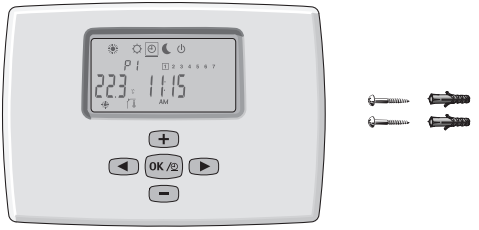
DAIKIN

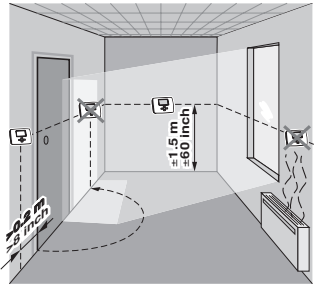
INSTALLATION MANUAL

Room thermostat

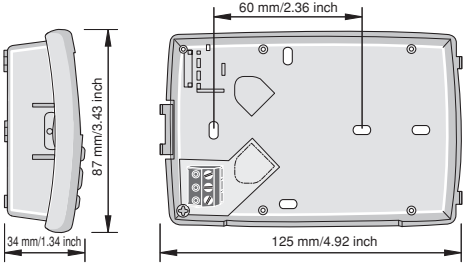
EKRTWA


OK

1


±1.5 m
±60 inch
0.5 m
19 inch

2


60 mm/2.36 inch
87 mm/3.43 inch
34 mm/1.34 inch
125 mm/4.92 inch

3

Read this manual attentively before starting up the unit. Do not throw it away. Keep it in your files for future reference.

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

Improper installation or attachment of equipment or accessories could result in electric shock, short-circuit, leaks, fire or other damage to the equipment. Be sure only to use accessories made by Daikin which are specifically designed for the use with the equipment and have them installed by a professional.

If unsure of installation procedures or use, always contact your dealer for advice and information.

Contents

1. Introduction

The room thermostat EKRTWA can be used to control the Daikin system (radiator heating and floor heating/cooling applications).

It is typically connected to the Daikin unit. Refer to the "Typical application examples" in the Installation manual of the Daikin unit.

- In case of floor heating-only applications the room thermostat can also be connected to the individual motorized valve of the floor heating loop.

- If a floor heating-only application is used in combination with fan coil units each fan coil unit should have its dedicated fan coil thermostat.

2. Installation of the EKRTWA

The EKRTWA thermostat is wall-mounted, with supplied screws and plugs. Refer to figure 1.

Cabling towards the Daikin system (field supply) should be foreseen in advance taking the suggestions for an ideal installation location into account. Refer to figure 2.

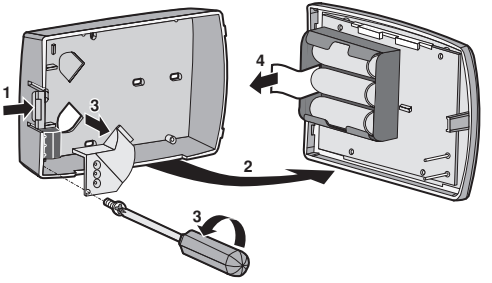
Before obtaining access to terminals, all power supply circuits must be interrupted.

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

2 Remove the front cover by pulling it towards you.

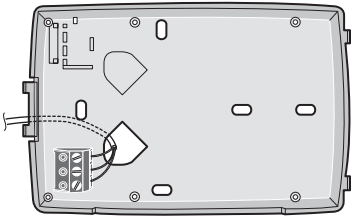
3 Unscrew the screw of the cable holder in the bottom left corner of the back part of the thermostat and remove the transparent cable protection.

4 Remove the battery insulator.



5 Drill holes in the wall taking the dimensions of the thermostat into account and insert the supplied plugs in the holes.
Refer to figure 3.

6 Pass the unit or motorized valve wiring through the back of the thermostat.

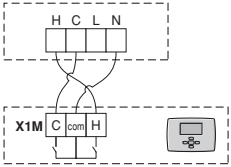


7 According your application, perform the wiring.

All field wiring and components must be installed by a licensed electrician and must comply with relevant European and national regulations.

7a When connected to the unit, refer to the wiring diagram of the unit.

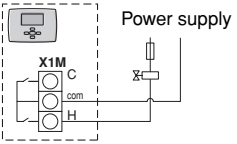
Example unit



H	Heating demand
C	Cooling demand

For heating-only applications, wire connection to C is not to be installed.
Use wire size 0.75~1.50 mm^2/AWG18~16.

7b When connected to the motorized valve, wire the motorized valve and the thermostat as shown below (for heating-only applications).



The output relays (H and C) are voltage-free contacts. Refer to "Technical characteristics" on page 11 for maximum load.

8 Fasten the thermostat with the supplied screws.

Be careful not to pinch the wiring when fastening.

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9 Put the transparent cable protection back into place and fix the cable protection with the screw.

10 Close the thermostat cover.

11 Remove the protective film from the LCD.

3. Setting up codes in the installer menu

You can set up codes, starting from the time and date menu (in advanced mode).

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 (31) by pressing ▷.

3 Press ▷ and keep it pressed while now pressing OK during 10 seconds.

🔧 is displayed next to 4r.

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

5 To modify codes, press ⊕, ⊖ or OK.

The value is flashing when being modified.

6 Press ⊕ or ⊖ to increase or decrease the code value by 1 step.

To put a code back to its default value, press ⊕ and ⊖ at the same time.

7 Press OK to save your selection.

You can exit this code menu by going to the "End" code and pressing OK.

3.1. Set-up for Fahrenheit degree type

Refer to the operation manual how to change parameter in user menu.

1st code	2nd code	Description	Range
tr	01	Degrees type.	°C/°F

3.2. Set-up for heating/cooling applications

For heating/cooling applications, set the following codes:

1st code	2nd code	Description	Required setting
Sr	01	Cooling mode present?	YES

3.3. Set-up for radiator applications

Before operation, change the following temperature control parameter to the required setting for radiator applications.

1st code	2nd code	Description	Required setting
br	02	Use proportional band control?	no (=hysteresis)

3.4. Overview of all codes

Following codes can be changed in the installer menu:

1st code	2nd code	Description	Default	Range	Step
Readout codes					
4r	01 +	Calibration of internal sensor. Actual temperature + offset are displayed. The ✋ symbol appears when the offset deviates from 0.	Offset = 0	Offset: –5°C~5°C	0.1°C
				Offset: –9°F~9°F	0.2°F
Installation codes					
5r	01	Cooling mode present?	no	YES/no	—
Temperature control codes					
Daikin advizes not to change below temperature control parameters. They are set for an optimal use of the Daikin system.					
6r	02	Use proportional band control?	YES	YES (proportional band)/no (hysteresis)	—
	03	Hysteresis value	00.5	00.5~02.0	0.1°C
			00.9	00.9~03.6	0.1°F
	04 + ☀	Duration proportional band (heating).	020	010~060	1 min.
	05 + ☀	Minimum "on" time (heat demand).	009	002~ 6r 04/2	1 min.

1st code	2nd code	Description	Default	Range	Step
6r	06 + ☀	Minimum delay between 2 heating cycles.	005	001~ 6r04/2	1 min.
	07 + ❄	Duration proportional band (cooling).	020	010~060	1 min.
	08 + ❄	Minimum "on" time (cool demand).	007	002~ 6r07/2	1 min.
	09 + ❄	Minimum delay between 2 cooling cycles.	003	001~ 6r07/2	1 min.
	10	Value of proportional band.	020	010~040	0.1°C
			036	018~072	0.1°F
	11	Not used parameter	—	—	—
	12	Upper setpoint limitation.	370	220~370	0.5°C
			990	720~990	0.5°F
	13	Lower setpoint limitation.	040	040~200	0.5°C
			395	390~680	0.5°F

1st code	2nd code	Description	Default	Range	Step
Schedule timer codes					
8r	01	Enable cooling/heating link for the user-defined schedules U1 and U2? When enabled and a user-defined schedule is selected in the schedule timer setting menu: in heating mode, schedule U1 will be active; in cooling mode, schedule U2 will be active.	no	YES/no	—

1st code	2nd code	Description	Default	Range	Step
Miscellaneous codes					
9r	01	Daylight saving time implementation.	YES	YES/no	—
	02 + ☀	Forced heating (installation check).	no	YES/no	—
	03 + ❄	Forced cooling (installation check).	no	YES/no	—
	15 + rESETALL	Reset all settings back to factory configuration. Press OK during 5 seconds. The complete LCD is shown to confirm all settings are reset.	—	—	—

After resetting all settings back to factory configuration (15 + rESETALL), the parameters must be changed manually again.

4. Technical characteristics

Temperature read out	Steps of 0.1°C/0.1°F
Operating temperature	0°C~50°C/32°F~122°F
Setpoint temperature range	4°C~37°C in steps of 0.5°C/ 39.5°F~99°F in steps of 0.5°F
Electrical protection	Class II - IP30 (indoor use, polution degree 2)
Feeding and autonomy	3 alkaline batteries AA.LR6 1.5 V approximately 2 years (depending on usage conditions)
Output relays	For United States of America and Canada: Maximum load 1 A - 24 VAC For other countries: Maximum load 5 A - 230 VAC
Immunity against voltage surges	Category III (2.5 kV)
Type of automatic action of the thermostat	1C

4PW56101-1 000000000

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