RMB ENERGIE
A YANMAR COMPANY

OPERATING MANUAL

RMB/Control
Status 04.2023

Combined heat and power unit neoTower® 5.0, 7.2, 11.0, 16.0, 20.0, 50.0

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1. Document information

1.1 Validity

This operating manual belongs to the documentation for the combined heat and power unit, which is referred to in this manual as “CHP” or the “system”.

This operating manual is a supplement to the operation manual for the system and describes control via the operational display with the software “RMB/Control”.

Valid from software status:
– Version 2.82

Use on the following systems:
– 5.0
– 7.2
– 11.0
– 16.0
– 20.0
– 50.0

For descriptions of the system, observe the associated operation manual.

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1.2 Safety instructions

⚠ DANGER!

Information highlighted with the word HAZARD warns against a hazardous situation that will lead to death or severe injury.

⚠ WARNING!

Information highlighted with the word WARNING warns against a hazardous situation that can lead to death or severe injury.

⚠ CAUTION!

Information highlighted with the word CAUTION warns against a situation that can lead to minor or moderate injuries.

⚠ ATTENTION!

Information highlighted with the word ATTENTION warns against a situation that can lead to material or environmental damage.

1.3 Explanation of symbols

Text

► Required action

– List

→ Cross reference to another point in this document

Cross reference to other documents that must be observed

2. Safety information

2.1 Intended use

The software “RMB/Control” serves to control and monitor the system. The software is operated via the operational display on the control cabinet.

The software “RMB/Control” is installed by the manufacturer. Only the manufacturer is permitted to implement measures for maintaining and updating the software.

Intended use also includes reading and following this manual.

Any other use is considered contrary to intended use.

2.2 Authorised target groups

This manual is intended for various target groups that are authorised for specific duties.

2.2.1 Manufacturer

The manufacturer supplies the product and has the following duties:
- Training experts on assembly, maintenance, disassembly and disposal.
- Commissioning the system.

Only the manufacturer and specialist partner authorised by the manufacturer have access to the “expert level” area of the “RMB/Control” software.

2.2.2 Operator

The operator is responsible for the building in which the product is installed. The operator has the following duties:
- Fulfilling the requirements specified by the energy provider (e.g. registration, approval, compensation).
- Meeting the installation location requirements.
- Training the user.
- Complying with statutory occupational health and safety obligations.
- Complying with the valid safety, accident prevention and environmental protection regulations.
- Providing and complying with the documentation.
- Ensuring that the product is always kept in a technically sound condition.
- Storing the system when necessary.

2.2.3 Trained personnel

Trained personnel are responsible for the assembly, maintenance, disassembly and disposal of the product. The following points must be observed:
- All tasks must only be performed by qualified personnel who have been trained by the manufacturer and who are familiar with assembly technology, gas and water installations, and current safety regulations.
- Special installation tasks (e.g. tasks involving the building structure or the ventilation system) must only be performed by the suitably qualified personnel of specialist companies.
- Electrical installations must only be performed by qualified, skilled electricians.

Only qualified personnel trained by the manufacturer have access to the “technician level” area of the “RMB/Control” software.

2.2.4 User

Users may perform operational and cleaning tasks on this product. Obligations of the user:
- To be trained on the product by the operator.
- To be familiar with this manual.

Trained users have access to the non-protected areas of the “RMB/Control” software, but not to the “expert level” and “technician level” areas.

2.3 General safety instructions

⚠ WARNING!

Danger of death with a failure to observe the manual!
This manual contains important information for handling the system safely. Potential hazards are specifically highlighted. Failing to observe such information can lead to death or severe injuries.
- ► Read the manual carefully.
- ► Follow the safety instructions contained in this manual.
- ► Follow the safety instructions on the system
- ► Store the manual in an accessible place.

If you can smell gas, immediately proceed as follows:
- – Close the gas valve.
- – Do not generate any naked flames.
- – Do not operate any electrical switches (e.g. light switches, all-pole separating points).
- – Do not use any electrical appliances in the hazardous area (e.g. telephone).
- – Ventilate the rooms.
- – Inform the manufacturer, gas utility company or qualified service company.

Use of the system is prohibited in the following cases:
- – If the system or individual components are damaged.
- – If the system has been altered or modified without authorisation.
- – If the supply and return lines (e.g. gas, flue gas, water, electricity, condensate drain) are altered or modified without authorisation.
- – If any safety devices are missing or inoperable.
- – During the construction phase of the building.
- – If the system has been in storage for more than 6 months after delivery without prior removal of preservative agent.
- – If the system has been decommissioned for more than 6 months without prior removal of preservative agent.
- – For children or individuals who are incapable of assessing the hazards associated with operating the system.

The manufacturer does not accept any liability or guarantee for damage or loss in the following cases:
- – Failing to observe this manual.
- – Contrary-to-intended use.
- – Improper handling.
- – Use by unauthorised target groups.
- – Failing to meet the installation location requirements.
- – Using replacement parts that have not been authorised by the manufacturer.
- – Bypassing the system's safety devices.
- – Removing the system's seals and sealants.
- – Failing to comply with the maintenance intervals.

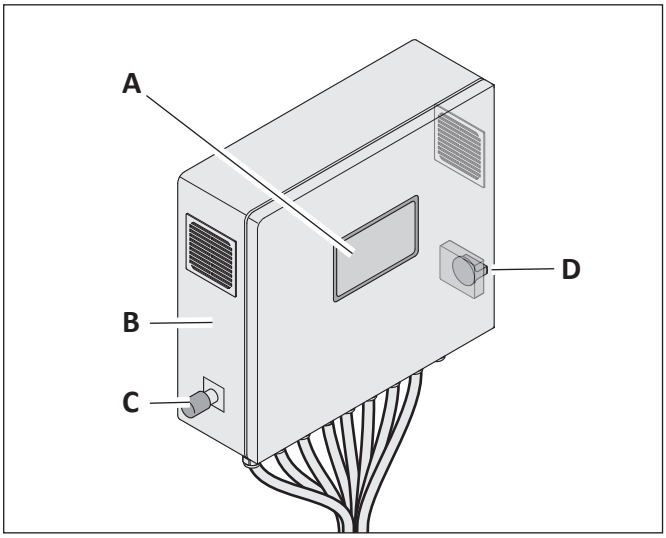
Additional safety instructions are provided in the respective chapters of this manual.
→ „4. Operating“ (page 8).
→ „5. Service repairs“ (page 38).

3. Product information

3.1 Product overview

The “RMB/Control” software is operated via the operational display on the system’s control cabinet. The operational display is equipped with a touch-sensitive screen (“touchscreen”).

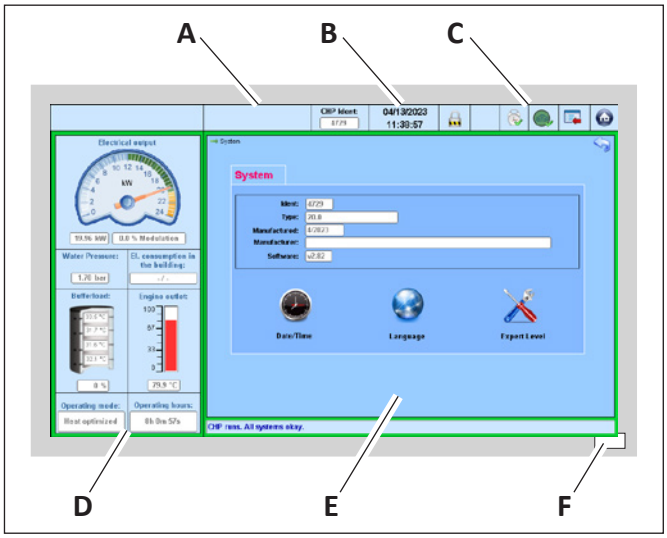
The control cabinet contains all the components required to control the system.



A Operational display
B Control cabinet housing
C Emergency stop switch
D Master switch

3.2 Operational display

By touching the screen (“touchscreen”), the user is able to execute functions and call up screen pages. If entries are necessary (e.g. names, values) then a corresponding on-screen keypad is automatically displayed.



A Area for system identification with:
- Information on the system and manufacturer
- Information on the software and the software version
- Identification (ID no.) of the system

Touching calls up the “system” menu.

B Date and time information. Touching calls up the “date/time” menu.

C Function keys for direct access to important menus (from right to left):
- Start screen
- Main menu
- Electric vehicle charging button
- Time program
- Peak load boiler
- Level protection

Touching calls up the corresponding menu.

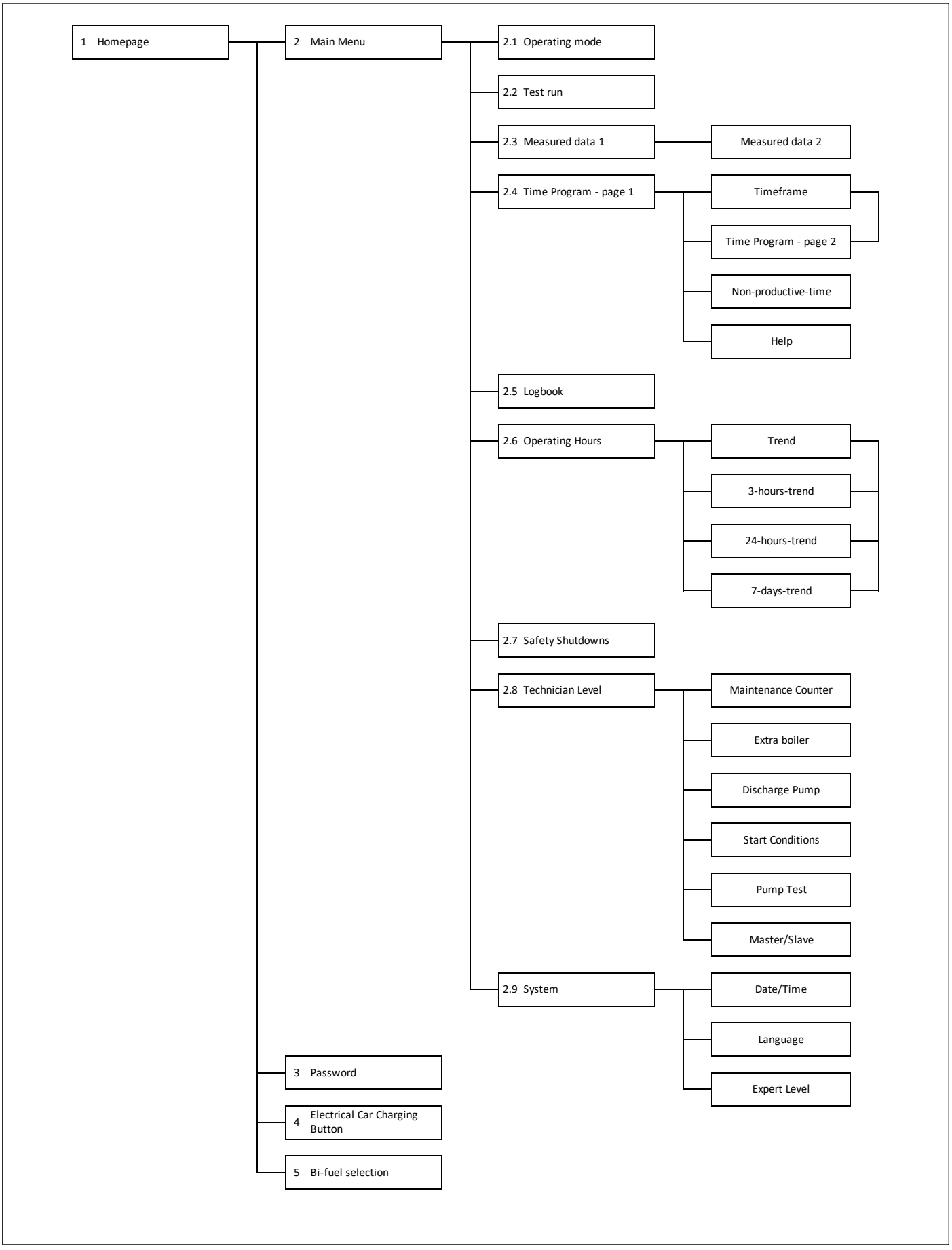
D Status area with continuous display of important performance data:
- Current performance and degree of modulation
- Water pressure in the motor circuit
- Electricity consumption in the building
- Buffer load and buffer tank temperatures
- Engine circuit supply temperature
- Operation mode
- Operating hours

Touching calls up the associated menu.

E Working area with display of the selected menu. Including:
- Menu path information (top left)
- Access to the previous menu (top right)
- Status bar (bottom)

F Button for direct access to the start screen.

3.3 Menu structure



4. Operating

⚠ ATTENTION!

Risk of damage to the system with a failure to observe the operating instructions!
This chapter contains important information regarding the safe operation of the system. Incorrect settings in the control mechanism can damage the system or shorten its service life.

- ► Read this chapter carefully before operating the system.
- ► Follow the safety instructions.

Trained users have access to the non-protected areas, but not to the “expert level” and “technician level” areas.
The system must only be operated by qualified users.
→ „2.2.4 User“ (page 4).

Only qualified personnel trained by the manufacturer have access to the “technician level” area.
→ „2.2.3 Trained personnel“ (page 4).

Only the manufacturer and specialist partner authorised by the manufacturer have access to the “expert level” area.
→ „2.2.1 Manufacturer“ (page 4).

In order to operate the system via the software, the following preconditions must be satisfied:

- – The system is completely and correctly assembled.
- – The system is switched on.

For information regarding assembly, observe the associated operation manual.

Function keys
The following function keys are permanently displayed for direct access to the respective menu:

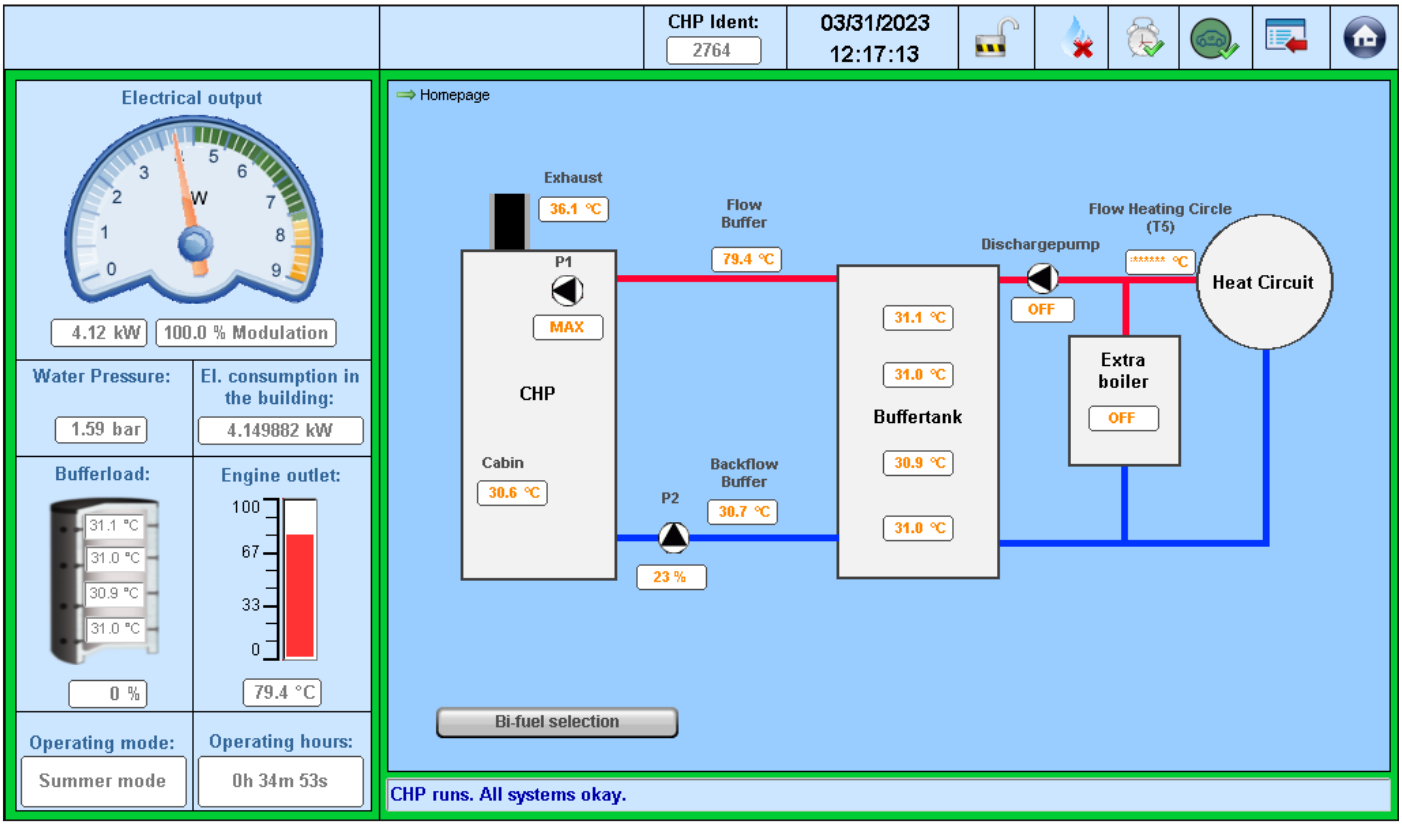
Symbol	Meaning
	Start screen → „4.1 Start screen“ (page 9).
	Main menu → „4.2 Main menu“ (page 10).
	Electric vehicle charging button → „4.4 Electric vehicle charging button“ (page 36).
	Time program → „4.2.4 Time program“ (page 15).
	Peak load boiler → „Technician level – peak load boiler“ (page 26).
	Level protection → „4.3 Level protection“ (page 35).

Background colours
The background colour of the screen changes depending on the system state.
The following colours are possible:

Colour	Meaning
Orange	System is switched off
Blue	System is switched on and waiting for requests
Green	System running and producing energy
Red	A safety shutdown has switched the system off

The screens for the non-protected areas and the technician level are described in the following, according to the menu structure.
→ „3.3 Menu structure“ (page 7).

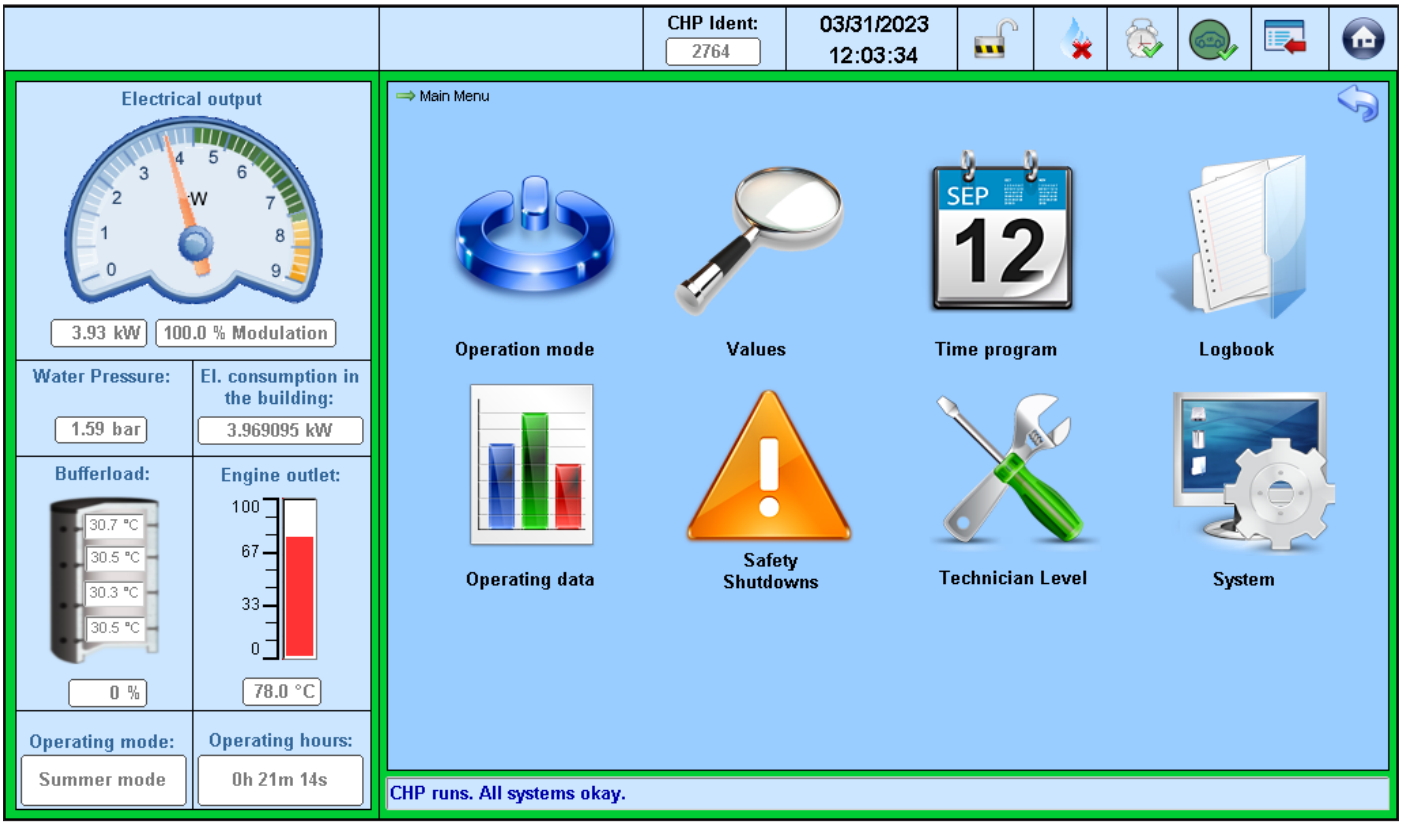
4.1 Start screen



The start screen displays an overview of the actuated system in accordance with the hydraulic plan (the actual layout may vary).
The following information is displayed:
– Temperature in the system (“cabin”)
– Flue gas temperature
– Supply and return temperature of the buffer tank
– Supply temperature of the heating circuit
– Buffer tank temperatures T1 to T4
– Release of the peak load boiler ("SLK")
– Output pump 2

The menu for fuel selection is available.
► Press the "Bi-Fuel selection" button

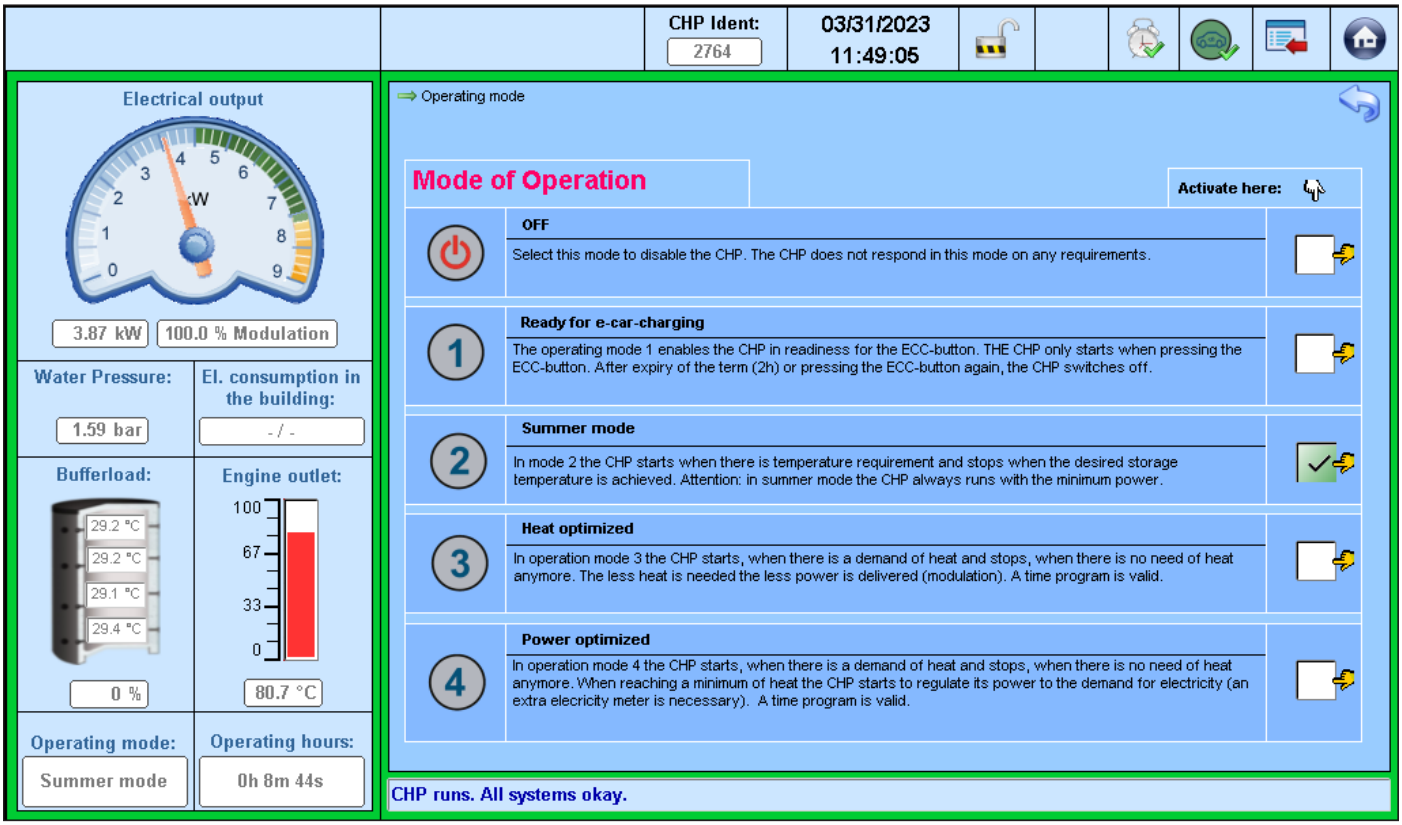
4.2 Main menu



The main menu branches into the following submenus:
- Operation mode
- Values
- Time program
- Logbook
- Operating data
- Safety shutdowns
- Technician level
- System

In order to switch to a certain submenu:
► Touch the corresponding button.

4.2.1 Operation mode



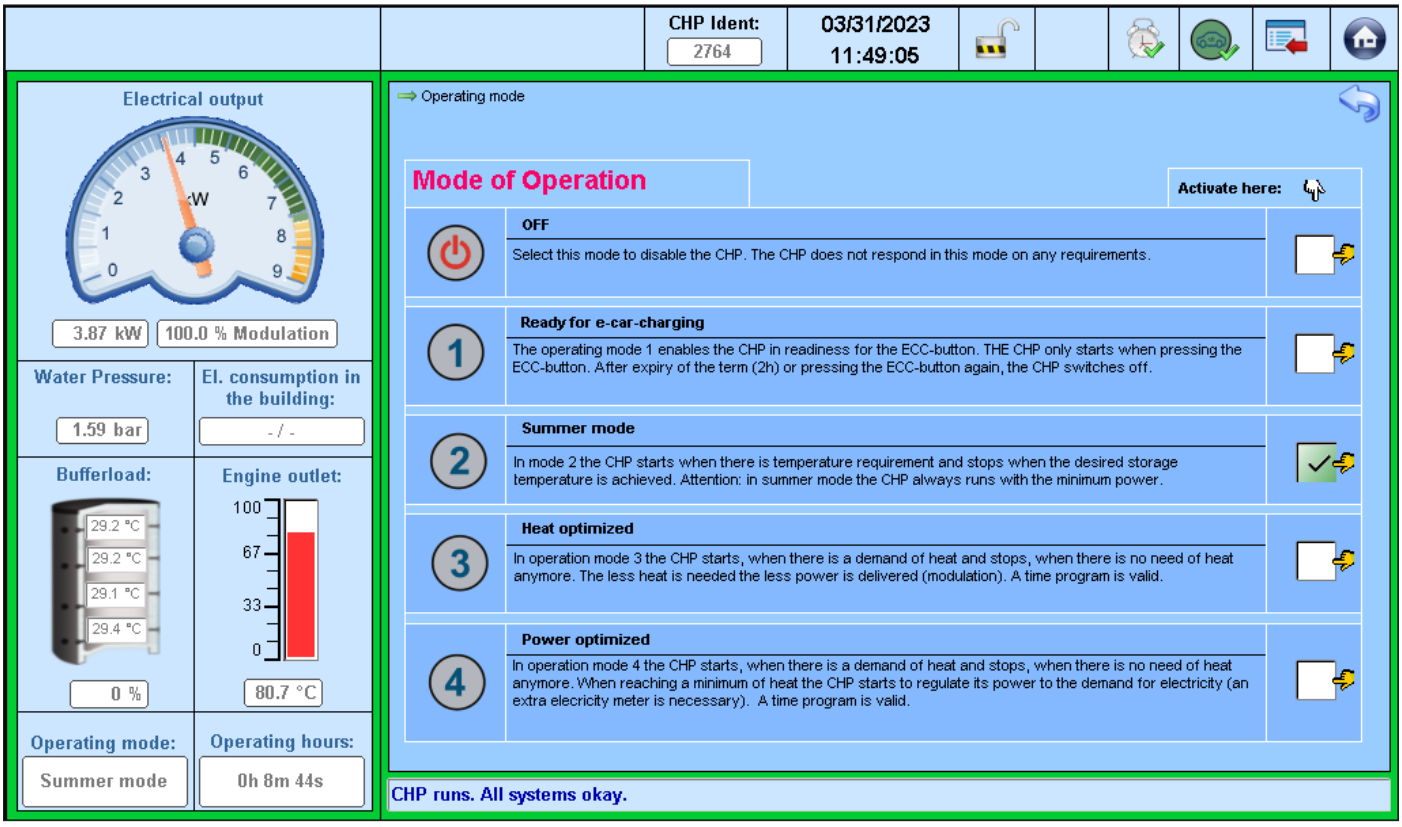
The system can be operated in five modes of operation (including shutdown).

Operation mode	
OFF	The system is in hibernation mode. The system does not start according to temperature requirements.
1 – Ready for electric vehicle charging button	Special mode for charging electric vehicles. It is still possible to produce electricity in this mode too, if the storage battery is fully charged. Once the electric vehicle charging button has been pressed, the system runs for two hours. → „4.4 Electric vehicle charging button“ (page 36).
2 – Summer mode	In summer operation mode, the system only operates at minimum capacity. The system only starts if the storage battery has insufficient charge. This mode is expedient if less heat is required.
3 – Heat-optimised	The system starts if a temperature requirement has been set. If the storage battery has reached a specific percentage charge, the system begins to power down steplessly. This mode is expedient if the power consumption is fundamentally lower than the nominal output of the system.
4 – Electricity-optimised	The system starts to operate according to a temperature requirement. Once a specific storage battery charge has been reached, the system aligns itself to the electricity consumption of the building. This mode helps to increase own consumption of the power generated.

In order to put the system into the desired operation mode:
► Touch the corresponding button (“activate here”) on the right side.

After the start, the system has a warm-up phase lasting a few minutes. Only then is the selected output reached. The selected operation mode is displayed bottom left in the status area.

4.2.2 Test run



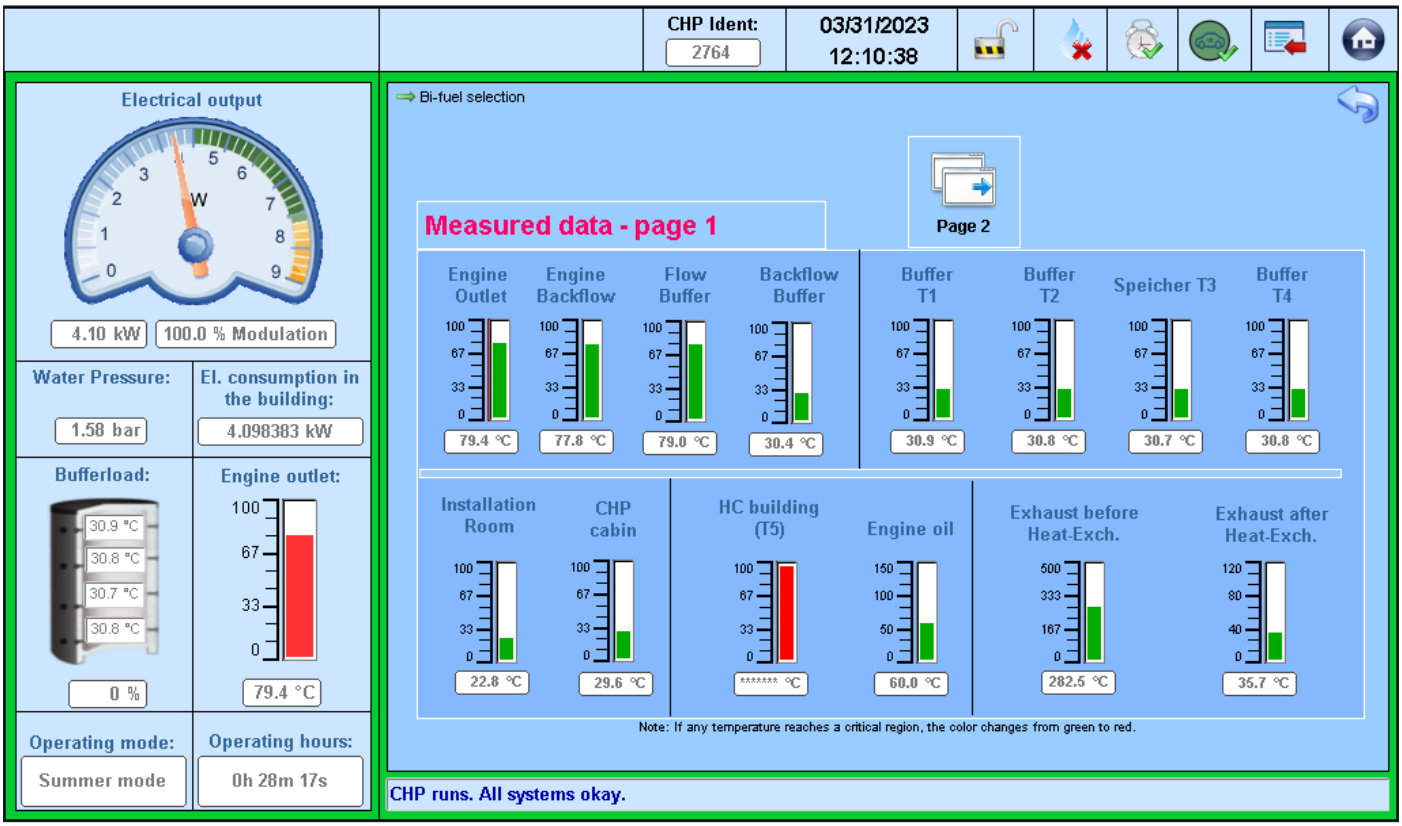
When the system is started for the first time, a test run must be performed.

To start the test run:
- ► Call up the “Operation mode” sub-menu.
  → „4.2.1 Operation mode“ (page 11).
- ► Touch the “Activate here” button on the right side for operation mode 3 “Heat optimised”.

The test run starts.

4.2.3 Measured data

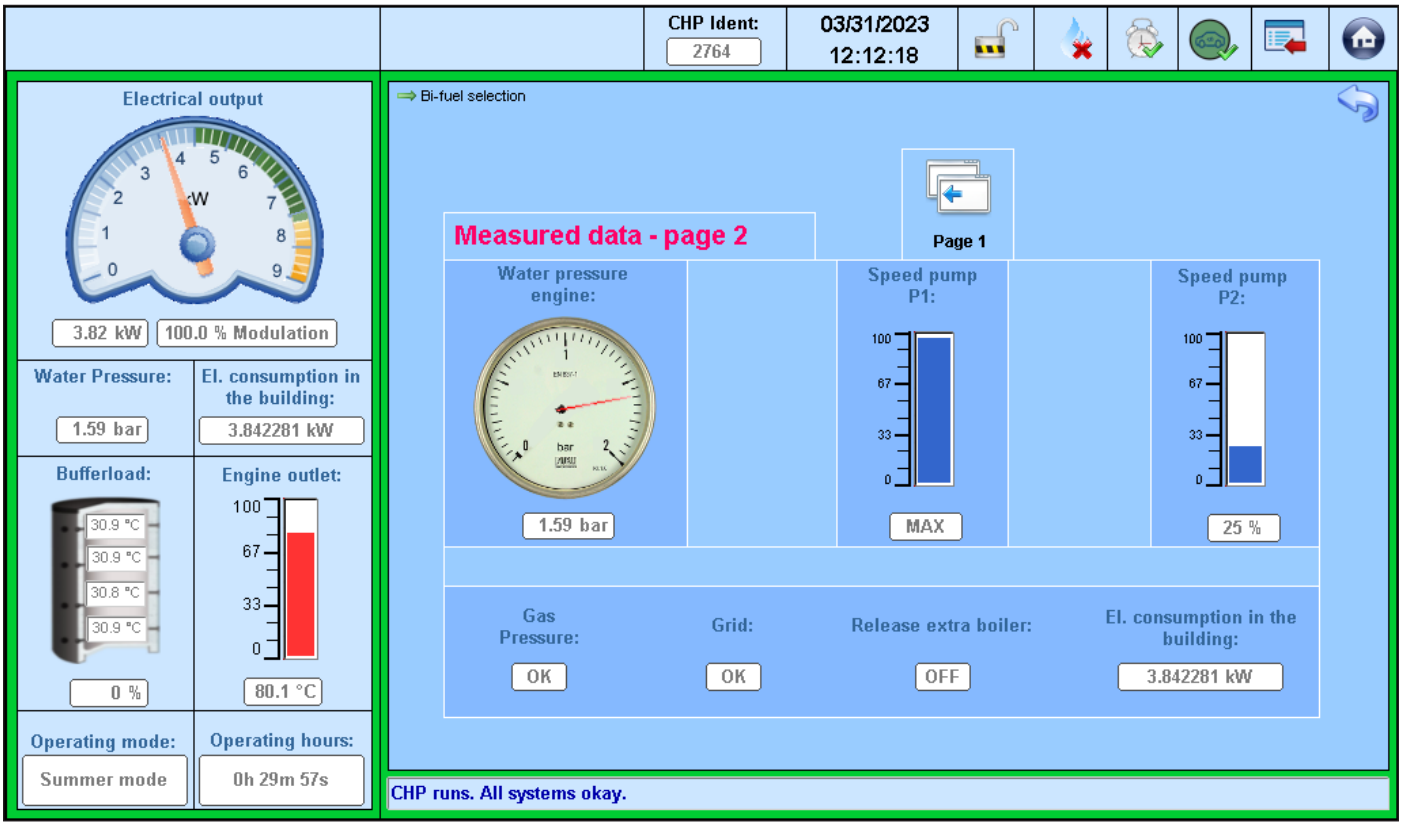
Measured data – page 1



Display of the measured temperature at different positions:
- Engine outlet
- Engine backflow
- Buffer supply line
- Buffer return line
- Buffer tank temperatures T1 to T4
- Room air
- CHP interior
- Building heating circuit (T5)
- Engine oil
- Flue gas before heat exchanger (“AWT”)
- Flue gas after heat exchanger (“AWT”)

Normal temperature ranges are displayed with a green bar. If the colour of the bar changes to red then the temperature has reached a critical value.

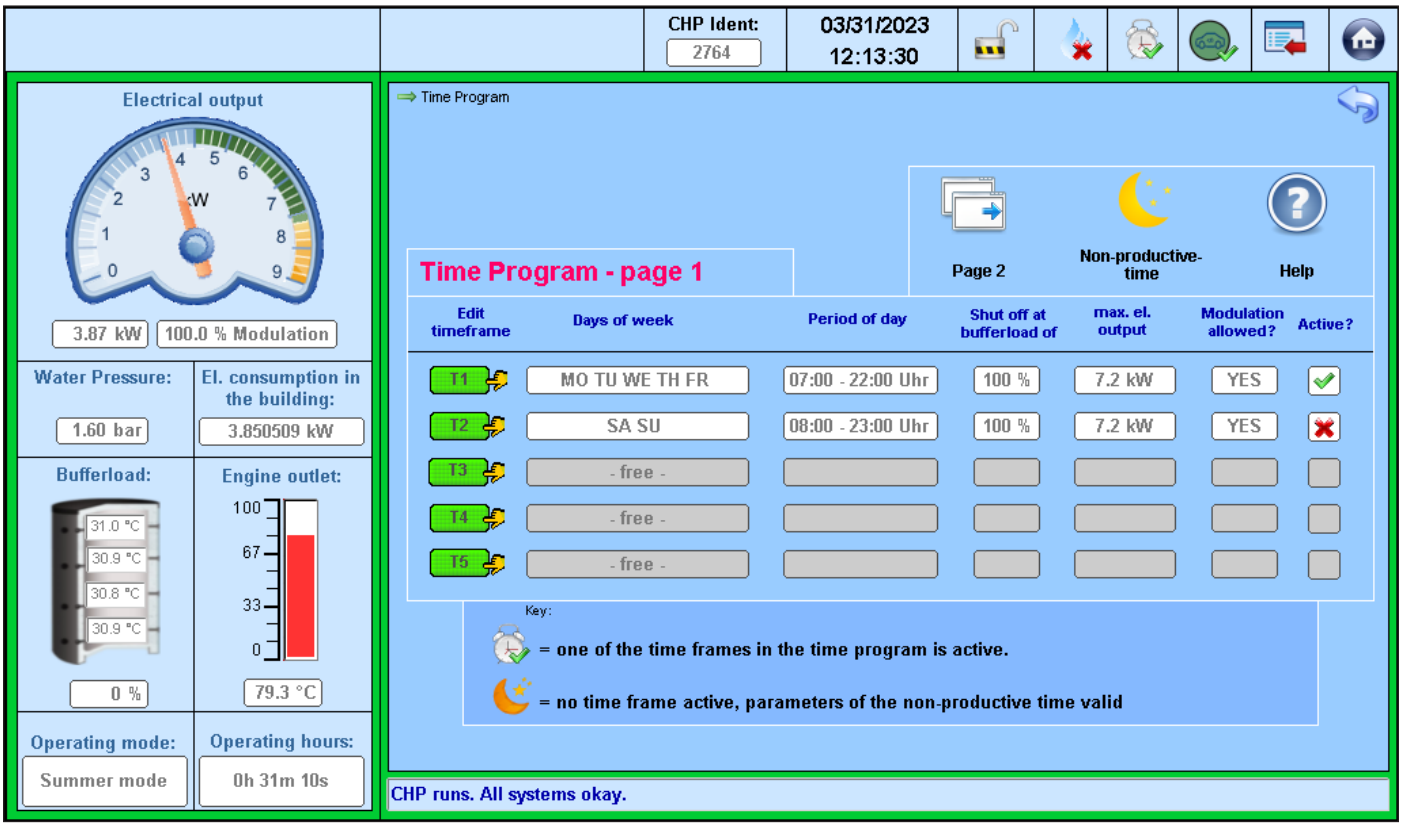
Measured data – page 2



Display of the following values and states:
- Water pressure in the engine circuit
- Speed pump 1
- Speed pump 2
- Gas pressure (ON/OFF)
- Grid / phase (ON/OFF)
- Thermal request (ON/OFF)
- Electricity consumption in the building

4.2.4 Time program

Time program – page 1



The runtime behaviour of the system is planned in the “time program” menu. Ten time windows are available here:
– Page 1: Time window T1 to T5
– Page 2: Time window T6 to T10

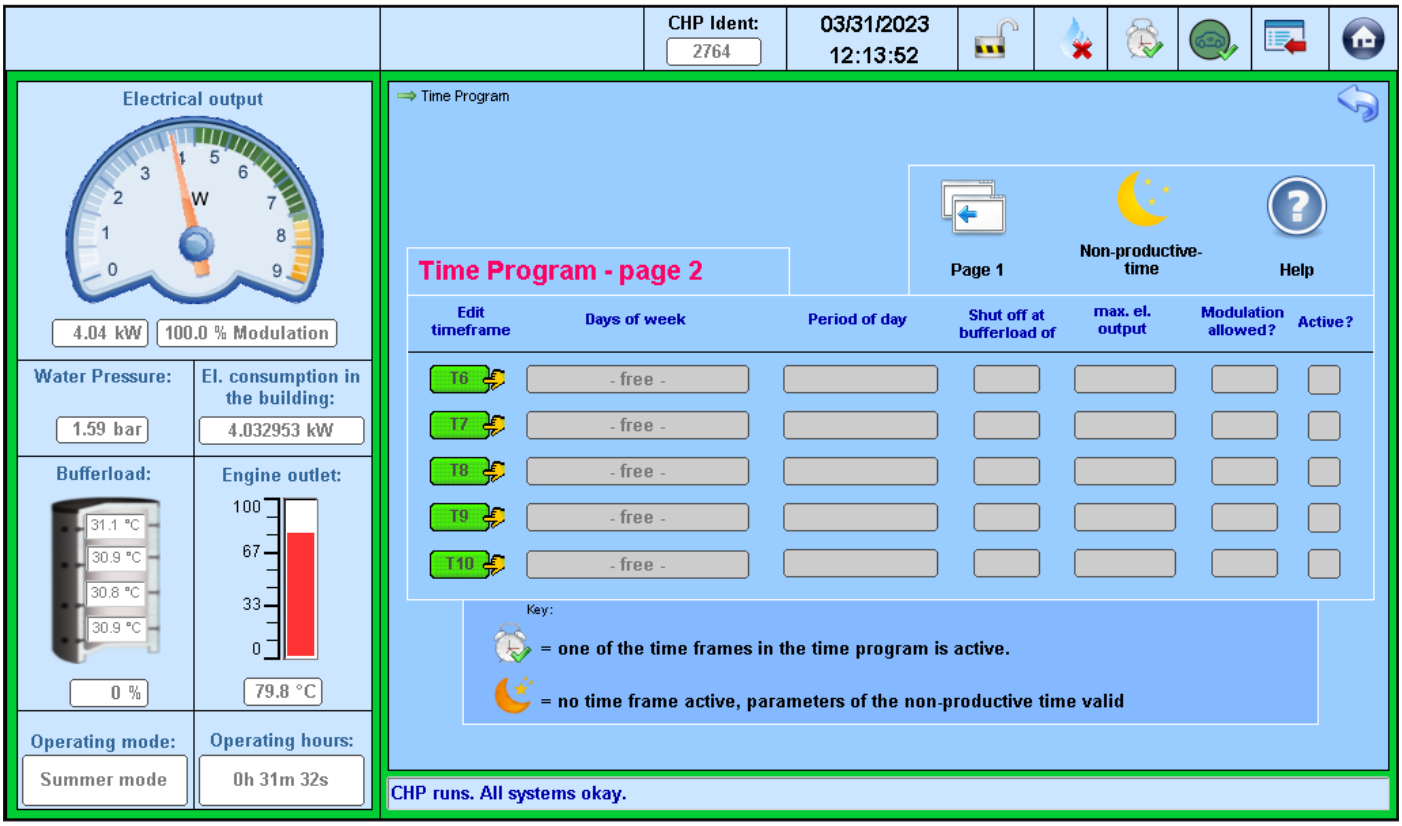
The control distinguishes between “productive time” and “non-productive time”.
– Productive time: Times stored in the ten time windows
– Non-productive time: All further times that have not been saved

In order to call up the desired time window:
► Touch the corresponding green button.

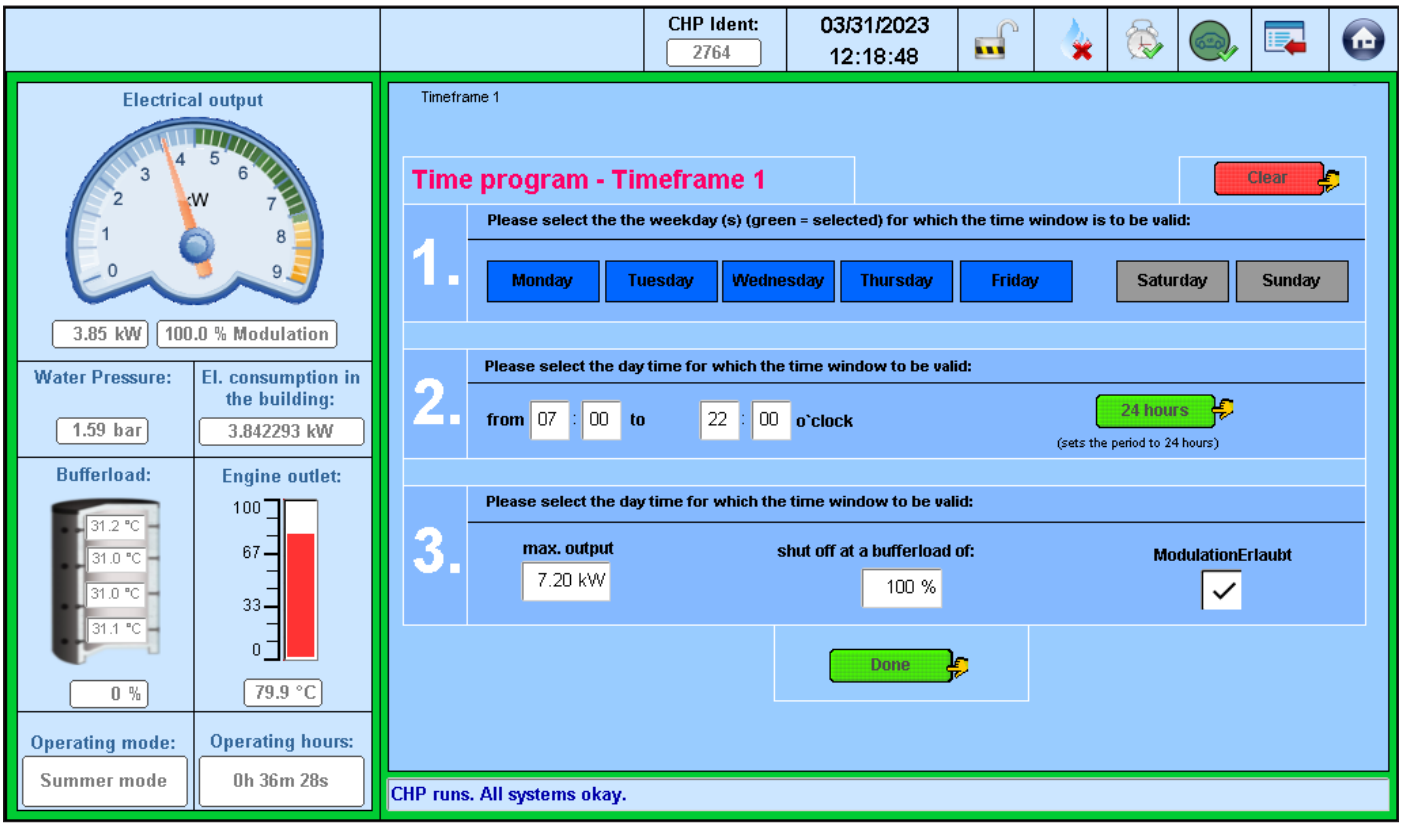
In the time window, the behaviour of the system during productive times is stipulated. The following information is required:
– Day of the week (Monday to Sunday)
– Timeframe (time of day)
– Shut-off upon reaching load (degrees in %) of the buffer tank
– Maximum output (in kW)
– Modulation release. In modulation mode, the system adjusts its output to the current requirement. Otherwise the system always delivers the maximum output specified.

Factory setting of the system for the productive time:
Monday to Friday from 05.00 hrs to 22.00 hrs, Saturday and Sunday from 07.00 hrs to 23.30 hrs.

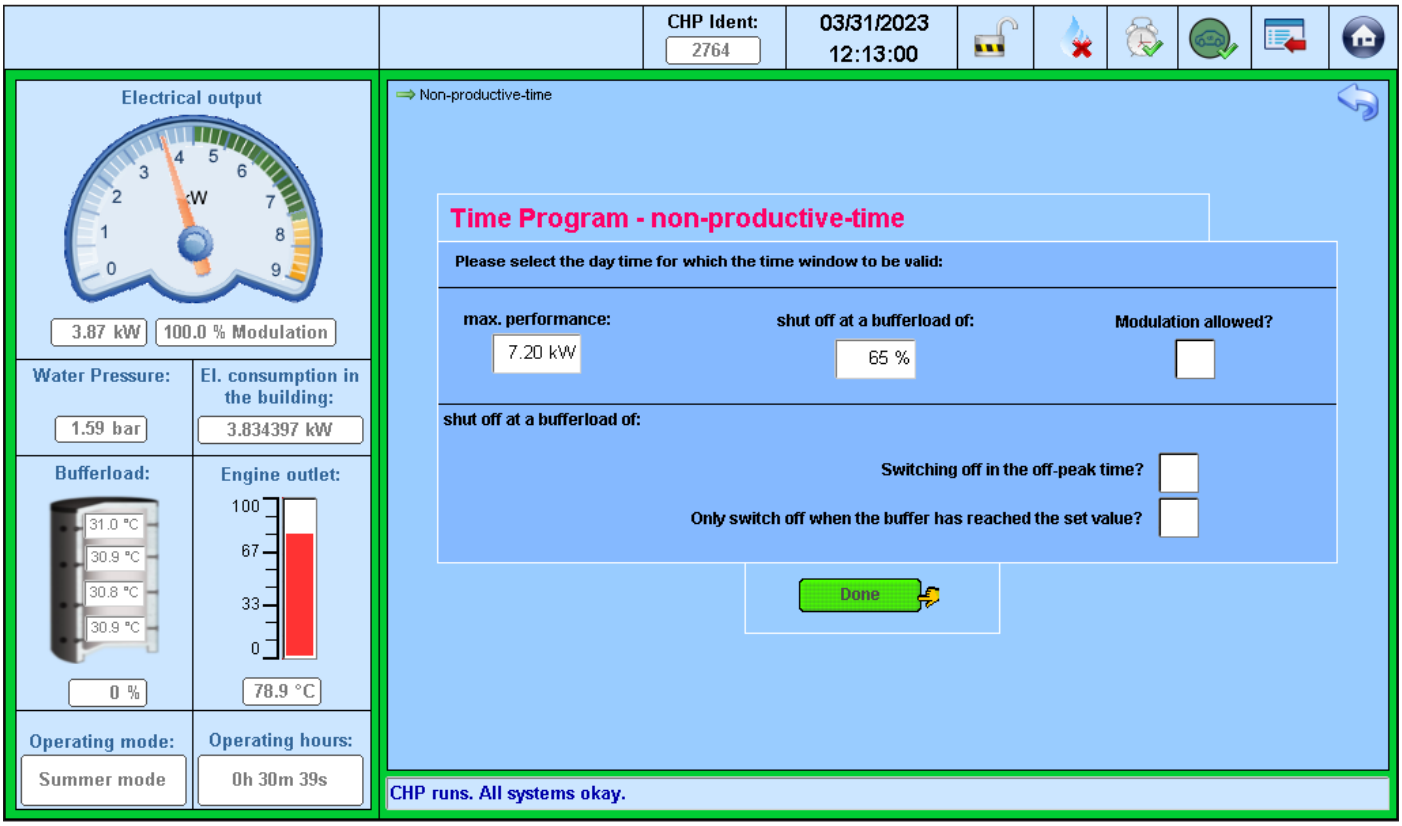
Time program – page 2



Time program – timeframe



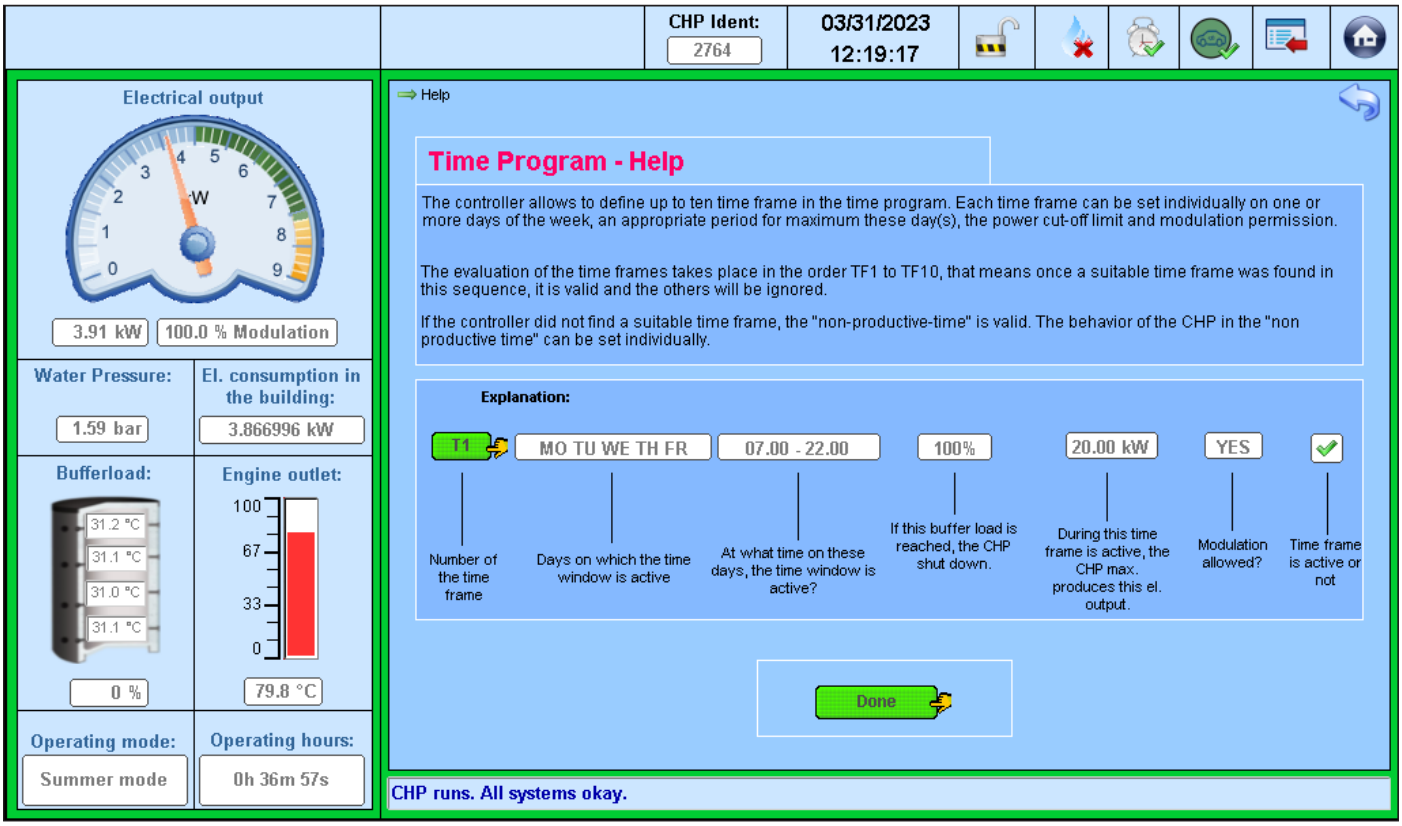
Time program – behaviour during non-productive times



In order to specify the behaviour during non-productive times, two options are available in a separate menu.

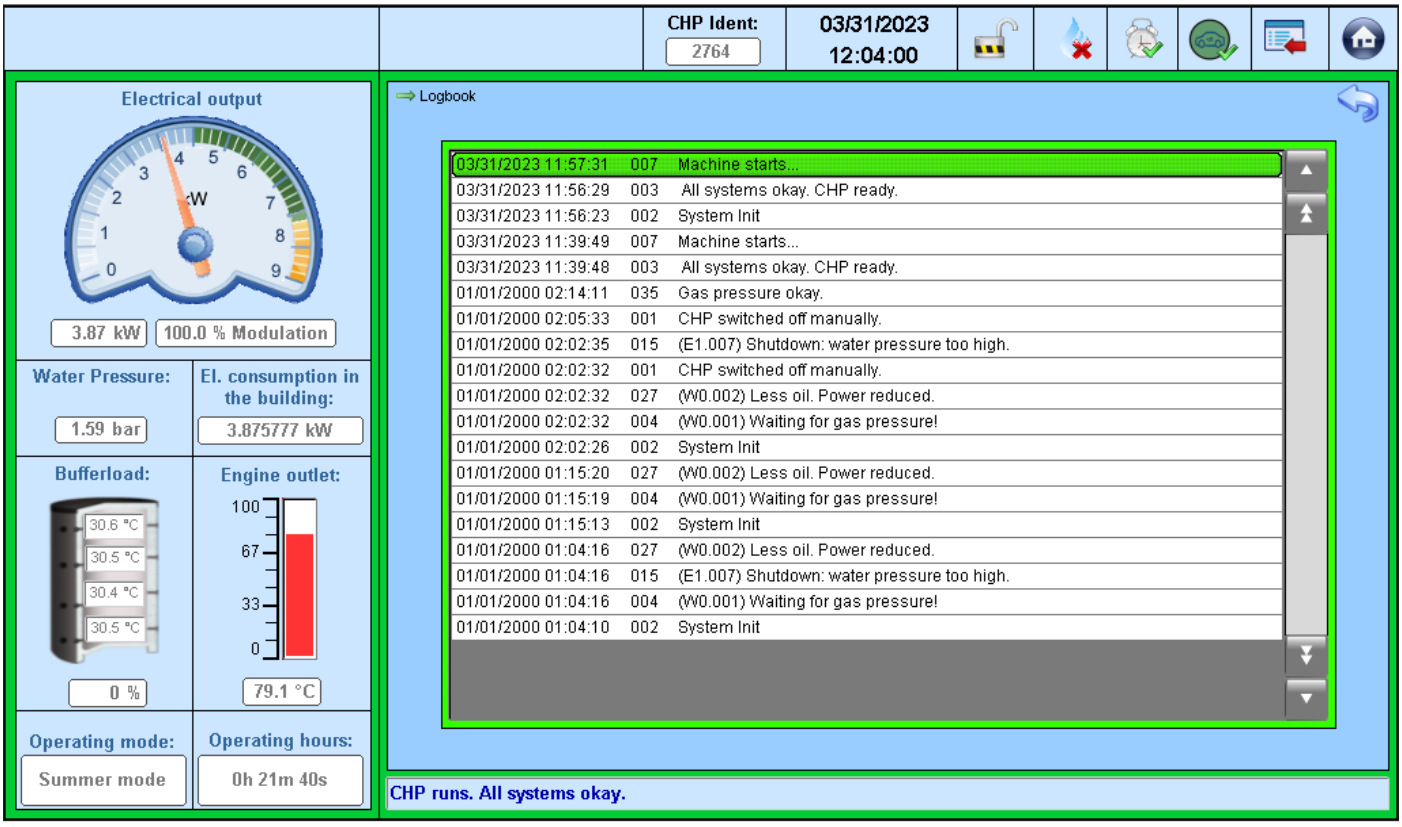
1. Setting with the following information:
   - Maximum output (in kW)
   - Shut-off upon reaching load (degrees in %) of the buffer tank
   - Modulation release
2. Setting determines that the system switches off automatically during non-productive times. In this case the system does not react with temperature requirements. When a productive time is reached, the system starts in the last operation mode selected.

Time program – help



A help menu is available to explain the time program.

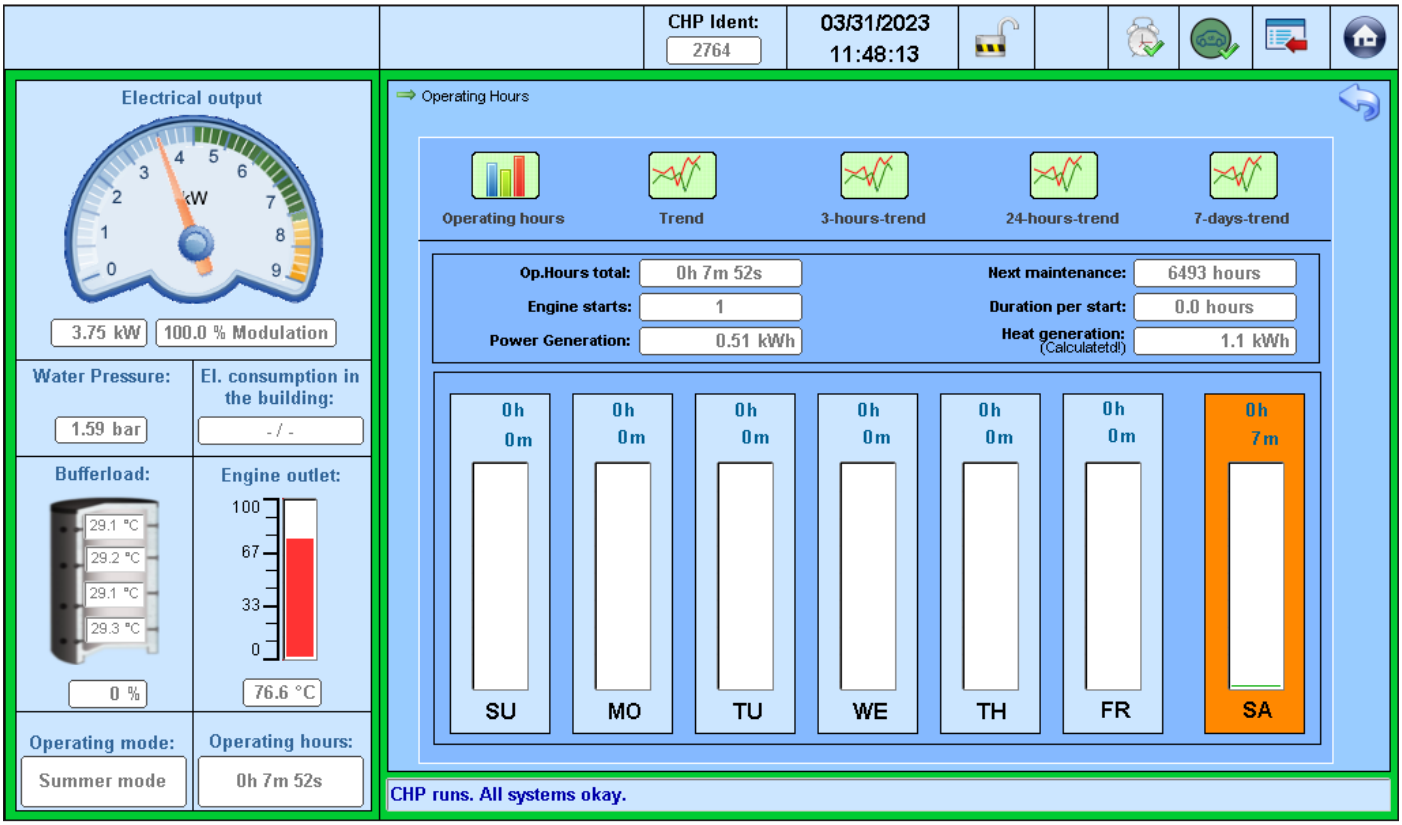
4.2.5 Logbook



The logbook records events and states to the precise second, e.g.:
- Start time after temperature request
- Reset of the maintenance counter

In order to scroll in the logbook:
► Touch the arrow keys on the right side.

4.2.6 Operating hours



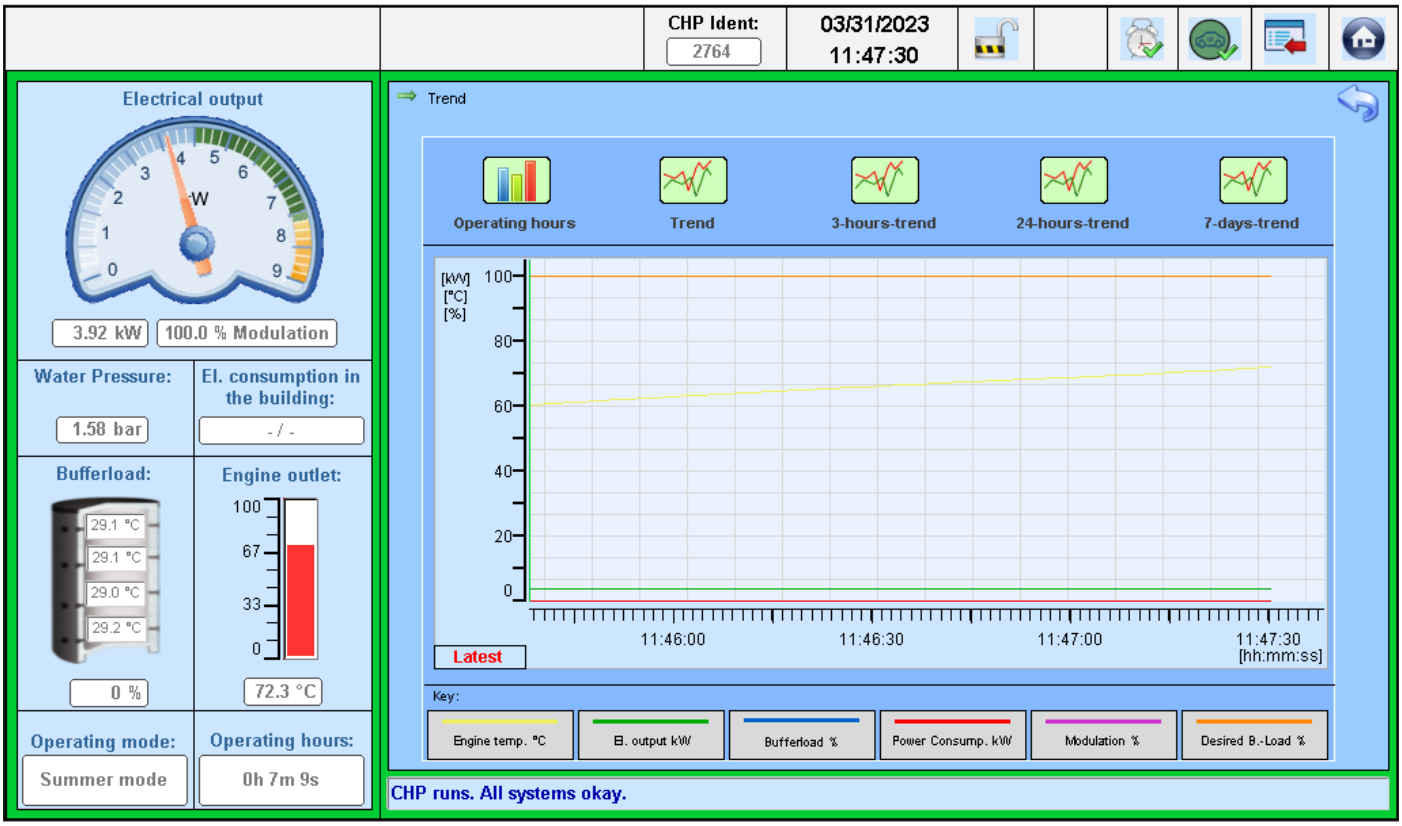
Display of the operating hours of the past seven days as column graphics and as numeric values:
– The current day is at the far right with an orange background.
– To the left of this are displays of the preceding six days.

The following information is displayed by the column graphics:
– Total operating time (operation hours)
– Countdown until next maintenance due
– Number of engine starts
– Average runtime per engine start
– Power generation
– Heat generation (calculated)

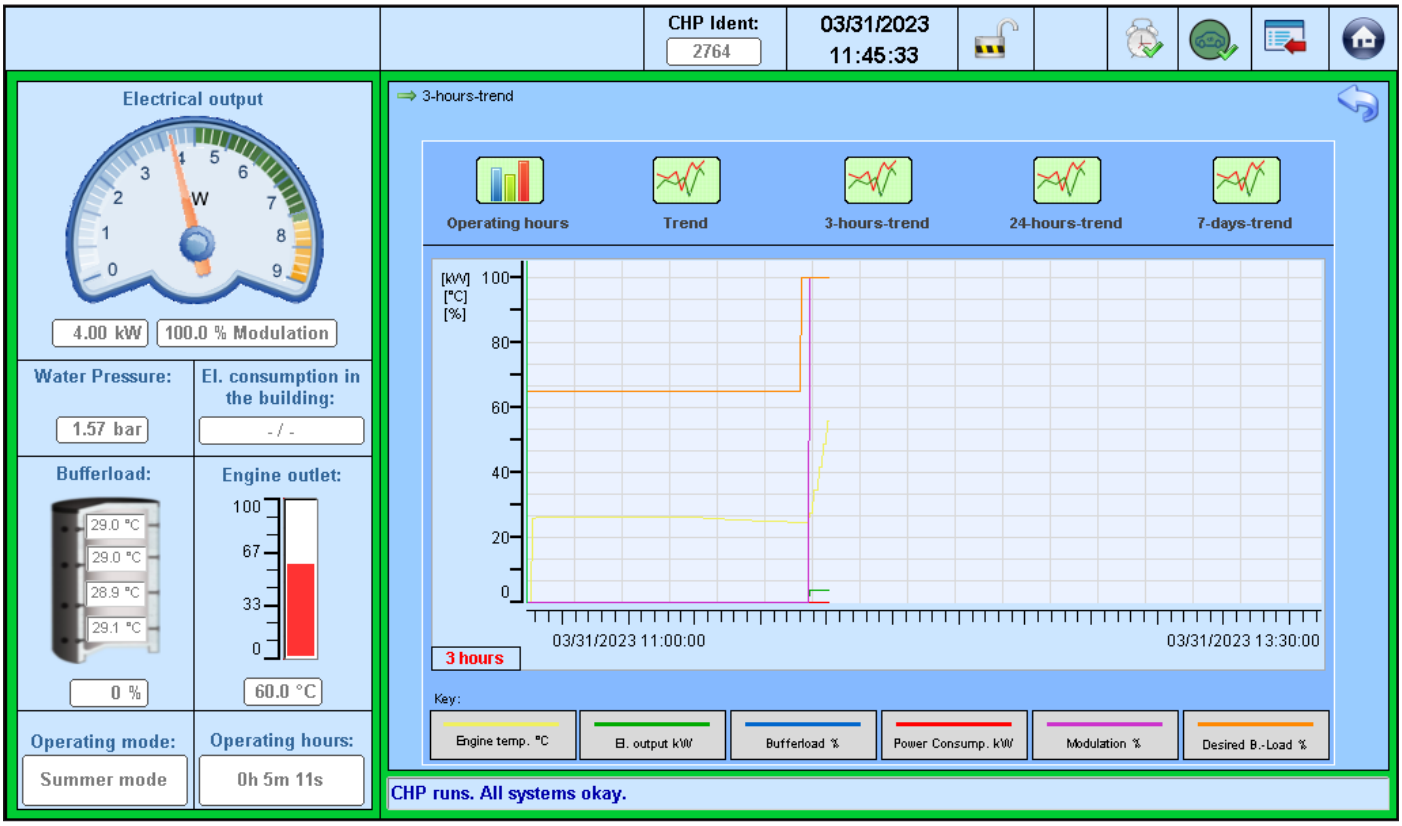
By touching the corresponding symbol on the screen, it is possible to display four trends:
– Current trend (updated every second)
– 3-hour trend (the data recorded over the last 3 hours)
– 24-hour trend (the data recorded over the last 24 hours)
– 7-day trend (the data recorded over the last 7 days)

The following information is recorded and displayed in diagram form to present the trends:
– Engine temperature (yellow)
– Electrical output (green)
– Buffer storage battery charge (blue)
– Power consumption (red, optional)
– Modulation rate (purple)
– Target storage battery charge (orange)

Operating hours – current trend

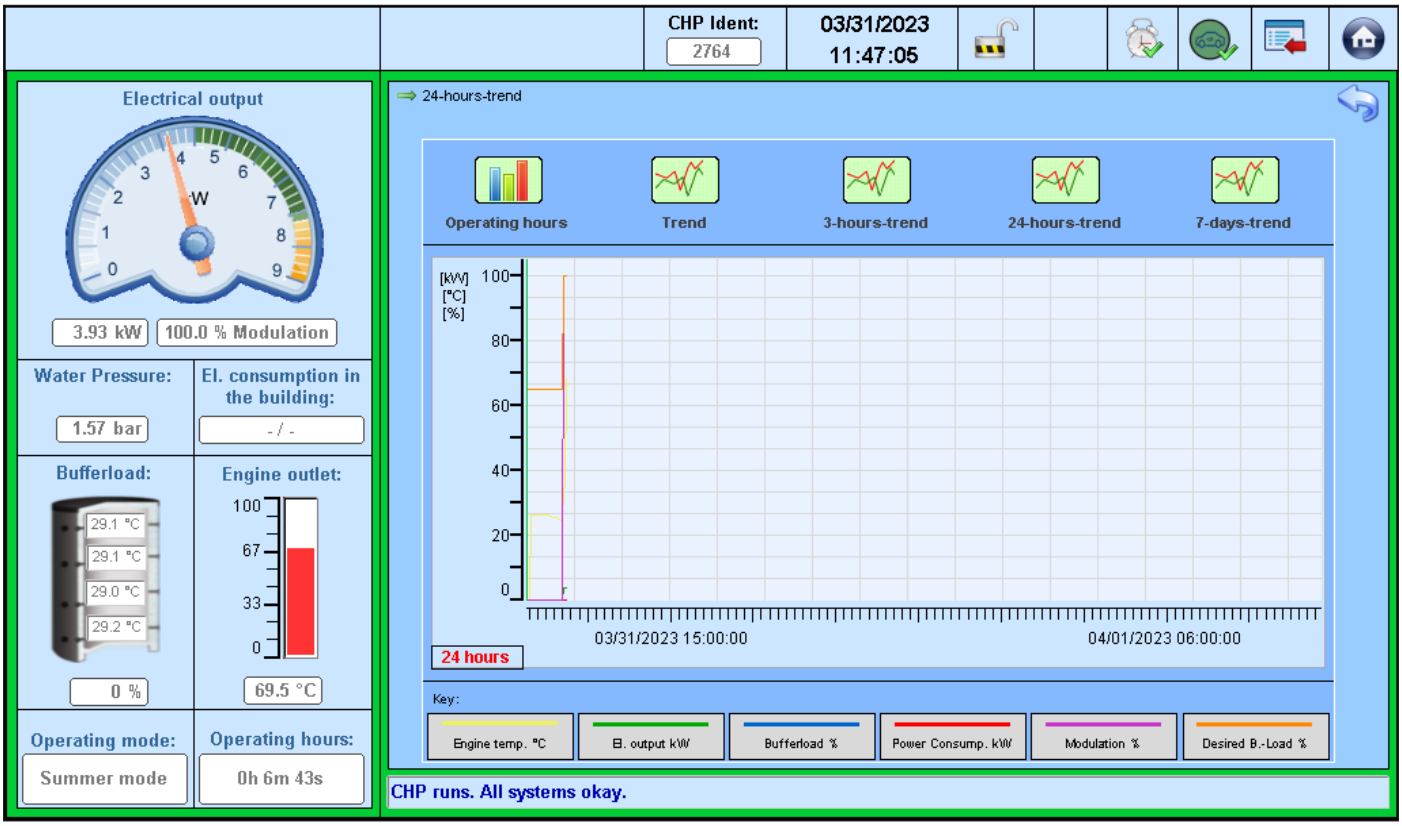


Operating hours – 3-hour trend

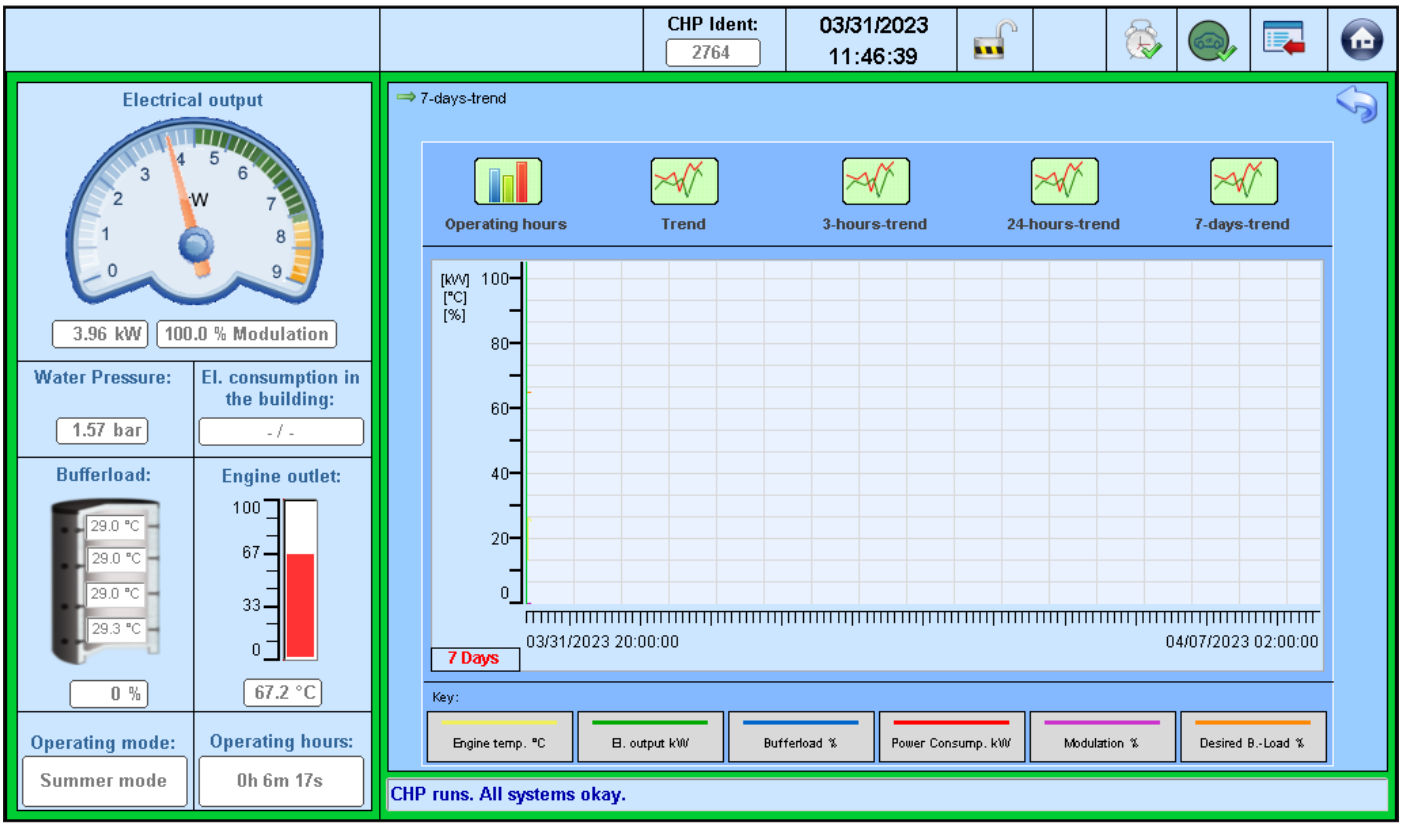


Operating

Operating hours – 24-hour trend



Operating hours – 7-day trend



4.2.7 Safety shutdowns

The system constantly monitors different temperatures and states. If certain limit values are exceeded here then a safety shutdown takes place automatically. Possible causes of a safety shutdown are displayed on this screen. The corresponding messages have a green background.

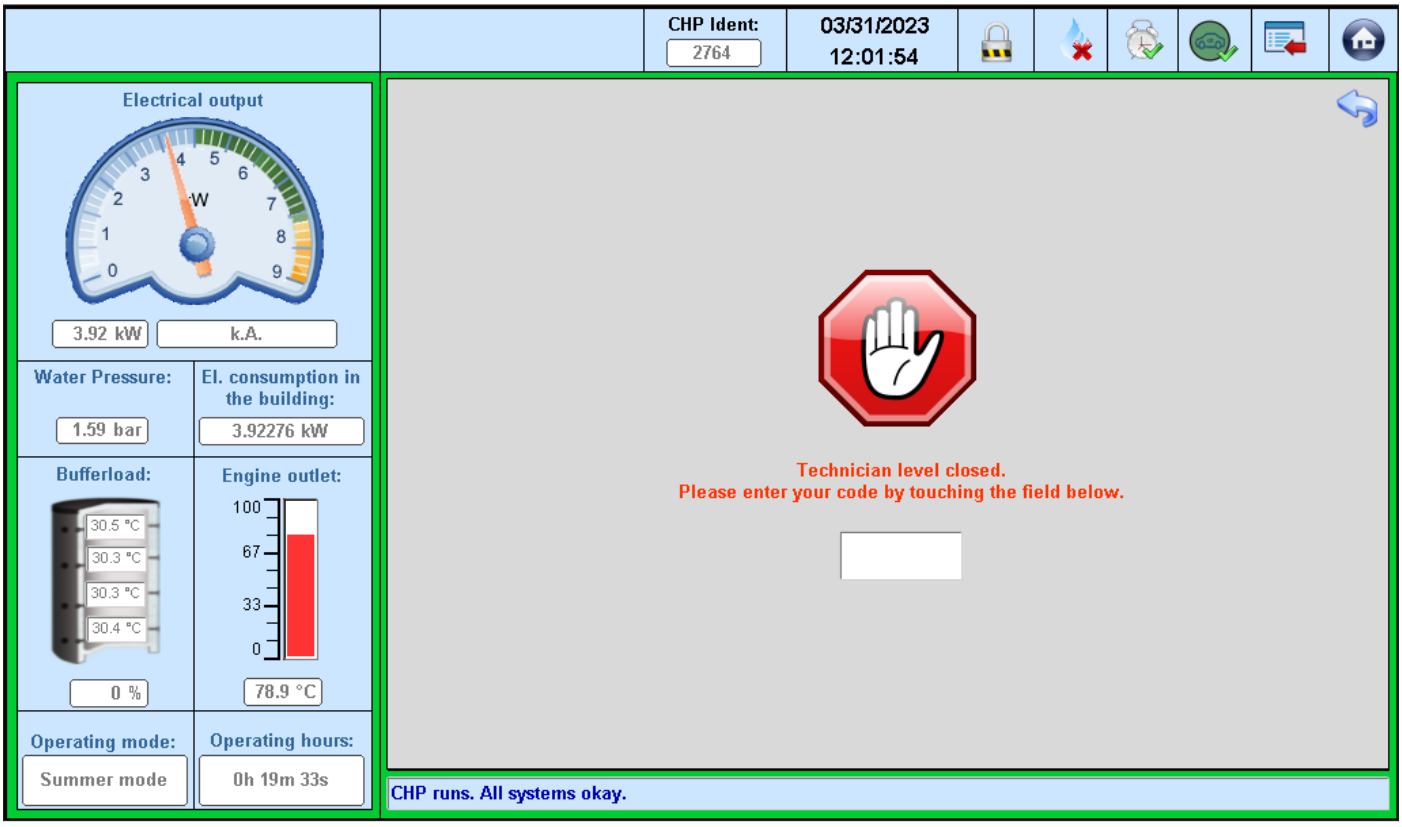
If a message has led to a safety shutdown then the message has a red background. As long as the cause of the message exists, an additional red lightning bolt is displayed.

In order to release the system again after a safety shutdown, the cause must be eliminated.
→ „5.1 Fault resolution“ (page 38).

Once the cause of the safety shutdown has been remedied, the system can be released again.
► Touch the “unlock” button.
The message is acknowledged and has a green background again.

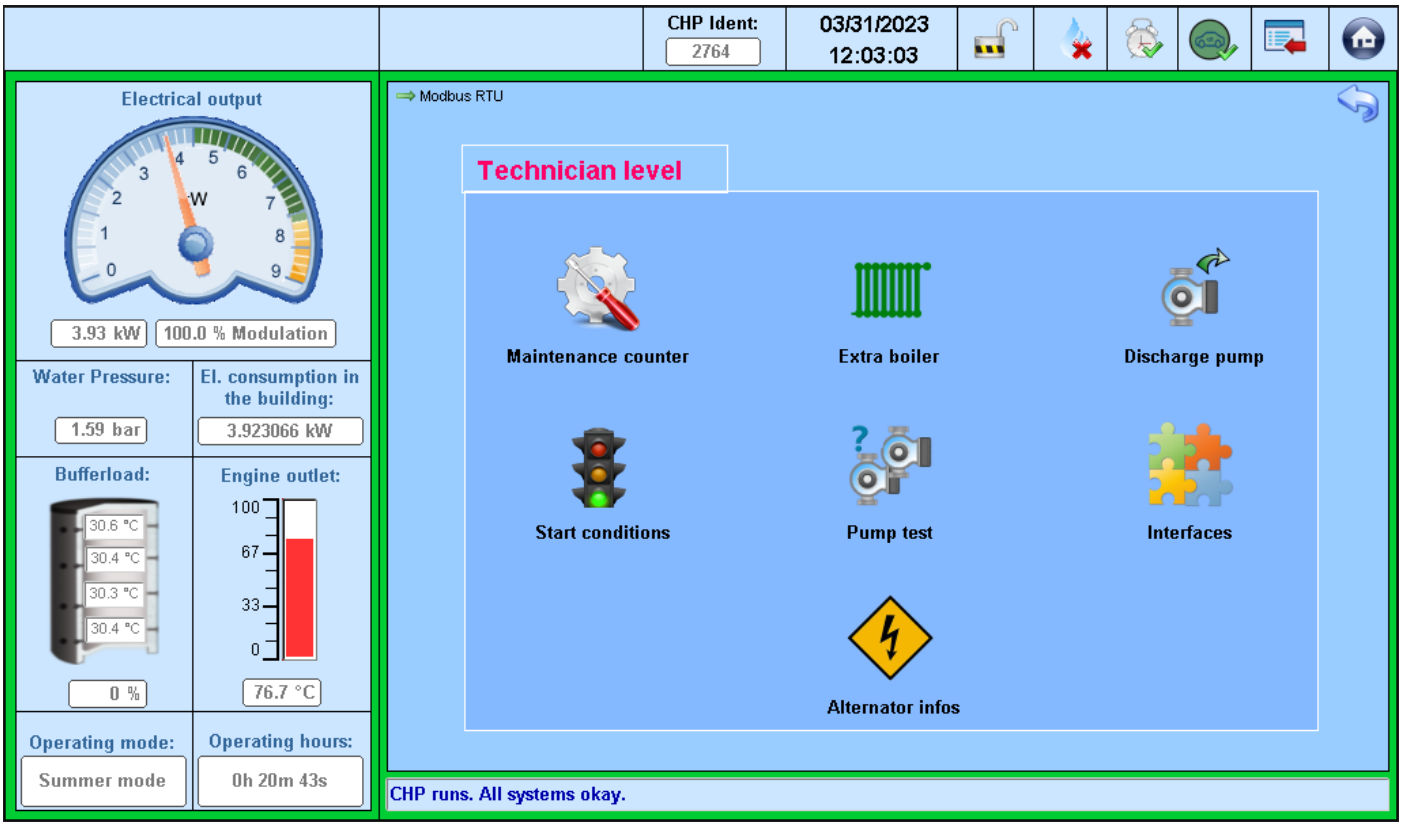
Example
The system flue gas temperature has exceeded its maximum limit during operation:
– The system switches off automatically.
– The message “overheat exhaust” has a red background.
– The red lighting bolt is displayed.
Once the flue gas temperature has cooled back down to a certain value:
– The lightning bolt disappears.
– The message retains its red background.
Only after release by touching the “unlock” button is the message acknowledged and has a green background again.

4.2.8 Technician level

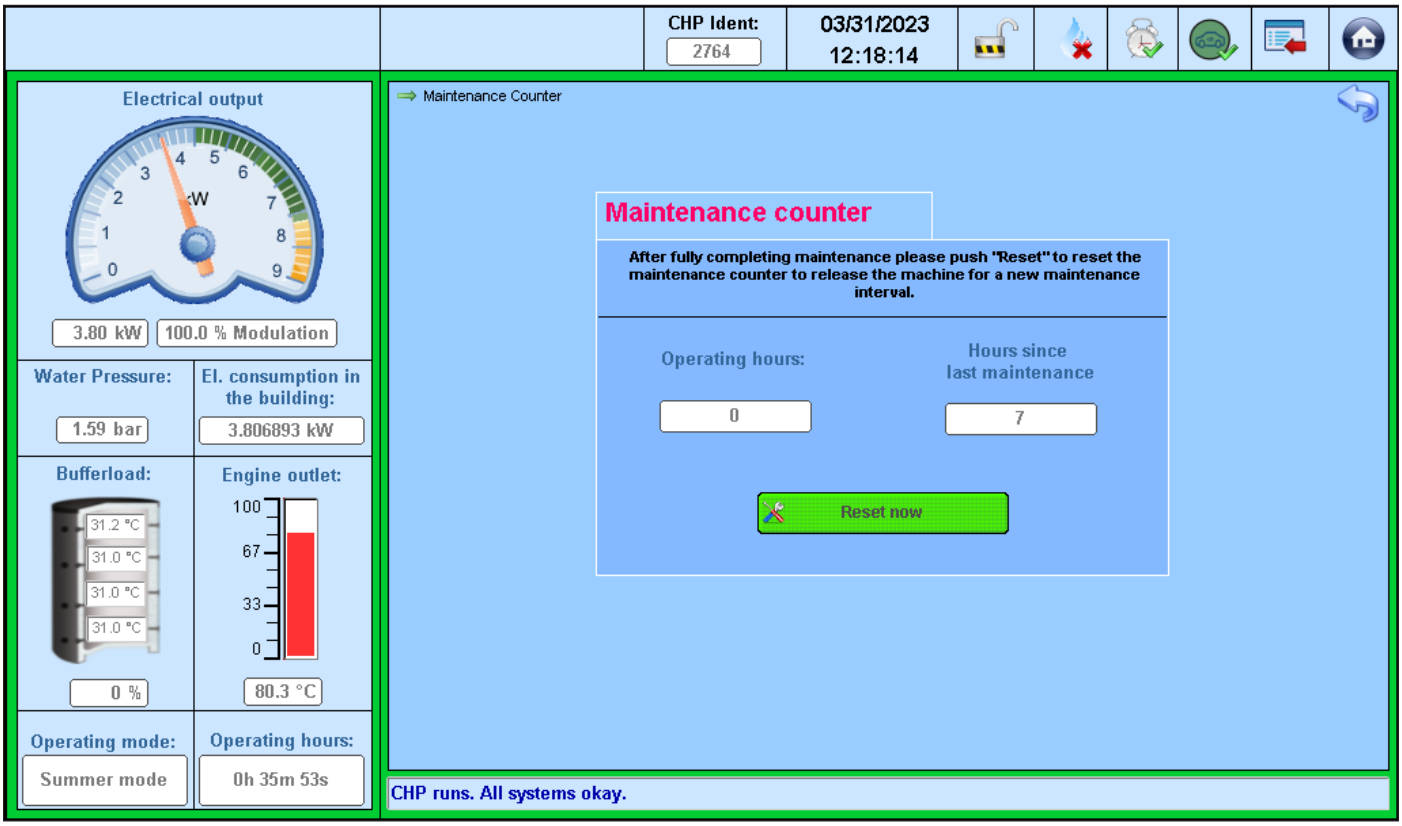


Only qualified personnel trained by the manufacturer have access to the “technician level” area. A code is required for access, which is provided by the manufacturer after training for example.

Once the correct code has been entered, the area is enabled.

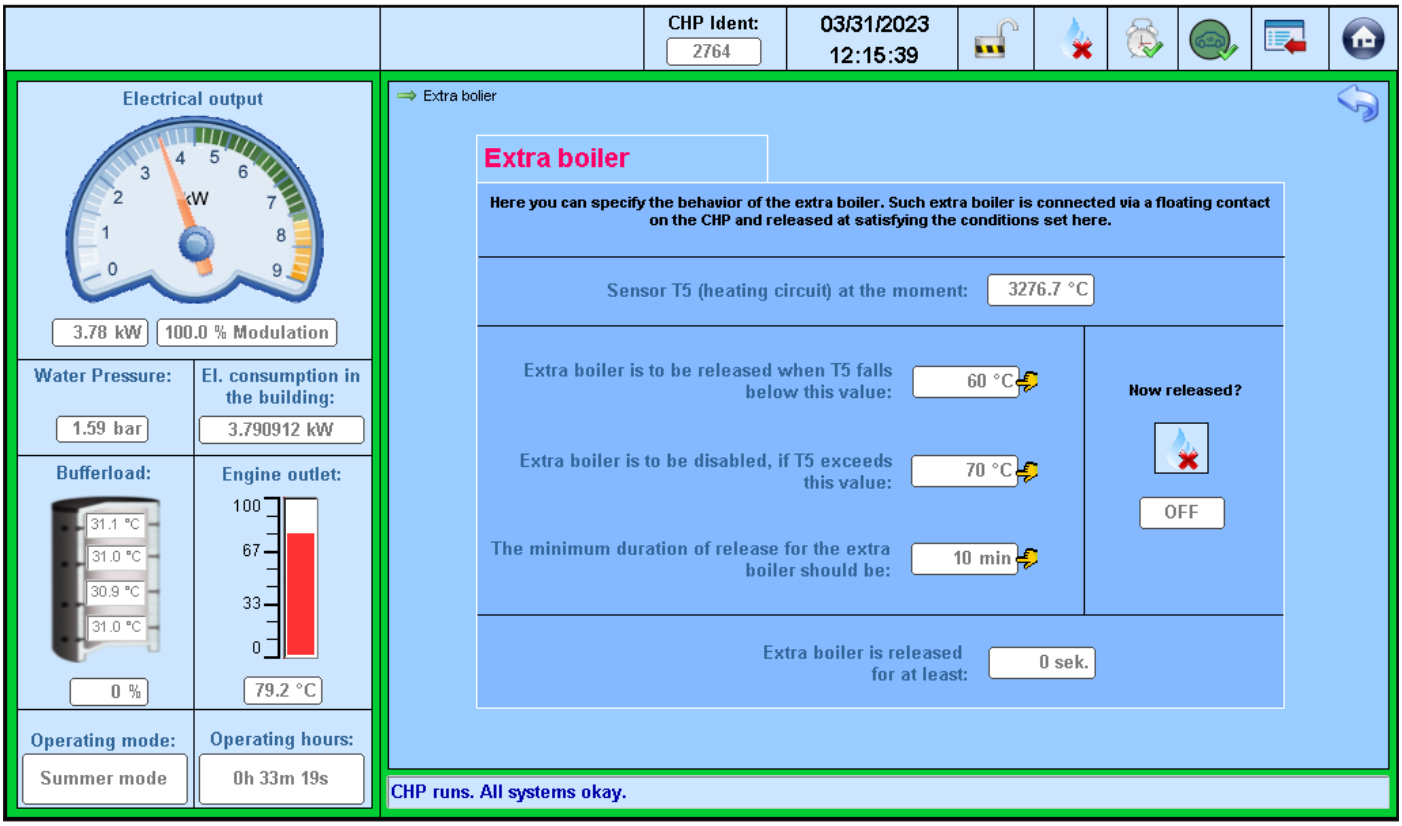


Technician level – maintenance counter



Once regular maintenance has been completed, the maintenance counter must be reset by trained specialist personnel.

Technician level – peak load boiler

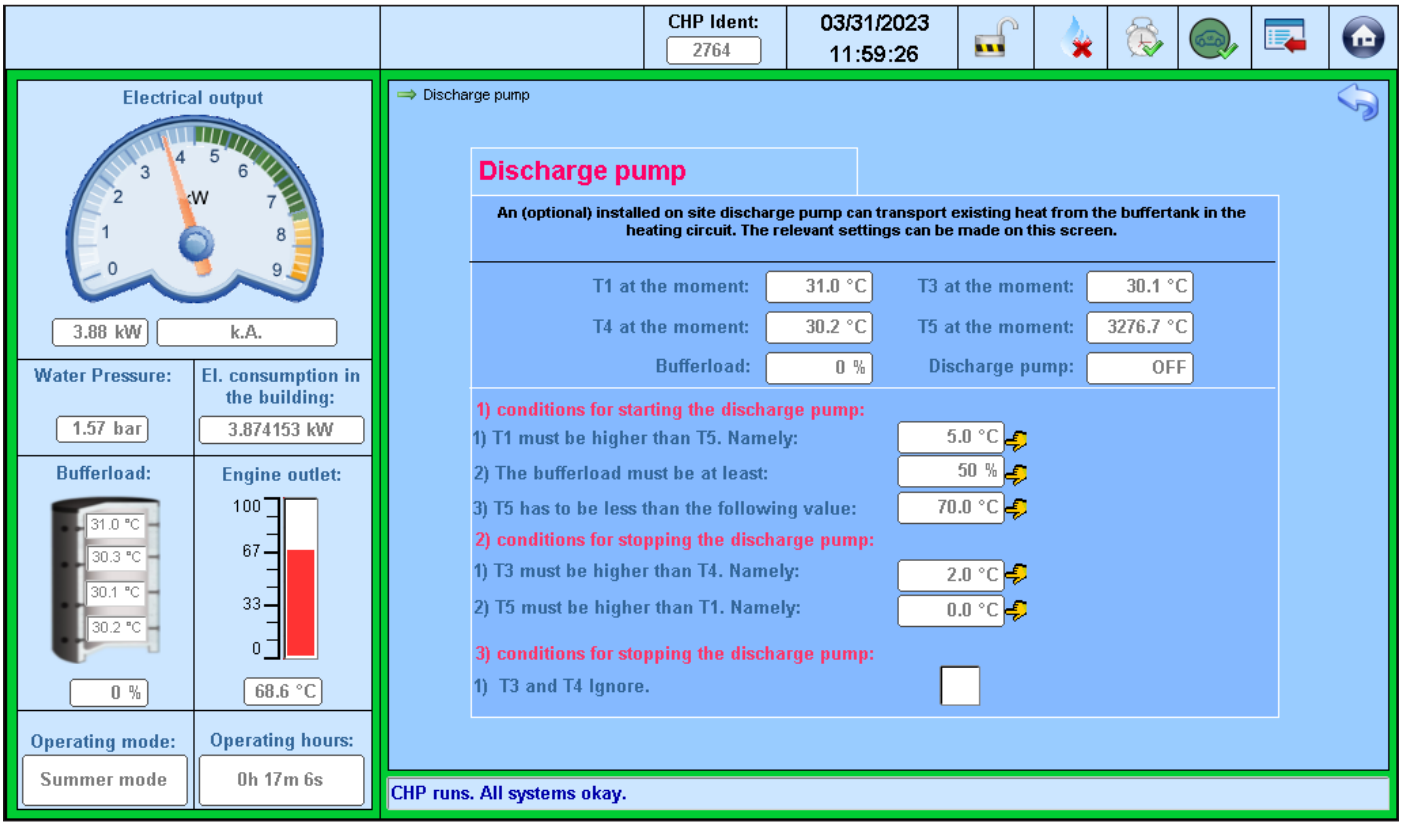


The system can control a connected peak load boiler via a potential-free contact (designed as an NC contact). Trained specialist personnel are able to stipulate the behaviour of the peak load boiler (“SLK”) in this menu.

The current temperature of the heating circuit (temperature sensor T5) is displayed.

The following values must be set:
- Temperature below T5, at which the peak load boiler is to be released.
- Temperature above T5, at which the peak load boiler is to be disabled.
- Minimum release period of the peak load boiler. This information is required in order to avoid the peak load boiler from being cycled too frequently - irrespective of the set values.
- Remaining time of the minimum release period.

Technician level – discharge pump



A discharge pump installed by the customer can pump available heat into the heating circuit. Trained specialist personnel are able to stipulate the behaviour of the system and the connected discharge pump in this menu.

The following information is displayed:
- Current temperature T1 (buffer tank)
- Current temperature T3 (buffer tank)
- Current temperature T4 (buffer tank)
- Current temperature T5 (heating circuit)
- Current buffer load
- Discharge pump ON or OFF

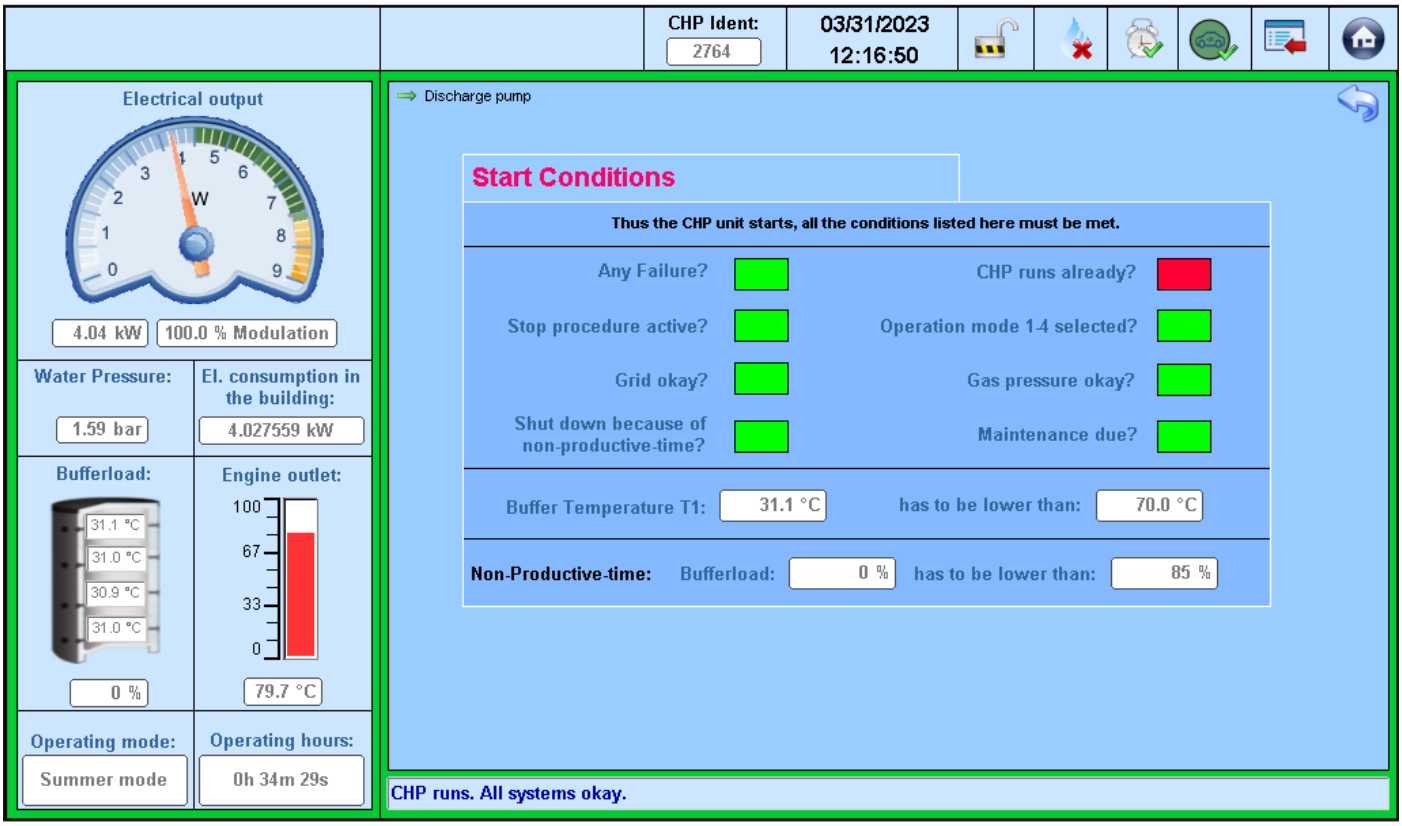
The following conditions must apply for the start of the discharge pump:
- The temperature in the buffer tank (T1) must be higher than the temperature in the heating circuit (T5). The minimum difference can be adjusted.
- The buffer load must reach and maintain a certain temperature. The load can be set as a percentage.
- The temperature in the heating circuit (T5) must be below a certain value. The temperature can be adjusted. If the temperature (T5) exceeds this value (including hysteresis) then the discharge pump is switched off.

The following conditions must apply for the discharge pump to stop, the minimum difference can be set:
- The temperature in the buffer tank (T3) must be higher than the temperature in the buffer tank (T4).
- The temperature in the heating circuit (T5) must be higher than the temperature in the buffer tank (T1).

The following condition can be additionally activated for starting and stopping the discharge pump:
- Ignore the temperatures in buffer tank T3 and T4.

Further conditions that apply for the start of the discharge pump are automatically monitored by the system and cannot be adjusted.

Technician level – start conditions

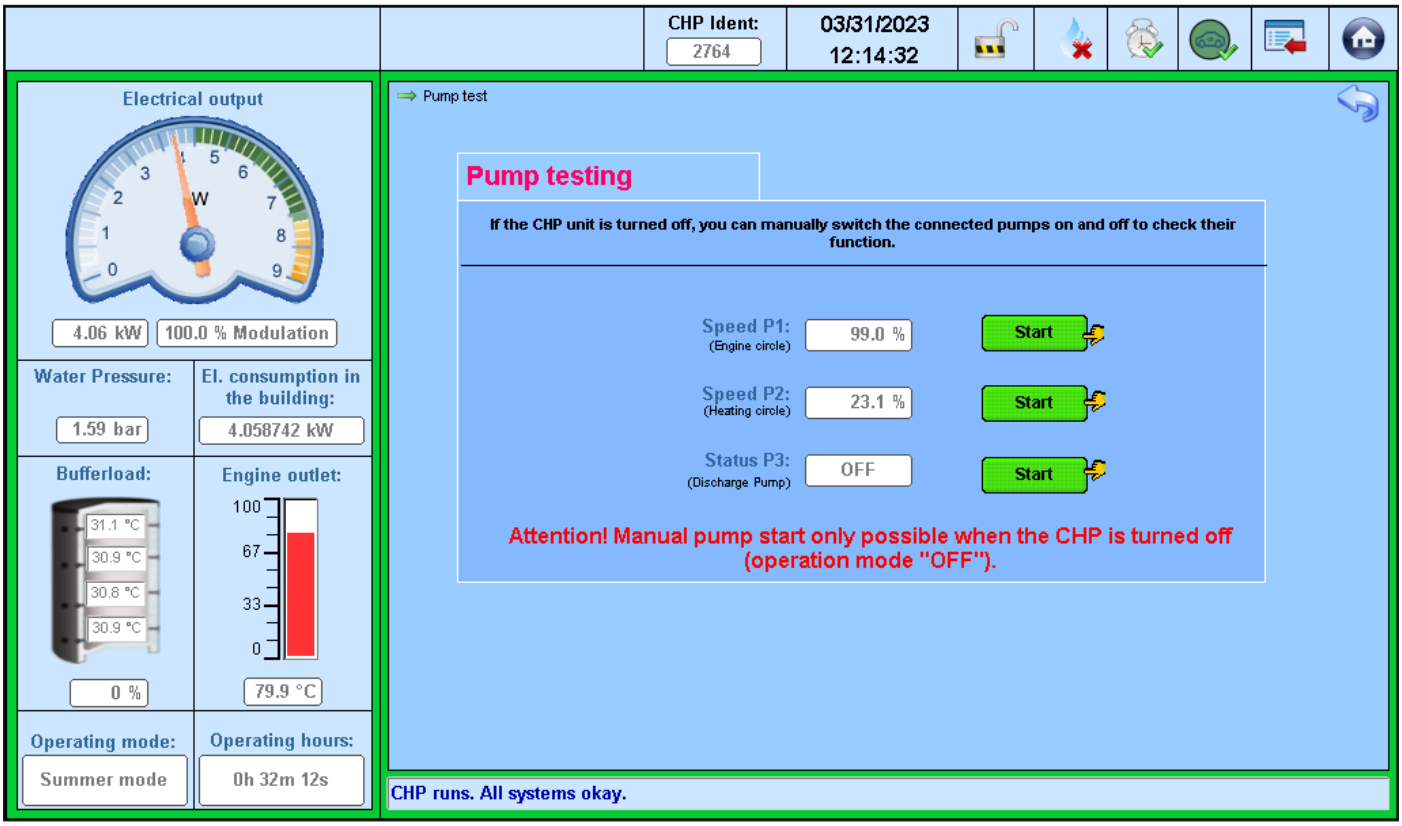


Trained specialist personnel are able to check the system start conditions in this menu at a glance.

If all messages are displayed with a green box then the conditions for starting the system have been fulfilled. Messages with a red box indicate conditions that are not fulfilled and that will prevent a system start.

Additionally, the following values are displayed for checking:
- Temperature T1 and predefined maximum value
- Buffer load in the non-productive time and specified maximum value

Technician level – pump testing



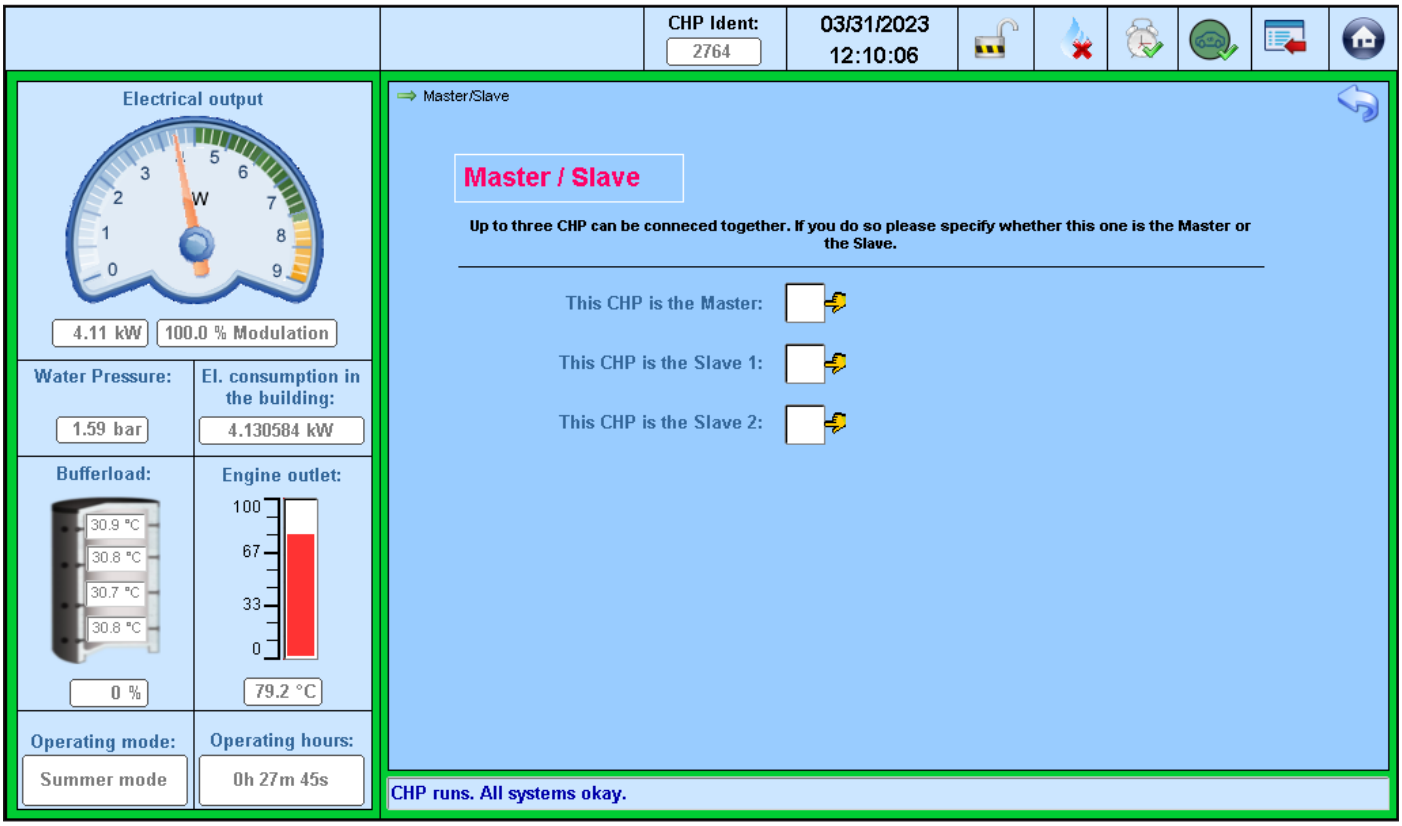
A pump test may be necessary after installation of the system, e.g. for flushing purposes. Trained specialist personnel are able to perform the pump test in this menu.

Precondition: the system must be switched off (operation mode “OFF”).

The following pumps can be tested:
- Engine circuit pump
- Heating circuit pump
- Tank discharge pump

In order to start or stop the pump test:
► Touch the corresponding button.

Technician level – Master/Slave



If two or more systems are installed then it is possible to connect the systems in a cascade. In cascade mode the participating systems are defined as “master” or “slave”. The “master” performs the control for all connected systems. For example:

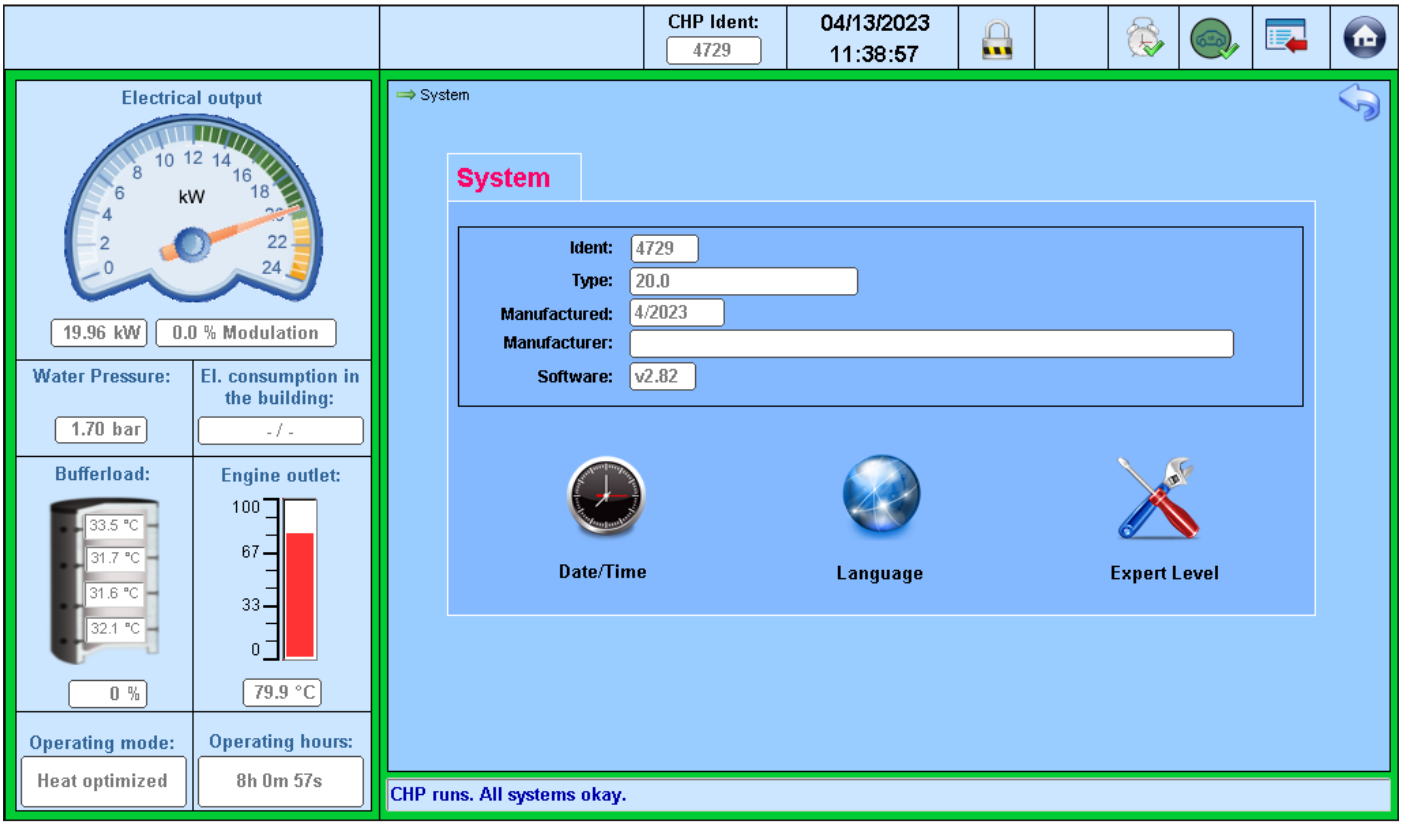
- Selection of the operation mode (in cascade mode, the only available modes of operation are "3 – Heat-optimised" and "4 – Electricity-optimised")
- Setting the output
- Settings for the peak load boiler
- Switching on/off

In this menu, trained specialist personnel can stipulate whether the system is a “master” or “slave”.
Precondition: A corresponding additional module for the system is installed and connected in the control cabinet.

In order to specify the system as a “master” or “slave”:

► Touch the corresponding button.

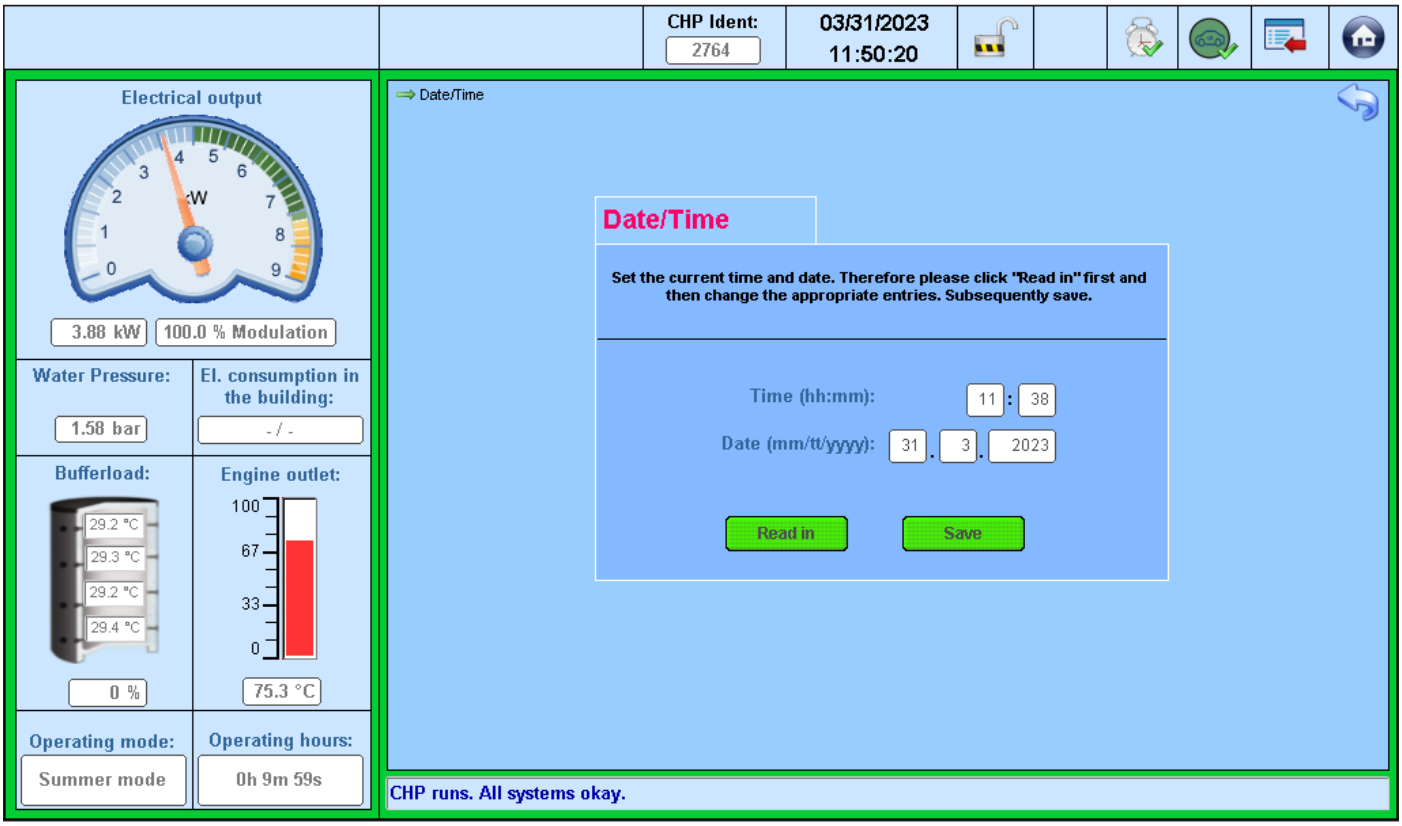
4.2.9 System



Display of important information for identifying the system:
- ID number
- Type
- Date of manufacture
- Manufacturer
- Software status

The “system” menu branches off into further submenus:
- Date/time
- Language
- Expert level

System – date/time

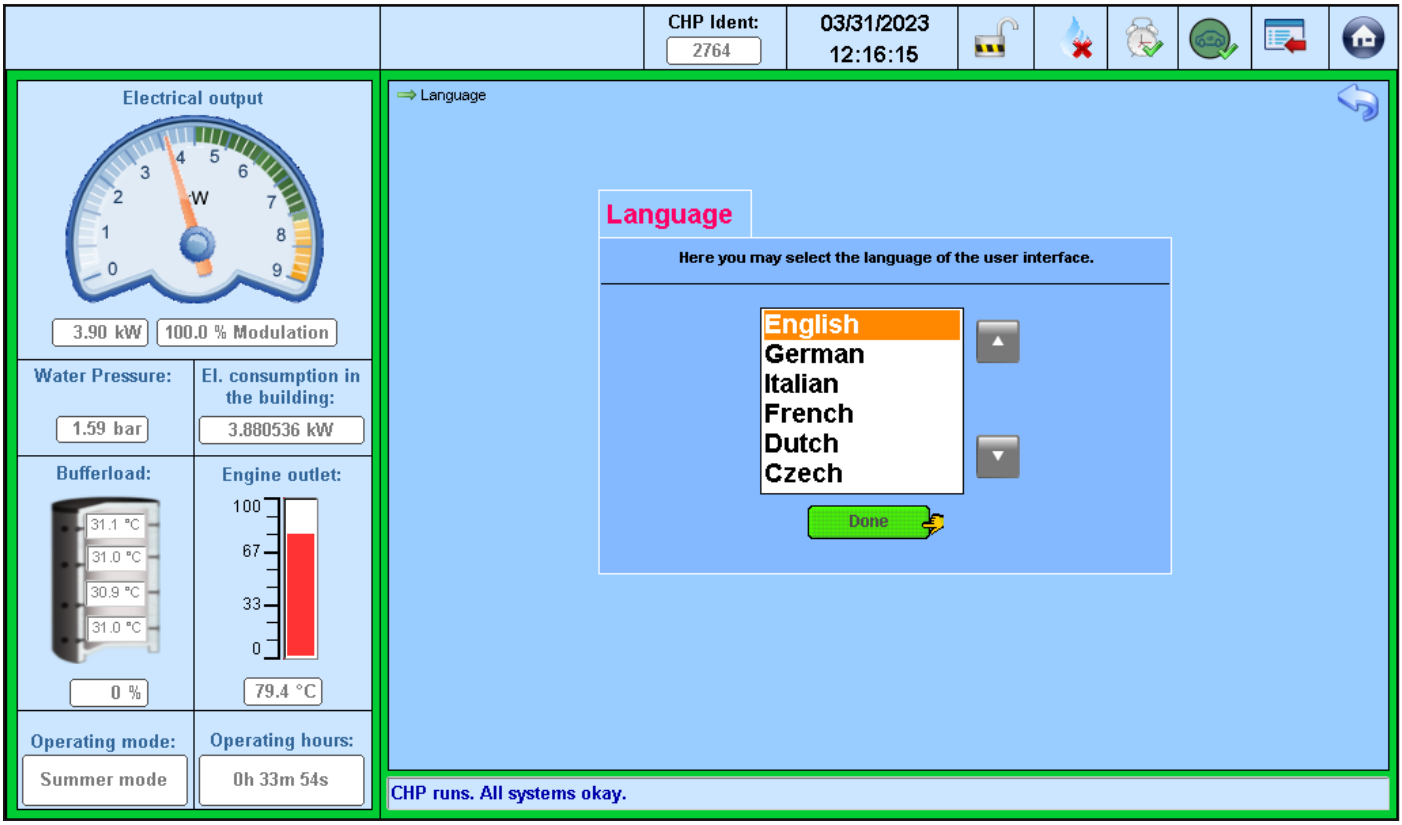


Menu for setting the date and time.

- ► Touch the “read in” button. The information is read in via the connected modem and automatically entered in the corresponding fields.
- ► Touch the “save” button to accept the information.

Switching between summer time and standard time takes place automatically.

System – language

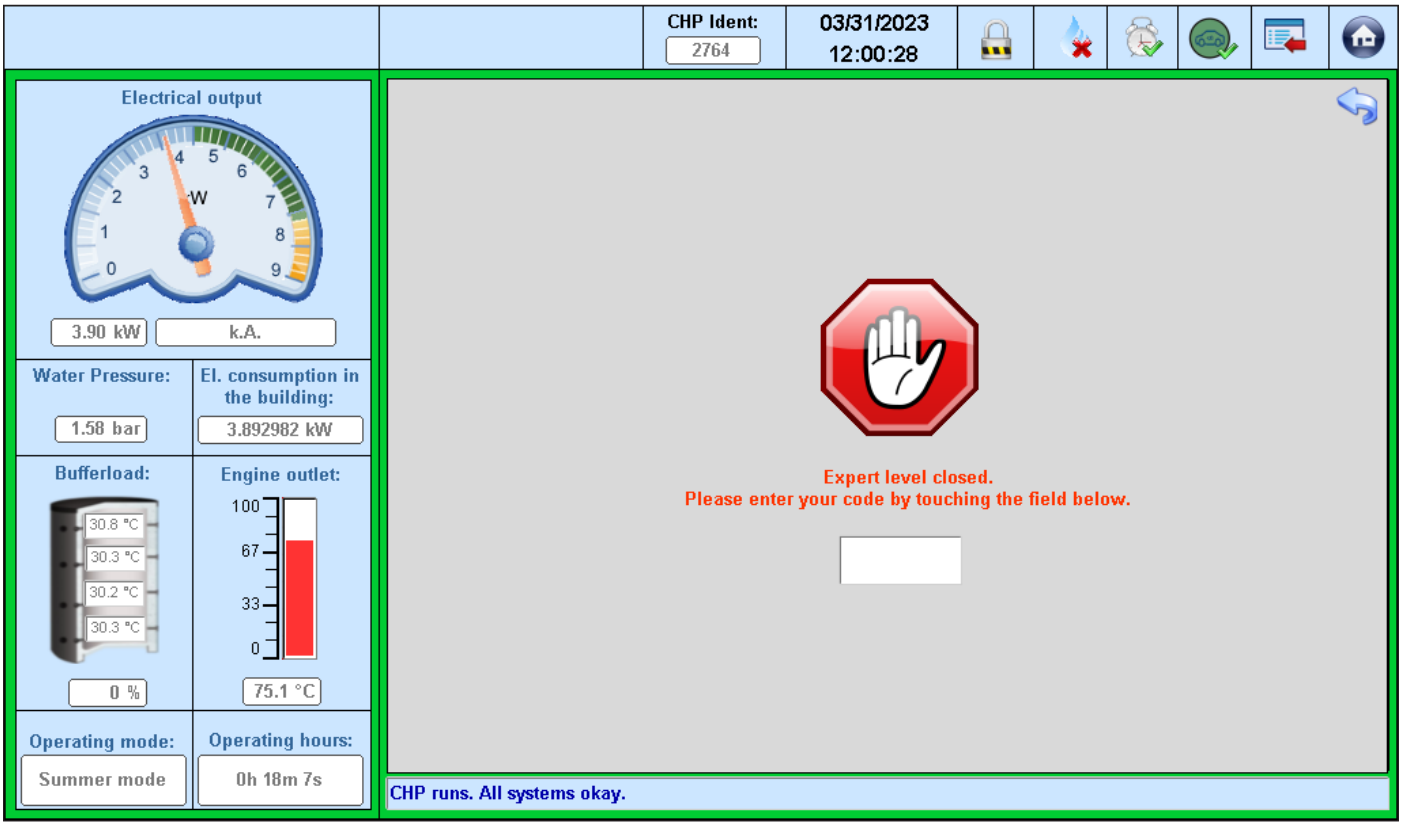


Menu for selecting the language.

- ► Touch the arrow keys to scroll to the desired language.
- ► Touch the “done” button to confirm the selection.

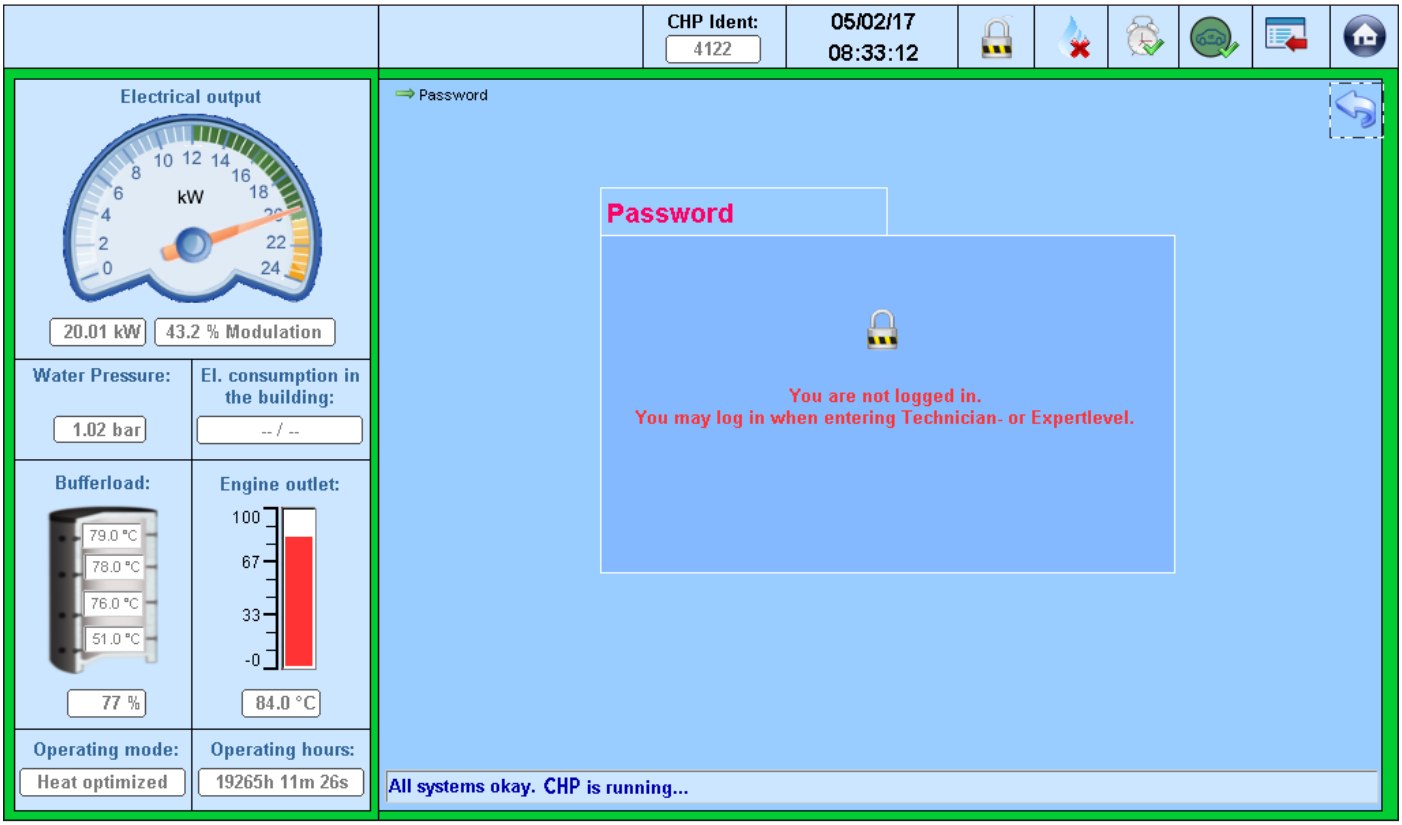
The display changes to the selected language.

System – expert level



Only the manufacturer and authorised specialist partners have access to the "expert level" area.
After entering the code, employees of the manufacturer or specialist partner can perform various settings and tests.

4.3 Level protection

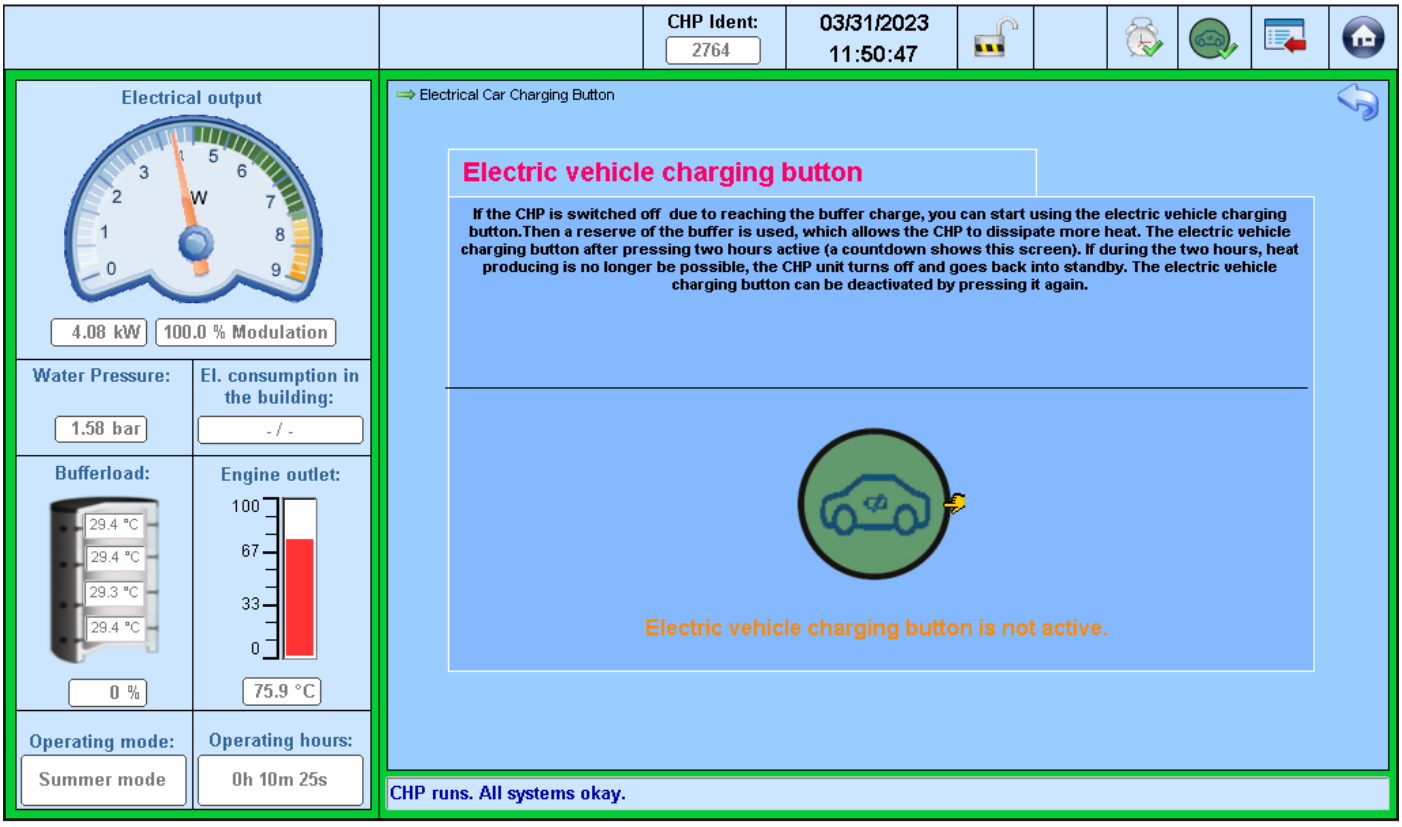


The “level protection” menu is available for logging out of the protected areas.

The current status is indicated by the symbol:
– Padlock open: Logged into the area “Technician level” or “Expert level”.
– Padlock closed: No access to the protected areas.

In order to close the protected areas:
► Touch the “log out” button.

4.4 Electric vehicle charging button



When the buffer tank is loaded, the system switches off. By touching the electric vehicle charging button it is possible to restart the system. This changes the regulation direction and a buffer reserve is used, so that the system can take off further heat.

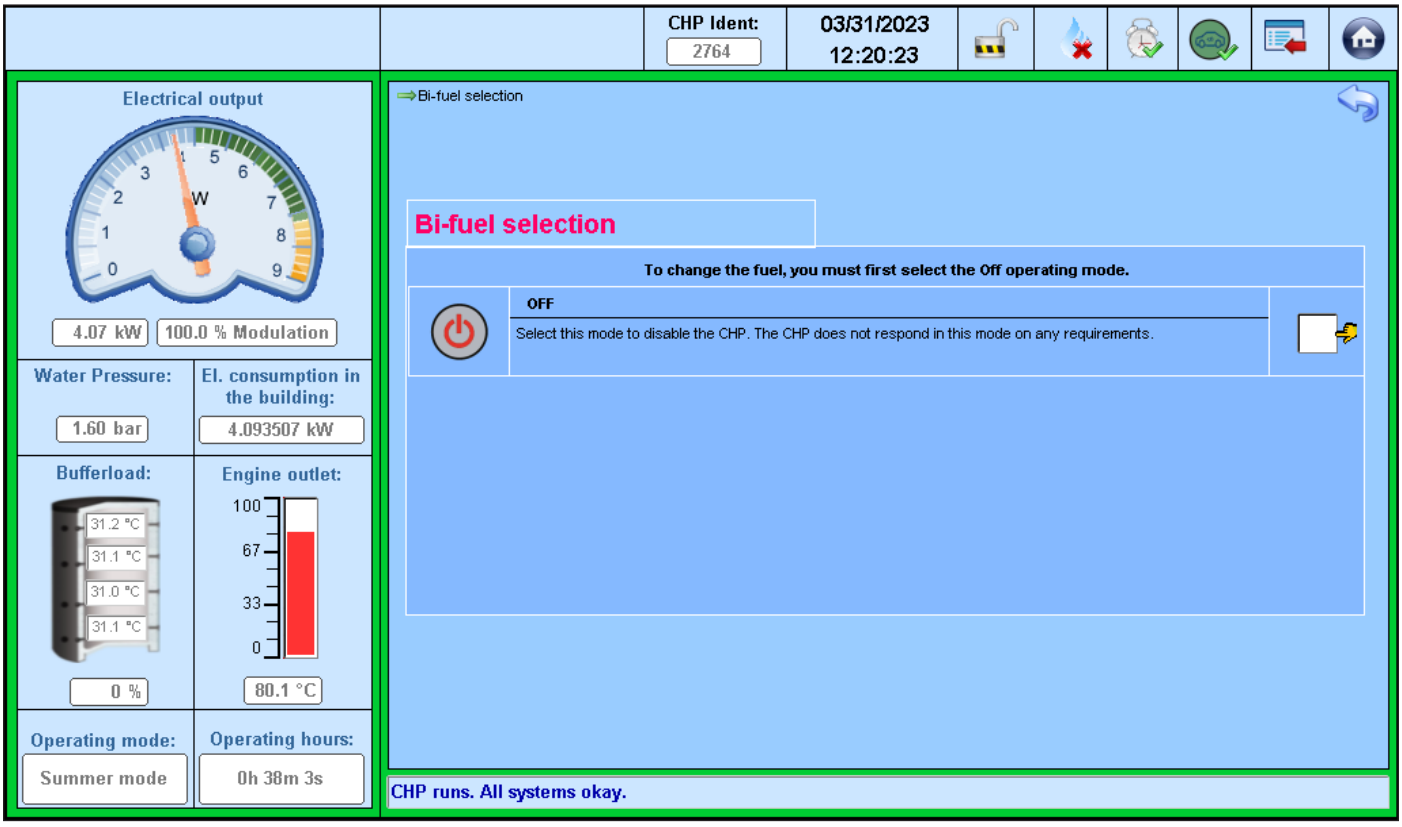
In order to activate the electric vehicle charging button:
► Touch the button.
The system is active for two hours. A countdown on the screen displays the remaining time.

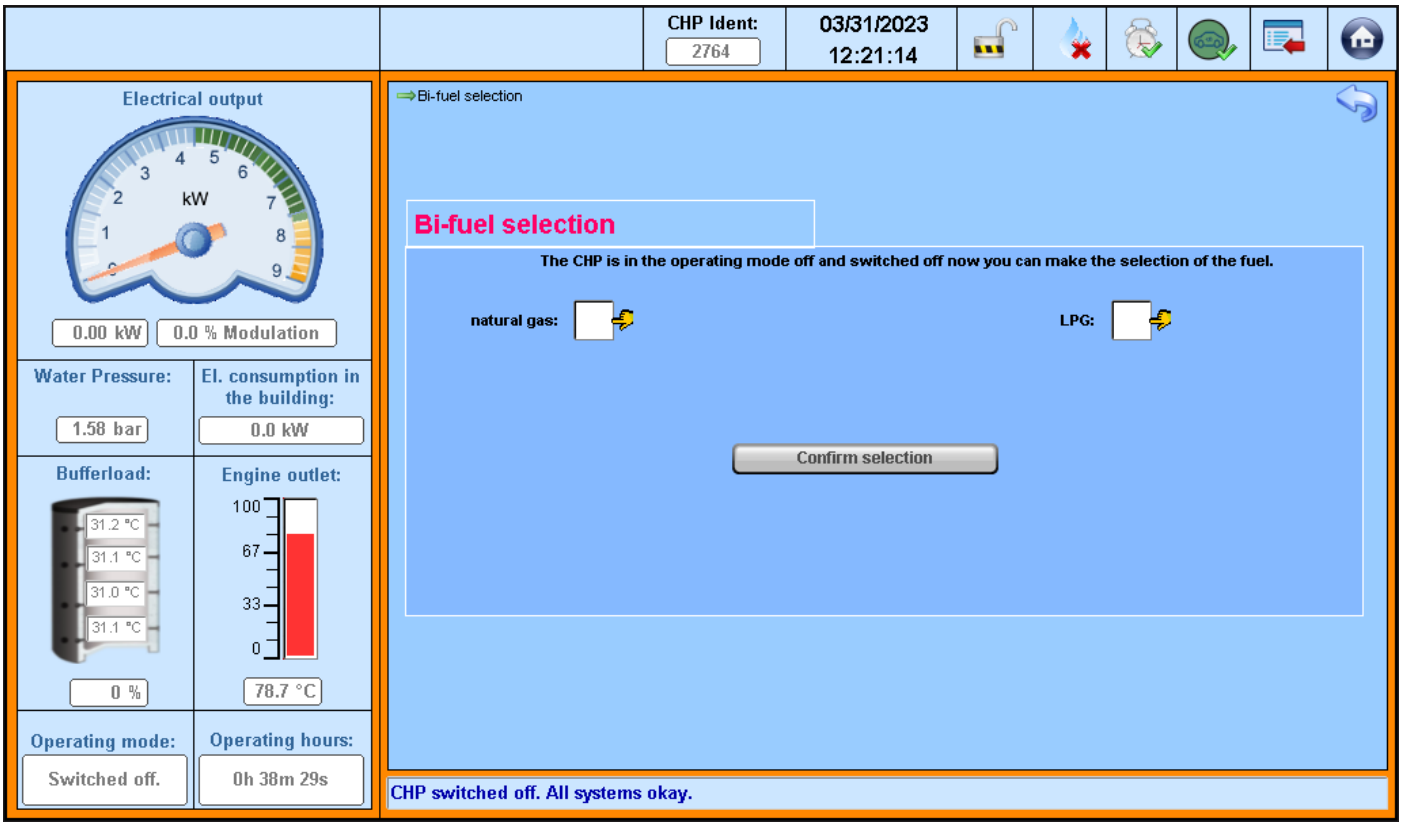
If, during the two hours, no further heat can be output:
The system switches off and goes into standby.

If, during the two hours, the electric vehicle charging button is pressed again:
The electric vehicle charging button is deactivated. The switch-off conditions for the most recently selected operation mode apply.

In order to use the function of the electric vehicle charging button externally, it is possible to connect an external button to the system control cabinet. The connection is only approved for a manual button; the connection of a superior controller is prohibited.

4.5 Bi-Fuel selection





Menu for selecting the fuel - natural gas or LPG (liquid petroleum gas).

- ► Select the operation mode "OFF" to switch off the system.
- ► Press the button for the desired fuel.
- ► Confirm the selection.

5. Service repairs

5.1 Fault resolution

⚠ ATTENTION!

Risk of damage to the system with a failure to observe the error messages!
Malfunctions indicate faults with the system or incorrect settings in the control mechanism. Malfunctions must be rectified immediately to prevent further subsequent damage.
► Rectify all faults immediately.

System malfunctions are displayed by the control mechanism in the operational display.

When a fault has been remedied, the message on the operational display must beacknowledged.
→ „4.2.7 Safety shutdowns“ (page 23).

In the case of malfunctions that cannot be resolved using the control mechanism:
► Initiate remote maintenance.
► Follow the manufacturer’s instructions.

Fault resolutions are described as follows:
Error message
– Possible cause.
  ► Remedial action.

Fuel/engine problem
– Insufficient or unavailable gas pressure.
  ► Measure the gas flow pressure and resting gas pressure.
  ► Check the pressure drop.
– Start values not correct.
  ► Adjust the start values.

Generator overtemperature
– Water return temperature too high.
  ► Check the water pressure.
  ► If necessary, bleed the system.
  ► Check the pump.

Generator protection
– NA protection triggered.
  ► Check the grid phases.
  ► Check the soft starter settings.

Oil low
– Insufficient oil in the storage tank.
  ► Top up oil.
  ► If necessary, check the oil circulation.
  ► Check the system for leaks.

Oil pressure
– Leak, oil circulation not correct, low oil.
  ► Top up oil.
  ► If necessary, check the oil circulation.
  ► Check the system for leaks.
  ► Check the start values and the gas pressure.

Engine temperature switch
– Engine temperature safety limiter triggered.
  ► Check the primary pump.
  ► Bleed the system.

Emergency stop
– Emergency stop switch pressed.
  ► Unlock the emergency stop switch.

Safety temperature limiter (STB)
– Overtemperature interior or flue gas.
  ► Unlock STB
  ► Check the fan.
  ► Check the exhaust line.
  ► Check the condensate drain.

Flue gas counter-pressure too high
– Exhaust line blocked, condensate drain blocked.
  ► Check the exhaust line.
  ► Clean the condensate line.

Maximum engine oil exceeded
– Too much oil in the storage tank.
  ► Check the oil level with the dipstick.

Engine oil overtemperature
– Oil cooling insufficient, water temperature for oil cooling too high, flow rate too low.
  ► Check the oil circulation.
  ► Check the oil level with the dipstick.
  ► Check the coolant and heating circuit flow rate.
  ► Check the oil filter.

Overtemperature flue gas before AWT
– Flue gas counter-pressure too high or mixture too thick.
  ► Check the mixture.
  ► Check the flue gas counter-pressure.

Overtemperature flue gas after AWT
– Cooling output from calorific value heat exchanger too low.
  ► Check the flue gas heat exchanger.

Overtemperature interior
– Room air temperature increased, exhaust air insufficient.
  ► Check the room air temperature.
  ► Check the fan.
  ► Check the exhaust air duct.

Water pressure too high
– Pre-pressure on the expansion tank insufficient, too much coolant in the circuit.
  ► Check the expansion tank.
  ► Check the water pressure sensor.
  ► Check the water quality.
  ► Correct the coolant fill level (water-glycol mixture 60:40).

Water pressure too low
– Pre-pressure on the expansion tank insufficient, too little coolant in the circuit.
  ► Check the expansion tank.
  ► Check the water pressure sensor.
  ► Check the water quality.
  ► Check the system for leaks.
  ► Correct the coolant fill level (water-glycol mixture 60:40).

Overtemperature supply
– Insufficient heat output at the plate heat exchanger.
  ► Check the pump.
  ► Check the flow rate.
  ► Check the water quality of the cooling and heating water.
  ► Perform cleaning.
– Heating circuit flow rate insufficient.
  ► Clean the MSM adapter magnetic filter.

Room air overtemperature
– Temperature in the installation room too high.
  ► Check the air intake openings.

Buffer supply overtemperature
– Supply temperature to the buffer tank too high.
  ► Check the flow rate from the secondary circuit.
  ► Check the water quality.
  ► Check the customer’s pump control.

Buffer return overtemperature
– Return temperature from the heating circuit too high.
  ► Check the heating system.
  ► Check the system pump control.

Waiting for grid
– Fuse tripped.
  ► Check the fuse in the control cabinet.
  ► Check the customer’s fuse.

Gas pressure
– No gas pressure present (customer supply).
  ► Check the gas pressure monitor.
  ► Check the gas supply line.
  ► Measure the gas pressure.

Waiting for commissioning
– Commissioning not yet performed.
  ► Complete the commissioning request.
  ► Arrange a time and date for the commissioning.

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