

# InteliGen 500

## Controller for parallel gen-set applications

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# 1 Graphical User Interface overview

## 1.1 Front panel

Front panel of the unit uses hardware buttons for configuring, moving, scrolling, commands and other functions.



Image 1.1 : Front panel overview

### 1.1.1 Navigation buttons

Arrow buttons on the front panel are mainly used for navigation inside the entire graphical user interface. In addition the arrows left and right are used for changing the controller mode if the actual position is any metering screen.

#### Arrow left and right



Image 1.2 : Arrow left and right

The buttons are used for :

- ▶ Changing the controller mode (only on metering screens)
- ▶ Movement between history columns
- ▶ Movement in the dialogs

## Arrow up and down



Image 1.3 : Arrow up and down

The buttons are used for :

- ▶ Cyclical movement between the metering Screens
- ▶ Movement in the dialogs
- ▶ Changing the value in the dialogs
- ▶ Movement in menus
- ▶ Listing on pages

## Enter



Image 1.4 : Enter button

The button is used for :

- ▶ Confirming the values
- ▶ Confirming the selections
- ▶ Confirming the listing options

## Menu



Image 1.5 : Menu button

The button is used for :

- ▶ Escape function
- ▶ Step back function
- ▶ Cyclical change of the page (from any metering screen)

## 1.1.2 Function buttons

Function buttons are dedicated for the performing of the concrete function. By pressing the button the controller action or controller command is performed (see below).



Image 1.6 : Function buttons (Start, Stop, Alarm/Horn reset, Horn reset)

- ▶ **Start** : starting of the Gen-set
- ▶ **Stop** : stoping of the Gen-set
- ▶ **Alarm/Horn reset** : resets the horn and confirms all the alarms in the alarmlist
- ▶ **Horn reset** : resets only the horn

## 1.1.3 User buttons



Image 1.7 : User button

User button is dedicated for predefined user function.

- ▶ Performing the controller command
- ▶ Jump to the specific page or metering screen
- ▶ special function on the pages

## 1.1.4 Special and button combination

In this manual the shortcut is a term for the combination of the buttons or long press of the button.



Image 1.8 : Shortcut (jump to the administration)

- ▶ **Enter + Menu** : performs the jump to the administration. Enter button has to be pressed first.
- ▶ **Long press** of the arrow up or down button
  - in the menus : performs the cyclical listing
  - in the dialog : velocity of the changing value is increased based on special algorithm

## 1.1.5 Status LED

There is one multicolor (RGB) LED on the front panel of the unit. The specified color and flashing function describes the actual state of the unit.



Image 1.9 : Status LED

- ▶ 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 level2 (shutdown) alarm
  - Inactive unconfirmed level2 (shutdown) alarm
  - Lost of internal communication line
  - Controller unit in init state
- ▶ Red lights
  - Active confirmed level2 (shutdown) 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 level1 (warning) alarm
  - Inactive unconfirmed level1 (warning) alarm
  - Active confirmed level1 (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

## 1.2 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
- ▶ Administration
  - Page administration is accessible only by pressing the combination of the Enter and Menu buttons from the only Metering screen.

## 1.3 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 arrow up and down buttons.

## 1.4 Special screens

There are 2 special screens stored in the unit :

- ▶ Init screen
  - displayed during the booting procedure and in Administration menu
  - dedicated for specific user logo (by default predefined by ComAp)
- ▶ Service screen
  - displayed in Administration menu
  - dedicated for useful technical information (by default predefined by ComAp)

**Note:** More information about Init and Service screen modification is described in concrete chapter of this manual.

## 1.5 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.

### 1.5.1 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.

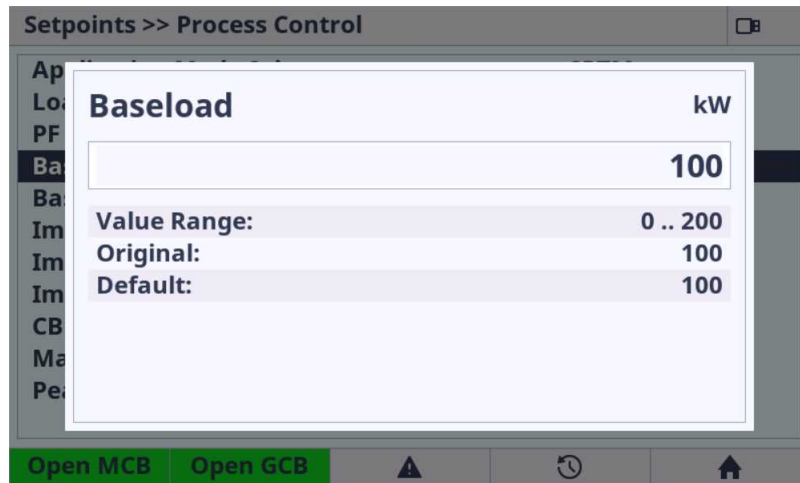


Image 1.10 : Dialog Value overview

## 1.5.2 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.

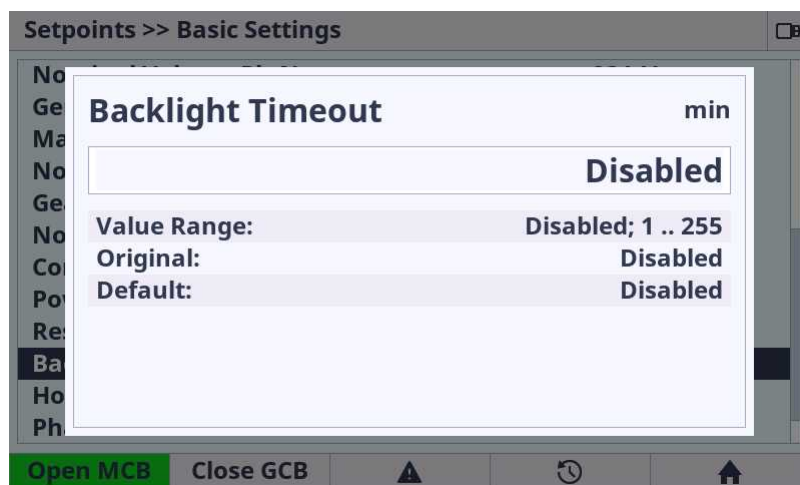


Image 1.11 : Dialog Value Extended overview

## 1.5.3 Dialog String List

The dialog string list is dedicated for list item selection. When the dialog is active the buttons arrow up and down are used for item selection. Enter button confirms the option. Menu button cancels the dialog without saving.

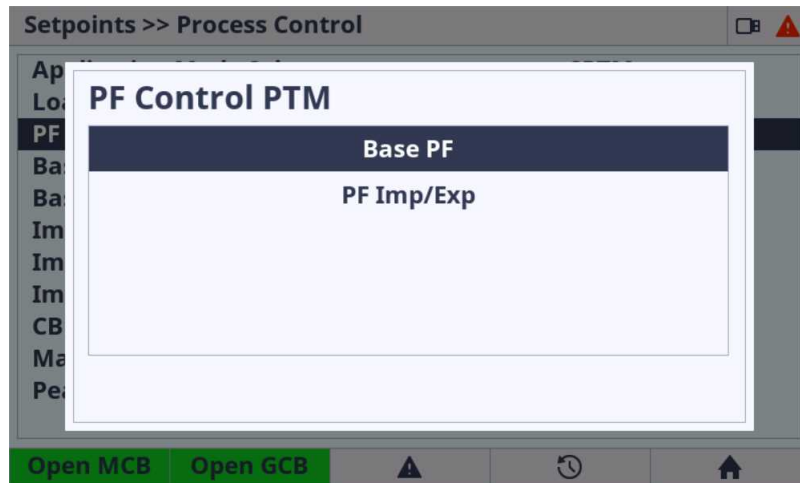


Image 1.12 : Dialog String List overview

### 1.5.4 Dialog Text

The dialog text is dedicated for text inserting or modification. When the dialog is active the buttons arrow up and down are used for letter selection. Arrows left and right are used for moving between the letters in the text. Letter DEL deletes actual selected letter (using move to left or right). Insert letter inserts the letter to the actual position (using move to left or right) Enter button confirms the text modification. Menu button cancels the dialog without saving.

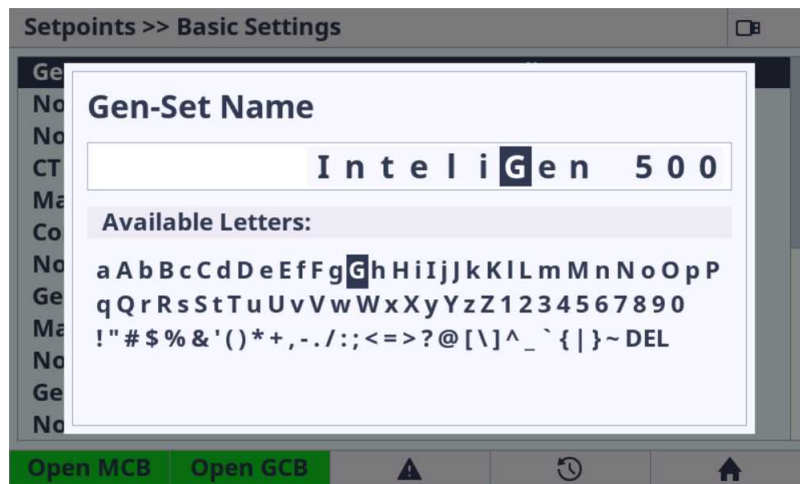


Image 1.13 : Dialog Text overview

**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.

### 1.5.5 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.

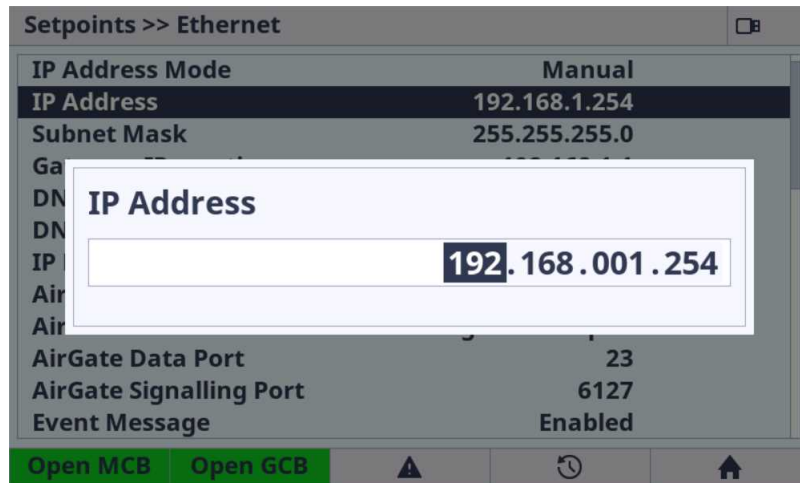


Image 1.14 : Dialog IP address overview

## 1.5.6 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.



Image 1.15 : Dialog Message overview

## 1.5.7 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 1.16 : Dialog Progress overview

### 1.5.8 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 1.17 : Dialog Date overview

### 1.5.9 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. Menu button cancels the dialog without saving.



Image 1.18 : Dialog Time overview

### 1.5.10 Dialog Password

The dialog password is dedicated for password 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.

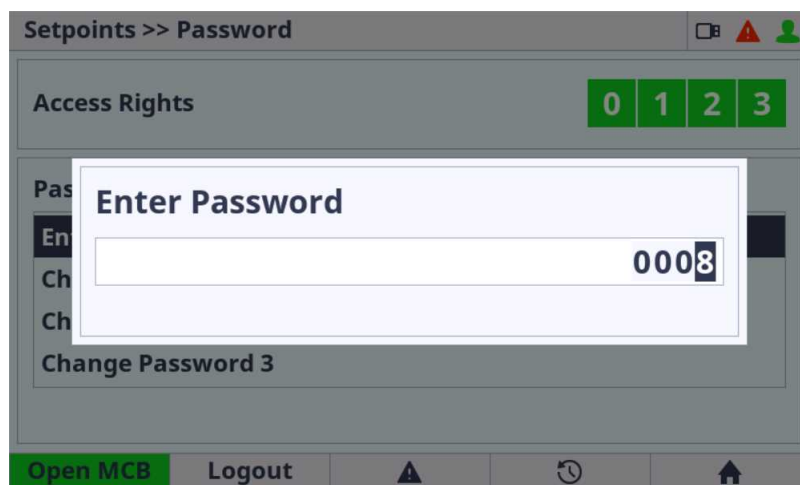


Image 1.19 : Dialog Password overview

### 1.5.11 Dialog Password Change

The dialog password change is dedicated for password change. When the dialog is active the buttons arrow up and down are used for number selection. Enter button confirms the first option and the same password must be inserted again. Enter button after insertion the second cell performs the password change (in case the password are same). Menu button cancels the dialog without saving.



Image 1.20 : Dialog Password Change overview

**Note:** The user must be logged in with respective rights to be able to change password for respective rights.

### 1.5.12 Dialog Timer

The dialog timer is dedicated for timer setting. When the dialog is active the buttons arrow left and right are used for the line option selection. Enter button confirms the actual option in the line and the next option can be performed. Enter button on the last line confirms all the option in dialog and save the timer settings to the controller. Menu button cancels the dialog without saving.

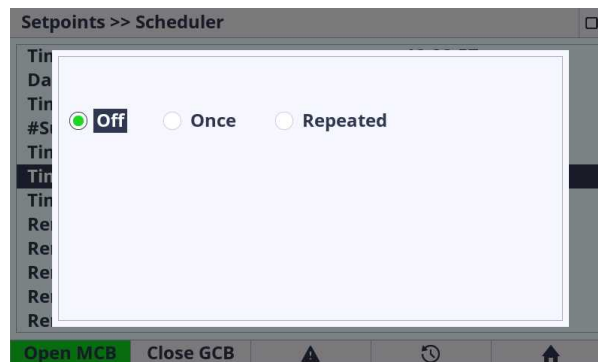


Image 1.21 : Dialog Timer (Off) overview

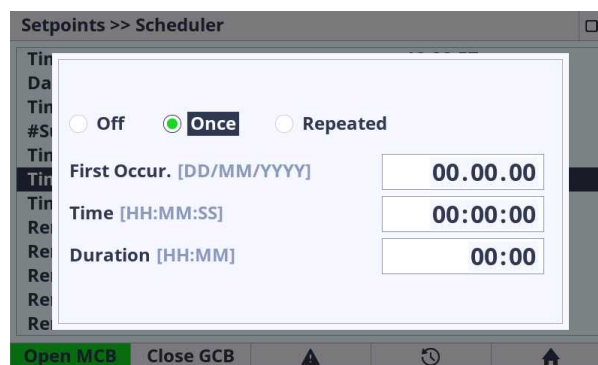


Image 1.22 : Dialog Timer (Once) overview

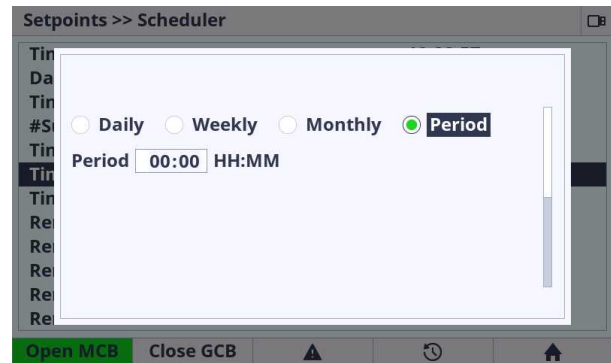
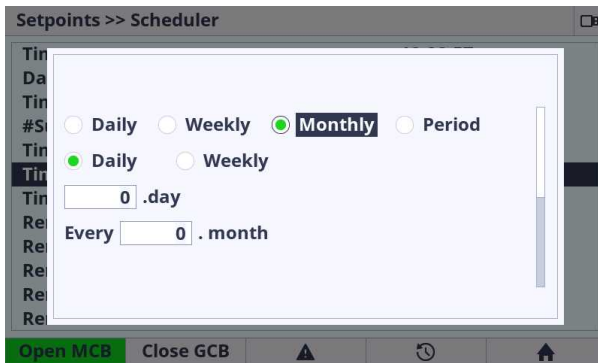
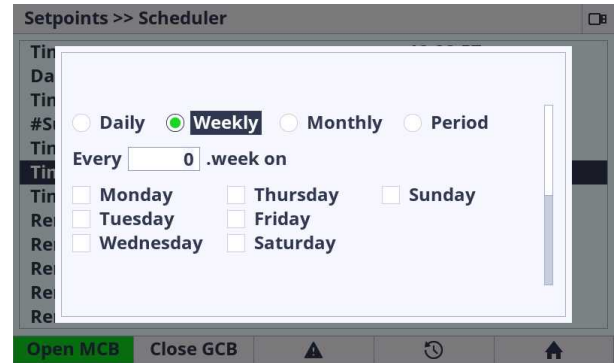
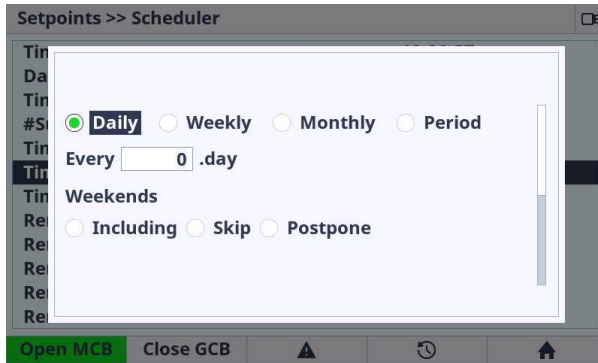
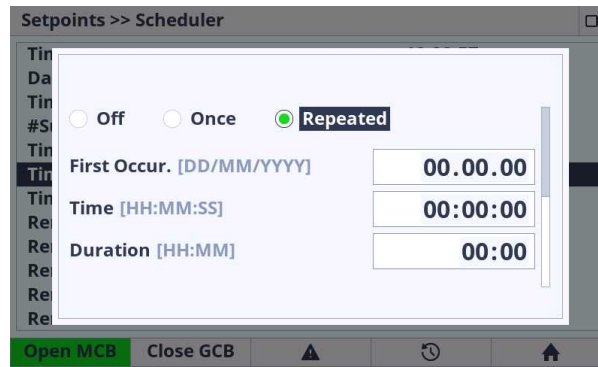


Image 1.23 : Dialog Timer (Repeated) overview

## 1.6 Status bars

### 1.6.1 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 (e.g. GCB open, GCB close, etc.), jump to the specified page (e.g. alarmlist, history) or special functions on some pages.

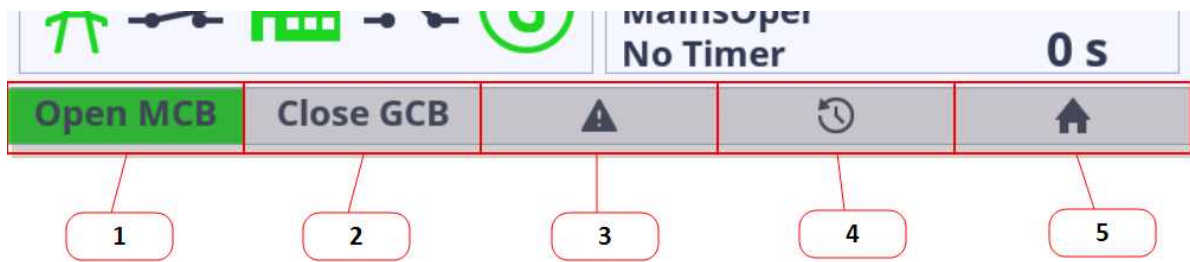


Image 1.24 : Example (bottom status bar on Home metering screen)

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.

## 1.6.2 Top status bar

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

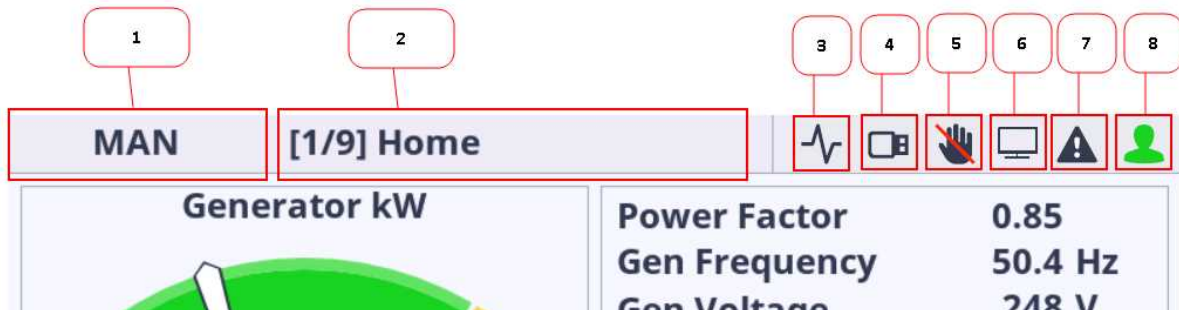


Image 1.25 Top Status Bar description



Image 1.26 : Top Status Bar - Mode selector dialog

1. **Mode selector** - Mode selector is dedicated for the controller mode selection. Using arrow left and right the controller mode is changed (only on the metering screens). The choice must be always confirmed by enter button. There is 5s 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.

### 2.1 IntelliGen 500 controller screens

IntelliGen 500 metering screens are predefined by Comap and covers all the application types.

- ▶ the movement between the metering screens is done using the arrow 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 PlugIn modules
  - Configured CAN modules
  - Aftertreatment ECU list settings
- ▶ The following structure is predefined in the IntelliGen 500 controller archive by default :

1. Home
2. Power
3. Generator
4. Mains
5. Bus
6. Synchro
7. Power Management
8. Analog inputs
9. Binary Inputs | Outputs
10. Statistics
11. Ethernet
12. Aftertreatment
13. CM-4G-GPS
14. CM-GPRS
15. EM-BIO8-EFCP-A
16. EM-BIO8-EFCP-B
17. CAN modules
18. ECU modules
19. Virtual modules

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



Image 2.1 : IntelliGen 500 metering screens overview

## 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 button 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 colour. 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 colour. These types of alarms protects the GenSet or Engine during the wrong state.
- ▶ **ECU alarm** - represented by the BLUE colour. This type of alarm comes from the connected external ECU units.
- ▶ **Sensor fail alarm** - represented by the WHITE colour. A special kind of alarm that appears if any connected sensor emits the wrong state.

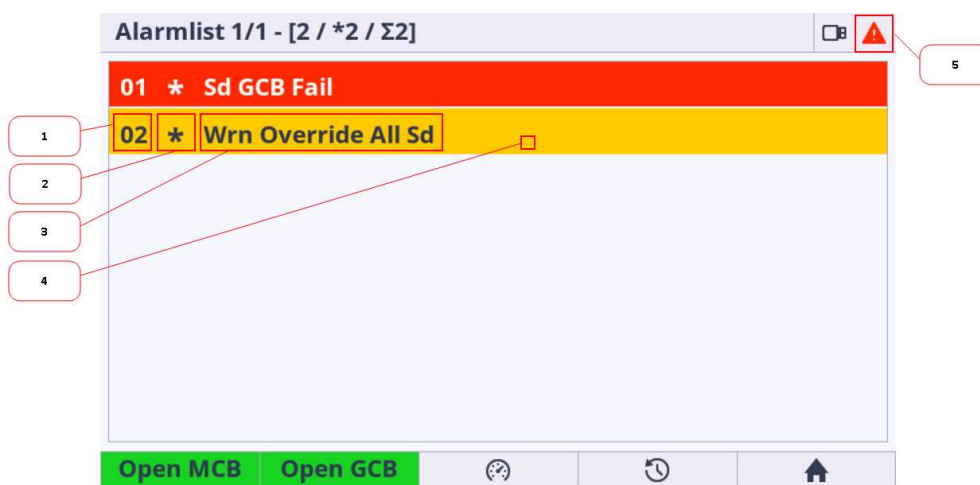


Image 3.1 : Alarmlist Page

1. **Alarm item number** - displays the number of the concrete alarm.
2. **Alarm item star** - describes if the alarm is CONFIRMED or NOT COFIRMED. 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:** IntelliGen 500 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 SPtM and MINT. 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 arrow up and down and confirmed using enter button

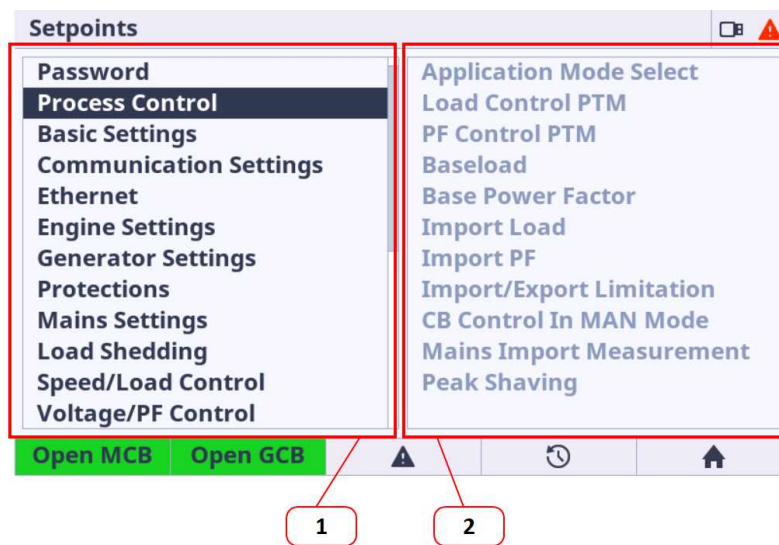


Image 4.1 : Setpoints Page overview

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 arrow left and right. The setpoint setting is done using the 2nd step - see below.
- ▶ 2nd step - Setpoint item is selected using the buttons arrow up and down and the dialog for value setting is called using the enter button. The dialogs are described in the chapter Dialogs.

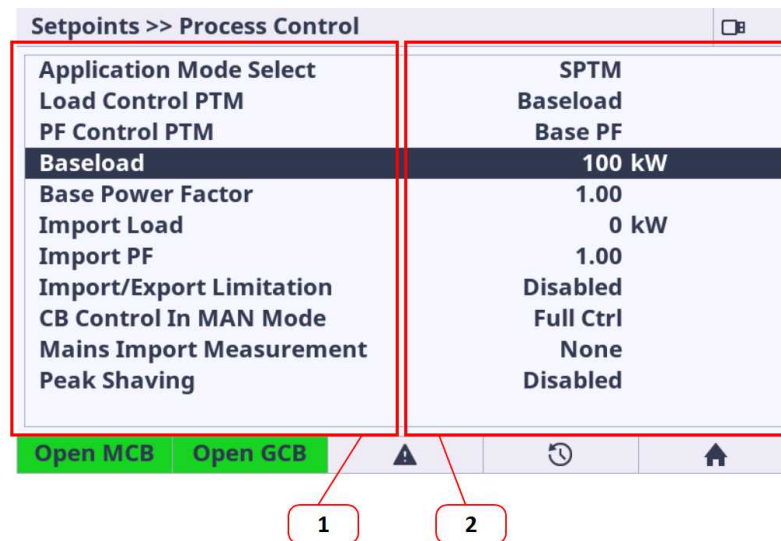


Image 4.2 : Group Setpoints Page

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 Password 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 4.3 : Main Setpoints Page

1. **Password item** - the item dedicated for the password settings, login and logout.

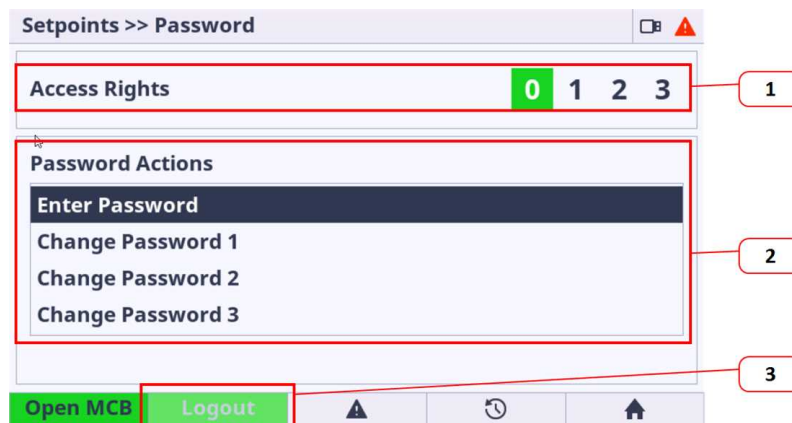


Image 4.4 : Setpoints Password Page

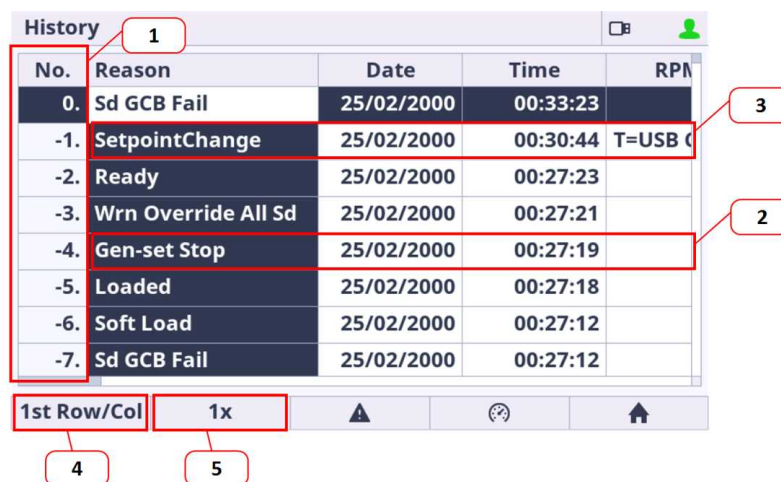
1. **Logged Access Level Info** - the information about actually logged in access rights.
  - a. 0 - user has access rights 0, which means logged-out
  - b. 0,1 - user has access rights 0 + 1 access rights
  - c. 0,1,2 - user has access rights 0 + 1 + 2 access rights
  - d. 0,1,2,3 - user has access rights 0 + 1 + 2 + 3, which means administrator rights
2. **Password Actions** - the list of available password actions.
  - a. Enter Password - calls the dialog for password insert
  - b. Change Password - calls the dialog for password change of respective access rights
3. **Logout Button** - is active in case of any user is logged in. The button is inactive if any user is logged out - this is indicated by green light of 0 access level.

# 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.



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 arrow 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 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.

# 6 Administration

## 6.1 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 IntelliConfig. By default the init screen is predefined by ComAp.



Image 6.1 : Init screen overview

## 6.2 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



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

Image 6.2 : Administration Page - Controller Info

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

## 6.3 Modules Info

Modules info page is dedicated for important information about the connected modules information. The page Modules Info displays the information from the following type of connected modules :

- ▶ Plug-In modules
- ▶ CAN peripheral extension modules



Image 6.3 : Administration Page - Modules Info

**Note:** The availability of the connected module depends on the type of controller unit.

## 6.4 Settings

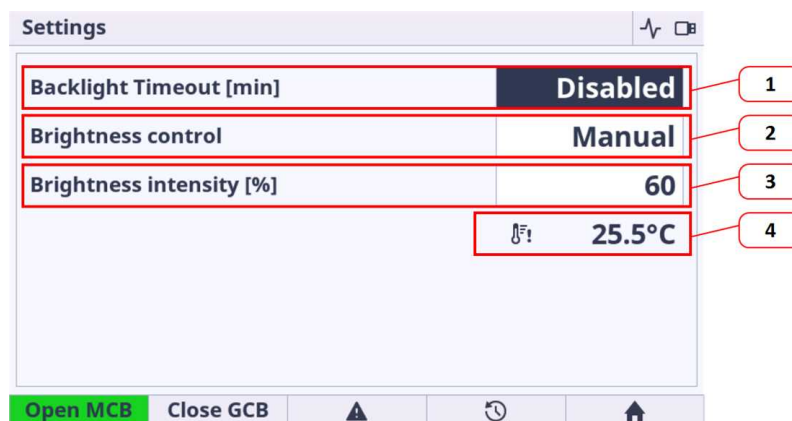


Image 6.4 : Administration Page - Settings

1. **Backlight Time** - 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.

2. **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).
3. **Brightness intensity** - the value is selected using the value dialog. Note the value is applied immediately during the change of the value.
4. **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.

## 6.5 Languages

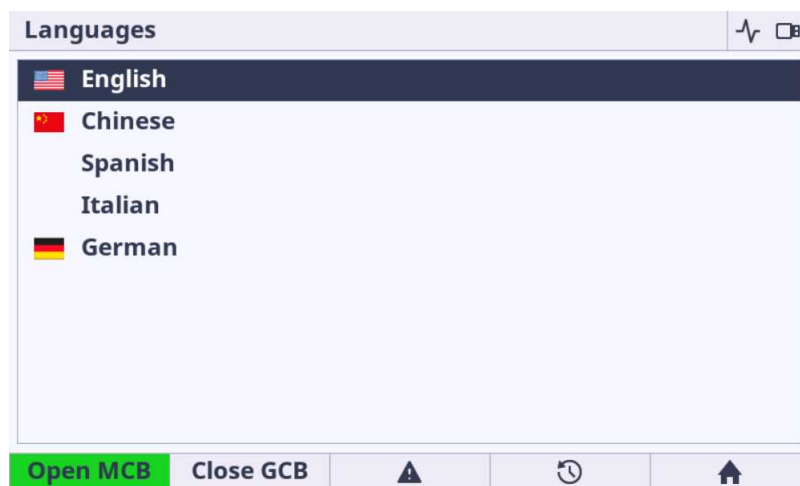


Image 6.5 : Administration Page - Languages

- ▶ **Language settings** - the list of languages stored in the controller configuration is displayed in the list of possible languages.
- ▶ The integrated color display unit can display the following languages
  - English
  - Chinese

- ▶ The integrated color display unit can **partially** display the following languages
  - Bulgarian, Taiwan, Czech, German, Greek, Spanish, Finnish, French, Hungarian, Icelandic, Italian, Japanese, Korean, Dutch - Netherlands, Norwegian, Polish, Roman, Russian, Croatian, Slovak, Swedish, Turkish, Ukrainian, Slovenian, Estonian, Latvian, Lithunian, Vietnamese, Italian, Portuguese, Bosnian

**IMPORTANT:** Even the language is configured in IntelliConfig the specific language is unavailable if the language is available in configuration (but empty) or the language is not supported by integrated color display unit.

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

## 6.6 Configuration level

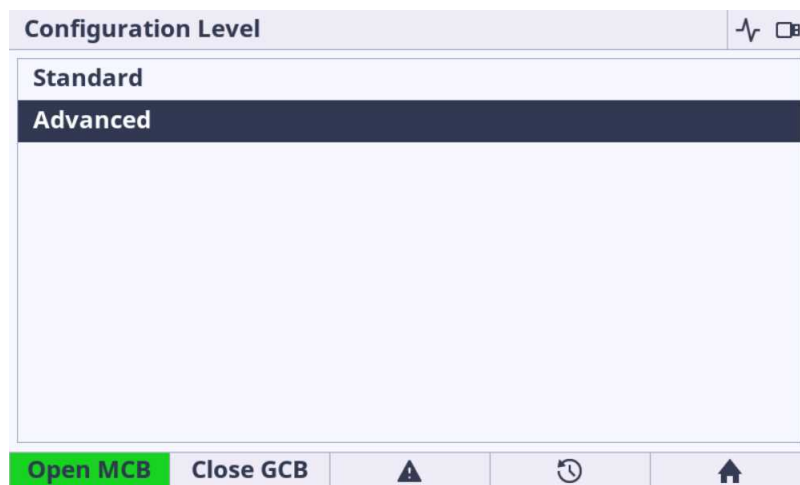


Image 6.6 : Administration Page - Configuration Level

- ▶ **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.

## 6.7 Export / Import

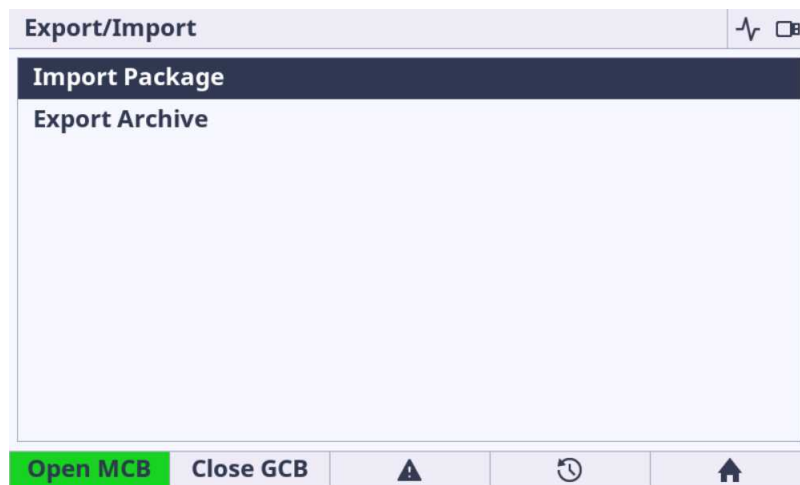
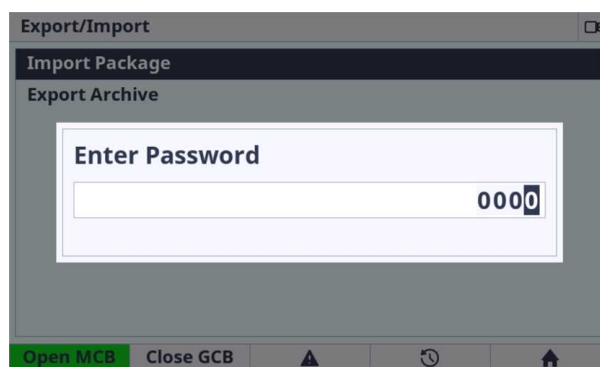


Image 6.7 : Administration Page - Export & Import

- ▶ **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 IntelIconfig PC application **only**.
  - The files (\*.pcg3) prepared in IntelIconfig (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 (level 3 access rights) password. Until the correct password is not inserted the import function is unavailable. Be aware that there is implemented algorithm to have password protected against the brute force attempts.



- The message dialog (Controller unit is not ready) is displayed if the controller is not in state ready for programming (e.g. genset 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 (\*.aig3) is exported to the fixed directory in the USB stick (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. genset 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 subdirectories are created automatically if does not exist.

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

## 6.7.1 Imported File selection

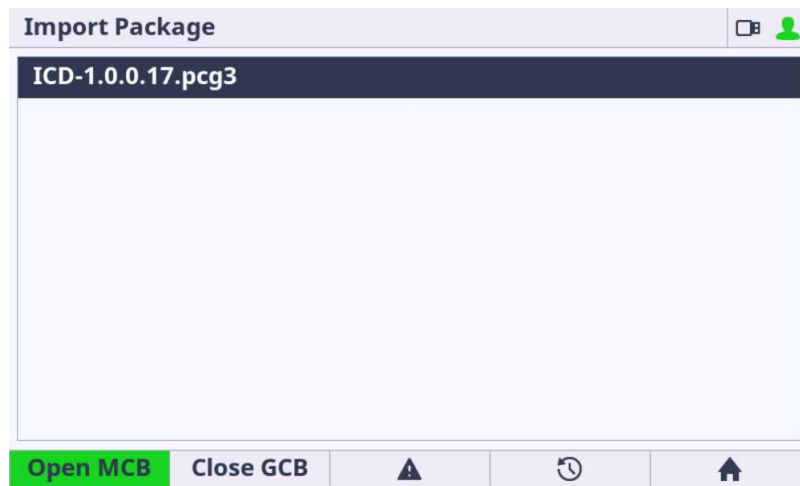


Image 6.8 : Administration Page - Export & Import - File selection

- ▶ **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



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

## 6.8 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.

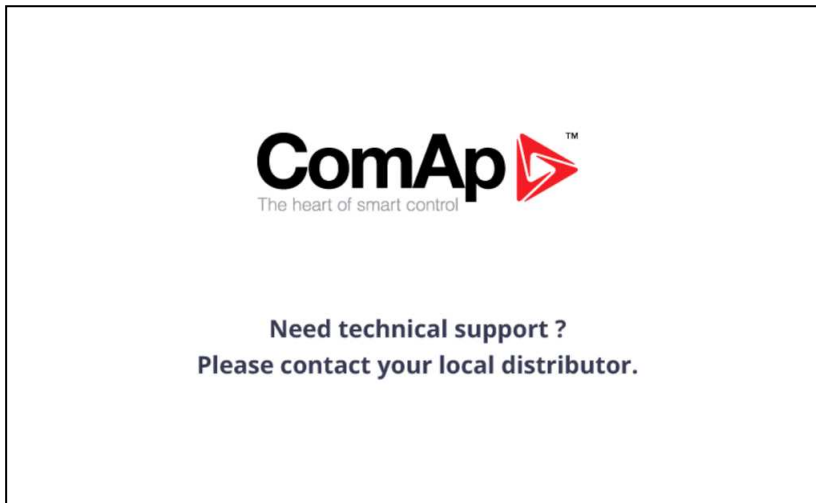


Image 6.10 : Service screen overview

# 7 Trends

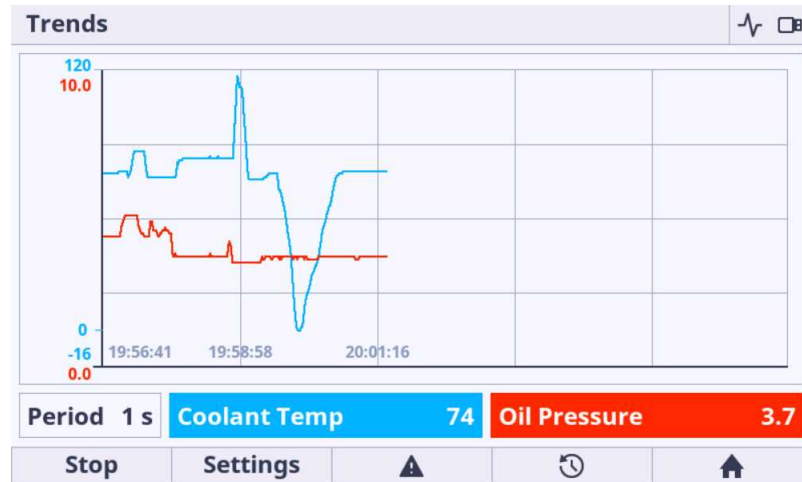


Image 7.1 : Trends page overview

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.

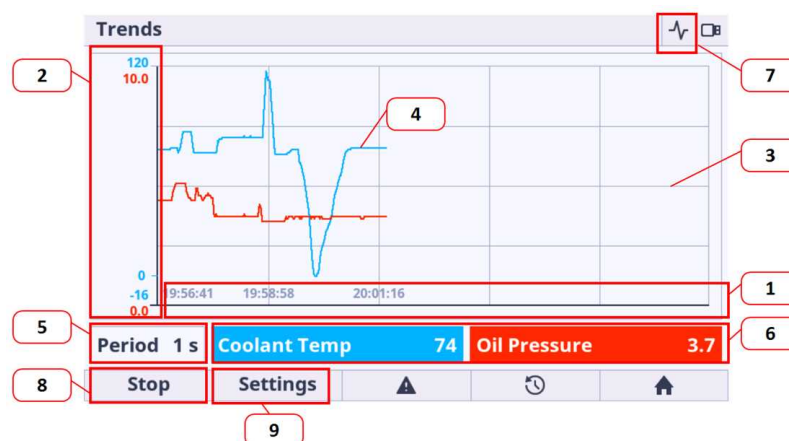


Image 7.2 : Trends page description

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 colour 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 bellow.

## 7.1 Trends settings

Trends settings page is dedicated for the available trends settings. The navigation in trends settings page is done by buttons arrow up, arrow down, arrow left, arrow right, enter, user button 1 and 2.

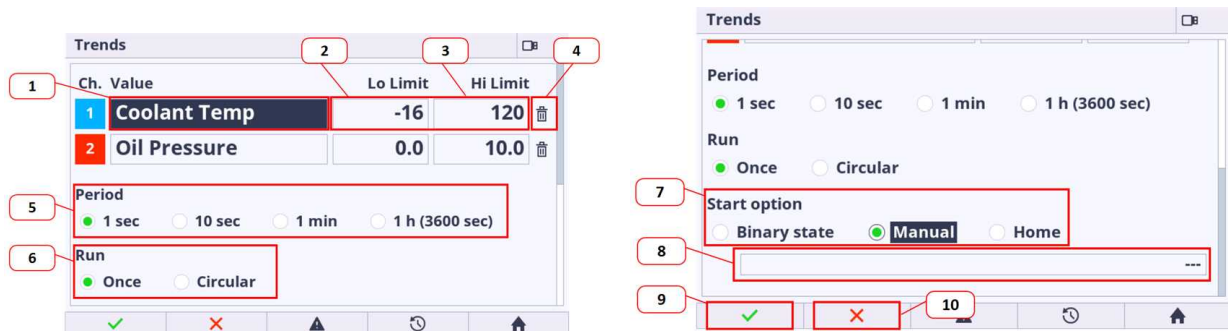


Image 7.3 : Trends page settings overview

1. **Channel value** - the channel value menu appears if the enter button is pressed just on the position. Inside the channel value menu the 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 low 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 temporary 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 temporary 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.

# 8 Quick help

## 8.1 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.

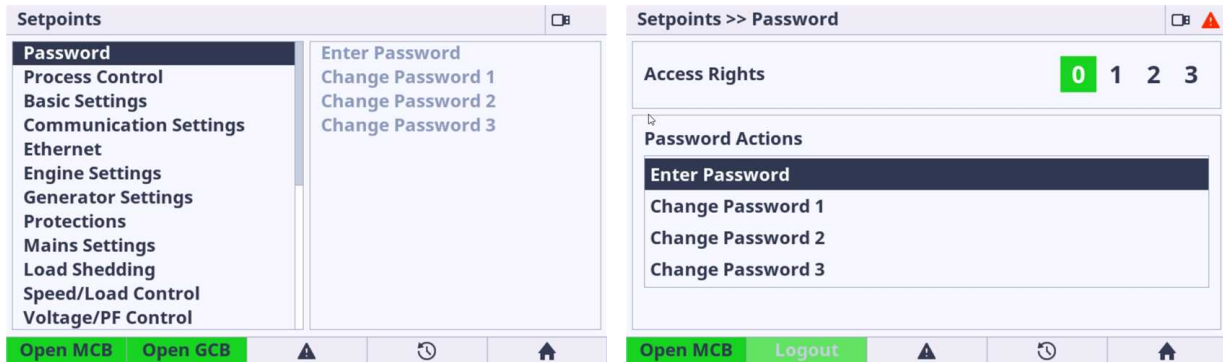


Image 8.1 : Password menu

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.

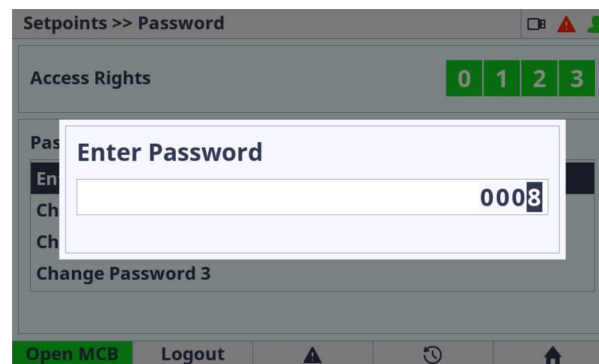


Image 8.2 : Password dialog

**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.

## 8.2 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 8.3 : Important values

## 8.3 Gen-set mode change

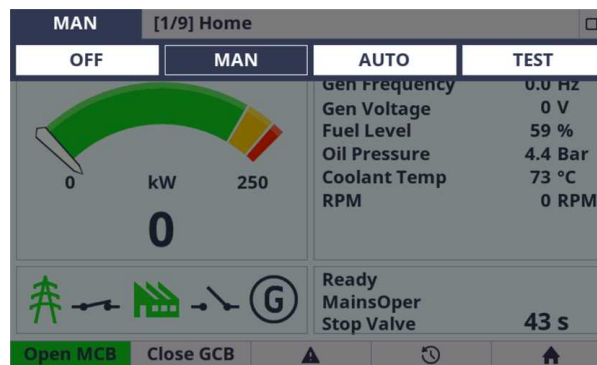


Image 8.4 : Genset mode change

1. Press the button arrow left or right in any metering screen
2. Change the controller mode using button arrow left or right and confirm the selection using enter button.
3. If all the controller conditions are fulfilled the GenSet 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.

## 8.4 Password change

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

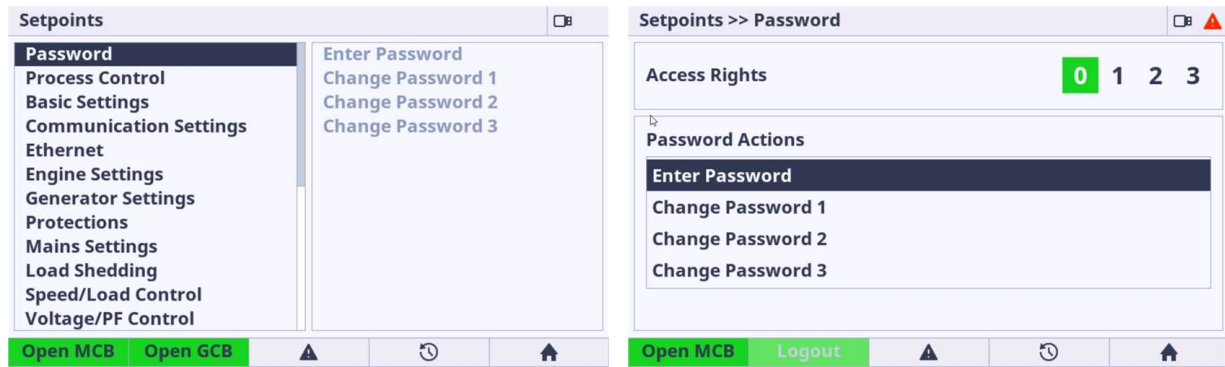


Image 8.5 : Password menu

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.

## 8.5 Display brightness settings

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

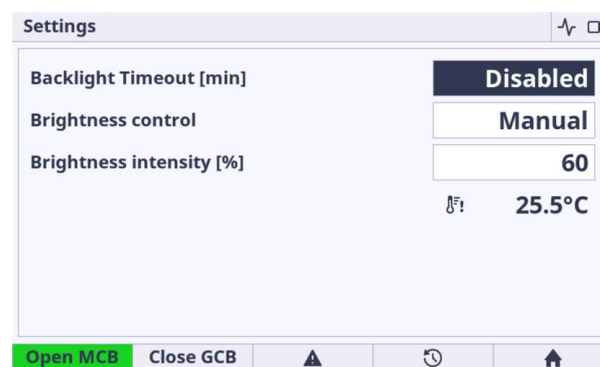


Image 8.6 : Display brightness settings

**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 dependant. 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.

## 8.6 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.