theben

307386 01

EN **Flush-mounting clock thermostat**

RAMSES 814 BLE UP

8140150

1. Basic safety information

WARNING

Danger of death through electric shock or fire!

➢ Installation should only be carried out by a qualified electrician!

- The flush-mounting clock thermostat conforms with EN 60730-2-9 if correctly installed
- Device corresponds to type 1 B in accordance with IEC/EN 60730-2
- Operation and programming only via **RAMSES BLE** app
- With external input (no SELV, adjustable)

2. Proper use

- Heating control for time-dependent monitoring and control of room temperature in single-family houses, offices etc.
- Use in dry rooms with normal levels of domestic cleanliness
- For installation in flush-mounted box

Disposal

➢ Dispose of device in environmentally sound manner (remove the battery from the device beforehand).

3. Installation

Mounting the clock thermostat

➢ For installation in conventional flush-mounted boxes (according to DIN 49073).

4. Connection

➢ Disconnect power source.

Risk of electric shock!
The device does not have basic insulation around the terminals/plugs!

➢ Protect against accidental contact during installation.
➢ Maintain a minimum distance of 3 mm from live parts or use additional insulation, e.g. separating strips/walls.

ⓘ Power is supplied via L and N (see technical data); the connection to the boiler is made via a relay contact.

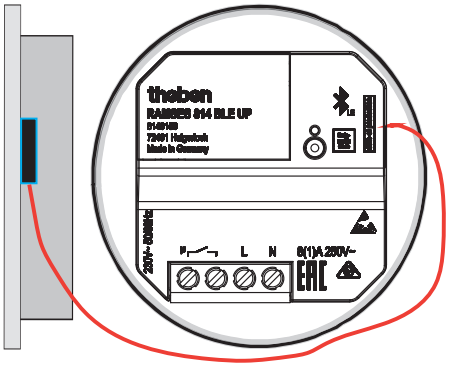
⚠ Secure device with an upstream type B or type C circuit breaker (EN 60898-1) with a maximum of 10 A..

⚠ In order to eliminate the possibility of EMC interference, always lay the mains supply feed separate from the external input (if used).

Connecting the temperature sensor

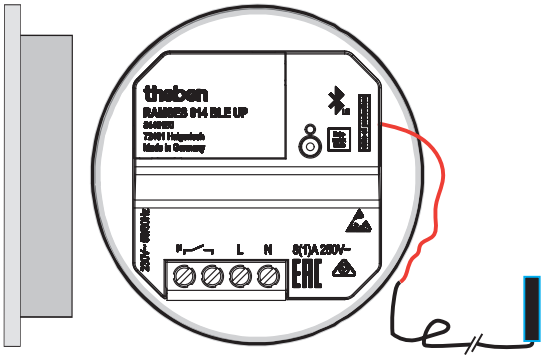
The temperature sensor is included in the package.

Internal sensor



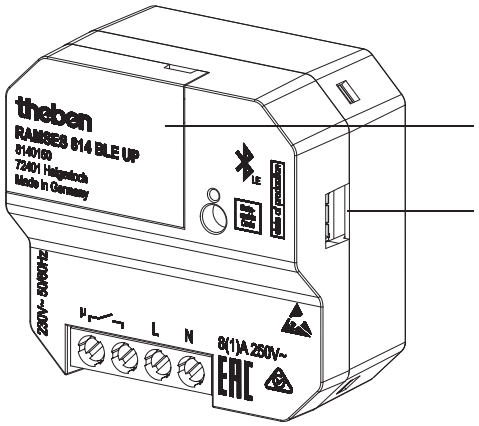
In order to measure the room temperature
➢ Plug in the sensor at the right hand side of the clock thermostat.
➢ Pull off the adhesive foil and stick to the blind cover inside.

External sensor (9070459 or 9070321)



The two insulated ends of the plugged in sensor cable form the external input.
➢ Remove the insulation and connect and wire the external temperature sensor, window contact, presence detector, etc.

5. Description



Change battery

ⓘ The CR1220 battery buffers date and time in case of a mains failure. If the heating program does not continue properly after a mains failure, the battery might be flat and has to be exchanged.

➤ Ensure absence of voltage via fuse box.
➤ Lift and remove the cover on the device.
➤ Remove the used battery (CR1220) and replace with a new battery.
➤ Remount the cover and press, until it engages.

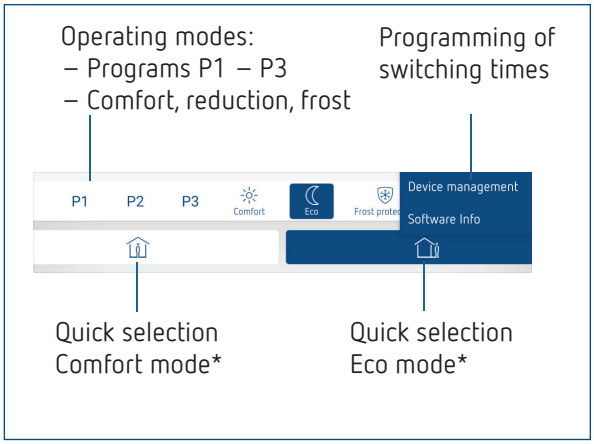
6. Settings and functions – operation via Theben app

Is my smartphone BLE capable?

➤ Download Bluescan app for Android and iOS

The app can be used to check whether a device is BLE capable or not.

RAMSES BLE app



*until the next switching time

Connecting clock thermostat and smartphone (via app) – pairing

The clock thermostats can be programmed using an app (from Android 4.3, iOS 5) on a mobile end device. Communication takes place via Bluetooth BLE.

ⓘ The clock thermostat is ready for pairing at any time.

➤ Download the RAMSES BLE app from the App Store or Google Play Store

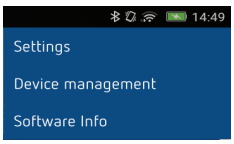
Available on the App Store
GET IT ON Google play

➤ Open the app
→ Window with offline mode/assign appears

➤ Press the button on RAMSES BLE for 3 s (green LED at RAMSES BLE flashes)
➤ Press **Assign**
→ Device list appears
➤ Select device and press ok
➤ Enter the name for RAMSES NUP (e.g. living room ...)
➤ Confirm with ok

→ RAMSES NUP is now paired. Each time when restarting the app, a connection will be established. This takes several seconds (the Bluetooth icon on the top left of the app flashes)

Loading additional devices ...



➤ Press device management
→ A window will open
➤ Press +
→ Further devices will be searched ...

ⓘ If pairing is not successful ...

➤ Close the app and restart it, or
➤ deactivate the Bluetooth connection shortly (in the operating system → settings), or
➤ interrupt the power supply at the clock thermostat > 1 min
→ Pairing is now possible again.

Delete pairing

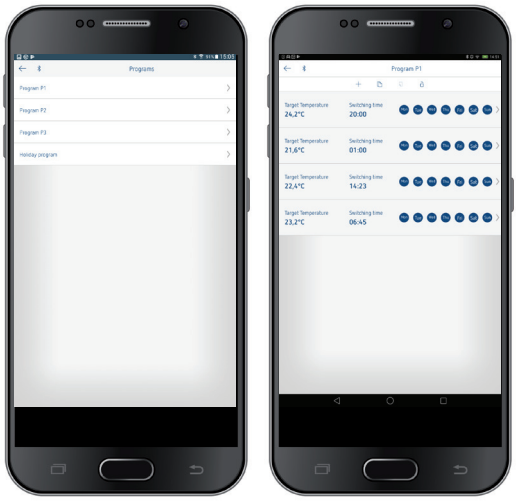
➤ Delete the connection / pairing also on the smartphone / tablet (Settings → Bluetooth pairing → delete respective device (RAMSES BLE)).

Program

Program

In the program menu,

- programs P1 – P3 can be changed
- a new program, or
- a holiday program can be created, or



- Programs P1 – P3 can be set, edited, or deleted.
- A maximum of 24 switching times can be set per program, up to a total of 42.

ⓘ During programming, selected days are shown like Di., and unselected days like Mo..

The created programs are automatically sent to the clock thermostat.

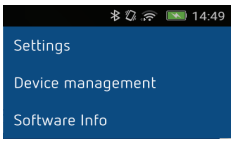
Creating a holiday program

In order to create a holiday program and activate it,
➤ slide the controller to "Activation"

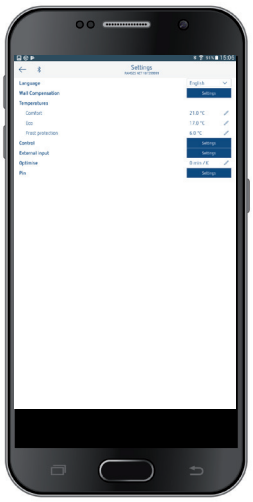
After a holiday program has been created via the app, the clock thermostat receives the following information:
– active / not active
– Start date and end date with time
– Room set temperature during holiday time

Info

Settings



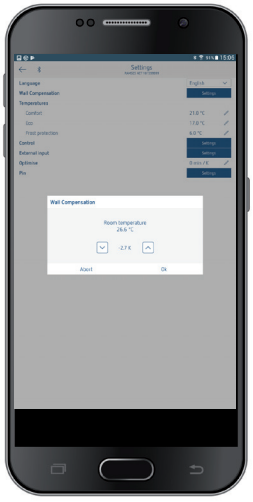
➤ Press Settings
→ A window will open



In the settings, language, temperature (comfort, eco, frost), wall compensation, optimisation, etc. can be set.

1. Setting the wall compensation

If the installation location is unfavourable, temperature deviations between detected and actual room temperature might occur. This difference can be corrected by using the wall compensation.



2. Setting the controller

Behaviour of a PD controller (pulse duration controller)

With adapted heating systems, a PD controller is characterised by its short transient time, minimal overshoot and high control accuracy.

– Control period: 5 bis 30 min
– Control range: ± 0,2 K bis ± 5 K

Behaviour of a hysteresis (on/off) controller

In over or undersized heating systems, a hysteresis controller is characterised by a minimum switching frequency and low temperature deviations.

– Switching hysteresis: ± 0,2 K bis ± 1 K

3. External input

The external input can be configured for various external sensors.

⚠ Input is active, therefore do not use external voltage. The connected contact must be floating and electrically isolated.

The following options are available with the individual sensors/contacts

Floor	Temperature limit	Floor temperature restriction, floor temperature selection adjustable between 20 °C and 50 °C; floor sensor (9070321) ⓘ no safety temperature limiter, but device type 1 B in accordance with EN 60730-1
Room temperature	no options	The internal temperature sensor will be switched off; external temperature sensor (IP 65) (9070459)
Presence detector	Temperature selection	This temperature is used for control if the HVAC output of the presence detector is switched. If no presence is detected, the set program is used for control
Window contact	no options	As long as the window contact is open, the thermostat controls to frost protection temperature
Telephone contact	Temperature selection	Select temperature for the controller if the telephone contact is switched

Failure of temperature measurement

Display: „Temperature 35 °C“
→ Short circuit or interruption
→ Temperature sensor
→ Emergency operation: relay 15 min on, 15 min off, etc.
→ Test: internal or external temperature sensor (via external input)

4. Setting the 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 starts. This time applies per K of temperature difference between actual temperature and desired set temperature.

Example

At 06.00 a.m. in the morning, a change in the bathroom is programmed from reduction (17 °C) to comfort temperature (23 °C).
Without optimisation function, the room thermostat enables the heating request for the bathroom at 06.00 a.m. Depending on the size of the room and the installed heating system, the bathroom reaches the desired 23 °C at 6.30 a.m., for example.
With a set optimisation of 5 min/K, the thermostat sends the heating request earlier, as follows:

Set temperature at 06.00 a.m. → 23 °C
Actual temperature → 17 °C
i.e. Delta T = 6 K
6 K * 5 min/K = 30 min

The controller sends the heating start 30 min. earlier and reaches the setpoint temperature at 06.00 a.m.

ⓘ The optimisation value depends on the spatial and heating conditions.

5. PIN

This function can be used to assign a new PIN.

- The factory setting for the PIN is 000000.
- New PIN can be entered (6 digits).
- If the PIN is 0, the PIN will not be requested during pairing.
- After a network reset, the PIN is „000000" for 5 min., i.e. a new PIN can be entered.

7. Technical data

Supply voltage:	230 V AC +10 %/–15 %, 50–60 Hz
Controller type:	Hysteresis controller or pulse duration controller
Contact:	Switch contact µ max. 2 (1) A/ 250 V AC (with temperature sensor in the flush-mounted box); switch contact µ max. 8 (1) A/250 V AC (with external temperature sensor)
Temperature setting range:	+ 2 °C ... + 30 °C in increments of 0.2 °C
Memory locations:	42
Operating temperature:	+ 0 °C ... + 50 °C
Power reserve:	4 years (battery type CR 1220)
Mode of operation:	Type 1 B in accordance with EN 60730-1
Rated impulse voltage:	4 kV
Pollution degree:	2
Software	Class A
Dimensions (WxHxD):	45 x 45 x 25 mm

Theben AG herewith declares that this type of radio installation complies with Directive 2014/53/EU. The complete text of the EU Declaration of Conformity is available at the following Internet address: www.theben.de/red-konformitaet

8. Contact

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