theben

RAMSES

RAMSES 811 top2
811 9 132

RAMSES 831 top2
831 9 132

RAMSES 812 top2
812 0 132

RAMSES 832 top2
832 0 132

Installation and operating instructions
Room thermostat

D GB F

E I NL

RAMSES 832 top2

Contents

Basic safety instructions

> ⚠️ **WARNING**
>
> **Danger of death through electric shock or fire!**
> ➤ Installation should only be carried out by a qualified electrician!

- The device is designed for wall installation
- Corresponds to type 1 B in accordance with IEC/EN 60730-1

Designated use
- The room thermostat controls the room temperature in houses, offices etc.
- It is used in dry rooms with normal levels of domestic cleanliness

Disposal
  Dispose of device and batteries in an environmentally sound manner

Screen and keys

Display programmed switching times

Text line

Time display

Temperature display

Days of the week from 1–7

RAUMTEMPERATUR
21.3 °C
12:41
MODE PARTY ECO INFO

Function keys:
– MODE   – ECO
– PARTY   – INFO

> *ESC*
– Leave menu

ESC   (--   --)   OK

> <-- -->
Scroll through menu or

> –/+
change values

> *OK*
– Store selection
– Confirm selection

Operating instructions

1. Read text line
Flashing text/symbol represents query

2. Make a decision

YES	NO
Confirmation	Amend/change
Press **OK**	◄ ► press

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Connection/installation

⚠ **WARNING**

Warning, danger of death through electric shock!
➢ Must be installed by qualified electrician!
➢ Disconnect power source.
➢ Cover or shield any adjacent live components.
➢ Ensure device cannot be switched on!
➢ Check power supply is disconnected.
➢ Earth and bypass.
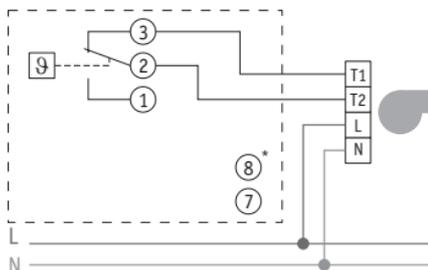
controlling burners or gas water heaters
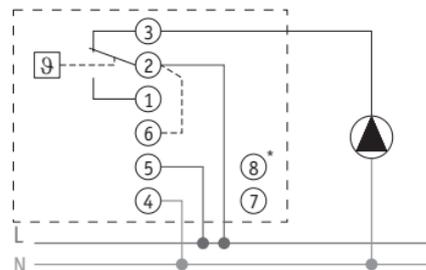
controlling circulation pump or actuator

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Installation

➢ Fix plate to wall and attach device.

➢ Ensure installation height of approx. 1.5 m.

Dismantling

➢ Insert screwdriver from below, push detent hooks up and open device.

Insert batteries

➢ Only use alkaline 1.5 V AA batteries.
➢ Ensure correct polarity when fitting batteries.

Replace batteries

1. Battery symbol flashes on display, controller remains active. The batteries should be replaced.
2. If the display flashes, the controller is no longer active; the relay remains permanently switched on. The batteries must be replaced immediately.

Reset

➢ Press a pointed object into the opening on the left hand side of the device.

Initial start-up

➢ With mains devices, after connecting mains lead or with battery devices, after inserting batteries, press the right key for more than 3 s and follow on-screen instructions (see fig.).

Date, time and summer/winter rule can be set via **MODE** menu under **TIME/DATE**.

Date and time have to be set with the RAMSES 811 top2 and RAMSES 812 top2 models, RAMSES 831 top2 and RAMSES 832 top2 are factory-set.

RAMSES 811 top2 and RAMSES 831 top2 are battery devices; RAMSES 812 top2 and RAMSES 832 top2 are mains devices.

```
                    GERMAN
              YEAR
              MONTH
                 DAY
                  HOUR
                   MINUTE
                     ROOM TEMP
                     21.6°c
```
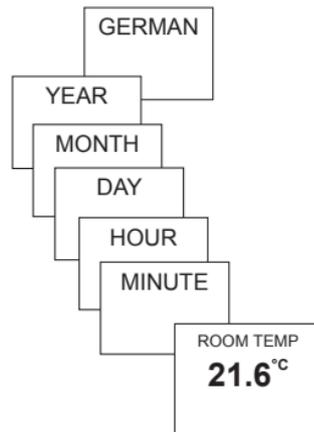
📖 User information

Note:
The whole screen, except for temperature and time, is faded out after 5 seconds. Press the **INFO** key to restore screen.
This setting can be changed under **OPTIONS/DISPLAY**.

INFO key – View settings

The **INFO** key allows you to access current room temperature, temperature program, setpoint temperature, date/time or battery status.

➤ Press **INFO** key repeatedly.

ROOM TEMP
21.6°C

| P1 ACTIVE | ➡ or P2 ACTIVE, P3 ACTIVE, PERM COMFORT, PERM REDUCED, FROST PROTECTION |

TARGET TEMP	➡ or PARTY TARGET TEMP, ECO TARGET TEMP.
22.4°C	

02-02-2009
15:31

| BATTERY |

ROOM TEMP
21.6°C
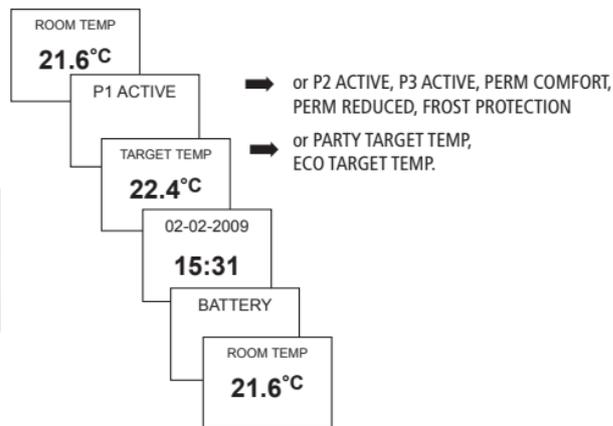
PARTY key – Set PARTY function

➢ Press **PARTY** key.
  The display shows **PARTY TARGET TEMP 23.0 °C**.

Provided the whole screen is shown, the PARTY key flashes to display the set party mode. The INFO key plus the PARTY key appear once the contents of the screen are faded out.

Delete PARTY function

➢ Press **PARTY** key.
  The display shows **PARTY OFF**.

Change PARTY TARGET TEMP

➢ The rotary control adjusts the **PARTY TARGET TEMP** up or down.

ECO key – Set ECO function

➢ Press **ECO** key.
  The display shows **ECO TARGET TEMP 17.0 °C**.

Provided the whole screen is shown, the ECO key flashes to display the set party mode. The INFO key plus the ECO key appear once the contents of the display are faded out.

Clear ECO function

➢ Press **ECO** key.
  The display shows **ECO OFF**.

Change ECO TARGET TEMP

➢ The rotary control adjusts the **ECO TARGET TEMP** up or down.

Temperature programs

RAMSES top2 devices have several preset programs.
– **P1**
– **P2**
– **P3**
– **PERM COMFORT**
– **PERM REDUCED**
– **FROST PROTECTION**

Use the **MODE** key to access selection of active temperature program.

Change temperature programs (P1, P2, P3)

The programs are adjusted using the **MODE**, key in the **SETTINGS** menu (see page 13ff.)

Use rotary control to make changes

In standard operation mode, you can temporarily change current setpoint temperature via the rotary control. It is not stored in the program and is replaced by the set value at the next programmed switching time.

➢ Turn rotary control up or down to change temperature setting (in 0.2 °C increments).

The following applies to all programs:

The broken bar in the top left of the display shows the number of menu points in the relevant menu. The flashing cursor indicates the point in the menu that you are currently in.

```
. ! . .
      P1 COMFORT 1
        6:20
       1 2 3 4 5 6 7
ESC    NEW    NEXT    EDIT
```

MODE key – Change/program settings

Using the **MODE** key and selecting the **SETTINGS** menu point brings up the programming and setting mode.

Select preset program

➢ Press **MODE** key.
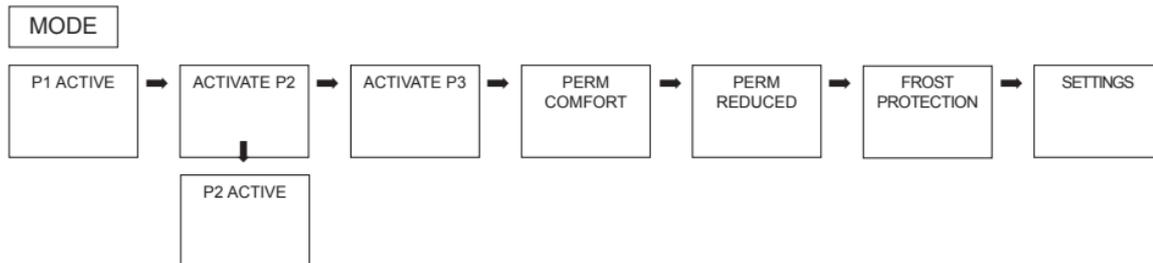
➢ Use <- or -> to scroll through menu points, select desired program and confirm by pressing **OK**.

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MODE – Settings– Overview

SETTINGS

| TARGET TEMP | ➡ | TIME/ DATE | ➡ | PROGRAMM ING | ➡ | HOLIDAY | ➡ | OPTIONS | ➡ | SERVICE | ➡ |

- COMFORT 3 — HOUR — PROG P1 — START HOLIDAY — LANGUAGE — WALL COMP
- COMFORT 2 * — MINUTE — PROG P2 — YEAR — DISPLAY — OPTIMISE
- COMFORT 1 * — YEAR — PROG P3 — MONTH — LCD BACKLIGHT — PUMP PROTECTION
- REDUCED TEMP. — MONTH — CLEAR PROG — DAY — CONTRAST — EXT INPUT
- FROST PROTECTION — DAY — — HOUR — KEY LOCK — CONTROLLER
- — SU-WI RULE — — END HOLIDAY — FACTORY SET — SERVICE
- — — — ⋮ — — INFO
- — — — FROST PROTECTION — —

* only RAMSES 811 top2, RAMSES 812 top2

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Change setpoint temperature

➢ Confirm **TARGET TEMP** by
   pressing **OK**.
   The display shows **COMFORT 3**.
➢ Use **+** or **–** keys or
   rotary control to change value.
➢ Confirm by pressing **OK**.

The other setpoint values
(for comfort 2, frost protection
etc.) are set accordingly.

All 3 comfort temperatures
are available as required:

– Comfort 1–3:	10.2 °C…30 °C
– Reduced temperature:	min. 10 °C,
	max. 0.2 K
	under Comfort 1
– Frost protection:	from 4 °C…10 °C

```
        SETTINGS

     TARGET TEMP

   COMFORT 3

     COMFORT 2

       COMFORT 1

         REDUCED
         TEMP.

           FROST
           PROTECTION
```
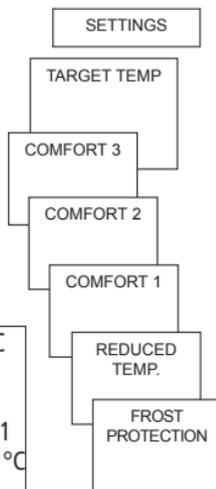
Set date, time and summer/winter time

➢ Confirm **TIME/DATE** by pressing **OK**.
   The display shows **HOUR**.
➢ Change hours, minutes
   etc. in succession using
   the **+** or **–** keys or the
   rotary control.
➢ Confirm by pressing
   OK.

```
        SETTINGS

       TIME/
       DATE

     HOUR

       MINUTE

     YEAR

       MONTH

     DAY

   SU-WI RULE

      ✎    ❘
```

EUROPE	EUROPE WEST	EUROPE EAST	NO SU-WI

15
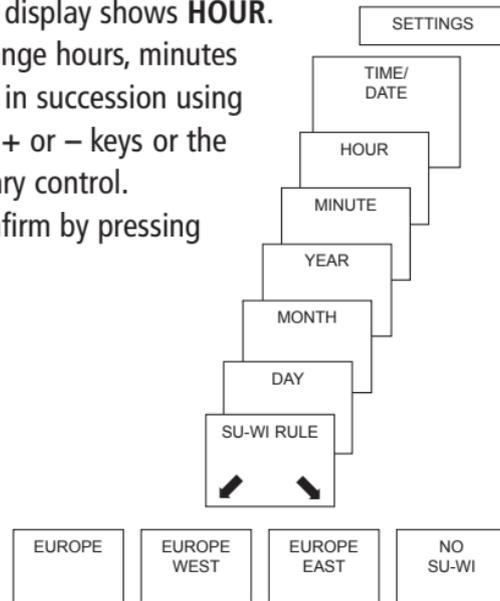
Set Holiday program

➢ Confirm **HOLIDAY** by pressing **OK**.
  The display shows **START HOLIDAY**.
➢ Select year, month, day etc.
  in succession.
➢ Use **+** or **–** keys or
  rotary control to change value.
➢ Confirm each setting by pressing **OK**.

➢ Finally, enter **END HOLIDAY** in same way
  as **START HOLIDAY** entry.
➢ Set desired temperature for the holiday
  period using the **+** or **–** keys and
  confirm with **OK**.

A maximum of one holiday period can be
entered.

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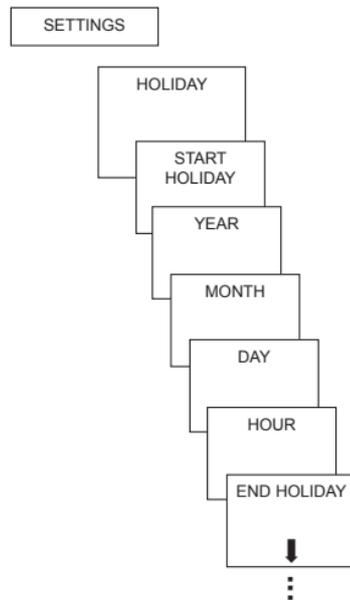
Set temperature preselection


```
FROST          REDUCED      COMFORT 1   COMFORT 2
PROTECTION     TEMP.                              → ...
```
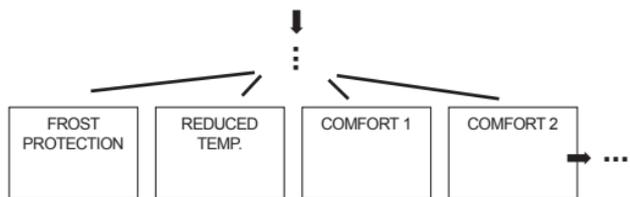
View/clear holiday program
(only possible with a programmed holiday period)


```
              HOLIDAY

        ↙             ↘

   CHECK              CLEAR
   YEAR               HOLIDAY
DAY/MONTH

      ⋮
```
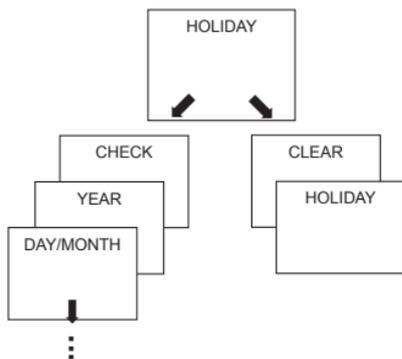
Switch off holiday program

HOLIDAY is displayed on screen during the programmed holiday period. The controller can only be operated once the holiday mode has been switched off.

➢ Confirm **HOLIDAY** on display with **OFF**.
The display shows **HOLIDAY OFF**.


```
HOLIDAY
  21.6°C
OFF
              HOLIDAY OFF
```

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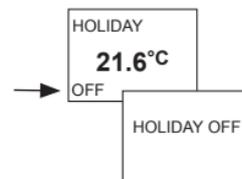
Briefly interrupt holiday program and restart

The program can be interrupted during the holiday period and restarted with the available data.

➢ Confirm **HOLIDAY** on screen
  by pressing **OK**.
  The display shows
  RESTART.

➢ Confirm by pressing **OK**.
  The display shows
  HOLIDAY.

| SETTINGS |

| HOLIDAY |
| RESTART |
| HOLIDAY |
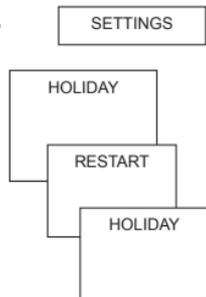
Programming

Programs P1–P3 are preset
but they can be amended or deleted.
A maximum of 24 switching times can be set per program, up to a total of 42.

Program P1 (preset)
Mon–Fri comfort 1   6.00–22.00
                otherwise reduction temperature
Sat–Sun comfort 1   7.00–23.00

Program P2 (preset)
Mon–Fri Comfort 1   6.00–8.00
                              16.00–22.00
                otherwise reduction temperature
Sat–Sun Comfort 1   7.00–23.00

Program P3 (preset)
Mon–Fri comfort 1   12.00–20.00
                otherwise reduction temperature
Sat–Sun comfort 1   7.00–22.00

| SETTINGS |
| PROGRAMM ING |
| PROG P1 |
| PROG P2 |
| PROG P3 |
| CLEAR PROG |
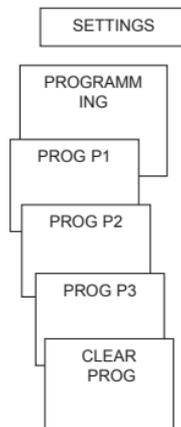
Reset switching time

MODE – SETTINGS– PROGRAMMING

➢ Confirm **PROGRAMMING** by pressing **OK**.
The display shows, for example, **PROG P1**.

➢ Confirm **PROG P1** by pressing **OK**.

➢ Press **NEW** key.

➢ Selected desired days using the **+** or **–**
or the rotary control (e.g. Mon–Fri, Sat–Sun,
individual days or daily).

➢ Confirm by pressing **OK**.

➢ Select desired temperature using the **+** or **–** keys
or the rotary control (comfort 1–3, reduced
temp, frost protection).

➢ Confirm by pressing **OK**.

➢ Enter switching time in hours and minutes using
the **+** or **–** keys or the rotary control.

➢ Confirm by pressing **OK**.

```
┌──────────┐
│ PROG P1  │
└──────────┘
     │
     ▼
┌──────────┐
│   NEW    │
└──────────┘
   ↙    ↘
```

P1 Mon - Fri	P1 Sat-Sun	DAILY	P1 MONDAY
--:--	--:--	--:--	--:--
1 2 3 4 5 - -	- - - - - 6 7	1 2 3 4 5 6 7	1 - - - - - -

```
┌──────────────┐
│ P1 COMFORT 1 │
│    0:00      │
│ 1 2 3 4 5 6 7│
└──────────────┘
       │
       ▼
┌──────────────┐
│ P1 COMFORT 1 │
│    2:20      │
│ 1 2 3 4 5 6 7│
└──────────────┘
       │
       ▼
┌──────────────┐
│   PROG P1    │
└──────────────┘
```

19
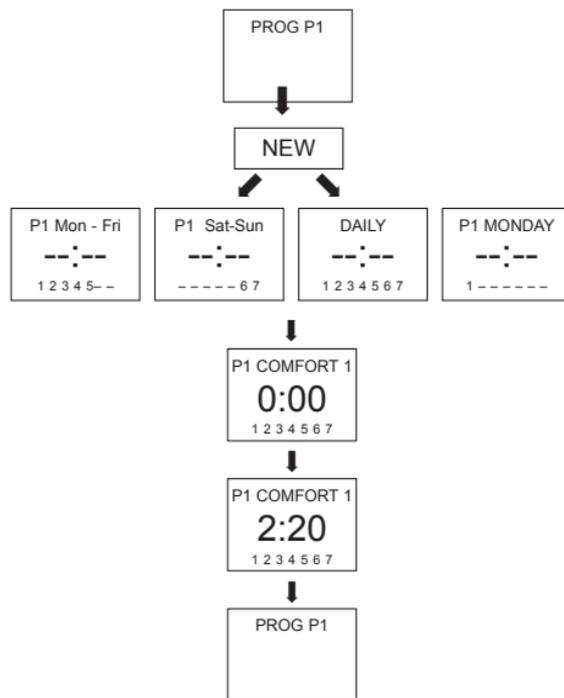
Change or delete switching time

➢ Confirm **PROGRAMMING** by pressing **OK**.
  The display shows, for example, **PROG P1**.
➢ Confirm **PROG P1** by pressing **OK**.
➢ Press **EDIT** key. The display shows **CHANGE** or **CLEAR**.
➢ Confirm **CHANGE** by pressing **OK**.
➢ Select switching time for desired days using the
  + or **–** keys or the rotary control
  (e. g. Mon–Fri, Sat–Sun, individual days or daily).
➢ Confirm by pressing **OK**.
➢ Select temperature using the **+** or **–**
  keys or the rotary control (comfort 1–3, reduced temp,
  frost protection) and confirm by pressing **OK**.
➢ Enter switching time in hours and minutes using
  the **+** or **–** keys or rotary control and
  confirm by pressing **OK**.

PROG P1

EDIT

CHANGE
6:00
– – – – – 6 7

CLEAR
6:00
– – – – – 6 7

P1 Mon - Fri
--:--
1 2 3 4 5 – –

P1 Sat-Sun
--:--
– – – – – 6 7

DAILY
--:--
1 2 3 4 5 6 7

P1 MONDAY
--:--
1 – – – – – –

P1 COMFORT 1
0:00
1 2 3 4 5 6 7

P1 COMFORT 1
2:20
1 2 3 4 5 6 7
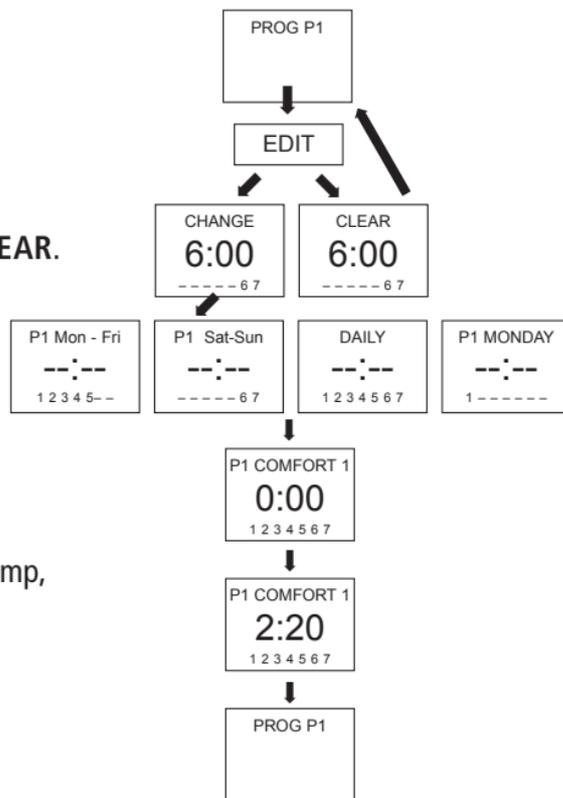
PROG P1

View switching time

➢ Confirm **PROGRAMMING** by pressing **OK**. The display shows, for example, **PROG P1**.
➢ Confirm **PROG P1** by pressing **OK**.
➢ Press **NEXT** key repeatedly.

All programmed switching times can be viewed in succession.

```
PROG P1
```

```
NEXT
```

```
P1 COMFORT 1
    2:20
  1 2 3 4 5 6 7
```

```
P1 COMFORT 1
    6:20
  1 2 3 4 5 6 7
```

```
END
```
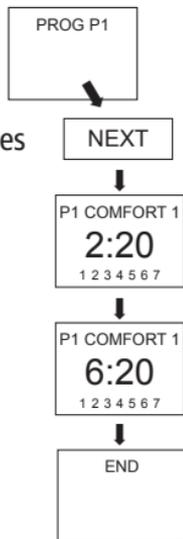
Delete program

➢ Confirm **PROGRAMMING** by pressing **OK**.
➢ Select **CLEAR PROG** using the **+** or **–** keys.
➢ Confirm by pressing **OK**. The display shows **CONFIRM**.
➢ Confirm by pressing **OK**.

```
SETTINGS
```

```
PROGRAMM
   ING
```

```
PROG P1
```

```
PROG P2
```

```
PROG P3
```

```
CLEAR
PROG
```

```
CONFIRM
```
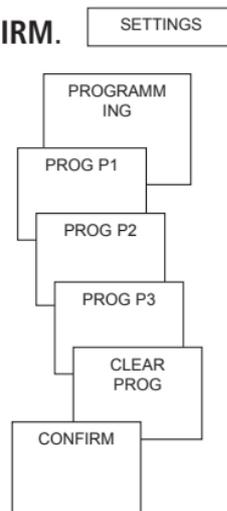
Set language

➢ Confirm **LANGUAGE** by pressing **OK**.
The display shows, for example, **GERMAN**.

➢ Use **+** or **–**
keys or rotary control
to select language.

➢ Confirm by pressing **OK**.
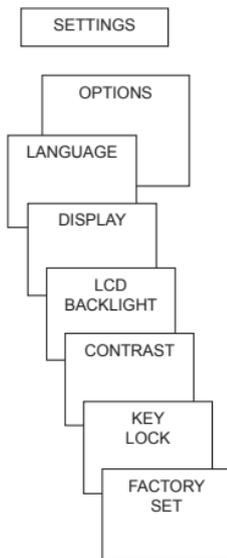
Set display

➢ Confirm **DISPLAY**
by pressing **OK**.

➢ Use **+** or **–**
keys or rotary control
to select values **1–3**.

➢ Confirm by pressing **OK**.

SETTINGS

OPTIONS

LANGUAGE

DISPLAY

LCD
BACKLIGHT

CONTRAST

KEY
LOCK

FACTORY
SET

21.3°C 12:00

1 = Standard display: after 5
seconds all display content
except for temperature and
time are faded out.

12:00 18.3°

2 = Standard display: Time and
temperature are swapped
round

21.3°C 12:00 ROOM TEMPERATURE

3 = complete display

Set LCD backlight

(only with RAMSES 832 top2)

The brightness of the backlighting can be set at different levels.

➢ Confirm **LCD BACKLIGHT** by pressing **OK**.
  The display shows, for example, **3**.
➢ Use **+** or **–** keys or the
  rotary control to select 0-3.
➢ Confirm by pressing **OK**.

Set contrast

Screen contrast can be set at different levels.

➢ Confirm **CONTRAST** by pressing **OK**.
  The display shows, for example, **8**.
➢ Use **+** or **–** keys or the
  rotary control to select 0-15.
➢ Confirm by pressing **OK**.

Keypad lock

The device is fitted with a keypad lock that is switched on or off via software program. When the keypad lock is switched on, a key symbol appears on the display and pressing a key shows **KEY LOCK** on the display.

Set key lock

➢ Confirm **KEY LOCK** by pressing OK.
  The display shows **WITH** or
  NO KEY LOCK.
➢ Confirm selection by pressing **OK**.

Briefly interrupt keypad lock

The keypad lock can be interrupted to allow programming etc. The keypad lock is reactivated once changes are completed and the standard operating mode is returned to.
➢ Press **INFO** key for more than 3 seconds.

Set factory settings

The factory settings return all controller settings to delivery status.

➢ Confirm **FACTORY SET** by pressing
  OK.
  The display shows **CONFIRM.**
➢ Confirm by pressing **OK**.

⚒ Operating level for specialist personnel

Set wall compensation

If the installation site is not in a good place, this may lead to a variation in temperature between the detected and actual room temperature. This can be corrected by using wall compensation.

➢ Confirm **SERVICE** by pressing **OK**.
  The display shows **WALL COMP**.
➢ Confirm **WALL COMP** by pressing **OK**.
➢ Use **+** or **–** keys or rotary control to change the temperature setting and confirm by pressing **OK**.

```
                    0,3°
        WALL COMP
        21.3°C
```

Offset value (difference between measures and displayed temperature)

Temperature value

SETTINGS

SERVICE

WALL COMP

OPTIMISE

PUMP PROTECTION

EXT INPUT

CONTROL

SERVICE

INFO
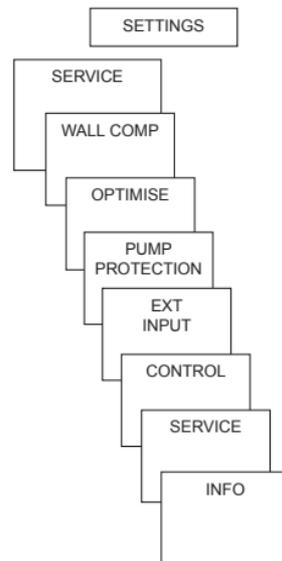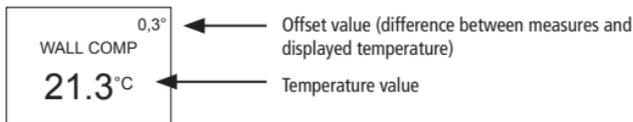
Set optimisation

The optimisation function allows you to achieve a certain room temperature at a desired switching point The display shows how many minutes earlier the heating has to be started. This time applies per K of temperature difference between actual temperature and the desired setpoint temperature.

Example:
In the bathroom at 06.00 a change is programmed from reduction (17 °C) to comfort temperature(23 °C).
Without the optimisation function, the room thermostat stops heating request for bathroom at 06.00. Depending on the size of the room and heating system used, the bathroom reaches the desired 23 °C at 06.30, for example. With a set optimisation of 5 min/K, the

thermostat requests the heating requirement earlier as follows:
• Setpoint temperature at 06.00 --> 23 °C
• Actual temperature --> 17 °C
• i. e. Delta T = 6 K
• 6 K * 5 min/K = 30 min

The controller starts the heating 30 mins earlier and reaches the setpoint temperature at 06.00. The optimisation value depends on spatial and heating setup.

➢ Confirm **OPTIMISE** by pressing **OK**.
➢ Use the **+** or **–** keys or rotary control to set the value (of 1–60) and confirm by pressing **OK**.

Set pump protection

Pump protection is not activated in the factory. But it can be set in the **SERVICE** menu.

- ➢ Confirm **PUMP PROTECTION** by pressing OK.
- ➢ Use the **+** or **–** keys or the rotary control **to select** ON **or** OFF and confirm by pressing **OK**.
- ➢ Set **TIME** and **DURATION** using the **+** or **–** keys or the rotary control and confirm by pressing **OK**.

PUMP
PROTECTION
ON

TIME
11:30

DURATION
0 40

PUMP
PROTECTION
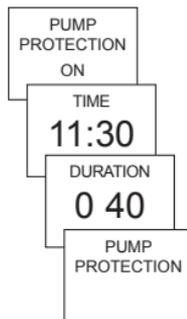
Set external input

The external input on the RAMSES 832 top2 can be configured for various external sensors.

- ⚠ **CAUTION!** Input is active, therefore do not use external voltage.

- ➢ Confirm **EXT INPUT** by pressing **OK**.
- ➢ You can choose from **UNUSED INPUT, FLOOR SENSOR, ROOM SENSOR, WINDOW SWITCH, PHONE SWITCH, PRESENCE DETECTOR.**
- ➢ Confirm desired **sensor/contact** by pressing **OK**. Select available options and confirm by pressing **OK**.

The following options are available with the individual sensors/contacts

Floor sensor:	Mode 1	no options, floor temperature control, floor temperature is shown on screen
	Mode 2	Floor temperature control, floor temperature level can be set between 20 °C and 30 °C, room temperature is shown on display; floor sensor (907 0 321)
Room sensor:	no options,	internal temperature sensor is switched off; external temperature sensor (IP 65) (907 0 459)
Presence detector:	Temperature selection	this temperature is controlled when the HVAC output on the presence detector is switched on. If no presence is detected, the set program is used.
Window switch:	no options,	

provided the window switch is switched on, the thermostat controls to frost protection temperature level; WINDOW SWITCH is shown in display.

Phone switch: Temperature selection   Select temperature level for controller when the phone switch is switched on.

Time selection   Select time until phone switch turns off automatically.

TELEPHONE SWITCH is shown on screen if the phone switch is switched on. The switched contact must be switched off manually to allow the control to be used again. A safety shutdown switches the contact off again automatically at the preset time. The telephone remote switch used should have a pulse output.

Set controller

Controller characteristics of pulse duration controller
With adapted heating systems, a PD controller is noted for its short transient time, minimal overshoot and therefore high control, accuracy.

Controller characteristics of a hysteresis-/ on/off controller
With over or undersized heating systems, hysteresis controllers are noted for their minimal switching frequency and low temperature variations.

➢ Confirm **CONTROL** by pressing **OK**.
➢ You can choose between **PD CONTROL** or **HYST CONTROL.**

➢ Use **+** or **−** keys or rotary control to implement settings and confirm by pressing **OK**.

Set maintenance period

With maintenance, it is a question of a "reminder function".

➢ Confirm **SERVICE** by pressing **OK**.
  The display shows
  MONTHS BEFORE NEXT SERVICE.
➢ Use the **+** or **–** keys or the rotary control
  to enter the value and confirm
  by pressing **OK**.

Flowchart (left):

```
                CONTROL
               /        \
        PD CONTROL      HYST
                        CONTROL
            |              |
        AMPLITUDE      HYSTERESIS
          1.2°C          0.2°C
            |              |
         PERIOD          HYST
           10           CONTROL
            |
         CONTROL
         OFFSET
          0.1°C
            |
        PD CONTROL
```

Display (right):

```
        SERVICE

    MONTHS BEFORE
    NEXT SERVICE
         12
```
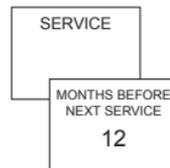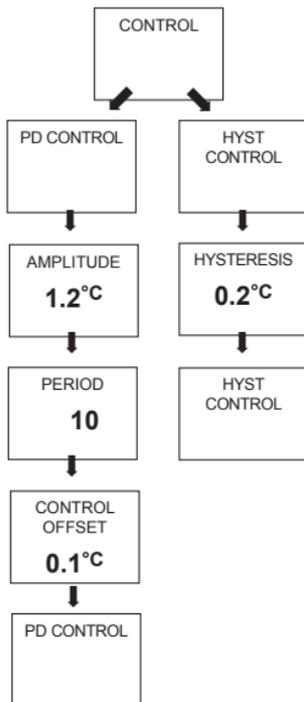
Technical data

Mains device:

Nominal voltage: 230–240 V~, +10 %/–15 %
Frequency: 50–60 Hz
Power reserve: 5 hours
Power consumption: typically 0.5 VA capacitive
Contact: Two-way switch, switching of choice of external wires is permitted
max. 6 A (1) /250 V~
min. 1 mA/5 V DC (SELV/PELV switching is not permitted)

Battery-operated device:

Batteries: 2 x alkaline batteries 1.5 V, AA type
Power reserve during battery change: 10 minutes
Mode of operation: Type 1 B in accordance with EN 60730-1
Contact: Two-way switch, floating
max. 6 (1) A/250 V~
min. 1 mA/5 V DC

Contact material: $AgSnO_2$
Temperature range: +6 °C to +30 °C in increments of 0.2 °C
Permissible ambient temperature: 0 °C ... +55 °C
Control period: 5–30 min. (PD controller)
Control capture range: ±0.2 K to 5 K (PD controller)
Switching hysteresis: ±0.2 K to ±1.0 K (hysteresis controller)
Memory locations: 42
Protection class: II in accordance with EN 60730-1 for designated installation
Protection rating: IP 20 in accordance with EN 60529
Time accuracy: ≤ 1 s/day at 20 °C
Pollution level: 2
Load current: max. 5 A internal NTC
max. 6 A external NTC