

READ AND SAVE THESE INSTRUCTIONS

INSTALLATION MANUAL

SPA control unit
Condair **Delta SPA Control Box**

Thank you for choosing Condair

Installation date (MM/DD/YYYY):

Commissioning date (MM/DD/YYYY):

Site:

Model:

Serial number:

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1 Introduction

1.1 To the very beginning

We thank you for having purchased the **Condair Delta SPA Control Box**.

The Condair Delta SPA Control Box incorporates the latest technical advances and meets all recognized safety standards. Nevertheless, improper use of the Condair Delta SPA Control Box may result in danger to the user or third parties and/or damage to property.

To ensure a safe, proper, and economical operation of the Condair Delta SPA Control Box, please observe and comply with all information and safety instructions contained in the present documentation as well as in the separate documentations of the components used together with the Condair Delta SPA Control Box.

If you have questions after reading this documentation, please contact your Condair representative. They will be glad to assist you.

1.2 Notes on the installation manual

Limitation

The subject of this installation manual is the Condair Delta SPA Control Box in its different versions. The various options and accessories are only described insofar as is necessary for proper operation of the equipment. Further information on options and accessories can be obtained in their respective instructions.

This installation manual is restricted to the **installation** of the Condair Delta SPA Control Box and is meant for **well trained specialists being sufficiently qualified for their respective work**.

This installation manual is supplemented by various separate items of documentation (operation manual, spare parts list, etc.), which are included in the delivery as well. Where necessary, appropriate cross-references are made to these publications in the installation manual.

Symbols used in this manual



CAUTION!

The catchword "CAUTION" used in conjunction with the general caution symbol designates notes in this installation manual that, if neglected, may cause **damage and/or malfunction of the unit or damage to property**.



WARNING!

The catchword "WARNING" used in conjunction with the general caution symbol designates safety and danger notes in this installation manual that, if neglected, may cause **injury to persons**.



DANGER!

The catchword "DANGER" used in conjunction with the general caution symbol designates safety and danger notes in this installation manual that, if neglected, may lead to **severe injury or even death of persons**.

Safekeeping

Please safeguard this installation manual in a safe place, where it can be immediately accessed. If the equipment changes hands, the documentation must be passed on to the new operator.

If the documentation gets misplaced, please contact your Condair representative.

Language versions

This installation manual is available in other languages. Please contact your Condair representative for information.

2 For your safety

General

Every person, who is in charge of the installation work on the Condair Delta SPA Control Box must have read and understood this installation manual and the Condair Delta SPA Control Box operation manual before carrying out any work.

Knowing and understanding the contents of this installation manual as well as the operation manual of the Condair Delta SPA Control is a basic requirement for protecting personnel against any kind of danger, to prevent faulty operation, and to operate the unit safely and correctly.

All icons, signs and markings applied to the Condair Delta SPA Control Box must be observed and kept in readable state.

Qualification of personnel

All installation work described in this installation manual **may only be carried out by specialists who are well trained and adequately qualified and are authorised by the customer.**

For safety and warranty reasons any action beyond the scope of this manual must be carried out only by qualified personnel authorised by Condair Ltd.

It is assumed that all persons working with the Condair Delta SPA Control Box are familiar and comply with the appropriate regulations on work safety and the prevention of accidents.

Intended use

The Condair Delta SPA Control Box is intended exclusively for the operating control (non-safety related) of Steam Baths, Caldariums and Rasul according to the information contained in this installation manual and in the SPA control software operation manual within the specified operating conditions. Any other type of application, without the written consent of Condair Ltd., is considered as not conforming with the intended purpose and may lead to the Condair Delta SPA Control Box becoming dangerous and will void any warranty.

Operation of the equipment in the intended manner requires **that all the information contained in this installation manual and in the SPA control software operation manual are observed (in particular all safety instructions).**

Danger that may arise from the Condair Delta SPA Control Box



DANGER!
Danger of electric shock!

The Condair Delta SPA Control Box is mains powered. Live parts may be exposed when the unit is open. Touching live parts may cause severe injury or danger to life.

Prevention: The Condair Delta SPA Control Box must be connected to the mains only after all mounting and installation work has been completed, all installations have been checked for correct workmanship and the unit is closed and properly locked.



WARNING!

Battery may explode if mistreated. Do not recharge, disassemble or dispose of in fire.

Preventing unsafe operation

All persons working with the Condair Delta SPA Control Box are obliged to report any alterations to the unit that may affect safety to the owner without delay and to **secure the Condair Delta SPA Control Box against accidental power-up.**

Prohibited modifications to the unit

No modifications must be undertaken on the Condair Delta SPA Control Box without the express written consent of Condair.

For the replacement of defective components use exclusively **original accessories and spare parts** available from your Condair representative.

Additional information

Type 1.C Action	
Pollution Degree	2
Impulse Voltage	2.5 kV

3 Product Overview

3.1 Application overview of the Condair Delta SPA Control Box

The Condair Delta SPA Control Box is available in different versions for different applications in the SPA sector.








Application	Description	Control of the cabine climate	Accessories										
			Light		Ventilation		Duftstoff		Additional relays		Shower	Heating	
			Light 1 (Cleaning or color light)	Light 2 (Cleaning or color light)	Fan 1 (Supply or exhaust fan)	Fan 2 (Supply or exhaust fan)	Fragrance 1 (Pump 1)	Fragrance 2 (Pump 2)	Music, ... (Rel 8)	Music, ... (Rel 9)	Shower (Pump 2)	Bench heating (Rel 8)	Wall heating (Rel 8)
Steam bath	Steam bath cabin supplied with steam from a steam generator. The humidity in the steam cabin is almost 100%. The heat is generated by the supplied steam and the optional bench heating in the cabin.	Temperature control up to 50 °C	x	x	x	x	x	x	(x)	x	–	(x)	–
Caldarium	Steam cabin supplied with steam from a steam generator. The humidity in the cabin is almost 70%. The heat is generated by the wall heating and the bench heating in the cabin.	Humidity control up to 80% rh	x	x	x	x	x	x	–	–	–	x	x
Rasul	Steam cabin supplied with steam from a steam generator. The humidity in the cabin is almost 70%. The heat is generated by the wall heating and the bench heating in the cabin.	Humidity control up to 80% rh	x	x	x	x	x	–	–	–	x	x	x








3.2 Versions of the Condair Delta SPA Control Box

Application / Cabin type	Hardware equipment Condair Delta SPA Control Box	Steam generation / Steam generator
Steam bath without bench heating	Condair Delta SPA Control Box with standard equipment	Steam generator (Condair EL, Condair RS, Condair Omega Pro, etc.)
	Condair Delta SPA Control Box with standard equipment	Condair Omega with Omega Control
Steam bath with bench heating	Condair Delta SPA Control Box with equipment for bench heating	Steam generator (Condair EL, Condair RS, Condair Omega Pro, etc.)
	Condair Delta SPA Control Box with equipment for bench heating	Condair Omega with Omega Control
Caldarium	Condair Delta SPA Control Box with equipment for bench and wall heating	Steam generator (Condair EL, Condair RS, Condair Omega Pro, etc.)
	Condair Delta SPA Control Box with equipment for bench and wall heating	Condair Omega with Omega Control
Rasul	Condair Delta SPA Control Box with equipment for bench and wall heating	Steam generator (Condair EL, Condair RS, Condair Omega Pro, etc.)
	Condair Delta SPA Control Box with equipment for bench and wall heating	Condair Omega with Omega Control

3.3 System / application overviews

The following chapters contain the corresponding system / application overviews. The following symbols are used in these system overviews.

	Fan 1 / 2 (Control of supply or exhaust fan)
	Light 1 / 2 (Control of cleaning or color light)
	Heating 1 / 2 (e.g. control of sauna heater, bench heating, etc.)
	Fragrance 1 / 2 (Control of fragrance pump 1 / 2)
	Temperature sensor (Measurement of cabin temperature, bench temperature, etc.)
	Humidity sensor (Measurement of cabin humidity)
	Door contact

	On/Off button SPA operation
	Steam (Steam generated by an external steam generator or the integrated water reservoir of the Bio sauna)
	Shower (Control of the cabin shower for Rasul application)
	Speaker (Control of music)
	Power supply
	Water supply steam generator
	Water drain steam generator

3.3.1 Condair Delta SPA Control Box for steam bath application

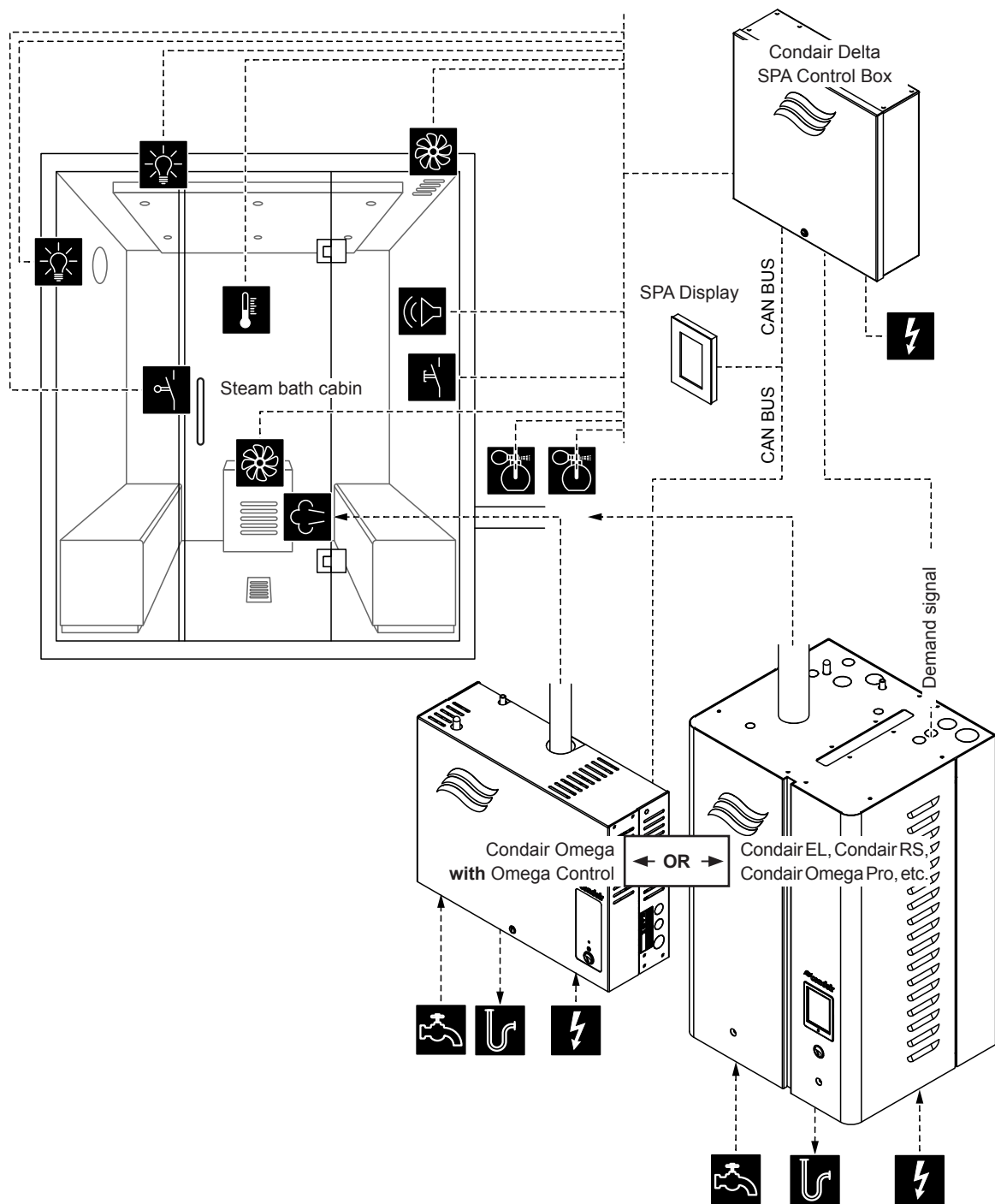


Fig. 1: Condair Delta SPA Control Box for steam bath application

3.3.2 Condair Delta SPA Control Box for steam bath application with optional bench heating

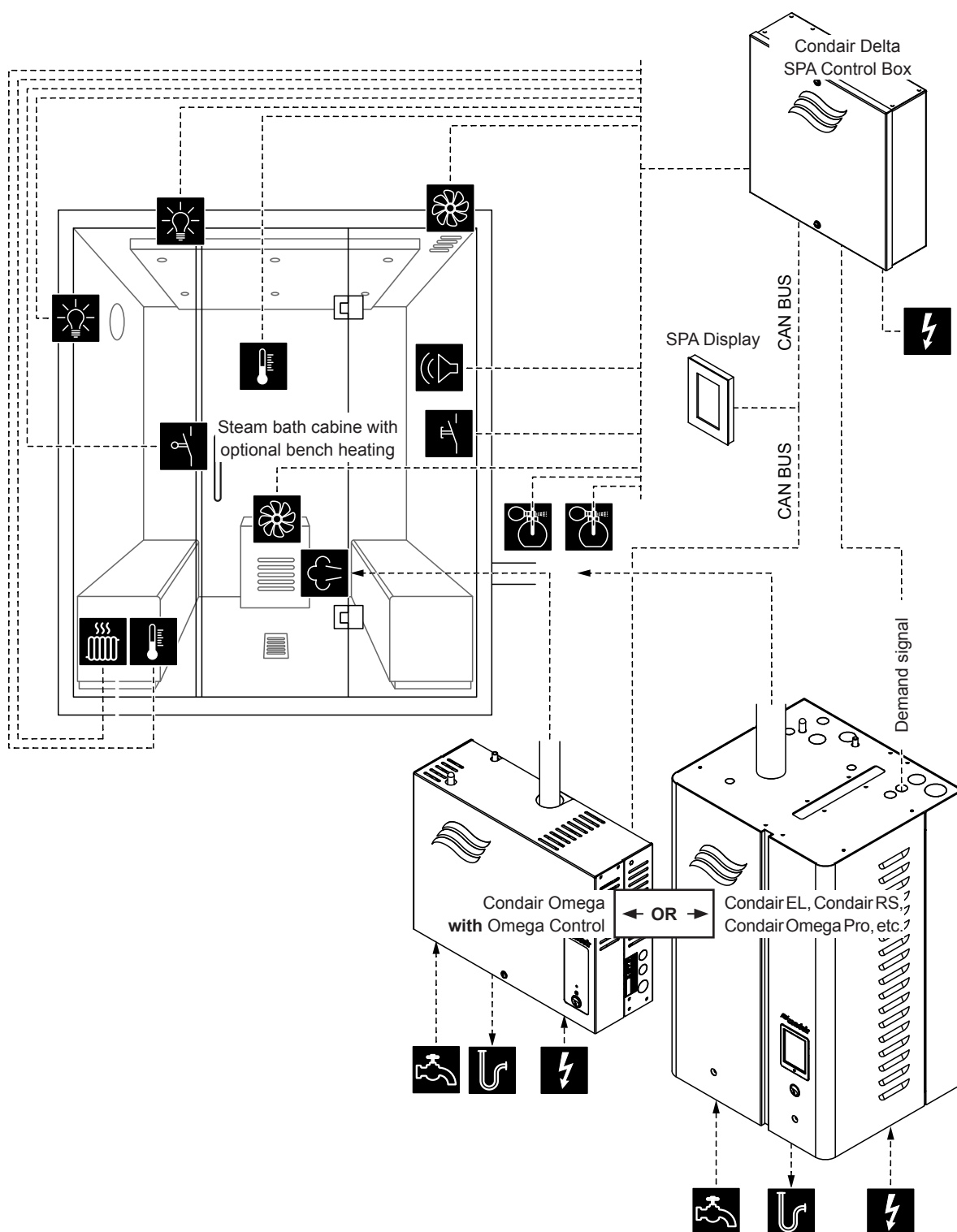


Fig. 2: Condair Delta SPA Control Box for steam bath application with optional bench heating

3.3.3 Condair Delta SPA Control Box for Caldarium application

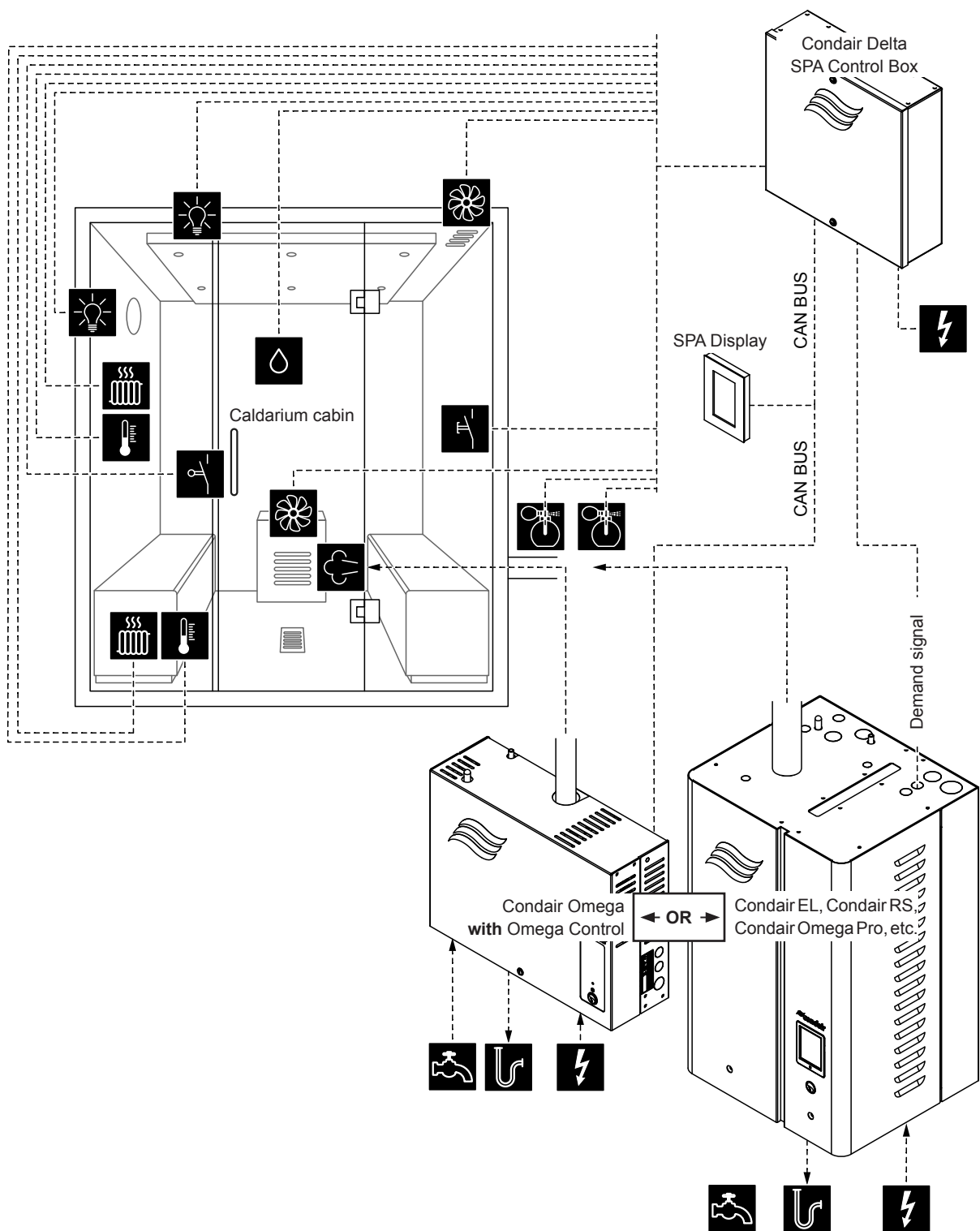


Fig. 3: Condair Delta SPA Control Box for Caldarium application

3.3.4 Condair Delta SPA Control Box for Rasul application

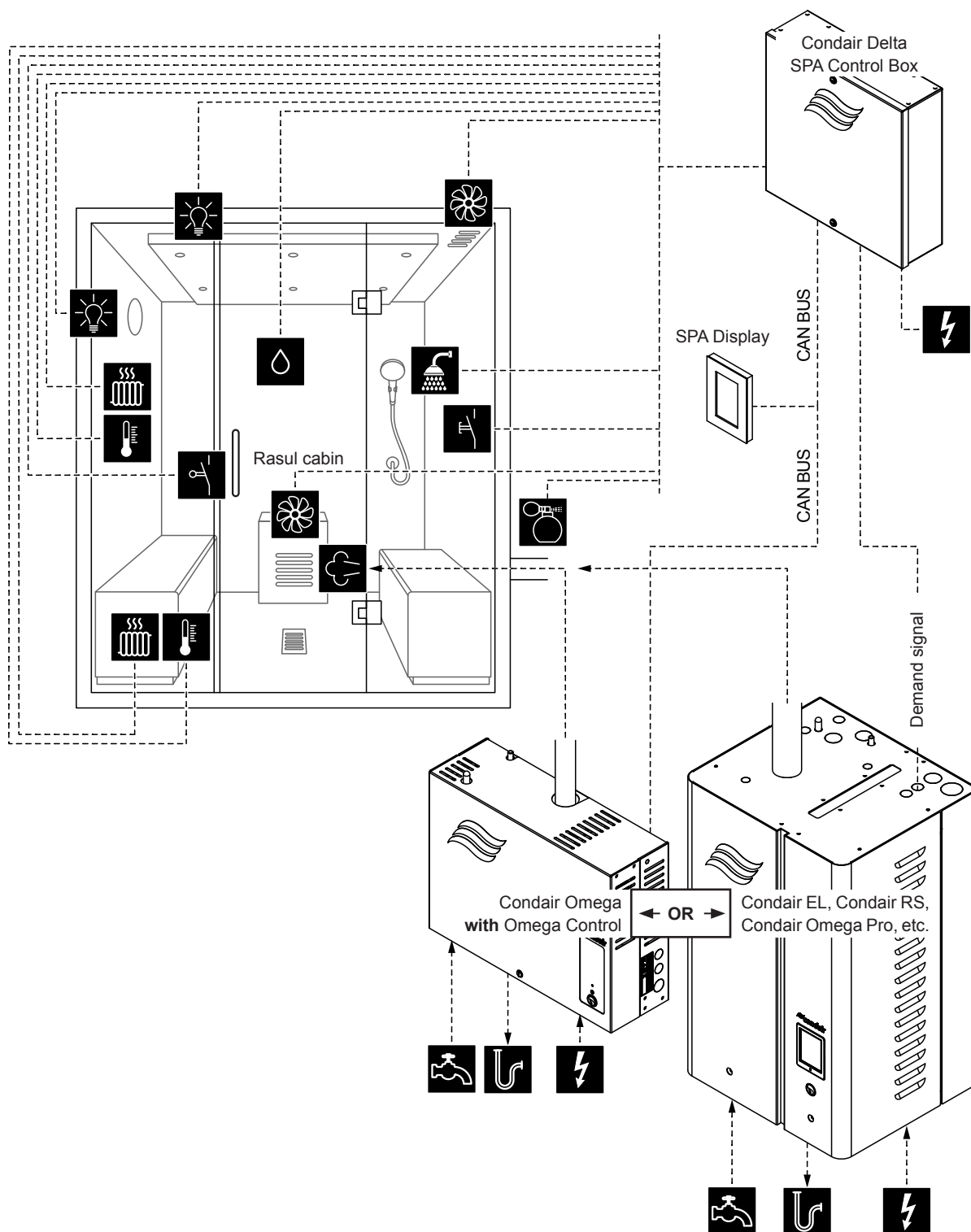



Fig. 4: Condair Delta SPA Control Box for Rasul application

3.4 Identification of the unit

The identification of the unit is found on the rating plate:

Type designation (DSC, DSC-BH or DSC-BWH)	Serial number (7 digits)	Month/Year
Condair Group AG, Gwattstrasse 17, 8808 Pfäffikon SZ, Switzerland		
Type: Condair DSC	Serial No.: XXXXXXX	11.23
Control voltage	Control voltage: 120V/1~/ 60Hz	Amps: xx A
Typical power consumption	Power: x.x kW	Circuit protection: Max. xx A
Field with certification symbols		File: Exxxxxx
Typical Amperage	Engineered in Switzerland, Made in Germany	
Max. circuit protection		

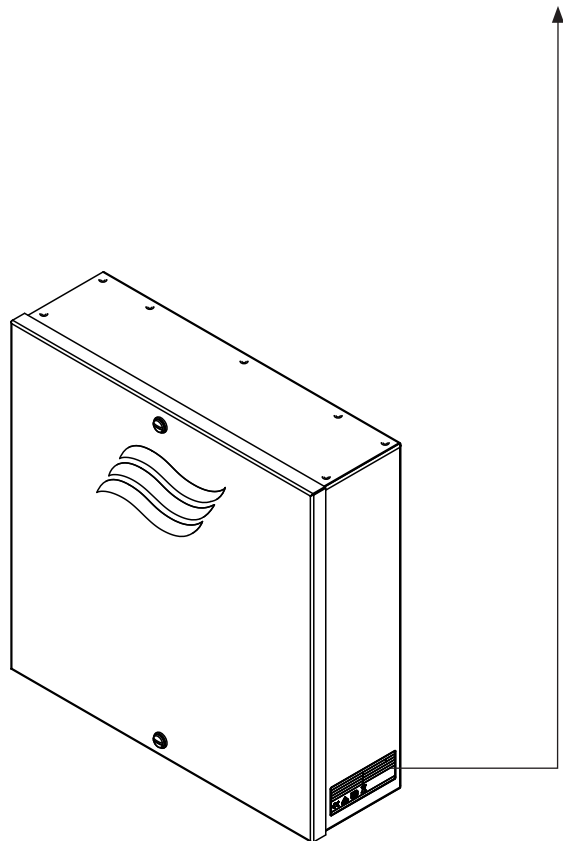


Fig. 5: Location of the rating plate

3.5 Accessories

A separate product documentation is available for accessories for the Condair Delta SPA Control Box and for SPA applications. Please contact your Condair representative.

4 Inspecting the delivery / Storage and Transportation

4.1 Delivery

4.1.1 Standard delivery

The standard delivery includes:

- Condair Delta SPA Control Box including fixing set, installation manual (this document) and operation manual SPA Control and spare parts list, packaged in cardboard box.

Unit type	Dimensions packaging (L x W x D)	Transport weight
Condair Delta SPA Control Box	16.85 in x 16.81 in x 6.77 in (428 mm x 427 mm x 172 mm)	13.23 lbs (6.0 kg)

- Ordered accessories with operating instructions packed separately.

4.1.2 Inspecting the delivery

After receiving:

- Inspect shipping box(es) for damage.
Any damages of the shipping box(es) must be reported to the shipping company without delay.
- Check packing slip to ensure all parts has been delivered.
All material shortages are to be reported to your Condair supplier within 48 hours after receipt of the goods. Condair Ltd. assumes no responsibility for any material shortages beyond this period.
- Unpack the parts/components and check for any damage.
If parts/components are damaged, notify the shipping company immediately.
- Check whether the components are suitable for installation on your site according to the unit data stated on the rating plate.

4.2 Storage and Transportation

Storing

Until installation store the Condair Delta SPA Control Box Pro in its original packaging in a protected area meeting the following requirements:

- Room temperature: 41 ... 104 °F (5 ... 40 °C)
- Room humidity: 10 ... 75 %rh

Transportation

For optimum protection always transport the unit and components in their original packaging and use appropriate lifting/transporting devices.



WARNING!

It is the customer's responsibility to ensure that operators are trained in handling goods and that the operators comply with the appropriate regulations on work safety and the prevention of accidents.

Packaging

Keep the original packaging of the components for later use.

In case you wish to dispose of the packaging, observe the local regulations on waste disposal. Please recycle packaging where possible.

5 Mounting and installation work

5.1 Important notes on mounting and installation work

Qualification of personnel

All mounting and installation work must be carried out only by **well qualified specialists authorised by the owner**. It is the owner's responsibility to verify proper qualification of the personnel.

The electrical installations may only be carried out by a trained electrician.

General notes

Strictly observe and comply with all information and safety instructions in the present installation manual as well as in the documentations for the components (steam generator, sensors, fans, etc.), which are installed and used together with the Condair Delta SPA Control Box.

Observe and comply with all local regulations dealing with water, steam and electrical installations.

Safety

Some installation work requires removal of the unit cover of the Condair Delta SPA Control Box. Please note the following:



DANGER!
Danger of electric shock!

The Condair Delta SPA Control Box is mains powered. Live parts may be exposed when the unit is open. Touching live parts may cause severe injury or danger to life.

Prevention: The Condair Delta SPA Control Box must be connected to the mains only after all mounting and installation work has been completed, all installations have been checked for correct workmanship and the unit is closed and properly locked.



CAUTION!

The electronic components inside the Condair Delta SPA Control Box and inside the steam generator are very sensitive to electrostatic discharge.

Prevention: To protect these components against damage caused by electrostatic discharge (ESD protection) appropriate measures must be taken when the unit(s) is/are open for installation work.

5.2 Mounting the Condair Delta SPA Control Box

5.2.1 Notes on locating the unit

For the positioning of the Condair Delta SPA Control Box the following points must be observed and adhered to:

- The Condair Delta SPA Control Box is designed for wall-mounting in protected interiors. Make sure that the construction (wall, pillar, floor-mounted console, etc.) to which the Condair Delta SPA Control Box is to be mounted, offers a **sufficiently high load-bearing capacity** (take notice of the weight information), and is suitable for the installation.
- Install the Condair Delta SPA Control Box in such a manner that it is **freely accessible** with sufficient space available for installation and operation purposes.
- The Condair Delta SPA Control Box is **IP22** protected. Nevertheless, care should be taken to ensure that the device is protected from splash water at the installation site and that the permissible ambient conditions are complied with.
- The Condair Delta SPA Control Box must not be installed in potentially explosive environments or inside the SPA cabin.
- When mounting the Condair Delta SPA Control Box use **only the mounting materials supplied with the unit**. If mounting with the materials supplied is not possible in your particular case, select a method of mounting that is of similar stability.
- The Condair Delta SPA Control Box is designed for installation and operation within buildings (admissible temperature range 5...40 °C).

5.2.2 Mounting the Condair Delta SPA Control Box

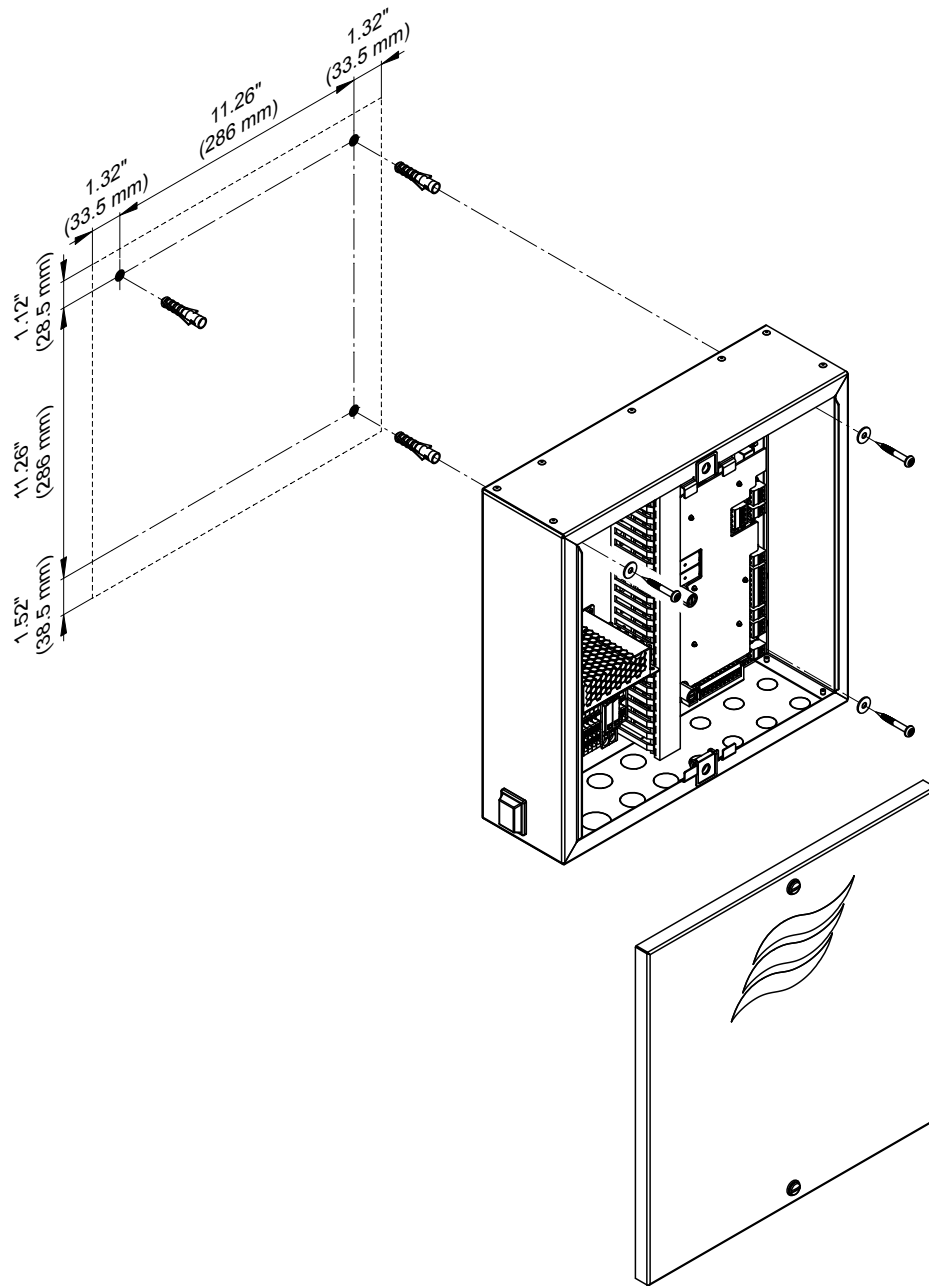


Fig. 6: Mounting the Condair Delta SPA Control Box

Procedure

1. Mark the three attachment points at the desired position with the help of a spirit level. Then, drill holes diameter: 0.39" (10 mm), depth: 1.97" (50 mm).
2. Insert the supplied plastic plugs.
3. Unlock the retaining screw of the unit cover, then remove the unit cover.
4. Fix the Condair Delta SPA Control Box to the wall using the supplied screws and washers, align horizontally with a spirit level and tighten the screws.

Important: Make sure that the washers are mounted underneath the screw heads.

5. Reattach the unit cover and lock it with the screws and gaskets.

Important: Make sure the gaskets are located underneath the screw heads.

5.2.3 Inspecting the installed unit

Check the following points:

- ☐ Is the Condair Delta SPA Control Box installed in the correct place (see [chapter 5.2.1](#))?
- ☐ Is the supporting surface stable enough?
- ☐ Is the Condair Delta SPA Control Box correctly aligned, vertically and horizontally?
- ☐ Is the Condair Delta SPA Control Box properly secured (see [chapter 5.2.2](#))?
- ☐ Has the unit cover been relocated and correctly fixed with the two screws and gaskets?

5.3 Electric installation

5.3.1 Notes on electrical installation



DANGER!
Danger of electric shock

The Condair Delta SPA Control Box is mains powered. Live parts may be exposed when the unit is open. Touching live parts may cause severe injury or danger to life.

Prevention: The Condair Delta SPA Control Box unit must be connected to the mains only after all mounting and installation work has been completed, all installations have been checked for correct workmanship and the unit is closed and properly locked.



CAUTION!

The electronic components inside the Condair Delta SPA Control Box are very sensitive to electrostatic discharge. Before carrying out installations work inside the unit, appropriate measures must be taken to protect the electronic components against damage caused by electrostatic discharge (ESD protection).



WARNING!

For public saunas without heating time limit, a warning light in the room of the supervisor must be installed, which indicates when the sauna heater is on.

- All work concerning the electrical installation must be performed only by **skilled and qualified technical personnel (e.g. electrician with appropriate training) authorised by the owner**. It is the owner's responsibility to verify proper qualification of the personnel.
- The electrical installation must be carried out according to the corresponding wiring diagram (see [chapter 5.3.3](#)), the notes on electrical installation as well as the applicable local regulations. All information given in the wiring diagram and additional notes regarding the electrical installation work must be followed and observed.
- All cables must be lead into the unit, via appropriate cable glands with strain relief (supplied by others). Make sure that the cable glands with splash-water protection are used and that they are watertight.
- Make sure the cables are adequately fixed, do not rub on any components or become a tripping hazard.
- Observe and maintain maximum cable length and required cross section per wire according to local regulations.
- Only use heat-resistant cables designed for a temperature of at least 150 °C to connect the accessory components in the cabin.
- The mains supply voltage(s) must match the respective voltage(s) stated in the corresponding wiring diagram (see [chapter 5.3.3](#)).
- Make sure that the maximum permissible loads are not exceeded (see [chapter 5.3.5](#)).
- For the installation of accessory components, please observe the information in the corresponding documentation supplied by the respective manufacturer.

5.3.2 Overview SPA cabin installations

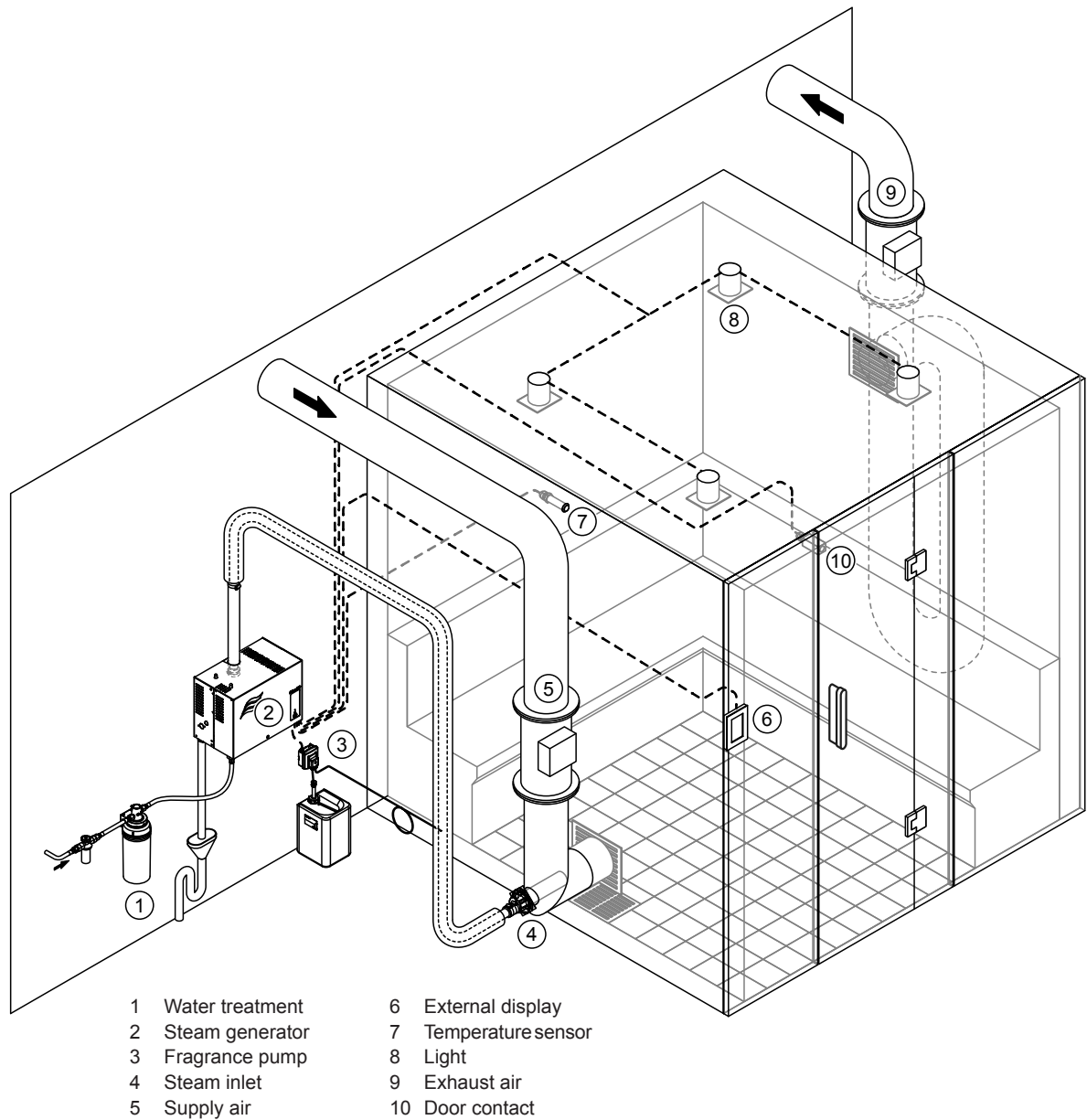
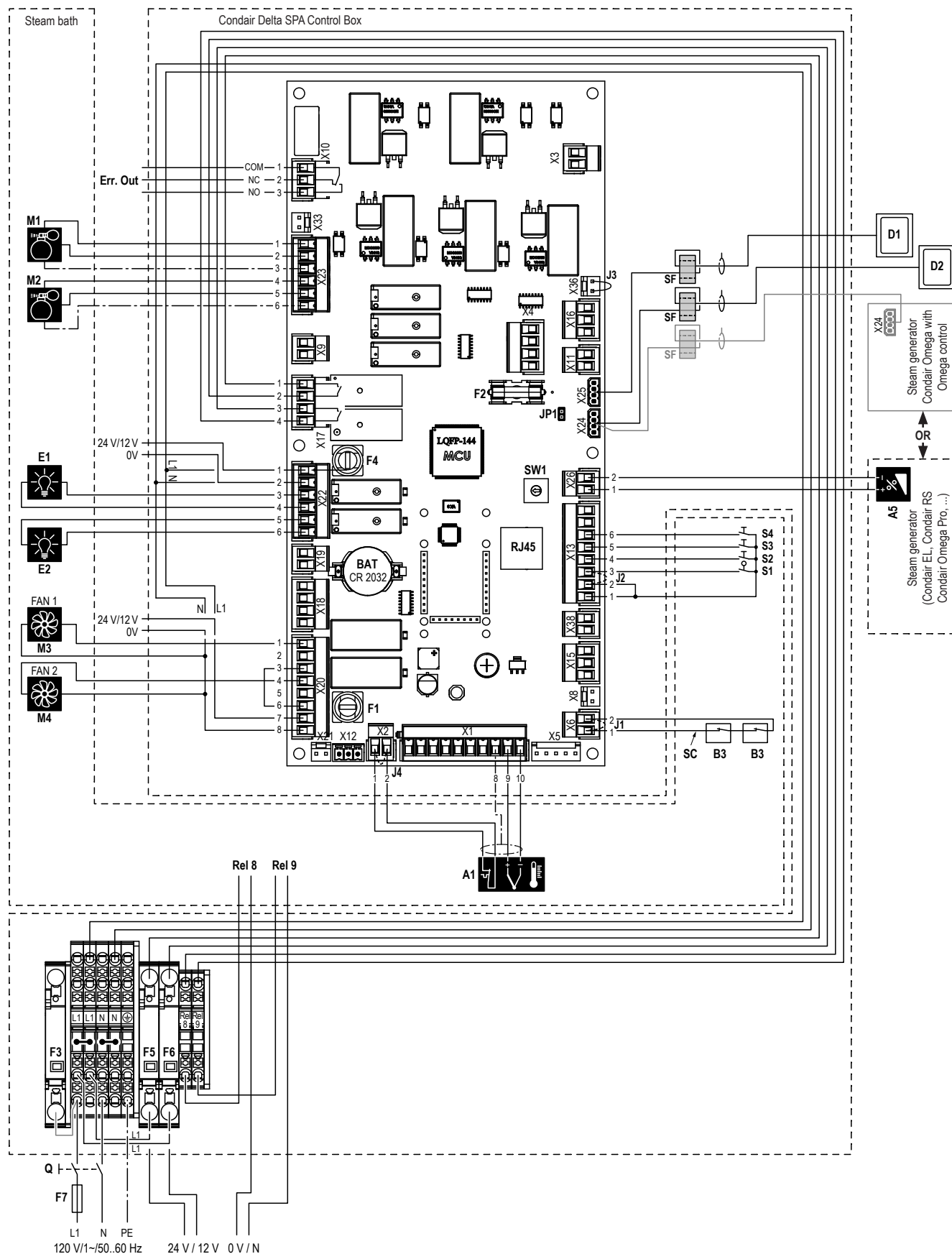




Fig. 7: Overview SPA cabin installations

5.3.3 Wiring diagrams

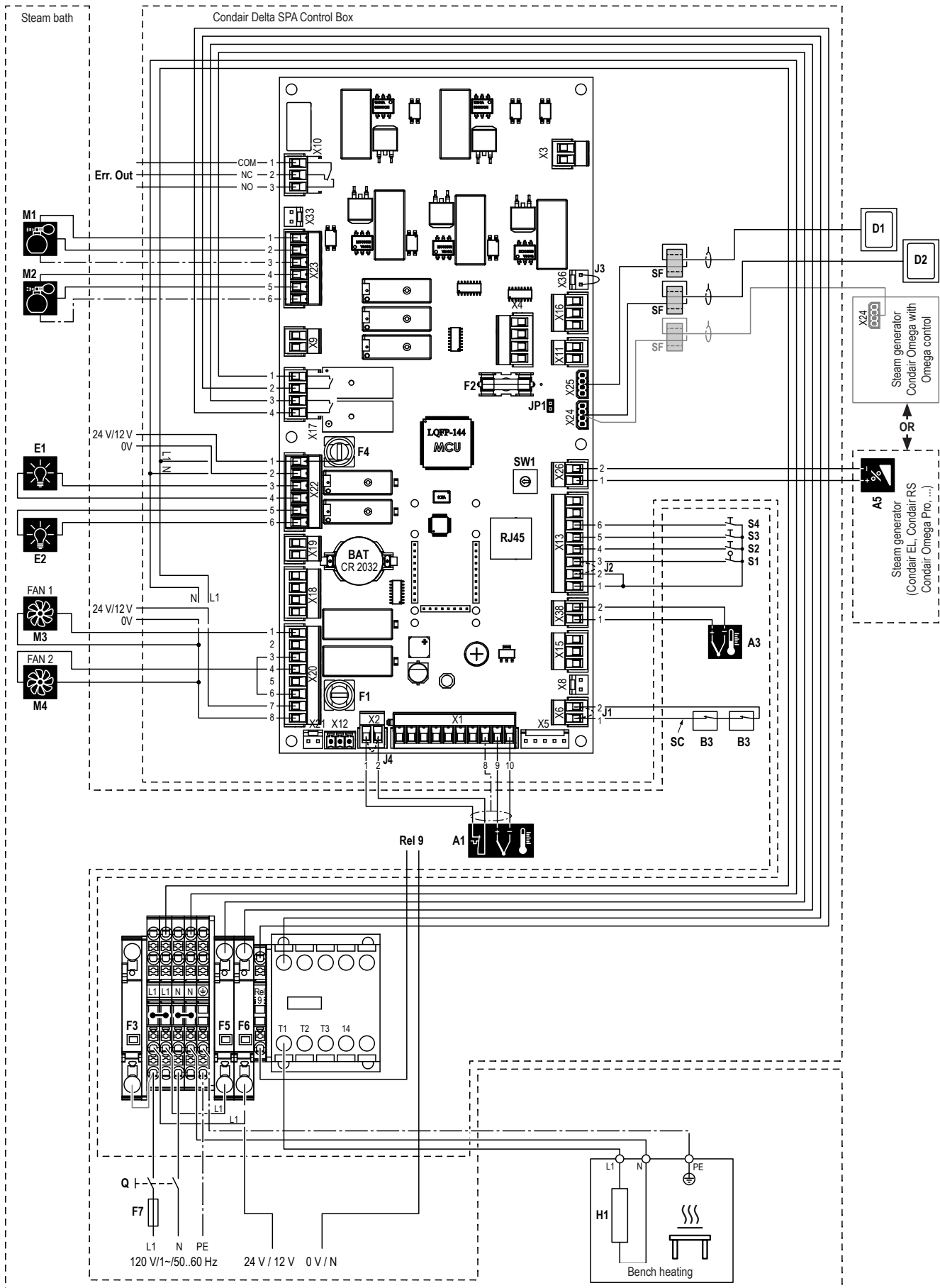
5.3.3.1 Wiring diagram Condair Delta SPA Control box for steam bath application






Legend wiring diagram Condair Delta SPA Control box for steam bath application

Symbol	Description	Remarks	Technical details
A1	Temperature sensor with integrated overtemperature switch	Detecting of the cabin temperature	KTY, PT100, PT1000
A5	Demand signal for external steam generator		0-10 V
B3	Safety devices (e.g. emergency stop)		
BAT	Backup battery SPA control board		CR2032, Lithium 3V
D1 / D2	External SPA display(s)	See notes in chapter 5.3.4.16	
E1	Light 1	Configurable as cleaning or color light	Maximum load: 250 V, 1 A
E2	Light 2	Configurable as cleaning or color light	Maximum load: 250 V, 1 A
Err.Out	Fault output		
F1	Microfuse fans		2 A, slow acting
F2	Microfuse 24 VDC external		1 A, slow acting
F3	Internal fuse terminal power supply		2 A, slow acting
F4	Microfuse light		2 A, slow acting
F5	Internal fuse terminal Relais 8		2 A, fast acting
F6	Internal fuse terminal Relais 9		2 A, fast acting
F7	External fuse power supply 120 V/1~/50..60 Hz	Supplied by others!	10 A, fast acting
J1	Cable bridge	Connect cable bridge to terminal block "X6", if no safety devices are connected to terminal block "X6".	
J2	Cable bridge	Connect cable bridge to terminals 2 and 3 of terminal block "X2", if no door switch is connected.	
J3	Cable bridge	Do not remove!	
J4	Cable bridge	Connect cable bridge to terminal block "X2", if no overtemperature switch is connected.	
JP1	Terminating resistor CAN BUS	Remove jumper, if both CAN BUS connectors are used.	
M1	Fragrance pump 1	 DANGER: 120 V output!	Maximum load: 250 V, 0.5 A
M2	Fragrance pump 2	 DANGER: 120 V output!	Maximum load: 250 V, 0.5 A
M3	Fan 1 (single-stage)	Control of supply and exhaust fan (configurable)	Maximum load: 250 V, 1 A
M4	Fan 2 (single-stage)	Control of supply and exhaust fan (configurable)	Maximum load: 250 V, 1 A
RJ45	Network connector	Network connector for the upload of software updates	
Rel 8	Potential-free relay contact	Function freely configurable	Maximum load: 250 V, 2 A
Rel 9	Potential-free relay contact	Function freely configurable	Maximum load: 250 V, 2 A
SC	Safety loop		
SF	Ferrite CAN BUS		
SW1	Rotary switch unit address	See notes in chapter 5.3.4.16	
S1	Door switch		
S2	Start-/Stop button		
S3	Light 1 button		
S4	Light 2 / Steam blast button		
Q	External main switch (all-pole disconnection) power supply	Supplied by others!	

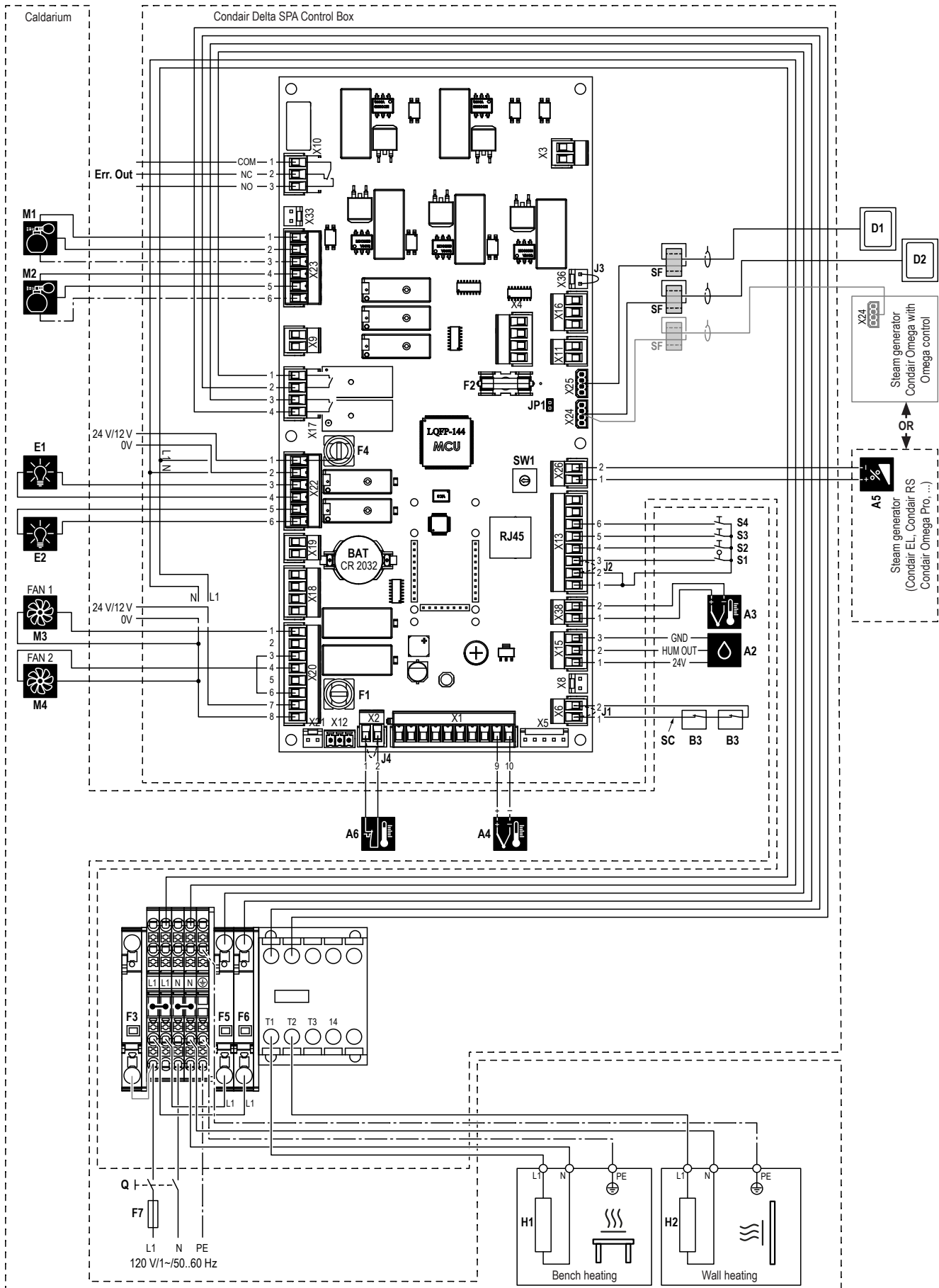
5.3.3.2 Wiring diagram Condair Delta SPA Control Box for steam bath application with optional bench heating







Legend wiring diagram Condair Delta SPA Control box for steam bath application with optional bench heating

Symbol	Description	Remarks	Technical details
A1	Temperature sensor with integrated over-temperature switch	Detecting of the cabin temperature	KTY, PT100, PT1000
A3	Temperature sensor bench heating	Detecting of the bench temperature	KTY, PT100, PT1000
A5	Demand signal for external steam generator		0-10 V
B3	Safety devices (e.g. emergency stop)		
BAT	Backup battery SPA control board		CR2032, Lithium 3V
D1 / D2	External SPA display(s)	See notes in chapter 5.3.4.16	
E1	Light 1	Configurable as cleaning or color light	Maximum load: 250 V, 1 A
E2	Light 2	Configurable as cleaning or color light	Maximum load: 250 V, 1 A
Err.Out	Fault output		
F1	Microfuse fans		2 A, slow acting
F2	Microfuse 24 VDC external		1 A, slow acting
F3	Internal fuse terminal power supply		2 A, slow acting
F4	Microfuse light		2 A, slow acting
F5	Internal fuse terminal Relais 8		6.3 A, fast acting
F6	Internal fuse terminal Relais 9		2 A, fast acting
F7	External fuse power supply 120 V/1~/50..60 Hz	Supplied by others!	16 A, fast acting
H1	Bench heating	 Observe safety notes in chapter 5.3.4.11!	Maximum load: 0.75 kW
J1	Cable bridge	Connect cable bridge to terminal block "X6", if no safety devices are connected to terminal block "X6".	
J2	Cable bridge	Connect cable bridge to terminals 2 and 3 of terminal block "X2", if no door switch is connected.	
J3	Cable bridge	Do not remove!	
J4	Cable bridge	Connect cable bridge to terminal block "X2", if no overtemperature switch is connected.	
JP1	Terminating resistor CAN BUS	Remove jumper, if both CAN BUS connectors are used.	
M1	Fragrance pump 1	 DANGER: 120 V output!	Maximum load: 250 V, 0.5A
M2	Fragrance pump 2	 DANGER: 120 V output!	Maximum load: 250 V, 0.5A
M3	Fan 1 (single-stage)	Control of supply and exhaust fan (configurable)	Maximum load: 250 V, 1 A
M4	Fan 2 (single-stage)	Control of supply and exhaust fan (configurable)	Maximum load: 250 V, 1 A
RJ45	Network connector	Network connector for the upload of software updates	
Rel 8	Potential-free relay contact	Used for the control of the bench heating	Maximum load: 250 V, 6.3 A
Rel 9	Potential-free relay contact	Function freely configurable	Maximum load: 250 V, 2 A
SC	Safety loop		
SF	Ferrite CAN BUS		
SW1	Rotary switch unit address	See notes in chapter 5.3.4.16	
S1	Door switch		
S2	Start/Stop button		
S3	Light 1 button		
S4	Light 2 / Steam blast button		
Q	External main switch (all-pole disconnection) power supply	Supplied by others!	

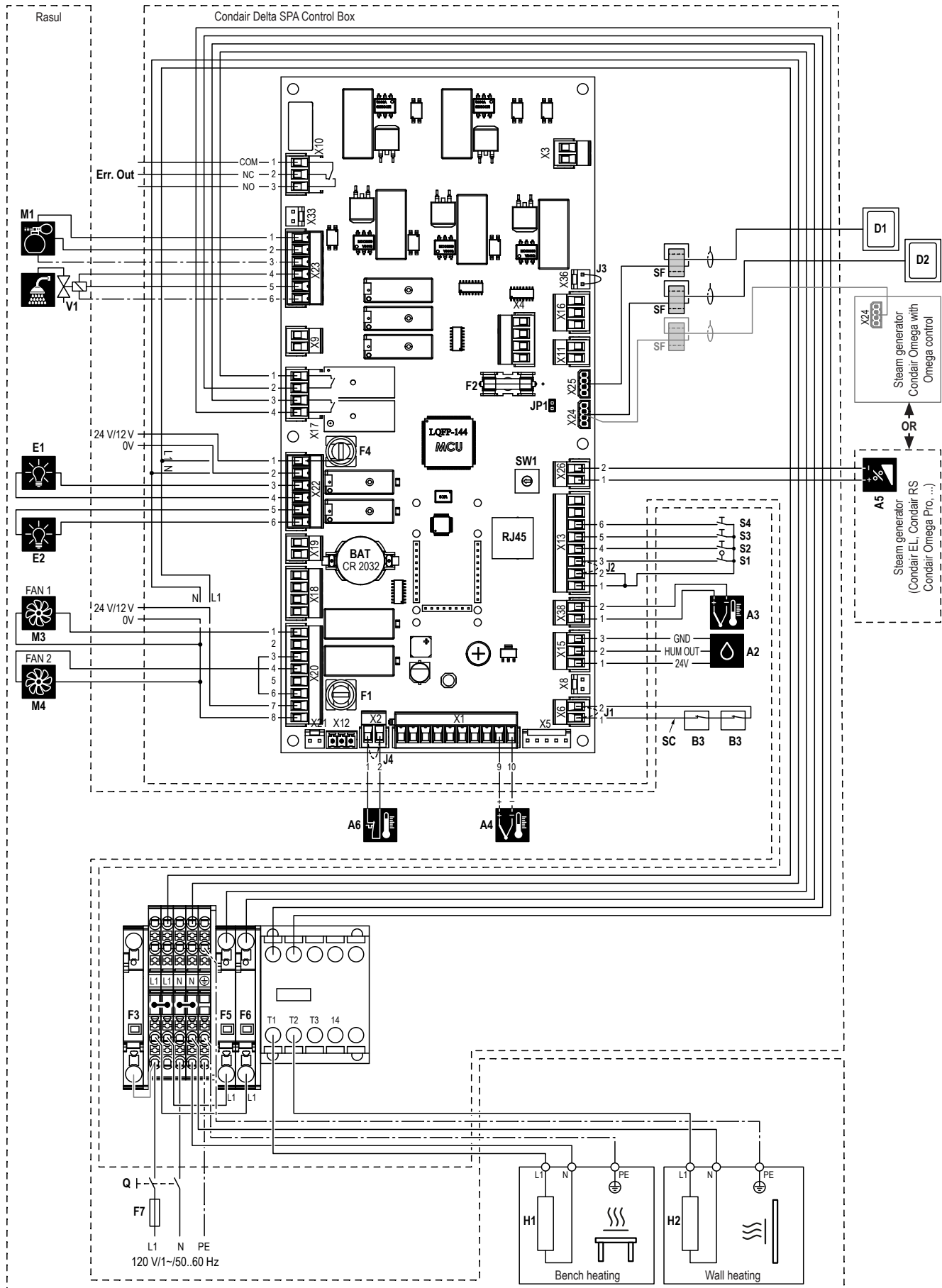
5.3.3.3 Wiring diagram Condair Delta SPA Control Box for caldarium application with bench and wall heating







Legend wiring diagram Condair Delta SPA Control box for caldarium application with bench and wall heating

Symbol	Description	Remarks	Technical details
A2	Humidity sensor	Caldarium	
A3	Temperature sensor bench heating	Detecting of the bench temperature for the control of bench heating	KTY, PT100, PT1000
A4	Temperature sensor wall heating	Detecting of the wall temperature for the control of wall heating	KTY, PT100, PT1000
A5	Demand signal for external steam generator		0-10 V
A6	Cabin overtemperature switch		
B3	Safety devices (e.g. emergency stop)		
BAT	Backup battery SPA control board		CR2032, Lithium 3V
D1 / D2	External SPA display(s)	See notes in chapter 5.3.4.16	
E1	Light 1	Configurable as cleaning or color light	Maximum load: 250 V, 1 A
E2	Light 2	Configurable as cleaning or color light	Maximum load: 250 V, 1 A
Err.Out	Fault output		
F1	Microfuse fans		2 A, slow acting
F2	Microfuse 24 VDC external		1 A, slow acting
F3	Internal fuse terminal power supply		2 A, slow acting
F4	Microfuse light		2 A, slow acting
F5	Internal fuse terminal Relais 8		6.3 A, fast acting
F6	Internal fuse terminal Relais 9		6.3 A, fast acting
F7	External fuse power supply 120 V/1~/50..60 Hz	Supplied by others!	20 A, fast acting
H1	Bench heating	 Observe safety notes in chapter 5.3.4.12!	Maximum load: 0.75 kW
H2	Wall heating	 Observe safety notes in chapter 5.3.4.12!	Maximum load: 0.75 kW
J1	Cable bridge	Connect cable bridge to terminal block "X6", if no safety devices are connected to terminal block "X6".	
J2	Cable bridge	Connect cable bridge to terminals 2 and 3 of terminal block "X2", if no door switch is connected.	
J3	Cable bridge	Do not remove!	
J4	Cable bridge	Connect cable bridge to terminal block "X2", if no overtemperature switch "A6".	
JP1	Terminating resistor CAN BUS	Remove jumper, if both CAN BUS connectors are used.	
M1	Fragrance pump 1	 DANGER: 120 V output!	Maximum load: 250 V, 0.5A
M2	Fragrance pump 2	 DANGER: 120 V output!	Maximum load: 250 V, 0.5A
M3	Fan 1 (single-stage)	Control of supply and exhaust fan (configurable)	Maximum load: 250 V, 1 A
M4	Fan 2 (single-stage)	Control of supply and exhaust fan (configurable)	Maximum load: 250 V, 1 A
RJ45	Network connector	Network connector for the upload of software updates	
Rel 8	Potential-free relay contact	Used for the control of the bench heating	Maximum load: 250 V, 6.3 A
Rel 9	Potential-free relay contact	Used for the control of the wall heating	Maximum load: 250 V, 6.3 A
SC	Safety loop		
SF	Ferrite CAN BUS		
SW1	Rotary switch unit address	See notes in chapter 5.3.4.16	
S1	Door switch		
S2	Start-/Stop button		
S3	Light 1 button		
S4	Light 2 / Steam blast button		
Q	External main switch (all-pole disconnection) power supply	Supplied by others!	

5.3.3.4 Wiring diagram Condair Delta SPA Control Box for Rasul application with bench and wall heating

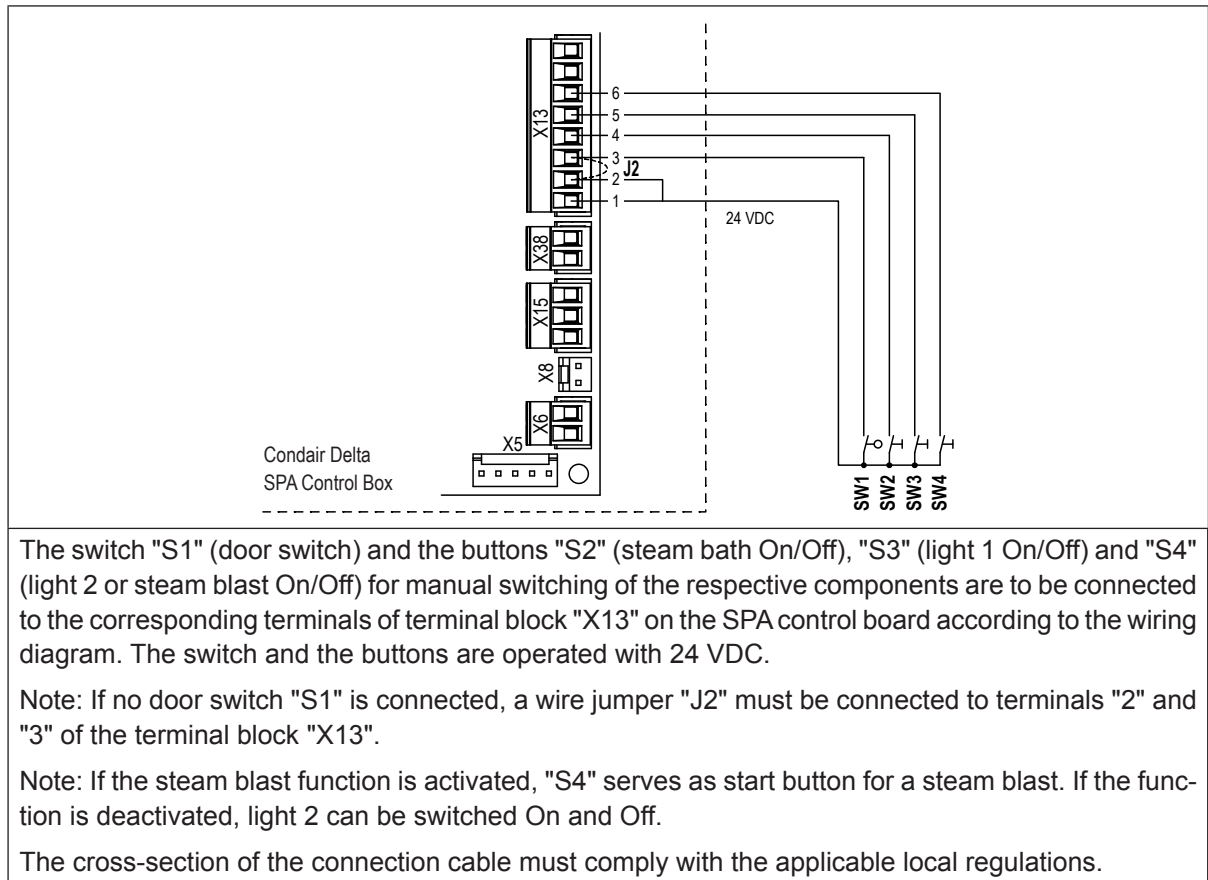


Legend wiring diagram Condair Delta SPA Control box for Rasul application with bench and wall heating

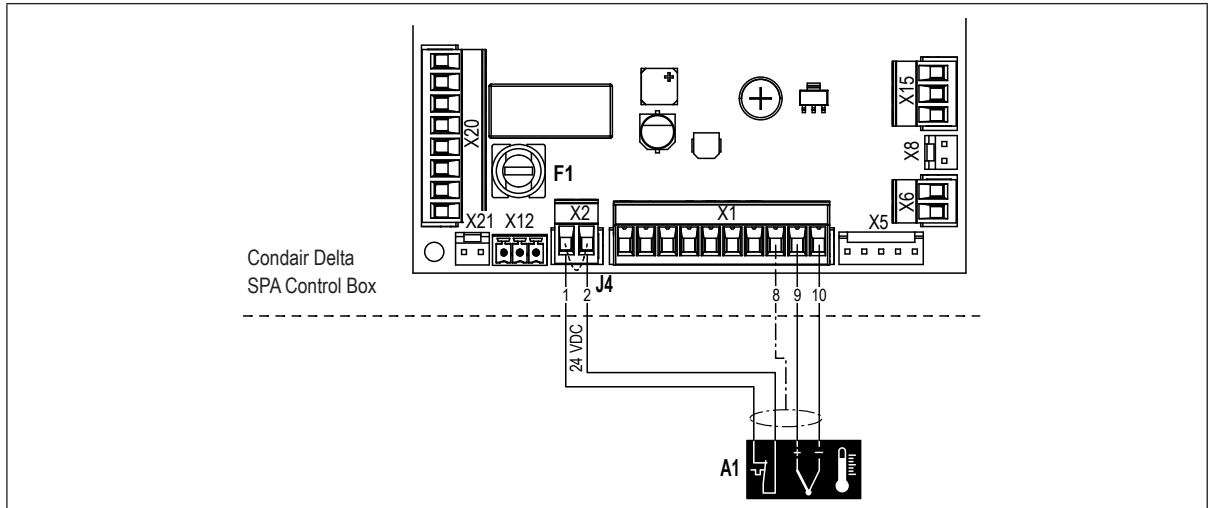
Symbol	Description	Remarks	Technical details
A2	Humidity sensor	Rasul	
A3	Temperature sensor bench heating	Detecting of the bench temperature for the control of bench heating	KTY, PT100, PT1000
A4	Temperature sensor wall heating	Detecting of the wall temperature for the control of wall heating	KTY, PT100, PT1000
A5	Demand signal for external steam generator		0-10 V
A6	Cabin overtemperature switch		
B3	Safety devices (e.g. emergency stop)		
BAT	Backup battery SPA control board		CR2032, Lithium 3V
D1 / D2	External SPA display(s)	See notes in chapter 5.3.4.16	
E1	Light 1	Configurable as cleaning or color light	Maximum load: 250 V, 1 A
E2	Light 2	Configurable as cleaning or color light	Maximum load: 250 V, 1 A
Err.Out	Fault output		
F1	Microfuse fans		2 A, slow acting
F2	Microfuse 24 VDC external		1 A, slow acting
F3	Internal fuse terminal power supply		2 A, slow acting
F4	Microfuse light		2 A, slow acting
F5	Internal fuse terminal Relais 8		6.3 A, fast acting
F6	Internal fuse terminal Relais 9		6.3 A, fast acting
F7	External fuse power supply 120 V/1~/50..60 Hz	Supplied by others!	20 A, fast acting
H1	Bench heating	 Observe safety notes in chapter 5.3.4.12!	Maximum load: 0.75 kW
H2	Wall heating	 Observe safety notes in chapter 5.3.4.12!	Maximum load: 0.75 kW
J1	Cable bridge	Connect cable bridge to terminal block "X6", if no safety devices are connected to terminal block "X6".	
J2	Cable bridge	Connect cable bridge to terminals 2 and 3 of terminal block "X2", if no door switch is connected.	
J3	Cable bridge	Do not remove!	
J4	Cable bridge	Connect cable bridge to terminal block "X2", if no overtemperature switch "A6".	
JP1	Terminating resistor CAN BUS	Remove jumper, if both CAN BUS connectors are used.	
M1	Fragrance pump 1	 DANGER: 120 V output!	Maximum load: 250 V, 0.5A
M3	Fan 1 (single-stage)	Control of supply and exhaust fan (configurable)	Maximum load: 250 V, 1 A
M4	Fan 2 (single-stage)	Control of supply and exhaust fan (configurable)	Maximum load: 250 V, 1 A
RJ45	Network connector	Network connector for the upload of software updates	
Rel 8	Potential-free relay contact	Used for the control of the bench heating	Maximum load: 250 V, 6.3 A
Rel 9	Potential-free relay contact	Used for the control of the wall heating	Maximum load: 250 V, 6.3 A
SC	Safety loop		
SF	Ferrite CAN BUS		
SW1	Rotary switch unit address	See notes in chapter 5.3.4.16	
S1	Door switch		
S2	Start-/Stop button		
S3	Light 1 button		
S4	Light 2 / Steam blast button		
Q	External main switch (all-pole disconnection) power supply	Supplied by others!	
V1	Valve cabin shower	 DANGER: 120 V output!	Maximum load: 250 V, 0.5A

5.3.4 Installation work external connections

5.3.4.1 Connection of switch "S1" and buttons "S2" to "S4"



5.3.4.2 Connection of the temperature sensor "A1" for monitoring the cabin temperature



The temperature sensor is connected to terminals "9" (+) and "10" (-) of terminal block "X1" on the SPA control board. The following sensors are supported: KTY, PT100 and PT1000.

The overtemperature switch (24 VDC) for monitoring the maximum cabin temperature is connected to terminals "1" and "2" of terminal block "X2" on the SPA control board. If installed, remove wire jumper "J4" first.

Note: Use only certified temperature sensors from Condair which are available as Wellness accessory.

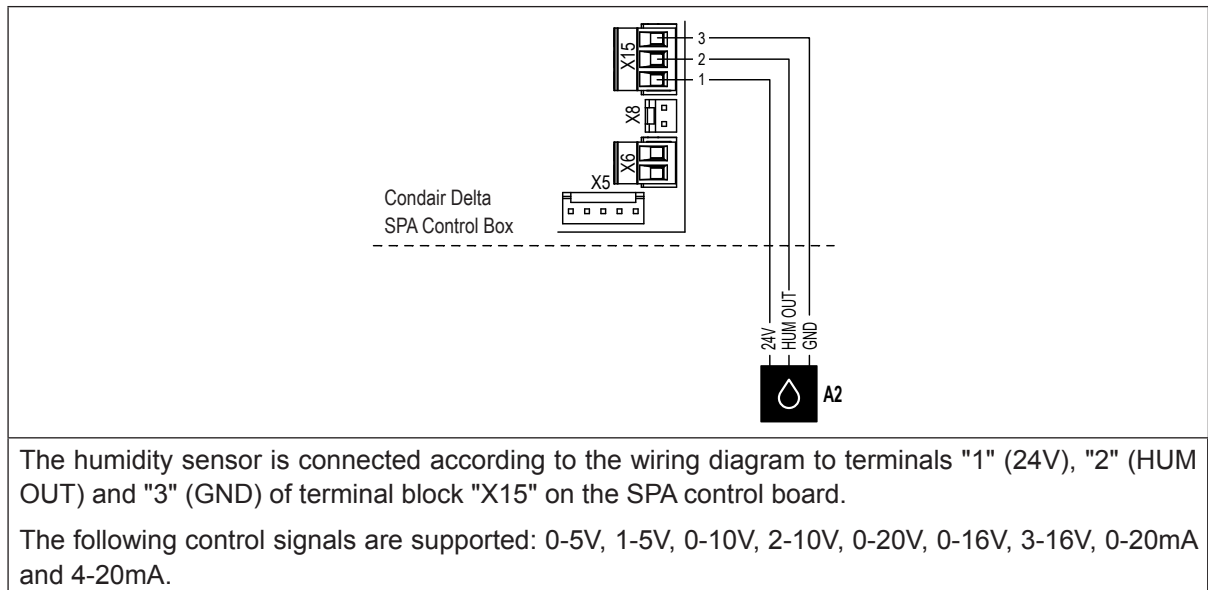


CAUTION! Do not apply any external voltage to the contacts "1" and "2".

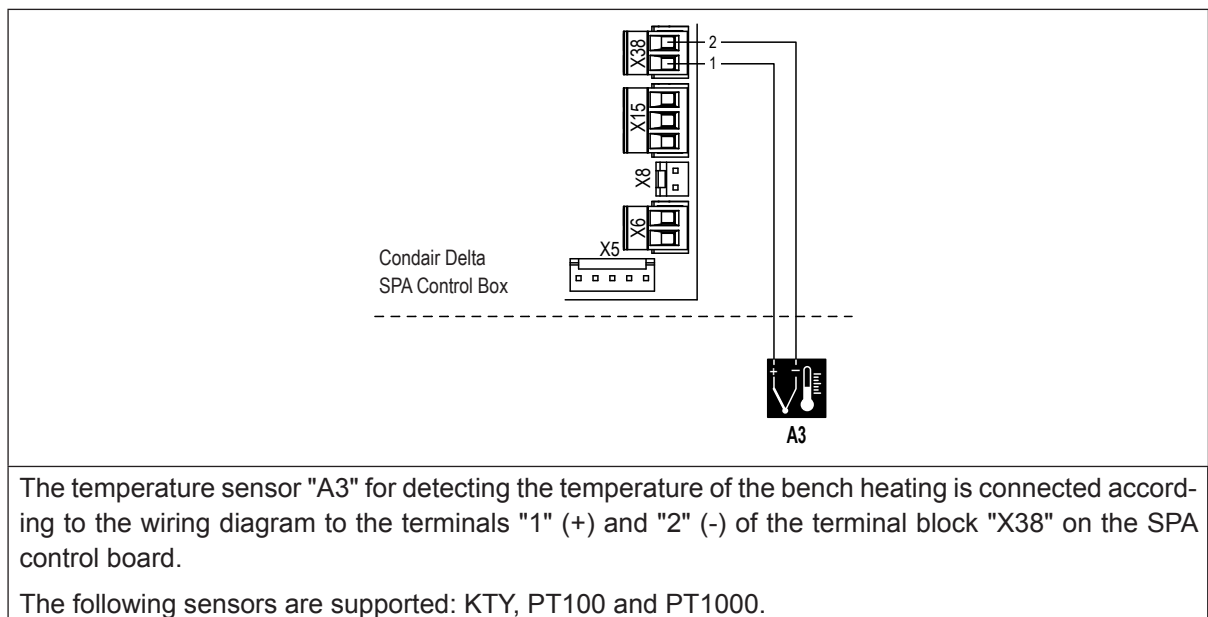
For the connection of the temperature sensor and the overtemperature switch we recommend the use of a shielded cable. The shield of the sensor cable is connected to terminal "8" of terminal block "X1" on the SPA control board.

Note: The temperature sensor with integrated overtemperature switch for the steam cabin must be installed in a suitable location (not in the immediate vicinity of the steam outlet) in the steam cabin. The temperature sensor (oven sensor) for the sauna heater must be installed above the sauna heater. For the placement and connection of the temperature sensor, please observe the instructions in the separate installation instructions for this product.

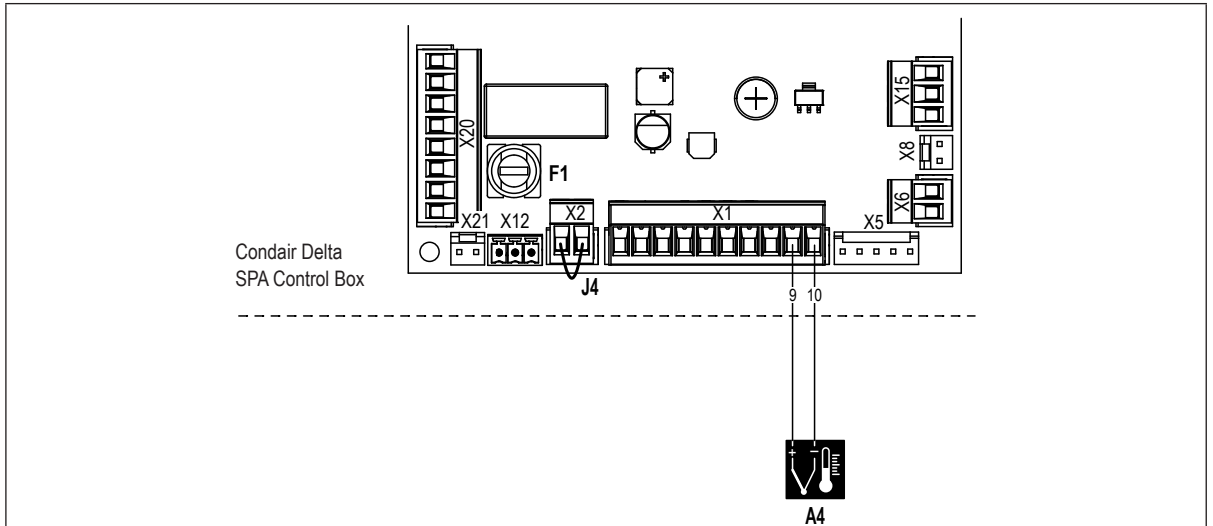
5.3.4.3 Connection of the humidity sensor "A2"



5.3.4.4 Connection of the temperature sensor "A3" of the bench heating



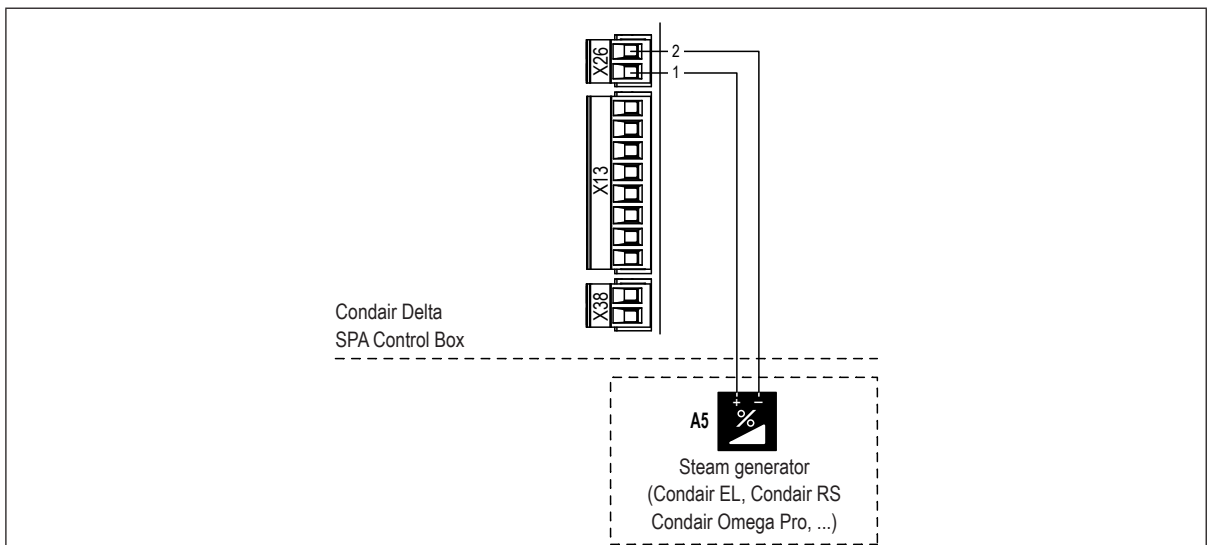
5.3.4.5 Connection of the temperature sensor "A4" of the wall heating



The temperature sensor "A4" for detecting the temperature of the wall heating is connected according to the wiring diagram to the terminals "9" (+) and "10" (-) of the terminal block "X1" on the SPA control board.

The following sensors are supported: KTY, PT100 and PT1000.

5.3.4.6 Connection of the demand signal "A5" for controlling the steam generator

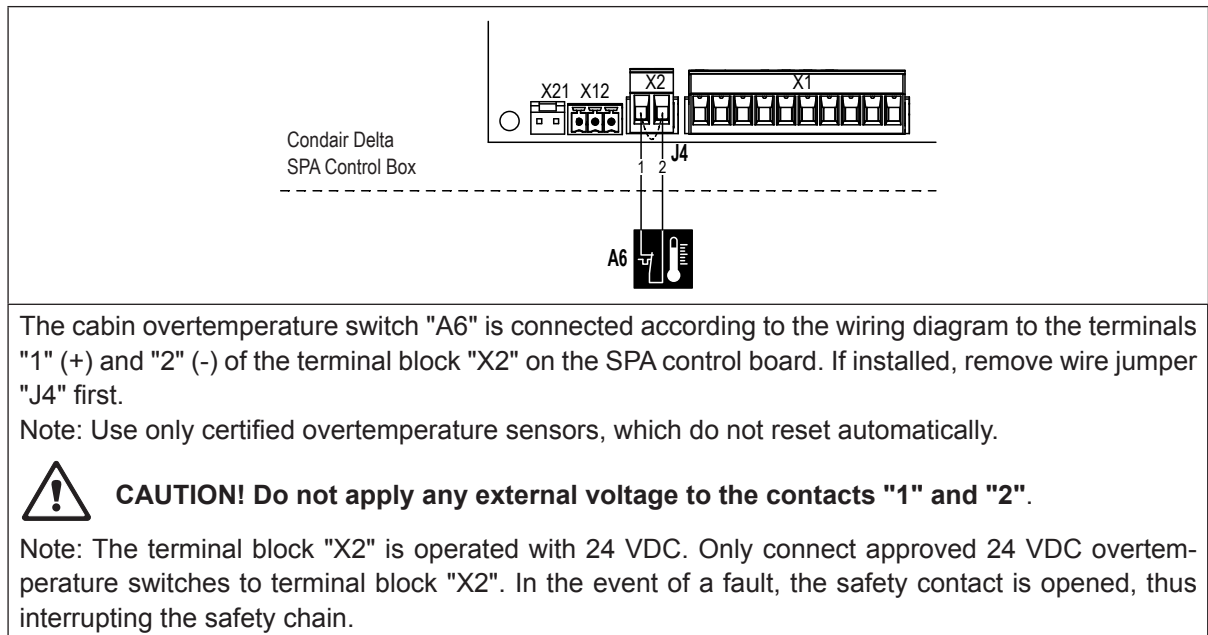


The demand signal "A5" for controlling the steam generator (Condair EL, Condair RS, Condair Omega Pro, etc.) is connected according to the wiring diagram to the terminals "1" (+) and "2" (-) of the terminal block "X26" on the SPA control board.

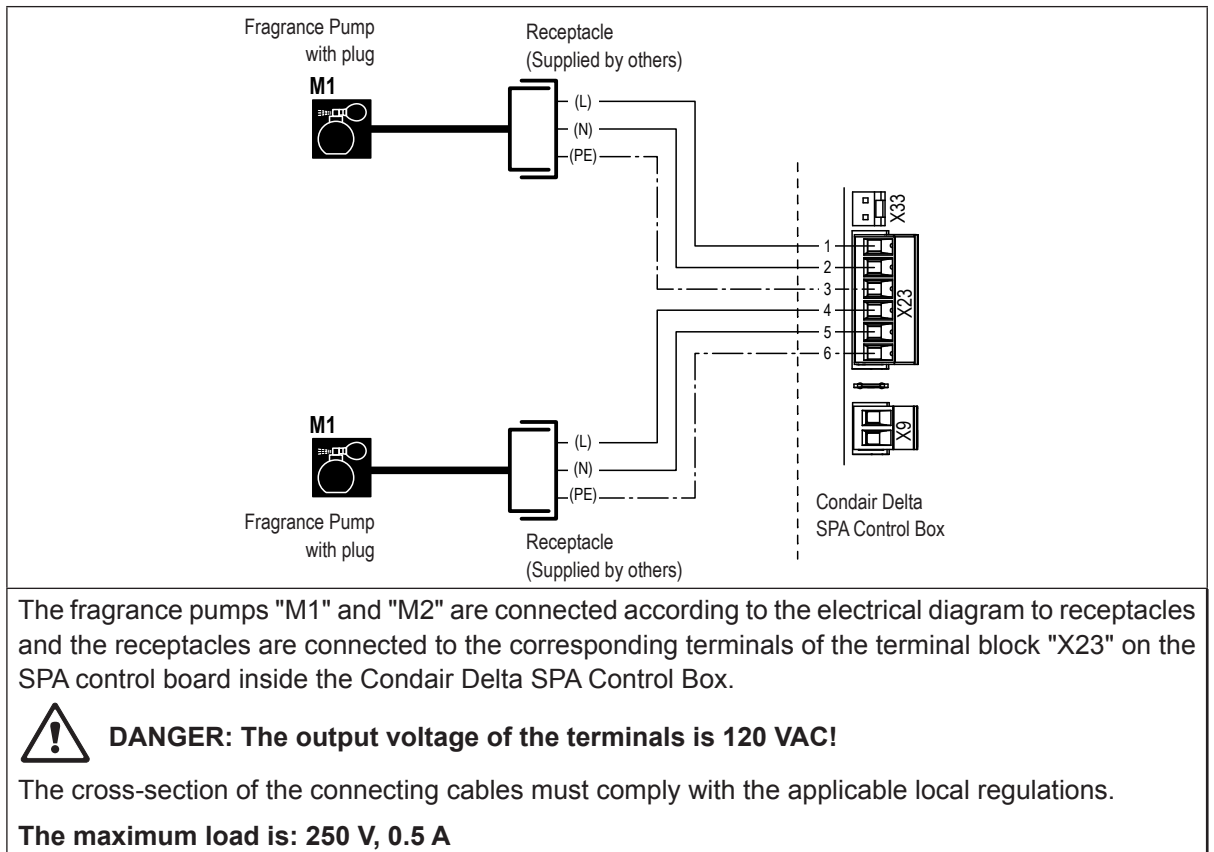
The output signal for the demand signal is 0-10 V and corresponds to a demand range of 0-100%.

For the connection of the demand signal to the steam generator, please observe the instructions in the documentation of the corresponding steam generator (Condair EL, Condair RS, Condair Omega Pro, etc.).

5.3.4.7 Connection of the cabin overtemperature switch "A6"



5.3.4.8 Connection of fragrance pumps "M1" and "M2" (120 VAC)



Notes:

- It is important to make sure that the fragrance oil cannot flow back into the steam generator. Always place fragrance injector in descending steam pipe section near the steam inlet.
- Furthermore make sure that steam cannot flow back to the fragrance pump in case you run out of fragrance oil. Make a loop in the fragrance hose which acts as a siphon (min. diameter 100 mm) to prevent steam flowing back to the pump (see also separate installation instructions supplied with the fragrance pump).

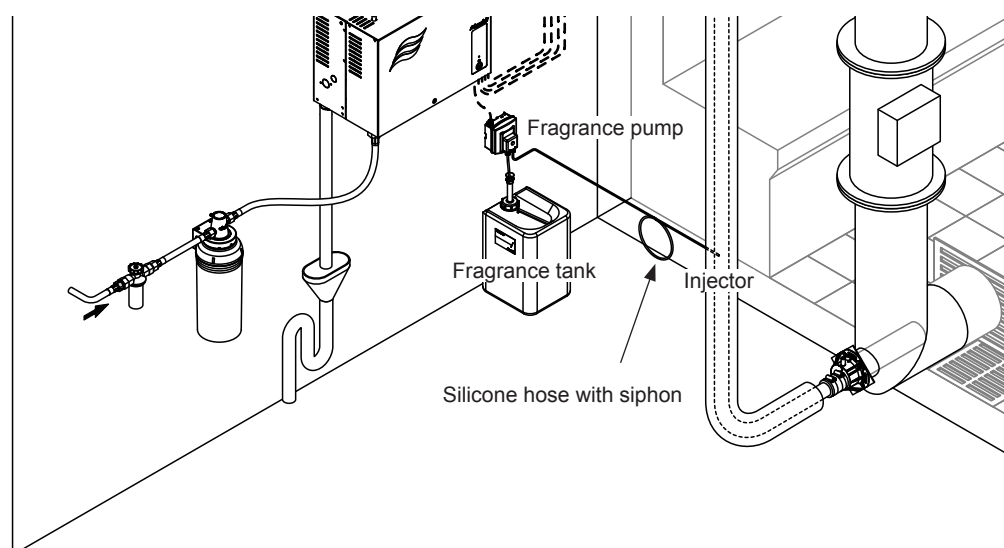
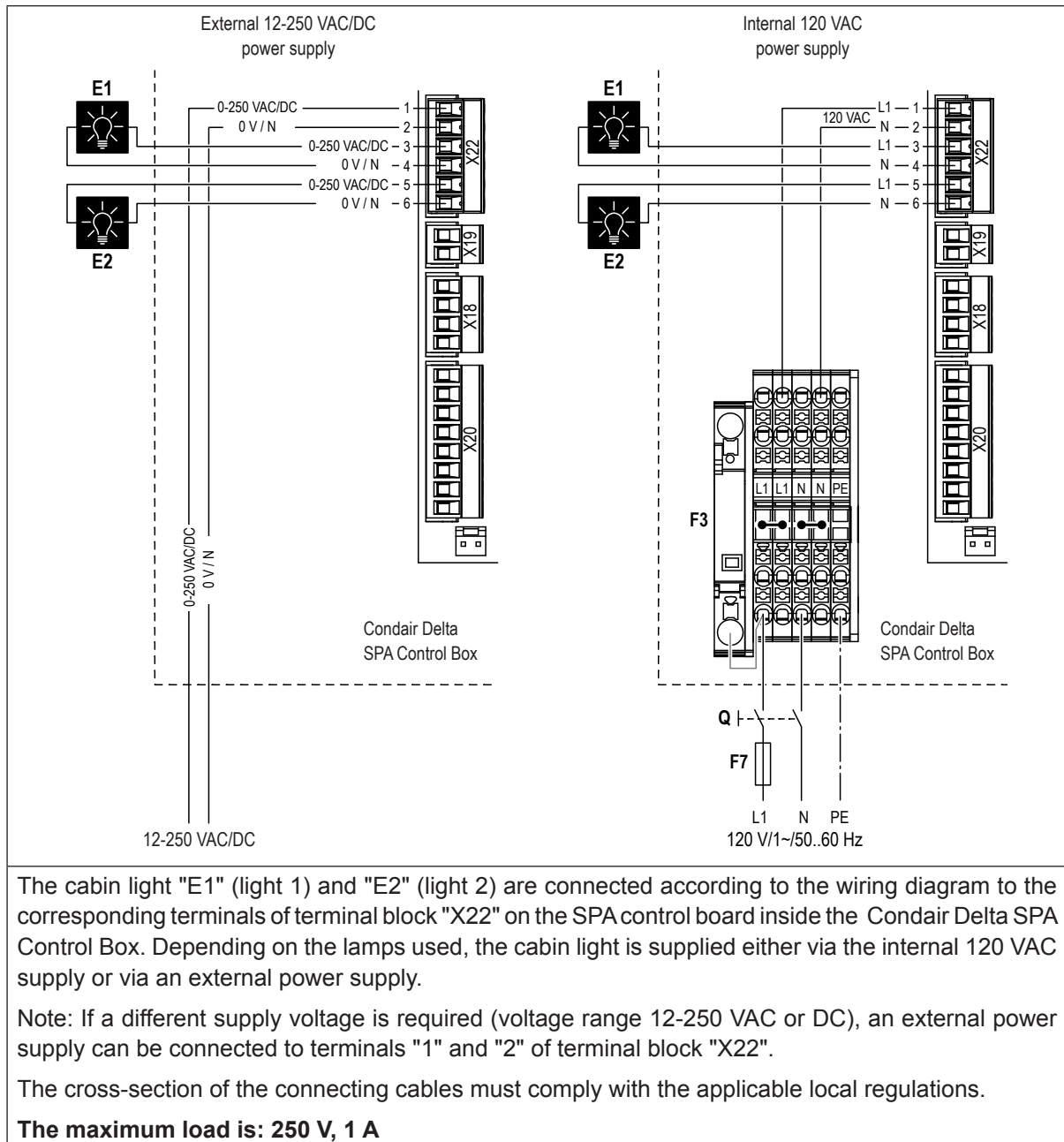
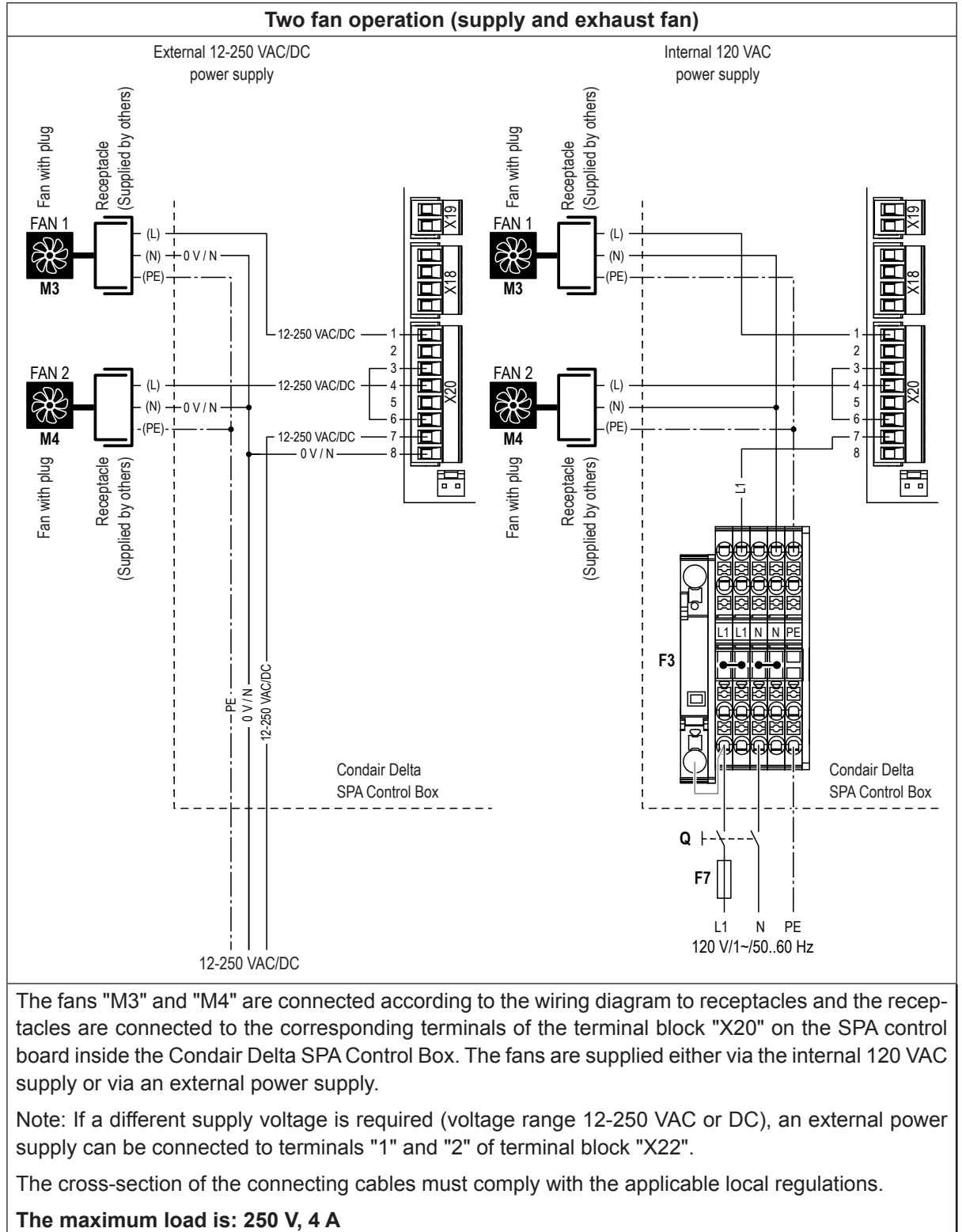


Fig. 8: Fragrance injection installation

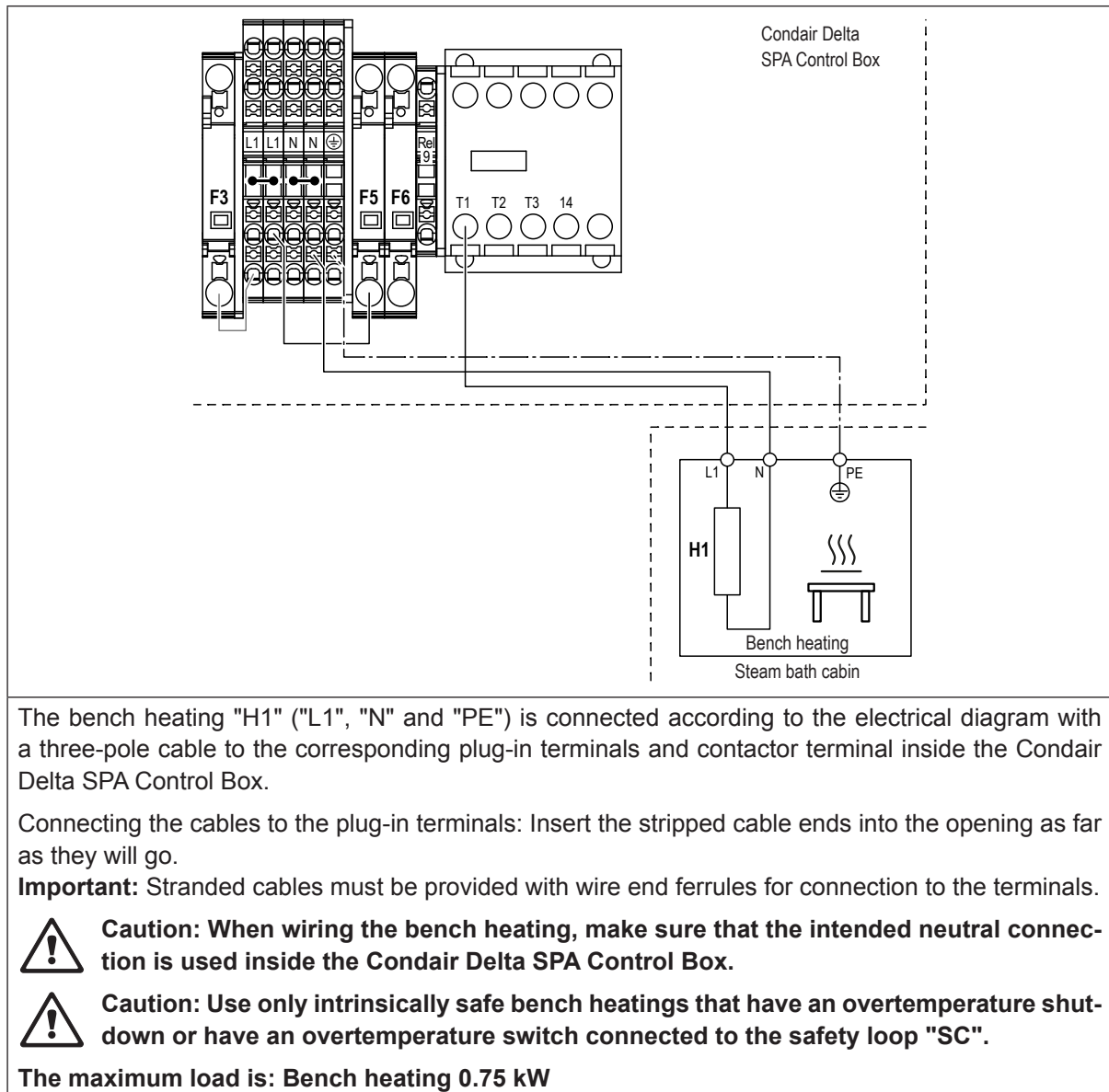
5.3.4.9 Connecting the cabin light "E1" and "E2"



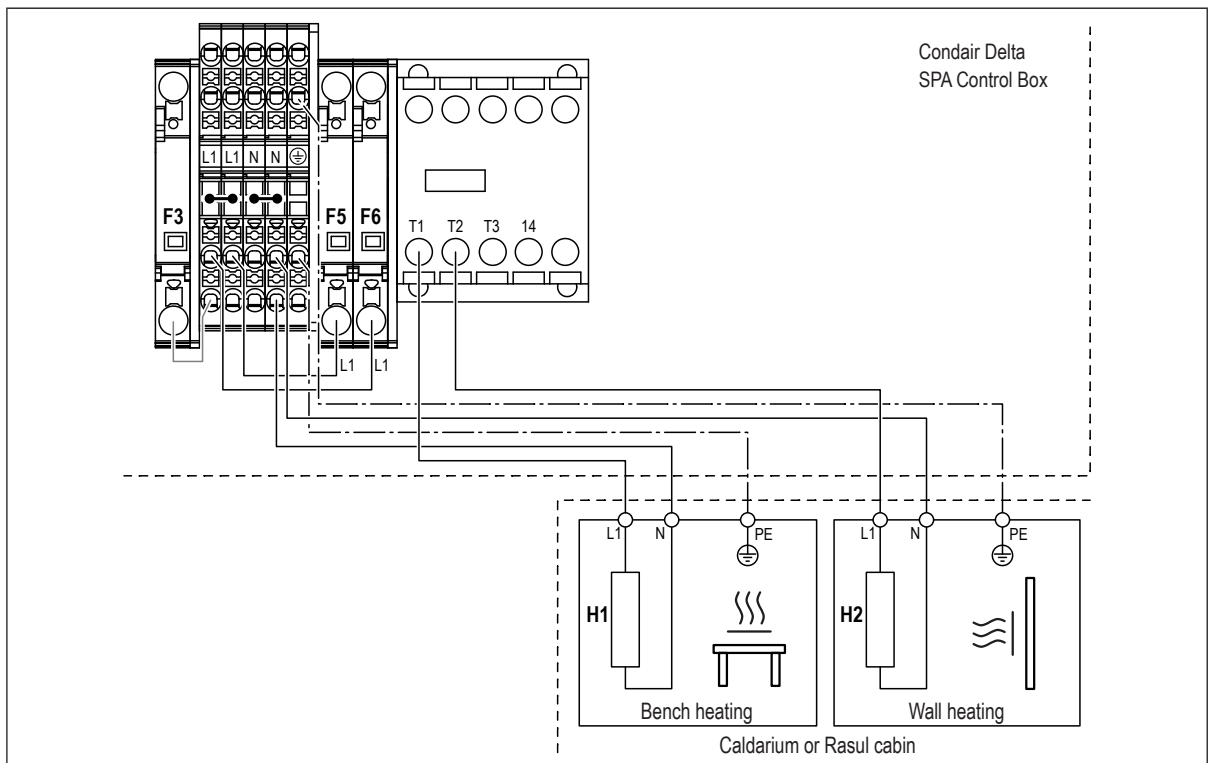
5.3.4.10 Connection of the fans "M3"/"M4" (two fan operation)



5.3.4.11 Connection of the optional bench heating for steam bath application



5.3.4.12 Connection of the bench heating and the wall heating for Caldarium and Rasul application



The bench heating "H1" ("L1", "N" and "PE") and the wall heating "H2" ("L1", "N" and "PE") are connected according to the electrical diagram with three-pole cables to the corresponding plug-in terminals and contactor terminals inside the Condair Delta SPA Control Box.

Connecting the cables to the plug-in terminals: Insert the stripped cable ends into the opening as far as they will go.

Important: Stranded cables must be provided with wire end ferrules for connection to the terminals.

The cross-section of the connecting cables must comply with the applicable local regulations.



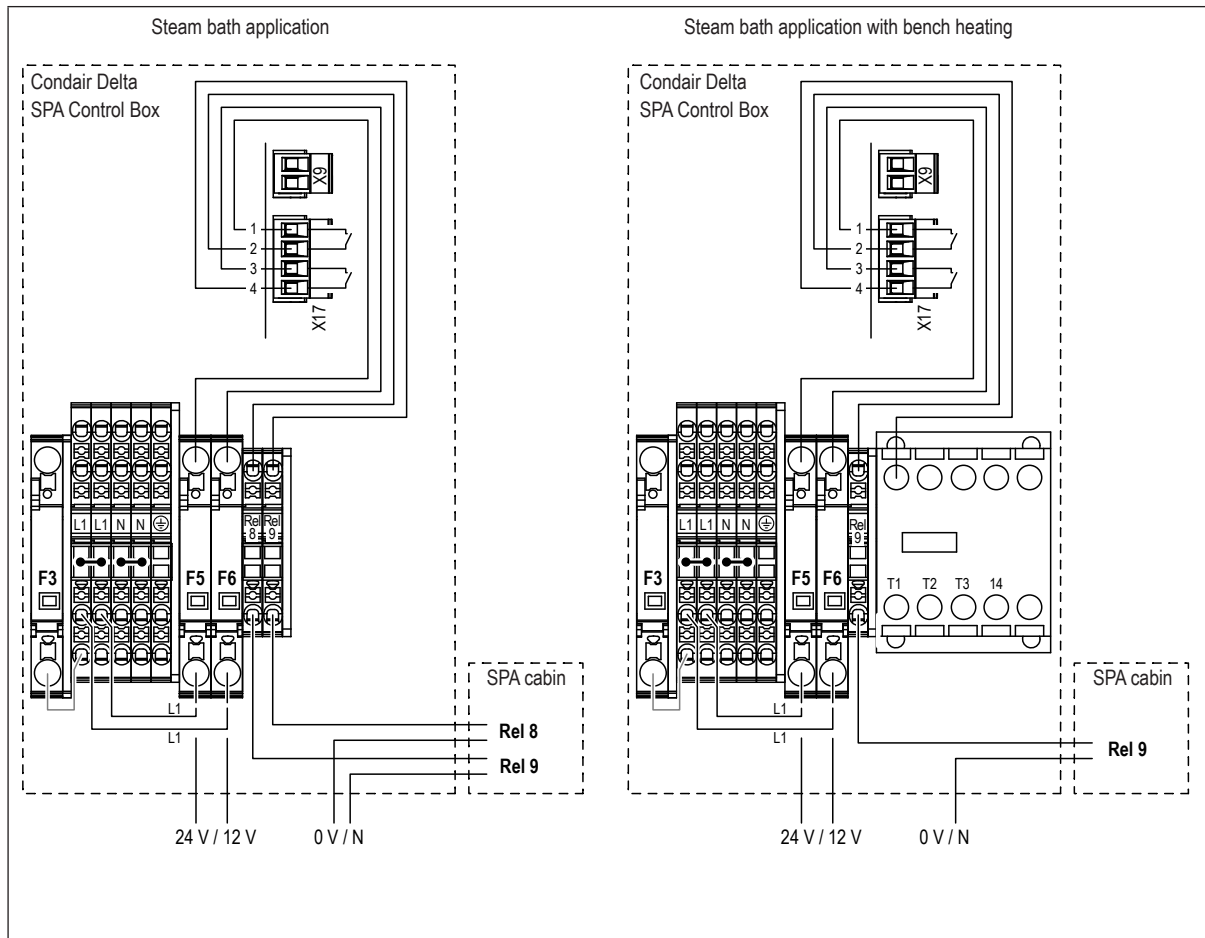
Caution: When wiring the bench heating and the wall heating, make sure that the intended neutral connection is used inside the Condair Delta SPA Control Box.



Caution: Use only intrinsically safe bench heaters and wall heaters that have an overtemperature shutdown or have an overtemperature switch connected to the safety loop "SC".

The maximum load is: bench heating 0.75 kW, wall heating 0.75 kW

5.3.4.13 Connection of the relays "Rel 8" and "Rel 9"



The potential-free relay contacts "Rel 8" and "Rel 9" (for steam bath application) or "Rel 9" (for steam bath application with bench heating) can be used to control components like loudspeakers, additional light, etc. in the SPA cabin. These components are connected according to the wiring diagrams shown above to the corresponding terminals inside the Condair Delta SPA Control Box.

The relays are supplied either via the internal 120 VAC supply or via an external power supply.

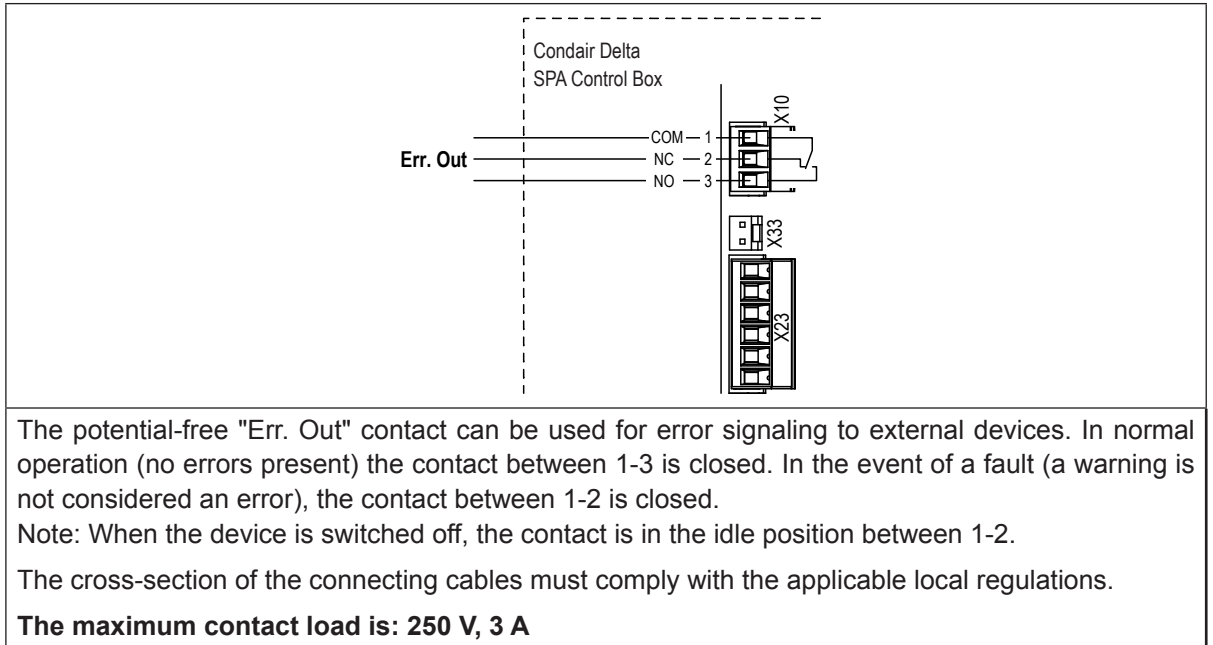
The cross-section of the connecting cables must comply with the applicable local regulations.

The maximum load is: 250 V, 12 A

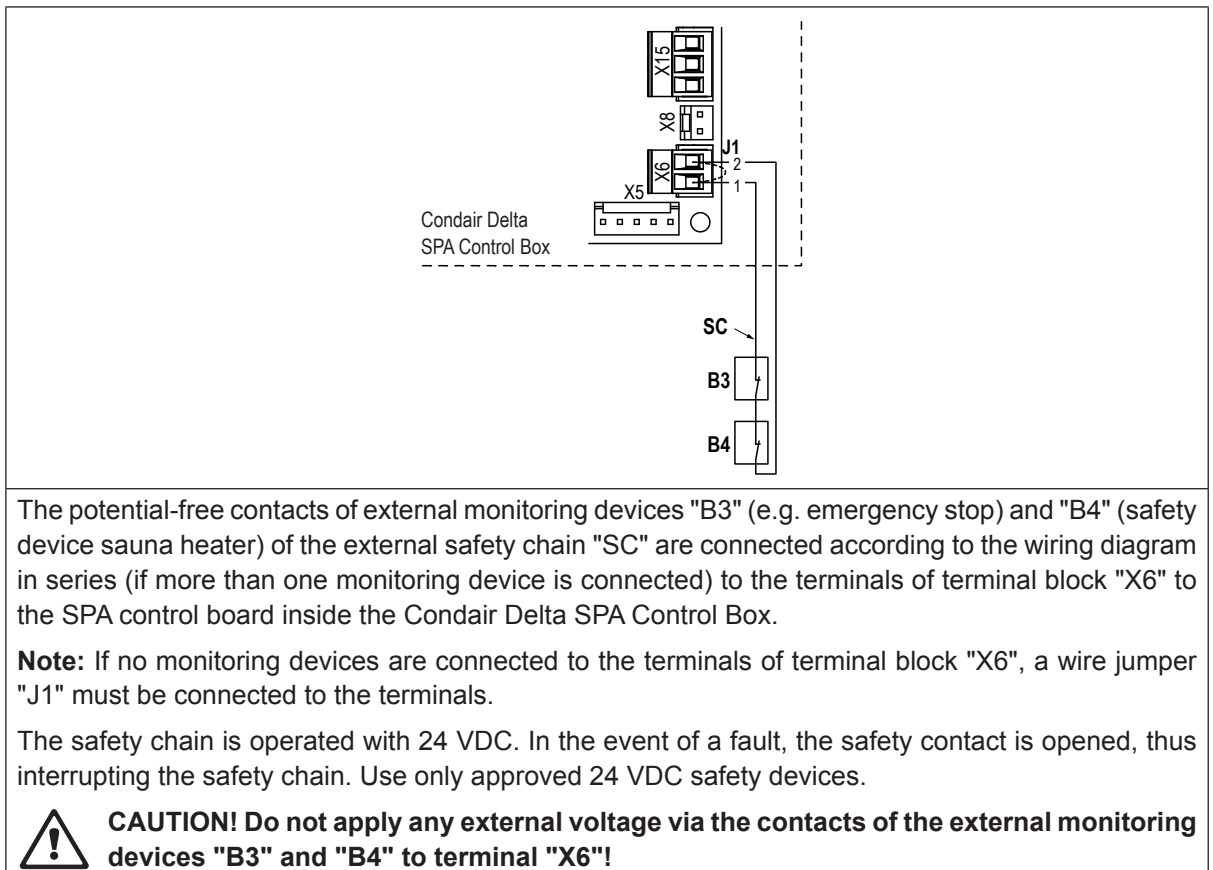
Notes:

- For the Caldarium and Rasul applications, the relay contacts "Rel 8" and "Rel 9" are used to control the bench heating and wall heating.
- For the steam bath application with bench heating, the relay contact "Rel 8" is used to control the optional bench heating.
- The function of the relay contacts is programmable via the SPA control software.

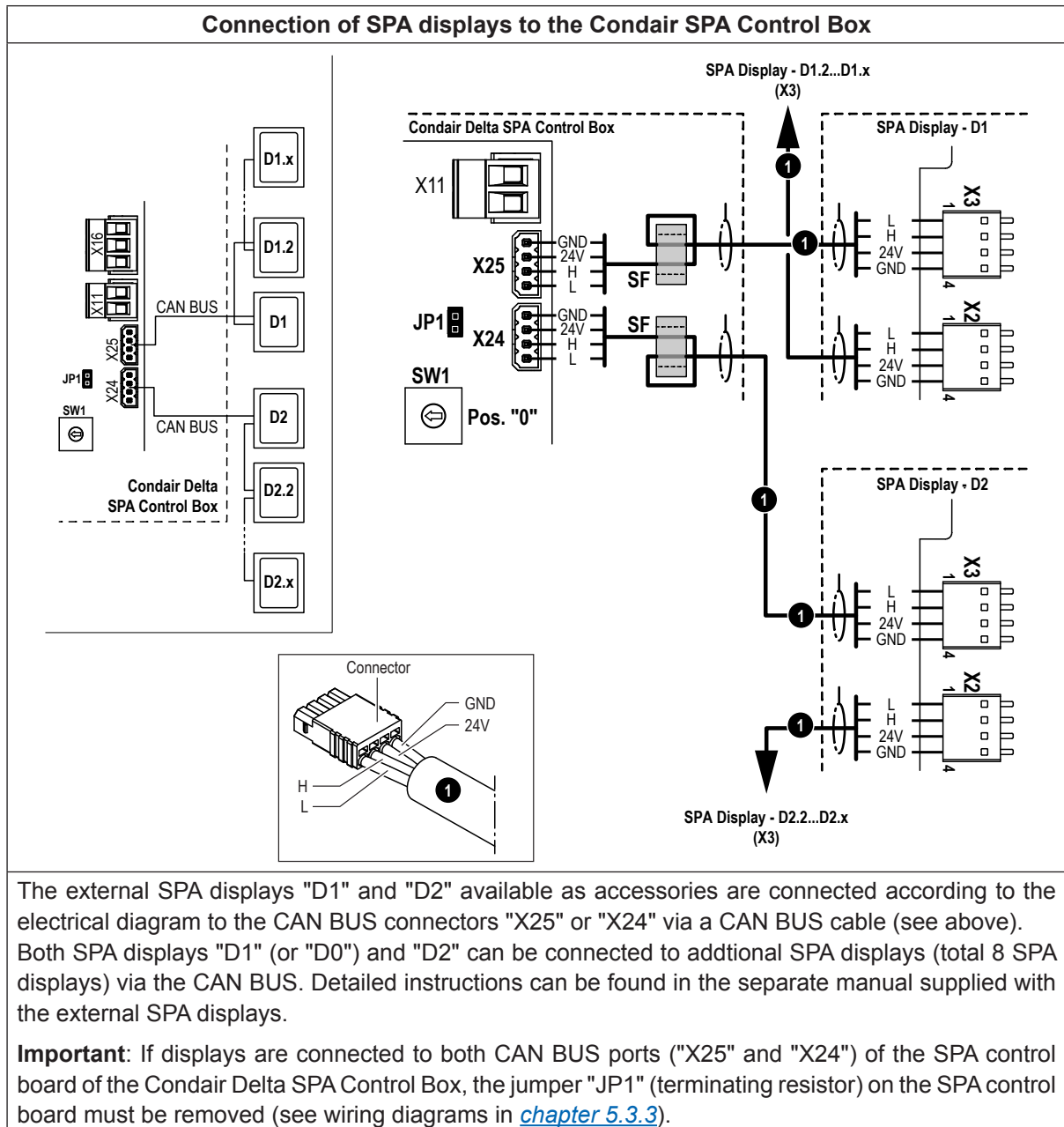
5.3.4.14 Connection of the fault output "Err. Out"



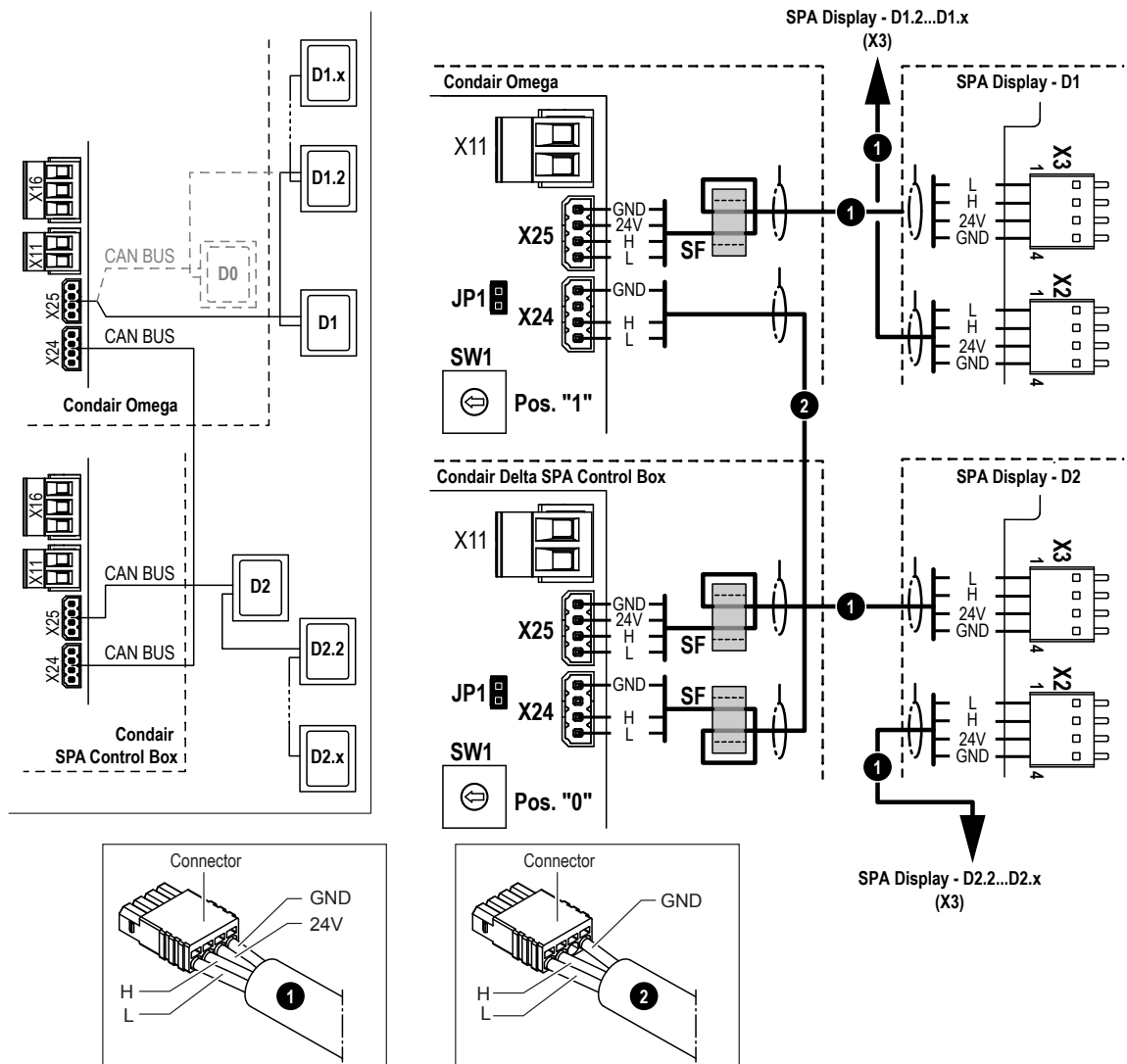
5.3.4.15 Connection of external safety chain



5.3.4.16 Connecting the external SPA display(s) (accessory)



Connection of the SPA displays to the Condair SPA Control Box in combination with Condair Omega



If a Condair Omega is used in combination with a Condair Delta SPA Control Box, the CAN BUS connector "X24" of the Condair Delta SPA Control Box must be connected via a CAN BUS cable without "24 V" conductor (cable No. 2) to the CAN BUS connector "X24" inside the control compartment of the Condair Omega.

The external SPA displays "D1" and "D2", which are available as accessories, are connected according to the connection diagram (see above) via a CAN BUS cable (cable no. 1) to the CAN BUS connector "X25" in the Condair Delta SPA Control Box or Condair Omega, respectively.

To both SPA displays "D1" (or "D0") and "D2" additional SPA displays (total 8 SPA displays) can be connected via the CAN BUS. Detailed instructions can be found in the separate manual supplied with the external SPA displays.

Note: With the Condair Omega with integrated SPA display "X0" (option) the display is connected ex works to the CAN BUS connection "X25".

Important: If displays are connected to both CAN BUS ports ("X25" and "X24") of the SPA control board of the the Condair Omega or the Condair Delta SPA Control Box, the jumper "JP1" (terminating resistor) on the SPA control board must be removed (see wiring diagrams in [chapter 5.3.3](#)).

Important: If a Condair Delta SPA Control Box is used in combination with a Condair Omega, the rotary switch "SW1" on the SPA control board of the Condair Delta SPA Control Box must be set to position "0" and the one on the SPA control board of the Condair Omega to position "1".

Connecting the CAN BUS cable

1. Lead the CAN BUS cable(s) (4-wire, shielded, 0.34 mm² per strand) via cable glands from below into the control compartment of the Condair Omega or into the Condair Delta SPA Control Box.
2. Guide the CAN BUS cable(s) in a loop through the ferrite ring(s) as shown in [Fig. 11](#).
3. Cut the CAN BUS cable(s) to length. Prepare the cable end(s) as shown in [Fig. 9](#) (SPA Display connection) or [Fig. 10](#) (connection cable Condair Delta SPA Control Box to Condair Omega), then connect the prepared cable ends to the the CAN BUS connectors.

Important: On the CAN BUS cable between the Condair Delta SPA Control Box ("X24") and the Condair Omega ("X24") the 24V conductor must be cut off not be connected to the CAN BUS connector, otherwise the system may not function properly.

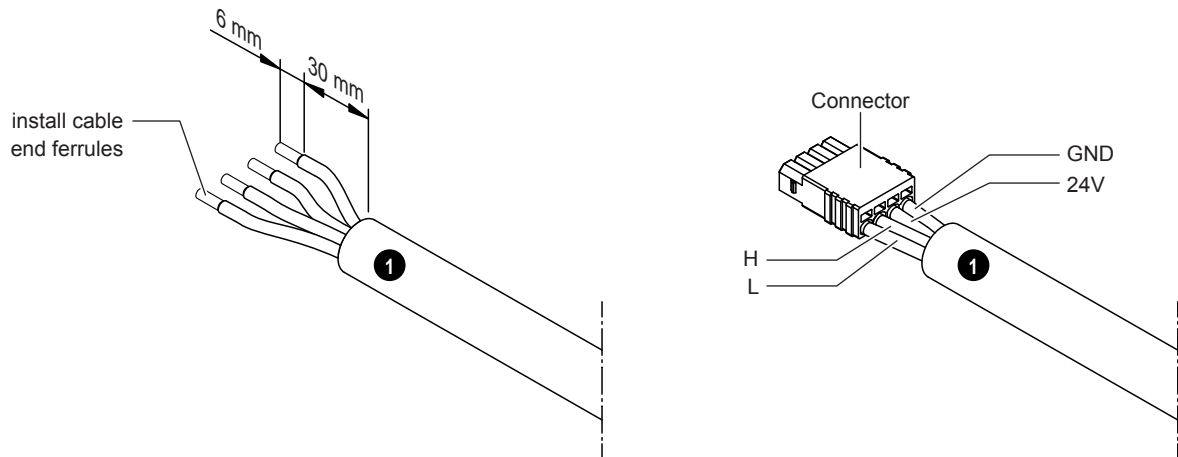


Fig. 9: Prepare CAN BUS cable for SPA Display connection

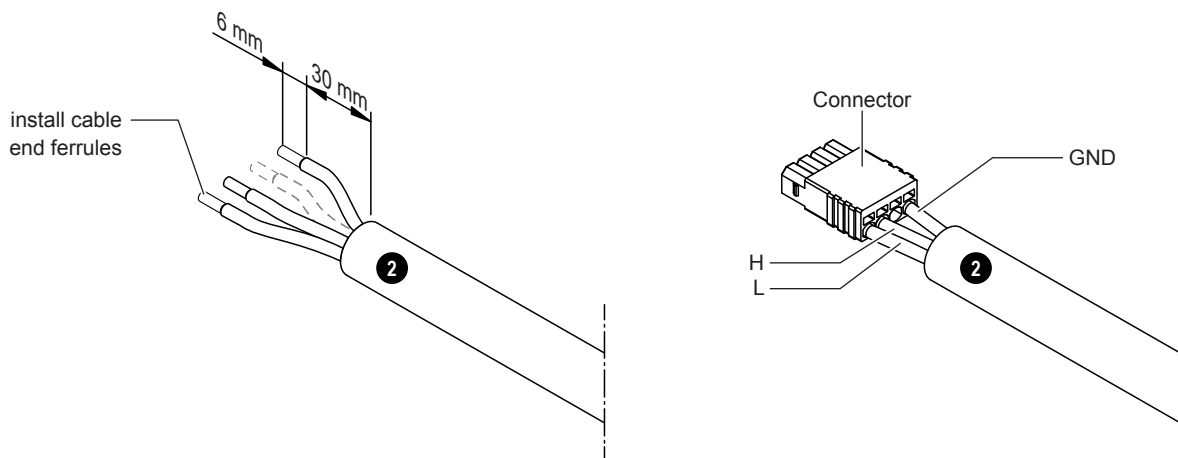


Fig. 10: Prepare CAN BUS cable for the connection between Condair Delta SPA Control Box and Condair Omega

4. Connect the prepared CAN BUS cable(s) to the corresponding connectors "X25" and/or "X24" on the control board of the Condair Omega according to the applicable diagram in this chapter.

5. Free the shielding of the CAN BUS cable(s) by removing the insulation at the appropriate position. Then, pinch the freed shielding of the CAN BUS cable(s) into the clamp holder(s) on the right side of the Condair Delta SPA Control Box or in the bottom of the Condair Omega housing, respectively.

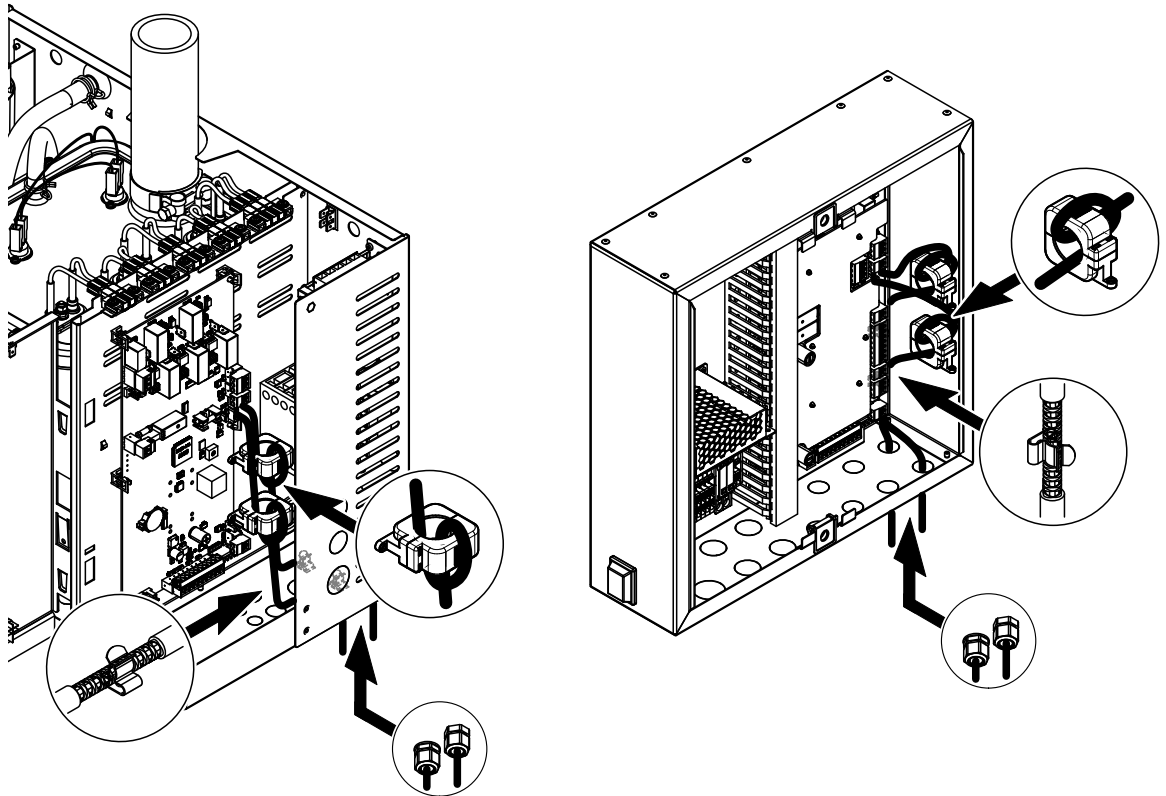
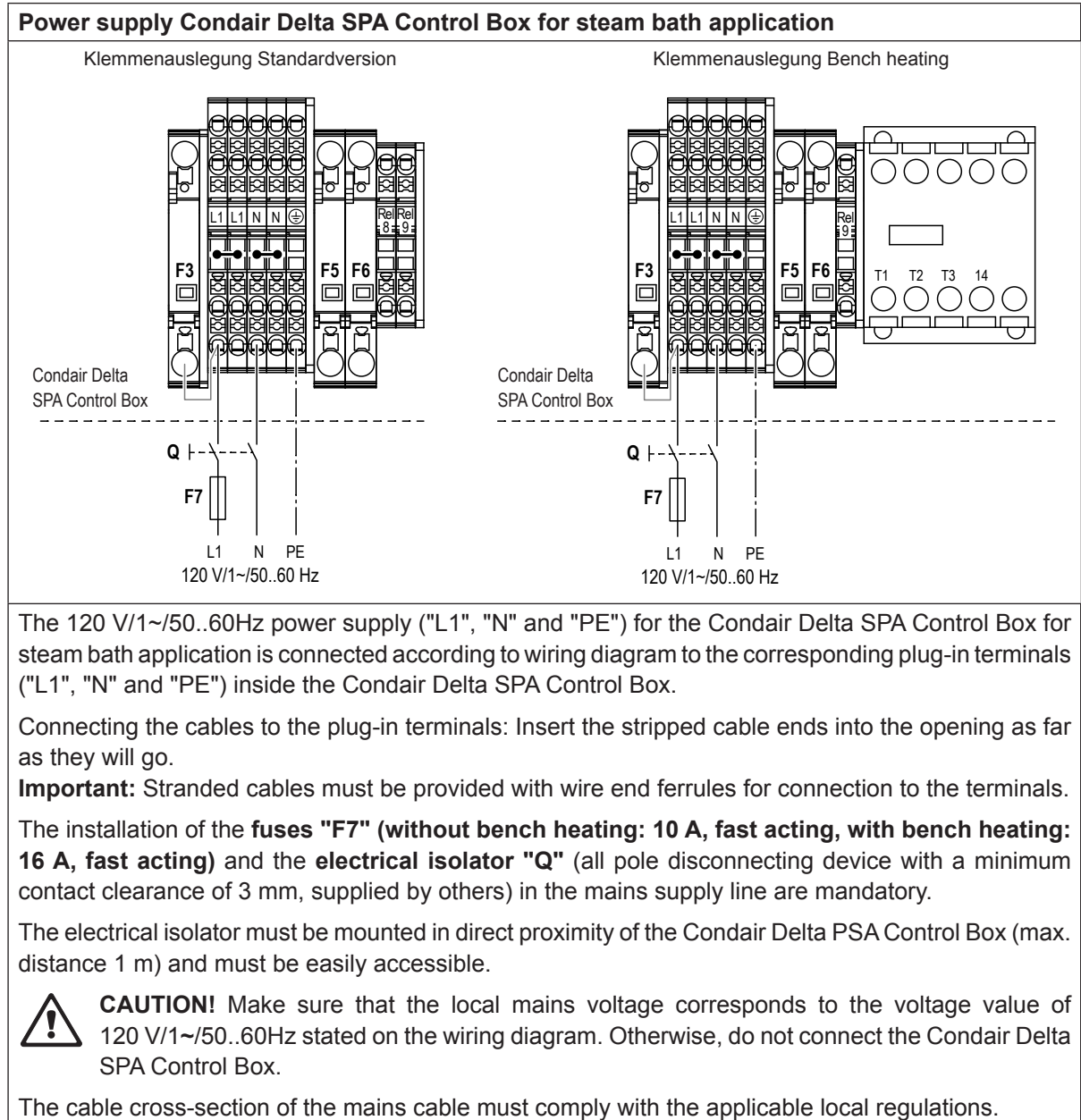
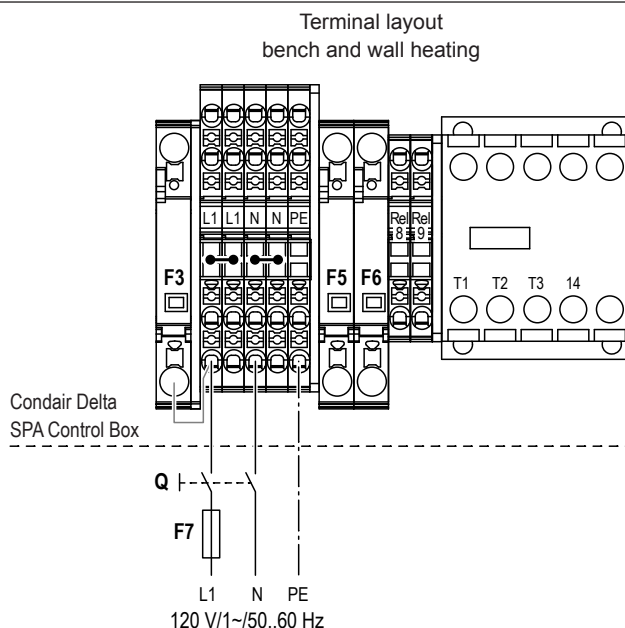


Fig. 11: Leading the cable through the ferrite ring and secure the cable shield in the clamp holder

5.3.4.17 Power supplies



Power supply Condair Delta SPA Control Box for Caldarium and Rasul application



The 120 V/1~/50..60Hz power supply ("L1", "N" and "PE") for the Condair Delta SPA Control Box and the bench and wall heating for Caldarium and Rasul applications is connected according to wiring diagram to the corresponding plug-in terminals ("L1", "N" and "PE") inside the Condair Delta SPA Control Box.

Connecting the cables to the plug-in terminals: Insert the stripped cable ends into the opening as far as they will go.

Important: Stranded cables must be provided with wire end ferrules for connection to the terminals.

The installation of the **fuses "F7" (20 A, fast acting)** and the **electrical isolator "Q"** (all pole disconnecting device with a minimum contact clearance of 3 mm, supplied by others) in the mains supply line are mandatory.

The electrical isolator must be mounted in direct proximity of the Condair Delta PSA Control Box (max. distance 1 m) and must be easily accessible.



CAUTION! Make sure that the local mains voltage corresponds to the voltage value of 120 V/1~/50..60Hz stated on the wiring diagram. Otherwise, do not connect the Condair Delta SPA Control Box.

The cable cross-section of the mains cable must comply with the applicable local regulations.

5.3.5 Connection data accessories

Maximum power consumption accessories for Condair Delta SPA Control Box

Application	Accessories										
	Light		Ventilation		Fragrance		Additional relay		Shower	Heating	
	Cleaning light (Light 1)	Color Light (Light 2)	Supply air fan (Fan 1)	Exhaust fan (Fan 2)	Fragrance 1 (Pump 1)	Fragrance 2 (Pump 2)	Music, ... (Rel 8)	Music, ... (Rel 9)	Shower (Pump 2)	Bench heating (Rel 8)	Wall heating (Rel 9)
Steam bath	max. 1 kW								-	max. 0.75 kW	-
Caldarium	max. 0.5 kW								-	max. 0.75 kW	max. 0.75 kW
Rasul	max. 0.5 kW									max. 0.75 kW	max. 0.75 kW

Connection data accessories

Application	Hardware variant	Control voltage accessories	Control power accessories max. in kW	Cable cross section supply line in mm ²	Fuse F5 fast acting in A
Steam bath	SPA Control with standard equipment	120 V/1~/50...60 Hz	1	1.5	10
Steam bath with bench heating	SPA Control with equipment for bench heating		1.75	2.5	16
Caldarium	SPA Control with equipment for bench and wall heating		2	2.5	20
Rasul	SPA Control with equipment for bench and wall heating		2	2.5	20

5.3.6 Inspecting the electrical installation

Check the following points:

- ☐ Does/do the supply voltage(s) for the respective SPA application meet the specifications in the corresponding wiring diagram and is/are the power supply/supplies and is/are the power supply/supplies connected in accordance with the wiring diagram?
- ☐ Is the power supply correctly fused (fuse value "F7" see wiring diagrams in [chapter 5.3.3](#))?
- ☐ Is the electrical isolator "Q" installed in the power supply line?
- ☐ Are all components correctly connected according to the wiring diagram?
- ☐ Are all connecting cables fastened?
- ☐ Are the connecting cables free of tension (passed through cable glands?)
- ☐ Have splash-proof cable glands been used?
- ☐ Does the electric installation meet the applicable local regulations for electric installations?
- ☐ Is a approved safety device (e.g. protective cover) attached to the sauna heater and is the corresponding safety device connected in series via the safety loop "SC"?
- ☐ Have intrinsically safe bench and wall heatings been used or has a corresponding overtemperature switch been integrated in series into the safety loop "SC"?
- ☐ Have the maximum capacities for the cabin volume used not been exceeded?
- ☐ Have the maximum power consumptions for the accessories been complied with (see [chapter 5.3.5](#))?
- ☐ Is the housing cover relocated and locked with the two screws and gaskets?

6 Appendix

6.1 Dimensions of the Condair Delta SPA Control Box

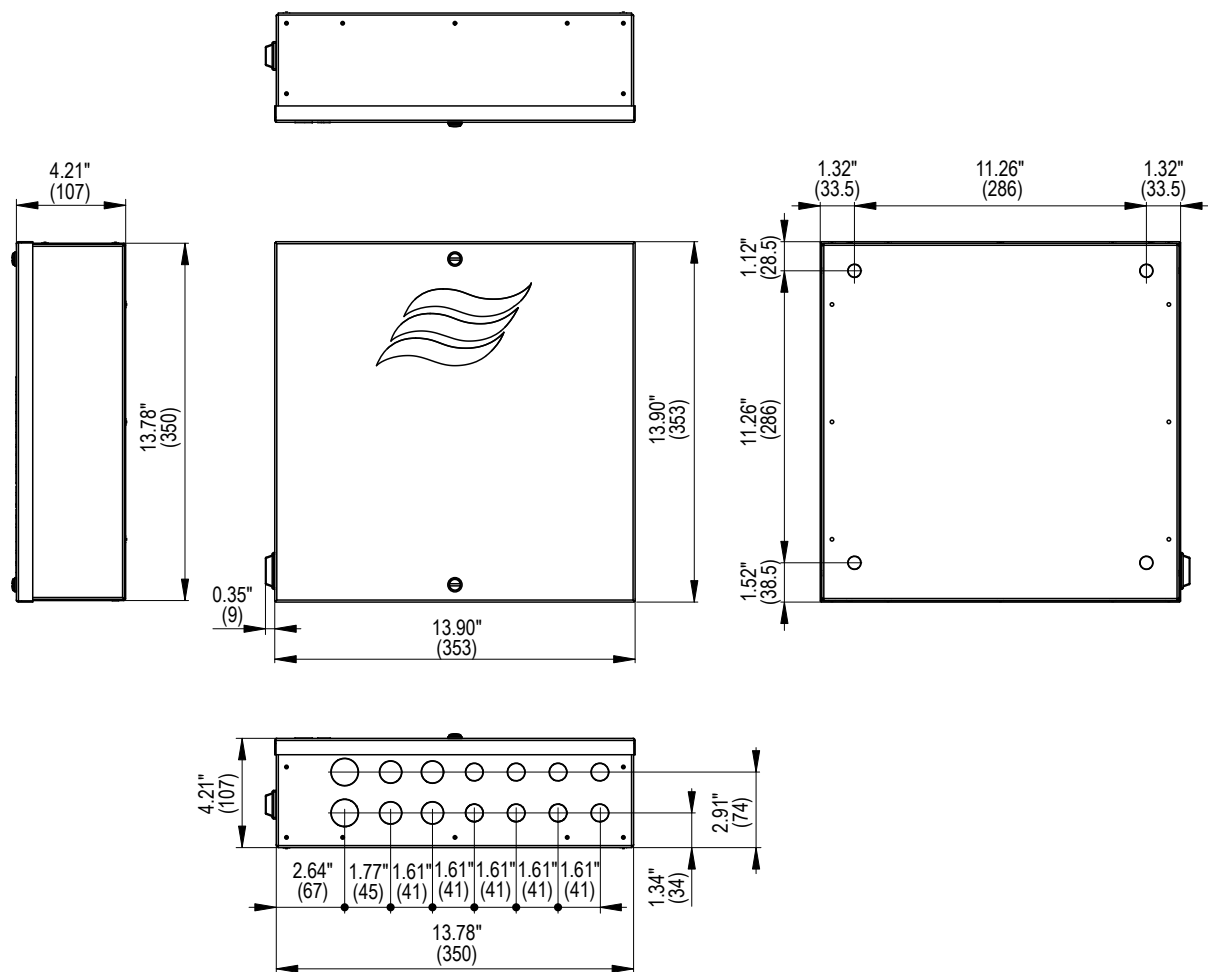


Fig. 12: Dimensions of the Condair Delta SPA Control Box (dimensions in inches (mm))

Notes

Notes

Warranty

Condaire Inc. or Condaire Ltd. (depending on the entity that supplied the product, and hereinafter collectively referred to as CONDAIRE) warrant for a period of two years after installation or 30 months from the manufacturer's ship date, whichever date is earlier, that CONDAIRE's manufactured and assembled products, not otherwise expressly warranted, are free from defects in materials and workmanship. Notwithstanding the foregoing, the products listed below have an alternate warranty period:

- GS/GSTC Series heat exchanger(s) are warranted to be free from defects in materials and workmanship for a period of 3 years from installation or 40 months from the manufacturer's ship date, whichever is earlier.
- SAM-e Short Absorption Manifolds, except for the coupling seals, are warranted to be free from defects in materials and workmanship for a total period of 10 years from the manufacturer's ship date.
- Humilife RH, RH2+ and WH humidifiers are warranted to be free from defects in materials and workmanship for a period of 5 years from the manufacturer's ship date. CONDAIRE may, at its discretion, replace individual components or Humilife RH units as a whole.
- Spare Parts used for repairs are warranted for the balance of the term of the warranty on the original humidifier or 90 days, whichever is longer.
- No warranty is made against corrosion, deterioration, or suitability of substituted materials used as a result of compliance with government regulations.

CONDAIRE's obligations and liabilities under this warranty are limited to furnishing replacement parts to the customer, F.O.B. CONDAIRE's factory. The replacement parts are warranted for the balance of the term of the warranty on the original humidifier or 90 days, whichever is longer. Procedure:

1. Customer Requests Warranty as per instructions on the CONDAIRE Warranty Form.
2. CONDAIRE reviews the warranty claim and will respond in one of two ways:
 - a. Warranty Accepted – Replacement Part or credit granted.
 - b. Warranty Declined – Response with justification will be provided to the customer.
3. In some cases, CONDAIRE may request the part to be returned, freight prepaid by the customer, as part of the warranty acceptance or warranty determination process. Some reasons include:
 - a. Part must be analyzed to determine the root cause of failure.
 - b. Part must be returned to the supplier for claim/investigation.

When parts are requested to be returned, replacement parts will be sent by CONDAIRE to the customer against an invoice from CONDAIRE paid by the customer. The cost of the replacement parts will be reimbursed to the customer with a credit note after the parts are received and analyzed by CONDAIRE, if the warranty is accepted.

The warranties set forth herein are in lieu of all other warranties expressed or implied by law. No liability whatsoever shall be attached to CONDAIRE until said products have been paid for in full and then said liability shall be limited to the original purchase price for the product. Any further warranty, with the exception of a purchased extended warranty described below, must be in writing, and signed by an officer of CONDAIRE.

CONDAIRE makes no warranty and assumes no liability unless the equipment is installed in strict accordance with the installation manual in effect at the date of purchase, and by properly qualified and licensed professionals capable of installing such equipment.

CONDAIRE makes no warranty and assumes no liability whatsoever for consequential damage or damage resulting directly from misapplication, incorrect sizing, or lack of proper maintenance of the equipment.

CONDAIRE makes no warranty and assumes no liability whatsoever for damage to the products, humidifier, supply lines, drain lines, steam distribution systems, or the building as a whole caused by freezing.

CONDAIRE reserves the right to change the design, specifications, and performance criteria of its products without notice or obligation.

Extended Warranty

Extended warranties are available to purchase under the conditions listed above. Extended warranties must be purchased at the time of the original equipment order.



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