BLANCO
PROFESSIONAL

BLANCO AIRSERVE CONTROLLER

Programming instructions for software version 3.1

General information

Copyright

These instructions are protected by copyright. None of this information may be reproduced, distributed, used to the advantage of our competitors or made accessible to third parties either completely or in part.

Technical changes

Subject to modifications for the purpose of technical improvement.

Authorised persons

BLANCO will instruct one person ("administrator", e.g. a kitchen director) in the programming of the device. Any additional persons ("users", e.g. operating personnel) who will operate the device are to be instructed by the person previously instructed by BLANCO.

Safety

These programming instructions describe the programming procedures of the device. These instructions do not contain any information on the further operation (e.g. cleaning) of the device. The further operation of the device is described in the separate operating instructions. The operating instructions also contain safety precautions for the device.

The prerequisite for programming the device is that the operating instructions and the safety precautions contained within them have been read and understood.

Product documentation

These are the original operating instructions. Target group: kitchen directors.

Typographical conventions

- ☞ **Important note** on special features or special cases.
- ⓘ **Explanatory information** in chapters or sections containing instructions.
- ↳ **Cross reference** to a chapter, section or external document.
- ✓ **Requirement** which must be fulfilled before the subsequent steps can be carried out.
- ➨ **Action** or activity which must be carried out.

Device model XYZ

A section identified in this way applies only to a particular device model or device option.

Warnings

⚠ **Signal word!**

Type and source of danger

Possible consequences of non-compliance with the warnings.

- ➨ Measures to avoid dangers and the consequences thereof.

The signal word (caution, warning, danger) informs of the level of danger.

Caution warns of possible minor injury and property damage.
Warning warns of possible serious bodily injuries.
Danger warns of possible highly severe/fatal bodily injuries.

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About this product

Application

These programming instructions of the BLANCO AirServe controller apply to the following product variants (standard model or with optional features):

- BAS-T 20/24 CS 20/24 GN trays, Cook & Serve
- BAS-T 26/30 CS 26/30 GN trays, Cook & Serve
- BAS-T 20/24 CC/CF 20/24 GN trays, Cook & Chill/Cook & Freeze
- BAS-T 26/30 CC/CF 26/30 GN trays, Cook & Chill/Cook & Freeze

General information

A controller for the device functions regeneration, keeping hot and cooling is integrated in the device. The time sequence and the conditions of one or more of the device's operating cycles is affected by the device controller. An operating cycle consists of all regeneration, cooling and/or keeping-hot phases of a meal time.

The combination of the operating cycles is relative to the respective application of the device (Cook & Serve, Cook & Chill or Cook & Freeze).

BASIC/MASTER

BASIC/MASTER device controller

The device controller is available in two different configuration levels. Both configuration levels have the following features:

BASIC	**MASTER**
Colour display	Colour display
Icon-supported plain text display	Icon-supported plain text display
Manual or program operation	Manual or program operation
Operating mode indicator in expressive colour	Operating mode indicator in expressive colour
Authorisation-controlled user levels	Authorisation-controlled user levels
Data exchange via USB stick	Data exchange via USB stick
Battery with integrated charger (optional)	
Core temperature sensor (optional)	Integrated temperature data logger
Door contact monitoring (optional)	Reading out different parameters
	Battery with integrated charger
	Core temperature sensor (optional)
	Door contact monitoring (optional)

Options

The device controller can be equipped with the following option:

- Connection for "LOA" performance optimisation system (abcd interface)

Operation

The device controller offers a selection of 2 different operating modes: "Manual operation" and "program operation". Food regeneration and keeping hot can be regulated through various device controller settings.

The device can be adjusted for the respective requirements via the corresponding parameter settings of the controller (e.g. regeneration temperature for regeneration and keeping hot).

Optionally available core temperature sensors are used for recording and displaying the food core temperatures.

The temperature of food which is loaded pre-cooled is maintained at the setpoint temperature (+3 °C to +15 °C) during the cooling phase.

In the regeneration phase, the food to be regenerated is brought to the required core temperature at the suitable parameter setting in compliance with the hygiene guidelines.

During the keeping-hot phase, regenerated or food loaded hot is supplied in order to prevent an unacceptable drop in temperature.

Instruction by BLANCO

The device controller offers a broad range of configuration options, and can therefore be adapted to a large number of special requirements and tasks.

Therefore, commissioning of the device is carried out together with a person authorised by BLANCO Service. The device controller is already pre-configured by BLANCO before delivery. During initial start-up, the device configuration can be adjusted again and instruction is given on all important operating and adjustment procedures.

☞ Do not make any adjustments to the device without having been instructed by BLANCO Service and without having read these programming instructions and the operating instructions.

Pre-information

Software damage

Unplugging the mains plug

⚠ **Caution!**

Software damage!

Damage to the controller software

- ➨ During running operation/regeneration or an update via firmware, the mains plug must NOT be pulled out, as otherwise the controller can be damaged.
- ➨ Unplug the mains plug only with the device switched off, otherwise the device electrical system and/or the mains socket outlet can be damaged.
- ➨ Only unplug the mains plug by pulling on the mains plug housing.

ⓘ On the controller display, various types of messages are shown in different colours depending on priority.

☞ Colours may be perceived differently depending on the viewing angle. It is therefore important to maintain as direct a viewing angle as possible (directly in front of the screen) in order to prevent colours from being mistaken.

Information An information message is displayed in green. Information messages do not need to be acknowledged.

Warning A warning is displayed in yellow. Warnings do not have to be acknowledged, although the corresponding cause must be eliminated (e.g. close door).

Malfunction A fault is displayed in red. There are three types of faults:

Faults that cannot be acknowledged

Safety monitoring messages (e.g. temperature variations during cooling, faulty sensors, CAN-BUS or control device errors and safety switch-off during permanent operation) cannot be acknowledged. To eliminate the fault, please contact BLANCO Service.

Faults that can be acknowledged without PIN

- Compartment temperature monitoring
- Termination of regeneration in progress
- Modification of settings during regeneration in progress
- Untimely mains connection of device

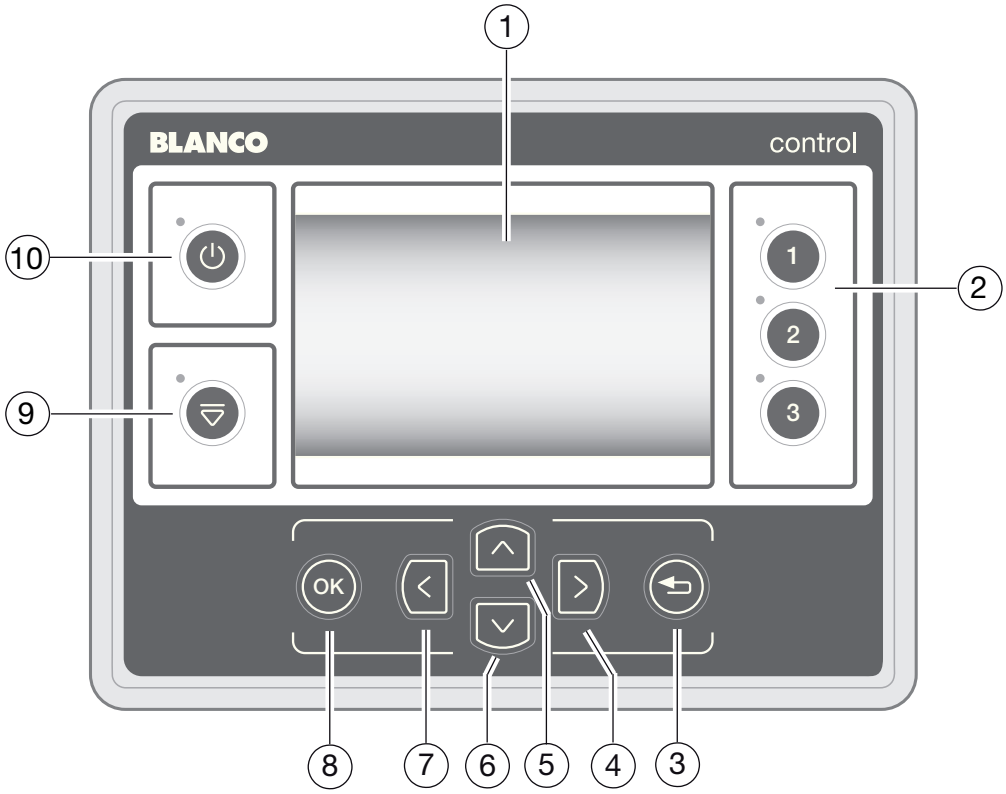
Once acknowledged, the message will no longer be displayed.

Faults that can only be acknowledged by entering the PIN

- Messages concerning missed regeneration
- Excessive interruption of regeneration process
- Regeneration authorisation that requires PIN entry

Device controller

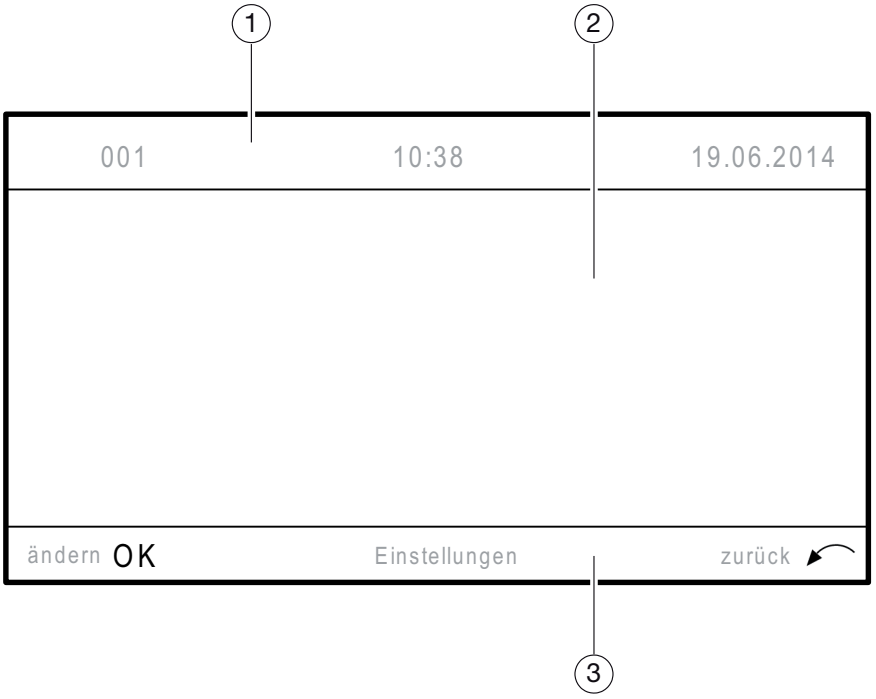
Overview The BLANCO AirServe controller is equipped with the following functions:



(1) Colour display with symbol-supported plain text display
(2) Function buttons/selection buttons (manual operation)
(3) Back button
(4) Right arrow button
(5) Up arrow button
(6) Down arrow button
(7) Left arrow button
(8) OK button
(9) Special function button
(10) Device On/Off

Colour display

Overview The BLANCO AirServe controller colour display with symbol-supported plain text display is structured as follows:



(1) Status area
(2) Display area
(3) Info area

Status area The status area shows general information such as date and time, in addition to further information displayed through symbols, such as program type, control level, battery mode, etc.

Display area The display area shows information and symbols relating to programs, temperatures, messages and the assignment of selection buttons (manual operation). The display area is also the main area, upon which the various parameters are displayed during programming or program modification.

Info area The info area displays control assistance. Depending on the control level and current information in the display area, the info area is not always shown.

Symbols on the colour display

Status area

Operating mode

M = Manual operation — Timer is not active.
Regeneration programs are started via the function buttons 1-3.

P = Program operation — Internal timer is active.
Function buttons have no function.

S = Settings — Device settings are open.
Running regeneration processes are interrupted.
Permanent temperature control (if active) is still running.

Page numbers

The page number shows the current level of the device controller.
This information is used for orientation and may be necessary if servicing is required.

Network

If no network symbol is displayed, the mini PC is still starting up. This process can take up to 2 minutes. During this time, the USB, network and time synchronisation are unavailable.

The adjacent symbol is displayed once the USB is available and the time synchronisation has been executed.

☞ The device controller can only be programmed once this symbol is displayed.

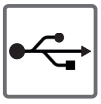
This symbol is displayed once the controller has access to the network or is accessible via the network. If the symbol is not displayed, there is a device fault that must be repaired by a person authorised by BLANCO (see Repair chapter in the BLANCO AirServe Trolley operating instructions).

Synchronisation activity between measured-value memory and mini PC

☞ When one of the two following symbols is displayed in the status area, then the synchronisation between the measured-value memory and the mini PC has not yet been completed. Please be sure to wait until both symbols disappear or are no longer displayed so that the download can be carried out completely.

Loading temperature data (is shown every minute for 1 second)

Loading operating messages



USB stick

This symbol is shown when the controller has recognised a suitable USB stick. The data functions of the USB stick can only be used when this symbol is shown.

Battery (optional)

ⓘ The battery is responsible for supplying the device controller and is not intended to perform a regeneration.

ⓘ If the device is equipped with a battery, the display will remain on but will switch to sleep mode after a certain time.

Charging battery (optional)

When the battery is fully charged, it is displayed as a continuous block. As the battery power decreases, the block becomes smaller. If less than 30% battery power remains, the block is shown in red. In this condition at the very latest, the battery should be charged by connecting the device to the power supply. If the battery is being charged, the adjacent symbol will appear.

Battery (optional) is defective or empty

The adjacent symbol appears if the battery is defective or empty. A corresponding warning message will also appear at every system start-up. If the adjacent symbol appears on the display, the battery must be replaced by a person authorised by BLANCO (see Repair chapter in the BLANCO AirServe Trolley operating instructions).

ⓘ As soon as the device is disconnected from the power supply, it automatically switches off.

☞ Follow the instructions in the warning message.

⚠ Caution!

A defective or empty battery may damage the device controller and/or cause a loss of data in regeneration or weekly program settings.

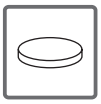
➨ Confirm the warning message with the "OK button" (8).

➨ Please contact BLANCO Service.

After replacing the battery, this must be acknowledged in the corresponding menu item ("Service/maintenance reset, replace battery").

Time

Shows the current time.



Battery power status (time) OK

This symbol is shown if the battery power status is OK.

Battery (time) must be replaced

The battery power of the internal battery decreases with operating life. If the adjacent symbol appears on the display after the setting levels are called up (upon entering the PIN), the batteries must be replaced by a person authorised by BLANCO (see Repair chapter in the BLANCO AirServe Trolley operating instructions).

Caution!

The battery must be replaced within 14 days in order to prevent data loss. Data loss may render the device temporarily unusable.
When the critical charge status of the time batteries is reached, a corresponding warning message is displayed during every device commissioning.

- ➨ Replace batteries within 14 days.
- ➨ Please contact BLANCO Service.

ⓘ When the time batteries are discharged, an error will be displayed during device commissioning that prevents any further operation.

- ➨ In order to be able to use the device for this day, the time must be set.

After replacing the battery, this must be acknowledged in the corresponding menu item ("Service/maintenance reset, register time battery replacement").

Date

Shows the current date.

Overheating protection for heating compartment

This symbol is shown to prevent overheating of the heating compartment.

- ☞ As long is this symbol is shown, the device must not be disconnected from the power supply.
- ☞ The device cannot be switched off during the cool-down phase.

Phase control

This symbol is shown when the phase control is set to "ACTIVE" in the device controller. When the device is started, the controller automatically determines whether the device is operated with 230 V or 400 V.

- 400 V: 3 bars in the colour brown/black/grey
- 230 V: 1 bar in the colour brown

ⓘ The number shown in the symbol is additional information for BLANCO Service.

Display area

Compartment temperature

The displayed temperature reflects the temperature in the heating/refrigeration compartment.

Core temperature (optional)

The displayed temperature reflects the core temperature of food in the heating/refrigeration compartment.

Heating compartment

Display of operating mode (heating) in heating compartment.

Temperature heating compartment side

Temperature display (compartment or core temperature), heating compartment side in °C or °F. The symbol is blue up to 20 °C, and red over 20 °C.

Refrigeration compartment

Operating mode display (cooling) in heating or refrigeration compartment.

Temperature refrigeration compartment side

Temperature display (compartment or core temperature), refrigeration compartment side in °C or °F.

☞ The symbol for the temperature display of the refrigeration compartment side is ALWAYS blue!

Text information

The display area can also show information on the current program or time information as text. In the Settings mode, the display area shows various pieces of text information and symbols as programming selection assistance.

Info area

In the info area, the symbols for the device controller arrow buttons are used. This information aims to facilitate handling of the device controller. The currently available operating options are also displayed.

Operation

User levels

In the BLANCO AirServe controller, two different user levels are distinguished:

- User (e.g. operating personnel)
- Administrator (e.g. kitchen director)

User

The user generally has limited access to the controller and does not require a PIN for this. When a device is connected or during battery mode (optional), pressing the "OK button" (8) on the display will show the temperatures in the device interior and food temperature (core temperature sensor optional).

During manual operation, the user also has the option to select from three regeneration programs stored on the selection buttons 1 to 3 (2) and start these programs.

The selected program will start. In addition to the information in the status area of the display, the display area shows the corresponding information, e.g. the remaining regeneration running time and end time, as well as the current compartment and core temperatures (optional).

Administrator

The device controller offers a broad range of configuration options, and can therefore be adapted to a large number of special requirements and tasks. The settings are made after entering the PIN on the various setting levels.

The administrator has various options to adjust the device controller to their requirements and adapt settings. The administrator can create and change various programs. The corresponding steps to be taken are explained in these programming instructions.

Version of the software package

During controller start-up, the mainboard software version is shown briefly at the bottom of the screen. This information may be necessary if servicing is required.

General information on changing and saving settings

ⓘ The executed changes must also be saved in the setting levels, and are only available to the controller after this is done. This is done as follows:

➥ Configure the desired setting.

➥ Save data with the "Back button" (3).

➥ Press the "Back button" until the main screen appears.

☞ The saving process can take up to 2 minutes. During this time, do not switch the device off or disconnect the power supply. After the saving process has been successful, the device controller automatically re-starts and the main screen appears once again.

Switching the device on

Switching the device on

ⓘ With devices with battery (optional) and depending on the power status, the following options are available for devices that are NOT connected to the power supply:

- Battery charged: LED next to "Device On/Off" button (10) flashes briefly every 5 seconds
- Battery empty: LED does not flash

➥ Charge battery.

✓ Device connected to power supply

ⓘ Once the device is connected, the LED beside the "Device On/Off" button will flash.

➥ Press the "Device On/Off" button for 3 seconds. The device will switch on and the LED on the button will flash. The home screen appears.

ⓘ By pressing the "OK button" (8), a temperature check is carried out and the current compartment and core temperatures (optional) are displayed.

Entering PIN

Entering the PIN (factory setting = 0000)

➥ Press and hold function buttons 1 and 2 (2) and the "Device On/Off" button (10) for 3 seconds.

➥ Select and enter the PIN (0000) with the buttons (4) to (7).

➥ Confirm the PIN with the "OK button" (8).

ⓘ When an access key (USB stick with loaded device settings) is inserted in the device, the device controller directly accesses the setting levels without entering a PIN.

Changing PIN

Changing PIN

➥ Change four-digit PIN as stated previously to a different value.

➥ Confirm the PIN with the "OK button" (8).

ⓘ If you have forgotten the modified PIN, please contact BLANCO Service.

Device configuration

Setting language

- ➨ Enter PIN and confirm.
- ➨ Select the setting level "Device configuration" and confirm with the "OK button" (8).
- ➨ Select the menu item "Language and units" and then the sub-item "Language" and confirm with the "OK button" (8).
- ➨ Select the desired language and confirm with the "Back button" (3).
- ➨ Return to the previous level by pressing the "Back button" (3).

Setting region

- ⓘ Based on the set region, the system automatically determines the time changeover from summer/to winter time and the valid time zone, inasmuch as the automatic changeover is set to "ACTIVE" (factory setting = ACTIVE).
- ⓘ An overview list with the region codes is provided at the end of these instructions.
- ⓘ The procedure for setting the region is the same as for setting the language.
- ☞ After the region has been changed, the system automatically carries out a restart.

- ☞ Then the following device configurations should also be carried out immediately on the "Device configuration" setting level in the menu item "Date and time":
- Date and date format
- Time and time format

- ➨ Save data with the "Back button" (3) and wait until the main screen appears.
- ☞ Further device configurations can be executed via the corresponding menu item. The relevant documentation can be found in the appropriate chapter of these programming instructions.

Carrying out temperature check

When the device is switched on or is in the energy-saving mode (battery operation) and the main screen is shown, all compartment temperatures are shown by pressing the "OK button" (8) for 5 seconds. Then the main screen is shown again or switches back into the energy-saving mode (in battery operation = screen off).

Showing current events

By pressing the "OK button" (8) twice, the current list of events can be shown from within the display of a current malfunction/warning.

- ⓘ A list is shown, as a malfunction usually triggers several events. A maximum of the last 12 events are shown.
- ➨ Press the "OK button" (8) again to trigger the renewed updating of the list.
- ➨ To return to the main screen, press the "Back button" (3).

Operating mode

ⓘ In the menu item "Operating mode", the desired operating mode (manual or program operation) and the number of program weeks can be configured.

Manual operation ON/OFF

☞ The operating mode "Manual operation ON/OFF" cannot be actively configured, but is established indirectly via program operating mode configuration.

Program operation ON/OFF

☞ Before the program operation is activated, the weekly/daily schedules must be completely saved.

☞ Program operation must not be activated during an active regeneration phase, since the command is carried out immediately.

☞ Recommendation: Only activate the program operation during permanent operation or device down-time, before or after a regeneration program.

ⓘ By switching the program operating mode (ON/OFF), the "Manual operation" mode is automatically adjusted accordingly. In program operation, the saved regeneration cycles are later assigned to one or more program weeks.

Number of program weeks

Specifying the number of program weeks

ⓘ Through the configuration of the desired program weeks (1-4 weeks), the internal timer knows how many program weeks should be used. The configured number of program weeks is later displayed under menu item "Program operation".

✓ The device is switched on

✓ Network symbol is displayed

✓ Setting levels are available

➨ Select the setting level "Operating mode" and confirm with the "OK button" (8).

➨ Use the arrow buttons (5) and (6) to scroll up/down.

➨ Select the desired number of program weeks.

➨ Confirm with the "OK button" (8).

☞ The process can be cancelled by pressing the "Back button" (3).

➨ Return to the previous level by pressing the "Back button" (3).

Deleting program weeks

✓ The device is switched on

✓ Network symbol is displayed

✓ Setting levels are available

➨ Enter PIN and confirm.

➨ Select the setting level "Operating mode" and confirm with the "OK button" (8).

➨ Use the arrow buttons (5) and (6) to scroll up/down to mark the desired number of program weeks.

☞ The program week to be deleted is highlighted in grey.

➨ Confirm with the "OK button" (8).

☞ The process can be cancelled by pressing the "Back button" (3).

➨ Return to the previous level by pressing the "Back button" (3).

General condition at mains voltage

ⓘ In the menu item "General condition at mains voltage", the sub-items "Heating compartment temperature control", "Temperature", "Cool refrigeration compartment", "Temperature" can be configured. The configured parameters become active as soon as the device is connected to the mains voltage and no program operation is activated.

Heating compartment temperature control

Possible choice of "permanent" or "OFF".

Temperature

Set the desired temperature for the heating compartment during permanent operation from +3 °C to +130 °C.

- CS model: +30 °C to +130 °C
- CC/CF model: +3 °C to +15 °C and +30 °C to +130 °C

☞ If a temperature of max. +79 °C is set, the device will heat permanently.

☞ If a temperature of more than/equal to +80 °C is set, the max. heating duration is limited to 3 hours. After this, the heating is switched off (cooling will still run). A corresponding error message will appear on the display and must be acknowledged. To be able to heat the device again, it must be disconnected from the power supply and re-connected again.

Cooling refrigeration compartment

Possible choice of "permanent" or "OFF".

Temperature

Set the desired temperature for the refrigeration compartment during permanent operation from +3 °C to +15 °C.

☞ After 6 hours of continuous operation, the refrigeration is interrupted (automatic defrost). After a certain period of interruption, the refrigeration will re-start again automatically.

➨ Enter PIN and confirm.

➨ Select the setting level "Manual operation" and confirm with the "OK button" (8).

➨ Use the arrow buttons (5) and (6) to scroll up/down.

➨ Return to the previous level by pressing the "Back button" (3).

Managing regeneration programs

ⓘ Under the menu item "Manage regeneration programs" various regeneration programs (manual and program operation) can be created, edited or deleted.

Overview of saved regeneration programs

➨ Add a regeneration cycle with the + button.

➨ Delete a regeneration cycle with the x button.

➨ Select the cycle with the arrow buttons on the cursor control.

☞ The selected regeneration cycle is highlighted in grey.

ⓘ At least 3 regeneration programs remain that cannot be deleted and are organised alphabetically.

Editing regeneration programs

Designation

Assigning or changing regeneration program designation.

ⓘ The designation of a regeneration program can be changed as required using the text editor. This is done as follows:

➨ Select the designation to be changed.

➨ Press the "OK button" (8).

The text editor opens and the program name is shown at the top left of the display. To facilitate orientation, the active letter is framed.

➨ Activate the letter with the "OK button" (8) (letter will be highlighted in grey in the text editor).

➨ Select the desired letter with the cursor buttons.

☞ Special characters and foreign letters can be accessed with the "Down arrow button" (6).

☞ The adjacent symbol can be used to switch/change between the letter fields and frequently used numbers/special characters (upper row).

☞ A new letter/special character/symbol can be added using the + button.

☞ A letter/special character/symbol can be deleted using the x button.

➨ Confirm the selected letter/special character/symbol with the "OK button" (8).

➨ Select the next letter and edit.

Serving duration

The serving duration is the time available to operating personnel to serve the regenerated food. The serving time can be set between 0 and 120 minutes. As soon as the regeneration is completed, the information "Regeneration complete. Serving time on" will appear on the display and the configured serving time will be counted down backwards.

☞ During the serving time, the heating compartment is not heated.

☞ During the serving time, the refrigeration compartment (providing refrigeration has been programmed during the regeneration) continues to be cooled to the pre-determined temperature (but only if the device is connected to the mains voltage).

Heating compartment temperature control (for program operation only)

Possible choice of "permanent" or "OFF".

☞ This setting has no influence on condition "On with mains voltage".

Temperature (for program operation only)

Setting the desired heating compartment temperature from +3 °C to +15 °C and +30 °C to +130 °C (for CC/CF models only) or +30 °C to +130 °C (for CS model).

☞ The temperature settings only apply if the "Program operation on" mode has been set. If this is not the case, the settings for the "On with mains voltage" operating mode will be used. Please make sure you are using the correct temperature unit (°C or °F).

Cooling the refrigeration compartment (for program operation only)

Possible choice of "permanent" or "OFF".

☞ This setting has no influence on condition "On with mains voltage".

Temperature (for program operation only)

Set the desired temperature for the refrigeration compartment from +3 °C to +15 °C.

☞ The temperature settings only apply if the "Program operation on" mode has been set. If this is not the case, the settings for the "On with mains voltage" operating mode will be used. Please make sure you are using the correct temperature unit (°C or °F).

Changing regeneration

ⓘ Under this menu item, a new window opens and the regeneration program time-temperature diagram appears.

Editing regeneration phases

Under this menu item, the parameters for one or more (as many as required) regeneration phases can be created, changed or deleted. The selected regeneration phase is highlighted in green on the display, and the heating compartment and refrigeration compartment are shown in blue.

ⓘ A regeneration cycle can consist of several regeneration phases.

ⓘ The maximum regeneration duration is limited to 90 minutes.

☞ By adding or deleting regeneration phases, the display changes, since it depends on the existing regeneration phases, and the corresponding settings (temperature and time) are displayed dynamically.

Creating a new regeneration phase

ⓘ A regeneration phase is composed of a time and temperature specification.

ⓘ In this menu mode, the adjacent symbol can be selected via the corresponding function button (2) on the controller. A new regeneration phase can then be created.

☞ If a new regeneration phase is created for the heating compartment, it is pre-set by the system to have a 1-minute duration and a compartment temperature of +80 °C.

☞ If a new regeneration phase is created for the refrigeration compartment, it is pre-set by the system to have a 1-minute duration and a compartment temperature of +5 °C.

ⓘ The pre-set parameters can be confirmed with the "OK button" and then the arrow buttons:

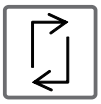
- Temperature: up (5) and down (6) buttons
- Time: right (4) and left (7) buttons

ⓘ Confirm the changes with the "OK button".

☞ To permanently save the settings, follow the instructions specified in the "Device configuration" chapter ("General information" section).

Deleting a selected regeneration phase

ⓘ In this menu mode, the adjacent symbol can be selected via the corresponding function button (2) on the controller. The regeneration phase highlighted in green can then be deleted.



Swapping a regeneration phase

ⓘ In this menu mode, the adjacent symbol can be selected via the corresponding function button (2) on the controller. This button is used to select and replace a specific regeneration phase. Theselected regeneration cycle is highlighted in green on the display.

ⓘ The selected regeneration phase is always replaced by the "successor", in other words, the next available regeneration phase.

➥ Enter PIN and confirm.

➥ Select the setting level "Manage regeneration programs" and confirm with the "OK button" (8).

➥ Use the arrow buttons (5) and (6) to scroll up/down.

➥ Return to the previous level by pressing the "Back button" (3).

Switching off a compartment

A heating or refrigeration compartment is switched off as follows:

➥ Select the corresponding compartment (heating or refrigeration compartment) with the arrow buttons (4) to (7)
(a compartment regeneration phase is displayed in green).

➥ Switch off the selected compartment (heating or refrigeration compartment) with the special function button (9).

☞ It is not possible to switch off both compartments at the same time.

To switch on a compartment that has been switched off, follow these instructions in reverse. The device will automatically identify the compartment to be switched on.

Manual operation

ⓘ In the menu item "Manual operation", the three function buttons 1, 2 and 3 can be associated with a regeneration program. The regeneration programs are ordered alphabetically. Only a fixed assignment can be programmed. The settings are only active in manual operation and are the same on every day of the week.

✓ The operating mode is Manual operation on/Program operation off

➥ Select the setting level "Manual operation" and confirm with the "OK button" (8).

➥ Use the arrow buttons (5) and (6) to scroll up/down to select a function button.

➥ To change the program, press the "OK button" (8).

➥ Use the arrow buttons (5) and (6) to scroll up/down to select the regeneration program.

➥ To save, press the "OK button" (8).

➥ Return to the main menu by pressing the "Back button" (3).

ⓘ The device controller accepts the setting and reboots.

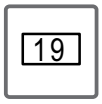
ⓘ The selected settings are saved when exporting the regeneration programs and can be transferred to other devices (of the same model and device type).

Program operation

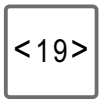
ⓘ Under the menu item "Program operation", various daily schedules can be managed and allocated within the weekly overview.

Selecting date

Select the desired date depending on the pre-set number in the menu item "Operating mode/ Number of program weeks".



☞ For informative purposes and to facilitate orientation, the current date is framed.



☞ To facilitate orientation, the selected date is highlighted in grey and is pin-pointed by an arrow to the left and right. The date must be selected with the arrow buttons (4) to (7).

After selecting the day, the user is taken to an overview of the date in question. As many servings as required can be saved onto the daily schedule. A temporal overlap of two separate servings is not possible.

Copying the daily schedule to the clipboard

With the adjacent symbol, the entire daily schedule can be copied to the clipboard.

- ➨ Select the desired day.
- ➨ Click on the symbol (function button 1).

Pasting the daily schedule from the clipboard

With the adjacent symbol, the entire daily schedule can be pasted from the clipboard.

- ➨ Select the desired day into which the daily schedule is to be pasted.
- ➨ Click on the symbol (function button 2).
- ⓘ It is possible to delete all servings from one day and use this "empty" schedule to delete all servings from another day (at once).

Deleting servings from the daily schedule

With the adjacent symbol, the highlighted serving can be deleted. The selected serving is highlighted in bold and can be selected using the arrow buttons (5) and (6).

Creating a new serving on daily schedule

With the adjacent symbol, a new serving can be created. A maximum of 8 servings can be set per daily schedule.

Editing Serving

With the "OK button" (8), the highlighted serving can be deleted.

Serving

Here, the desired regeneration program can be selected.

Serving time

The serving time is the time when the regeneration is completed and food serving is planned. The serving time can be set from 00:01 to 23:59.

- ☞ If the serving time is chosen as 00:01, the regeneration process will be scheduled and begin on the previous day, however cannot be edited there.
- ☞ When creating new servings, the serving time may be limited if already existing servings already occupy certain time periods.
- ☞ If a new serving is to be added between two existing ones, the serving BEFORE the new one must be selected.
- ☞ The starting time will be calculated automatically in accordance with the selected serving program.
- ☞ If the serving times are changed, then the daily schedule sequence does not change until after saving and restarting the controller.

Start lead time

This menu item enables the user to set the earliest time at which regeneration can be started manually ("early start"). The lead time can be set between 0 and 60 minutes.

- ☞ These settings only work if the device is connected to the power supply (with mains plug plugged in)!
- ☞ An early regeneration start can only be started manually and within the defined lead time.

Rest time

This menu item permits the setting of the slack time at which the device can begin regeneration at the latest ("delayed start"). The rest time can be set between 0 and 60 minutes.

- ☞ These settings only work if the device is connected to the power supply (with mains plug plugged in)!

Data logger

- ⓘ To be able to use the functions of the data logger, first the general condition, which can be viewed under the menu item "Data transfer" (General information on USB sticks, Preparing the USB stick, Inserting and removing the USB stick) must be read carefully and observed.
- ☞ The procedure for saving the respective evaluation on the USB stick is the same for all possible evaluations.
- ✓ The device is switched on
- ✓ Network symbol is displayed
- ➡ Insert USB stick.
- ➡ Select "Data logger" setting level, select desired evaluation period or menu item and confirm with "OK button" (8).
- ⓘ The message "Please wait" appears.
- ⓘ Depending on the evaluation period, the duration of the data export can be several minutes. Never disconnect the device from the power supply during this time, as this could result in permanent damage to the USB stick and the controller.
- ☞ Do not remove the USB stick as long as the message "Please wait" is shown!

➨ After data transfer has been completed, return to the main menu and remove the USB stick.

☞ If the "USB stick" status symbol is not shown, the USB stick is not generally suitable for a data transfer.

☞ During the data transfer the data are stored in various file formats (csv, txt, etc.) in a ZIP archive on the USB stick. The file names are saved with a unique designation and the download date, enabling one USB stick to be used for several devices.

Device configuration

☞ The existing setting levels (from "Date and time" to "Access data and PIN") are shown under each other. Use the arrow buttons (5) and (6) to scroll up/down to select a setting level. The selected setting level is highlighted. Behind these setting levels, additional sub-items can be selected and set in accordance with the program structure.

Setting further device configurations

ⓘ As already mentioned, the menu item "Device configuration" enables further points, (see the "Operation" section, "Device configuration"), to be selected and set.

Date and time

- Date
- Date format (YYYY.MM.DD/DD.MM.YYYY)
- Time
- Time format (12 h/24 h)
- automatic summer/winter time (ACTIVE/INACTIVE)
- Time zone (UTC **U**niversal **T**ime **C**oordinated (coordinated world time), ± 0.30 h/± 1 h/etc.)
- Summer/winter time

Language and units

- Language (English, German, etc.)
- Region
- Temperature unit (°C/°F)

Designations and identity

- Device designation
  In this menu item, the device designation can be changed (max. 20 characters).
- Object name

ⓘ Every device can be allocated with a customised object name (e.g. Ward XY). This object name will be displayed on the start screen.

ⓘ When this menu item is called up in the settings levels, a text editor opens for object name entry. For exact instructions on how to use the text editor, please see the chapter

↳ "Editing regeneration programs/Designation"

- Serial number (display mode only)
- Production order (display mode only)

Monitoring and acoustics

- Phase control (ACTIVE / INACTIVE)

ⓘ When this option is activated, the customer-supplied mains connection is monitored in both operating modes (manual or program operation). When the phase control is activated, all 3 phases must be available in perfect working order. If one or more phases are absent or a fault is present, a corresponding warning message will appear in the display which cannot be acknowledged.

ⓘ If this option is deactivated, the phase control is nevertheless active; only the related warning message is then not shown.

☞ Despite a corresponding warning message, the scheduled or running regeneration will be carried out.

➨ If the warning message is displayed, check the customer-supplied mains connection.

➨ If the problem cannot be solved, please consult BLANCO Service.

ⓘ When operating using an adapter cable, the phase control must be deactivated.

- Compartment monitoring (ACTIVE / INACTIVE)

☞ Activating this menu item is only useful for CC/CF applications.

☞ For the CS application, compartment monitoring should remain deactivated.

ⓘ When compartment monitoring is activated, the configured functions (heating or refrigerating) will be monitored for each compartment. Compartment monitoring starts after activation with the start of a regeneration. When compartment monitoring is activated, the device must reach a specific minimum temperature difference within a configurable period of time.

ⓘ Possible causes for problems with the compartment monitoring may be:
- Compartment door is not closed properly
- Device is used in CS mode

ⓘ If the minimum temperature difference is not reached, a compartment-specific warning message is displayed, which can be acknowledged by pressing the "OK button".

- Acoustic signal after end of regeneration (ACTIVE / INACTIVE)

ⓘ In this menu item, the acoustic signal at the end of regeneration can be set (factory setting = INACTIVE).

ⓘ The acoustic signal can be heard for min. 30 seconds, max. 5 minutes and no longer than the defined serving time. The acoustic signal can be acknowledged/switched off by pressing the "OK button".

- Acoustic signal when door open (ACTIVE / INACTIVE)

Equipment options

- Door contacts option (ACTIVE / INACTIVE)

ⓘ When this option is activated and a compartment door is not closed properly during regeneration, the current regeneration program will be interrupted after a (configurable) period of time. A corresponding warning message appears on the display.

ⓘ If the menu item "Door open acoustics" is also activated, an acoustic signal will sound after a (configurable) period of time.

➨ Close the compartment door. Once the compartment door has been closed, the interrupted regeneration program will continue.

ⓘ If the interruption is brief, the interrupted regeneration will be continued automatically by the device controller.

ⓘ In the case of longer interruptions, the PIN must be entered in order to continue the regeneration (after inspecting and ensuring the food quality).

☞ In order to prevent disruptions to the ongoing operation through this option, it should be deactivated (factory setting = active).

- Core temperature option (ACTIVE / INACTIVE)

ⓘ When the option is active in temperature check (main screen), the core temperatures are displayed by pressing the "OK button" (8).

ⓘ If the core temperature sensor is damaged/defective, the regeneration is interrupted or cannot be started.

➨ Deactivate "Display core temperature sensor" option.

➨ Contact BLANCO customer service.

⚠ **Caution!**

Damaged temperature sensors (compartment or core temperature) can lead to permanent damage to the temperature data logging and subsequently cause device failure.

➨ Please contact BLANCO customer service as soon as possible.

Access data and PIN

- Change PIN (˝see "Operation, change PIN")

- Remote maintenance (ACTIVE / INACTIVE)

ⓘ In this menu item, access for BLANCO Service can be set (factory setting = INACTIVE).

- Key lock in manual operation (ACTIVE / INACTIVE)

☞ In this menu item, the key lock in manual operation can be set (factory setting = INACTIVE).

☞ As soon as the key lock is activated, all buttons are deactivated 30 seconds after a regeneration program is started (selection buttons 1-3). This means that the running program cannot be interrupted by a third person.

ⓘ An active key lock can only be interrupted if the device is disconnected from the power supply for at least 10 seconds (pull out mains plug).

Maintenance information

The device maintenance information can only be displayed.

➨ Enter PIN and confirm.

➨ Select the setting level "Maintenance information" and confirm with the "OK button" (8).

➨ Use the arrow buttons (5) and (6) to scroll up/down.

➨ Return to the previous level by pressing the "Back button" (3).

☞ The 4 display points of "Main board", "Power board", "Data logger" and "Charger" should generally always display the status "Online"!

☞ During battery operation (optional), the status of the powerboard may change to OFFLINE.

☞ The number of the displayed control devices depends on the device model.

Digital outputs

ⓘ The menu item "Digital outputs" can only be used by BLANCO Service.

Data transfer

☞ Data transfer with a USB stick is only possible with the same software package version and devices of the same class (CS or CC/CF). If this is not the case, an error message will appear on the display. If this happens, please contact BLANCO Service.

⚠ **Caution!**

The menu items "Reload language packs" and "Restore factory settings" and "Carry out firmware update again" are only intended for BLANCO Customer Service. Making changes here or even activating menu items may render the device unusable.

➨ Do not select or activate menu items.

General USB stick information

For the following menu items, a suitable and ready-prepared USB stick must be used, which must meet the following basic requirements:

- Plug type: Standard A
- Version: 1.0 or 2.0
- Design: flat
- Memory: at least 5 MB memory
- Test marks: suitable for operating system Linux 2.6x, USB test marks/logo must be present
- Special features: USB memory devices with integrated status LED are helpful

The USB stick should be empty and formatted, and should be produced by a brand manufacturer. If you are unsure, please contact BLANCO Service.

☞ The use of USB extension cables is not permitted!

USB stick preparation

The USB stick must be appropriately prepared before first use in order to ensure that a suitable file system is available:

➨ Deactivate any write protection.

➨ Connect the USB stick to the computer.

➨ Select the USB stick/drive.

➨ Right-click on the mouse and open "Properties".

ⓘ If the data system is displayed as FAT, FAT32 or EXT4, the USB stick can be removed again. Otherwise, please proceed as follows:

- Right-click on the mouse and open "Format".
- Select the suitable file system (FAT or FAT32 or EXT4).
- Launch/execute formatting.

After the formatting has been completed, the USB can be removed.

Inserting and removing the USB stick from the device

The interface access with USB connection is located above the mains plug holder (see "Overview" chapter of the operating instructions) and is closed with a self-closing cover. The interface access has at least one LAN connection (left) and one USB port (centre).

➨ To insert the USB stick, carefully open the interface cover.

➨ Hold the cover open and insert the USB stick in the corresponding USB port.

☞ Please make sure that the USB stick is NOT inserted into the LAN connection, since this can damage both the LAN connection and the USB.

☞ The existing LAN connection can only be used by BLANCO Service.

☞ Make sure that the USB stick is carefully and completely inserted the correct way in the USB port.

☞ If the USB stick is inserted the wrong way, both the USB stick and the port may be damaged.

⚠ **Caution!**

The USB stick must not be removed from the device during data transfer, as otherwise the data and/or the USB stick can be permanently damaged.

Saving regeneration programs to USB

ⓘ The regeneration programs (manual and program operation settings) are saved.

✓ The device is switched on

✓ Network symbol is displayed

✓ Setting levels are available

➨ Insert USB stick and wait approx. 10 seconds or until the status LED illuminates.

➨ Select menu item "Save regeneration program to USB".

➨ Confirm with the "OK button" (8).

ⓘ "Please wait" appears briefly on the display. The saving process can take up to 2 minutes. After the saving process, the controller automatically returns to the main screen.

➨ Switch off the device.

➨ Remove USB stick.

☞ If an error message ("File error") appears on the display, the USB stick may be write-protected or not readable. In this case, prepare the USB stick as described above and de-activate the write protection.

Loading regeneration programs from USB

✓ The device is switched on

✓ Network symbol is displayed

✓ Setting levels are available

➨ Select and open menu item "Load regeneration program from USB".

ⓘ Please also follow this step even if only "Manual operation" is configured.

➨ Confirm 2x with the "Back button" (3).

ⓘ This saves the changes and the controller restarts automatically.

➨ Log in again with the PIN.

➨ Select menu item "Load regeneration program from USB".

➨ Insert USB stick and wait approx. 10 seconds or until the status LED illuminates.

➨ Confirm with the "OK button" (8).

ⓘ All regeneration programs on the device controller will be deleted. All regeneration programs saved onto the USB stick (program and manual operation) and saved data in the menu item "General condition at mains voltage" will be loaded onto the device controller.

ⓘ "Please wait" appears briefly on the display. The saving process can take up to 2 minutes. After the saving process, the controller automatically returns to the main screen.

➨ Check transferred data.

➨ Remove USB stick.

Saving device settings to USB

☞ Any changes made to the device settings must be saved before executing this function.

☞ When saving the device settings on a USB stick, they are simultaneously programmed as an access key.

The following device settings can be transferred with this menu item:

- Language
- Temperature unit
- Time format
- Date format
- Time zone
- Door open acoustics
- Acoustic signal after end of regeneration

✓ The device is switched on

✓ Network symbol is displayed

✓ Setting levels are available

➨ Insert USB stick and wait approx. 10 seconds or until the status LED illuminates.

➨ Select menu item "Save device settings to USB".

➨ Confirm with the "OK button" (8).

ⓘ "Please wait" appears briefly on the display. The saving process can take up to 2 minutes. After the saving process, the controller automatically returns to the main screen.

➨ Alternative 1: Remove USB stick.

➨ Alternative 2: USB remains in the USB port for at least 10 seconds.

ⓘ The device recognises the USB stick as an access key and the controller automatically calls up the setting levels.

Saving device settings of several devices to USB

☞ If several device settings are to be saved on one USB stick, first each device ID must be saved once on the USB stick for this purpose. Please proceed as follows to do this:

- First device: Saving settings to USB stick.
- Second device: Load settings from USB stick, then back up the device settings to USB stick following restarting.
- Each additional device: same procedure as for second device
  - First load settings already saved from USB stick
  - Wait for device to restart
  - Save device settings to USB stick

Loading device settings from USB

☞ Only device settings that can be saved to the USB stick can be loaded onto another device.
✓ The device is switched on
✓ Network symbol is displayed
➨ Insert USB stick and wait approx. 10 seconds or until the status LED illuminates.
ⓘ The device recognises the inserted USB stick as an access key and automatically opens the setting levels.
➨ Select menu item "Load device settings from USB".
➨ Confirm with the "OK button" (8).
ⓘ "Please wait" appears briefly on the display. The saving process can take up to 2 minutes. After saving, the device will re-start completely.
ⓘ If there is a USB stick in the USB port, it will be recognised as an access key and the controller will automatically call up the setting levels.
➨ Remove USB stick.

Start firmware update

ⓘ Only call or run this menu item if separately requested to do so by BLANCO. In conjunction with this kind of request, detailed documentation on the procedure and the required USB stick will be provided by BLANCO.

Reload language packages
Restore factory settings
Carry out firmware update again

⚠ **Caution!**

These three menu items are only intended for BLANCO customer service.
Making changes here or even activating menu items may render the device unusable.
➨ Do not select or activate menu items.

Self-test

With this menu item, a device controller self-test can be carried out.

✓ The device is switched on
✓ Network symbol is displayed
➨ Select the menu item "Self-test".
➨ Confirm with the "OK button" (8).
ⓘ The "Play symbol" (filled triangle) displays which stage is currently being tested and the remaining time.
ⓘ Delta T shows the temperature difference between the start temperature and the current compartment temperature. For compartment refrigeration, the compartment temperature should be in the minus range, and for compartment heating, it must be in the positive range.
☞ The measuring results closely depend on the start temperature (= compartment temperature at the start of the self-test).

The self-test can be cancelled at any time by pressing the "Back button" (3). After cancelling the self-test, the "Play symbol" disappears and the user is taken to the program structure by pressing the "Back button" again.

Service/maintenance reset

In this menu item, battery or time battery replacements must be confirmed.

Register time battery replacement

- ✓ The device is switched on
- ✓ Network symbol is displayed
- ✓ Setting levels are available
- ➨ Select the menu item "Register time battery replacement".
- ➨ Confirm with the "OK button" (8).
- ⓘ After pressing the "OK button", the battery replacement is registered without any further notification and the device controller automatically returns to the next higher level.

Replacing battery - shutting down controller

⚠ **Caution!**

This menu item is only intended for BLANCO customer service.
Making changes here or even only activating the menu item may render the device unusable.

- ➨ Do not select or activate the menu item.

Exporting errors and operating messages

- ✓ The device is switched on
- ✓ USB stick is inserted, USB symbol is displayed
- ✓ Setting levels are available
- ➨ Select the menu item "Export error and operating messages".
- ➨ Confirm with the "OK button" (8).
- ⓘ Depending on the evaluation period, the duration of the data export can be several minutes. Never disconnect the device from the power supply during this time, as this could result in permanent damage to the USB stick and the controller.
- ☞ Do not remove the USB stick as long as the message "Please wait" is shown!
- ➨ After data transfer has been completed, return to the main menu and remove the USB stick.

Operating messages

- ➥ Select the menu item "Operating messages".
- ➥ Confirm with the "OK button" (8).
- ⓘ A maximum of the last 12 events are shown.

Terminating program

To terminate a running program, press and hold the "Device On/Off" button (10) for 3 seconds.

- ☞ The device can automatically start a cool-down phase after a hot-air regeneration. In this case, the fans of the heating compartment can continue to run, although the program has been cancelled.

Switching off the device

Switching off the device

- ➥ Switch off the device with the "Device On/Off" button (press and hold for 3 seconds). The LED goes out on the corresponding symbol.
- ☞ If the device is switched off after hot-air regeneration, the fans of the heating compartment can continue to run in order to prevent overheating of the device and to protect the interior from accumulated heat. In this case, the corresponding icon "Overheating protection for heating compartment"" lights up in the status area and a corresponding warning message ("Cool-down time running") is also shown in the display.
- ➥ Do not switch off device as long as warning message/icon is shown.

Troubleshooting

General

- ☞ If disruptions arise during a planned or running regeneration, the serving time is highlighted in yellow and the reason for the disruption appears on the display.
- ⓘ If no disruptions are detected, the serving time is highlighted in green.
- ☞ Before starting an interrupted or delayed regeneration, the food quality must be checked and ensured.
- ☞ In the event of disruptions and for the resulting need to contact BLANCO Service, it is helpful if you photography the fault shown on the display or note down all of the information given (text, colour, etc.).

Error messages in program and manual operation

Cause	Measure
Diverse error messages (see text on display)	Contact BLANCO Service for advice on how to proceed. Shut down device. ↳ "Shutting down" chapter of operating instructions Secure the device from being started up accidentally. Inform a facility authorised to carry out repairs. ↳ "Repair" chapter of operating instructions
Compartment monitoring, continuous heating operation	After 3 hours of heating duration (over 79 °C), the heating is turned off (refrigeration continues). For further instructions, please see ↳ "Heißfach Temperierung"
Compartment monitoring, temperature difference is not reached in the pre-defined time	Check the suitability of compartment monitoring for the application case (CC/CF or CS). This option is not suitable for the application case CS.
Power supply interrupted during regeneration (interruption time less than specified test period)	Regeneration is automatically started and completed later.
Power supply interrupted during regeneration (interruption time greater than specified test period)	➨ Authorise regeneration with PIN ➨ Button 1: Re-start ➨ Button 2: Continue Cancellation of scheduled regeneration by pressing the "Back button" (3).
Display dark (possibly due to lightning strike/overvoltage)	Restart system (switch off device, wait briefly, switch on device again).

Error messages in program operation

Cause	Measure
Delayed regeneration start within the rest time	Regeneration is automatically started and completed later.
Delayed regeneration start outside of the rest time	Regeneration must be started by entering PIN. Cancellation of scheduled regeneration by pressing the "Back button" (3).

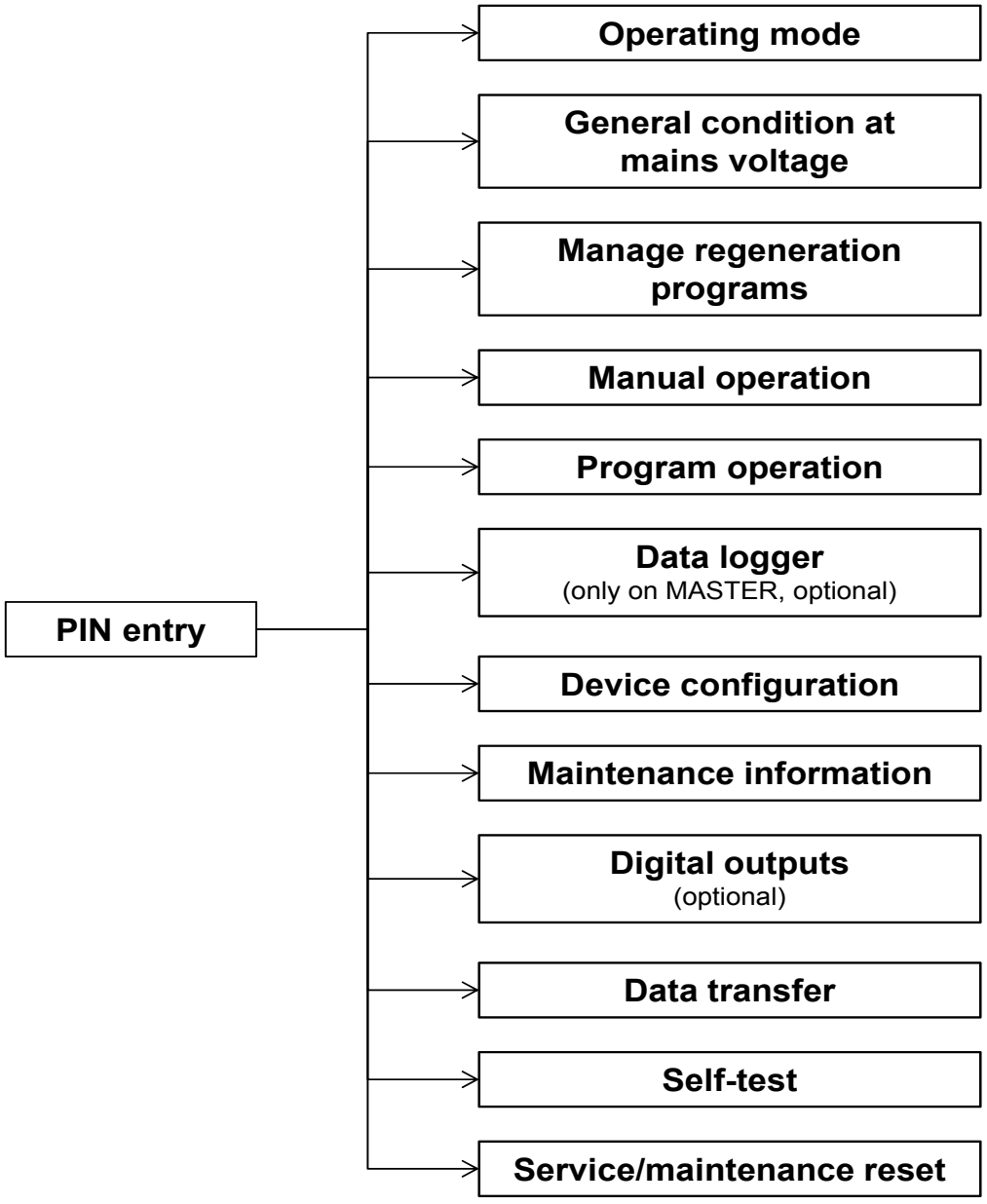
Controllers behaves unexpectedly

Cause	Measure
Controller defective	Inform a facility authorised to carry out repairs. "Repair" chapter of operating instructions
Controller is in an irregular state	Shut down device. "Shutting down" chapter of operating instructions Secure the device from being started up accidentally. Inform a facility authorised to carry out repairs. "Repair" chapter of operating instructions
Safety temperature delimiter has been triggered	Shut down device and inform BLANCO Service.
Phase control Phase L1 missing	Check customer-supplied mains connection and ensure power supply. If the problem continues to exist, shut down the device and inform BLANCO Service.
Incompatible software	Open menu item "Maintenance information" and contact BLANCO Service.

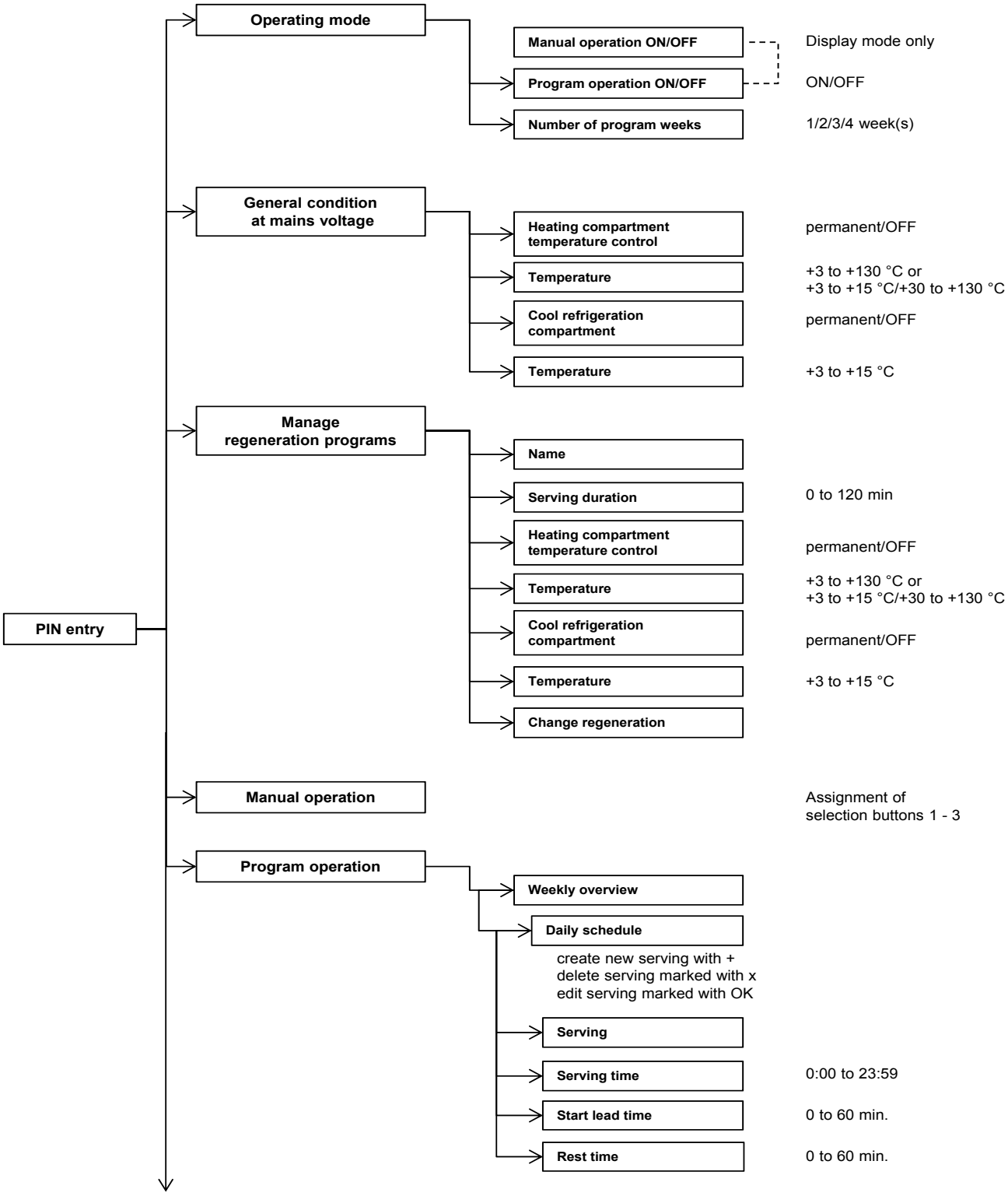
Data on data logger incomplete or incorrect (only with master, optional)

Cause	**Measure**
Data logger and device controller are not yet synchronised	Leave device switched on and repeat procedure after 10 min.
Device data (date, time, region, autom. time changeover, time zone) are not current or are set incorrectly	Correct device data and repeat procedure.
Missing data for optional device equipment (door contact, core temperature sensor, LOA)	Activate desired menu items in controller (only is optionally present) and repeat procedure.

Program structure overview



Program structure Page 1



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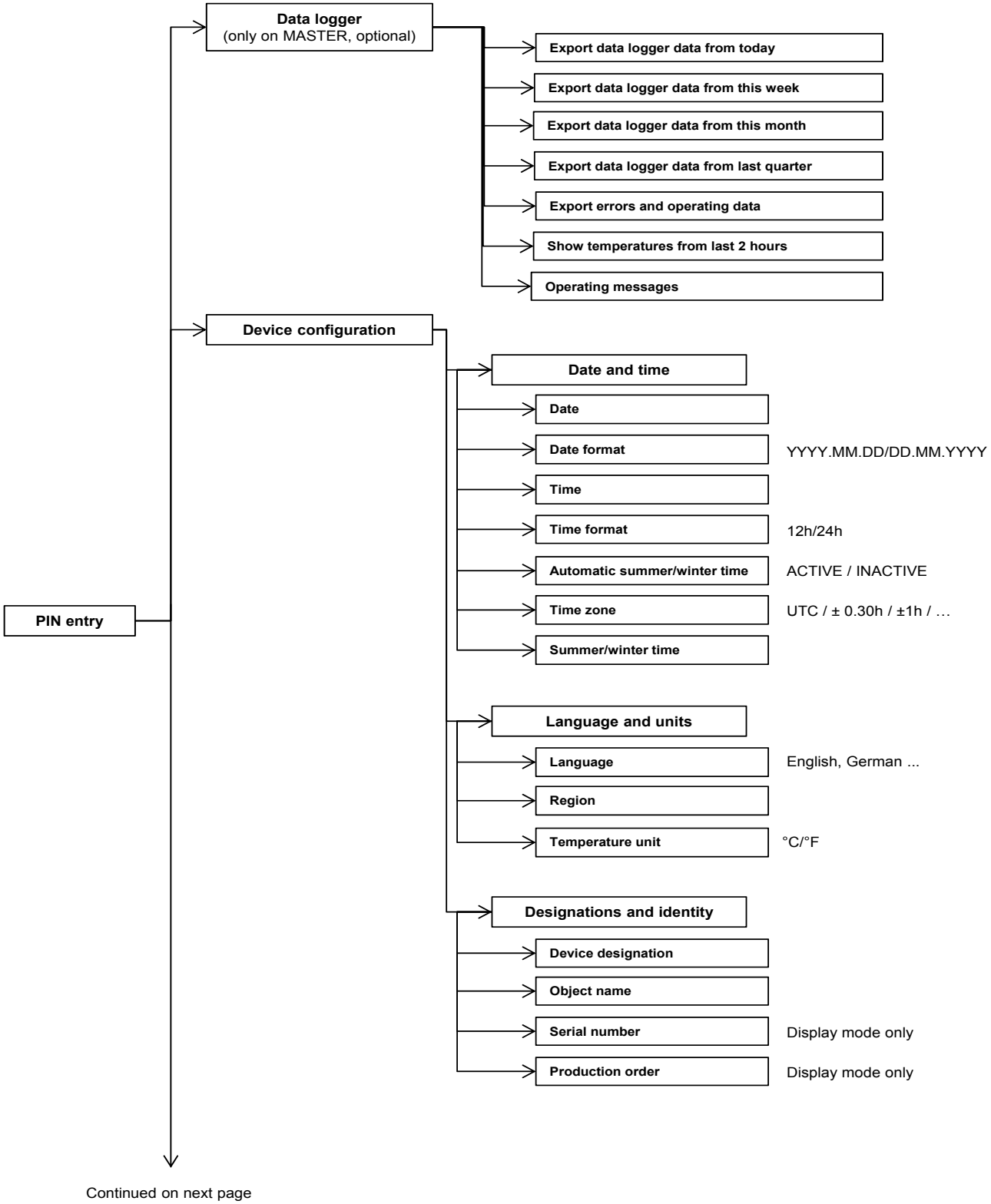
Program structure Page 2



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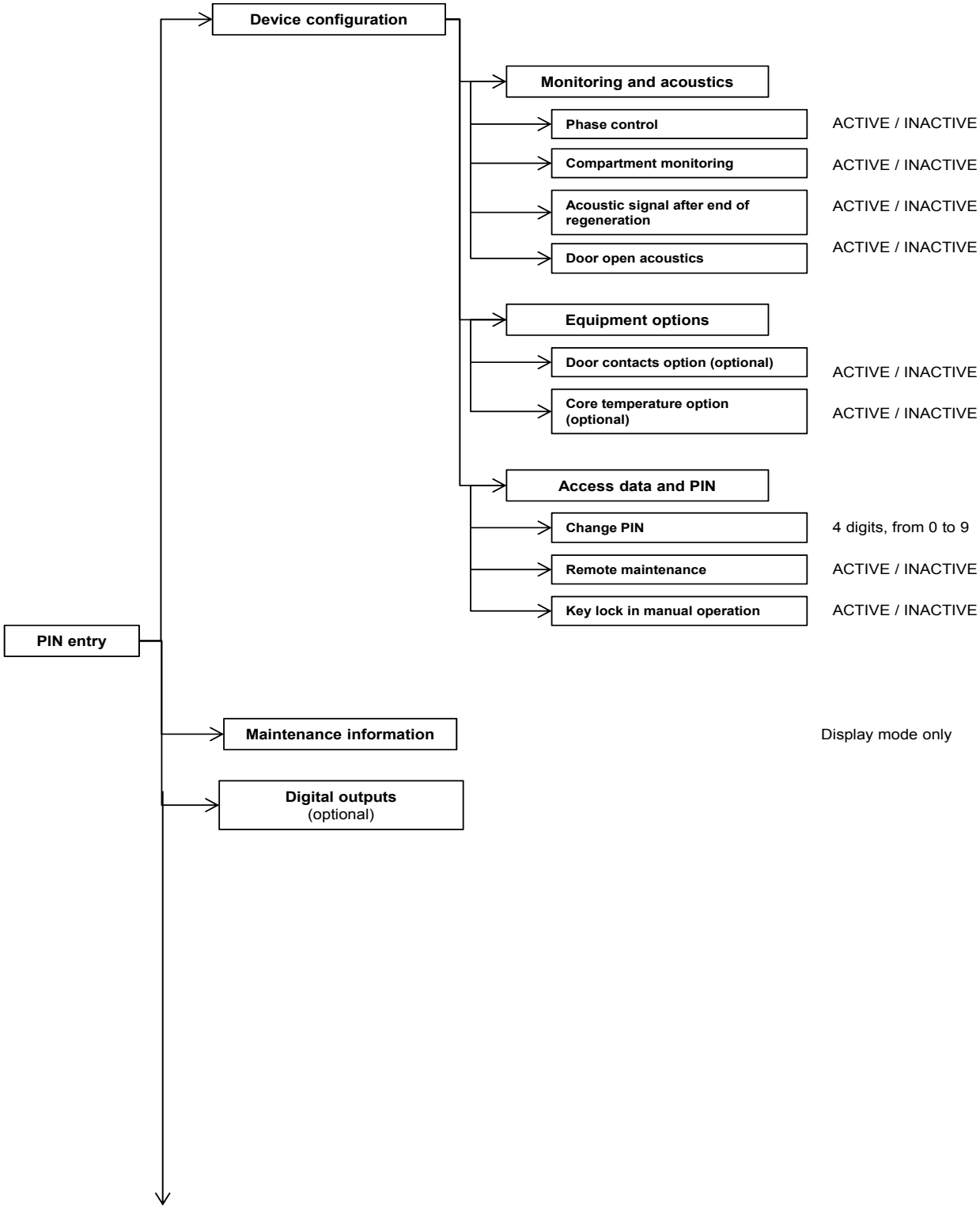
Program structure Page 3



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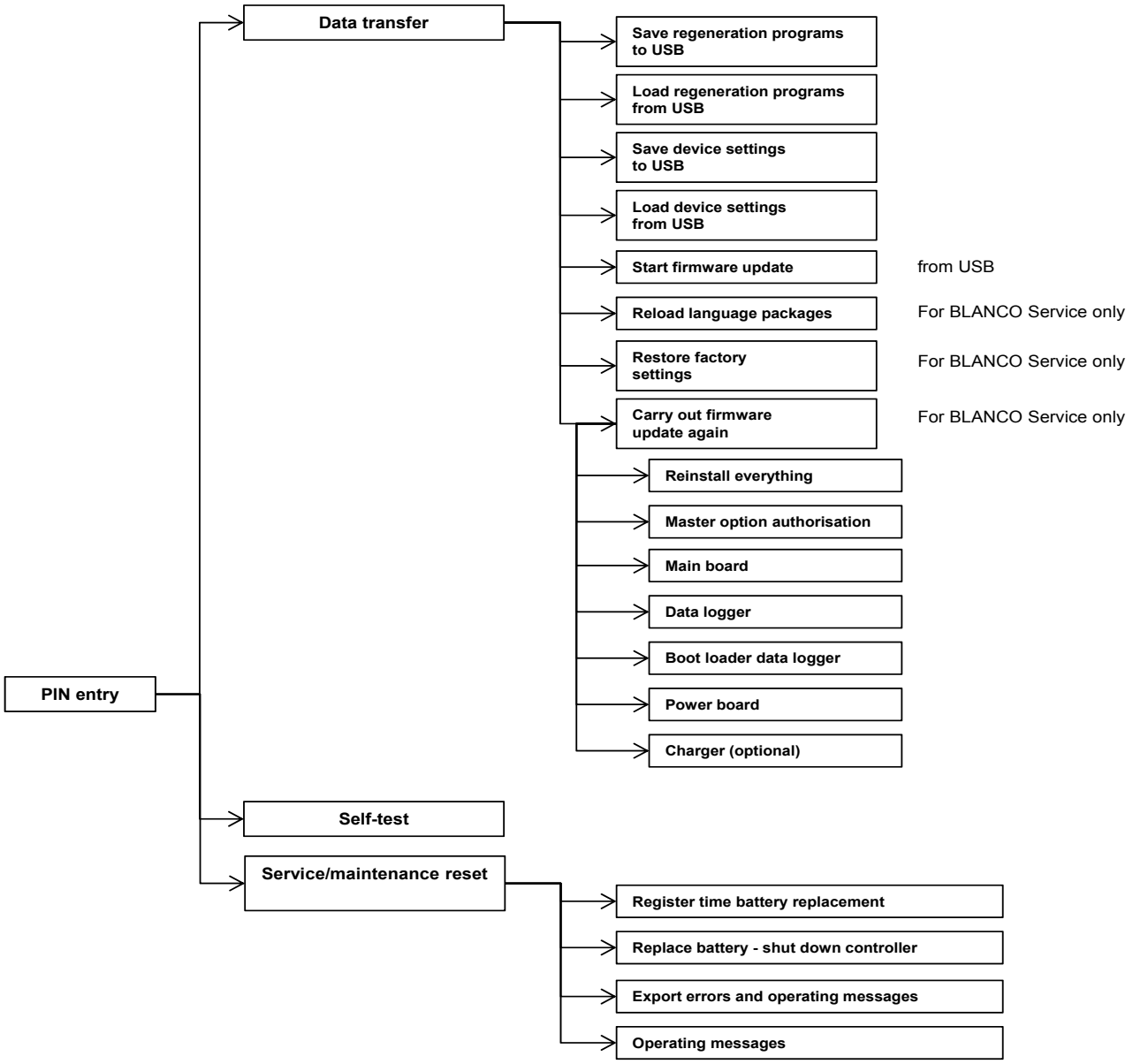
Program structure Page 4



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