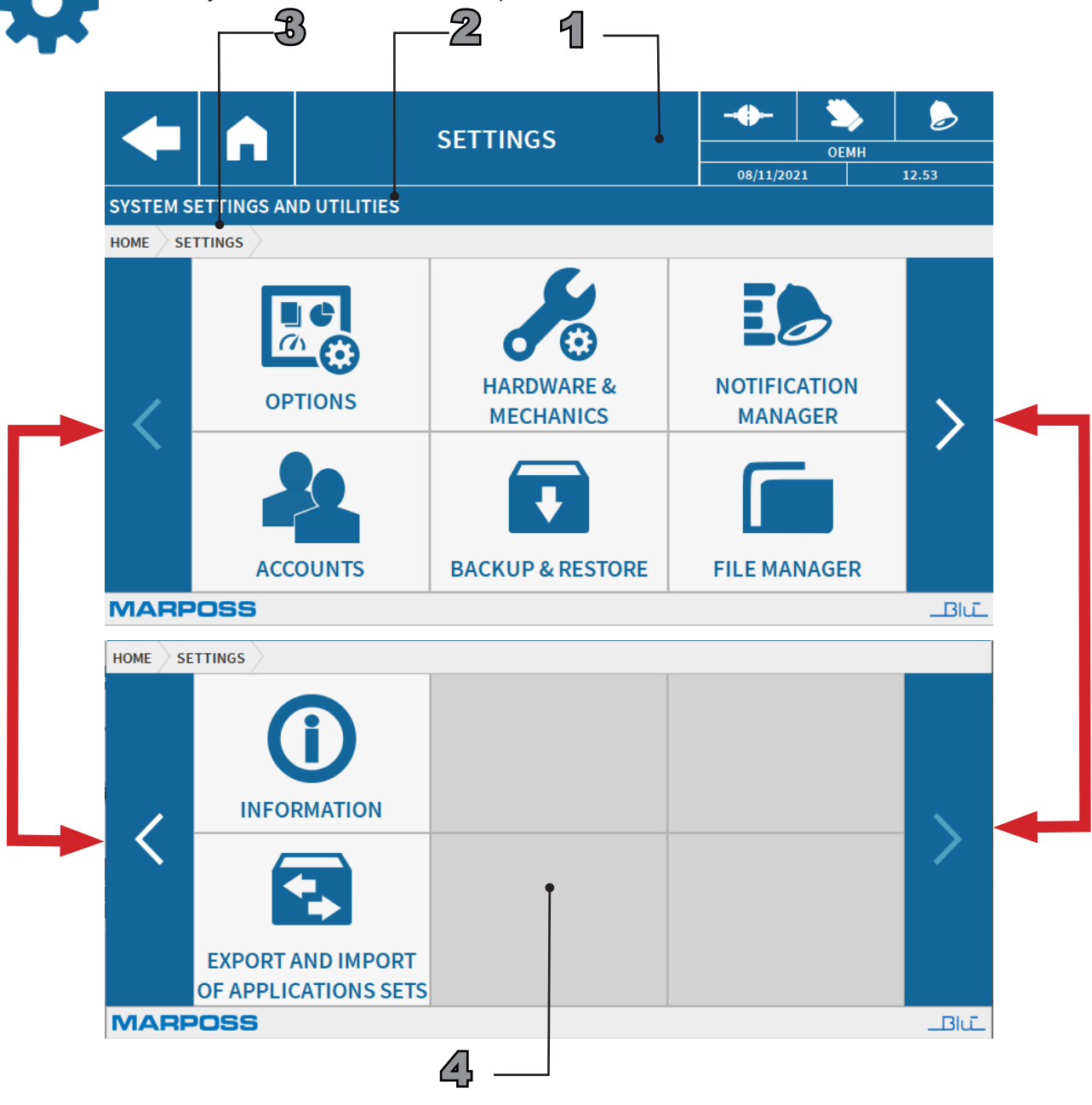


Fig.20. Settings selection screen

1. Screen title: **Settings**.
2. Messages and descriptions area: **System and utilities settings**.
3. Navigation path: **Home > Settings**.
4. Working area:
  - **Options**.
  - **Hardware and Mechanical programming**.
  - **Notification Management**.
  - **Users**.
  - **Backup & Restore**.
  - **File Management**.
  - **Information**.
  - **Exporting and importing application sets**.

### 3.1 Options



Use the **Options** dashboard to specify various settings assigned to a given operator profile.

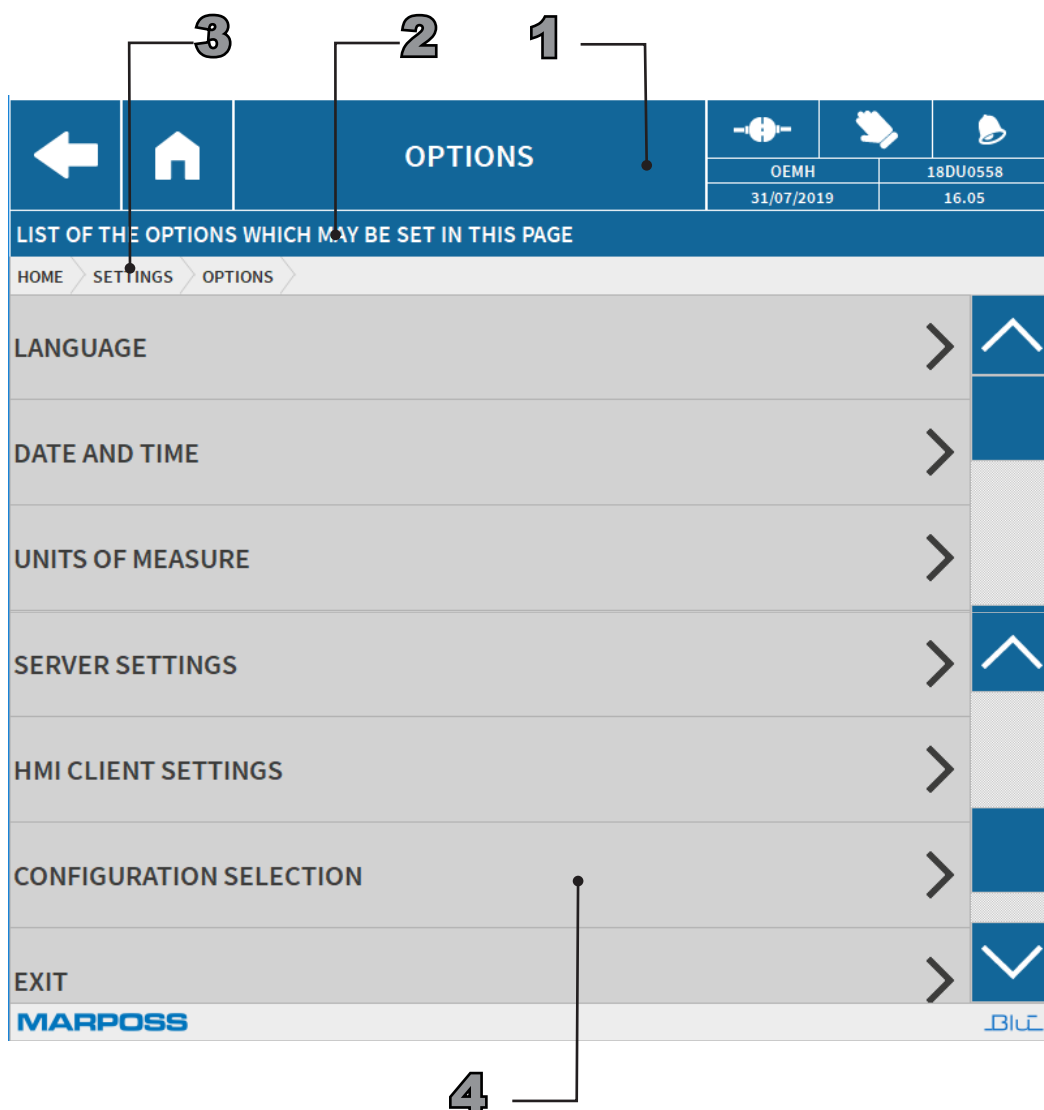


Fig.21. Main options screen

1. Screen title: **Options**.
2. Messages and descriptions area: **List of options that may be managed on this page**.
3. Navigation path: *Home > Settings > Options*.
4. Working area:
  - **Language.**
  - **Date and Time.**
  - **Unit of Measurement.**
  - **Connection Parameters.**
  - **Master Node (server) settings.**
  - **Human Machine Interface (Client) settings.**
  - **Output.**

### 3.1.1 Language

Use the **Language** dashboard to select the desired language from the list of available options; the selection takes effect immediately and does not require confirmation on the part of the operator.

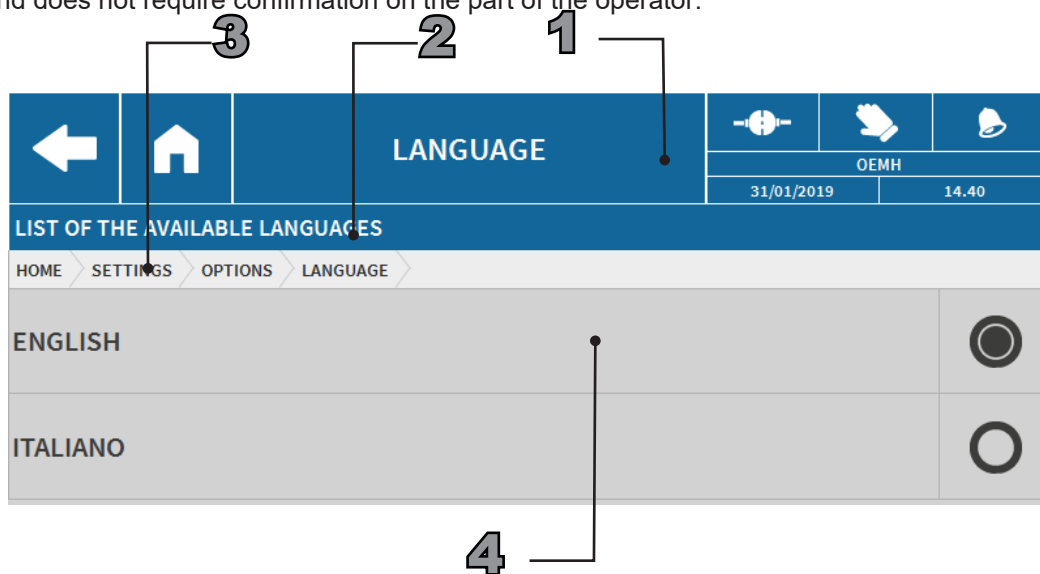


Fig.22. Language setting screen

1. Screen title: **Language**.
2. Messages and descriptions area: **List of available languages**.
3. Navigation path: *Home* > *Settings* > **Language**.
4. Working area: List of available languages. The system switches between languages with immediate effect.

3.1.2 Date and Time

Use the **Date & Time** dashboard to define the Master Node date and time format.

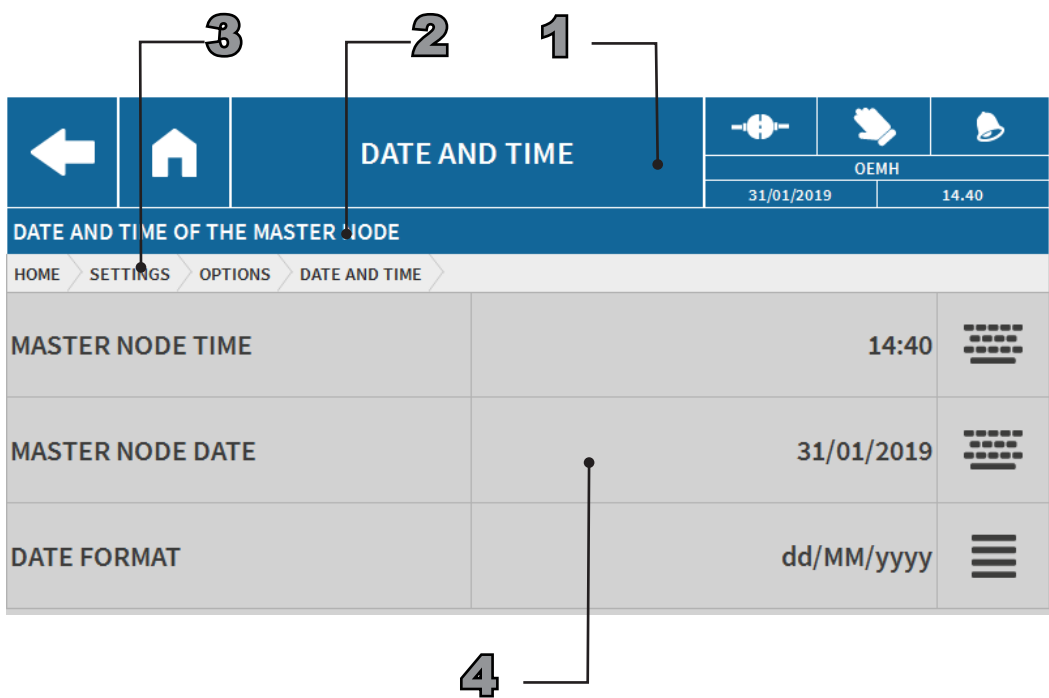


Fig.23. Date & time settings screen

- 1. Screen title: **Date and Time**.
- 2. Messages and descriptions area: **Master Node Date and Time**.
- 3. Navigation path: *Home* > *Settings* > *Options* > **Date and Time**.
- 4. Working area:
  - **Master Node time**
  - **Master Node Date**
  - **Date Format**. Select one of the following date formats:

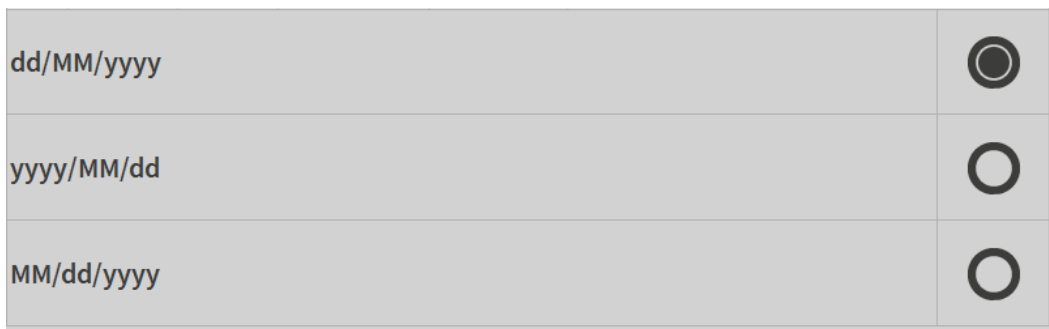


Fig.24. Select date format page

### 3.1.3 Unit of Measurement

The **Units of Measurement** dashboard may be used to select whether to use the metric or imperial measurement system.

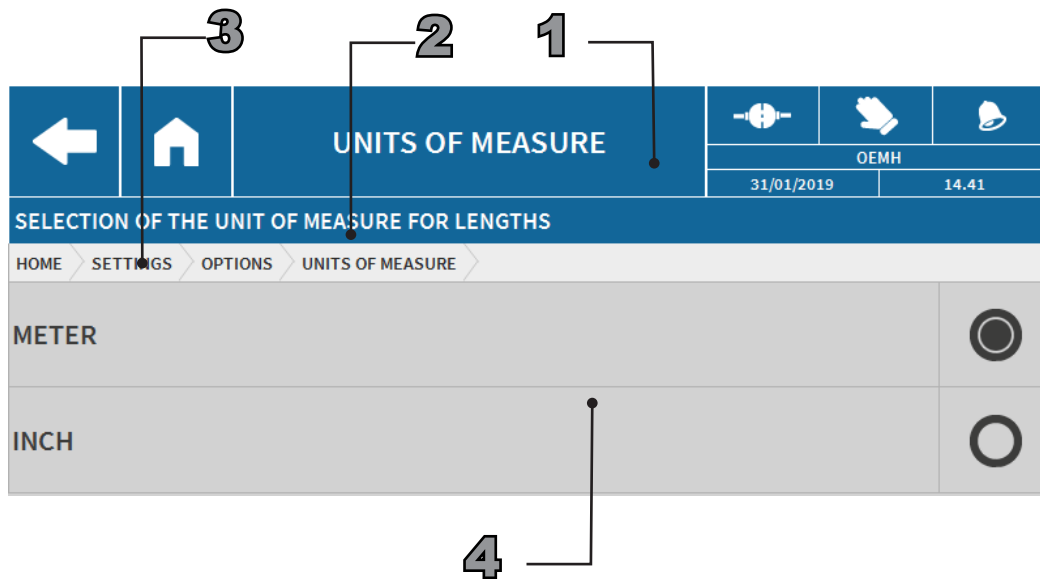


Fig.25. Unit of measurement setting page

1. Screen title: **Unit of measurement.**
2. Messages and descriptions area: **Selecting the unit of measurement for lengths.**
3. Navigation path: *Home > Settings > Options > Unit of measurement.*
4. Working area:
  - **Meter.** If selected, enables measurements using the metric measurement system.
  - **Inch.** If selected, enables measurements using the Imperial measurement system.

### 3.1.4 Connection parameters

Use the **Connection parameters** dashboard to set-up the address of the Master Node Ethernet port that the Human Interface is to be connected to, and to carry out the User Login..

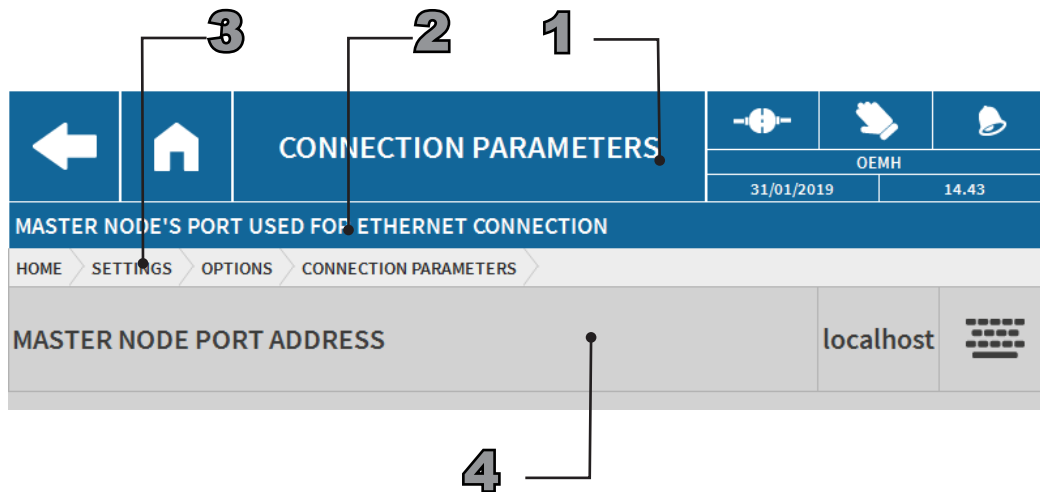


Fig.26. Connection parameters setting page

1. Screen title: **Connection parameters**.
2. Messages and descriptions area: **Master Node H.M.I. port address if connect to Ethernet**.
3. Navigation path: *Home* > *Settings* > *Options* > **Connection Parameters**.
4. Working area:

**Master node address.** It is possible to define three different cases:

- 1 Using an operator panel connected to the **Master Unit**.
- 2 Using a network personal computer (NPC) connected to the NET 10/100 port.
- 3 Using a network personal computer (NPC) connected to the company network.

For a clearer understanding of the following, refer to the example described in Fig.27.

- **Case 1:** *Using an operator panel connected to the Master Unit.* In order to use the Unit Master and the nodes belonging to its local network as the reference, set the Master Unit address to "Localhost" via the operator panel.
- **Case 2.** *Using a local personal computer (LPC) connected to the NET 10/100 port (NPC)..* The Master Unit address setting must correspond to the NET 10/100 port corresponding to the Master Unit the port is associated with.
- **Case 3.** *Using a network personal computer (NPC) connected to the company network.* The Master Unit address setting must correspond to the NET 10/100 port corresponding to the Master Unit the port is associated with.

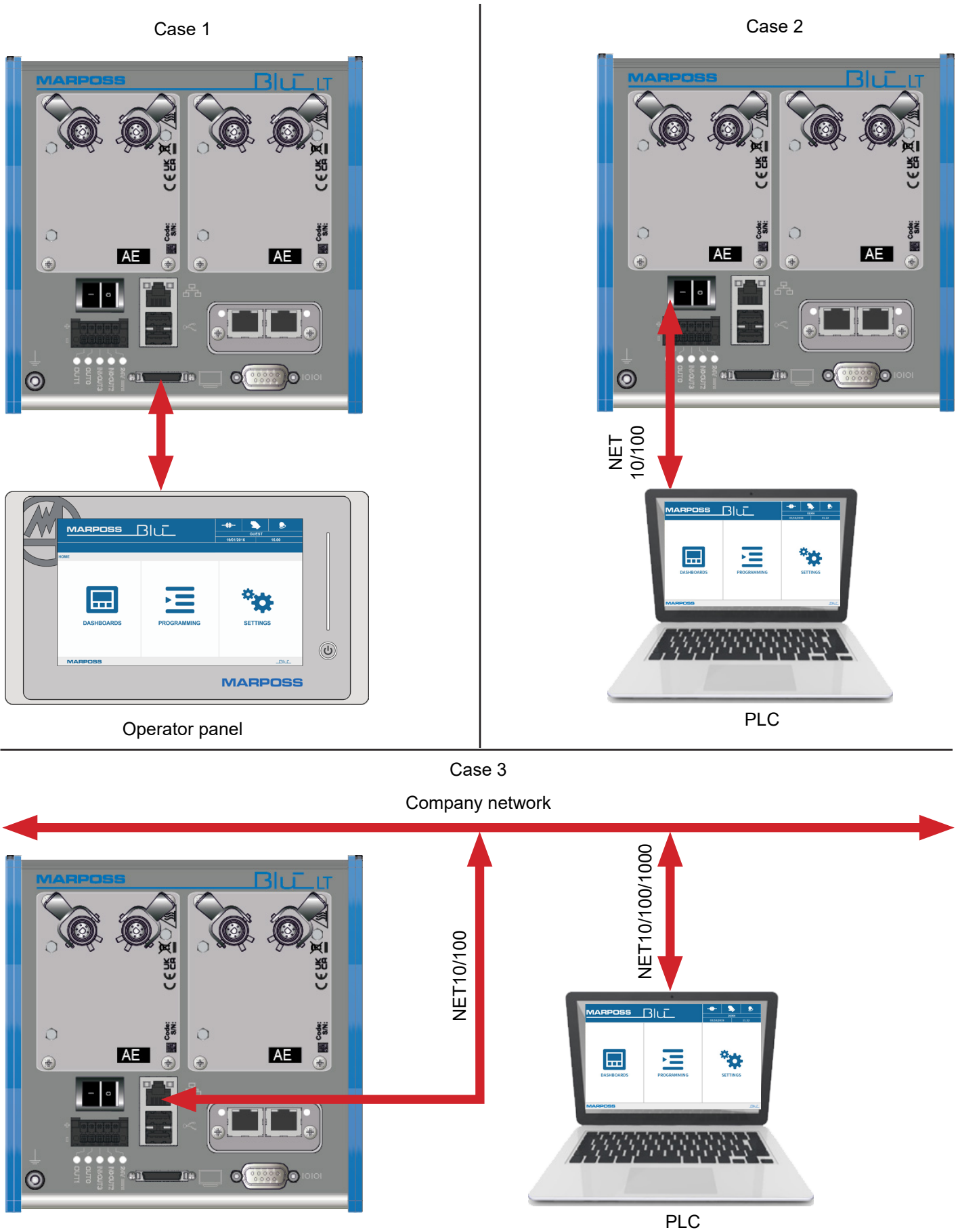


Fig.27. Example showing connections between Master node, operator panel and PC within the context of a company network.

3.1.5 Server settings (Master Node)

Use the **Server Settings** page to set-up the connection to the server (Master Node) and view the address.

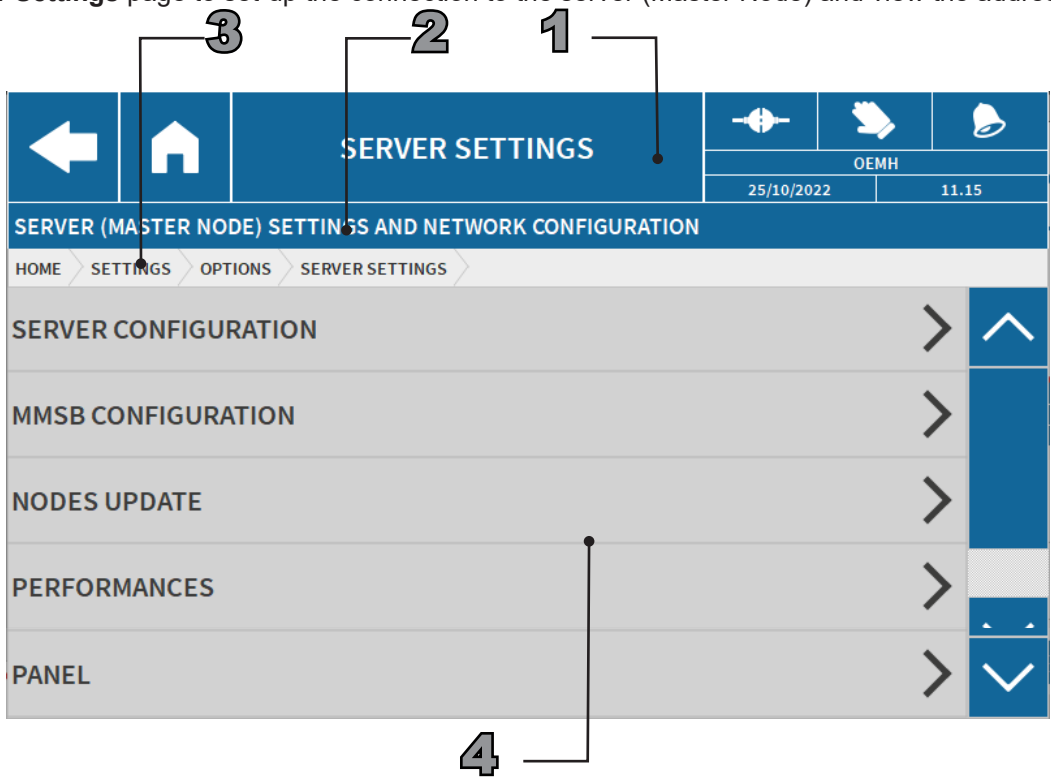


Fig.28. Server connection settings dashboard (Master Node)

- 1. Screen title: **Server Settings**.
- 2. Messages and descriptions area: **Server Settings (Master Node) and Network Configurations**.
- 3. Navigation path: *Home > Settings > Options > Server Settings*.
- 4. Working area:
  - **Server Configuration**. Use the following dashboard to set-up the server (Master Node) connection mode:

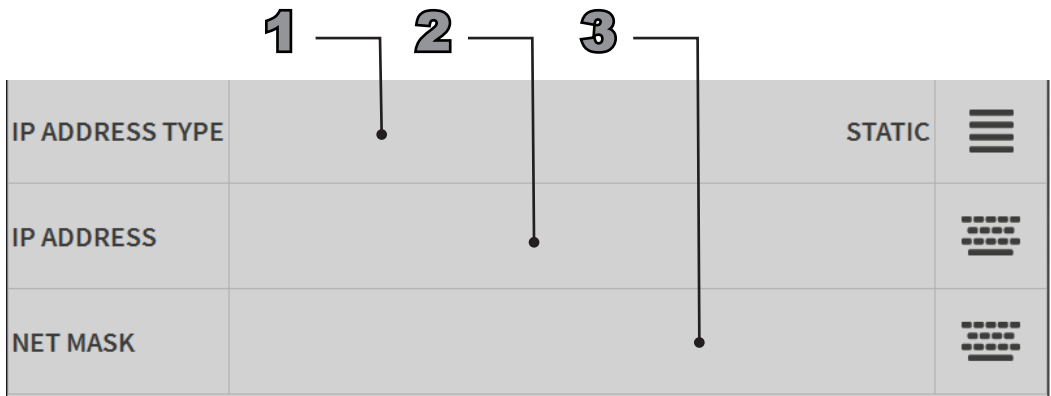


Fig.29. Server (Master Node) connection mode set-up screen

- 1. **IP address type**. Select the IP address type from the following options: **Static** (fixed address not assigned automatically by the network) and **DHCP** (variable address assigned automatically by the network). When setting up the IP Address Type on DCHP, it is necessary to program the new address assigned by the network in the "Master Node port address"; the new address may be found at: *Home/Settings/Information/Server info*
- 2. **IP Address**. Enter the numerical value corresponding to the IP address to be used (if "**Static**" has been selected).
- 3. **Net Mask**. Enter the numerical value of the network to be used that the IP belongs to. (if "**Static**" has been selected).



- **MMSB configuration.** When enabled (☑) this function may be used to speed up the switch on phase by not performing the checks on the various nodes installed on the system.

FAST MMSB ACQUISITION	<input checked="" type="checkbox"/>
-----------------------	-------------------------------------

Fig.30. Enable rapid MMSB self learning screen

- **Update nodes.** This function may be used to force the update of the software on the nodes following a restart.

FORCE SW UPDATE AFTER REBOOT	<input checked="" type="checkbox"/>
------------------------------	-------------------------------------

Fig.31. Node software update screen

- **Performance specifications.** May be used to set-up the synchronisation time for fast access to the database file during data synchronisation.

FAST DATABASE FILE ACCESS		<input checked="" type="checkbox"/>
SINCHRONIZATION TIME	<input type="text" value="s"/>	10 <input type="text" value=""/>

Fig.32. Fast database access screen

- **Panel.** Use this function to set-up the length of the installed cable.

PANEL CABLE LENGHT	<input type="text" value="m"/>	10 <input type="text" value=""/>
--------------------	--------------------------------	----------------------------------

Fig.33. Fast database access screen

[

**N.B.**  
If the length of the cable changes when replacing it, set-up the new value before installing the new one.

### 3.1.6 H.M.I. settings (Human Machine Interface) Client

Use the **H.M.I. Client Settings** dashboard to select the dashboard display options and specify other information regarding how the elements available in the “**Dashboards**” environment are displayed.

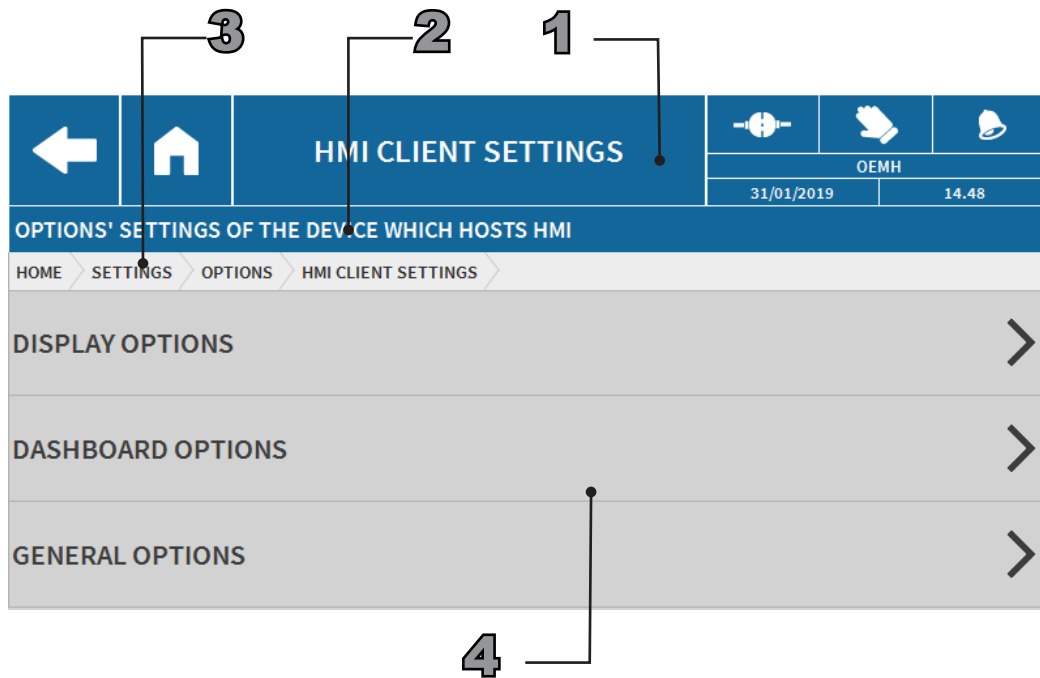


Fig.34. H.M.I. settings panel (Human Machine Interface) Client

- 1 Screen title: **HMI Client Settings**.
- 2 Messages and descriptions area: **HMI Client Settings**.
- 3 Navigation path: *Home > Settings > Options > H.M.I. Client Settings*.
- 4 Working area:

- **Display options:** Use this command to enable a series of display and data synchronisation features via the dashboard on the following page:

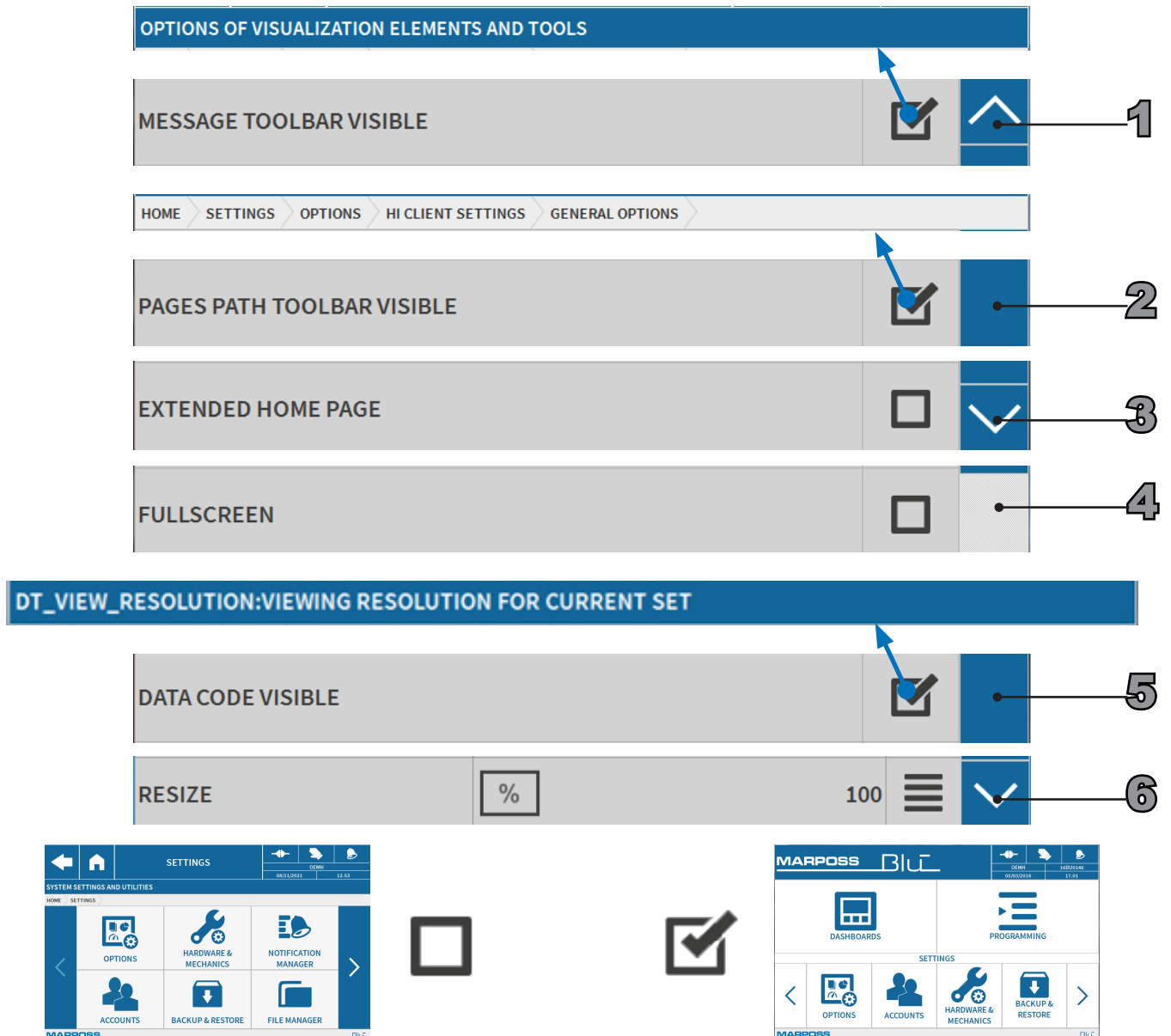


Fig.35. Enable display elements screen.

- 1 Message bar visible.** Select to render the message bar visible permanently. Otherwise, the message bars will only be displayed for a few seconds in the dashboards that include the list of programmable data. See Part B2.
- 2 Pages path toolbar visible.** Enables the pages path area. See Part B2.
- 3 Expanded Home page.** Enables the alternative Home page layout
- 4 Full screen.** Enables H.M.I. full screen display mode
- 5 Data code visible.** Enables the absolute data reference messages display area. See Part B2.
- 6 Resize.** Use this parameter to modify the HMI interface display dimensions.

- **Dashboard Options.** Manages information regarding the displays available in the “Dashboards” environment via the following screens:

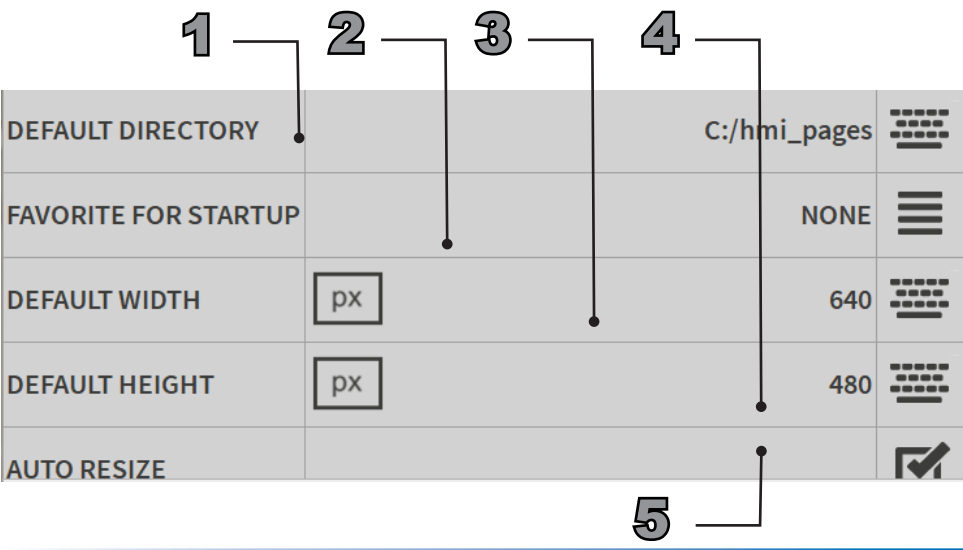


Fig.36. Predefined parameters and dashboard options selection screen

- 1 **Predefined Directory (Available for H.M.I. on PC only).** Defines the path to the directory that contains all the files that refer to the dashboards created on the PC.
- 2 **Start-up preferences.** Select the dashboard that is displayed when the H.M.I. is started up.



Fig.37. List of created dashboards (example)

- 3 **Predefined width.** Defines the width of the above mentioned screens.
- 4 **Predefined height.** Defines the height of the above mentioned screens.
- 5 **Auto resize.** When activated, this function permits automatic resizing of the widgets.

- **General options:** May be used to set-up the following values:
  - 1 **Number of connection attempts.** Use this field to set-up the maximum number of connection attempts during the switch on phase. We recommend modifying this value only if suggested by **Marposs Customer Service**.
  - 2 **Interval between connection attempts.** Use this field to set-up the time interval between one connection attempt and the next. We recommend modifying this value only if suggested by **Marposs Customer Service**.
  - 3 **Download local date and time data to Master node at each HMI reboot.** Enables (☒) synchronisation of the date and time with those of the PC on which it is installed each time the HMI is started.
  - 4 **Alarm screenshots directory. Alarm Screenshots Directory.** Use this command to select the path to the directory where the alarm pop-up messages are saved. **Available on H.M.I. Versions for PC only.** The address shown in the figure is intended as an example.
  - 5 **Gestures enabled.** Enables (☒) multiple functions for those commands having more than one assigned to them. Otherwise, the alternative commands are not displayed, meaning that they cannot be used.

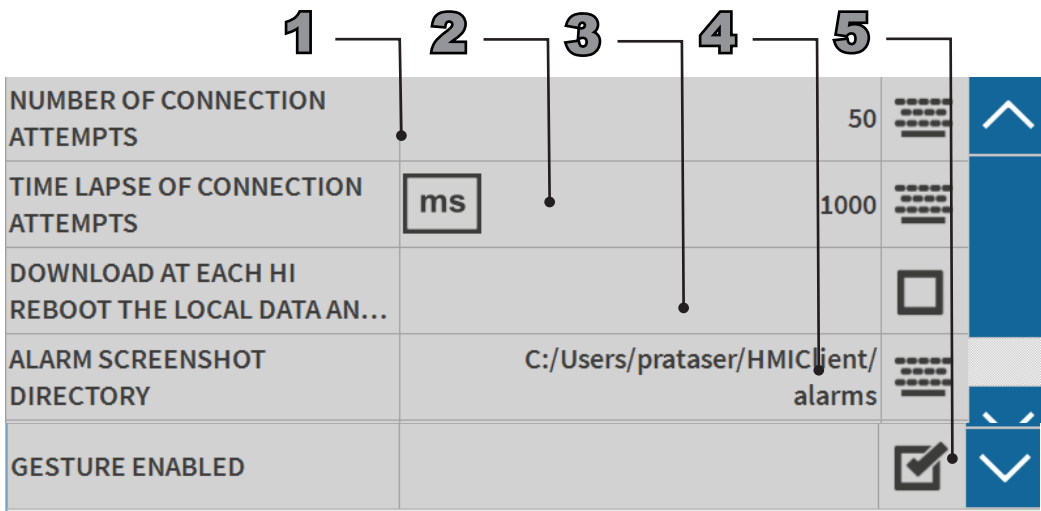


Fig.38. Predefined parameters and dashboard options selection screen

3.1.7 Exit

The **exit** command may be used to close the application window (for PC H.M.I. only).



Fig.39. Main options screen

### 3.2 Hardware & Mechanical programming



The **Hardware and Mechanics Programming** screen may be used to select which hardware or mechanical components to intervene on. See Part C2XX Chap. 2.2 with reference to the installed node.

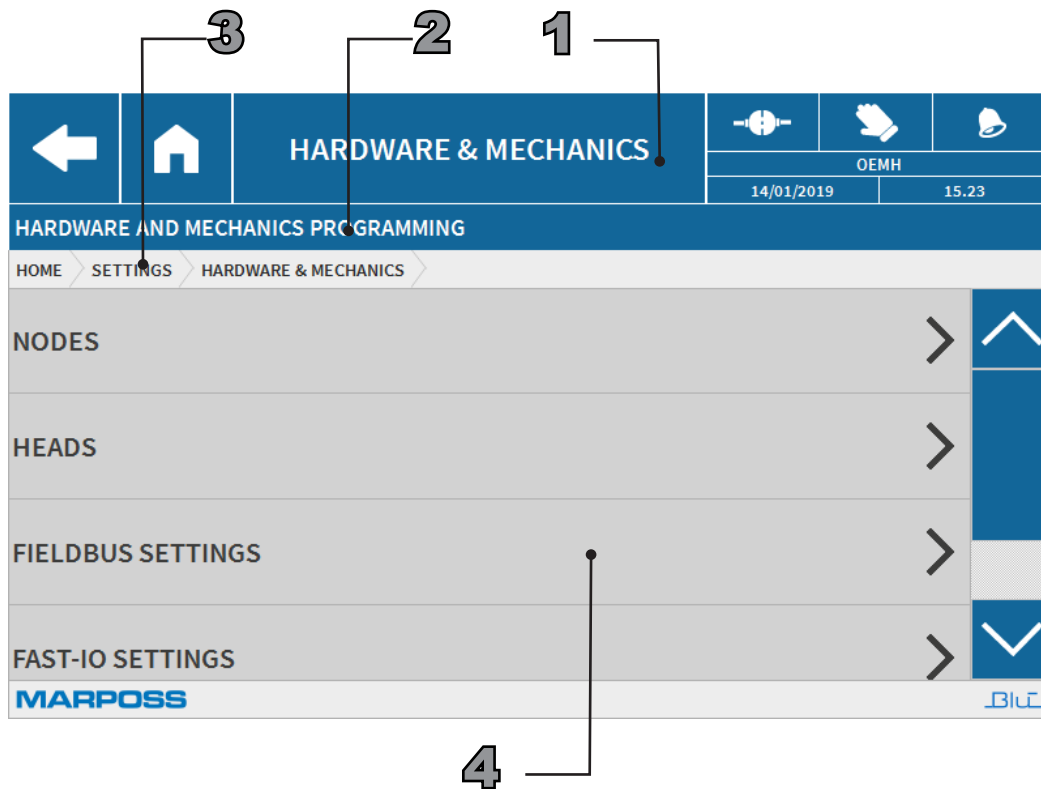


Fig.40. Hardware and mechanical components selection screen

1. Screen title: **Hardware & Mechanical parts**.
2. Messages and descriptions area: **Hardware & Mechanical programming**.
3. Navigation path: *Home* > *Settings* > **Hardware and Mechanical parts**.
4. Working area:
  - **Heads**. List of measurement heads present in the application.
  - **Nodes**. List of nodes present in the application.
  - **Fieldbus Settings**. Displays the fieldbus settings.
  - **Fast I/O settings**. Use this parameter to define the operating mode of an ON/OFF command generated by a given sensor (e.g.: Touch/Gap/Crash probe).

### 3.2.1 Measurement head parameters set-up

The **Heads** dashboard may be used to display and modify the parameters of the heads in the configuration file.

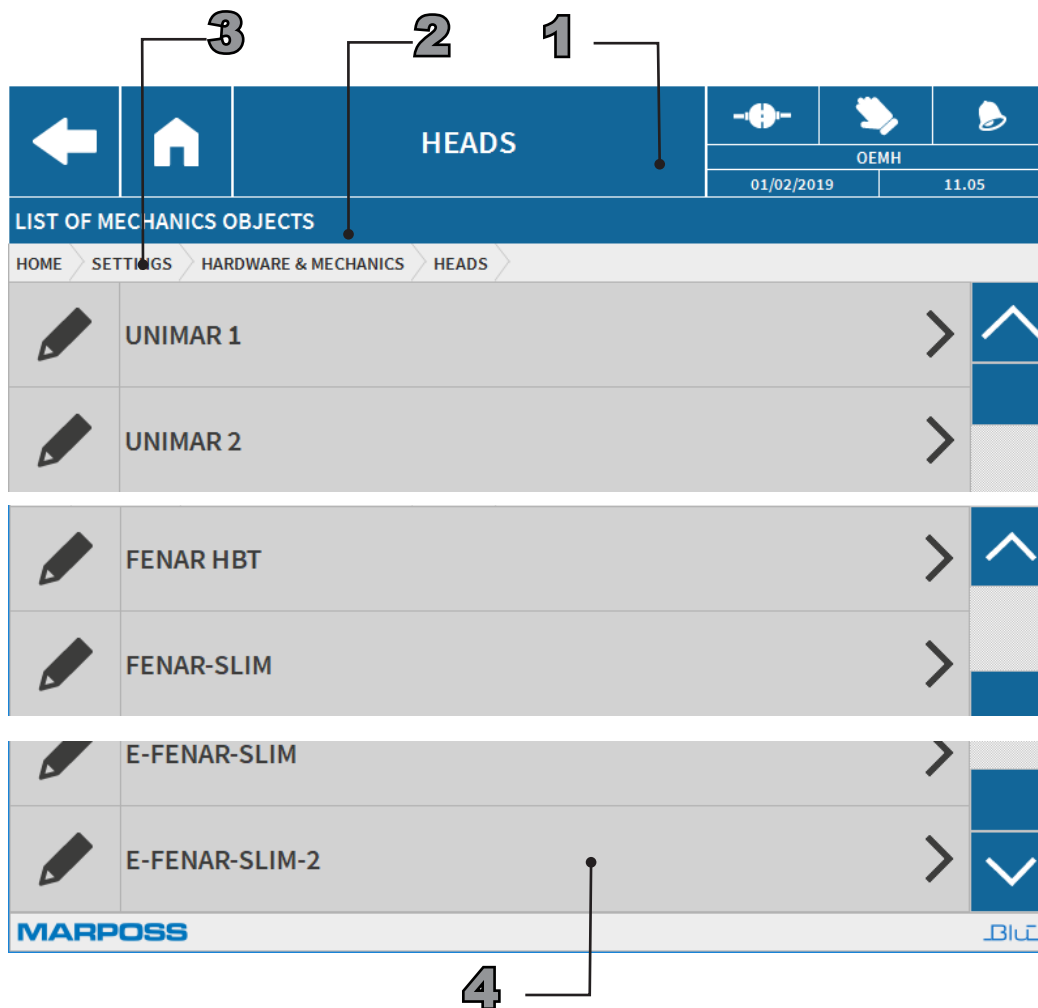


Fig.41. List of measurement heads included in configuration file dashboard (example)

1. Screen title: **Heads**.
2. Messages and descriptions area: **List of mechanical objects**.
3. Navigation path: *Home > Settings > Hardware and Mechanical parts > Heads*
4. Working area. Sequence determined in the configuration file (example):
  - **UNIMAR**. UNIMAR applications with **LVDT** or **HBT** type sensor.
    - **UNIMAR LVDT**. UNIMAR heads with LVDT-UNIMAR type sensors.

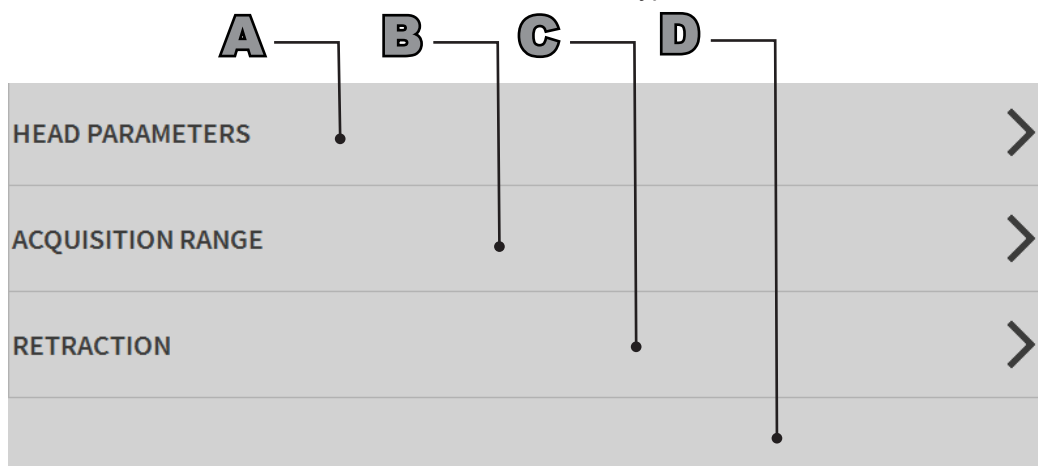


Fig.42. UNIMAR head parameters dashboard with LVDT type sensors

## A Head Parameters.

	CLOCKWISE PART ROTATION ENABLED		<input type="checkbox"/>
	DESCRIPTION	HEAD 1 DESCRIPTION	
	FAMILY	UNIMAR	
	IDENTIFIER	1	
	HEAD MODE	NORMAL	
	PHASE	0.00	
	SENSOR TYPE	LVDT	
	UNIMAR MODEL	UNIMAR S	

Fig.43. UNIMAR head parameters dashboard with LVDT type sensors

1. **Enables** clockwise rotation (this parameter may only be used for the SC function, if present). Enables the clockwise rotation indication for the part being measured.
2. **Description**. Enables the operator to enter useful information about the head in use. Parameter set-up in the “Configuration file”.
3. **Family**. Indicates the type of head in use. Parameter set-up in the “Configuration file”.
4. **ID information**. Indicates the identification number of the head in use. Parameter set-up in the “Configuration file”.
5. **Head mode**. Use this parameter to select the head operating mode (NORMAL or INVERTED). Select INVERTED to change the polarity of transducer signal in front of the measurement equation.
6. **Phase (this parameter may only be used for the SC function, if present)**. It permits the operator to set-up the offset between the position of the measurement axis of the head in use and the position of the switch that provides the synchronisation signal, or the part rotation “C” axis reference when the signal is generated by the CNC [angle °]. For a description of the acquisition procedure, see Cap. 1.2 Part C1ME.
7. **Sensor type**. Identifies the type of sensor in use.
8. **Unimar model**. Indicates the model of head in use. Parameter set-up in the “Configuration file”.



B. Acquisition Ranges.

		1	2	3	
	NOMINAL ARM RATIO			2.598000	
	OVR ENABLED				
	ZERO RANGE ±			50	

Fig.44. UNIMAR head acquisition ranges dashboard with LVDT type sensors

1. **Arms ratio.** Indicates the “nominal arms ratio” of the current head.
2. **Acquisition Ranges.** Enables the sensor range outside limits check (☑).
- Over Range Limits (OVR Limit).** Use the “Over Range Limits” (OVR Limit) function to define the valid measurement values range. If the programmed values are modified, during the measurement cycle, he message “+OVR” (positive limit value, above which the measurement is outside tolerance), or “-OVR” (negative limit value, below which the measurement is outside tolerance). Activate this function (by clicking on the ☑ icon) to program the positive and negative limit of the measurement tolerance range, which may not exceed the indicated default value. If this function is not selected, the operating range limit of the measurement heads pre-defined in the “Configuration file” is used; this value corresponds to the indicated default value.

	OVR ENABLED			
	OVR UPPER LIMIT		1039	
	OVR LOWER LIMIT		-1039	

Fig.45. Sensor range limit value settings screen

3. **Zeroing range.** This parameter indicates the acceptable mechanical sensor zeroing range for a measurement head operating around the natural zero of the transducer.

C. Zero shift. Customises the zero shift data.

		1	2	
	ZERO SHIFT ENABLED			
	ZERO SHIFT RANGE ±		400	

Fig.46. Zero shift data screen.

1. **Enabling of zero shift.** Enables the zero shift function. In this case, the electrical zeroing range is that programmed in the “zero shift range”. If this function is not enabled, permitted electrical transducer zeroing range corresponds to the range ± OVR.
2. **Zero shift range.** Indicates the range within which it is possible to execute the electrical zero setting. This value may not be greater than the ± OVR range.

D. **Retraction.** Customises the retraction values for the sensor in question.









	RETRACTION TYPE		PNEUMATIC	
	FALL SPEED		50	
	VIBRATION TIME		50	

Fig.47. Retraction values for the respective sensor screen

- 1. **Retraction type.** Enables the retraction function, which may be either pneumatic or external.
- 2. **Drop Speed:** Contact drop speed (in mm/s).
- 3. **Vibration time.** Maximum retraction vibration time limit (in ms).
- **UNIMAR HBT.** UNIMAR heads with HBT-UNIMAR type sensors.











HEAD PARAMETERS						
ACQUISITION RANGE						
ZERO SHIFT						
RETRACTION						
THERMAL						

Fig.48. UNIMAR head parameters dashboard with HBT type sensors

A Head Parameters.

	CLOCKWISE PART ROTATION ENABLED					
	DESCRIPTION			HEAD 7 DESCRIPTION		
	FAMILY			UNIMAR		
	IDENTIFIER			7		
	HEAD MODE			NORMAL		
	PHASE			0.00		
	SENSOR TYPE			HBT-UNIMAR		
	UNIMAR MODEL			UNIMAR W		

Fig.49. UNIMAR head parameters dashboard with HBT-UNIMAR type sensors.

- 1

Enables clockwise rotation (this parameter may only be used for the SC function, if present). Enables the clockwise rotation indication. See ref. 1 Fig.49.
- 2

**Description.** Enables the operator to enter useful information about the head in use. Parameter set-up in the “Configuration file”.
- 3

**Family.** Indicates the type of head in use. Parameter set-up in the “Configuration file”.
- 4

**ID information.** Indicates the identification number of the head in use. Parameter set-up in the “Configuration file”.
- 5

**Head mode.** Permits the operator to select the head operating mode (NORMAL or INVERTED). In the case of applications that use Fenar L heads, select “NORMAL”.
- 6

**Phase (this parameter may only be used for the SC function, if present).** It permits the operator to set-up the offset between the position of the measurement axis of the head in use and the position of the switch that provides the synchronisation signal, or the part rotation “C” axis reference when the signal is generated by the CNC [angle °]. For a description of the acquisition procedure, see Cap. 1.2 Part C1ME.
- 7

**Sensor type.** Identifies the type of sensor in use.
- 8

**UNIMAR head model.** Indicates the model of head in use. Parameter set-up in the “Configuration file”.

B Acquisition Ranges.

	NOMINAL ARM RATIO			2.598000	
	OVR ENABLED				
	ZERO RANGE ±			50	

Fig.50. FENAR head acquisition range dashboard with HBT-UNIMAR type sensors

- 1 **Arms ratio.** Indicates the “nominal arms ratio” of the current head.
- 2 **Acquisition Ranges.** Enables the sensor range outside limits check (☑).
  - **Over Range Limits (OVR Limit).** Use the “Over Range Limits” (OVR Limit) function to define the valid measurement values range. If the programmed values are modified, during the measurement cycle, the message “+OVR” (positive limit value, above which the measurement is outside tolerance), or “-OVR” (negative limit value, below which the measurement is outside tolerance). Activate this function (by clicking on the ☑ icon) to program the positive and negative limit of the measurement tolerance range, which may not exceed the indicated default value. If this function is not selected, the operating range limit of the measurement heads pre-defined in the “Configuration file” is used; this value corresponds to the indicated default value.

	OVR ENABLED			
	OVR UPPER LIMIT	<input type="text" value="μm"/>	1912	
	OVR LOWER LIMIT	<input type="text" value="μm"/>	-1912	

Fig.51. Sensor range limit value settings screen

- 3 **Zeroing range.** This parameter indicates the acceptable mechanical sensor zeroing range for a measurement head operating around the natural zero of the transducer.
- C **Zero shift.** Customises the zero shift data.

	ZERO SHIFT ENABLED			
	ZERO SHIFT RANGE ±	<input type="text" value="μm"/>	400	

Fig.52. Zero shift data screen.

- 1 **Enabling of zero shift.** Enables the zero shift function. In this case, the electrical zeroing range is that programmed in the “zero shift range”. If this function is not enabled, permitted electrical transducer zeroing range corresponds to the range ± OVR.
  - 2 **Zero shift range.** This parameter indicates the range within which it is possible to execute the electrical zero setting. This value may not be greater than the ± OVR range.
- D **Retraction.** Customises the retraction values for the sensor in question.

	RETRACTION TYPE		PNEUMATIC	
	FALL SPEED	<input type="text" value="mm/s"/>	50	
	VIBRATION TIME	<input type="text" value="ms"/>	50	

Fig.53. Retraction values for the respective sensor screen

- 1 **Retraction type.** Enables the retraction function and type.
  - 2 **Drop Speed:** Contact drop speed (in mm/s).
  - 3 **Vibration time.** Maximum retraction vibration time limit (in ms).
- E **Temperature parameters.** This parameter may be used to enable (☑) the function and customise the retraction data of the respective sensor.







	THERMAL CORRECTION		
	THERMAL SENSITIVITY COEFF. (KS)	<div><div>μm</div><div>°C mm</div></div>	-0.669 
	THERMAL OFFSET COEFF. (K0)	<div><div>μm/°C</div></div>	-0.125 

Fig.54. Temperature compensation values input screen

- **Thermal sensitivity coefficient (KS).** This coefficient may be used to compensate for the measurement variations caused by variations in the temperature of the measurement head transducer T1 and/or T2. The default value is valid for most of the applications. For especially demanding applications this parameter value must be calculated according to tests carried out on the specific head you want to use for the application.
- **Thermal zero coefficient (K0).** This coefficient may be used to compensate for the measurement variations caused by variations in the temperature of the measurement head transducer T1 and/or T2. The default value is valid for most of the applications. For especially demanding applications this parameter value must be calculated according to tests carried out on the specific head you want to use for the application.

### 3.2.2 Node parameter settings

The **Hardware Programming** dashboard contains the list of nodes indicated in the configuration file. See Part C2XX Chap. 2.2 with reference to the installed node..

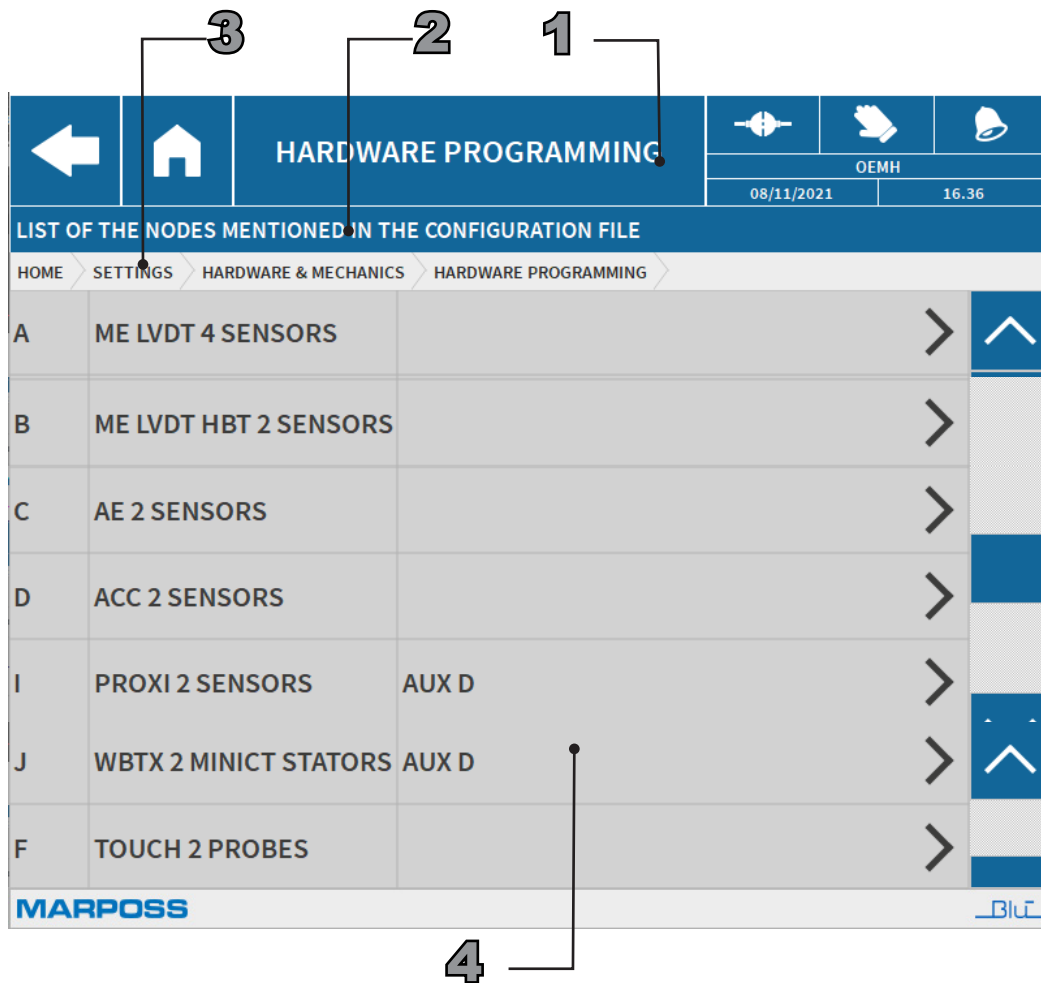


Fig. 55. Dashboard displaying information on the nodes present in an application

1. Screen title: **Hardware Programming**.
2. Messages and descriptions area: **List of nodes mentioned in the configuration file**.
3. Navigation path: *Home > Settings > HW Programming*.
4. **Working area**. Sequence determined in the configuration file (example):
  - **ME LVDT 4 SENSORS**. LVDT 4 sensor **Measurement** function See **Part C2ME**.
  - **ME LVDT HBT 2 SENSORS**. LVDT/HBT 2 sensor **Measurement** function See **Part C2ME**.
  - **AE 2 SENSORS**. Two sensor **Acoustic Emission** function. See **Part C2AE**.
  - **ACC 2 SENSORS**. Two sensor **Balancing** function. See **Part C2WB**.
  - **PROXI 2 SENSORS**. Two sensor **Balancing** function. See **Part C2WB**.
  - **WBTX 2 MINICT STATORS**. Two sensor **Balancing** function. See **Part C2WB**.
  - **TOUCH 2 PROBES**. Two sensor **Touch** function. See **Part C2TO**.

### 3.2.3 Fieldbus Settings

The **Fieldbus settings** dashboard may be used to check the fieldbus module parameters, and modify some of them.

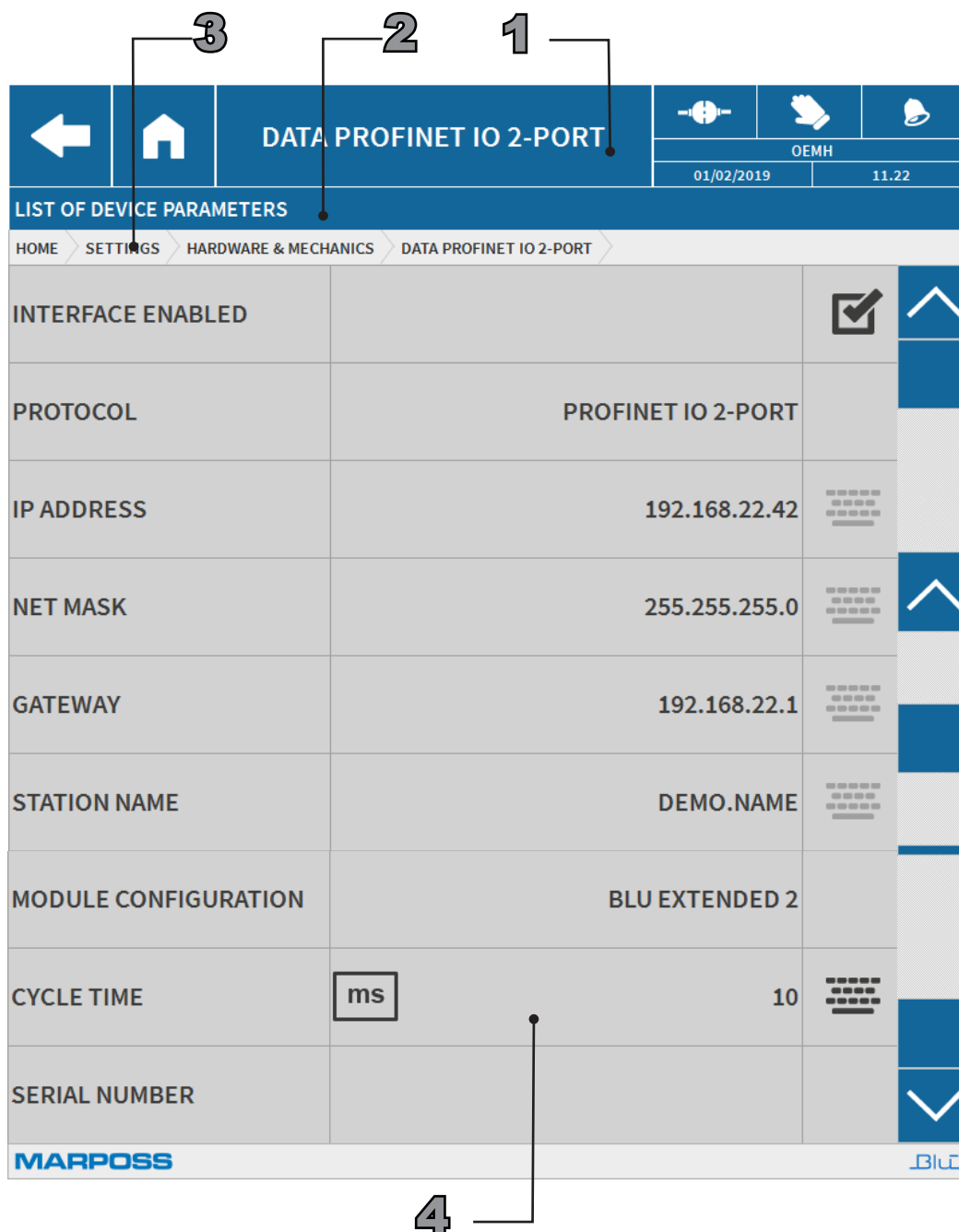


Fig.56. Fieldbus settings screen

1. Screen title: **Fieldbus Settings**.
2. Messages and descriptions area: **Fieldbus module settings**.
3. Navigation path: *Home > Settings > Hardware and Mechanical parts > Fieldbus settings*
4. **Working area**. (example):
  - Interface enabled Enables (☒) the function.
  - **Protocol**. Indicates the profile used by the Fieldbus (Profibus, Profinet, etc.)
  - **Slave address**. When using a Profibus Fieldbus, it is possible to assign a value between 1 and 256 to the Master node that assumes the slave profile.

**N.B.:**

By default, the number entered in the configuration file is assigned.

- **Net mask.** Indicates the address of the port with respect to the network to be used that the IP belongs to.
- N.B.:**  
IP address. In the case of a Profinet or Ethernet IP fieldbus, the address must be assigned by the manufacturing, establishing a connection via the network Master.
- **Gateway.** Indicates the address of the network access port.
  - **Station name.** Indicates the name of the Profinet connector.
  - **Module configuration.** Indicates the type of I/O module installed.
  - **Cycle time.** May be used to set-up the Fieldbus module outputs refresh time (in ms).
  - **Serial Number.** Indicates the serial number of the fieldbus kit present on the Master node.

3.2.4 Fast I/O settings

The Fast I/O Settings dashboard may be used to modify the probe operating mode

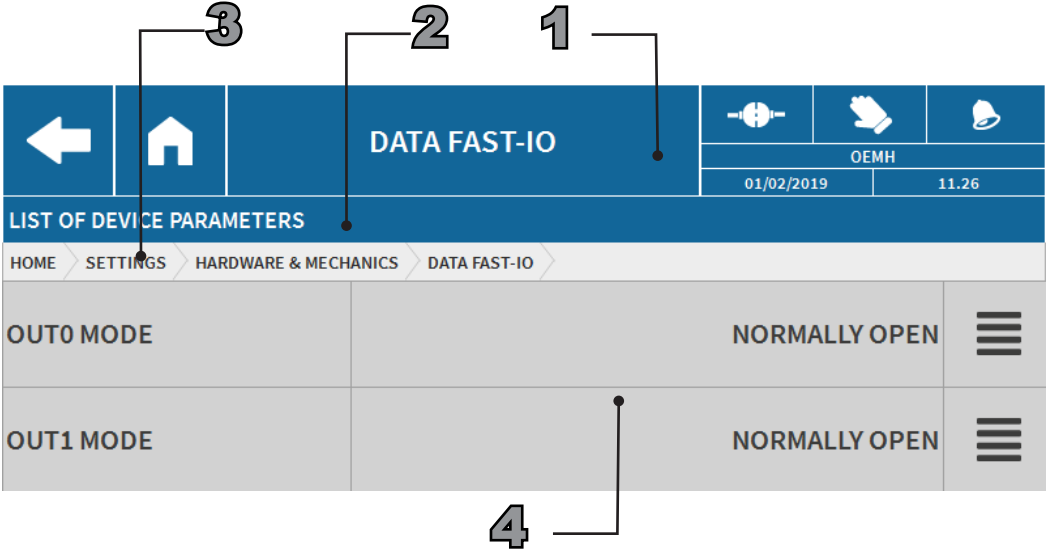


Fig.57. Probe operating mode modification screen

1. Screen title: **Fast I/O Data.**
2. Messages and descriptions area: **List of device parameters.**
3. Navigation path: *Home > Settings > Hardware and Mechanics > Fast IO Data*
4. Working area:
  - **Out 0/1 Mode.** Assign “normally open” or “normally closed” to each fast I/O.

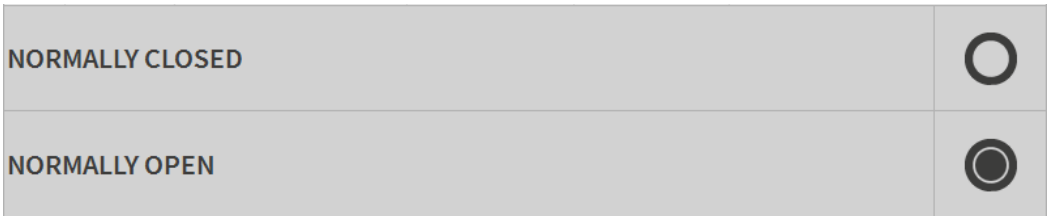


Fig.58. Fast I/O type assignment screen



### 3.3 Notification management



Use the Notification Management dashboard to define the content of the log file, and methods used to display and save it.

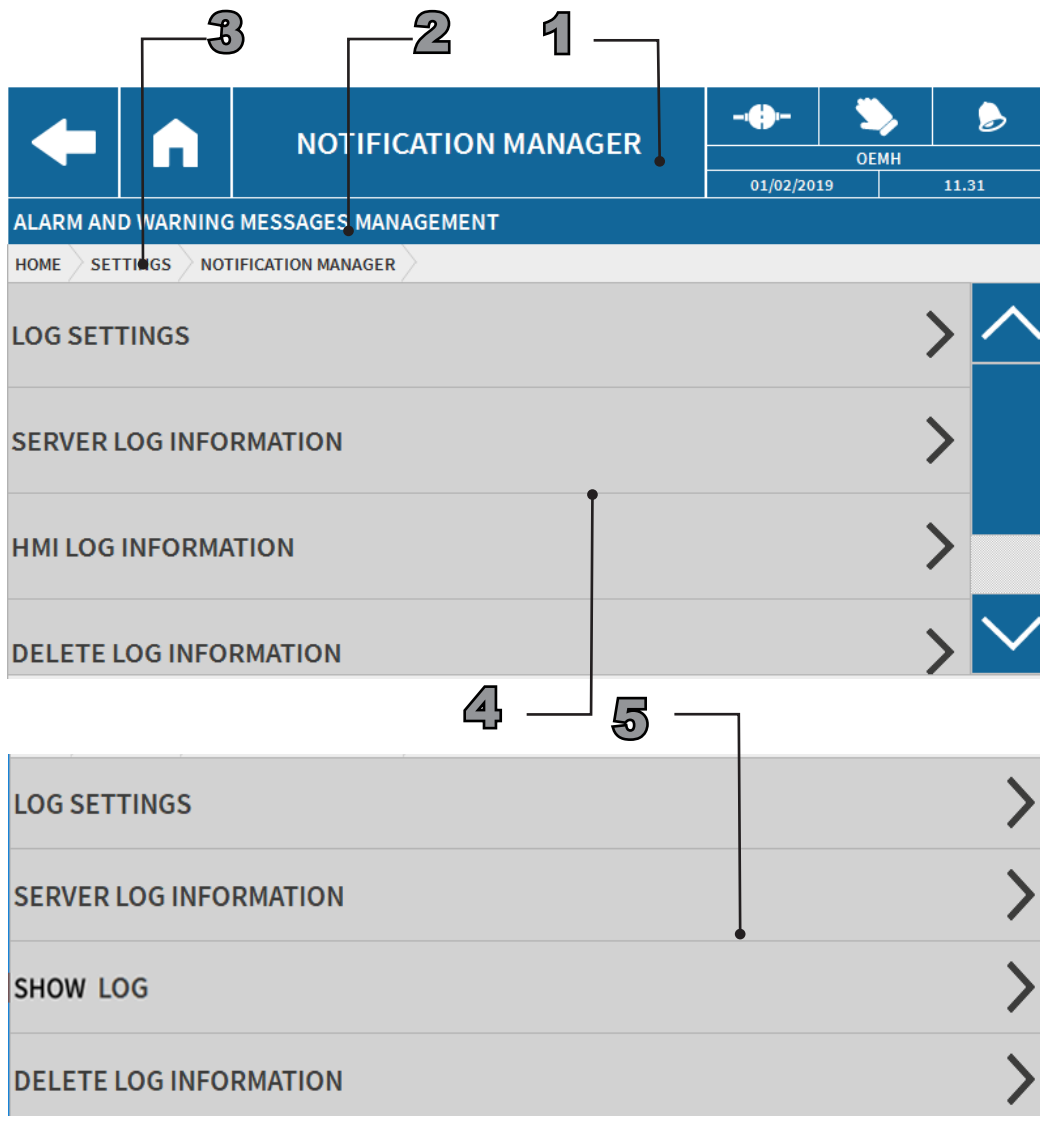


Fig.59. Main notification management screen

1. Screen title: **Notification management.**
2. Messages and descriptions area: **Alarm and warning message management.**
3. Navigation path: *Home > Settings > Notification Management.*
4. Working area (H.M.I. Version for PC):
  - **Log Information settings.**
  - **Show Master Node Log Information.**
  - **Show Log Information on HMI.**
  - **Delete Log Information.**
5. Working area (Remote Panel version):
  - **Log Information settings.**
  - **Display Log Information.**
  - **Delete Log Information.**

### 3.3.1 Log Information Settings

Use the **Log Information Settings** dashboard to define the contents of the Log file. To specify the contents of the Log, select one of the available options listed below:

1. Debug.
2. Info.
3. Note.
4. Warning.
5. Error.
6. Critical.
7. Alert.
8. Emergency.

The **“Debug”** level can be used to contain the maximum quantity of information. The **“Info”** level contains a sub-set of the information available for the **“Debug”** level. The same applies for the subsequent levels.

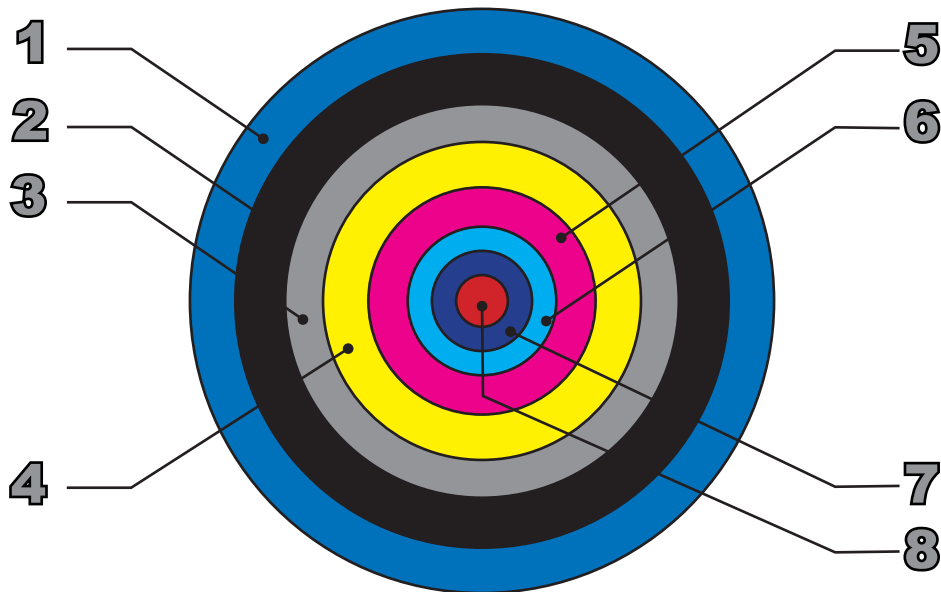


Fig.60. Diagram illustrating information available in the Log file.

We recommend that users do not alter the default selection, i.e. **“Note”**, since the size of the Log file depends on the selected option. In any event, Marposs customer service will be happy to offer advice on which level to use if it is necessary to choose an alternative option.

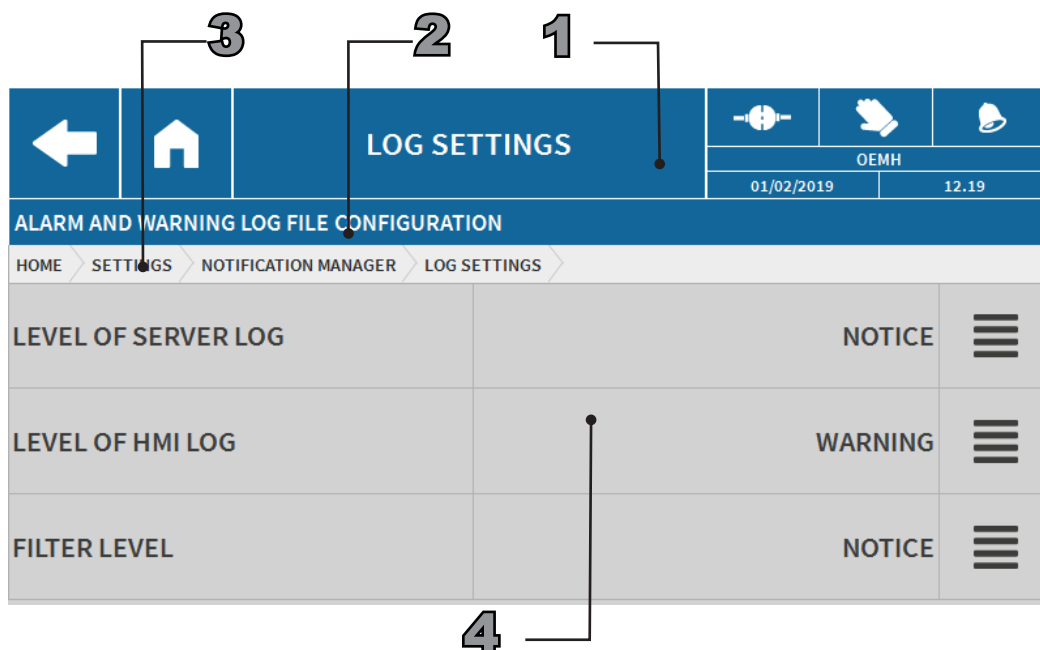


Fig.61. Log information settings screen

- 1 Screen title: **Notification management.**
- 2 Messages and descriptions area: **Alarm and warning message management.**
- 3 Navigation path: *Home > Settings > Notification Management.*
- 4 Working area:
  - **Server Log level.** Use the following dashboard to select the level to start from when saving the messages in the Log file.
  - **HMI Log level.** Use the following dashboard to select the level to start from when saving the messages in the HMI Log file.
  - **Log filter level.** Use this command to select the level to start from when viewing the messages on the display, so that it is possible to display a sub-set of the messages that are considered to be more representative, without deleting the rest. The messages are displayed on the Show log information dashboard.

DEBUG	<input type="radio"/>
INFO	<input type="radio"/>
NOTICE	<input checked="" type="radio"/>
WARNING	<input type="radio"/>

Fig.62. Filter settings and log level selection screen.

### 3.3.2 Show Master Node Log Information.

The **Master Node Show Log Information** dashboard displays the alarm and warning messages from the Log file, starting from the selected level.

1 Screen title: **Show Master Node Log Information.**

2 Messages and descriptions area: **View Log Information.**

3 Navigation path: *Home > Settings > Notification Management > Show Log Information.*

4 Reset alarms.

5 Working area:

- List of information available in the Log file.

Fig.63. Master Node Log information display screen

### 3.3.3 Show Log Information on H.M.I.

The **Show Log Information on HMI** dashboard displays the alarm and warning messages from the Log file, starting from the selected level.

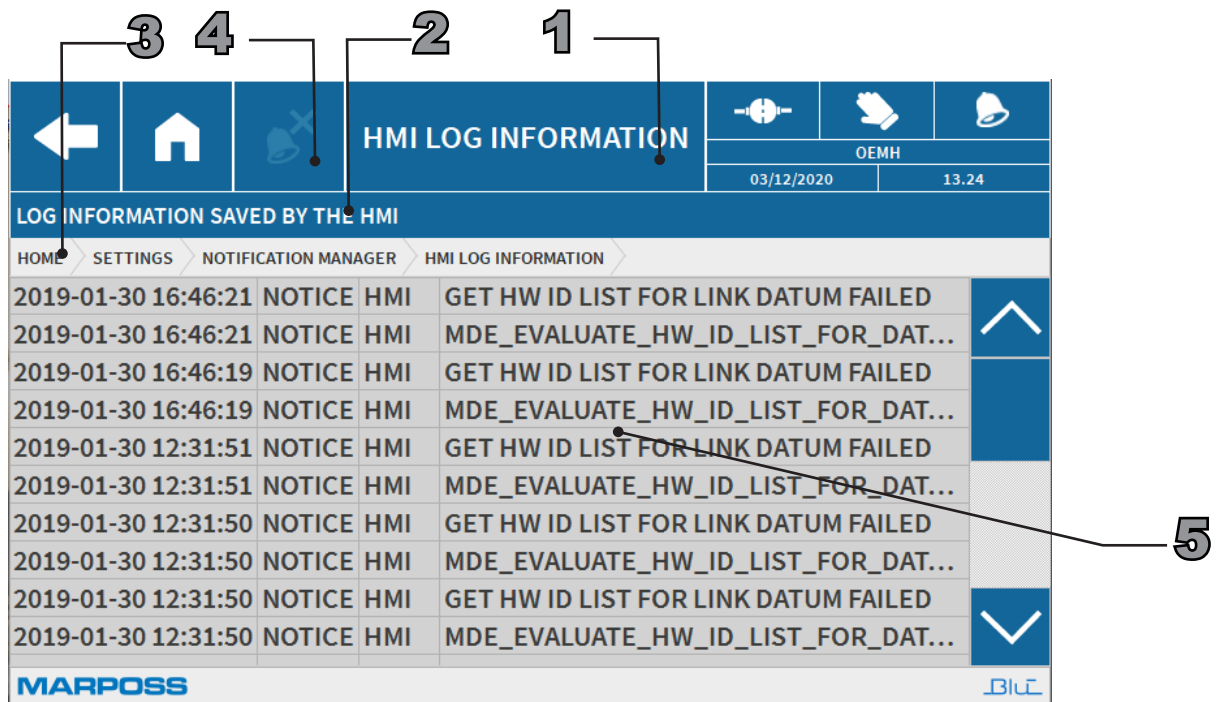



Fig.64. Master Node Log information display screen

- 1 Screen title: **Show Master Node Log Information.**
- 2 Messages and descriptions area: **View Log Information.**
- 3 Navigation path: *Home > Settings > Notification Management > Show Log Information.*
- 4 Reset alarms. Available in manual mode only .
- 5 Working area:
  - List of information contained in the Log, reserved for Marposs S.p.A. technical personnel.

### 3.3.4 Delete Log Information

Use the **Delete Log Information** dashboard to delete the Log file.

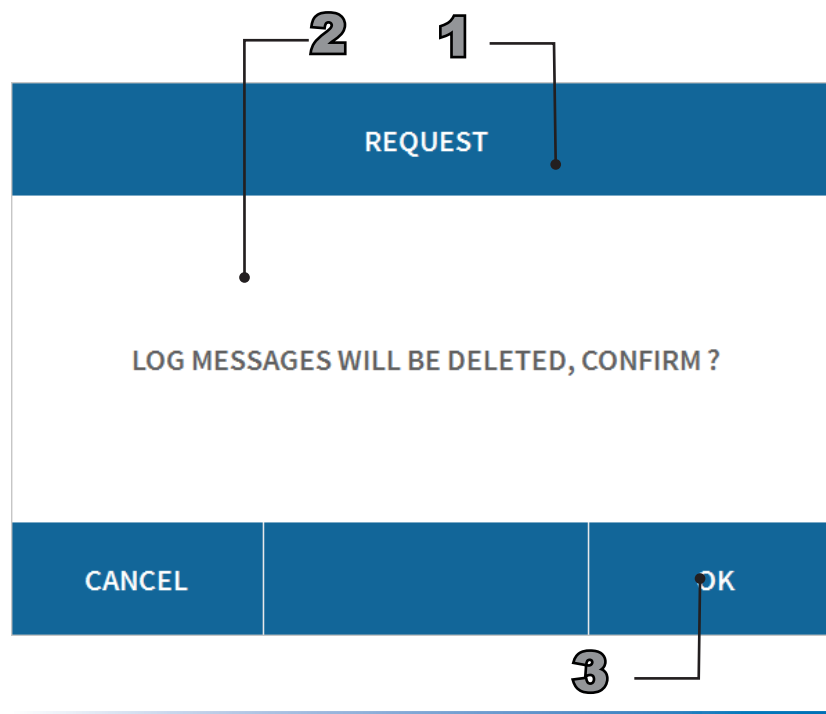


Fig.65. Log information display screen

1. Dashboard code number **MDREQUEST**
2. Messages and descriptions area: **This action will delete the Log files do you want to proceed?**
3. Navigation path: *Home* > *Settings* > Notification Management > **Delete Log Information**.
4. Press this key to confirm that you wish to delete the Log files.

#### WARNING

**This operation is irreversible!**

### 3.4 Users



Use the **Users** dashboard to manage the user accounts. In order to select between the various user profiles.

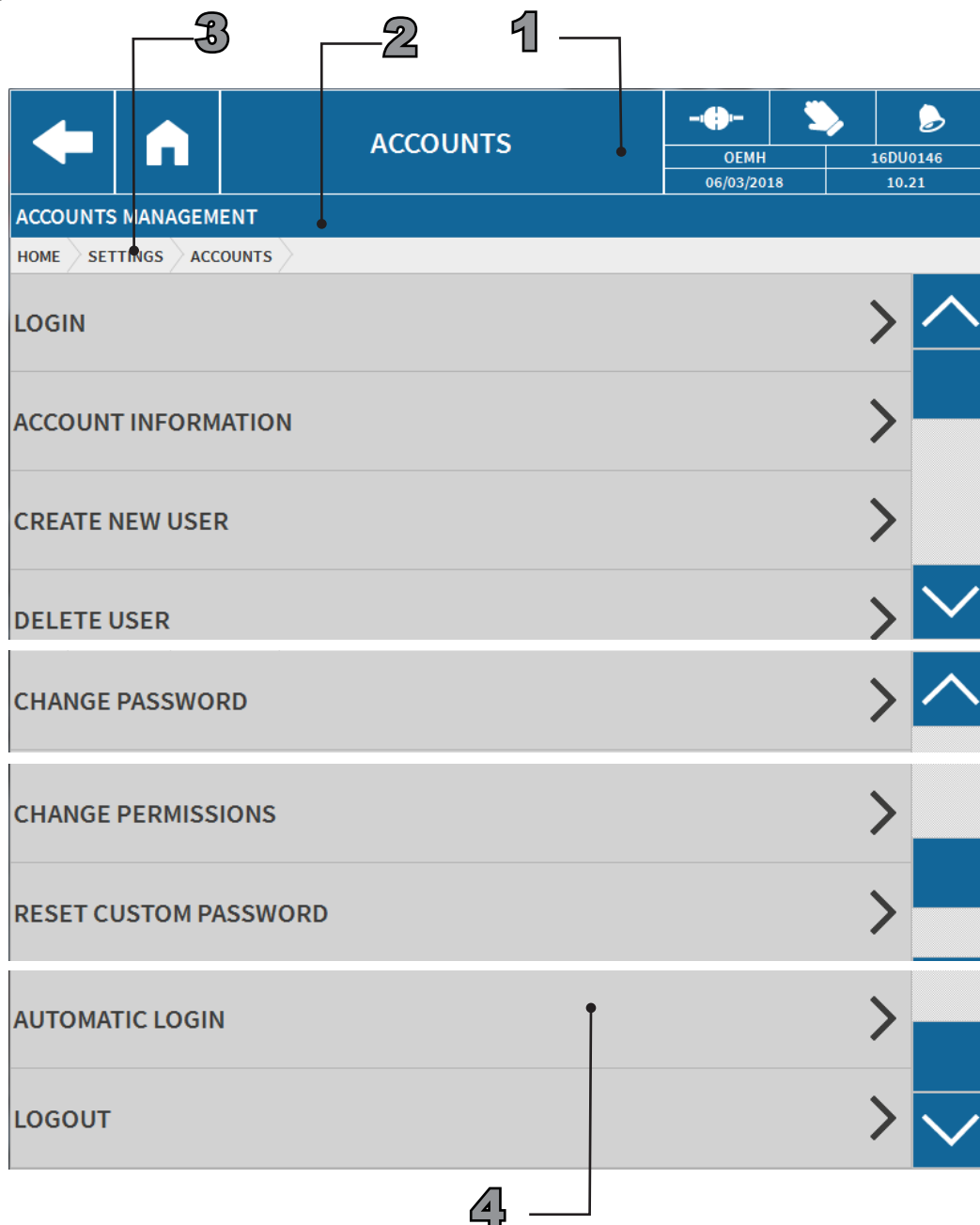


Fig.66. Main user management screen

1. Screen title: **Users**.
2. Messages and descriptions area: **Managing User Accounts**.
3. Navigation path: *Home > Settings > Users*.
4. Working area:
  - **Login.**
  - **User Information.**
  - **Create New User.**
  - **Delete User.**
  - **Modify Password.**
  - **Modify Permissions.**
  - **Reset Original Password.**
  - **Automatic Login.**
  - **Logout.**

N.B.

It is possible to access the Users dashboard at any time by double-clicking on the user area.

### 3.4.1 User profiles

Several default user profiles are available (see *Home > Settings> Users > Modify permissions (Selectable profiles)*).

ENDUSER1	<input type="radio"/>
ENDUSER2	<input checked="" type="radio"/>
ENDUSER3	<input type="radio"/>
OEM	<input type="radio"/>
OEMH	<input type="radio"/>

Fig.67. Available user profiles page

The following user profiles are available:

- **Guest:** *This is the level that corresponds to the lowest level of access permissions.* Guest users are not permitted to modify any of the accessible parameters apart from the “Programming” selection (see Part B2) and the “Settings -> Programming and Hardware” selection. **This level is normally used to consult the system in read-only mode.**
- **Enduser1:** *Basic level Operator.* Users who are only permitted to carry out operations directly involved in changing the work-piece (viewing, “ADJ” correction and “zeroing” reset operations). The programming menu is accessible in read-only mode. Such users are not permitted to modify or self-learn the Hardware parameters. **It is possible to create multiple “Enduser1” accounts, and the assigned operators may choose their own User Name and Password.**
- **Enduser2:** *Advanced operator.* This user is permitted to carry out all the operations assigned to level 1 users, in addition to modifying sets (but not creating new ones), and self-learning the Hardware parameters during the set-up procedures. **By definition, only one “Enduser2” profile may be created.**
- **Enduser3:** *Machine technician.* This user is permitted to carry out all the operations assigned to lower level users, in addition to modifying and creating new sets, performing configuration procedures, and carrying out a reset (if authorised by the OEM profile) in order to create or modify the display pages. **Such users may use the service tools provided for the end user. By definition, only one “Enduser3” profile may be created.**
- **OEM:** *Expands the permissions granted to Enduser3.* OEM level should be used when installing the device or when it is being serviced by the OEM. Users accessing at this level are permitted to modify the new set programming page, existing groups and programming levels. **Such users may use the service tools provided for the OEM.** By definition, only one “OEM” profile may be created.
- **OemH:** *Expands the permissions granted to the lower level OEM user,* so that users accessing at this level can also customise the permissions granted to the various end user levels. This is a “design OEM” level, meaning that it is reserved for use by personnel from the manufacturer of the machine tool that the **Blú LT** system is used on. **This level may be assigned to the same person who is capable of using the configurator to create the Marposs application. By definition, only one “OEMH” profile may be created.**

### 3.4.2 Login

Use the **Login** dashboard to activate the operator profile by entering the User Name and corresponding Password.

The screenshot shows the 'LOGIN' dashboard interface. At the top, there is a blue header bar with a back arrow, a home icon, and the title 'LOGIN'. To the right of the title are three icons: a clock, a hand, and a bell. Below these icons are two rows of text: 'OEMH' and '16DU0146' in the first row, and '06/03/2018' and '10.43' in the second row. Below the header is a blue bar with the text 'ACCOUNT LOGIN'. Underneath this is a breadcrumb navigation path: 'HOME > SETTINGS > ACCOUNTS > LOGIN'. The main area of the dashboard is divided into two sections: 'USER' and 'PASSWORD'. Each section has a large input field and a button with a right-pointing arrow. Numbered callouts are present: '1' points to the 'LOGIN' title, '2' points to the 'ACCOUNT LOGIN' bar, '3' points to the 'SETTINGS' breadcrumb, and '4' points to the 'PASSWORD' input field.

Fig.68. Login Dashboard

1. Screen title: **Login**.
2. Messages and descriptions area: User login.
3. Navigation path: *Home* > *Settings* > *Users* > **Login**
4. Working area:
  - **User**. Displays the name of the user to be modified.
  - **Password**. Enter the user Password.

**N.B.:**

The default passwords are listed in a separate document.



### 3.4.3 User information

Use the **User Information** dashboard to check the identity and access level of the current user.

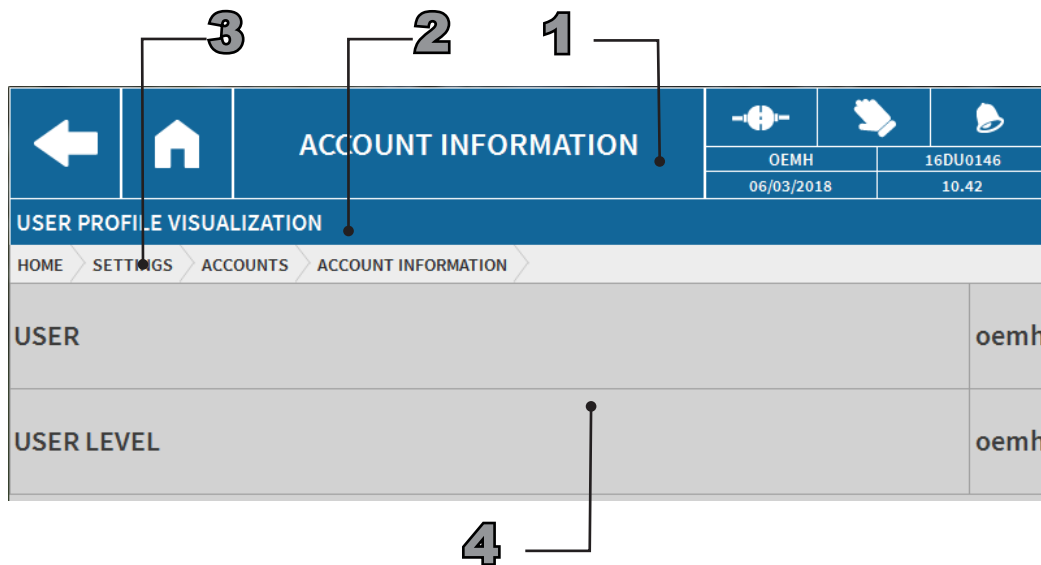


Fig.69. User information screen

1. Screen title: **User information**.
2. Messages and descriptions area: **User profile display**.
3. Navigation path: *Home > Settings > Users > User Information*.
4. Working area:
  - **User**. Indicates the name of the current user.
  - **User Level**. Indicates the access level associated with the current user.

3.4.4 Create new user

Use the **Create New User** dashboard to create a new user profile (**End user 1** level), assigning it a new consisting of at least four characters, and a protection password consisting of at least four characters.

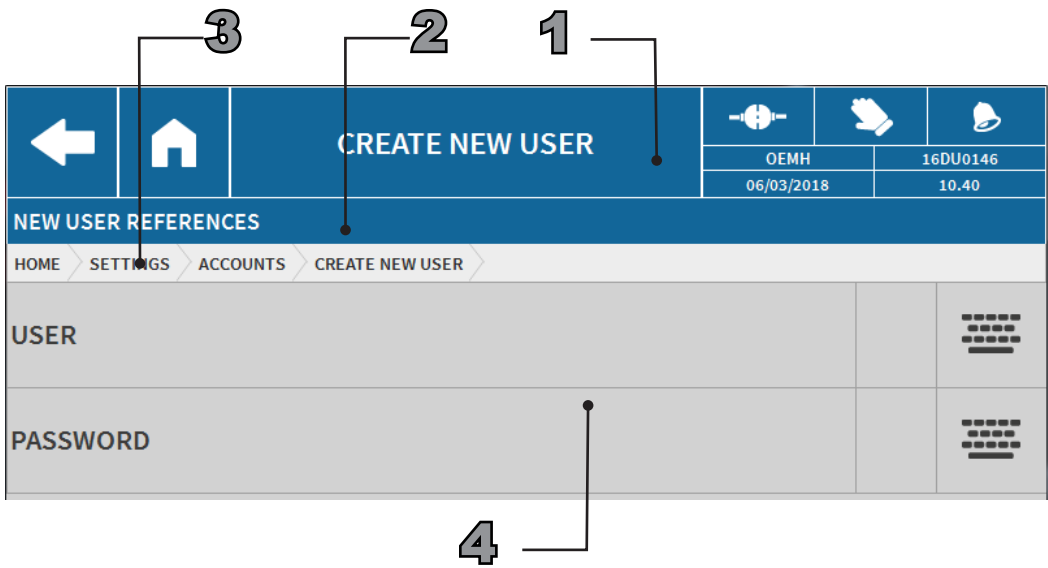


Fig.70. Create new user screen

- 1. Screen title: **Create New User**.
- 2. Messages and descriptions area: **New user reference**.
- 3. Navigation path: *Home > Settings > Users > Create New User*.
- 4. Working area:
  - **User**. Assign the new user name. In the example: **Operator1**.

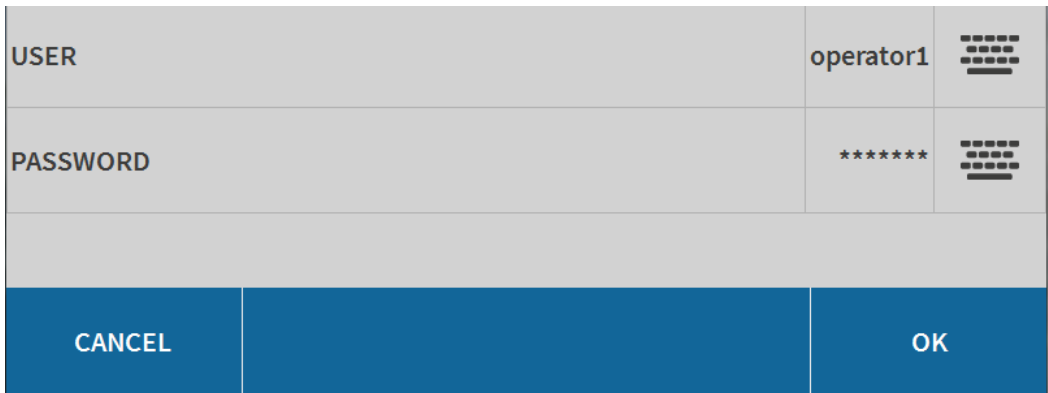


Fig.71. New user created sample page

- **Password**. Assign a four character password to the new user.

**N.B.:**  
Only Enduser3 level or higher users may create new Enduser1 profiles.

## 3.4.5 Delete user

Use the Delete User dashboard to eliminate a newly created user with the profile Enduser1.

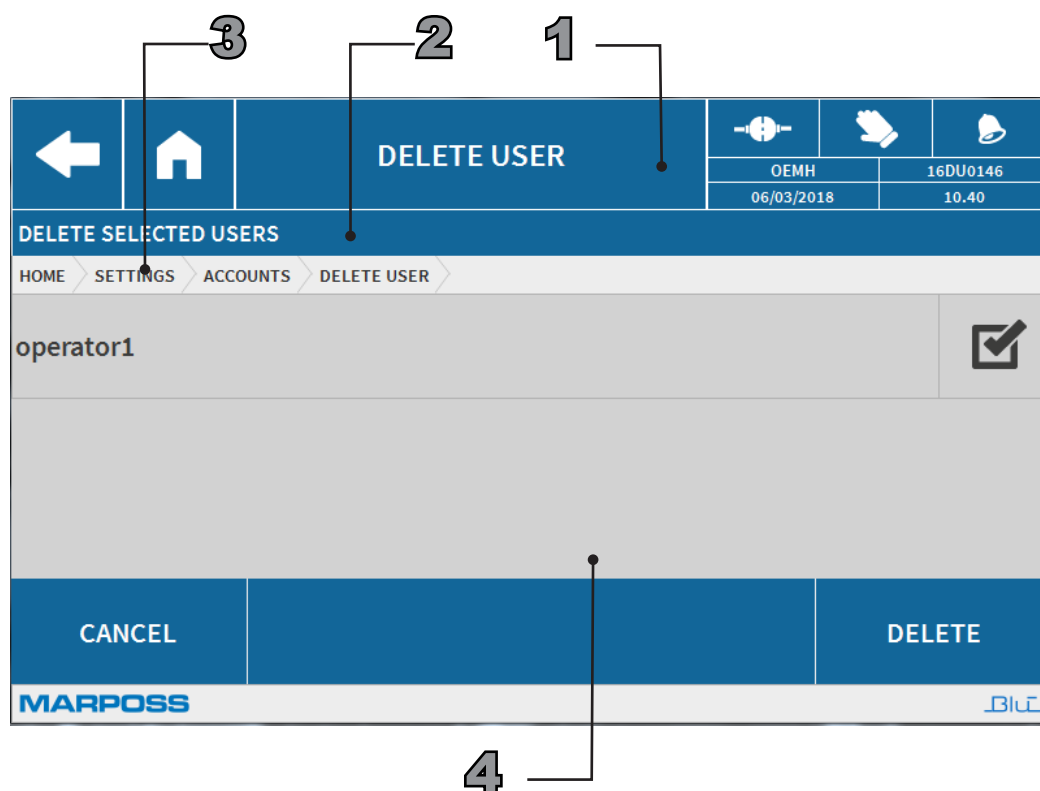


Fig.72. Delete created user profile screen

- 1 Screen title: **Delete user.**
- 2 Messages and descriptions area: **Delete selected users.**
- 3 Navigation path: *Home > Settings > Users > Delete User.*
- 4 Working area. List of recently created users. In the example: **bobby, operator1.**

**N.B.**

This operation is possible when logging in at Enduser3 level, or higher. The system user profiles **MAY NOT** be deleted.

### 3.4.6 Modify password

Use the **Modify Password** dashboard to modify the password for the active profile.

The screenshot shows the 'CHANGE PASSWORD' screen. At the top, there is a blue header bar with a back arrow (3), a home icon, and the title 'CHANGE PASSWORD' (1). To the right of the title are three icons: a clock, a hand, and a bell. Below these icons are two rows of text: 'OEMH' and '16DU0146' in the first row, and '06/03/2018' and '10.35' in the second row. Below the header is a blue bar with the text 'SEQUENCE OF NEEDED ACTIONS' (2). Below this is a breadcrumb navigation path: 'HOME > SETTINGS > ACCOUNTS > CHANGE PASSWORD' (3). The main area contains three input fields: 'INSERT OLD PASSWORD', 'INSERT NEW PASSWORD', and 'CONFIRM NEW PASSWORD'. Each field has a corresponding password strength indicator on the right. At the bottom, there is a blue bar with the 'MARPOSS' logo on the left and the 'BLU' logo on the right (4).

Fig.73. Modify password screen

- 1 Screen title: **Modify password**.
- 2 Messages and descriptions area: **Sequence of actions**.
- 3 Navigation path: *Home > Settings > Users > Modify Password*
- 4 Working area:
  - **Enter Current Password**. Enter the password assigned to the current user.
  - **Enter New Password**. Enter the new password, selecting four numbers between 0 and 9.
  - **Confirm New Password**. Enter the new password again to confirm the modification.

### 3.4.7 Modify permissions

Use the **Vary Permissions** dashboard to define the minimum user profile level necessary to perform each of the actions in the list.

1. Screen title: **Vary permissions**.

2. Messages and descriptions area: **List of actions where it is possible to modify the user profile level.**

3. Navigation path: *Home > Settings > Users > Modify Permissions*

4. Working area:

LIST OF THE ACTIONS WHOSE PERMISSION PROFILE MAY BE CHANGED			
HOME	SETTINGS	ACCOUNTS	CHANGE PERMISSIONS
MODIFY PROGRAMMING	ENDUSER2	≡	⬆
MODIFY HW PROGRAMMING VIEW	ENDUSER2	≡	
MODIFY HW PROGRAMMING	OEM	≡	
CREATE SET	ENDUSER3	≡	⬇
MODIFY SET	ENDUSER2	≡	⬆
DELETE SET	ENDUSER3	≡	
COPY SET	ENDUSER3	≡	
CREATE DASHBOARD	ENDUSER3	≡	⬇
MODIFY DASHBOARD	ENDUSER3	≡	
DELETE DASHBOARD	ENDUSER3	≡	
COPY DASHBOARD	ENDUSER3	≡	⬇

Fig.74. Vary permissions screen

1. Screen title: **Vary permissions**.
2. Messages and descriptions area: **List of actions where it is possible to modify the user profile level.**
3. Navigation path: *Home > Settings > Users > Modify Permissions*
4. Working area:

- **Modify programming.** This function permits the operator to modify the minimum user profile level at which it is permitted to perform the actions available at the address: *Home > Programming*.

IP	IP01	>
PP	PP01	>
AE	AE01	>

Fig.75. Programming Dashboard

- **Modify HW data display.** Use this function to modify the minimum user profile level at which it is permitted to display only the parameters available at the following address: *Home > Settings> HW Programming*.

A	ME LVDT 4 SENSORS	>
G	RETRACTION	AUX A >
B	ME LVDT HBT 2 SENSORS	>

Fig.76. HW Programming dashboard *with* the option of viewing the data

A	ME LVDT 4 SENSORS	>
G	RETRACTION	AUX A >
B	ME LVDT HBT 2 SENSORS	>

Fig.77. HW Programming dashboard *without* the option of viewing the data

- **Creating a Set.** This function permits the operator to modify the minimum user profile level at which it is permitted to perform the actions available at the address: *Home > Programming > Sets (e.g.: IP01) > List of Sets*.

	0	SINGLE IN-PROCESS	>
	0	CONCURRENT IN-PROCESS	>
	0	ACTIVE POSITIONING	>
	0	PASSIVE POSITIONING	>

Fig.78. Dashboard showing the available sets selection list

- **Modify Set.** This function permits the operator to modify the minimum user profile level at which it is permitted to perform the actions available at the address: *Home > Programming > Sets (e.g.: IP01) > Data group (e.g.: Single In-Process)*.



Fig.79. Key for modifying the set

- **Delete Set.** This function permits the operator to modify the minimum user profile level at which it is permitted to perform the actions available at the address: *Home > Programming > Sets (e.g.: IP01) > Data group (e.g.: Single In-Process)*.



Fig.80. Key for deleting the set

- **Copy Set.** This function permits the operator to modify the minimum user profile level at which it is permitted to perform the actions available at the address: *Home > Programming > Sets (e.g.: IP01) > Data group (e.g.: Single In-Process)*.



Fig.81. Key for copying a set

- **Modify/Copy/Delete/Create Dashboard.** This function permits the operator to modify the minimum user profile level at which it is permitted to perform the actions available at the address: *Home > Dashboards > List of Sets*.



Fig.82. Key for modifying/copying/deleting/creating a set.

N.B.  
By default, this operation is restricted to the “OEMH” level user profile.

### 3.4.8 Reset original passwords

Use the **Reset Original Passwords** dashboard to restore any passwords that have been modified to the original factory settings.

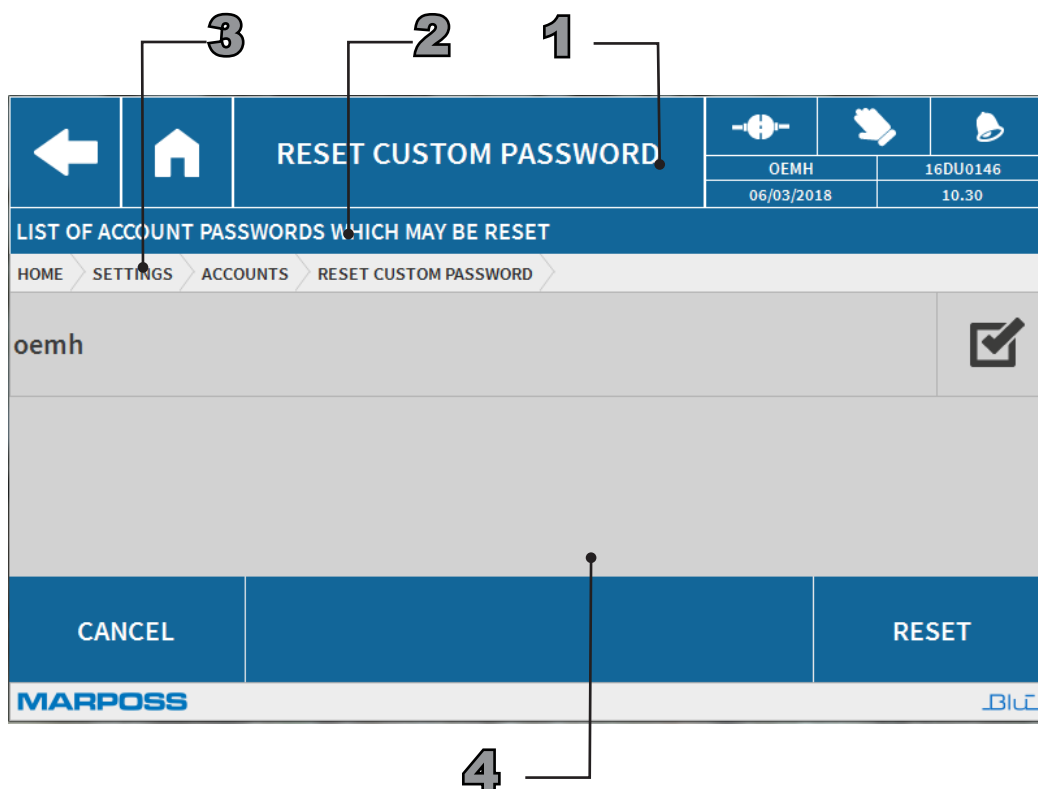


Fig.83. Reset original passwords screen

1. Screen title: **Reset Original Passwords**.
2. Messages and descriptions area: **List of actions where it is possible to modify the user profile level.**
3. Navigation path: *Home > Settings > Users > Reset Original Passwords*.
4. Working area: List of user levels where the password has been modified.

**N.B.**

This operation is restricted to the “OEMH” level user profile.



### 3.4.9 Automatic Login

The **Automatic Login** dashboard may be used to avoid the need to enter the login and password credentials if the (☑) functions are enabled.

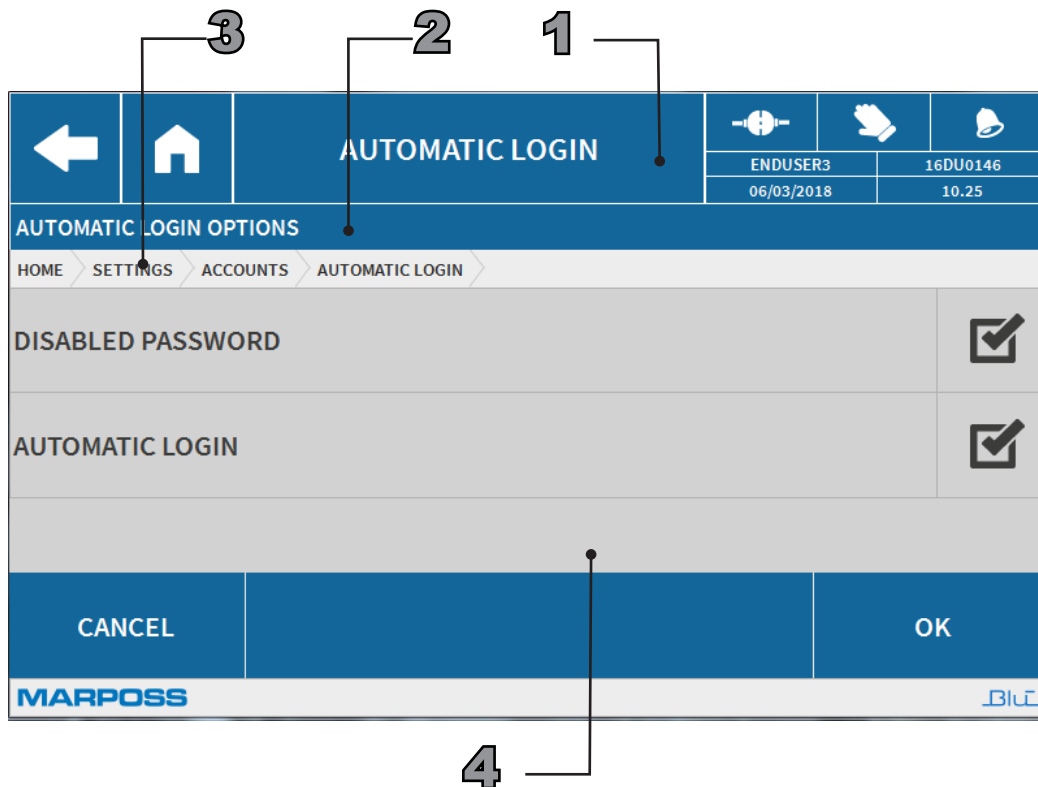


Fig.84. Automatic Login options screen

1. Screen title: **Automatic Login**.
2. Messages and descriptions area: **Automatic Login options**.
3. Navigation path: *Home > Settings > Users > Automatic Login*.
4. Working area:
  - **Disable password**. Disable the requirement for the current user to enter the password for all the operations where it is requested.
  - **Automatic Login**. Enables the user to access the system without logging in.

#### N.B.

If both functions are enabled, the selected user profile will be available as soon as the equipment is switched on.

This operation is restricted to the “ENDUSER2” and “ENDUSER3” user levels.

### 3.4.10 Log out

Use the **Logout** dashboard to log out from the current profile. Once the user has logged out, the active profile reverts to **Guest**.

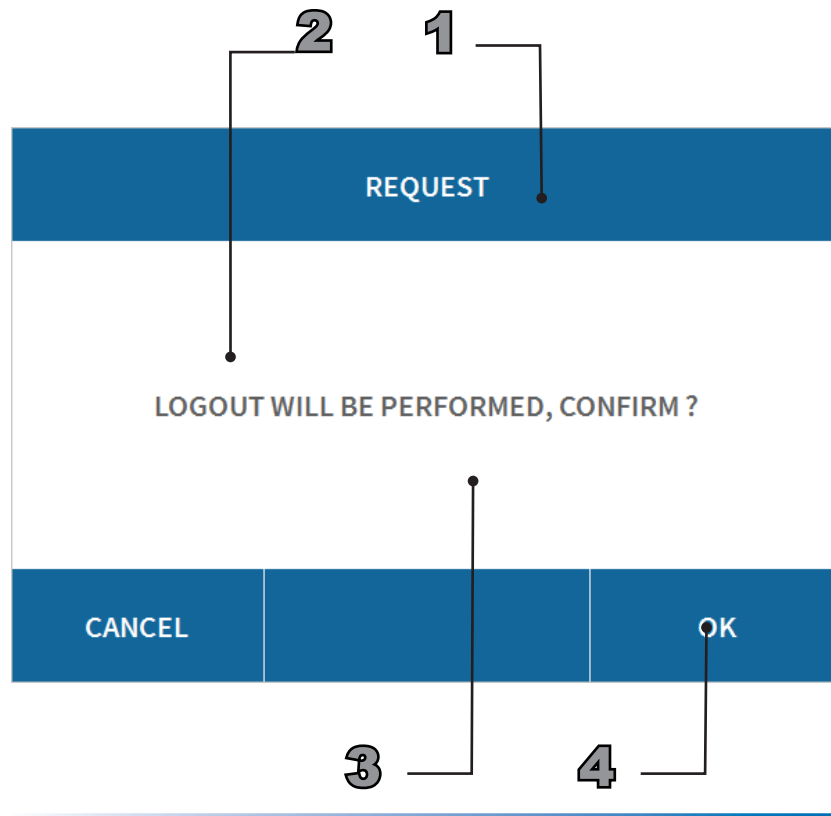


Fig.85. Log out screen

1. Dashboard code number **MDREQUEST**
2. Messages and descriptions area: **Proceed with log out?**
3. Navigation path: *Home > Settings > Users*.
4. Confirm log out key.

### 3.5 Backup & Restore



Use the **Backup & Restore** dashboard to manage programmed data save and restore operations.

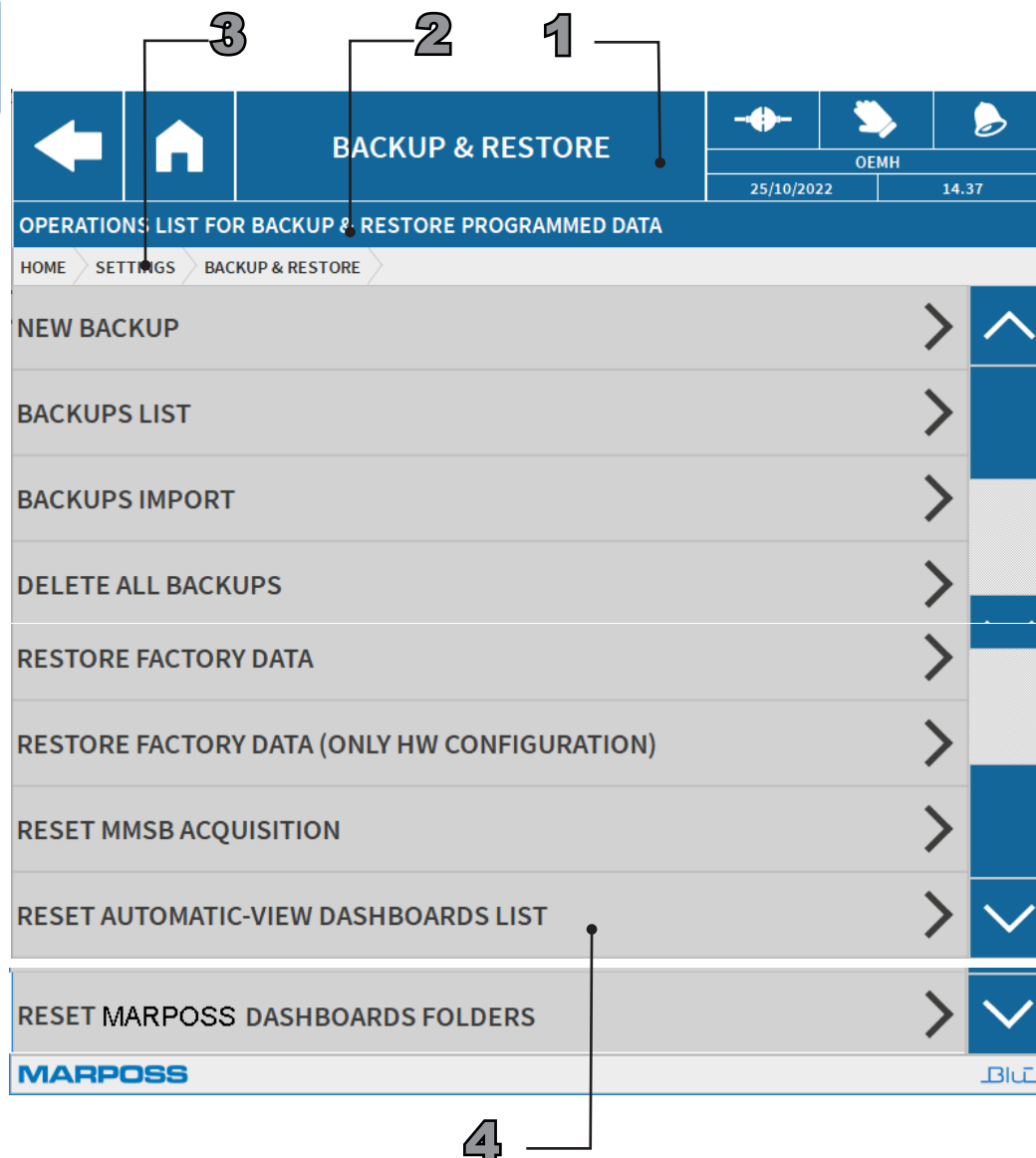


Fig.86. Main save and restore screen

1. Screen title: **Backup & Restore**.
2. Messages and descriptions area: **List of programmed data save & restore operations**.
3. Navigation path: *Home > Settings > Backup & Restore*.
4. Working area:
  - **Create new Backup.**
  - **List of Backups.**
  - **Copy Backups from External Memory.**
  - **Delete all backups.**
  - **Restore Factory Data.**
  - **Restore Factory Data (hardware configuration only).**
  - **Restore acquisition on MMSB.**
  - **Reset Automatic-view Dashboard List.**
  - **Reset Marposs Dashboards Folders.** Available on remote panel only.

### 3.5.1 New Backup

Use the **New Backup** dashboard to create a new backup copy of the:

- The data contained in the database.
- The customised settings implemented on the Human Interface.
- A list of the created screens.
- Logs list.

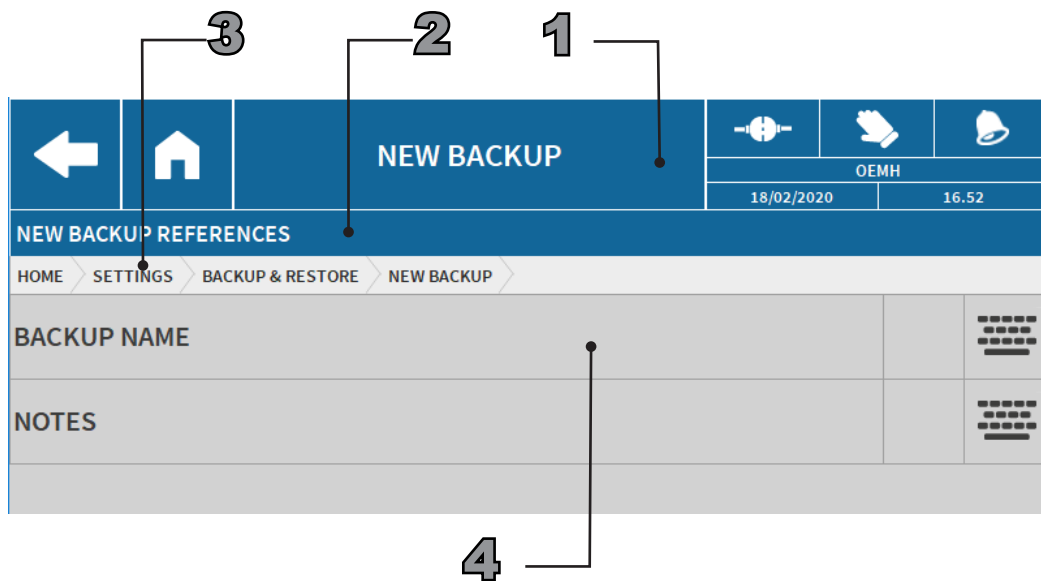


Fig.87. New backup screen

1. Screen title: **New Backup**.
2. Messages and descriptions area: **New backup references**.
3. Navigation path: Home > Settings > Backup & Restore > **New Backup**.
4. Working area:
  - **Backup name**. Assigns a name to the backup copy.
  - **Notes**: Use this command to insert a short message that describes the contents of the backup.

When the operation is complete, the following dashboard appears

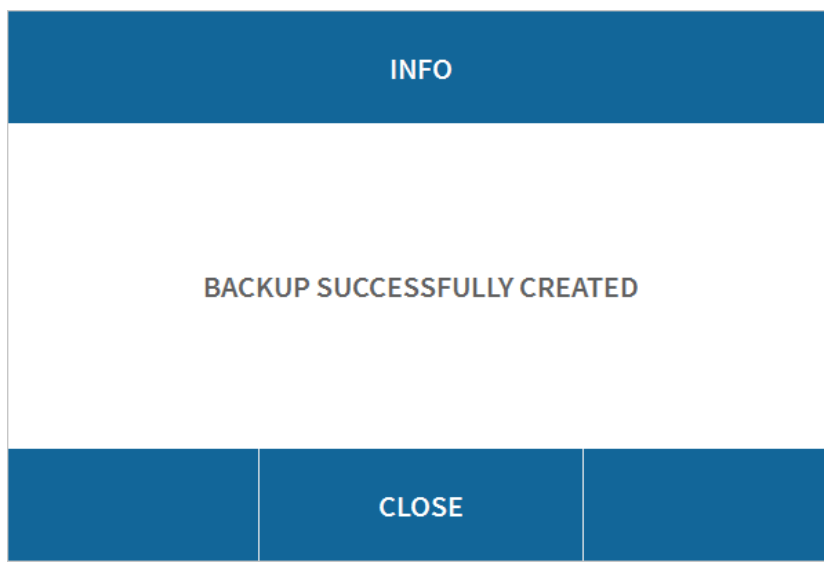


Fig.88. Confirm new backup successful screen

### 3.5.2 List of Backups

The **List of Backups** dashboard displays all the backup copies that have been created.

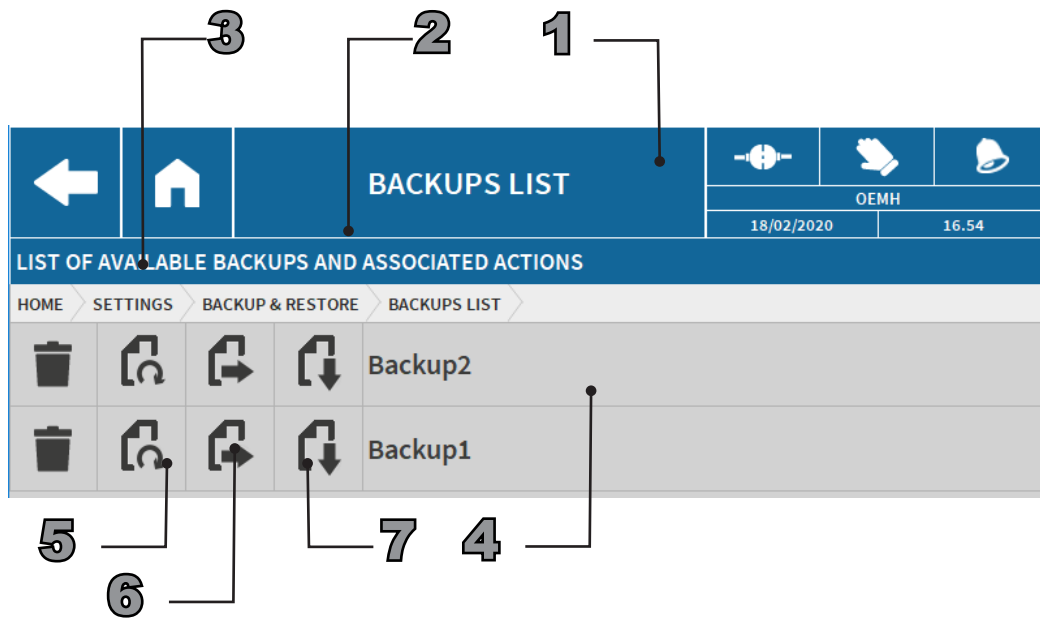


Fig.89. Backups list screen

1. Screen title: **List of Backups**.
2. Messages and descriptions area: **List of the available backup copies and the associated actions**.
3. Navigation path: *Home > Settings > Backup & Restore > List of Backups*.
4. Working area: List of backup copies that have been created. In the example: **Backup1, Backup2**.
5. Restore key: Use this function to execute a selective restore of the following parameters:
  - All;
  - Dashboards,
  - Application Data;
  - Hardware and mechanical data;
  - Server settings;
  - User settings.

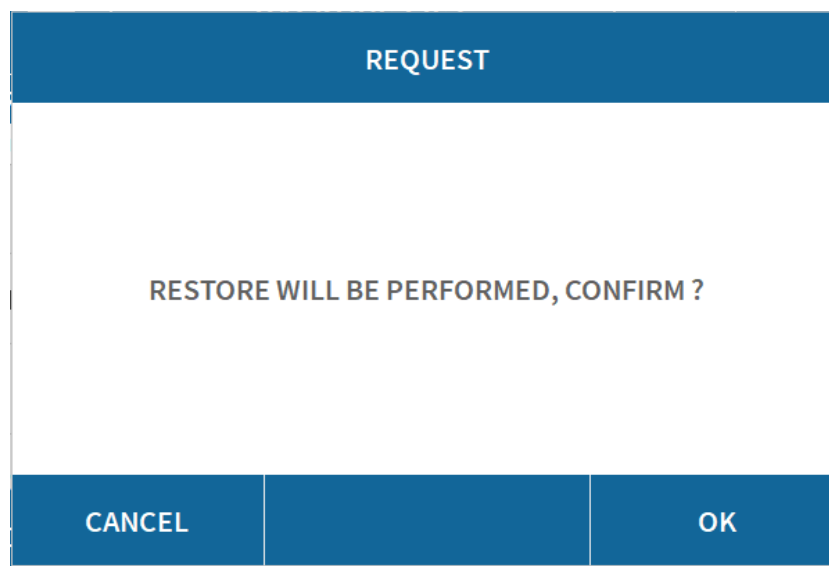


Fig.90. Restore from selected backup screen

After selecting “OK” the system requests user to reboot the Master Node.

6. Export to external driver key: Press this key to select which external memory to save the data to.

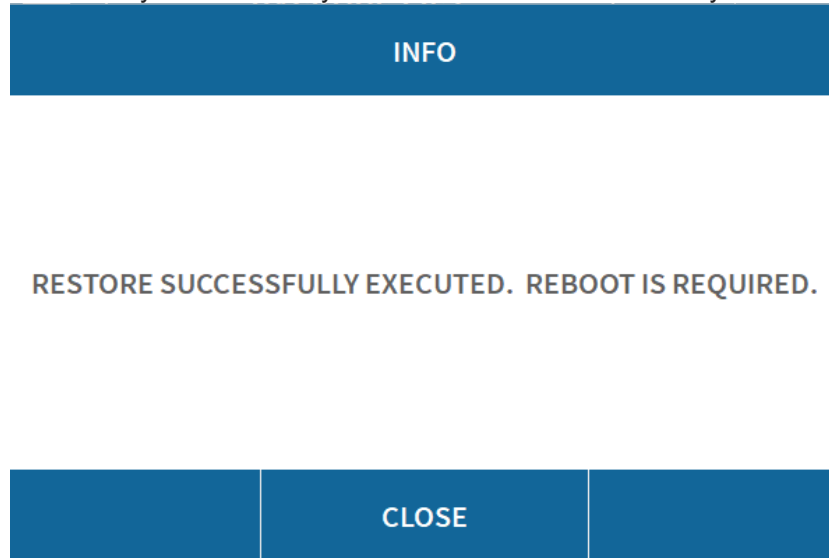


Fig.91. Restore from selected backup screen

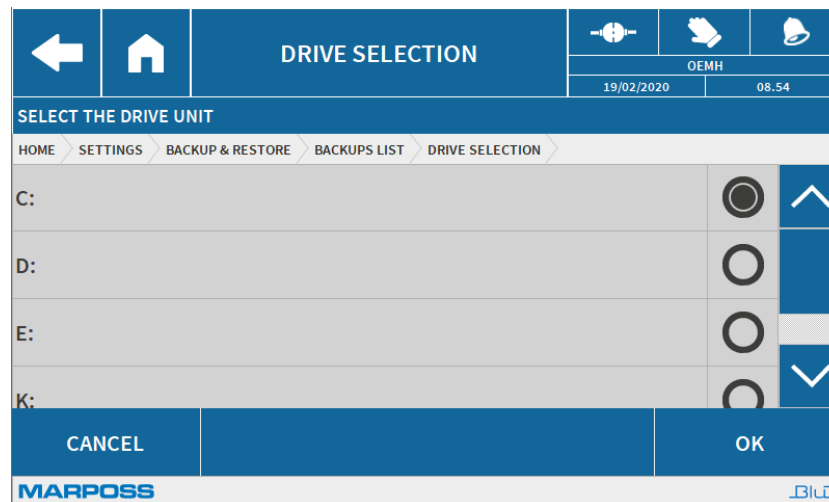


Fig.92. Export selected backup screen

7. Export key. Press this key to copy the selected backup to and external (USB) memory.

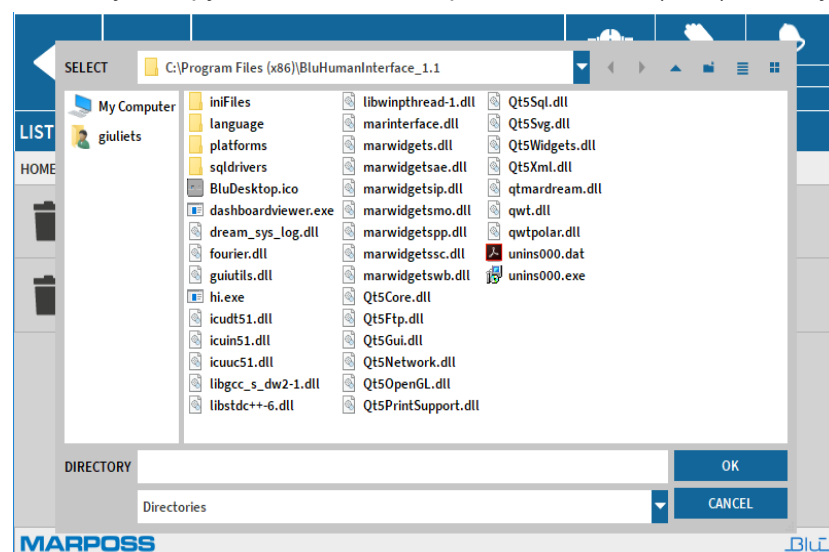
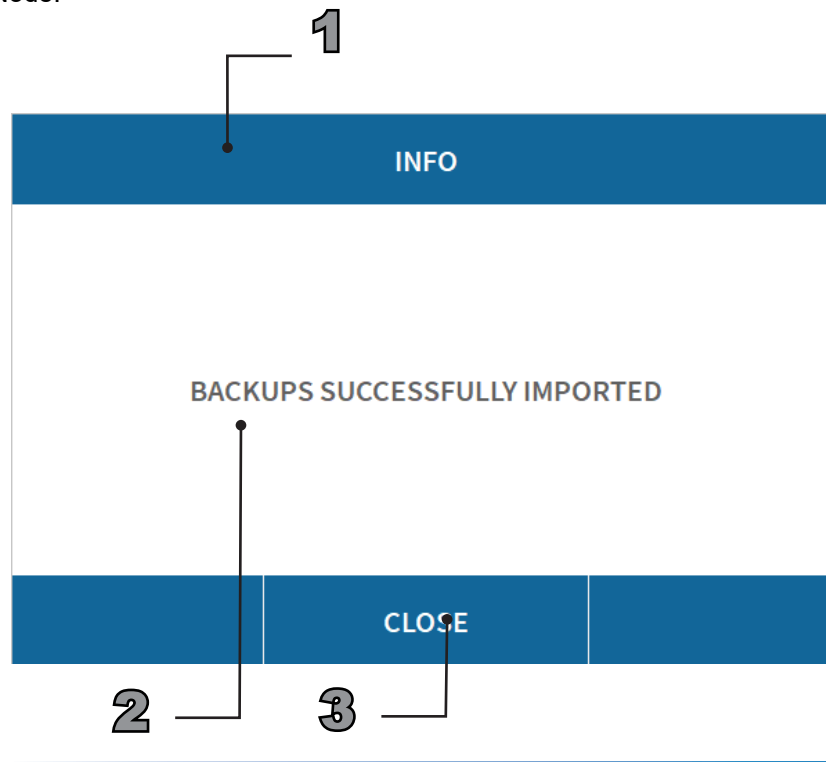


Fig.93. Export selected backup screen

### 3.5.3 Copy Backups from External Memory

Use the Copy Backups from External Memory dashboard to transfer previously saved backups from an external USB memory to the Master Node.



*Fig.94. Copy backups from external memory screen*

1. Dashboard code number **INFO**
2. Messages and descriptions area: **Backups copied successfully from external memory**
3. Close dashboard key

### 3.5.4 Delete all backups

The **Delete all backups** dashboard may be used to delete all the backups created previously.

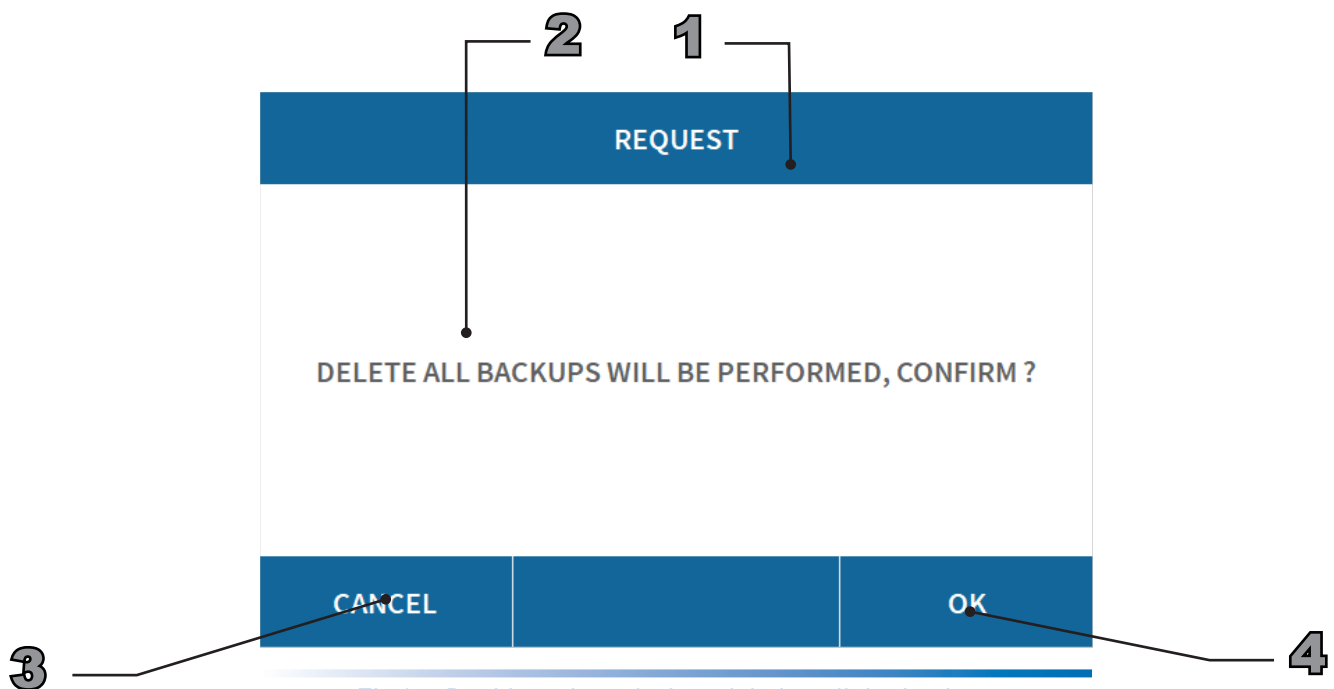


Fig.95. Dashboard used when deleting all the backups

1. Dashboard code number **REQUEST**
  2. Messages and descriptions area: **All backups will be deleted. Confirm?**
  3. Press this button to cancel the operation.
  4. Press this button to confirm the operation.
- After pressing the Confirm button **4** Fig.95, the following dashboard Fig.96 appears.

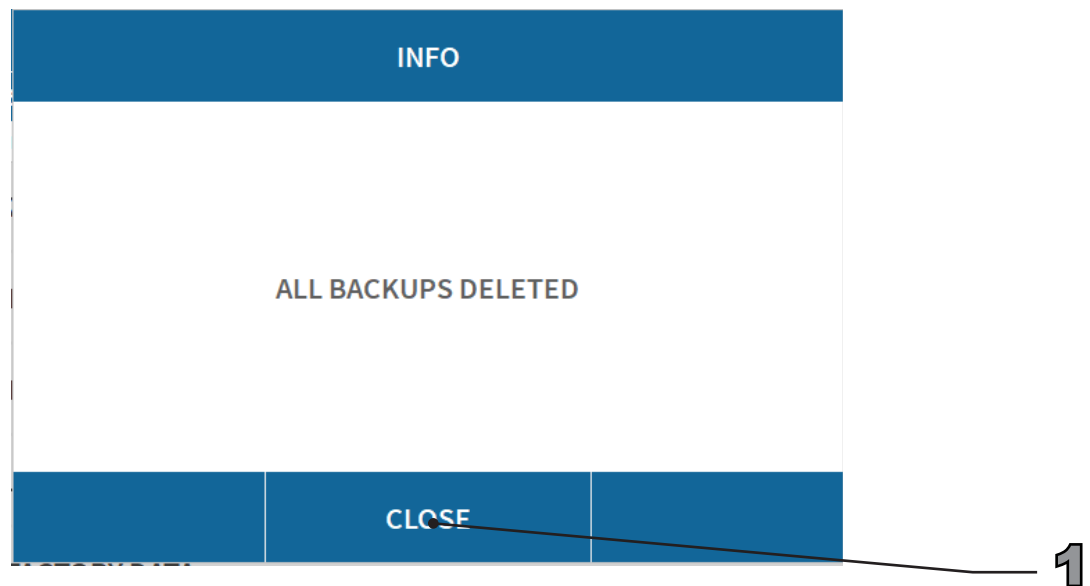
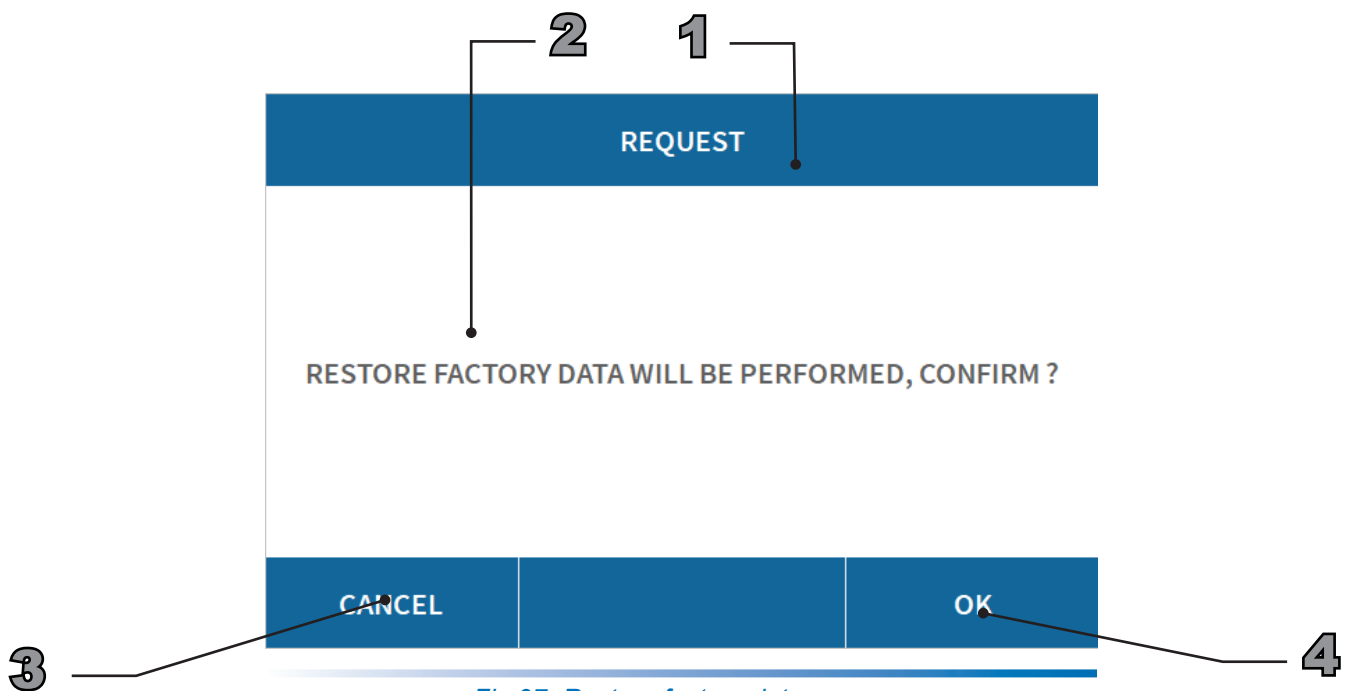


Fig.96. Screen used when confirming the operation



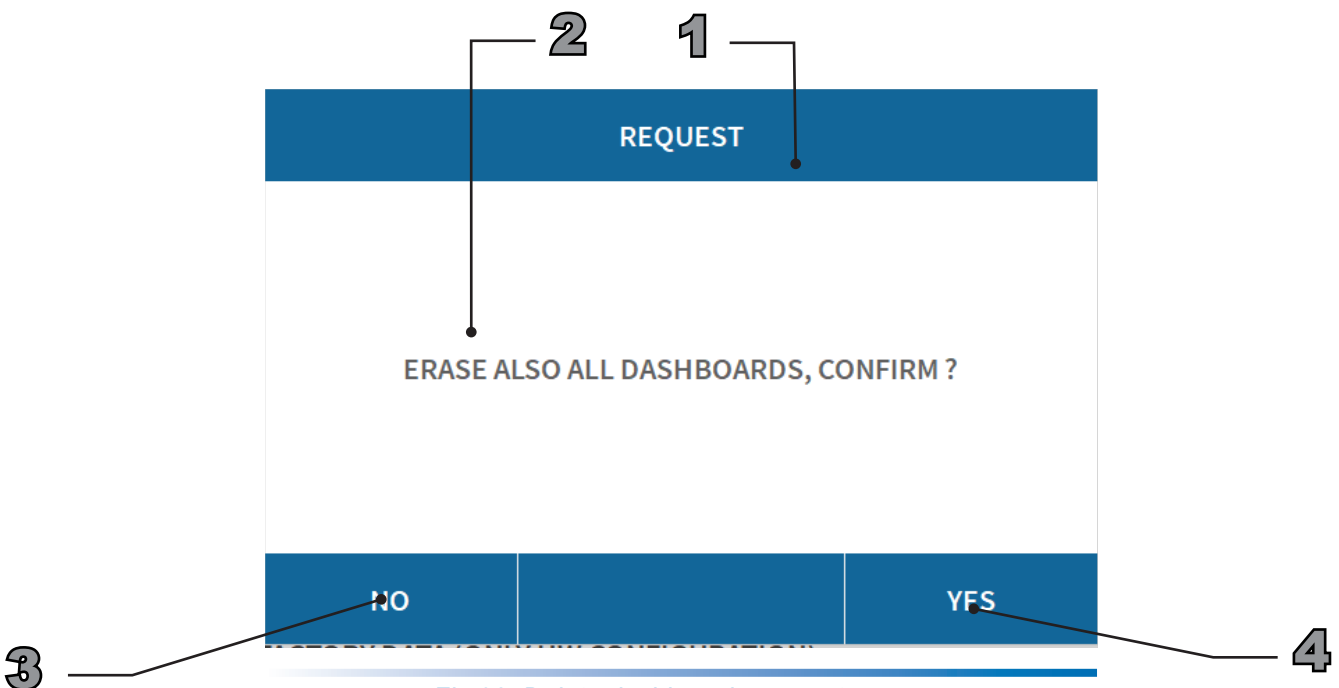
### 3.5.5 Restore Factory Data

Use the **Restore Factory Data** dashboard to reset the system configuration to the factory settings.



*Fig.97. Restore factory data screen*

1. Dashboard code number **REQUEST**
  2. Messages and descriptions area: **This action will restore the factory settings. Confirm?**
  3. Press this button to cancel the operation.
  4. Press this button to confirm the operation.
- Press the "OK" button ref. 4 Fig.97 to delete all the dashboards, confirm the operation by pressing "YES".



*Fig.98. Delete dashboards request screen*

Once the procedure is complete, press the “Save” button ref. 1 Fig.99 at this point, the user is requested to reboot the Master Node to complete the restore procedure.

CODE: SYS.W005

27/10/2022 15:15

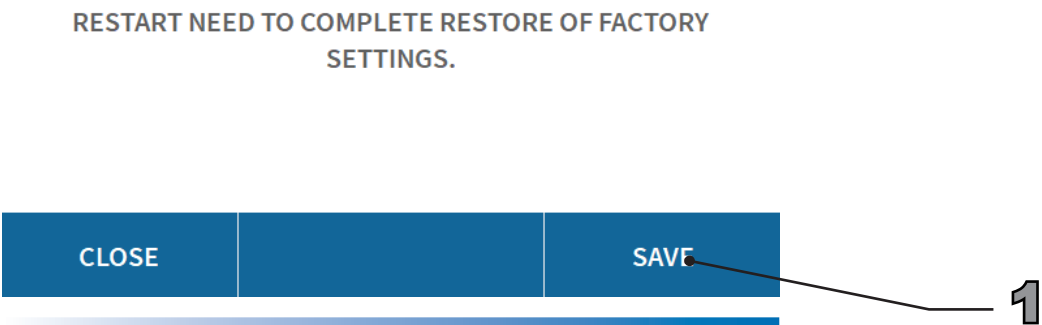


Fig.99. Confirm restart from Master node screen

WARNING

This operation is irreversible!

If the “Erase all the dashboards” procedure has also been executed via the HMI, all the dashboards present at the address “C://.../More/Setting/Option/HMI client/Dashboard option” are permanently deleted and cannot be restore by means of the “Backup & Restore” function. Therefore, we recommend saving a local copy of the folders present at the above address.

3.5.6 Restore factory Data (hardware configuration only)

Use the **Restore Factory Data** dashboard to reset the system hardware configuration only to the factory settings.

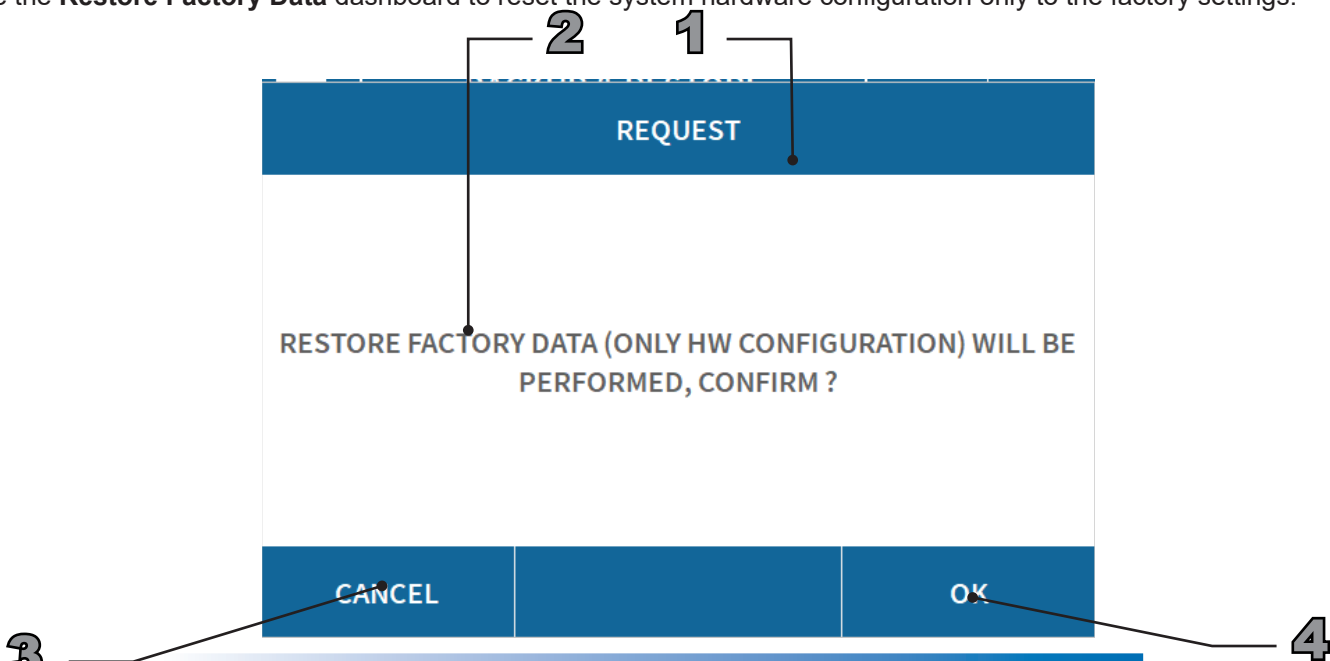


Fig.100. Screen used when restoring the factory data (HW configuration only)

- 1. Dashboard code number **REQUEST**
- 2. Messages and descriptions area: **Factory data will restored (hardware configuration only). Confirm?**
- 3. Press this button to cancel the operation.
- 4. Press this button to confirm the operation.

3.5.7 Reset acquisition on MMSB

The **Reset MMSB Acquisition** forces the system to reread the node number and serial number.

**WARNING**  
This procedure should be carried out when two or more nodes of the same type are installed on the same network and one is repositioned or replaced. If the system is not forced to reread these values, it may result in a discrepancy between the position and serial number of the node in question.

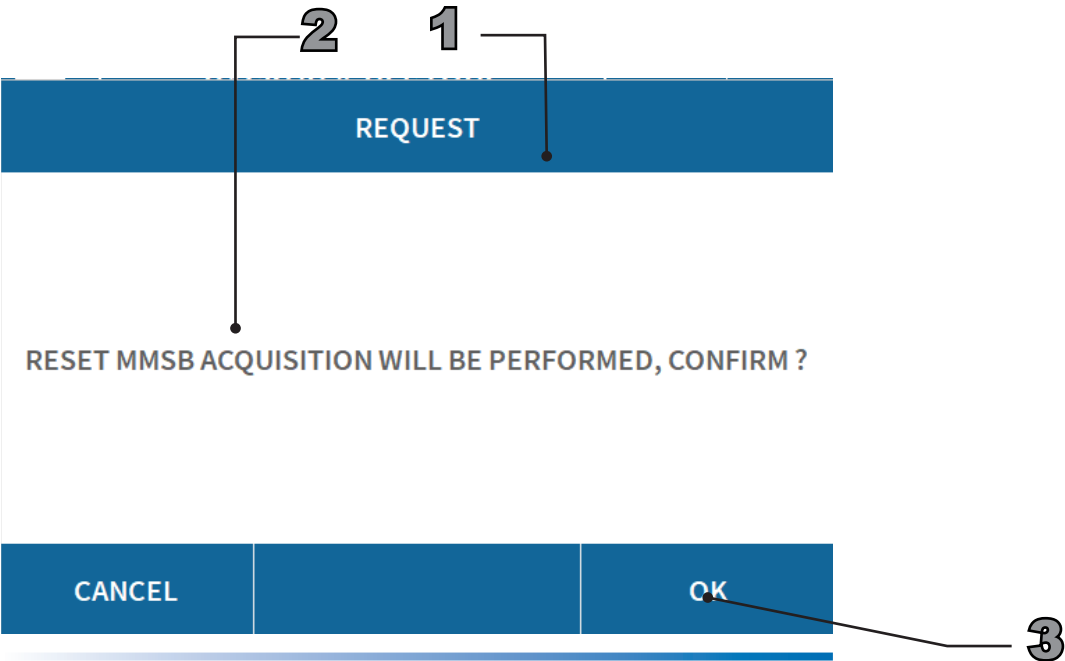


Fig.101. Copy backups from external memory screen

- 1 Dashboard code number **REQUEST**
- 2 Messages and descriptions area: **Reset MMSB acquisition in progress Do you wish to proceed?**
- 3 Press this button to confirm the operation.
- 4 Once the procedure is complete, the user is requested to reboot the Master Node so as to acquire the serial numbers of the nodes.

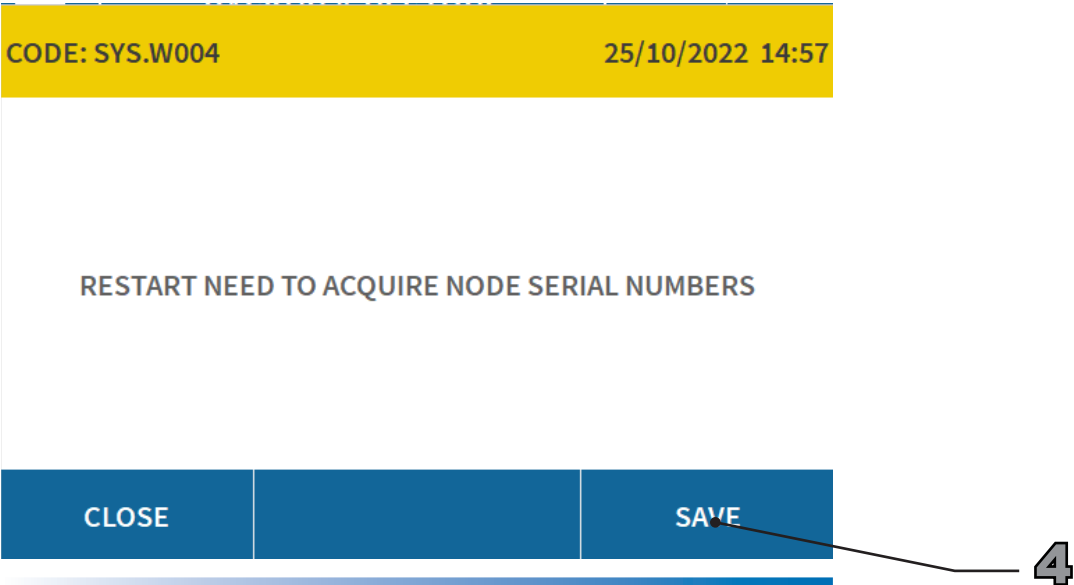


Fig.102. Confirm restart screen

3.5.8 Cancel List of Dashboards for Automatic Display

The **Cancel List of Dashboards for Automatic Display** dashboard may be used to cancel the list of dashboards created each time the single dashboard option is selected.

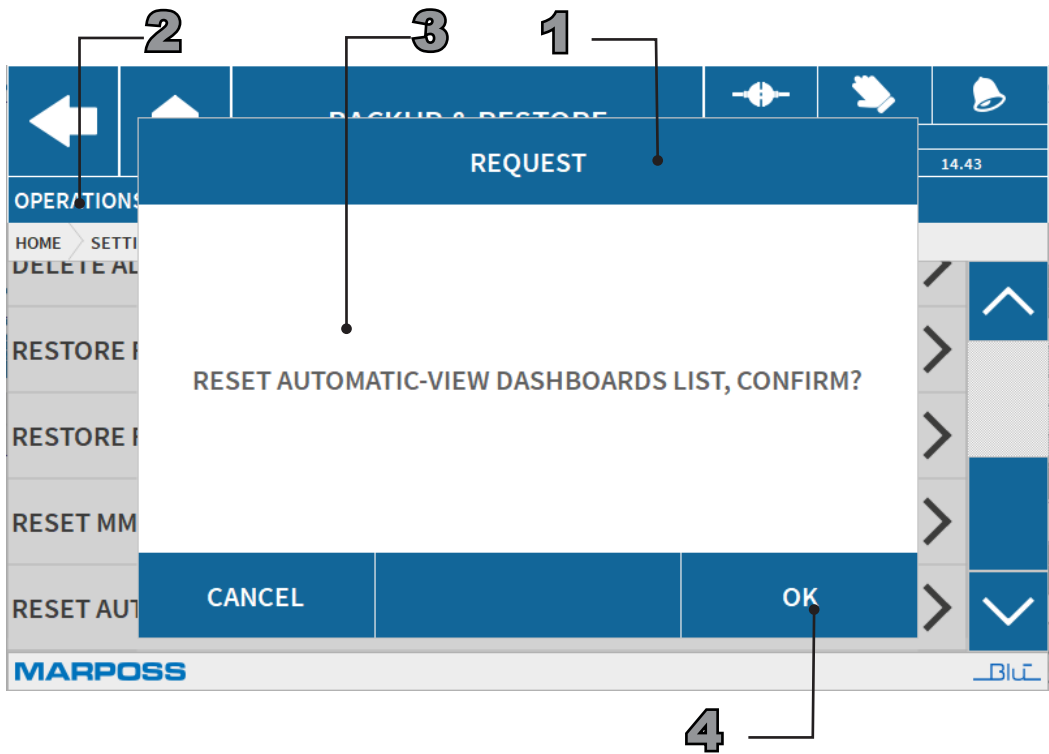


Fig.103. Cancel List of Dashboards for Automatic Display screen

- 1. Dashboard code number **REQUEST**
- 2. Navigation path: *Home > Settings > Cancel List of Dashboards for Automatic Display*
- 3. Messages and descriptions area: **Cancel List of Dashboards for Automatic Display Confirm?**
- 4. Press this button to confirm the operation. Press “**OK**” to cancel the list.
- 5. Key used to terminate the operation. Press “**Close**” to return to the start screen.

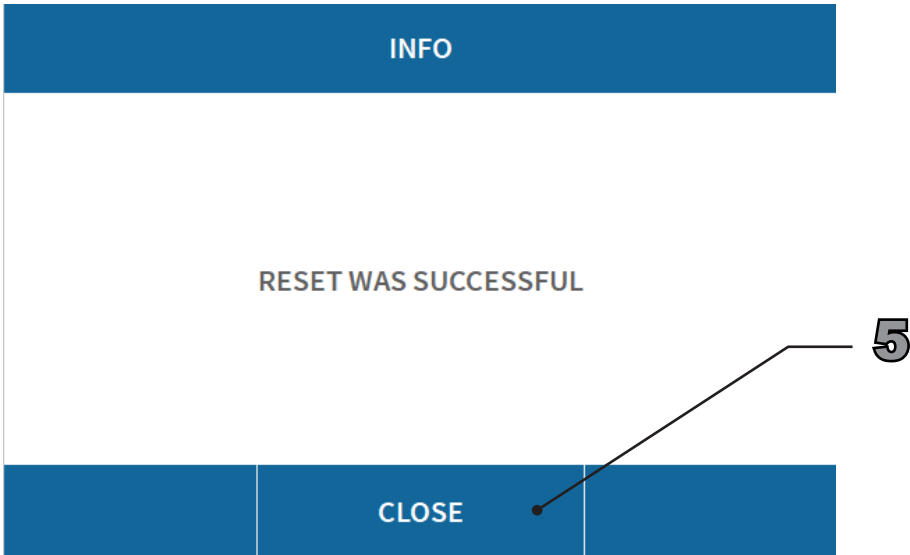


Fig.104. Confirm cancellation of list screen

3.5.9 Reset Marposs dashboard folders

The **Reset Marposs Dashboard Folders** dashboard may be used to cancel the list of dashboards present in the Marposs folder.

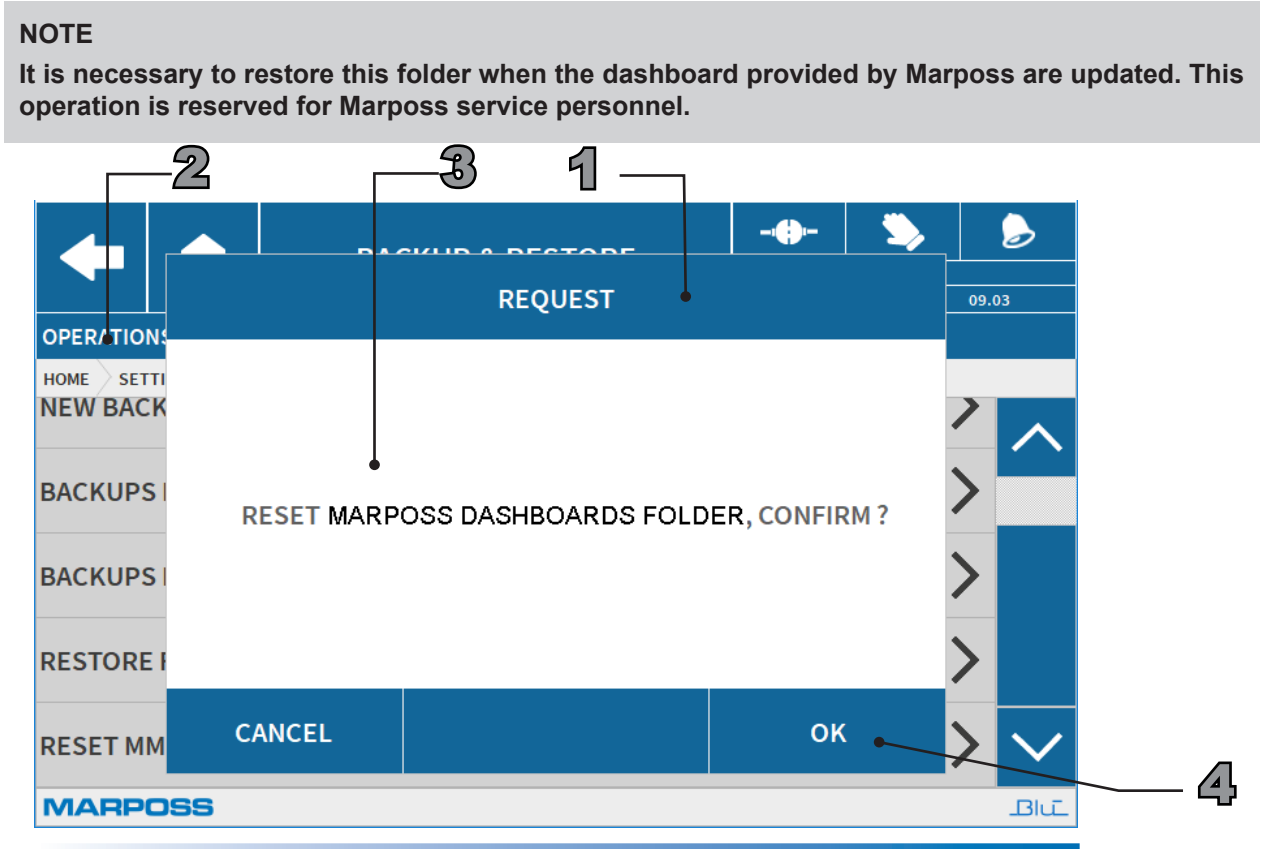


Fig.105. Restore Marposs folders screen

- 1. Dashboard code number **REQUEST**
- 2. Navigation path: *Home > Settings > Restore Marposs Dashboard Folders.*
- 3. Messages and descriptions area: **Reset Marposs Dashboard folders Confirm?**
- 4. Press this button to confirm the operation. Press “**OK**” to render the restore effective
- 5. Key used to terminate the operation. Press “**Close**” to return to the start screen.

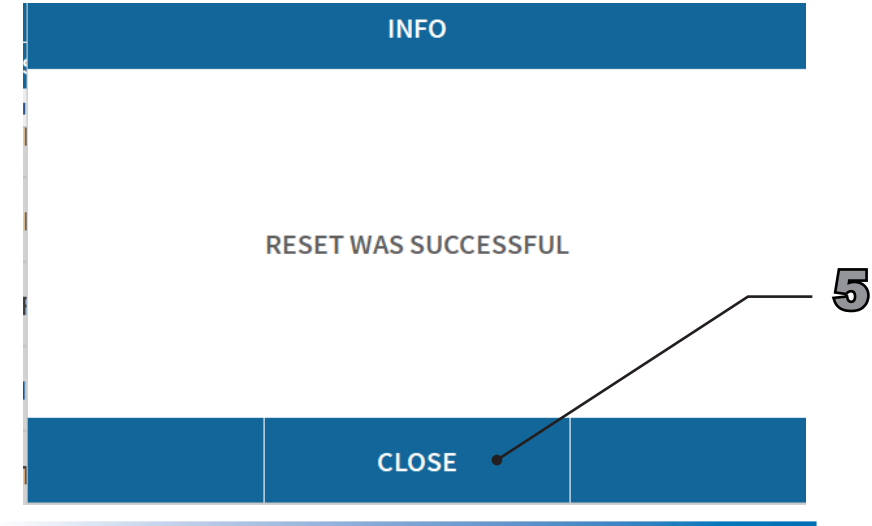


Fig.106. Confirm delete screen

[

**N.B.**

The backups do not include the dashboards, which reside on the machine PC. When restoring the dashboards via the HMI, the dashboards present in the “Default directory, are permanently deleted.

### 3.6 File management



The **File management** page may be used to export, import and delete the .ncf, .fst and .ref files and create customised folders for the pages that have been created.

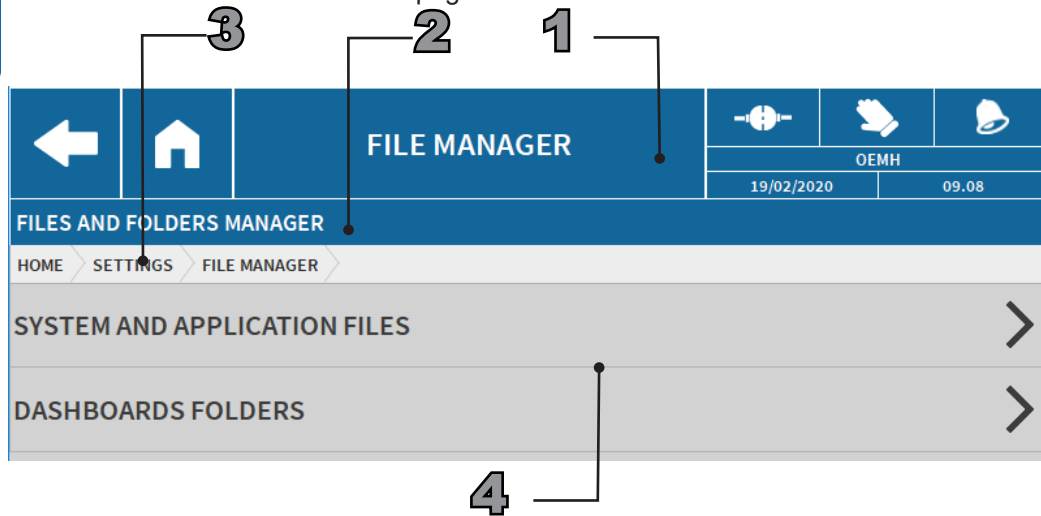


Fig.107. File management screen

1. Screen title: **File management**.
2. Messages and descriptions area: **Management of files and folders**.
3. Navigation path: *Home > Settings > File management*.
4. Working area:
  - **System files and applications.**
  - **Dashboard folders.**

3.6.1 System files and applications,

The **System files and applications** dashboard allows you to export files previously generated by the "Oscilloscope" (trace-scope) system widget or acquired by the "Shape control" applications (.ncf, .fst, .ref).

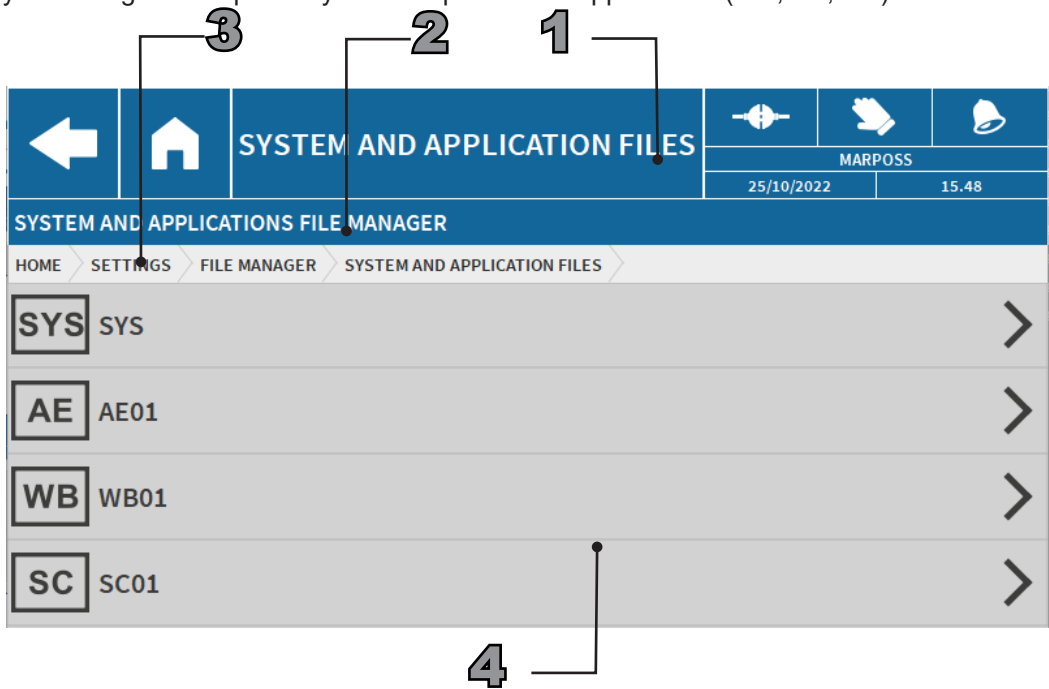


Fig.108. System files and applications screen

- 1. Screen title: **File management.**
- 2. Messages and descriptions area: **System file and applications management**
- 3. Navigation path: *Home > Settings > File management.*
- 4. Working area:
  - **SYS.** List of "trace-scope" files generated by the "Oscilloscope" system widget.

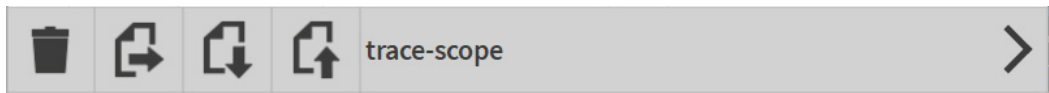


Fig.109. List of available files

- **AE.** This folder contains the list of "trace-scope" files generated by the "Oscilloscope" system widget.

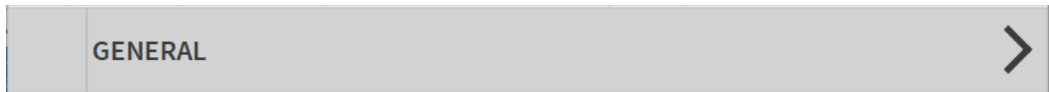


Fig.110. Folder containing the list of available files

- List of "trace-spectrum" files

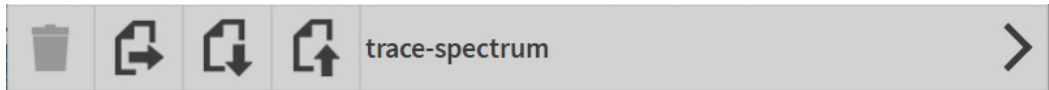


Fig.111. List of available files

- **WB.** This folder contains the list of "trace-scope" files generated by the "Oscilloscope" system widget.

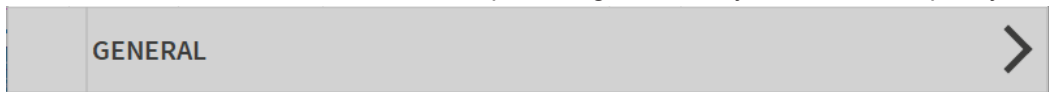
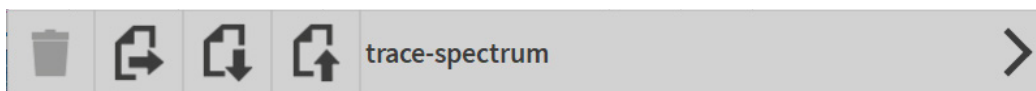


Fig.112. Folder containing the list of available files

- List of “trace-spectrum” files



*Fig.113. List of available files*

N.B.

The   icons are available only on the HMI for PC. If they appear on the remote panel the icons cannot be selected.



3.6.2 Dashboard folders

The **Page folders** may be used to create folders for saving the pages created in *Home > Dashboard > OEM*, depending on the individual requirements.

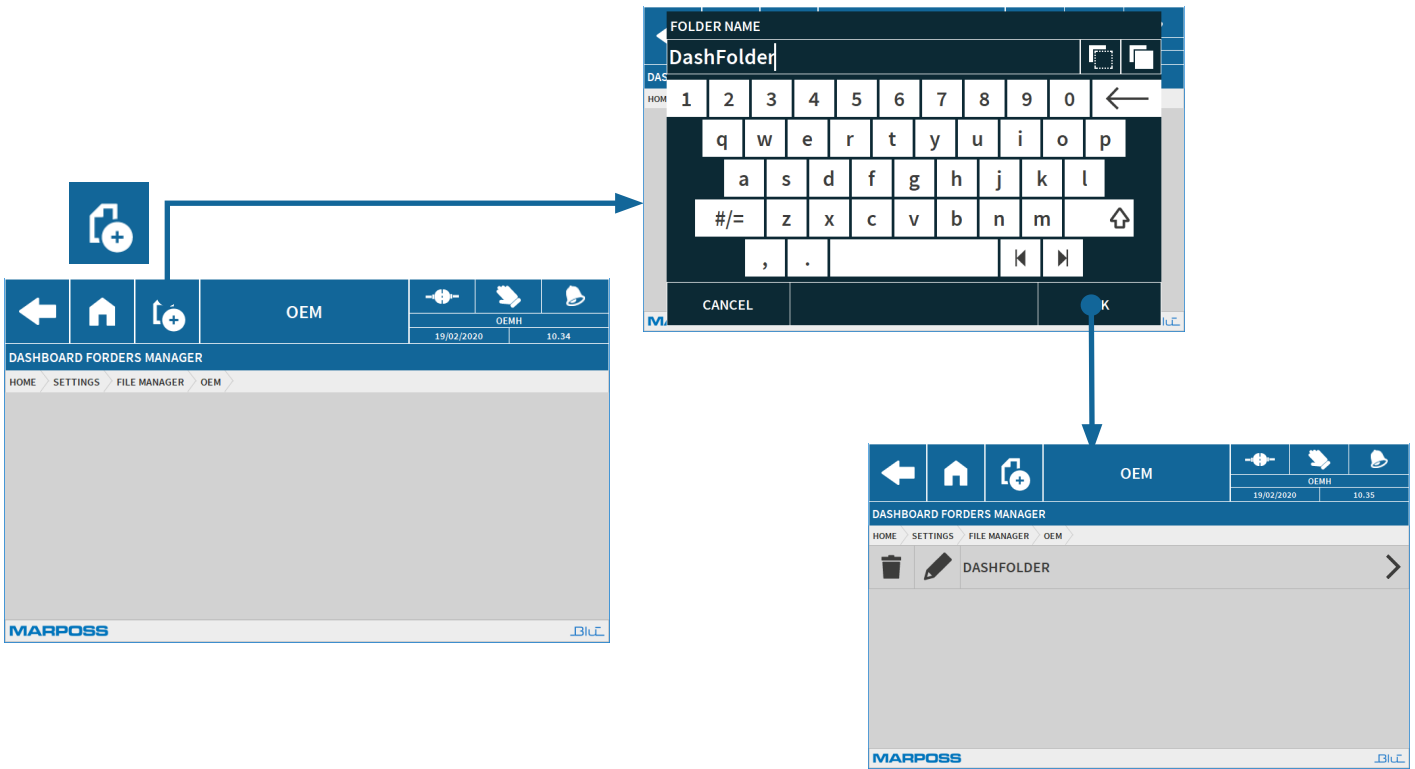


Fig.116. Procedure for creating the folder for the OEM page

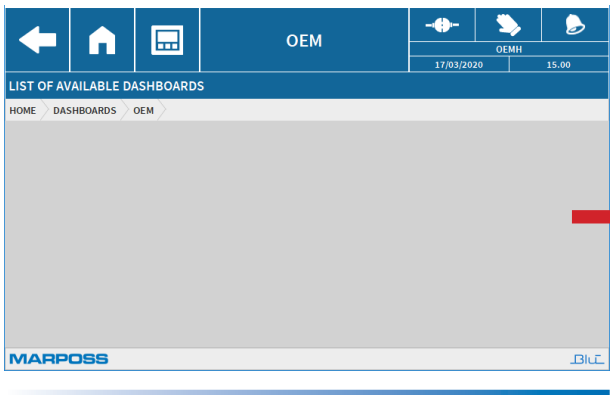


Fig.115. OEM page before

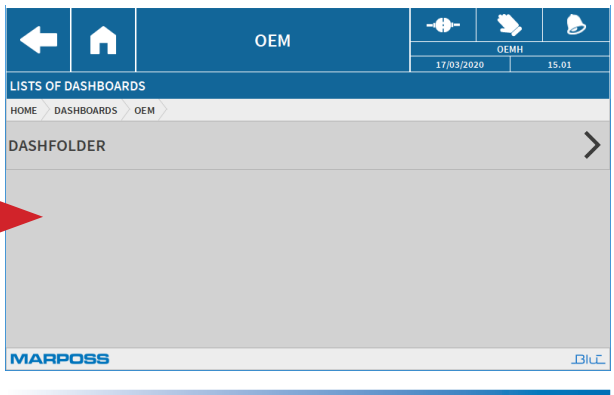


Fig.114. OEM page after

**N.B.**  
The names of the generated folders cannot be selected if they contain dashboards, which means that they cannot be deleted. They may only be deleted when they are empty and, hence, it is possible to select the respective names.

3.7 Information



Use the **Information** dashboard to obtain general information about the installed nodes, or legal information.

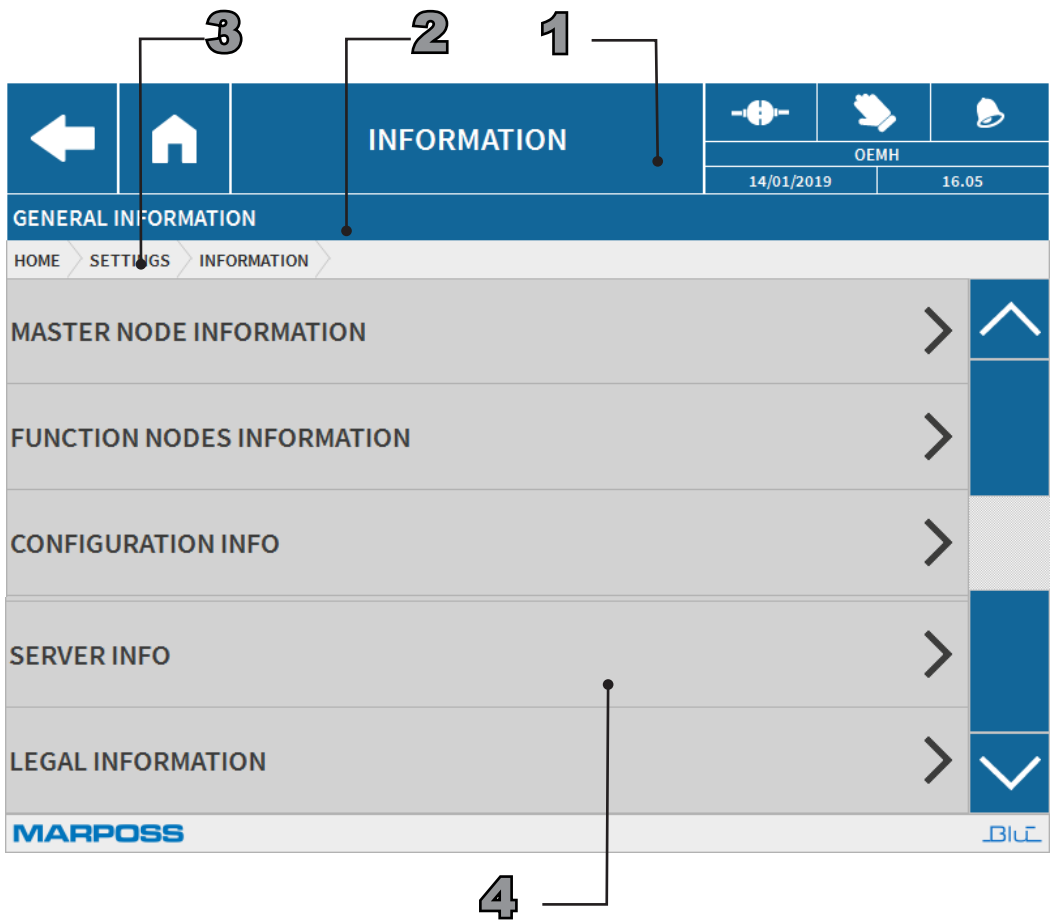


Fig.117. Information screen

- 1. Screen title: **Information**.
- 2. Messages and descriptions area: **General information**.
- 3. Navigation path: *Home > Settings > Information*.
- 4. Working area:
  - **Information about the Master node.** This area contains a list of the software package codes (1), their names (2) and the corresponding versions (3), with respect to the Master node installed on the system.

SYSTEM		
SMD4001400	HMI SYS	1.4a
SMD0101400	SYS	1.4a
APPLICATIONS		
SMD0511400	HMI IP	1.4a

Fig.118. Master node information screen

- **Information about the nodes.** Contains the information about the software installed on the individual nodes.

ID	CODE	TYPE	FW VERSION	PTPD VERSI...	INITD VERSI...
A	NodeMarpoCo	ME_LVDT_4_SENSORS	1.2d	1.1c	1.0b
G	AncMarpoCo	RETRACTION	0.4.4b		0.5c
B	NodeMarpoCo	ME_LVDT_HBT_2_SENSORS	1.2d	1.1c	1.0b
K	AncMarpoCo	COM_2_SERIAL	0.4.4b		0.5c

Fig.119. Installed nodes information screen

- **Settings Information.** This function displays the configuration file (if present), and the letter indicates the edition.

CONFIGURATION FILE VERSION	SMD3999999
----------------------------	------------

Fig.120. Configuration file information screen

- **Server Information.** Collects information regarding the servers (Master nodes) that are active on the Ethernet network, using the following screen:

1 MASTER NODE PORT ADDRESS	2 NAME	3 VERSION
172.20.113.71	16DU0151	1.0a

Fig.121. Dashboard containing information regarding the active servers on the network. Example

- 1 Master Node address. Address of the M.N. "A" NET 10/100/1000 port (e.g.: 172.20.120.26) and M.N."B" 10/100/1000 port (e.g.: 172.20.120.29).
  - 2 Name. Serial number of the M.N. "A" (e.g.: 16DU0151) and the M.N."B" (e.g.: 16DU0172).
  - 3 Version. M.N."A" (e.g.: 1.0a) system/server software version.
- The values displayed as addresses are recalculated automatically when the user access the screen.

- **Legal information.** Contains the software license information.

MARPOSS S.p.A. SOFTWARE LICENSE AGREEMENT
Under the terms and conditions stated below, MARPOSS S.p.A. (hereinafter "MARPOSS") grants the user (hereinafter also called the "LICENSEE") the right to use the related/enclosed software product "BLÚ HMI" (hereinafter the "SOFTWARE").
DEFINITIONS
a - The term "END USER" shall mean a prospective customer of MARPOSS or of one of its OEM ("Original Equipment Manufacturer") customers, to whom copies of the SOFTWARE are offered for use together with MARPOSS products applications and not for resale;
b - The term "DISTRIBUTOR" shall mean any person or entity who is authorized by MARPOSS to sell and distribute to its OEM customers and END USERS copies of the SOFTWARE which has been supplied by MARPOSS.
Whereas:

Fig.122. Software license information screen

### 3.8 Exporting and importing application sets



It is possible to export and import the sets of previously created applications from the **Export Import** screen.

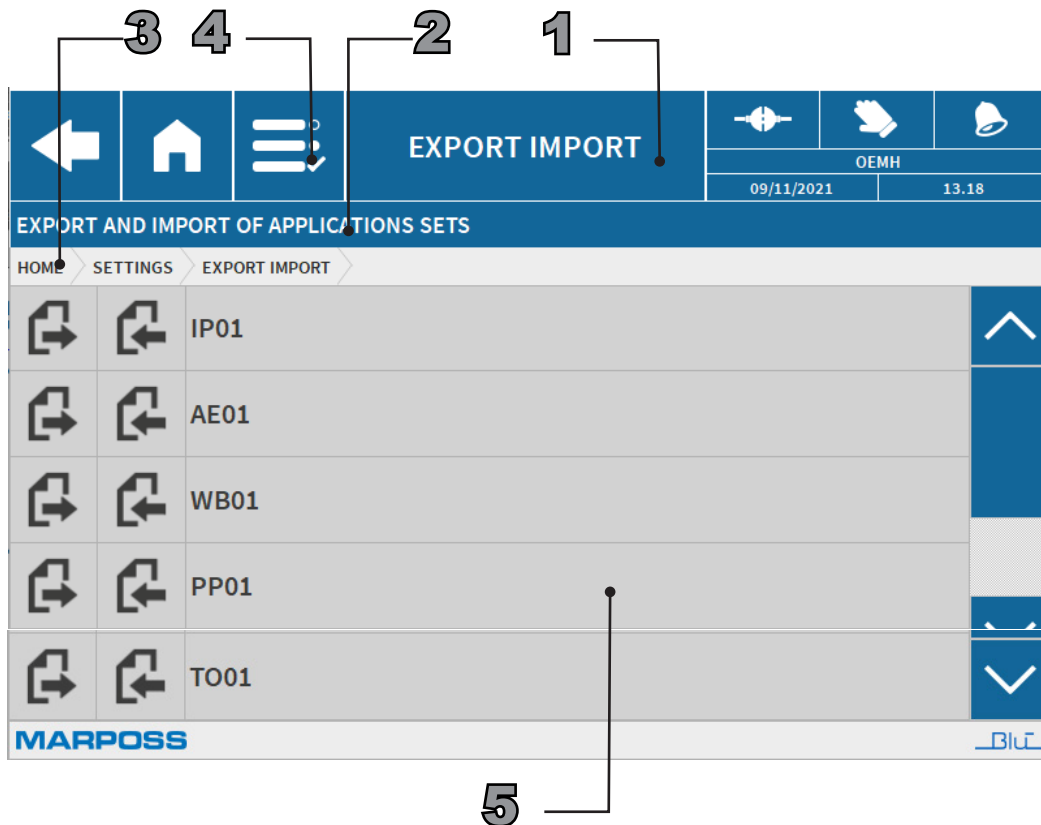


Fig.123. Export and import application sets screen

1. Screen title: **Export/Import**.
2. Messages and descriptions area: **Exporting and importing application sets**.
3. Navigation path: *Home > Settings > Export Import*.
4. Select external export unit. The exported sets are saved in the “blu-sets” folder

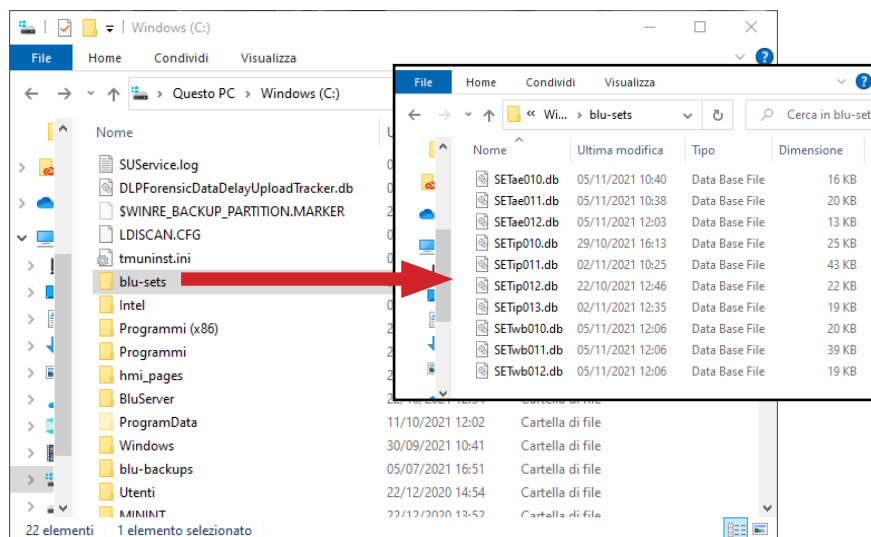


Fig.124. “Blu-sets” folder saved to the external unit

5. Working area:



**Export application sets.** Use this function to select the individual sets to be exported.

0 (SINGLE IN-PROCESS)	<input checked="" type="checkbox"/>	^
1 (CONCURRENT IN-PROCESS)	<input checked="" type="checkbox"/>	
2 (ACTIVE POSITIONING)	<input checked="" type="checkbox"/>	
3 (PASSIVE POSITIONING)	<input checked="" type="checkbox"/>	v

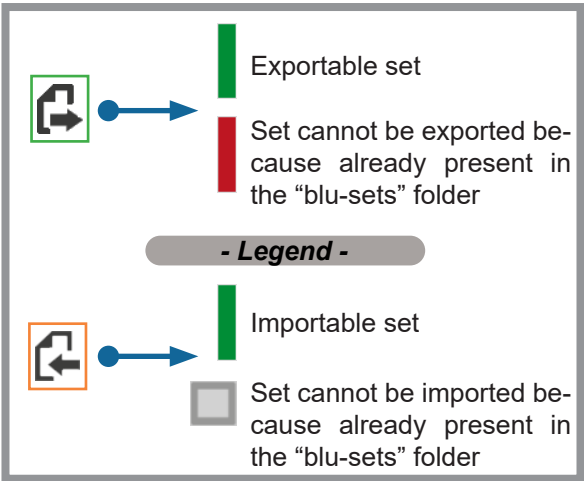
Fig.125. Example of sets that may be selected for export



**Import application sets.** Use this function to select the sets (single or multiple) to be imported.

0 (SINGLE IN-PROCESS)	ip01	1.3a	<input checked="" type="checkbox"/>	^
1 (CONCURRENT IN-PROCESS)	ip01	1.3a	<input type="checkbox"/>	
2 (ACTIVE POSITIONING)	ip01	1.3a	<input type="checkbox"/>	
3 (PASSIVE POSITIONING)	ip01	1.3a	<input checked="" type="checkbox"/>	v

Fig.126. Example of sets that may be selected for import



This page has been intentionally left blank

## 4 PROGRAMMING

The purpose of **Programming** is to assign the appropriate values to the parameters in the available sets. The sets vary based on the types of function nodes that are installed. For a list of the available sets, see the Chap. 3 in Part C2XX (e.g.: C2ME for the Measurement node, C2AE for the Acoustic node, etc.) dedicated to the installed node.

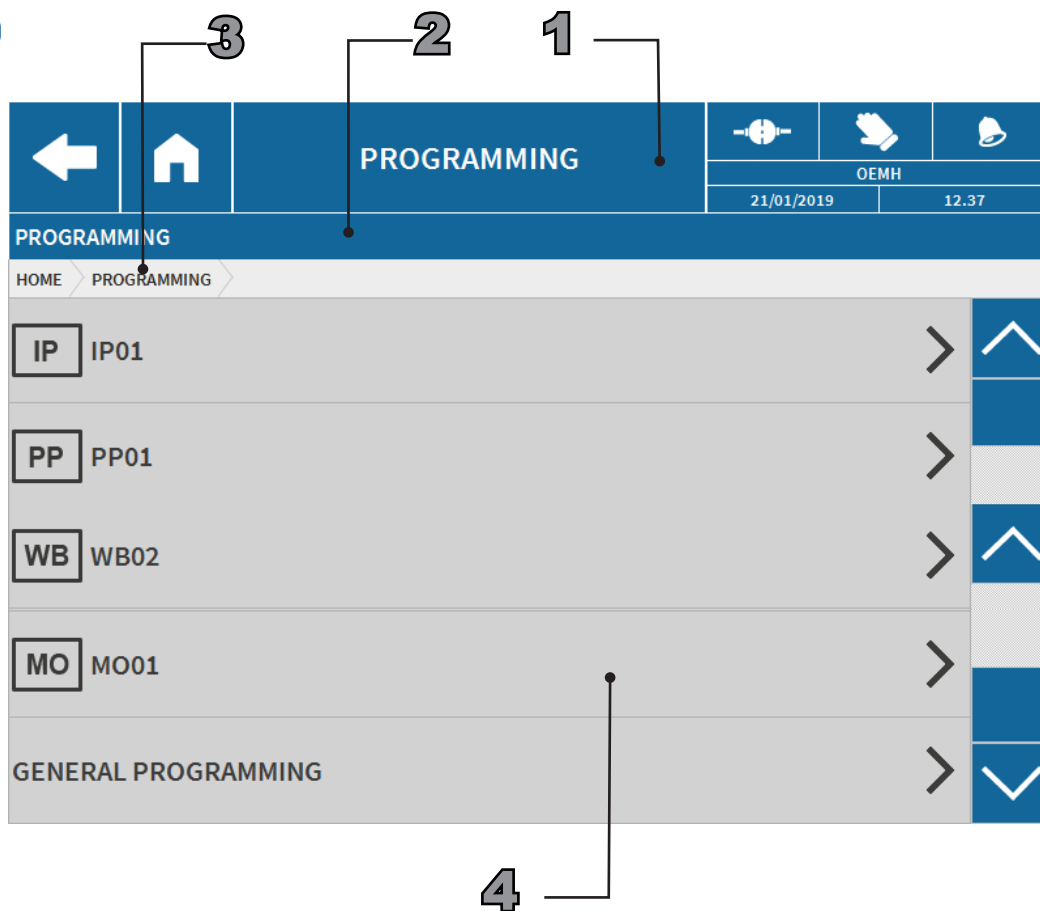


Fig.127. Available nodes for installed system screen

- 1 Screen title: **Programming**.
- 2 Messages and descriptions area: **Programming**.
- 3 Navigation path: *Home* > **Programming**.
- 4 Working area: List of installed nodes. In the example:
  - **IP0X. In-Process Measurement** Application See Chap. 3 - Part **C2ME**.
  - **PP0X. Post Process Measurement** Application See Chap. 3 - Part **C2ME**.
  - **AE0X. Acoustic Emission** application See Chap. 3 - Part **C2AE**.
  - **WB0X. Balancing** application See Chap. 3 - Part **C2WB**.
  - **TO0X. Touch Measurement** Application. See Chap. 3 - Part **C2TOUCH**.
  - **Generic Programming**. Generic part programming.

4.1 Creating a set

Use the icon (1) Fig.128 on the **List of Sets** dashboard to add one of the sets available for the selected application.

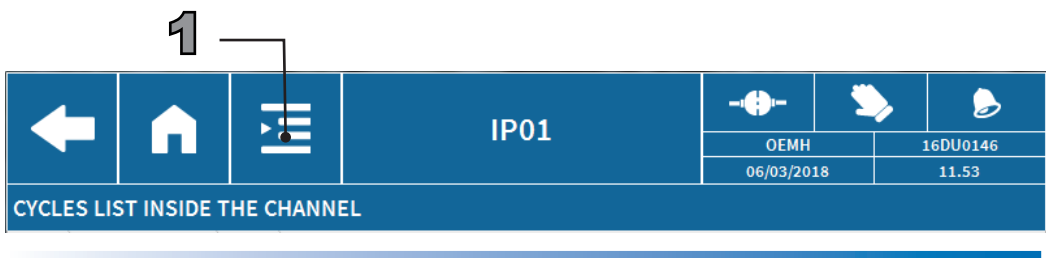


Fig.128. Icon for selecting sets from the available list

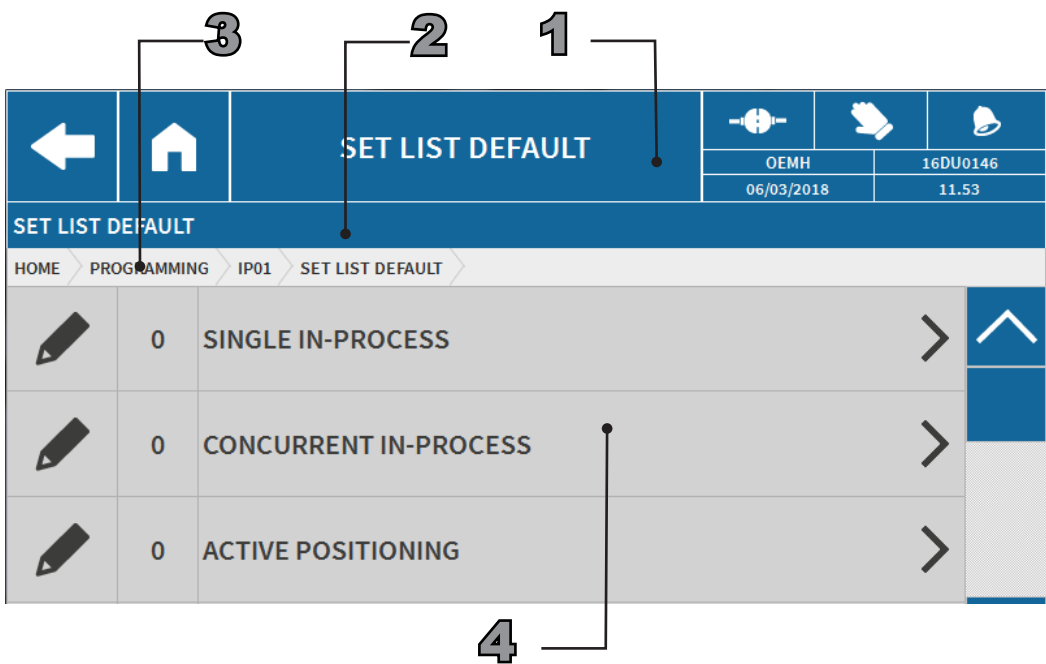


Fig.129. Select sets from the available list screen. Ex.: IP Measurement

1. Screen title: **List of sets**.
2. Messages and descriptions area: **List of sets**.
3. Navigation path: *Home > Programming > IP01 (e.g.) > List of sets* In the example: Set list "IP01".
4. Working area: **List of selectable sets**. Each additional set is automatically assigned a progressive number between 0 and 255.



4.2 Modifying/Deleting a set

This dashboard contains a list of the sets that are available for each individual function (in the example: **IP01**) it is possible to delete a set create a copy of an existing one.

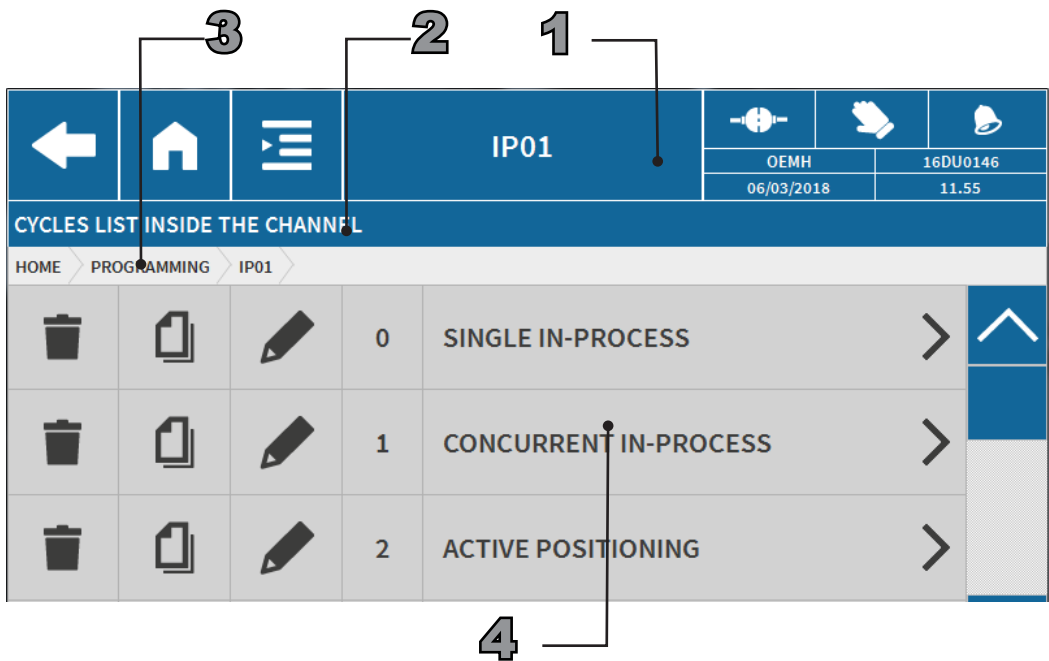


Fig.130. Set modification screen. Ex.: IP Measurement

- 1. Screen title: **IP01** (example).
- 2. Messages and descriptions area: **List of cycles present in the channel.**
- 3. Navigation path: *Home > Programming > IP01* (example).
- 4. Working area: **List of created sets.** After creating a set it is possible to:



Delete the set by selecting the icon.

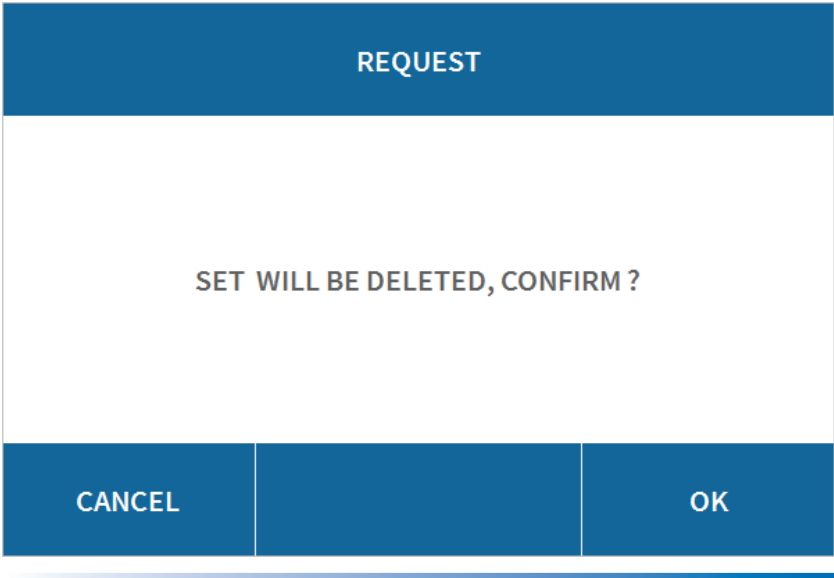



Fig.131. Confirm delete set screen.

WARNING

The “Delete” function is irreversible! Thus, there is no way of recuperating the deleted data, other than restoring them from a backup file.

 **Copy an existing set**, select this icon to create a copy of the selected Set. The numerical keypad may be used to modify the number of the Set that corresponds to the first available number by default.

SELECT SET CODE

1

1

2

3

4

5

6

7

8

9

0

←

q

w

e

r

t

y

u

i

o

p

a

s

d

f

g

h

j

k

l

#/=

z

x

c

v

b

n

m

↵

,

.


⏮

⏭

CANCEL

OK

Fig.132. Alphanumeric keypad used to modify the set number

 **Modify the set name**, by selecting the icon and typing in the new name on the alphanumeric keypad.

EDIT

SINGLE IN-PROCESS

1

2

3

4

5

6

7

8

9

0

←

q

w

e

r

t

y

u

i

o

p

a

s

d

f

g

h

j

k

l

#/=

z

x

c

v

b

n

m

↵

,

.

⏮

⏭

CANCEL

OK

Fig.133. Alphanumeric keypad used to modify the set name

**N.B.**  
If the set name is modified, the new name will remain the same, irrespective of the selected language.

4.3 General programming

The **General Programming** dashboard may be used to customise the data associated with the parts.



Fig.134. Programming Dashboard

4.3.1 Piece to be measured

The **Parts** dashboard may be used to set-up all the dimension values for the part to be measured.

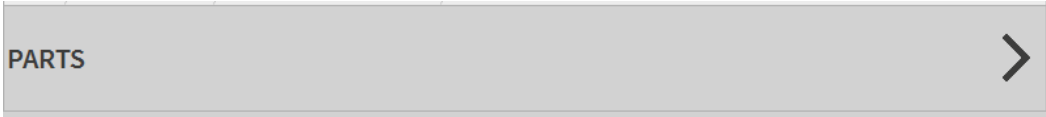


Fig.135. Select part to be measured screen

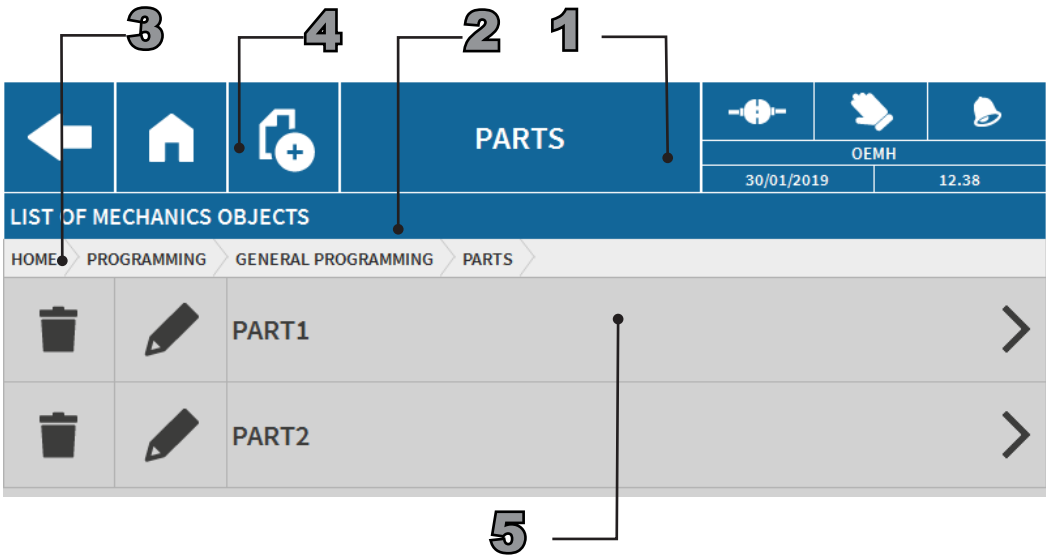


Fig.136. Parts list screen

- 1. Screen title: **Parts**.
- 2. Messages and descriptions area: **List of parts**.
- 3. Navigation path: *Home > Programming > General programming > Parts*
- 4. Enter new part
- 5. Working area:
  - **Part (x)** Customisation of the mechanical values of the part to be measured.

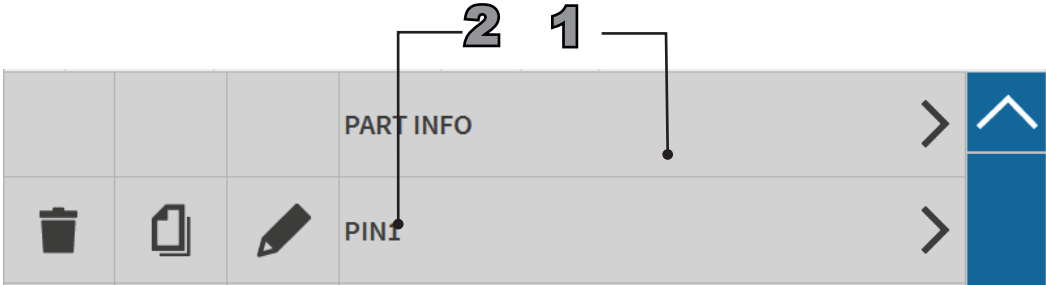


Fig.137. List of pins for each part screen



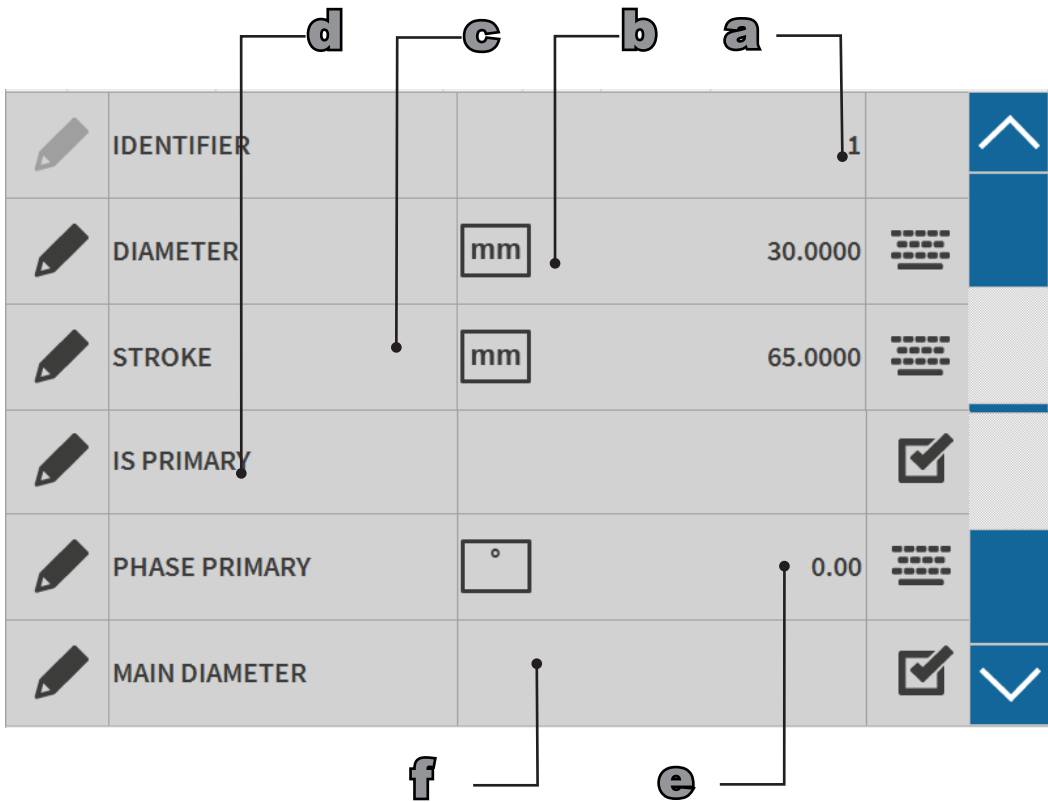
This function may be used to insert other parts and/or bosses to be measured.

1. **Part information.** Displays the part identification number and the number of pins present.

	IDENTIFIER	1	
	PIN NUMBER	3	

Fig.138. Selected part information screen

2. **Pin (x).** Parameters of the selected pin. Permits the operator to modify the dimension values of the pin.
- A **ID information.** Displays the name used to create the Pin.
  - B **Diameter.** Permits the operator to enter the nominal Pin diameter value.
  - C **Stroke.** Permits the operator to enter the stoke value of a crank pin. This function is enabled for Fenar L type measurement heads only.
  - D **Primary Pin.** If enabled it assigns the “Primary Pin” value, relegating all the others to “Secondary Pin” status.
  - E **Primary Phase.** Permits the operator to set-up the phase angle between the pin and the machine reference zero point for the primary pin, expressed in degrees.
  - F **Crankshaft bearing diameter** This function should be activated when the pin in question refers to a crankshaft bearing and not a crank pin, with the purpose of optimising the introduction of the gauge onto the part with the Fenar L/E-Fenar arm.
  - G **Secondary phase:** This phase represents the angle of the phase shift with respect to the Primary pin.















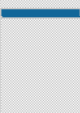







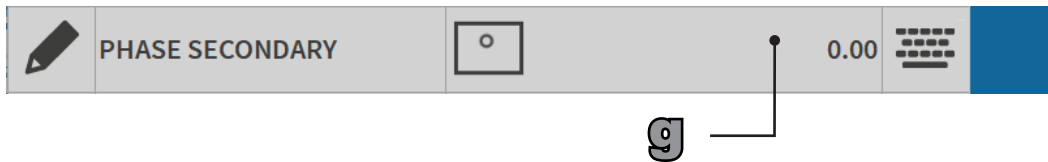
	IDENTIFIER			1		
	DIAMETER			30.0000		
	STROKE			65.0000		
	IS PRIMARY					
	PHASE PRIMARY			0.00		
	MAIN DIAMETER					

Fig.139. Selected part pin information screen. Primary Pin






	PHASE SECONDARY			0.00		
---	-----------------	---	--	------	---	---

Fig.140. Selected part pin information screen. Secondary Pin

## 5 DASHBOARDS



For the navigation map between the menus, see **Navigation map, Sect. E**.

### 5.1 Selecting a Marposs/OEM page

When it is switched on, the **Blú LT** system permits the operator to select either the page corresponding to the installed application (**Marposs**), or between the ready to use options created by the customer (**OEM**).

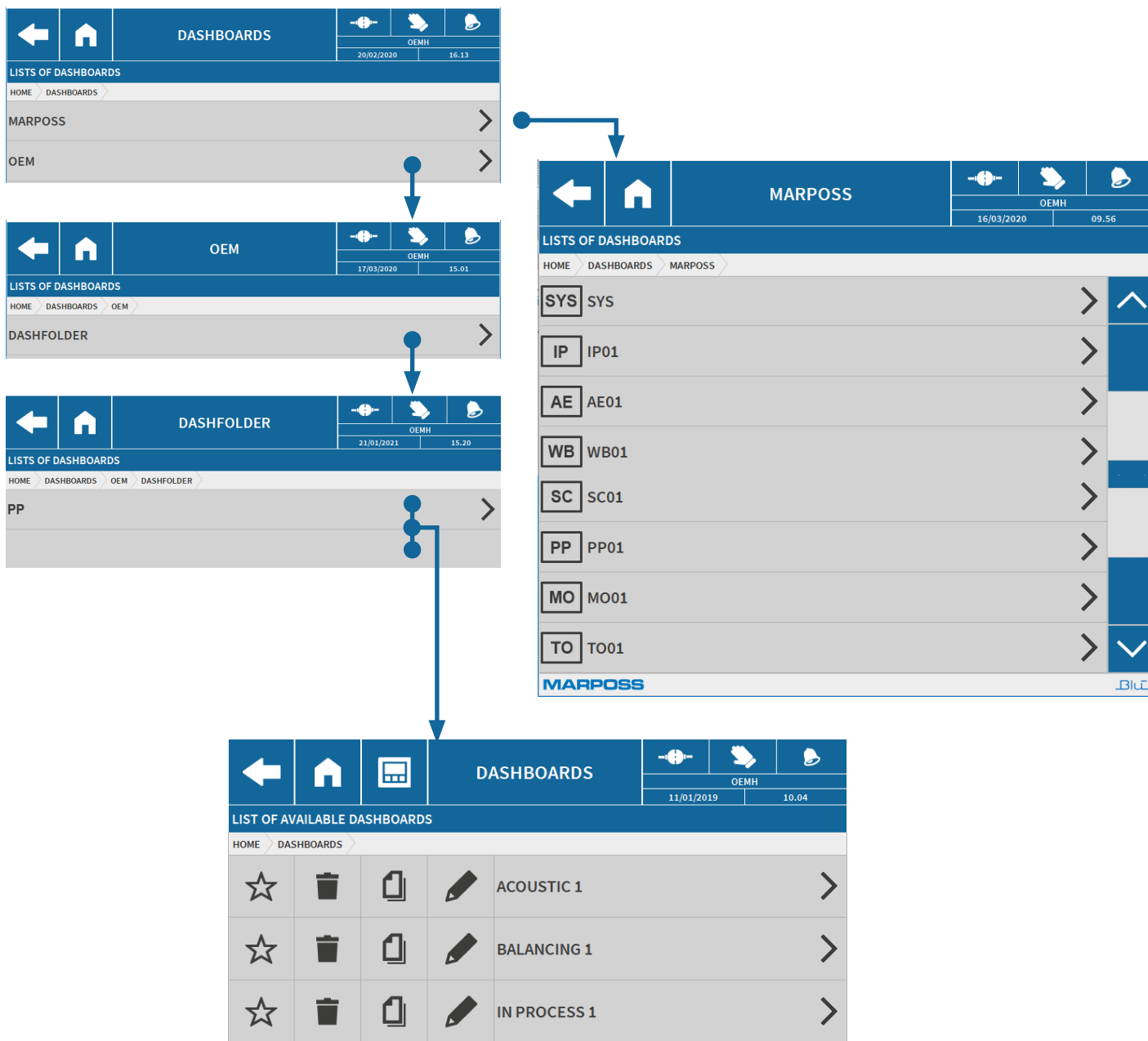


Fig.141. Pre-compiled Marposs page and pages created by the OEM customer

5.2 Creating a new dashboard



To create a new dashboard, press the “**Create**” button in the adjacent “**Dashboards**” panel.



Once a new dashboard has been created, it is possible to modify the dimensions (in pixels) by clicking on the “**Customize**” icon. When a new dashboard is created, its initial dimensions will correspond to those defined on the “**Dashboard Option**” dashboard.



Once a new dashboard has been created it is possible to add the various system or function widgets that will be monitored on the dashboard. Click on the “**Create**” icon to insert the desired functions.

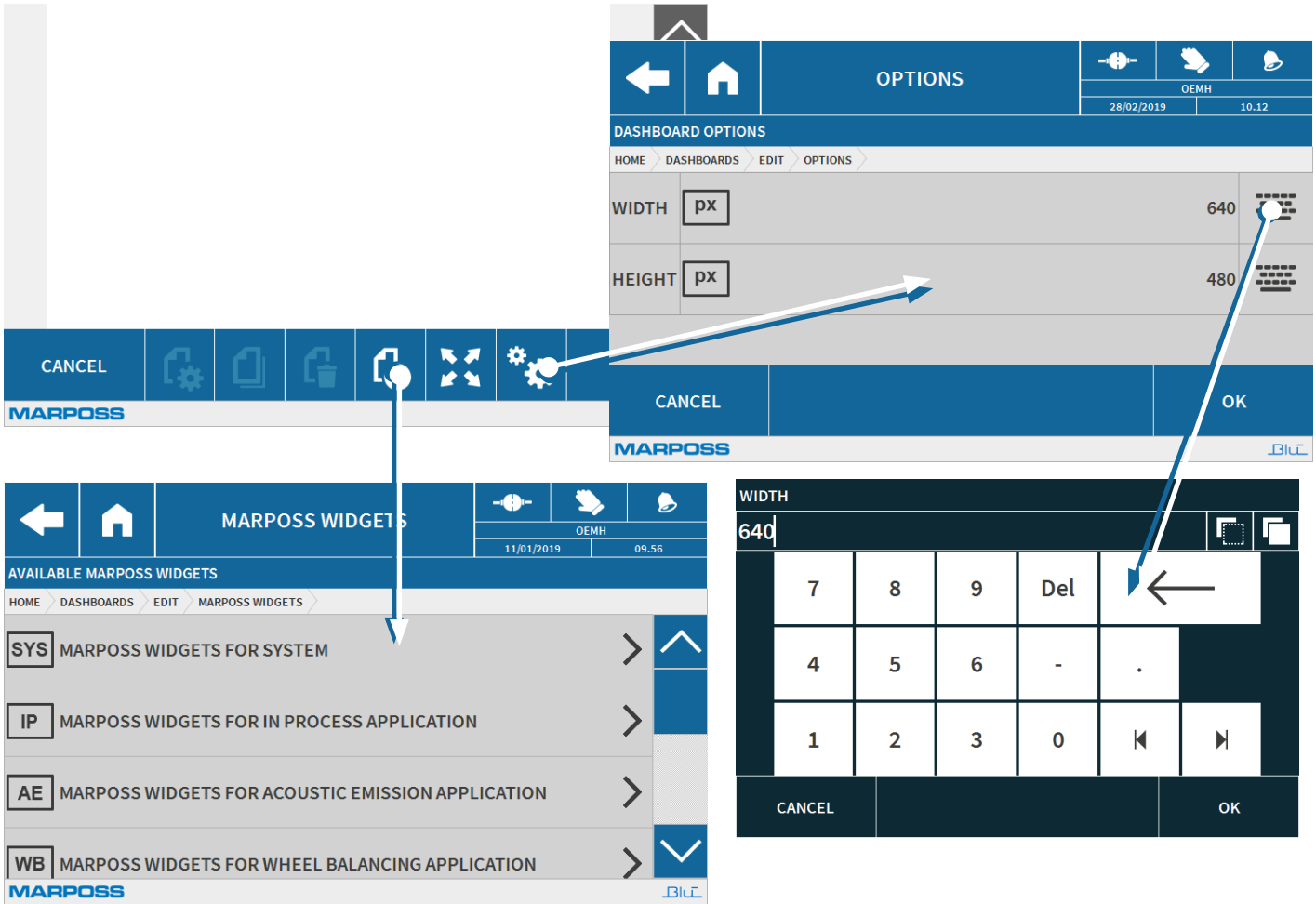


Fig.142. Dashboard creation menu

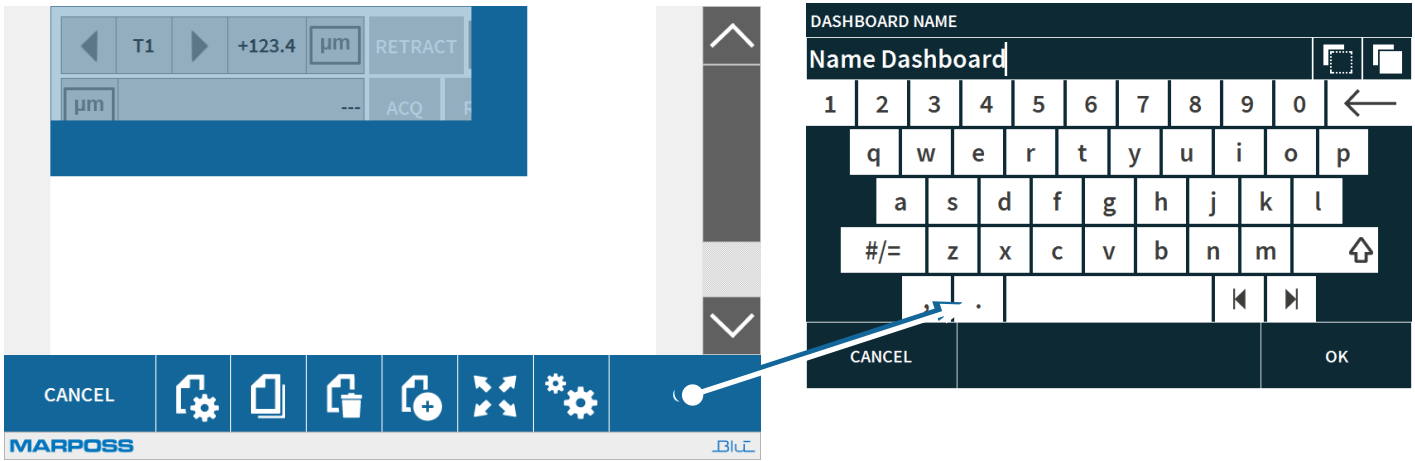




Fig.143. Save menu screen

5.3 Modifying a dashboard



It is possible to modify the widgets from any “Dashboard” by clicking on the adjacent “Modify” icon for a few seconds. To view the widget parameters subsequently, click rapidly on the “Modify” icon to display the widget icon , then click on this icon to display the icon , which may be used to view the parameters. Press and hold the central area of the widget in order to move it, switching positions with another widget, for example. When finished, click “OK” to save the new position. After selecting a widget, use the “Settings” function to modify the parameters once they have been created.

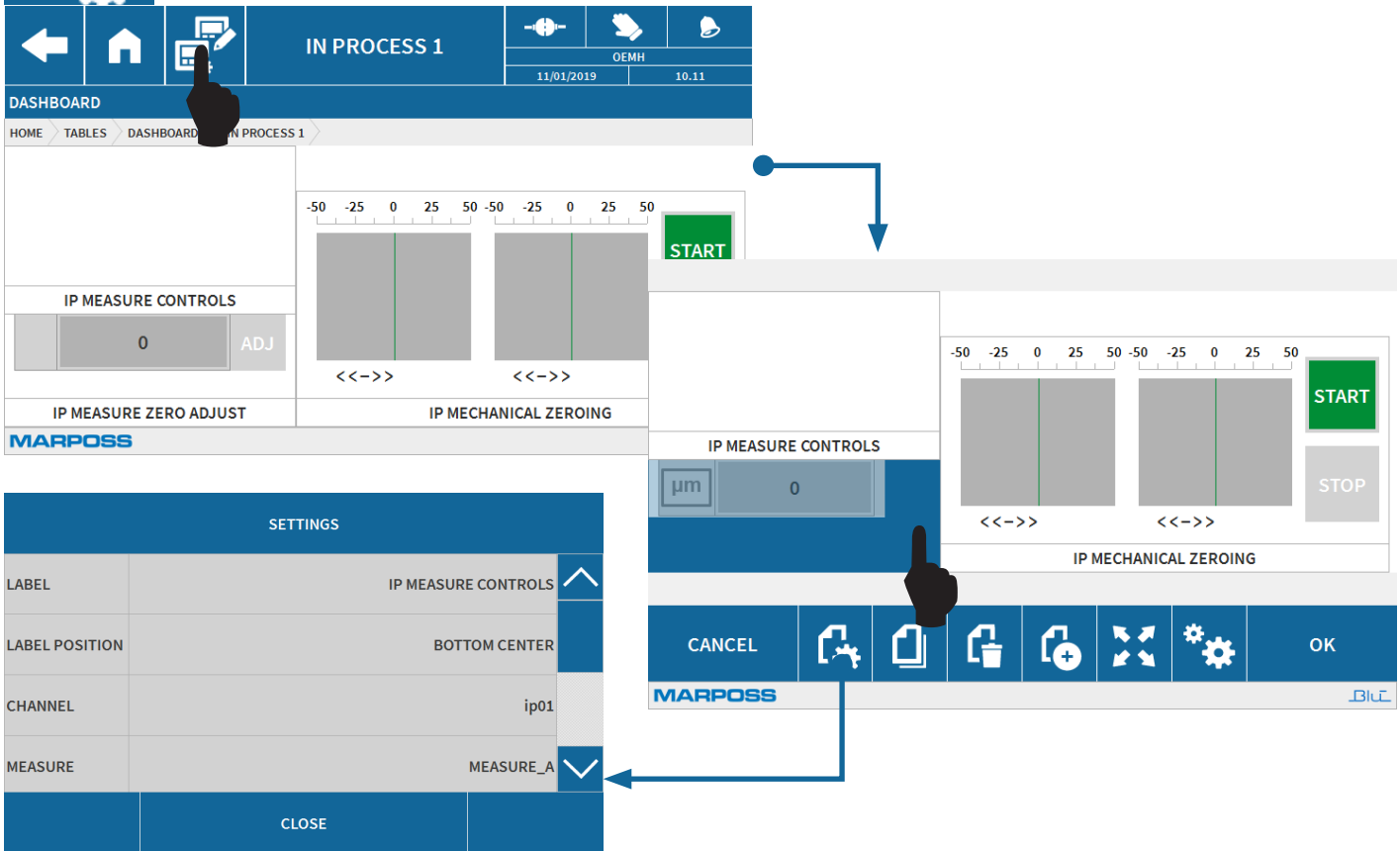


Fig.144. Dashboard modification menu



Press the adjacent **“Enlarge”** icon shown on the left to select full dashboard mode.



In some widgets, clicking rapidly on the **“Modify”** icon displays the icon shown on the left, which may be used to select full dashboard display mode.



When viewing the selected widget in **“full dashboard mode”**, it may be restored to normal display size by pressing the adjacent **“reduce”** icon.



May be used to **unlock** the widget zoom function.



May be used to **lock** the widget zoom function.



May be used to **increase/reduce** the zoom percentage of the area of the widget being displayed.



The navigation buttons may be used to move within the widget areas.



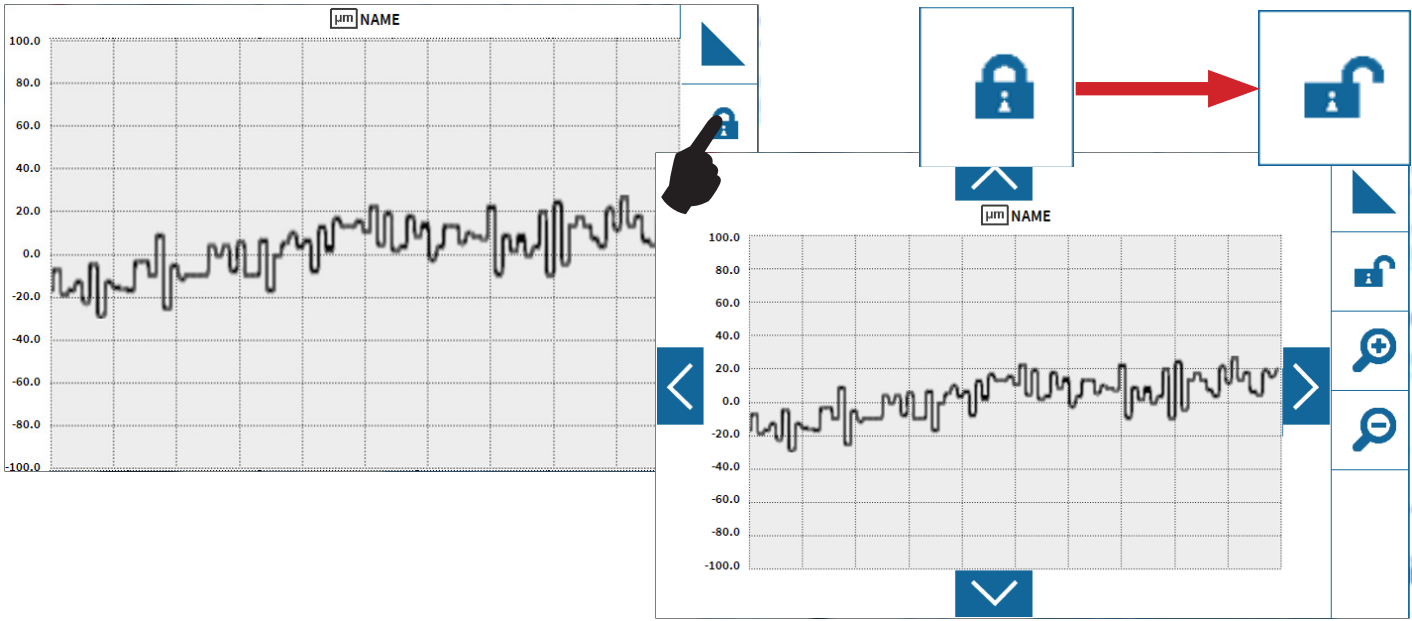


Fig.145. Dashboard modification menu

5.4 Renaming a dashboard

To modify the name of a dashboard, press the **“Edit”** button in the adjacent **“Dashboards”** panel. Enter the new name using the **“virtual alpha-numeric keyboard”**, then confirm by clicking on the **“OK”** button.

**N.B.**  
If the system language is changed, the new name assigned to the dashboard will remain the same.



Fig.146. Dashboard renaming menu. Example

5.5 Duplicating a dashboard

To create a duplicate dashboard, press the “**Duplicate**” button in the adjacent “**Dashboards**” panel. The newly created dashboard will assume the name of the original, with the word “**copy**” added at the end.

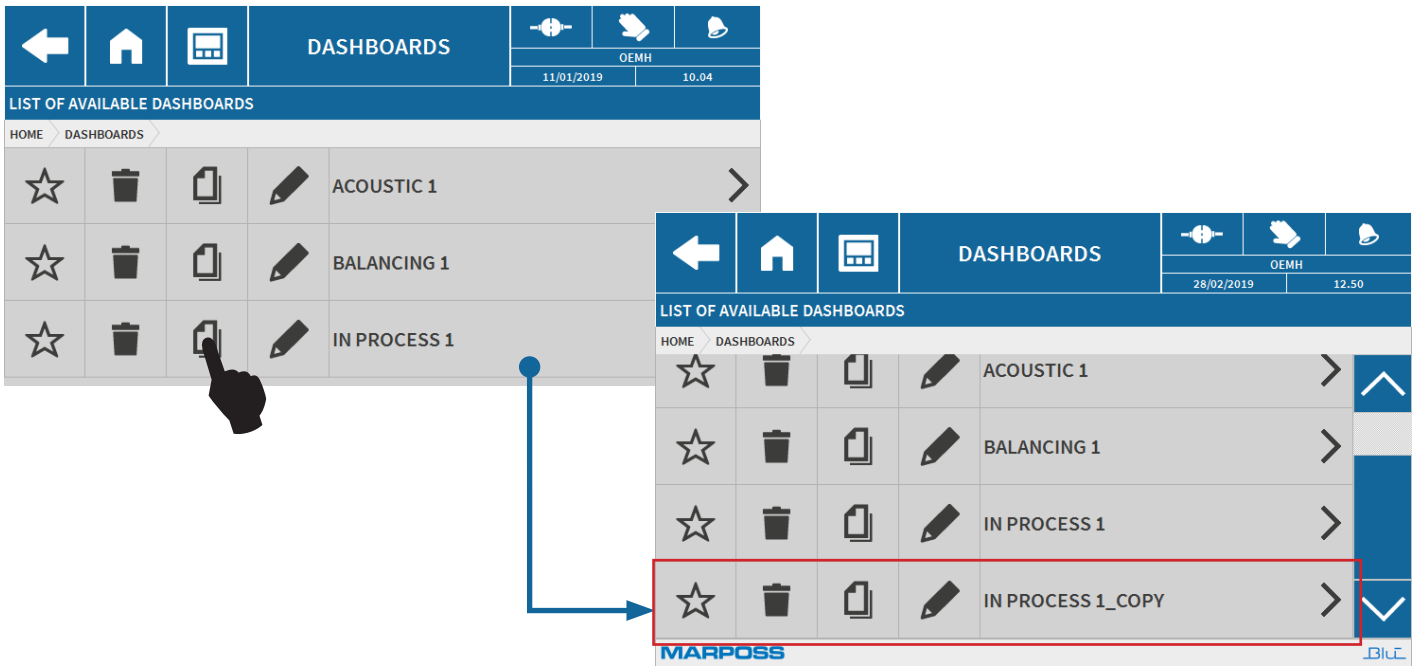


Fig.147. Dashboard duplication menu

5.6 Deleting a dashboard

To delete a dashboard, press the “**Delete**” button in the adjacent “**Dashboards**” panel. A message appears asking the operator to confirm whether on not he/she wishes to delete the dashboard.

**WARNING**  
This operation is not reversible.

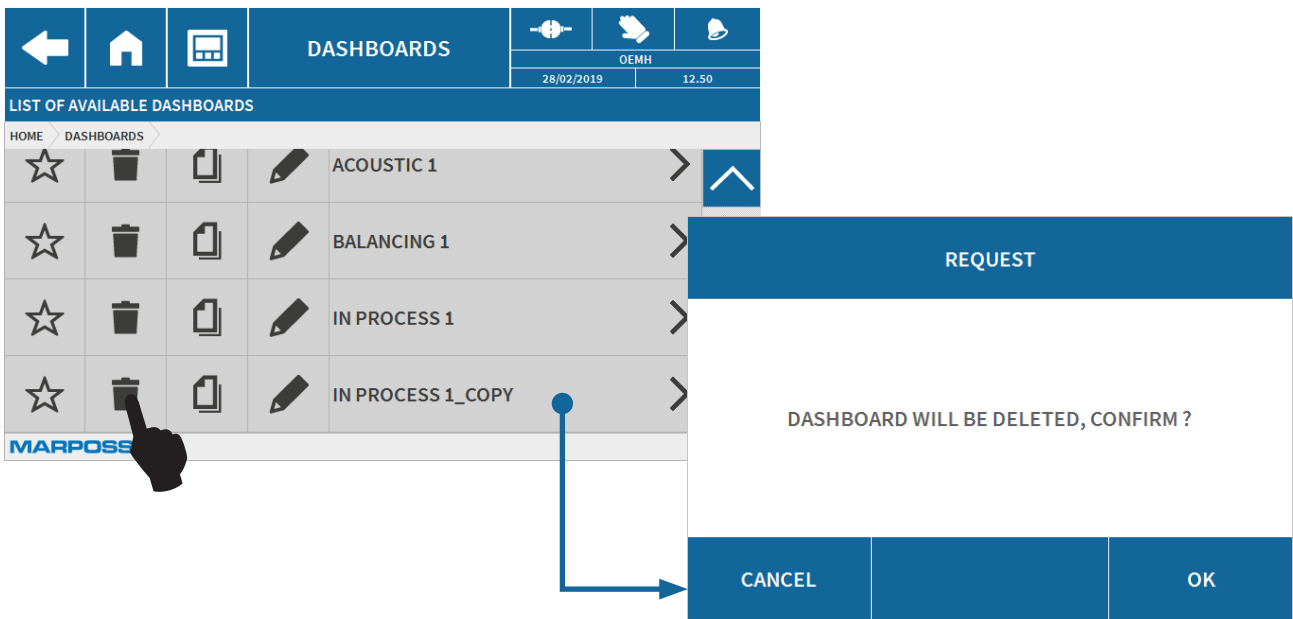


Fig.148. Dashboard delete menu

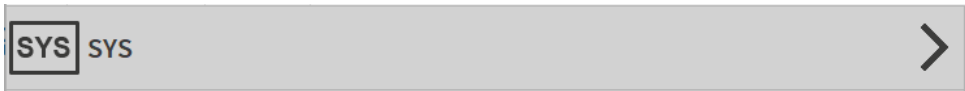
5.7 Widgets and dashboards

The system widgets (**SYS**) are those that can be used for sensors assigned to different functions (T1, Mic1, RPM, etc.) There are two types of widget available:

- **Marposs.** Group of pages, pre-compiled by Marposs, containing widgets that are ready for use with the current applications.
- **OEM.** Group of pages, created by OEM, containing widgets that are ready for use with the current applications.

For instructions on creating and managing the pages, see previous chapters.

5.7.1 Marposs dashboards



For a description of the individual widgets present and their characteristics, see the following paragraph for a description of the characteristics of the individual widgets.

Table 2. List of Marposs dashboards > Sys > Setup

Page name	Page								
<div>SYS CLEAR ALARM</div>	<div><div>CLEAR ALARM</div><div>SYS CLEAR ALARM</div></div>								
<div>SYS MINICT SETUP</div>	<div><div><div><div>&lt;&lt;-&gt;&gt; mA &lt;&lt;-&gt;&gt; mA</div><div><div>+1</div><div>-1</div><div>+2</div><div>-2</div></div><div>START ◀ WBH1 ▶</div><div>SYS MINICT CURRENT</div><div><div>+26.5</div><div>°C</div></div><div><div>0 10 20 30 40 50 60 70 80 90 100</div><div>START ◀ WBH1 ▶</div></div></div><div><div>+38.0 V</div><div><div>0 6 12 18 24 30</div><div><div>+1+2</div><div>-1-2</div><div>+1-2</div><div>-1+2</div></div><div>START ◀ WBH1 ▶</div><div>SYS MINICT VOLTAGE</div><div><div>CLEAR ALARM</div><div>SYS CLEAR ALARM</div></div></div></div></div></div>								
<div>SYS TRANSDUCERS</div>	<div><table><tr><td><div>+363.7</div><div>μm</div><div>SYS T1</div></td><td><div>+106.3</div><div>μm</div><div>SYS T2</div></td></tr><tr><td><div>-65.9</div><div>μm</div><div>SYS T5</div></td><td><div>+276.6</div><div>μm</div><div>SYS T6</div></td></tr><tr><td><div>+448.9</div><div>μm</div><div>SYS T3</div></td><td><div>---</div><div>SYS T7</div></td></tr><tr><td><div>+191.5</div><div>μm</div><div>SYS T4</div></td><td><div>---</div><div>SYS T8</div></td></tr></table></div>	<div>+363.7</div> <div>μm</div> <div>SYS T1</div>	<div>+106.3</div> <div>μm</div> <div>SYS T2</div>	<div>-65.9</div> <div>μm</div> <div>SYS T5</div>	<div>+276.6</div> <div>μm</div> <div>SYS T6</div>	<div>+448.9</div> <div>μm</div> <div>SYS T3</div>	<div>---</div> <div>SYS T7</div>	<div>+191.5</div> <div>μm</div> <div>SYS T4</div>	<div>---</div> <div>SYS T8</div>
<div>+363.7</div> <div>μm</div> <div>SYS T1</div>	<div>+106.3</div> <div>μm</div> <div>SYS T2</div>								
<div>-65.9</div> <div>μm</div> <div>SYS T5</div>	<div>+276.6</div> <div>μm</div> <div>SYS T6</div>								
<div>+448.9</div> <div>μm</div> <div>SYS T3</div>	<div>---</div> <div>SYS T7</div>								
<div>+191.5</div> <div>μm</div> <div>SYS T4</div>	<div>---</div> <div>SYS T8</div>								

Table 2. List of Marposs dashboards > Sys > Setup	
Page name	Page
SYS TRANSDUCERS SETUP	

5.7.2 OEM Widgets

SYS

MARPOSS WIDGETS FOR SYSTEM

>

Table 3. List of OEM dashboards > Dashfolder > Sys		
Icon	Widget	System Description/Status
	<div>Text viewer</div>	<div></div> <div></div> <div></div> <div>This widget may be used to insert a note that can be consulted on-screen.</div>
	<div>Oscilloscope</div>	<div></div> <div></div> <div></div> <div>This widget may be used view a graphical representation of the signal generated by a probe.</div>
	<div>Physical I/O</div>	<div></div> <div></div> <div></div> <div>This widget may be used to enable the I/O present on the system, selecting type, address and operating mode.</div>

Table 3. List of OEM dashboards &gt; Dashfolder &gt; Sys


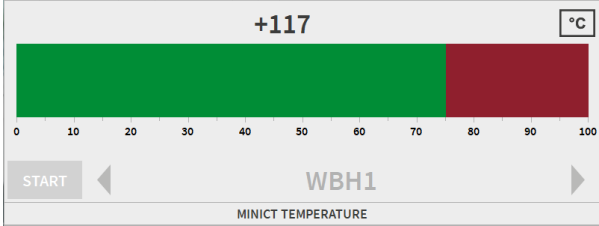




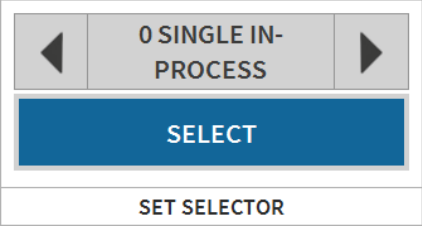




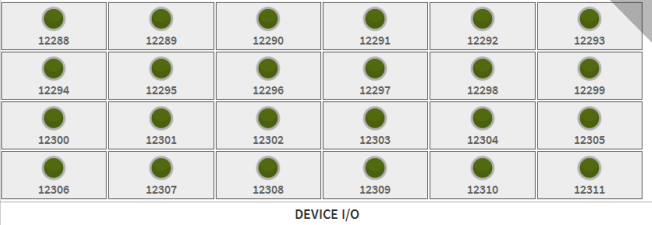









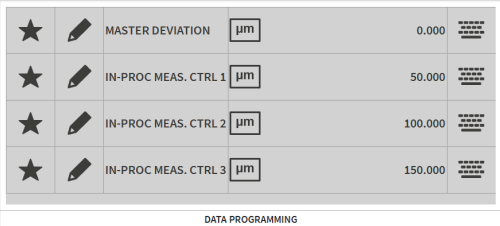



Icon	Widget	System Description/Status		
	<b>MiniCT Temperature</b> 			
		This widget may be used to monitor the temperature detected by the MiniCT present on the system.		
	<b>Set Selector</b> 			
		This widget may be used to enable one of the sets present on the system (IP, AE, WB, etc.)		
	<b>I/O Device</b> 			
		This widget may be used view the input and output signals activated by the machine PLC.		
	<b>Function Button</b> 			
		This widget maybe used reconnect the selected function between: <ul style="list-style-type: none"> <li>Reconnect target.</li> <li>Remove exam.</li> </ul>		
	<b>Data programming</b> 			
		This widget may be used to display the parameters that have been saved among the favourites (★)		

Table 3. List of OEM dashboards &gt; Dashfolder &gt; Sys


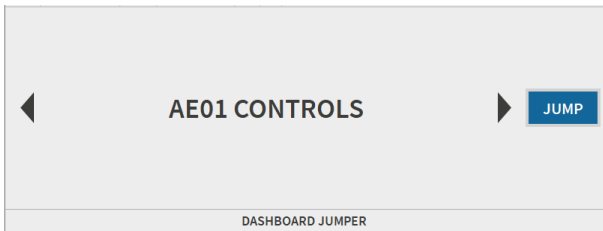




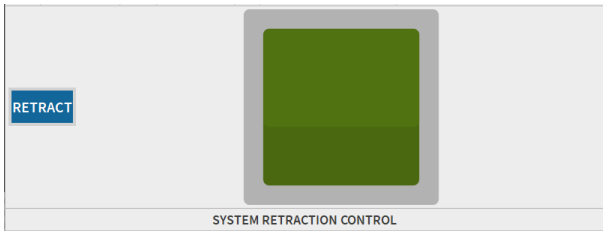







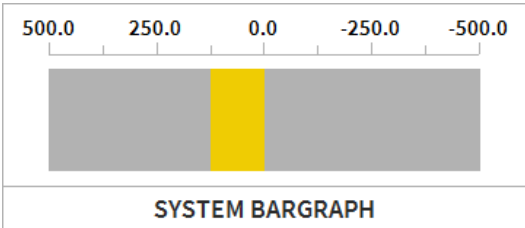




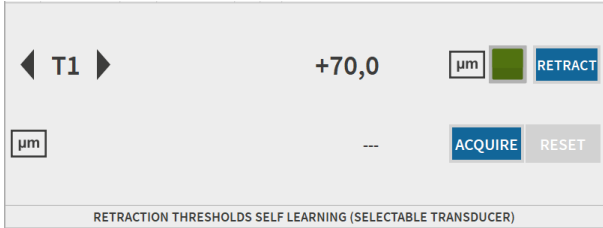







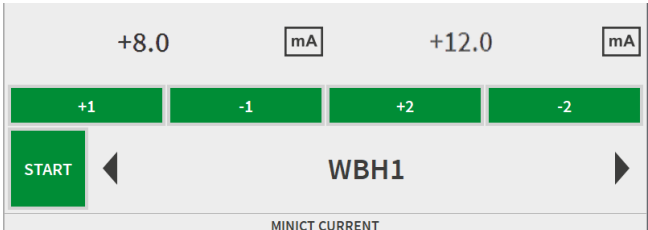



Icon	Widget	System Description/Status		
	<b>Dashboard Jumper</b> 			
		<p>This widget may be used to switch between the dashboard that have been generated, selecting the desired dashboard by using the ◀ ▶ buttons and the clicking on the “Jump” button to confirm</p>		
	<b>System Retraction Control</b> 			
		<p>This widget may be used to activate the retract auxiliary node command RET.</p> <p>In  and  mode only the  LED is active.</p>		
	<b>System bargraph</b> 			
		<p>This widget may be used display the measurement value.</p>		
	<b>Retraction thresholds self learning (Selectable Transducer)</b> 			
		<p>This widget may be used to acquire the retraction threshold for the selected transducer. In  and  mode only the  LED is active.</p>		
	<b>MiniCT Current</b> 			
		<p>This widget may be used to view the current values found in the MiniCT.</p>		


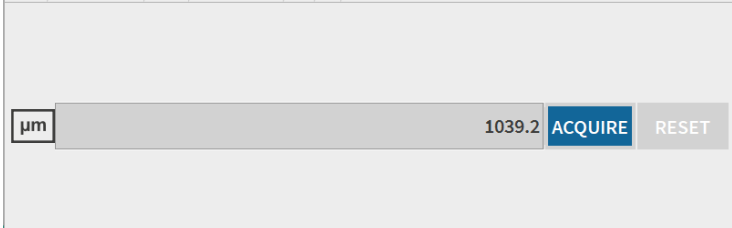




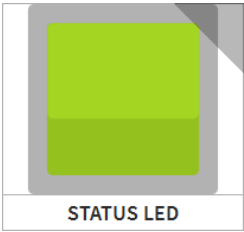




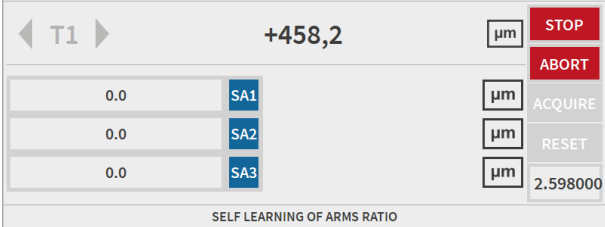




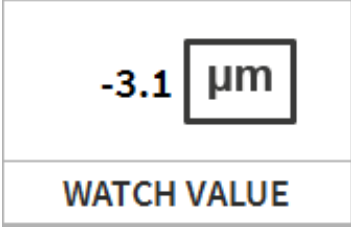




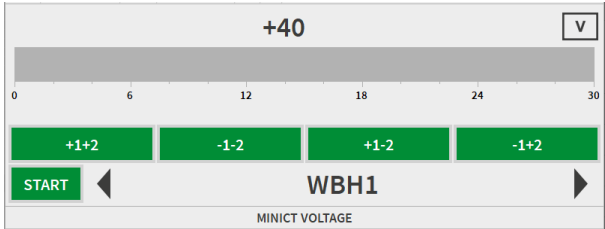



Table 3. List of OEM dashboards > Dashfolder > Sys		
Icon	Widget	System Description/Status
	<b>Retraction thresholds self learning (Fixed Transducer)</b> 	   This widget may be used to acquire the retraction threshold for the pre-defined transducer.
	<b>Status LEDs</b> 	   These LEDs are used to display the status of the selected object, as follows: <ul style="list-style-type: none"> <li>• Connection</li> <li>• Alarm</li> <li>• Touch1</li> <li>• Touch2</li> </ul>
	<b>Self Learning Arms ratio</b> 	   This widget may be used to carry out the arms ratio self learning procedure
	<b>Watch value</b> 	   This widget may be used to display the measurement value generated by the selected sensor assigned to one of the functions present on the system
	<b>MiniCT Voltage</b> 	   This widget may be used to display the voltage values present in the MiniCT.

Table 3. List of OEM dashboards &gt; Dashfolder &gt; Sys







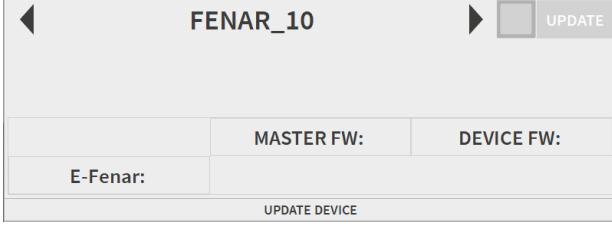




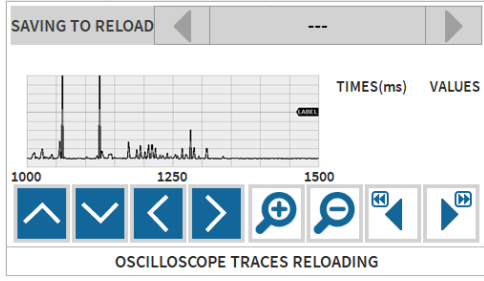




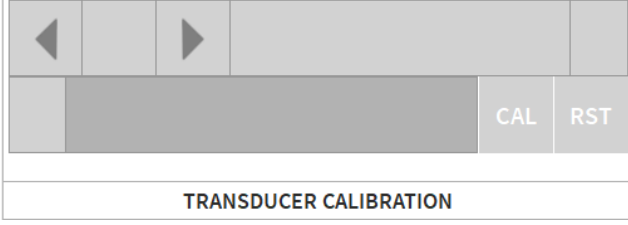




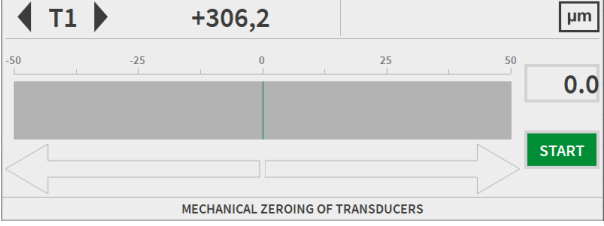



Icon	Widget	System Description/Status		
	<p><b>Selected Set index</b></p> 			
		<p>This function may be used to display:</p> <ul style="list-style-type: none"> <li>• The system status</li> <li>• Any alarms that may be present</li> <li>• The set selected by the machine PLC</li> </ul>		
	<p><b>Updates FW device</b></p> 			
		Ensures the selected device firmware is updated using the ◀ ▶ keys.		
	<p><b>Reloading oscilloscope traces</b></p> 			
		Allows for a previously acquired trace to be loaded.		
	<p><b>Transducer calibration</b></p> 			
		Allows for the absolute calibration of a particular transducer to be carried out <b>Only for Unimar A</b>		
	<p><b>Mechanical zeroing of a transducer.</b></p> 			
		<p>This widget may be used to carry out the mechanical zeroing procedure on the selected measurement transducer. <b>For use with HBT type sensors only.</b></p>		



Table 3. List of OEM dashboards > Dashfolder > Sys

Icon	Widget	System Description/Status
	<b>Bit test</b> 	 <p>This function may be used to display and test the individual system available application bits.</p>
	<b>OTX Diagnostics</b> 	 <p>This function may be used to display the MiniCT voltage, current and temperature values in a single widget.</p>
	<b>Mechanical head diameter reset</b> 	 <p>This function may be used to mechanically reset the head</p>
	<b>Head diameter calibration</b> 	 <p>This function may be used to calibrate the head diameter</p>
	<b>Values (numerical) of all the sensors</b> 	 <p>This function displays the (numerical) values of the various sensors installed on the system</p>
	<b>Test (bar) values of all the sensors</b> 	 <p>This function displays the (bar) values of the various sensors installed on the system</p>

This page has been intentionally left blank

## 6 ERRORS - WARNINGS - ALARMS

### 6.1 Errors

Table 4. Errors			
Code	Message	Cause	Remedy
1	The dynamic memory is full	No space remains in the memory.	None.
2	The transducer over range limit is incorrect.	The transducer over range limit exceeds its working range.	Reduce the limit, or modify the value of the arms ratio or the linearity range.
3	The transducer identifier is not valid.	The identifier assigned to the transducer of a connected head is null.	Disable the head.
4	Two or more transducers with the same identifier.	Two or more sensors with the same identifier.	Disable all the heads having the same transducer identifier, apart from the first one.
5	More than two sensors with pneumatic retraction share the same nozzle	Sensors assigned to different applications need to use the same retraction nozzle.	Modify the node identifier or the sensor number corresponding to the specified sensor retraction.
6	Two heads with pneumatic retraction and assigned to different applications share the same retraction nozzle	Sensors assigned to different applications need to use the different retraction nozzles.	Modify the retraction nozzle program settings
7	Two or more sensors with the same node identifier	Two or more nodes with the same identifier	Modify the identifier of the specified node
8	The microphone identifier is not valid.	The microphone identifier is null.	Disable the microphone
9	Two or more microphones with the same identifier.	Two or more microphones with the same identifier.	Disable all the microphones having the same identifier, apart from the first one.
10	Accelerometer identifier not valid	The identifier assigned to an enabled accelerometer is null	Disable the accelerometer
11	Two or more accelerometers with the same identifier	Two or more accelerometers with the same identifier	Disable all the accelerometers having the same identifier, apart from the first one.
12	It is not possible to enable more than two touch probes	More than two touch probes have been enabled	Disconnect a touch probe
13	The balancing head used as the source for the microphone is not valid	The balancing head identifier is null or the head does not exist	Change the identifier of the balancing head
14	The proximity sensor identifier is not valid	The proximity sensor identifier is null	Disable the auxiliary node or the element connected to it
15	The balancing head identifier is not valid	The balancing head identifier is null	Disable the auxiliary node or the element connected to it
16	Two or more proximity sensors with the same identifier	Two or more proximity sensors with the same identifier	Disable all the proximity sensors having the same identifier, apart from the first one.
17	Two or more balancing heads with the same identifier	Two or more balancing heads with the same identifier	Disable all the balancing heads having the same identifier, apart from the first one.
18	The selected fast output is not valid	The fast output is already in use by another touch node	Change the fast output associated with the probe
19	The touch node identifier is not valid	The touch node identifier is null	Disable the touch probe

Table 4. Errors

Code	Message	Cause	Remedy
20	The parameter value is not correct for the type of probe in use	The parameter value is not correct for the type of probe in use	Consult the manual for the values that may be assigned to the parameter for this type of probe
21	No pin configured as primary	A pin must be configured as the primary	Set-up a pin as the primary
22	More than one pin configured as primary	Too many pins configured as the primary	Set-up a single pin as the primary
23	Measurement head identifier not defined	Each measurement sensor must be associated with a measurement head	Select a measurement head for each measurement sensor
24	Same measurement head used by two or more sensors	Two or more sensors are associated with the same measurement head	Modify the identifier assigned to measurement head of the specific sensor
25	Head invalid for a sensor in LVDT mode	A sensor in LVDT may only use measurement heads with LVDT transducers	Select a measurement head with a LVDT transducer for sensors on the lvd nodes
26	Head in use without retraction connected to a retraction nozzle	The measurement sensor is using a head without the retraction connected to a retraction nozzle	Connect a retraction nozzle to the head before using it for a measurement sensor
27	Pneumatic retraction not permitted		
28	Invalid device type connected to the COM	In invalid type of device is connected to the COM	Change the type of device connected to the COM
29	Invalid E-FENAR head identifier	No head has been selected or a non E-FENAR head has been selected	Select an E-FENAR head
30	The same E-FENAR has been connected to more than one COM	Two or more COM are connected to the same E-FENAR	Change the identifier assigned to the E-FENAR or disable the transmission
31	Two or more RPM identifiers are identical	Two or more RPM identifiers are identical	Modify the duplicated RPM
32	No proximity sensors available	Proximity sensor usable as RPM source only if connected to this node	Use another RPM source
33	No proximity sensor with identifier selected	No proximity sensor with identifier selected connected to this node	Select the identifier corresponding to a proximity sensor connected to this node
34	No WBTX available	Balancing head usable as RPM source only if WBTX connected to this node	Use another RPM source
35	No balancing head with identifier selected	No balancing head with identifier selected connected to this node	Select the identifier corresponding to a balancing head connected to this node
36	More than one retraction nozzle connected to the same head	A measurement head with pneumatic retraction may be connected to a single retraction head only	Reprogram the retraction auxiliary node data
37	The HW configuration cannot be modified during set-up	It is not possible to modify the HW configuration during set-up operation	

Table 4. Errors

Code	Message	Cause	Remedy
38	The hw configuration cannot be modified in automatic	It is not possible to modify the hw configuration during automatic operation	Interrupt automatic operation
39	Fieldbus interface IP address not formatted correctly	The IP address, the netmask or the gateway have not been formatted correctly	Change the IP address the netmask or the FIELDBUS interface gateway
40	Invalid station name	The station name value has not been formatted correctly	Enter a correctly-formatted value
41	Error when self-learning arms ratio due to incorrect machine mode		
42	Error when self-learning arms ratio due to incorrect processing state		
43	Error when self-learning arms ratio due to another set-up command in progress		
44	Error when self-learning arms ratio due to an incorrect transducer identifier value		
45	Error when self-learning the arms ratio due an incorrect number of samples or an incorrect shim dimension		
46	Error when self-learning arms ratio due to an error in the calculated value of the arms ration		
47	Arms ratio self-learning not started		
48	Invalid samples		
49	Value permitted for BIÚ LT only	Value permitted for BIÚ LT only	Change the value to one accepted by <b>BIÚ LT</b>
50	Type of transmission invalid for selected head	Type of transmission invalid for selected head	Select minict type transmission or select a different balancing head
51	Type of transmission invalid for selected head	Type of transmission invalid for selected head	Select MINICT PLUS type transmission or select a different balancing head
52	Two or more probes with the same identifier.	Two or more probes with the same identifier.	Disable all the touch probes having the same identifier, apart from the first one.
53	Invalid number of balancing heads assigned to this WBTX node	Invalid number of balancing heads assigned to this WBTX node	Check the WBTX settings
54	The thermal probe identifier is not valid	The identifier assigned to a thermal probe for a connected head is not valid	Disable the head.
55	An invalid node has been used for a thermal probe	An incompatible node has been used for a thermal probe	Modify the type of node
56	Two or more sensors share the same thermal probe	Two or more sensors share the same thermal probe	Disable all the thermal probes having the same identifier, apart from the first one

Table 4. Errors

Code	Message	Cause	Remedy
57	Head with incorrect sensor used	The head connector must be compatible with the connector on the node	Make sure a head with the correct connector is in use
58	The speed exceeds the maximum speed	Select a correct speed value	Correct the movement speed, which must be less than the maximum speed value.
59	The calibration speed exceeds the maximum speed	Select a correct speed value for the calibration	Correct the calibration movement speed, which must be less than the maximum speed value.
60	Incorrect sensor type associated with the Protomar node	Incorrect sensor type associated with the Protomar node	Correct the sensor type associated with the Protomar node
61	The wrong transducer has been associated with the Protomar node	THE wrong transducer has been associated with the Protomar node	Associate the correct transducer with the Protomar node
62	Wrong head associated with the Protomar node	Wrong head associated with the Protomar node	Associate a Protomar head with the Protomar node
63	Incorrect number of sensors associated with the Protomar node	Incorrect number of sensors associated with the Protomar node	Associate four sensors with the Protomar node
64	Incorrect Protomar head associated with the Protomar node	Incorrect Protomar head associated with the Protomar node	Associate the same Protomar head with the four Protomar node sensors
65	Error programming the retractions for measurement heads with more than one transducer	The retraction of the measurement heads with more than one transducer may not be performed by a nozzle used to retract other heads	Reprogram the retractions.
66	Outside head measurement range.	$(Mco + \text{Nominal val.}) > (\text{maximum diameter})$ or $(\text{Nominal val.} - mco) < (\text{minimum diameter})$ .	Modify the value of the master centring offset or the nominal value.
67	Data reading error	Problem with the hardware configuration check functions.	Cancel the modifications that have been implemented. Modify the hardware configuration. If the problem persists, contact customer service.
68	Invalid electromechanical slide identification number	No electromechanical slide has been selected	Select an electromechanical slide
69	Invalid microphone type	The microphone type has not been selected	Change the microphone type or disable the microphone

## 6.2 Warnings

Table 5. Warnings

Code	Message	Cause	Remedy
1	Tripod touch (sensor, node)		
2	System configuration not present		
3	Restart the system to use the updated firmware on the nodes.		
4	Restart the system to acquire the serial numbers of the nodes		
5	Restart the system to complete the factory reset		

Table 5. Warnings			
Code	Message	Cause	Remedy
6	Restart to reconnect the node		
7	Warning on user interface server.		
8	Opcua server not started		
9	Fw AP-head not updated		
10	Restart the system to implement the new LCD panel settings		
11	Error when reading part data, parts deleted.	Parts deleted due to an error in the database (probably a different version)	Recreate the deleted parts
12	Application sets deleted because different version to current sets		
13	E-fenar program not updated		
14	OTX program not updated		
15	Cannot create synchronisation thread		Restart the system
16	Restart to render the modified options effective		
36	Transducer marker not acquired		
37	Error when updating a part database	The software stop working during the previous session while updating a part database	Cancel the part that caused the problem and restart the system
38	Error when updating an application set database	The software stop working during the previous session while updating an application set database	Cancel the application set that caused the problem and restart the system
39	Protomar head not released		

### 6.3 Alarms

Table 6. Alarms			
Code	Message	Cause	Remedy
1	A node has stopped working		
2	MMSB fault. Check the cable and restart		
3	Fixed I/O outputs fault in correspondence with (bit, node):		
4	Configurable I/O outputs fault in correspondence with (bit, node):		
5	I/O problem on power supply in I/O node		
6	I/O problem with an internal module on the I/O node board		
7	I/O problem with the I2C module in the I/O node		
8	MMSB bus self-learning failed		
9	Error when reading the node SW version: result =		
10	Errors when starting data reception: result =		
11	Errors when initialising the tracer mmsb: result =		



Table 6. Alarms

Code	Message	Cause	Remedy
12	Errors when initialising the data interface: result =		
13	Errors when initialising the rt data reception task: result =		
14	Errors when initialising the commands interface object: result =		
15	Error when starting the node firmware		
16	Error when starting the ptp service: result =		
17	Error when starting the MMSB-TDMA: result =		
18	PTP master node not found: result =		
19	Incorrect configuration file		
20	Fatal error in acquisition system		
21	Two nodes with the same address, firmware update not executed		
22	Loader update not completed on node		
23	Firmware update not completed on node		
24	Node not found (the acquisition will be reset on MMSB)		
25	Unknown auxiliary node type found!		
26	Incorrect auxiliary node type found		
27	Auxiliary node not found		
28	Fieldbus interface found but configured		
29	FIELDDBUS module configuration found but configured		
31	Generic TOUCH error (sensor, node)		
32	TOUCH error in internal communication (sensor, node)		
33	TOUCH probe not recognised (sensor, node)		
34	Probe TOUCH parameter not recognised (sensor, node)		
35	TOUCH no probe detected (sensor, node)		
36	TOUCH no probe configured (sensor, node)		
37	TOUCH node hardware problem		
38	TOUCH (trigger board) error receiving package (node)		



Table 6. Alarms

Code	Message	Cause	Remedy
39	TOUCH (trigger board) timeout error (node)		
40	TOUCH (trigger board) no data received (node)		
41	TOUCH (trigger board) package lost error (node)		
42	Fast output fault		
43	Device configuration error		
44	Communication between processes failed		
45	Communication between different threads of the same process failed		
46	Incorrect device type		
47	Initialisation not correct		
48	FIELDBUS board fault: watch dog timeout expired		
49	FIELDBUS board fault: error mapping the DPR addresses		
50	FIELDBUS board fault: error when recognising module		
51	FIELDBUS board fault: error when starting the module		
52	FIELDBUS board fault: the configured module and the actual one are different		
53	FIELDBUS board fault: module not recognised		
54	FIELDBUS board fault: module not marked		
55	Incorrect configuration file	More than one node or auxiliary node with the same identifier	
56	Time expired at start		
57	Cannot open configuration file (problem with HW database update)		
58	Configuration file missing		
59	Cannot create HW database	Probable error in the configuration file	Call customer service to check the configuration file
60	A device identifier is missing, configuration file incorrect		
61	Device type missing, configuration file incorrect		
62	Invalid device type, configuration file incorrect		
63	Configuration file reading failed, buffer too small.		
64	Critical error in processing		
65	Critical error in flow control		

Table 6. Alarms

Code	Message	Cause	Remedy
66	Critical error on the processed data		
67	Critical error on the FIELD BUS		
68	Critical error at start-up		
69	Shunt voltage problem on the TWO WAY node		
70	Bus voltage threshold limit exceeded on the TWO WAY node (branch, node)		
71	Power threshold limit exceeded on the TWO WAY node (branch, node)		
72	Power supply problem on the TWO WAY node		
73	Current overload on the TWO WAY node (branch, node)		
74	Current overload on the TWO WAY node in the absence of terminal cap (branch, node)		
75	Short circuit on the TWO WAY node (branch, node)		
76	Current overload on the two way node in the absence of terminal cap (branch, node)		
77	Generic error on the TWO WAY node (branch, node):		
78	TOUCH (trigger board) cannot open I2C device.		
79	TOUCH undefined error (sensor, node)		
80	TOUCH invalid configuration (sensor, node)		
81	TOUCH short circuit on the probe (sensor, node)		
82	TOUCH probe detached (sensor, node)		
83	TOUCH hardware malfunction on the probe (sensor, node)		
84	TOUCH timeout (sensor, node)		
85	Touch error in internal management software (sensor, node)		
86	TOUCH none (sensor, node)		
87	TOUCH initialisation error (sensor, node)		
88	TOUCH communication error (sensor, node)		
89	TOUCH invalid userset (sensor, node)		
90	TOUCH message lost (sensor, node)		

Table 6. Alarms

Code	Message	Cause	Remedy
91	TOUCH transition lost (sensor, node)		
92	TOUCH reset (sensor, node)		
93	Touch tripod (sensor, node)		
94	TOUCH unknown message (sensor, node)		
95	Error when creating thread		
96	Fan fault		
97	Master type not detected		
98	Configuration file not compatible with the Master		
99	Internal software error		
100	Communication error with the node		
101	Fieldbus interface not found but configured		
102	Too many data packages from node lost		
103	Fatal error on Protomar node drive		
104	MMSB protocol version incompatible Functional		
105	HW configuration not correct	An update may have compromised the HW configuration	Restore the factory values and contact Marposs customer service if the problem persists
106	Error when updating a HW database	The software stop working during the previous session while updating a head or software node database	Restore the factory values or perform a total or hw restore from a previous backup.
500	Transducer no longer connected		
501	A retracted transducer cannot be retracted again		
502	The transducer retraction has failed		
503	A transducer with retraction is in use by two channels simultaneously		
504	Thermal probe no longer connected: identifier		
505	The transducer release has failed		
602	HW problem on the AE node	HW problem on the AE node	Replace the AE node and contact Marposs customer service
604	Acoustic sensor not operative	Acoustic sensor not operative	Replace the acoustic sensor
605	Acoustic sensor not connected or defective	Acoustic sensor not connected or defective	Connect the acoustic sensor or replace it if necessary
606	Short circuit on the active acoustic sensor	Short circuit on the active acoustic sensor	Replace the acoustic sensor
607	Background noise acquisition failed	Background noise acquisition failed	Repeat the background noise acquisition procedure

Table 6. Alarms

Code	Message	Cause	Remedy
608	HW gain calculation failed during manual set-up contact phase	HW gain calculation failed during manual set-up contact phase	Repeat the acquisition
609	Gain and band limits calculation failed	Gain and band limits calculation failed	Repeat the acquisition
700	WBTX auxiliary node alarm	WBTX auxiliary node alarm	Repeat the operation
701	Communication between ACC mode and auxiliary mode alarm	Communication between ACC mode and auxiliary mode alarm	Repeat the operation
702	Balancer transmission alarm	Balancer transmission alarm	Repeat the operation
705	Rpm sensor failure		
706	Accelerometer sensor not connected	Accelerometer sensor not connected	Connect the accelerometer sensor
707	Accelerometer fault	Accelerometer fault	Replace the accelerometer
709	Motor connections alarm on:	Motor connections alarm	Restore the connection between the rotor and balancing head
710	Data transmission alarm on:	Data transmission alarm	Check the distance between rotor and stator
711	Power supply alarm on:	Power supply alarm:	Check the cables used to communication between WBTX and the balancing head
712	Data transmission alarm on:	Data transmission alarm	Check the distance between rotor and stator
713	Current overload on motors:	Current overload on motors	Check whether there are any mechanical components obstructing the balancing head motors
714	Overheating on:	Overheating	Switch the system off and check the system assembly layout
715	Generic alarm on motor controller	Generic alarm on motor controller	Restart the system.
716	Generic alarm on AE board	Generic alarm on AE board	Restart the system.
717	Configuration modified. Restart the system	Configuration modified.	Restart the system
718	AP-HEAD must be updated	AP-HEAD must be updated	Update the FW
719	AP-HEAD must be updated, but FW missing	AP-HEAD must be updated, but FW missing	Install the packages requested on the master node
720	The AP-HEAD FW has not been updated, but the device is currently occupied	The AP-HEAD FW has not been updated, but the device is currently occupied	Release the device and update the FW
721	Communication with motor controller lost	Communication with motor controller lost	Check the distance between rotor and stator
722	Excess temperature on motor controller	Excess temperature on motor controller	Switch the system off and allow it to cool down
723	Low voltage level on motor controller	Low voltage level on motor controller	Check the distance between rotor and stator
724	Low current level on motor 1	Low current level on motor 1	Check the balancing head wiring
725	Current overload on balancing head motors	Current overload on balancing head motors	Verify that the motors are free to move
726	Low current level on motor 2	Low current level on motor 2	Check the balancing head wiring
727	Current overload on balancing head motors	Current overload on balancing head motors	Verify that the motors are free to move

Table 6.Alarms

Code	Message	Cause	Remedy
728	Error in AP-HEAD	Error in AP-HEAD	Repeat the last operation and, if it fails, lower the log level to debug and try again
729	Error in AP-HEAD	Error in AP-HEAD	Repeat the last operation and, if it fails, lower the log level to debug and try again
730	Error in AP-HEAD	Error in AP-HEAD	Repeat the last operation and, if it fails, lower the log level to debug and try again
731	Error in AP-HEAD	Error in AP-HEAD	Repeat the last operation and, if it fails, lower the log level to debug and try again
732	Error in AP-HEAD	Error in AP-HEAD	Repeat the last operation and, if it fails, lower the log level to debug and try again
733	Communication with acoustic board on rotor lost	Communication with acoustic board on rotor lost	Check the distance between rotor and stator
734	Excess temperature on acoustic board on rotor	Excess temperature on acoustic board on rotor	Switch the system off and allow it to cool down
735	Microphone disconnected in the AP-HEAD	Microphone disconnected in the AP-HEAD	Call customer service to check the AP-HEAD
736	Error in AP-HEAD	Error in AP-HEAD	Call customer service to check the AP-HEAD
737	Voltage level low on acoustic board on rotor	Voltage level low on acoustic board on rotor	Check the distance between rotor and stator
738	Communication with rotor lost during analogue acoustic operation	Communication with rotor lost during analogue acoustic operation	Check the distance between rotor and stator
741	Alarm on OTX	Alarm on OTX	Repeat the last operation and, if it fails, lower the log level to debug and try again
742	Communication alarm on OTX	Communication alarm on OTX	Check the distance between rotor and stator
743	OTX retentive memory failure	OTX retentive memory failure	Repeat the last operation and, if it fails, lower the log level to debug and try again
744	Otx update procedure failed	OTX update procedure failed	Repeat the last operation and, if it fails, lower the log level to debug and try again
745	OTX peripheral unit failure	OTX peripheral unit failure	Repeat the last operation and, if it fails, lower the log level to debug and try again
746	Excess temperature on OTX	Excess temperature on OTX	Switch the system off and allow it to cool down
747	Power supply alarm on OTX:	Power supply alarm on OTX:	Switch the system off
748	Current overload on balancing head motor 1	Current overload on balancing head motor 1	Verify that the motors are free to move
749	Current overload on balancing head motor 2	Current overload on balancing head motor 2	Verify that the motors are free to move
750	Low current level on motor 1	Low current level on motor 1	Check the balancing head wiring
751	Low current level on motor 2	Low current level on motor 2	Check the balancing head wiring

Table 6. Alarms

Code	Message	Cause	Remedy
752	Home sensor 1 error on otx	Home sensor 1 error on otx	Repeat the last operation and, if it fails, lower the log level to debug and try again
753	Home sensor 2 error on otx	Home sensor 2 error on otx	Repeat the last operation and, if it fails, lower the log level to debug and try again
754	Driver motors in alarm state on OTX	Driver motors in alarm state on OTX	Repeat the last operation and, if it fails, lower the log level to debug and try again
755	MC excess temperature on otx	MC excess temperature on otx	Switch the system off and allow it to cool down
756	AE CH1 driver error	AE CH1 driver error	Repeat the last operation and, if it fails, lower the log level to debug and try again
757	AE CH1 excess temperature on OTX	AE CH1 excess temperature on OTX	Switch the system off and allow it to cool down
758	AE CH1 sensor not operative	AE CH1 sensor not operative	Repeat the last operation and, if it fails, lower the log level to debug and try again
759	AE CH1 sensor not connected	AE CH1 sensor not connected	Repeat the last operation and, if it fails, lower the log level to debug and try again
800	Excess temperature inside the node	Excess temperature inside the node	Switch the system off and reposition the node if possible
801	Power supply defective on node	Power supply defective on node	Replace the node
802	HW problem on node	HW problem on node	Replace the node and contact Marposs customer service
803	Auxiliary node not connected	Auxiliary node not connected	Connect the auxiliary node and restart the system
804	Communication error with the defective auxiliary node	Defective auxiliary node	Replace the node and contact Marposs customer service
900	Communication timeout error with the node, motor:		
901	Communication error with the node, motor:		
902	Error on the node optical row, motor:		
903	Motor stopped on electro-brake. Node, motor:		
904	Movements disabled on node, motor:		
905	Motor stopped. Node, motor:		
906	Motor stopped because the contact sensor has exceeded the safety threshold. Node, motor:		
907	The motor speed is not correct. Node, motor:		
908	Marker self-learning procedure failed		
909	Initialisation error on the node, motor:		

Table 6. Alarms

Code	Message	Cause	Remedy
910	The Protomar calibration has failed	The measurement status is not correct or the values are outside the calibration limits.	Release the head or repeat the mechanical reset
911	Protomar calibration, reset failed.	Protomar calibration, data failed	Repeat the command.
912	Error reading the temperature map	The head temperature map is not present	Check that the temperatures are present in the head programming
1000	The dynamic memory is full	No space remains in the memory	

**MARPOSS**

End of General Information about the Programming Environment and  
General programming

---

**BUILT**