

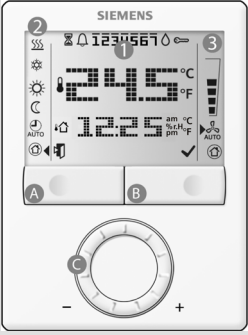
RDG100KN / RDG160KN / RDG165KN – the room thermostat with KNX communications that allows you to set the ideal room temperature you want. The thermostat provides Comfort, Economy and Protection mode.

In addition it can operate in Auto timer mode according to a schedule via KNX bus.

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.

Humidity control is available on RDG165KN.



<p>1 Main display</p> <ul style="list-style-type: none"> 24.5 Room temperature 12.5 Outdoor temperature Room temperature in degrees Celsius Room temperature in degrees Fahrenheit %r.H Humidity Button lock active Fault indicator * Condensation in the room * Humidity control active Timer function active 1234567 Weekday 1 = Monday 7 = Sunday 12:25 Additional user info, e.g. current time of day, or rel. humidity Escape (Cancel) Confirm (OK) 	<p>2 Operating mode</p> <ul style="list-style-type: none"> Heating mode AUX Electric heater active Cooling mode Comfort mode Economy mode Auto timer mode Protection mode: Protection against frost Indicator for mode selection
<p>A Operating mode button</p> <p>B Fan mode button</p> <p>C Rotary knob</p>	<p>3 Fan mode</p> <ul style="list-style-type: none"> Automatic fan Manual fan: Low Medium High

* Needs to be configured by your HVAC installer

Changing the room temperature



- Turn the rotary knob clockwise (+) to increase, or counterclockwise (-) to decrease the current room temperature setpoint. The thermostat changes to Comfort mode .
- The setting range is from 5...40 °C; it can be limited by parameters P09 and P10. (for parameter settings, see reverse side).

Adjusting the fan speed



- Press the right button repeatedly until the desired fan mode is reached.
- In Automatic mode , the fan speed is automatically selected by the thermostat depending on the setpoint and the actual room temperature.
 - RDG100KN: When the room temperature reaches the setpoint, the fan keeps running at low speed (factory setting).
 - RDG16..KN: The fan stops (factory setting) or keeps running at low speed (P15).
- In Manual mode, the fan operates independently and always runs at the speed you set: low / medium / high.

Note:
If desired, you can change the fan mode selector option via P03: Auto / manual, Manual only, or Manual including Protection mode.

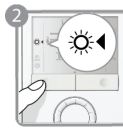
Changing the operating mode of the thermostat

Press the operating mode button repeatedly until the symbol points to the operating mode you desire.

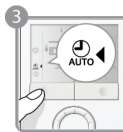


- 1. Protection mode**
- In protection mode, the plant stops operating. However, if the room temperature falls below 8 °C, heating is switched on to protect the room against frost.
 - RDG165KN: the thermostat switches to protection mode when the window contact (local or on KNX) is active.

The setpoints for Protection mode can be changed by your HVAC installer if desired:
Changes made by installer: Frost protection: _____ °C Heat protection: _____ °C



- 2. Comfort mode**
- In Comfort mode, the thermostat maintains the room temperature on the setpoint which can be adjusted with the rotary knob.
 - RDG165KN: the thermostat switches to Comfort mode when the presence detector (local or on KNX) is active (room is occupied).



- 3. Auto Timer mode**
- In Auto Timer mode, the thermostat automatically switches over between Comfort and Economy mode according to the schedule via KNX bus. If no schedule via KNX is available, then Auto Timer is replaced by Comfort.



- 4. Economy mode**
- In Economy mode, the thermostat maintains the room temperature at a lower or higher setpoint, thus saving energy and money.
 - The thermostat can be set to Economy mode *either* by pressing the operating mode button if enabled (P02 = 2), *or* via an external signal (switch or KNX bus command) such as window switch (RDG1..0KN), keycard or presence detector.
 - The Economy setpoints are factory-set to 15 °C for heating and 30 °C for cooling. They can be adjusted via parameters P11 and P12 (for parameter settings, see reverse side).

Important: These setpoints can be set to OFF; which means that the thermostat is not active, i.e. no protective heating or cooling function. **Risk of frost!**

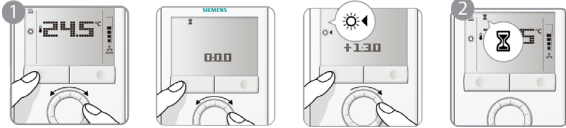
Changing from heating to cooling mode



- The changeover from heating to cooling (or vice versa) is made
 - either *automatically* by a changeover sensor, or a changeover switch, or a remote changeover switch via KNX command.
 - or manually by pressing the operating mode button.
 If the thermostat is configured for "heating only" or "Cooling only", changeover is not available (see parameter P01)
- To select cooling or heating manually (P01=2), press the operating mode button until the symbol points to the mode you desire.
- With automatic changeover or continuous heating / cooling, symbols / indicate that the system currently heats or cools.
- With manual changeover, symbols / indicate that the system currently operates in heating or cooling mode. Symbols / indicate that the system currently heats or cools.

Timer to extended presence or absence (RDG1..0KN only)

The Comfort and Economy modes can be temporarily extended by 0.5 to 9.5 hours using the timer.



- To set the timer, press and hold the operating mode button. While holding the button, turn the rotary knob clockwise or counterclockwise as required.
 - Turn the rotary knob clockwise to extend Comfort mode.
Display: ☀ 0...+9:30
 - Turn the rotary knob counterclockwise to extend Economy mode.
Display: ☾ 0...-9:30
- Release the operating mode button and the mode is temporarily changed, indicated by ⌚ symbol.
 - After the temporary timer has elapsed, the thermostat will resume operation in the operating mode according to schedule via bus (if available). Without schedule:
 - when extended Comfort mode ends → new operating mode = Economy
 - when extended Economy mode ends → new operating mode = Comfort
 - If Economy mode cannot be selected via the operating mode button (P02 ≠ 2), Protection mode will be used for extended absence instead.
 - The temporary timer function is aborted whenever a new setting is made.

Temporary timer to extend the Comfort mode

When the operating mode is Economy (commanded by schedule via KNX or by an external signal, e.g. keycard), it can be set back to Comfort temporarily by pressing the operating mode button. The ⌚ symbol will appear.

Pressing the operating mode button again will stop the timer.

This function is only available when parameter P02 = 1. Duration: * P68 = 0...360 min, factory setting = 0 min.
* Needs to be configured by your HVAC installer.

Humidity control (RDG165KN only)

Humidity in the room is controlled by shifting temperature setpoint and release of external equipment (dehumidifier / humidifier). When the relative humidity in the room exceeds the limitation (max. or min.), the 💧 symbol displays and the thermostat controls the humidity in the room.

- Set the maximum humidity limitation via P21; Set the minimum humidity limitation via P22.
- Relative humidity value (% r.H) displays when P07=5 (factory setting).

Reminder clean filter and display of external faults

FIL * This message reminds you to clean the filter on your HVAC equipment. It will appear after "fan operating hours" and disappear when the thermostat is set to Protection.

AL1 * These fault messages tell you an external fault has occurred *:
AL2 * **AL2 :**
AL3 * **AL3 :**

* Needs to be configured by your HVAC installer

Button lock

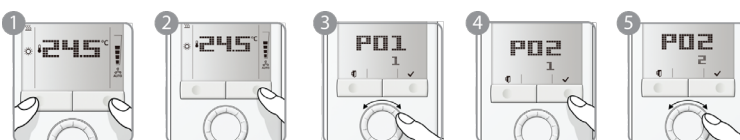


- If the button lock function is enabled (parameter P14 = 2), then pressing the right button for 3 seconds will lock or unlock the buttons respectively. Locked buttons are indicated with the key symbol 🔑.
- If "Auto lock" is configured (P14 = 1), the thermostat will automatically lock the buttons 10 seconds after the last adjustment.

Commissioning (by qualified HVAC installer)

To adapt the thermostat to your system and optimize the control performance, a number of control parameters can be adjusted. This can be done during operation, either via the buttons on the thermostat or via a commissioning tool.

Control parameters



If you wish to change control parameters, proceed as follows:

- Press left and right buttons simultaneously for at least 4 seconds.
- Release them and, within 2 seconds, press the right button again until "P01" is displayed.
- Select the required parameter by turning the rotary knob.
- Press button ✓ (OK). The current value of the selected parameter starts blinking and can be changed by turning the rotary knob.
- Press button ✓ (OK) to confirm the adjusted value, or ↵ (Esc) to cancel the change.

If you wish to adjust additional parameters, repeat steps 3 through 5, or press ↵ (Esc) to leave the parameter setting mode.

Parameter list

No.	Description	Factory setting	Setting range	Adj. ✎
P01	Control sequence	2-pipe / 2-stage: 1 = cooling only 4-pipe: 4 = H and C	0 = Heating only 1 = Cooling only 2 = H/C changeover, manual 3 = H/C changeover, automatic 4 = Heating and cooling	
P02	Mode selection via operating mode button	1	1 = Auto** / Comfort / Protection 2 = Auto** / Comfort / Economy / Protection	
P03	Mode selection via fan mode button	0 = Auto / Manual	0 = Auto / Manual 1 = Manual 2 = Auto / Manual / Protection	
P04	Selection of °C or °F	0 = °C	0 = °C 1 = °F	
P05	Sensor calibration	0.0 K	-3...+3 °C	
P06	Standard temperature display	0 = Room temp.	0 = Room temperature 1 = Setpoint	
P07	Additional user information	0 = No display (RDG1..0KN) 5 = Humidity (% r.H, RDG165KN only)	0 = No display 1 = Room Temperature in °C / °F 2 = Outside temperature (via bus) 3 = Time of day (12h, via bus) 4 = Time of day (24h, via bus) 5 = Humidity (% r.H, RDG165KN only)	
P08	Comfort basic setpoint	21 °C	5 ... 40 °C	
P09	Minimum setpoint limitation in Comfort mode	5 °C	5 ... 40 °C	
P10	Maximum setpoint limitation in Comfort mode	35 °C	5 ... 40 °C	
P11	Setpoint for heating in Economy mode (WheatEconomy)	15 °C	OFF, 5 °C...WcoolEconomy	
P12	Setpoint for cooling in Economy mode (WcoolEconomy)	30 °C	OFF, WheatEconomy...40 °C	
P13 ***	Electric heater in cooling mode	ON	OFF = Disabled ON = Enabled	
P14	Button lock	0 = Disabled	0 = Disabled 1 = Automatic 2 = Manual	
P15	Fan stage in dead zone (Comfort) (RDG16..KN)	0 = Disabled	0 = Disabled 1 = Low speed (heating and cooling) 2 = Low speed (cooling only)	
P21	Maximum setpoint limitation for humidity (RDG165KN only)	50	OFF, 20...90%	
P22	Minimum setpoint limitation for humidity (RDG165KN only)	OFF	OFF, 20...90%	
P23	Calibration humidity (RDG165KN only)	0	-10...10%	

** When no time schedule via KNX exists, then Auto is equal to Comfort.

*** Parameter P13 is only displayed with application 2-pipe with el. heater.

All temperature settings can be made in increments of 0.5 °C.

✎ Please record all changes you make!