ORTECH®
Instruction Manual

ERV SCREEN CONTROLLER
ERV-SC-1

HIGHLIGHTS

Wall Mounted, Screen Controller for Energy Recovery Ventilators

- Ultra thin wired controller
- OCA bonded capacitive touch screen
- Easy installation
- Powered by ERV, no battery required
- Adjustable brightness
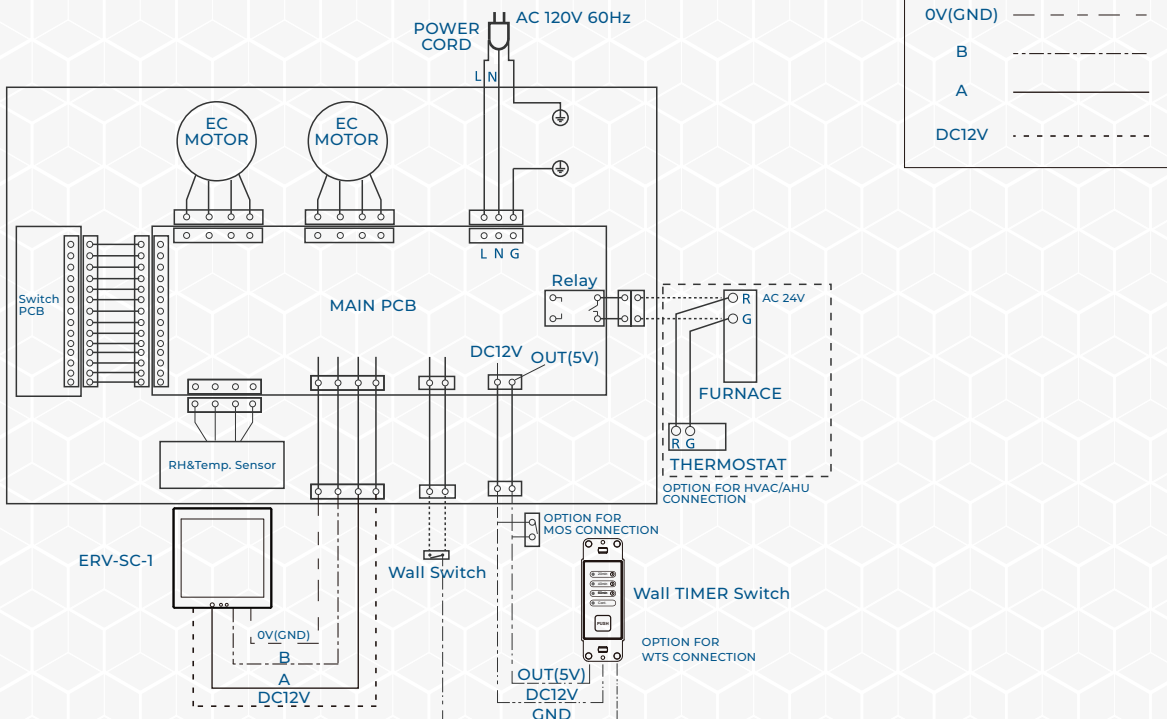- Wide viewing angle

WARNING

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

- Use this unit only in the manner intended by the manufacturer.
- Before servicing or cleaning unit, switch power off.
- Installation work and electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction codes and standards.
- When cutting or drilling into wall, do not damage electrical wiring and other hidden utilities.

CAUTION

- Read all instructions before installing or using this unit.
- To reduce the risk of fire, remove any shipping material that may be present inside the unit.
- Inspect all wiring connections ensuring they meet the correct current capacity.
- After connecting the ERV-SC-1, please keep the knobs on the control board at the factory settings (100CFM).

WIRING DIAGRAM

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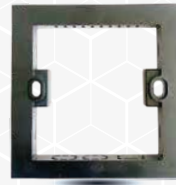
ERV SCREEN CONTROLLER
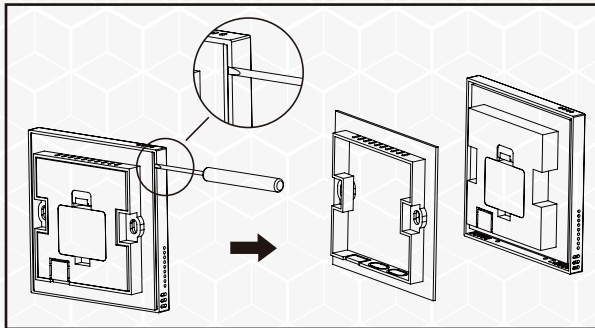## ERV-SC-1

HARDWARE CONTENTS
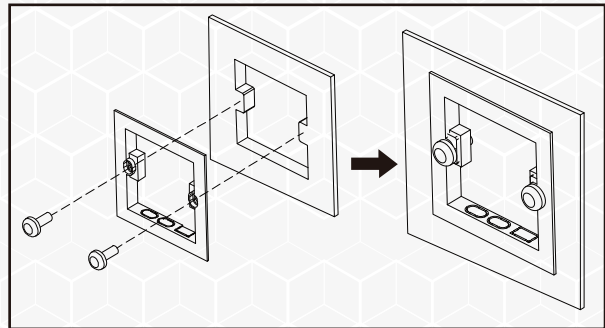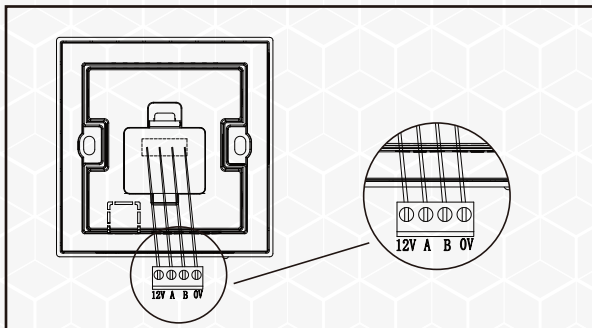

ERV-SC-1

Bracket

ASSEMBLY INSTRUCTIONS

1. Using straight screwdriver, pry off the bracket of the ERV-SC-1.
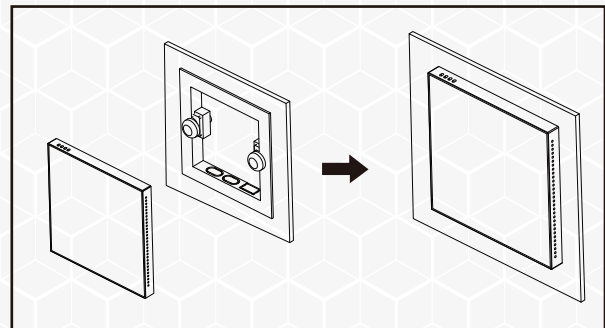

2. Install the bracket to the wall using two screws. Ensure the bracket is oriented correctly (up).

3. Connect wire to terminals on the ERV-SC-1, note which wire color has been chosen for each terminal.

4. Install the ERV-SC-1 to the bracket without using screws, the ERV-SC-1 can be fixed by the tabs.

We suggest to use the following wire colors for each terminal:
Red for "12V",
Yellow for "A",
Green for "B",
Black for "0V".

5. Connect wires to terminals on the unit.
Note: Match the wire color with the right terminal, red wire to terminal "12V", yellow wire to terminal "A", green wire to terminal "B", black wire to terminal "0V".

6. After connecting the ERV-SC-1, please keep the knobs on the control board at the factory settings (100CFM).
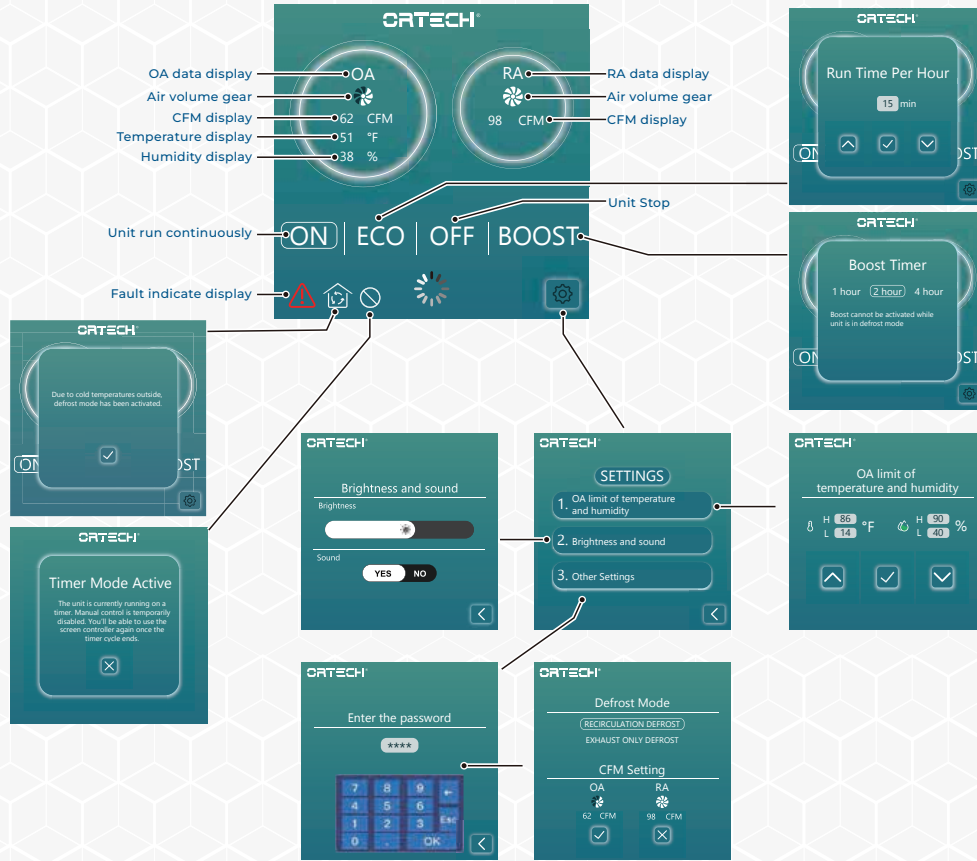

⚠️ **CAUTION**

Please connect according to the requirements, do not connect incorrectly, otherwise it may cause electrical damage.

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DISPLAY CONTROLLER OPERATION

ICON	FUNCTION	DESCRIPTION
ON	Continuous Ventilation	If ON selected, unit will run continuously.
ECO	Intermittent Ventilation	If ECO selected, there will be popup page showing the run timer per hour. Press ⌃ ⌄ to adjust the run time.
OFF	Turn Unit Off	If OFF selected, the unit will stop running.
BOOST	High Speed Ventilation	If BOOST selected, the unit will run at high speed. 1hour, 2hour, 4hour boost mode time can be selected. When the OA temperature is below 14°F, the BOOST mode cannot be activated to prevent the exchange core from frosting.
(fan icon)	Setting the Ventilation Speed	Enter the password, then adjust the current CFM. The fan speed will be displayed in the middle of the screen.
(defrost icon)	Defrost Indicator	A defrost indicator appears when the unit is operating in defrost mode. Defrost mode occurs automatically and cannot be overridden.
(settings icon)	Settings	Press to go to the Settings page [1. OA limit of temperature and humidity] Setting OA limit of temperature and humidity, Select the number, Press ⌃ ⌄ to adjust the temperature and humidity limit. [2. Brightness and sound] Setting screen brightness and sound, pull the progress bar to adjust the screen brightness. Screen sound can be selected to turn on or off [3. Other Settings] Setting defrost mode and fan speed.
(warning icon)	Service Indicator	A service indicator appears when the unit requires routine maintenance.
(prohibited icon)	Timer Mode Active	The unit is currently running on a timer. Manual control is temporarily disabled. You'll be able to use the screen controller again once the timer cycle ends.
(loading icon)	Loading	If the mode is switched too quickly in succession, the loading icon appears.

Note: After the screen sleeps, pressing anywhere on the screen will light up the screen.

ORTECH reserves the right to modify at any time, without notice, any or all of our product's features, designs, components and specifications to meet market changes.

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OPERATIONS

1. Press the **ON** button to let the unit ventilate continuously.
   a. When the outdoor temperature is higher than -10°C, the unit will run continuously.
   b. When the outdoor temperature is less than -10°C, the unit run as per the Temperature Sensor Operation tables in manual.

2. Press the **ECO** button to set the running time per hour. The unit will run as follows:
   10min: run 5min, stop 25min;
   15min: run 5min, stop 15min;
   20min: run 5min, stop 10min;
   25-55min: run as per the set time once per hour.

3. When the outdoor temperature and humidity is out of OA limit of temperature and humidity range, the unit will run as per a 5 min on/15 min off cycle. OA limit of temperature and humidity setting range is as follows:
   Temperature High: 68-113°F
   Temperature Low: 14-50°F
   Humidity High: 45-99%
   Humidity Low: 10-40%

TROUBLE SHOOTING

| | Pause / Continue / Reset screen |

Will display when accumulated running time reach to 90 days → FILTER CHECK OR MAINTENANCE
OA or RA motor fault alarm → FAN POWER FAULT
Temperature and humidity sensor fault alarm → SENSOR FAULT
→ OUTSIDE AIR CONDITIONS OUT OF LIMITS
When OA CFM is less than 40% of the set limit and lasts for at least 1 min → SUPPLY AIR FAULT
When RA CFM is less than 40% of the set limit and lasts for at least 1 min → EXHAUST AIR FAULT

To resolve fault, refer to the user manual.

Alarm will trigger if:
OA temperature exceed limit and last 1 minute, or
OA humidity exceed limit, unit will go into check cycle.
Run 5 mins, stop 25 mins.

ICON	FUNCTION	DESCRIPTION
☒	Filter check or maintenance	Will display when accumulated run time reaches 90 days. Click to display Pause, Continue, Reset.
PAUSE	Pause Sound Alarm	The alarm sound is temporarily suspended. This setting only cancels the alarm, while the fault codes on the display screen continue to be shown to remind the customer.
CONTINUE	Resuming Sound Alarm	Resuming the detection of faults. If the faults persist, the alarm will continue to be activated.
RESET	Reset Button	The action of replacing the filter after the accumulated usage time has been reached. By selecting "Reset," the accumulated time will be reset. After the reset, both the display alarm and the audible alarm will be canceled simultaneously.

⚠ CAUTION

- In addition to the display, the unit also provides alarm reminders. The alarm buzzer sounds every 4 hours, lasting for 5 seconds each time.
- During the FILTER CHECK OR MAINTENANCE alarm, there will be a popup page showing: Pause, Continue or Reset.
- All alarms can be exited by pressing the return button to go back to the main interface. And by clicking the "⚠" icon, the alarm interface can be displayed again.
- If the screen is not powered, please check the ERV unit is powered on, the display is powered by the ERV unit.

REFERENCE	QUANTITY	REMARKS	PROJECT DETAILS
			Project:
			Location
			Architect:
			Engineer:
			Contractor:
			Submitted By:
			Date:

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