Series FCU6x00/FCU-EXT-APP

Installation and Operating Manual

FCU6x00
FCU-EXT-APP-CONTROL

can be combined with the following sauna control units in the FCU series:

Series FCU3000	**FCU3200**	**FCU3400**
Series FCU4000	**FCU4200**	**FCU4400**
Series FCU5000	**FCU5200**	**FCU5400**
Series FCU6000	**FCU6200**	**FCU6400**

Doc-ID: B_FCU-EXT-APP

Version: V 1.05

Technical changes and errors excepted, illustration similar.

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Table of contents

1   Safety

Important safety instructions

Read this manual carefully and keep it for future reference.

1.1   Explanation of symbols

Warnings   Warning are marked by symbols in this manual. The instructions in this operating manual are introduced by signal words that indicate the severity of the danger.

Always follow the safety notes and proceed with caution in order to avoid any accidents, personal injuries and damage to property.

DANGER!

... shows an imminently hazardous situation that can result in severe injuries or even death, if not avoided.

WARNING!

... shows a potentially hazardous situation that can result in severe injuries or even death, if not avoided.

CAUTION!

... shows a potentially hazardous situation that can result in minor injuries, if not avoided.

WARNING!

... shows a potentially hazardous situation that can result in property damage, if not avoided.

Tips and suggestions

NOTE!

... underlines useful tips and suggestions as well as information for efficient and proper operation.

1.2   Safety-related assembly and installation instructions

⚠

– **DANGER!**

– The control unit can be mounted directly on the outside of the cabin or at another location, but not inside the cabin

– The control unit may be operated with a cover guard for the oven only if one of the following options is available:

Timer function (can be locked in the service menu)

Remote start (remote operation) via option input or WEB-/APP-Control

– According to VDE, for public saunas, an indicator lamp indicating that the heater is switched on must be installed in the supervisor's room.

– This lamp can be connected to the clamp **PS1** (FLE-STB).

– To disconnect from the mains, the power supply line must be equipped with a fuse having a contact opening according to the requirements of overvoltage category III for full separation.

– The main switch of the control unit must be freely accessible for devices of the *FCUxxxx* series.

– The temperature sensor must be installed in such a way that it is not affected by cold air flowing in from the outside.

1.3   Intended use

The FASEL sauna control units in the FCUxx00 series are designed exclusively for operation and control of sauna cabins, saunas with humidity and infrared cabins. The control units are approved for operation in private homes and businesses.

Intended use

⚠

WARNING!
Danger if used other than for intended purpose!

Any use apart from the intended use and/or any other use of the sauna control system can result in dangerous situations.

For this reason:

– Use sauna control unit only as intended.

– The sauna control unit may be operated only within the permissible ambient temperature limits and humidity limits.

– All specifications in the operating manual and installation instructions must be strictly adhered to.

Claims of any kind due to damage as a result of non-intended use are excluded. The operator bears sole responsibility for any damage caused by non-intended use.

1.4   Changes and alterations

Changes and alterations to the sauna control unit or to the installation can lead to unforeseen dangers.

Always obtain the written permission of the manufacturer before any technical changes and alterations are made to the sauna control unit.

1.5   Requirements for the operator and technicians

This device can be used by children aged 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning the safe use of the device and understand the hazards involved. Children should not play with the device. Cleaning and user maintenance should not be carried out by children without supervision.

Read this operating manual carefully before switching on. Adherence to all the safety and operating instructions specified in this operating manual is a basic prerequisite for safe operation and safe working.

Please contact your customer service in case of doubts.

Inadequate qualification

WARNING!
Risk of injury in case of inadequate qualification!

Improper handling could lead to considerable personal injuries and damage to property.

For this reason:

Assembly, installation, initial operation as well as troubleshooting, maintenance and repairs must be carried out by qualified persons only, unless otherwise specified.

1.6   Occupational safety and special risks

The safety notes and warnings specified here and in the following sections of this manual must be taken into account in order to reduce health hazards and avoid dangerous situations.

Safety

The following instructions are for your own safety and for the safety of the system and must be adhered to:

Electric voltage

DANGER!
Danger to life due to electric shock.

There is imminent danger to life in case of direct contact with live parts.

Damage of insulation or individual parts could pose danger to life.

For this reason:

– To disconnect from the mains, the power supply line must be equipped with a fuse having a contact opening according to the requirements of overvoltage category III for full separation.

– Disconnect power supply to the system before any work (switch off the fuse in the junction box) and secure against restarting. Check if the equipment is disconnected from the power supply. Disconnect the control unit from the mains before opening the housing.

– In case of damage to the insulation, immediately switch off power supply and initiate repairs.

– Works on electrical machinery should be carried out only by skilled personnel.

– Never bypass or switch off fuses.

– Adhere to the correct current specification while changing the fuses.

– Keep moisture away from live parts as it can lead to short-circuits.

WARNING!

If there is a short-circuit in a 230V/400V load, the contact of a relay can fuse due to the high short-circuit current. Even the safety relay can fuse if restarted before removing the short-circuit. This will lead to steady state of the consumer. Switch off the automatic circuit breaker in the junction box. Send the device back to the factory for checking/repair.

Improper operation

WARNING!
Improper operation can result in serious injuries.
For this reason:
– Read and follow the operating manual.

1.7   Information about the operating manual and installation instructions

This FASEL control unit comes with an operating manual and installation instructions.

The operating manual is intended for users and provides important advice on handling the FASEL control unit.

The installation instructions describe the process of assembly, installation, initial operation, troubleshooting and repairs and are intended exclusively for professionals.

Adherence to all the safety and operating instructions specified in this operating manual is a basic prerequisite for safe operation and safe working.

In addition, the local accident prevention regulations and general health and safety requirements must be adhered to wherever the control unit is in use.

Read this operating manual carefully before switching on. The operating manual and installation instructions are integral parts of this product and must be kept accessible at all times in the immediate vicinity of the control unit.

The device can have more or less connection options and functions, depending on the version. Depending on the variant, the key(s) and display inscriptions may also be individually designed and may deviate from the figures.

If the control unit is passed on to third parties, the operating manual and the installation instructions must also be handed over.

Components by other providers have their own operating manuals, as well as safety requirements and regulations that must also be adhered to.

2 Installation instructions
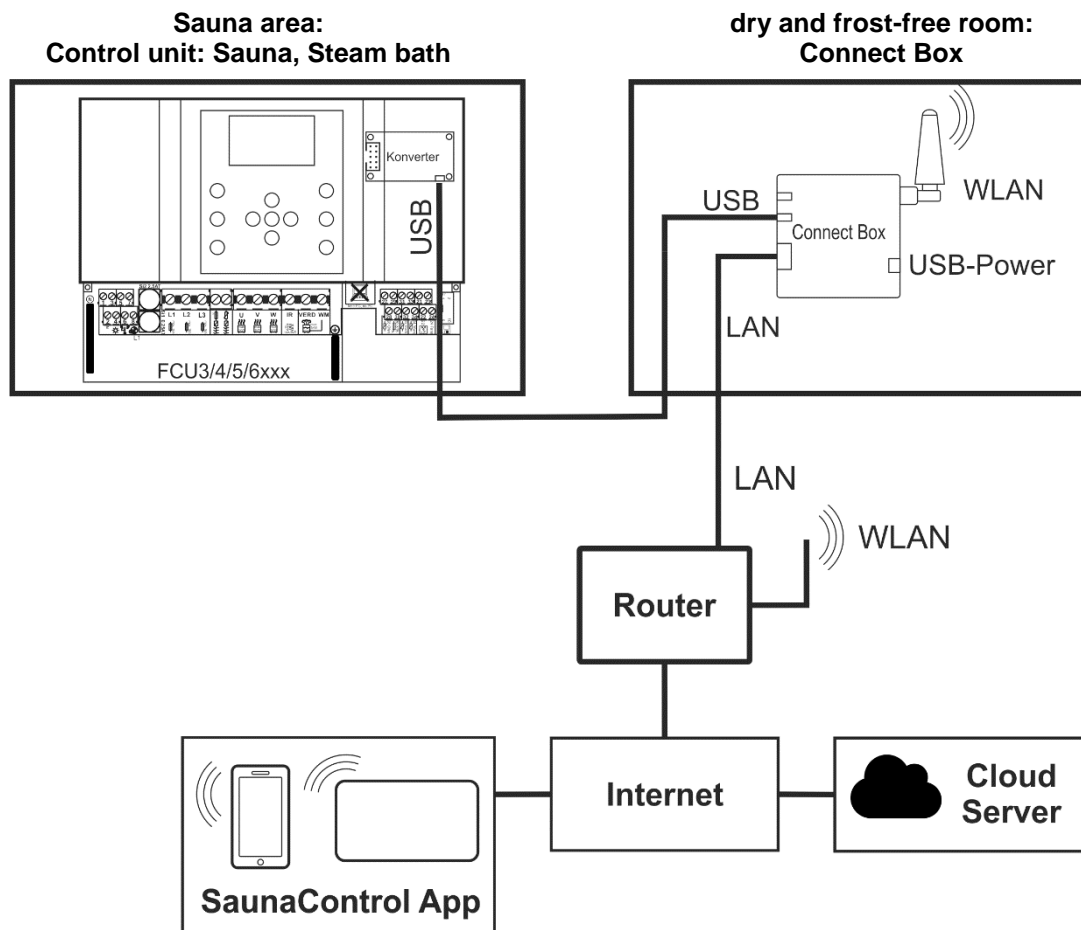
2.1 Schematic connection of the components

Fig. 1: Schematic lay-out FCU-EXT-APP-CONTROL

2.2 Installing the interface converter

ATTENTION!

Note ESD protection!

Do not touch on electrical parts because of ESD protection

- Take appropriate protections. Touch a grounded piece of metal as a minimum protection.

Tips for installation of options boards

Attention: Before opening the control device, please **separate all poles of the control device from the mains** (fuse box or distributing box).

Please plug the 4 included plastic distance bolts with the sharp edges in the provided holes on the control board. Now you can put the flat ribbon plug into the appropriate connector of the control board (coding nose up). Lead the connecting terminal through the separating strip and set the options board onto the distance bolts. Press the options board firmly, until the lock clips of the distance bolts click into place. The notches of the board must be placed firmly on the noses of the separating strip, otherwise the options board can slip from the fastener when attaching the power plugs.

Installation instructions of the options board

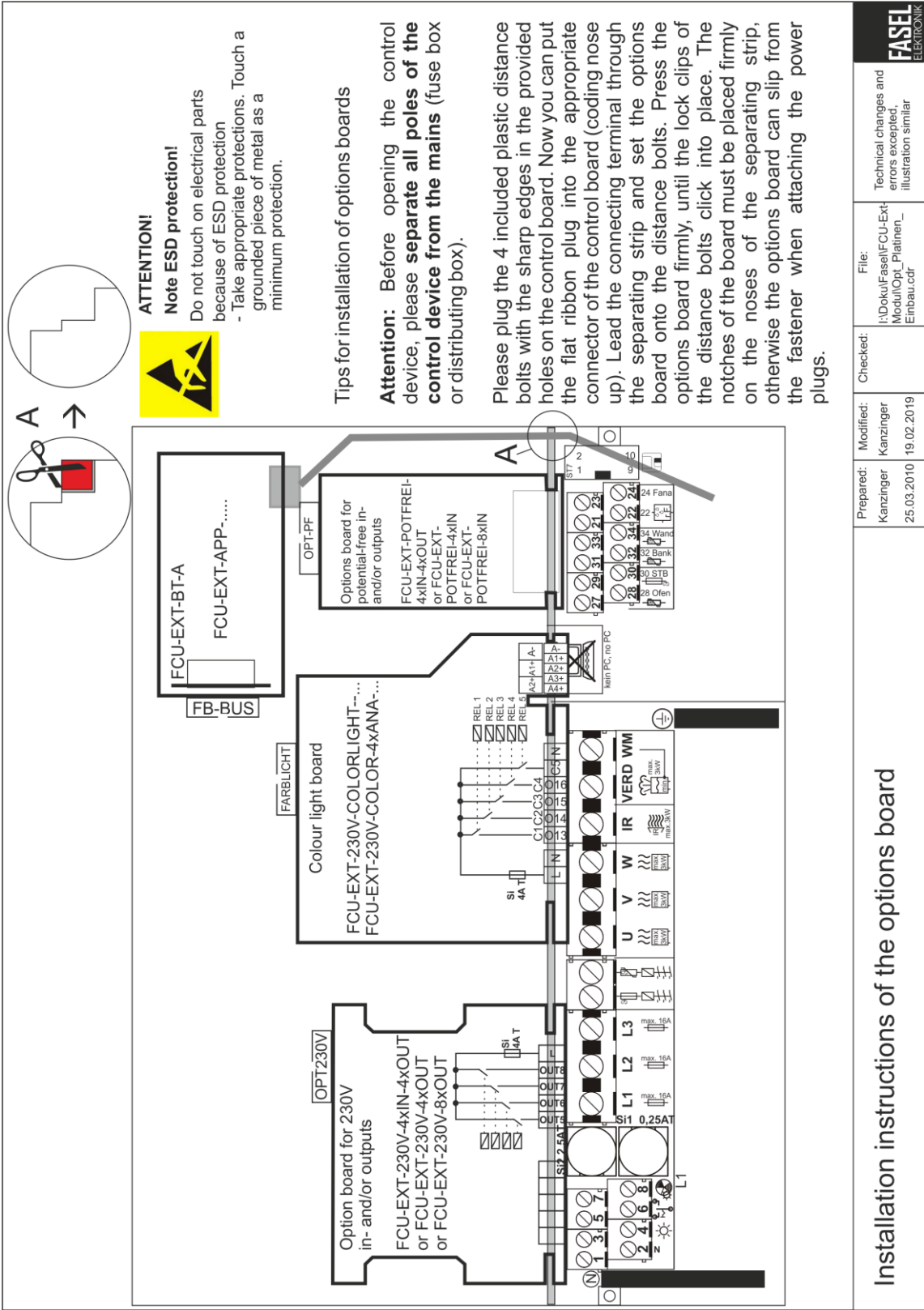| Prepared:	Modified:	Checked:	File:	Technical changes and errors excepted, illustration similar
Kanzinger 25.03.2010	Kanzinger 19.02.2019		I:\Doku\Fasel\FCU-Ext-Modul\Opt_Platinen_Einbau.cdr	

Fig. 2: Installing FCU-EXT-APP-CONTROL-CONVERTER

3 Connection and initial set-up by service technician
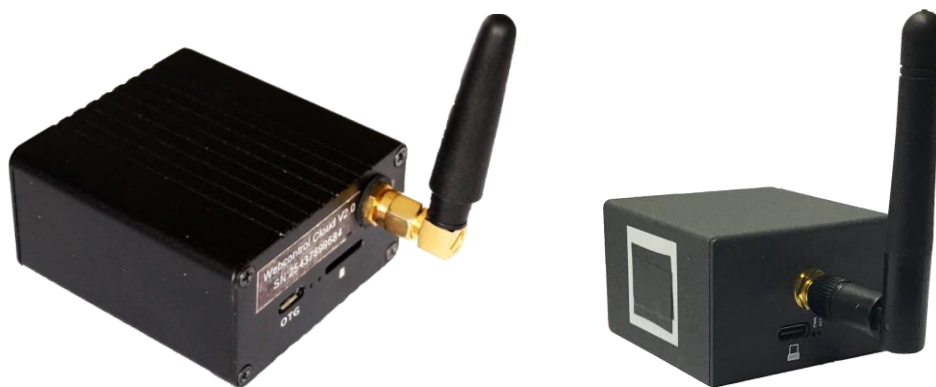
3.1 Components

The following components are available:

- ■ Connect Box
- ■ Mains adapter with USB cable
- ■ Interface converter
- ■ USB cable

3.1.1 Connect Box

Fig. 3: Connect Box front panel (Version 1/2)

Fig. 4: Connect Box rear view (Version 1/2)

The LAN and USB ports are located on the front panel. This USB port is for connecting to the interface converter. When the LAN connection is active, the LEDs on the LAN port will flash.

The rear panel has the connector for the USB mains adapter (Power). The WLAN antenna is also located on the rear panel. This can be aligned. Please always make sure that the antenna is fixed via the nut!

3.1.2 Mains adapter

Mains adapter for supplying the Connect Box via a USB cable.

3.1.3 Interface converter

Interface converter between sauna unit FCUxxxx and Connect Box.

3.1.4 USB cable

USB cable (3m) for connection between Connect Box and interface converter.

3.2 Connection and initial operation

Connection and initial operation of the individual components:

1. Please insert the interface converter in the FCU control.
    Connect the interface converter to the FCU slot "FB-BUS".

2. Please connect the Connect Box to the interface converter via the USB port. USB port may not be changed during operation. If this happens, the Connect Box must be restarted.

3. Only for LAN operation:
    Connect the LAN cable from the Connect Box to your in-house network (LAN). This connection can be made to a router or network switch.
    Only for WLAN operation:
    Ensure that you have stable WLAN reception.
    If necessary, the WLAN antenna can be rotated 360° after loosening the nut. Ensure that you tighten the nut firmly afterwards.

4. Please connect the USB mains adapter to the Connect Box. The Connect Box starts automatically after it has been plugged in.

5. Setting up the Connect Box.

NOTE!

Please note that a DHCP server must be enabled in the in-house LAN.

In most cases, this function is performed by the connected router (or, in some company networks, by a corresponding network server).

3.3 Initial set-up with LAN operation

The Connect Box automatically connects to the cloud server when there is an Internet connection. No further set-up is necessary. If successfully connected to the cloud server, the FCU will give 3 beeps as feedback.
You can connect directly to the sauna via the App.

Connection and initial set-up by service technician

3.4 Initial set-up with WLAN operation

NOTE!

Please have your personal WLAN password ready for set-up via WLAN.

During initial operation, the Connect Box must be connected to the existing WLAN.

1. Start the Connect Box by briefly disconnecting it from the power supply and plugging it in again.
   After it is switched on, the Connect Box searches for all available WLAN connections. The Connect Box then opens its own WLAN "**CONNECT-BOX**".

   Note: This WLAN is only required for setting the Connect Box. It is only available for 3 minutes once the "Connect Box" has been found by your Smartphone/Tablet. Please perform the following steps (2-5) within these 3 minutes.

2. Please connect to the WLAN "**CONNECT-BOX**".
   To do this, open the WLAN menu in your Smartphone/Tablet:
   Settings → WLAN → Search WLAN
   Connect to "**CONNECT-BOX**"
   The password required for this is: "**11111111**"
   Note: This WLAN does not have Internet access. Any warnings that your Smartphone/Tablet is not connected to the Internet can be ignored or, if you are prompted to do so, this message must be confirmed.
   Note: Check that you are still connected to the WLAN "**CONNECT-BOX**".
   Note: After a repeated connection with "CONNECT-BOX", the password may be saved and does not have to be entered again.

3. On your Smartphone/Tablet, open the Internet browser (e.g., Safari or Chrome) and open the following page in the address bar: "**http://10.42.0.1**"

4. Select your own home WLAN from the list and enter your personal WLAN password. Then press "Save & Restart".
   If your WLAN is not listed, check the WLAN signal strength!
   After saving you lose the connection to the Connect Box, which can lead to an error message in your browser.
   Note: Remember to reconnect your Smartphone/Tablet to your home WLAN.

5. After saving the settings successfully, the Connect Box automatically connects to your in-house WLAN and afterwards to the cloud server.
   The sauna control unit gives the following feedback signals on these three processes via the buzzer:
   1x beep: Settings saved.
   Note: If this 1x beep is not heard, you may have taken too long or are too far away from the Connect Box. In this case, you must start again from step 1.

   2 x beeps: WLAN connection successfully established.
   Note: If the 2x beeps are not heard, the Connect Box has not connected to your in-house WLAN. You may not have enough WLAN reception or a wrong WLAN password. You may need to move the Connect Box to another location. Please check both and start again at step 1.

3 x beeps: Server connection successfully established. Now you can connect to the App. This process can take about 5 minutes.
Note: If the 3x beeps are not heard, the Connect Box has not been able to establish a connection to the server. Check for a stable Internet connection and possible security settings on the WLAN router. In this case, start the Connect Box by briefly disconnecting it from the power supply and plugging it in again. The Connect Box should now automatically connect to your WLAN and try to establish a connection to the server.

6. After you have successfully connected to the server, you can connect to the sauna via the App.

3.5 Switching off or restarting the Connect Box

The Connect Box is switched on/off by plugging in/unplugging the USB mains adapter.

3.6 Connecting to the "SaunaControl" App

WARNING!
Important access code for your sauna!

Your access code is unique to your sauna control unit and gives you and others access to your sauna. Please keep it safe and do not pass it on to third parties. This access cannot be blocked and is intended only for the owner of the sauna.
For other users, we recommend the sub-user function.

NOTE!

Please note that after a restart or power failure, the Connect Box takes about 5 minutes to connect to the server and be accessible from the App.

Only after this period is the Connect Box ready for operation and can be controlled or accessed using the following method.

To control the sauna, you must connect your App to the sauna control unit.

1. Please check that the sauna control unit is on. In addition, the Connect Box must be plugged in and connected to the server.

2. Please install the "SaunaControl" App
The App can be downloaded from the official app stores of Google (Android) and Apple (iOS).

3. Open the "SaunaControl" App on your Smartphone/Tablet.

4. Press "Connect to cloud"

5. Press "Scan QR Code" and scan your QR connection code.
The first time you connect to the main user you will need the access code.

The access code is on the supplement!
For sub-user access you do not need an access code.

6. The App automatically connects to your sauna.

7. The sauna is additionally protected with a PIN. This is the same for all users.
As delivered, this PIN is set to "0000".

8. You will be asked to assign a PIN when you connect for the first time.
Please make a note of this PIN. It can be reset only on a sauna control unit with an operating element or by a service engineer!

9. To disconnect, open the side menu and press

10. You can access your sauna at any time via "Known devices".

NOTE!

In addition, a protection module is installed to protect against changes to the software components. Any change by the sales department or end customer is prohibited and will lead to a loss of function of the system in the event of a violation. We can detect a change. In such a case, there will be a charge for repairing the software.

3.7 Use of the sub-user function

The sub-user function creates secure and controlled access for other people. The access included with the App-Control is always the main user. The main user will be able to create and delete further accesses. For safety reasons, only the main user has this authorisation.
To create a sub-user, proceed as follows:

1. Connect to your sauna as the main user in the App.

2. Select the menu item User in the side menu

3. Use to add another user.

4. The corresponding access is displayed as a QR code.

5. You can also remove a user with .
Note: A user who has been deleted cannot be restored.
The corresponding user will no longer have access to the sauna.

4 Technical data

Description	Type
Max. distance FCUxxxx to CONNECT BOX	3m USB cable
FCU compatibility	FCU 6.18 or later
Power supply	Only with the enclosed USB mains adapter
Ambient temperature	0 to +40 °C

Rel. humidity	max. 80 % rel. humidity, not condensing
Storage temperature	-10 to +60 °C
Rel. humidity, storage	max. 80 % rel. humidity, not condensing
Protection class	IP20
CONNECT BOX dimensions	W x H x D approx. 55mm x 30mm x 75mm

Table 1: Technical data

Connecting cable switch/router to CONNECT BOX	The LAN cable is not included in the delivery. It can be purchased from electrical retailers.
Specification of the patch cable and LAN cable	■ At least AWG26 ■ At least CAT 5 ■ Pin 1 to Pin 1 cable configuration (straight through)
WLAN frequency band	■ 2,4 GHz

5   Structure and function

5.1   Function
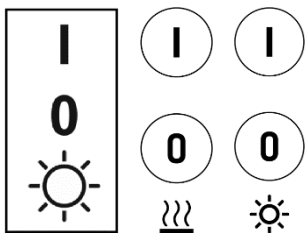
Depending on the variant of the FCUxxxx control unit, the following bath modes can be operated with the APP CONTROL:

- ■ Sauna
- ■ Sauna with humidity
- ■ Infrared
- ■ Steam bath

In addition, the following settings can be changed depending on the bath mode:

- ■ Temperature
- ■ Humidity
- ■ Heating time / Remaining heating time

5.2   Operating keys for the sauna control unit

Key / Switch	Description	
Main switch		
	0	**"Power OFF" switch** Use this switch to turn off the mains connection to the control unit and the cleaning light.
	I	**"Control unit power ON" switch** This switches on the power to the control unit.

Structure and function

Key / Switch	Description	
	☼	**"Cleaning light ON" switch** Use this switch to switch on the cleaning light.

5.3   Operating keys for App Control

The App is equipped with the following operating keys:

Key / Switch	Description	
Keys for bath modes		
)))	**Key "Bath mode Sauna"**	
	Display	Meaning
	Grey	■ Bath mode not selected. ■ Press the key to select this bath mode
	Blue	■ Bath mode selected. ■ The bath mode is activated by pressing this key.
	Orange	■ Bath mode is active. ■ The bath mode is deactivated by pressing this key.
	Flashing blue/orange	■ The timer is active. ■ Bath mode starts at the set time.
)) ☁	**Key "Bath mode Sauna with humidity"** Functions as described for "Bath mode Sauna" key.	
IR ≋	**Key "Bath mode Infrared"** Functions as described for "Bath mode Sauna" key.	
☁	**Key "Bath mode steam bath" (only FCUX000-STEAM)** Functions as described for "Bath mode Sauna" key.	
Keys, Basic functions		
💡	**Key "Cabin light"** Switches light in the cabin on and off. The light is switched on and off by pressing this key. To adjust brightness, press and hold the key until the light settings mode opens.	
⏻	**Key "Control unit standby"** ■ Switches the control unit standby on and off. ■ The control unit will switch automatically to standby mode if it remains without active program for 2 minutes.	

Table 2: Operating keys for the sauna control unit

5.3.1 Symbols in the status bar

The following symbols can appear in the status bar:

Display elements	Description
	Heating time / Remaining heating time
	Light is active
	Fan is active
	Fragrance pump is active
	Drying program is active
	Water deficiency signal
	Active error / warning Click on the symbol to open the error message.

Table 3: Symbols in the status bar.

6 Operation

6.1 Safety and instructions

Electric voltage

DANGER!
Danger to life due to electric shock.

There is imminent danger to life in case of direct contact with live parts.

For this reason:

– The control system may be opened only by authorised electricians.
– Works on electrical machinery should be carried out only by skilled personnel.

Improper operation

WARNING!
Improper operation can result in serious injuries.

For this reason:

– Perform all operating steps precisely as described in this operating manual.

Risk of fire

WARNING!
Risk of injury due to fire.

Objects on the heater or in the immediate vicinity of the heater can cause a fire and in turn result in injuries.

For this reason:

– Always keep objects away from the heater.

Physical injuries

WARNING!
Covering the temperature sensor and/or humidistat will lead to a risk of injury.

Covering the temperature sensor and/or humidistat will lead to a higher temperature and humidity. These elevated values may cause physical harm or severe injuries.

For this reason:

– Do not cover the temperature sensor or humidistat.
– Ensure free air circulation.

NOTE!

The temperature and humidity readings shown on the thermometers and hygrometers installed additionally in the cabin may differ from those on the control unit. This may have the following reasons:

Temperature differences of between 60K and variance in humidity of up to 40% may be encountered from the floor to the ceiling or between the oven and the opposite wall, depending on the cabin

Instruments with pointers do not respond as sensitively, compared to the electronic measurement and display system used in the control unit.

6.2 Switching the sauna control unit on and off

6.2.1 Switching on the sauna control unit

Ensure that the oven, its immediate surroundings and the sensors are free of objects.

1. Use the "Control unit standby" key to switch on the sauna control unit.
   → See page 18.
2. Select bath mode on the display (see Table 2).
3. To start the bath mode, press and hold the bath mode key until the key lights up orange (see Table 2).

6.2.2 Switching off the sauna control unit

WARNING!

Repeated improper shutdown can lead to premature damage to electronic parts.

For this reason:

– Switch off sauna control unit as described.

WARNING!
Cabin damage, e.g. mould growth due to premature ending of the drying function.

After completion of the "Sauna with humidity" bath mode, the cabin is automatically dried for a defined period and at a defined temperature. This drying function helps to avoid damage to the cabin, e.g. mould growth.

For this reason:

– Do not end drying function prematurely.
– The drying function may only be ended if the cabin is operated afterwards in the "Sauna" bath mode.
– A message appears on the screen if the drying function has been accidentally stopped. Follow the instructions on the display to restart the drying function.

Operation

A bath mode is selected and active (orange)

1. Press the key for the active bath mode. This stops the bath mode. The key is now blue.
2. Use the "Control unit standby" or "Power Off" key to switch off the sauna control unit → See page 18.

6.3   Setting bath mode

The control unit is switched on.

1. Select the preferred bath mode on the display (see Table 2).
2. Use the adjustable slider in the "Temperature / Humidity setting" section to set the preferred temperature / humidity (see Table 4).
3. The current values in the cabin for temperature/humidity are shown in the section "Display temperature/humidity. The values are also shown as icons in the display.
4. To adjust the heating period, press and hold the section "Heating period / Remaining heating period" until the menu opens.

> *NOTE!*
>
> *The program automatically skips to the home page if there has been no key operation for several seconds. (It skips to the timer menu if the control unit has an active timer).*

Bath mode	Slider symbol	Meaning
〈〈〈	**Bath mode Sauna**	
	〈〈〈	Set the target temperature in the sauna.
〈〈 🌣	**Bath mode Sauna with humidity (only FCUX200 and FCUX400)**	
	〈〈〈	Set the target temperature in the sauna.
	◊◊	Set the target humidity in the sauna.
IR ≋	**Bath mode Infrared (only FCUX400)**	
	〈〈〈	Set the base temperature in the sauna.
	🌡≋	Set the maximum temperature in the sauna cabin using the infrared heater
🌣	**Bath mode Steam bath (only FCUX000-STEAM)**	
	🌣	Set the temperature in the steam bath.

Table 4: Temperature / Humidity setting

6.4   Menu: settings

The following entries may be shown in the settings menu, depending on the configuration:

Symbol	Description	Function
	Fan levels setting	■ Press the key briefly to switch the fan on/off. ■ Press and hold the key to open the fan levels setting.
	Light dimming	■ Press the key briefly to switch the cabin light on/off. ■ Press and hold the key to open the light dimming setting.
	Timer settings (optional)	■ Opens the timer menu.
	Coloured light settings (optional)	■ Press the key briefly to switch the coloured light on/off. ■ Press and hold the key to open the coloured light settings.
	Aroma settings (optional)	■ Opens the aroma settings menu.
	Bench heating settings (optional)	■ Press the key briefly to switch the bench heating on/off ■ Press and hold the key to open the menu to set the bench temperature
	Freely configurable option (optional)	■ Press the key briefly to switch the respective option on/off.
	Basic settings:	■ Opens the basic settings menu.
	Menu Back	■ Jumps to the previous menu. ■ This function is available in every menu.

Table 5: Menu: settings

6.4.1   Fan and light settings

The menu is used to adjust the cabin light and fan at 9 levels.

1. Use the slider to set the preferred level.

2. Use the Back key ← or Menu key ☰ to close the menu at any time. The set values for the current bath mode will be saved automatically.

6.4.2   Setting the timer

> *NOTE!*
>
> *Your service engineer is not allowed to approve the timer without addi-tional fire protection measures (e.g., cover guard above the oven) and it may therefore be blocked (menu is not shown).*

The timer starts the sauna with the active bath mode at the set start time.

1.   The system time of your Smartphone/Tablet is used as the current time.
2.   Press the appropriate symbol to change the time / start time.
     The time setting menu opens.
3.   Set the preferred start time.
4.   If the start time has been set, the timer must be started by pressing the preferred bath mode.

6.4.3   Aroma settings (optional)

The injection times for the aroma pump can be configured in the aroma settings menu. Available settings are the interval time with inactive aroma pump in minutes, and the aroma pump with active injection in seconds.

1.   Touch one of the time fields to enable.
2.   Enter the preferred time in the number field.
3.   The value is saved once you press the Enter key.
4.   Use the Back key ⬅ to close the menu at any time without saving.

Only FCU5000-STEAM: Press and hold the menu symbol for the aroma pump to manually enable the aroma pump for the duration of your keypress.

6.4.4   Coloured light settings (optional)

Make the following settings in the coloured light menu:

Symbol	Description	Function
	Coloured light automatic system	Press briefly on the key to switch automatic mode on/off The colours alternate automatically (red, green, blue) in this mode.
	Manual coloured light setting	Press briefly on the key to switch the respective colour on/off This mode is only possible if automatic mode is deactivat-ed.
	Dim coloured light	Press briefly on the key to turn coloured light dimming up or down. These symbols are only shown if coloured light dimming is possible.

6.5   Menu: Basic settings

The following entries may be shown in the basic settings menu, depending on the configuration:

Symbol	Description	Function
PIN	PIN setting	■ Opens the menu for the Pin setting ■ After entering the current pin, a new PIN can be entered. ■ You will be asked to assign a PIN when you connect for the first time. Please make a note of this PIN. It can be reset only on a sauna control unit with an operating element or by a service engineer!
INFO	Info menu	■ Opens the info menu ■ This menu shows information about the control unit, configuration, sensor systems and add-ons.
⚙	Service menu	■ Opens the service menu ■ This menu is used for initial operation/configuration and can only be accessed by the service engineer.

Table 6: Menu: Basic settings

6.5.1   Info menu

The info menu is used to access all information about the control unit used. Use the key ▼ to scroll one page forward.
The following information is shown:

1.   Info: This shows the control unit's hardware and software version.

2.   Configuration: This shows the control unit's basic configuration.

3.   Inputs and outputs: This shows the configuration of the inputs and outputs.

4.   Sensor: This shows all available sensor values (temperature/humidity).

5.   Use the Back key ← to close the menu at any time.

6.5.2   Maximum permissible heating period

Once the bath mode has been started, the display shows the remaining heating period instead of the heating period. The heating period can only be changed in standby mode.

EN 60335-2-53 "Special requirements for sauna heaters and infrared cabins" permits the following maximum heating periods:

Max. heating period	Description
More than 12 hours	Public cabins supervised by instructed staff.
Max. 12 hours	Hotels, apartment blocks, etc.
Max. 6 hours	All other cabins/private households

Table 7: Maximum heating period

The control units are delivered with a maximum adjustable heating period of 6 hours. Please contact the installer or the dealer of your sauna or infrared system if you require a heating period of more than 6 hours.

7 Maintenance

The sauna control units are maintenance-free.

Cleaning

Aggressive cleaning agents and media

⚠️ **WARNING!**
Device damage possible!

Aggressive cleaning agents and media can damage or destroy components or electric cables.

For this reason:

– Do not use any cleaning agents or media with aggressive substances.

1. Turn off the control unit and secure it against being switched on again (switch off the automatic circuit breakers.)
2. Clean the housing only from outside using a damp soft cloth. The housing must not be opened.

8 Faults

8.1 Safety

General

⚠️ **WARNING!**
Risk of injury due to improper troubleshooting!

Improper troubleshooting can result in serious injuries or even death.

For this reason:

– In case of faults, switch off the control unit, disconnect it from the mains and secure against restarting. Contact customer service.
– Repair work must be carried out only by qualified personnel, unless otherwise specified.
– Before starting work make sure there is sufficient space for the installation.
– Pay attention to order and cleanliness at the place of installation. Loose components and tools lying around or on top of each other are safety hazards.
– If parts are to be replaced: Ensure correct installation of spare parts. Install all fastening elements properly again. Only use original spare parts.
– Ensure that all covers are properly installed before restarting.

⚠️ **WARNING!**

If there is a short-circuit in a 230V/400V load, the contact of a relay can fuse due to the high short-circuit current. This can lead to steady state of the consumer. Switch off the automatic circuit breaker in the junction box. Contact customer service.

8.2   Messages and instructions on the display

Messages and instructions may be shown on the display that require the operator to take action.

Messages/Instructions	Possible causes	Measures	To be carried out by
Device not re-sponding	Sauna control unit is switched off.	Switch on the sauna control unit.	Operator
Connection to the server failed	1. No server connection with the App. 2. No server connection of the Connect Box. 3. No WiFi connection possible	1. Check the Internet connection on your Smartphone/Tablet 2. Restart the Connect Box and wait for about 5 minutes until the connection to the server is established. Pay attention to the beep confirmation. 3. Avoid the following special characters in the WLAN password: **äöüÄÖÜß€§"&<>$\'()|;`+**	Operator
USB NOT EXISTS	USB connection interrupted	Check if the USB cable between FCU and Connect Box is plugged in. Restart the Connect Box and wait for about 5 minutes until the connection to the server is established. Pay attention to the beep confirmation.	Operator
Water deficiency	Evaporator without water	Fill water according to the operating manual of the evaporator.	Operator
		Check water inlet / magnetic valve on the evaporator.	Specialist/ electrician
Drying function interrupted	After completion of the "Sauna with humidity" bath mode, the cabin is auto-matically dried for a defined period and at a defined temperature. This drying function helps to avoid damage to the cabin, e.g. mould growth. This drying function was interrupted prematurely.	Follow the instructions on the display: Restart the drying function Cancel the drying function	Operator

Table 8: Messages and instructions

8.3   Acknowledge message

1.   Eliminate the cause of the error.

2.   ◄ -Press the key for approx. 2 seconds. Message disappears.

8.4   Error messages

This section describes possible faults and troubleshooting measures.

Faults

Contact the installer or dealer for your sauna system in the event of faults that cannot be dealt with based on the following descriptions. Refer to the invoice, delivery note or the back of this manual for the address.

In case of a fault during operation, the display will alternately show the cause, error number and troubleshooting option.

If the cause cannot be resolved by the end user, please make a note of all displayed messages and contact your service technician.

No.	Fault	Possible causes	Troubleshooting	To be carried out by
000	Internal time error	Internal time error		Service engineer
100	STB circuit open, STB	The connection to the safety temperature limiter (STB) is interrupted or the thermal fuse is destroyed due to a excessively high temperature.	■ Check STB. ■ Check cable. ■ Check clamps 29 and 30.	Qualified electrician/service engineer
200	Oven sensor short-circuit	Oven sensor short-circuit	■ Check cable. ■ Check clamps 27 and 28.	Qualified electrician/service engineer
201	Oven sensor interruption	Oven sensor cable break Clamp contacts	■ Check cable. ■ Check clamps 27 and 28.	Qualified electrician/service engineer
210	Short circuit in bench sensor	Bench sensor short circuit	■ Check cable. ■ Check clamps 31 and 32.	Qualified electrician/service engineer
211	Interruption in bench sensor	Cable breakage in the bench sensor Clamp contacts	■ Check cable. ■ Check clamps 31 and 32.	Qualified electrician/service engineer
220	Short circuit in wall sensor	Wall sensor short circuit	■ Check cable. ■ Check clamps 33 and 34.	Qualified electrician/service engineer
221	Interruption in wall sensor	Cable breakage in the wall sensor Clamp contacts	■ Check cable. ■ Check clamps 33 and 34.	Qualified electrician/service engineer
300	Humidistat	The humidistat is interrupted or has short circuited	Check clamps 21–23. Note: The control unit can remain in operation as a control unit with time-controlled humidity. Acknowledge the error Disconnect the humidistat.	Qualified electrician/service engineer
400	External error message	Option input on the control unit, e.g. gas burner	Acknowledge error. Eliminate malfunction in external device.	User / Service engineer
11C	I²C error	Error in I²C Bus	Switch off mains, wait for a while, switch on and contact	Service engineer

No.	Fault	Possible causes	Troubleshooting	To be carried out by
			the service engineer if the error occurs again.	
485	RS485 error	Error in RS485 bus	Switch off mains, wait for a while, switch on and contact the service engineer if the error occurs again.	Service engineer
800	Drying did not end correctly.	Drying temperature was not reached, program cancellation by the user or error	Execute the drying program or acknowledge the error. Start the sauna program if the cabin is damp.	User
999	Internal time error	Internal time error		Service engineer

Table 9: Error messages

8.5   Acknowledge error message

1. Eliminate the cause of the error.
2. ◄ -Press the key for approx. 2 seconds. Message disappears.

9   Decommissioning and disposal

- ■ Do not dispose of the sauna control unit with regular garbage.
- ■ Dispose the control system in accordance with the respective country-specific regulations.

10 General

10.1   Limitation on liability

All the specifications and directions in this manual have been prepared based on the statutory standards and regulations, the present state of technology, as well as our many years of knowledge and experience.

The manufacturer is not responsible for damage due to:

- ■ Non-adherence to the operating and installation instructions
- ■ Non-intended use
- ■ Unauthorised alterations
- ■ Technical changes
- ■ Use of own installation tools (only the provided installation tools are permitted)
- ■ Use of non-licensed spare and wear parts.

The actual delivery package can deviate from the given descriptions and illustrations in case of special designs, additional orders or due to latest technical changes.

Otherwise, the obligations agreed in the delivery contract, the General Terms and Conditions as well as the delivery conditions of the manufacturer and the legal regulations valid at the time of entering into the contract are applicable.

Warranty

The warranty period of the manufacturer shall commence with the dispatch from the manufacturer's place and is valid for 24 months. The dispatch date can be obtained from device number on the type plate.

The manufacturer is not responsible for any warranty claims deviating from this regulation. Warranty claims must be made to the manufacturer of the sauna system or the dealer.

10.2 Copyright protection

NOTE!

All data, texts, drawings, images and other illustrations are copyright protected and are subject to the commercial copyright laws. Any misuse is punishable by law.

Distribution of any kind, even in parts, as well as reproduction and/or sharing the content without the prior written consent of the manufacturer is strictly prohibited.

10.3 Scope of delivery

See the enclosed delivery note for the scope of delivery.

10.4 Spare parts

CAUTION!
Risk of injury due to incorrect spare parts.

Wrong or defective spare parts can result in damage, malfunctions or total failure as well as hamper safety.

For this reason:

– Only use original spare parts from the manufacturer.
– Repair work at the control unit must be carried out only by qualified personnel.

Order spare parts from the installer or the dealer of the sauna system. For address, see invoice, delivery note or the back of this manual.

10.5 Customer service

For technical details, please contact your dealer or the installer of the sauna system.

For address, see invoice, delivery note or the back of this manual.

> *NOTE!*
>
> *For quick processing, have the data of the type plate such as the type, series number, variant etc. ready before making the call.*

11 Settings

11.1 Adjusting range: sauna

	min.	**max.**
Temperature	10°C	110°C
Operating time	00:15 h	06:00 (20:00*)

11.2 Adjusting range: Sauna with humidity

	min.	**max.**
Temperature	10°C	65°C
Humidity	30% (01 F)	80% (09 F)
Operating time	00:15 h	06:00 (20:00*)
Drying temperature	80°C	110°C
Drying time	0	59 min.
Humidity – temp., sum	according to VDE characteristic EN 60335 – 2 – 53:2003 + A1:2007 image 101	

11.3 Adjusting range: Infrared

	min.	**max.**
Temperature	40°C	90°C (45°C **)
Base temperature	--	65°C (40°C **)
Operating time	00:15 h	06:00 (20:00*)

* The control units are delivered with a maximum adjustable heating period of 6 hours. Please contact the installer or the dealer of your sauna system if you require a heating period of more than 6 hours.

** The temperature can be restricted to 45 °C for Austria.

12 Declaration of Conformity

The electronics mounted in the device series FCU6xxx is identical to the certified device series FCU4xxx.

You will find the current declaration of conformity online at www.fasel-gmbh.de in the section "Wellness, Sauna and Spa control units" under "Service / Downloads".

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Address of the installer or the dealer of the sauna system: