

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;
- Auto switch between cooling and heating

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.

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	
Storage / Shipping Temperature	-10~60°C	
Ambient humidity	95% r.h., non-condensing	
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 × 16 mm (W × H × D)	
Connections terminals	Screw-in terminals, each terminal capable of accepting 2 × 1.5 mm ² 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.

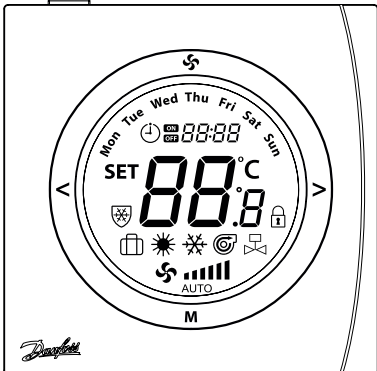
Example of GreenCon RC-T4 used in combined floor heating/FCU cooling application.

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.

Function



Symbols	Function Description
88.8°C	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 "🌀"
- Auto switch between heating and cooling
When auto switch between heating and cooling On, heating and cooling is automatically controlled by the parameters P16 , P17 and P19. The temperature is controlled by the set temperature and the dead zone is decided via the parameters P16 for Normal mode and P17 for ECO mode.
- Floor/radiator for heating & fan coil for cool-ing
If P18 is Off - *The fan is controlled by the Fan Speed Selection*
If P18 is On - *The fan is disabled, when heating is on. When cooling, the fan is controlled by the Fan Speed Selection*

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

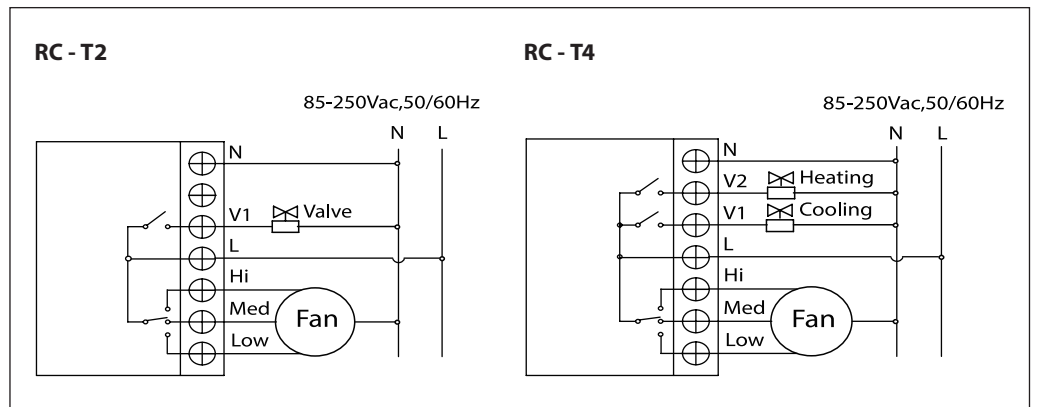
- Programming of workday set up;
Long press "⌚" for 5 seconds till "Mon.Tue.Wed.Thu.Fri" icon displays;
Press "<" or ">" to adjust starting hour of first event, press "⌚" to confirm;
Press "<" or ">" to adjust heating temperature during first event, press "⌚" to confirm;
Press "<" or ">" to adjust cooling 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

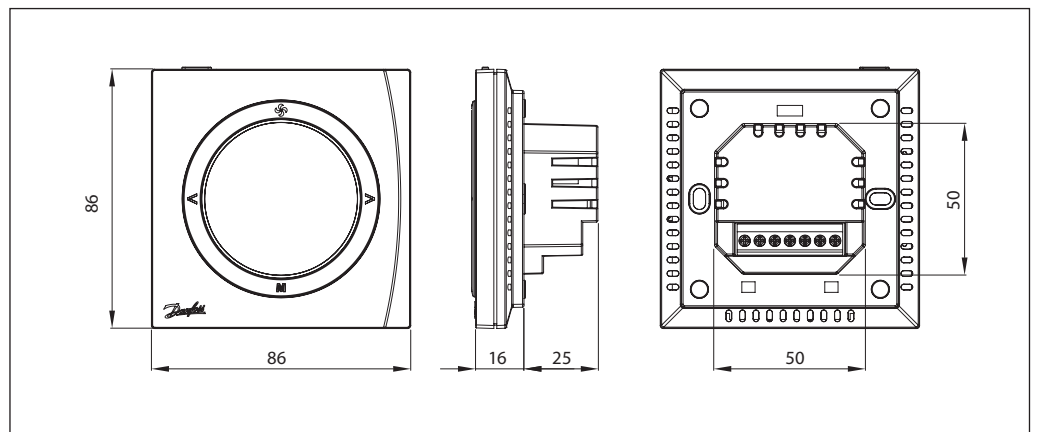
Long press "M" for 6 seconds to enter parameter setting mode. Then, short press "M" to select parameter; press "<" or ">" to adjust value of this parameter.

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
P15	Auto switch between heating and cooling	01: Close; 02: Open	01
P16	deadBand for Normal Mode	0.5°C - 5°C	1°C
P17	deadBand for ECO Mode	5°C - 10°C	5°C
P18	Floor/radiator for heating & fan coil or cooling	01: ON; 02: OFF	01
P19	Temperature setting range when auto switch between heating and cooling	5°C - 35°C	25°C

Wiring diagrams



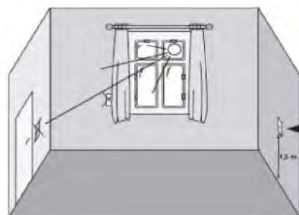
Dimensions



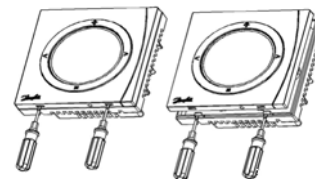
Installation



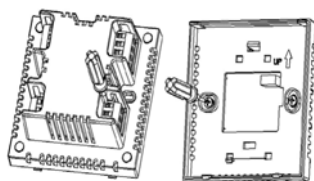
Attention: wiring work should be done according to wiring diagram Water, mud etc. should be kept outside of the thermostat.



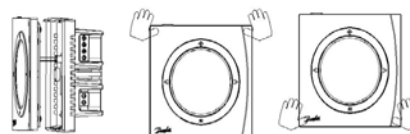
Install GreenCon 1,5m above ground and avoid direct sushine.



Remove front panel carefully.



Connect the wires in accordance with connection diagrams.



Align pin connector and press slightly to lock the panel.



Danfoss A/S

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