oventrop

Room thermostat
with fan drive 230 V
Operating instructions

Contents

1. General information

The original operating instructions were drafted in German.

The operating instructions in other languages have been translated from German.

1.1 Validity of the operating instruction

These operating instructions are valid for the Oventrop room thermostat with fan drive 230 V.

1.2 Extent of supply

Please check your delivery for any damages caused during transit and for completeness.

Items included in the delivery:

- Oventrop room thermostat with fan drive 230 V
- Operating instructions

1.3 Contact

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Technical services

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1.4 Declaration of conformity

Oventrop GmbH & Co. KG hereby declares that this product complies with the basic requirements and other relevant provisions of the EC Directives concerned.

The declaration of conformity can be obtained from the manufacturer.

1.5 Used symbols

ⓘ	Highlights important information and further explanations.
▶	Action required
•	List
1. 2.	Fixed order. Steps 1 to X.
▷	Result of action

2.   Safety-related information

2.1   Correct use

Operating safety is only guaranteed if the product is used correctly.

The room thermostat with fan drive 230 V is an electronically controlled operating device. The room thermostat allows for the electrical activation of fan convectors (fan coil units) for demand oriented heating and cooling.

Any other use of the product will be considered incorrect use.

Claims of any kind against the manufacturer and/or its authorised representatives due to damage caused by incorrect use will not be accepted.

Observance of the operating instructions is part of compliance with correct use.

2.2   Warnings

Each warning contains the following elements:

Warning symbol SIGNAL WORD
Type and source of danger! Possible consequences if the danger occurs or the warning is ignored. ▶ Ways to avoid the danger.

The signal words identify the severity of the danger arising from a situation.

⚠ DANGER
Indicates an imminent danger with high risk. The situation will lead to death or serious injury if not avoided.

⚠ WARNING
Indicates a possible danger with moderate risk. The situation may lead to death or serious injury if not avoided.

⚠ CAUTION
Indicates a possible danger with lower risk. The situation will lead to minor and reversible injury if not avoided.

NOTICE
Indicates a situation that may lead to damage to property if not avoided.

2.3   Safety notes

We have developed this product in accordance with current safety requirements.

Please observe the following notes concerning safe use.

2.3.1   Danger to life due to electric current

▶ Ensure that the product can be disconnected from the power supply at any time.

▶ Do not put the product into operation if there are visible signs of damage.

▶ Any work on the power supply must only be carried out by a qualified electrician.

▶ Completely disconnect the product from the power supply and secure it against switching back on.

▶ Check that no voltage is present.

▶ Only install the product in dry indoor areas.

2.3.2   Danger caused by inadequately qualified personnel

Any work on this product must only be carried out by qualified tradesmen.

As a result of their professional training and experience as well as their knowledge of the relevant legal regulations, qualified tradesmen are able to carry out any work on the described product professionally.

User

The user must be informed how to operate the product by a qualified tradesman.

#### 2.3.3   Availability of the operating instructions

These operating instructions have to be read and applied by any person working on the product.

The operating instructions have to be kept at the installation location.

▶ Hand these operating instructions and all other relevant documents (e.g. accessory manuals) over to the user.

3. Technical description

3.1 Construction
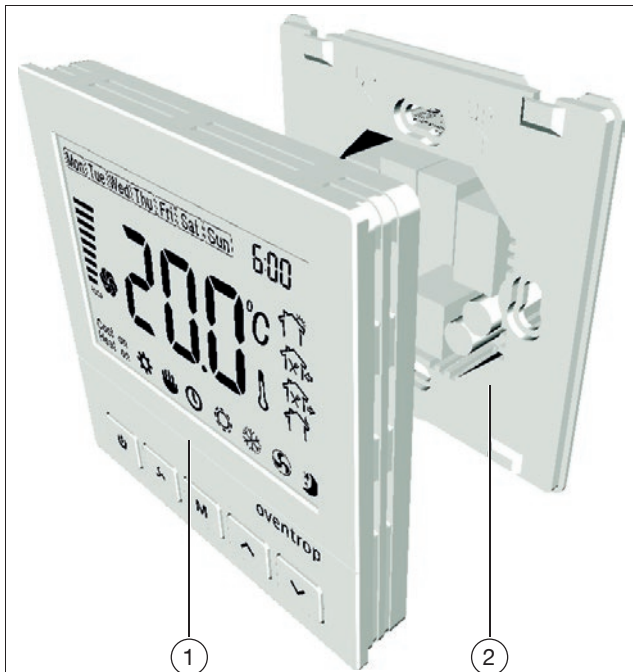
Illust. 1: Construction

(1)	Operating unit
(2)	Base

3.2 Functional description

The room thermostat with fan drive 230 V serves the individual temperature control. It is designed for fan convectors with two-pipe systems.

If you want to use both, the cooling and the heating mode, the supply pipe has to carry either hot or cold water, depending on the season respectively the outside temperatures.

You can set the temperature with the help of the arrow keys "Increase" and "Decrease".

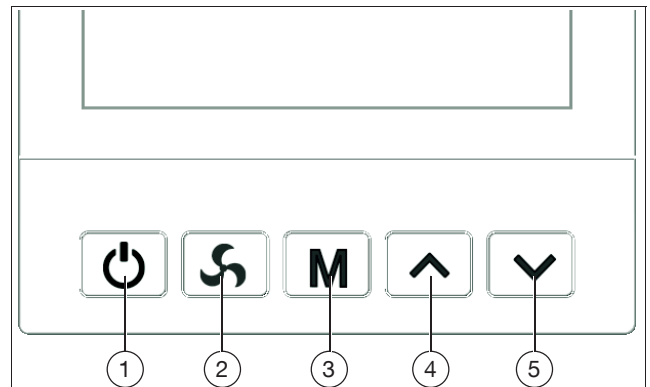The temperature can be adjusted in steps of 1 °C.

The fan speed can be adjusted automatically or manually in three stages.

Your settings are permanently saved. Even in the event of a power failure, your configuration will be maintained .

3.3 Operating elements and display

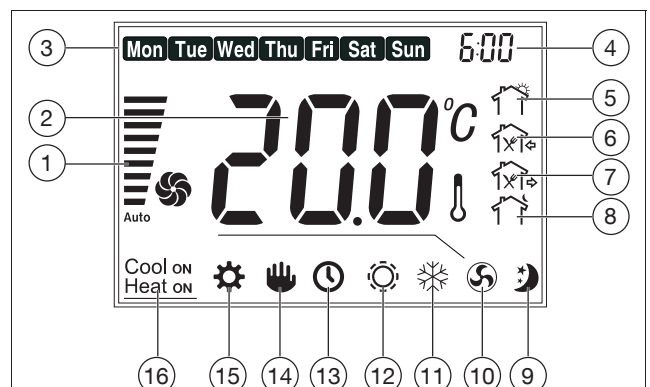The room thermostat features an LCD display with backlighting.

3.3.1 Operating elements

Illust. 2: Operating elements

(1)	ON/OFF
(2)	Fan speed
(3)	Operating mode
(4)	Increase
(5)	Decrease

3.3.2 Display

Illust. 3: Display

		Remark
(1)	Fan speed	High, medium, low, automatic
		During automatic operation, the fan speed will be governed by the difference between the measured room temperature (actual value) and the desired temperature (nominal value).
(2)	Temperature display	Actual or nominal value
(3)	Days	
(4)	Time	
(5)	Switching point 1	e.g. getting up in the morning

(6)	Switching point 2	e.g. leaving the house
(7)	Switching point 3	e.g. coming home
(8)	Switching point 4	e.g. going to bed
(9)	Sleeping mode	Automatic adjustment of a manually set temperature in case of deactivated time profiles (see section 7.3 on page 12).
(10)	Fan	Fan mode active
(11)	Cooling	Cooling mode active
(12)	Heating	Heating mode active
(13)	Time profiles active	Timed temperature control (see section 6.3 on page 11).
(14)	Manual mode	Manual settings active
(15)	Settings	Configuration menu active
(16)	Active mode	Shows whether heating or cooling is active

3.4   Technical data

Temperature setting range	5°C to 35°C
Operating voltage	100 - 240VAC 50/60Hz
Switching current	- Resistive load Last 3A - Inductive load 2A
Power consumption	< 2W
Fuse	Without
Switching temperature difference	±1K
Protection	IP21
Dimensions (HxWxD)	88mm x 88mm x 45mm
Colour (casing)	white

4.   Transport and storage

Temperature range	0 °C to +50 °C
Relative air humidity	5 to 95%
Particles	Store dry and free from dust
Mechanical influences	Protected from mechanical agitation
Weather influences	Do not store outdoors
	Protect from direct sunlight
Chemical influences	Do not store together with aggressive fluids

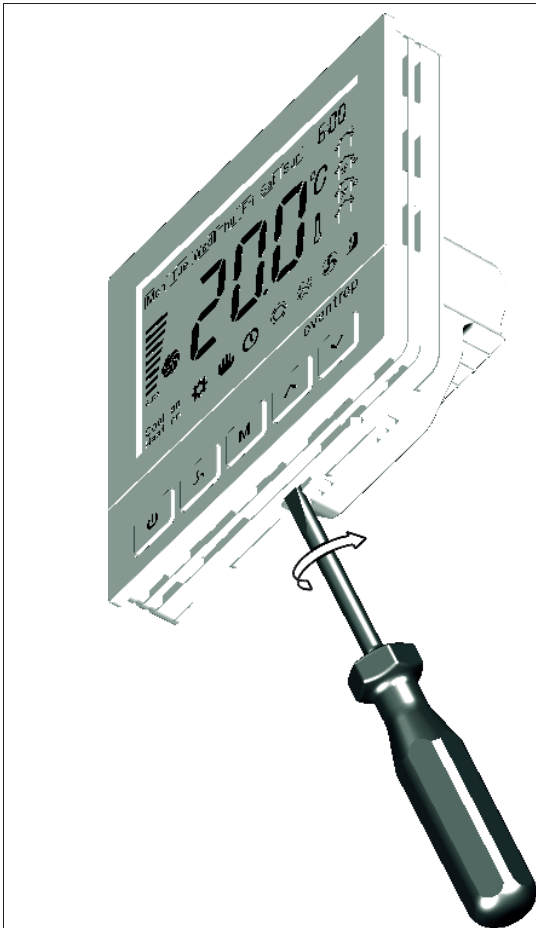## 5.   Installation

⚠	**DANGER**
	Danger to life due to electric current
	Danger to life due to contact with live components.
	▶ Completely disconnect the product from the power supply.
	▶ Check that no voltage is present.
	▶ Secure the product against switching back on.
	▶ Only install the product in dry indoor areas.

Install the room thermostat in a commercial flush socket. (Distance of the fixing screws 60mm.)

1. Release the operating unit from the base by levering it out as shown in Illust. 4.
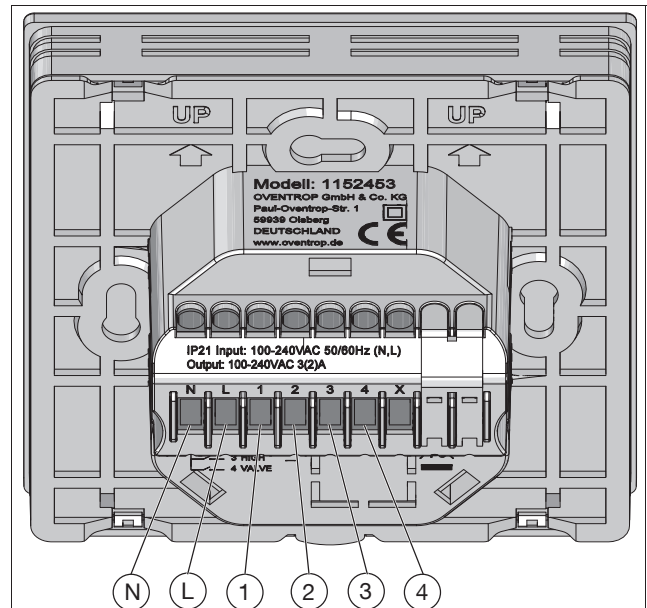

Illust. 4:   Release of the operating unit

2. Disconnect the plug of the ribbon cable from the operating unit and put the operating unit to one side.

ⓘ	Observe the correct positioning of the plug and the installation position of the ribbon cable.

3. Connect the base according to the assignment in Illust. 5.

Illust. 5:   Connection assignment

N	Neutral conductor
L	Phase
(1)	Fan speed 1 (LOW)
(2)	Fan speed 2 (MED)
(3)	Fan speed 3 (HIGH)
(4)	Valve control (Open/closed)

4. Install the base in the flush socket.

ⓘ	Ensure that the inscription "UP" is at the top.

5. Connect the ribbon cable plug of the base to the operating unit.

ⓘ	Observe the correct positioning of the plug and the installation position of the ribbon cable.

6. Fix the operating unit to the base. To do so, suspend the operating unit from the top, then press it down until it engages with an audible click.

▷ Installation is complete.

6.   Commissioning

6.1   Basic settings

The configuration menu allows for the adaptation of different basic settings of the room thermostat to your requirements.

6.1.1   Selection of the configuration menu

1.   When the room thermostat is switched on, you can switch it off by pressing the key "ON/OFF" ⏻.

▷   "OFF" will appear on the display.

2.   Press the key "Mode" **M** for more than 4 seconds.

▷   You are in the configuration menu. "CL" will appear on the display.

> ℹ️ If no key is pressed for 30 seconds, the device will switch to "OFF".

6.1.2   Setting and saving of parameters

▶   Press the key "Mode" repeatedly **M** until the menu option you want to set will appear.

▶   You can set the parameters of the respective menu option with the keys ⋀ or ⋁ .

▶   Press the the key "ON/OFF" to save your configuration.

> ℹ️ If no key is pressed for 30 seconds, the device will switch to "OFF".

Configuration table

Menu option	Default	Selection	Description
CL	0	-4° C to +4° C	The room thermostat is calibrated when leaving the factory. If the room thermostat cannot be positioned in such a way that the room temperature is measured without being influenced by external disturbance factors, the deviations can be compensated by modifying the settings. The value measured at a cold outer wall would, for instance, be lower than the actual room temperature. In this case, the value can be corrected upwards.
AH	25°C	20°C to 35°C	Select the maximum nominal value. During operation, this setting cannot be exceeded.
AL	5°C	5°C to 20°C	Select the minimum nominal value. During operation, this setting cannot be undercut.
rE	rE	rd/rE	Behaviour after a power failure. - When set to **"rE",** the ON or OFF position will be preserved and the last set position will be reactivated once the power supply will have been restored. - When set to **"rd",** the device will be in the "OFF" position once the power supply will have been restored.
LA	OFF	ON/OFF	Constant operation of the fan. - When set to **"OFF"**, the fan will run constantly when the device is switched on. - When set to **"ON"**, the fan will only be activated in case of "Heating" or "Cooling" demand.
PP	OFF	ON/OFF	Valve protection. - When set to **"ON"**, the valve will be opened for 30 seconds once every 24 hours. - When set to **"OFF"**, the valve protection will be deactivated.
CH	CO	CO/CH	- **"CO"** means "Cooling only" - **"CH"** means "Heating and Cooling" ℹ️ If you select "CO", the "Heating mode" will not be available.

|			
PSI	0	0/3/7	- **"0"** means that all time controlled functions are deactivated. - **"3"** means that you can set one time profile for 5 workdays, one time profile for Saturday and another one for Sunday. - **"7"** means that you can set a separate time profile for each day of the week.

6.2   Setting of the time

This menu will be available if you have set the menu option "PSI" to "3" or "7" in the basic settings (see section 6.1.2 on page 10).

1. Switch the device on.
2. Press the key "Fan speed" 🌀 for more than 5 seconds.
▷ The menu for setting the system time will be displayed.
3. Set the desired values with the keys ⋀ or ⋁ and confirm your entry with 🌀.
4. Press the key "ON/OFF" ⏻ to save you settings.

6.3   Setting of time profiles

- This menu will be available if you have set the menu option "PSI" to "3" or "7" in the basic settings (see section 6.1.2 on page 10).
- If no key is pressed in the menu for time profile setting for 30 seconds, the device will switch back to "ON".

1. Switch the device on.
2. Press the key "Mode"**M** for more than 5 seconds.
▷ The menu for setting the first switching point (getting up in the morning) will appear.
If you have set "PSI" to "3" in the basic settings, **Mon Tue Wed Thu Fri** will flash in the header.
If you have set "PSI" to "7" in the basic settings, **Mon** will flash in the header.
3. Select the days for which you want to set a time profile with the keys ⋀ or ⋁ and confirm your entries with the key "Mode" **M**.
4. Set the time for the switching point and confirm your entry with the key "Mode" **M**.
5. Set the temperature and confirm your entry with the key "Mode" **M**.
▷ Setting of the first switching point is complete. The menu will change to the settings for the next switching point.
6. Set the other switching points (leaving the house), (coming home), and (going to bed).
▷ The settings for the selected period are complete. The menu will change to the setting for the next day.
7. Set the desired values for the other days.
8. Leave the menu for time profile setting by pressing the key "ON/OFF" ⏻.
▷ Setting of the time profile is complete.

7.   Operation

7.1   Setting of the fan speed

The fan speed can be adjusted manually or automatically.

1. Switch the device on.
2. Press the key "Fan speed" 🍃 to switch between the different speeds.

ℹ️	During automatic operation, the fan speed will be governed by the difference between the measured room temperature (actual value) and the desired temperature (nominal value).

7.2   Setting of the mode

You can operate the room thermostat in the heating mode, cooling mode or fan mode, irrespective of the programmed time profiles.

7.2.1   Heating mode and cooling mode

ℹ️	If you have set the the menu option "PSI" to "3" or "7" in the basic settings (see section 6.1.2 on page 10), the values set here will remain in effect until the next switching point.

1. Switch the device on.
2. Press the key "Mode" **M** to switch between the different operating modi.
3. Select the heating mode or the cooling mode.

ℹ️	As the room thermostat with fan drive 230 V is a control unit for a two-pipe system, the fluid at the fan convector must be at **a suitable temperature**.
	Example: The room temperature amounts to 15°C. The desired temperature amounts to 22°C. If the fluid at the fan convector is hot, the room temperature will be heated to 22 °C as desired.
	If the fluid at the fan convector is cold, the room will be cooled down further.

⚠️ **CAUTION**
Health hazard due to too high or too low room temperatures
If the fluid at the fan convector is cold during heating operation or hot during cooling operation, the room temperature may deviate strongly from the desired temperature.
▶ Ensure that the fluid at the fan convector is at a suitable temperature.

4. Select the desired room temperature with the keys ⌃ or ⌄ .

5. Confirm your entry with the key "Mode" **M** or wait for more than 5 seconds.
▷ The desired room temperature will be saved. The symbol for "Manual mode" (see position (14) in Illust. 3) will appear on the display.

7.3   Sleeping mode

The sleeping mode serves the moderate room temperature adjustment for a pleasant sleep and energy saving.

- In the cooling mode, the temperature will be increased by one degree after one hour and by another degree after the next hour.

- In the heating mode, the temperature will be reduced by one degree after one hour and by another degree after the next hour.

|	
ℹ️	The sleeping mode will be available if the **time profiles** have been **deactivated** (The menu option "PSI" is set to "0" in the basic settings (see section 6.1.2 on page 10).)

1. Switch the device on.
2. Press the key "ON/OFF" ⏻ for more than 5 seconds.
▷ The sleeping mode will be activated. The symbol "Sleeping mode" 🌙 will appear on the display.

ℹ️	- To deactivate the sleeping mode, press one of the control keys.
	- You switch the device off by pressing the key "ON/OFF" ⏻ .

▷ The sleeping mode will be switched off after 8 hours.

8. Maintenance

NOTICE
Damage to the surfaces due to aggressive detergents
▶ Do not use hard or sharp objects, scouring agents or detergents harmful to plastics for cleaning. ▶ If required, clean the surfaces with a soft cloth. In case of heavy soiling, dampen the cloth **slightly** with water or a mild detergent. Do not apply pressure to the LED display.

9. Removal and disposal

9.1 Removal

⚠ **DANGER**
Danger to life due to electric current
Danger to life due to contact with live components.
▶ Completely disconnect the product from the power supply. ▶ Check that no voltage is present. ▶ Secure the product against switching back on.

9.2 Disposal

Guideline 2012/19/EU WEEE:
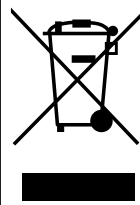
	Waste electrical and electronic equipment (WEEE) must not be disposed of with domestic waste, but must be dropped off at a collection point for the recycling of electrical and electronic appliances.

10. Appendix

10.1   Factory settings time profile "Cooling"

Day	Period 1		Period 2		Period 3		Period 4	
Monday	06:00 o'clock	24°C	08:00 o'clock	28°C	18:00 o'clock	24°C	22:00 o'clock	25°C
Tuesday	06:00 o'clock	24°C	08:00 o'clock	28°C	18:00 o'clock	24°C	22:00 o'clock	25°C
Wednesday	06:00 o'clock	24°C	08:00 o'clock	28°C	18:00 o'clock	24°C	22:00 o'clock	25°C
Thursday	06:00 o'clock	24°C	08:00 o'clock	28°C	18:00 o'clock	24°C	22:00 o'clock	25°C
Friday	06:00 o'clock	24°C	08:00 o'clock	28°C	18:00 o'clock	24°C	22:00 o'clock	25°C
Saturday	06:00 o'clock	24°C	08:00 o'clock	28°C	18:00 o'clock	24°C	22:00 o'clock	25°C
Sunday	06:00 o'clock	24°C	08:00 o'clock	28°C	18:00 o'clock	24°C	22:00 o'clock	25°C

10.2   Factory settings time profile "Heating"

Day	Period 1		Period 2		Period 3		Period 4	
Monday	06:00 o'clock	21°C	8:00 o'clock	16°C	18:00 o'clock	21°C	22:00 o'clock	20°C
Tuesday	06:00 o'clock	21°C	8:00 o'clock	16°C	18:00 o'clock	21°C	22:00 o'clock	20°C
Wednesday	06:00 o'clock	21°C	8:00 o'clock	16°C	18:00 o'clock	21°C	22:00 o'clock	20°C
Thursday	06:00 o'clock	21°C	8:00 o'clock	16°C	18:00 o'clock	21°C	22:00 o'clock	20°C
Friday	06:00 o'clock	21°C	8:00 o'clock	16°C	18:00 o'clock	21°C	22:00 o'clock	20°C
Saturday	06:00 o'clock	21°C	8:00 o'clock	16°C	18:00 o'clock	21°C	22:00 o'clock	20°C
Sunday	06:00 o'clock	21°C	8:00 o'clock	16°C	18:00 o'clock	21°C	22:00 o'clock	20°C