

Fit for the
future –
Mobile online
access



NEA SMART FAMILY CONTROLS

Energy saving with smart temperature control

NEA SMART

Room control with smart temperature control



Whether new build or renovation, the innovative NEA Smart room controller allows mobile access via the Internet. Available as a wired or wireless-option for maximum flexibility.

Control via Smartphone away from home

Full control and access at any time from any location.

Up to 20 % energy saving

No wasted heat due to intelligent and accurate control.

No dirt, no mess

The wireless option eliminates the need for building works for wiring.



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INTERNET OF THINGS

The internet is already a constant companion in everyday life. By 2020, approximately 25 billion devices with internet access will be connected. Over 50% of these devices will be connected from the consumer sector. The NEA Smart control system is ready for this growing future.

YOU HAVE THE CHOICE

Versatile thanks to wired and wireless options

Whether new build, renovation, residential or light commercial - with NEA Smart you make the right decision.



**Full
Flexibility**

The NEA Smart room controller is available in both wired and wireless options, with an easy to read LCD display (60 x 40 mm).



**Clean
Installation**

The NEA Smart R (wireless) offers time saving installation. With no wires to be installed it allows a quick and efficient installation, with no building works or repainting. No dirt, no fuss!



Simple Wiring

The NEA Smart wired version is also easy to install. Wiring of the NEA Smart base station to the NEA Smart room control unit only requires 2 wires, meaning existing controllers can be easily replaced.



Comfortable Operation

In addition to the time saving installation, the simple commissioning and programming of the NEA Smart room control units, remote maintenance and diagnostic operations gives complete comfort for all users.

OFFER MORE VALUE TO YOUR CUSTOMERS

Smart Temperature Control – the smart way to control



Up to
20 % energy
saving



**Easy to set up,
global control**

The use of Smart Temperature Control with the NEA Smart room control unit is easily integrated into an existing home network. The intuitive display provides access to all settings and functions of the system. Access via PC, laptop or smartphone devices at anytime, anywhere means room programming, operation and monitoring will be child's play.



The intuitive control knob is easy to use, so your customers can get the right temperature in the blink of an eye.



INTUITIVE OPERATION



Modern and Timeless Design

Aesthetically, NEA Smart is a modern and timeless design, made of scratch-resistant plastic to ensure longevity. NEA Smart is ideal for any room concept, thanks to its unobtrusive flat design.



Up to 20% energy savings per year*

The Smart Temperature Control of the NEA Smart effectively prevents wasting heat and saves up to 20% in energy costs.

*based on a typical 160m² UK family home using national EPC data

THE NEA SMART FAMILY

All in one hand

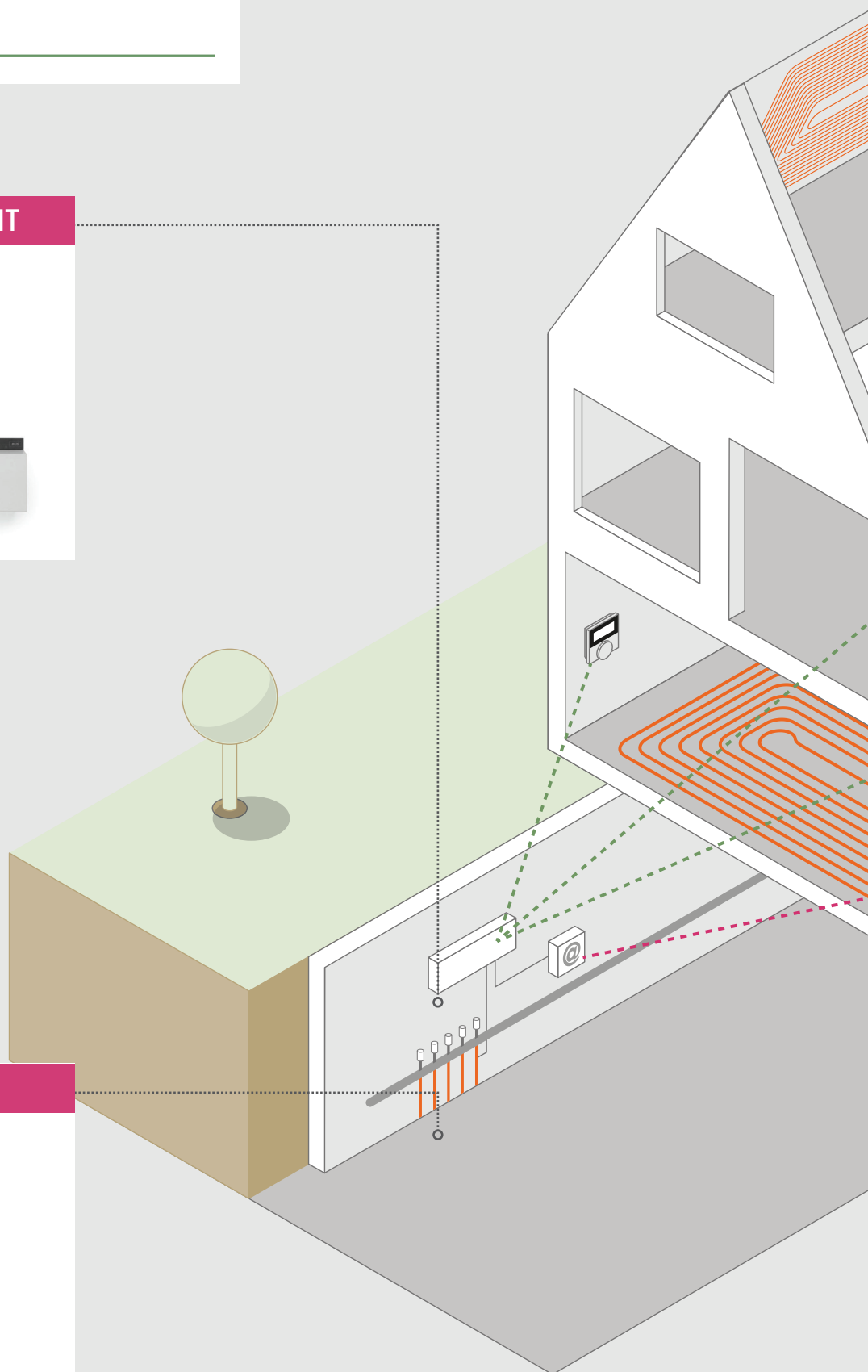
NEA SMART BASE UNIT

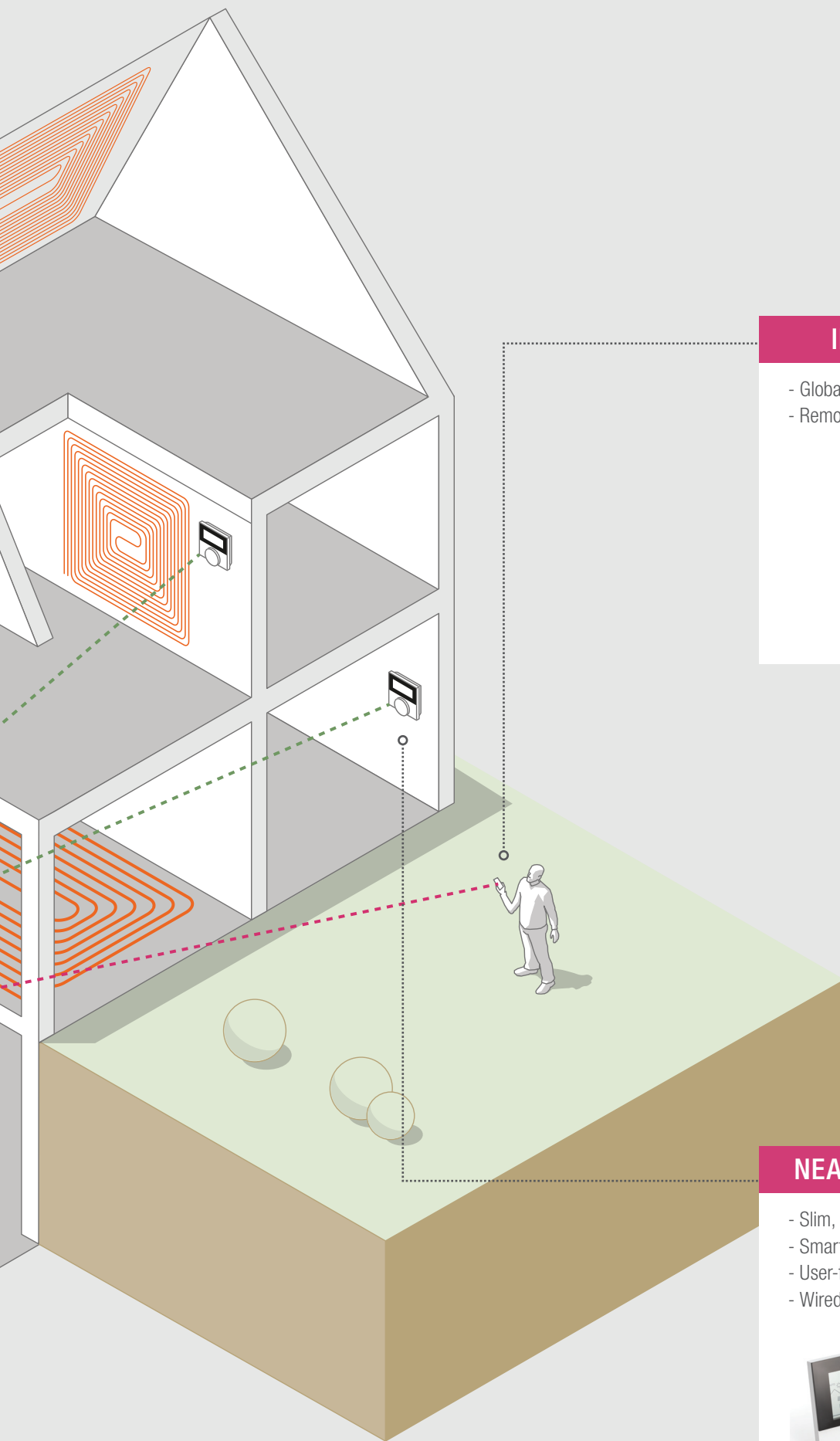
- 8 zones with Ethernet
- Wired or wireless option
- For heating
- Control of up to 56 rooms with bus connection



SMART ACTUATORS

- 24 V and 230 V
- Only 1 Watt power consumption





INTERNET CONTROL

- Global control
- Remote maintenance and diagnostics



NEA SMART DISPLAY UNIT

- Slim, high quality design
- Smart Temperature Control
- User-friendly, intuitive operation
- Wired or wireless option



YOUR REHAU SERVICE

Together to success



Design Support

We are happy to assist you with your planning and design for your project with technical and design advice.

From your first heating design and providing a bill of materials to supporting you using the software.

Do you have any questions about your installation? Our expertly trained staff are there to help you on-site if needed.

Always there for you: Contact your local Sales Office for more information.

REHAU ACADEMY

Product and technical training:

Take advantage of our range of training for our products providing technical support in the office or onsite.

NEA Smart Champions:

Trained REHAU NEA Smart champions are on hand to help you through your first installation from on-site support to programming and diagnostics enquires. We are here to help you every step of the way.



Software

Whether a single family home, office or industrial building, REHAU calculation and planning software can be used. We offer a professional tool for the planning, design and specification for heating and plumbing trades.

Sales Support

We can provide professional sales materials to help you focus on other tasks, as well as saving you time and money. Promotional materials available include posters, email banners, web banners, product samples as well as web content. Some of the promotional material can also be dual branded with your company logo and details.

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More information on the NEA Smart control system and all documentation is available for download at www.rehau.uk/

neafamily

2.1 INFORMATION AND SAFETY INSTRUCTIONS

2.1.1 Notes on this Technical Information

Validity

This Technical Information is valid for the United Kingdom.

Other applicable technical information

NEA Smart controller installation and operating manual.

Navigation

At the beginning of this Technical Information, you will find a detailed table of contents with the hierarchical headings and the corresponding page numbers..

Pictograms and logos



Electrical voltage! Danger to life! Warnings are indicated with the adjacent symbol.



Note

Most current Technical Information

For your own safety and in order to ensure correct use of our products, please regularly check whether an updated version of this Technical Information is available.

The date of issue of your Technical Information is always printed on the back cover.

The latest version of the Technical Information is available from your REHAU sales office, specialist wholesaler and it can be downloaded via the Internet at www.rehau.uk/neafamily.

Safety instructions and operating manuals

- For your own safety and that of others, please read this Technical Information and the installation and operating manuals carefully and completely before commencing installation.
- Keep the operating manuals and ensure that they are always available.
- If you do not understand the safety instructions or the individual installation regulations or if there is any uncertainty with regard to their content, please contact your local REHAU sales office.
- Ignoring the safety instructions may cause injury or property damage.



This Technical Information presents an overview of the features, the functions and the basic requirements for correct operation of the system. In addition to this information, the installation and operating manuals for the products and the additional documents are available from www.rehau.uk/neafamily and must be followed in the planning and installation phase.

2.1 Intended use

The NEA Smart control system must be configured, installed and operated only as described in this Technical Information and in the other installation manuals for the system. Any other use is deemed to be inappropriate and is therefore impermissible.

Observe the applicable national and international routing, installation, accident prevention and safety regulations and the instructions in this Technical Information when installing piping systems and electrical components and equipment.

Our applications engineering department must be consulted for areas of application which deviate from those described in this Technical Information (special applications).

Contact your REHAU sales office.



Requirements for personnel

- Only authorised and trained persons are permitted to install our systems.
- Work on electrical equipment or wiring may only be performed by authorised and qualified electricians.

General precautionary measures

- Keep your workplace clean and free of objects which could get in your way.
- Ensure that your workplace is adequately lit.
- Keep children, pets and unauthorised persons away from tools and the installation locations. This is particularly important when carrying out renovation work in occupied areas.

2 NEA SMART CONTROL SYSTEM

2.1 System overview

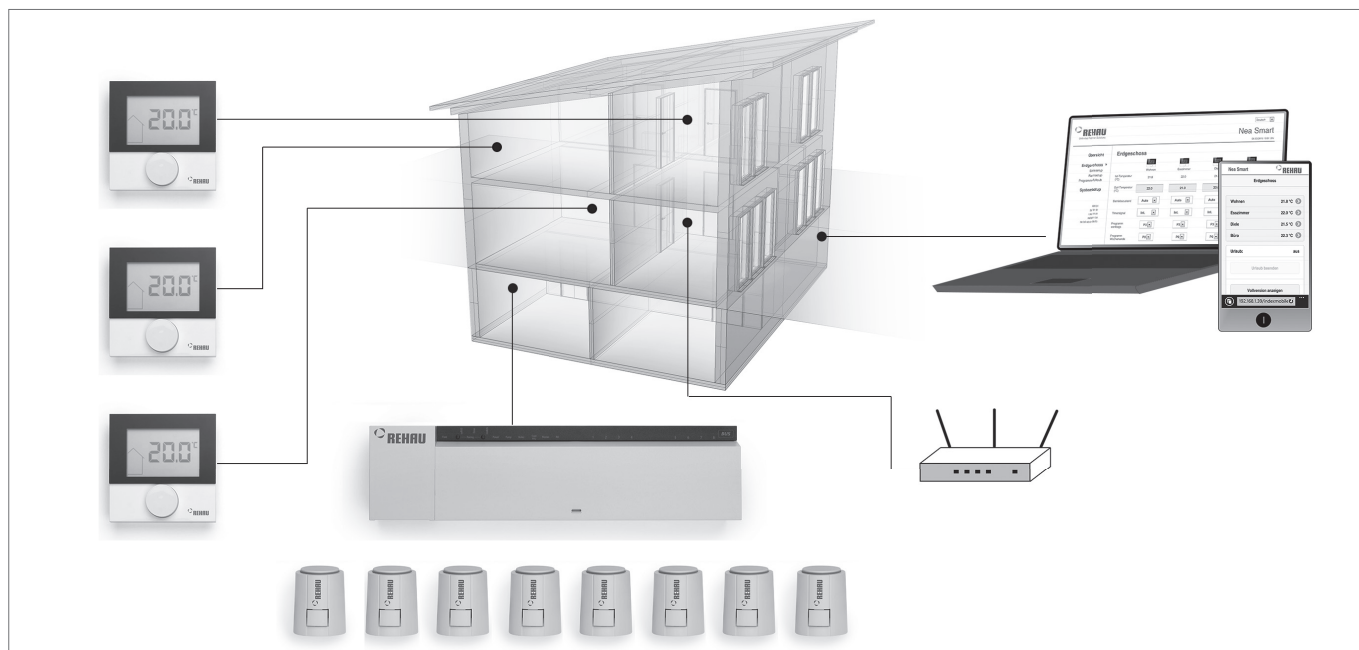


Fig. 2-1 NEA Smart control system

The NEA Smart room temperature control system offers modern technology, high energy efficiency and advanced design. It can be conveniently operated from any location by smartphone, tablet or laptop. The wired and wireless versions of the system can be installed quickly and easily.

Features

- Access by smartphone, tablet and computer
- Wireless and wired system available
- Both systems can easily be upgraded
- Suitable for heating and cooling
- Energy efficiency with high degree of comfort
- Simple commissioning and operation
- High-quality room control unit with LCD display
- Can be expanded to 56 rooms
- Remote maintenance option by remote access

Area of application



The components of the NEA Smart system are designed for the regulation of room temperature by surface heating or surface heating and cooling systems in enclosed buildings.

Unified design

The NEA Smart R (wireless system) and NEA Smart (wired system) systems have identical control functions, operating concept and basic procedures for commissioning.

This unification offers significant advantages for planning and commissioning the system.

System features

The NEA Smart control system is available in 2 models:

NEA Smart R: wireless system (230 V)

NEA Smart: wired system (24 V)

The two available models – wireless and wired – are equally suitable for new installations and for retrofitting. Existing wiring for conventional room thermostats can also be used for the wired model (see planning information).

The NEA Smart control system allows simple installation and convenient operation. The standard Ethernet port in the base units enables operation and monitoring by smartphone, tablet, laptop or computer both at home or while travelling.

The system can be expanded to a total of 56 rooms with interconnected base units.

2.2 Components and system structure

2.2.1 Components of the wireless system

- NEA Smart R room control unit D (with display)
- NEA Smart R room control unit (with setpoint adjuster)
- NEA Smart R base station 230 V
- NEA Smart remote sensor
- UNI 230 V actuator
- NEA Smart R antenna
- NEA Smart R repeater

2.2.2 NEA Smart R – wireless system structure

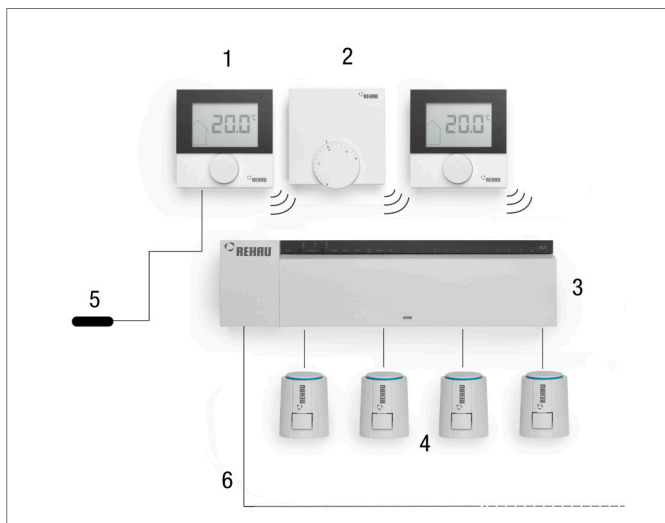


Fig. 2-2 NEA Smart R control system structure

- 1 NEA Smart R room control unit D
- 2 NEA Smart R room control unit
- 3 NEA Smart R base 230 V
- 4 UNI 230 V actuator
- 5 NEA Smart remote sensor
- 6 Ethernet port

The NEA Smart R room control unit is easily allocated to the channels of the NEA Smart R base station 230 V. The NEA Smart R room control unit D can optionally be fitted with the remote sensor to monitor the floor temperature. The thermal actuators are connected to the NEA Smart R base station. The standard Ethernet port can be connected to the computer or laptop directly or via a router.

2.2.3 Components of the wired system

- NEA Smart room control unit D (with display)
- NEA Smart room control unit (with setpoint adjuster)
- NEA Smart base station (24V)
- NEA Smart remote sensor
- UNI 24 V actuator

2.2.4 NEA Smart – wired system structure

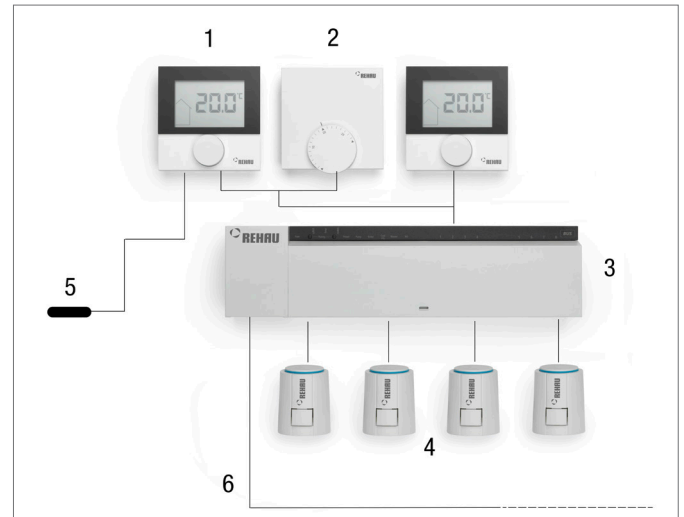


Fig. 2-3 NEA Smart control system structure

- 1 NEA Smart room control unit D
- 2 NEA Smart room control unit
- 3 NEA Smart base 24 V
- 4 UNI 24 V actuator
- 5 NEA Smart remote sensor
- 6 Ethernet port

The NEA Smart room control unit is easily linked to the communications port of the NEA Smart base station 24 V with a 2-wire cable. The wiring layout can be selected as desired. Existing wiring can generally be used (see planning information). All other features and system channels are identical to the NEA Smart R system.

2.3 Description of components

 The room control unit described below is available for the wireless system (NEA Smart **R**) and the wired system (NEA Smart).

2.3.1 NEA Smart (R) room control unit D



Fig. 2-4 NEA Smart R room control unit D / NEA Smart room control unit D

- Flat housing can be mounted with a pattress box or directly onto the wall
- Large display (60 x 40 mm), white backlit with NEA Smart room control unit D
- Clear status display using easy to understand icons
- Operation with control knob
- Setpoint adjustment in 0.2 degree steps
- Remote sensor for monitoring floor temperature, room temperature controller **or** dew point sensor can be connected
- Adjustment range can be customised, setback is adjustable
- Selection of different operating modes: Automatic, Standard, Reduced and optionally Off (frost protection)
- Tamper proof option

2.3.2 NEA Smart (R) room control unit



Fig. 2-5 NEA Smart R room control unit / NEA Smart room control unit

- Flat housing can be mounted with a pattress box or directly onto the wall
- Operation with setpoint adjuster
- Setback adjustable

2.3.3 NEA Smart (R) room control unit D/NEA Smart (R) room control unit overview of functions

	NEA Smart (R) room control unit D	NEA Smart (R) room control unit
Heating	✓	✓
Cooling	✓	✓
Setpoint specified by time switch programs of the NEA Smart (R) base	✓	*)
Display with continuous display of room temperature, system time and operating status	✓	—
Operation with control knob	✓	—
Setpoint adjustment/operation can be locked	✓	—
Remote sensor can be connected	✓	—
Integrated frost and valve protection function	✓	✓
Party and holiday mode can be selected on device	✓	—

Tab. 2-1 Function overview

✓ Function included

— Function not included

*) Energy-saving mode of the controller without display can also be activated through the timer program. The setpoint for energy-saving mode is dropped by an adjustable amount from the setpoint on the controller.

2.3.4 Technical data of the NEA Smart room control unit

	NEA Smart R room control unit	NEA Smart room control unit
Colour	Housing signal white (RAL 9003); Panel on display (room control unit D) black, back of housing grey-black (RAL 7021)	
Material	ABS (housing, socket, rotary button) PMMA (screen on room control unit D)	
Voltage supply	2 LR03 AAA alkaline batteries, battery life > 2 years	24 V over bus line, polarity-reversal protected
Protection type/ protection class	IP20 / III	
Communication	Radio technology 868 MHz, range approx. 25 m in buildings	Bus technology, polarity-reversal protected 2-wire bus, maximum cable length 500 m
width x height x depth	room control unit D: 86 x 86 x 26.5 mm room control unit: 86 x 86 x 25.5 mm	
Size of display (room control unit D)	Visible area of display: H x W: 40 x 60 mm	
Setting range	room control unit D: 5 to 30 °C room control unit: 10 to 28 °C	
Ambient temperature	0 to 50 °C	
Ambient humidity	5 to 80%, non-condensing	
Area of application	in enclosed rooms	

Tab. 2-1 Technical data of the NEA Smart room control unit

2.3.5 NEA Smart remote sensor



Fig. 2-6 NEA Smart remote sensor

The NEA Smart remote sensor can be connected to the NEA Smart room control units with display, if required – NEA Smart room control unit D and NEA Smart R room control unit D.

The sensor can be configured as a floor temperature sensor or room temperature sensor.

Configured as a floor temperature sensor it can be used to maintain a minimum floor temperature in heating mode.

Configured as a room temperature sensor, it replaces the sensor integrated in the room temperature controller, so the room temperature controller can be installed in a different room.

Technical data of the NEA Smart remote sensor

Cable length	3 m
Sensor diameter	5 mm
Operating temperature range	0 to 50 °C
Type of protection	IP 67

Tab. 2-1 Technical data of the NEA Smart remote sensor

 The input of the NEA Smart (R) room control unit D can also be used to attach the potential-free contact of a dew point sensor.

Connection of the contact triggers a dew point alarm and terminates the cooling mode of the zone controller by the room control unit.

2.3.6 UNI 230 V/24 V actuator



Fig. 2-7 UNI actuator

REHAU UNI actuators in the 230 V version are used for the NEA Smart R (radio wireless version) system, REHAU UNI actuators in the 24 V version are used for the NEA Smart (wired version) system.

Features:

- Thermal actuator, normally closed
- Energy-efficient, only 1 W power consumption
- Clear status display
- Easy installation
- Overhead installation possible
- "First-open function" for operation of area heating in the construction phase (before installation of controllers)
- Can be adjusted for different makes of valves and manifolds
- Protection type IP 54
- Available in 24 V or 230 V models

2.3.7 NEA Smart R base station 230 V / NEA Smart base station 24 V



Fig. 2-8 NEA Smart R base station 230 V

- For connecting a maximum of 8 NEA Smart R or NEA Smart room control units
- Actuation of 12 UNI 24 V thermal actuators (NEA Smart base station) or 12 UNI 230 V thermal controllers (NEA Smart R base station)
- Simple and intuitive installation and operation
- Standard Ethernet interface for integration of the system into the home network
- Smart Start function continuously optimises the start time for heating after the setback phase
- System can be extended with up to 6 additional base stations using wireless (wireless version only) or system BUS technology
- Connections for pump, high temperature limiter and dew point sensor
- Connections without screws using clamp connections
- For installation racks in distribution box
- Ease of installation using DIN Rail supplied



Fig. 2-9 NEA Smart base station 24 V

Function

The NEA Smart R base station 230 V (wireless) and the NEA Smart base station 24 V (wired) are the central and intelligent units to which up to 8 room control units can be allocated. The REHAU UNI actuators for the valves on the heating circuit manifold are connected to the base stations.

The base stations provide terminals for a heating circuit pump, boiler or chiller, high temperature limiter and dew point sensor. The CO input sets the "heating" or "cooling" operating modes.

The base stations can be configured from the room temperature controller display and a laptop which is directly connected to the Ethernet port or by connecting the base station to the router via LAN or WLAN in the home network.

System expansion with slave units

Up to 7 base stations can be networked over system BUS or wirelessly with the wireless version.

Global information is exchanged in the system:

- Heating or cooling mode
- Demand heating circuit pump
- Demand heating unit



Every base station has a separate web server: The base station can be selected with access over the Internet (remote access) via the password-secured REHAU portal.

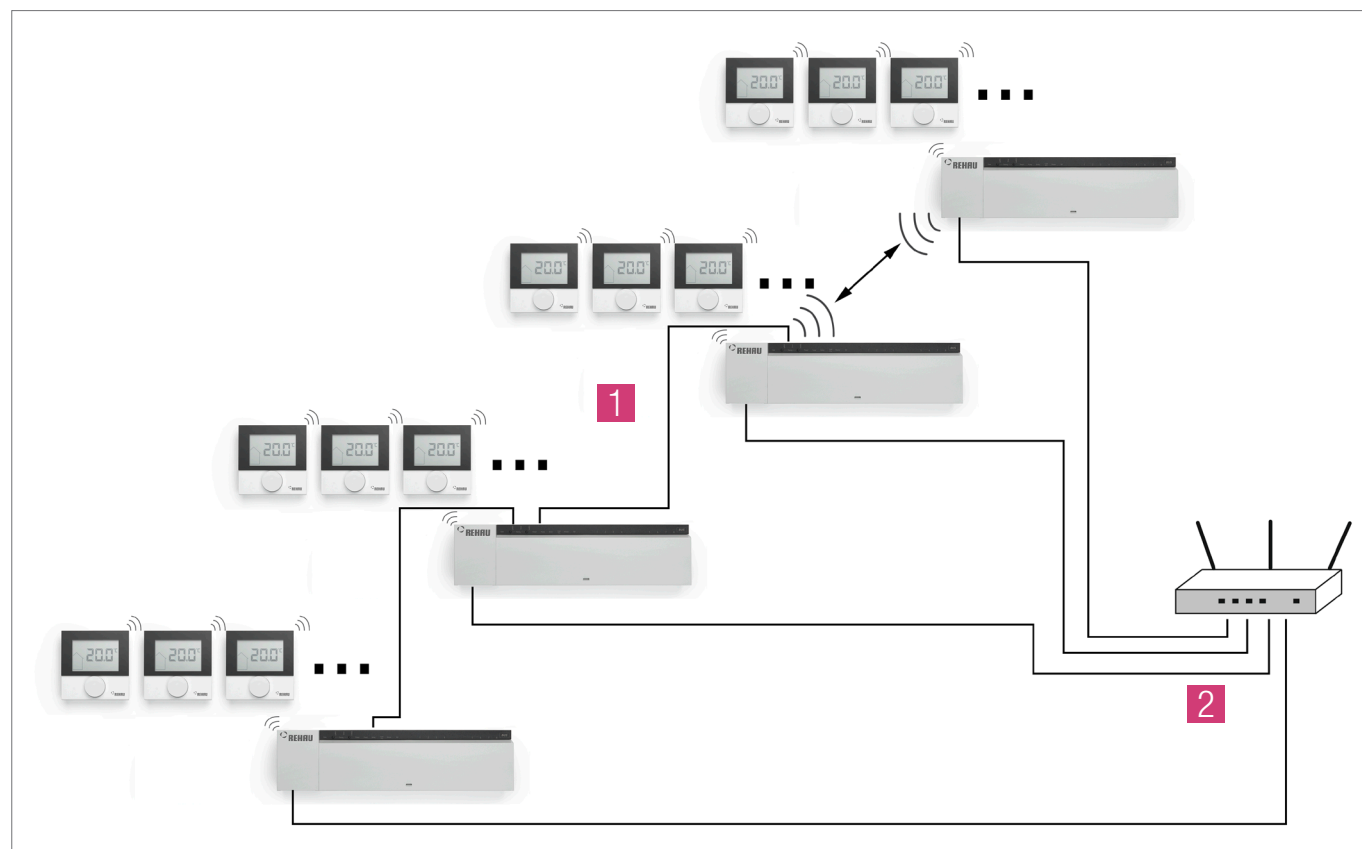


Fig. 2-10 System with a total of 4 base stations networked over system BUS (1), base stations connected to router by network cable (2)

Overview of technical data of NEA Smart R base station 230 V, NEA Smart base station 24 V

	NEA Smart R base station 230 V	NEA Smart base station 24 V
Communication with NEA Smart room control units	Radio, 868 MHz SRD band	2-wire bus, polarity-reversal protected
Number of room control units per base station		8
Number of actuators per base station	12 UNI 230 V actuators	12 UNI 24 V actuators
Terminals for actuators	4 x 2 actuators/channel, 4 x 1 actuator/channel	
Max. nominal load of all actuators	24 W	
Power consumption in unloaded status	2.4 W	1.4 W
Fuses	T4AH, 5 x 20 mm	T2A, 5 x 20 mm
Protection class	II	
Type of protection	IP 20	
Permissible ambient temperature	0 °C to 60 °C	
Permissible storage temperature	-25 °C to +70 °C	
Relative humidity	5% - 80%, non-condensing	
width x height x depth	290 x 52 x 75 mm	370 x 52 x 75 mm
Area of application	in enclosed rooms	

Tab. 2-1 Technical data of NEA Smart R base station 230 V, NEA Smart base station 24 V

2.4 Notes on planning

2.4.1 NEA Smart (wired system, bus technology)

 The wired NEA Smart system only requires a 2-wire cable for communication between the NEA room control unit and the NEA Smart base station. The topology can be selected as desired (but not ring topology), the polarity is irrelevant for connecting the room temperature controllers.

Recommended lines:

From **NEA Smart base station** to **NEA Smart room control units**:

Recommended cable: Standard beldon 0.8mm two pair or similar
also permissible: existing wiring with at least 2 wires, but country-specific standards and regulations must always be observed!

From **NEA Smart base station** to **NEA Smart base station**:

Cable to be used: Standard beldon 0.8mm² two pair or similar
Connect shield to device earth (GND) at both ends!

From **NEA Smart base station** to **router**:

Network cable

Use of existing wiring (retrofit)

 If the existing wiring of previously installed 24 V or 230 V room thermostats is used, it is very important to ensure that the existing lines are totally disconnected from the mains power. Both 230 V power supply voltage and 24 V voltage must not share a line.

2.4.2 NEA Smart (wireless system, wireless technology)

The NEA Smart R base station can be networked wirelessly or by a communication line as with the wired version. The wired version must be preferred if problems with range could be anticipated. **The specified range of 25 m for the wireless components in buildings may be reduced under unfavourable installation conditions.**

 Dew point sensors are required at critical points of the system to detect condensation during cooling.

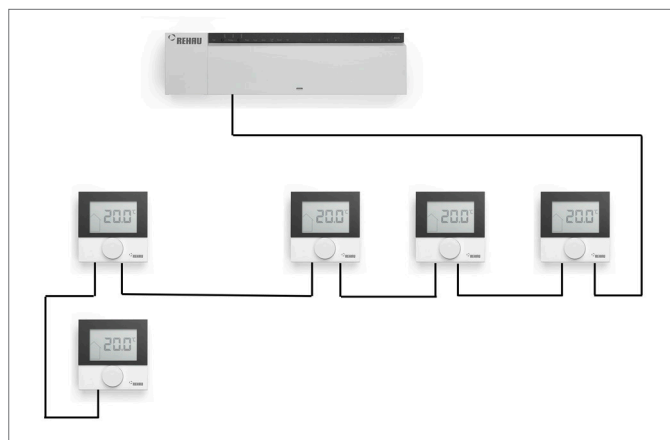


Fig. 2-11 Linear bus structure

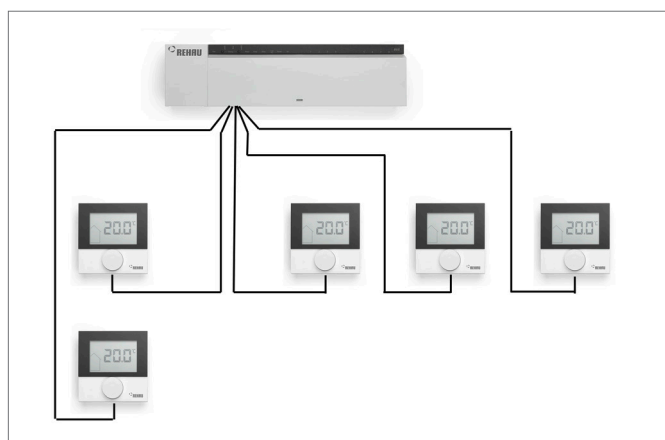


Fig. 2-13 Star bus structure

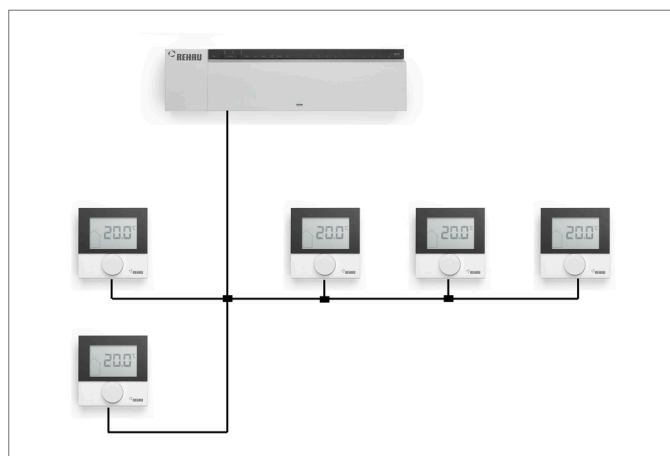


Fig. 2-12 Tree bus structure

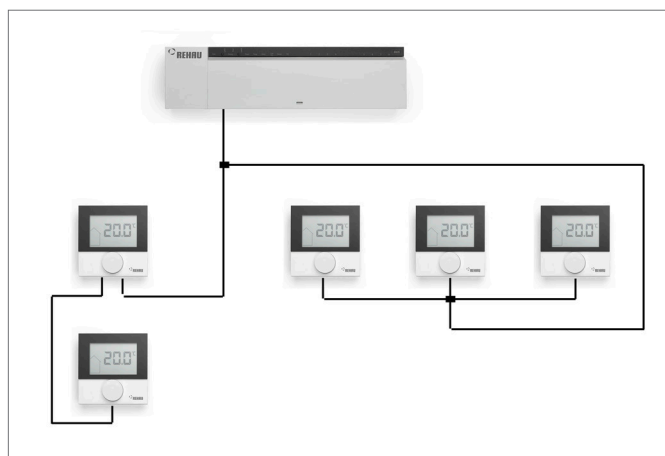


Fig. 2-14 Mixed structure

2.4.3 Data exchange in a system with several base stations

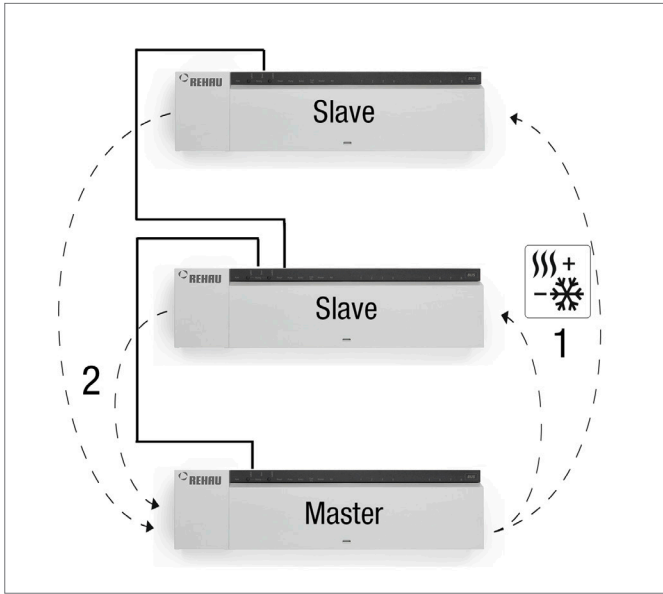


Fig. 2-15 Data exchange between master and slaves

The base station designated as master is defined during configuration. It sends the heating/cooling operating mode (1) to all connected slave stations. It receives and processes the demand signals of the slave stations for pumping and heat/cooling actuation (2)

2.4.4 Connection options for base stations

Outputs:

- Heating circuit pump

A potential-free contact is provided for the heating circuit pump. The parameters can be defined as follows:

- High efficiency or standard pump
- Heating circuit pump for the entire system (global) or local (to one distributor)
- Run times
- Pump protection function

- Heating/cooling/CO pilot function

Potential-free contact. The delay and follow-up time of the heating or cooling can be configured. The heating/cooling output at the master is activated by every active heating/cooling demand in the entire system. The heating/cooling output at the slave base stations is activated only by a demand at that base station (local, decentralised heating/cooling).

The output can also be defined as a heating/cooling switching signal for other devices (pilot function).

Inputs:

- High temperature limiter

If the high temperature limiter is triggered, all heating circuit distributor valves that are connected to the relevant base station are closed.

- External timer (ECO)

Potential-free input. When a potential-free contact is closed all rooms **of the relevant base station** are switched to reduced operation, which is not controlled by an internal timer programme.

- Dew point sensor

Potential-free input. The **closing** of the contact triggers a dew point alarm and all heating circuit valves that are connected to the relevant base station are closed.

- Heating/cooling switching signal (CO)

Potential-free contact **on master**. The signal switches the **entire system** to cooling mode:

All connected NEA Smart base stations are switched to the same operating mode.

2.5 Installation



The electrical installation must comply with the applicable national regulations and the requirements of the local power supplier. The installation must only be carried out by persons who are officially certified as electricians or electronic technicians or comparable trades as defined by specific national legislation.

- Controllers are installed on all standard pattress boxes in accordance with DIN 49073 **or** directly on the wall.
- The NEA Smart base stations should have a separate fuse.

Position

To ensure operation without interference and efficient control, the NEA Smart room control unit should be installed in an area without drafts at a height of 130 cm from the floor.

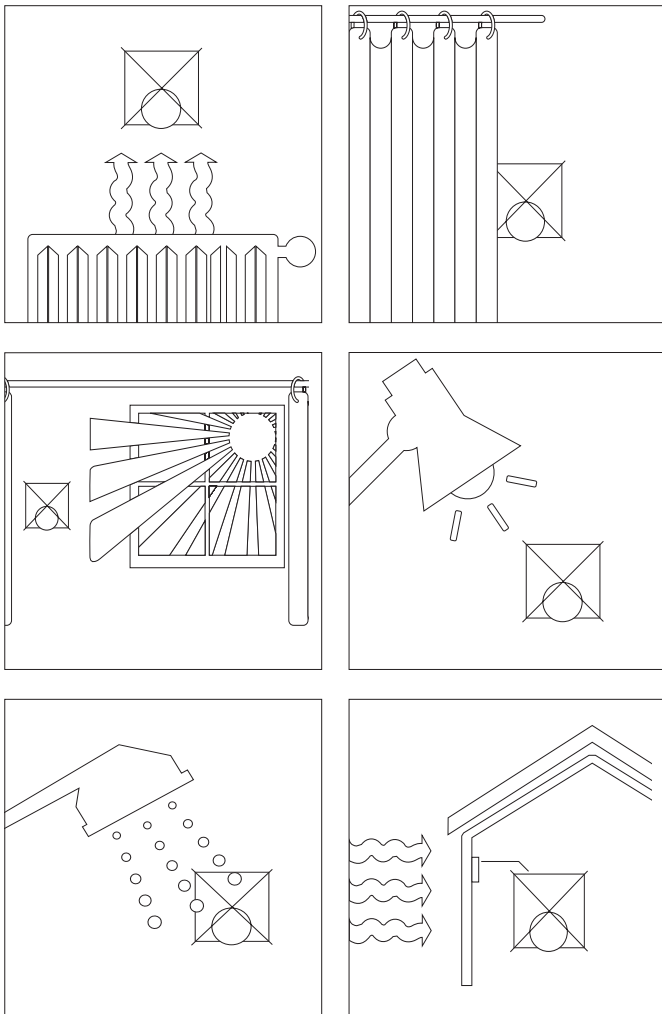


Fig. 2-16 Unsuitable locations for the room control unit

- Do not install the controller close to a heat source, behind curtains, places exposed to direct sunlight, areas of drafts or areas of high humidity.
- Do not install the controller on an exterior wall.
- A suitable empty conduit is required for connecting the remote sensor. The sensor element must be installed to ensure a good temperature transition to the measured building component.



If the controller is not installed in a pattress box, the cable connection on the wall must be about 10 mm below the centre of the controller.

For instructions for installing the NEA Smart and NEA Smart base stations see the instruction manuals supplied with the products and www.rehau.uk/neafamily.

2.6 Commissioning, function test

Commissioning can be divided into the following steps

1. Function test and unlocking the actuators
2. Assignment (pairing) the room temperature controllers
3. Optional: Assignment of additional NEA Smart base stations.
4. Optional: Connection to the home network



The procedure for commissioning is identical for the wired and wireless versions of NEA Smart.

To unlock the first-open function of the UNI actuators, all outputs of the NEA Smart base stations are activated for an adjustable time after connecting the mains voltage. During this period the room control units can be assigned to the various zones.

The base stations are in installation mode for the first 30 minutes after switching on to simplify the process of checking the allocation of the room control units. In this mode the base responds immediately to changes in the setpoints at the room control unit to allow immediate recognition of the channel allocation. This mode can also be started subsequently for inspection of the system by switching the mains voltage off briefly.

2.7 Using the integrated web interface

The NEA Smart system can be operated and monitored with a browser on any device (computer, laptop, tablet, smartphone). The user can decide whether the system is to be exclusively integrated into the home network **without allowing access from outside** the network **or with access** over the Internet, and therefore from anywhere in the world. Access to the system over the Internet is via the REHAU server with a user name and password.

To enable access **inside the house**, only the network connection between the NEA Smart base station and the router, and no other settings to the base station are required. See the configuration page of the router for the IP address that the NEA Smart base station has received from the router.

 If a network cable from the installation location of the NEA Smart base station to the router is not available, the connection can be made without difficulty with standard components using the installed power lines or WLAN. To enable **access from anywhere in the world** to the NEA Smart base station, only a few inputs on the system page of the NEA Smart base station and registration on the REHAU server are required.

Heating technicians can also access the system from outside the home network to troubleshoot any problems with the system.

Display and operation with web browser

Usage with smartphone

The NEA Smart base station web server detects access via smartphone and switches to the optimum display for this type of device. The entry screen shows an overview of the rooms with the current room temperature. If the system is in holiday mode, this mode can be terminated.

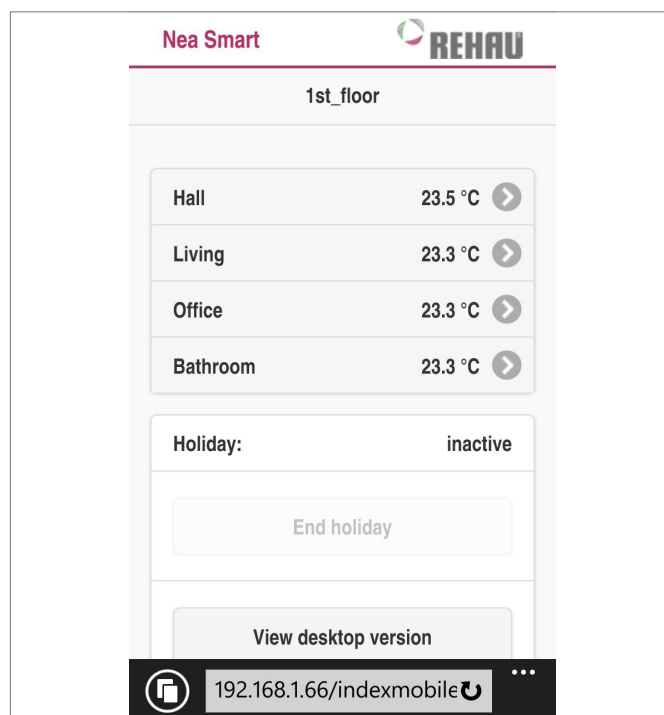


Fig. 2-17 Room selection with smartphone

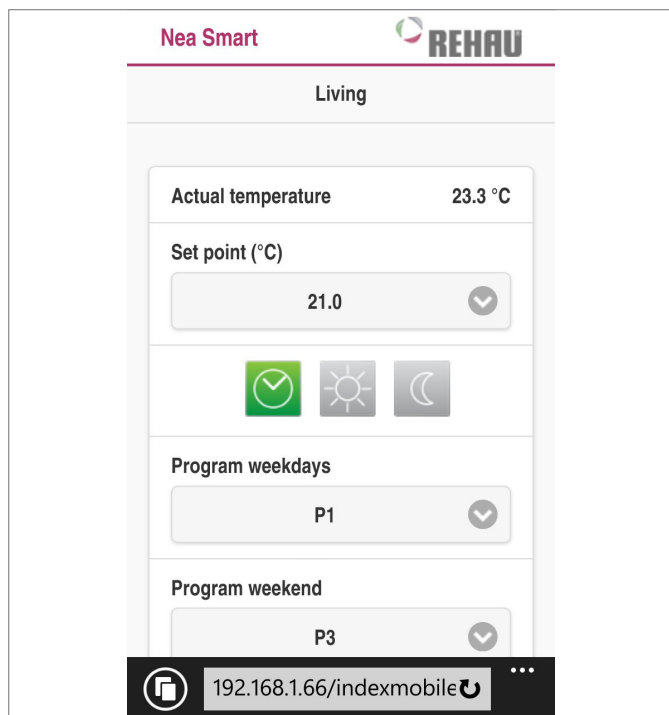


Fig. 2-18 Room operation with smartphone

The set temperature, mode and timer programme can be set for every room with a smartphone.

Symbols:



timer-controlled operation (currently active)



comfort mode, day mode



reduced mode, night mode

Usage with tablet, computer, laptop



All websites listed here can also be opened and operated with a smartphone.

The overview page shows the current status of the NEA Smart base station. In this example the base station is given the name "ground floor"..

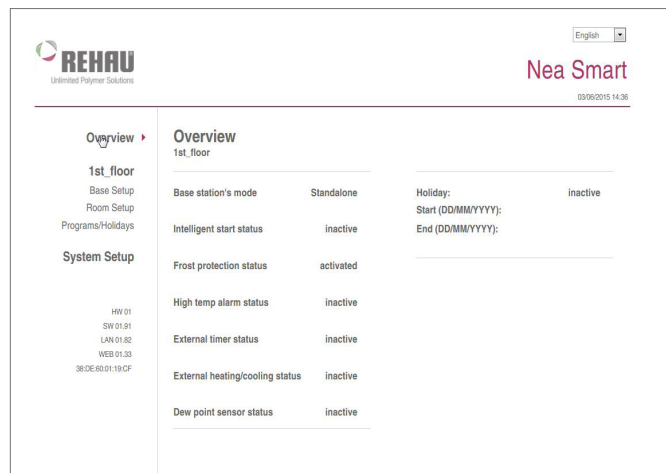


Fig. 2-19 Overview page

The "ground floor" page shows the room control units in this zone with the setpoint and actual temperatures and the defined timer programmes, all of which can be changed. The wireless version also shows the battery level and the quality of the wireless connection.

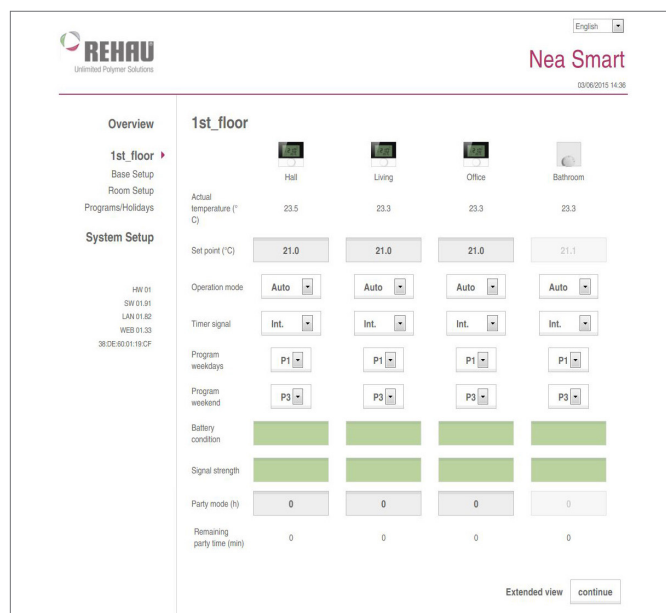


Fig. 2-20 Display of the rooms

The menu "room setup" allows the selection of the temperature setpoints for heating and cooling mode according to the timer programme as well as for comfort mode (day) and setback mode (night). In the menu "Operating mode" the user can select whether heating/cooling or only heating mode is active for the room

	Hall	Living	Office	Bathroom
Temperature calibration of actual values (K)	0.0	0.0	0.0	0.0
Set point temp. heat day (°C)	21.0	21.0	21.0	0.0
Set point temp. cool day (°C)	23.0	23.0	23.0	0.0
Set back heating (°C)	19.0	19.0	19.0	0.0
Set back cooling (°C)	24.0	24.0	24.0	0.0
Limit adjust. min (°C)	5.0	5.0	5.0	0.0
Limit adjust. max (°C)	30.0	30.0	30.0	0.0
Min. floor temp. comfort mode	2.0			
Heating/cooling lock	Normal	Normal	Normal	Normal
Heating system type	0	0	0	0
Set point temperature can be set at the room control unit	☒	☒	☒	☒
Tamper proof lock ON/OFF	☐	☐	☐	☐
Tamper proof code	0000	0000	0000	0000
Remote sensor	2	0	0	0

0 FH standard - 1 FH low energy - 2 Radiator - 3 Convector passive - 4 Convector active

0 No additional sensor - 1 Dew point sensor - 2 Floor sensor - 3 Room sensor

Fig. 2-21 Room setup

The four timer programmes can be customised in the "programmes/holiday" menu. In the example shown below a holiday is planned from 30.03.2015 – 08.04.2015.

Overview

1st_floor

Program P0

Comfort period: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Set back period: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Program P1

Comfort period: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Set back period: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Program P2

Comfort period: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Set back period: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Program P3

Comfort period: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Set back period: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Holiday:

Holiday: inactive

Start (DD/MM/YYYY): 30.03.2015 Confirm

End (DD/MM/YYYY): 08.04.2015 Cancel

Fig. 2-22 Programmes/holiday

3 PARTS LIST

WIRELESS OPTION

NEA Smart R Room Control Unit

Wireless room control unit with set point adjuster for operation with the NEA Smart base station 230V.

Temperature setting via control knob with 1/4-degree temperature change, Suitable for wall and wall box mounting. setting range: 10 ... 28°C.

Power supply: 2x LR03

Battery type: AAA (Micro) Alkaline Battery, battery life: >2 years

Protection type: IP20, protection class: III

Colour: pure white (RAL9010)

Frequency band: 868 MHz

Dimesions H x D x W: 86.0 x 25.5 x 86.0 mm



Article No.	Material No.	Description	Weight kg/Pc	Pack Qty
315267-001	13152671001	NEA Smart R Control Unit	0.11	1 Pc

Nea Smart R Room Control Unit D

Wireless room control unit with display for operation with the NEA Smart base station 230V.

Large easy to read LCD-display (60mm x 40mm) made of scratch-resistant material.

Suitable for wall and wall box mounting. Setting range 5 ... 30°C, limited.

Continuous operation via turning and pushing of control knob. Room temperature, time and operating function always on display.

Power supply: 2x LR03

Battery type: AAA (Micro) Alkaline battery, battery life: >2 years

Protection type: IP20, protection class: III

Colour: pure white (RAL9010), Frequency band: 868 MHz

Dimensions H x D x W: 86.0 x 26.5 x 86.0 mm

NEA Smart remote sensor can be connected to monitor ground temperature..



Article No.	Material No..	Description	Weight kg/Pc	Pack Qty
315268-001	13152681001	NEA Smart R Control Unit D	0.13	1 Pc

NEA Smart R base station 230V

Wireless base station 230V for the pairing of a maximum of 8 NEA Smart R room control units (with or without display) and control up to 12 actuators UNI 230 V.

Suitable for heating/cooling applications. Easy and intuitive installation and operation.

Ethernet interface for home network integration.

Comfortable operating and monitoring of the system inside the home or away from home via PC, phone or tablet. System expansion via adding up to 6 additional base station via radio or syBUS technology. Screwless connectors/terminal connection technology, safer cable routing and strain relief. Inputs for heat/cool switch (potential-free contact required), High limit thermostat, external dew point monitor / Smart Start / Stop function for comfortable and energy efficient control.

Operating voltage: 230 V / ±15% / 50 Hz, Max. power consumption: 50 W (without Pump), Protection type: IP20, Protection class: III

Colour: grey/black, Dimensions H x D x W: 86.0 x 52.0 x 290.0 mm



Article No.	Material No..	Description	Weight kg/Pc	Pack Qty
315271-001	13152711001	NEA Smart R Basis 230V	0.93	1 Pc

NEA Smart R Repeater

Repeater to improve the wireless range of the NEA Smart R base station 230 V.

When building conditions are unfavourable or adverse the placement of the NEA Smart R base station can be in a difficult place. The NEA Smart R repeater can improve the communication between the NEA Smart R base station and the NEA Smart R room control units (with or without display).

Range: >25m in buildings

Operating voltage: 5 V via AC adaptor

Protection type: IP30

Protection class: III

Dimensions H x D x W: 76.0 x 35.0 x 76.0 mm



Article No.	Material No..	Description	Weight kg/Pc	Pack Qty
315274-001	13152741001	NEA Smart R Repeater	0.185	1 Pc

NEA Smart R Antenna

The active NEA Smart R antenna improves radio frequency of the NEA Smart R base station 230V. When building conditions are unfavourable or adverse the placement of the NEA Smart R base station can be in a difficult place. The NEA Smart R antenna can improve the communication between the NEA Smart R base station and the NEA Smart R room control units (with or without display).

Range: <25m in buildings

Operating voltage: Power via NEA Smart R base station 230 V

Protection type: IP30

Protection class: III

Dimension H x D x W: 76.0 x 35.0 x 76.0 mm



Article No.	Material No..	Description	Weight kg/Pc	Pack Qty
315273-001	13152731001	NEA Smart R Antenne	0.235	1 Pc

WIRED OPTION

NEA Smart Room Control Unit

Room control unit with set point adjuster for operation with the NEA Smart base station 24V.

Temperature setting via turning control knob with 1/4-degree temperature change, For wall and wall box mounting. Setting range 10 ... 28°C.

Power supply: 24V bus line, reverse polarity protected

Protection type: IP20

Protection class: III

Colour: Pure White (RAL9010)

Dimensions H x D x W: 86.0 x 25.5 x 86.0 mm



Article No.	Material No..	Description	Weight kg/Pc	Pack Qty
315269-001	13152691001	NEA Smart room control unit	0.11	1 Pc

NEA Smart Room Control Unit D

Room control unit with display for operation with the NEA Smart base station 24V.

Large, easy to read LCD display (60mm x 40mm) made of scratch-resistant material.

Suitable for wall and wall box mounting. Setting range 5 ... 30°C, limited.

Continuous operation via turning and pushing of control knob. Room temperature, time and operating function always on display,

Power supply: 24V bus line, reverse polarity protected

Protection type: IP20

Protection class: III

Colour: Pure white (RAL9010)

Dimensions H x D x W: 86.0 x 26.5 x 86.0 mm

NEA Smart remote sensor can be connected to monitor ground temperature.



Article No.	Material No..	Description	Weight kg/Pc	Pack Qty
315270-001	13152701001	NEA Smart room control unit D	0.13	1 Pc

NEA Smart base station 24V

Basisstation 24V does the pairing of a maximum of 8 NEA Smart room control units (with or without display) via 2-wire bus and the control of 12 actuators UNI 24 V. Suitable for heating/cooling applications. Easy and intuitive installation and operation. Ethernet interface for home network integration. Comfortable operating and monitoring of the system inside the home or away from home via PC, phone or tablet. System wiring can be made in any technology with phone lines or other cables. Screwless connectors/terminal connection technology, safer cable routing and strain relief. Inputs for heat/cool switch (potential-free contact required), High limit thermostat, external dew point monitor / Smart Start / Stop function for comfortable and energy efficient control.

System expansion via adding up to 6 additional base station via radio or syBUS technology. System can be in conventional star wiring and can be retrofitted.

Power supply: 24 V / ±20% / 50 Hz Max. power consumption: 50 W (without Pump)

Protection type: IP20

Protection class: III

Colour: grey/black

Dimensions H x D x W: 75.0 x 52.0 x 370.0 mm



Article No.	Material No..	Description	Weight kg/Pc	Pack Qty
315272-001	13152721001	NEA Smart base station 24V	1.49	1 Pc

Accessories

NEA Smart Remote Sensor

For the connection to NEA Smart R or NEA Smart room control display unit, for the measurement and monitoring of the ground temperature.

Cable Length: 3m

Sensor diameter: 5mm

Operating temperature range: 0 - 50°C

Protection type: IP67



Article No.	Material No..	Description	Weight kg/Pc	Pack Qty
315275-001	13152751001	NEA Smart Remote Sensor	0.100	1 Pc

Actuator UNI

Thermal actuator controlling flow and return valves for the manifolds

Position indicator with adjustment control at the top.

Easy Assembly.

First-Open-Function for operation the heating in the building phase (prior to assembling the room thermostat)

Adaptation to different valves with adaptor.

Cable length: 1 m



Article No.	Material No..	Description	Weight kg/Pc	Pack Qty
217915-001	12179151001	Stellantrieb UNI (230 V)	0.13	1 Pc
217916-001	12179161001	Stellantrieb UNI (24 V)	0.13	1 Pc

NOTES

NOTES

Follow REHAU Underfloor:



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