**Data sheet**
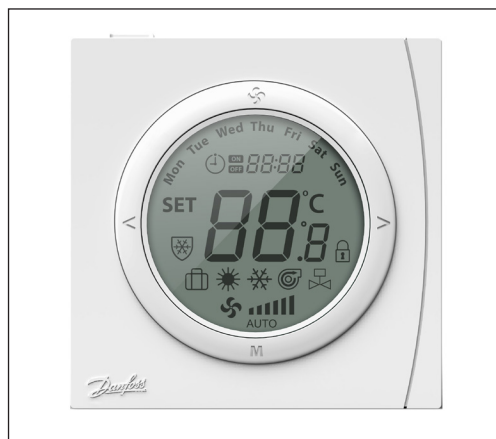
# GreenCon On/Off Room Thermostat

**Description**



The GreenCon on/off room thermostats are used for room temperature control in fan coil units cooling and heating systems. By controlling room temperature in accordance with the temperature desired by the user, the room thermostats provide optimal energy savings while upholding and ensure optimal thermal comfort in the room.

The product controls the operating state of the terminal system by means of a built-in temperature sensor that detects temperature changes in the room. GreenCon's advanced programmable features allow maximum energy efficiency without comprising on interior comfort.

**Features:**
- Scandinavian design with white backlight;
- User-friendly interactive interface;
- Room temperature display and settings;
- 12 or 24 hour clock display and settings;
- Three-speed manual/automatic fan;
- Three operating modes: cooling, heating or ventilation;
- Frost protection;
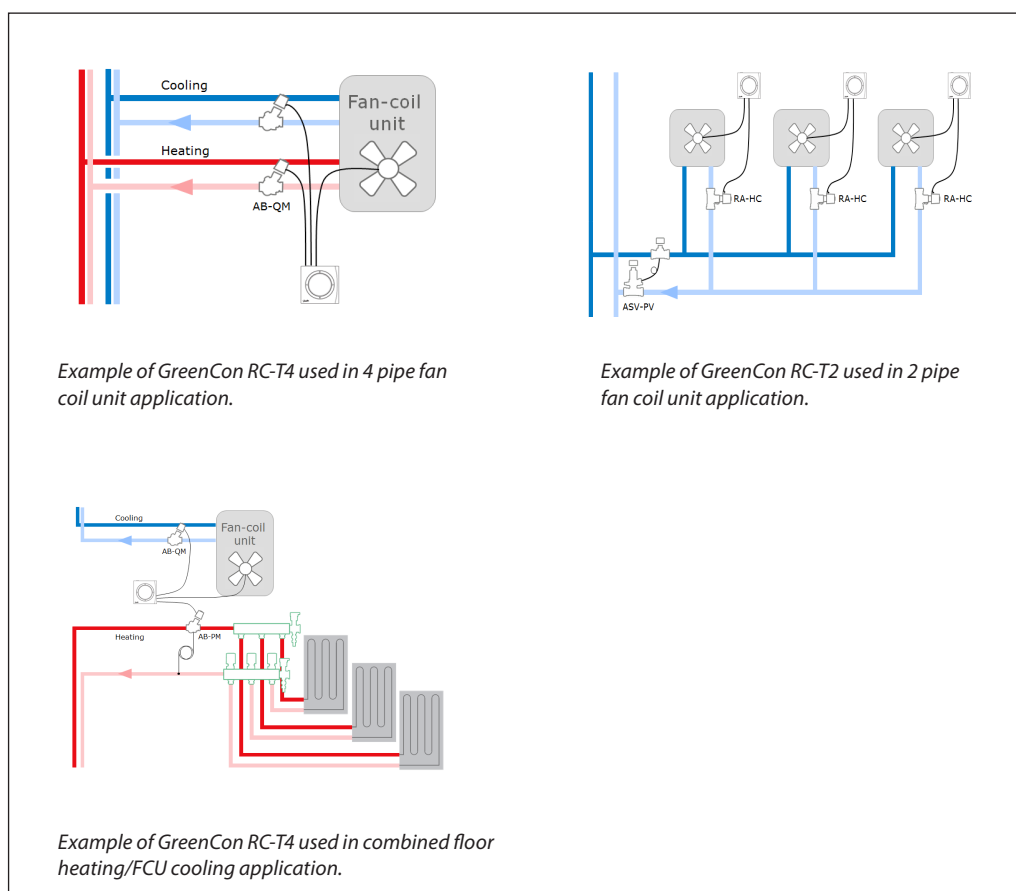- ON/OFF timer;
- Fault alarm;
- Reset function;

**Advanced features:**
- Energy saving mode and keyboard lock;
- Fast and secure, convenient installation;
- Programmable default temperature setting for cooling and heating modes, including in Eco mode;
- Programmable temperature setting range;
- Fan can be disabled for radiant heat system application (e.g. floor heating);
- Fan control mode programmable;
- 5-2 days programmable, 4 periods per day for weekday and weekend;
- User settings can be restored or retained with power loss.

**Data sheet**      **GreenCon On/Off Room Thermostat**

## Ordering

| Model | RC-T2 | RC-T4 |
|---|---|---|
| Code | **193B0941** | **193B0942** |
| Application | 2 pipe, heating/cooling | 4 pipe, heating/cooling |
| Output | SPST relay output 230V AC, Maximum load: 1A(Inductive)/3A(Resistive) | |
| Power supply | 85~250V AC, 50/60Hz | |
| Power protection | Time-lag fuse: 5A | |
| Power consumption | 2W | |
| Temperature sensor | NTC 100K: Accuracy±1% | |
| Ambient temperature | 0~45°C | |
| Operation humidity | 5~95% RH | |
| Storage / Shipping Temperature | -10~60°C | |
| Protection class | IP30 | |
| Norms and standard | EU Conformity (CE), RoHS compliance | |
| Housing material | ABS+PC flame retardant | |
| Housing color | Front color: White RAL9010, back color: Grey RAL7024 | |
| Dimensions | 86 × 86 × 13 mm (W × H × D) | |
| Connections terminals | Screw-in terminals, each terminal capable of accepting 2 × 1.5 mm² wires | |
| Display | LCD display with white back light | |

## Application



*Example of GreenCon RC-T4 used in 4 pipe fan coil unit application.*

*Example of GreenCon RC-T2 used in 2 pipe fan coil unit application.*



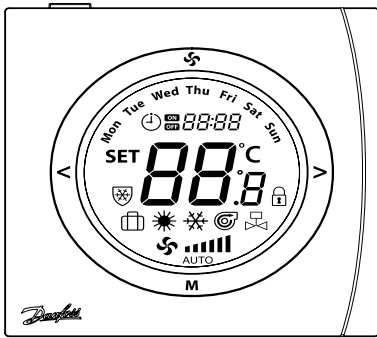*Example of GreenCon RC-T4 used in combined floor heating/FCU cooling application.*

Recommended use of GreenCon is with:
- AB-QM valve & TWA-Z actuator
- RA-HC valve & TWA-A actuator

Maximum 3 x TWA actuators can be connected to a single GreenCon output.

| **Data sheet** | **GreenCon On/Off Room Thermostat** |

**Function**

| Symbols | Function Description |
|---------|---------------------|
| $88^{°C}_{.8}$ | Temperature indication |
| SET | Set temperature |
| ☀ | Heating |
| ❄ | Cooling |
| ⌬ | Ventilation |
| ⌁ ▮▮▮▮▮ AUTO | Fan control |
| ⋈ | Valve |
| ⊛ | Frost protection |
| ⊓ | Eco mode |
| 🔒 | Keyboard lock |
| ON OFF | ON/OFF Timer |
| ⏱ | 4 events in 5-2 days programmable |
| 88:88 | Clock |
| Mon Tue Wed Thu Fri Sat Sun | Actual weekday |

**Operation**

**Power On/Off and Eco mode**
- When powered off, press power button on top of GreenCon to turn on;
- When powered on, press power button for 2 seconds to turn off thermostat;
- When powered on, short press power button to enter ⊓ ECO mode;
- In ECO mode, press " <" or " >" for temperature setting, short press power button to exit

**Mode selection**
- Press "M" to change system working mode: Cooling "❄", heating "☀" or ventilation "⌬"

**Setting temperature**
- Press "<" to reduce temperature, press ">" to raise temperature. (0.5°C changed each press)
- During setting temperature, "SET" icon will be displayed, after setting finished, this icon disappears and LCD shows actual temperature.

**Fan speed selection**
- Press "⌁" to select ⌁ (close), ⌁ ▮▮ (Low), ⌁ ▮▮▮▮ (Med), ⌁ ▮▮▮▮▮ (Hi), AUTO (Auto);
- In Auto mode, fan speed will change according to the difference between room temperature and setting temperature, Low-speed when this difference exceed 1°C, Med-speed when exceed 2°C, Hi-speed when exceed 3°C.

**Alarms**
- E1: Alarming for short circuit of sensor
- EE: EEPROM chip error
- Lo: Indicating temperature lower than 0°C;
- Hi: Indicating temperature higher than 50°C

**Time setting and ON/OFF timer**
- Time setting; Long press"⌁" for 3 seconds till "hh" start flashing, press "<" or ">" to adjust hour; Short press "⌁" , "mm" flash, press "<" or ">" to adjust minute; Short press "⌁" , "week" flash, press "<" or ">" to adjust weekday;
- On/Off timer setting; After finishing time setting, short press"⌁" to configure timer On/Off function, press other button or wait for 6 seconds to exit. Short press "⌁" till "ON" start flashing; Press"<" or ">" to adjust timer "ON" hour; Press "⌁" to confirm; Press"<" or ">" to adjust timer "ON" minute; Press "⌁" to confirm;
  After setting timer "ON", "OFF" start flashing; Press"<" or ">" to adjust timer "OFF" hour; Press "⌁" to confirm; Press"<" or ">" to adjust timer "OFF" minute; Press "⌁ " to confirm;
- Cancel On/Off timer; During above steps, adjust hour and minute to "--:--" to cancel On/Off timer function; Alternatively, configure P02 to "02" in parameter setting to disable On/Off timer function.

**Keyboard lock**
Press and hold "M", within 6 seconds, short press ">" to lock keyboard, icon "🔒" will be displayed on LCD, repeat this to unlock.

**Factory reset**
During power off, press and hold both "M", "<", ">" for 10 seconds, thermostat will automatically reset and restart.

**Programming**

**5-2 day programming**
To enable this function, please configure P01 to "02" in parameter setting. When this function is enabled, system automatically changes setting temperature four times per day. Both setting temperature and event time can be modified. Programming function allows users to define temperature setting for 4 time periods during workdays (Mon-Fri) and weekend (Sat-Sun)
•   Default setting
    Starting time and temperature for each period
    7:00  / 18 °C / 28°C
    9:00  / 22 °C / 26°C
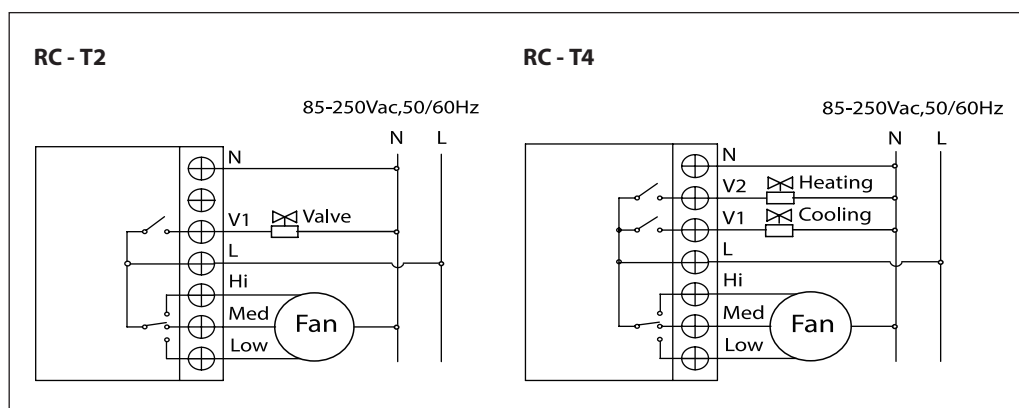    18:00 / 18 °C / 28°C
    21:00 / 15 °C / 30°C

•   Programming of workday set up;
    Long press" 🌀 " for 5 seconds till
    **"Mon.Tue.Wed.Thu.Fri"** icon displays;
    Press "<" or ">" to adjust starting hour of first event, press " 🌀 " to confirm;
    Press "<" or ">" to adjust heating temperature during first event, press " 🌀 " to confirm;
    Press "<" or ">" to adjust cooling temperature during first event, press " 🌀 " to confirm;
    Repeat above operation for next 3 events
•   Programming for weekend set up;
    After finishing programming of work days, **"Sat.Sun"** will appear on screen, repeat above steps to set starting time and temperature on weekends.
    From next event, GreenCon will automatically change setting temperature according to this set up.
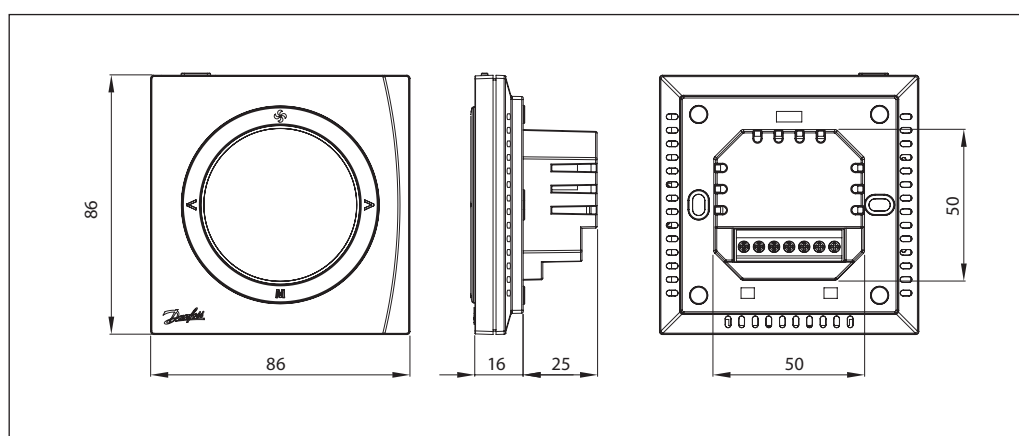
**Parameter settings**

Long press "**M**" for 6 seconds to enter parameter setting mode. Then, short press "**M**" to select parameter; press "<" or ">" to adjust value of this parameter.

| Parameter | Definition | Setting range | Factory setting |
|---|---|---|---|
| P01 | Programming function On/Off | 01: Off; 02: 5/2 days 4 event | 01 |
| P02 | On/Off timer | 01: ON; 02: OFF | 01 |
| P03 | Maximum room temperature setting | 5-35°C | 30°C |
| P04 | Minimum room temperature setting | 5-35°C | 5°C |
| P05 | Frost protection (Low temperature protection) | 01: ON; 02: OFF | 01 |
| P06 | Frost protection temperature | 5-17°C | 5°C |
| P07 | Default heating temperature | 5-35°C | 20°C |
| P08 | Default cooling temperature | 5-35°C | 25°C |
| P09 | Default heating temperature for ECO mode | 5-35°C | 15°C |
| P10 | Default cooling temperature for ECO mode | 5-35°C | 28°C |
| P11 | Fan control mode | 01: Fan speed keeps low when reaching setting temperature; 02: Stop fan when reaching setting temperature | 02 |
| P12 | Clock | 01: 24hour; 02: 12hour | 01 |
| P13 | Display room temperature after thermostat turned off | 01: OFF; 02: ON | 01 |
| P14 | Save user set up when powered off. | 01: ON; 02: OFF | 01 |

**Data sheet**          **GreenCon On/Off Room Thermostat**

**Wiring diagrams**

**RC - T2**                                    **RC - T4**

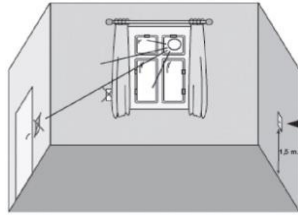85-250Vac,50/60Hz                              85-250Vac,50/60Hz
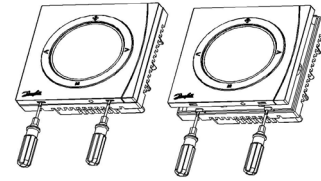


**Dimensions**
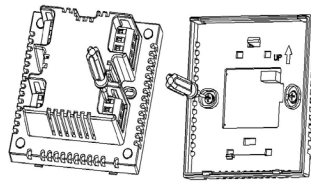
**Installation**

⚠

**Attention**: wiring work should be done according to wiring diagram Water, mud etc. should be kept outside of the thermostat.
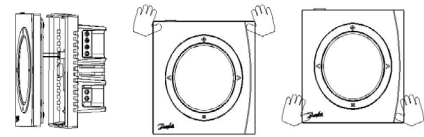


*Install GreeenCon 1,5m above ground and avoid direct sushine.*



*Remove front panel carefully.*



*Connect the wires in accordance with connection diagrams.*



*Align pin connector and press slightly to lock the panel.*