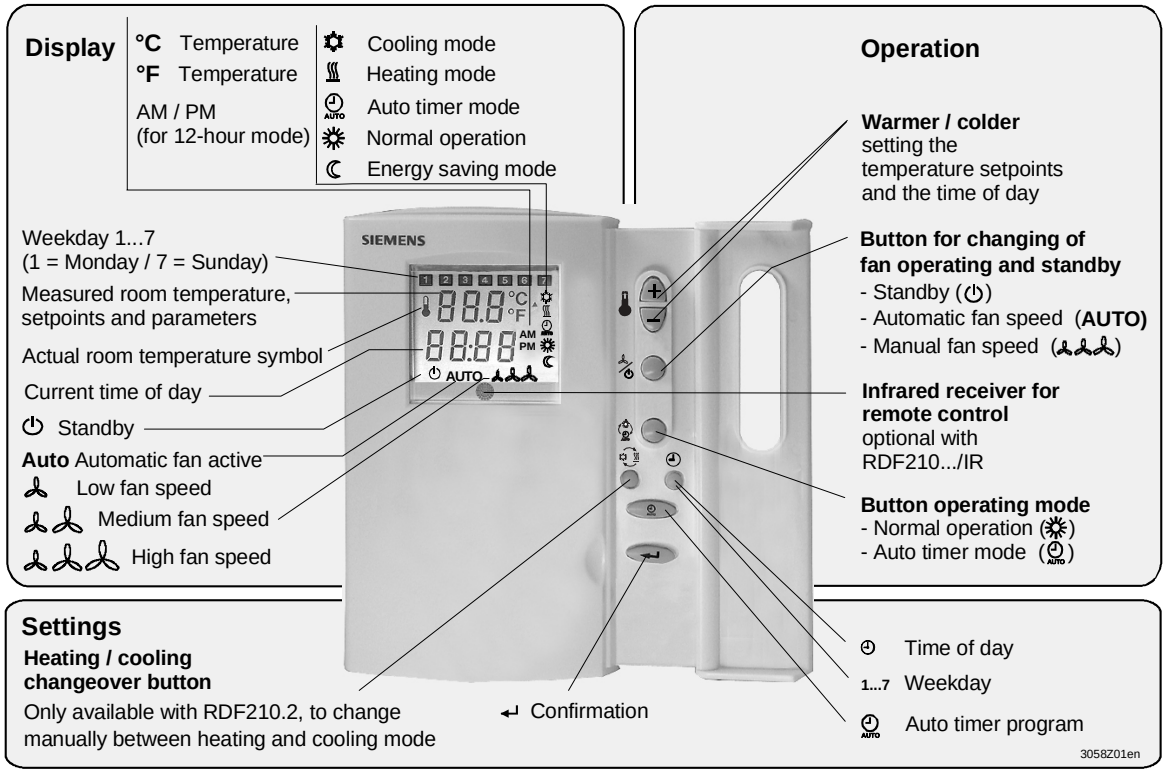
SIEMENS

# en Operating Instructions RDF210…

RDF210... – the temperature controller that allows you to set the ideal room temperature you want. The controller provides normal operation or auto timer mode with 8 programmable timers. The fan operates either in automatic mode or at the selected speed when using manual mode. You can either rely on the factory settings or make adjustments that suit your individual needs.




### Setting the time of day and the weekday

1. Keep the button pressed until the time digits start to flash and then press or to set the time of day. *If the current time is the 24-hour format and you wish to change to the 12-hour format, press passing 23:59 or press passing 00:00. Vice versa back to the 24-hour format.*
2. Confirm the time of day by pressing and the weekday indicator starts to flash.
3. Press or to set the current weekday.
4. Confirm the current weekday by pressing .

### Are your rooms too warm or too cold?

Only applicable in normal operation.
Pressing or allows you to increase or decrease the current room temperature setpoint for normal operation in increments of 0.5 °C. The maximum setting range is from 5...40 °C, unless it is limited by parameters P05 and P06.

### Do you want to set your controller to standby?

Press the button several times until the display shows the symbol to indicate that standby is selected.

In standby , the controller maintains the adjusted lower setpoint of heating (parameter P03) or the higher setpoint of cooling (parameter P04).
**Important:**
If the setpoint of standby is set to **OFF** (factory setting)**,** the controller will not be active in standby.

**Risk of frost!**

### Do you want to change the fan mode?

Press the button until you have selected the desired fan mode.

**AUTO**

In automatic mode, the fan speed is automatically selected by the controller and depends on the setpoint and the actual room temperature. When the room temperature has reached the setpoint, the fan switches off.

In manual mode the fan operates independently and always runs at the same speed: Low, medium or high.

The actual fan speed is indicated by the number of fan symbols.

Low fan speed

Medium fan speed

High fan speed

### Do you want to change from heating to cooling mode?

With the RDF210, the changeover between cooling and heating is done either automatically by a heating / cooling changeover sensor or a remote changeover switch. If the controller is commissioned *cooling only* or *heating only,* no changeover is possible (see parameter P22; factory setting cooling only).

With the RDF210.2, when pressing the button, the controller changes from heating to cooling or vice versa.

### Do you want to change to auto timer mode?

Press the button once to select auto timer mode . In auto timer mode, the controller will automatically change over between normal operation and energy saving mode according to the 8 preprogrammed timers.

### Do you want to set the programmable timer settings?

To adjust the time schedule, keep the button pressed for 3 seconds to go to the programmable timer setting mode.
This mode is indicated by displaying Ax (x= auto timer 1...8) and the time xx:xx flashing. For each auto timer, proceed as follows:

1. The and symbols are displayed. Press or to adjust the normal operation start time and confirm by pressing .
2. The and symbols are displayed. Press or to adjust the normal operation end time or energy saving start time respectively and confirm by pressing .
3. Symbol 1 will flash. Press or to select or deselect each day and advance to the next day. Confirm setting for actual timer by pressing and advance to the next timer

The controller will leave the programmable timer setting mode if no button is pressed within 20 seconds. All changes made after the last press of button will not be saved.

### Do you want to view the programmable timer settings?

| | |
|---|---|
| | Press the button to sequentially review the 8 auto timers. |

### Do you want to reload the default timer settings?

1. Set the controller to standby.
2. Press + and − simultaneously for 3 seconds. Release them and, within 2 seconds, press 2 times .

| | Day/s | Time when controller is in normal operation | |
|---|---|---|---|
| Default settings | Mo (1) – Fr (5) | 06:30 – 08:30 (A1) | 17:30 – 22:30 (A2) |
| | Sa (6) | 08:00 – 23:00 (A3) | |
| | Su (7) | 08:00 – 22:30 (A4) | |
| | | - in the remaining time controller is in energy saving<br>- timer A5…A8 are free, no default setting | |

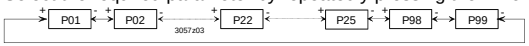
### Changing the control parameters

To optimize the control performance, a number of control parameters can be adjusted. This can also be made during operation without opening the controller.

If you want to change the control parameters, proceed as follows:

(For factory settings, see table on the right-hand side)

1. Set the controller to standby
2. Press + and − simultaneously for a minimum of 3 and a maximum of 5 seconds. Release them and, within 2 seconds, press the + again for 3 seconds. The display will show "P01".
3. Select the required parameter by repeatedly pressing the + or − button:




4. Press + and − simultaneously. The current value of the selected parameter will appear, which can be changed by repeatedly pressing + or −.
5. By pressing + and − simultaneously again or 5 seconds. after the last press of a button, the last parameter will be displayed again.
6. If you wish to display and change additional parameters, repeat steps 3 through 5.
7. 10 seconds after the last display or setting, all changes are stored and the controller will return to standby.
8. Switch to normal operation with the button.

### Recalibrating the sensor

If the room temperature displayed by the controller does not agree with the temperature effectively measured, the temperature sensor can be recalibrated. For that purpose parameter P07 must be changed.

Proceed as described under "Changing the control parameters" and follow steps 1 through 3 to select parameter P07.

With step 4, the room temperature displayed can now be matched to the temperature effectively measured. Each push of the + or − button changes the temperature by + or – 0.5 °C up to a maximum of + / - 3 °C.

With step 7, the recalibration is automatically stored 10 seconds after the last readjustment.

### Commissioning (by qualified HVAC staff)

(all temperature settings can be made in increments of 0.5 K)

| Para-meter | Controller's parameter factory settings: | | Setting range | RDF210 | RDF210.2 |
|---|---|---|---|---|---|
| P01 | Setpoint of heating in energy saving mode ($Wheat_{Eco}$) | 16 | OFF, 5 °C…$Wcool_{Eco}$ | | |
| P02 | Setpoint of cooling in energy saving mode ($Wcool_{Eco}$) | 28 | OFF, $Wheat_{Eco}$…40 °C | | |
| P03 | Setpoint of heating in standby ($Wheat_{Stb}$) | OFF | OFF, 5 °C…$Wcool_{Stb}$ | | |
| P04 | Setpoint of cooling in standby ($Wcool_{Stb}$) | OFF | OFF, $Wheat_{Stb}$ …40 °C | | |
| P05 | Minimum setpoint limitation in normal operation ($Wmin_{Norm}$) | 5 °C | 5 °C…$Wmax_{Norm}$ | | |
| P06 | Maximum setpoint limitation in normal operation ($Wmax_{Norm}$) | 35 °C | $Wmin_{Norm}$…40 °C | | |
| P07 | Sensor calibration | 0 K | -3…+3 K | | |
| P08 | Switching differential heating SDH | 2 K | 0.5…+4K | | |
| P09 | Switching differential cooling SDC | 1 K | 0.5…+4K | | |
| P10 | Switching differential fan speed 2 in heating operation mode SDH2 | 1 K | 0.5…+4K | | |
| P11 | Switching differential fan speed 2 in cooling operation mode SDC2 | 1 K | 0.5…+4K | | |
| P12 | Switching differential fan speed 3 in heating operation mode SDH3 | 1 K | 0.5…+4K | | |
| P13 | Switching differential fan speed 3 in cooling operation mode SDC3 | 1 K | 0.5…+4K | | |
| P14 | Dwelling time of auto fan speeds | 2 min. | 1…5 minutes | | |
| P15 | Minimum output on-time (Y11) | 1 min. | 1…10 minutes | | |
| P16 | Minimum output off-time (Y11) | 1 min. | 1…10 minutes | | |
| P17 | Selection of °C or °F | °C | °C or °F | | |
| P18 | Display of temperature or setpoint | ON | OFF: Setpoint<br>ON: Room (or return air) temperature | | |
| P20 | Fan control in energy saving mode | OFF | OFF in dead zone<br>ON in dead zone | | |
| P21 | Fan control in normal operation | OFF | OFF in dead zone<br>ON in dead zone | | |
| P22 | Heating / cooling mode | 1: Cooling only | 0: Heating only<br>1: Cooling only<br>2: Automatic c/h changeover | | X |
| P23 | Heating / cooling changeover switching point cooling | 16°C | 10…25 °C | | X |
| P24 | Heating / cooling changeover switching point heating | 28°C | 27…40 °C | | X |
| P25 | Infrared receiver (only with RDF.../IR) | 1 | 0: Disabled<br>1: Enabled | | |
| P98 | Active temperature sensor | Diagnostic value | 0: Internal sensor<br>1: External sensor | | |
| P99 | Value of current heating / cooling changeover temperature reading or indication of current mode | Diagnostic value | 100 = input open → heating mode<br>0…49 °C = cur. temp. value<br>00 = input bridged → cooling mode<br>OFF= not commissioned as automatic c/h changeover | | X |

### Legend to table

| | | | | | |
|---|---|---|---|---|---|
| | Adjustable: Please record all changes you make | | Not adjustable / display only | X | Not adjustable / no display |