EG4® HYBRID SOLAR WINDOW UNIT

USER MANUAL

VERSION 1.0 | INFORMATION SUBJECT TO CHANGE WITHOUT NOTICE.
MODEL #: DAWA1-ACDC1-12KR2(US)

ENERGY STAR

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1. CHANGELOG

Revision	Date	Description of change
Version 1.0	4-15-26	Initial release

2. TECHNICAL SPECIFICATIONS

TYPE & MODEL #	
WINDOW AIR CONDITIONER	DAWA1-ACDC1-12KR2(US)
REFRIGERANT	
REFRIGERANT TYPE	R32
REFRIGERANT CHARGE VOLUME	16.93 oz. (480 g)
MAX. ALLOWABLE PRESSURE	<610 PSIG (4205.8 kPa)
ELECTRICAL	
RATED VOLTAGE	115 VAC; 75 – 350 VDC
RATED CURRENT	10.2A (AC); 3.3 – 13A (DC)
AC VOLTAGE RANGE	103.5 – 126.5 VAC
AC FREQUENCY	60 Hz
PV MAX VOLTAGE	≤380 VOC
ISC OF PV	≤15A
INPUT CURRENT OF COMPRESSOR INVERTER	11.5A
TOTAL AC INPUT CURRENT	12A
FAN MAX. OPERATING CURRENT & HORSEPOWER	1.2A/0.1 HP
COOLING	
NOMINAL CAPACITY	12000 BTU/h
CAPACITY RANGE	2500 – 12000 BTU/h
AC INPUT POWER	1150W
AC RATED CURRENT	10.2A
EER	10.4 BTU/h
CEER	14.2
COMPRESSOR	
COMPRESSOR MODEL	KSK103D33UEZ3
TYPE	Rotary
BRAND	GMCC
INPUT POWER	830 W
RATED LOAD AMPERAGE (RLA)	5.65A

UNIT DATA	
FAN MOTOR MODEL	ZWB178L61A
RATED LOAD AMPERAGE (RLA)	0.23A
SPEED (H/M/L)	1350/1250/1150 r/min
AIR FLOW (H/M/L)	294/265/235 CFM
INDOOR SOUND PRESSURE (H/M/L)	56/54/52 dB(A)
MOISTURE REMOVAL	2.65 pt/hr
GENERAL SPECIFICATIONS	
UNIT DIMENSIONS (H × W × D)	15 × 19 × 24.8 in. (381 × 483 × 630 mm)
PACKAGING (H × W × D)	17.1 × 22.4 × 27.2 in. (434 × 569 × 691 mm)
UNIT WEIGHT	66.1 lbs. (30 kg)
PACKAGED WEIGHT	77.2 lbs. (35 kg)
WARRANTY	5 years*
OPERATING TEMPERATURES	
INDOOR (COOLING)	61 – 90°F (16 – 32°C)
OUTDOOR	50 – 131°F (10 – 55°C)

For information regarding warranty registration on EG4® Electronics products, navigate to https://eg4electronics.com/warranty/ and select the corresponding product to begin the registration process.

3. ABBREVIATIONS

- AWG – American Wire Gauge
- A – Amps
- Ah – Amp hour(s)
- AC – Alternating Current
- AFCI – Arc-Fault Circuit Interrupter
- AHJ – Authority Having Jurisdiction
- kAIC – kilo-Amp Interrupting Capability
- ANSI – American National Standards Institute
- BAT – Battery
- BMS – Battery Management System
- COM – Communication
- CT – Current Transformer
- DC – Direct Current
- DIP – Dual In-line Package
- DOD – Depth of Discharge
- EG – Equipment Ground
- EGS – Equipment Grounding System
- EMC – Electromagnetic Compatibility
- EPS – Emergency Power System
- ESS – Energy Storage System
- E-Stop – Emergency Stop
- FCC – Federal Communication Commission
- GE – Grounding Electrode
- GEC – Grounding Electrode Conductor
- GFCI – Ground Fault Circuit Interrupter
- GFDI – Ground Fault Detector/Interrupter
- Imp – Maximum Power Point Current
- IEEE – Institute of Electrical and Electronic Engineers
- IP – Ingress Protection
- Isc – Short-Circuit Current
- In-lbs. – Inch Pounds
- kW – Kilowatt
- kWh – Kilowatt-hour
- LCD – Liquid Crystal Display
- LFP – Lithium Iron Phosphate
- L1 – Line 1
- L2 – Line 2
- mm – Millimeters
- MPPT – Maximum Power Point Tracking
- mV – Millivolt
- N – Neutral
- NEC – National Electric Code
- NEMA – National Electrical Manufacturers Association
- NFPA – National Fire Prevention Association
- Nm – Newton Meters
- NOCT – Normal Operating Cell Temperature
- PC – Personal Computer
- PCB – Printed Circuit Board
- PE – Protective Earth
- PPE – Personal Protective Equipment
- PV – Photovoltaic
- RSD – Rapid Shut Down
- SCC – Standards Council of Canada
- SOC – State of Charge
- STC – Standard Testing Conditions
- UL – Underwriters Laboratories
- UPS – Uninterrupted Power Supply
- V – Volts
- VOC – Open-Circuit Voltage
- VMP – Voltage Maximum Power

4. SAFETY

4.1 SYMBOLS USED IN MANUAL

DANGER

This type of notation indicates a severe hazard that presents an immediate risk of serious injury or death.

WARNING

This type of notation indicates that a hazard may pose a risk to human health and safety.

TEAM LIFT

Use team lift whenever load weight, size, or center of gravity exceeds safe single-person handling limits. Coordinated lifting improves stability, control, and significantly reduces injury risk.

CAUTION

This type of notation indicates that the hazard could potentially damage the equipment.

NOTICE

This type of notation indicates that the information provided is important for the installation, operation, and/or maintenance of the equipment. Failure to follow the recommendations in such a notation could result in the equipment warranty being voided.

NOTE

This type of notation indicates useful information.

4.2 SYMBOLS USED ON EQUIPMENT

	**WARNING:** Read the instructions before installation, operation, and maintenance of the system.
	**WARNING:** Read the instructions before installation, operation, and maintenance of the system.
	**WARNING:** Hazardous Voltage Circuits!

4.3 SAFETY INSTRUCTIONS & NOTIFICATIONS

EG4® inverters, batteries, and system components are designed and tested in strict adherence to international safety standards. Before beginning any work, carefully review all safety instructions and follow them throughout the handling of all system components. Installation should be performed only by qualified service personnel who must adhere to the guidelines provided and follow appropriate practices in accordance with local electrical, building, fire, and utility regulations. It is also essential to consult the local Authority Having Jurisdiction (AHJ) to obtain any necessary permits and approvals prior to installation.

Incorrect installation may cause:

Injury or death to the installer, operator, or third party

Damage to the inverter or other attached equipment

WARNING

All tasks related to this product, including system design, installation, operation, setup, configuration, and maintenance, must be performed by trained personnel. To prevent electric shock, avoid performing any maintenance beyond what is outlined in the operating instructions unless qualified to do so.

DANGER

Hazardous Voltage Circuits! There are various safety concerns that must be carefully observed before, during, and after installation, as well as during future operation and maintenance. The following are important safety notifications for the installer and any end users of this product under normal operating conditions.

1. This equipment requires the handling and installation of high-pressure gases and hazardous levels of AC and DC voltages.
2. All electrical work must be performed by a licensed technician in accordance with local regulations and the instructions provided in this guide.
3. Only authorized service technicians should repair or perform maintenance on this unit.
4. If the unit operates abnormally (*emits strange noises or a burning smell*), immediately turn off the unit and disconnect the power to avoid electric shock, fire, and/or injury. Call the distributor for further assistance.
5. When moving or relocating the air conditioner, consult experienced service technicians for disconnection and reinstallation of the unit.
6. Personal Protective Equipment (PPE) must be used while installing this equipment. The manufacturer and any reseller of this equipment assume no responsibility for any failure to properly protect personnel from injury.
7. Failure to follow all applicable safety standards will result in the warranty being voided.
8. The unit contains fluorinated gases. For specifics on the type of gas used and maximum amount, refer to the label on the window unit.
9. Never supply power to the unit until all wiring and connections are completely connected and re-checked.
10. If the air conditioner is used together with burners or other heating devices, thoroughly ventilate the room to avoid oxygen deficiency.
11. This unit must be properly grounded and plugged into a GFCI rated outlet.
12. For all electrical work, fuse the specified cables. Connect cables tightly and clamp them securely to prevent external forces from damaging the terminal. Improper electrical connections could overheat, causing fire and/or electrical shock.
13. The unit and any solar modules must be properly grounded in accordance with local electrical and building codes.
14. Compatible MC4 connectors must be used for solar connections.

15. Use only provided parts and accessories for installation. Using any non-standard parts could result in water leakage, electrical shock, fire, or cause the unit to fail.
16. Only install the unit in a location which can support the weight of the unit. Failure to do so could result in the unit failing and injuring personnel or damaging property.
17. In certain functional environments (*such as kitchens and server rooms, etc.*), the use of specifically designed air-conditioning units is highly recommended.
18. The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).
19. The appliance shall be stored to prevent mechanical damage from occurring.
20. Keep ventilation openings clear of obstruction.
21. Dispose of the air conditioner in accordance with federal and local regulations. Flammable refrigerants require special disposal procedures.
22. Never store or ship the air conditioner upside down or on its side, as this may cause damage to the compressor.

DO NOT: Install the unit within 1 meter of any combustible materials.

DO NOT: Share the electrical circuit with other appliances. An independent power source must be used. An improper or insufficient power supply could cause fire or electrical shock.

DO NOT: Allow children to play with the air conditioner. Children should always be supervised around the unit.

DO NOT: Insert fingers, rods, or other objects into the air inlet or outlet. The fan within the unit could be rotating at high speeds and could cause injury.

DO NOT: Use flammable sprays such as hair spray, lacquer, or paint near the unit. These could cause fire and/or an explosion.

DO NOT: Install or operate the unit in a room where it could be exposed to excessive amounts of water (*such as a bathroom or laundry room*). Excessive exposure to water can cause electrical components to short circuit.

DO NOT: Expose any skin or body directly to the cool air coming from the unit for a prolonged period of time.

DO NOT: Operate the air conditioner with wet hands. This could cause an electrical shock.

DO NOT: Turn on the power until the installation has been completed.

DO NOT: Use any means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.

DO NOT: Pierce or burn the refrigerant tubing. Be aware that refrigerants may not contain an odor.

DO NOT: Drill holes in the unit.

WARNING

Cancer and reproductive harm – See www.p65warnings.ca.gov for more details.

WARNING

When using R32 refrigerant:

- When flammable refrigerant is used, the appliance needs to be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation.
- For R32 refrigerant models:
  - Appliances shall be installed, operated, and stored in a room with a floor area larger than 43 sq. ft. (4 m^2).
  - Appliances shall not be installed in an unventilated space if the space is smaller than 43 sq. ft. (4 m^2).
  - **Minimum room size requirements:**
    >12000 BTU/h & <18000 BTU/h: 280 sq. ft. (26 m^2)
  - Reusable mechanical connectors and flared pipes are not allowed indoors. (EN Standard Requirement)
  - Mechanical connectors used indoors shall have a leak rate of not more than 3 g/year at 25% of the maximum allowable pressure. When mechanical connectors are reused indoors, sealing parts shall be renewed. When flared joints are reused indoors, the flare part shall be re-fabrication. (UL Standard Requirement)
  - When mechanical connectors are reused indoors, sealing parts shall be renewed. When flared joints are reused indoors, the flare part shall be re-fabricated.
  - Mechanical connectors used indoors shall comply with ISO 14903.

NOTE

This unit contains fluorinated greenhouse gases.

- For specific information on the type of gas and the amount, refer to the relevant label on the unit.
- Service, maintenance, and repair of this unit must be performed by a certified technician.
- Product decommissioning and recycling must be performed by a certified technician.
- For equipment that contains fluorinated gases in quantities of 5 tons of CO2 equivalent or more, but less than 50 tons of CO2 equivalent, and has a leak-detection system installed, it must be checked for leaks at least every 24 months.
- It is recommended to keep a record of all leak checks throughout the unit's lifetime.

5. SÉCURITÉ

5.1 SYMBOLES UTILISÉS DANS LE MANUEL

DANGER

Ce type de signalisation indique un danger grave présentant un risque immédiat de blessures graves, voire mortelles.

AVERTISSEMENT

Ce type de signalisation indique qu'un danger peut présenter un risque pour la santé et la sécurité humaines.

LEVAGE EN ÉQUIPE

Utilisez le levage à deux personnes lorsque le poids, les dimensions ou le centre de gravité de la charge dépassent les limites de manutention sécuritaire pour une seule personne. Un levage coordonné améliore la stabilité et le contrôle, et réduit considérablement les risques de blessure.

IMPORTANT

Ce type de notation indique que les informations fournies sont importantes pour l'installation, le fonctionnement et/ou l'entretien de l'équipement. Le non-respect des recommandations figurant dans cette notation pourrait entraîner l'annulation de la garantie de l'équipement.

RAPPEL

Ce type de notation indique des informations précédemment mentionnées qui doivent être prises en compte pour garantir un fonctionnement et une sécurité optimaux.

NOTE

Ce type de notation indique des informations utiles.

5.2 SYMBOLES UTILISÉS SUR L'ÉQUIPEMENT

	**AVERTISSEMENT :** Lisez les instructions avant l'installation, l'utilisation et l'entretien du système.
	**AVERTISSEMENT :** Lisez les instructions avant l'installation, l'utilisation et l'entretien du système.
	**AVERTISSEMENT :** Circuits à tension dangereuse.

5.3 CONSIGNES DE SÉCURITÉ ET AVIS

Les onduleurs, batteries et composants système EG4® sont conçus et testés en stricte conformité avec les normes de sécurité internationales. Avant toute intervention, veuillez lire attentivement toutes les consignes de sécurité et les respecter scrupuleusement lors de la manipulation du système. L'installation doit être effectuée uniquement par du personnel qualifié, qui doit respecter les directives fournies et appliquer les bonnes pratiques conformément aux réglementations locales en matière d'électricité, de construction, de sécurité incendie et de services publics. Il est également essentiel de consulter l'autorité compétente locale afin d'obtenir les permis et autorisations nécessaires avant l'installation.

Une installation incorrecte peut entraîner les effets suivants :

Blessure ou décès de l'installateur, de l'exploitant ou d'un tiers

Dommages à la batterie ou à tout autre équipement attaché

AVERTISSEMENT

Pour réduire le risque de blessure, lisez toutes les instructions ! Toutes les tâches relatives à ce produit, y compris la conception du système, l'installation, le fonctionnement, la configuration et la maintenance, doivent être effectuées par du personnel qualifié. Afin de prévenir tout risque d'électrocution, il est impératif de ne procéder à aucune opération de maintenance autre que celles décrites dans le manuel d'utilisation, sauf si vous possédez les qualifications requises.

DANGER

Circuits à haute tension! Il existe diverses précautions de sécurité qui doivent être scrupuleusement respectées avant, pendant et après l'installation, ainsi que lors de l'utilisation et de la maintenance futures. Vous trouverez ci-dessous des consignes de sécurité importantes destinées à l'installateur et à tout utilisateur final de ce produit dans des conditions normales d'utilisation.

1. Cet équipement nécessite la manipulation et l'installation de gaz sous haute pression ainsi que de niveaux dangereux de tensions CA et CC.
2. Tous les travaux électriques doivent être effectués par un technicien agréé conformément aux réglementations locales et aux instructions fournies dans ce guide.
3. Seuls des techniciens de service autorisés doivent effectuer les réparations ou l'entretien de cette unité.
4. Si l'unité fonctionne de manière anormale (bruits inhabituels ou odeur de brûlé), éteignez immédiatement l'unité et coupez l'alimentation afin d'éviter tout risque de choc électrique, d'incendie et/ou de blessure. Contactez le distributeur pour obtenir de l'assistance.
5. Lors du déplacement ou de la relocalisation du climatiseur, consultez des techniciens de service expérimentés pour la déconnexion et la réinstallation de l'unité.
6. L'équipement de protection individuelle (EPI) doit être utilisé lors de l'installation de cet équipement. Le fabricant et tout revendeur de cet équipement n'assument aucune responsabilité en cas de défaut de protection adéquate du personnel contre les blessures.
7. Le non-respect de toutes les normes de sécurité applicables entraînera l'annulation de la garantie.
8. L'unité contient des gaz fluorés. Pour connaître le type de gaz utilisé et la quantité maximale, consultez l'étiquette située sur l'unité de fenêtre.
9. N'alimentez jamais l'unité tant que tous les fils et toutes les connexions ne sont pas complètement raccordés et vérifiés.
10. Si le climatiseur est utilisé avec des brûleurs ou d'autres appareils de chauffage, ventilez soigneusement la pièce afin d'éviter une insuffisance d'oxygène.
11. Cette unité doit être correctement mise à la terre et branchée dans une prise de courant protégée par un disjoncteur différentiel (GFCI).
12. Pour tous les travaux électriques, utilisez les fusibles appropriés pour les câbles spécifiés. Raccordez les câbles fermement et fixez-les solidement afin d'éviter que des forces externes n'endommagent les

bornes. Des connexions électriques inadéquates peuvent provoquer une surchauffe, entraînant un incendie et/ou un choc électrique.

13. L'unité et tout module solaire doivent être correctement mis à la terre conformément aux codes électriques et aux codes du bâtiment locaux.
14. Des connecteurs MC4 compatibles doivent être utilisés pour les connexions solaires.
15. Utilisez uniquement les pièces et accessoires fournis pour l'installation. L'utilisation de pièces non standard pourrait entraîner des fuites d'eau, un choc électrique, un incendie ou provoquer une défaillance de l'unité.
16. Installez l'unité uniquement dans un emplacement capable de supporter son poids. Le non-respect de cette consigne pourrait entraîner la chute de l'unité et causer des blessures ou des dommages matériels.
17. Dans certains environnements fonctionnels (tels que les cuisines, salles de serveurs, etc.), l'utilisation d'unités de climatisation spécialement conçues est fortement recommandée.
18. L'appareil doit être entreposé dans une pièce sans sources d'inflammation fonctionnant en continu (par exemple : flammes nues, appareil à gaz en fonctionnement ou chauffage électrique en fonctionnement).
19. L'appareil doit être entreposé de manière à prévenir tout dommage mécanique.
20. Maintenez les ouvertures de ventilation libres de toute obstruction.
21. Éliminez le climatiseur conformément aux réglementations fédérales et locales. Les réfrigérants inflammables nécessitent des procédures d'élimination spéciales.
22. Ne stockez et n'expédiez jamais le climatiseur à l'envers ou sur le côté afin d'éviter d'endommager le compresseur.

NE PAS : Installer l'unité à moins de 1 mètre de tout matériau combustible.

NE PAS : Partager le circuit électrique avec d'autres appareils. Une source d'alimentation indépendante doit être utilisée. Une alimentation inadéquate ou insuffisante pourrait provoquer un incendie ou un choc électrique.

NE PAS : Permettre aux enfants de jouer avec le climatiseur. Les enfants doivent toujours être supervisés à proximité de l'unité.

NE PAS : Insérer les doigts, des tiges ou tout autre objet dans l'entrée ou la sortie d'air. Le ventilateur à l'intérieur de l'unité peut tourner à grande vitesse et provoquer des blessures.

NE PAS : Utiliser de sprays inflammables tels que laque, aérosol capillaire ou peinture à proximité de l'unité. Cela pourrait provoquer un incendie et/ou une explosion.

NE PAS : Installer ou utiliser l'unité dans une pièce où elle pourrait être exposée à des quantités excessives d'eau (par exemple une salle de bain ou une buanderie). Une exposition excessive à l'eau peut provoquer un court-circuit des composants électriques.

NE PAS : Exposer directement la peau ou le corps à l'air froid provenant de l'unité pendant une période prolongée.

NE PAS : Utiliser le climatiseur avec les mains mouillées. Cela pourrait provoquer un choc électrique.

NE PAS : Mettre l'appareil sous tension avant que l'installation soit complètement terminée.

NE PAS : Utiliser des moyens pour accélérer le processus de dégivrage ou pour nettoyer l'appareil autres que ceux recommandés par le fabricant.

NE PAS : Percer ou brûler les conduites de réfrigérant. Notez que les réfrigérants peuvent être inodores.

NE PAS : Percer de trous dans l'unité.

AVERTISSEMENT

Cancer et dommages reproductifs – Voir www.P654warnings.ca.gov pour plus de détails.

AVERTISSEMENT

Lors de l'utilisation du réfrigérant R32 :

- Lorsqu'un réfrigérant inflammable est utilisé, l'appareil doit être entreposé dans un endroit bien ventilé où la taille de la pièce correspond à la surface minimale requise pour le fonctionnement.
- Pour les modèles utilisant le réfrigérant R32 :
  - Les appareils doivent être installés, utilisés et entreposés dans une pièce dont la surface au sol est supérieure à 43 pi² (4 m²).
  - Les appareils ne doivent pas être installés dans un espace non ventilé si la surface de cet espace est inférieure à 43 pi² (4 m²).
  - Exigences minimales relatives à la taille de la pièce :
    >12000 BTU/h et <18000 BTU/h : 280 pi² (26 m²)
  - Les raccords mécaniques réutilisables et les tuyaux évasés ne sont pas autorisés à l'intérieur. *(Exigence de la norme EN)*
  - Les raccords mécaniques utilisés à l'intérieur doivent présenter un taux de fuite maximal de 3 g/an à 25 % de la pression maximale admissible. Lorsque des raccords mécaniques sont réutilisés à l'intérieur, les éléments d'étanchéité doivent être remplacés. Lorsque des raccords évasés sont réutilisés à l'intérieur, la partie évasée doit être refabriquée. *(Exigence de la norme UL)*
  - Lorsque des raccords mécaniques sont réutilisés à l'intérieur, les éléments d'étanchéité doivent être remplacés. Lorsque des raccords évasés sont réutilisés à l'intérieur, la partie évasée doit être refabriquée.
  - Les raccords mécaniques utilisés à l'intérieur doivent être conformes à ISO 14903.

NOTE

Cette unité contient des gaz à effet de serre fluorés.

- Pour des informations précises sur le type de gaz et la quantité utilisée, consultez l'étiquette correspondante apposée sur l'unité.
- L'entretien, la maintenance et la réparation de cette unité doivent être effectués par un technicien certifié.
- La mise hors service et le recyclage du produit doivent être effectués par un technicien certifié.
- Pour les équipements contenant des gaz fluorés en quantités équivalentes à **5 tonnes de CO_2 ou plus, mais inférieures à 50 tonnes de CO_2**, et équipés d'un système de détection de fuite, une vérification des fuites doit être effectuée **au moins tous les 24 mois**.
- Il est recommandé de conserver un registre de toutes les vérifications de fuite pendant toute la durée de vie de l'unité.

6. PRODUCT OVERVIEW

6.1 FEATURES

The EG4® Hybrid Solar Window Unit offers energy-efficient and cost-effective room cooling by using PV power to help reduce the customer's day-to-day utility consumption. Each window unit is capable of cooling and dehumidifying as needed.

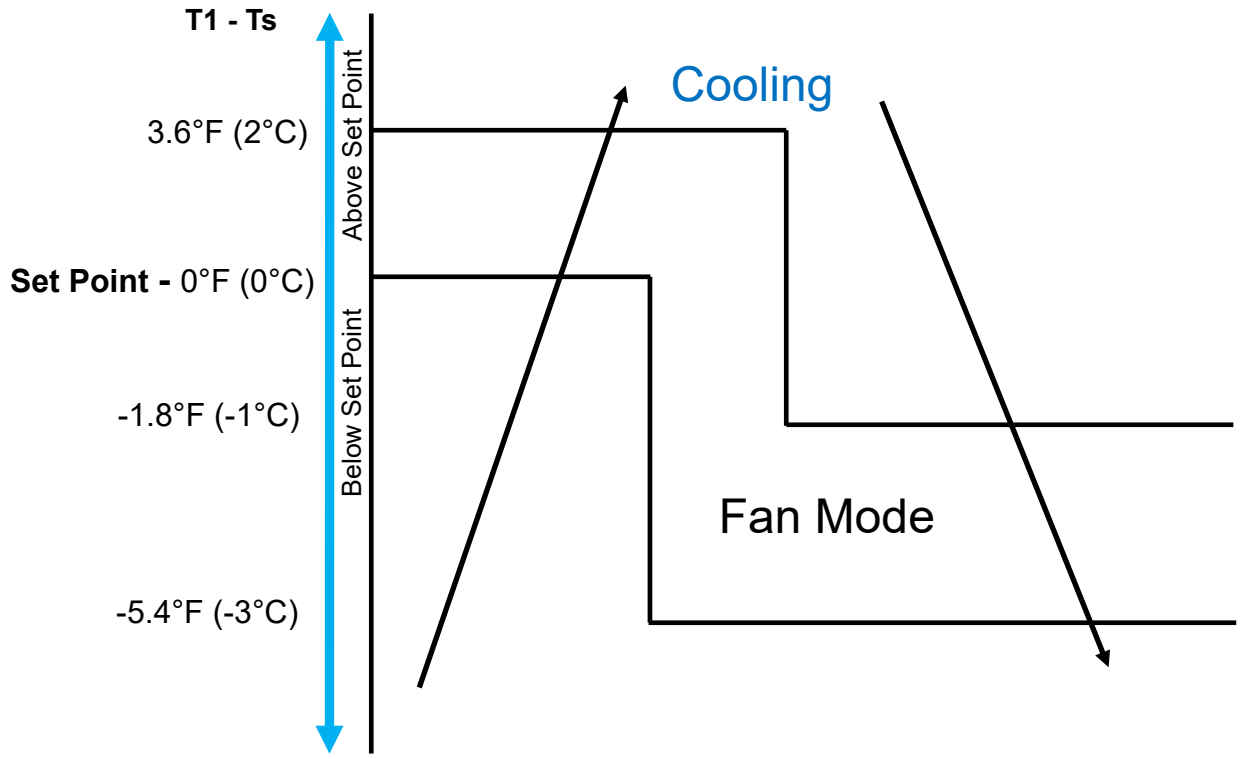
Hybrid models can be powered from AC power, DC power, or a combination of both when using a dedicated solar array. While the hybrid models can run entirely on solar power, solar power is not required for them to operate. It is recommended to use AC power for days with low amounts of solar energy, or for use at night. The unit will automatically supplement AC power when needed to keep the unit running. Installation follows the same guidelines as a traditional window unit installation, but with the addition of solar inputs for an alternative power supply.

Each unit comes with a remote control and can also be controlled by a smartphone via a third-party application. See section 13.2 for more information on controlling the unit using the mobile app.

COOLING MODE:

Below is a detailed explanation of how the unit operates:

- As the room temperature reaches the set point, the compressor slows to a very low speed.
- When the room temperature difference is less than 1.8°F (1°C) below the set point, the system switches to fan mode.



KEY DESIGN NOTE:

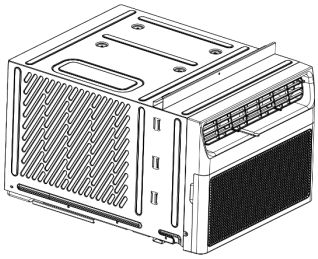
- The fan remains active in auto mode, with only the compressor unit shutting down. This is due to the system's design, which allows it to operate dynamically across cooling and fan modes depending on the temperature conditions.

Summary:

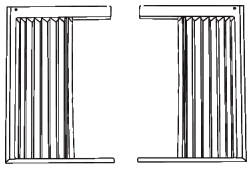
Once the target temperature is reached, the unit may transition to fan mode within a tolerance of ±5.4°F (±3°C) while operating in Cooling mode.

6.2 PACKING LIST

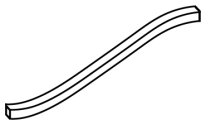
When the product is unpacked, the contents should match the list below:
Pictures are for reference only.



EG4 Hybrid Solar Window Unit



Curtain Frames and Curtains



Foam Seal

Adhesive Foam Seal (Gray)

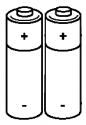
#10 × 3/8 in. Phillips Head Screw* (x4)

#10 × 3/4 in. Phillips Head Screw (x7)

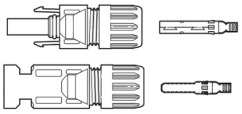
Top Rail*

Window Sash Bracket

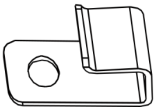
Remote Control



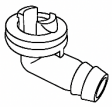
AAA Batteries (x2)



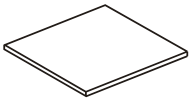
MC4 PV Connector Set



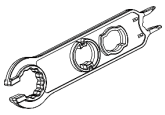
Frame Bracket (Vinyl-clad windows)



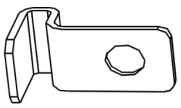
Drain Joint Seal



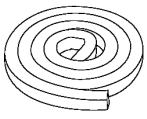
EVA Foam



Solar Spanner Wrench



Frame Bracket (Wood windows)



Adhesive Foam Seal (Black)

NOTE

Items in the packing list with an "*" may arrive pre-installed on the unit.

7. PRE-INSTALLATION

7.1 LOCATION REQUIREMENTS

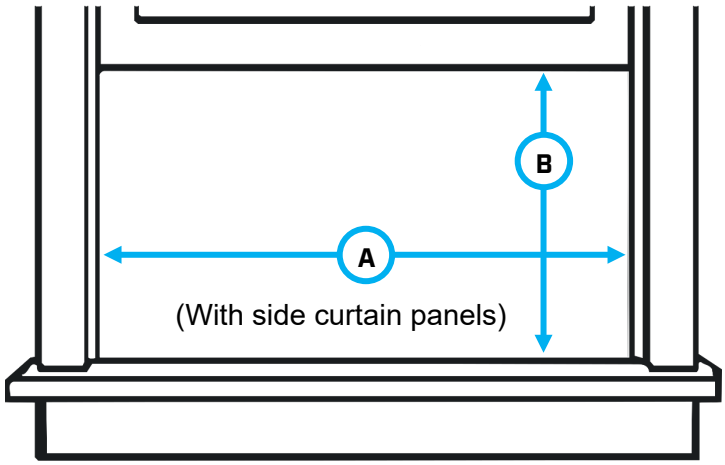
Check the location where the air conditioner will be installed. The location should provide:

- A large enough opening for the air conditioner. See the section below.
- Access to a grounded 3-prong 20A outlet without the use of an extension cord.
- Free movement of air in the room.
- Exterior and interior cabinet vents must not be obstructed.

7.2 WINDOW REQUIREMENTS

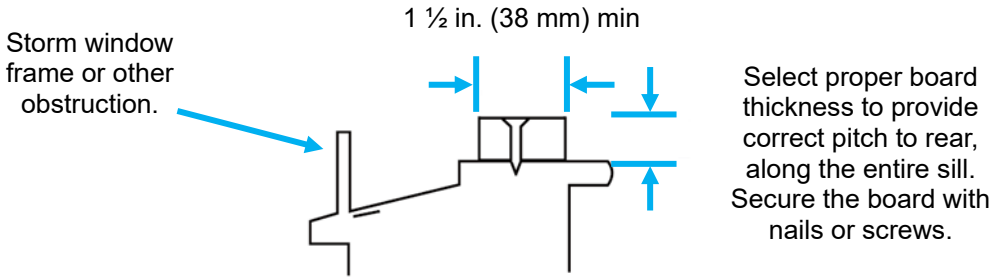
These instructions are for a standard double-hung window:

- All supporting parts must be secured to wood, vinyl, masonry, or metal.
- Follow the dimensions and illustration found below for the 12K BTU unit:
  - **A:** The width of the window opening must be between 24.9 in. – 39 in. (632 mm – 991 mm).
  - **B:** The height of the window opening must be a minimum of 15.2 in. (386 mm).



INSTALLATION WITH STORM WINDOW

Add a wood board to raise the height of the unit or remove storm window before installing the air conditioner. If the storm window must remain, verify that the drain holes or slots are not blocked. Accumulated rainwater or condensation must be able to drain out.



7.3 ELECTRICAL REQUIREMENTS

DANGER

Electrical shock hazard!

- Plug into a grounded 3-prong outlet.
- Do not remove the ground prong.
- Do not use an adapter.
- Do not use an extension cord.
- Failure to follow these instructions can result in death, fire, or electrical shock.

RECOMMENDED GROUNDING METHOD

The air conditioner unit must be grounded. The air conditioner is equipped with a power supply cord with a 3-prong grounding plug. The cord must be plugged into a 3-prong grounded outlet in accordance with all local codes and ordinances.

WIRING REQUIREMENT

POWER SUPPLY	MODEL	TIME-DELAY FUSE (CIRCUIT BREAKER)
115 VAC 103.5 VAC min. 126.5 VAC max.	12K BTU cooling only	20A

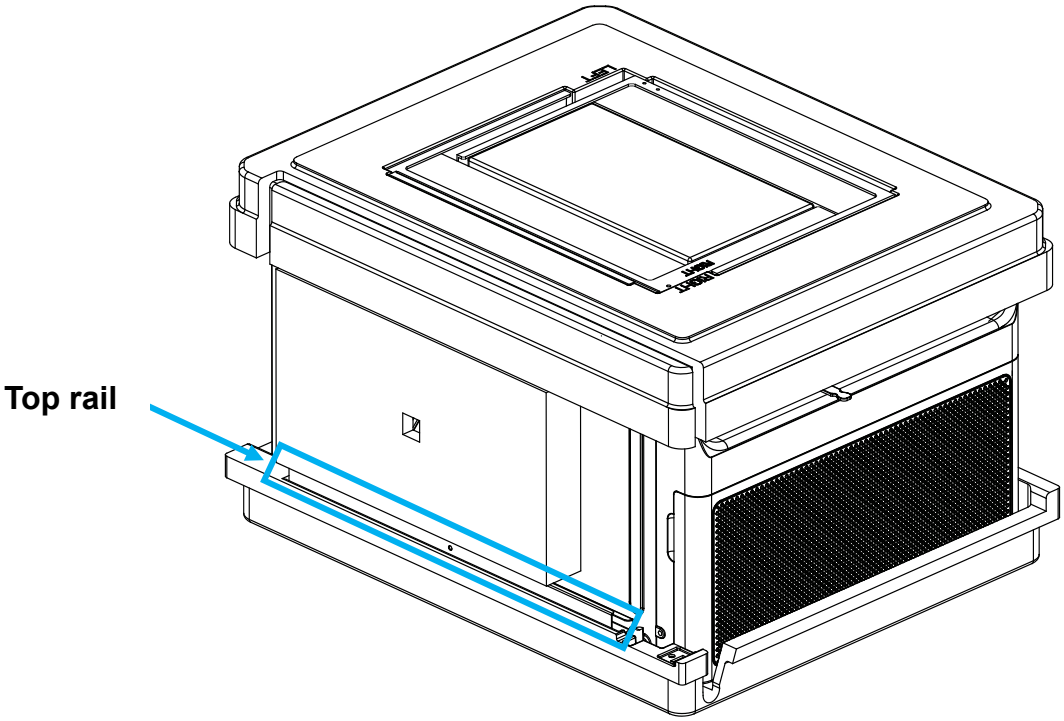
7.4 UNPACKING THE AIR CONDITIONER

Remove, dispose of, or recycle the packaging materials properly. Due to the weight of the window unit, the team-lift technique is recommended when lifting or moving the air conditioner. Follow the instructions listed below when unpacking the air conditioner:

- Remove tape and glue residue from surfaces before turning on the air conditioner. Rub a small amount of liquid dish soap over the adhesive. Wipe with warm water and dry the unit with a towel or cloth.
- Remove the top rail from the packaging, if applicable*.

NOTE

The top rail may arrive pre-installed to the unit.



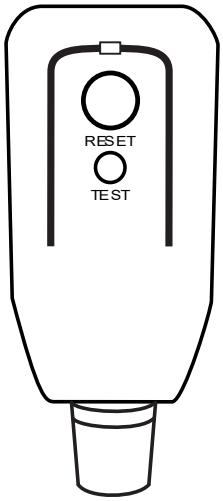
CAUTION

Do not use sharpened instruments, rubbing alcohol, flammable liquids, or abrasive cleaners to remove tape or glue. These products can damage the surface of the window unit.

7.5 POWER SUPPLY CORD TEST

NOTE

The power supply cord may differ from the one shown. This window air conditioner unit is equipped with a power supply cord required by UL. The power supply cord contains integrated electronics that sense leakage current. If internal electronics detect leakage current or imbalances, the power will disconnect in a fraction of a second.



To test the power supply cord:

1. Plug the power supply cord into a grounded 3-prong outlet.
2. Press RESET (on some devices, a green light will turn on).
3. Press TEST and listen for the click. The RESET button will trip, and on some devices, a green light will turn off.
4. Press and release RESET and listen for the click. The RESET button will latch, and on some devices, a green light will turn on. The power supply cord is ready for operation.

NOTE

If the power supply cord does not pass this test, contact a licensed electrician to verify the outlet is functioning properly.

CAUTION

The reset button must be pressed in for proper operation.

- The power supply cord must be replaced if it fails to trip when the test button is pressed or fails to reset.
- Do not use the power supply cord as an on/off switch. The power supply cord is designed to be a protective device.
- A damaged power supply cord must be replaced with a new power supply cord obtained from the product manufacturer and must not be repaired.
- The power supply cord contains no user-serviceable parts. Opening the tamper-resistant case voids all warranty and performance claims.

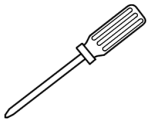
8. WINDOW UNIT INSTALLATION

8.1 RECOMMENDED TOOLS

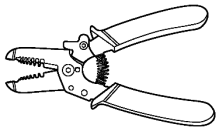
Electric drill

1/8 in. drill bit

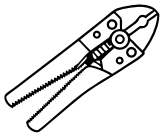
Tape measure



Phillips head screwdriver



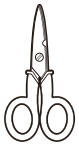
Wire strippers



Wire crimpers

Level

Pencil



Scissors

8.2 RECOMMENDED PPE

Safety Goggles

Dielectric Shoes

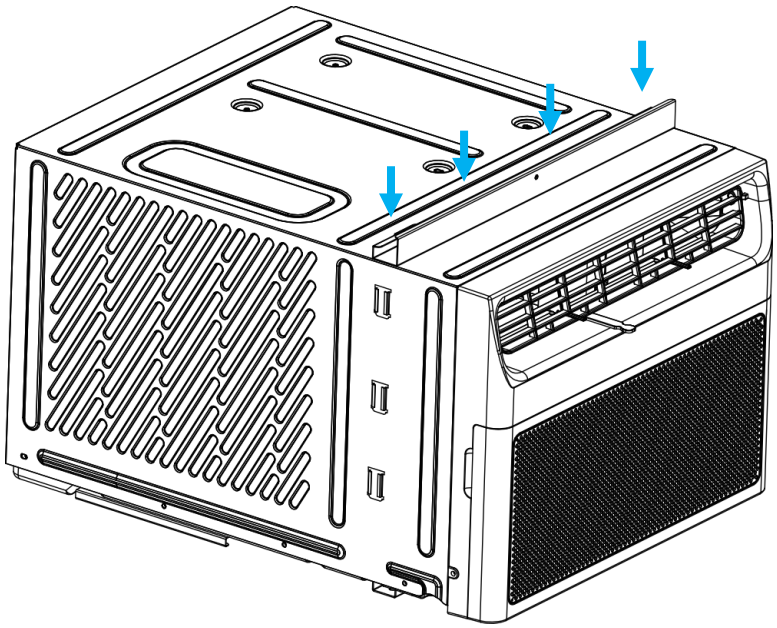
Insulated Gloves

8.3 ATTACHING THE TOP RAIL

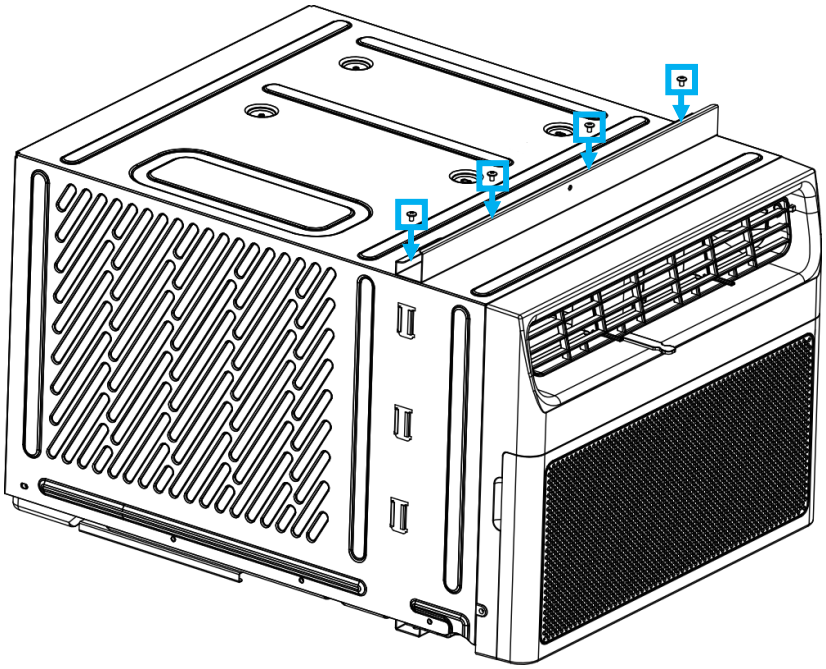
NOTE

On certain models, the top rail is pre-installed to the unit by the manufacturer. If the top rail is attached, skip ahead to section 8.4.

1. Place the top rail on top of the air conditioner cabinet and align the four holes on the top of the rail with the four holes on the top of the air conditioner cabinet. Verify that the taller side of the top rail faces the front of the unit.



2. Using the four included #10 × 3/8 in. screws, attach the top rail to the air conditioner cabinet.

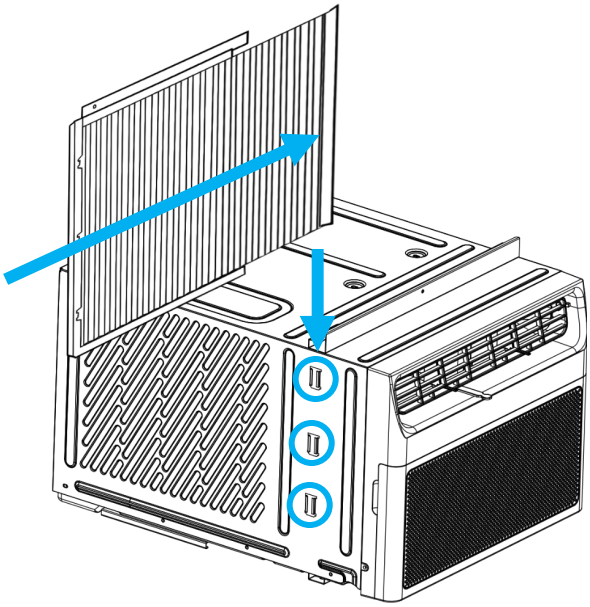


8.4 INSTALLING THE SIDE CURTAINS

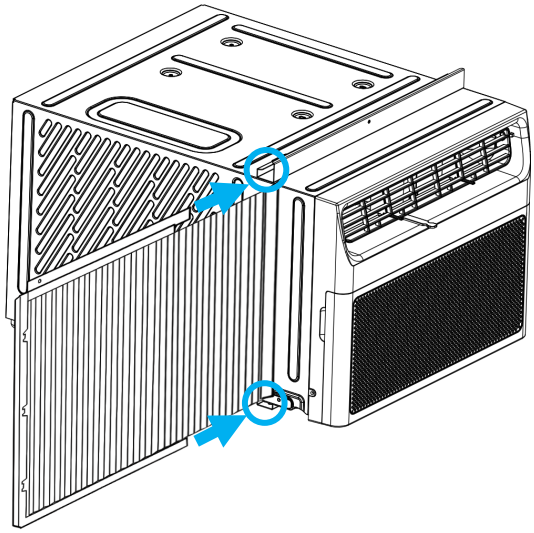
NOTE

Attach the curtains to the air conditioner before placing the unit in the window.

1. Starting with the left-side curtain, gently extend the curtain past the curtain frame and slide the curtain down into the three slotted grooves on the side of the cabinet.



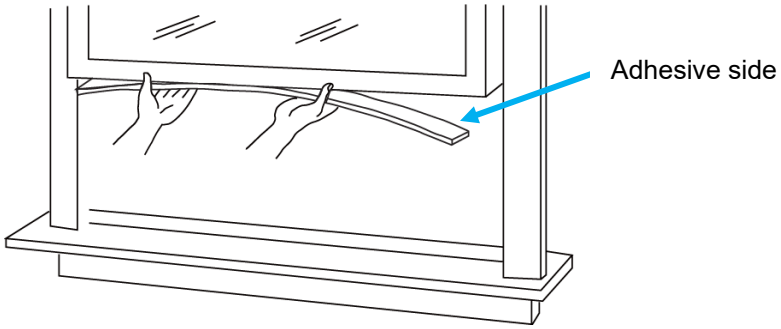
2. Insert the top, then the bottom, of the left-hand curtain frame into the top and bottom rails on the air conditioner.



3. Fully slide the curtain frame into the rails of the unit.
4. Repeat the above steps for the right-side curtain.

8.5 ATTACHING THE ADHESIVE SEAL

1. Open the window and measure the width of the lower window sash.
2. Measure and cut the adhesive foam seal (gray) to the width of the lower window sash.
3. Remove the backing from the seal and attach the adhesive side of the seal to the bottom of the lower window sash.



8.6 INSTALLING AIR CONDITIONER

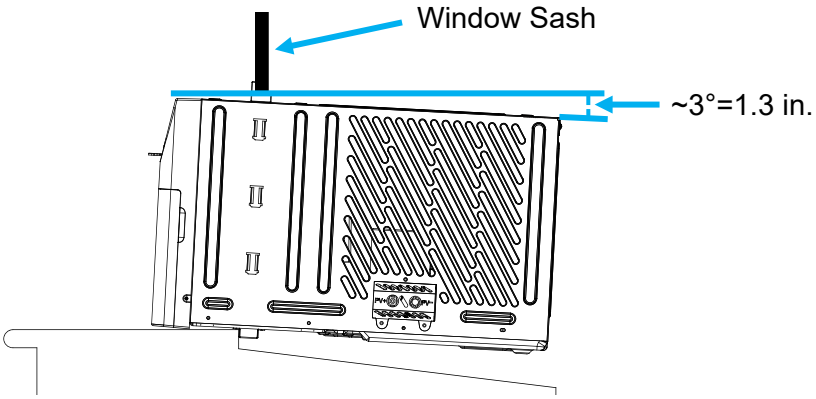
NOTE

- Be sure the air conditioner does not fall out of the window opening during installation or removal.
- Do not block the vents on the front panel or on the outside of the air conditioner.
- The air conditioner should provide a downward slope towards the outside for adequate drainage.

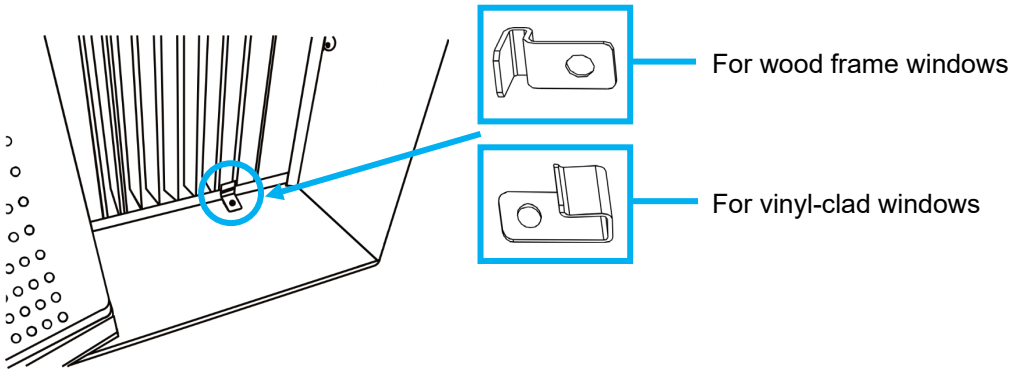
1. Use a tape measure to measure the width of the windowsill and mark the center with a pencil.
2. Using the team-lift technique, lift and place the unit into the window opening so that the bottom of the air conditioner frame is against the windowsill.
3. Verify the unit is in the center of the window.
4. Keeping a firm hold on the air conditioner, carefully close the window sash behind the top rail of the unit to hold it in place.

NOTE

Verify that the air conditioner is installed with a rearward tilt of ~1.3 inches. This equates to a ~3° downward tilt toward the exterior of the unit.



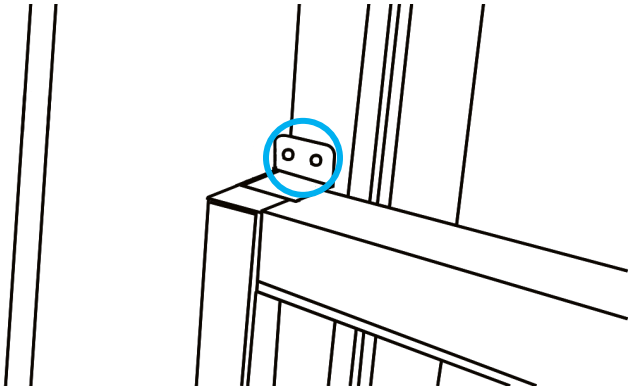
5. Fully extend the right and left sides of the window curtain frames until they are flush with the window frame and place the frame bracket (depending on window frame type) between the curtain housing and the windowsill with a #10 × 3/4 in. screw as shown.



6. To secure the lower sash in place, attach the window sash bracket with two of the included #10 × 3/4 in. screws as shown below.

CAUTION

Verify that drilling into the window frame will not break the glass prior to starting to drill!

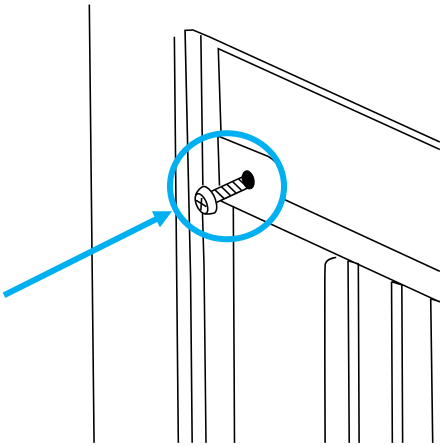


8.7 ATTACHING SIDE CURTAINS

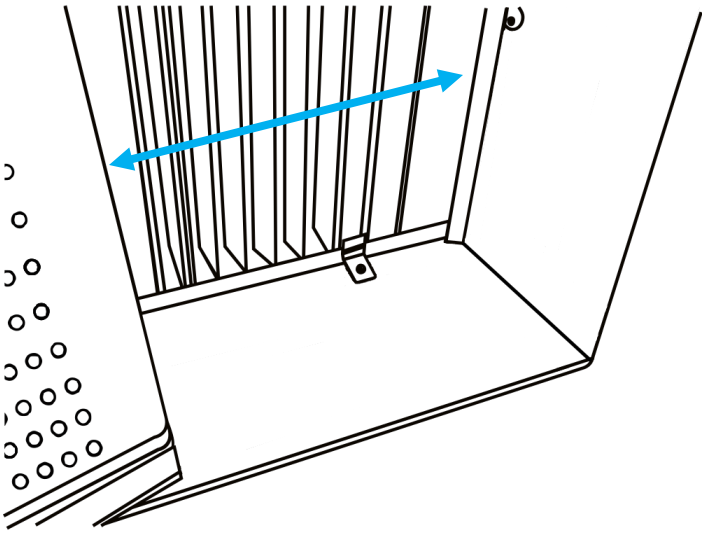
1. Verify the left-hand side curtain is extended until it fits into the window channel.
2. Use a 1/8 in. (3 mm) drill bit to drill a starter hole through the hole in the curtain frame.
3. Insert one #10 × 3/4 in. screw through the left-hand curtain frame and into the window sash.

CAUTION

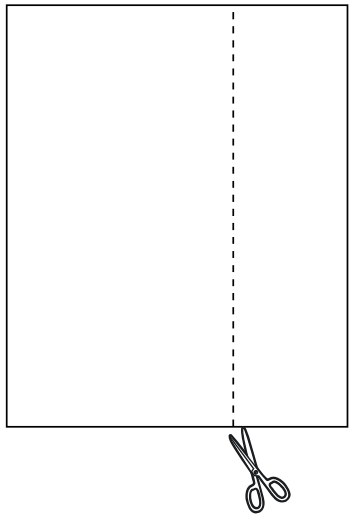
Verify that drilling into the window frame will not break the glass prior to starting to drill!



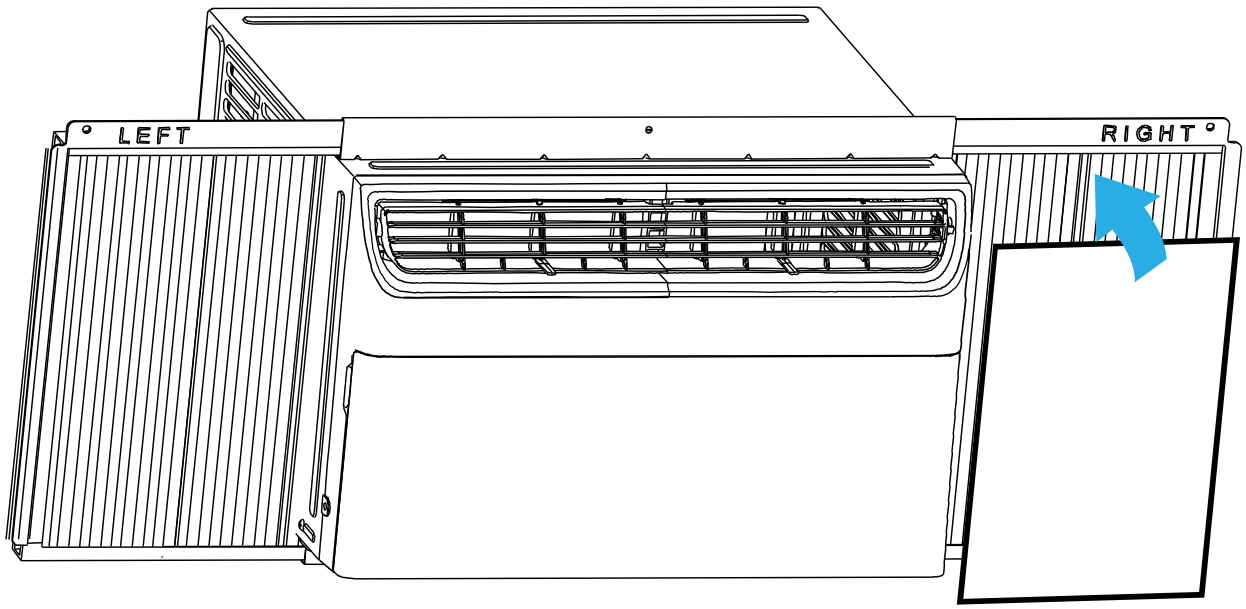
4. Repeat the steps above for the right-hand side curtain.
5. Install the included Ethylene Vinyl Acetate (EVA) foam onto the window curtain frame after the unit is installed in the window to minimize air leaks and ensure optimal insulation. Measure the inner width of the side curtain as shown.



6. Mark a line on the EVA foam within 1/8 in. (3 mm) of the measured width of the side curtain, then cut the EVA foam along the line.



7. Remove the backing from the EVA foam and attach the EVA foam to the curtain frame, the adhesive side should face the window curtain frame.



8. Repeat the above steps for the left-hand side curtain.

8.8 COMPLETING THE INSTALLATION

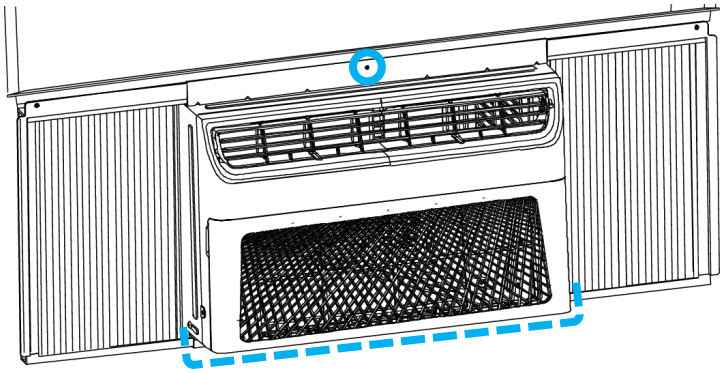
1. Install the foam seal between the top of the lower sash and the upper windowpane to prevent air leakage between the inside and outside air.

2. Use a 1/8 in. (3 mm) drill bit to drill a starter hole through the hole in the top rail, to attach the top rail to the window sash.

CAUTION

Verify that drilling into the window frame will not break the glass prior to starting to drill!

3. Attach the top rail to the window sash with a #10 × 3/4 in. screw to secure the window in place.



4. Check for gaps around the bottom of the air conditioner and seal any gaps found with the included adhesive foam seal (black).

DANGER

Electrical shock hazard!

- Plug into a grounded 3-prong outlet.
- Do not remove the ground prong.
- Do not use an adapter.
- Do not use an extension cord.
- Failure to follow these instructions can result in death, fire, or electrical shock.

5. Plug the power supply cord into a grounded 3-prong outlet.
6. Press RESET on the power supply cord.

9. PHOTOVOLTAIC MODULE INSTALLATION

9.1 OVERVIEW

This section contains information regarding the installation and safe handling of solar photovoltaic (PV) modules. All instructions should be read and understood before attempting to install the PV modules and electrical connections. Use the PPE listed in section 8.2. The installer should conform to all safety precautions and requirements listed in this guide when installing the modules.

PV modules must be installed in accordance with all applicable local and national codes, including, where applicable, NEC, AS/NZS 4777, AS/NZS 5033, and CSA C22.1. They must be installed by a qualified solar technician. The solar technician should determine the following:

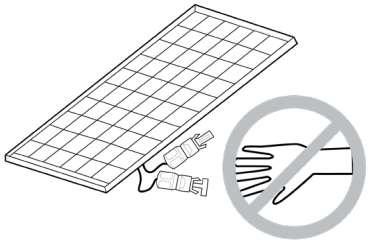
- The specifications of the solar photovoltaic system
- Cable material
- Connecting components
- Bracket and supporting parts
- Switching and circuit protection

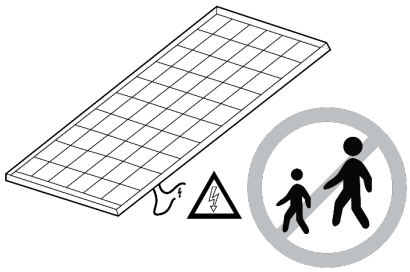
CAUTION

- Only qualified technicians should install PV modules.
- PV modules are large and require careful handling. The team-lift technique is recommended.
- PV arrays are current-limited sources. Use appropriate protection measures when working on them as they contain hazardous DC voltages. Many solar modules generate DC voltage >30V when exposed to sunlight. Contact with DC voltage of 30V or more could be hazardous. Do not touch the contacts of electrical terminals.
- All electrical connections should be made with approved MC4-type connectors from the same manufacturer. [AS/NZS 5033 clause 4.3.7 (k)]

DANGER

- Do not touch the module contacts!
- Keep children away from the system while transporting and installing mechanical and electrical components.
- Failure to follow these instructions can result in death, fire, or electrical shock.



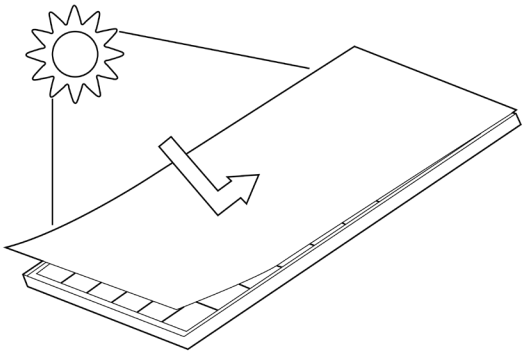


WARNING

Completely cover the PV module with an opaque material during installation to keep electricity from being generated.

- Do not touch the ends of live wires!

Do not wear metallic rings, watchbands, earrings, nose rings, lip rings, or other metallic objects when installing or troubleshooting the photovoltaic system.

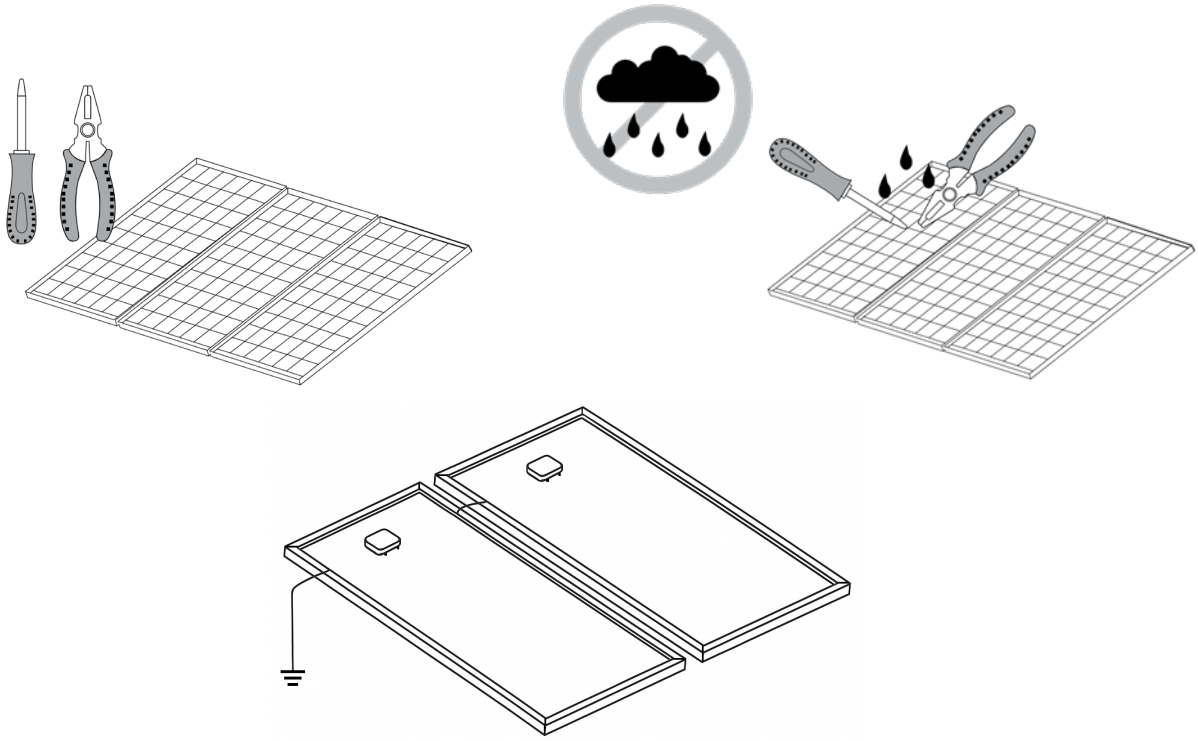


CAUTION

- Use only insulated tools that are approved for electrical installations.
- Do not work on solar modules in wet conditions.

NOTICE

The module frame must be properly grounded. Removal of any single module must not interrupt the grounding of the remaining modules.



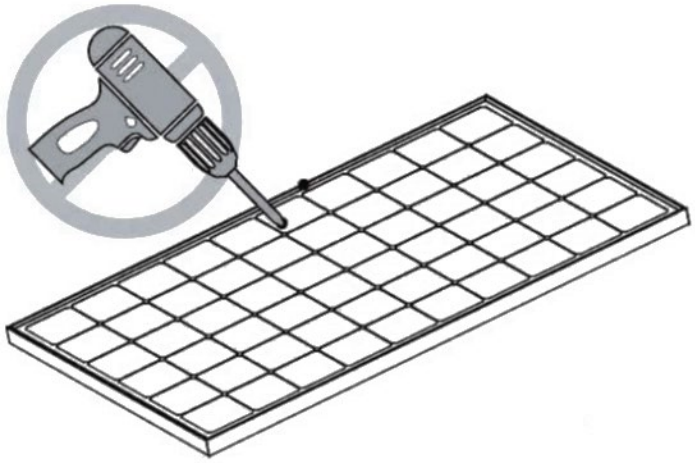
9.2 SOLAR ARRAY INSTALLATION

Selecting an installation location:

- Select a suitable place for installation of solar modules. The modules should not be shaded during prime sunlight hours.
- In southern latitudes, the modules should face north for best power generation.
- An approved solar technician should be consulted to determine the best orientation of the solar modules.

Selecting the proper support frame:

- Always observe the instructions and safety precautions included with the support frame to be used with the modules.
- Never attempt to drill holes in the glass surface of the module. It will void the warranty of the equipment.
- Do not drill additional mounting holes in the frame of the module. Doing so will void the warranty of the equipment.



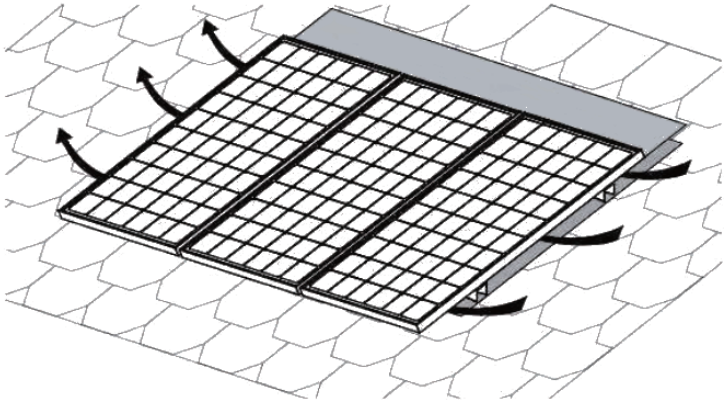
- Modules must be securely attached to the mounting structure using four mounting points for normal installation. If additional wind or snow loads are considered for the installation, additional mounting points should also be used.
- The support frame must be made of durable, corrosion-resistant and UV-resistant material.
- The heat expansion and cold contraction of the support frame should have no effect on its usage and performance.

GROUND MOUNTING:

Select the height of the mounting system to prevent the lowest edge of the module from being covered in snowy winter areas that experience heavy snowfalls. In addition, verify the lowest portion of the module is placed high enough that it is not shaded by plants or trees and is free from the effects of sand and stone driven by wind.

ROOF MOUNTING:

- When installing the modules on a roof, verify that they are securely fastened and cannot be displaced because of wind or snow loads.
- When installing PV modules on a roof, be sure that the roof construction is suitable. In addition, any roof penetration required to mount the module must be properly sealed to prevent leaks.
- The roof installation of solar modules may affect the fireproofing of the house construction, and it may be necessary to use an ground-fault circuit breaker.



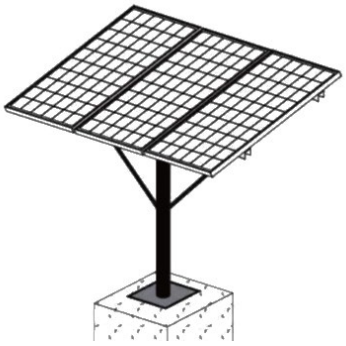
- Provide adequate ventilation below a module for cooling. Provide a minimum clearance of 1.97 in. (50 mm) between the module and the mounting surface. Refer to the solar panel specifications for more direct instructions.

NOTICE

All panel wiring and panel mounting must be performed by licensed professionals.

POLE MOUNTING:

- When installing PV modules onto a pole, choose a pole and module mounting structure that will withstand winds for the area. The pole must have a solid foundation. Refer to the solar panel specifications for more direct instructions.



NOTICE

All panel wiring and panel mounting must be performed by licensed professionals.

9.3 SOLAR ARRAY WIRING

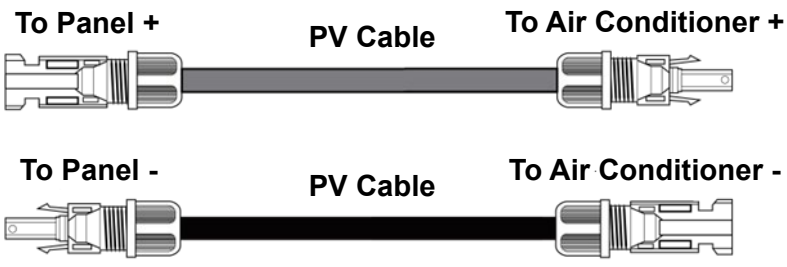
The array is formed by multiple PV modules connected in series. The switch disconnectors must be approved for disconnecting solar DC under load.

The MC4 connectors must be approved and from the same manufacturer at each PV connection. Mismatched connectors can cause failures, which may result in fire.

CAUTION

- Use only insulated tools that are approved for electrical installations.
- The solar array total system voltage must not exceed 380 VOC. If installed in an area that experiences temperatures lower than 68°F (20°C), the open-circuit voltage will rise. All array sizing calculations should be done by a qualified solar technician.
- Both sides of the MC4 type connection must be of the same type and manufacturer.
- Supported multi-strand solar wire size ranges from 14 AWG (2.5 mm2) minimum to 10 AWG (5.26 mm2) maximum.
- Cable installation must follow all local and national codes and regulations.
- A switch disconnector rated for DC must be installed between the array and the window unit. If not next to the array, a separate switch must be installed at the array.

Example of PV Connections



SOLAR GROUND FAULT PROTECTION

Roof mounted DC PV arrays located on residential dwellings must be equipped with DC ground fault protection per US Electrical code NEC 2005 Article 690.5. Ground fault protection isolates the neutral conductor (in DC this is usually the negative wire) from ground when a ground fault occurs.

9.4 WIRING DIAGRAM

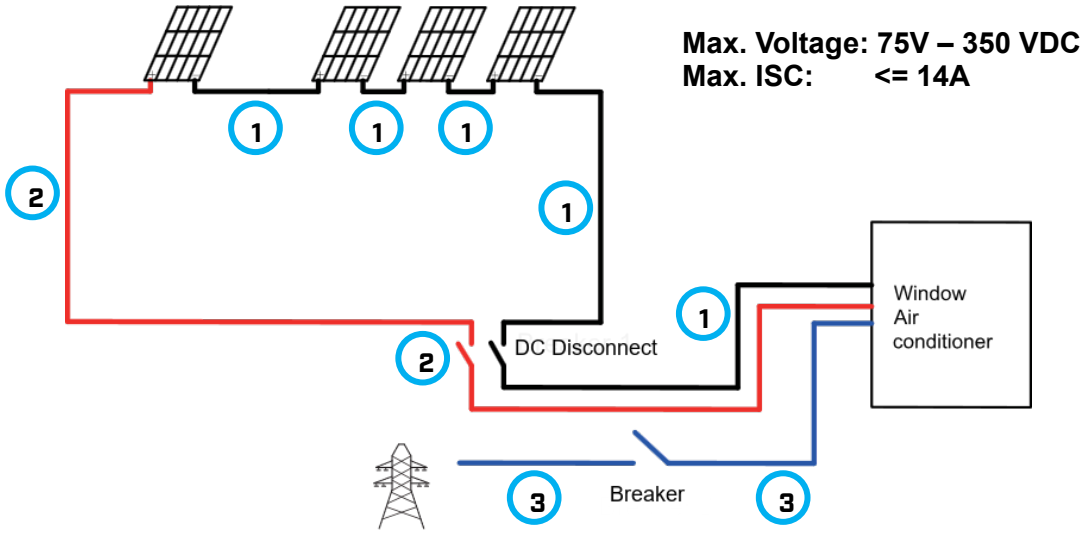
Connect the wiring according to the wiring diagram shown below.

- DC solar only: The unit will start up and run on just solar power.
- DC solar with supplemental AC power: The unit will operate primarily on solar power, with AC power assisting when generated solar power is insufficient.
- AC only: The unit will run solely on AC power and function at nighttime.

The number in the table correlates to the **circle callout in the diagram below.**

CALLOUT	NOTE	DESCRIPTION
1	Negative PV Wire	12 AWG
2	Positive PV Wire	12 AWG
3	AC Wire	18 AWG

NOTE	RECOMMENDED SPEC
Solar Panel Wattage	1200 W
DC Disconnect	DC 1000 V ≥ 16A
Breaker	20A



10. ELECTRICAL SAFETY CHECKS

After installation, confirm that all electrical wiring is installed in accordance with local and national regulations before proceeding.

CAUTION

All wiring must comply with local and national electrical codes and must be installed by a licensed electrician.

CHECK ALL CONNECTIONS

Check all wiring connections to verify there are no loose or uncovered ends exposing bare connections or wire. Using a multimeter, verify the proper voltage at each connection point.

CHECK PROPER GROUNDING

Measure grounding resistance with a grounding resistance tester. Ground resistance must be low enough to allow overcurrent protection devices to operate properly.

11. TEST RUN

Perform the test run only after completing the electrical safety checks described in section 11.

11.1 INSTRUCTIONS

Perform the test run for at least 30 minutes.

1. Provide power to the unit.
2. Press the ON/OFF button on the remote while pointing it at the unit to power it on.
3. Press the MODE button to scroll to the COOL function and select the lowest possible temperature.
4. Let the function run for 5 minutes and perform the checks listed in the table below:
5. After the test run is performed, return the unit to normal operating temperature.

CHECK TO PERFORM	PASS	FAIL
No electrical leakage		
Unit is properly grounded		
All electrical terminals are properly covered		
Window unit is securely installed		
Unit performs Cool function properly		
Window unit responds to remote control		
Solar array VOC		
Solar array grounding fault		
Solar array operating current		

12. AIR CONDITIONER OPERATION

Proper air conditioner operation helps obtain the best possible results which can lead to extended equipment life. This section explains proper air conditioner operation.

NOTICE

- If the unit is turned off, wait at least 3 minutes before turning it back on. This prevents the air conditioner from blowing a fuse or tripping a circuit breaker.
- In the event of power failure, the air conditioner will operate at the previous settings when the power is restored.

12.1 HYBRID AND AC OPERATION

The window unit can be powered by three different methods.

- Solar only
- Solar with supplemental AC
- AC only

SOLAR ONLY:

The unit runs completely from solar input. The window unit receives and utilizes solar power to operate. The minimum amount of solar input required to start the unit is 75 VDC. For optimal performance, the voltage should be >80 VDC and <350 VDC.

For occasions with low solar input (e.g., early morning or cloudy days) the unit may go into sleep mode. In sleep mode, the compressor will shut off resulting in no cooling output. When this happens, the unit will try to come out of sleep mode three times. The first attempt will take place after 15 minutes, a second attempt 45 minutes later, and a final attempt 1 hour later. If all three attempts fail, the unit will not try again and will put itself into Low Power (LP) mode. In LP mode, the window unit will display LP on the LED panel. This is a safety measure to protect the compressor from frequent stops and starts, which could lead to damage. When the unit is in LP mode, verify there is adequate solar input before trying to restart the unit. To clear LP mode, perform a manual restart on the unit by powering it off, waiting 3 minutes, and then powering it back on.

SOLAR WITH SUPPLEMENTAL AC:

The unit will use solar input along with supplemental AC input. This is the recommended mode for use in areas with extended cloudy days, seasons with little to no sun, or for use at night. The supplemental AC will keep a constant flow of power to the unit even when there is no solar input available.

The system will automatically prioritize solar input over AC input. To further limit the AC input, there is a power saving feature called “AC Power Limiter”. This feature can be enabled using the remote control or by using the phone app. By default, the AC limiter feature will not be automatically re-enabled when the power is cycled. To configure the unit to always power on into AC Limiter mode, perform the following steps:

1. Run the unit in cooling mode and set the fan speed to low.
2. Set temperature 90°F.
3. Press the AC Limiter button on the remote 8 times within 10 seconds and listen for the rapid tones.
4. Once the rapid tones are heard, the AC limiter function is always on. To cancel the AC limiter function, follow steps 1 – 3 again.

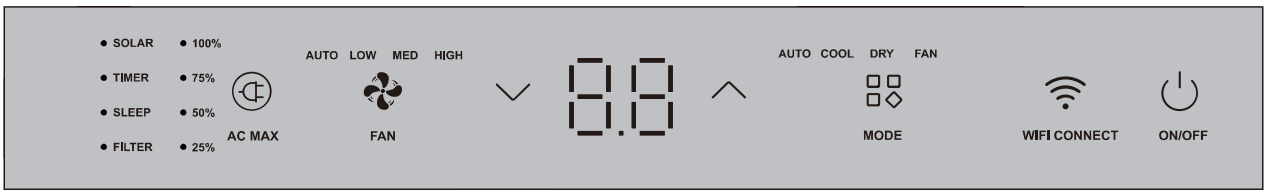
To manually set the amount of AC power that is limited while using solar, see section 12.2.

AC ONLY:

The unit is powered by AC input only, which can be supplied from the grid or by an inverter. This is ideal for customers who want to benefit from the unit’s efficiency but already have an Energy Storage System (ESS) that can power the air conditioner. Utilizing AC input does not require adding dedicated solar panels directly to the window unit.

12.2 USING THE CONTROL PANEL

The window unit can be controlled through the control panel, the remote control, and the mobile app. See section 13.2 for more information on controlling the unit through the mobile app.



ON/OFF

ON/OFF SETTINGS

- Press the ON/OFF button to turn on and turn off the air conditioner.

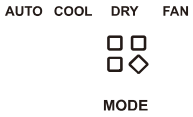
Note: When the air conditioner is turned on for the first time after being plugged in, the display will show the current set temperature.

WIFI CONNECT

WI-FI

- Wi-Fi control is available for connected models with the Wi-Fi logo on the control panel.
- After the Wi-Fi connects to the router, the Wi-Fi Connect LED stays on.

Note: Wi-Fi control is only available for certain models. See section 13.1 for more information on connecting Wi-Fi.



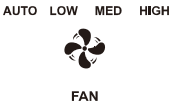
MODE SETTINGS

- Press the MODE button until the indicator begins to illuminate for the desired setting.
- Choose AUTO, COOL, DRY, or FAN.
  - AUTO – Automatically switch between Cool and Fan mode depending on the selected temperature and temperature of the room.
  - COOL – Cools the room.
  - DRY – Dries the room, acting as a dehumidifier. The air conditioner automatically selects the temperature. The fan runs at low speed only.
  - FAN – When cooling is not required, select Fan mode for the unit to provide air circulation.

Note: Dry mode should not be used to cool the room.

TEMPERATURE SETTINGS

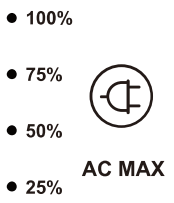
- Press the UP arrow to raise the temperature. Each time the button is pressed or held down, the temperature will go up by 1°F (1°C) until it reaches 90°F (32°C).
- Press the DOWN arrow to lower the temperature. Each time the button is pressed or held down, the temperature will go down by 1°F (1°C) until it reaches 61°F (16°C).



FAN SETTING

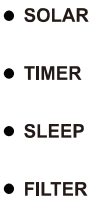
- Press the FAN button until the indicator light begins to illuminate for the desired fan speed setting.
- Choose AUTO, LOW, MED, or HIGH.
  - AUTO – Automatically adjusts fan operation based on system demands.
  - LOW – For slower fan speed.
  - MED – For normal fan speed.
  - HIGH – For maximum fan speed.

Note: The Fan button will operate only when the FAN or COOL modes have been selected.



AC MAX SETTING

- When AC power is used, the 100% LED will illuminate. AC power is not limited.
- Press the AC MAX button until the indicator light illuminates for the desired setting.
- Choose 75%, 50%, or 25% power limit.
  - 75% - The unit works in hybrid mode, with the AC power input limited to 75% of the rated power. If the DC power input meets the working requirements of the air conditioner, the AC power input will be reduced accordingly.
  - 50% - The unit works in hybrid mode, with the AC power input limited to 50% of the rated power. If the DC power input meets the working requirements of the air conditioner, the AC power input will be reduced accordingly.
  - 25% - The unit works in hybrid mode, with the AC power input limited to 25% of the rated power. If the DC power input meets the working requirements of the air conditioner, the AC power input will be reduced accordingly.



SOLAR, TIMER, SLEEP, AND FILTER FUNCTIONS

- The corresponding LED indicator on the control panel will illuminate for SOLAR, TIMER, SLEEP, and FILTER.
- SOLAR – When the photovoltaic controller starts to work, the SOLAR light will turn on. If there is a fault in the photovoltaic controller or if the input voltage of the photovoltaic panel is too high or too low, the SOLAR light flashes as a warning first and then goes off.
- TIMER – The timer light is always on when the timer function is enabled through the remote control, otherwise the light is always off.
- SLEEP – The light is always on when the unit is in sleep mode, otherwise the light is always off.
- FILTER – The filter light is always on when the filter alarm is triggered, and the light goes off after the alarm is cleared or reset.

Note: Hold the FAN key on the control panel for ~3 seconds, the filter alarm will be cleared.

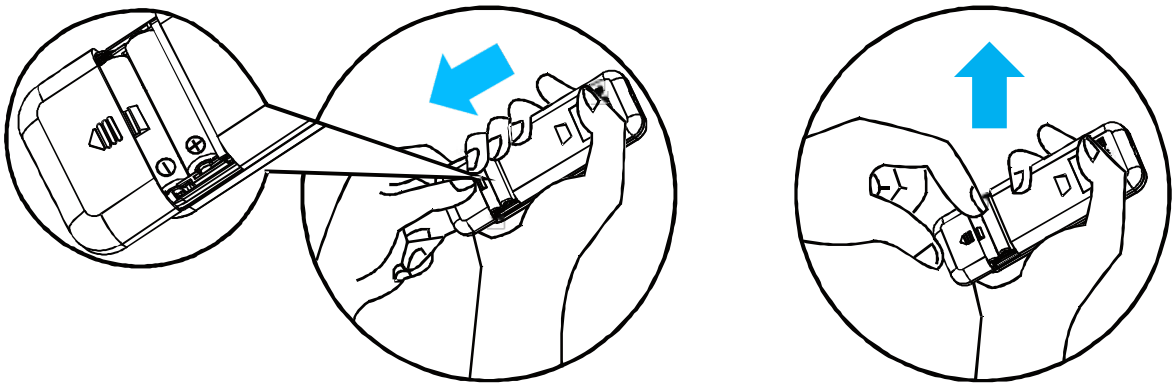
12.3 UNIVERSAL REMOTE OPERATION

The air conditioner has an infrared universal remote that can fully operate the unit. Some of the functions on the remote control may not be available for all units. For example, the AC power limiter is only available on hybrid models. To operate the remote, first follow these steps to install the batteries:

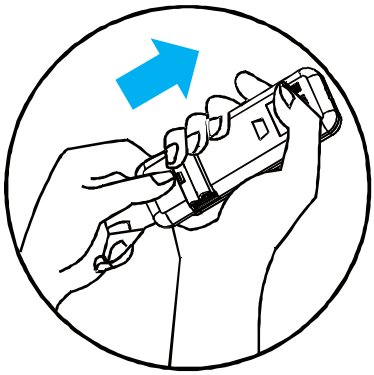
NOTE

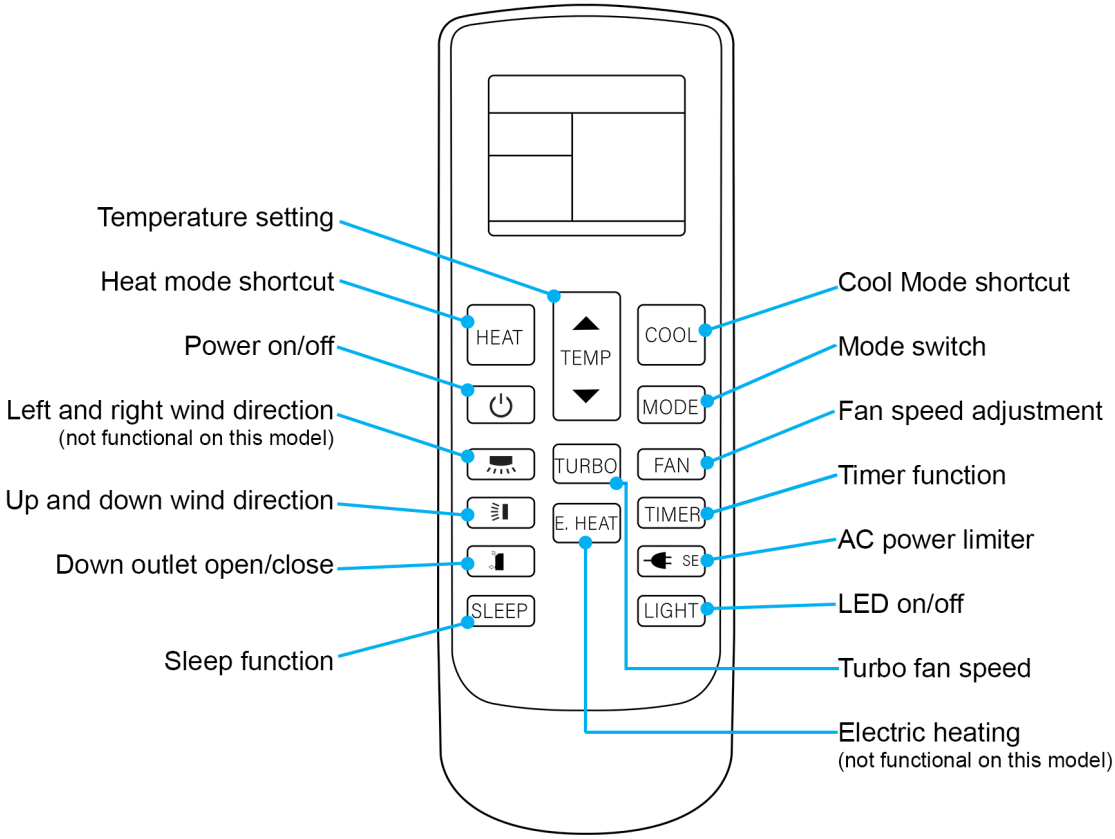
- Use 2 standard AAA (1.5V) batteries. Do not use rechargeable batteries.
- Replace batteries when the display becomes dim, or after six months.
- When replacing batteries, always replace both batteries with new batteries. Do not mix old and new batteries. Do not mix alkaline, lithium, standard (carbon-zinc), or rechargeable (NiCd, Ni-MH, etc.) batteries.
- If the air conditioner will not be used for an extended period of time, remove the batteries from the remote.
- Optional remote mount included.

1. Remove the battery cover along the direction of the arrow.
2. Insert the two included AAA batteries, verifying the positive and negative battery terminals are aligned correctly.



3. Re-attach the cover by sliding it back into position.





BUTTON	DESCRIPTION
Power	Switch the window unit off or on.
Mode	Selects one of the following modes: • Auto • Cooling • Dehumidifying • Fan
Cool	Sets the unit to enter the cooling mode with a set temperature of 78°F (26°C). • With the unit off or on, press the button and the unit will enter cooling mode with a set temperature of 78°F (26°C). • In the “timer on” state, press the button to cancel the timer setting and turn on cooling mode with a set temperature of 78°F (26°C). • In a sleep state, press this button to run the cooling mode with a set temperature to 78°F (26°C).
Temp	In cooling, heating, and dehumidifying modes, press the “up arrow” or “down arrow” to adjust the temperature setting ranging from 61°F – 90°F (16°C – 32°C). **Note:** The temperature is not adjustable in the Fan mode.
Fan	Select the blower output speed of: “Auto / Low / Med / High”. **Note:** Automatic fan speed is not available.

Timer	Press the “Timer” button to turn on the timer, then press the “up/down” button to set the time. The range is 1 – 24 hr. time period. Press the “Timer” button to complete the selection. If the timing has been set, press the “Timer” button again to cancel the timing.
Turbo	Enables the fan to run at a maximum speed. When in turbo mode, the fan speed display on the remote control will disappear. The window unit will be noticeably louder when running in “Turbo” mode. **Note:** • Pressing the Fan button will cancel the “Turbo” function. • Enabling the “Sleep” mode will cancel the “Turbo” function. • “Turbo” mode cannot be enabled in automatic mode, dehumidification mode, fan mode, or when the timer or sleep mode is running.
AC Power Limiter	Press the “AC Power Limiter” button to set how much AC power is used. The limit can be set to 25%, 50%, and 75% of AC input. To set or change the AC Power Limiter input level, use the following steps: 1. Press the “AC Power Limiter” button on the remote control. 2. Press the “Down Outlet” button to select the percentage of 25%, 50%, or 75%. Each level can be seen on the window unit, with the LED indicator illuminating for the selected level. 3. After the desired level is selected, press the “AC Power Limiter” button again to exit the setup. **Note:** This feature is only supported with hybrid models. DC power input will not be affected when limiting AC input.
Light	Turns the window unit LED display off or on.
Sleep	Press the “Sleep” button to turn on sleep mode. The fan speed and temperature automatically adjust, but the remote-control display remains unchanged. The unit will automatically exit sleep mode after 8 hours of continuous operation in sleep mode and revert to the previous running state. **Note:** Sleep mode cannot be turned on in air supply mode.
Down Outlet	This button will allow the configuration of the AC Power Limiter feature. See section 12.1 for more information.

NOTE

The unit can ship with one of two remotes which look structurally the same. However, each remote uses a specific sequence of button presses to change the temperature readout.

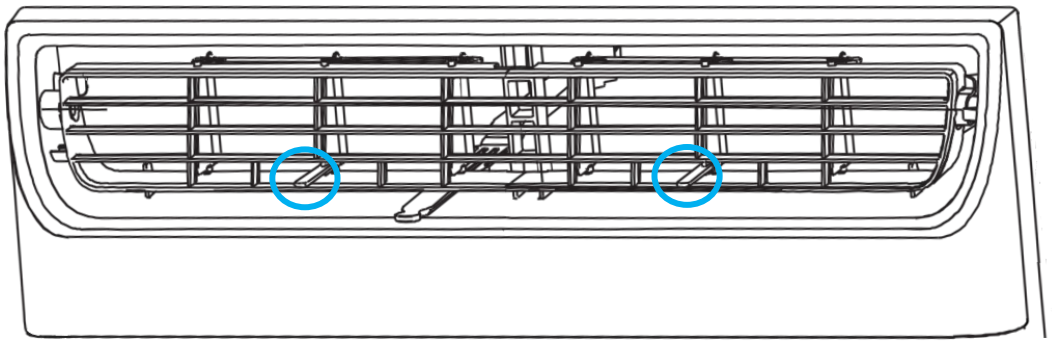
- Method 1: Press and hold the Temp Up and Down buttons simultaneously for ~5 seconds.
- Method 2: Power down the remote and press and hold both the Temp Up and Fan buttons simultaneously for ~5 seconds.

NOTICE

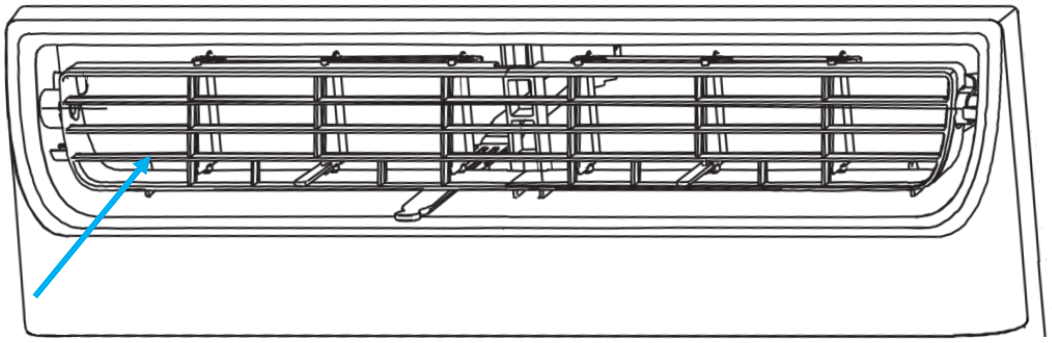
The remote displays settings and options that do not apply to this window unit.

12.4 CHANGING AIRFLOW DIRECTION

Adjust either of the louvers to direct the airflow left or right.

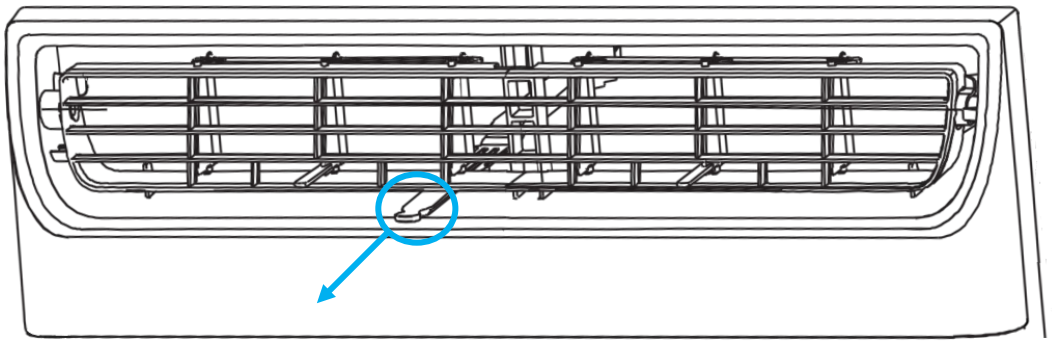


Use the horizontal air deflector to direct the air straight ahead, down, or up.



12.5 EXHAUST AIR VENT

To use the exhaust air vent, pull out the exhaust air vent control to open the vent to exhaust stale or smoky air from the room.



Push in the exhaust air vent control to close the exhaust air vent for maximum continuous cooling.

12.6 OPTIMAL OPERATION

To achieve optimal operating performance, note the following:

- **DO NOT** put any objects near the air inlets/outlets. Doing this will impair performance and could cause the unit to shut down.
- Adjust the airflow direction so it does not blow directly onto personnel or at an extreme angle.
- Adjust the temperature to achieve moderate comfort levels. An excessively low or high temperature setting wastes energy.
- Keep windows and doors closed to improve performance.
- Limit energy usage (run time) using the Timer function.

When the air conditioner is operating normally, the user may hear sounds that are not abnormal, such as:

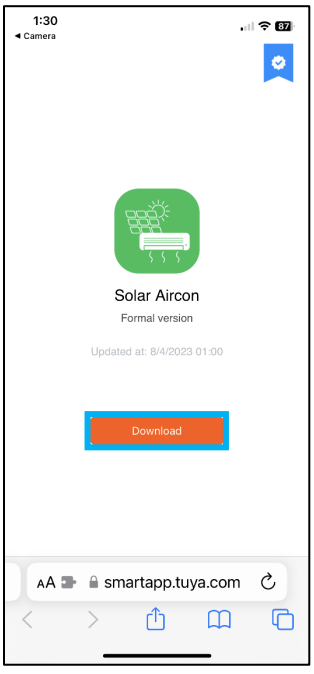
- Droplets of water hit the container, causing a pinging, or clicking sound. The water droplets help cool the condenser.
- Air movement from the fan.
- Clicks from the thermostat cycle.
- Vibrations or noise due to poor wall or window construction.
- A high-pitched hum or pulsating noise caused by the modern high-efficiency compressor cycling on and off.

13. MOBILE APP

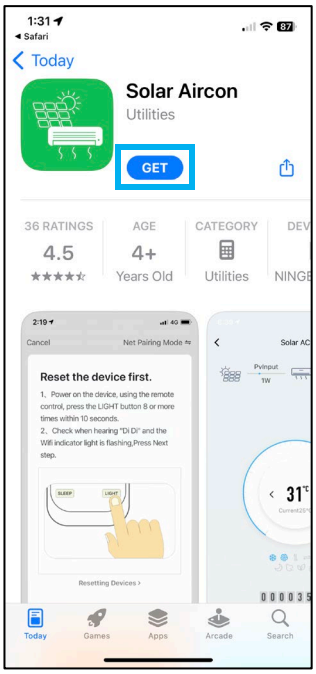
The window unit can be controlled and monitored using the Solar Aircon app on an iOS or Android device. This section will provide the installation and configuration steps for the app, as well as how to use the app.

13.1 APP INSTALLATION

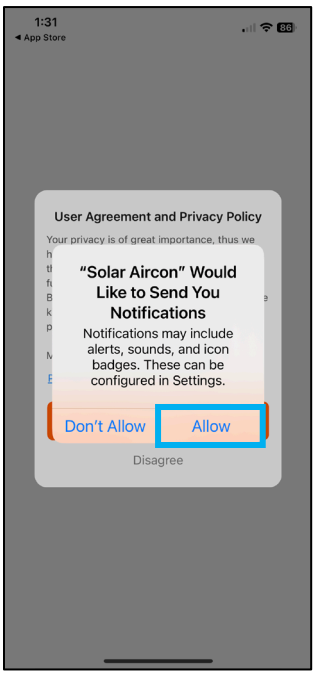
Perform the following installation steps to install and set up the mobile app:

1. To download and install the phone app, scan the QR code below. (The same code can also be found on the top of the window unit) **iOS and Android**	2. Select **Download**. 

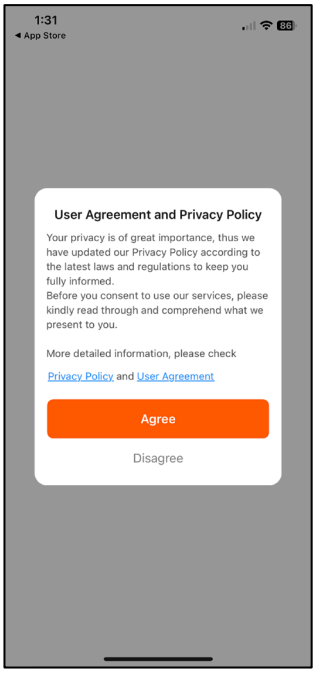
3. Select **Get.**



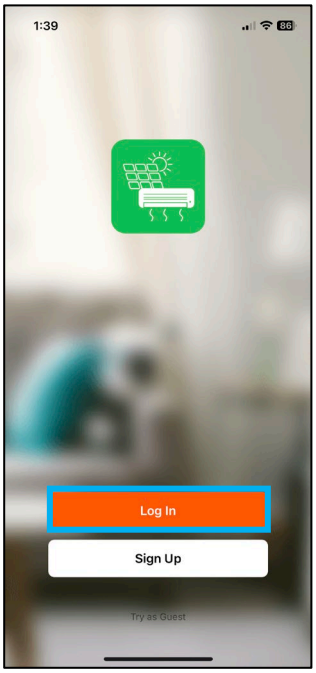
4. Select **Allow**.



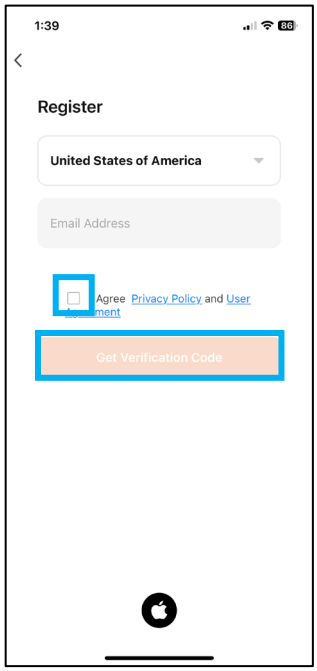
5. Select **Agree**.



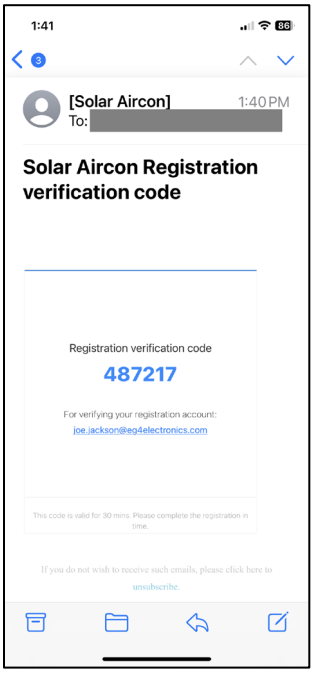
6. Select **Sign Up**.



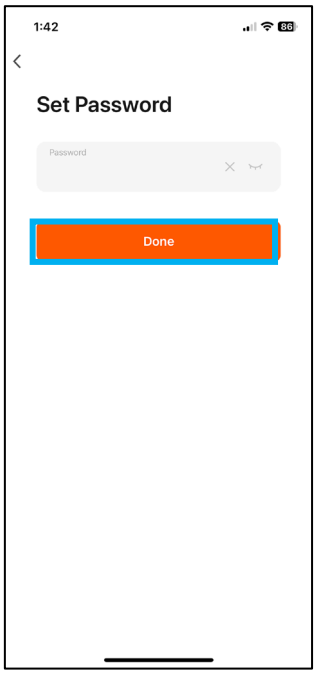
7. Provide an **email address**, select **I Agree**, click **Get Verification Code**.



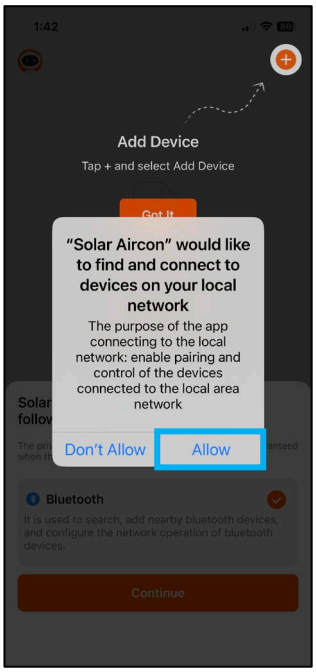
8. Locate the verification code emailed to the email address used in the previous step. Provide the code when requested by the app.



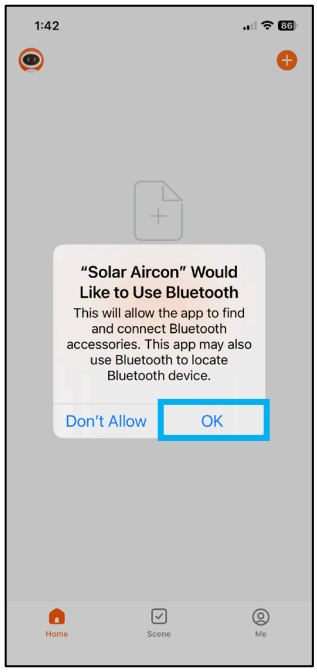
9. Enter a password then select **Done**.



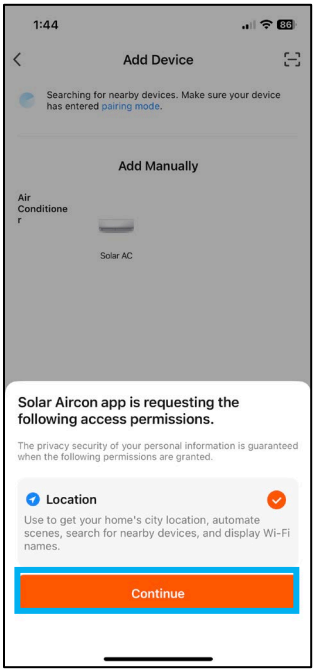
10. Select **Allow**. This allows access to the unit's Wi-Fi.



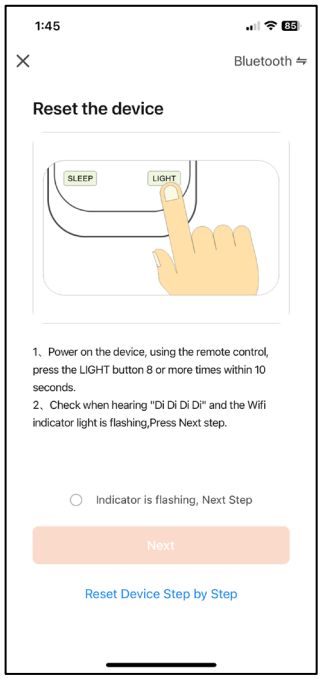
11. Select **OK**. This will provide the app access to the hardware device's Bluetooth.



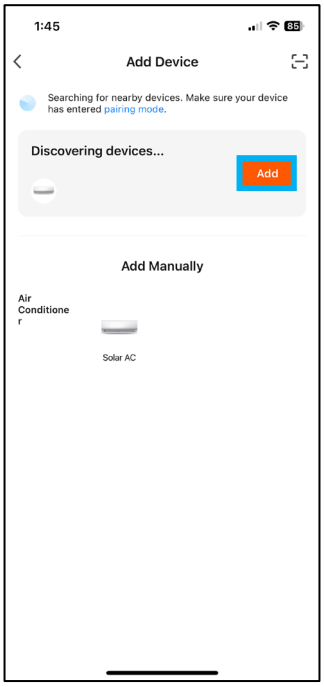
12. Select **Continue.** This will allow the app to use location services.



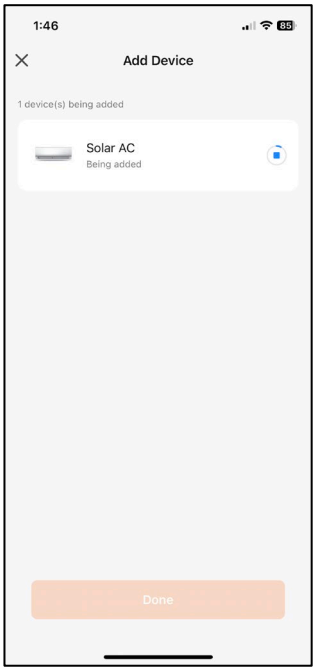
13. Turn the air conditioner on using the remote. Press the Wi-Fi Connect button on the front panel of the unit or press the **LIGHT** button 8 times within 10 seconds. When the incremental beeps are heard, the unit is in pairing mode, and the Wi-Fi indicator should be flashing.



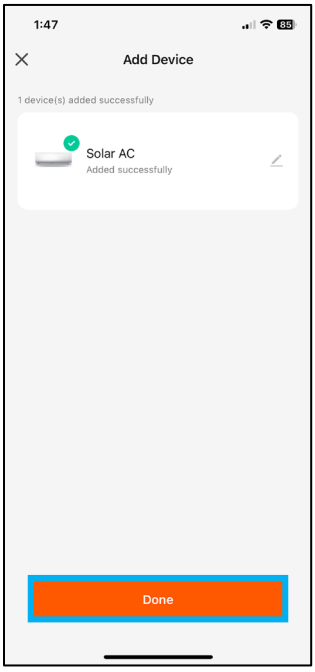
14. Select **Add**. If the window unit does not show up, verify pairing mode is enabled in the previous step.



15. The device will be displayed as “Being added”.



16. Select **Done**. The app is now paired with the window air conditioner and is ready for use.

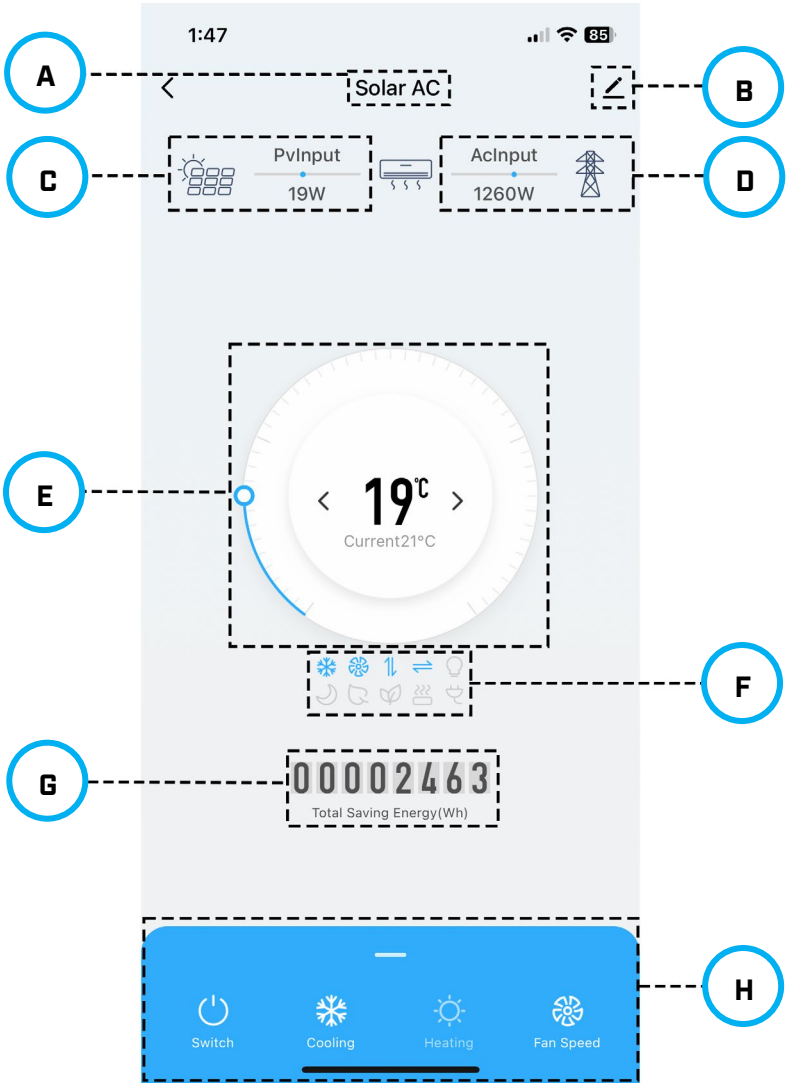


13.2 USING THE APP

The following information demonstrates some of the settings that can be displayed and set using the mobile app.

Main Screen

ITEM	DESCRIPTION
A	Displays the system name
B	Select to edit settings within the app
C	Real-time PV input measured in watts
D	Real-time AC input measured in watts
E	Displays current temperature and set temperature.
F	The illuminated icons represent features that are currently enabled.
G	Counter that displays the cumulative energy saving in watt hours.
H	A pull-up menu that provides settings for the following: • Power • Cooling • Heating • Fan Speed • Mode • Vertical • Horizontal • Light • Eco • Sleep • Anion • Electricity Heat • C°/F° • AC Limiter

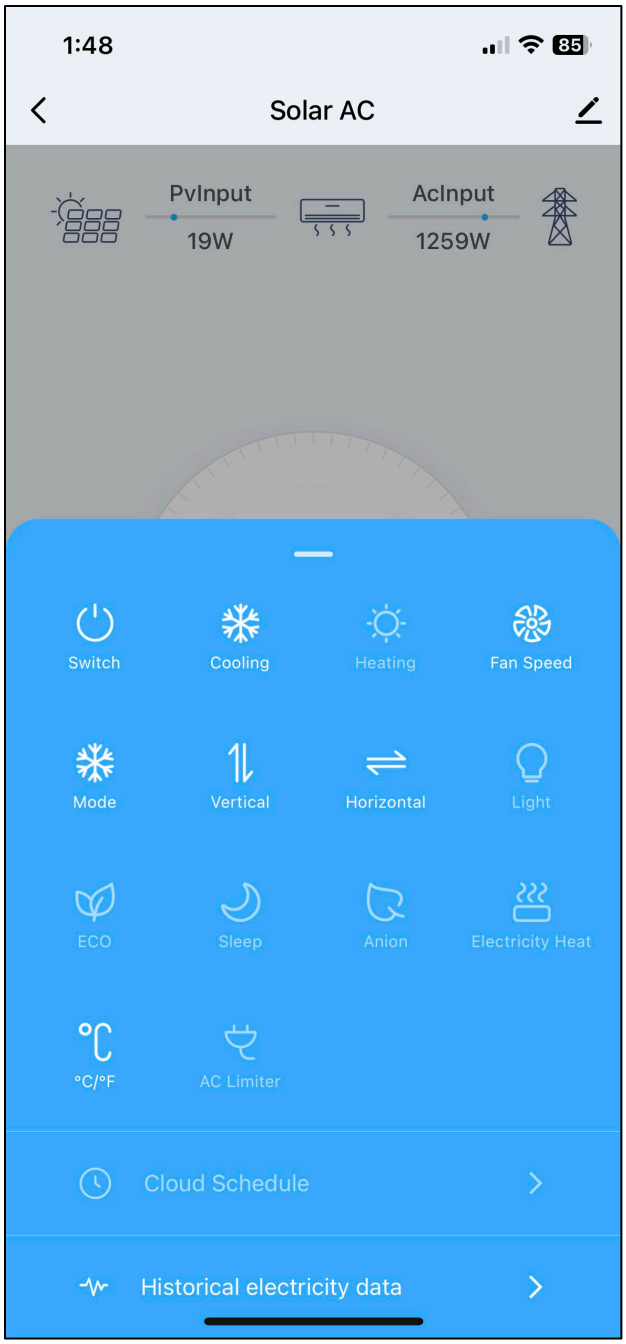


NOTICE

The remote shows settings and options that are non-applicable to the window unit.

Settings Menu

ITEM	DESCRIPTION
Power Switch	Turns the unit on or off
Cooling	Selects cooling mode
Heating	Selects heating mode
Fan Speed	Selects desired fan speed: • Auto • Low • Mid • High • Turbo
Mode	Selects desired mode: • Auto • Cold • Hot • Wind • Dry
Vertical	Does not function on this model.
Horizontal	Does not function on this model.
Light	Turns on or off the indoor unit LED display.
ECO	Enables ECO mode.
Sleep	Enables Sleep mode.
Anion	Does not function on this model.
Electricity Heat	Does not function on this model.
°C/°F	Toggles between Celsius and Fahrenheit. Changes the LED display on the app and unit.
AC Limiter	Enables the AC limiter function. When enabled, AC power is limited to 0-600W.



NOTICE

The remote and mobile app show settings and options that are non-applicable to the window unit.

14. CARE AND MAINTENANCE

The EG4® Hybrid Solar Window Unit is designed to give many years of dependable service. This section explains how to clean and care for the unit properly.

CAUTION

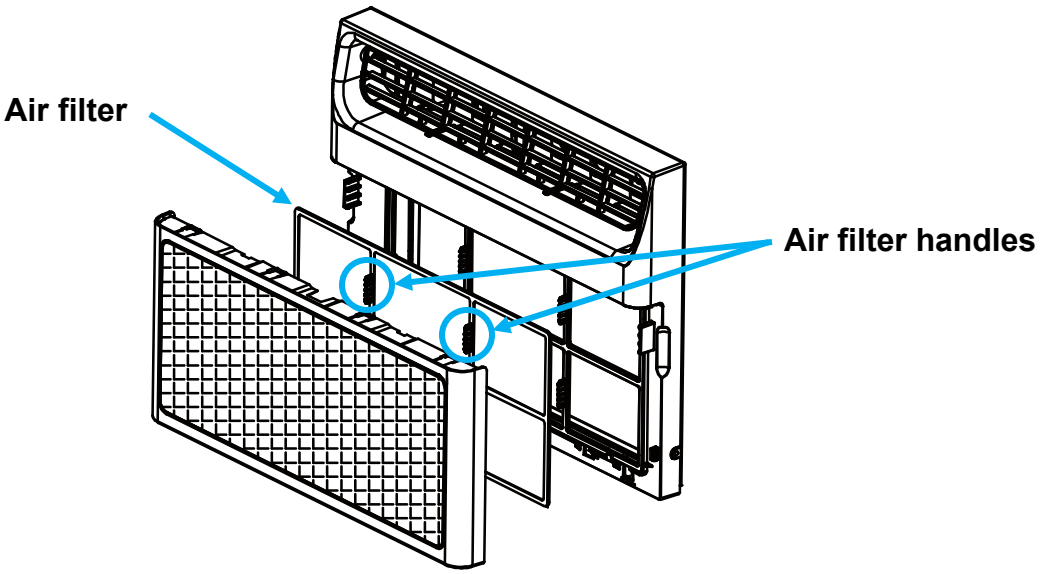
Turn off power before any cleaning or maintenance. Before performing any maintenance, turn off the unit and disconnect the power supply cord and photovoltaic connectors. Failure to do so could cause electrical shock and injury.

- Do not use benzene, thinner, polishing powder, or similar solvents for cleaning. These could cause the plastic to deform and/or crack.
- Do not clean the unit with excessive amounts of water.
- Do not touch the metal parts of the unit when removing the filter. Injuries can occur when handling the sharp metal edges.
- Do not operate the air conditioner without the filter in place.
- Do not wash the air filter with water hotter than 104°F (40°C).
- Do not use water to clean the inside of the unit. Exposure to water can destroy the insulation, which could lead to electrical shock.
- Do not use a chemically treated cloth or duster to clean the unit.
- Do not clean the unit with combustible cleaning agents. These could cause fire and/or deformation of the unit.
- Do not expose the filter to direct sunlight, as this could cause it to shrink. Allow the filter to air-dry in the shade.

14.1 CLEANING THE AIR FILTER

The air filter is easily removable for cleaning. A clean filter helps remove dust, lint, and other particles from the air and is very important for optimal cooling and operating efficiency. Check the filter every two weeks to see whether it needs cleaning.

1. Turn off the air conditioner.
2. Open the front panel using the recessed grooves on the left and right sides of the unit. Once the front panel is open, lift the panel to fully remove it.
3. Use the handles on the front of the filter to remove it from the unit.



4. Use a vacuum cleaner to gently clean the air filter. If the air filter is excessively dirty, wash it in warm water with a mild detergent. Do not wash the air filter in the dishwasher or use any chemical cleaners. Allow the filter to completely air dry before replacing it to achieve maximum efficiency.
5. Replace the filter back into the air conditioner.
6. Reinstall the front panel to the window unit.

NOTE

The filter cleaning reminder is set to occur once every 90 days. The filter cleaning reminder can be enabled by pressing the Fan and Temp up buttons together until four long buzzer sounds are heard, and disabled when the buttons are pressed together and two long buzzer sounds are heard.

14.2 CLEANING THE FRONT PANEL

1. Turn off the air conditioner.
2. Clean the front panel with a soft, damp cloth.
3. Allow the front panel to completely air dry.

14.3 REPAIRING PAINT DAMAGE

Check once every six months for exterior paint damage. This is very important, especially in areas near oceans or where rust is a problem. If needed, touch up with quality-grade enamel paint.

14.4 ANNUAL MAINTENANCE

The air conditioning unit needs annual maintenance to help maintain optimal performance throughout the year. Contact a local HVAC technician to schedule maintenance.

14.5 REMOVING WINDOW AC UNIT

1. Turn off the unit by pressing the ON/OFF button on the front panel, then disconnect the power supply cord.
2. Turn off the DC power by switching OFF the DC breaker and disconnecting the MC4 PV connectors.
3. Remove the sash seal from between windows and unscrew the safety lock.
4. Remove screws installed through the frame and frame bracket.
5. Remove the EVA foam.
6. Close the curtain housing.
7. Keeping a firm grip on the air conditioner, raise the window sash and carefully remove the unit using the team-lift technique.

NOTE

Be careful not to spill any standing water when removing the unit from the window. Store all components for installation with the air conditioning unit.

15. TROUBLESHOOTING

15.1 ISSUES AND SOLUTIONS

ISSUE	SOLUTION
Air conditioner will not operate	• The power supply cord is unplugged. Plug it into a grounded 3-prong outlet. See section 7.5. • The power supply cord has tripped (RESET button has popped out). Press and release RESET to resume operation. • A household fuse has blown, or circuit breaker has tripped. Replace the fuse or reset the circuit breaker. If the problem persists, call an electrician. • The power button has not been pressed. Press the power button. • Utility power has failed. Wait for power to be restored.
Air conditioner blows fuses or trips circuit breakers	• Too many appliances are being used on the same circuit. Unplug or relocate appliances that share the same circuit. • An extension cord is being used. Do not use an extension cord with this or any other appliance. • User is trying to restart the air conditioner too soon after powering the unit down. Wait at least 3 minutes after turning off the air conditioner before trying to restart the unit.
Air conditioner power supply cord trips (Reset button pops out)	• Disturbances in the electrical current can trip (RESET button will pop out) the power supply cord. Press and release the RESET to resume operation. • Electrical overloading, overheating, cord pinching, or aging can trip (RESET button will pop out) the power supply cord. After correcting the problem, press and release RESET to resume operation. **Note:** A damaged power supply cord must be replaced with a new power supply cord obtained from the product manufacturer and must not be repaired.
Air conditioner running too much	• The hybrid window unit replaced an older model. The use of the more efficient components may cause the air conditioner to run longer than an older model, but the total energy consumption will be less. Newer air conditioners do not emit the “blast” of cold air the user may be accustomed to from older air conditioners, but this is not an indication of lesser cooling capacity or efficiency. Refer to the efficiency rating (EER) and capacity rating (in BTU/h) marked on the air conditioner. • The air conditioner is in a heavily occupied room, or heat-producing appliances are in use in the room. Use exhaust vent fans while cooking or bathing and try not to use heat producing appliances during the hottest part of the day. A higher capacity air conditioner may be required, depending on the size of the room being cooled.

Air conditioner frequently cycles on and off or does not cool	• The air conditioner is not properly sized for the room. Check the cooling capabilities of the window unit. A window air conditioner is not designed to cool multiple rooms. • The filter is dirty or obstructed by debris. Clean the filter. • The evaporator and condenser coils are dirty or obstructed by debris. See section 14.4. • There is excessive heat or moisture (open container cooking, showers, etc.) in the room. Use a fan to exhaust heat or moisture from the room. Try not to use heat producing appliances during the hottest part of the day. • The louvers are blocked. Install the air conditioner in a location where the louvers are free from curtains, blinds, furniture, etc. • The temperature of the room that is being cooled is extremely hot. Allow extra time for the air conditioner to cool a very hot room. • Windows or doors to the outside are open. Close all windows and doors. • The temperature control is not at a cool enough setting. Adjust the Temp control to a cooler setting by pressing the minus button to reduce the temperature. Set the Fan Speed control to the highest setting.
Water drips from unit into the house	The air conditioner is not properly leveled. The unit should slope slightly downward toward the outside. Level the air conditioner to provide a downward slope toward the outside for proper drainage. See section 8.6. **Note:** Do not drill a hole in the bottom of the metal base and condensate pan.
Error code appears in the LED display of the window unit	The unit may stop operation or continue to run safely. If the indicator light continues to display an error code, wait for ~10 minutes. The problem may resolve itself. If not, disconnect both solar and grid power, wait 2 minutes, then reconnect the power and turn on the unit. If the problem persists, turn off the unit and contact an authorized service center. (See fault codes listed in section 15.2)

NOTE

If the issue persists after completing the troubleshooting steps, contact a licensed electrician or HVAC technician.

15.2 WINDOW UNIT LED FAULT CODES

CODE	DESCRIPTION
03	Communication fault
05	E-type fault
19	Middle section of outdoor coil sensor fault
31	Indoor temperature sensor fault
32	Indoor coil sensor fault
35	Outdoor air temperature sensor fault
36	Outdoor heat exchanger sensor fault
37	Exhaust temperature sensor fault
51	Fan stall
55	Compressor feedback fault
57	Refrigerant leak fault
73	Input current control fault
76	DC low voltage protection
79	Demagnetization protection control fault
81	PFC overcurrent
82	Total power protection fault
83	AD abnormal detection fault
84	Unstable current
85	Compressor setting data wrong
91	IPM_FO edge fault
92	IPM_FO level fault
93	IMP over temperature
94	Compressor phase-loss fault
95	Compressor lost speed
96	IPM over voltage
LO	IPM over current
LP	IPM current shortage
P1	PV input voltage too high
P2	PV input voltage too low
P3	Boost board output voltage too high
P4	Boost board output voltage too low
P5	Boost board leakage protection
P6	Boost board overcurrent protection
P7	Outdoor unit and boost board communication fault

16. WARRANTY INFORMATION

For information regarding warranty registration for EG4® Electronics products, navigate to https://eg4electronics.com/warranty/ and select the corresponding product to begin the registration process.

NOTES

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