oventrop

Valves, controls + systems

EN

"R-Tronic RT B" (ENOCEAN)
Installation and operating instructions

enocean®

EEP A5-10-02
EEP A5-10-03
EEP A5-10-04
EEP A5-10-06
EEP A5-10-06 +RPS

- Installation and commissioning must only be carried out by a qualified tradesman.
- Read installation and operating instructions before installation and operation.
- Hand installation and operating instructions over to the final user.
- Read separate instructions of connected systems.

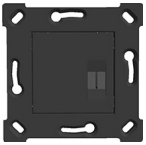
1. Extent of supply and accessories ... 3
2. General information ... 4
2.1 Manufacturer and contact ... 4
2.2 Storage ... 4
2.3 General conditions of sales and delivery ... 4
2.4 Note regarding declaration of conformity ... 4
2.5 Copyright and protective rights ... 4
3. Safety ... 5
3.1 Correct use ... 5
3.2 Residual risks and fundamental dangers ... 5
4. Technical description ... 6
4.1 Summary “R-Tronic RT B” (ENOCEAN) ... 6
4.2 Technical data ... 7
5. Installation ... 8
5.1 General installation advice ... 8
5.2 Wall attachment of fixing plate “R-Tronic RT B” (ENOCEAN) (battery operation) ... 9
5.3 Wall attachment of fixing plate and flush-mounted power pack (accessory) ... 10
5.4 Use with mains adaptor and table stand (accessory) ... 11
6. Function and commissioning ... 12
6.1 Summary of the supported Enocean Equipment profiles (EEP) ... 12
6.2 Adaptation to a gateway ... 17
6.2.1 Activation and deactivation of the key lock ... 18
6.3 Subsequent modification of the EEP profile ... 19
6.4 Summary of the setup level ... 21
6.4.1 Summary of the error messages ... 22
7. Setting options for the final user ... 23
8. Disposal ... 23

1. Extent of supply and accessories

Thank you for purchasing this product. Please check the delivery for completeness. It consists of the following components:

Item no.: 1150780

“R-Tronic RT B” (ENOCEAN)



Wall bracket

2 x battery

Installation and operating instructions

Optional accessories for 230 V power supply:

Flush-mounted power pack with wall bracket (item no.: 1150692)

Mains adaptor with table stand (item no.: 1150694)

2. General information

2.1 Manufacturer and contact

Oventrop GmbH & Co. KG
Paul-Oventrop-Straße 1
D-59939 Olsberg, Germany

Phone: +49 29 62 82-0
Fax: +49 29 62 82-450
E-mail: mail@oventrop.de

2.2 Storage

- Dry (max. RH 70%); free from dust
- Temperature: -10°C up to +65°C
- Keep packaging material and small components away from children
- Do not expose to aggressive fluids or heat sources

2.3 General conditions of sales and delivery

Oventrops general conditions of sales and delivery valid at the time of supply are applicable.

2.4 Note regarding declaration of conformity

The company OVENTROP GmbH & Co. KG hereby declares that the wireless thermostat “R-Tronic RT B” (ENOCEAN) complies with the basic requirements and other relevant provisions of the guidelines 1999/5/EC (R&TTE) and 2014/30/EU (EMC, electromagnetic compatibility). The declaration of conformity can be obtained from the manufacturer.

2.5 Copyright and protective rights

These installation and operating instructions are copyrighted and are exclusively designed for persons involved with the product. Passing these installation and operating instructions on to third parties is not permitted.

3. Safety

3.1 Correct use

The wireless thermostat “R-Tronic RT B” (ENOCEAN) serves the transmission of actual and nominal temperatures in rooms to a gateway for the control of building automation applications. As the wireless thermostat supports different **EnOcean profiles “EEP”** for the European market, it can be connected to the gateways of different manufacturers - such as the “wibutler”. The thermostat not only serves the transmission of temperature values but it can also be used for the activation of additional functions, such as the speed control of a fan or the transmission of information on whether the room is occupied or not.

Furthermore, the wireless thermostat can be used for the control of freely definable “special functions” (RPS telegram). These functions, such as the control of light (on/off) and blinds (up and down) are not stored in the controller and have to be configured in the connected gateway.

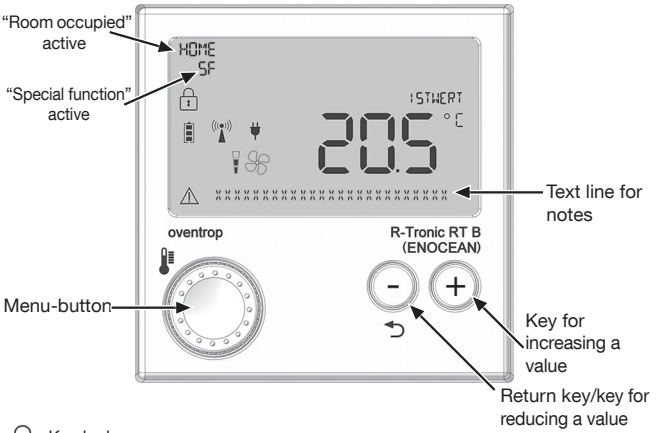
Any use of the wireless thermostat outside this application will be considered as non-compliant and misuse. This applies particularly to the use of the product in the medical sector for which it is not intended.

3.2 Residual risks and fundamental dangers

- The flush-mounted power pack with wall bracket has to be connected to the 230 V network. Connection must only be carried out by a qualified electrician. Switch off the current supply before cabling!
- The wireless thermostat must only be installed in dry, closed rooms.
- The occupational health and accident prevention regulations must be observed during installation.
- Keep small components and accessories out of reach of children (risk of ingestion).

4. Technical description

4.1 Summary "R-Tronic RT B" (ENOCEAN)



Key lock active

Battery status (fully charged, low, empty)

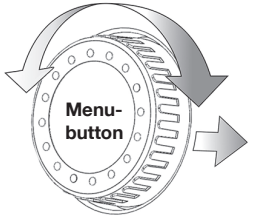
"Teach in" telegram sent to gateway

Current supply via external power pack

Warning symbol for notes and error messages

Fan speed (1-3)

Fan control active



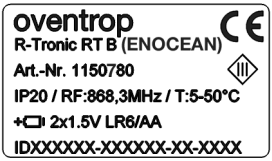
Turning = Function selection (via display)

Pressing = Confirmation of selection and storage

4.2 Technical data

Radio frequency	868.3 MHz
Radio range within the building	Depending on materials and interference sources
Transmission interval	Winter mode 10 min.; Summer mode 30 min.
Operation mode	Type 1 (EN 60730-1)
Protection	IP20 (EN 60529)
Protective system	III – Protective low voltage
Ambient temperature	+5 °C up to +50 °C
Energy supply	Battery type AA 1.5 V Mignon LR6, alkaline (no rechargeable batteries); optional mains operation
Battery life span	about 2 years (battery capacity > 2,600 mAh)
Display	LCD
Measuring range T (°C)	0 °C up to +50 °C
Accuracy at +25 °C	± 1 K
Casing	ABS (ASA), traffic white similar to RAL 9016
Casing dimensions	85 x 85 x 35 mm (W x H x D)

Type plate:



5. Installation

5.1 General installation advice

The wireless thermostat “R-Tronic RT B” (ENOCEAN) should be installed at a location where a good circulation of air is guaranteed. If possible, the wireless thermostat should be mounted onto an inner wall or a pillar at a height of 140 cm to 170 cm. Please make sure that the wireless thermostat is not affected by other heat sources (such as sunlight or heating devices next to it) in order to guarantee a high measuring accuracy.

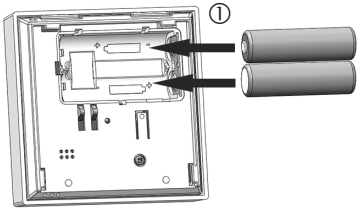
The wireless thermostat cannot only be mounted onto a wall, but can also be placed on a table stand is available as optional accessory. The table stand should be set up freestanding, for instance on tables, sideboards or similar and should not be covered.

The radio range can be impaired by spatial factors such as room geometry, existing objects, materials and interference sources and so-called radio-shadows, for instance behind metal objects, may develop.

5.2 Wall attachment of fixing plate "R-Tronic RT B" (ENOCEAN) (battery operation)

Power is supplied by batteries by default. A flush-mounted power pack and a mains adaptor with table stand are available as accessories.

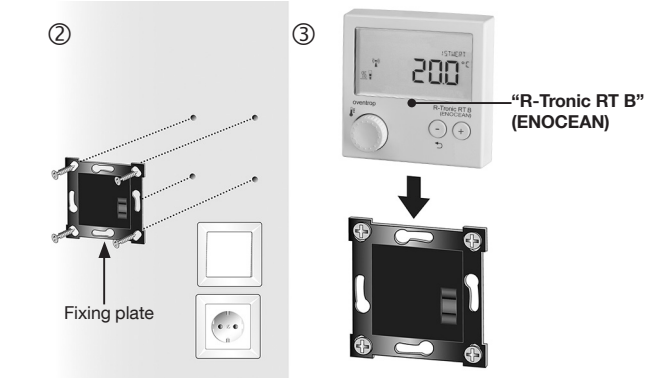
1. Insert two AA 1.5 V Mignon batteries into the battery case. The position of the batteries is specified by the markings +/-.
2. Screw the supplied fixing plate for the wireless thermostat horizontally onto the wall.



NOTE

A necessary battery replacement is indicated by a message on the display.

3. Insert the wireless thermostat into the fixing plate from the top.



▶ The "R-Tronic" is ready for the "teach in" process (see paragraph 6.2)

5.3 Wall attachment of fixing plate and flush-mounted power pack (accessory)

⚠ WARNING

Risk of electric shock!

As the flush-mounted power pack has to be connected to the power supply of the building, there is a risk of electric shock.

➔ The flush-mounted power pack must only be installed by a qualified electrician.

⚠ CAUTION

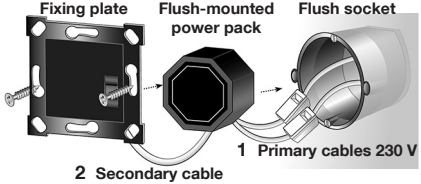
Risk of fire due to overcharging of the batteries!

There is a risk of overcharging of the batteries if the "R-Tronic" is equipped with batteries and is connected to the 230 V network via the flush-mounted power pack.

➔ The wireless thermostat must never be equipped with batteries when using the flush-mounted power pack.

1. Switch off the current supply before installation of the flush-mounted power pack.
2. Assemble the electrical connection between the flush-mounted power pack and the **230 Volt connection** in the flush socket.
3. Screw the fixing plate to the flush socket and switch on the current supply.
4. Insert the "R-Tronic" into the fixing plate from the top.

② ③



"R-Tronic RT B" (ENOCEAN)
⚠ Remove batteries!

④

⚠ The flush-mounted power pack has to be installed so that the **primary cables (1)** and the **secondary cable (2)** do not touch each other. If necessary, these cables are to be fixed, for instance with a cable retainer in order to guarantee the physical separation.

► The "R-Tronic" is now ready for the "teach in" process (see paragraph 6.2).

5.4 Use with mains adaptor and table stand (accessory)

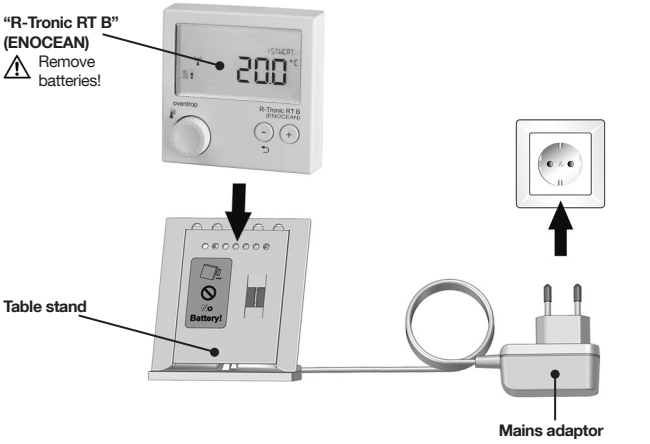
⚠ CAUTION

Risk of fire due to overcharging of the batteries!

There is a risk of overcharging of the batteries if the "R-Tronic" is equipped with batteries and is connected to the 230 V network via the mains adaptor with table stand.

➔ The wireless thermostat must never be equipped with batteries when using the mains adaptor with table stand.

1. Plug the mains adaptor which is connected to the table stand into an earthed socket (100-240 V ~/50-60 Hz).
2. Insert the "R-Tronic" into the table stand from the top.



▶ The "R-Tronic" is now ready for the "teach in" process (see paragraph 6.2).

NOTE

The "R-Tronic" is **removed** by pulling it vertically upward out of the table stands.

6. Function and commissioning

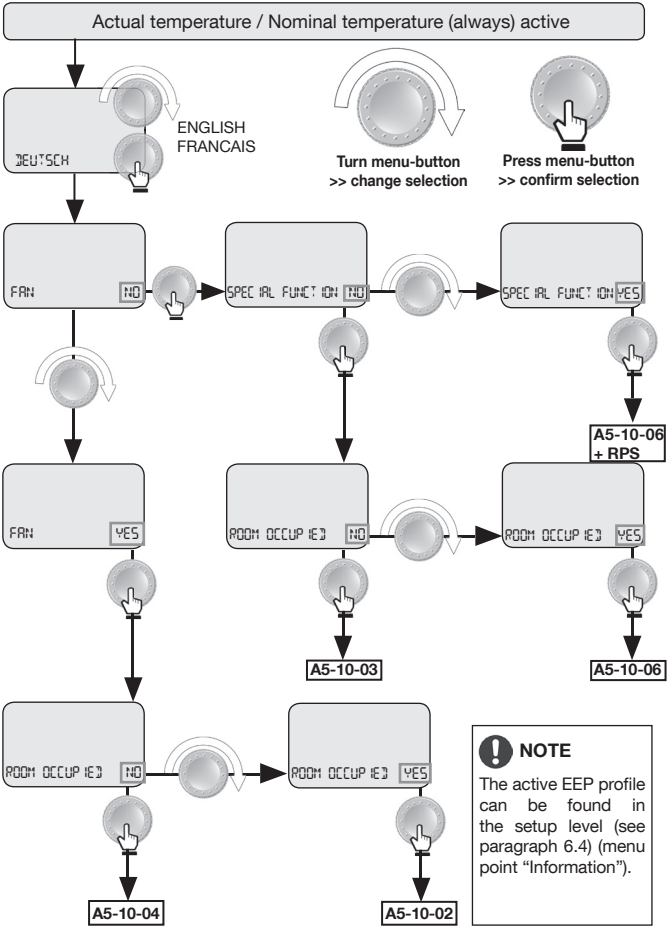
6.1 Summary of the supported Enocean Equipment profiles (EEP)

The wireless thermostat supports a total of **five EEP profiles**, which, when combined with a gateway, serve the control of different and sometimes even several functions. It must be observed that only **one profile can be activated at the thermostat during commissioning**. The display controlled user navigation (see next page) shows the respective activation process for the individual EPP profiles.

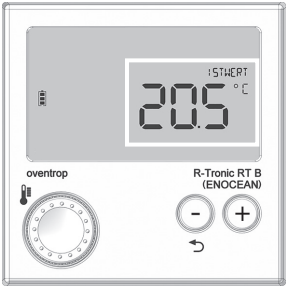
Function / EEP profile	ACTUAL VALUE[1]	NOMINAL VALUE[2]	Fan speed[3]	Room occupied[4]	Function keys (+) (–)[5]
A5-10-02	x	x	x	x	
A5-10-03	x	x			
A5-10-04	x	x	x		
A5-10-06	x	x		x	
A5-10-06 + RPS	x	x		x	x

[1] ACTUAL VALUE: Measured room temperature (° C)
[2] NOMINAL VALUE: Required room temperature (° C)
[3] Fan speed: OFF, I, II, III, AUTO
[4] Room occupied: present/absent
[5] Function keys: freely definable, e.g. on / off, increasing a value (+) / reducing a value (-)

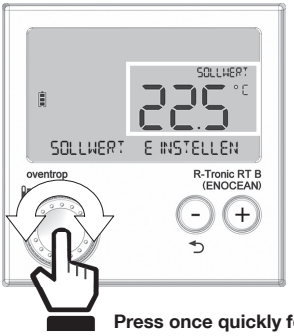
Activation of EEP profiles



Display of the actual temperature/
Setting of the nominal temperature
(supported by all profiles: **A5-10-02, A5-10-03, A5-10-04, A5-10-06, A5-10-06 + RPS**)
Cyclical measurement of the room temperature (ACTUAL value):



Setting of the new required temperature (nominal value):



Press once quickly for storing

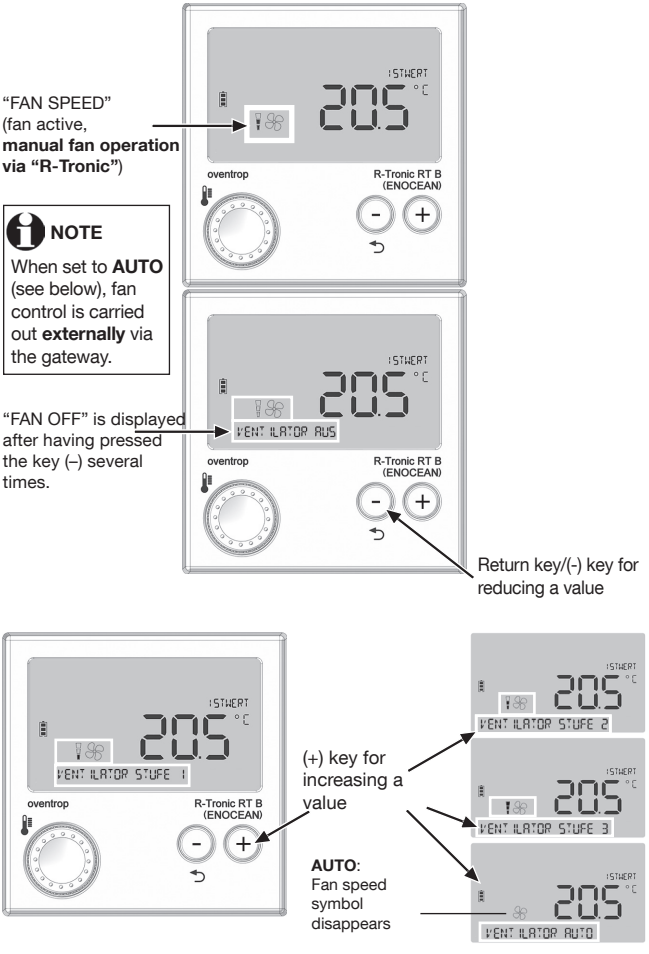
Turn the menu-button **to the right** to **increase the temperature.**

Turn the menu-button **to the left** to **reduce the temperature.**

Store by pressing the menu-button.

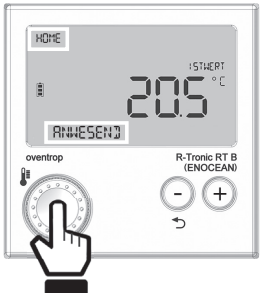
Remark: If the menu-button is not pressed, the new nominal value will be stored automatically after about 5 seconds.

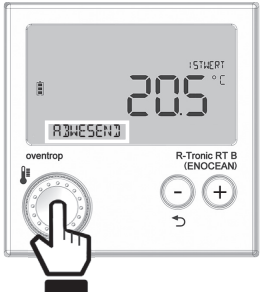
Symbols and display text with active fan speed (A5-10-02, A5-10-04)



Function "Room occupied" (A5-10-02, A5-10-06, A5-10-06 + RPS)

If the EEP profiles **A5-10-02, A5-10-06** or **A5-10-06 + RPS** were activated during commissioning, the **function "Room occupied"** will be available at the "R-Tronic RT B" (ENOCEAN). This function can be activated when the room is occupied and be deactivated when leaving the room.

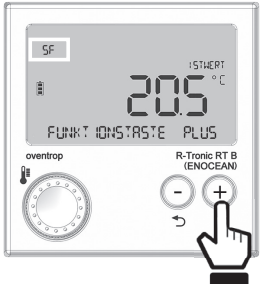


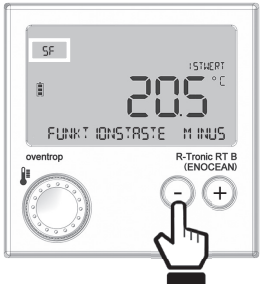


Switching between PRESENT (HOME) and ABSENT: **Press once quickly**

Special functions (A5-10-06 + RPS)

If the EEP profile **A5-10-06 + RPS** was activated during commissioning, freely definable "Special functions" (SF) can be controlled via the plus and minus keys of the wireless thermostat. Please observe that these functions, such as the control of light (on/off) and blinds (up and down) have to be configured in the connected gateway.





Function key "Plus"
-Press key quickly: e.g. light on
-Press and hold key : e.g. increase brightness

Function key "Minus"
-Press key quickly: e.g. light off
-Press and hold key: e.g. reduce brightness

6.2 **Adaptation to a gateway**

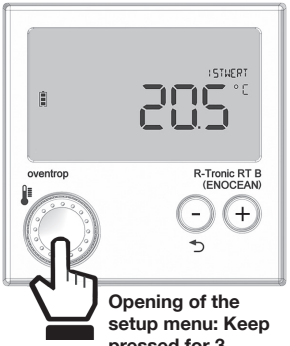
After activation of the EEP profile, there does **not yet** exist an automatic communication between the wireless thermostat and the gateway. The communication will only be established after having sent a telegram via the “R-Tronic”. Once the telegram has been received by the gateway, the wireless thermostat will be “teached in”.

The EEP profile activated at the “R-Tronic” must be supported by the gateway, i.e. it must be able to control the corresponding function. If this is not the case, the “teach in” process will fail.

The “teach in” telegram is sent to the gateway as follows:

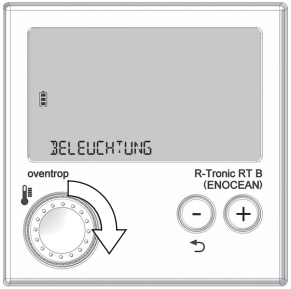
1. Switch to the setup menu by pressing the menu-button until **BACKLIGHT** will appear on the display.
2. Turn the menu-button to the right until **INSTALLATION** will be displayed.
3. Press the menu-button. **TEACH IN** will be shown on the display.

1

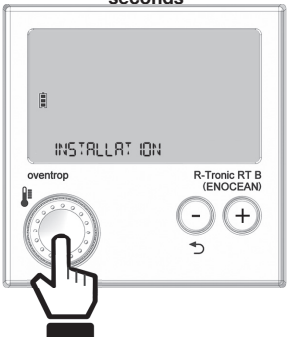


Opening of the setup menu: Keep pressed for 3 seconds

2



3

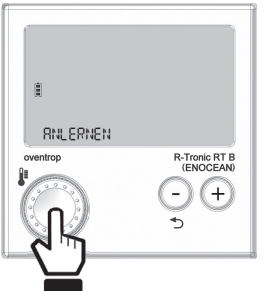


4. Press the menu-button to complete the “teach in” process.

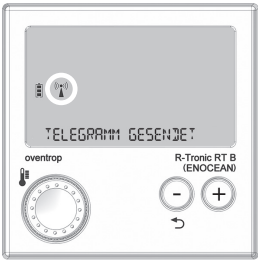
▶ The message **TELEGRAM SENT** and a **radio symbol** will be displayed.

It has to be checked via the user interface of the gateway whether the “teach in” process was successful. The displayed radio symbol does **not** automatically indicate a successful radio connection.

4



5

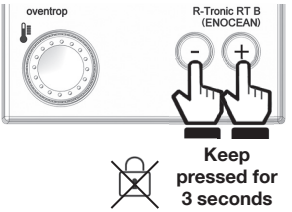


6.2.1 Activation and deactivation of the key lock

Once the “teach in” process has been completed, the key lock will be activated **automatically** and the “padlock” symbol will appear. With the activated key lock, the setup level (see paragraph 6.4 on page 21) can no longer be selected and an inadvertent factory reset will be prevented.

Even if the key lock is active, the nominal value can still be modified and the presence or absence in a room as well as the fan speed can still be selected.

The key lock is deactivated by keeping the keys (+) and (-) pressed for at least 3 seconds.



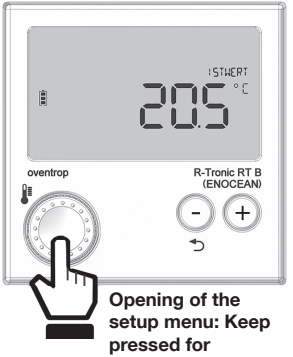
6.3 Subsequent modification of the EEP profile

If the EEP profile shall be modified subsequently or a wrong EEP profile has been activated, **the factory settings of the thermostat have to be restored**. A different respectively the correct profile can then be activated in the course of the new installation (see paragraph 6.1 on page 12).

The factory settings of the “R-Tronic RT B” (ENOCEAN) are restored as follows:

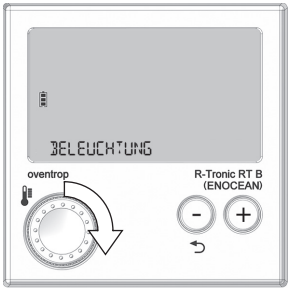
1. Switch to the setup menu by pressing the menu-button until **BACKLIGHT** will appear on the display.
2. Turn the menu-button all the way to the right until **FACTORY SETTINGS** will be displayed.
3. Press the menu-button. **RESTORE** will be shown on the display.

1

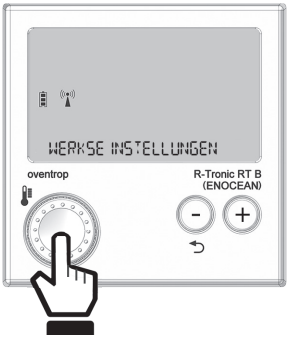


Opening of the setup menu: Keep pressed for 3 seconds

2



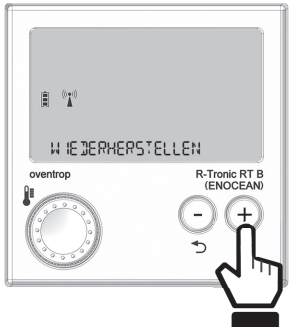
3



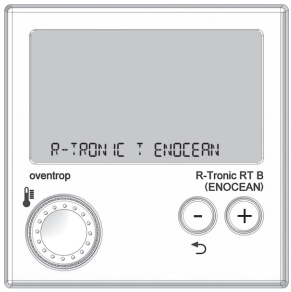
4. Keep the “Plus” key pressed for some seconds.

▶ The thermostat is reset to the factory settings and can be reconfigured.

4



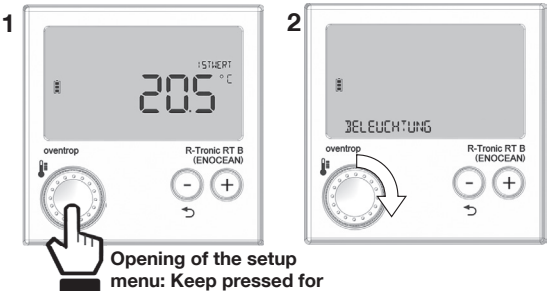
5



6.4 Summary of the setup level

Some basic functions can be defined and information on the operating status of the “R-Tronic RT B” (ENOCEAN) can be queried on the setup level.

To switch to the setup menu, keep the menu-button pressed until BACKLIGHT will appear on the display (1).



Opening of the setup menu: Keep pressed for 3 seconds

When turning the menu-button (2) to the right, the following menu points will be displayed one after another:

- **BACKLIGHT (YES/NO):** Activation and deactivation of the display lighting (switched off by default to increase battery life)
- **Installation (“TEACH IN”):** see paragraph 6.2
- **Transmission interval:** 10 or 30 minutes
- **Languages:** German, English, French
- **Offset temperature:** -3.0° C up to +3.0° C (compensation of physical influences impairing the measurement accuracy)
- **Diagnosis: ID** (unique identification of the wireless thermostat); display of **error messages**: see 6.4.1
- **Information** (Software version, **active EEP profile**)
- **Factory settings** (restoration)

Press the menu-button to access the setup options of the individual menu points.

Press the menu-button to store the modifications.

6.4.1 Summary of the error messages

BATTERY EMPTY	
REPLACE BATTERIES	
POWER SUPPLY DEFECT	Power supply for “R-Tronic” temporarily insufficient.
RADIO MODULE DEFECT	
INIT ERROR	Initialisation error occurred.
MEMORY DEFECT	Error in the electronic memory.
T-SENSOR DEFECT	Temperature sensor defective

7. Setting options for the final user

The final user of the wireless thermostat has the following setting options which were already described in chapter 6:

1. Modification and saving of the nominal temperature (warmer, colder)

This function is available in all EEP profiles.

2. Setting of the fan speed respectively the ventilation intensity
3. Activation and deactivation of the function “Room occupied” (present/ absent)
4. Control of “special functions” (e.g. light, blinds)

Activation of the correct EEP profile is paramount for the functions 2 to 4. This is the task of the qualified tradesman configuring the Smart Home System in the object into which the wireless thermostat(s) is (are) integrated. Access to the setup level and a subsequent modification of the EEP profiles by the final user should be prevented by locking the keypad (symbol “padlock”).

The final user may use the a.m. functions even if the key lock is active.

8. Disposal

Disposal of this product with the standard waste is inadmissible. Electronic waste is dangerous and must only be disposed of by specialist companies The local municipal authorities give information on environmentally friendly disposal.

OVENTROP GmbH & Co. KG
Paul-Oventrop-Straße 1
D-59939 Olsberg, Germany
Phone +49 29 62 82-0
Fax +49 29 62 82-450
E-mail mail@oventrop.de
Internet www.oventrop.com

For an overview of our global presence visit www.oventrop.de.

Subject to technical modifications without notice.

115078080 08/2017