

Nordmann AT4 D SPA Display



INSTALLATION AND OPERATION MANUAL

Thank you for choosing Nordmann

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 **Nordmann AT4 D SPA Display with touch-sensitive display**.

The Nordmann AT4 D SPA Display incorporates the latest technical advances and meets all recognized safety standards. Nevertheless, improper use of the Nordmann AT4 D 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 Nordmann AT4 D 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 Nordmann 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 Nordmann AT4 D SPA Display.

This installation and operation manual is restricted to the **installation, commissioning, operation, and trouble shooting** of the Nordmann AT4 D 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 operation manual for the steam generator Nordmann AT4 D. 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 steam generator with which the Nordmann AT4 D SPA Display is used changes hands, the documentation should be passed on to the new operator.

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

Language versions

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

2 *For your safety*

General

Every person working with the Nordmann AT4 D 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 Nordmann AT4 D 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 Nordmann representative.

It is assumed that all persons working with the Nordmann AT4 D 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 Nordmann AT4 D SPA Display is intended exclusively for the control of the steam generator Nordmann AT4 D within the specified operating conditions (see [chapter 9](#)). 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).**

Behaviour in case of danger

If it is suspected that **safe operation is no longer possible**, then the Nordmann AT4 D should **immediately be set out of operation, disconnected from the mains and secured against accidental power-up (see Nordmann AT4 D operation manual)**. This can be the case under the following circumstances:

- if the Nordmann AT4 D SPA Display is damaged
- if the Nordmann AT4 D SPA Display is no longer operating correctly
- if the connecting cable is damaged

All persons working with the Nordmann AT4 D 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 Nordmann AT4 D 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 Nordmann representative.

3 Product Overview

Nordmann AT4 D SPA Display
flush-mounted

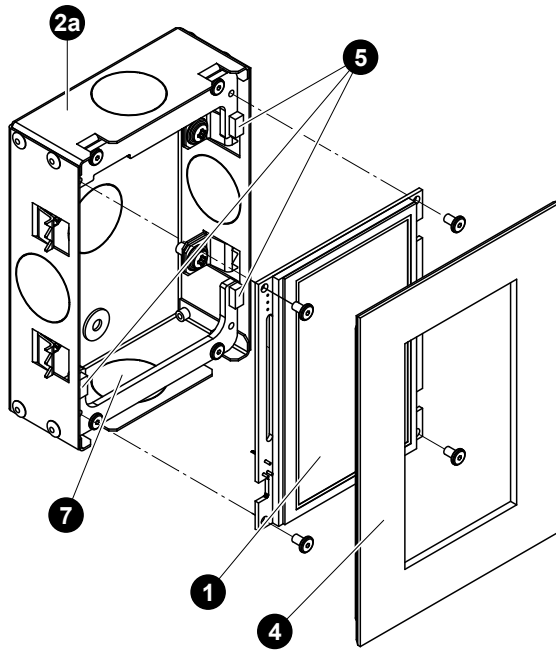


Fig. 1: Front view

Nordmann AT4 D SPA Display
surface-mounted

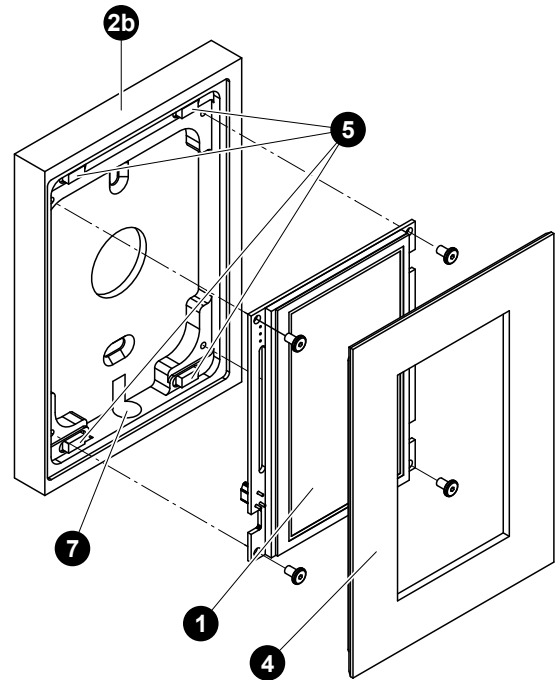


Fig. 2: Front view

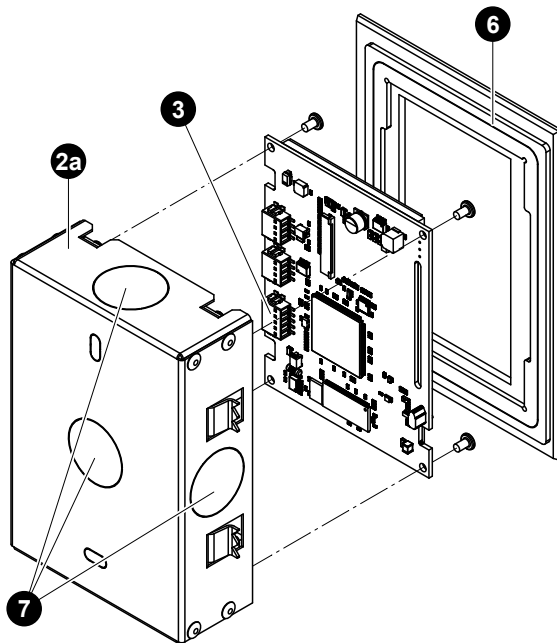


Fig. 3: Back view

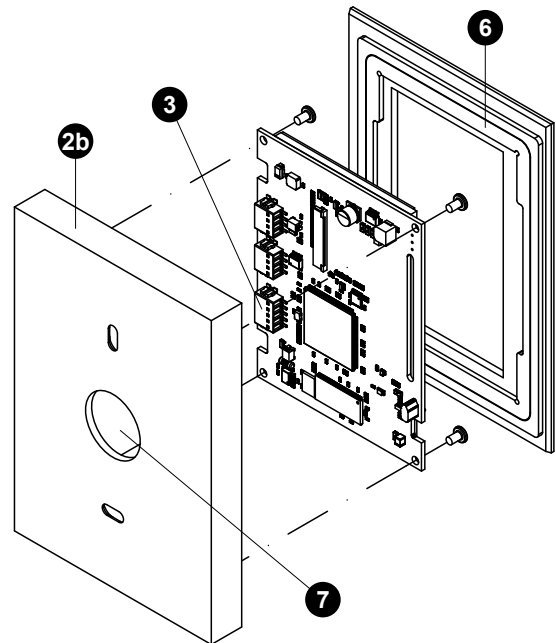


Fig. 4: Back view

- 1 Touch-sensitive display
- 2a Flush-mounted housing
- 2b Surface-mounted housing
- 3 Connecting terminal
- 4 Decorative cover

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

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 Nordmann representative in case something is lacking, they will be glad to send you the missing part without delay. The standard delivery includes:

- Nordmann AT4 D SPA Display **flush-mounted**
 - Nordmann AT4 D SPA Display control PCB
 - Flush-mounted housing with pre-mounted display mounting supports, fastening claws and 3 magnets
 - Plastic bag containing mounting material
- Nordmann AT4 D SPA Display **surface-mounted**
 - Nordmann AT4 D SPA Display control PCB
 - Surface-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 Nordmann representative and to the carriers, as required.

Packaging

The original packaging of the Nordmann AT4 D SPA Display 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 external steam bath control 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 Nordmann AT4 D SPA Display

Please observe the following notes for the correct positioning of the Nordmann AT4 D SPA Display:

- The Nordmann AT4 D SPA Display must not be installed in hazardous locations and in rooms where water splashes may occur.
- Do not mount the Nordmann AT4 D SPA Display inside the steam bath cabin, sauna, bio sauna, etc.
- If possible mount the Nordmann AT4 D SPA Display at eye level.
- Do not mount the Nordmann AT4 D SPA Display in exposed places.
- Do not mount the Nordmann AT4 D SPA Display on vibrating components.

4.4 Mounting the Nordmann AT4 D SPA Display



The electronic components of the Nordmann AT4 D 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).

4.4.1 Flush mounting

1. At the desired location, mark mounting opening according to the size of the flush-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.

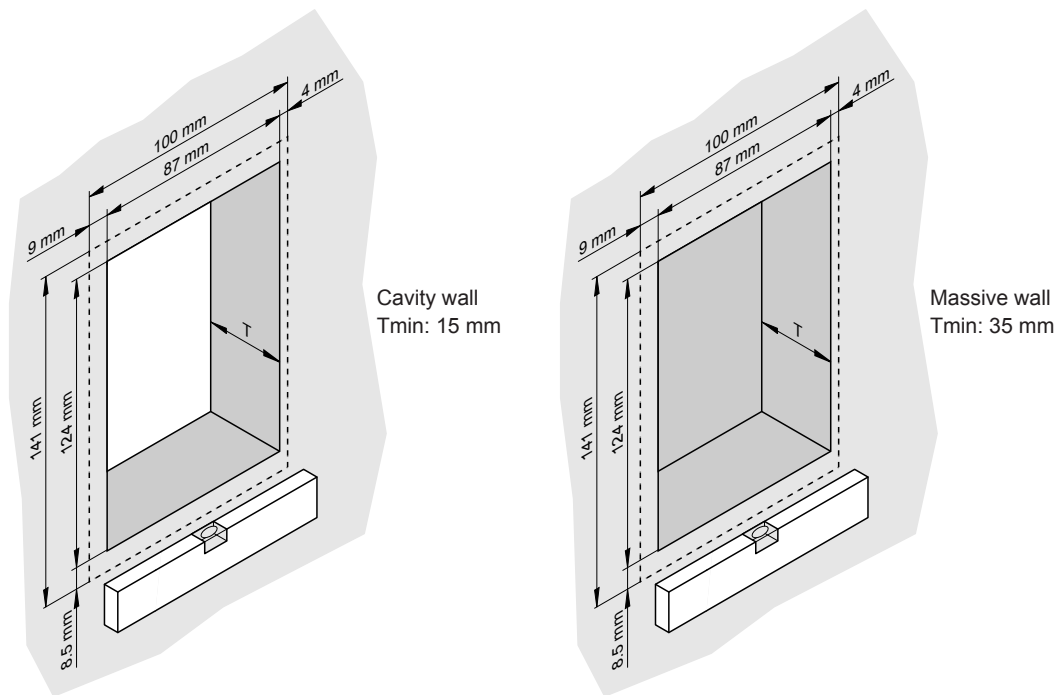


Fig. 5: Making the mounting opening for the flush-mounted housing

2. Knock out the desired cable entry of the flush-mounted housing and insert the connecting cable (four-wire cable, 0.34 mm² per wire) into the flush-mounted housing. Then, lead the cable through the wall opening to the steam generator.

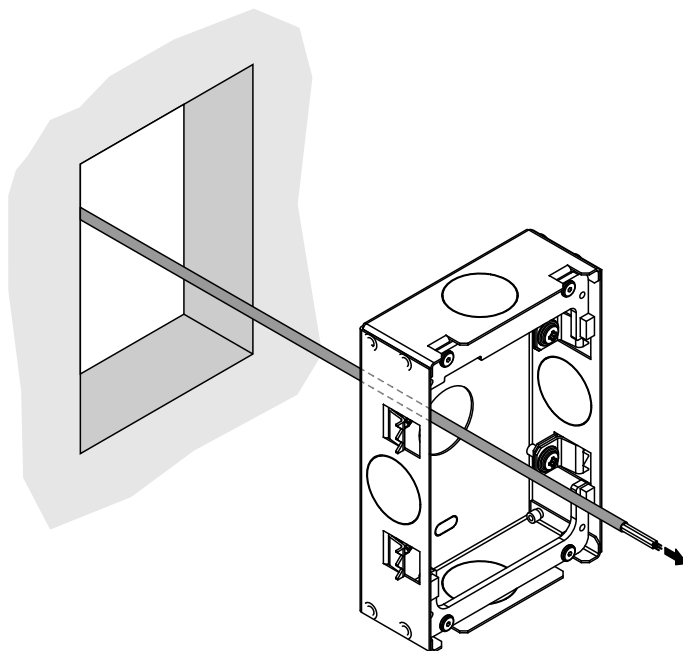


Fig. 6: Inserting the connecting cable

3. Insert the flush-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 flush-mounted housing (only necessary with cavity walls).

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

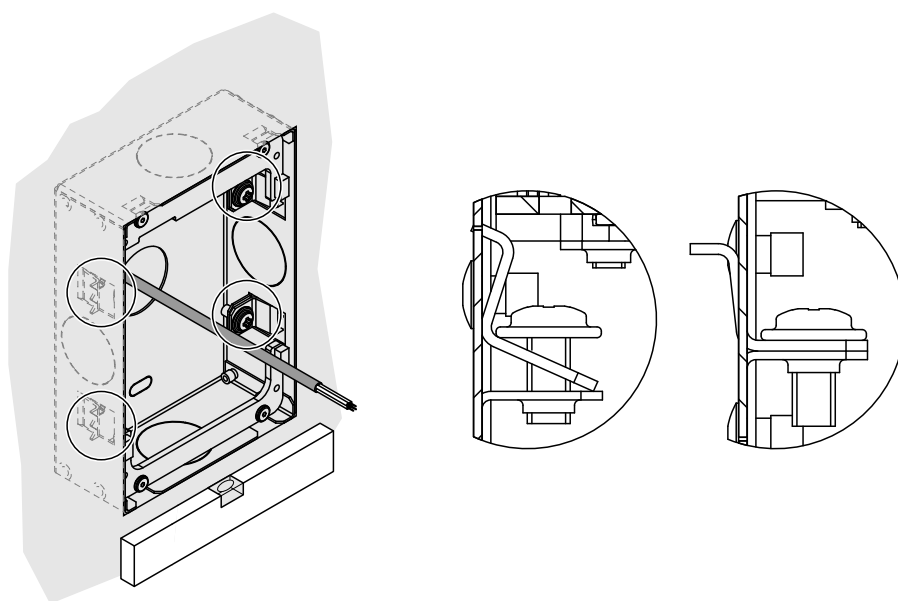


Fig. 7: Mounting the flush-mounted housing to the wall opening

4. Connect the connecting cable to the Nordmann AT4 D SPA display control board according to the figure below. For this purpose, the individual wires have to be stripped 6 mm and appropriate cable end sleeves have to be crimped. Then, push the individual wires into the corresponding connection opening of the terminal plug "X1" until they come to a stop.

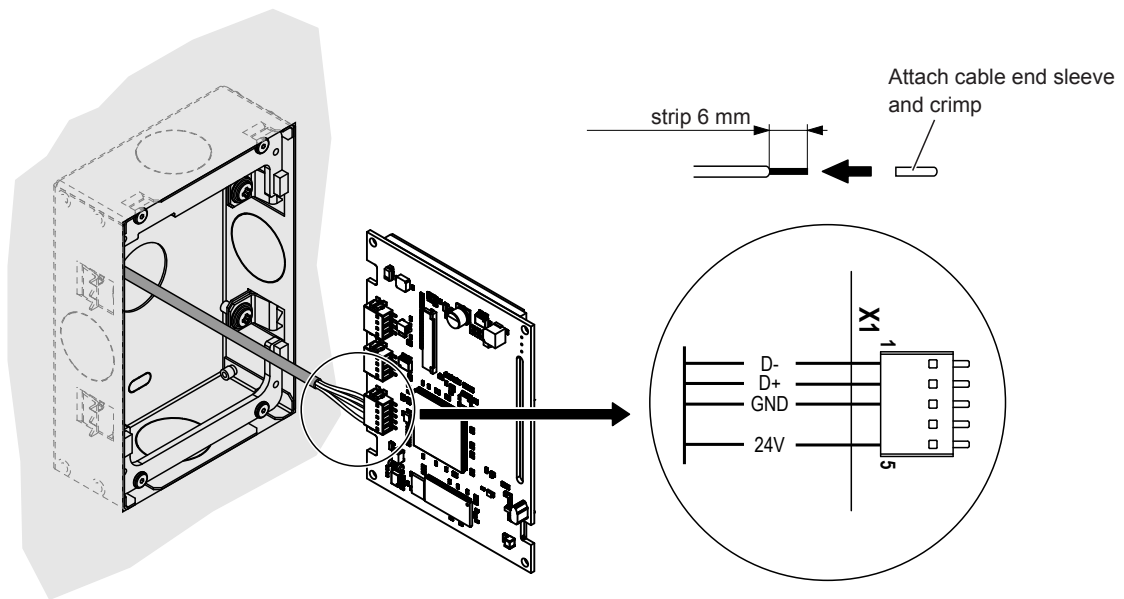


Fig. 8: Connecting the connecting cable to the Nordmann AT4 D SPA Display

5. Connect the connecting cable according to the specifications in [chapter 4.5](#) to the Nordmann AT4 D, then perform the function tests.
6. After function tests have been passed carefully place the Nordmann AT4 D SPA Display onto the flush-mounted housing. Make sure the supply cable is not getting pinched and that the magnets in the housing fit into the openings of the control board. Then, fix the Nordmann AT4 D SPA Display to corresponding supports of the flush-mounted housing using the four screws supplied.

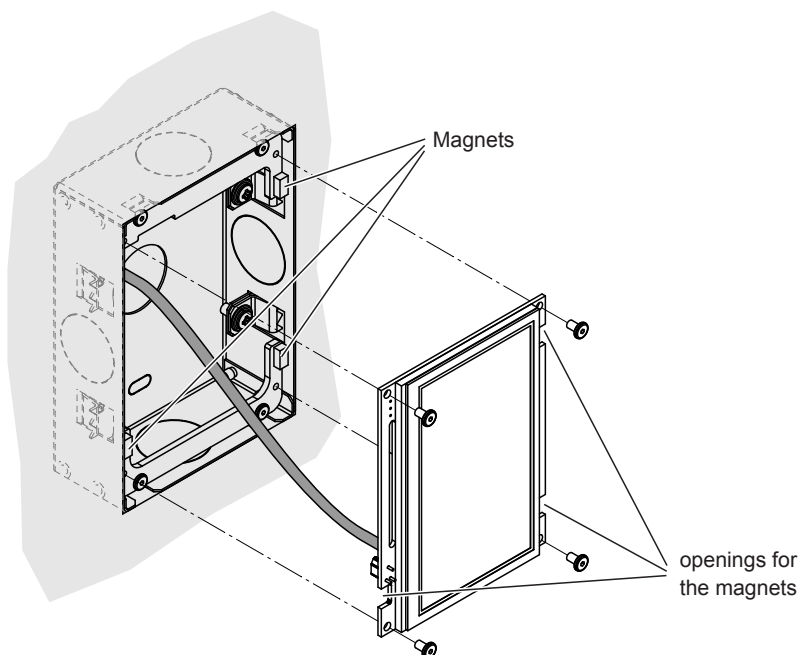


Fig. 9: Mounting the Nordmann AT4 D SPA Display

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

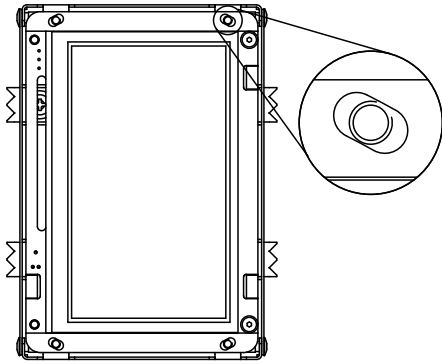


Fig. 10: Adjusting the supports

8. Finally attach the decoration cover. The decoration cover is held by the magnets in the flush-mounted housing.

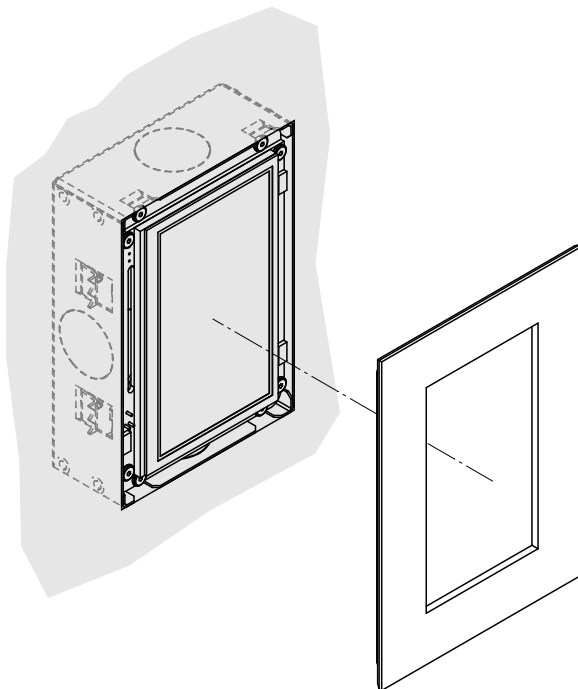


Fig. 11: Attaching the decoration cover

4.4.2 Surface mounting

1. Using the aluminum surface-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.
 - Insert the supplied dowels.
 - Fix surface-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:
 - Drill 2 holes $\varnothing 3$ mm, depth 35 mm
 - Fix surface-mounted housing to the wall using the countersunk screws supplied, align housing with the help of a spirit level and fasten den screws.

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

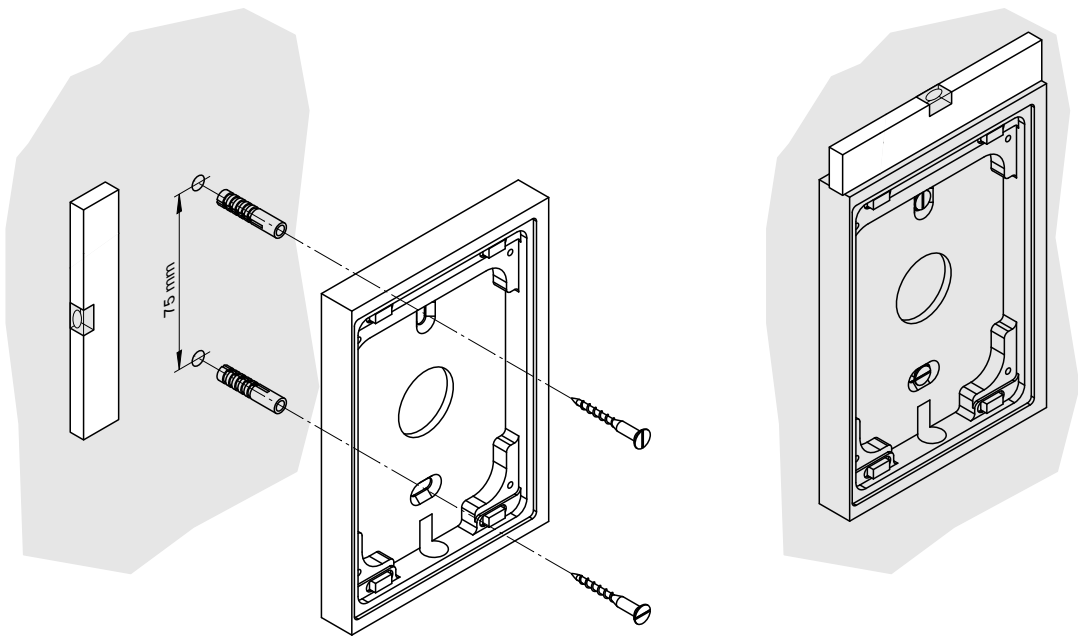


Fig. 12: Mounting the surface-mounted housing (figure shows mounting on a stonework wall)

2. Drill the hole for the cable entry at the desired location into the wall (for in-wall cable routing) or use one of the existing cable entry on the housing (for surface-mounted cable routing).

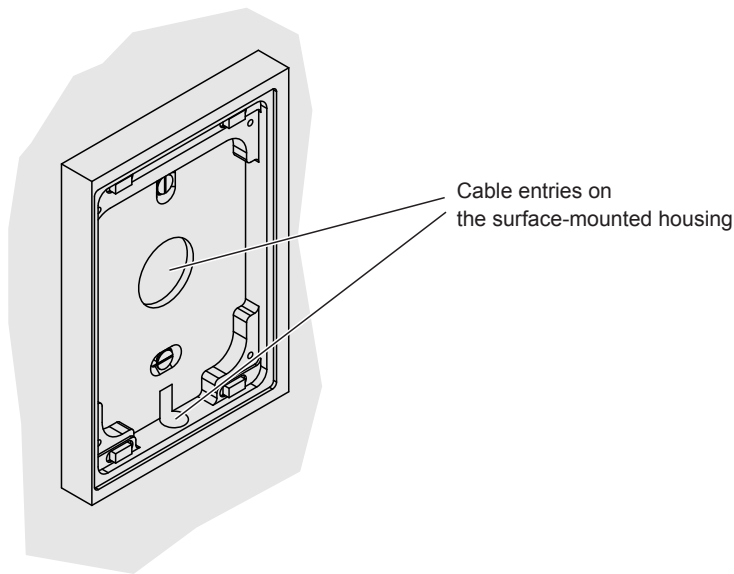


Fig. 13: Cable entries

3. Connect the connecting cable to the Nordmann AT4 D SPA display control board according to the figure below. For this purpose, the individual wires have to be stripped 6 mm and appropriate cable end sleeves have to be crimped. Then, push the individual wires into the corresponding connection opening of the terminal plug "X1" until they come to a stop.

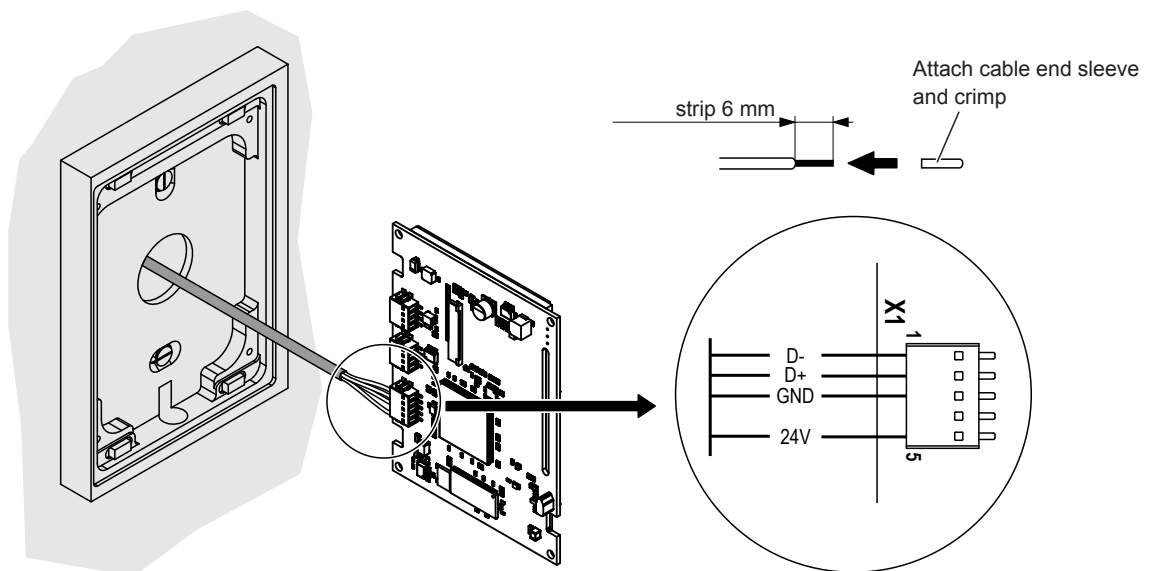


Fig. 14: Connecting the connecting cable to the Nordmann AT4 D SPA Display

4. Connect the connecting cable according to the specifications in [chapter 4.5](#) to the Nordmann AT4 D, then perform the function tests.

5. After function tests have been passed carefully place the Nordmann AT4 D SPA Display onto the surface-mounted housing (make sure the supply cable is not getting pinched). Then, fix the Nordmann AT4 D SPA Display to the surface-mounted housing using the four screws supplied. Seal the cable entry at the bottom of the surface-mounted housing splash-proof using silicone sealant.

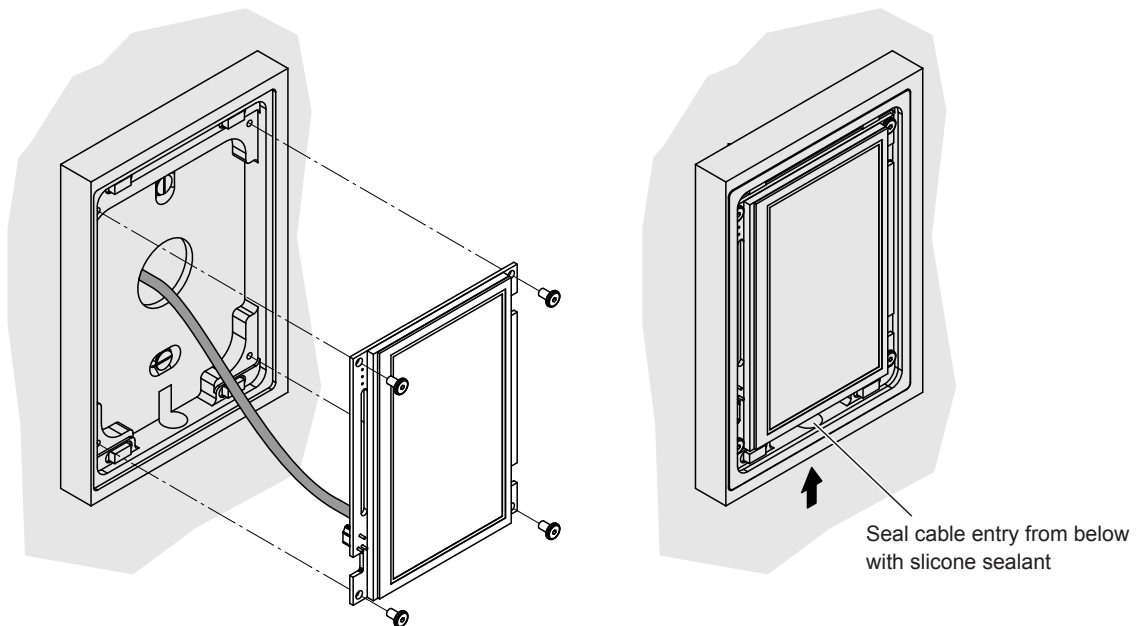


Fig. 15: Mounting the Nordmann AT4 D SPA Display

6. Finally attach the decoration cover. The decoration cover is held by the magnets in the surface-mounted housing.

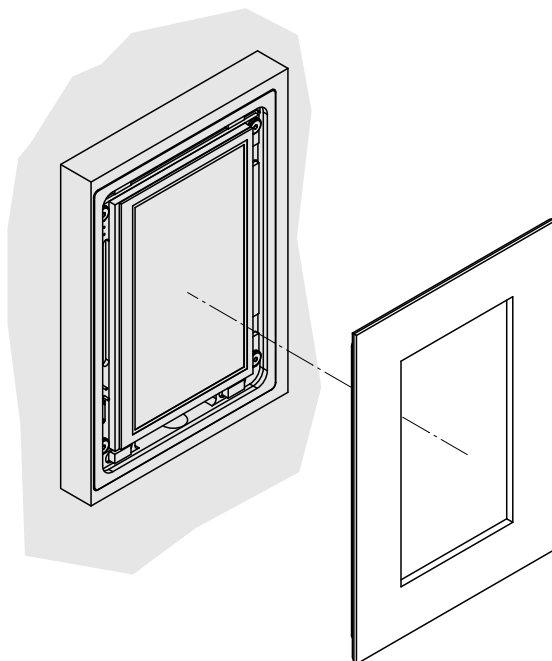


Fig. 16: Attaching the decoration cover

4.5 Connecting the SPA Display to the Nordmann AT4 D

Observe and comply with the notes in the installation of the Nordmann AT4 D steam generator and the local regulation regarding electrical installation when connecting the Nordmann AT4 D SPA Display to the Nordmann AT4 D steam generator!



DANGER!
Danger of electric hazard!

Before connecting the Nordmann AT4 D SPA Display to the Nordmann AT4 D steam generator set the steam generator out of operation and disconnect it from the mains!



CAUTION!

The electronic components inside the Nordmann AT4 D steam generator 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 the front panel of the control compartment of the Nordmann AT4 D.
2. Insert the four-wire connecting cable from the bottom via a cable gland into the control compartment. Then, connect the cable to terminal "X15" on the power board of the Nordmann AT4 D according to the wiring diagram shown below.

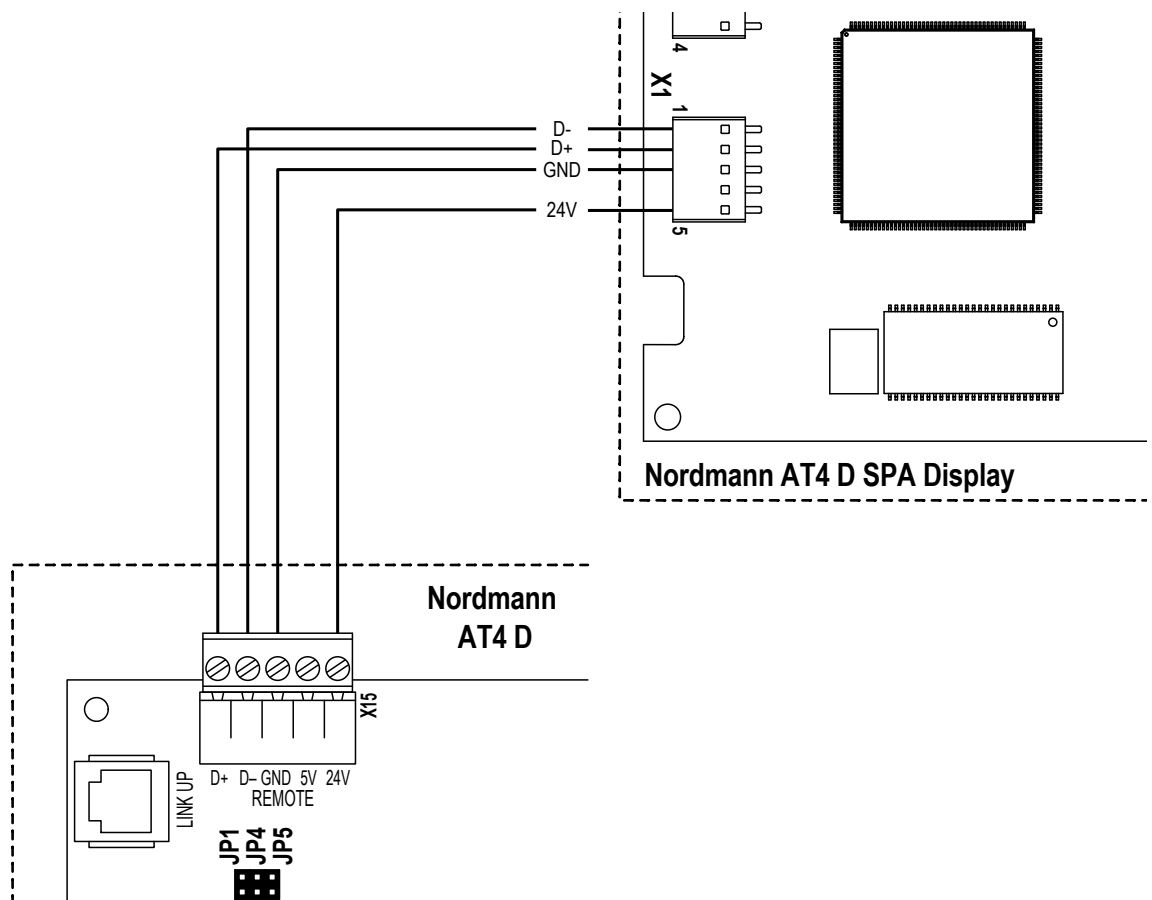


Fig. 17: Wiring diagram AT4 D SPA Display

3. Plug one jumper each on JP1, JP4 and JP5 (if not already plugged in).
4. Replace front panel of the control compartment of the Nordmann AT4 D.
5. Set Nordmann AT4 D into operation.

If wired correctly the standby operation display is shown in the Nordmann AT4 D SPA Display (see [chapter 5.1](#)) after the Nordmann AT4 D has been started, or if the Nordmann AT4 D has not been configured correctly, the Modbus error message appears (Modbus configuration see [chapter 4.6](#)).

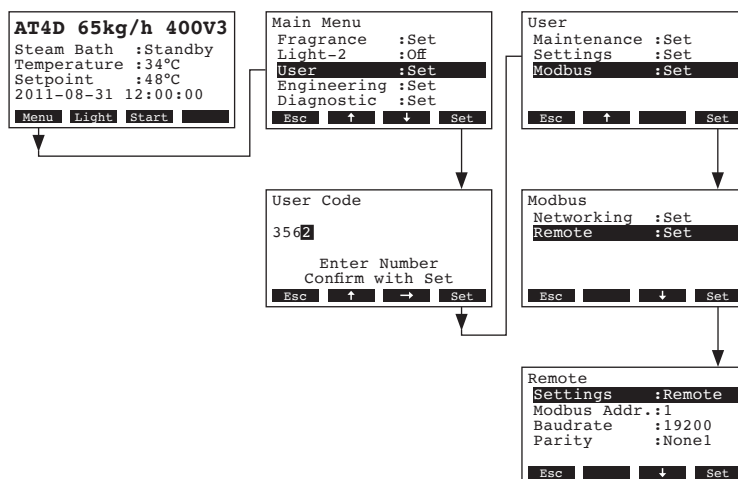
4.6 Configuring the Nordmann AT4 D for operation with the external Nordmann AT4 D SPA Display

Note: Detailed information on the operation of the control software of the Nordmann AT4 D can be found in the operating manual of the Nordmann AT4 D.

Specify the Modbus parameters for communication

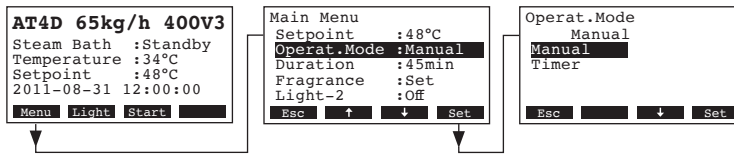
In the Modbus submenu "Remote" (path: Menu > User > Password input: 3562 > Modbus > Remote) set the parameters as follows:

Settings:	Remote
Modbus Addr.:	1
Baudrate:	19200
Parity:	None1



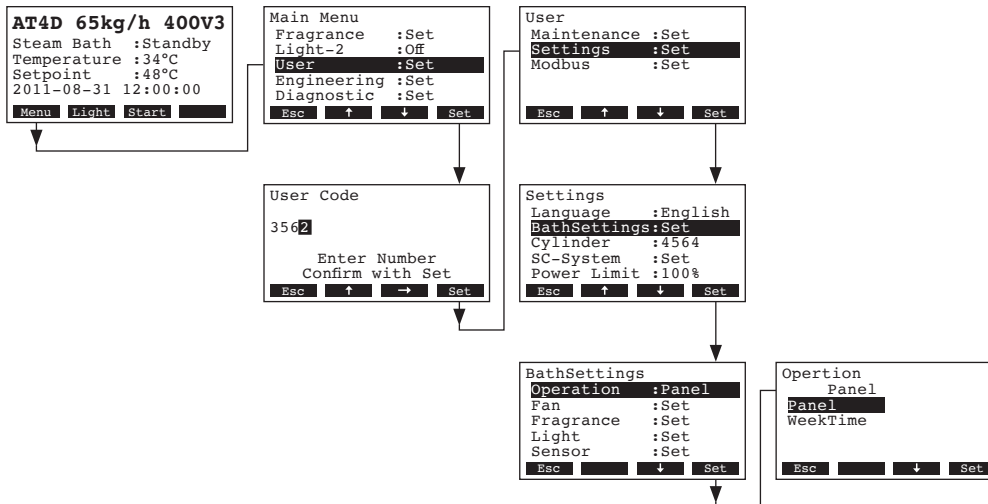
Setting the control mode

Set the "Operat. Mode" parameter in the main menu to "Manual" (path: *Menu > Operat. Mode*):



Setting the operation mode

Set in the "BathSettings" submenu (path: *Menu > User > Password input: 3562 > Settings > BathSettings*) the "Operation" parameter to "Panel":



5 Operation of the Nordmann AT4 D SPA display

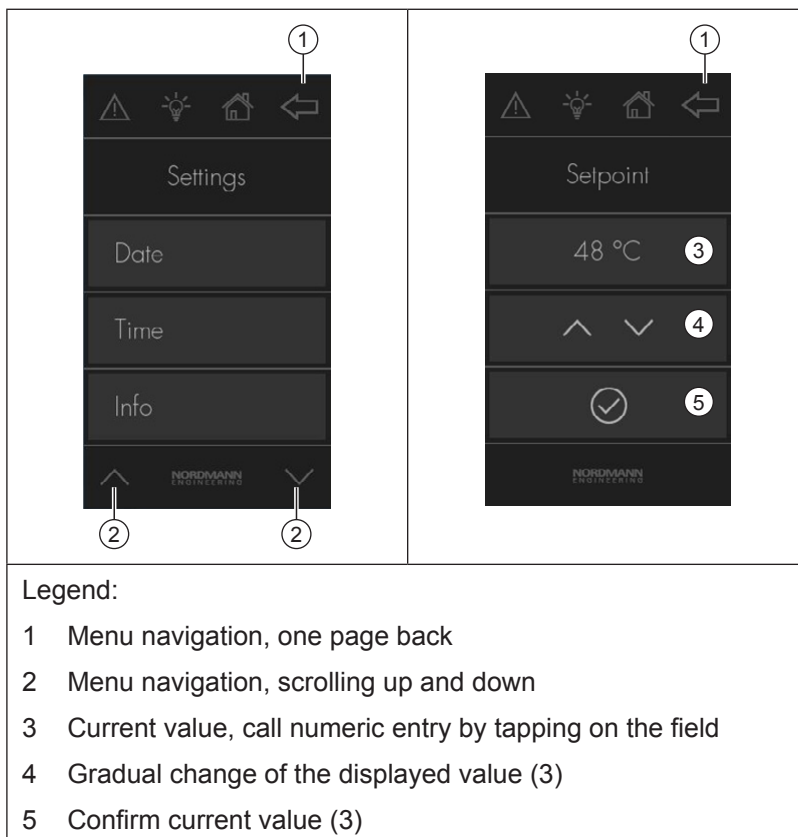
5.1 Operating displays

After the connection of the Nordmann AT4 D SPA display to the Nordmann AT4D and the corresponding configuration of the Nordmann AT4D, the Nordmann AT4 D SPA display is ready for use. As soon as the Nordmann AT4D steam generator is switched on, the **standby operating display** appears after starting the steam generator has finished initialization (see below).

Standby operating displays		
Steam bath operation	Caldarium operation	Operating display with active timer
<p>Legend:</p> <ul style="list-style-type: none"> 1 Current steam bath temperature, call setpoint adjustment by tapping on the field 2 Set bath time, call steam bath time adjustment by tapping on the field 3 Steam bath Start / Stop (Priority always higher than timer) 4 Current humidity of the caldarium, call setpoint adjustment by tapping on the field 5 Start time timer controlled steam bath operation, call timer settings by tapping on the field 6 Malfunction status (Warning yellow, Fault red), call fault list/ fault history by tapping on the symbol 7 Cabin light On / Off 8 Home button, jumps back to operating display 9 Menu button 		

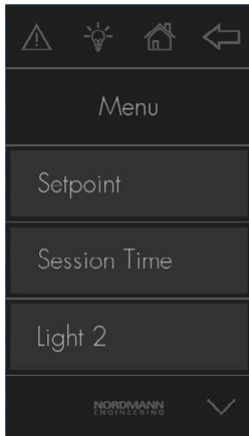
6 Menu

6.1 Overview menu navigation



Note: All settings are automatically synchronized between the control of the Nordmann AT4 D and the Nordmann AT4 D SPA display.

6.2 Steam bath settings



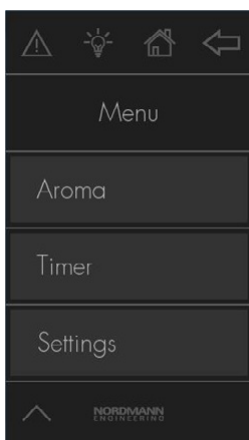
Setpoint: Setting the temperature (steam bath operation) or humidity (caldarium operation) setpoint.

Setting range humidity: 30...90 %rh
Setting range temperature: 25...55 °C

Session Time: Setting the bath time.

Setting range: 1...1080 minutes

Light 2: Turning on / off the effect light.



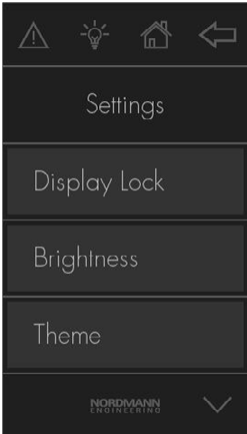
Aroma: Setting the aroma intensity level of the fragrance pump 1 and 2.
Note: To deactivate the fragrance pump, select intensity level "0".

Setting range: 0...5

Timer: Timer-controlled bathing operation can be configured and activated via the steam bath control. If the timer is activated, the steam generator is automatically switched on at the set time of day and for the set bathing time. The timer is always deactivated after bathing operation has finished and must be reactivated for each day.

Settings: Display settings see [chapter 6.3](#).

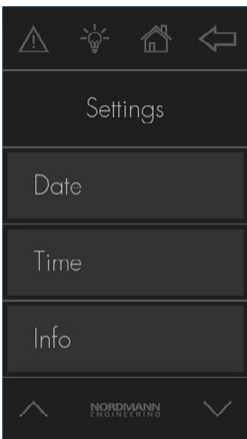
6.3 Display settings



Display Lock: With this setting you can lock the SPA display. If activated, changes to settings can only be made after entering the user code "3562".

Brightness: With this setting you can adjust the brightness of the display backlight.
Setting range: 20...100 %

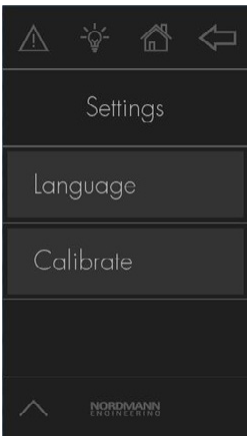
Theme: Selecting the display theme option.
Options: "Light" or "Dark"



Date: With this setting you can determine the current date.

Time: With this setting you can determine the current time of day.

Info: This function displays a list of relevant device data such as software version, operating hours, and device type.



Language: With this setting you can determine the display language.
Options: "German" or "English".

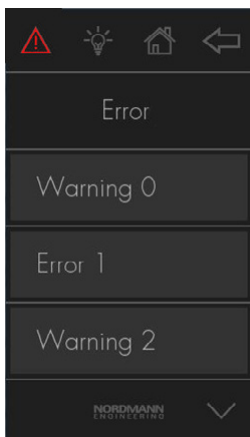
Calibrate: Calling up the calibration function of the SPA display.
Note: A calibration needs to be done only if the pressure point on the display is no longer accurately detected. This function may only be performed by the Nordmann service technician.

7 Troubleshooting

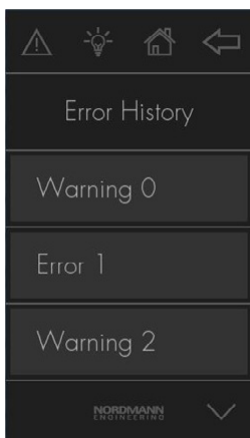
7.1 Fault indications on the Nordmann AT4 D SPA Display

Faults during operation are indicated by the yellow (warning) or red (fault) illuminated warning triangle in the upper left corner of the SPA display. If the warning triangle lights up yellow or red, the list of the currently active faults appears after pressing on the warning triangle.

Note: The numbers correspond to the error codes of the Nordmann AT4 D. Please refer to the malfunction list in the operating manual of the Nordmann AT4 D.



If there is no fault, the warning triangle in the top left of the display is grey. If the warning triangle is grey, the fault history appears after pressing the warning triangle.



Note: The Nordmann AT4 D SPA display does not save the fault history. However, all data is cyclically synchronized with the data of control of the Nordmann AT4 D.

7.2 Malfunctions of the Nordmann AT4 D SPA Display

Malfunction	Cause	Remedy
Message "Time Out" appears in the Nordmann AT4 D SPA Display.	No data connection	Check connections "D-" and "D+" on the SPA display and on the Nordmann AT4 D control board.
Keystroke is not detected in the correct location.	Display is not calibrated correctly.	If possible, access the calibration function (Path: Menu> Settings > Calibration) and start the calibration function by pressing "Start". Otherwise, the display must be replaced.
Display remains dark.	Nordmann AT4 D steam generator is not switched on.	Switch on the Nordmann AT4 D.
	No supply voltage present: <ul style="list-style-type: none"> – Supply cable not or not correctly connected. – Fuse "F3" on the AT4 D power board defective. – Control board and/or power board of the Nordmann AT4 D defective. 	<ul style="list-style-type: none"> – Connect cable correctly. – Replace fuse "F3". – Check/replace control board and/or power board of the Nordmann AT4 D.
No reaction when tapping on a key on the display.	SPA display defective.	Replace SPA display.
	Control board of the Nordmann AT4 D SPA display defective.	Replace control board.

8 Taking out of service/Disposal

8.1 Taking out of service

If the Nordmann AT4 D SPA Display must be replaced or if the Nordmann AT4 D SPA Display is not needed any more, proceed as follows:

1. Switch off the Nordmann AT4 D steam generator, separate it from the mains and secure it against inadvertent power-up.
2. Have the Nordmann AT4 D SPA Display (and any other system components, if necessary) unmounted by a qualified service technician.

8.2 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 Nordmann representative.

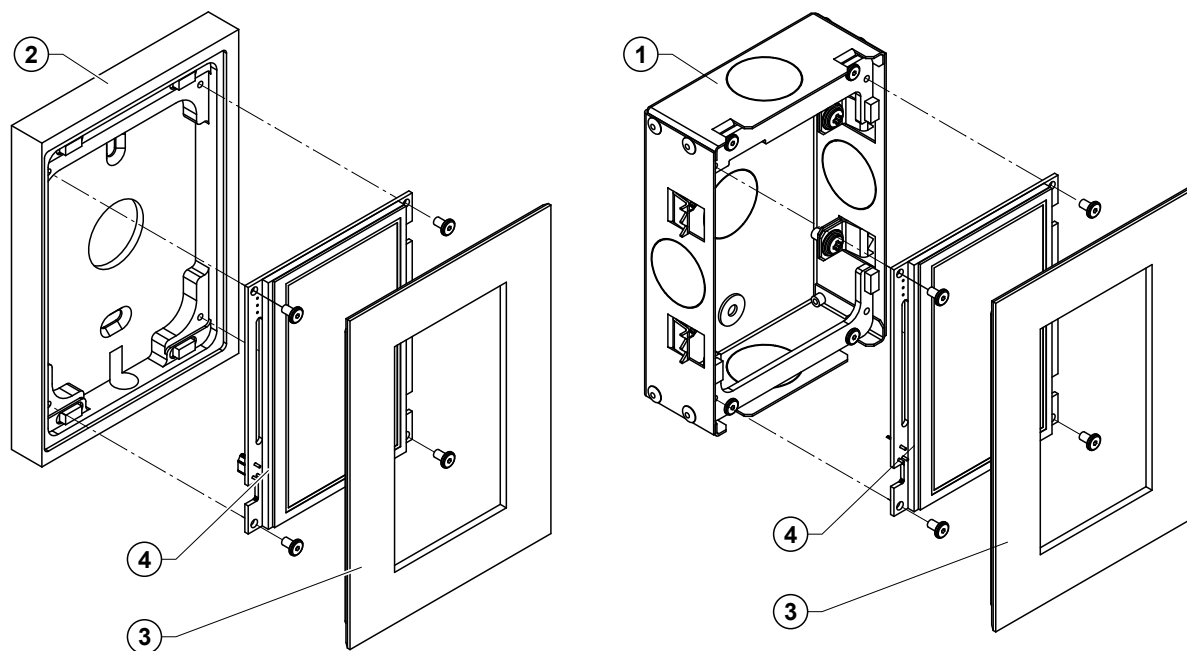
Thank you for your contribution to environmental protection.

9 *Technical data*

	Nordmann AT4 D SPA Display	
	flush-mounted version	surface-mounted version
Touch Panel	Resistive Touch Panel with 95 x 54 mm active screen	
Display	4,3" LCD, 272 x 480 Pixel	
Interface	RS485	
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 micro controller 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](#)

10 Spare parts



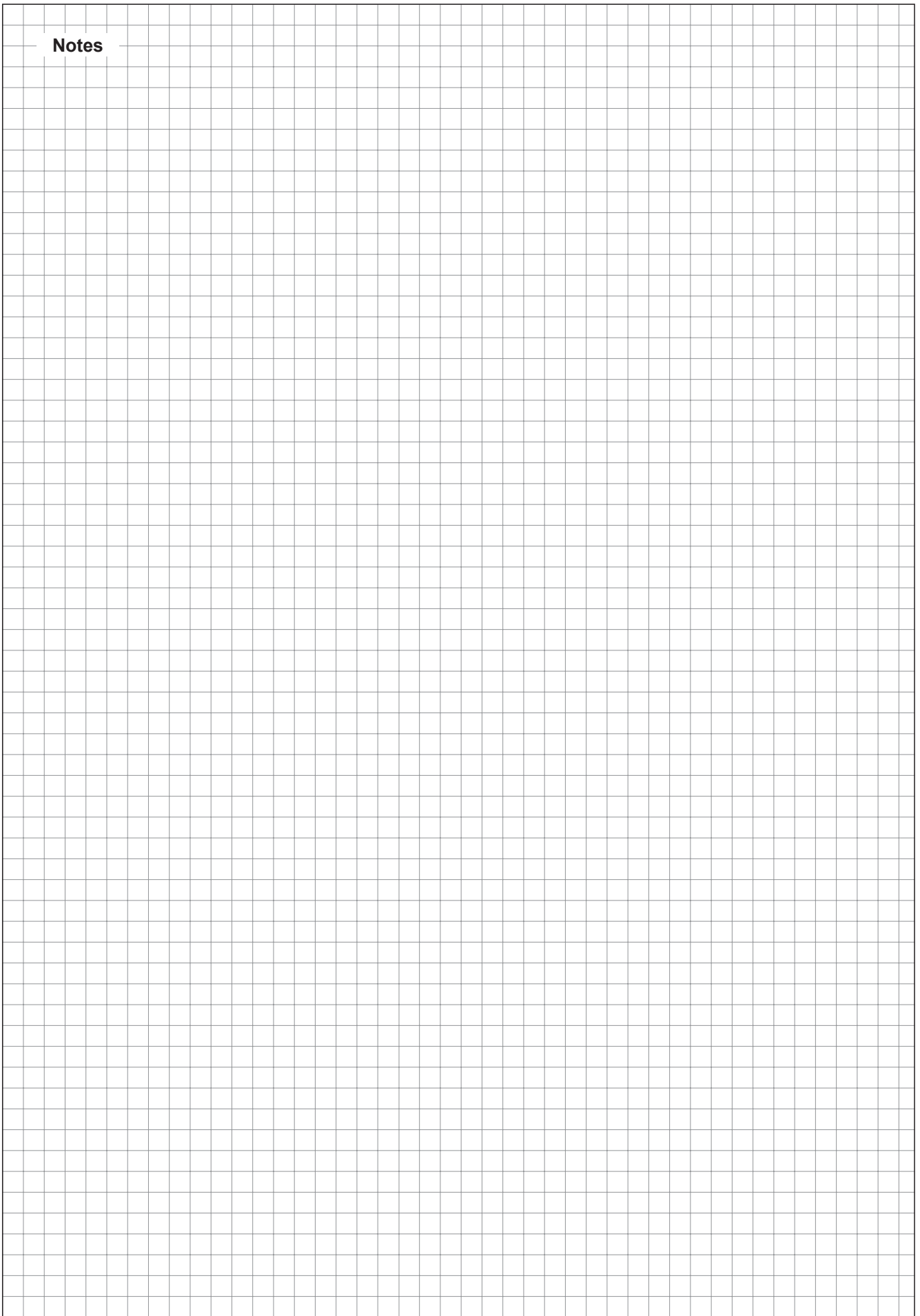
Pos.	Description	Spare part No.
1	Flush-mounted housing (incl. mounting material)	2590178
2	Surface-mounted housing (incl. mounting material)	2590179
3	Decorative cover steel	2590183
	Decorative cover glass white	2590185
	Decorative cover glass black	2590186
4	PCB AT4D SPA Display	2590191

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

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

Notes

Notes





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