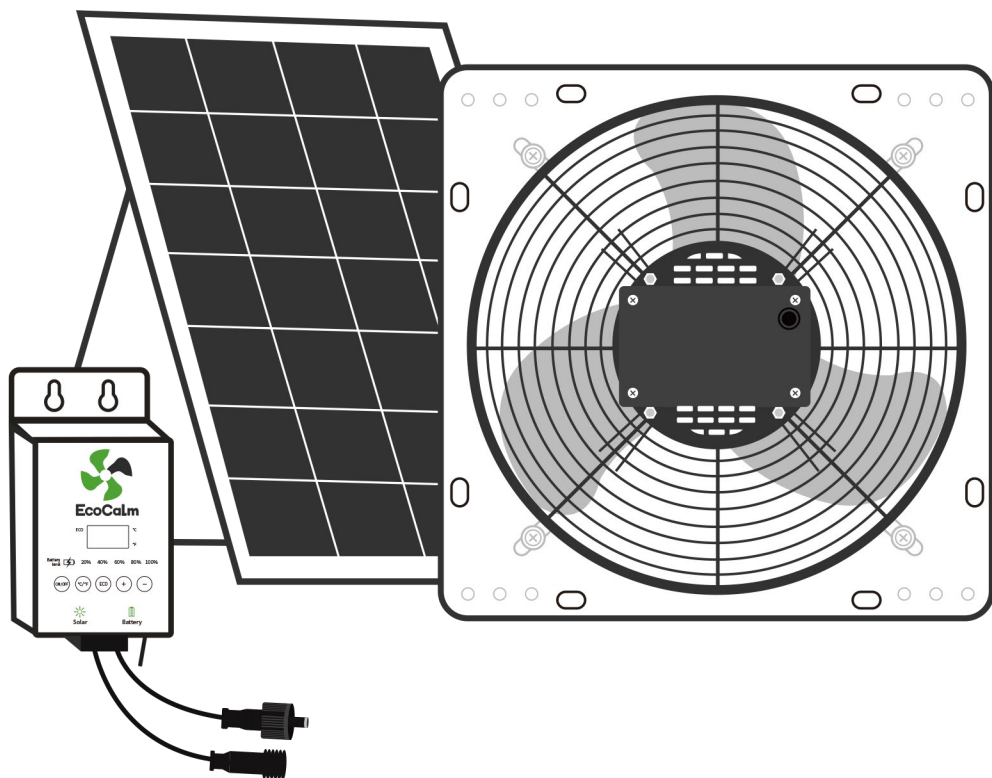




USER INSTRUCTIONS

Please read and understand all instructions



KP-SEF2409

Contents

Part 1: Parts of the Product	2
Part 2: Product features and instructions for use	3
Part 3: Operational Notes	3
Part 4: Temperature setting for temperature control mode	4
Part 5: Installation and usage steps	4
Part 6: Precautions for Use	7
Part 7: Solar Panel Specification Information Sheet	7
Part 8: Solar Powerbank Function Sheet	8



WARNING

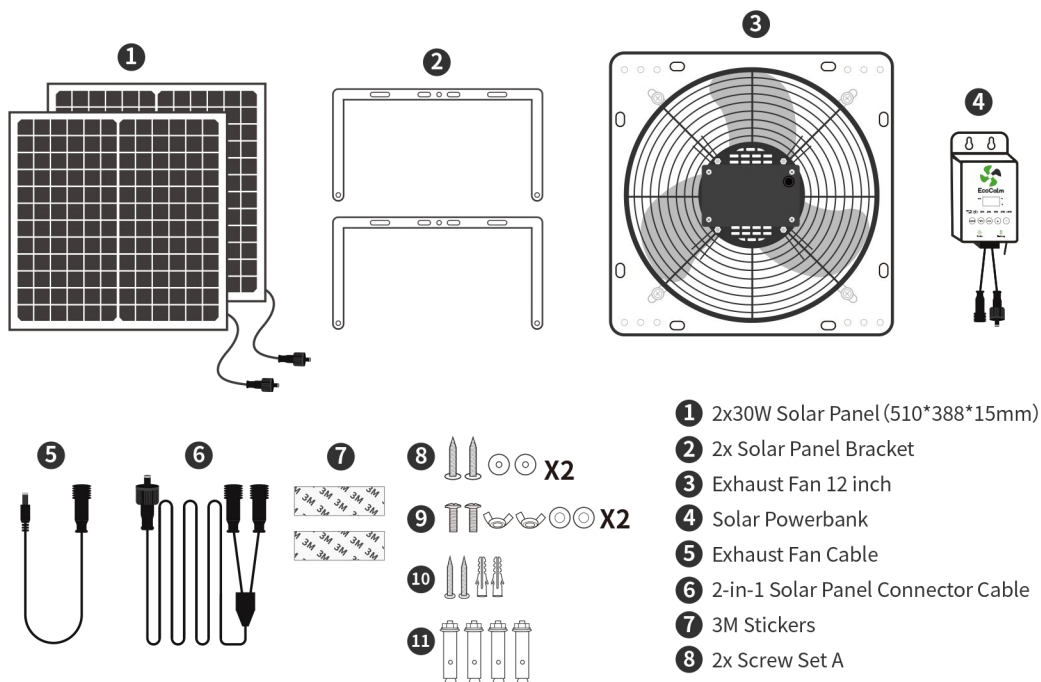
- Do not stop the fans by inserting into any objects.
- Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
- Never operate this product if it has a damaged cord or plug.
- Do not place or store appliance where it can fall or be pulled into a tub or sink.
- Do not place in or drop into water or other liquid.
- Keep fingers away from all the fans, specially the back of the fan which without the protecting cover.
- Use this product only for its intended use as described in this manual.
- Do not place the solar powerbank over 50°C.
- Do not smash the solar panel with any object.

Service

- For any issue, you are welcome to contact us at ecocalm_service@kpe-commerce.com.

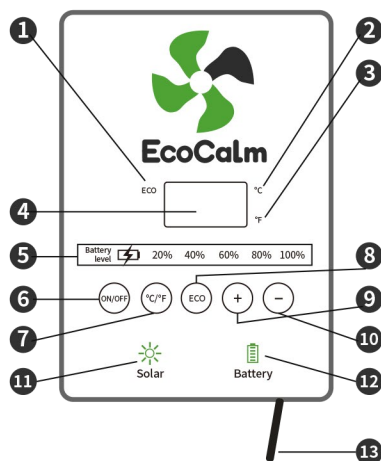
1.Parts of the Product

Product Size ①



- ① 2x30W Solar Panel (510*388*15mm)
- ② 2x Solar Panel Bracket
- ③ Exhaust Fan 12 inch
- ④ Solar Powerbank
- ⑤ Exhaust Fan Cable
- ⑥ 2-in-1 Solar Panel Connector Cable
- ⑦ 3M Stickers
- ⑧ 2x Screw Set A
- ⑨ 2x Screw Set B
- ⑩ Screw Set C
- ⑪ Screw Set D

Interface Button Description ②



- ① ECO mode light (Indicates the ECO thermostat Control Mode Status)
- ② °C light (Displays temperature in Celsius.)
- ③ °F light (Displays temperature in Fahrenheit.)
- ④ Temperature screen
- ⑤ Battery level indicator
- ⑥ Power button
- ⑦ Temperature toggle switch
- ⑧ ECO mode switch
- ⑨ Temperature plus
- ⑩ Temperature minus
- ⑪ Solar indicator
- ⑫ Battery indicator
- ⑬ Temperature sensor

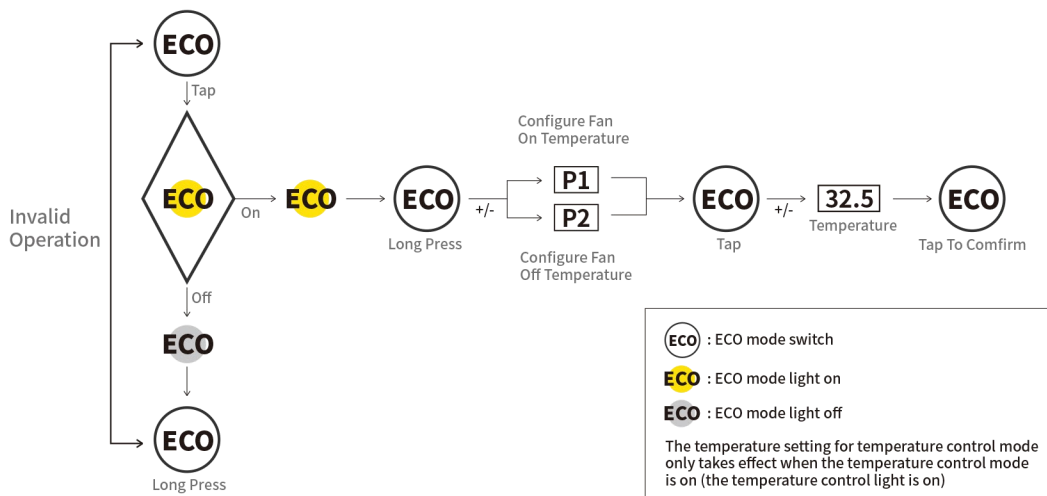
2. Product features and instructions for use

- (1) **ON/OFF:** Long press for 3 seconds to turn the fan and power on or off. Activating starts the fan, deactivating stops it. The solar powerbank continues to charge under sunlight.
- (2) **°C/°F:** Tap the button to switch temperature units; the °C light indicates Celsius mode, the °F light indicates Fahrenheit mode.
- (3) **ECO:** Tap the ECO button to activate the ECO thermostat mode. When in ECO thermostat mode (ECO light on), long-press the ECO button to enter temperature setting mode. P1 sets the fan's activation temperature, P2 sets the deactivation temperature.
- (4) **+/-:** In temperature setting mode, press +/- to choose P1/P2. When 'P1' is displayed, press the ECO button to adjust the fan's activate temperature (The temperature screen is flashing) . Use the +/- buttons to increase or decrease the temperature (short press for 0.1 increments, long press for continuous adjustment). Confirm your setting by pressing the ECO button within 5 seconds. When 'P2' is displayed, press the ECO button to adjust the fan's stop temperature using the same +/- controls and confirmation method. By default, the fan activates at 30°C (86°F) and deactivates at 26°C (78.8°F).

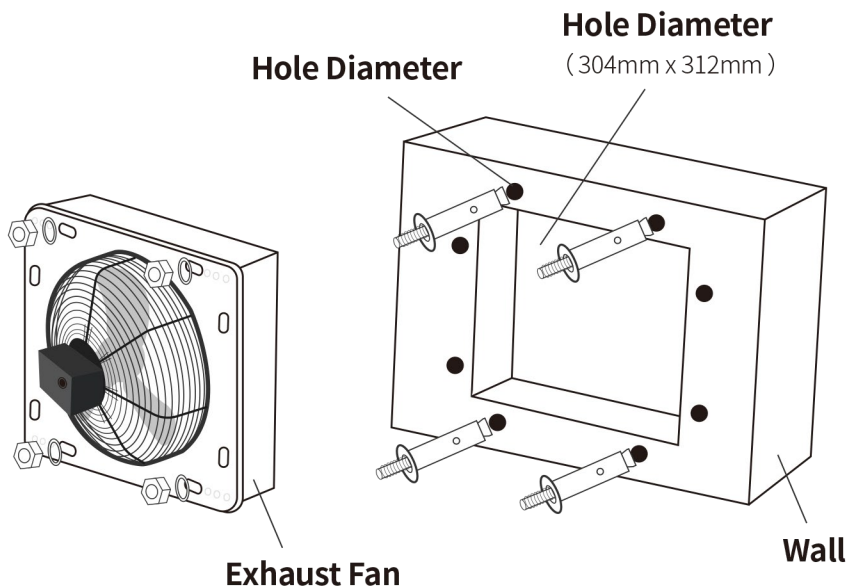
3. Operational Notes

- (1) Long pressing the ECO button is ineffective when the ECO light is off.
- (2) After completing all settings, if there is no interaction for 15 seconds, the interface will go into sleep mode, turning off all displays. Any button can be reactivated by a light touch, without affecting the fan's function or the charging of the solar powerbank.
- (3) Flashing of the battery indicator signifies imminent depletion. In the absence of solar power, the fan will automatically shut down and will resume operation, along with the charging function, once power is restored.
- (4) Alternating flashes of the solar and battery indicators denote a transition from solar to battery power due to insufficient solar voltage. Normal solar operation resumes once adequate voltage is restored.
- (5) During charging, the battery level indicator will flash at the next increment. When fully charged, the indicator will stabilize and display 100% battery capacity.
- (6) Typically, the fan's activation temperature is set higher than or equal to the deactivation temperature.

4. Temperature setting for temperature control mode

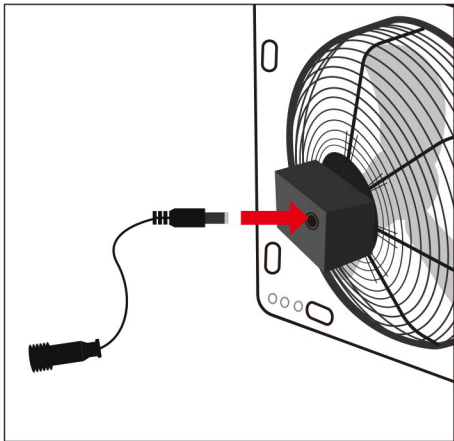


5. Installation and usage steps

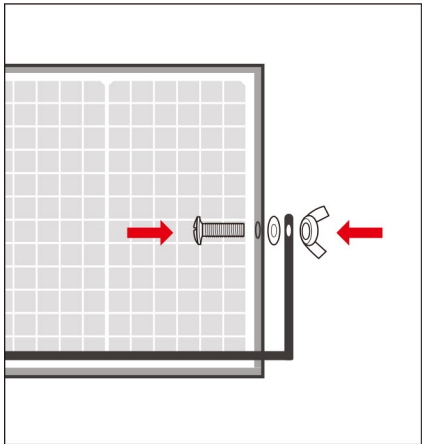


- (1) Cut a hole measuring 304mm by 312mm.
- (2) Insert the square end of the fan into the hole (ensure the direction is correct, with the flap naturally hanging vertically downwards).
- (3) Mark the positions for the 8 screw holes.
- (4) Drill the holes and insert expansion screws.
- (5) Reinsert the square end of the exhaust fan into the hole.
- (6) Secure the fan with the screw set (SET D).

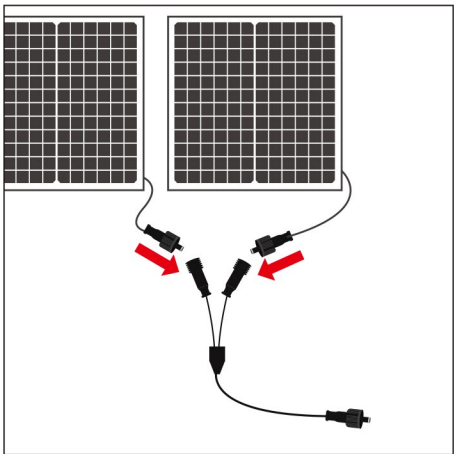
(7) Connect one end of the fan's wire to the fan.



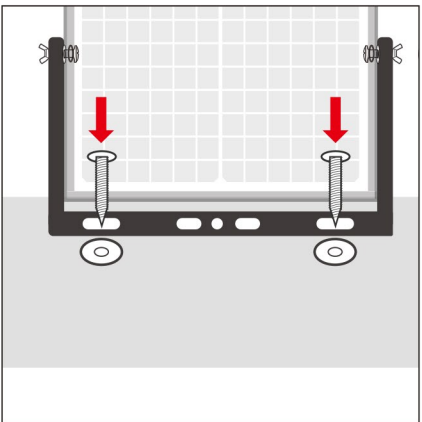
(8) Remove the screws from the solar panel set and attach the bracket following the instructions in the manual.



(9) Connect the output cables of the two solar panels to the 2-in-1 solar panel connector cable.

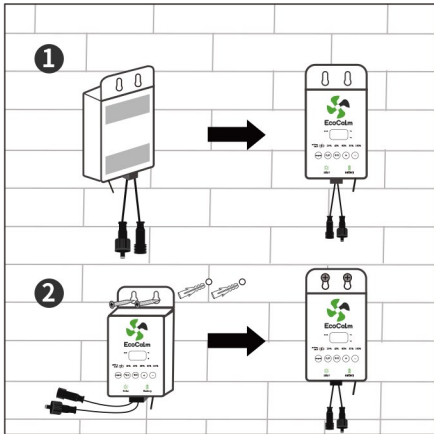


(10) Secure the 2 solar panels to the roof or wall using the screws from the kit.

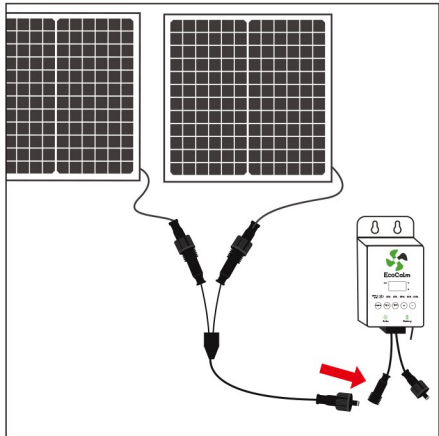


The product has added an energy storage device, aiming to improve the efficiency of solar energy utilization and increase the working time of the fan, avoiding the situation that the fan cannot work when the solar energy is insufficient or there is no sun.

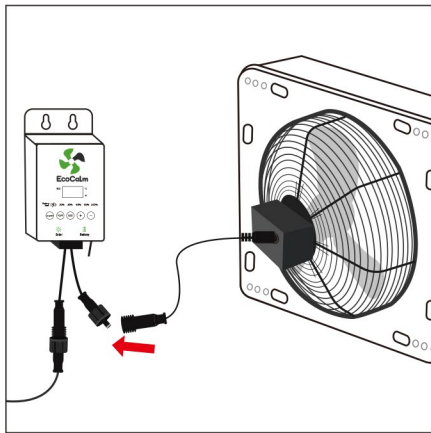
(11) Attach the solar powerbank to a convenient spot with 3M stickers or screws.



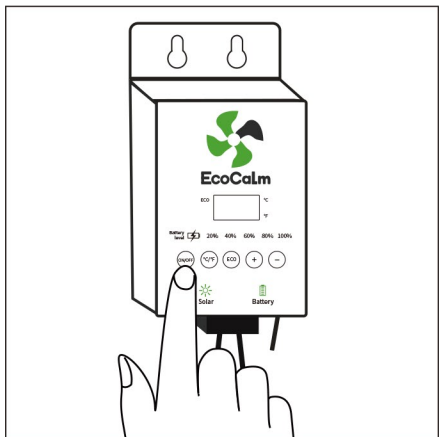
(12) Connect the 2-in-1 cable to one end of the solar powerbank.



(13) Connect the exhaust fan cable to the solar powerbank's output port.



(14) Touch the ON/OFF switch for 3 seconds after plugging in the two cables to activate the fan.



6. Precautions for Use

- (1)** The energy storage box monitors the solar input voltage and switches the fan power state accordingly. If the voltage drops below 6v for more than a minute, the fan runs on battery power. After another minute, the box checks the voltage again and resumes solar power if it is above 6v. Otherwise, the fan stays on battery power.
- (2)** The fan may stop working if the battery runs out and there is no sun for 2 days. This is because the chip IC protection may reset to the default state. To restart the fan, you have to press the switch manually.

7. Solar Panel Specification Information Sheet

Item	Double sided solar panels for 12 inch exhaust fan
Part №	BBS-130-18V-30W
Solar Panel	Single-crystal Silicon
Maximum Power	30W
Open Circuit Voltage/ Voc(V)	21V
Short-circuit Current/ Isc(A)	2.32A
Maximum Working Voltage/Vmp(V)	18V
Maximum Working Current/ Imp(A)	1.94A
Operating Temperature	-40°C-+80°C
Power Tolerance	±5%
Max.Power Temp	-(0.5±0.05)%/°C
Open Circuit Voltage Temp	-(160±10)mV/°C
Shot Circuit Current Temp	(0.065±0.015)%/°C
Max.System Voltage(V)	1000V
Product Size	390mm x510mm x15mm

8. Solar Powerbank Function Sheet

	Battery Level Light	Solar Light	Battery Light	Exhaust Fan	Description
Situation 1	● ● ● ● ●	☀	/	√	The exhaust fan is running on solar power and the solar powerbank is full of charge.
Situation 2	● ● ● ● ○	/	🔋	√	The exhaust fan is operating using battery from solar powerbank for power supply.
Situation 3	● ● ● ● ● ↑ Flashing	☀	/	√	The exhaust fan is running on solar power and the solar powerbank is charging through solar energy.
Situation 4	● ● ● ● ○	☀	/	√	The exhaust fan is operating using solar power, and the solar power is not sufficient to charge the solar powerbank.
Situation 5	○ ○ ○ ○ ○	/	/	√	There is no display on the powerbank, but the fan can operate, indicating that the solar powerbank is out of battery. The solar energy can supply power to the fan, but cannot charge the solar powerbank.
Situation 6	● ● ● ● ○	☀ Flashing	🔋 Flashing	√	Solar power unstable, switching power supply mode.
Situation 7	○ ○ ○ ○ ○	/	/	x	The energy of the solar powerbank is depleted, and the solar power is insufficient to supply power to the fan.