# FWEDA – FCU CONTROL BOARD

## Use & Installation quick guide


EN

UK CA CE

# Safety Information and General Warnings

Improper installation, operation, or maintenance of this device may result in property damage, serious injury, or death. To reduce these risks, follow the safety instructions carefully and, if necessary, consult a qualified technician for installation.

## Warnings
## Electrical Hazard 

Turn off the power supply to the electrical panel or circuit breaker before beginning installation. Failure to do so could result in electric shock, injury or death.
This device is designed to be installed by qualified personnel. If you are unfamiliar with electrical systems, contact a licensed electrician or HVAC technician. Improper installation could damage the unit or connected systems.
Wear protective equipment and use insulated tools to avoid electrical hazards.
Make sure the supply voltage matches the voltage indicated on the unit's label. Incorrect voltage could damage the unit and cause safety hazards.

**Do Not Install in Hazardous Environments.**
Avoid installing the device in areas exposed to moisture, extreme heat, direct sunlight or chemicals. These conditions can cause malfunction or damage to the unit and the device. Make sure that cables are not damaged or crushed during installation. Damaged cables can cause short circuits, overheating or fire.

**Comply with Local Rules and Regulations.**
Installation must comply with all local building codes, safety regulations, and electrical standards.

## Caution
## General Safety Information 

Do not force components or apply excessive pressure. Handle all parts with care to avoid damage to sensitive components.

**Keep the Device Out of the Reach of Children**
This device contains small parts that may pose a choking hazard. Also, make sure that children do not tamper with the thermostat settings or wires.

**Maintenance and Faults**
Inspect the device and associated components periodically for signs of wear or damage.
Contact qualified technical service personnel for necessary repair or adjustment work.
Perform work in accordance with the operation and installation manual.

## Attention
## Disposal Provisions 

This device contains electronic components that should not be disposed of with household waste. At the end of its useful life, dispose of the device in accordance with local electronic and environmental waste regulations. Proper disposal helps to avoid potential damage to the environment and public health.
Do not dispose of the device in ordinary waste, as it may contain harmful chemicals.
For information on how to properly dispose of the device, contact your local authorities or authorized collection centers. This device complies with the current European directive on the disposal of WEEE. Penalties established by current local regulations apply in case of improper disposal.

# Specifications and Installation

## Content of the box

- Control Board
- Fixing bracket
- Screws:
  - (2x) 4,2 x 13 mm self-tapping screw (fixing the bracket to fan-coil sheet metal)
  - (2x) M5 - 12 mm (fixing the board directly on FCU switchbox)
    → for FWF-D/FWC-D/FWE-D/F FCU models
  - (2x) 3,9 x 9,5 mm self-tapping screw (fixing the board to bracket)
    → for FWV/FWZ/FWL/FWR/FWM/FWS/FWB/FWP/FWN/FWD/FWH/FWI FCU models
- Quick guide

## Technical Data

| | |
|---|---|
| **Supply voltage** | 230 Vac - 50/60 Hz |
| **Transport temperature** | -10°C / + 60°C |
| **Max power consumption** | 500 mA |
| **Nominal power consumption** | 60 mA |
| **Operating temperature** | 0 ÷ 45 °C |
| **Relay type** | NA 5A@277V (resistive)<br>Maximum ambient temperature 105°<br>1.B micro- interruption |
| **Digital input** | Sourcing |
| **Protection class** | IP20 |
| **Dimensions** | 116,5 mm x 102 mm x 52 mm |
| **Temperature sensors** | NTC 10K |
| **Maximum cable cross-section for regular terminals** | 1.5 $mm^2$ |
| **Maximum cable cross-section for regulation terminals** | 1 $mm^2$ |
| **Pollution class** | II Class |
| **Heat and fire resistance category** | Glow wire according to IEC/EN 60335-1 |
| **EMC Standard** | EN IEC 61000-6-2<br>EN IEC 61000-6-3<br>ETSI EN 301 489-1 (V 2.2.3)<br>ETSI EN 301 489-3 (V 2.3.2)<br>ETSI EN 301 489-17 (V 3.2.4) |
| **Communication specifications** | WiFi 2.4GHz 802.11.b/g/n<br>Bluetooth® 5 (LE)<br>N.02 RS485<br>NFC Forum Type 5 ISO15693 |

Control Board I/O Table

| | | |
|---|---|---|
| **Digital inputs** | GND | Common |
| | DI1 | Remote Changeover |
| | DI2 | Remote ON/OFF |
| | DI3 | Economy by contact |
| | DI4 | Dehumidification by contact* (from April 2025) |
| | GND | Common |

| | | |
|---|---|---|
| **Analog Inputs** | GND | Common |
| | AI1 | Water sensor #1 (cold/heat water for 2 pipes, cold water for 4 pipes) |
| | AI2 | Water sensor (hot water) #2 (4 Pipes) |
| | AI3 | Supply temperature |
| | AI4 | Room temperature |
| | GND | Common |
| | | |
| **Analog Outputs** | GND | AO1/AO2 common |
| | AO1 | Fan modulation (0-10V) |
| | AO2 | Proportional water valve modulation (0-10V – 2 pipe) |
| | AO3 | Proportional hot water valve modulation (0-10V – 4 pipe) |
| | AO4 | Programmable |
| | GND | AO3/AO4 common |
| | | |
| **RS485/1-2** | + | Modbus positive |
| | - | Modbus negative |
| | REF | Reference |

| | | |
|---|---|---|
| **Linea** | L | Phase |
| | N | Neutral |
| | GND | Ground |
| | | |
| **Digital Outputs** | DO1 | Fan step 1 |
| | C12 | DO1/DO2 common |
| | DO2 | Fan step 2 (not used for 3-steps fan coil unit) |
| | DO3 | Fan step 3 for 4-steps fan coil unit/Fan step 2 for 3-steps fan coil unit |
| | C34 | DO3/DO4 common |
| | DO4 | Fan step 4 for 4-steps fan coil unit/Fan step 3 for 3-steps fan coil unit |
| | | |
| **Digital Outputs** | DO5 | Cooling valve |
| | DO6 | Heating valve (for 4 pipes fan coil) or electrical heater |
| | C56 | DO5/DO6 common |
| | DO7 | Programmable |
| | DO8 | Programmable |
| | C78 | DO7/DO8 common |
| | DO9 | Programmable |
| | C9 | DO9 common |
| | | |
| **24VAC** | AC1 | 24 Vac Line |
| | AC2 | 24 Vac Line |

## Dimensions

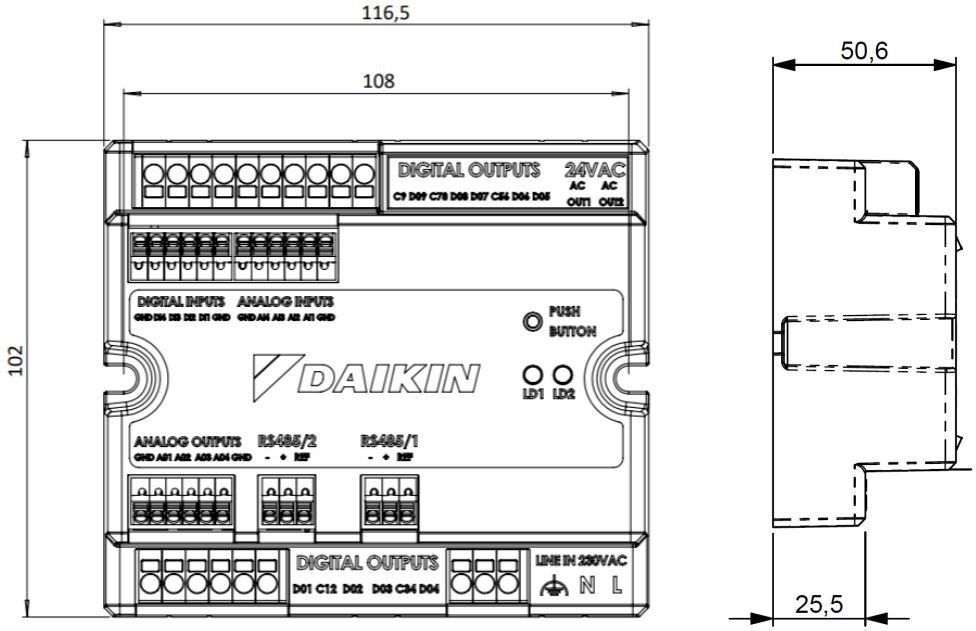



*Figure 1 – Power Control Board dimensions*

## Installation

**Important:** Before starting, make sure the power supply is turned off to avoid electric shock. You should wear protective equipment and use insulated tools. If you are not experienced in electrical installations, contact a qualified technician for installation.

### Read the Manual

Before starting the installation, read all instructions carefully and make sure you have the necessary tools.

### Choose the Location

Depending on the model of fan coil unit, the holes might be in different places. Please refer to the instructions and diagrams of your model available in the Installation and Operation Manual. In general, always install the PCB on the opposite side of the water connection (heat exchanger).

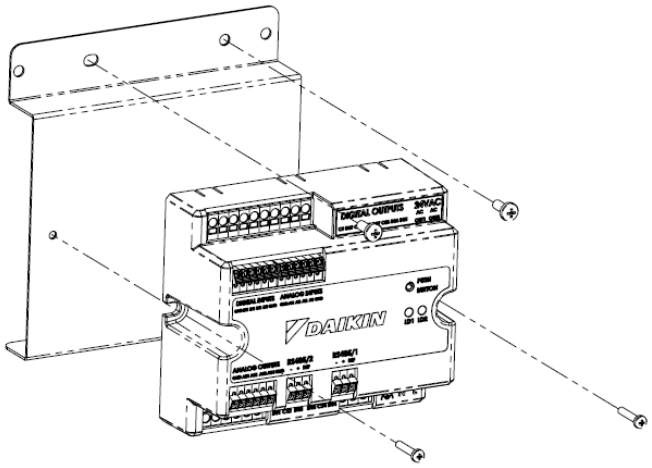
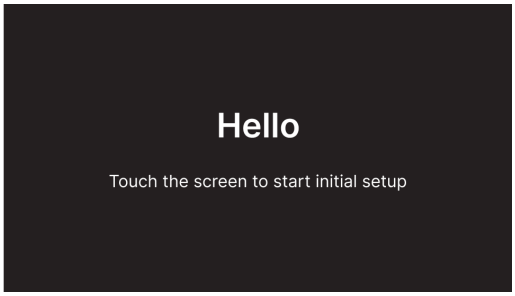


*Figure 2 – Power Control Board installation bracket*

# Quick Configuration

The first time the device is turned on, it must be initialized.

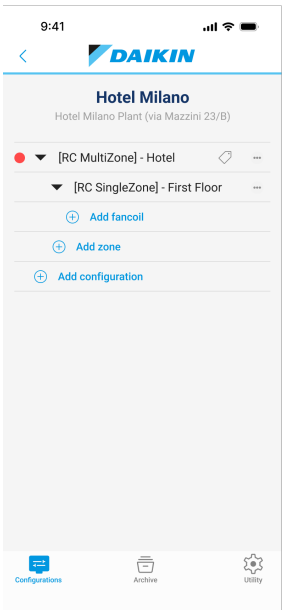

During the initial setup the user can set:

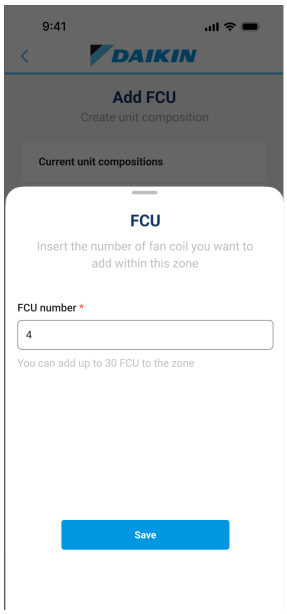
- The system language
- The full brightness of the display
- The date and time

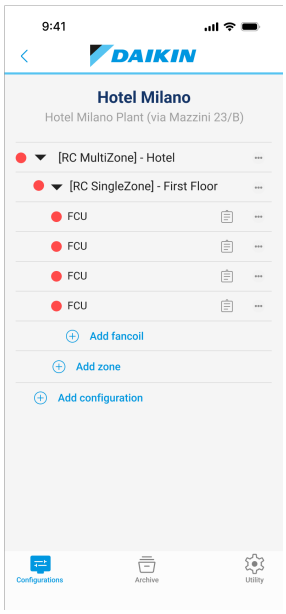
Following system initialization, it will be possible to proceed with system configuration ("Plant Configuration"). The system configuration can be done more easily and quickly through the "Daikin Shinka Manager" Mobile App, otherwise it can be done in a guided way through the same user interface, following the instructions on the screen.

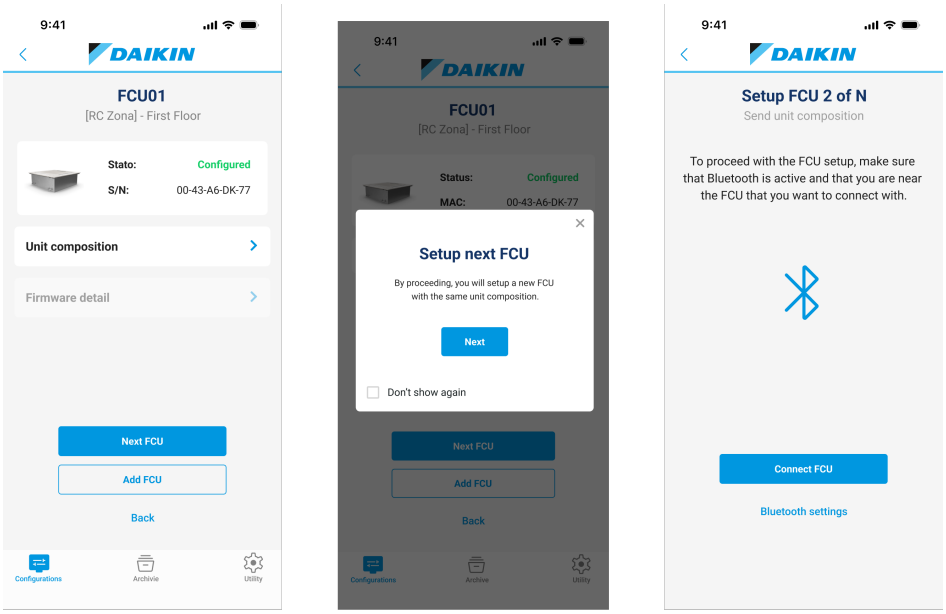
## Download the Daikin Shinka Manager Mobile App

Through the Daikin Shinka Manager App, you can create, edit and fully configure your "Plant" (user interfaces + fan coil units).






Within a Plant, each Shinka user interface (Touch/Sense/Zone model) can be associated with a "Configuration".
In each Configuration it is possible to arbitrarily add and set "Zones" of fan coils (single zone in case of Shinka Touch/Sense models, multiple zones in case of Shinka Zone).
Each Zone can consist of 1 or more fan coils (on which the FWEDA control board is already installed and wired).
The fan coils added within a Zone must be configured through the creation of the "Unit Composition", setting the unit's parameters (2/4 pipe, fan-motor type, presence of valves etc.).
Once every Unit Composition has been completed for each fan coil unit within a Zone, it is possible to proceed with the "Setup" of the fan coil units and finally of the Shinka user interfaces through a Bluetooth addressing connection.

**For any additional and more comprehensive information, please refer to the Shinka Controller Installation and Operation Manual available on the Daikin Applied Europe website or contact your local Daikin representative.**

**Scan to discover more about the Daikin Shinka FCU Controller**