

ebsmoke.com

downloads

Content

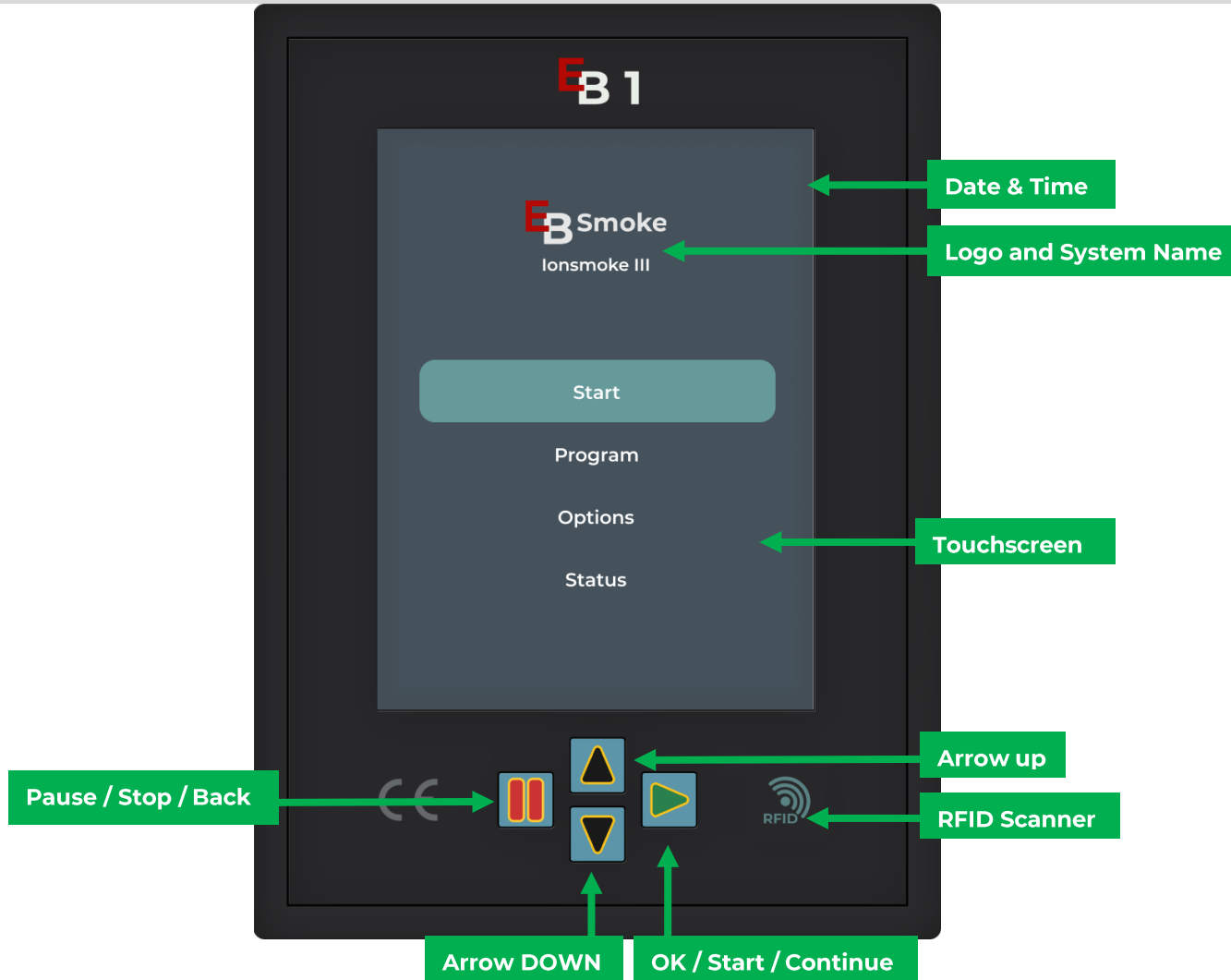
OPERATION EB1	4
FRONTPANEL	4
PROGRAMMING AND OPERATION	5
PROGRAMMING	5
CHANGE PROGRAM NAME	6
DELETE PROGRAM STEP	7
READ PROGRAM	8
START PROGRAM	9
IN THE RUNNING PROGRAM- „PAUSE / EXIT“	10
IN THE RUNNING PROGRAM- „ CHANGE REMAINING TIME “	11
IN THE RUNNING PROGRAM - " VIEW ACTIVE RELAYS“	12
STOP THE HORN AFTER PROGRAM END	13
SERVICE PROGRAMS	14
SINGLE RELAY TEST	14
LANGUAGE	15
DATE AND TIME	16
NETWORK CONFIGURATION	17
BENUTZERVERWALTUNG	18
USB UPDATE	19
SENSOR CALIBRATION	20
CALIBRATE ANALOG OUTPUTS (CAUTION!)	21
STATUS	22
ACTIVATE IONSMOKE	23
ACTIVATE BATCH NUMBER	24
DISPLAY SETTINGS	25
SETTING THE SERVICE VARIABLES	26
VARIABLE 01 - HUMIDIFICATION	27
VARIABLE 02 - DEHUMIFICATION	27
VARIABLE 03 – HORN	27
VARIABLE 04 – SMOKE FEEDER	28
VARIABLE 05 – CORE TEMPERATURE – SWITCH ON/OFF ACTUAL VALUE	28
VARIABLE 06 - REDUCTION HEATING POWER	28

VARIABLE 07 – HUMIDITY CYCLE (ODER CLOCKED HUMIDITY?)	29
VARIABLE 08 – ADDITIONAL IGNITION	29
VARIABLE 09 – SHOWER REDUCTION < KORREKT?	29
VARIABLE 10 – CLEANING INTERVAL	29
VARIABLE 11 - RESERVE	29
VARIABLE 12 - SWITCH TEMPERATURE MONITORING ON/OFF	30
VARIABLE 13 – CLOCKED HEATING A < KORREKT?	30
VARIABLE 14 – CLOCKED HEATING B	30
VARIABLE 15 – MINIMAL ON/OFF TIME FOR HEATING WITH OIL/GAS	31
VARIABLE 16 - NUMBER OF FEEDS DURING PRE-IGNITION OF THE SMOKE GENERATOR	31
VARIABLE 17 - SWITCHING THE GLYCOL CONTROLLER ON/OFF	31
VARIABLE 18 - GLYCOL CONTROLLER ADJUST THE FLOW TEMPERATURE	31
VARIABLE 19 - GLYCOL CONTROLLER CONTROL DELAY	32
VARIABLE 20 - GLYCOL CONTROLLER TEMPERATURE MONITORING	32
VARIABLE 21 - SWITCH ENTALPHY CONTROLLER ON/OFF	32
VARIABLE 22 - ENTALPHY CONTROLLER HYSTERESIS TEMPERATURE	32
VARIABLE 23 - ENTALPHY CONTROLLER PROPORTIONAL BAND TEMPERATURE	33
VARIABLE 24 - ENTALPHY CONTROLLER HYSTERESIS HUMIDITY	33
VARIABLE 25 - ENTALPHY CONTROLLER PROPORTIONAL BAND HUMIDITY	33
VARIABLE 26 - SWITCHING ADDITIONAL CORE TEMPERATURE SENSORS ON/OFF	33
VARIABLE 27 - SWITCH TEMPERATURE DISPLAY IN °C (CELSIUS)/°F (FAHRENHEIT) ON/OFF	34
VARIABLE 28 - BLANK	34
VARIABLE 29 - TIMING FOR SECOND CORE TEMPERATURE SENSOR	34
VARIABLE 30 - SWITCH HUMIDITY MONITORING ON/OFF	34
VARIABLE 31 - SWITCH ACTUAL HUMIDITY DISPLAY ON/OFF	34
VARIABLE 32 - DELTA-T FOR OUTSIDE AIR COOLING	35
VARIABLE 33 - MAXIMUM TEMPERATURE FOR OUTSIDE AIR COOLING	35
VARIABLE 34 – ROTATION DAMPER POSITION 1 (CYLINDER CONTROLLED)	35
VARIABLE 35 - ROTATION DAMPER POSITION 2 (CYLINDER CONTROLLED)	35
VARIABLE 36 - ROTATION DAMPER POSITION 3 (CYLINDER CONTROLLED)	35
VARIABLE 37 - ANALOG HUMIDITY BAND (WITH FI)	36
VARIABLE 38 - DELTA-T FOR „COOKING“	36
VARIABLE 39 - SWITCHING TIME WITH CODE "RSE" (SWITCH OFF RELAY BEFORE END OF STEP)	36
VARIABLE 40 - RECORDING INTERVAL	36

VARIABLE 41 - ENABLE REMOTE POWER ON	37
VARIABLE 42 - CYCLE INTERVAL FOR CODE "TAK	37
VARIABLE 43 - BLANK	37
VARIABLE 44 - BLANK	37
VARIABLE 45 - BLANK	37
VARIABLE 46 - FAN MINIMUM FOR RIPENING "RF"	37
VARIABLE 47 - SWITCHING THE DISPLAY OF THE DEGREE/HOURS-VALUE ON/OFF	38
VARIABLE 48 – ROTATION DAMPER POSITION 4	38
VARIABLE 49 – TEMPERATURE OFFSET	38
VARIABLE 50 – TEMPERATURE TIMEOUT (TEMPERATURE MONITORING)	38
VARIABLE 51 - SENSOR CONFIGURATION	39
VARIABLE 52 – MONITORING SMOKE GENERATOR FLAP	39
ERROR CODE EXPLANATIONS	40
RAM ERRORS	40
AUFSETZ ERROR	41
SENSOR ERROR	41
IGNITION ERROR	42
ERROR 5	42
TIMER DEFECTIVE	42
TEMPERATURE CONTROL	43
CROSS SUM ERROR	43
SERVICE VARIABLE	43
FEEDER ERROR	44
GLYCOL-TEMP. ALARM	44
RELAY ERROR	44
OPTO 1	45
OPTO 2	45
OPTO 3	45
OPTO 4	45
OPTO 5	46
OPTO 6	46
OPTO 7	46
OPTO 8	46

OPERATION EB1

Frontpanel

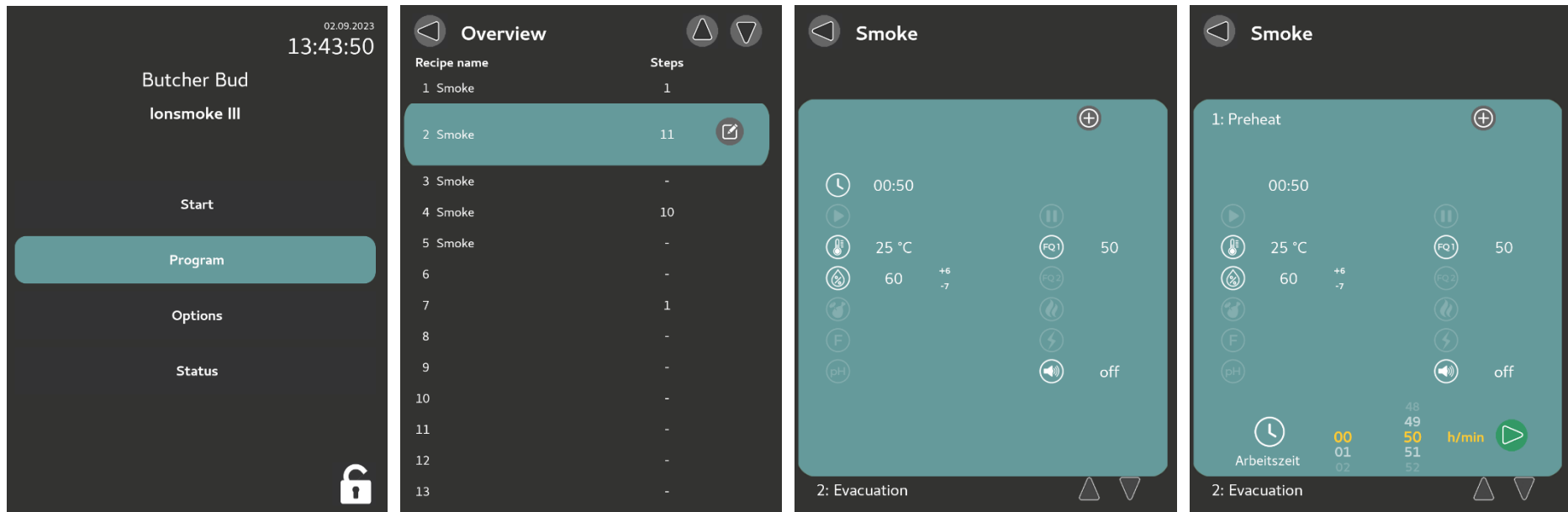


PROGRAMMING AND OPERATION

Programming

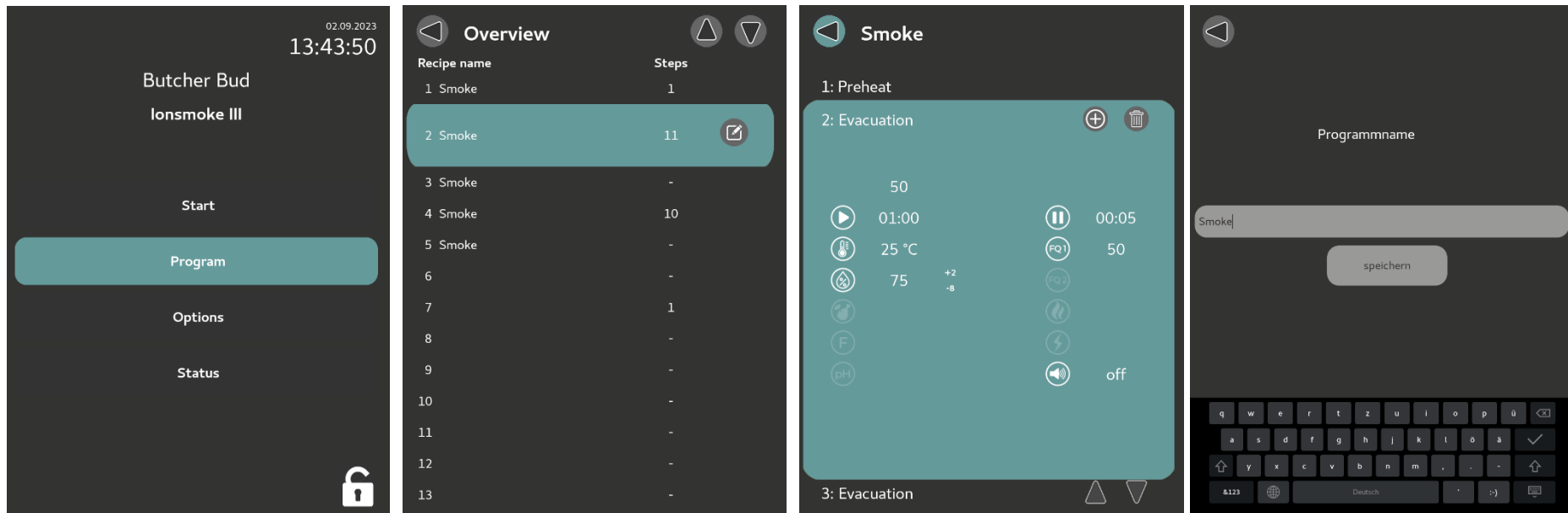
1. Click on **Program** in the main menu (or click the physical down arrow key until Program is colored. Then confirm with green arrow key.)
2. Choose **Program** with help of arrows or touchscreen
3. Select **process code**
4. Define **values by clicking on the symbol** (greyed symbols are not available on that step)

Attention: If you want to set a target core temperature you must set working time to 0h 0min. Otherwise it will be greyed out.



Change Program Name

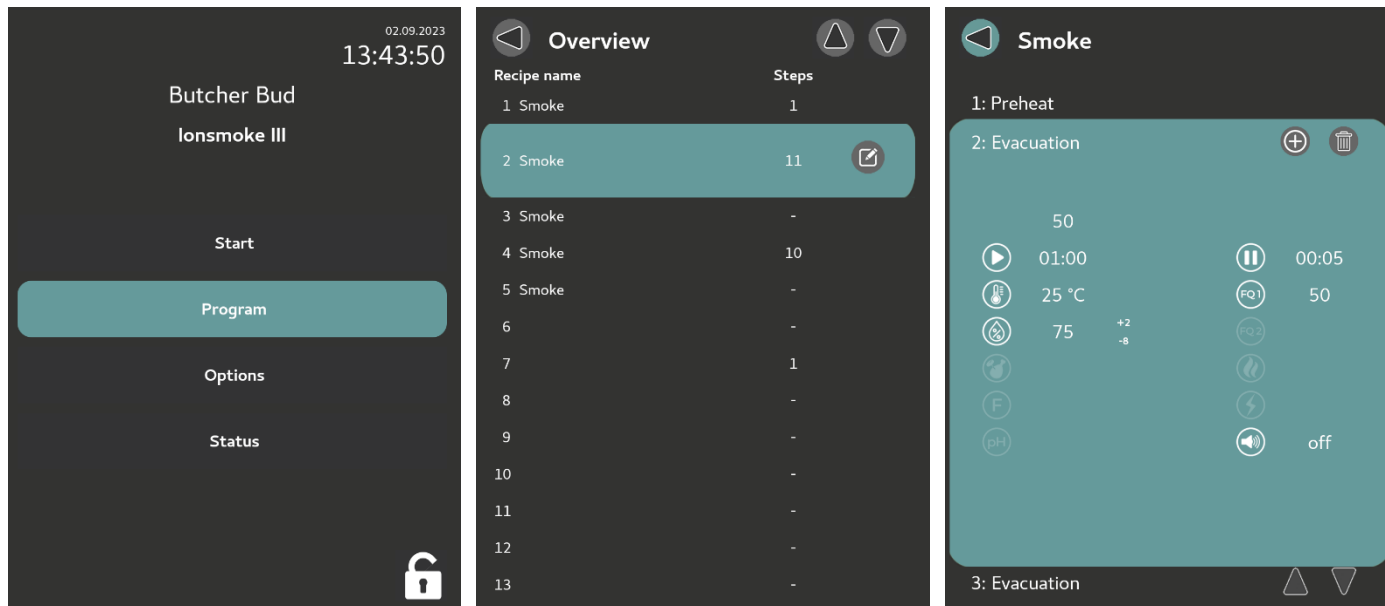
1. Click on **Program** in the main menu (or click the physical down arrow key until Program is colored. Then confirm with green arrow key.)
2. Select the **program number** via the touchscreen or arrow keys and confirm with the green arrow key.
3. Use the touchscreen to click on the **name** at the top (i.e. “Smoke”).
4. Keyboard appears, enter **name** and save.



Delete Program Step

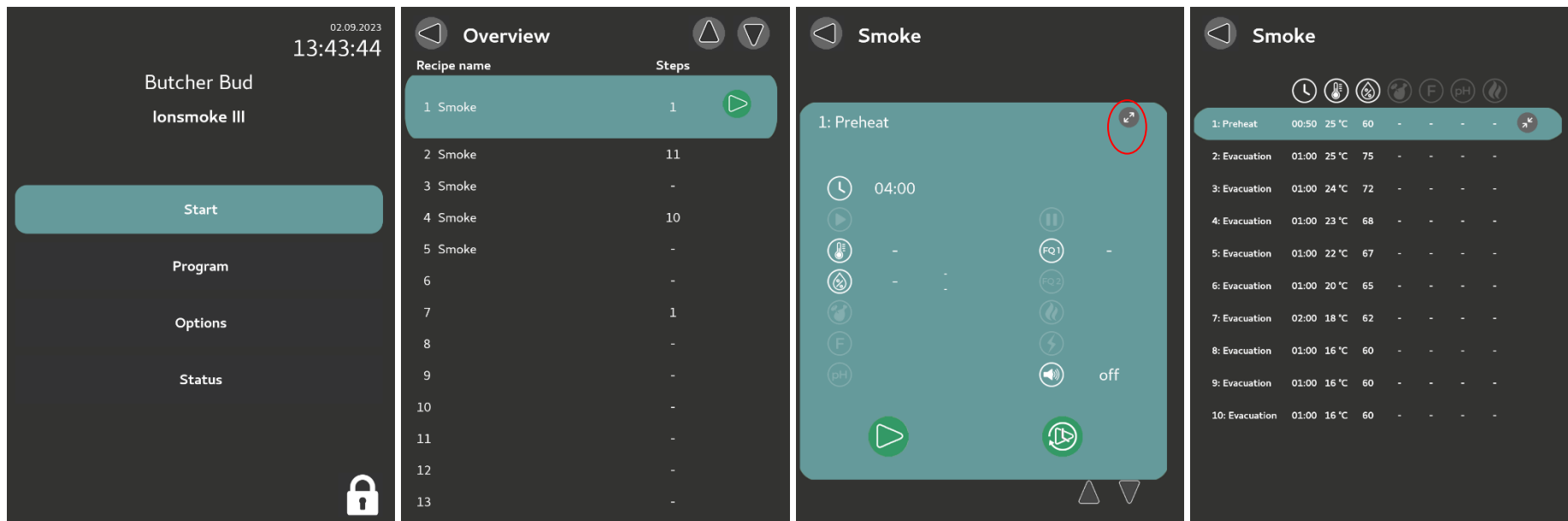
1. Click on **Program** in the main menu (or click down with the physical arrow key until Program is colored. Then confirm with green arrow key).
2. Select **program number** via touch screen.
3. Select **process code**.
4. Click on the **recycle bin** at the top right.

Attention: The first step can only be deleted at the end. First delete all other steps.



Read Program

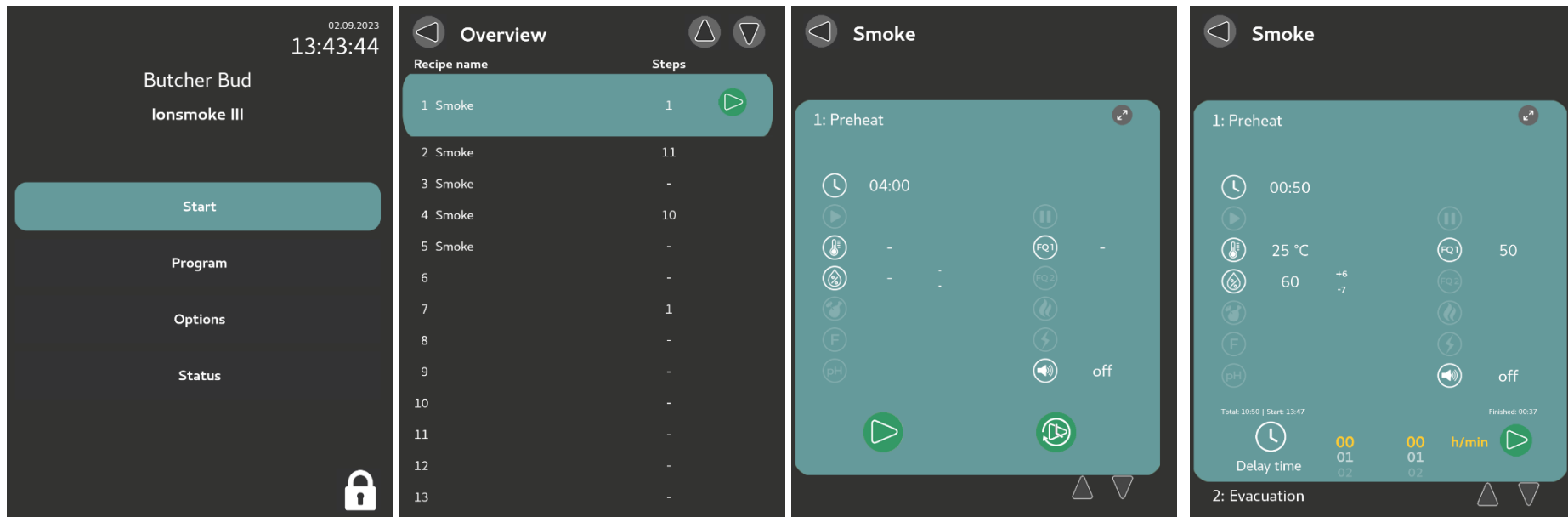
1. Click on **Start** in the main menu (or click down with the physical arrow key until Start is colored. Then confirm with green arrow key).
2. Select the **program number** via the touch screen or arrow keys and confirm with the green arrow key.
3. Click **expanding arrows** on top right to see the detailed program.



Start Program

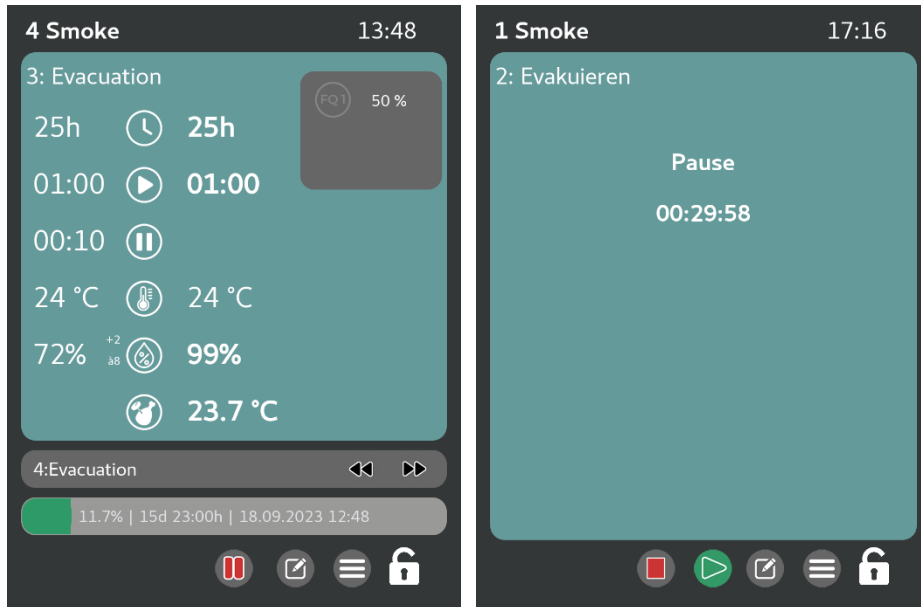
1. Click on **Start** in the main menu (or click down with physical arrow keys until Start is colored. Then confirm with green arrow key).
2. Select the **program number** via the touch screen or arrow keys and confirm with the green arrow key.
3. Use the arrow keys to select the **step** in which you want to start.
4. **Start** directly with green arrow key, or enter a preset time with arrow key + time.

In the **display settings**, it can be set that the **green keyboard key** is used to start directly - without a pre-selection time.



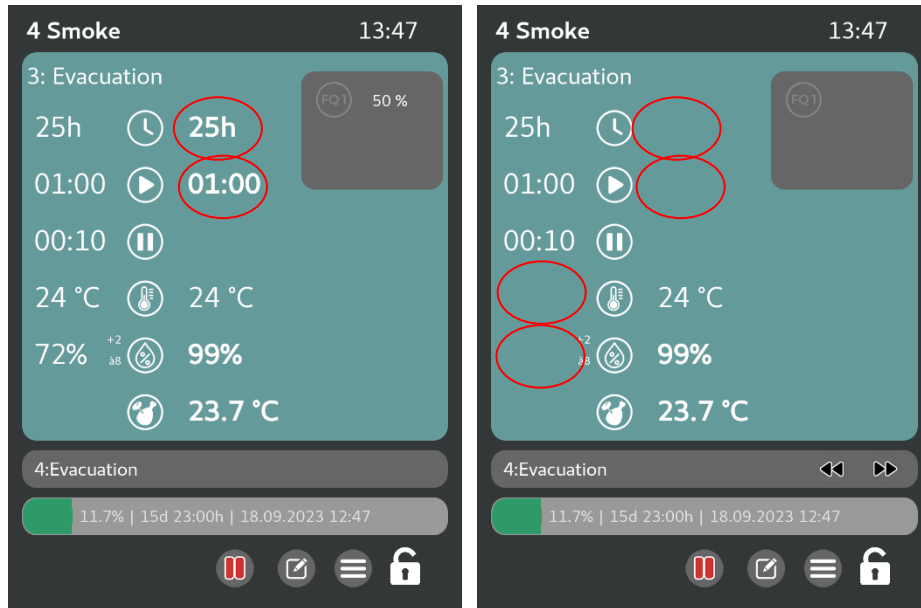
In the Running Program- „Pause / Exit“

Stop program with red "Pause" key. Program goes into pause mode. Continue clicking the red "Stop" key to end the program prematurely.



In the Running Program- „ Change Remaining Time “

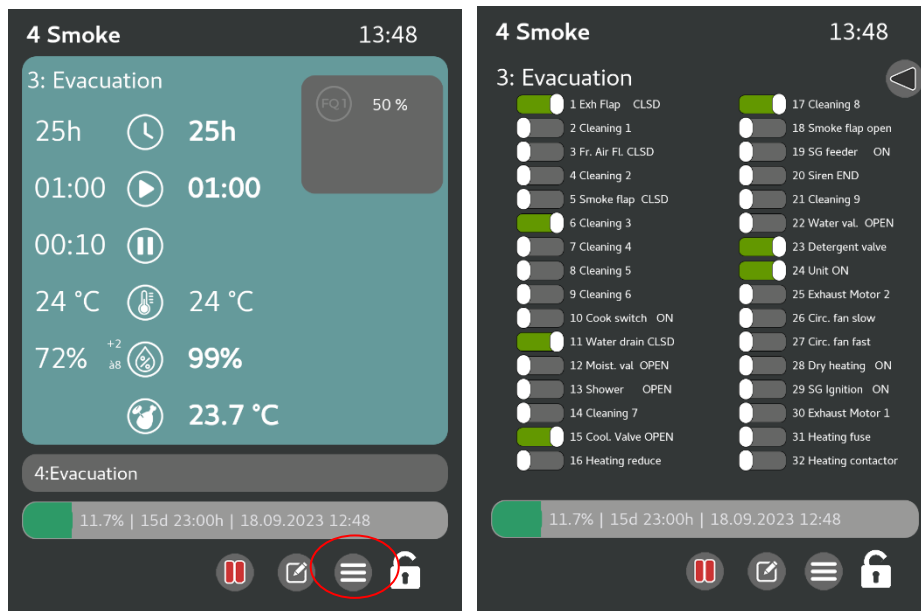
Click the pencil  in the running program. Changeable values light up (red circled values flash).



In the Running Program - " View Active Relays“

In the running program click on the **menu**  – then "active relays". There you can see which relays are currently switched on.

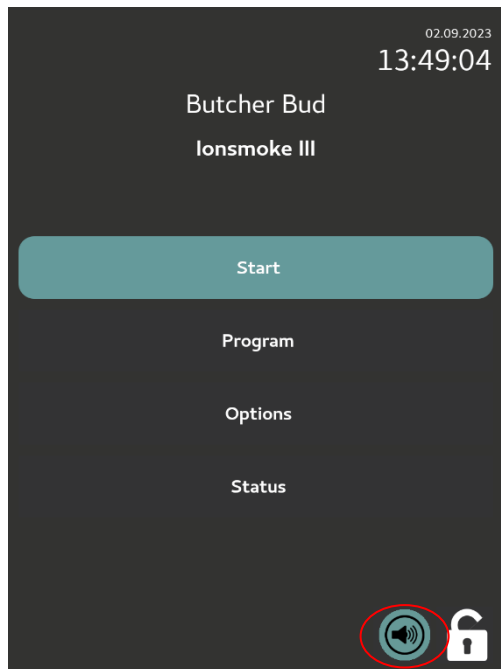
Attention: Update only about every second.



Stop the Horn after Program End

When a program ends, the **signal** starts. To cancel this prematurely, either click the "**Pause**" button on the keyboard or press the **signal symbol** that appears automatically on the start screen.

The signal duration can be set in **service variable 03**.



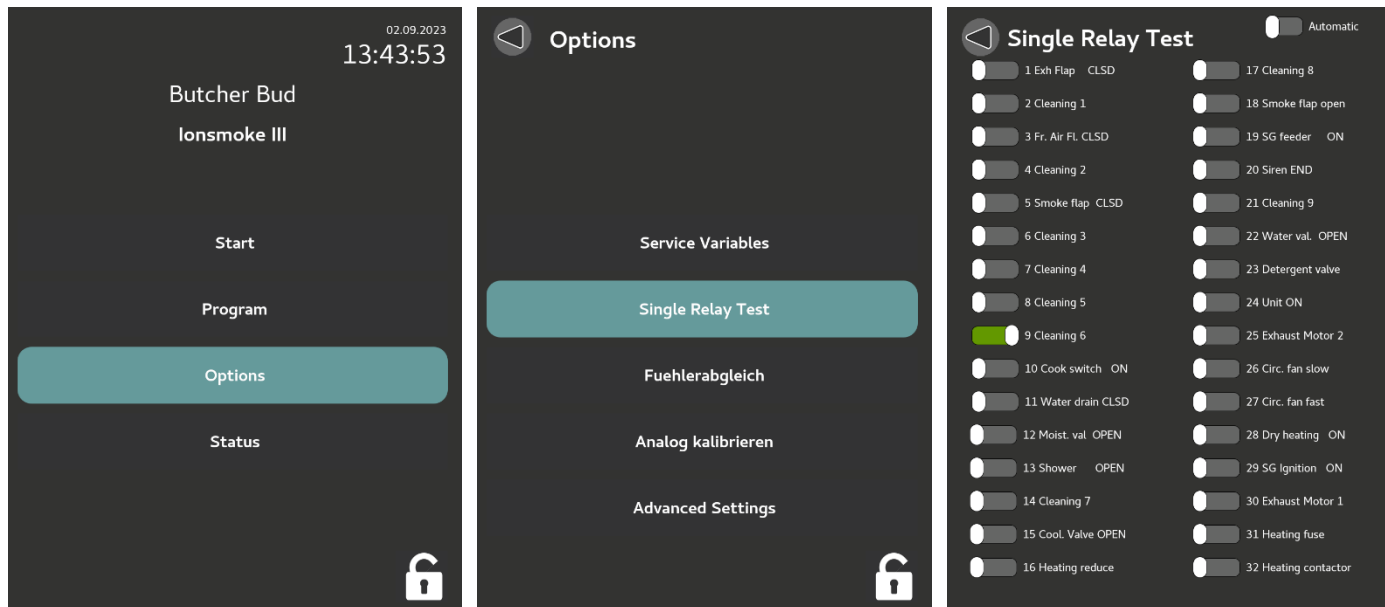
SERVICE PROGRAMS

Single Relay Test

Options > Single Relay Test

Then activate or deactivate the desired **relay** with the touch button.

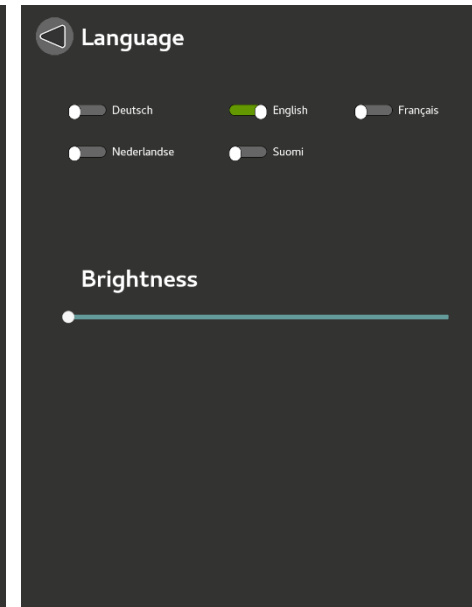
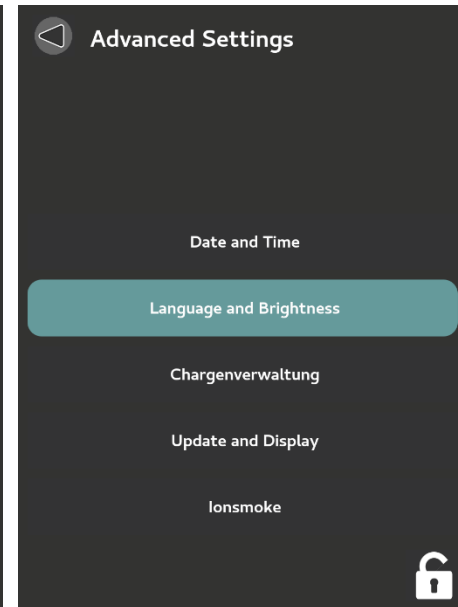
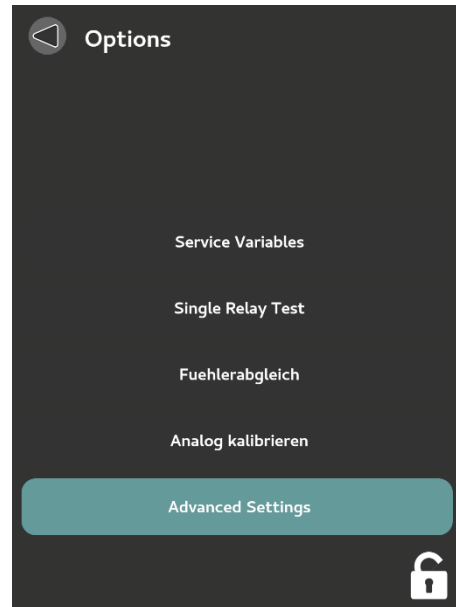
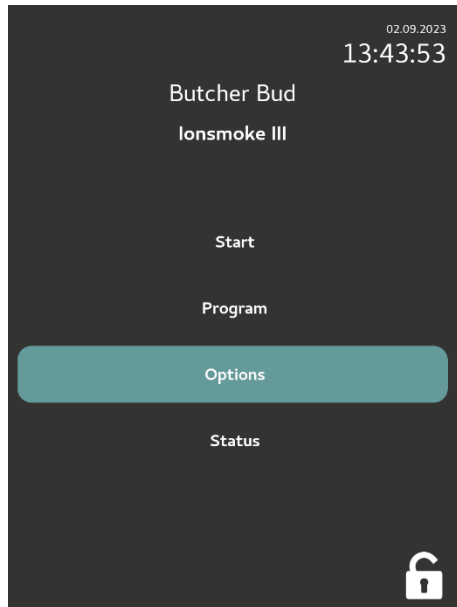
Attention: Only one relay can be active at a time.



Language

Options > Advanced Settings > Language and Brightness

Select desired language there.

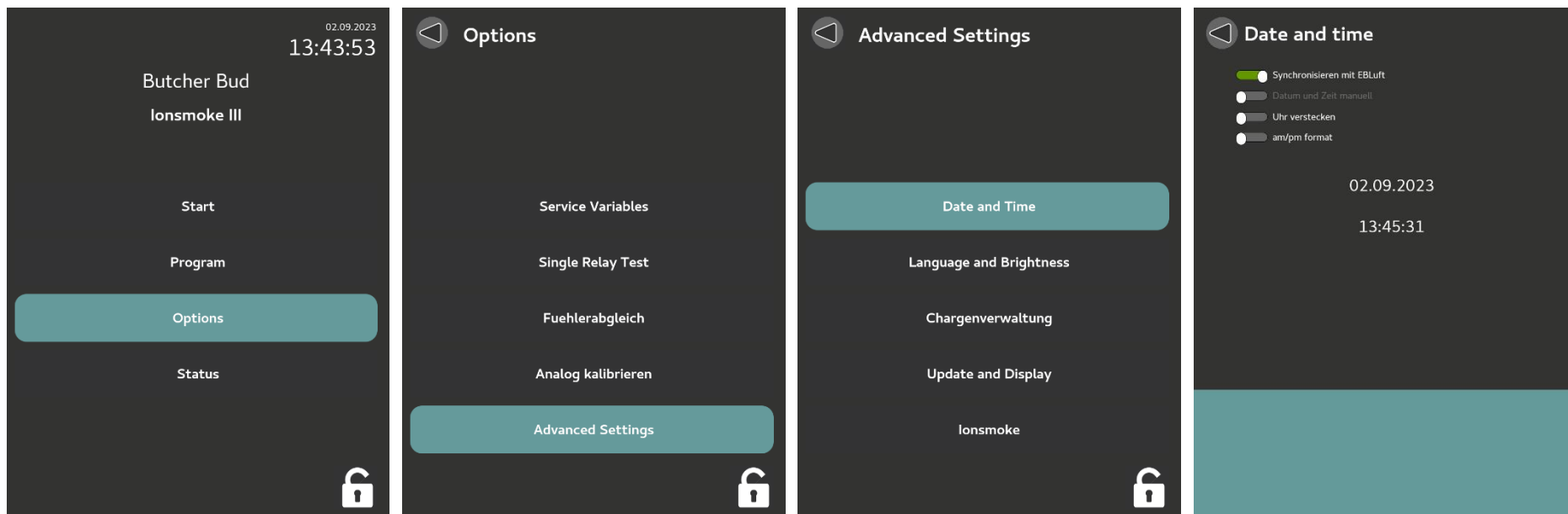


Date and Time

Options > Advanced Settings > Date and Time

Select desired option there.

Attention: Offline recording when there is no connection to the database only works when "Synchronization with EBLuft" is active. If this is active and there is a network failure, the controller stores data itself for up to two weeks and then writes it automatically to the data recording as soon as the connection is re-established.

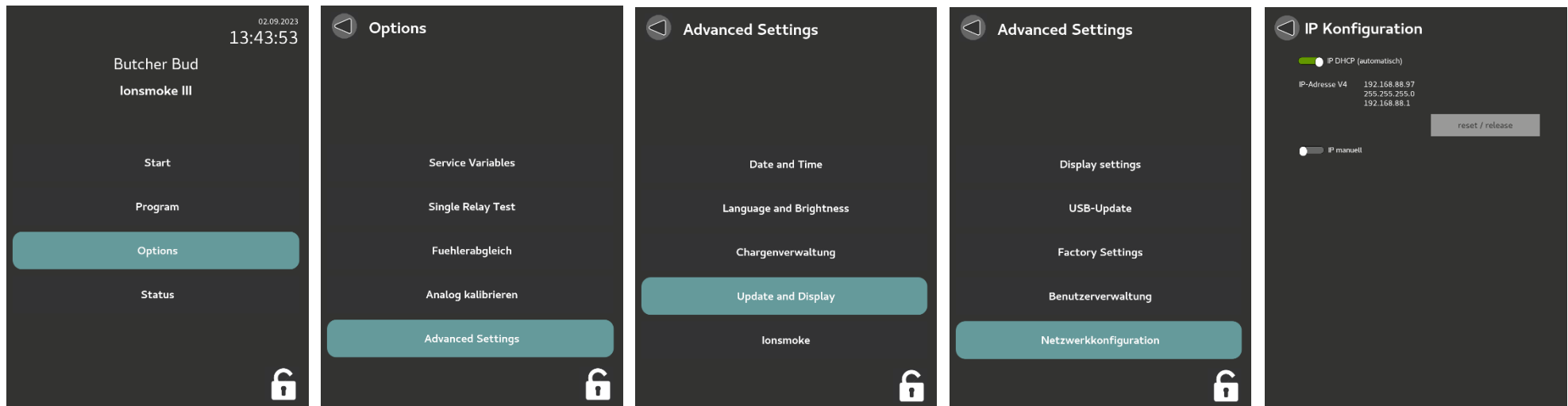


Network Configuration

Options > Advanced Settings > Network Configuration

Select desired option there.

Network tries to connect via **DHCP** by default. If you want to assign your own **fixed IP** - you can do this either via the MAC address (status screen) or via the network settings. "IP manual".

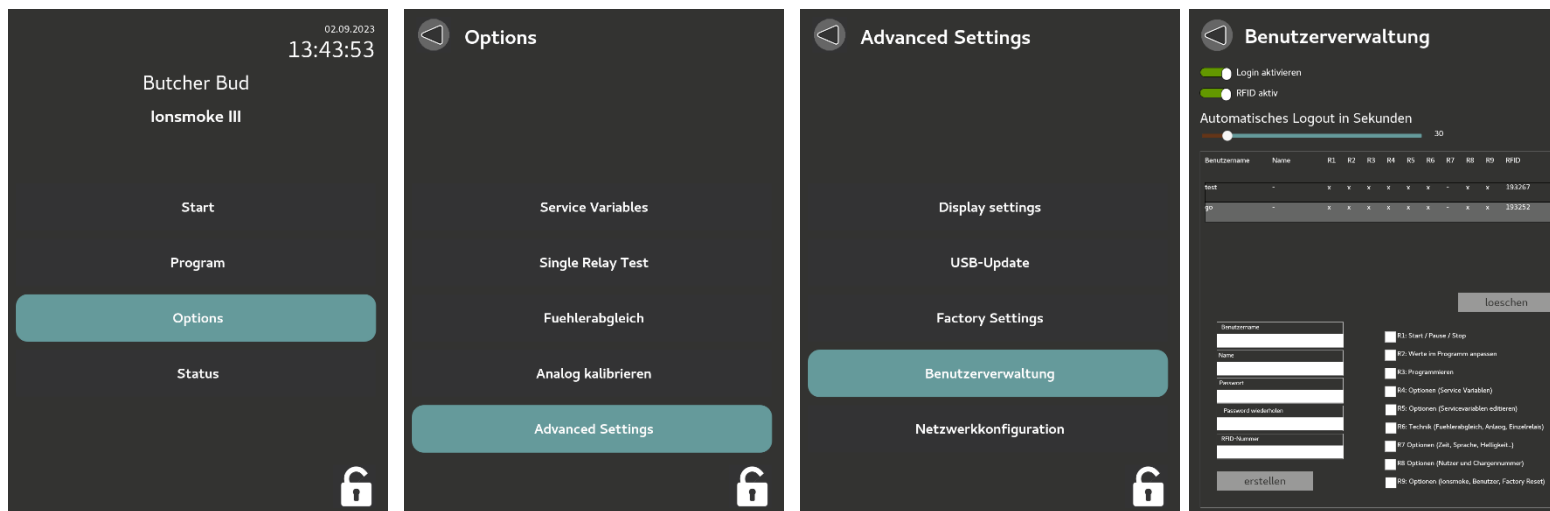


Benutzerverwaltung

Options > Advanced Settings > User Administration

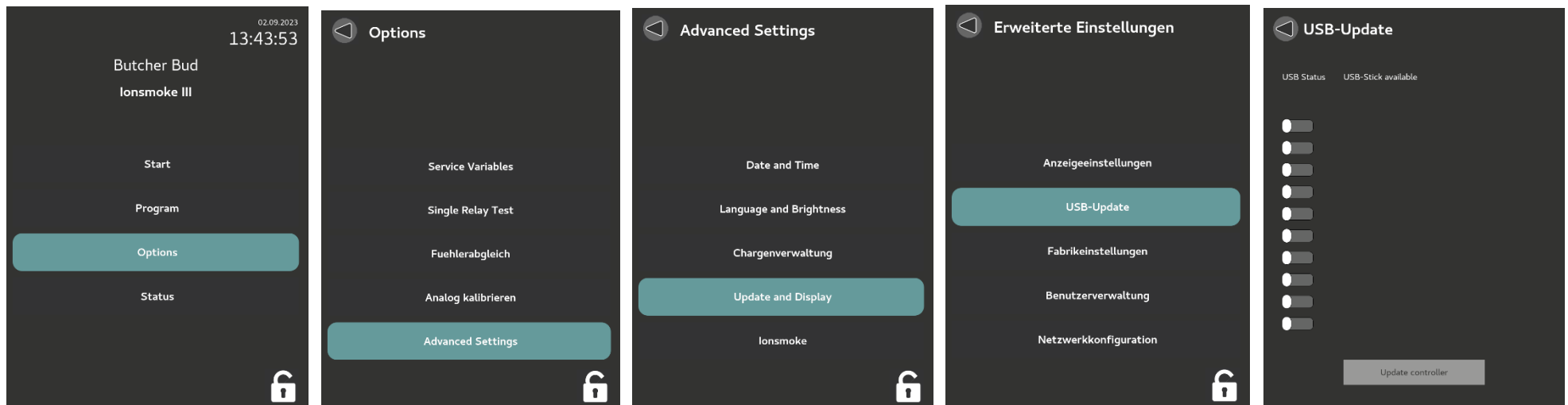
Select desired option there.

Note: RFID is not built in as standard.
Ask us for your personal RFID chips or integration into your existing system.



USB Update

1. USB stick with FAT32 formatting.
2. Create a main USB folder called "Update" - put the file "EB1Update.zip" into it.
3. Insert USB stick into **EB1**.
4. Go to **Options > Advanced settings > USB update**.
5. When the USB folder is loaded, you should be able to click on the "Update" folder.
6. Then click "Update controller"
7. **IMPORANT**: wait for 3 minues, while the update is performed.
8. Then turn off the power and restart (power cycle). ⚡

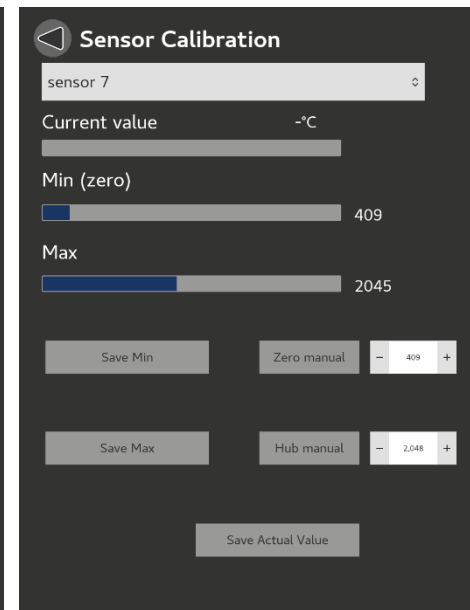
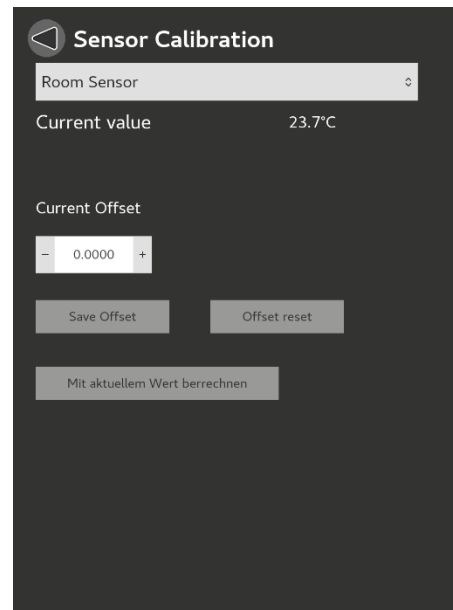
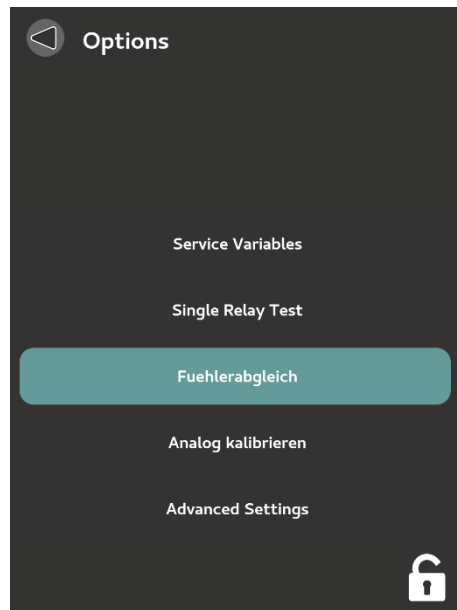
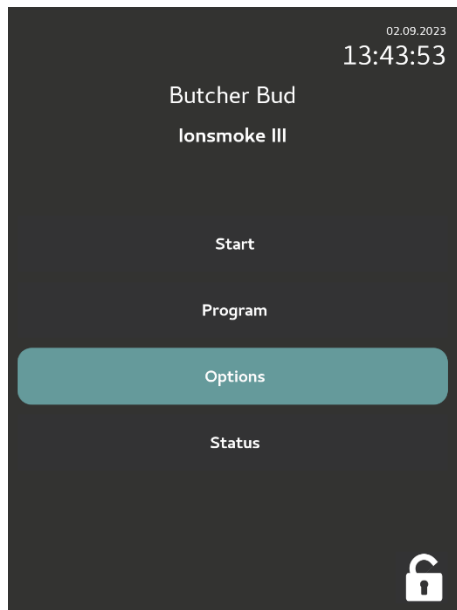


Sensor Calibration

Options > Sensor Calibration

The current temperature value appears at "**Current value**". The corresponding offset value is saved with "**Save offset**".

Attention: Sensors must be checked with a reference sensor at regular intervals.
 Correct sensor calibration according to instructions "**EB1 Sensor Calibration**" under www.ebsmoke.com/downloads



Calibrate Analog Outputs (CAUTION!)

Options > Anlaog Calibration

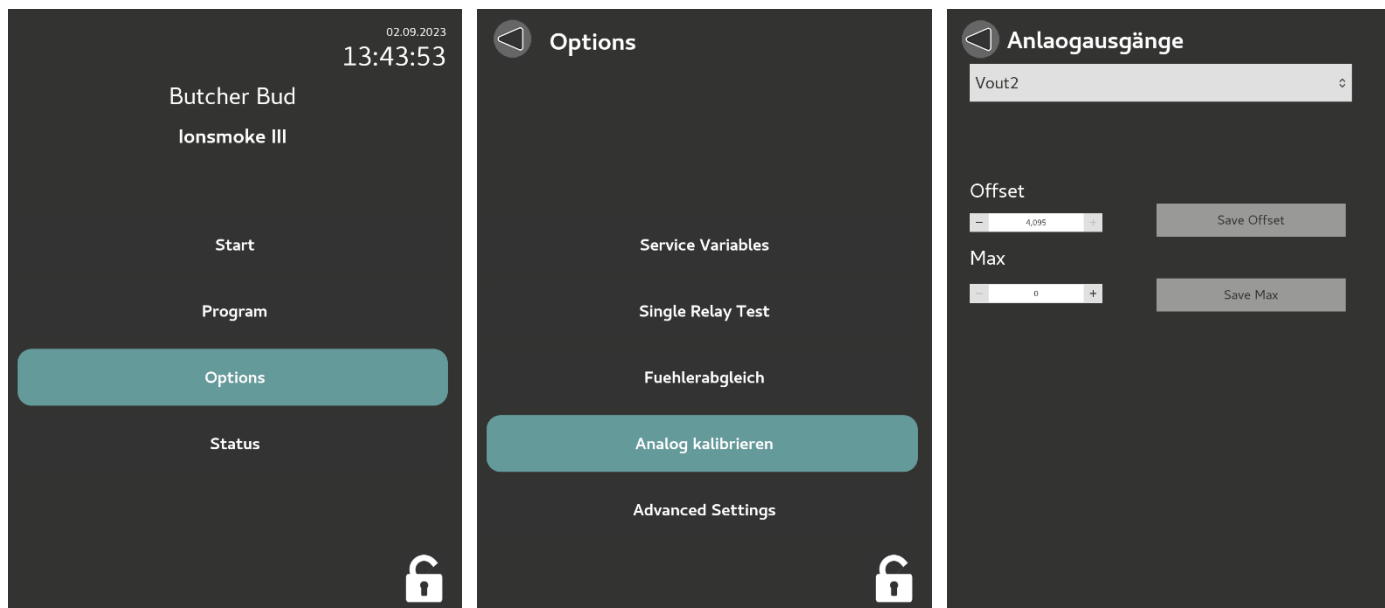
At "Offset" the momentary value appears.

For Vout1 to Vout4: Offset 0 and Max 1000

For Iout1 to Iout4: Offset 409 and Max 2048

The corresponding offset value is saved with "Save offset" and "Save Max".

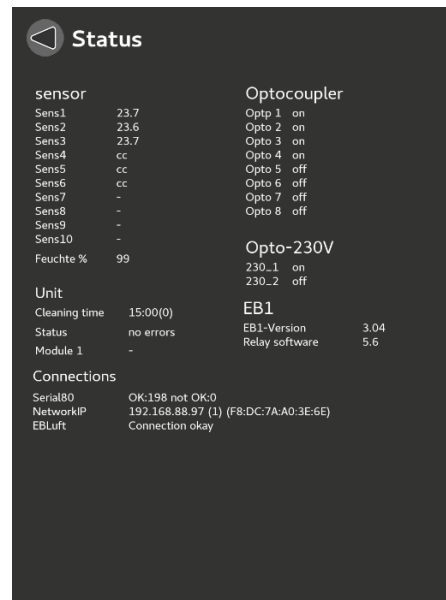
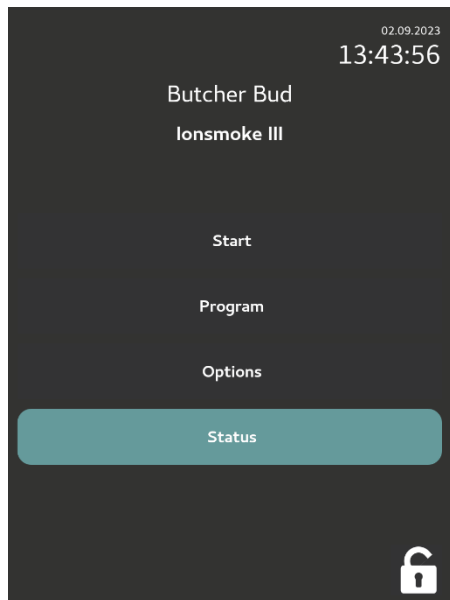
Note: This can be used to calibrate the analog outputs of the controller. Special measuring devices are required for this purpose. This service program may be performed only by the technical personnel.



Status

View **status screen**.

Note: If NetworkIP brackets show (0) – it means no Network Cable is plugged in. Check health of cable then.

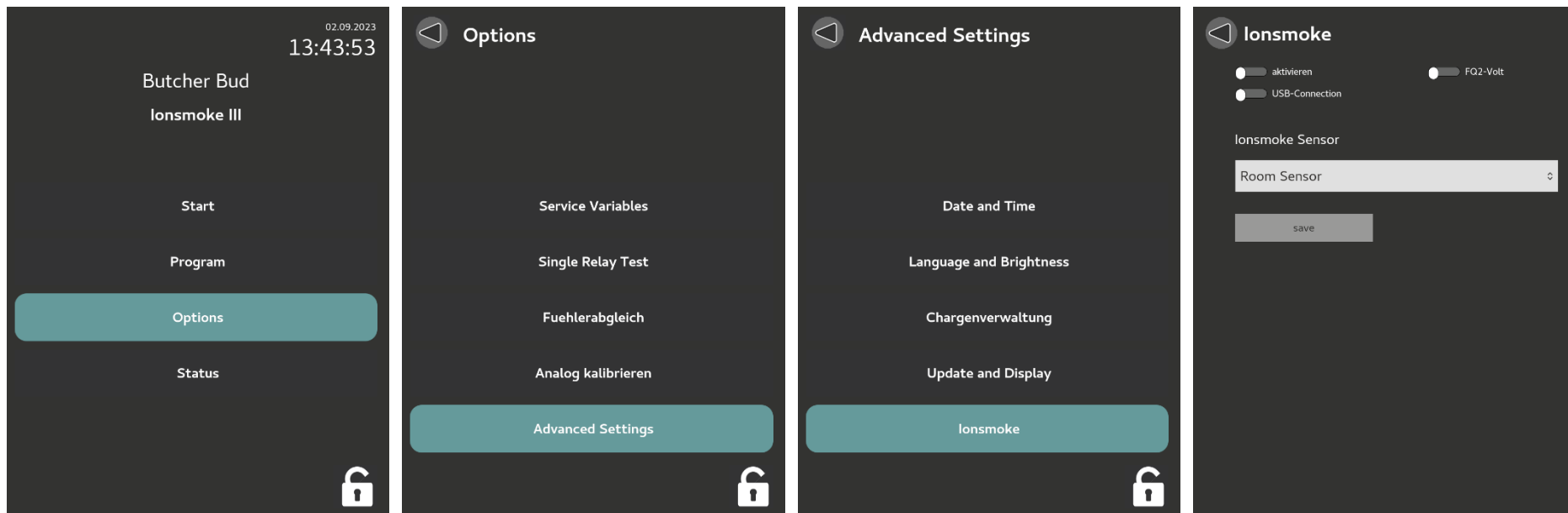


Activate Ionsmoke

Options > Advanced Settings > Ionsmoke

For the **Ionsmoke function** to work, it can be activated via the options. Ionsmoke is controlled via USB in 99% of cases. This means that **"activated"** must be selected and **"USB connection"**. After that, the controller should be restarted to reinitialize the USB connection to Ionsmoke.

Ionsmoke is not installed by default. Ask us or visit our website:
www.ionsmoke.com

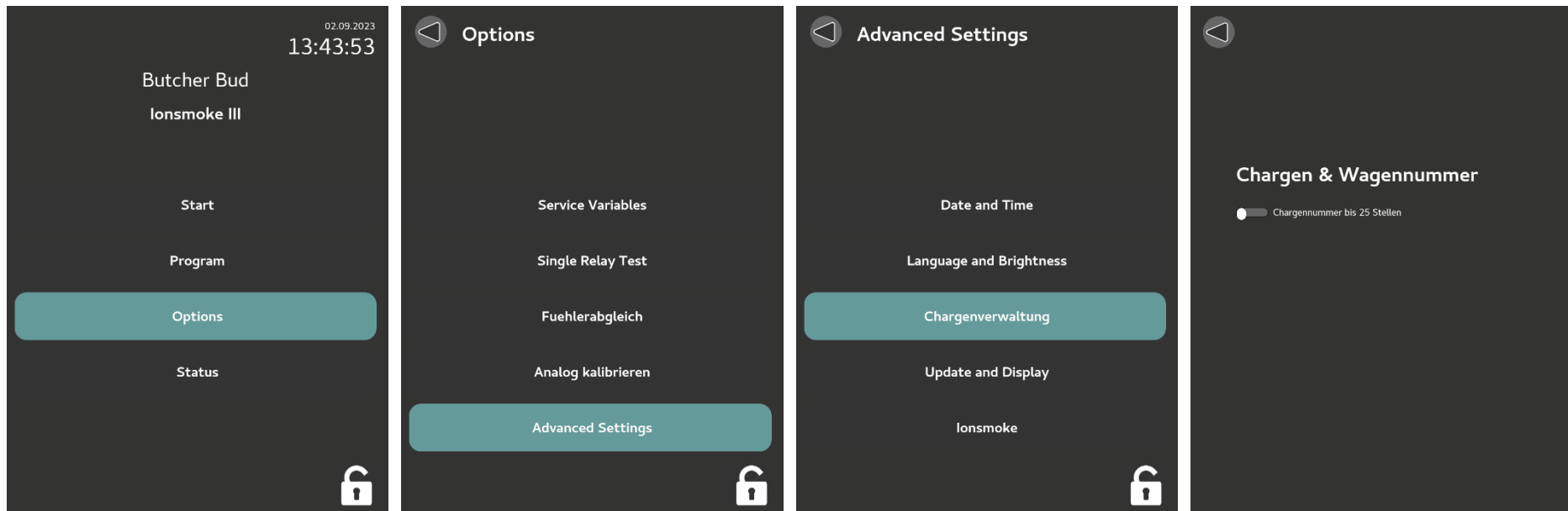


Activate Batch number

Options > Advanced Settings > Batch Numbers

Here you can select the input for batch number and carriage number.

When starting a program, a batch number with max. 25 digits and the carriage numbers can be entered.



Display Settings

Options > Advanced Settings > Update and Display > Display Settings

Various settings can be made here, e.g. "Large clock when control is at standstill".

The sequence of screenshots illustrates the navigation path:

- Screen 1:** Main menu showing "Butcher Bud", "Ionsmoke III", and buttons for "Start", "Program", "Options", and "Status".
- Screen 2:** "Options" menu with "Advanced Settings" selected.
- Screen 3:** "Advanced Settings" menu with "Update and Display" selected.
- Screen 4:** "Advanced Settings" sub-menu with "Display settings" selected.
- Screen 5:** "Display" settings screen with various options like "Zusätzlicher Fuehler" and "Verschiedenes".

A blue callout box with an arrow points to the final "Display" screen, containing the text: "This screen appears after about 30 seconds of inactivity when no program is running and the controller is in the main menu."


SETTING THE SERVICE VARIABLES

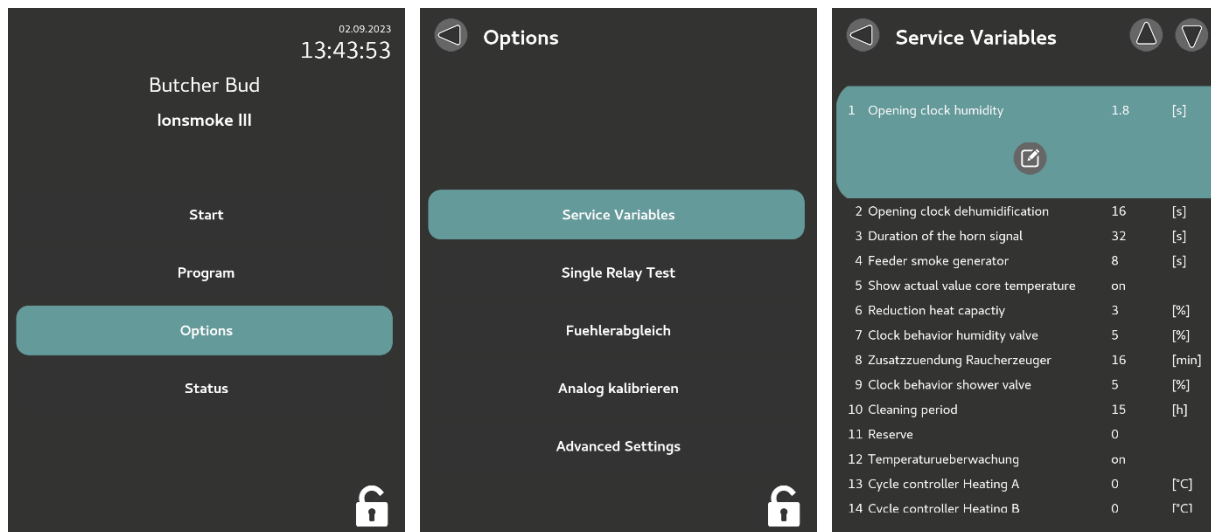
The controller has various service programs with which some **variables** can be determined. These programs are described below.

The values are set by the supplier during commissioning. It is nevertheless important that the operator of the plant has an idea of these possibilities, since in some malfunctions the variables must be reset.

The service variables screen can be accessed as follows:

Options > Service Variables

Then select the desired variable with arrow key or touch and change the values with pencil button .



Select one of the variables numbers 1-52 from the list here.

Note: some of the variables are only optionally available. Please discuss these with your supplier.

Variable 01 - Humidification

This determines the **opening time** of the **humidification** valve. It is permissible to select between a digit "01" and "99". The assigned value refers to 1 / 10 second per digit. So, 99 = 9.9 seconds.

Special: In combined smoke, cooking and intensive cooling systems, this variable is set to the value 1 second per digit and is used there for humidification in the cooling phase.

Variable 02 - Dehumidification

This determines the **opening time** of the **fresh air and exhaust air dampers** during dehumidification. It is permissible to select between a digit "01" and "99". The assigned value refers to 1 second per digit. Thus, 99 = 99 seconds.

Variable 03 – Signal

This defines the duration of the horn signal at the end of the program. It is permissible to select between a digit "01" and "99". The assigned value refers to 1 second per digit.

So 99 = 99 seconds.

Optionally, the value can be set to minutes.

Variable 04 – Smoke Feeder

This defines the time during which the gear unit is to run for the smoke feeder. It is permissible to select between a digit "01" and "99". The assigned value refers to 1 second per digit.

So for 99 = 99 seconds.

Note: the feeder should always make one complete turnaround.

Variable 05 – Core Temperature – switch on/off actual value

This activates the display for the **actual value** of the **core temperature**, even if no setpoint has been programmed.

The following applies for "0" = inactive and "1" = active

Variable 06 - Reduction Heating Power

This defines the **duration** of the **heating cycle for delta cooking processes**. It is permissible to select between a digit "01 " to "10". The assigned value refers to the tenfold value in %.

So for 10 = 100 % If 100% duty cycle corresponds to 60 seconds, then 50% is 30 seconds ON and 30 seconds OFF

This variable should only be selected for cooking processes with low-pressure steam.

Variable 07 – Humidity Cycle

This determines the duration of the **cycle** for the **humidity valve**, from humidification via the humidity controller. It is permissible to select between a digit "01" and "10". The assigned value refers to the tenfold value in %.

So for 10 = 100 % If 100% duty cycle corresponds to 20 seconds, then 50% is 10 seconds ON and 10 seconds OFF

Variable 08 – Additional Ignition

This determines the duration of the **after-ignition time** for the **smoke generator**. It is permissible to select between a digit "00" and "15". The assigned value refers to 1 minute per digit.

So for 15 = 15 minutes

Variable 09 – Shower Cycle

This defines the **duration of the shower cycle** during the shower process with **cycle behavior**. It is permissible to select between a digit "01" and "10". The assigned value refers to the tenfold value in %.

So for 10 = 100 % If 100% duty cycle corresponds to 40 seconds, then 50% is 20 seconds ON and 20 seconds OFF

Variable 10 – Cleaning Interval

This defines how many hours the unit may be used for smoking until the next cleaning is to take place. It is permissible to select between a digit "01" and "99". The assigned value refers to 1 hour per digit.

So 99 = 99 hours.

Variable 11 - Reserve

Blank

Variable 12 - Switch temperature monitoring on/off

This defines whether the **temperature monitoring** is to be active or inactive. It is permissible to select between a digit "0" and "1".

In this case, "0" = inactive and "1" = active.

Variable 13 – Proportional Heating A

This determines how many degrees C before the programmed setpoint the heating controller A is to start with the cycle behavior. It is permissible to select between a digit "00" and "50". The assigned value refers to 1 degree C per digit.

So, 15 = 15 degrees C before the setpoint.

With the entry 00, the cycle behavior is switched off.

The set delta-T applies simultaneously to the proportional behavior of the heating controller via the analog output 1 (0-10 volts) or 5 (4-20 mA)

For electric or gas or oil heating, the variable should be set to 00.

Variable 14 – Proportional Heating B

This determines how many degrees C before the programmed setpoint the heating controller B is to start with the cycle behavior. It is permissible to select between a digit "00" and "50". The assigned value refers to 1 degree C per digit.

So 15 = 15 degrees C before the setpoint.

With the entry 00, the cycle behavior is switched off.

The set delta-T applies simultaneously to the proportional behavior of the heating controller via the analog output 1 (0-10 volts) or 5 (4-20 mA)

For electric or gas or oil heating, the variable should be set to 00.

Variable 15 – Minimal ON/OFF time for Heating with Oil/Gas

Due to the legally prescribed safety regulations for oil and gas heating systems concerning ventilation of the system before and after operation, it is necessary to provide a minimum time for these heating systems during which the heating remains active or inactive. The preset time is fixed in the program and cannot be changed by the operator. However, it is possible to switch this mode on or off. It is allowed to choose between a digit "0" and "1".

In this case, "0" = inactive and "1" active.

Variable 16 - Number of feeds during pre-ignition of the smoke generator

This determines the soft number of feeds to be made during pre-ignition. It is permissible to select between a digit "1" and "9".

Here, for "1" = one feed and for "9" = nine feeds.

Variable 17 - Switching the glycol controller ON/OFF

This determines whether the control should work with the glycol controller or not. It is permissible to select between a digit "0" and "1".

Here, "0" = controller inactive and "1" = controller active.

Variable 18 - Glycol controller adjust the flow temperature

This defines the delta-T to the room temperature with which the flow temperature of the glycol circuit is to be controlled. It is permissible to choose between a digit "1" and "20".

Example: Set delta-T = 15. If the room temperature is greater than 15°C, the setpoint for the supply temperature is 0°C. If the room temperature is less than 15°C, the flow temperature is controlled with room temperature minus 15°C. The minimum value is set to -7°C.

The following applies for "1" = 1°C Delta-T and for "20" = 20°C Delta-T

Variable 19 - Glycol controller control delay

This defines after how many measurements the state of the mixing valve is to be changed. It is permissible to choose between a digit "1 " and "20".

Here, "1 " = change of state every 6 seconds and "20" = change of state every 120 seconds.

Variable 20 - Glycol controller temperature monitoring

This determines whether the temperature monitoring of the glycol circuit is active or passive. It is permissible to select between a digit "0" and "1".

Here, "0" = monitoring OFF and "1" = monitoring ON.

Variable 21 - Switch entalphy controller ON/OFF

This defines whether the control is to work with the entalphy controller or not. It is permissible to select between a digit "0" and "1".

Here, "0" = controller inactive and "1" = controller active.

Variable 22 - Entalphy controller hysteresis temperature

This defines from which difference to the room temperature (actual value) the outside air is used. It is permissible to select between a digit "0" and "9".

The following applies for "0" = 0°C temperature band and for "9" = 9°C temperature band

Variable 23 - Entalphy controller proportional band temperature

This determines up to what distance from the setpoint for the room temperature the fresh air damper remains fully open. It is permissible to choose between a digit "0" and "20".

Here, "0" = 0°C proportional band and "20" = 20°C proportional band.

Variable 24 - Entalphy controller hysteresis humidity

This defines from which difference to the humidity (actual value) the outside air is used. It is permissible to choose between a digit "0" and "9".

The following applies for "0" = % humidity band and for "9" = 9% humidity band

Variable 25 - Entalphy controller Proportional band Humidity

This determines up to what distance from the setpoint for humidity the fresh air damper remains fully open. It is permissible to select between a digit "0" and "20".

Here, "0" = 0% proportional band and "20" = 20% proportional band.

Variable 26 - Switching additional core temperature sensors ON/OFF

This determines whether the control should work with additional core temperature sensors or not. It is permissible to choose between a digit "0" and "1".

Here, "0" = mode OFF and "1" = mode ON.

Variable 27 - Switch temperature display in °C (Celsius)/°F (Fahrenheit) ON/OFF

This determines whether the temperature display is to be shown in °C or in °F. It is permissible to select between a digit "0" and "1".

The following applies for "0" = display in °C and for "1" = display in °F

Variable 28 - Blank

blank

Variable 29 - Timing for second core temperature sensor

This defines how long the unit should continue cooking after a second core temperature sensor when this value is reached.... It is permissible to choose between a digit "1" and "59".

Here, "1" = 1 minute of additional cooking time and "59" = 59 minutes of additional cooking time.

Variable 30 - Switch humidity monitoring on/off

This determines whether the additional humidity monitoring is active (time during which there was more than 90% humidity in the process as a % of the total time). It is permissible to choose between a digit "0" and "1".

Here, "0" = inactive and "1" = active.

Variable 31 - Switch actual humidity display on/off

This determines whether the actual humidity should always be displayed. It is permissible to select between a digit "0" and "1".

Here, "0" = display switched off and "1" = display switched on.

Variable 32 - Delta-T for outside air cooling

This defines up to which outside air temperature (core temperature minus delta-T) the outside air is to be used. It is permissible to choose between a digit "0" and "20".

Here, "0" = 0°C Delta-T and "20" = 20°C Delta-T.

Variable 33 - Maximum temperature for outside air cooling

This determines up to which outside air temperature this is used. It is permissible to choose between a digit "0" and "40".

Here, "0" = maximum 0°C air temperature and "40" = maximum 40°C air temperature.

Variable 34 – Rotation damper position 1 (cylinder controlled)

This determines how long the position 1 remains set. It is permissible to select between a digit "0" and "99".

Here, for "0" = no time and for "99" = 99 seconds. (no relays are set)

Variable 35 - Rotation damper position 2 (cylinder controlled)

This determines how long the relays for position 2 remain set. It is permissible to select between a digit "0" and "99".

Here, "0" = no time and "99" = 99 seconds.

Variable 36 - Rotation damper position 3 (cylinder controlled)

This determines how long the relays for position 3 remain set. It is permissible to select between a digit "0" and "99".

Here, "0" = no time and "99" = 99 seconds.

Variable 37 - Analog humidity band (with FI)

This defines when an analog controlled damper is 100% opened. It is permissible to select between a digit "0" and "50".

Here, "0" = no humidity band and "50" = 50% above the programmed humidity setpoint.

This also gives the possibility to control a damper with two positions. The set value means 100% and when this value is exceeded a designated relay is switched. When 50% is exceeded, another relay switches.

Variable 38 - Delta-T for „Cooking“

This determines how many degrees above the core temperature the maximum room temperature is allowed. It is permissible to select between a digit "0" and "50".

Here, "0" = no temperature spread and "50" = 50°C above the measured core temperature value.

Variable 39 - Switching time with code "RSE" (switch off relay before end of step)

This defines how many minutes before step end a relay switches off. It is permissible to select between a digit "0" and "99".

Here, for "0" = no time and for "99" = 99 minutes before step end, a specific relay is switched off.

Variable 40 - Recording interval

This defines the interval at which the data is entered in the graphic. It is permissible to select between a digit "1" and "99".

The following applies for "1" = one entry every second for "99" = one entry every 99 seconds.

Variable 41 - Enable remote power on

This determines whether remote activation is active. It is permissible to select between a digit "0" and "1".

Here, "0" = no remote control and "1" = remote control active.

Variable 42 - Cycle interval for code "TAK

This defines the interval at which a particular relay is clocked. It is permissible to select between a digit "1" and "3000". Here, for "1" = a clocking behavior of 1 second ON and 1 second OFF and for "3000" = a clocking behavior of 3000 second ON and 3000 second OFF. This variable is entered at the beginning of the program.

Variable 43 - blank

Variable 44 - blank

Variable 45 - blank

Variable 46 - Fan minimum for Ripening "RF"

This defines the minimum percentage with which the fan is controlled via the FI. It is permissible to select between a digit "0" and "99".

Here, "0" = no output to the FI and "99" = 99% of the output to the FI.

Variable 47 - Switching the display of the degree/hours-value ON/OFF

This determines whether the degree/hours-value is to be displayed. It is permissible to select between a digit "0" and "1".

The following applies for "0" = no display and for "1" = display degree/hours-value.

Variable 48 – Rotation Damper Position 4

This determines how long the relays for position 3 remain set. It is permissible to select between a digit "0" and "99".

Here, "0" = no time and "99" = 99 seconds.

Variable 49 – Temperature Offset

This defines what the maximum temperature difference is before an error message occurs (in interaction with variable 50). The temperature difference works upwards and downwards.

Here, for "0" = no time and for "99" = 99 °C.

Variable 50 – Temperature Timeout (Temperature Monitoring)

This defines how long the maximum temperature difference may be before an error message occurs (in interaction with variable 49). The temperature difference works upwards and downwards.

Here, "1" = one minute and "99" = 99 minutes.

Variable 51 - Sensor configuration

This determines which sensor configuration is active.

Download technical data and connection diagrams for configurations 0-4 from www.ebsmoke.com/downloads.

0	=	6 x PT100 3-Wire
1	=	4 x PT100 4-Wire A
2	=	4 x PT100 4-Wire B
3	=	4 x PT100 4-Wire C
4	=	4 x PT100 4-Wire D

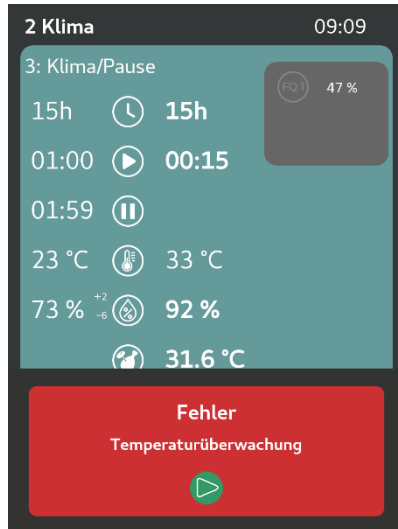
Variable 52 – Monitoring smoke generator flap

This determines whether the interval of the smoke generator lower air flap is to be monitored. It is permissible to select between "off" and "on".

Here, "off" = no monitoring and "on" for active monitoring.

Further service variables are added as required in the controllers. Please request the description available for this from the manufacturer.

ERROR CODE EXPLANATIONS



Example of an error message.

RAM Errors

The computer has detected changed data in the RAM due to the cross sum calculation and control. The program(s) in which the error was found has/have been deleted.

ACKNOWLEDGE ERROR.

The EB1 goes to the home position.

Reprogram the program and start it again. If the error remains, the RAM is defective and must be replaced.

COMPLETION BY SERVICE CENTER

Restart Error

The computer was not able to save the current data when a voltage drop occurred and therefore could not pick up where it left off in the program.

ACTION: Acknowledge error.

The EB1 goes to the home position.
Program must be restarted. If possible, always at the position where the power was interrupted.

SOLUTION: Self-disposal.

Sensor Error

The temperature sensor used for measurement has an interruption or short circuit. The computer cannot work with it and therefore has interrupted the program sequence.

ACTION: Acknowledge error.

The EB1 shows the program status in which the error occurred. In addition, the display on which the defective sensor operates shows three or two small "u" or "c".

"u" stands for sensor short circuit.

"c" stands for sensor break.

SOLUTION: Self-disposal.

Ignition Error

The EB1 did not measure a return signal at the start of the ignition process of the smoke generator. If the function of the ignition rod is monitored by a current monitoring relay, this means that the smoke generator could not ignite. The EB1 interrupts the current program.

ACTION: Acknowledge error.

The EB1 shows the program status in which the error occurred.

SOLUTION: Contact service center.

Error 5

The computer has set all functions.

ACTION: Acknowledge error.

The EB1 is without display.

SOLUTION: Contact service center.

Timer defective

The timer installed in the device is defective. The device can no longer operate.

ACTION: Acknowledge error.

SOLUTION: Contact service center.

Temperature Control

This error is displayed when the operating temperature actual value is 10°C or more (depending on the system also 5°C) away from the setpoint and does not approach it during 4.5 minutes (optionally other time possible).

Further conditions are: The process must allow heating and cooling. The process must not be assigned an interval. The process is not occupied with NTH or NTL, which means that it can basically be monitored.

ACTION: Acknowledge error.

The EB1 shows the program status in which the error occurred.

SOLUTION: Usually done by yourself with the help of the electrician, heating or cooling specialist.

Cross Sum Error

This error only appears if the controller has been completely reconfigured.

ACTION: Acknowledge error.

The EB1 goes into the home position.

Service Variable

If the <Smoke generator feed> service variable was not set before the first start of the controller, this error appears.

ACTION: Acknowledge error.

The EB1 goes to the home position.

Check and set service variable 4.

SOLUTION: Self-disposal.

Feeder Error

This error is only displayed if the smoke unit is a closed system and the safety program is activated in the software. See variable 52. If this error occurs, it indicates that the feed behavior or the function of the material feed is not OK.

ACTION: Acknowledge error.

The EB1 shows the program status in which the error occurred.

SOLUTION: Do it yourself with the help of the electrician.

Glycol-Temp. Alarm

This error is displayed if the glycol temperature setpoint is not reached for more than 10 minutes.

ACTION: Acknowledge error.

The EB1 shows the program status in which the error occurred.

SOLUTION: Usually done by yourself with the help of the electrician, heating or cooling specialist.

Relay Error

This error is displayed when the software switches on a relay, but it does not work.

ACTION: Acknowledge error.

SOLUTION: Contact service center.

OPTO 1

This error is indicated if no 24V are present at optocoupler 1 within a preset time in seconds after relay 25 is switched on.

ACTION: Acknowledge error.

The EB1 shows the program status in which the error occurred.

OPTO 2

This error is indicated if no 24V are present at optocoupler 2 within a preset time in seconds after relay 26 is switched on.

ACTION: Acknowledge error.

The EB1 shows the program status in which the error occurred.

OPTO 3

This error is indicated if no 24V are present at optocoupler 3 within a preset time in seconds after relay 27 is switched on.

ACTION: Acknowledge error.

The EB1 shows the program status in which the error occurred.

OPTO 4

This error is indicated if no 24V are present at the optocoupler 4 within a preset time in seconds after switching on the relay 28.

ACTION: Acknowledge error.

The EB1 shows the program status in which the error occurred.

OPTO 5

This error is indicated if no 24V are present at optocoupler 5 within a preset time in seconds after relay 29 is switched on.

ACTION: Acknowledge error.

The EB1 shows the program status in which the error occurred.

OPTO 6

This error is indicated if there is no 24V at the optocoupler 6 within a preset time in seconds after switching on the relay 30.

ACTION: Acknowledge error.

The EB1 shows the program status in which the error occurred.

OPTO 7

This error is indicated if there is no 24V at the optocoupler 7 within a preset time in seconds after switching on the relay 31.

ACTION: Acknowledge error.

The EB1 shows the program status in which the error occurred.

OPTO 8

This error is indicated if there is no 24V at the optocoupler 8 within a preset time in seconds after switching on the relay 31.

ACTION: Acknowledge error.

The EB1 shows the program status in which the error occurred.