

## MVHR | CONTROL SYSTEM

USER MANUAL | ENGLISH VERSION OV1.2

INSTALLATION INSTRUCTION & OPERATION GUIDE

CONTROL PANEL MODEL VK8



## **ACCESSORIES**

External CO2 / RH & TEMP Sensor Model ESB-CRT-01

External RH & TEMP Sensor Model ESB-RT-01

External Sensor Connection Box Model ESCB-CRT-01

External Boost Switch Model EBS-01

External Boost Connection Box Model EBCB-01

External Electrical Heater Model EEH-01

External Electrical Air Damper Model EEAD-01

External Relay Board Model ERB-01

### **External CO2 / RH & TEMP Sensor**

- External CO2 / RH & TEMP Sensor is not included in the delivery set (available as accessories for purchase)
- External Sensor Board for VK8 automation system
- Up to 8 external sensors can be connected to the control system via the connection board

### **External RH & TEMP Sensor**

- External RH & TEMP Sensor is not included in the delivery set (available as accessories for purchase)
- External Sensor Board for VK8 automation system
- Up to 8 external sensors can be connected to the control system via the connection board

### **External Sensor Connection Box**

- External Sensor Connection Box is not included in the delivery set (available as accessories for purchase)
- External Sensor Connection Board for VK8 automation system
- Connecting external sensors to the control system

### **External Boost Switch**

- External Boost Switch is not included in the delivery set (available as accessories for purchase)
- Up to 10 external boost switches can be connected to the control system via the connection board

### **External Boost Connection Box**

- External Boost Connection Box is not included in the delivery set (available as accessories for purchase)
- External Boost Connection Board
- Connecting external boost switches to the control system

### **External Electrical Heater**

- External Electrical Heater is not included in the delivery set (available as accessories for purchase)
- Up to 2 external electrical heaters can be connected to the control system via the relay board

### **External Electrical Air Damper**

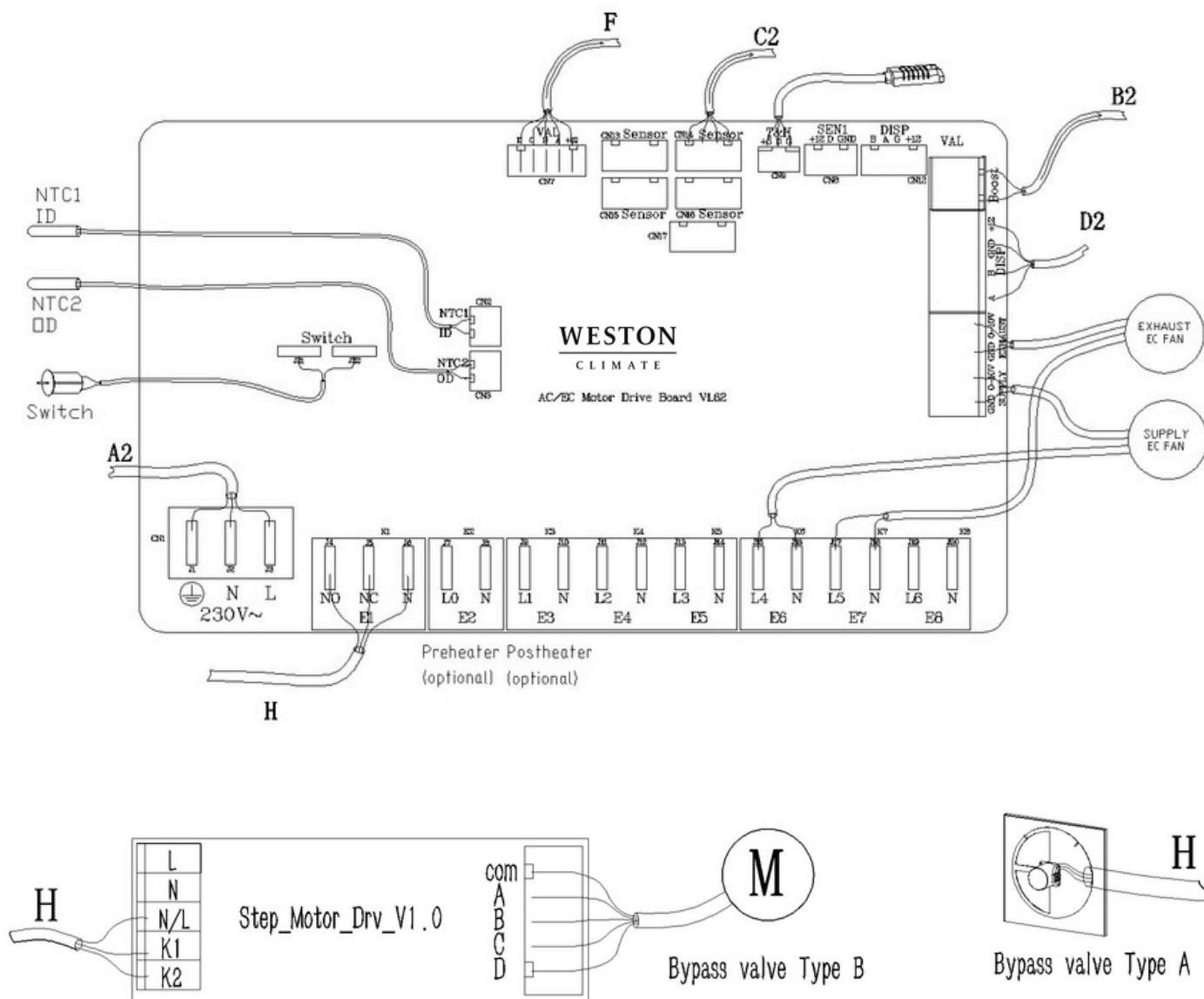
- External Electrical Air Damper is not included in the delivery set (available as accessories for purchase)
- Up to 2 external electrical air dampers can be connected to the control system via the relay board

### **External Relay Board**

- External Relay Board is not included in the delivery set (available as accessories for purchase)
- Connecting external air dampers and external heaters to the control system

## 01/ CONTROL PANEL & ACCESSORIES INSTALLATION INSTRUCTION

- Before installing or maintaining the system, main power must be turned OFF to avoid personal injury due to electric shock
- Wiring should be strictly in accordance with the cable configuration requirements
- Protective measures must be taken to prevent the ventilation system failure, risk of electric shock and fire
- Below diagrams and tables illustrate the connection of the power and the control system
- Go to **TERMINAL BLOCK T1-A1** and **T3-D1** for the quick connection method of the standard model



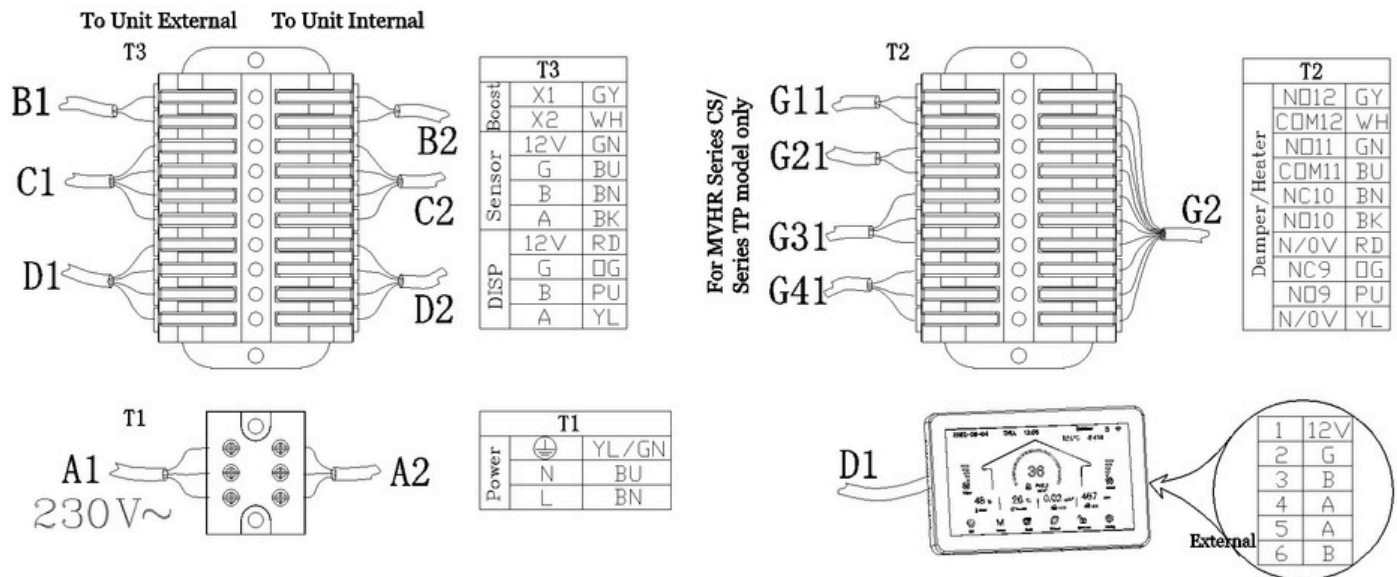
### AC/EC MOTOR DRIVE BOARD

A2	GND	→ Connect to Terminal Block [T1-A2] [GND]
	N	→ Connect to Terminal Block [T1-A2] [N]
	L	→ Connect to Terminal Block [T1-A2] [L]
E1	NO	Cable H
	NC	→ Connect to Bypass Valve
	N	For MVHR Series C / Series CS / Series W / Series TP Model
E2	L0	→ Connect to Internal Preheater (optional)
	N	

E3	L1	→ Connect to Internal Postheater (optional)
	N	
[E4] [E5] Reserve		
E6	L4	Supply Fan Power Supply Connection
	N	
E7	L5	Extract Fan Power Supply Connection
	N	
[E8] Reserve		
[Supply] [GND] [0-10V] EC Supply Fan Speed Control		
[Exhaust] [GND] [0-10V] EC Extract Fan Speed Control		
D2	[+12]	→ Connect to Terminal Block [T3-D2] [DISP] [12V]
	GND	→ Connect to Terminal Block [T3-D2] [DISP] [G]
	B	→ Connect to Terminal Block [T3-D2] [DISP] [B]
	A	→ Connect to Terminal Block [T3-D2] [DISP] [A]
B2	Boost	→ Connect to Terminal Block [T3-B2] [Boost] [X1] [X2]
[F] [CN7]		→ Connect to External Relay Board (model ERB-01) [F]
[CN8]		Jumper [D] [GND] for EC Motor Type
[C2] [CN9]		→ Connect to Temperature & Humidity Sensor (on extract air side of the unit)
[CN14]		→ Connect to Terminal Block [T3-C2] [12V] [G] [B] [A]
[CN12] [CN13] [CN15] [CN16] [CN17] Reserve		
NTC1 (ID)		Exhaust Air Temperature Sensor
NTC2 (OD)		Outdoor Air Temperature Sensor
Switch		Safety Switch For MVHR Series ES / Series CS / Series W Model

Bypass Valve Type A		
Motor [N]		← Connect from AC/EC Motor Drive Board [H-E1] [N]
Motor [NO]		Through a Micro Switch → Connect to AC/EC Motor Drive Board [H-E1] [NO]
Motor [NC]		Through a Micro Switch → Connect to AC/EC Motor Drive Board [H-E1] [NC]

Bypass Valve Type B		
L		← Connect from AC/EC Motor Drive Board [A2-CN1] [J3]
N		← Connect from AC/EC Motor Drive Board [A2-CN1] [J2]
N/L		← Connect from AC/EC Motor Drive Board [H-E1] [N]
K1		← Connect from AC/EC Motor Drive Board [H-E1] [NO]
K2		← Connect from AC/EC Motor Drive Board [H-E1] [NC]
[Com] [A] [B] [C] [D]		Plug Cable → Connect to Stepping Motor

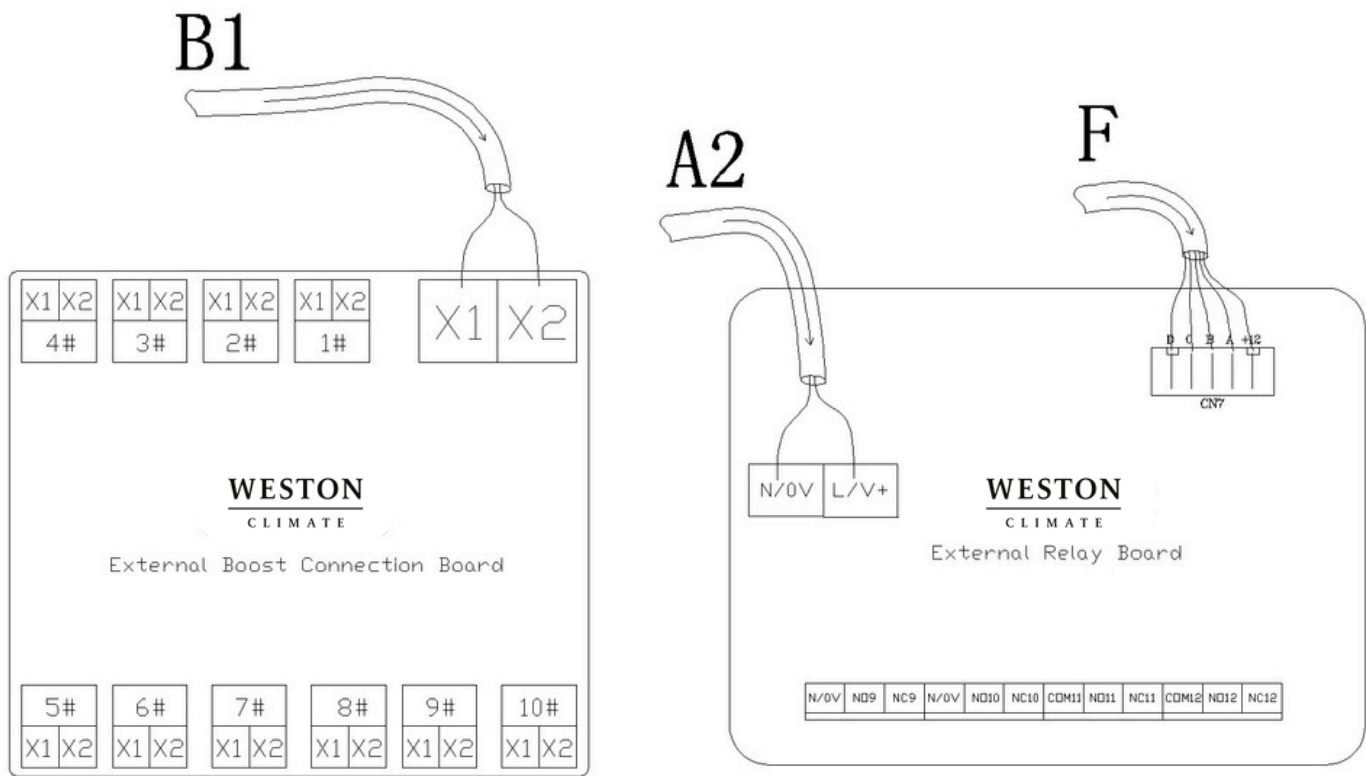


## TERMINAL BLOCK

T1	A1	GND		→ Connect to Customer's Power Supply [GND]
		N		→ Connect to Customer's Power Supply [N]
		L		→ Connect to Customer's Power Supply [L]
	A2	GND	ColorYL/GN	← Connect from AC/EC Motor Drive Board [A2] [CN1] [J1]
		N	ColorBU	← Connect from AC/EC Motor Drive Board [A2] [CN1] [J2]
		L	ColorBN	← Connect from AC/EC Motor Drive Board [A2] [CN1] [J3]
T2	G11	NO12		→ Connect to External Postheater Interlock (optional)
		COM12		
	G21	NO11		→ Connect to External Preheater Interlock (optional)
		COM11		
	G31	NC10		→ Connect to External Exhaust Air Damper - Close (optional)
		NO10		→ Connect to External Exhaust Air Damper - Open (optional)
		N/0V		→ Connect to External Exhaust Air Damper - Com. (optional)
	G41	NC9		→ Connect to External Intake Air Damper - Close (optional)
		NO9		→ Connect to External Intake Air Damper - Open (optional)
		N/0V		→ Connect to External Intake Air Damper - Com. (optional)
	G2	NO12	ColorGY	← Connect from External Relay Board [K12] [NO12] (optional)
		COM12	ColorWH	← Connect from External Relay Board [K12] [COM12] (optional)
		NO11	ColorGN	← Connect from External Relay Board [K11] [NO11] (optional)
		COM11	ColorBU	← Connect from External Relay Board [K11] [COM11] (optional)
		NC10	ColorBN	← Connect from External Relay Board [K10] [NC10] (optional)
		NO10	ColorBK	← Connect from External Relay Board [K10] [NO10] (optional)
		N/0V	ColorRD	← Connect from External Relay Board [K10] [N/0V] (optional)
		NC9	ColorOG	← Connect from External Relay Board [K9] [NC9] (optional)
		NO9	ColorPU	← Connect from External Relay Board [K9] [NO9] (optional)
		N/0V	ColorYL	← Connect from External Relay Board [K9] [N/0V] (optional)
T3	B1	X1		→ Connect to External Boost Connection Board [B1] [X1] (optional)
		X2		→ Connect to External Boost Connection Board [B1] [X2] (optional)
	B2	X1	ColorGY	← Connect from AC/EC Motor Drive Board [B2] [Boost] [X1] [X2]
		X2	ColorWH	

	C1	12V		→ Connect to External Sensor Connection Board [MAIN] [12] (optional)
		G		→ Connect to External Sensor Connection Board [MAIN] [GND] (optional)
		B		→ Connect to External Sensor Connection Board [MAIN] [B] (optional)
		A		→ Connect to External Sensor Connection Board [MAIN] [A] (optional)
	C2	12V	ColorGN	← Connect from AC/EC Motor Drive Board [C2] [CN13] or [CN14]
		G	ColorBU	
		B	ColorBN	
		A	ColorBK	
	D1	12V	ColorBN	→ Connect to VK8 Control Panel [+12V] [1]
		G	ColorBU	→ Connect to VK8 Control Panel [GND] [2]
		B	ColorBK	→ Connect to VK8 Control Panel [B] [3]
		A	ColorGY	→ Connect to VK8 Control Panel [A] [4]
	D2	12V	ColorRD	← Connect from AC/EC Motor Drive Board [D2] [+12] [DISP]
		G	ColorOG	← Connect from AC/EC Motor Drive Board [D2] [GND] [DISP]
		B	ColorPU	← Connect from AC/EC Motor Drive Board [D2] [B] [DISP]
		A	ColorYL	← Connect from AC/EC Motor Drive Board [D2] [A] [DISP]

VK8 Control Panel [D1]		
1	12V	← Connect from Terminal Block [T3-D1] [12V]
2	G	← Connect from Terminal Block [T3-D1] [G]
3	B	← Connect from Terminal Block [T3-D1] [B]
4	A	← Connect from Terminal Block [T3-D1] [A]
5	A	→ Connect to External RS485 [A] (smart home)
6	B	→ Connect to External RS485 [B] (smart home)

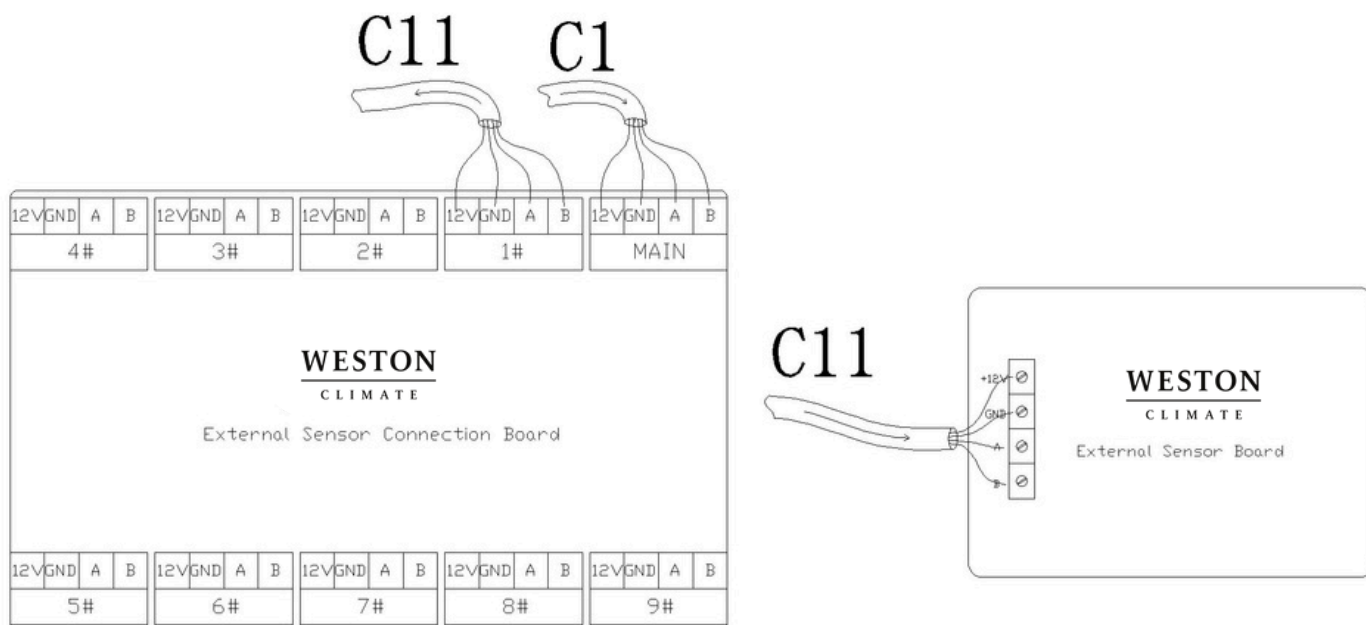


#### EXTERNAL BOOST CONNECTION BOARD

B1	X1	← Connect from Terminal Block [T3-B1] [Boost] [X1] (optional)
	X2	← Connect from Terminal Block [T3-B1] [Boost] [X2] (optional)
[1#] - [10#] [X1]		→ Connect to External Boost Switch (model EBS-01) (optional)
[1#] - [10#] [X2]		→ Connect to External Boost Switch (model EBS-01) (optional)

#### EXTERNAL RELAY BOARD

A2	N/0V	← Connect from AC/EC Motor Drive Board [A2-CN1] [J2] [J3]
	L/V+	
F	D	← Connect from AC/EC Motor Drive Board [F] [CN7]
	C	
	B	
	A	
	12V	
[N/0V]		→ Connect to Terminal Block [T2-G2]
[NO9] [NC9]		
[N/0V]		
[NO10] [NC10]		
[COM11]		
[NO11] [NC11]		
[COM12]		
[NO12] [NC12]		



### EXTERNAL SENSOR CONNECTION BOARD

C1	MAIN 12V	← Connect from Terminal Block [T3-C1] [12V]
	MAIN GND	← Connect from Terminal Block [T3-C1] [G]
	MAIN A	← Connect from Terminal Block [T3-C1] [A]
	MAIN B	← Connect from Terminal Block [T3-C1] [B]
C11	12V	→ Connect to External Sensor Board [C11] [+12V]
[1#]	GND	→ Connect to External Sensor Board [C11] [GND]
-	A	→ Connect to External Sensor Board [C11] [A]
[9#]	B	→ Connect to External Sensor Board [C11] [B]

### EXTERNAL SENSOR BOARD

C11	12V	← Connect from External Sensor Connection Board [C11] [12V]
	GND	← Connect from External Sensor Connection Board [C11] [GND]
	A	← Connect from External Sensor Connection Board [C11] [A]
	B	← Connect from External Sensor Connection Board [C11] [B]



## 02/ CONTROL PANEL OPERATION GUIDE

- Control Panel Model VK8 is not included in the delivery set (available as accessories for purchase)

### Home

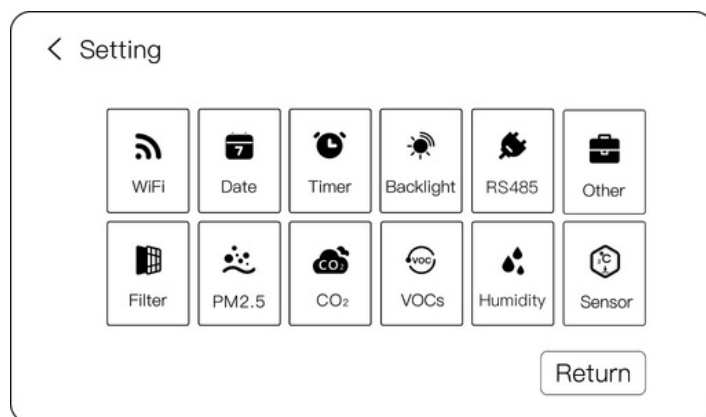


- [2022-03-31] [Thu.] [10:32]
  - Indication of the current date, day and time set in the [Date & Times] page
- [Outdoor] [19°C] [48%]
  - Indication of the real-time intake air (from outdoor) temperature data from the ventilation unit sensor
  - Indication of the real-time outdoor relative humidity (RH) data from the cloud
  - Indication of the real-time outdoor weather status (icon) from the cloud
- Indication of the WiFi (icon) connection status of pairing with cloud and APP
- [Defrosting]
  - Indicates that the ventilation system currently running defrost mode
  - Defrost automation triggering temperature level can be set in the [Other Features] page
- [Boosting]
  - Indicates that the ventilation system currently running boost mode
  - Boost ventilation duration time can be set in the [Other Features] page
- [Filter Alert]
  - Indicates that the filter cleaning or replacement timer set in the [Filter Management] page reached
- [Supply]
  - Indication of the current supply fan speed level
  - When [Fan Separation] (independent fan adjustment) mode switched ON in the [Other Features] page
    - Press [Supply] (icon) to adjust the supply fan speed level independently in [Manual] mode
- [Extract]
  - Indication of the current extract fan speed level
  - When [Fan Separation] (independent fan adjustment) mode switched ON in the [Other Features] page
    - Press [Extract] (icon) to adjust the extract fan speed level independently in [Manual] mode
- [CO2] [478ppm]
  - Indication of the real-time indoor CO2 data from the control panel sensor
  - Indication of the real-time indoor highest CO2 data if external CO2 sensors installed
  - Indication of the real-time indoor CO2 status with color bar and [Excellent] / [Good] / [Bad] (green / yellow / red)
- [Humidity] [48%]
  - Indication of the real-time extract air (from indoor) relative humidity (RH) data from the ventilation unit sensor
  - Indication of the real-time indoor highest relative humidity (RH) data if external RH sensors installed
- [Temperature] [26°C]
  - Indication of the real-time extract air (from indoor) temperature data from the ventilation unit sensor

- [PM2.5][53ug/m3]
  - Indication of the real-time indoor PM2.5 data from the control panel sensor
- [VOCs] [1]
  - Indication of the real-time indoor VOCs data from the control panel sensor
- Ventilation system control power [ON] or [OFF] switch
- [Manual]/ [Sleep] / [Auto] mode switch
  - PM2.5 automation control parameters can be set in the [PM2.5 Control Parameters] page
  - CO2 automation control parameters can be set in the [CO2 Control Parameters] page
  - VOCs automation control parameters can be set in the [VOCs Control Parameters] page
  - RHautomation control parameters can be set in the [RH Control Parameters] page
- [Fan]
  - Press[Fan] (icon) to adjust supply fan speed level and extract fan speed level simultaneously in [Manual] mode
- [Boost]ventilation ON/OFF switch
- [Bypass]
  - Selecting [Outdoor Auto Mode] or [Indoor Auto Mode] bypass automation mode
    - [Outdoor Auto Mode] follows the outdoor comfortable temperature range set in the [Other Features] page to run
    - [Indoor Auto Mode] follows the indoor comfortable temperature point set in the [Other Features] page to run
  - Switching [Bypass Valve ON] or [Bypass Valve OFF] manually or [Bypass Valve Auto] for automation mode
    - Bypass function only available for models with a bypass damper
  - Switching [Freecooling ON] or [Freecooling OFF] manually or [Freecooling Auto] for automation mode
    - Freecooling function only available for models without a bypass damper
    - Freecooling only [Outdoor Auto Mode] possible for automation mode
- [Heater]
  - Switching [Postheat ON] or [Postheat OFF] manually
  - Switching [Preheat ON] or [Preheat OFF] manually
  - Heater can only be turned ON when the supply fan is operating
- [ChildLock] screen locking switch
  - Longpress to lock or unlock the screen
- [Setting]
  - Longpress to enter into the [Setting] page

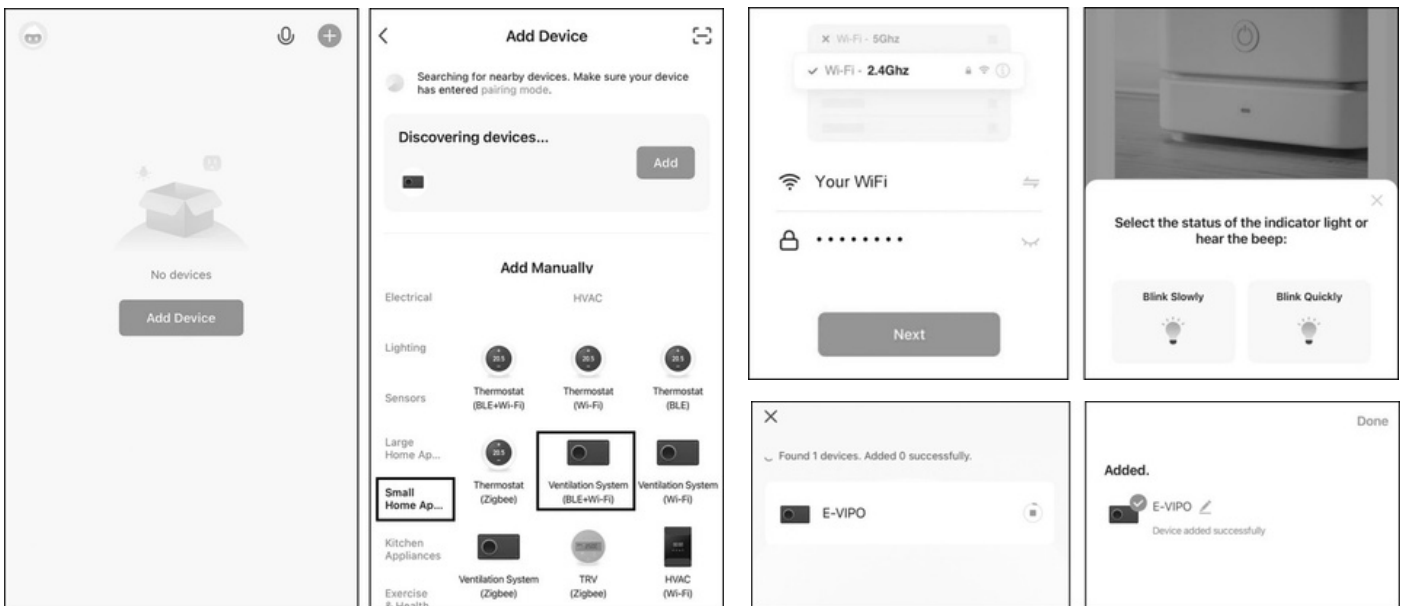
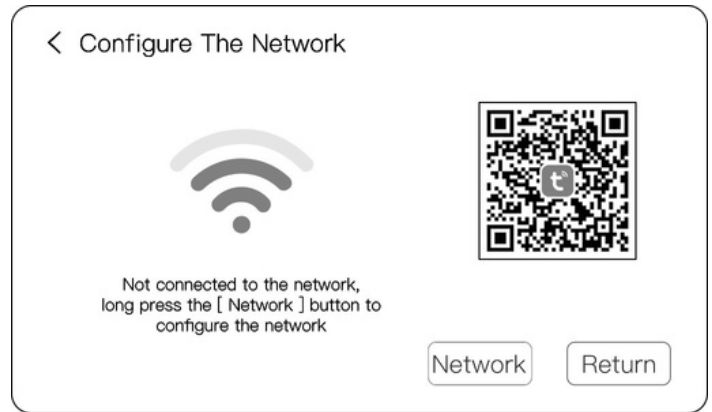
## Setting

- [WiFi] → [Configure The Network] page
- [Date] → [Date & Times] page
- [Timer] → [Timer Parameter] page
- [Backlight] → [Backlight/Off Screen Settings] page
- [RS485] → [Modbus] page
- [Other] → [Other Features] page
- [Filter] → [Filter Management] page
- [PM2.5] → [PM2.5 Control Parameters] page
- [CO2] → [CO2 Control Parameters] page
- [VOCs] → [VOCs Control Parameters] page
- [Humidity] → [RH Control Parameters] page
- [Sensor] → [Sensor Data] page



## Configure The Network

- Download the [Tuya Smart] APP on the smart phone
- Turn ON both WiFi and Bluetooth on the smart phone
- Open the APP (register and create an account) and then press [Add Device]
- Long press [Network] on the control panel
  - Ventilation system starts pairing to smart phone when the WiFi (icon) blinking on the control panel
- Press [Add] on the APP when the pairing ventilation system appears at the top of the page on APP
  - Or select [Small Home Appliances] at the left column and then select [Ventilation System (BLE+Wi-Fi)] to pair
  - Enter the local venue using WiFi username and password
- Check the current status of the WiFi (icon) on the control panel
  - Select [Blink Slowly] or [Blink Quickly] on the APP according to the control panel WiFi (icon) current status
- Pairing completed when the ventilation system added on the APP successfully
  - WiFi (icon) on the control panel stops blinking with full colored when pairing completed



## Date & Times

- [Mon.] [Tues.] [Wed.] [Thur.] [Fri.] [Sat.] [Sun.]
  - Select current day
- [D/M/Yr] [04] [01] [2022]
  - Select the values of [D/M/Yr] to set the current date
  - Press the up arrow (icon) or down arrow (icon) to adjust the values
- [H/Min/S] [15] [03] [25]
  - Select the values of [H/Min/S] to set the current time
  - Press the up arrow (icon) or down arrow (icon) to adjust the values
- Press [Save] to complete the settings



## Timing Parameter

- [Mon.] [Tues.] [Wed.] [Thur.] [Fri.] [Sat.] [Sun.]
  - Select one of the day
- [Boot time(H/Min)] [08] [00]
  - Select the values of [Boot time(H/Min)] to set the ventilation system control power ON time
  - Press the up arrow (icon) or down arrow (icon) to adjust the values
  - Press the ON/OFF (switch) next to the up arrow (icon) to turn ON or OFF the timer
- [Shutdown time(H/Min)] [23] [00]
  - Select the values of [Shutdown time(H/Min)] to set the ventilation system control power OFF time
  - Press the up arrow (icon) or down arrow (icon) to adjust the values
  - Press the ON/OFF (switch) next to the down arrow (icon) to turn ON or OFF the timer
- Press [Save] to complete the settings

← Timing Parameter

Mon. Tues. Wed. Thur. Fri. Sat. Sun.

Boot time(H/Min) 08:00 ⬆️ ☐

Shutdown time(H/Min) 23:00 ⬇️ ☐

Save Return

## Backlight/Off Screen Settings

- [Backlight brightness] [050%]
  - Select the value of [Backlight brightness] to set the screen brightness level of active touch operating moments
  - Press [+] or [-] to adjust the value
- [Screen off brightness] [18%]
  - Select the value of [Screen off brightness] to set the screen brightness level of inactive touch operating moments
  - Press [+] or [-] to adjust the value
- [Turn off screen time(S)] [069]
  - Select the value of [Turn off screen time(S)] to set the inactive touch operating seconds for [Screensaver] mode
  - Press [+] or [-] to adjust the value
- Press [Save] to complete the settings

← Backlight/Off Screen Settings

Backlight brightness	Screen off brightness	Turn off screen time(S)
050%	18%	069

—  +

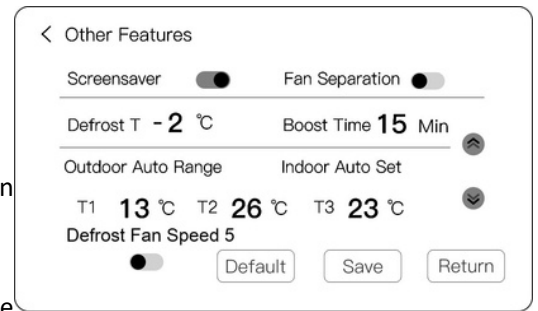
Save Return

## Other Features

- [Screensaver]
  - Press the ON/OFF (switch) next to [Screensaver] to turn ON or OFF the [Screensaver] function
- [Fan Separation] (manually balancing the indoor bidirectional air flows with over-pressure or under-pressure)
  - Press the ON/OFF (switch) next to [Fan Separation] to turn ON or OFF the independent fan adjustment mode
- [Defrost T] [-2°C]
  - Select the value of [Defrost T] to set the defrost automation triggering temperature level
  - Press the up arrow (icon) or down arrow (icon) to adjust the value (range: -5°C to +3°C)
  - Defrost mode starts when exhaust air (to outdoor) temperature level is lower than [Defrost T] value
  - Defrost mode stops when exhaust air (to outdoor) temperature level is higher than extract air (from indoor) temperature level minus 3°C (Defrost mode will also stop when 15 minutes reached)
  - Defrost mode operation interval is 45 minutes
  - Extract fan runs at fan speed 4 while the supply fan stops running in defrost mode ([Defrost Fan Speed 5] can be

turned ON if necessary)

- Ventilation system returns back to normal operation after [Defrosting] completed
- [Boost Time] [15Min]
  - Select the value of [Boost Time] to set the boost ventilation duration time when boost function triggered
  - Press the up arrow (icon) or down arrow (icon) to adjust the value
  - Boost function triggered when the [Boost] on control panel home page or external boost switches if external boost switches installed pressed
  - Ventilation system runs at maximum fan speed for a period of time set
  - Ventilation system returns back to normal operation after [Boosting] completed
- [Outdoor Auto Range] [T1] [13°C] [T2] [26°C] (for bypass automation)
  - Select the values of [Outdoor Auto Range] [T1][T2] to set the outdoor comfortable temperature range
  - Press the up arrow (icon) or down arrow (icon) to adjust the values (T1 range: +10 °C to +20°C)(T2 range: +20°C to +40°C)
  - Bypass damper opens when the extract air (from indoor) temperature level minus the intake air (from outdoor) temperature level is higher than 3°C, and the intake air (from outdoor) temperature level is between [T1] to [T2]
  - Bypass damper closes when the extract air (from indoor) temperature level minus the intake air (from outdoor) temperature level is lower than 3°C, or the intake air (from outdoor) temperature level is not between [T1] to [T2]
- [Indoor Auto Set] [T3] [23°C] (for bypass automation)
  - Select the value of [Indoor Auto Set] [T3] to set the indoor comfortable temperature point
  - Press the up arrow (icon) or down arrow (icon) to adjust the value (T3 range: +15°C to +40°C)
  - Bypass damper opens when the extract air (from indoor) temperature level is higher than the intake air (from outdoor) temperature level, and extract air (from indoor) temperature level is higher than [T3] plus 3°C
  - Bypass damper closes when the extract air (from indoor) temperature level is higher than the intake air (from outdoor) temperature level, and extract air (from indoor) temperature level is lower than [T3] minus 3°C
  - Bypass damper opens when the extract air (from indoor) temperature level is lower than the intake air (from outdoor) temperature level, and extract air (from indoor) temperature level is lower than [T3] minus 3°C
  - Bypass damper closes when the extract air (from indoor) temperature level is lower than the intake air (from outdoor) temperature level, and extract air (from indoor) temperature level is higher than [T3] plus 3°C
- Press [Save] to complete the settings
- Select one of the values and press [Default] to restore the value of factory setting if necessary



## **Filter Management**

- [Initial Time/Hours] [H-Filter] [8760]
  - Select the value of [Initial Time/Hours] [H-Filter] to set the cleaning or replacement timer of the H13 or H11 filter
  - Press the up arrow (icon) or down arrow (icon) to adjust the value
- [Already Working Time] [H-Filter] [001] (time in hours accumulated)
  - [Filter Alert] reminder notifies on the home page when [Already Working Time] reaches [Initial Time/Hours]
  - Select the value of [Already Working Time] [H-Filter] after cleaning and replacement taken place
  - The value of [Already Working Time] [H-Filter] restores to [000] hours after pressing [Reset]
- [Initial Time/Hours] [F-Filter] [4380]
  - Select the value of [Initial Time/Hours] [F-Filter] to set the cleaning or replacement timer of the F8 filter
  - Press the up arrow (icon) or down arrow (icon) to adjust the value
- [Already Working Time] [F-Filter] [001] (time in hours accumulated)

- [Filter Alert] reminder notifies on the home page when [Already Working Time] reaches [Initial Time/Hours]
- Select the value of [Already Working Time] [F-Filter] after cleaning and replacement taken place
- The value of [Already Working Time] [F-Filter] restores to [000] hours after pressing [Reset]
- [Initial Time/Hours] [G-Filter] [2190]
  - Select the value of [Initial Time/Hours] [F-Filter] to set the cleaning or replacement timer of the G4 filter
  - Press the up arrow (icon) or down arrow (icon) to adjust the value
- [Already Working Time] [001] (time in hours accumulated)
  - [Filter Alert] reminder notifies on the home page when [Already Working Time] reaches [Initial Time/Hours]
  - Select the value of [Already Working Time] [G-Filter] after cleaning and replacement taken place
  - The value of [Already Working Time] [G-Filter] restores to [000] hours after pressing [Reset]
- Select one of the values of [Initial Time/Hours] and press [Default] to restore the value of factory setting if necessary
- Press the type of filter to hide the column from active when the type of filter not equipped on the ventilation unit
- Press [Save] to complete the settings

	G-Filter	F-Filter	H-Filter	
Initial Time/Hours	2190	4380	8760	⬆ ⬇ ⬆
Already Working time	001	001	001	⬆ ⬇ ⬆

Reset Default Save Return

### **PM2.5 Control Parameters**

- [Auto] mode runs according to the real-time indoor PM2.5 data from the control panel sensor
- PM2.5 automation control runs at different fan speed [stop] [1] [2] [3] [4] [5] according to the indoor PM2.5 level
- Ventilation system stops when indoor PM2.5 level reaches below the lowest value set
- Select the values of [035] [075] [115] [150] [250] to set and define the fan speed levels under [Auto] mode
- Press [+] or [-] to adjust the values
- Press [Default] to restore the values of factory settings if necessary
- Press the ON/OFF (switch) at the top right corner to turn ON or OFF whether [Auto] mode take into account of PM2.5
- Press [Save] to complete the settings

< PM2.5 Control Parameters ☒

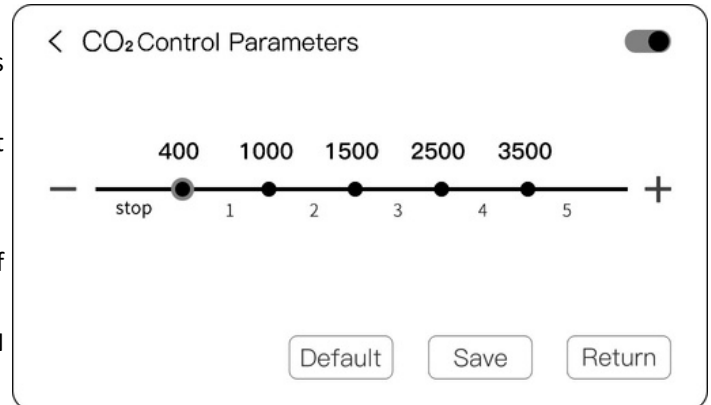
035 075 115 150 250

— stop 1 2 3 4 5 — +

Default Save Return

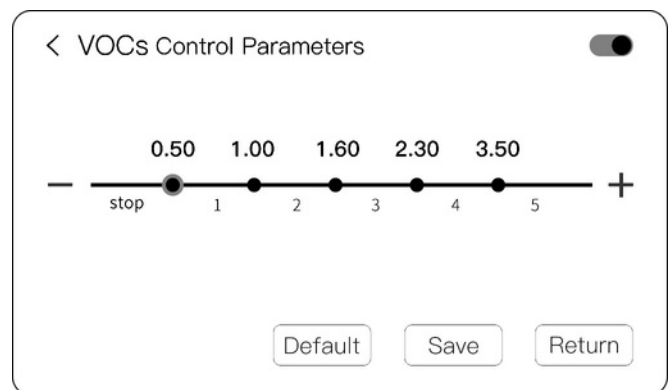
## CO2 Control Parameters

- [Auto] mode runs according to the real-time indoor CO2 data from the control panel sensor
- [Auto] mode runs according to the real-time indoor highest CO2 data if external CO2 sensors installed
- CO2 automation control runs at different fan speed [stop] [1] [2] [3] [4] [5] according to the indoor CO2 level
- Ventilation system stops when indoor CO2 level reaches below the lowest value set
- Select the values of [400] [1000] [1500] [2500] [3500] to set and define the fan speed levels under [Auto] mode
- Press [+] or [-] to adjust the values
- Press [Default] to restore the values of factory settings if necessary
- Press the ON/OFF (switch) at the top right corner to turn ON or OFF whether [Auto] mode take into account of CO2
- Press [Save] to complete the settings



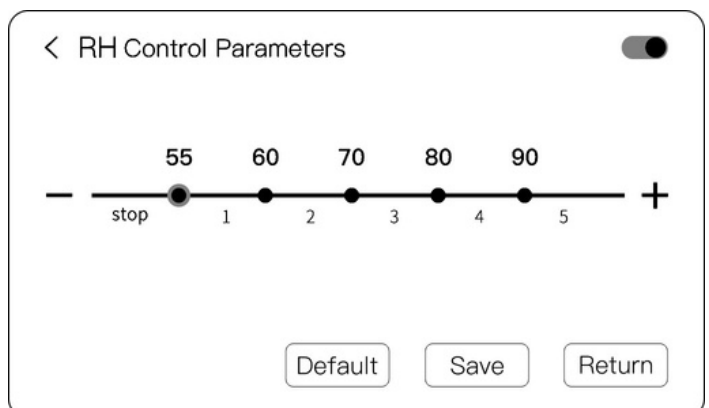
## VOCs Control Parameters

- [Auto] mode runs according to the real-time indoor VOCs data from the control panel sensor
- VOCs automation control runs at different fan speed [stop] [1] [2] [3] [4] [5] according to the indoor VOCs level
- Ventilation system stops when indoor VOCs level reaches below the lowest value set
- Select the values of [0.50] [1.00] [1.60] [2.30] [3.50] to set and define the fan speed levels under [Auto] mode
- Press [+] or [-] to adjust the values
- Press [Default] to restore the values of factory settings if necessary
- Press the ON/OFF (switch) at the top right corner to turn ON or OFF whether [Auto] mode take into account of VOCs
- Press [Save] to complete the settings



## RH Control Parameters




- [Auto] mode runs according to the real-time extract air (from indoor) relative humidity (RH) data from the ventilation unit sensor
- [Auto] mode runs according to the real-time indoor highest relative humidity (RH) data if external RH sensors installed
- RH automation control runs at different fan speed [stop] [1] [2] [3] [4] [5] according to the indoor RH level
- Ventilation system stops when indoor RH level reaches below the lowest value set
- Press the values of [55] [60] [70] [80] [90] to set and define the fan speed levels under [Auto] mode
- Press [+] or [-] to adjust the values
- Press [Default] to restore the values of factory settings if necessary
- Press the ON/OFF (switch) at the top right corner to turn ON or OFF whether [Auto] mode take into account of RH
- Press [Save] to complete the settings



## Sensor Data

- Indication of the real-time extract air (from indoor) temperature [Extract] data from the ventilation unit sensor
- Indication of the real-time extract air (from indoor) relative humidity (RH) [Extract] data from the ventilation unit sensor
- Indication of the real-time indoor CO2 [Panel] data from the control panel sensor
- Indication of the real-time indoor temperature [Onsite] data from the external TEMP sensors installed
- Indication of the real-time indoor relative humidity (RH) [Onsite] data from the external RH sensors installed
- Indication of the real-time indoor CO2 [Onsite] data from the external CO2 sensors installed
- Indication of the real-time exhaust air (to outdoor) temperature [Exhaust Temp] data from the ventilation unit sensor
- Data not showing when external sensors are not installed at the corresponding sites
- Press the corresponding site to hide the column from active when the corresponding site is not equipped with sensor

< Sensor Data

	Extract	Onsite1	Onsite2	Onsite3	Onsite4	Onsite5	Onsite6	Onsite7	Onsite8
	26	25	26	27	26	27	26	27	26
	43	44	44	44	40	42	43	42	43
	Panel 541	515	528	503	515	441	504	520	514

Exhaust Temp: 28 °C

Return

- If you have any specific problems during the use or maintenance of this product, contact the supplier or the maintenance department. Measures shall be taken after approval, otherwise the company will not be responsible for the consequences caused by the user's unauthorized changes
- The company will not bear any responsibility for the adverse consequences caused by the user's modification of the ventilation unit or the electronic control system without the permission of the company
- Due to the failure to install or use the ventilation unit as required, the company will charge corresponding fees for the after-sales service
- The information in this user manual and the product specifications may change without prior notice.
- For the most up-to-date user manual, please visit our website.
- If you have any questions about the configurations of this product, feel free to reach out to us.
- The schematic diagram in this user manual is subject to the actual object

**WARNING: DO NOT DISPOSE THE VENTILATION UNIT OR THE CONTROL PANEL OR THE ACCESSORIES IN DOMESTIC WASTE. PART OF THE PRODUCT MATERIALS CAN BE RECYCLED AND PART OF THE PRODUCT MATERIALS SHOULD NOT BE DISPOSED IN DOMESTIC WASTE. AT THE END OF THE SERVICE LIFE OF THE PRODUCT, PLEASE DISPOSE ACCORDING TO THE RELEVANT NATIONAL REGULATIONS**

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