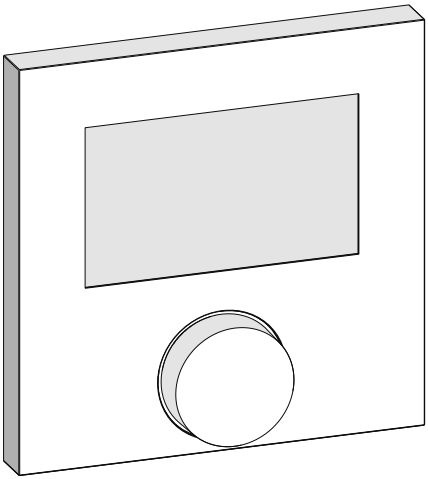
USER REFERENCE GUIDE

DIGITAL THERMOSTAT 230V

DAIKIN

EKWCTRDI1V3



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1 About these instructions

1.1 Validity, storage and relaying of the instructions

These instructions apply to the room thermostat EKWCTRDI1V3 Digital Thermostat 230 V.

The instructions include information necessary for the operation of the device. The instructions must be read completely and thoroughly before commencing any work with the device. They must be kept and handed over to future users. You can view and download these instructions and the associated installation instructions under https://qr.daikin.eu?N=EKWCTRDI1V3.

1.2 Symbols

The following symbols are used in this manual:

Hazard symbols: Identifies a hazard

Information: Identifies important or useful information

➢ User action
✓ Result of an action
• List without fixed order
1., 2. List with fixed order

2 Safety

2.1 Intended use

The room thermostat controls thermal actuators connected in a room-by-room temperature control system directly or via a connection unit. The unit

- is a fixed installation,
- measures the actual temperature (room temperature),
- can be used to set the target temperature (comfort temperature),
- can be used to control the actual temperature by activating actuators in heating/cooling operation in a predetermined zone.

Every other use, modification and conversion is expressly forbidden and leads to dangers the manufacturer cannot be held liable for.

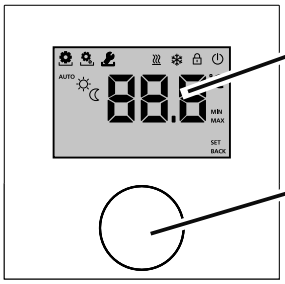
2.2 General safety notes

All safety notes in these instructions must be observed in order to avoid accidents with injury or property damage.

- Only an authorized electrician may open the device. It may only be opened in de-energised state.
- Always disconnect from the mains network and secure against unintended activation before opening.
- Only use the device if it is in perfect working condition state.
- Observe the performance limits of the device and the environmental conditions.

- This device is not intended to be used by persons (including children) with restricted physical, sensory or mental skills or who lack the necessary experience or knowledge. If necessary, these persons must be supervised by a person responsible for their safety or receive instructions from this person on how to use this unit.
- Ensure that children do not play with this device. Children must be monitored if necessary.
- In case of emergency, disconnect the complete room-by-room temperature control system.

3 Device overview



Room thermostat			
Symbol	**Meaning**	**Symbol**	**Meaning**
	Lifestyle functions menu	°C	Temperature unit
	Settings menu	88.8	Target/ actual temp.
	Heating	MIN	Min. temperature
	Operating lock	MAX	Max. temperature
	Switching off	SET	Make/confirm entry
AUTO	Automatic operation	CAL	Correction of actual temp. measuring
	Day operation	BACK	Back
	Night operation		
	Service menu	LEd	Display illum.
	Cooling	user r25	Factory settings

4 Operation

WARNING

Danger to life in case of swallowing!

The dial can be taken off; children might swallow it.

➢ Do not leave the dial near children.

4.1 Setting the target temperature

The target temperature is set by turning the dial to the left or to the right. Rotating to the left decreases the temperature, rotating to the right increases it.

Comfort temperatures for day and night operation can be stored. A manual or automatic change between the operating modes "day operation" and "night operation" changes to the stored temperature. The target temperature can be changed with the dial, independently of the active operating mode. You can find more information in the section *Lifestyle functions menu*.

4.2 Navigation and settings

The navigation and settings of the room thermostat are performed with the dial:

By pressing the dial, menus are opened and functions are activated, and changed settings are applied.

By rotating the dial, settings can be adjusted and functions and menus can be chosen.

A main level and three menus are available for navigation and settings:

Main level
In the main level, all room thermostats show the current actual temperature as well as active functions.

Menu selection

Lifestyle functions
Contains all important basic functions.

Settings
Includes extended functions and numerous possible settings.

Service
Includes various system parameters. An optimal tuning of the overall system can be obtained by adjusting individual settings.

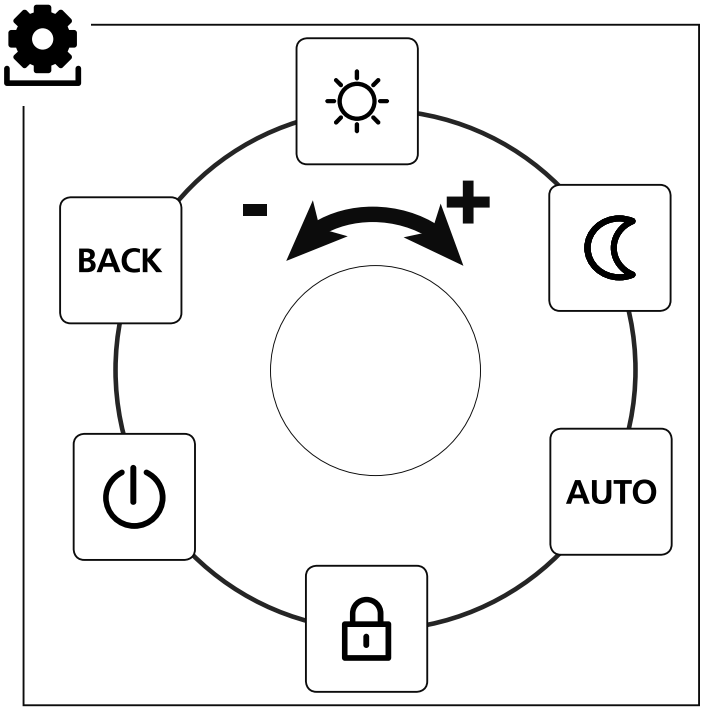
Back
Leaves the menu selection and returns to the main level.

- A selected menu or function is displayed by a flashing symbol.
- If no operation is performed, the display returns to the main level after approximately 5 seconds.

4.2.1 Lifestyle functions menu

This menu allows the setting of the lifestyle functions. The settings shown in the graphic below. The following pages contain detailed information.

- When selecting an operating mode (day, night, automatic operation) only the inactive modes are available for selection.
- If no operation is performed, the display returns to the main level after approximately 30 seconds.



- ➢ Open the menu selection by pressing the dial.
- ➢ Select the menu *Lifestyle functions*.
- ➢ Activate the menu by pressing again.
- ➢ Select the desired function.

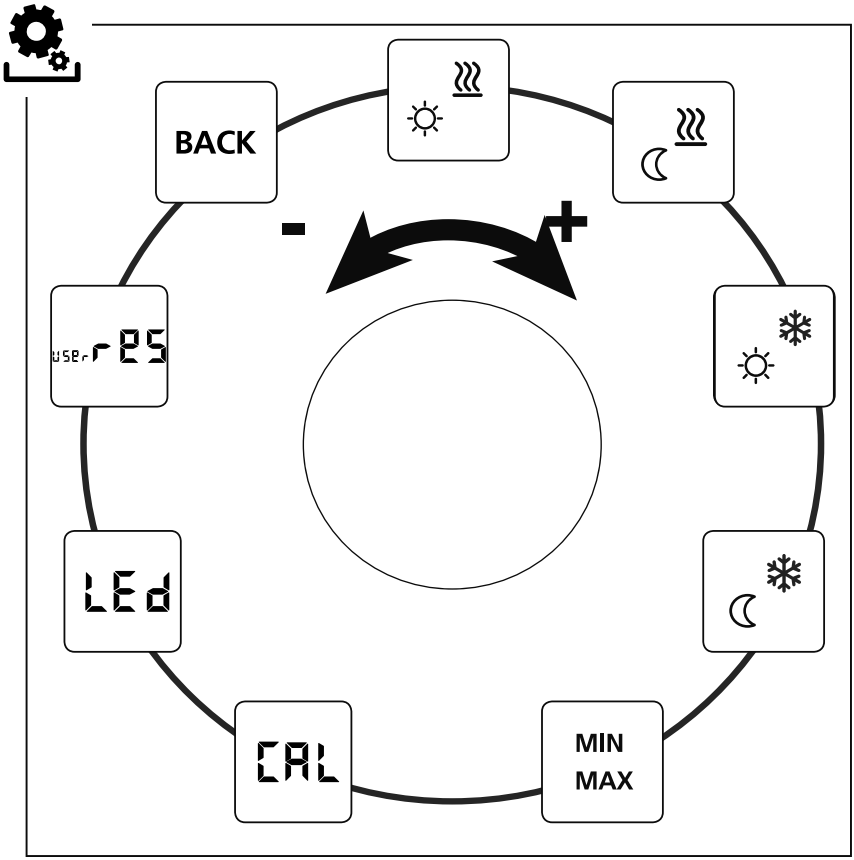
Description	Steps
Day operation Adjustment to the comfort temperature set in the *Settings* menu.	➢ Confirm the selection by pressing the dial. ✓ Day operation is activated. ✓ The main level is displayed.
Night operation Adjustment to the reduction temperature set in the *Settings* menu.	➢ Confirm the selection by pressing. ✓ Night operation is activated. ✓ The main level is displayed.
Automatic operation The signal of an external system clock (e. g. from a Control room thermostat) activates day or night operation.	➢ Confirm the selection by pressing. ✓ Automatic operation is activated. ✓ The main level is displayed.

Description	Steps
Operating lock Locks the room thermostat. The actual temperature and all active functions are still displayed, but the possibility to change the target temperature and the operation are deactivated.	**Activate** ➢ Confirm the selection by pressing. ✓ The operating lock is activated. ✓ The symbol is displayed. ✓ The main level is displayed. **Deactivate** ➢ Press the dial for > 5 seconds. ✓ The symbol is deactivated, operation is possible again.
Switching off Switches the room thermostat off. Temperature control is deactivated. The protective functions (valve protection and antifreeze protection) remain active.	➢ Confirm the selection by pressing the dial. ✓ All functions are deactivated. ✓ The symbol is displayed. ✓ The actual temperature is displayed **Switching on** ➢ Press the dial for > 5 seconds. ✓ The main level is displayed. ✓ All active functions are displayed.
Back Leaves the menu.	➢ Confirm the selection by pressing. ✓ The display returns to the main level.

4.2.2 Settings menu

Extended settings can be made in this menu. The following pages contain detailed information.

If no operation is performed, the display returns to the main level after approximately 30 seconds.



- ➢ Open the menu selection by pressing.
- ➢ Select the *settings* menu.
- ➢ Activate the menu by pressing again.
- ➢ Select the desired setting.

Description	Steps
Comfort temperature Heating Sets the target temperature for day operation.	➢ Confirm the selection by pressing. ➢ Set the target temperature. ➢ Confirm the entry by pressing. ✓ Can be found in the *Settings* menu.
Reduction temperature Heating Sets the target temperature for night operation.	➢ Confirm the selection by pressing. ➢ Set the target temperature. ➢ Confirm the entry. ✓ Can be found in the *Settings* menu.
Comfort temperature Cooling Sets the target temperature for day operation.	➢ Confirm the selection by pressing. ➢ Set the target temperature. ➢ Confirm the entry. ✓ Can be found in the *Settings* menu.
Reduction temperature Cooling Sets the target temperature for night operation.	➢ Confirm the selection by pressing. ➢ Set the target temperature. ➢ Confirm the entry. ✓ Can be found in the *Settings* menu.

Description	Steps
MIN MAX **Target temperature limitation** Setting of the maximum and minimum settable target temperature.	➢ Confirm the selection by pressing. ➢ Set the minimum temperature. ➢ Confirm the entry. ➢ Set the maximum temperature. ➢ Confirm the entry. ✓ Can be found in the *Settings* menu.
CAL **Temperature correction** Corrects a deviating measurement of the actual temperature of the internal sensor by ±2 °C in 0.1 °C increments.	➢ Confirm the selection by pressing. ➢ Set the correction value. ➢ Confirm the entry. ✓ Can be found in the *Settings* menu.
LEd **Display illumination** Sets the brightness of the display illumination in five levels: 0 Off 25 Level 1 50 Level 2 75 Level 3 100 Level 4 The setting is shown on the time display.	➢ Confirm the selection by pressing. ➢ Set the brightness of the display illumination. ➢ Confirm the entry. ✓ The *Settings* menu is displayed.

Description	Steps
Factory settings Restores the factory settings. All previously made settings will be reset.	➢ Confirm the selection by pressing. ➢ Select the entry “Yes” for resetting. ➢ Press the dial for 5 seconds. ✓ A restart is performed. The main level is displayed subsequently. The entry “No” cancels the process.
Back Leaves the menu.	➢ Confirm the selection by pressing. ✓ The main level is displayed.

4.2.3 Service menu

CAUTION

Damage to the installation!

Faulty configuration can lead to errors and installation damage.

- Only authorised specialists may perform settings.

An optimal tuning of the overall system can be reached by adjusting settings of the system parameters. In order to avoid a faulty configuration, this menu is protected by a 4-digit PIN (standard: 1234).

- Open the menu selection by pressing.
- Select the *Parameters* menu.
- Activate the menu by pressing again.
- Select the menu entry “Code”.
- Activate the PIN entry by pressing.
- Enter the 4-digit PIN (standard: 1234). Select the individual digits by rotating and confirm by pressing.
- Start the entry by activating the function “PAR”.
- Select the individual digits of the parameter number by rotating and confirm by pressing.
- Activate the entry by selecting “SET” and by pressing.
- Perform the setting according to the subsequent parameter list.
- Return to the main level by selecting “BACK” 2 times.

If no operation is performed, the display returns to the main level after approximately 30 seconds.

No.	Description	Setting
010	**Heating system** Sets the existing heating system: • Floor heating, standard (FBH St.) • Floor heating, low energy (FBH NE) • Radiator (RAD) • Convector, passive (KON pas) • Convector, active (KON akt)	0 = FBH St. 1 = FBH NE 2 = RAD 3 = KON pas 4 = KON akt *Standard: 0*
020	**Disable cooling** Deactivates the cooling function.	0 = activated 1 = deactivated *Standard: 0*
030	**Operating lock** Protects the deactivation of the operating lock with a PIN.	0 = deactivated 1 = activated *Standard: 0*
031	**PIN operating lock** Sets the PIN for parameter 30. If PIN is unknown: ➢ De-energise the device. ➢ Hold down the dial and apply voltage again until the software version is shown on the display and goes out again. ➢ Press the dial again until the symbol 🔒 disappears.	0 ... 9999 *Standard: 1234*
032	**Restricted operation** Switches the room control unit operating lock between “Standard” and “Restricted operation”.	0 = deactivated 1 = activated *Standard: 0*
050	**Duration of the display illumination** Sets the duration of further illumination of the display after use.	0 ... 30 sec. in 5 second increments *Standard: 15 sec.*
090	**Signalling of switching output** Signals the control of switching outputs by a flashing heating resp. cooling symbol.	0 = deactivated 1 = activated *Standard: 1*

No.	Description	Setting
110	**Control direction switching output** Sets the control direction of connected actuators: • Normally closed (NC) • Normally open (NO)	0 = NC 1 = NO *Standard: 0*
161	**Antifreeze temperature** Activates the antifreeze protection function when the temperature falls below the set temperature.	5 ... 10 °C *Standard: 5*
190	**Valve protection function** Cyclic opening of the valve in order to avoid clogging.	0 ... 28 days *Standard: 14*
191	**Valve activation duration** Time for triggering actuators for performing the valve protection function.	0 ... 10 minutes *Standard: 5 min*

5 Comfort and protection functions

5.1 Comfort functions

In order to increase user comfort, the room thermostat includes functions for controlling the comfort temperature.

5.1.1 Heating/cooling change-over

This function switches the entire installation between heating and cooling using an external signal.

5.1.2 Restricted Mode

The restricted mode only allows the target temperature to be changed.

Activate mode

Activation is as follows:

- ➢ Activate parameter 032 in the Service menu (value: 1).

The operating mode active before restarting is continued for restricted operation.

- ➢ De-energise the device.
- ➢ Apply voltage again.
- ✓ The restricted mode is activated.

Deactivate mode

- ➢ De-energise the device.
- ➢ Hold down the dial and apply voltage again until the software version is shown on the display and disappears again.
- ➢ In the Service menu, deactivate parameter 032 (value: 0).
- ✓ The device is permanently in standard operation.

Temporarily deactivate mode

The restricted mode can be temporarily deactivated to use or activate disabled functions of the device during this time. After a voltage interruption of the device, the restricted mode is reactivated.

- ➢ De-energise the device.
- ➢ Hold down the dial and apply voltage again until the software version is shown on the display and disappears again.
- ✓ The device is temporarily in standard operation until the next power interruption occurs.

5.2 Protection functions

The room thermostat is equipped with protection functions for avoiding damage to the overall installation.

5.2.1 Valve protection function

In periods without valve activation (e. g. outside the heating period), all valves are opened cyclically. This avoids a clogging of the valves (parameters 190 and 191).

5.2.2 Antifreeze protection

Independent from the operating mode, the room thermostat is equipped with an antifreeze function (parameter 161). When the temperature falls below the antifreeze protection temperature, all connected actuators are activated and the valves are opened.

6 Maintenance

6.1 Troubleshooting

Display	Meaning	Possible solution
- - -	Measuring temperature of internal sensor exceeded	**Internal sensor/room sensor** • Remove external heat sources in the direct environment and wait until the sensor has cooled down again. • Reposition the room sensor if necessary. • Have the room thermostat/room sensor checked and replaced if necessary.
0010	Malfunction in internal sensor	• Reset to factory settings. • Have the room thermostat checked and replaced if necessary.

6.2 Cleaning

Only use a dry and solvent-free soft cloth for cleaning.

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