### Operating Instructions

**RDG2..KN** – Room thermostat with KNX communications allowing users to set both ideal temperature and relative humidity. The thermostat offers the operating modes Comfort, Economy and Protection.

In addition, it can operate in Auto mode as a schedule via KNX bus. The fan operates either in Auto mode or at the selected speed in Manual mode. Users can either use the factory settings or set up their own settings.

#### Changing the operating mode

**1. Comfort mode**
   - In Comfort mode, the thermostat maintains the room temperature at the setpoint which can be adjusted with the rotary knob.

**2. 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 or by an external signal (switch or KNX bus command) such as a keycard.
   - The Economy setpoints are factory-set to 15 °C for heating and 30 °C for cooling.
   - They can be adjusted via parameters P019 and P020 (for parameter settings, see Control parameters on page 2).

**3. Protection mode**
   - In Protection mode, the thermostat stops operating. However, if the room temperature drops below 8 °C, heating is switched on to protect the room against frost.
   - The thermostat switches to Protection mode when the window contact (local or on KNX) is activated.
   - The setpoints for Protection mode can be changed by your HVAC installer if desired: Changes must be approved by: __________
   - Frost protection: _________ ˚C
   - Heating protection: _________ ˚C

**4. Auto mode**
   - In Auto mode, the thermostat automatically switches over between Comfort and Economy mode as per the KNX bus.
   - If no schedule is available, Comfort replaces Auto.

### Adjusting the fan speed

- **Fan Speed I**: Speed I
- **Fan Speed II**: Speed II
- **Fan Speed III**: Speed III

#### Changing the room temperature

- **Temperature settings** can be adjusted. This can be done during operation, either via the buttons on the thermostat or via a commissioning tool.

#### Reminder to clean filter, display of external faults

**1. Green leaf indication**
   - The green leaf indication is an energy-efficient setting and indicates the end user settings.
   - Green leaf: Settings are within the preset energy-efficient range.
   - Red leaf: Settings exceed the preset energy-efficient range.

**2. Button lock**
   - If the button lock function is enabled (parameter P028 = 1), pressing the right button for 3 seconds locks or unlocks the buttons respectively.
   - Locked buttons are indicated by the key symbol.

**3. Commissioning** (by qualified HVAC installer)
   - To adapt the thermostat to your system and optimize 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.

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**Important:**
- **Parameters AL1, AL2 and AL3** are factory-set and can be changed by your HVAC installer if desired.
- **Fault messages** tell you an external fault has occurred:
  - **AL1**: Fan operating hours and disappears when the thermostat is turned off.
  - **AL2**: Automatic fan speed III.
  - **AL3**: Commissioning.

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**Control parameters on page 2.**
Control parameters

To change control parameters, proceed as follows:

1. Press left and right buttons simultaneously for at least 3 seconds.

2. Service level: Release and within 0.5…4 seconds, press the right button again until “P001” is displayed.

3. Expert level: Release and within 0.5…4 seconds, press the left button again until the temperature disappears. Turn the rotary knob clockwise by minimum 1/2 rotation. P050 displays.

4. Select the required parameter by turning the rotary knob.

5. Press button (OK). The current value of the selected parameter flashes and can be changed by turning the rotary knob.

6. Press button (OK) to confirm the adjusted value, or (Esc) to cancel the change.

To adjust additional parameters, repeat steps 3 through 5, or press (Esc) to quit parameter setting mode.

Note: If password protection (needs to be done by HVAC installer) is enabled, users must enter the password to open parameter setting mode. If the password is inputted 5 times, the thermostat is locked and the password cannot be entered for 5 minutes. Symbols and are displayed.

Parameter list

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Factory setting</th>
<th>Setting range</th>
<th>Adj.</th>
</tr>
</thead>
<tbody>
<tr>
<td>P001</td>
<td>Control sequence</td>
<td>2 = Cooling only</td>
<td>0 = Cooling only</td>
<td>4 = Heating and cooling</td>
</tr>
<tr>
<td>P002</td>
<td>Operation via room operating mode selector</td>
<td>1 = Auto- Comfort - Protection</td>
<td>0 = Auto - Manual</td>
<td>2 = Fan</td>
</tr>
<tr>
<td>P003</td>
<td>Operation via fan operating selector</td>
<td>0 = Auto</td>
<td>0 = Manual</td>
<td>0 = Manual</td>
</tr>
<tr>
<td>P004</td>
<td>Units</td>
<td>0 = °C (parameter in °C)</td>
<td>0 = °C (parameter in °C)</td>
<td>0 = °C (parameter in °C)</td>
</tr>
<tr>
<td>P005</td>
<td>Measured value correction</td>
<td>0 = °C, K</td>
<td>0 = °C, K</td>
<td>0 = °C, K</td>
</tr>
<tr>
<td>P006</td>
<td>Humidity value correction</td>
<td>0 = --- (No display)</td>
<td>0 = --- (No display)</td>
<td>0 = --- (No display)</td>
</tr>
<tr>
<td>P007</td>
<td>Humidity value correction</td>
<td>0 = --- (No display)</td>
<td>0 = --- (No display)</td>
<td>0 = --- (No display)</td>
</tr>
<tr>
<td>P008</td>
<td>Standard display</td>
<td>0 = Room temperature</td>
<td>0 = Room temperature</td>
<td>0 = Room temperature</td>
</tr>
<tr>
<td>P009</td>
<td>Additional display information</td>
<td>0 = --- (No display)</td>
<td>0 = --- (No display)</td>
<td>0 = --- (No display)</td>
</tr>
<tr>
<td>P010</td>
<td>Humidity basic setpoint</td>
<td>21 °C (70 °F)</td>
<td>21 °C (70 °F)</td>
<td>21 °C (70 °F)</td>
</tr>
<tr>
<td>P011</td>
<td>Humidity setpoint minimum</td>
<td>5 °C (41 °F)</td>
<td>5 °C (41 °F)</td>
<td>5 °C (41 °F)</td>
</tr>
<tr>
<td>P012</td>
<td>Humidity setpoint maximum</td>
<td>35 °C (95 °F)</td>
<td>35 °C (95 °F)</td>
<td>35 °C (95 °F)</td>
</tr>
<tr>
<td>P013</td>
<td>Humidity comfort setpoint</td>
<td>15 °C (59 °F)</td>
<td>15 °C (59 °F)</td>
<td>15 °C (59 °F)</td>
</tr>
<tr>
<td>P014</td>
<td>Humidity setpoint low</td>
<td>5 °C (41 °F)</td>
<td>5 °C (41 °F)</td>
<td>5 °C (41 °F)</td>
</tr>
<tr>
<td>P015</td>
<td>Humidity setpoint high</td>
<td>5 °C (41 °F)</td>
<td>5 °C (41 °F)</td>
<td>5 °C (41 °F)</td>
</tr>
<tr>
<td>P016</td>
<td>Electric heater when cooling</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>P017</td>
<td>Electric heater when heating</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>P018</td>
<td>Keypad lock</td>
<td>0 = Unlocked</td>
<td>0 = Unlocked</td>
<td>0 = Unlocked</td>
</tr>
<tr>
<td>P020</td>
<td>Economy cooling setpoint</td>
<td>30 °C (86 °F)</td>
<td>30 °C (86 °F)</td>
<td>30 °C (86 °F)</td>
</tr>
<tr>
<td>P021</td>
<td>Economy heating setpoint</td>
<td>15 °C (59 °F)</td>
<td>15 °C (59 °F)</td>
<td>15 °C (59 °F)</td>
</tr>
<tr>
<td>P022</td>
<td>Fan: Dead zone Comfort mode</td>
<td>0 = Fan disable</td>
<td>0 = Fan disable</td>
<td>0 = Fan disable</td>
</tr>
<tr>
<td>P023</td>
<td>Fan: Dead zone Auto &amp; Manual</td>
<td>0 = Fan disable</td>
<td>0 = Fan disable</td>
<td>0 = Fan disable</td>
</tr>
</tbody>
</table>

** When no time schedule via KNX exists, Auto equals Comfort.

*** Parameter P027 is displayed only for application 2-pipe with electric heater.

All temperature settings are in increments of 0.5 °C.

Remember to record all changes!