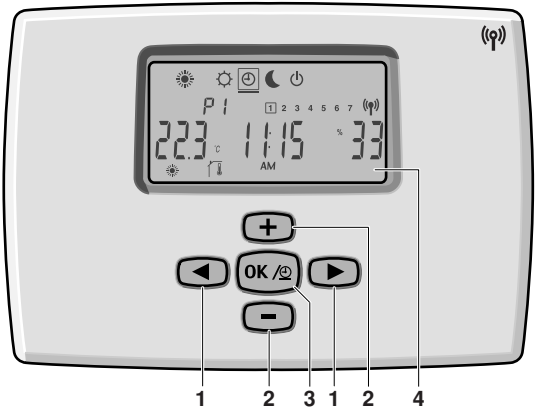
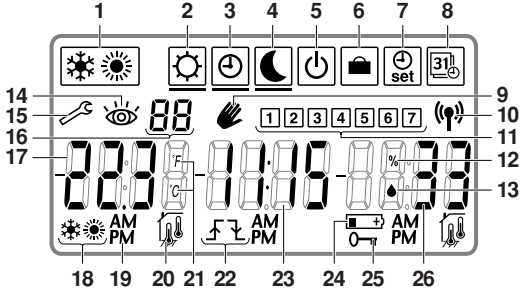
OPERATION MANUAL

Room thermostat

EKRTR
EKRTETS


P1
1 2 3 4 5 6 7
22.3 °C
11:15
AM
%
33
OK
1
2
3
1
2
4

1


1
2
3
4
5
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8
set
31
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12
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14
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17
1 2 3 4 5 6 7
88
F
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2

THANK YOU FOR PURCHASING THIS THERMOSTAT. READ THE MANUAL ATTENTIVELY BEFORE USING THE INSTALLATION. AFTER READING THE MANUAL, STORE IT IN A SAFE PLACE FOR FUTURE USE.

The English text is the original instruction. Other languages are translations of the original instructions.

WARNINGS

- Never let the thermostat get wet, this may cause an electric shock or fire.
- Never press the buttons of the thermostat with a hard, pointed object. The thermostat may be damaged.
- Never inspect or service the thermostat yourself, ask a qualified service person to do this.

Contents

1. Introduction

The EKRTR is a state of the art programmable electronic thermostat, which regulates your Daikin system, where comfort, simplicity and energy saving go hand in hand.

- EKRTR
  - wireless room thermostat option kit,
  - consists of a wireless receiver and thermostat,
  - mainly used for existing installations.
- EKRTETS
  - optional external temperature sensor for the EKRTR.

2. Main features

The main features are:

- Room temperature control, based on the measurements of the temperature sensor inside the thermostat or of the external temperature sensor EKRTETS.
- Cooling and heating mode (with possibility to disable cooling function if not required).
- Off function (with integrated frost protection).
- Comfort and reduced function modes, using the comfort and reduced setpoint respectively.
- Holiday function mode.

- Weekly schedule timer with 2 custom (U1+U2) and 5 predefined (P1~P5) schedules.
  - The predefined schedules use the comfort and reduced setpoints of the comfort or reduced function mode.
  - The custom schedules use independent, programmed setpoints (up to 12 setpoints per day).
  - You can lock the schedule timer which allows a temporary override with the comfort or reduced setpoint by means of a single key push.
  - It is possible to link a custom schedule to cooling and heating mode.
  - Comfort startup control. The schedule timer will automatically start up in advance, trying to reach the programmed setpoint at the programmed time.
- Clock (with day and month).
- Key lock function.
- Automatic daylight saving time change.
- Setpoint limitation. Your installer has the possibility to modify the lower and upper limit of the setpoints. Refer to “Setting up codes in the installer menu” (code Br12+Br13) in the installation manual.
- Floor temperature protection (only for floor heating/cooling applications where the EKRTETS is installed).
- Humidity sensor.
- Dew prevention (only if EKRTETS is installed).

3. Buttons on front cover and LCD

Refer to figure 1 at the inside of the front cover.

1	Left and right buttons (and). Used to select modes.
2	Up and down buttons (or). Used to change values.
3	OK - Schedule timer button ( ). Used to: - confirm setpoints or save selections - enable/disable locked schedule timer
4	LCD

Refer to figure 2 at the inside of the front cover.

1	Cooling/heating mode selection
2	Comfort function mode
3	Schedule timer function mode
4	Reduced function mode
5	OFF function mode (with integrated frost protection)
6	Holiday function mode
7	Schedule timer setting menu
8	Date and clock setting menu
9	Manual override of the scheduled mode
10	Active wireless communication between thermostat and its receiver
11	Day of the week
12	Percentage sign for humidity indication
13	Active dew prevention function. Only possible in cooling mode if EKRTETS is installed as floor temperature sensor and if dew prevention function is enabled.

14	Error occurred: intervention needed.
15	Active user or installation menu or error occurred. Refer to "Troubleshooting" on page 19.
16	Selected program (schedule timer) or code
17	Room temperature or setpoint (when flashing)
18	Thermostat ON (heating or cooling requested)
19	AM - PM indication
20	Room or floor temperature symbol. Floor temperature symbol is flashing if floor protection function is active.
21	Degrees type indication (°C or °F)
22	When manually overriding a schedule or when consulting the active scheduled setpoints by pressing (+) or (−), the current and next setpoint together with the starting hour of the next action are displayed. • is shown in case the next action setpoint goes up. • is shown in case the next action setpoint goes down. • is shown in case the setpoints are equal.
23	Actual time
24	"Low batteries" indication
25	Key lock function
26	Humidity indication or indication of next scheduled temperature setpoint

4. Getting started

4.1. Setting the clock and date

After installation you first need to set the clock before you can actually use the thermostat.

1 Activate the advanced mode by pressing ▷ during 5 seconds in OFF mode (⏻).
Refer also to "Description of the function modes and menus" on page 8.

2 Navigate to the date and clock setting menu (📅) by pressing ▷ and then press OK.

3 Set the hour, minutes, day of the week (1 = Monday, 2 = Tuesday,...), day, month and year by pressing + or − and confirm each time by pressing OK.
The value that you modify flashes.

4.2. Setting the desired mode: heating or cooling

NOTE This is only possible if cooling mode is available.

1 Press ◁ to go to comfort mode (☼).

2 Press ◁ during 5 seconds to go to the heating/cooling selection mode.

3 Press ◁ or ▷ to switch to the desired mode.
❄ or ☀ is flashing.

4 Press OK to save your selection.
The thermostat returns to the schedule timer mode (⏲).

4.3. Setting the desired setpoint

1 Navigate to the comfort mode (☼) by pressing ◁ or ▷ to set the comfort setpoint.
Refer also to "Description of the function modes and menus" on page 8.

2 Raise or drop the setpoint by pressing + or −.
The current setpoint flashes.

3 Press OK to save your settings.
The room temperature is displayed (🌡).

5. Description of the function modes and menus

5.1. Modes in the standard menu ☼ ◴ ☾ ⏻

Press ◁ or ▷ to switch to the desired mode.

The ☐ cursor will move.

Icon	Description
☼	**Comfort** mode. Use this mode for a fixed temperature on comfort level (comfort setpoint default on 21.0°C/70.0°F in heating mode, 24.0°C/75.5°F in cooling mode).
◴	**Schedule timer** mode. Use this mode to let your installation be controlled by the schedule timer. The actions programmed in the schedule timer will be executed automatically according to the actual time. This function mode uses the scheduled temperature setpoint. The functionality of the locked/unlocked schedule timer mode is explained in "Manually overriding a schedule" on page 12. It is advised to lock the schedule timer mode by pressing OK/⚲. A line will appear underneath the icon (◴).
☾	**Reduced** mode. Use this mode for a fixed temperature on reduced level (reduced setpoint default on 17.0°C/63.0°F in heating mode, 28.0°C/82.5°F in cooling mode).
⏻	**OFF** mode. Use this mode to switch off your installation. Integrated frost protection remains activated (frost protection default on 4.0°C/39.5°F in heating mode).

5.2. Modes and menus in the advanced menu

To activate advanced modes, navigate to OFF mode (⏻) and press ▷ during 5 seconds.

Icon	Description
🧳	**Holiday** mode. Use this mode to set a fixed temperature during a long absence. To exit the holiday mode, set the duration to "no". Refer to "Using the holiday mode" on page 15.
set	**Schedule timer setting** menu. Use this menu to choose a factory-defined schedule or create a custom one.
31	**Date and clock setting** menu. Use this menu to set date and time.

6. Using the thermostat

6.1. Using the key lock function

Activate or deactivate the key lock function by pressing ⊕ and ⊖ at the same time.

6.2. Activating the schedule timer

For full comfort with limitation of energy consumption you can pick an ideal schedule for each day. This makes sure the temperature is in the comfort mode when you are at home and that the temperature is automatically reduced at times you are sleeping, at work and so on.

1 If needed, activate the advanced mode by pressing ▷ during 5 seconds in OFF mode (⏻).

2 Navigate to the schedule timer setting menu (📅) by pressing ▷.

3 Select the desired schedule by pressing ⊕ or ⊖.
When pressing ⊕ the next schedule is shown. When pressing ⊖ the previous schedule is shown.
The possible schedules are: 2 user-defined (U1+U2) and 5 factory-defined (P1~P5).
The factory-defined schedules are described in "APPENDIX: factory-defined programs" on page 22. For the user-defined schedules, refer to "Setting up a user-defined schedule" on page 13.

4 Activate the selected schedule by pressing OK.
Press ◁ to exit the schedule.
Press ⊕ and ⊖ to consult the programmed actions, press ◁ and ▷ to consult the other days (if already programmed).

5 Navigate to the schedule timer function mode (⏲) by pressing ◁.

6 Optionally, press OK to lock the schedule timer mode (⏲).

NOTE

For your optimum comfort, the schedule timer can be set to start up in advance (120 minutes, code 2r02, for 4.0° setpoint difference), trying to reach the programmed setpoint at the programmed time. This control can be enabled or disabled by means of code 2r01 in the user menu. Refer to "Setting up codes in the user menu" on page 16.

6.3. Manually overriding a schedule

There are 2 ways of overriding a schedule:

- **A temporary override in locked schedule timer mode (⏲)**
  Temporarily choose the comfort or reduced setpoint by pressing 1 button only: ◁ or ▷. The cursor "_" will move.
  - comfort setpoint: ☼ and ✋ are displayed.
  - reduced setpoint: ☾ and ✋ are displayed.

- **A temporary override of the setpoint in schedule timer mode**
  Press + or − to modify the setpoint in steps of 0.5°C/0.5°F. Save a new, manual setpoint by pressing OK or by waiting 5 seconds.
  ✋ is displayed.

Locking and unlocking the schedule timer mode is performed by pressing OK. The locked schedule timer mode displays as ⏲. The unlocked schedule timer mode displays as ⏲.

NOTE By default the manual override is active until the next scheduled action. You can change this behavior by means of user code 2r 03: the manual override will then only be active for 1 hour. Refer to "Setting up codes in the user menu" on page 16.

6.4. Setting up a user-defined schedule (U1 and U2)

Within the user-defined schedule each day can be programmed individually and 12 actions (setpoints) are possible per day.

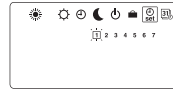
- First decide upon the temperature scale you prefer (°C/°F) by setting up code 1r01 as decribed in "Setting up codes in the user menu" on page 16.
- At all times you can press ◁ to go back 1 step. Pressing ▷ goes to the next step.

1 If needed, activate the advanced mode by pressing ▷ during 5 seconds in OFF mode (⏻).

2 Navigate to the schedule timer setting menu (set) by pressing ▷.

3 Press + or − until U1 or U2 flashes and press OK to confirm.

4 Press ◁ or ▷ to move to the day you want to program and press + to select or − to deselect it.
You can program multiple days at once by selecting them.

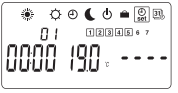


5 Press OK to confirm.

6 Press + or − to adjust the setpoint of the first action.
The first action starts at 00:00 and lasts until the end time which you set up in the next step.

7 Press (OK/⊘) to confirm.

8 Press (+) or (−) to adjust the end time of this action. Programming a day is finished when the end time of the last scheduled action is set to 23:59. You can quickly set the time to 23:59 by pressing (▷).



9 Press (OK/⊘) to confirm.

10 Repeat step 6 till 9 for the next scheduled actions of this day.

11 To program the remaining days, repeat above steps. Do this for all days of the week.

NOTE Once programmed you can only modify programmed actions one by one and no additional actions can be added.

You can clear a user-defined schedule again by selecting it (U1 or U2 should be flashing) and then pressing (◁) during 10 seconds. "CLr U1" or "CLr U2" appears on the LCD to confirm the schedule is cleared.

Your installer can link a custom schedule to cooling and heating mode. Refer to “Setting up of codes in the installer menu” (code 8r01) in the installation manual.

6.5. Using the holiday mode

Use the holiday mode to set a fixed setpoint during a long absence. The default holiday setpoint for heating is 14.0°C/57.5°F, for cooling 30.0°C/86.0°F.

1 If needed, activate the advanced mode by pressing ▷ during 5 seconds in OFF mode (⏻).

2 Press ▷ to navigate to holiday mode (🧳).

3 Press + or − to adjust the duration (H = hours, d = days).

To exit the holiday mode, set the duration to "no".

4 Press OK to confirm.

5 Press + or − to adjust the holiday setpoint.

6 Save this new setpoint by pressing OK or by waiting 5 seconds.

The holiday setpoint will be kept for the programmed duration. The duration is shown and counts down. In case the duration becomes less than 1H, the remaining minutes are shown (example: 59'). After the programmed duration the thermostat will go back to the schedule timer mode (⏲).

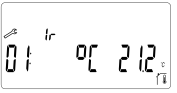
7. Setting up codes in the user menu

NOTE As a consequence of a customized configuration, it is not abnormal that some codes are no longer accessible.

1 Activate the advanced mode by pressing ▷ during 5 seconds in OFF mode (⏻).

2 Navigate to the date and clock setting menu (30) by pressing ▷.

3 Press ▷ during 5 seconds.
🔧 is displayed next to Ir.



4 Press ◁ or ▷ to consult the current settings of the codes.

5 To modify codes, press +, − or OK/⊘.

6 Press + or − to increase or decrease the code value by 1 step.

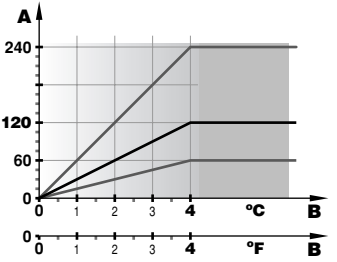
7 Press OK/⊘ to save your selection.
You can exit this user code menu by going to the "End" code and pressing OK/⊘.
To put a code back to its default value, press + and − at the same time.

Following codes can be consulted or changed in the user menu:

1st code	2nd code	Description	Default	Range	Step
1r	01 +	Degrees type. Current room temperature is displayed. Refer also to note below.	°C	°C/°F	—
	02	Choice of hour control. Actual time is displayed.	24H	12H/24H	—
	03	Always enable advanced menu? (no = standard menu enabled)	no	YES/no	—
	04	Display humidity.	YES	YES/no	—
2r	01	Enable comfort startup control?	no	YES/no	—
	02	Comfort control speed: time for setpoint difference of 4°. Refer also to note below.	120	060~240	1 min.
	03	Schedule timer override: only 1 hour active? (no = until next action)	no	YES/no	—
3r	01	Showing software version	—	—	—

NOTE

- In case the $\mathit{Ir}\,01$ code is modified after having user-defined schedules programmed, the $U1$ and $U2$ user-defined schedules are cleared.
- Code $\mathit{dr}\,02$: Refer to diagram below for clarification of the comfort control speed.



A minutes

B setpoint difference

8. Troubleshooting

The guidelines below might help to solve your problem. If you cannot remedy the problem, consult your installer.

8.1. No readings on the LCD (display blank)

Batteries are empty. Replace batteries. Refer to "Replacing batteries" on page 21.

8.2. Buttons on front cover do not react

If 0 is flashing when pressing a button on the front cover it means the key lock is activated. Press + and − at the same time to deactivate it.

8.3. Thermostat does not initiate cooling or heating demand according to setpoint

Verify if the floor protection function is active (the icon is flashing).

Verify if the dew prevention function is active (the icon is flashing).

Verify if the receiver is in thermostat mode and not in manual mode by checking if the LED is off.

8.4. Schedule timer starts up too early

The schedule timer by default starts up in advance, trying to reach the programmed setpoint at the programmed time. If desired, disable this function by means of code 2r01 in the user menu.

8.5. Clock and date are flashing on the thermostat LCD

The clock and date are flashing before first use or after replacement of batteries. Set clock and date as described in “Setting the clock and date” on page 6.

8.6. User-defined schedule does not react

The Ir01 code was modified after programming the user-defined schedules. Re-program the schedules as described in "Setting up a user-defined schedule" on page 13.

8.7. Error codes on the thermostat LCD

Error codes are displayed next to the flashing icons .

Error code	Failure cause	Corrective action
H	Broken external temperature sensor.	Contact your local dealer.

8.8. Error codes for the receiver

LED	Failure cause	Corrective action
Green LED slowly blinking	There is no longer communication between the receiver and the thermostat. Both heating and cooling demand is stopped. A manual override is still possible: refer to the installation manual.	Verify thermostat batteries. Verify if maximum distance between thermostat and receiver is not exceeded. Refer to "Technical characteristics" in the installation manual. Make sure no other devices are interfering on the same radio frequency. Refer to "Technical characteristics" in the installation manual. Contact your local dealer.

9. Maintenance

9.1. Replacing batteries

When the "low battery" icon flashes, batteries need to be replaced.

Once the icon flashes, you still have ±30 days to replace them before the thermostat completely shuts down.

With normal operation conditions the battery lifetime is ±2 years.

1 At the left of the thermostat, gently push the lid.

2 Remove the front cover by pulling it towards you.

3 Remove the old batteries and insert new ones.

4 Put the thermostat cover back in place until it clicks.

Only use alkaline batteries of type AA.LR6. Refer also to the technical characteristics in the installation manual.

9.2. Disposal requirements

The batteries supplied with the thermostat are marked with this symbol.

This means that the batteries shall not be mixed with unsorted household waste.

If a chemical symbol is printed beneath the symbol, this means that the battery contains a heavy metal above a certain concentration. Possible chemical symbols are:

- Pb: lead (>0.004%).

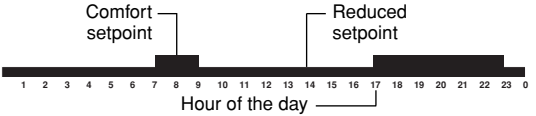
Waste batteries must be treated at a specialized treatment facility for re-use.

By ensuring waste batteries are disposed of correctly, you will help to prevent potential negative consequences for the environment and human health.

10. APPENDIX: factory-defined programs

There are 5 factory-defined programs (P1~P5) for standard situations. If none of them matches your needs, create a custom one (refer to "Setting up a user-defined schedule" on page 13). The comfort setpoint can be changed in the comfort mode ☼, the reduced setpoint can be changed in the reduced menu ☾.

Legend:



Comfort setpoint	by default 21.0°C/70.0°F in heating mode (24.0°C/75.5°F in cooling mode)
Reduced setpoint	by default 17.0°C/63.0°F in heating mode (28.0°C/82.5°F in cooling mode)
Day 1 ~ 5	days of the week (week starts on Monday)
Day 6 + 7	days of the weekend

Refer to the very end of this manual for graphical 24-hour representations of the 5 factory-defined programs like listed below.

- P1 Residential (morning, evening and weekend)
- P2 Residential (morning, noon, evening and weekend)
- P3 7-19h office
- P4 Weekend (secondary house)
- P5 Weekend (shop)

P1

1 ~ 5

6 + 7

P2

1 ~ 5

6 + 7

P3

1 ~ 5

6 + 7

P4

1

2 ~ 4

5

6 + 7

P5

1 ~ 5

6

7

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