



INSTALLATION MANUAL

SPA Control
Condair **SPA Display**

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 SPA Display with touch-sensitive display**.

The Condair SPA Display incorporates the latest technical advances and meets all recognized safety standards. Nevertheless, improper use of the Condair SPA Display may result in danger to the user or third parties and/or impairment of material assets.

To ensure a safe, proper, and economical operation of the Condair SPA Display, please observe and comply with all information and safety instructions contained in the present installation and operation manual.

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

1.2 Notes on the installation and operation manual

Limitation

The subject of this installation and operation manual is the external Condair SPA Display.

This installation and operation manual is restricted to the **installation, commissioning, operation, and trouble shooting** of the Condair SPA Display and is meant for **well trained personnel being sufficiently qualified for their respective work**.

This installation and operation manual is supplemented by the installation manual and the operation manual for the steam generator Condair Omega or the Condair Delta SPA Control Box, respectively. Where necessary, appropriate cross-references are made to this publication in this installation and operation manual.

Symbols used in this manual



CAUTION!

The catchword "CAUTION" designates notes in this installation and operation manual that, if neglected, may cause **damage and/or malfunction of the unit or other material assets**.



WARNING!

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



DANGER!

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

Safekeeping

Please safeguard this installation and operation manual in a safe place, where it can be immediately accessed. If the Condair Omega or the Condair Delta SPA Control Box with which the Condair SPA Display is used changes hands, the documentation should be passed on to the new operator.

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

Language versions

This installation and operation manual is available in various languages. Please contact your Condair representative for information.

2 For your safety

General

Every person working with the Condair SPA Display must have read and understood the present installation and operation manual before carrying out any work.

Knowing and understanding the contents of the Installation and operation manual is a basic requirement for protecting the personnel against any kind of danger, to prevent faulty operation, and to operate the unit safely and correctly.

All ideograms, signs and markings applied to the Condair SPA Display must be observed and kept in readable state.

Qualification of personnel

All actions described in the present Installation and operation manual (installation, operation, etc.) must be carried out only by **well trained and sufficiently qualified personnel authorised by the owner**.

For safety and warranty reasons any action beyond the scope of this manuals must be carried out only by qualified technical personnel authorised by your Condair representative.

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

This unit may not be used by persons (including children) with reduced physical, sensory or mental abilities or persons with lacking experience and/or knowledge, unless they are supervised by a person responsible for their safety or they received instructions on how to operate the unit.

Children must be supervised to make sure that they do not play with unit.

Intended use

The Condair SPA Display is intended exclusively for the control of the steam generator Condair Omega and the Condair Delta SPA Control Box within the specified operating conditions (see [chapter 8](#)). Any other type of application without the express written consent of the manufacturer is considered as not conforming with the intended purpose and may lead to the system becoming dangerous. Operation of the equipment in the intended manner requires **that all the information in these instructions are observed (in particular the safety instructions).**

Behavior in case of danger

If it is suspected that **safe operation is no longer possible**, then the Condair Omega or the Condair Delta SPA Control Box, respectively should **immediately be set out of operation, disconnected from the mains and secured against accidental power-up (see Condair Omega or Condair Delta SPA Control Box operation manual)**. This can be the case under the following circumstances:

- if the Condair SPA Display is damaged
- if the Condair SPA Display is no longer operating correctly
- if the connecting cable is damaged

All persons working with the Condair SPA Display must report any alterations to the unit that may affect safety to the owner without delay.

Prohibited modifications to the unit

No modifications must be undertaken on the Condair SPA Display without the express written consent of the manufacturer.

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

3 Product Overview

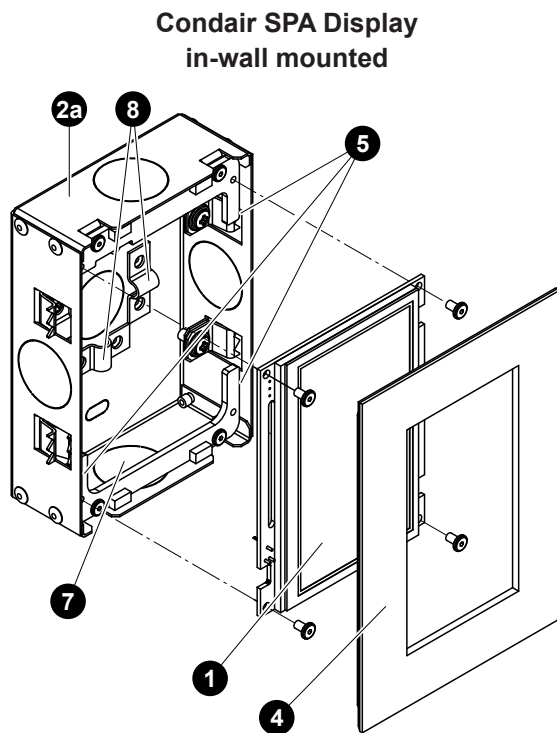


Fig. 1: Front view

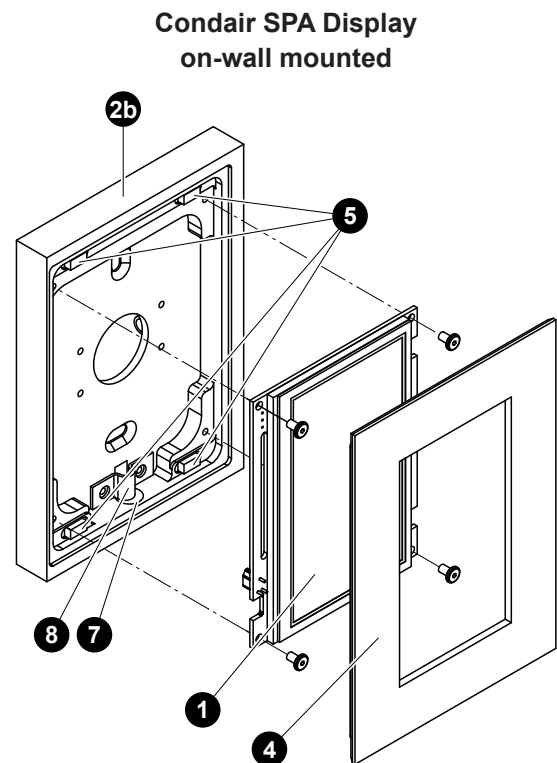


Fig. 2: Front view

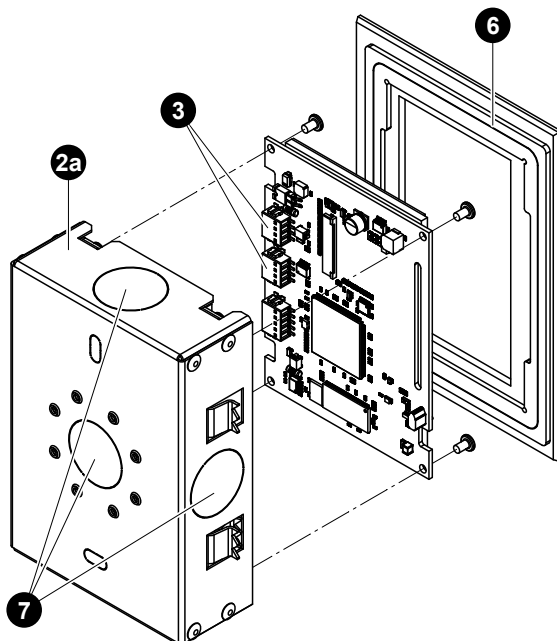


Fig. 3: Back view

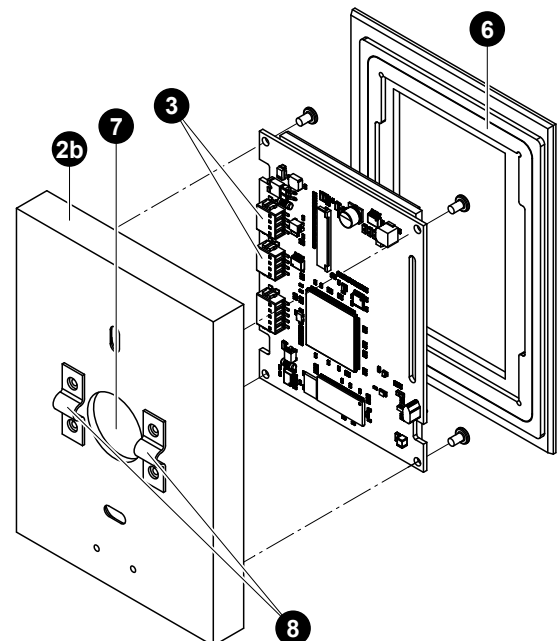


Fig. 4: Back view

- 1 Touch-sensitive display
- 2a In-wall mounted housing
- 2b On-wall mounted housing
- 3 Connecting terminals (CAN BUS)
- 4 Decorative cover

- 5 Magnets for the attachment of the decorative cover
- 6 Magnetic centring frame with sealing
- 7 Cable entries
- 8 Shielding clamps

4 Installation

4.1 Unpacking and checking the scope of delivery

Unpacking the unit

Open the packing and check the delivery for completeness. Please contact your Condair representative in case something is lacking, they will be glad to send you the missing part without delay. The standard delivery includes:

- Condair SPA Display **in-wall mounted**
 - Condair SPA Display control PCB
 - In-wall mounted housing with pre-mounted display mounting supports, fastening claws and 3 magnets
 - Plastic bag containing mounting material
- Condair SPA Display **on-wall mounted**
 - Condair SPA Display control PCB
 - On-wall mounted housing
 - Plastic bag containing mounting material
- Decoration cover with pre-mounted centring frame and sealing (if ordered)

Please check the equipment for damage. Please report any damage to your Condair representative and to the carriers, as required.

Packaging

The original packaging of the Condair SPADisplay was designed for optimum safety during transportation. Please preserve the original packing material in case you once have to return the unit for some reason.

In case you wish to dispose of the packaging, observe the local regulations on waste disposal. Never dispose of the packaging to the environment.

4.2 Storing the unit

If the Condair SPA Display must be stored, store it in a protected area (best in the original packaging) meeting the following requirements:

- room temperature: 1 ... 40 °C
- room humidity: 10 ... 80 %rh (non condensing)

4.3 Notes on positioning the Condair SPA Displays

Please observe the following notes for the correct positioning of the Condair SPA Display(s):

- The Condair SPA Display(s) must not be installed in hazardous locations and in rooms where water splashes may occur.
- Do not mount the Condair SPA Display(s) inside the steam bath cabin, sauna, bio sauna, etc..
- If possible mount the Condair SPA Display(s) at eye level.
- Do not mount the Condair SPA Display(s) in exposed places.
- Do not mount the Condair SPA Display(s) on vibrating components.
- Place the Condair SPA Display(s) in such a way, that the total length of 50 m of the CAN BUS cables with which the Condair Omega or the Condair Delta SPA Control Box and the Condair SPA Display(s) are interconnected is not exceeded.

4.4 Mounting the Condair SPA Display



CAUTION!

The electronic components of the Condair SPA Display are very sensitive to electrostatic discharge. For all installation work on equipment appropriate measures must be taken to protect these components against damage caused by electrostatic discharge (ESD protection).

Note: the Condair Omega or the Condair Delta SPA Control Box, respectively and the Condair SPA Display(s) (up to a max. of 8 SPA Displays) are interconnected via a so-called CAN BUS. Use only a **shielded four-wire cable with a cross section of 0.34 mm² per wire** to establish the CAN BUS connections. The **total length of the CAN BUS must not exceed 50 m**.

4.4.1 In-wall mounting

1. At the desired location, mark mounting opening according to the size of the in-wall mounted housing with the help of a spirit level, then ream out the mounting opening.
Important: the mounting opening must be reamed out exactly since the decoration cover (broken line in [Fig. 5](#)) overlaps the mounting opening on the right side only 4 mm, on the left side only 9 mm and on the top and bottom side only 8.5 mm.

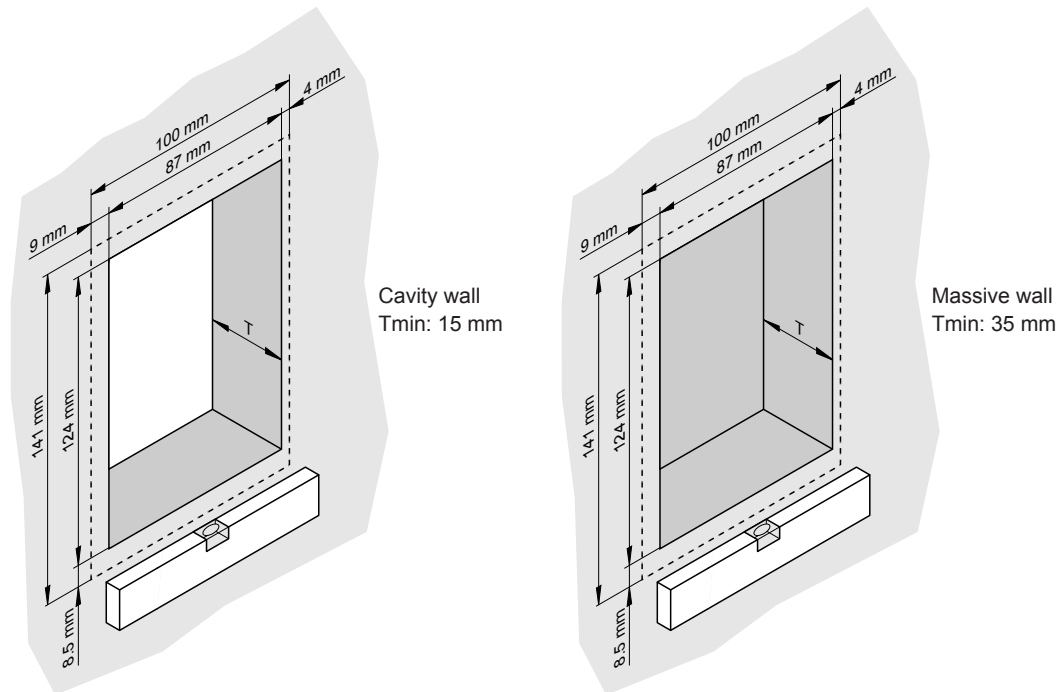


Fig. 5: Making the mounting opening for the in-wall mounted housing

2. Knock out the desired cable entry of the in-wall mounted housing and insert the CAN BUS cable (shielded four-wire cable, 0.34 mm² per wire) into the in-wall mounted housing. Then, lead the cable through the wall opening to the steam generator or to the Condair Delta SPA Control Box.

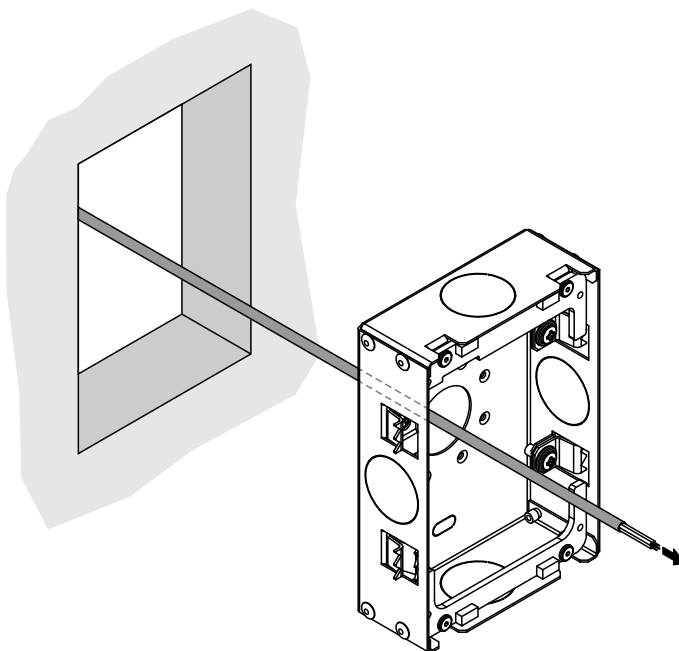


Fig. 6: Inserting the CAN BUS cable

3. Insert the in-wall mounted housing into the wall opening, align it with the help of a spirit level, then fix it with the four fastening claws attached to the in-wall mounted housing (only necessary with cavity walls).

Note: in massive walls the in-wall mounted housing must be fixed either with the screws and dowels supplied or by using PU mounting adhesive or mortar.

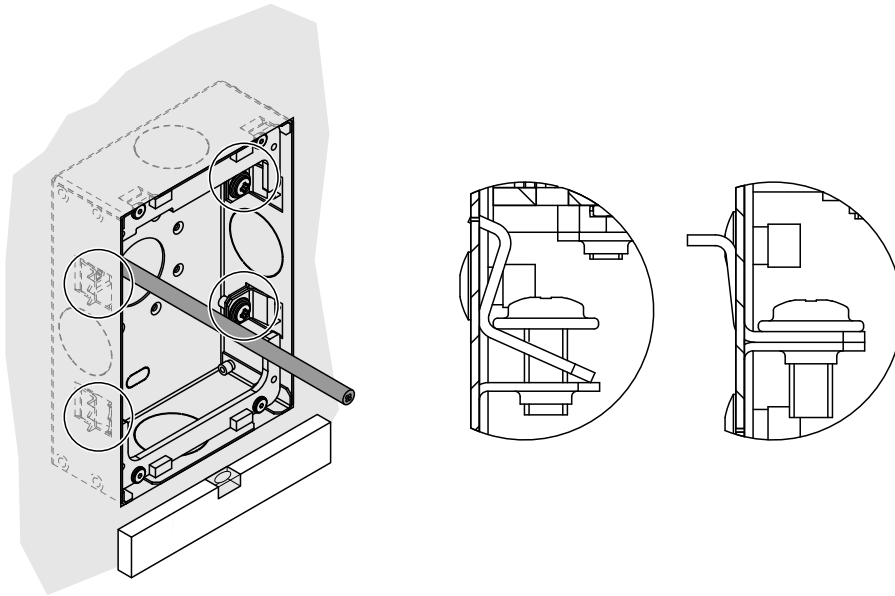


Fig. 7: Mounting the in-wall mounted housing to the wall opening

4. Free the shielding of the CAN BUS cable(s) by removing the insulation from the appropriate clamping position to the end of the cable. Remove the exposed shielding to about 2 cm, then fix the end of the remaining shielding with a piece of shrink tubing as shown in [Fig. 8](#) and secure the exposed shielding with the shielding clamp(s) to the housing.

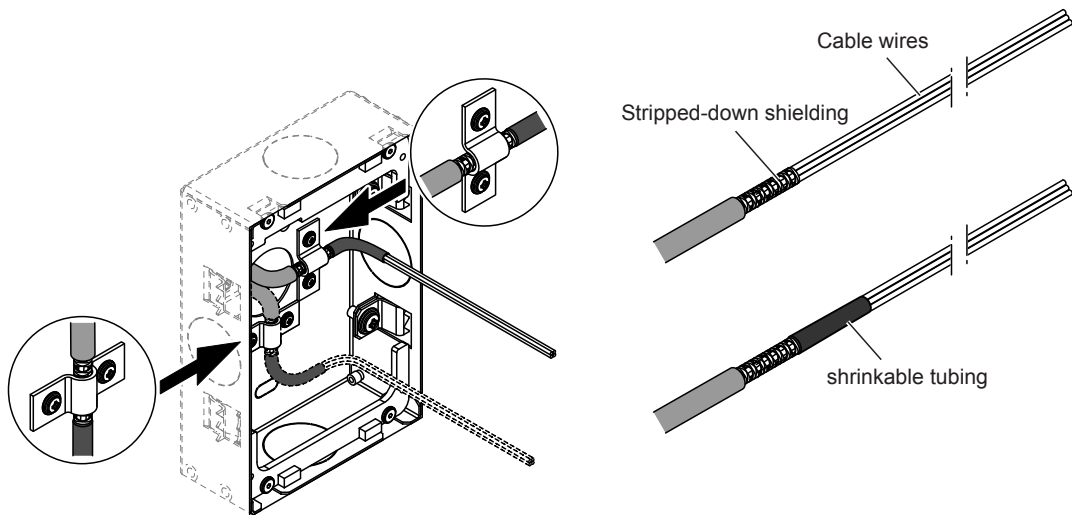


Fig. 8: Fix the CAN BUS cable(s) with exposed shielding to the housing with the shielding clamp(s)

5. Connect the supplied CAN BUS connecting plug to the CAN BUS cable from the Condair Omega, Condair Delta SPA Control Box or from another Condair SPA Display as shown below. For this purpose, strip the individual cable wires of the CAN BUS cable 6 mm, crimp the suitable wire end ferrules and insert the cable wires as far as possible into the correct connection opening of the supplied CAN BUS connecting plug. Then connect the CAN BUS connecting plug to the adapter cable (ex factory connected to terminal "X3").

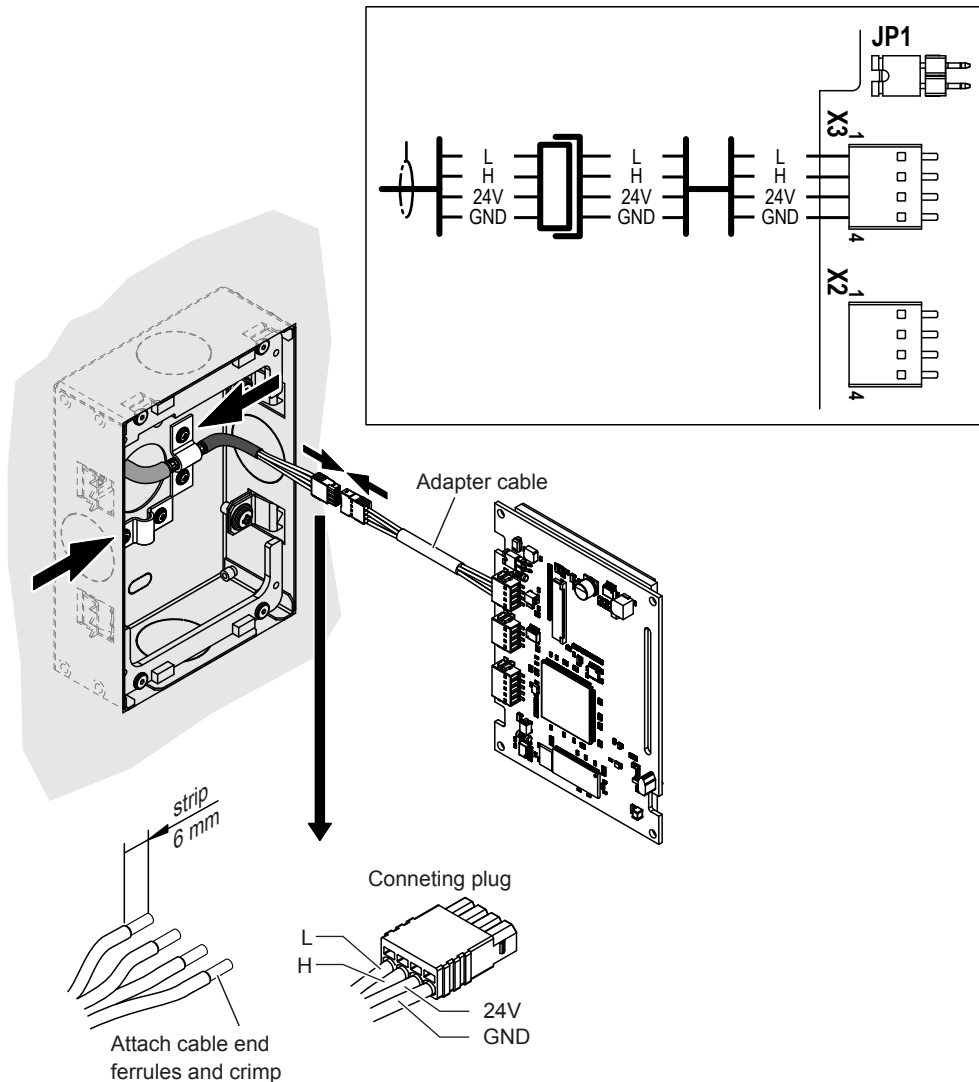


Fig. 9: Connecting one CAN BUS cable to the Condair SPA Display

A CAN BUS cable to another Condair SPA display is connected either directly or via another adapter cable (available as an accessory) to the unused terminal "X2" (see notes in [chapter 4.5](#)).

Important: If two CAN BUS cables are connected to the Condair SPA Display board, jumper "JP1" (terminator) on the Condair SPA Display must be removed.

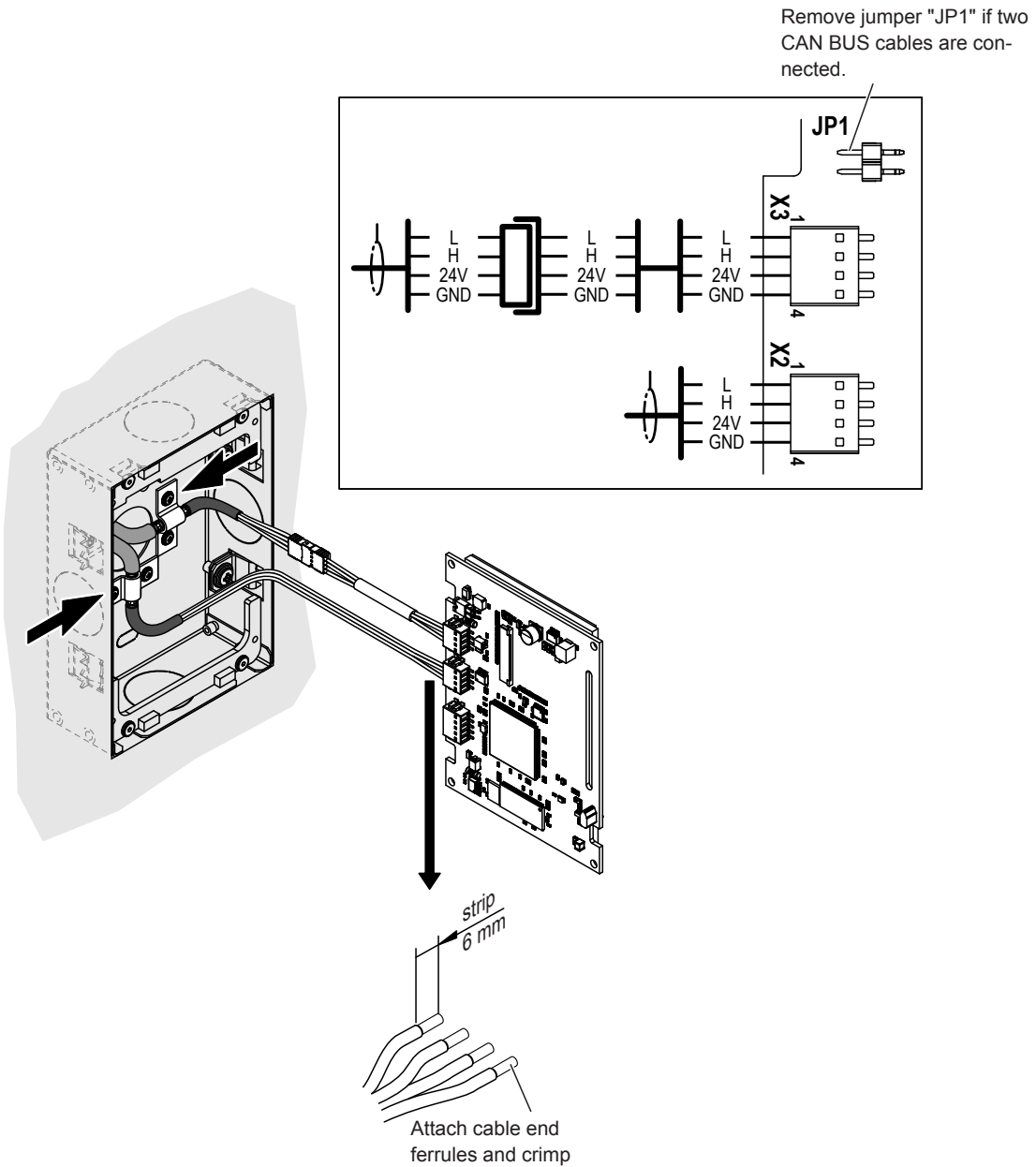


Fig. 10: Connecting two CAN BUS cables to the Condair SPA Display

6. Connect the CAN BUS cable according to the specifications in [chapter 4.5](#) to the Condair Omega or the Condair Delta SPA Control Box, then perform the function tests of the Condair Omega SPA Display.
7. After function tests have been passed carefully place the Condair SPA Display onto the in-wall mounted housing. Make sure the supply cable is not getting pinched. Then, fix the Condair SPA Display to corresponding supports of the in-wall mounted housing using the four screws supplied.

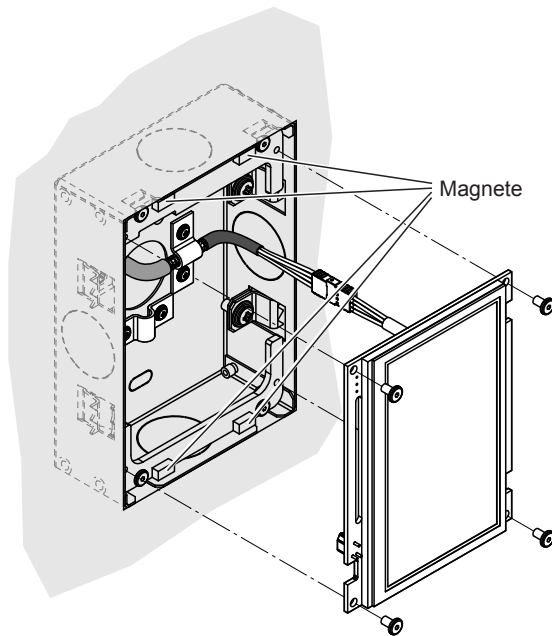


Fig. 11: Mounting the Condair SPA Display

8. If necessary loosen the screws of the display supports and adjust the display.

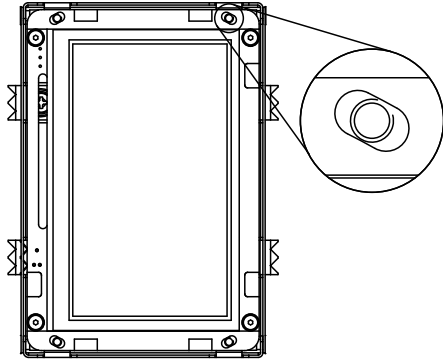


Fig. 12: Adjusting the display

9. Finally attach the decoration cover (the decoration cover is held by the magnets in the in-wall mounted housing), and seal the gap between the decoration cover and the wall splash-proof with silicone.

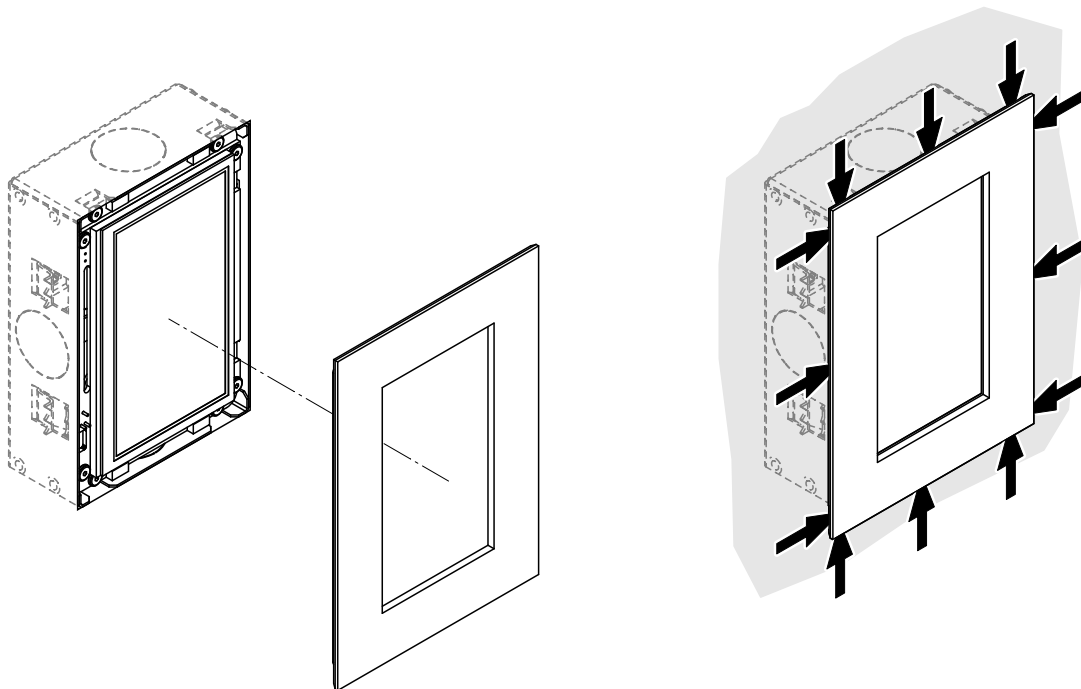


Fig. 13: Attaching and sealing the decoration cover

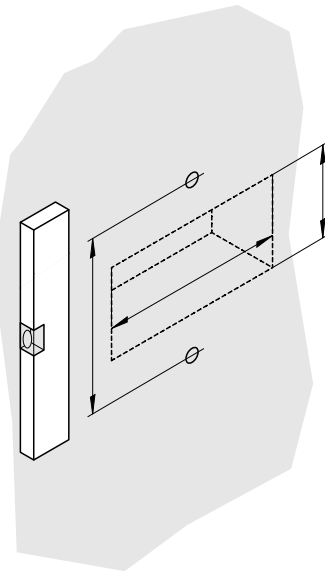
4.4.2 On-wall mounting

1. Using the aluminum on-wall mounted housing as template mark the two fixing holes at the desired location, with the help of a spirit level. Then proceed as follows:
 - for the mounting on a stonework wall:
 - Drill 2 holes $\varnothing 6$ mm, depth 35 mm.
 - for the mounting on a wooden wall:
 - Drill 2 holes $\varnothing 3$ mm, depth 35 mm

Note: If the mounting location does not permit bolt mounting (e.g. on a glass wall) the aluminum on-wall mounted housing can also be glued over its entire surface to the underground.

If the CAN BUS cable is routed in-wall to the mounting point, an cavity of 40 mm x 80 mm (centered on the drill holes) with a minimum depth of 30 mm must be provided for the shielding clamps.

In-wall cable routing



On-wall cable routing

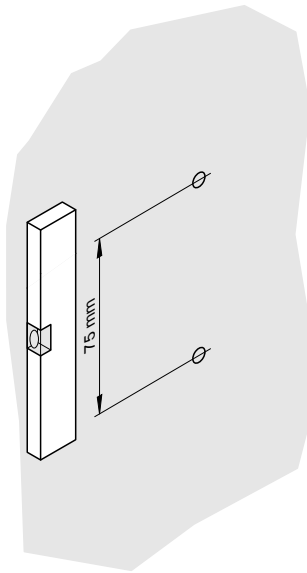


Fig. 14: Drilling mounting holes and making cavity for in-wall cable routing

- Free the shielding of the CAN BUS cable(s) (shielded four-wire cable, 0.34 mm² per wire) by removing the insulation from the appropriate clamping position to the end of the cable. Remove the exposed shielding to about 2 cm, then fix the end of the remaining shielding with a piece of shrink tubing as shown in [Fig. 15](#) and secure the exposed shielding with the shielding clamp(s) to the housing.

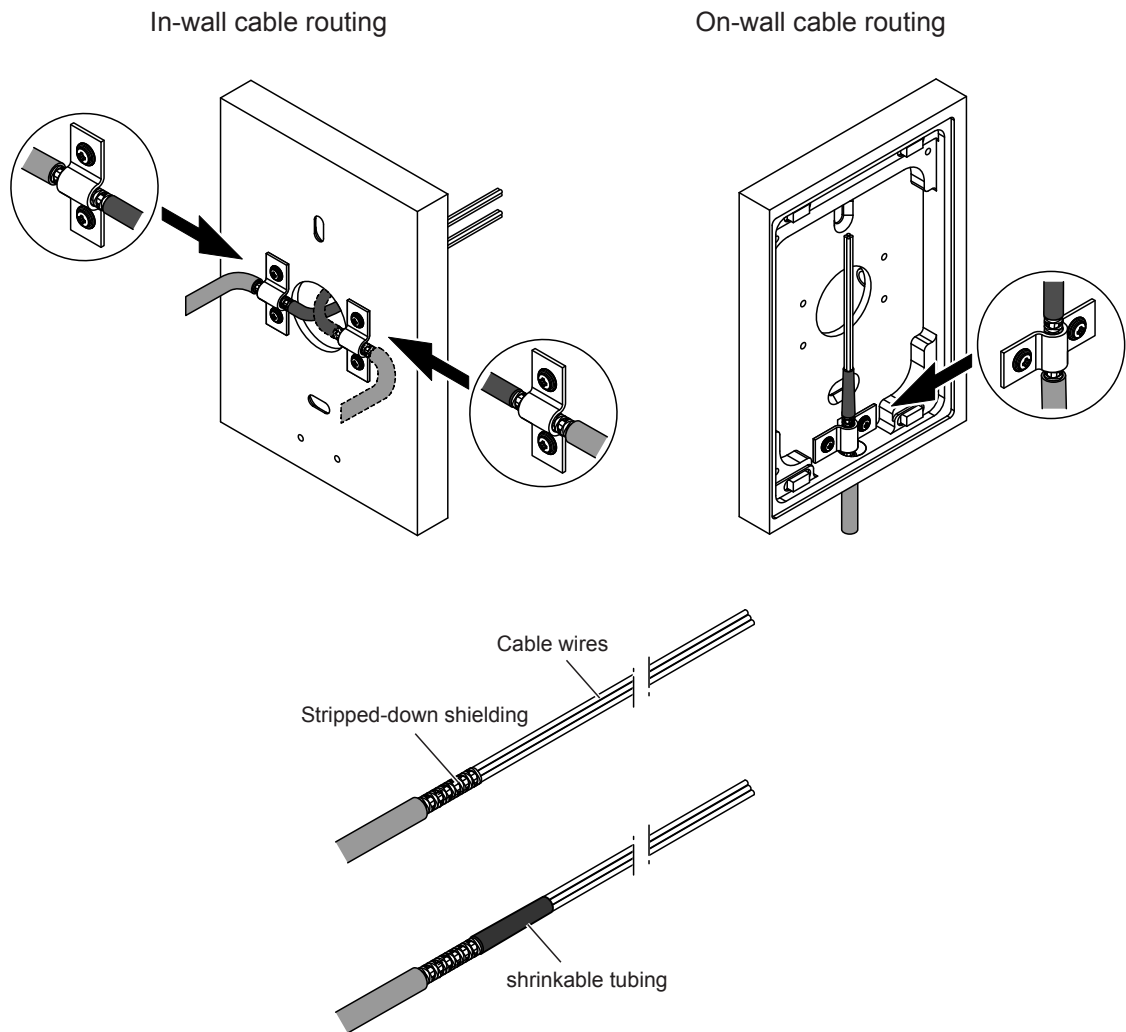


Fig. 15: Fixing the exposed shielding of the CAN BUS cable(s) to the housing with the shielding clamp(s)

3. Mount the on-wall mounted housing to the wall:

- for the mounting on a stonework wall:
 - Insert the supplied dowels.
 - Fix on-wall mounted housing to the wall using the screws supplied, align housing with the help of a spirit level and fasten den screws.
- for the mounting on a wooden wall:
 - Fix on-wall mounted housing to the wall using the countersunk screws supplied, align housing with the help of a spirit level and fasten den screws.

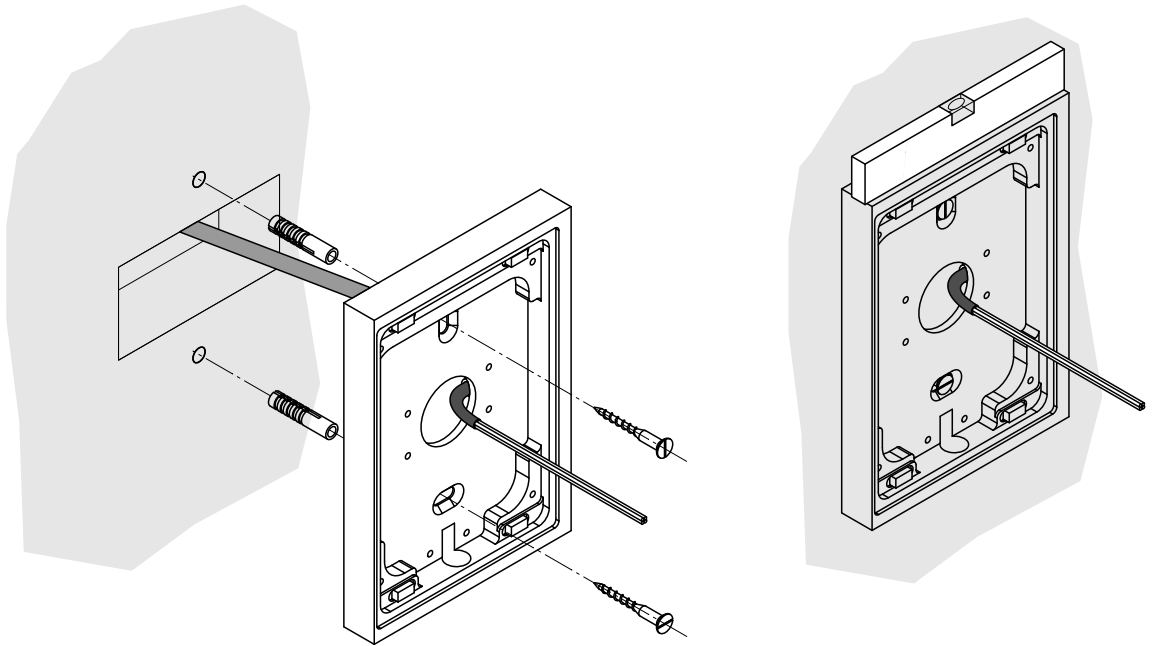


Fig. 16: Mounting the on-wall mounted housing (Figure shows attachment to masonry)

4. Connect the supplied CAN BUS connecting plug to the CAN BUS cable from the Condair Omega, Condair Delta SPA Control Box or from another Condair SPA Display as shown below. For this purpose, strip the individual cable wires of the CAN BUS cable 6 mm, crimp the suitable wire end ferrules and insert the cable wires as far as possible into the correct connection opening of the supplied CAN BUS connecting plug. Then connect the CAN BUS connecting plug to the adapter cable (ex factory connected to terminal "X3").

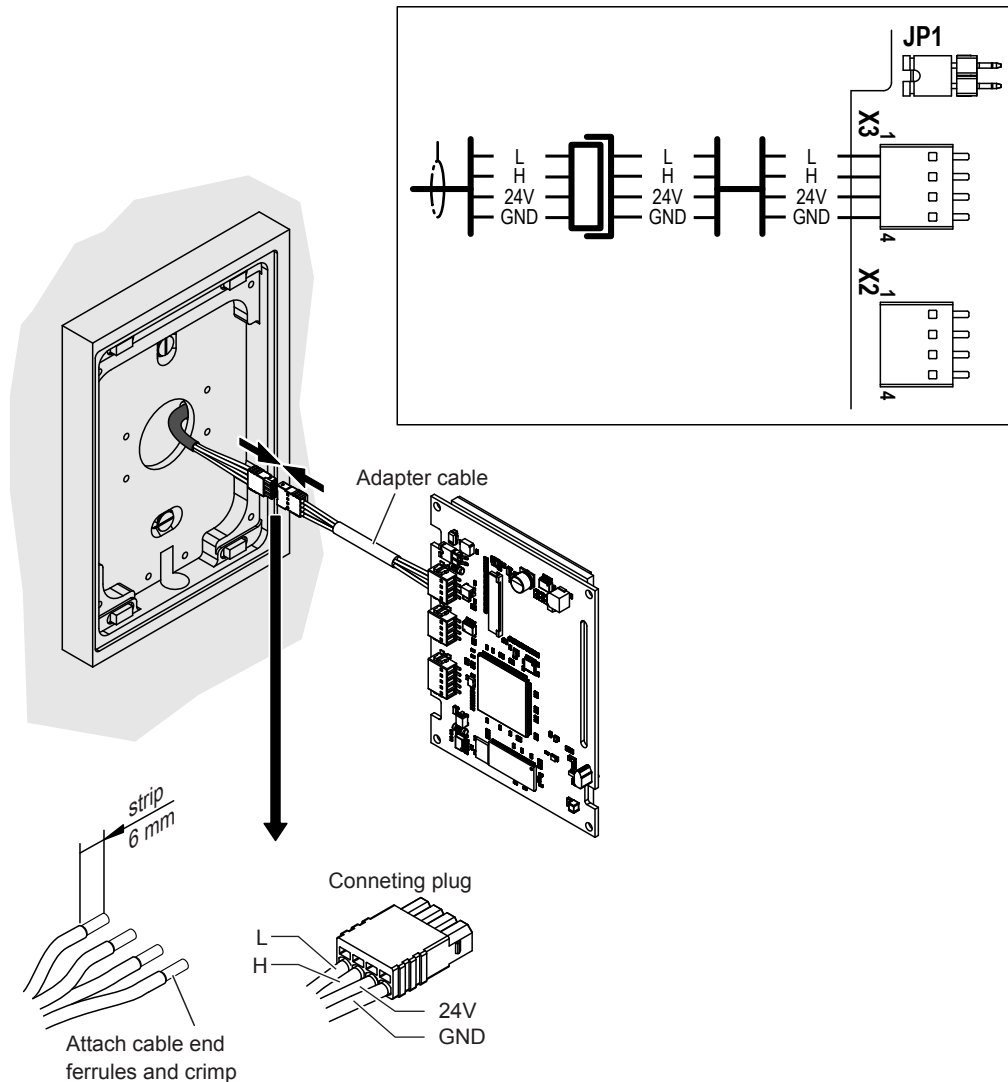


Fig. 17: Connecting one CAN BUS cable to the Condair SPA Display

A CAN BUS cable to another Condair SPA display is connected either directly or via another adapter cable (available as an accessory) to the unused terminal "X2" (see notes in [chapter 4.5](#)).

Important: If two CAN BUS cables are connected to the Condair SPA Display board, jumper "JP1" (terminator) on the Condair SPA Display must be removed.

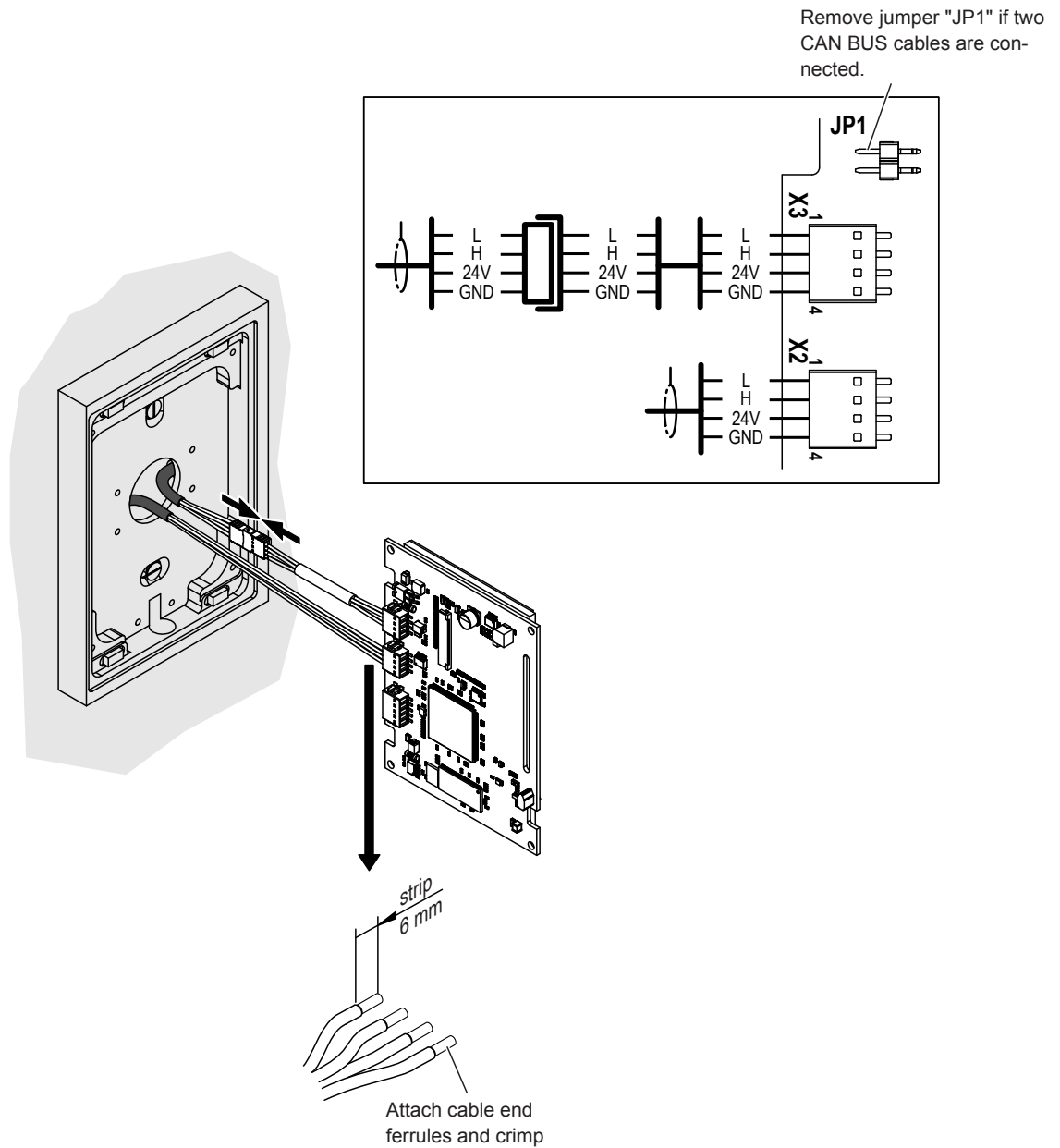


Fig. 18: Connecting two CAN BUS cables to the Condair SPA Display

5. Connect the CAN BUS cable according to the specifications in [chapter 4.5](#) to the Condair Omega or the Condair Delta SPA Control Box, then perform the function tests of the Condair Omega SPA Display.
6. After function tests have been passed carefully place the Condair SPA Display onto the on-wall mounted housing (make sure the supply cable is not getting pinched). Then, fix the Condair SPA Display to the on-wall mounted housing using the four screws supplied. Seal the cable entry at the bottom of the on-wall mounted housing splash-proof using silicone sealant.

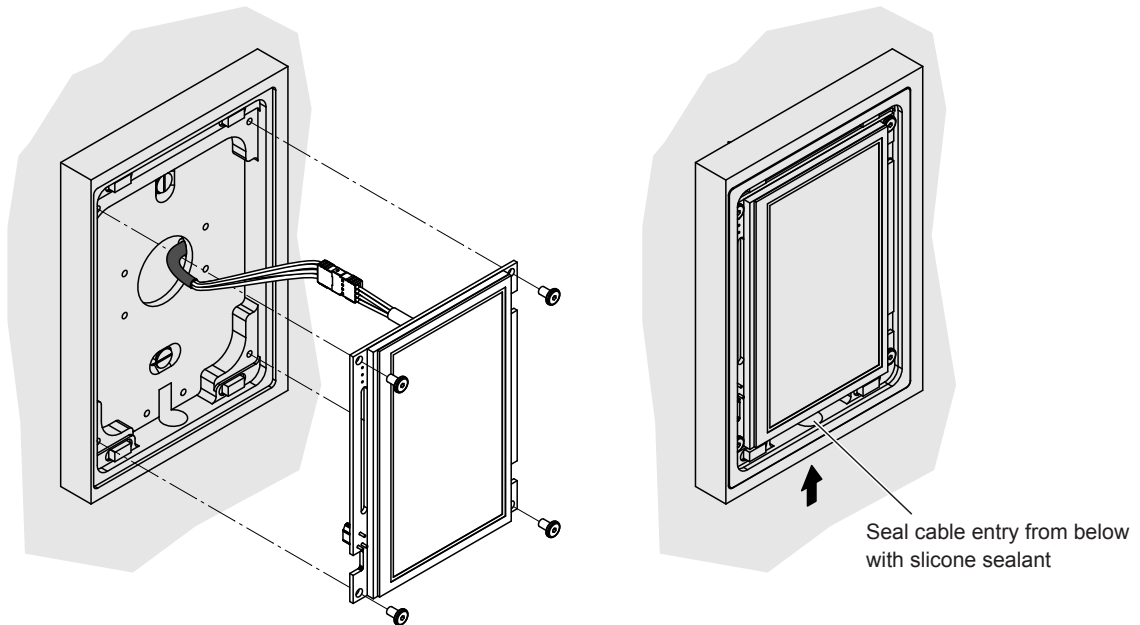


Fig. 19: Mounting the Condair SPA Display

7. Finally attach the decoration cover. The decoration cover is held by the magnets in the on-wall mounted housing.

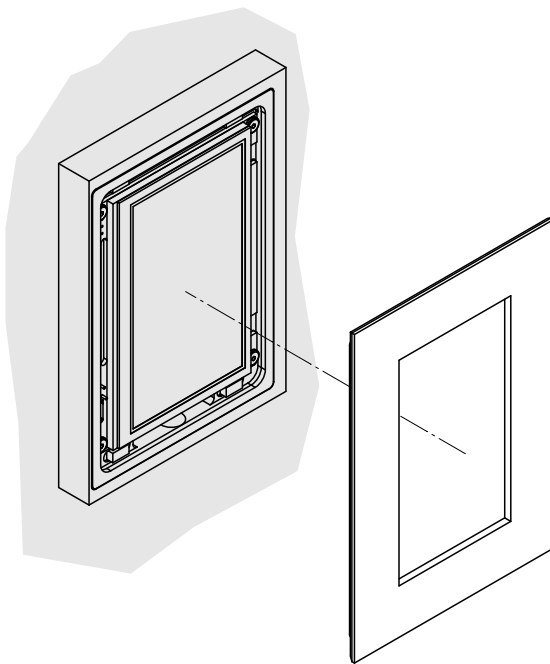


Fig. 20: Attaching the decoration cover

4.5 Connecting the Condair SPA Display to the Condair Omega or to the Condair Delta SPA Control Box

Observe and comply with the notes in the installation and operation manual of the Condair Omega or the Condair Delta SPA Control Box and the local regulation regarding electrical installation when connecting the Condair SPA Display(s) to the Condair Omega or the Condair Delta SPA Control Box!



DANGER!
Danger of electric hazard!

Before connecting the Condair SPA Display(s) to the Condair Omega or the Condair Delta SPA Control Box set the Condair Omega or the Condair Delta SPA Control Box out of operation and disconnect it from the mains!



CAUTION!

The electronic components inside the Condair Omega or the Condair Delta SPA Control Box, respectively are very sensitive to electrostatic discharge. When the unit is open for installation work, appropriate measures must be taken to protect these components against damage caused by electrostatic discharge (ESD protection).

1. Remove front panel of the Condair Omega or the Condair Delta SPA Control Box, respectively.
2. Insert the CAN BUS cable(s) (shielded four-wire cable, 0.34 mm² per wire) from the bottom via cable glands into the control compartment of the Condair Omega or into the Condair Delta SPA Control Box.
3. Guide the CAN BUS cable(s) in a loop through the ferrite ring(s) as shown in [Fig. 24](#).
4. Cut CAN BUS cable(s) to length. Prepare cable end(s) as shown in [Fig. 21](#) and connect plug(s) to the CAN BUS cable(s).

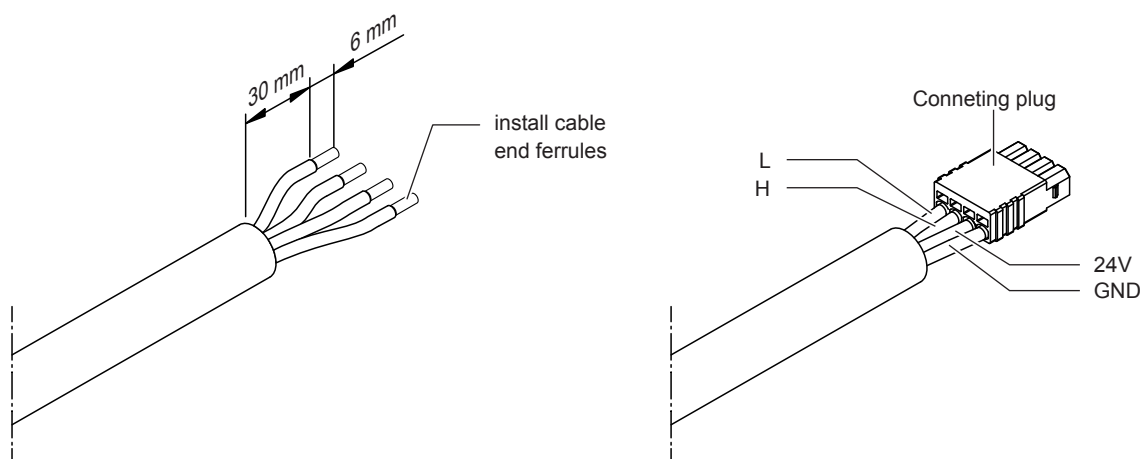


Fig. 21: Preparing the CAN BUS cable for the connection on the control board

5. Connect the CAN BUS cable(s) according to the appropriate wiring diagram (see [Fig. 22](#) or [Fig. 23](#)) to socket "X25" and/or "X24" on the control board of the Condair Omega or the Condair Delta SPA Control Box. Also observe the instructions in the installation manual for the Condair Omega or the Condair Delta SPA Control Box.

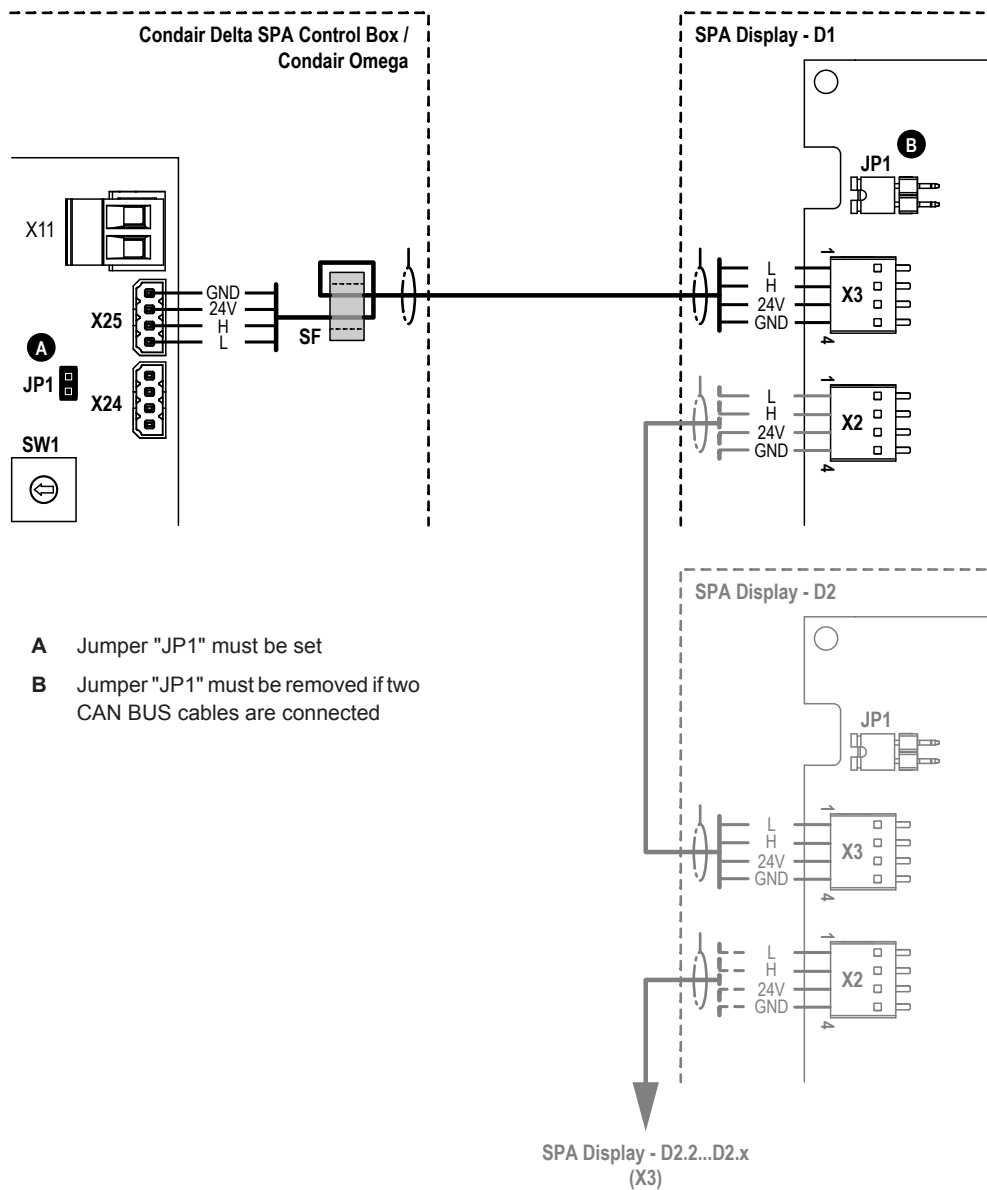


Fig. 22: Wiring diagram variant 1 with one or more Condair SPA Displays

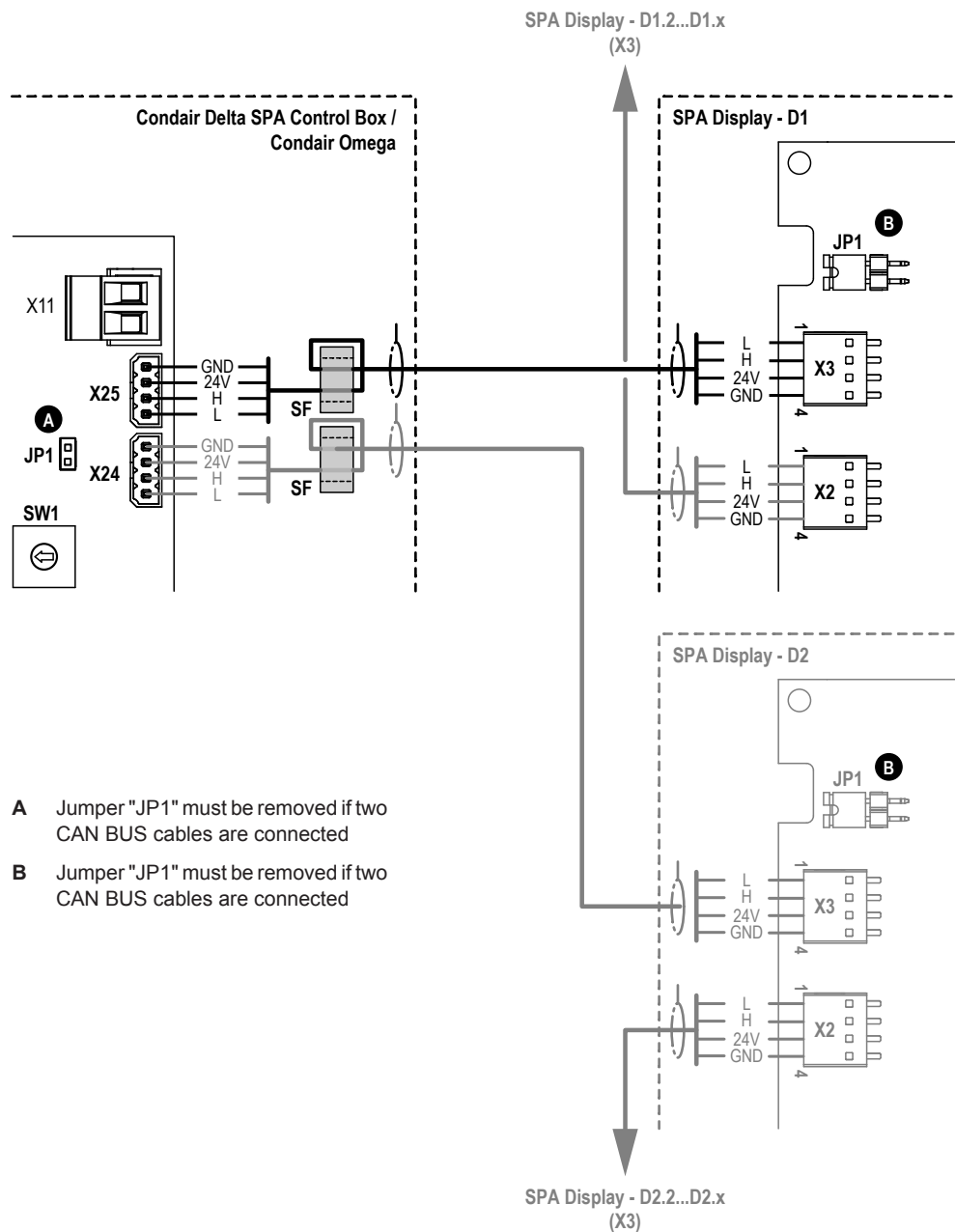


Fig. 23: Wiring diagram variant 2 with one or more Condair SPA Displays

6. 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 on the right side of the Condair Delta SPA Control Box or at the bottom in the housing of the Condair Omega.

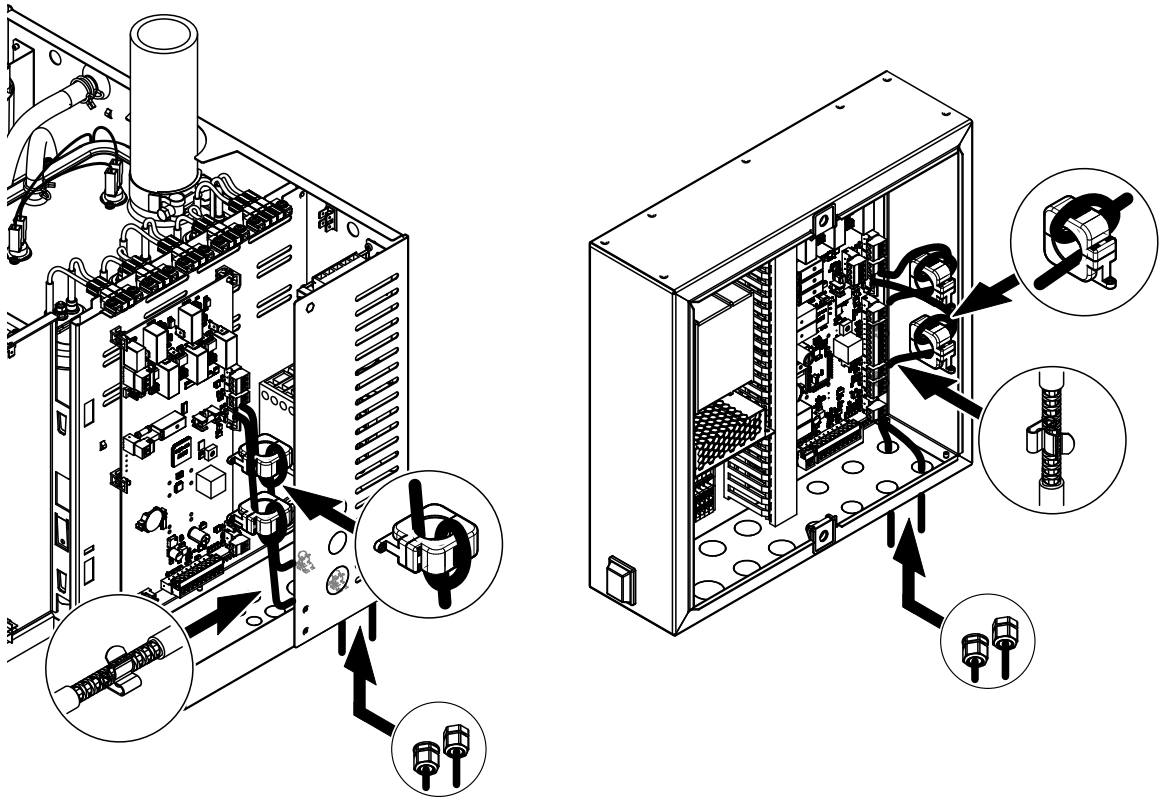


Fig. 24: Feeding the cable(s) through the ferrite ring(s) and fixing the cable shield(s) in the clamp holder(s)

7. Remount front panel of the Condair Omega or Condair Delta SPA Control Box, respectively.
8. Put the Condair Omega or Condair Delta SPA Control Box, respectively into operation.

Assumed the cabling is correct the home screen is shown on the Condair SPA Display after start-up of the Condair Omega.

5 Configuration and operation of the Condair SPA Display

5.1 Configuration of the Condair SPA Display

In principle, the Condair SPA Display is ready for operation after the connection and requires no additional configuration.

However, if more than one SPA display is used in the system, a unique display address must be assigned to each connected SPA display.

For each connected SPA display, go to the menu "Engineering > Administration > Display > Server ID Display" and assign an individual address to the Condair SPA Display via the parameter "Server ID Display".

5.2 Operation of the Condair SPA Display

For the operation of the Condair Omegas or the Condair Delta SPA Control Box via the Condair SPA Display, please refer to the instructions in chapter 5 of the Condair Omega or the Condair Delta SPA Control Box operation manual.

6 Troubleshooting

6.1 Fault indications / warning and fault list

Detailed information on the fault indication on the Condair SPA Display as well as a list of the warning and fault messages which can occur during operation of the Condair Omega or the Condair Delta SPA Control Box can be found in chapter 8 of the Condair Omega or the Condair Delta SPA Control Box operation manual.

6.2 Malfunctions during operation of the Condair SPA Display

Malfunction	Cause	Remedy
Message "Time Out" appears in the Condair SPA Display.	No data connection	Check connections "L" and "H" on the Condair SPA display and on the Condair Omega or the Condair Delta SPA Control Box control board.
Keystroke is not detected in the correct location.	Display is not calibrated correctly.	If possible, access the calibration function (Path: Menu > Engineering > Admin > Display > Calibrate) and start the calibration function by pressing "Start". Otherwise, the display must be replaced.
Display remains dark.	Condair Omega or the Condair Delta SPA Control Box is not switched on.	Switch on the Condair Omega or the Condair Delta SPA Control Box.
	No supply voltage present: <ul style="list-style-type: none">– Supply cable not or not correctly connected.– Control board of the Condair Omega or the Condair Delta SPA Control Box defective.	<ul style="list-style-type: none">– Connect cable correctly.– Check/replace control board of the Condair Omega or the Condair Delta SPA Control Box.
No reaction when tapping on a key on the display.	SPA display defective.	Replace SPA display.
	Control board of the Condair SPA display defective.	Replace control board.

7 Taking out of service/Disposal

7.1 Taking out of service

If the Condair SPA Display must be replaced or if the Condair SPA Display is not needed any more, proceed as follows:

1. Switch off the Condair Omega steam generator, separate it from the mains and secure it against inadvertent power-up.
2. Have the Condair SPA Display (and any other system components, if necessary) unmounted by a qualified service technician.

7.2 Disposal/Recycling

Components not used any more must not be disposed of in the domestic waste. Please dispose of the unit or the individual components in accordance with local regulations at the authorised collecting point.

If you have any questions, please contact the responsible authority or your local Condair representative.

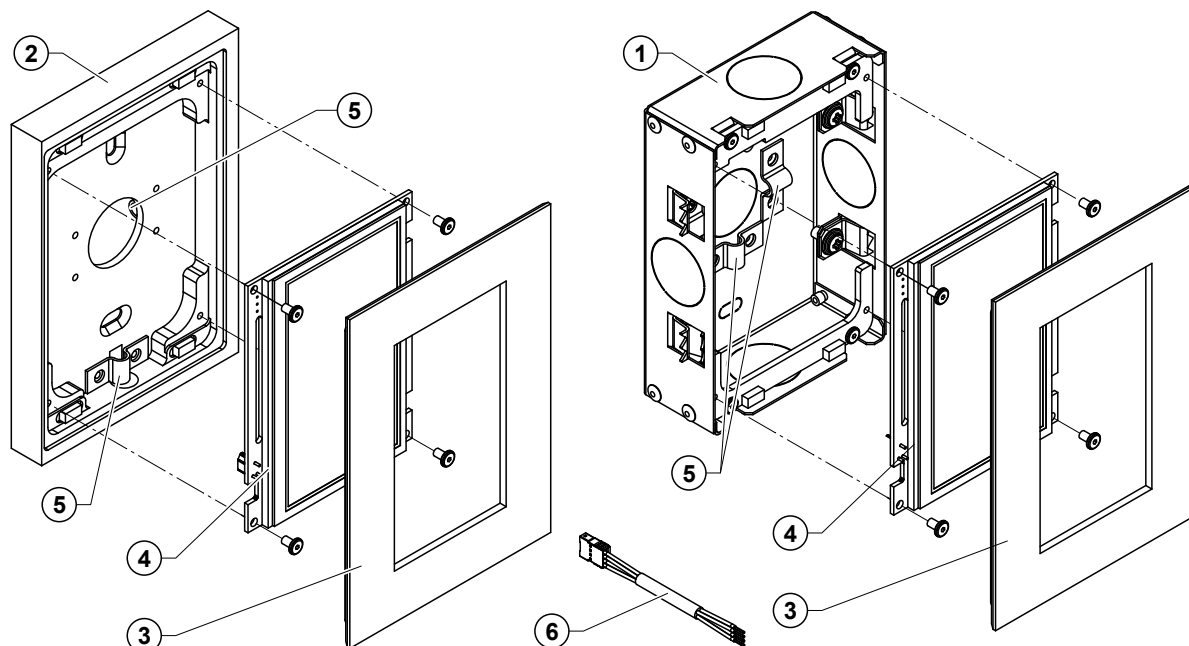
Thank you for your contribution to environmental protection.

8 Technical data

	Condair SPA Display	
	in-wall mounted version	on-wall mounted version
Touch Panel	Resistive Touch Panel with 95 x 54 mm active screen	
Display	4,3" LCD, 272 x 480 Pixel	
Interface	CAN BUS	
Supply voltage	24 VDC	
Max. rated power	2 W	
Admissible ambient temperature	-20...70°C	
Admissible ambient humidity	10... 80 %rh, non condensing	
Type of protection	IP44	IP44 (IP33 ¹⁾)
Conformity	CE	
Control	ARM Cortex M4 high-performance microcontroller 16 MB DRAM, 16 MB Flash for program & data	
Dimensions (L x W x D)	141.5 mm x 100.2 mm x 40.2 mm	141.5 mm x 100.2 mm x 19.0 mm

¹⁾ If cable entry is not sealed by the customer, see [chapter 4.4.2](#)

9 Spare parts



Pos.	Description	Spare part No.
1	In-wall mounted housing (incl. mounting material)	2590178
2	On-wall mounted housing (incl. mounting material)	2590179
3	Decorative cover steel	2590183
	Decorative cover glass white	2590185
	Decorative cover glass black	2590186
4	PCB SPA Display	2590964
5	Shielding clamps	2595477
6	SPA Display adapter cable	2595479
—	Plug for CAN BUS cable (5 pcs.)	2591662
—	CAN BUS cable shielded (50 m)	2591666
—	Clamp holder for shielding (5 pcs.)	2591667
—	Foldable ferrite ring for EMC	2594845

If you would like to use other materials for the decorative cover, the magnetic centering frame including the seal and the appropriate gluing device can be ordered separately in consultation with your Condair representative:

Pos.	Description	Spare part No.
—	Centering frame & sealing	2590188
—	Gluing device	2590197

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CONSULTING, SALES AND SERVICE:



CH94/0002.01

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