

InteliMains 510

Mains supervision controller





SW version 1.3.0

1 Status LED Indication	4
2 Metering screens	13
3 Alarmlist	14
4 Setpoints	16
5 History	20
6 Trends	22
7 Values	25
8 Administration	26



Image 1.1 Operator interface of IntelliMains 510

Control buttons		
Position	Picture	Description
1		<p>LEFT button. Use this button to move left or to change the mode. The button can change the mode only if the main screen with the indicator of currently selected mode is displayed.</p> <p><i>Note: This button will not change the mode if the controller mode is forced by one of binary inputs listed in the Reference Guide – "Operating modes" chapter.</i></p>
2		<p>RIGHT button. Use this button to move right or to change the mode. The button can change the mode only if the main screen with the indicator of currently selected mode is displayed.</p> <p><i>Note: This button will not change the mode if the controller mode is forced by one of binary inputs listed in the Reference Guide – "Operating modes" chapter.</i></p>
3		<p>HORN RESET button. Use this button to deactivate the horn output without acknowledging the alarms.</p>
4		<p>FAULT RESET button. Use this button to acknowledge alarms and deactivate the horn output. Inactive alarms will disappear immediately and status of active alarms will be changed to "confirmed" so they will disappear as soon as their reasons dismiss.</p>
5		<p>UP button. Use this button to move up or increase value.</p>
6		<p>PAGE/MENU button. Use this button to switch over display pages.</p>

7		DOWN button. Use this button to move down or decrease value.
8		ENTER button. Use this button to finish editing a setpoint or moving right in the history page.
9		START button. Works in MAN mode only. Press this button to activate LBO System Start/Stop.
10		STOP button. Works in MAN mode only. Press this button to deactivate LBO System Start/Stop.
11	Softkey (programmable via ScreenEditor) MCB button. Works in MAN mode only. Press this button to open or close the MCB.	
12	Softkey (programmable via ScreenEditor) MGCB button. Works in MAN mode only. Press this button to open or close the MGCB.	
13	Softkey (programmable via ScreenEditor) ALARMLIST button. Use this button to get to the alarmalist screen.	
14	Softkey (programmable via ScreenEditor) HISTORY button. Use this button to get to the history screen.	
15	Softkey (programmable via ScreenEditor) HOME button. Use this button to get to the main screen.	
16	Multicolor (RGB) LED. The specified color and flashing function describes the actual state of the unit. For more information see Status LED Indication on page 4.	

1 Status LED Indication

- LED intensity is directly connected with the actual setting of the backlight intensity in Administration menu "Settings" accessible by shortcut Enter + Menu
 - the intensity respects the value of the Manual or External brightness control
- The flashing of the status LED and indicative Alarm icon in the top statusbar have the same period
- Meaning of the status LED colors is described below


Color and flashing function meaning:

- Red is flashing
 - Active unconfirmed level 2 alarm
 - Inactive unconfirmed level 2 alarm
 - Lost of internal communication line
 - Controller unit in init state
- Red lights
 - Active confirmed level 2 alarm
 - Integrated color display unit in init state
 - Integrated color display unit booting procedure
- Cyan lights
 - temperature inside the housing exceeded the 85 °C (185 °F)
- Yellow lights
 - Active unconfirmed level 1 (warning) alarm
 - Inactive unconfirmed level 1 (warning) alarm
 - Active confirmed level 1 (warning) alarm
 - Active unconfirmed fail sensor alarm
 - Inactive unconfirmed fail sensor alarm
 - Active confirmed fail sensor alarm
- Green lights
 - unit is running correctly without any errors or alarms

Color state priority:

1. Red is flashing
2. Red lights
3. Cyan lights
4. Yellow lights
5. Green lights

1.1 Pages

There are several screens called pages in the graphical user interface (GUI), which are accessible by pressing the  **MENU** button or concrete user button in the bottom status bar. Each page has a different function and different structure. Pages are described in special chapters in this manual.

The actual GUI consists of 6 different pages:

- > Metering screen
- > Alarmlist
- > Setpoints
- > History
- > Trends
- > Values (applicable only in supported controllers)
- > Administration
 - » Page administration is accessible only by pressing the combination of the **ENTER** + **MENU** buttons from only Metering screen.

1.2 Screens

Each type of controller has special set of screens stored in the controller configuration. The description of the each metering screens is by default predefined by ComAp. Scrolling between the screens is performed using the **UP** and **DOWN** buttons.

Note: The metering screens are adjustable using the Screen Editor (in IntelliConfig). The Screen Editor tool also has its own manual.

1.3 Service screen

The service screen is the special screen (bitmap) defined and stored in the controller. The service screen is also accessible from administration as a last list item. The purpose of the service screen is to allow the site administrator to put into the display (resp. controller) important data for technical support. The status screen can be uploaded using the IntelliConfig. By default the service screen is predefined by ComAp.



Need technical support ?
Please contact your local distributor.

Image 1.2 : Service screen overview

Service screen is accessible using the buttons combination **ENTER** + **MENU** just only from the metering screens. **ENTER** button has to be pressed first.

1.4 Dialogs

Values and parameters and other can be set in the controller via dialogs. There are several dialogs in the GUI. Dialogs for numbers, texts and lists.

Note: Function and User buttons work on background (e.g. if any dialog is displayed).

IMPORTANT: Each dialog has its own structure corresponding to the value type.

IMPORTANT: A QR Code is displayed on each dialog. Together with ComAp Smart Hint application the QR Code is dedicated for further help. Simply read the QR Code using Smart Hint application to get a help about actually edited setpoint.

1.4.1 Dialog Value

The dialog value is dedicated for number setting. When the dialog is active the buttons arrow up and down are used for number selection. **ENTER** button confirms the option. **MENU** button cancels the dialog without saving.

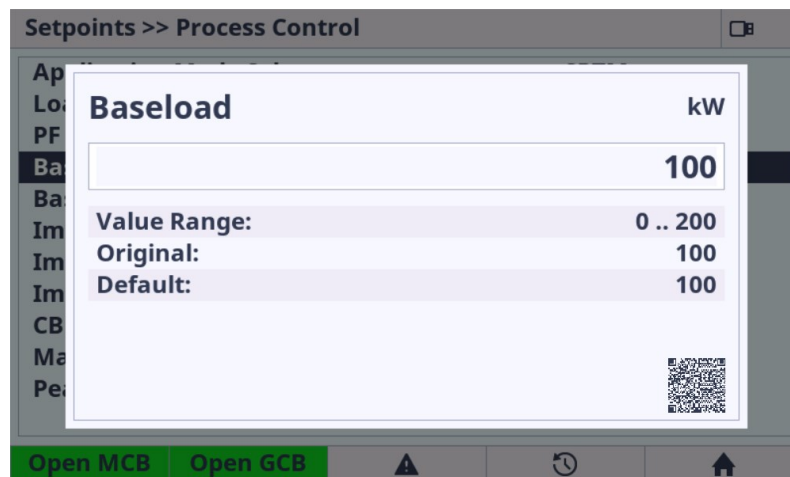


Image 1.3 : Dialog Value overview

1.4.2 Dialog Value Extended

The dialog value extended is dedicated for number setting with combination with one or more string value. When the dialog is active the buttons arrow up and down are used for number/item selection. **ENTER** button confirms the option. **MENU** button cancels the dialog without saving.

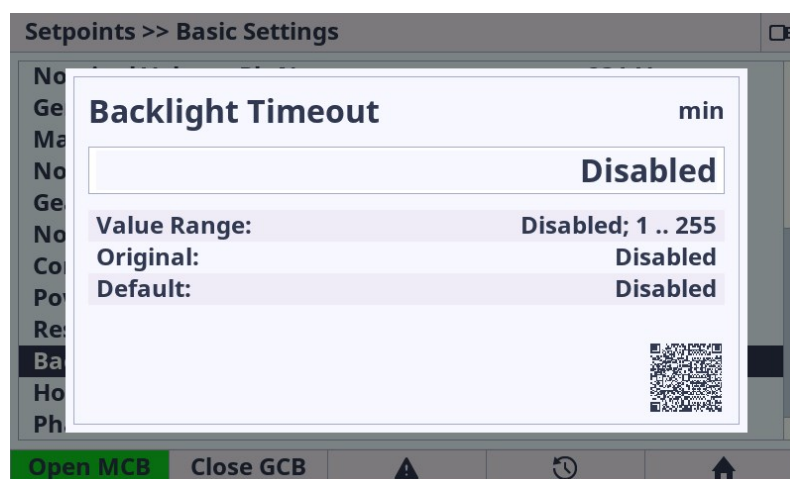


Image 1.4 : Dialog Value Extended overview

1.4.3 Dialog String List

The dialog string list is dedicated for list item selection. When the dialog is active the buttons **UP** and **DOWN** are used for item selection. **ENTER** button confirms the option. **MENU** button cancels the dialog without saving.

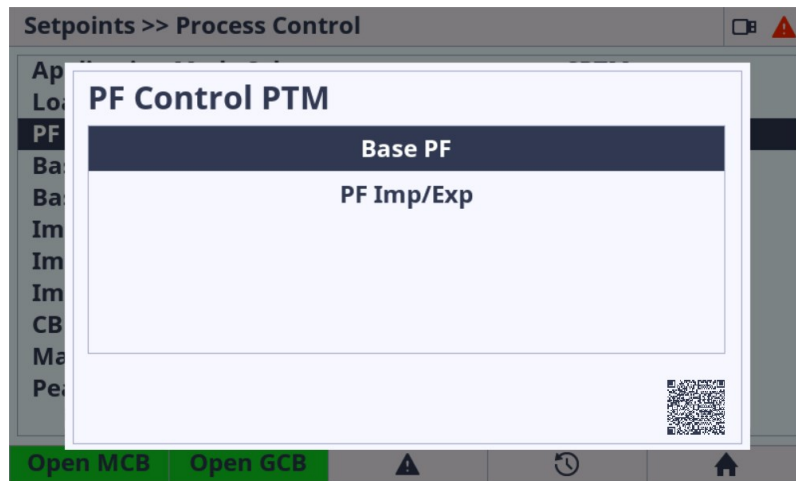


Image 1.5 : Dialog String List overview

1.4.4 Dialog Text

The dialog text is dedicated for text inserting or modification. When the dialog is active the buttons **UP** and **DOWN** are used for letter selection. **UP** means the selection in left direction, **DOWN** means the selection in right direction. Arrows **RIGHT**/**LEFT** are used for moving between the letters to the Next/Previous letter position in the text field. If actual position is very right letter then the arrow right inserts new letter to the right. Letter **DEL** deletes actually selected letter (using **LEFT** or **RIGHT** arrow). Insert letter (empty letter - just behind the **DEL** letter) inserts the letter to the actual position (using **LEFT** or **RIGHT** arrow).

ENTER button confirms the text modification. **MENU** button cancels the dialog without saving.

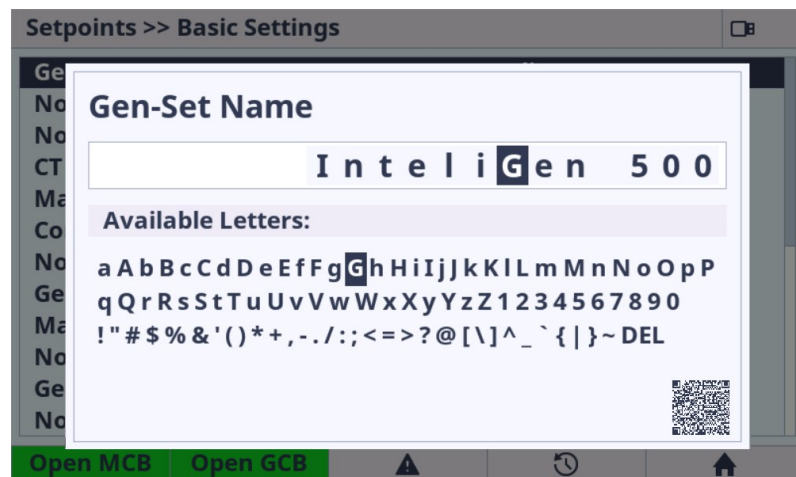


Image 1.6 : Dialog Text overview

Improved dialog for text inserting from version ICD 1.4.0 allows users better and user friendly control. Arrows are used for movement in letter table. **ENTER** is used for letter selection/confirmation. Function buttons are used for another functions. **F1** button is used to delete letter. **F2** button is used for changing the letter table to special characters and vice versa. **F3** and **F4** buttons are used for movement inside the text field between the

letters. **F5** button confirms the dialog and save changes. **≡MENU** button cancels the dialog without the saving changes.

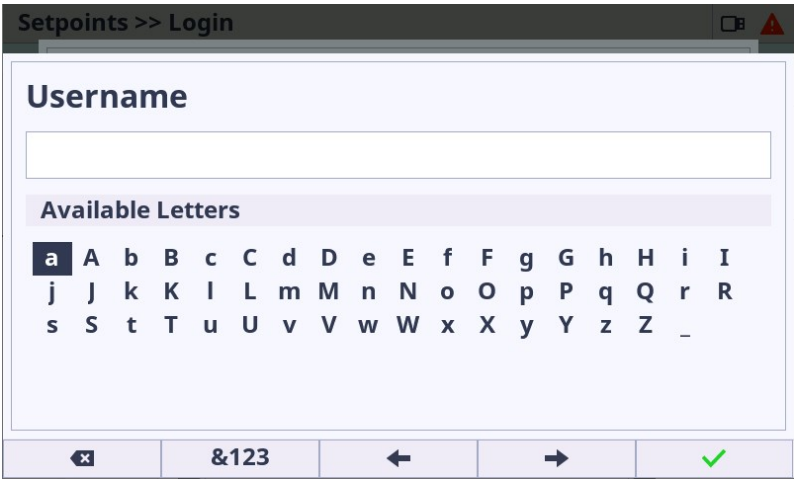


Image 1.7 : Dialog Text from ICD firmware version 1.4.0

Note: Enter button is used for dialog confirmation and saving the entire text to the configuration and because of this the DEL and INS letter is inserted using the left or right arrow button.

1.4.5 Dialog IP address

The dialog IP address is dedicated for IP address insertion. When the dialog is active the buttons arrow **⬆UP** and **⬇DOWN** are used for number selection. Arrows left and **➡RIGHT** are used for moving between the IP cells. **↵ENTER** button confirms the option. **≡MENU** button cancels the dialog without saving.

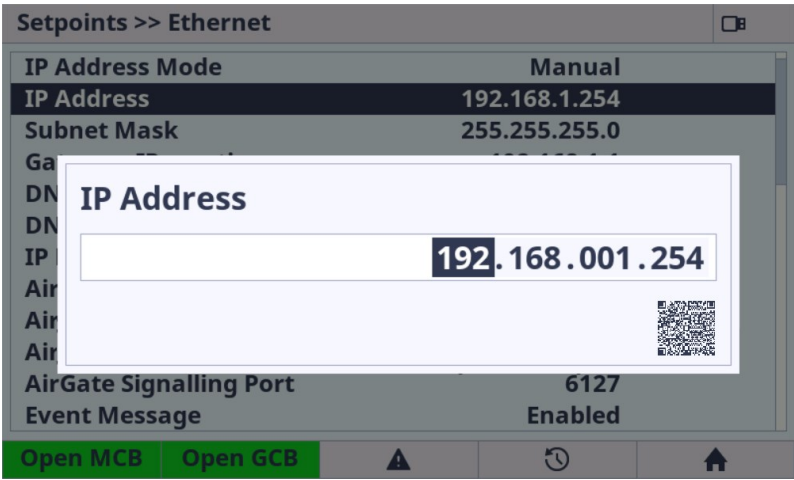


Image 1.8 : Dialog IP address overview

1.4.6 Dialog Message

The dialog message has informal character about the result of any action. **↵ENTER** or **≡MENU** button cancels the dialog without saving. There is no need to confirm the selection. There two types of message dialogs :

- Stop - dedicated for error indication
- Information - dedicated for general message

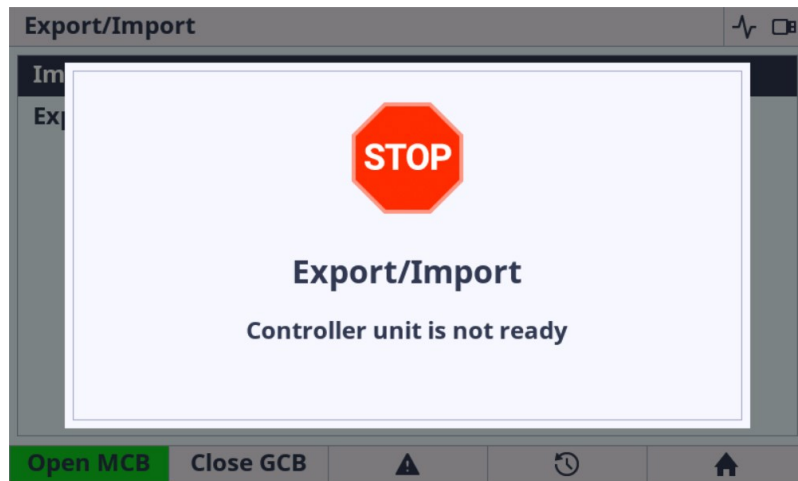


Image 1.9 : Dialog Message overview

1.4.7 Dialog Progress

The dialog progress has informal character about the result of any action. The progress bar and percents are also displayed during the action performing. **ENTER** or **MENU** button cancels the dialog without saving. There is no need to confirm the selection.

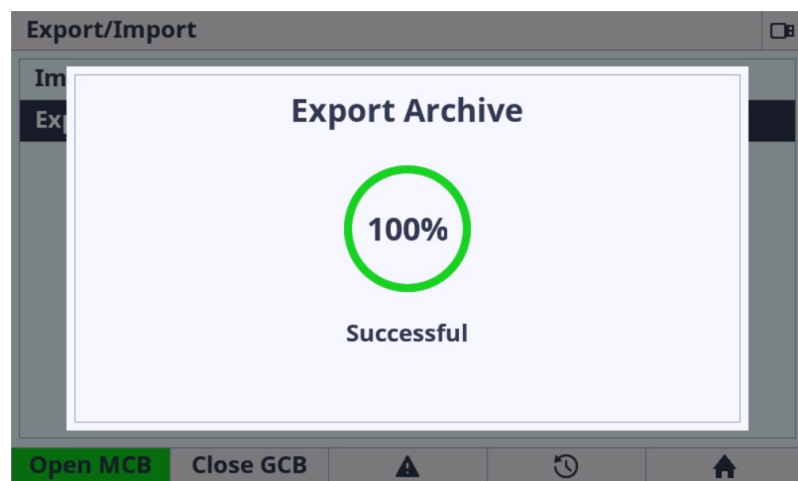


Image 1.10 : Dialog Progress overview

1.4.8 Dialog Date

The dialog date is dedicated for date setting. When the dialog is active the buttons arrow **UP** and **DOWN** are used for number selection. Arrows **LEFT** and **RIGHT** are used for moving between the date cells. **ENTER** button confirms the option. **MENU** button cancels the dialog without saving.

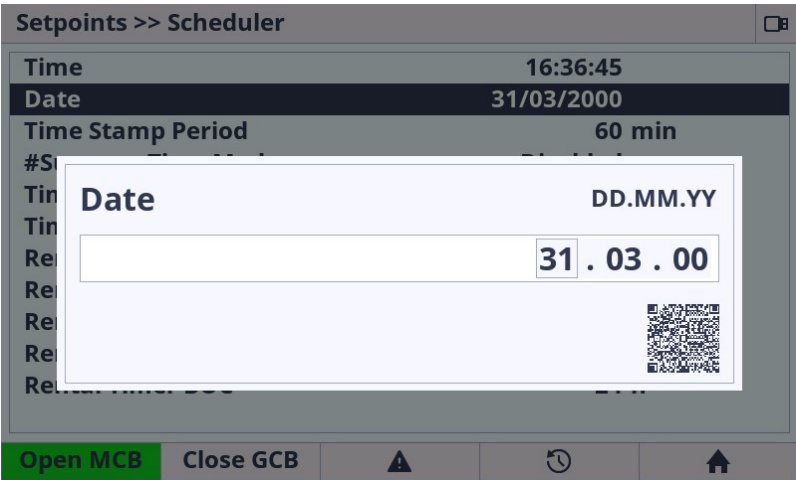


Image 1.11 : Dialog Date overview

1.4.9 Dialog Time

The dialog time is dedicated for date setting. When the dialog is active the buttons arrow **UP** and **DOWN** are used for number selection. Arrows **LEFT** and **RIGHT** are used for moving between the time cells. **ENTER** button confirms the option. **MENU** button cancels the dialog without saving.

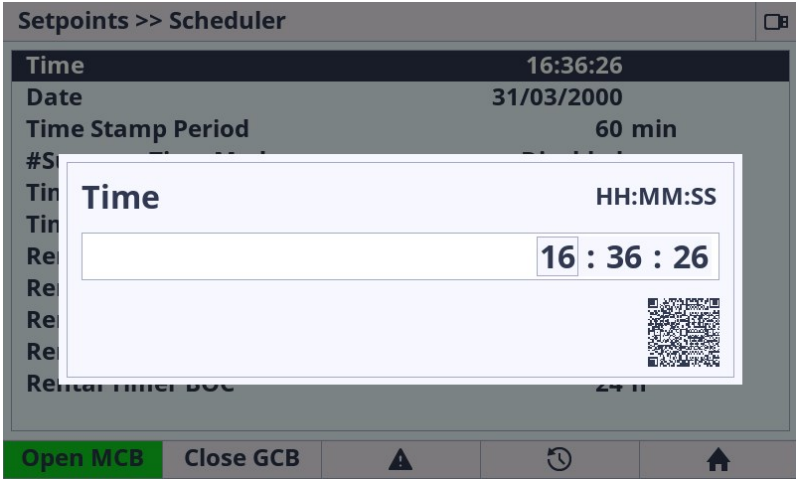


Image 1.12 : Dialog Time overview

1.4.10 Dialog Login

The dialog login is dedicated for login insertion. When the dialog is active the buttons arrow **UP** and **DOWN** are used for number selection. **ENTER** button confirms the option. **MENU** button cancels the dialog without saving.

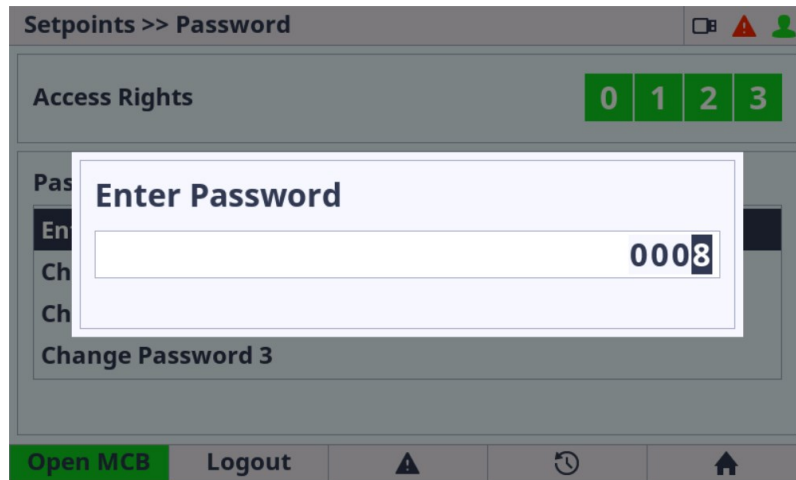


Image 1.13 : Dialog Login overview

1.5 Status bars

1.5.1 Bottom status bar

The bottom status bar is used for the user button functions. There are several status bars in the GUI. Bottom status bar consists of 5 areas (user buttons) dedicated for emitting the command to the controller unit, jump to the specified page (e.g. alarmlist, history) or special functions on some pages.



Image 1.14 : Example (bottom status bar on Home metering screen)

1. **User button 1** – emitting the command to the controller or link to page in GUI or special function
2. **User button 2** – emitting the command to the controller or link to page in GUI or special function
3. **User button 3** – emitting the command to the controller or link to page in GUI or special function
4. **User button 4** – emitting the command to the controller or link to page in GUI or special function
5. **User button 5** – emitting the command to the controller or link to page in GUI or special function

Note: The button press is visually indicated by black frame around the button area. The indication does not mean that requested command is performed, it is only press indication.

Note: Concrete status bar views for concrete page are described in specific chapters in this manual.

1.5.2 Top status bar

The top status bar can NOT be adjusted. Information in the top status bar is fixed and controlled by ComAp.

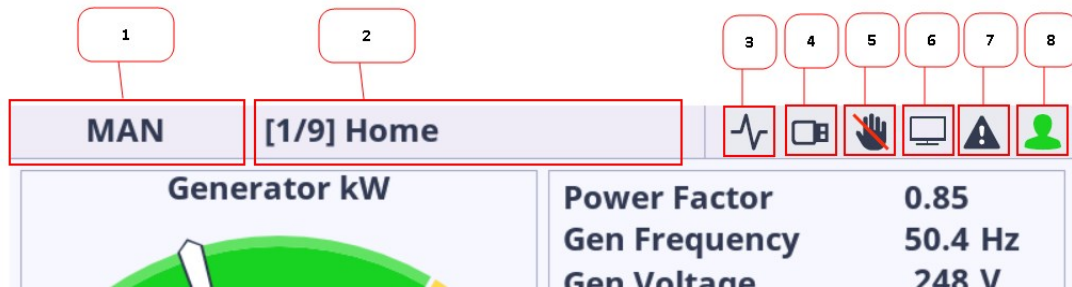


Image 1.15 Top Status Bar description



Image 1.16 : Top Status Bar – Mode selector dialog

1. **Mode selector** – Mode selector is dedicated for the controller mode selection. Using arrow **LEFT** or **RIGHT** the controller mode is changed (only on the metering screens). The choice must be always confirmed by **ENTER** button. There is 5 s timer for the automatic mode selector dialog cancellation. The mode selector dialog can be also canceled by menu button.
2. **Page title** – Each page and each metering screen has its own title. The first number in square brackets describes the actual metering screen position. The second number describes the total available number of metering screens.
3. **Trending** – The icon is active when the trending is running. Icon is inactive when the trending is stopped.
4. **USB Stick** – The icon is active if the USB stick is plugged in the display unit. Icon is inactive if there is no USB stick plugged in.
5. **Access Lock** – Access lock icon is active if the display is locked for security reasons. Icon is inactive if the controller unit is not locked.
6. **PC connection** – PC connection icon is active if the unit established connection to the PC using the USB cable. Icon is inactive if there is not established connection to the PC.
7. **Alarm indication** – The alarm icon is flashing red if there is at least one unconfirmed alarm (shutdown or warning) in the alarmlist. The icon lights red if there is at least one confirmed active alarm and no unconfirmed alarm in the alarmlist. The icon is inactive if the alarmlist is empty.
8. **User** – The user icon lights green if the user is logged in to the controller. The icon is inactive if the user is logged out.

2 Metering screens

Metering screens are dedicated for important controller values and setpoints.

InteliMains 510 metering screens are predefined by ComAp and covers all the application types.

- The movement between the metering screens is done using the **⬆UP** and **⬇DOWN** buttons in the front panel.
- The entire screens and instruments on the screens are dynamically displayed or hidden based on the following state of the controller unit:
 - Application type
 - Wiring controller settings
 - Connected Plug-In modules
 - Configured CAN modules
 - Aftertreatment ECU list settings

Note: Some of the screens are added automatically if external modules, ECU modules and others are added using InteliConfig software. The screens are automatically removed if the respective module is removed from the configuration.

3 Alarmlist

The alarmlist page is intended for displaying the controller alarms. If any of the following type of the controller alarm occurs The alarmlist page is displayed and also the alarm icon in the Top status bar starts flashing RED, even if it is not the shutdown alarm. The Automatic jump to the Alarmlist page is performed only in case the actual GUI position is the Home metering screen. The alarm icon in the top status bar is informative icon where the display unit informs the user that there is any alarm stored in the controller unit. Pressing the User button 3 opens the alarmlist page. The alarmlist page is displayed until the alarmlist contains at least one unconfirmed alarm.

There are 4 different types of controller alarms:

- > **Warning (often also known as 1st level alarm)** – represented by the YELLOW color. These types of alarms inform the user that something is wrong and need to be checked and confirmed.
- > **Shutdown (often also known as 2nd level alarm)** – represented by the RED color. These types of alarms protects the Gen-set or Engine during the wrong state.
- > **ECU alarm** – represented by the BLUE color. This type of alarm comes from the connected external ECU units.
- > **Sensor fail alarm** – represented by the WHITE color. A special kind of alarm that appears if any connected sensor emits the wrong state.

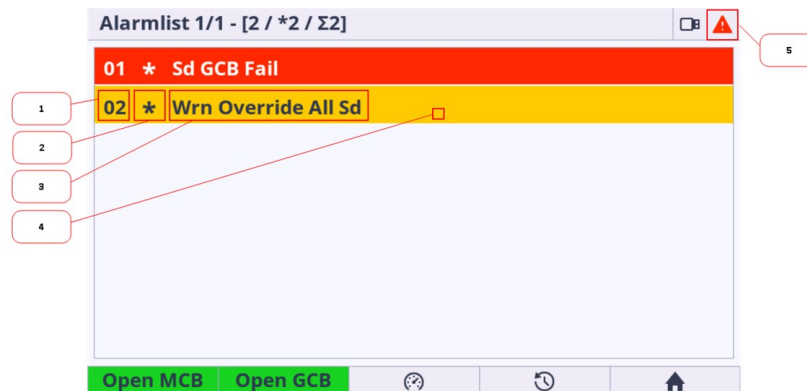


Image 3.1 : Alarmlist Page

1. **Alarm item number** – displays the number of the concrete alarm.
2. **Alarm item star** – describes if the alarm is CONFIRMED or NOT CONFIRMED. The confirmation action is performed by the Alarm reset button in the front panel
 - a. Star is displayed – alarm is NOT CONFIRMED
 - b. Star is not displayed – alarm is CONFIRMED (using alarm reset button)
3. **Alarm description** – The short description of the alarm
4. **Alarm coloring** – There are specified the color and asterix combination
 - > Level 1 (warning) alarm
 - Active/unconfirmed : *** / yellow background / dark text** (asterix active)
 - Active/confirmed : **yellow background / dark text** (asterix inactive)
 - Inactive/unconfirmed : *** / dark background / yellow text** / asterix active

➤ Level 2 (shutdown) alarm

- Active/unconfirmed : * / red background / white text (asterix active)
- Active/confirmed : red background / white text (asterix inactive)
- Inactive/unconfirmed : * / dark background / red text (asterix active)

➤ Sensor fail alarm

- Active/unconfirmed : * / white background / dark text (asterix active)
- Active/confirmed : white background / dark text (asterix inactive)
- Inactive/unconfirmed : * / dark background / white text (asterix active)

➤ ECU alarm

- Active/unconfirmed : * / blue background / white text (asterix active)
- Active/confirmed : blue background / white text (asterix inactive)
- Inactive/unconfirmed : * / dark background / blue text (asterix active)

5. **Topstatus bar Alarmlist icon** – The alarm icon is flashing red if there is at least one unconfirmed alarm (shutdown or warning) in the alarmlist. The icon lights red if there is at least one confirmed active alarm and no unconfirmed alarm in the alarmlist. The icon is inactive if the alarmlist is empty. This is information that something is wrong and need to be checked and resolved.

Note: The Alarmlist displays maximum 8 alarm items at the same time. If there is more than 8 alarms in the alarmlist it is possible to list in the page to another alarm items by arrow up and down buttons.

Note: The alarmlist page is automatically displayed and backlight is turned on if the new alarm appears (only in case the actual GUI position is the Home metering screen).

IMPORTANT: InteliMains 510 controller displays maximum 16 alarms.

IMPORTANT: Alarm reset button confirms all the unconfirmed alarms stored in controller.

IMPORTANT: If the actual GUI position is Alarmlist page and there is at least one unconfirmed alarm in the Alarmlist the jump to the home metering screen and backlight timeout are ignored.

4 Setpoints

The setpoint page is intended for setting the controller values. Each type of controller has specific setpoints to be set. The setpoints also depend on the type of application like MCB / MGCB etc. Availability of the setpoint item also depends on configuration level settings in Administration page. Setpoint is set in 2 steps.

- 1st step – Setpoint group is selected using buttons **⬅UP** and **➡DOWN** and confirmed using **⏏ENTER** button.

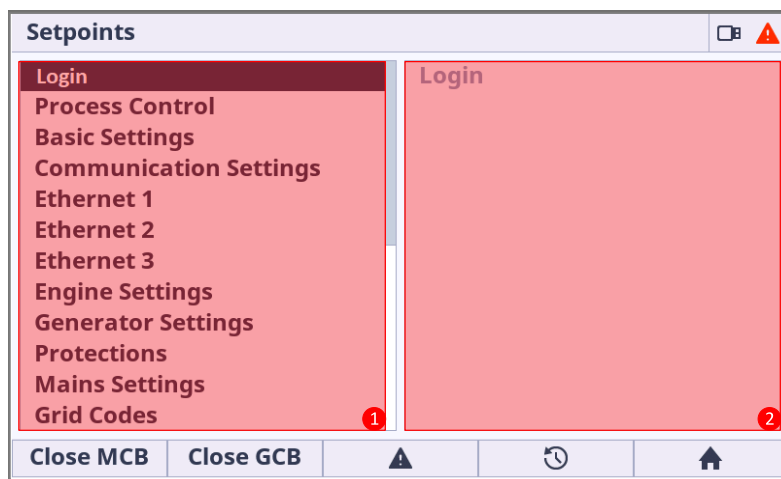


Image 4.1 : Setpoints Page overview

1. **Setpoints group** – the column setpoint group displays the available groups based on the controller, application type and configuration level settings. Respective setpoint group is selected using **⏏ENTER** button.
 2. **Available setpoints in actually selected group** – each setpoint group contains specific setpoints. The informative column Setpoint name displays the available set of setpoints to be set in each Setpoint group. This column is only informative and can NOT be set using the **⬅LEFT** and **➡RIGHT**. The setpoint setting is done using the 2nd step – see below.
- 2nd step – Setpoint item is selected using the **⬅UP** and **➡DOWN** and the dialog for value setting is called using the **⏏ENTER** button. The dialogs are described in the chapter Dialogs.

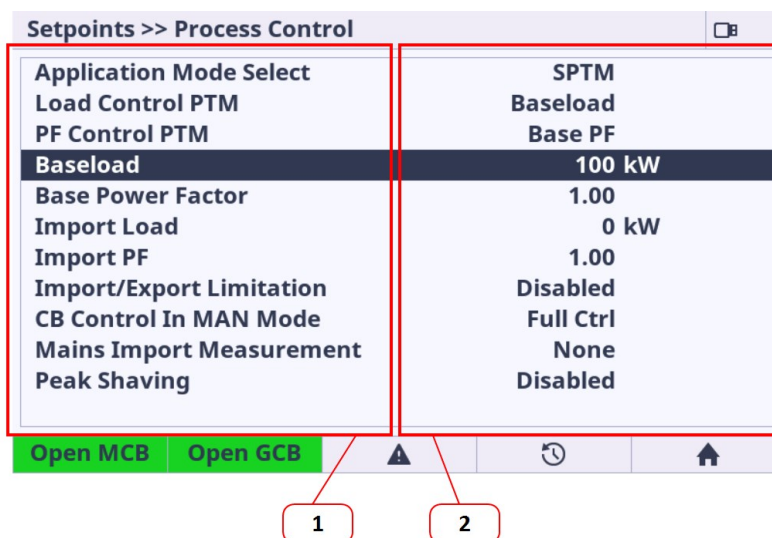


Image 4.2 : Group Setpoints Page

1. **Setpoint name** – Setpoint is set using the enter button. Specific dialog is displayed and the value can be set. There are several types of dialogs (text, numeric, stringlist) and the type of called dialog depends on the setpoint type. The dialogs are described in the chapter Dialogs.
2. **Actual value** – Informative actual value for specific setpoint is displayed. Value range, original value and default value for the selected setpoint are displayed inside the dialog.

4.1 Protected Setpoint Indication

If the setpoint is protected by password then the icon (crossed hand) is displayed just behind the setpoint value. The setpoint protection is set using PC Tool IntelliConfig.

4.2 Force Value Indication

If the setpoint is forced by another setpoint then the icon (double right arrow) is displayed just behind the setpoint value.

- > Green Icon – Forcing is active
- > Grey Icon – Force Value is set to the specific setpoint and forcing is inactive

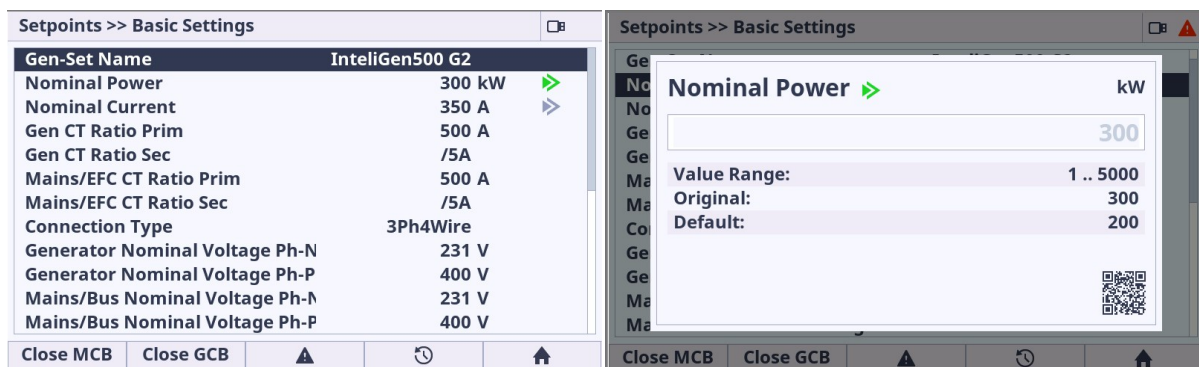


Image 4.3 : Force Value and Protected Setpoint Indication

IMPORTANT: If the controller is locked (Access Lock function is active) then the attempt for setpoint edition is denied and the information dialog is displayed (Controller is Locked). See chapter Administration and Access Lock.

4.3 Login screen

The group Password is not setpoint group. This Password item is manually placed to the first group position on the program code level just for this controller unit.

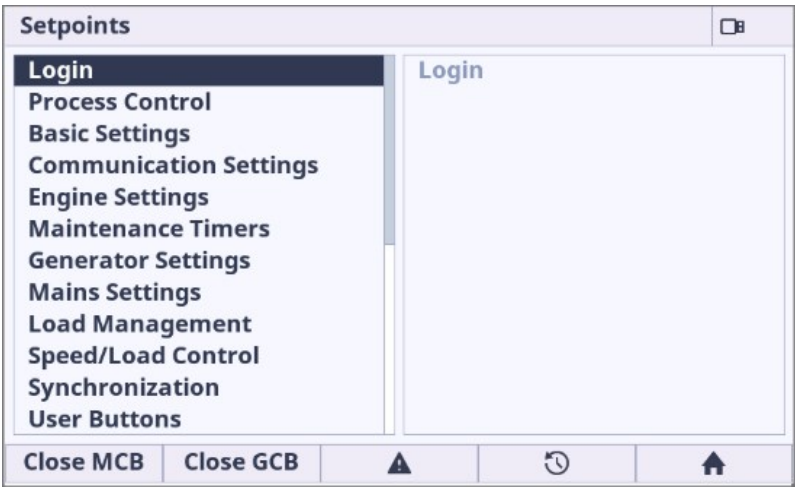


Image 4.4 : Main Setpoints Page

Password item – the item dedicated for the login and logout to the controller.

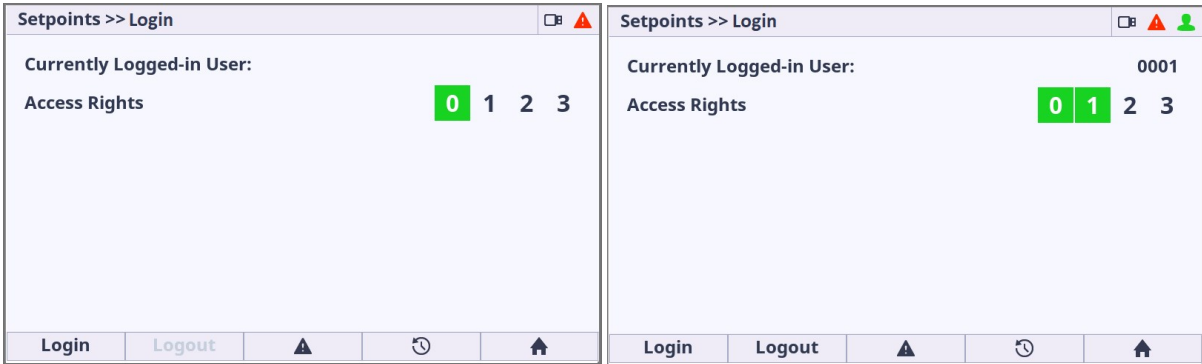


Image 4.5 : Setpoints Password Page

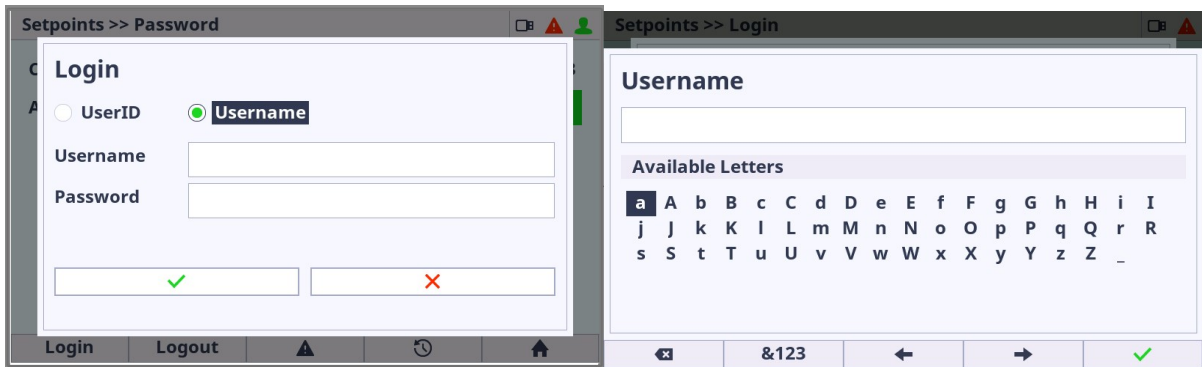


Image 4.6 : Login Dialog

Currently Logged-in User – the information about actually logged in user or his ID if logged using ID and PIN.

Access Rights – Access rights of the actually logged in user

- > 0 – user has access rights 0, which means "logged-out" user
- > 0,1 – user has access rights 0 + 1 access rights

- 0,1,2 – user has access rights 0 + 1 + 2 access rights
- 0,1,2,3 – user has access rights 0 + 1 + 2 + 3, which means administrator rights

Login and Logout buttons

- Login button calls the login dialog.
- Logout button performs the logout action.

5 History

The history page displays the records of the important moments in the controller history.

There are 2 types of history records :

- > **Event records** – are also known as standard history records. This type of record appears in case the controller event has been made. The time stamp history also belongs in the event history. The time record is stored for a specified period of time.
- > **System records** – are also known as text history record. These type of records are generated during the user login/off, controller programming or other system actions.

The screenshot shows a 'History' page with a table of records. Callout 1 points to the 'History' header. Callout 2 points to the 'Reason' column. Callout 3 points to the 'Time' column. Callout 4 points to the '1st Row/Col' button. Callout 5 points to the '1x' button.

No.	Reason	Date	Time	RPM
0.	Sd GCB Fail	25/02/2000	00:33:23	
-1.	SetpointChange	25/02/2000	00:30:44	T=USB C
-2.	Ready	25/02/2000	00:27:23	
-3.	Wrn Override All Sd	25/02/2000	00:27:21	
-4.	Gen-set Stop	25/02/2000	00:27:19	
-5.	Loaded	25/02/2000	00:27:18	
-6.	Soft Load	25/02/2000	00:27:12	
-7.	Sd GCB Fail	25/02/2000	00:27:12	

1st Row/Col 1x

Image 5.1 : History page overview

1. **Fixed column** – has a different shade of colour. Fixed column is always merged and anchored on the left side of the history page.
2. **Event history record** – this type of record appears in case the controller event has been made. The time stamp history also belongs in the event history. The time record is stored for a specified period of time. Pressing the **ENTER** button the dialog with detailed information for selected record is displayed.
3. **System history record** – this type of record appears in case the controller system action has been made. The time stamp history also belongs in the event history. The time record is stored for a specified period of time. Pressing the **ENTER** button the dialog with detailed information for selected record is displayed.
4. **Jump to first row and column** – the jump to the first row and first column is performed if the button is pressed.
5. **Listing mode** – by pressing this button the listing mode is changed. There are available 3 modes : listing by 1 item, listing by 1 page, listing by 10 page. The mode is useful if the history is full of records. Listing mode is also automatically changed if the listing buttons **UP** and **DOWN** are pressed for longer time. Original mode is set when the listing buttons are released.

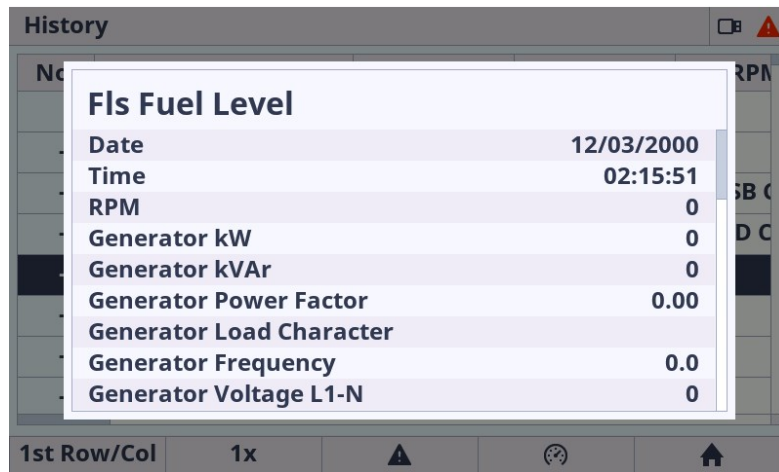


Image 5.2 : History page – Item detail dialog

Note: Pressing the ENTER button on the actually selected row the dialog with detailed information for selected record is displayed.

IMPORTANT: Each controller unit supports the specific number of history records. E.g. controller IntelliMains 510 supports 500 history records.

6 Trends

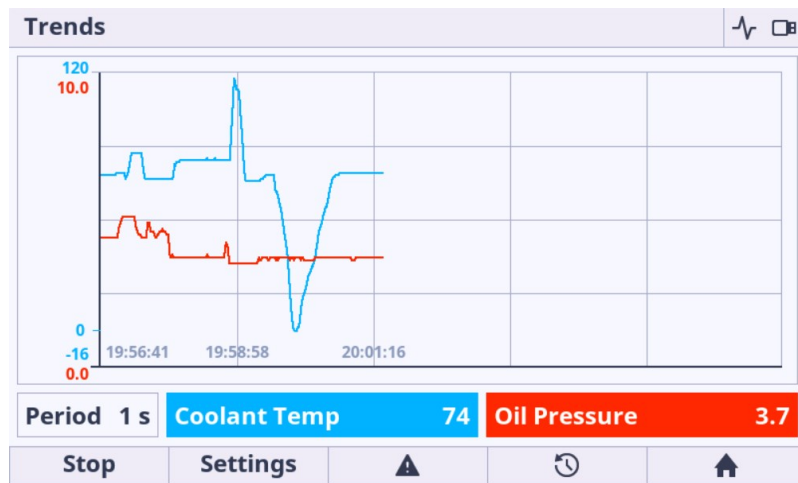


Image 6.1 : Trends page overview

The Trends page is divided on to 3 main blocks :

- > **Main Trends Window** is intended to display all trends. The view and chart movement is fully automatic.
- > **Channel panel** displays the actual values and sample period.
- > **Function buttons** is intended for start, stop and settings of the trends.

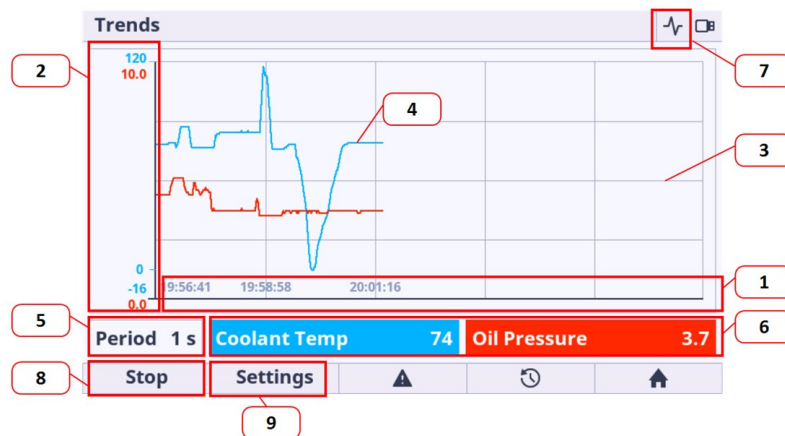


Image 6.2 : Trends page description

1. **X axis** – X axis displays the time stamps. The view of X axis is fully automatic.
2. **Y axis** – If the default range is not suitable for the displaying of the value it can be adjusted in settings option. See below for more information.
3. **Grid** – the grid is displayed behind the trends charts. The grid is fully automatic.
4. **Trend line** – each channel have different color for better value identification. The color of the trend line match to the Value color in channel panel.
5. **Actual period** – actual period settings. The period can be adjusted in settings option.
6. **Actual channel value panels** – display the values of the newest (actual) sample.
7. **Trend Icon** (Top Status bar) – if the trends are running the informative icon is shown in the top status bar

8. **Start / Stop button** – the button is dedicated for manual start and stop of the trends. It is possible to setup the automatic start of trending based on the trigger. There are 2 triggers : Return to Home metering screen and the specified bit of the available binary value.
9. **Channel settings button** – There are some settings available for the trends. See more information below.

6.1 Trends settings

Trends settings page is dedicated for the available trends settings. The navigation in trends settings page is done by buttons **UP**, **DOWN**, **LEFT**, **RIGHT**, **ENTER**, user button 1 and 2.

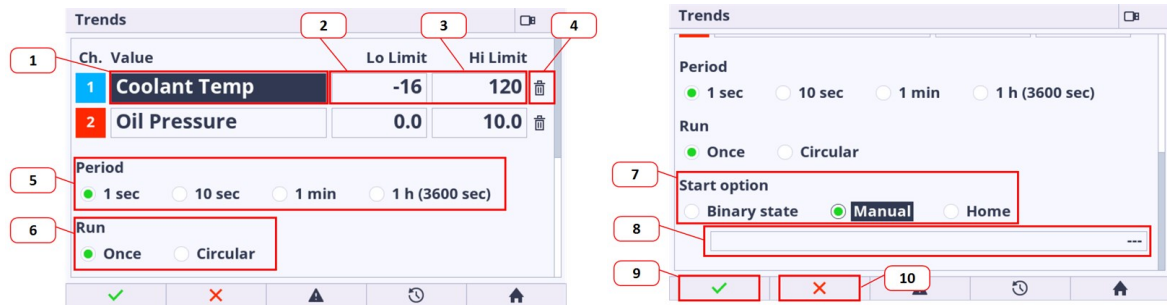


Image 6.3 : Trends page settings overview

1. **Channel value** – the channel value menu appears if the **ENTER** button is pressed just on the position. Inside the channel value menu the requested channel value can be selected. The value availability depends on the type of configuration stored in the controller.
2. **Low limit value** – the low limit value is intended for changing the low border of the value range. For the best view of the displayed trends it is highly recommended to set this limit to the minimum expected value with some reserve.
3. **High limit value** – the high limit value is intended for changing the high border of the value range. For the best view of the displayed trends it is highly recommended to set this limit to the maximum expected value with some reserve.
4. **Quick channel removal** – pressing the **ENTER** button on the trash bin icon the actual channel is not configured.
5. **Period** – section is dedicated for setting of the sample time period.
6. **Run** – the section is intended for the selection of the run mode
 - a. once – trending only until the trend chart window is full
 - b. circular – cyclic mode (trending is repeated continuously) – be aware the samples are stored only in internal temporal memory, the trend chart starts moving when the trend chart window is full, the oldest samples are trashed out
7. **Start option** – The start of trends are triggered by the start option. There are 3 start options.
 - a. Binary state - the trigger is the bit of the selected binary value. Manual start and stop is still active.
 - b. Manual (by default) – the trigger is the start button called by user.
 - c. Home – the trigger is the return to the Home metering screen from any GUI position. Manual start and stop is still active.
8. **Bit of binary value selection** – If the start option is set to Binary state then the field for the bit of the concrete binary value is activated.
9. **Acknowledgment button** – Pressing the user button 1 (Confirm) the settings are saved.

10. **Cancel button** – Pressing the user button 2 (Cancel) the settings are canceled and the main trends page is displayed without any change of the trends configuration.

Note: *To get the best view of the displayed trends it is recommended to manually set the typical value range for each channel.*

IMPORTANT: If the trending is started and the changes have been made in the settings the trending is restarted based on the new settings.

IMPORTANT: Be aware the samples are stored only in internal temporal memory. Trend chart starts moving when the trend chart window is full, the oldest samples are trashed out.

IMPORTANT: There is no option to store the trends to the external memories like USB stick, etc.

7 Values

The values page is intended to monitor the controller values. Each type of controller has specific set of values. Values screen is visually similar to Setpoints screen.

To list across the values the navigation, **ENTER** and **MENU** buttons are used.

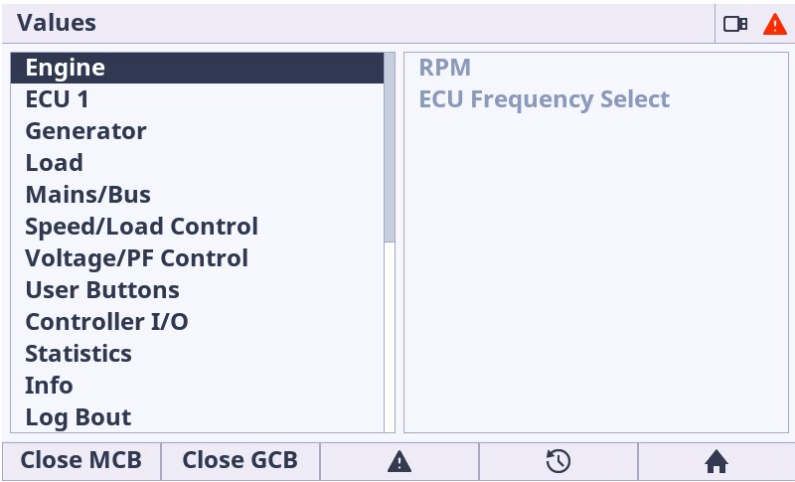


Image 7.1 : Values screen overview

8 Administration

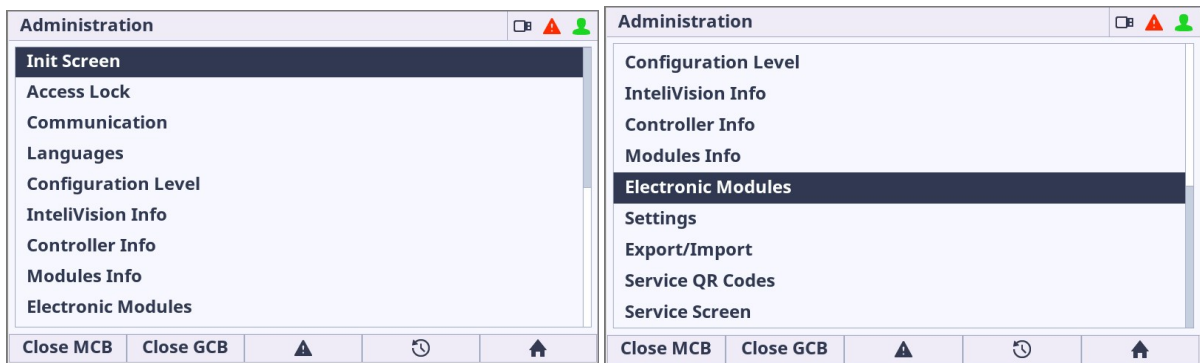


Image 8.1 : Administration Screen Overview

8.1 Init screen

The init screen is the special screen (bitmap) defined and stored in the controller. The init screen is displayed during the booting procedure. The init screen is also accessible from administration as a first list item. The purpose of the init screen is to allow the user to create and show his own initial logo screen during the booting procedure. The init screen logo can be uploaded using the InteliConfig. By default the init screen is predefined by ComAp.

I'm manageable
remotely

websupervisor.net

Image 8.2 : Init screen overview

Init screen is accessible using the buttons combination **ENTER** + **MENU** just only from the metering screens. **ENTER** button has to be pressed first.

8.2 Controller Info

Controller info page is dedicated for important information about the entire unit. These information is useful mainly for issue troubleshooting .

Controller info page is divided into 3 main blocks of information :

- > Integrated Color Display unit
- > Controller unit
- > Configuration

ControllerInfo		 
Name	Value	
ICD HW version	1.0.0.900	
ICD SW version	1.0.0.900	
ICD bootloader version	0.0.0.0	
ID String	InteliGen-500-1.0.0.20	
Software version	1.0.0.20	
Serial number	FF110339	
Controller type (HW)	21	
Application type (HW)	2	
Open MCB		Close GCB   

Image 8.3 : Administration Page – Controller Info

Note: Similar values with similar structure can be displayed using InteliConfig PC tool.

Controller Info screen is accessible using the buttons combination **ENTER + MENU** just only from the metering screens. **ENTER** button has to be pressed first.

8.5 Settings

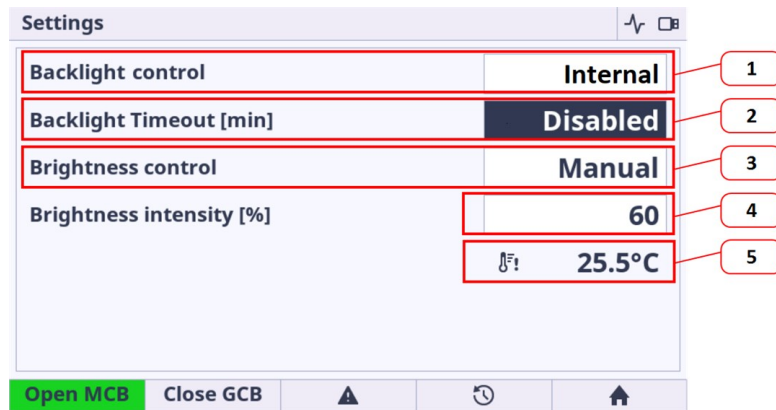


Image 8.6 : Administration Page – Settings

1. **Backlight Control** – can be controlled using Internal settings or external signal over LBI Dark Mode
 - a. Internal – Backlight timeout and backlight intensity is respected from the manual settings
 - b. LBI Dark Mode – if controller LBI Dark Mode is activated then the Status LED and LCD backlight is completely disabled. Be aware that the application and controller is still running. Keyboard is still in functional state. The Backlight Timeout is still respected in this option.
2. **Backlight Timeout** – if the cell area is pressed the dialog for time settings is displayed. The user is able to set the period from 1 up to 241 minutes. There is also the option to set NO Timeout which means the display unit is backlit forever. Note that in remote displays like IntelliVision 5.2 the Backlight Timeout option is not mirrored with controller setpoint Backlight Timeout (it is mirrored in Integrated Color Display).
3. **Brightness Control:**
 - a. Manual (by default) – the value of the backlight is set manually using the value dialog (point 3)
 - b. External-- the value of the backlight is given by the Analog Input settings in IntelliConfig and connected value of resistor, voltage or current (based on the type of the selected sensor).
4. **Brightness intensity** – the value is selected using the value dialog. Note the value is applied immediately during the change of the value.
5. **Internal Temperature information** – gives the actual inside temperature of the unit. There is implemented automatic mechanism for lowering the backlight intensity based the internal derating backlight curve. If the inside temperature exceeds 35°C the area behind the temperature lights yellow. The yellow color indicates that the display backlight curve is applied and automatically starts derate the backlight intensity. The backlight intensity returns to normal when the temperature is decreased below 35°C. This feature saves the lifetime of the internal components.

IMPORTANT: It is strongly recommended to use backlight on the standard level max. 60%. Maximal backlight intensity level of 100% is suitable only for application with higher amount of the ambient light. Be aware that higher intensity level means higher surface front glass temperature and lower lifetime.

IMPORTANT: It is strongly recommended to use Backlight Time (timer) set on the reasonable amount of time (approximately 30 minutes) during the normal running genset or engine phase. It is because of saving lifetime of the display unit. The display unit is still running if the backlight is off. For switching on the LCD backlight the simple pressing any button is necessary.

Settings screen is accessible using the buttons combination **ENTER + MENU** just only from the metering screens. **ENTER** button has to be pressed first.

8.6 Languages

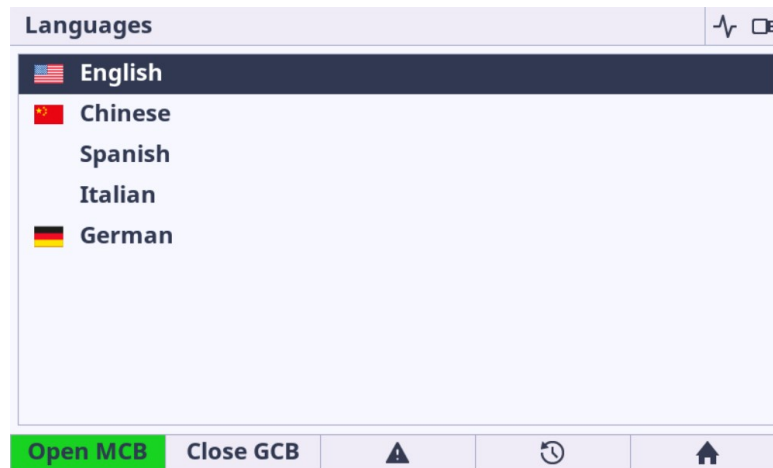


Image 8.7 : Administration Page – Languages

- > **Language settings** – the list of languages stored in the controller configuration is displayed in the list of possible languages.
- > The integrated color display unit supports the following languages
 - >> English, Chinese, Japanese, Bulgarian, Taiwan, Czech, German, Greek, Spanish, Finnish, French, Hungarian, Icelandic, Italian, Korean, Dutch – Netherlands, Norwegian, Polish, Roman, Russian, Croatian, Slovak, Swedish, Turkish, Ukrainian, Slovenian, Estonian, Latvian, Lithuanian, Vietnamese, Italian, Portuguese, Bosnian
- > The integrated color display unit supports the following Unicode standard character sets
 - >> Basic Latin, Latin-1 Supplement, Latin Extended-A, Latin Extended-B, Latin Extended Additional, Cyrillic, Greek, Greek Extended, Arabic, Arabic Supplement, General Punctuation, Superscripts and Subscripts, Currency Symbols, Arrows, CJK Unified Ideographs, Kanji, Hiragana, Katakana, Hangul Jamo, Thai

Note: The flag is not displayed if the language is supported but the flag icon does not exist in the integrated color display unit.

Languages screen is accessible using the buttons combination **ENTER** + **MENU** just only from the metering screens. **ENTER** button has to be pressed first.

8.7 Configuration Level



Image 8.8 : Administration Page – Configuration Level

- > **Standard** – Limited amount of settings are available for configuration. The description which settings are available in chapters concerning to controller functions.
- > **Advanced** – Set by factory default. All the settings are available for configuration. Be aware that only experiences users should perform the settings of extended functions.

Note: By default the Advanced settings is selected which means all the setpoints are available by default. To restrict the availability the Standard setting must be performed. The advanced and standard category are set in IntelliConfig PC application.

Configuration Level screen is accessible using the buttons combination **ENTER + MENU** just only from the metering screens. **ENTER** button has to be pressed first.

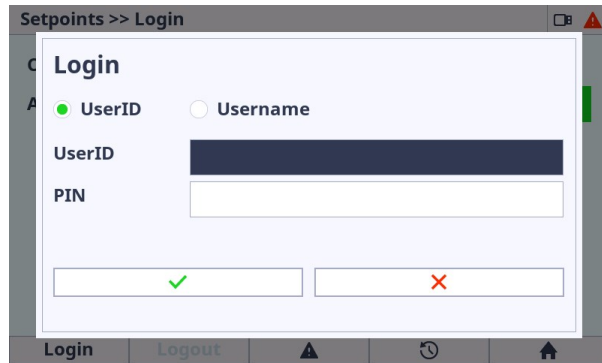
8.8 Export/Import



Image 8.9 : Administration Page – Export & Import

- > **Import Package** – is dedicated for integrated color display unit firmware updated, controller firmware update, controller archive update. Extension modules firmware update is not supported.
 - >> If the USB stick is not connected the import function is not available and visually indicated as a greyed text.
 - >> File packages used for firmware import can be prepared only in IntelliConfig PC application **only**.

- » The files (*.pcg3) prepared in IntelliConfig (for import) must be stored in the root of USB stick folder – the only root folder is supported for import.
- » Import function is always protected by Administrator password. Until the correct credentials are not inserted the import function is unavailable. Be aware that there is implemented algorithm to have password protected against the brute force attempts. It is possible to insert credentials using UserID and PIN or Username and Password.



- » The message dialog (Controller unit is not ready) is displayed if the controller is not in state ready for programming (e.g. Gen-set running)
- > **Export Archive** – is dedicated for the entire archive export.
 - » If the USB stick is not connected the export function is not available and visually indicated as a greyed text.
 - » The archive files (.aig4) is exported to the fixed directory in the USB stick (eg: "root:/IG500/Archive"). The directory structure is automatically created if does not exist.
 - » Export function is not protected by password.
 - » The message dialog (Controller unit is not ready) is displayed if the controller is not in state ready for archive export (e.g. Gen-set running)
 - » Waiting dialog is displayed during the export process.
 - » The message dialog is displayed after archive process.
 - » Archive Export Successful if successfully exported.
 - » Archive Export Failed if any error occurs during the export process.
 - » Integrated color display unit is restarted after export process.

Note: Once the USB stick is inserted to the display unit the directory and its subdirecotries are created automatically if does not exist.

IMPORTANT: Requested files to be imported must be saved in the root directory on a USB Stick.

8.8.1 Imported File selection

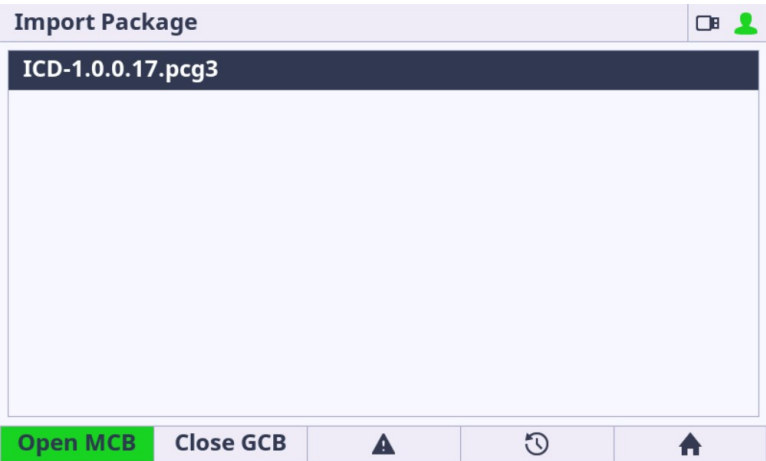


Image 8.10 : Administration Page – Export & Import - File selection

- > **File selection** – is available if the conditions above (in section Import Package) is fulfilled
 - » Only files with pcg3 extension is displayed.
 - » Maximum 100 files (*.pcg3) in root is displayed.
 - » The message dialog (Package Incompatible) is displayed if the incompatible pcg3 file is used
 - » The message dialog (Invalid File) is displayed if the pcg3 file is invalid or corrupted

8.8.2 Import process

Import Package				
Name	Actual	Package		
HMI Logo	N/A	N/A		
HMI Fonts	1.0.0.0	1.0.0.0		
HMI Images	1.0.0.5	1.0.0.5		
HMI Firmware	1.0.0.900	1.0.0.17		⚠
HMI Service screen	N/A	N/A		

Image 8.11 : Administration Page – Export & Import – Import process

- > **Import process** – is available if the correct and compatible file is selected conditions above (in section Import Package) is fulfilled
 - » The import process is not allowed if at least one file in the package is not compatible with each other – the Import button is not displayed.
 - » When the Import process is started it is not possible to interrupt it.
 - » Bar Message is displayed
 - » Package Import Successful (green colored) – if success
 - » Package Import Failed (red colored) – if any error during the process

- » the user is informed about the actual item progress
 - » ✓ – the file has been imported correctly
 - » ... – the file import is under progress
 - » ⚠ – the file is incompatible
- » The device is rebooted after import process.

IMPORTANT: Integrated color display unit firmware is updated in two steps. Firstly the firmware is uploaded to the internal memory (indicated by icon ✓). The second step is the firmware update from internal memory. The firmware is updated immediately after reboot using bootloader (Indicated by progress bars and messages in limited GUI). After all the unit is automatically started with new firmware.

IMPORTANT: Only in some special cases the import process using USB stick must be performed twice. This situation is always described in New Feature List with more detailed information.

IMPORTANT: Only FAT16 and FAT32 file system on USB stick are supported.

Note: If the USB stick is plugged in the Import/Export page is automatically displayed.

Note: If the import process fails try the import process again.

Note: If the import process fails try to create new package file using IntelliConfig.

Export / Import screen is accessible using the buttons combination **ENTER** + **MENU** just only from the metering screens. **ENTER** button has to be pressed first.

8.9 Service QR Codes

Service QR Codes screen is dedicated for easy maintenance and technical support. Together with ComAp Smart Hint application the usage of the small display is even easier.

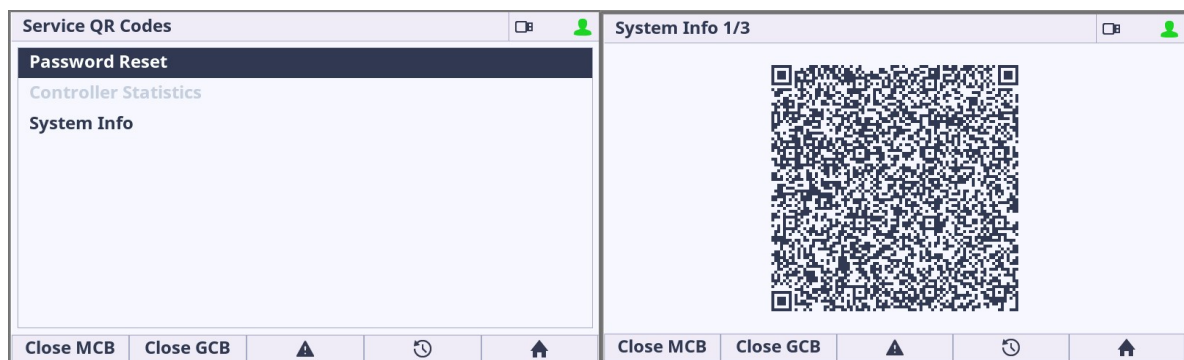


Image 8.12 : Administration Page – Service QR Codes

1. **Password Reset** – Password Reset function is dedicated for simple handling of the password reset procedure. Scan the QR code using the Smart Hint application and send the reset code to the ComAp technical support.
2. **Controller Statistics** – Controller statistics data gathered during the controller operation. Smart Hint application displays the controller statistic data in one place in a readable text form and could be further investigated.
3. **System Info** – System data info in one place in ComAp HelpCentre.

IMPORTANT: Each dialog in Setpoints screen consists of the small QR code which represents the name of the setpoint. Smart Hint application gives you additional help or hint of the setpoint.

Service QR Code screen is accessible using the buttons combination **ENTER** + **MENU** just only from the metering screens. **ENTER** button has to be pressed first.

8.10 Service screen

The service screen is the special screen (bitmap) defined and stored in the controller. The service screen is also accessible from administration as a last list item. The purpose of the service screen is to allow the site administrator to put into the display (resp. controller) important data for technical support. The status screen can be uploaded using the IntelliConfig. By default the service screen is predefined by ComAp.



Need technical support ?
Please contact your local distributor.

Image 8.13 : Service screen overview

Service screen is accessible using the buttons combination **ENTER** + **MENU** just only from the metering screens. **ENTER** button has to be pressed first.

9 Quick help

9.1 Logging in/off to the Controller	36
9.2 Important values	37
9.3 Controller mode change	37
9.4 Password change	37
9.5 Display brightness settings	38
9.6 State messages	39
9.7 Hints	40

9.1 Logging in/off to the Controller

The user is able to log in/off to/from the controller via the menu Passwords in Setpoint page.

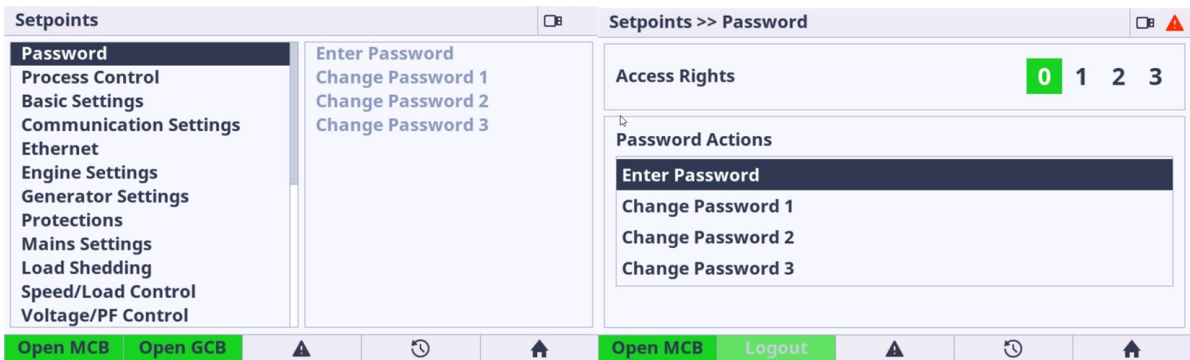


Image 9.1 : Password menu

1. Current Access Rights are shown on the top of the page.
2. Press the button on item Enter Password, the Password dialog will appear.
3. Insert the correct password. If the password is not correct, the user is informed about it. Be aware there is a brute force algorithm protection implemented.
4. The icon (user) in the top status bar turns green when the user is logged in.

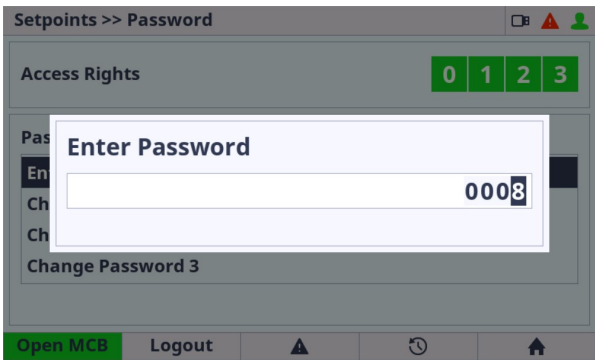


Image 9.2 : Password dialog

Note: Each Access Rights password can be changed by inserting old password and new password.

IMPORTANT: If the setpoint is protected by password the password dialog appears when the attempt to password change is performed.

IMPORTANT: Be aware there is a brute force algorithm protection implemented. If the brute force protection is active then the user is informed by Invalid Password message even the password is inserted correctly.

9.2 Important values

The important controllers values and system buttons are displayed by default and accessible from the Home, Power and Synchro metering screens. The breaker status, controller status and system timer are also displayed on the Home metering screen.

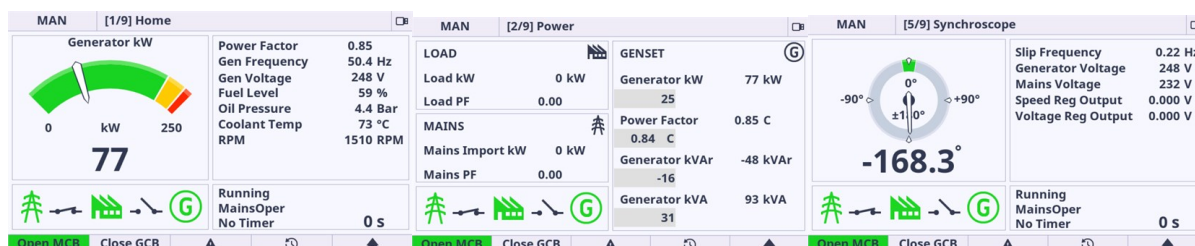


Image 9.3 : Important values

Note: The adjustment of the important values can be made using powerfull tool Screen Editor (in IntelliConfig).

9.3 Controller mode change

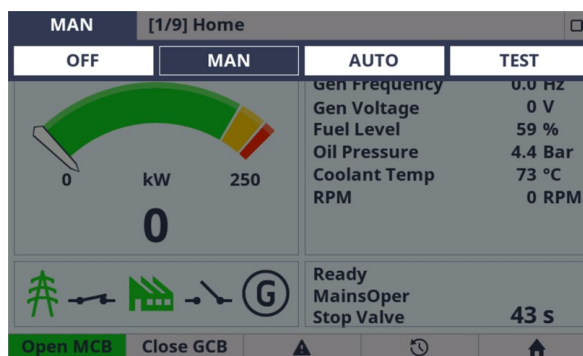


Image 9.4 : Controller mode change

1. Press the button arrow left or right in any metering screen
2. Change the controller mode using buttons **←LEFT** or **→RIGHT** and confirm the selection using **ENTER** button.
3. If all the controller conditions are fulfilled the Controller mode is changed.

IMPORTANT: If the controller mode setpoint is protected by password the password dialog appears when the attempt to confirm the selection is performed.

9.4 Password change

The password change can be performed using the Password menu in Setpoint page.

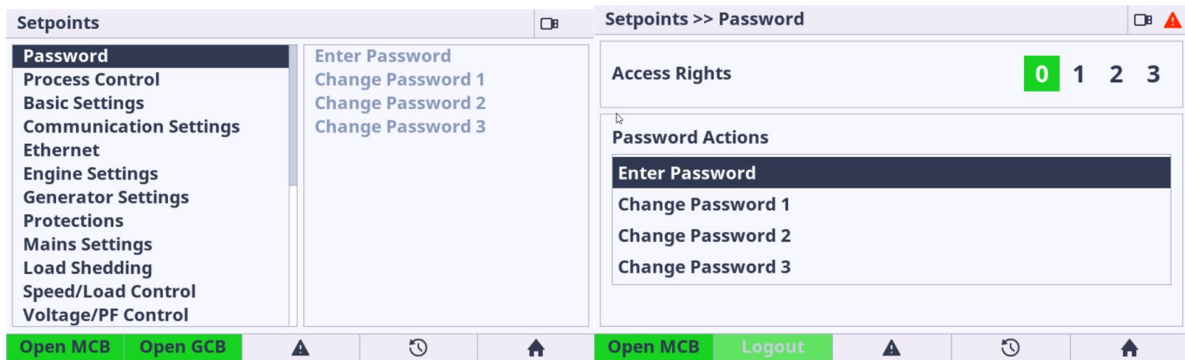


Image 9.5 : Password menu

1. Choose the item for which access right you want to change password.
2. Using password change dialog enter correct old and new requested password and confirm the choice.
3. The password for respective Access Rights level is changed.

9.5 Display brightness settings

The display brightness setting is adjustable using the Administration Menu - IntelliVision Settings.

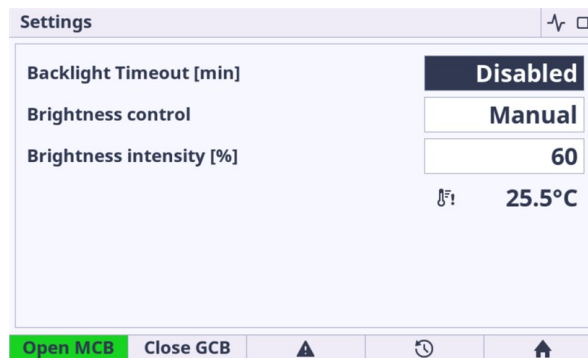


Image 9.6 : Display brightness settings

Backlight Timeout - can be set at a range of 1 to 254 minutes or Disabled. Disabled means the backlight never shuts down.

Brightness control

1. If the manual mode is chosen the user is responsible for his own backlight intensity.
2. If the External mode is chosen the display unit expects the external resistor (potentiometer) on its Analog input. The type of sensor can be set in IntelliConfig.

Brightness intensity - The backlight intensity can be adjusted using the value dialog from 1 up to 100 %. It is not possible to set 0 to avoid total shutdown of backlight intensity.

IMPORTANT: It is strongly recommended to use maximum backlight if it is really needed. The temperature of the LCD grows linearly with the set of LCD backlight intensity. The product lifetime is temperature dependent. In general it means higher temperature lower lifetime.

IMPORTANT: It is strongly recommended to set the Backlight Timeout to reasonable time (e.g 5 minutes). If the backlight is off then any button press switch on the backlight again.

9.6 State messages

State message	Description
Running	Indication of correctly running controller.
Initialize control unit	Controller unit initialization is under progress. The message is displayed during the booting procedure.
Control unit is programmed	The controller upgrade process is under progress.
Configuration Reading	Controller configuration reading is in progress. Text disappears when controller is detected.
Detecting main CU failed	Internal communication error.
Unsupported configuration format	Configuration version is not supported
Unsupported screen format	Screens template has unsupported screen format. Screens template is missing in configuration.
Control unit firmware is corrupted	Controller unit is not in valid state.
Wrong configuration content	Content of the configuration in controller unit does not match to configuration.

 [back to Quick help](#)

9.7 Hints

UI Position	Issue	Hint / Description
StartUp Screen	Detecting main CU failed	<ol style="list-style-type: none"> 1. Download the latest FW from the ComAp webpage. 2. Import or reimport the newest ICD firmware.
StartUp Screen	Not compatible application branch in CU	<ol style="list-style-type: none"> 1. Download the latest FW from the ComAp webpage. 2. Import or reimport the newest ICD firmware.
StartUp Screen	Firmware is corrupted	<ol style="list-style-type: none"> 1. Import or reimport the newest ICD firmware.
StartUp Screen	Unsupported configuration format	<ol style="list-style-type: none"> 1. Import the newest ICD firmware. 2. Upgrade the controller firmware to the newest version.
StartUp Screen	Unsupported screen format	<ol style="list-style-type: none"> 1. Import the newest ICD firmware. 2. Upgrade the controller firmware to the newest version. 3. Check if there is at least one language in configuration using IntelliConfig.
StartUp Screen	Wrong configuration content	<ol style="list-style-type: none"> 1. Check the controller configuration using IntelliConfig Tool. 2. Try to rewrite the controller configuration.
StartUp Screen	Controller unreachable	<ol style="list-style-type: none"> 1. Check if the expected controller is online
StartUp Screen	Controller identification timeout	<ol style="list-style-type: none"> 1. Double check the wiring. 2. Double check all the communication parameters. 3. Double check the missing or wrong Access Code in Communication settings screen.
StartUp Screen	Connecting / Connected (with IntelliGen 500)	Connecting and connected state are marked red because at that moment the user is not logged in yet. Login procedure is automatic to IntelliGen 500 controller on StartUp screen (user with access rights 0 is always logged in). Due to this fact the connecting and connected state are the transition states only on StartUp screen.
Metering Screens	Adjustment	The metering screens are adjustable using the Screen Editor (in IntelliConfig). See chapter Screen Editor for more information. The Screen Editor tool also has its own manual.
Administration	Access to administration	Administration screens is accessible using the buttons combination Enter + Menu just only from the metering screens. Enter button has to be pressed first.
Init Screen Service Screen	Adjustment	Both screens are adjustable only in Integrated Color Display unit. The feature is not available in IntelliVision 5.2 1.0.0.
Bottom Statusbar	Inactive Buttons	Inactive buttons are visually indicated as grayed button. It means that the button is not available for any reason (e.g. password protected button).
Alarmlist	Buttons Function	Alarm reset button confirms all the unconfirmed alarms stored in controller and resets the horn. Horn reset button resets only the horn.
Alarmlist	Automatic Jump	If the actual GUI position is Alarmlist page and there is at least one unconfirmed alarm in the Alarmlist the jump to the home metering screen and backlight timeout are ignored.

UI Position	Issue	Hint / Description
History	Number of Records in IntelliGen 500	The number of records is different for each controller. E.g. IntelliGen 500 supports 500 history records. Default configuration consists of 33 columns. Maximal column amount is approximately 100 columns based on the type of the observed value.
Trends	View	To get the best view of the displayed trends it is recommended to manually set the typical value range for each channel. If the channel is set the low and high limit values are automatically set based on the default value in configuration.
Trends	Communication Interruption	If the communication between display and controller is interrupted for any reason all the trends values are lost and the trending is automatically stopped. If the Trends settings option (Start option) is set to Home then the trending is automatically restarted in the moment the actual UI position becomes Home screen.
Export / Import Screen	Import process	If the import process fails try the import process again. Check if the import package is not corrupted. Try to use another USB stick.