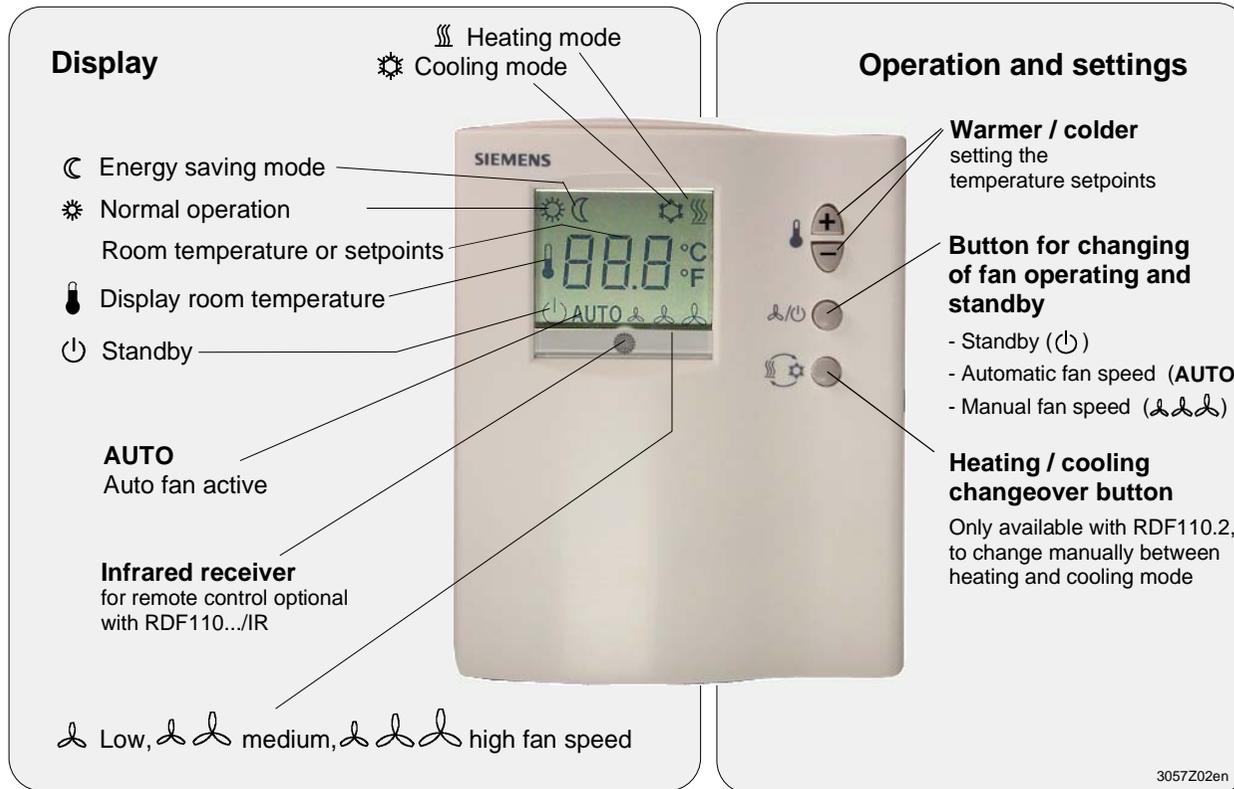


## en Operating Instructions

## RDF110...

RDF110... – the temperature controller that allows you to set the ideal room temperature you want. 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.



### 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). <b>Important:</b> If the setpoint of standby is set to <b>OFF</b> (factory setting), this means the controller will not be active in standby.
⚠	<b>Risk of frost!</b>

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

🌀/🔌	Press the 🌀/🔌 button until you have selected the desired fan mode.
<b>AUTO</b>	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 RDF110, 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 <i>cooling only</i> or <i>heating only</i> , no changeover is possible (see parameter P22: factory setting <i>cooling only</i> ).
☀/☀	With the RDF110.2, when pressing the ☀ button, the controller changes from heating to cooling or vice versa.

### Do you want to change to Energy saving mode?

☀/☾	With the RDF110 only, a changeover from normal operation or standby to energy saving mode takes place automatically via an external contact such as window switch, key card switch etc. In energy saving mode the AUTO fan speed is active.
🔌/☾	

### Energy saving mode

☾	If you want to change the factory-set temperature setpoints (16 °C for heating and 28 °C for cooling), follow the procedure "Changing the control parameters". <b>Important:</b> The setpoint of energy saving mode can be set to <b>OFF</b> . This means that the controller is not active in energy saving mode and symbol AUTO will not appear.
⬆ ⬇ ⬆	
⚠	<b>Risk of frost!</b>

## Commissioning (by qualified HVAC staff)

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

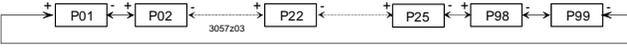
Parameter	Controller's parameter factory settings:		Setting range	RDF110	RDF110.2
P01	Setpoint of heating in energy saving mode	(Wheat <sub>Eco</sub> )	16	OFF, 5 °C...Wcool <sub>Eco</sub>	X
P02	Setpoint of cooling in energy saving mode	(Wcool <sub>Eco</sub> )	28	OFF, Wheat <sub>Eco</sub> ...40 °C	X
P03	Setpoint of heating in standby	(Wheat <sub>Stb</sub> )	OFF	OFF, 5 °C...Wcool <sub>Stb</sub>	
P04	Setpoint of cooling in standby	(Wcool <sub>Stb</sub> )	OFF	OFF, Wheat <sub>Stb</sub> ...40 °C	
P05	Minimum setpoint limitation in normal operation	(Wmin <sub>Comf</sub> )	5 °C	5 °C...Wmax <sub>Comf</sub>	
P06	Maximum setpoint limitation in normal operation	(Wmax <sub>Comf</sub> )	35 °C	Wmin <sub>Comf</sub> ...40 °C	
P07	Sensor calibration		0 K	-3...+3 K	
P08	Switching differential heating mode SDH		2 K	0.5...+4K	
P09	Switching differential cooling mode 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 for °C or °F		°C	°C or °F	
P18	Display of temperature or setpoint		ON	OFF: setpoint ON: Room (or return air) temperature	
P19	Operating action of remote changeover input		0	0: Normally open (N.O) 1: Normally closed (N.C.)	X
P20	Fan control in energy saving mode		OFF	OFF in dead zone ON in dead zone	X
P21	Fan control in normal operation		OFF	OFF in dead zone ON in dead zone	
P22	Heating / cooling mode		1: Cooling only	0: Heating only 1: Cooling only 2: Automatic H/C 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 1: Enabled	
P98	Active temperature sensor		Diagnostic value	0: Internal sensor 1: External sensor	X
P99	Value of current heating / cooling changeover temperature reading and indication of current mode		Diagnostic value	100 = input open →  mode 0...49 °C = cur. temp. value 00 = input bridged →  mode OFF= not commissioned as automatic H/C changeover	X

## 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 left hand side)



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

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

## 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.

## Legend to table

	Adjustable: please record all changes you make
	Not adjustable / display only
X	Not adjustable / no display