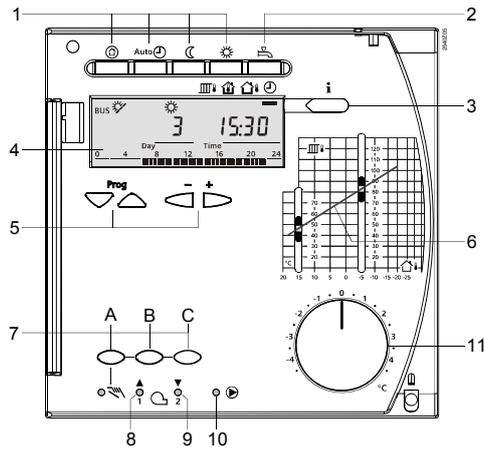


Operating Instructions – Heating Controllers
RVL479, RVL480, RVL481, RVL482

Content

Overview, display, and symbols	4
Info button.....	7
Operating modes	8
Switching the heating ON	9
D.h.w. heating.....	10
Room temperature is not correct	12
Departing from the heating program.....	14
Querying and readjusting the setting values.....	15
Selecting the room temperature setpoints.....	16
Changing the heating program	17
Entering the holidays	20
Querying or readjusting the d.h.w. temperature	21
Changing switching program 2	22
Setting the clock	24
Tips.....	25
Faults and manual operation	27



Overview – what is where?

- 1 Operating mode buttons. The button indicating the current operating mode is lit
- 2 Button for d.h.w. heating ON / OFF (only RVL481, RVL482)
- 3 Info button
- 4 Display
- 5 Buttons for programming the setting values
- 6 Adjustment of heating curve
- 7 Buttons for manual operation:
A = manual operation ON (LED  lit)
For buttons B and C, refer to page 29
- 8 LED for actuator OPENS or 1st burner stage ON
- 9 LED for actuator CLOSES or 2nd burner stage ON
- 10 LED for pump ON
- 11 Knob for room temperature readjustments

Meaning of symbols on the display

-  NORMAL heating
-  REDUCED heating
- ECO** No heating required according to the prevailing outdoor temperature
-  Holiday mode
-  Heating OFF (frost protection ensured)
-  Solar d.h.w. charging (only RVL481, RVL482)
-  Fault in the plant
-  One of the maximum limitations is active
-  One of the minimum limitations is active
- BUS** Controller connected to the data bus

You want to obtain information

Press **i** several times to display the:

-  Time of day
-  Outdoor temperature
-  Room temperature (only if a sensor is used)
-  Flow or boiler temperature

 The marking  indicates the displayed variable.

The info selected last is permanently displayed!

The different operating modes

-  Heating OFF
- Auto  Automatic heating up and setback according to the heating program / Heating automatically OFF during the holiday period entered / Heating automatically OFF if permitted by the prevailing outdoor temperature (ECO function)
-  Continuously REDUCED heating
-  Continuously NORMAL heating
-  Frost protection ensured in all operating modes
-  Remote operation with a room unit is only possible in AUTO mode.
If the Auto  button flashes, the room unit overrides the controller's heating program.

In AUTO mode, the controller operates fully automatically throughout the year.

You want to switch the heating ON

- Is the heating plant ready to operate? Check position of the mains isolator
- Press **i** button several times until the display shows the weekday and the time of day. Make corrections, if necessary
- Check date and time. Make corrections, if necessary
- Press **Auto**  for AUTO mode
- Activate the d.h.w. heating  (only RVL481, RVL482)

Practice-oriented and proven values were entered by your heating engineer when the controller was commissioned!

You want d.h.w. heating

(Only RVL481, RVL482)

Press  to switch d.h.w. heating ON (button lit) and OFF (button extinguished).

When the button is lit, the controller provides d.h.w. heating at the following times, depending on the settings made by your heating engineer:

- According to switching program 2
- According to the heating program
- 24 hours per day

Mark with a cross whichever applies)

For plants with d.h.w. storage tank, press  until the button flashes to charge it manually (not possible in plants where d.h.w. is heated electrically).

The d.h.w. is heated with a solar collector provided that your plant is equipped accordingly. The symbol  indicates that solar d.h.w. is heated.

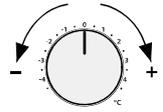
 D.h.w. heating is independent of the controller's operating mode.

During the holiday period, d.h.w. is not heated.

Room temperature is not correct

If the room temperature is never correct, neither in mild **nor** in cold weather, make a room temperature readjustment with the setting knob:

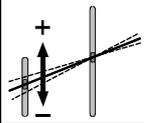
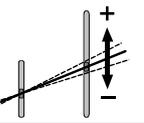
- Room temperature too low:
Turn the knob toward +
- Room temperature too high:
Turn the knob toward –



The setting knob's scale gives the room temperature readjustment in °C.

If the room temperature is not correct in mild weather only **or** in cold weather only, make the readjustment with the heating curve. For that purpose, there are three setting choices available, depending on the entries made by your heating engineer.

To make a readjustment, proceed as follows:

Setting choice	Room temperature not correct in <i>mild</i> weather	Room temperature not correct in <i>cold</i> weather
<input type="checkbox"/> Analog	Use slider on the left and readjust by about 5 °C 	Use slider on the right and readjust by about 5 °C 
<input type="checkbox"/> Digital	Readjust line 14 by about 5 °C	Readjust line 15 by about 5 °C
<input type="checkbox"/> Via data bus	Contact plant operator	Contact plant operator

(☒ Mark with a cross whichever applies)

After having made a readjustment, wait two days – the room temperature requires a certain time to adapt!

You don't want to heat according to the heating program

- No setback:
Press  to select NORMAL mode
- Reduced heating:
Press  to select REDUCED mode

 Don't forget to return to the normal heating program!

The controller operates according to the heating program only when in AUTO mode.

How to query or readjust setting values

- Press ▼ or ▲ to access the setting level
 - The settings are assigned to several lines:
 - ▼ Select next line below
 - ▲ Select next line above
 - Readjustment of values:
 - ◀ Decrease
 - ▶ Increase
 - The value is adopted by selecting the next line or by leaving the setting level
 - Leaving the setting level: Press button of the required operating mode, or the info button, or automatically after 30 minutes
-  For list of lines, refer to the last page of these instructions.

If you wish to practice, reset the time of day (refer to page 24).

You want to select other room temperature setpoints

To select lines: Press  and 
To readjust values: Press  and 

- On line **1**, change the setpoint of NORMAL heating (display ).
Standard setting: **20 °C**
- On line **2**, change the setting of REDUCED heating (display ).
Standard setting: **14 °C**
- On line **3**, change the setpoint of protection and holiday mode (display ).
Standard setting: **10 °C**

To leave the setting level: Select the required operating mode.

Don't forget temperature-sensitive objects like plants!

You want to change the heating program

To select lines: Press ▼ and ▲
To readjust values: Press ← and →

For the daily heating up and setback, the controller comes with the following standard heating program:

- Daily from 06:00 to 22:00: NORMAL heating
- Daily from 22:00 to 06:00: REDUCED heating



You can enter a maximum of three heating periods per day. For each heating period, the following times need to be entered:

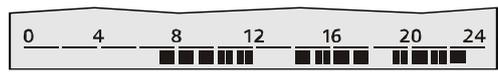
- Start of NORMAL heating
- End of NORMAL heating

Procedure:

1. On line **4**, select the weekday whose times you want to change:
1 = Monday, 2 = Tuesday, etc.
1-7 = all weekdays
 2. On line **5**, set the time for the start of NORMAL heating.
 3. On line **6**, set the time for the end of NORMAL heating.
- If additional daily heating periods are required:
4. On lines **7** and **8**, set the times required for the start and the end of the **2nd heating period**.
 5. On lines **9** and **10**, set the times required for the start and the end of the **3rd heating period**.
- To cancel a heating period, change line **5**, **7** or **9** until --:-- appears.

To leave the setting level: Select the required operating mode.

Example of a 24-hour program with three heating periods:



NORMAL heating from 07:00 to 12:00, from 14:00 to 18:00,
and from 19:00 to 23:00

If the settings for the weekend differ from the other weekdays, first enter the times for the entire week (1-7); then, change weekdays 6 and 7.

You want to enter your holidays

To select lines: Press  and 

To readjust values: Press  and 

The data for a maximum of eight holiday periods can be entered. To enter the data for one period, proceed as follows:

1. Line **11** : Enter the number of the holiday period.
2. Line **12** : Enter the date of the first day.
3. Line **13** : Enter the date of the last day (possible only when an entry on line **12** has been made).

To cancel an entry, change line **12** until --.-- appears on the display. When a holiday period has elapsed, its data will be cancelled.

To leave the setting level: Select the required operating mode.

 No d.h.w. heating during the holiday period (only RVL481, 482).

Before making any entries, prepare a holiday plan.

You want to query the d.h.w. temperature or readjust the d.h.w. setpoint

(Only RVL481, RVL482)

To select lines: Press  and 
To readjust values: Press  and 

- Set the NORMAL d.h.w. temperature setpoint on line 26. The standard setting is 55 °C
- Query the current d.h.w. temperature on line 27
- Set the REDUCED d.h.w. temperature setpoint on line 28. This setpoint is used during the OFF periods of the selected program. The standard setting is 40 °C

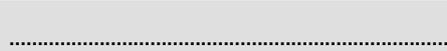
To leave the setting level: Select the required operating mode.

Excessive d.h.w. temperatures increase the risk of scalding and produce more scale!

You want to change switching program 2

(Only RVL481, RVL482)

In addition to the switching program for the heating periods, the controller has a second switching program. In your plant, your heating engineer has assigned it to



The factory settings are as follows:

- Daily from 05:00 to 22:00: ON
- Daily from 22:00 to 05:00: OFF

Each day can accommodate a maximum of three ON periods. The following time settings are required for each ON period:

- Start of ON period
- End of ON period

If you want to make changes, proceed as follows (analogous to the switching program for the heating periods):

To select lines: Press ▼ and ▲

To readjust values: Press ◀ and ▶

1. On line 31, select the weekday whose times you want to change:
1 = Monday, 2 = Tuesday, etc.
1-7 = all weekdays
 2. On lines 32 and 33, set the times required for the start and the end of the 1st ON period.
 3. On lines 34 and 35, set the times required for the start and the end of the 2nd ON period.
 4. On lines 36 and 37, set the times required for the start and the end of the 3rd ON period.
- To cancel an ON period, change line 32, 34 or 36 until --:-- appears.

To leave the setting level: Select the required operating mode.

You want to set the clock

To select lines: Press ▼ and ▲

To readjust values: Press ← and →

1. To set the time of day: select line **38**
2. The weekday on line **39** (1 = Monday, 2 = Tuesday, etc.) is set automatically with the date
3. Use the same procedure just as for the time of day:
 - the date (day and month) on line **40**
 - the year on line **41**

To leave the setting level: Select the required operating mode.

 The change from wintertime to summertime, and vice versa, is made automatically.

Savings tips without sacrificing comfort

- During the day, make certain that room temperatures of 21 °C will not be exceeded. Every degree above that level will increase heating costs by 6 to 7 %
- Renew the air in the house quickly, with windows fully open
- Set the thermostatic radiator valves in unoccupied rooms to their frost protection position
- Radiators should not be covered by curtains, furniture, etc., as these reduce heat emissions
- Closed window shutters, blinds, etc., reduce heat losses to the environment
- Check heating energy consumption at regular intervals
- Make certain that the d.h.w. temperature setting is not unnecessarily high (only RVL481, RVL482)

Tips to follow if something seems wrong

- The heating does not work:
 - Check the display. If **ECO** (economy) is shown, no heating is currently required due to high outdoor temperatures!
- The heating always maintains the same room temperature:
 - Check the operating mode used (only AUTO mode provides setback and heats up again)
- The control has a room unit, but it cannot be operated:
 - Check controller's operating mode. To enable the controller to be operated from the room unit, it must be in AUTO mode
- The required room temperature is reached either too early or too late:
 - Change the heating program
 - If the building is well insulated, you can expect long cooling down times

Faults and manual operation

If you are uncertain:

- Is the plant switched ON?
- Are all plant fuses in order?
- Is sufficient fuel in the tank?
- Has the controller been readjusted by unauthorized persons? (Time of day, setpoints, etc.)
- Check the display. If  is shown, line 50 displays an error code:
 - 10 = fault outside sensor
 - 11 = fault solar sensor
 - 12 = fault wind sensor
 - 20 = fault boiler temperature sensor
 - 30 = fault flow temperature sensor
 - 40 = fault return temperature sensor
 - 42 = fault return temperature sensor
 - 50 = fault storage tank temperature sensor/control thermostat 1

- 52 = fault storage tank temperature sensor/control thermostat 2
- 54 = fault d.h.w. flow temperature sensor
- 60 = fault room temperature sensor
- 61 = fault room unit
- 62 = wrong room unit connected
- 73 = fault collector sensor
- 81 = short-circuit on the bus
- 82 = same bus address assigned several times
- 100 = two clock masters on the bus
- 120 = flow alarm
- 140 = inadmissible bus address or plant type
- 142 = no partner unit on the data bus

These error codes are very useful for service staff.

If the controller uses a room temperature sensor (room unit):

- Is the sensor affected by drafts, direct solar radiation, etc.?
- Is the sensor affected by heat gains, such as people, machines, lighting, etc.?
- Is the sensor covered by furniture, curtains, etc.?
- Are all thermostatic radiator valves in the "sensor's room" in the fully open position?

The control no longer works:

- If the heat source and the heating circuit pumps still operate: Press button **A** to switch to **manual operation**:
- 
- Heating plant with a valve:
The valve can be operated manually by pressing button **B** (OPENING) or **C** (CLOSING)
 - Heating plant with no valve:
The burner runs continuously. With two-stage burners,

the second stage can be switched ON and OFF by pressing button **C**. In the case of modulating burners, modulation can be changed by pressing button **B** (OPEN) or **C** (CLOSE) (only with RVL482)

- **D.h.w. heating** (only with RVL481, RVL482):
The pumps used for d.h.w. heating run continuously. If the d.h.w. plant uses a mixing valve, you can drive it manually to the required position.
In plants with a changeover valve, d.h.w. heating is not possible.

 Switch manual operation OFF again: Press button **A** or select the required operating mode.

The heat source no longer works:

- The burner has gone to lockout: Press the reset button!
- The heating circuit pump and / or the boiler pump do not operate: Check the fuses!

– The coupling mechanism between actuator and valve is disengaged: Engage it!

☞ If you cannot correct the problem, call in your heating engineer.

Address and phone no. of your heating engineer:

- 1 Setpoint of NORMAL heating ☼
- 2 Setpoint of REDUCED heating ☾
- 3 Setpoint of holiday period / protection mode ☺
- 4 Weekday (1 to 7), for entering the heating program
- 5 to 10 Entry of heating phases for the heating program
- 11 Number of the holiday period (1 to 8) ☐
- 12 First day of the holiday period (day.month) ☐
- 13 Last day of the holiday period (day.month) ☐
- 14 Heating curve, flow temperature at +15 °C
- 15 Heating curve, flow temperature at -5 °C
- 26 NORMAL d.h.w. temperature setpoint 📄
- 27 Actual value of the d.h.w. temperature 📄
- 28 REDUCED d.h.w. temperature setpoint 📄
- 31 to 37 Entries for switching program 2
- 38 to 41 Settings the yearly clock (time, weekday, date and year)
- 50 Display of faults (refer to page 27)

Displays depend on controller and plant type.