



## INSTALLATION GUIDE

# DKN510 Wireless VRV Communicating Thermostat

### INTRODUCTION

The Daikin Wireless VRV Communicating Thermostat has onboard sensors. This device is an all-in-one thermostat, humidistat, and IAQ sensing station. This device does not require external power source as it works on the P1P2 communication bus.

### PACKAGE CONTENTS

- P1P2 wireless thermostat device
- Mounting accessories

### SPECIFICATIONS

<b>Power</b>	Power Source: 24V AC/DC input (+/- 15%) Peak consumption: P1P2 variant can be powered by the Daikin IDU, 1W nominal (1.3W maximum) power consumption
<b>Operating range</b>	Humidity 20-85% non-condensing. Temperature 0 to 122°F (-17 to 50°C)
<b>Communication</b>	3-wire sensor bus for daisy-chained sensor communication and low power 3V dc 4-wire interface for RS 485 communication @ 115200 baud and 5V DC, 100mA power source 900-928 MHz Mesh IEEE 802.15.4-compliant, for communications to CCU Bluetooth: BLE 4.1 for commissioning, triangulation and communication to wireless sensors
<b>Inputs</b>	2 x 10K Type-2 thermistor inputs with 2% accuracy 2 x 0-10V analog voltage inputs with 2% detection accuracy (2-10V) Touch slider for temperature control along with 3 mechanical buttons
<b>Outputs</b>	2 x Relays rated at 24V DC/1A 2 x 0-10V or 4-20mA analog outputs 2.8" 240x320 pixel TFT display



### Onboard Sensors

CO2 sensor with a range of 0 - 40,000 ppm, accuracy of +/-30ppm (0 - 5000ppm, 25C). Drift +/- 50ppm over 400 -5000ppm range over a lifetime of 15 years

VOC sensor with derived e-CO2; Typical accuracy: 15% of measured value; TVOC: 0 - 60,000 ppb; CO2eq: 0 - 60,000 ppm; Drift: 1.3% of the measured value per year

Occupancy sensor based on passive infrared (PIR) with detection range of 4m with 15-degree angle

Light Sensor. Ambient light sensor • <100 LUX resolution • High-accuracy UV index sensor • Matches erythermal curve

Temperature sensor: Typical accuracy of +/- 0.2°C

Humidity sensor: Typical accuracy of +/- 2% RH

Sound sensor with 40-120dB response for 100Hz to 10KHz

PM2.5, PM10 sensor (optional). Detection range of 0-1000µg/m3 and accuracy of +/-10µg/m3 (PM2.5, 0-100µg/m3) or +/-25µg/m3 (PM10, 0-100µg/m3). Maximum long-term mass concentration precision limit drift:

- 0 to 100 µg/m3 ±1.25 µg/m3/year
- 100 to 1000 µg/m3 ±1.25 % mV/year

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## WARNINGS AND DISCLAIMERS

The following compiles a list of warnings and notes associated with the installation and operation of this kit. Make sure to follow these warnings, as well as always having properly trained technicians and electricians, or Daikin-authorized technicians perform work.

### CAUTION

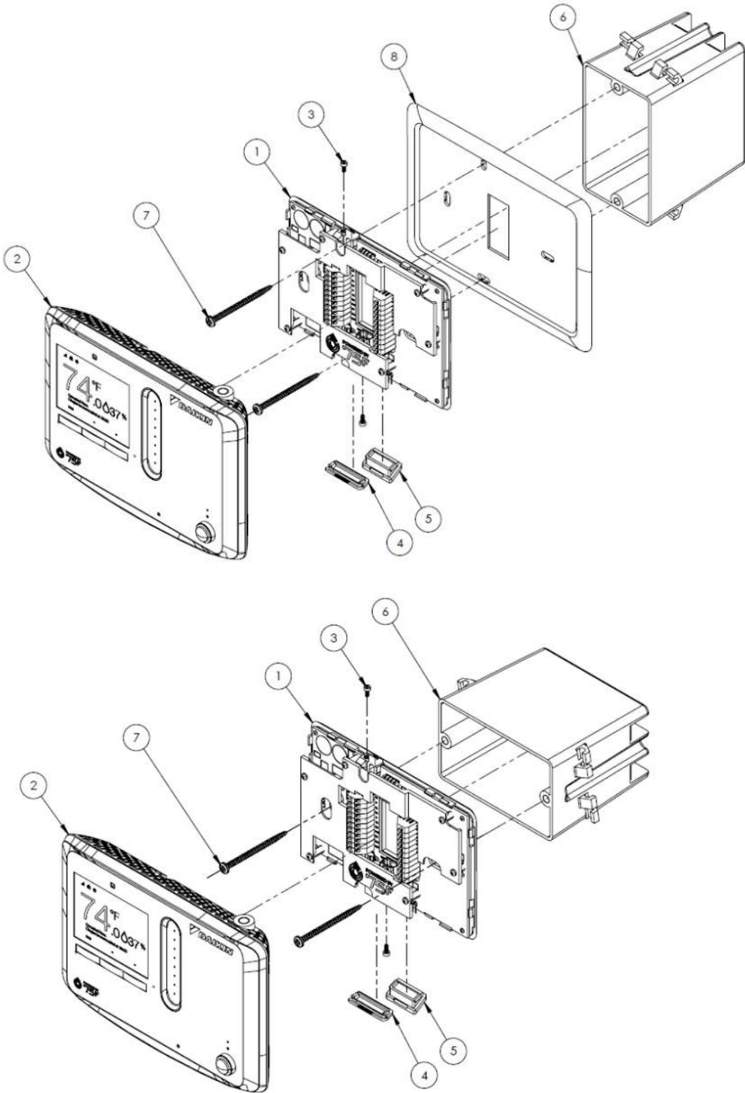
Failure to wire devices for power with the correct polarity when using a shared transformer may result in damage to any device powered by the shared transformer.

Turn off the power before wiring. Never connect or disconnect the wiring with the power turned on. Do NOT allow live wires to touch the circuit boards.

Do not connect the front to the back plate assembly when the power is ON.

Install in accordance with all state and local codes.

# MOUNTING



- 1. P1P2 thermostat interface
- 2. Thermostat/VRV Controller interface
- 3. Allen head screws
- 4. Rubber cover 1
- 5. Rubber cover 2
- 6. Gang box
- 7. PHP screws
- 8. Back plate



1. Place the P1P2 thermostat interface and the back plate (only if the gang box is fixed vertically) on the gang box such that back plate covers the gang box and fix these two items to the wall gang box with the PHP screws provided in the box.
2. Now align the thermostat main to lock onto the P1P2 thermostat interface.
3. Use the Allen head screws to make this entire setup tamper-proof.
4. Rubber covers 1 and 2 must be fixed to cover the programming pins.

## DAIKIN WIRELESS TECHNICAL SUPPORT

Installations carried out by non-certified technicians/engineers would void warranty.

For more information on wiring, commissioning, or usage of Daikin Wireless products, please refer to any documentation provided with the job. If no documentation was provided with the job, please use the Daikin Wireless Help Center ([support.wirelesscontrols.daikinapplied.com](http://support.wirelesscontrols.daikinapplied.com)) where you can find application specific wiring schematics and helpful user guides and videos

If you need more information, please visit [support.wirelesscontrols.daikinapplied.com](http://support.wirelesscontrols.daikinapplied.com) for instructional videos, installation guides, and more. You can also call +1 866 462 7829