NEA SMART ROOM CONTROL UNIT D

Installation and operating manual

CONTENT

More information on the Nea Smart control system and all documentation available for download can be found at

www.rehau.com/neasmart

1 SAFETY

1.1   Used symbols

There is a risk to life and limb.

1.2   Intended use

The Nea Smart room control unit D (in the following abbreviated as
room control unit D) is a room control unit for the base station Nea
Smart 24 V.

The device is intended
- for the control of the base station Nea Smart 24 V.
- the registration of the room temperature and the setting of the
  desired target temperature in the allocated heating zone.
Every other use is outside its intended use for which the manufacturer
cannot be held liable.

1.3   General safety warnings

Danger to life in case of swallowing
Small children might swallow the knob.
- Install room control unit outside the reach of small children.

These instructions belong to the device.

- Retain this manual and provide it to future owners.

2   VERSIONS

2.1   Technical data

	Nea Smart room control unit D
Floor temperature monitoring	Nea Smart remote sensor (optional)
Power supply	24 ... 35 V [via rmBUS]
BUS connection [rmBUS]	polarity reversal protected
Protection type/protection class	IP20 / III
Ambient temperature	0 to 50 °C
Ambient humidity	5 to 80%, not condensing
Dimensions (HxWxD)	86 x 86 x 26,5 mm
Target temp. setting range	5 bis 30°C
Target temp. resolution	0.2 K
Actual temp. measuring range	0 bis 40°C (int. sensor)
Measuring accuracy of internal NTC	±0.3 K

*Tab. 2-1   Technical data Nea Smart room control unit D*

2.2   Compliance

This product is labelled with the CE Marking and thus is in compliance with the requirements from the guidelines:
- 2004/108/EG with amendments "Council Directive on the approximation of the laws of the Member States relating to Electromagnetic Compatibility"
- 2006/95/EG with amendments "Council for Coordination of the Regulations of EU Member Countries regarding the electrical equipment for use within certain voltage limits"

Increased protection requirements may exist for the overall installation, the compliance of which is the responsibility of the installer.
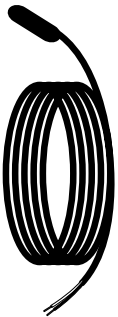
3 INSTALLATION

3.1 Box contents
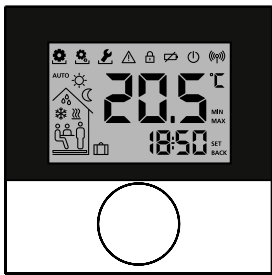
1 x

Accessories:

Nea Smart remote sensor

Fig. 3-1   Box contents

3.2 Installation

Nea Smart remote sensor
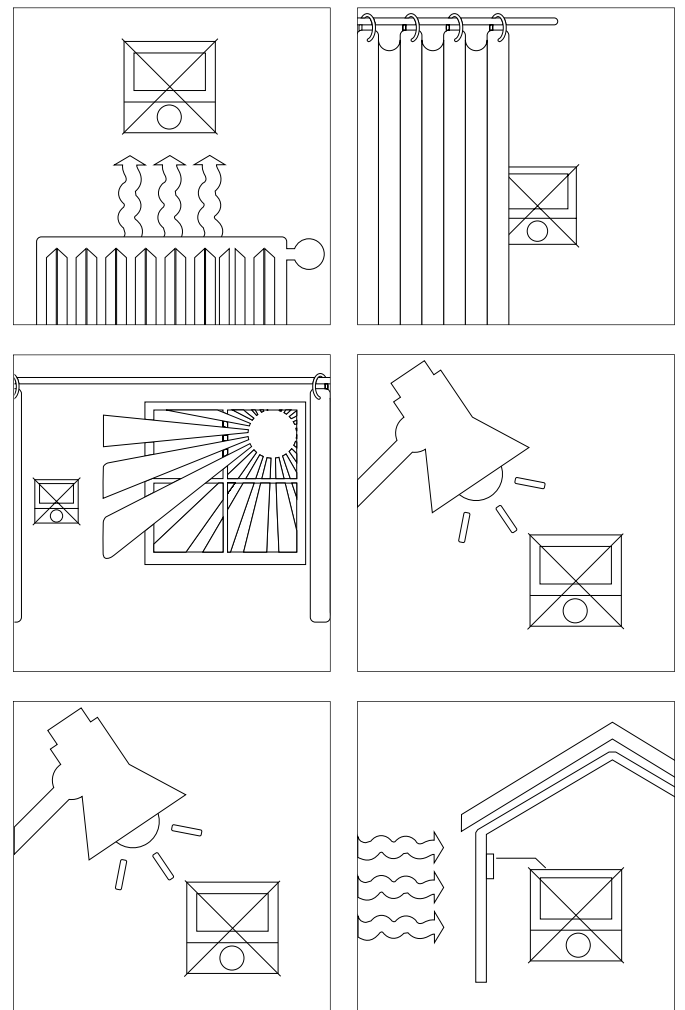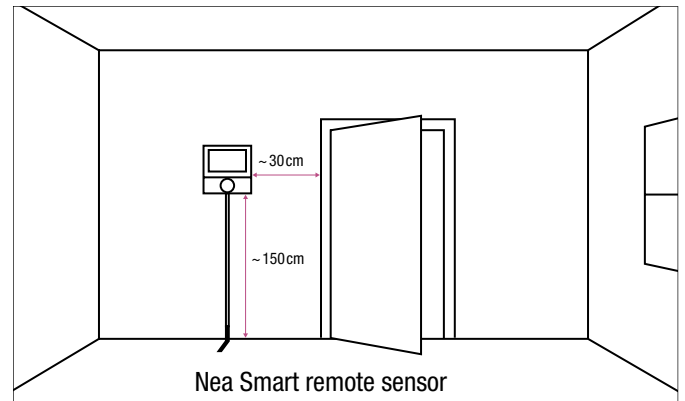
~30 cm

~150 cm

Fig. 3-2   Notes on the mounting location of the room control unit
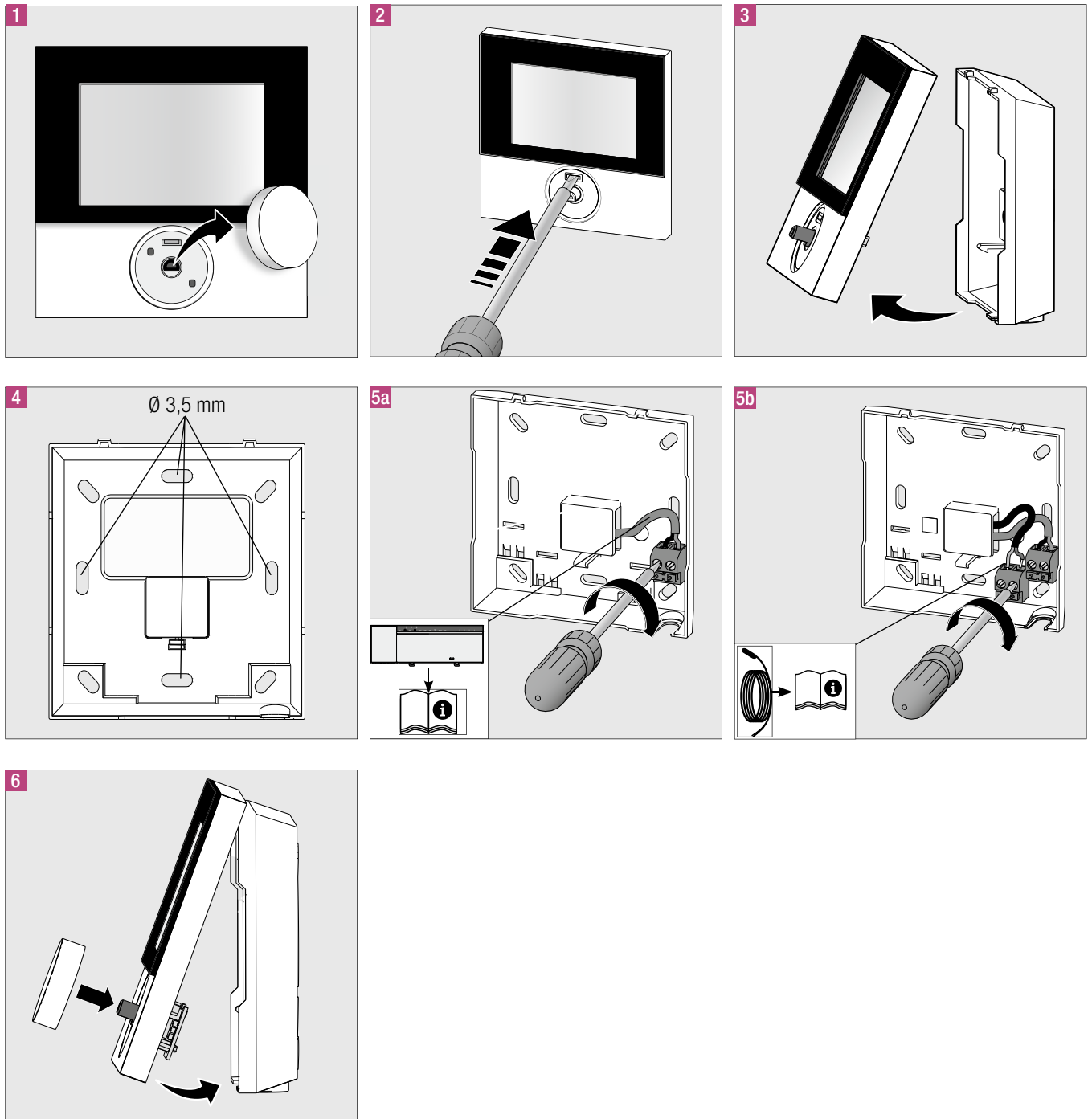
Fig. 3-3   Installation and connection of the room control unit
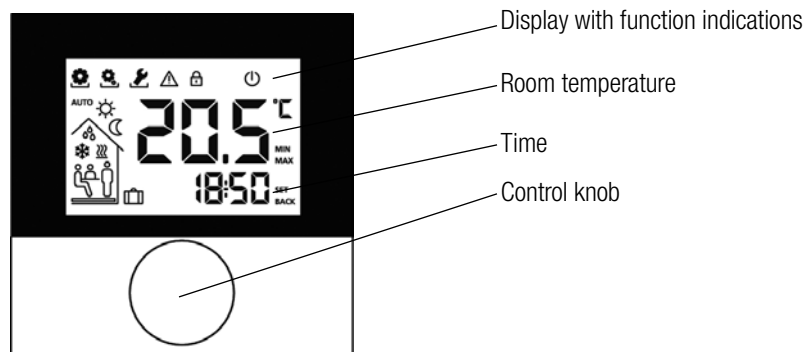
4   OPERATION

4.1   Overview and displays

Display with function indications

Room temperature

Time

Control knob

Fig. 4-1   Front view of the Nea Smart room control unit D

Symbol	Meaning
⚙	Menu "Functions" active
⚙	Menu "Parameters" active
🔧	Menu "Service" active
⚠	Important note/malfunction
🔒	Child safety lock active
⏻	Stand-by mode active
AUTO	Automatic mode active
☼	Day mode active

Symbol	Meaning
☾	Night mode active
ᗺ	Condensation detected, cooling deactivated
❄	Cooling mode active
⚒	Flashing: Smart Start/Stop mode active Permanent on: Heating mode active
⚨	Presence active (only in Automatic mode)
⚩	Party function active
🧳	Holiday function Flashing: planned Permanent on: active
—	Minimum floor temperature fallen short of

Tab. 4-1   Meaning of display symbols

4.2 Operation

The room control unit can be operated via the control knob:

Pressing the control knob activates menus and functions.

Rotation permits the target temperature to be set as well as navigation between menus and their functions.

A basic level and three menus are available.

Basic level:

Rotating adjusts the desired target temperature.

Menu selection with:

Functions: includes all important lifestyle functions.

Parameters: includes several parameters as e. g. heating and setback temperatures, date and many more.

Service: includes settings for the specialist (secured by PIN, see manual of the base station)

4.3 Commissioning (incl. pairing)

1. Activate the pairing function at the base station for the desired heating zone (see manual base station Nea Smart 24 V).
2. Press the control knob for approx. 3 s. in order to activate pairing function (the display shows "Set").
   - The base station and the room control unit are connected to each other.
   - If the base station has been programmed before, the date and time of the room control unit are set automatically.

For first commissioning of the base station:
Set year, date and time by rotating, confirm entries by pressing.

4.4 Connection test

Press the control knob for approx. 3 s. in order to activate pairing function (the display shows "Set").
At the base station, the heating zone connected to this room control unit is changed for 1 minute, in other words switched on or off depending on the previous operating status.

4.5 Comfort programs - Smart Start/Stop mode

Comfort programs include pre-defined heating times to be used for working days (1-5) or for the weekend (6-7). Outside the heating times the installation switches to night mode. You can select the comfort programs in the Parameter menu. The Smart Start/Stop Mode of the system calculates the required delay times to reach the desired temperature at the starting and finishing time of the heating program.

Program	Comfort time 1	Comfort time 2
P0	05:30 – 21:00	–
P1	04:30 – 08:30	17:30 – 21:30
P2	06:30 – 10:00	18:00 – 22:00
P3	07:30 – 17:30	–

Tab. 4-2   Predefined time programs

You can create individual comfort programs with the on-line software available under www.ezr-home.de and transfer these to the basis station with a MicroSD card.

4.6 Lifestyle functions overview

In this menu you can activate or deactivate the lifestyle functions.
1. Press the control knob.
2. Activate the menu "Lifestyle functions" by pressing the control knob again.
3. Select the desired lifestyle function.

The following lifestyle functions are available to you; you can find further information in the table "Functions" on the next page.

It may take up to 10 minutes before changes of global lifestyle functions are displayed on all room control units.
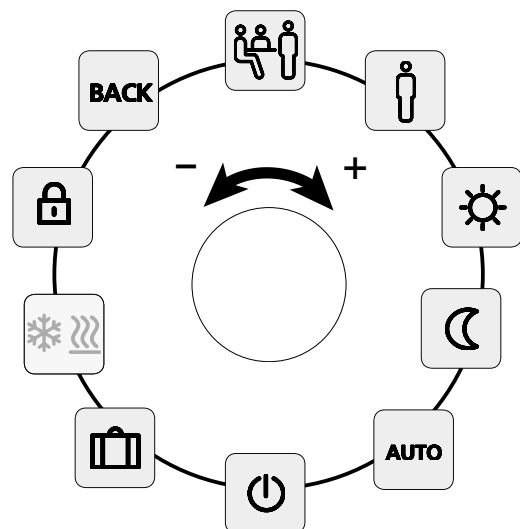

Fig. 4-2   Selection menu of lifestyle-functions

4.7 Lifestyle functions

Lifestyle function	Symbol	Steps
Party Deactivates the temperature setback for XX hours	👥	- Activate by pressing. - Set the duration in hours (hh) - Confirm your entry by pressing.
Presence Weekend heating times are also used for working days	**AUTO** 👤	- The automatic mode is only available on workdays. - Activate by pressing. - Finish by selecting another Lifestyle function.
Day (default setting) Permanent regulation according to the set target temperature	☼	- Activate by pressing.
Night Permanent setback according to pro-grammed night temperature.	☾	- Activate by pressing.
Automatic Automatic temperature regulation according to the correspondingly activated comfort programs	**AUTO**	- Activate by pressing.
Deactivates the room control unit, the temperature is still displayed, frost protection is activated	⏻	- Press in order to switch off the room control unit - Press again to switch the room control unit on again
Selection of heating or cooling mode The operating mode can be set on the room control unit D when the CO pilot function is activated on the base.	❄ ♨	(The CO pilot of the base is activated.) - Activate by pressing. - Select the mode. - Confirm your entry by pressing.
Holiday mode The temperature is automatically lowered to the set holiday temperature	🧳	- Activate by pressing. - Select 1. the start date and 2. the end date (dd:mm) confirm by pressing. - Deactivate the holiday mode by calling the function again.
Child safety lock Locks the room operating unit	🔒	- Activate by pressing. - Deactivate by pressing (>3 s).
BACK The room control unit returns to the basic level.	**BACK**	- Exit the menu by pressing

Tab. 4-3   Lifestyle functions

4.8 Overview parameters

This menu is needed only for basic setup.
- Press the control knob.
- Select the menu "Parameters" and activate it by pressing again.

The following parameters are available to you; you can find further information in the table "Parameters" on the next page.

ℹ️ It may take up to 10 minutes before changes of global system parameters are displayed on all room control units.
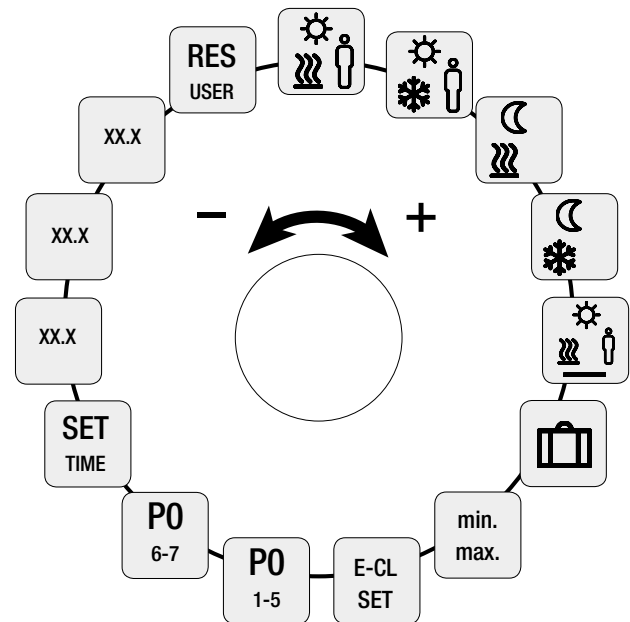
Fig. 4-3   Selection of parameters

4.9 Parameters

Parameters	Symbol	Steps
Temperature for presence in heating mode	☀ ♨ 👤	- Activate and set the desired temperature. - Confirm by pressing.
Temperature for presence in cooling mode	☀ ❄ 👤	- Activate and set the desired temperature. - Confirm by pressing.
Setback temperature for heating mode	☾ ♨	- Activate and set the desired temperature. - Confirm by pressing.
Setback temperature for cooling mode	☾ ❄	- Activate and set the desired temperature. - Confirm by pressing.
Floor heating minimum temperature (only in connection with Nea remote sensor)	☀ ♨ 👤	- Activate and select the desired comfort temperature (1.0...6.0 ≈ 18 °C...28 °C) - Confirm by pressing.
Setback temperature for holidays	🧳	- Activate and set the desired temperature. - Confirm by pressing.
Setting the temperature limit	min max	- Activate - Select the min./max. adjustable temperature, confirm each by pressing
Time control via external timer (instead of integrated programs P0 to P3)	E-CL SET	- Activate and select the status On or Off. - Confirm by pressing.
Select Comfort program for working days	P0 1-5	- Activate and confirm entry. - Select and activate lifestyle program (P0-P3).
Select Comfort program for the weekend	P0 6-7	- Activate and confirm entry. - Select and activate lifestyle program (P0-P3).
Set time/date	SET TIME	- Activate, set year (yyyy), month (mm) and day (dd) as well as time (hh:mm), confirm each by pressing.
Info software version of room control unit	So1 XX-XX	- Display of the room control unit software version
Info base station software version	So2 XX-XX	- Display of the base station software version
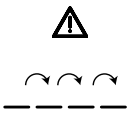
Parameters	Symbol	Steps
Info software version Ethernet Controller	So3 XX-XX	- Display of the software version of the Ethernet Controller
User level reset Reset of all user settings to factory settings!	RES USER	- Activate and select Yes - Press to reset all functions.

Tab. 4-4   Parameters

5 TROUBLESHOOTING, CLEANING AND DECOMMISSIONING

5.1 Troubleshooting

Error messages are displayed by, the corresponding symbols in the display flashing.

Display	Meaning	Handling
⚠ ⌒⌒⌒ – – – –	Connection to base station faulty	- Room control unit paired. - Room control unit tries to establish a connection to the base.
20.5℃ – – – –	Room control unit not paired.	- Carry out new pairing of the room control unit. - Contact your electric installer.
⚠	Base station switched off	- Re-establish the power supply to the base station. - Contact your electric installer in case of a defect.
🔧⚠ Err 0001	Internal temperature sensor defective.	- Replacement necessary, contact your electric installer.
🔧⚠ Err 0002	External temperature sensor defective.	- Replacement necessary, contact your electric installer.
🔧⚠ Err 0005	Base station not found in spite of successful pairing	- Check the voltage supply of the base station. - Carry out new pairing of the room control unit. - Contact your electric installer.
🔧⚠ Err 0006	Communication between base stations faulty	- Check the voltage supply of the base station. - Contact your electric installer.

Tab. 5-1 Errors shown on the display

5.2 Cleaning

Only use a dry and solvent-free, soft cloth for cleaning.

5.3 Disposal

The room control unit must not be disposed with domestic waste. The operator has the duty to dispose of the units through appropriate collection points. The separate collection and orderly disposal of all materials will help to conserve natural resources and ensure a recycling in a manner that protects human health and the environment. If you need information about collection points for your devices, please contact your local municipality or your local waste disposal services.

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