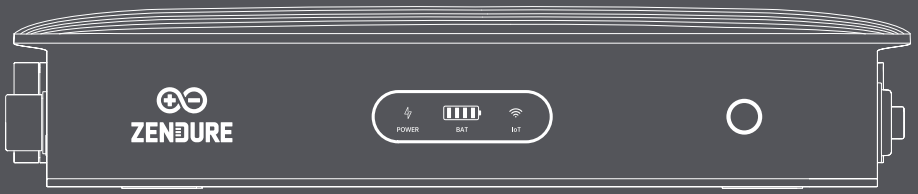
ZENDURE



SolarFlow 2400 AC Coupled Inverter
User Manual

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Disclaimer

Read all safety guidelines, warnings and other product information in this manual carefully, and read any labels or stickers attached to the product before using. Users take full responsibility for the safe usage and operation of this product. Familiarize yourself with relevant regulations in your area. You are solely responsible for being aware of all relevant regulations and using Zendure products in a way that is compliant.
Keep this manual for future reference.

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1. Safety Instructions

1.1 Usage

1. Basic Installation Requirements
   (1) Read all up-to-date documentation carefully before installation
   (2) Install strictly according to the user manual to prevent damage or injury
   (3) Ensure the SolarFlow 2400 AC Coupled Inverter and batteries are securely installed to prevent falling
   (4) Maintain a 50mm distance from other objects
   (5) Install in a well-ventilated area and do not restrict ventilation
2. Operating Environment
   (1) Do not install or operate under extreme weather conditions (lightning, snow, heavy rain, strong winds)
   (2) Avoid direct sunlight to prevent overheating
   (3) Keep away from heat sources
   (4) Do not use near strong static electricity or magnetic fields
   (5) Keep away from flammable or explosive compounds, gas, or smoke
   (6) The product has IP65 protection rating and cannot be immersed in liquids
3. Electrical Safety
   (1) Verify all cords and plugs are intact and dry before connecting to prevent electric shock
   (2) Pull the connectors rather than the cord when disconnecting to reduce damage risk
   (3) Do not exceed the output rating to avoid fire hazards
   (4) Disconnect solar photovoltaic panels, batteries, and home grid before servicing
   (5) In case of fire, only use dry powder fire extinguishers
4. Off-grid Socket Safety
   (1) When using the off-grid socket function on the inverter, protect the socket from rain and water exposure to prevent electrical hazards
   (2) After using the off-grid socket function, immediately close the protective cover to prevent rain and dust from entering the inverter
5. Daily Operation Precautions
   (1) Regularly check for damage, cracks, liquid leakage, overheating, or other abnormalities
   (2) Do not place heavy objects on top of the inverter
   (3) Avoid moving or shaking the unit during operation to prevent poor internal connections
   (4) Normal operating temperature may feel warm
   (5) Clean only with a dry cloth; do not use chemicals or detergents
6. Battery Safety
   (1) Charge batteries in well-ventilated areas
   (2) Battery servicing must be performed or supervised by qualified personnel
   (3) Do not use damaged or modified batteries to prevent fire or explosion risks
7. Critical Safety Warnings
   (1) Do not insert fingers or hands into the product
   (2) Close supervision required when used near children
   (3) If the product falls into water, place it in a safe, open area, keep away until completely dry, then dispose of properly according to guidelines
8. Maintenance and Warranty
   (1) Use only original charger and cables; third-party equipment may cause damage and void warranty
   (2) Do not disassemble the product
   (3) Use only identical replacement parts for repairs to maintain product safety

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1.2 EC DECLARATION OF CONFORMITY

ZENDURE TECHNOLOGY CO., LIMITED declares the SolarFlow 2400 AC Coupled Inverter complies with directive 2014/53/EU (RED), 2011/65/EU(RoHS), 2015/863/EU(RoHS).
The full text of the Declaration of Conformity is available at the following web address: https://zendure.de/pages/download-center

CE	**Declaration of conformity** The EU Declaration of Conformity can be requested at this address: https://zendure.de/pages/download-center
	**Disposal and Recycling** Disposal of packaging: dispose of the packaging separately by type of material.
	Disposal of old equipment (applies in the European Union and other European countries with separate collection (waste collection) Old equipment must not be disposed of in household waste. Every consumer is legally obligated to dispose of old equipment that can no longer be used separately from household waste, for example at a collection point for recyclables. To ensure proper recycling and avoid negative impact on the environment, electronic devices must be taken to an appropriate collection site. For this reason, electronic devices are marked with the symbol shown to the left.

2. Symbols Used in This Guide

Symbol	Explanation
	A high-risk hazard that, if not avoided, could result in death or serious injury.
	Important information that you must pay attention to.
	Included with your product
	Optional (not included)
	Indicates additional information on correct use or useful tips.

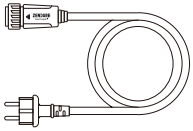
3. What's in the Box



SolarFlow 2400 AC Coupled Inverter



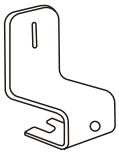
User Manual



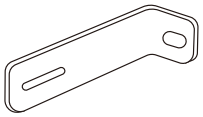
3m AC power cable



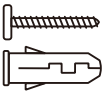
Wrench for Removing PV Connectors and AC Cable Connectors



Battery mounting bracket(×4)



Wall mounting bracket(×2)



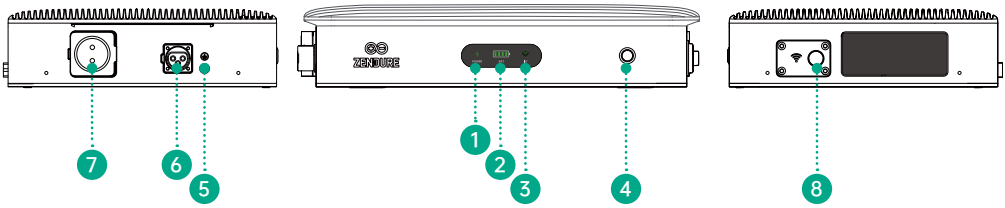
Self-sealing expansion bolts(×2)

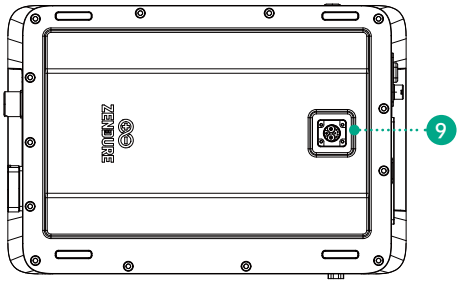


M4 Srews(×4)

4. Overview

4.1 Product Overview

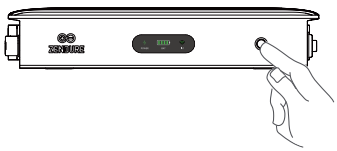




1	Power Status Indicator
2	Battery Status Indicator
3	IoT Status Indicator
4	Button
5	Protective Ground Screw Hole
6	On-Grid Terminal
7	Off-Grid Output Terminal(Socket)
8	Smart Fan Terminal
9	Battery Terminal

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4.2 Button Controls

Button	Action	Function
	Press for 2 second	Turn on the SolarFlow 2400 AC
	Press for 3 second	Reset Wi-Fi connection
	Press for 6 second	Turn off the SolarFlow 2400 AC

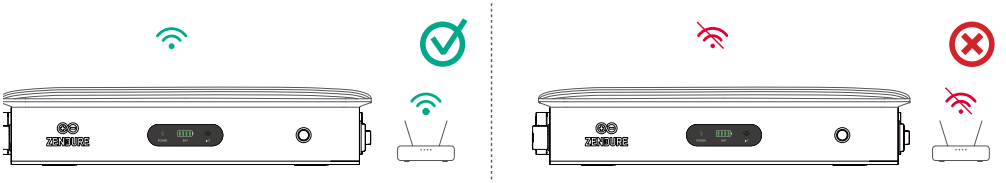
4.3 LED Display

LED Indicator	LED Description	Detailed Explaination
	Solid Green	powered on and operating normally
	Blinking Green	The device is functioning normally, and the off-grid mode is active.
	Blinking Red	A device error has occurred. Please check the app for further details.
	Solid Green	Stable and normal Wi-Fi connection
	Blinking Green	Waiting to connect to Wi-Fiyi
	Blinking Red	Wi-Fi connection is lost
	Blinking Yellow	OTA update in progress.
	Solid Green	Battery is operating normally and connected. Battery status is indicated by 4 green LEDs: ● 1 Green LED: 0-25% battery ● 2 Green LEDs: 26-50% battery ● 3 Green LEDs: 51-75% battery ● 4 Green LEDs: 76-100% battery Example: At 60% battery level, three green LEDs will be illuminated.
	Blinking Green	Charging the Battery
	Slow Red Blink on First LED	Battery level below 5%.
	Solid Yellow	Indicates the battery level and the battery is in protection mode.
	Solid Red	Battery error detected; check the system for troubleshooting.
	Slow Yellow Blink	Low temperature detected; the battery pack is heating to reach operational temperature.

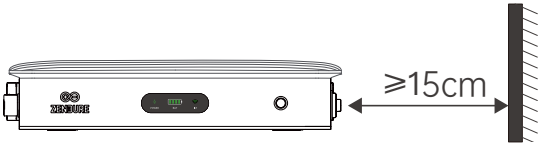
5. Installation

5.1 Choose a location for the Inverter

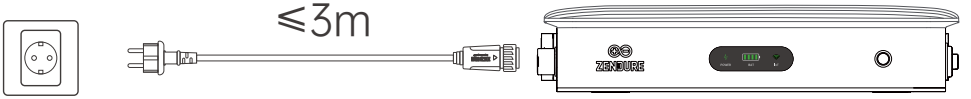
Make sure the SolarFlow 2400 AC Coupled Inverter is within the Wi-Fi coverage area.



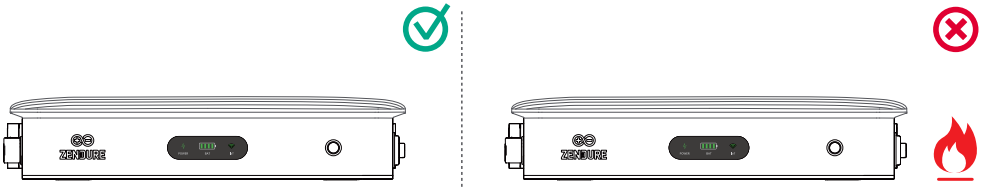
The antenna casing on the device needs to be at least 15cm away from the wall.



Please place the inverter within 3 meters of a power socket.



Do not place the Inverter in an area where flammable or explosive materials are stored.

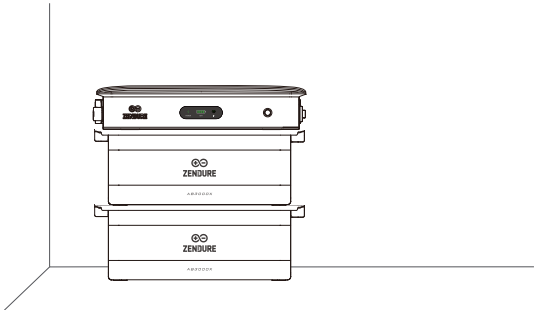


The Inverter can be installed indoors or outdoors. Be sure the device is placed in area where it will not be subjected to direct sunlight or rain.



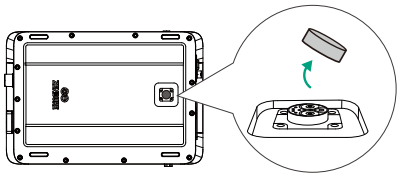
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Position your Inverter and batteries (not included) on a hard, level floor.



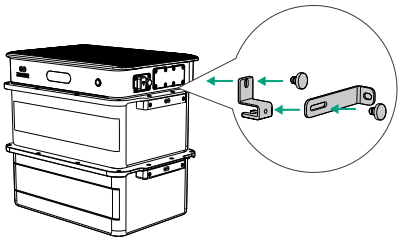
5.2 Assembly Process

5.2.1 Remove the Protective Cover



5.2.2 Connect to the Battery

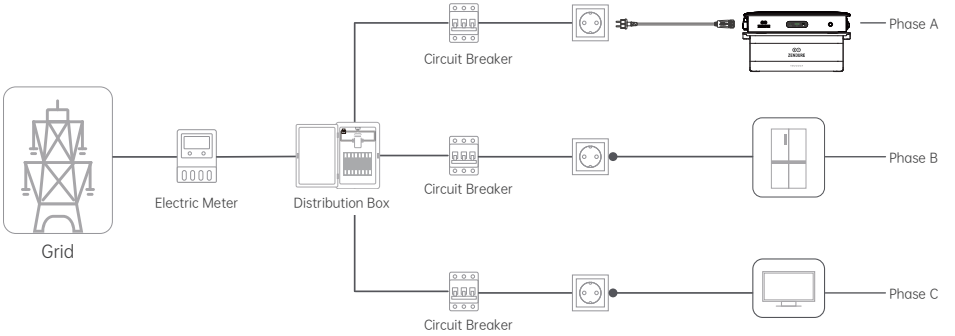
(1) Place the SolarFlow 2400 AC on Zendure AB3000X Battery. A single SolarFlow 2400 AC can be connected to up to 6pcs AB3000X batteries in parallel.
(2) Use the mounting brackets and M4 screws to securely attach the SolarFlow 2400 AC to the battery pack on both sides.
(3) Use the brackets and expansion screws to firmly fix the SolarFlow 2400 AC to the wall.



5.2.3 Connecting to the Grid via a Power Socket

The inverter's peak power can reach 2400W. To prevent circuit overloads or tripping, connect the inverter to a socket on the dedicated circuit, without any other appliances sharing the same circuit.

The inverter is set to a default output power limit of 800W. If you need to exceed this limit, please have a licensed electrician visit your location to assess the safety of your circuit and ensure it complies with safety standards. After the electrician's verification, you can apply to increase the power to 2400W via the Zendure App.



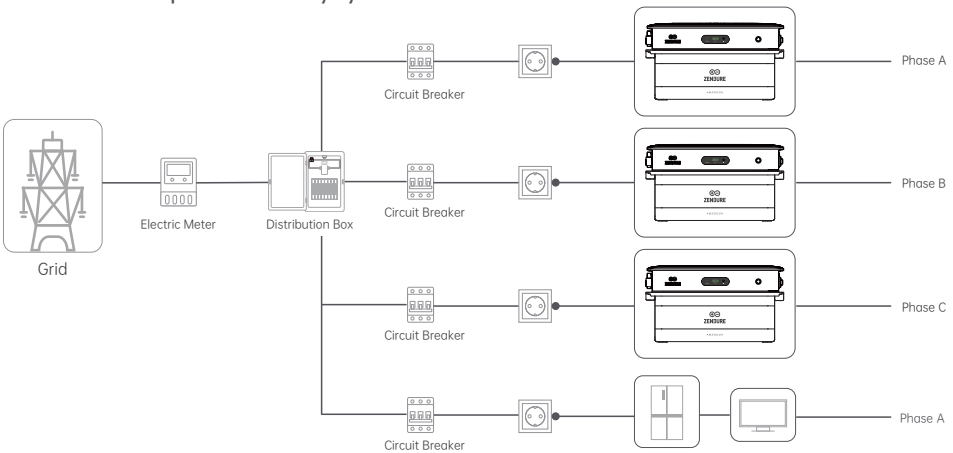
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5.2.4 Connecting Multiple Units to the Grid via Power Sockets

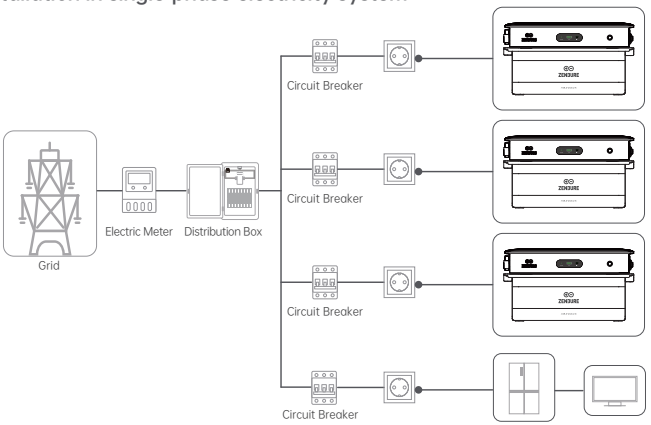
⚠ 1. Each inverter's peak power can reach 2400W. Connecting multiple inverters to the same circuit can cause the circuit to overload, leading to potential safety risks.
2. If your home does not have the required sockets and circuits, or if you lack the electrical knowledge to accurately identify whether these sockets or circuits meet the requirements, please request the assistance of an electrician. It is recommended to connect each inverter directly to a separate breaker. For detailed instructions, refer to section 5.2.5.
3. The total maximum output power of all inverters is set to a default of 800W. If you need to exceed this limit, please invite an electrician to your home to ensure your wiring is safe and does not exceed the circuit load, or follow the installation guidelines in section 5.2.5 to connect each inverter directly to the breaker. Then you can apply to increase the power via the Zendure App.

1. For Three-Phase Power: Connect each inverter to a socket on a dedicated circuit for each phase, ensuring no other appliances are sharing the same circuit.
2. For Single-Phase Power: Connect the inverter to a socket on the dedicated circuit, without any other appliances sharing the same circuit.
3. Press and hold the button for 2 seconds to power on each inverter.

Installation in three-phase electricity system



Installation in single-phase electricity system

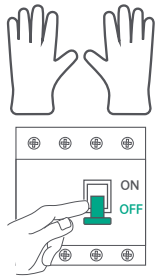


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5.2.5 Connect to the Grid via a Circuit Breaker. (Optional)

⚠ Please Note: This installation must be performed by a certified electrician to avoid risks of electric shock, fire, or other hazards.

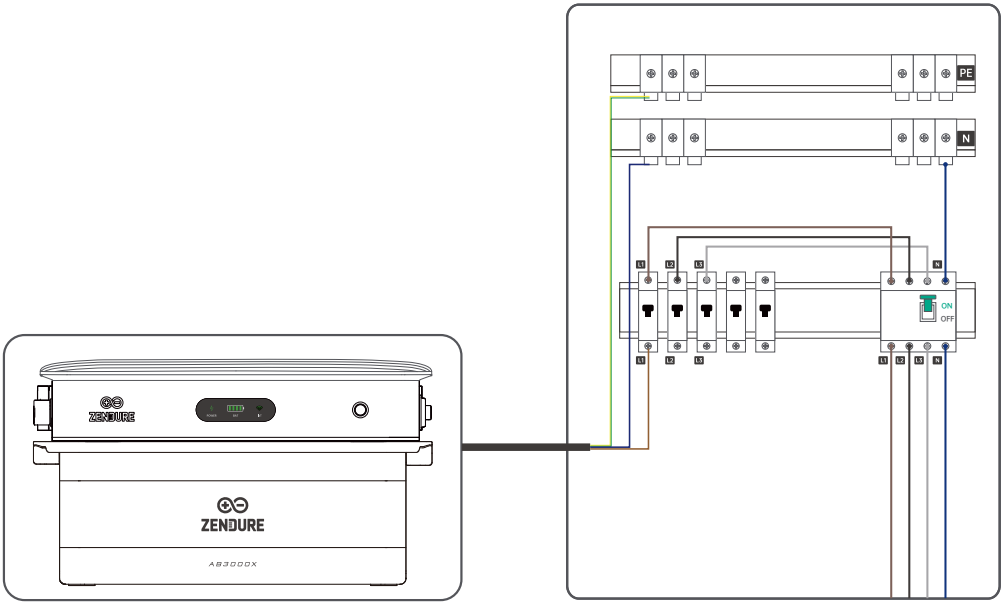
1. Put on Insulating gloves(Note: Gloves are not included and must be provided by the electrician or user.)
2. Turn off circuit protection switches to avoid electric shock risk, ensure the circuit breaker is turned off before starting the installation. Verify that there is no voltage at the terminals using a multimeter. Only proceed with the installation after confirming the absence of voltage.
3. Cut off the plug of the AC cable and strip the insulation from the three wires to expose the copper.



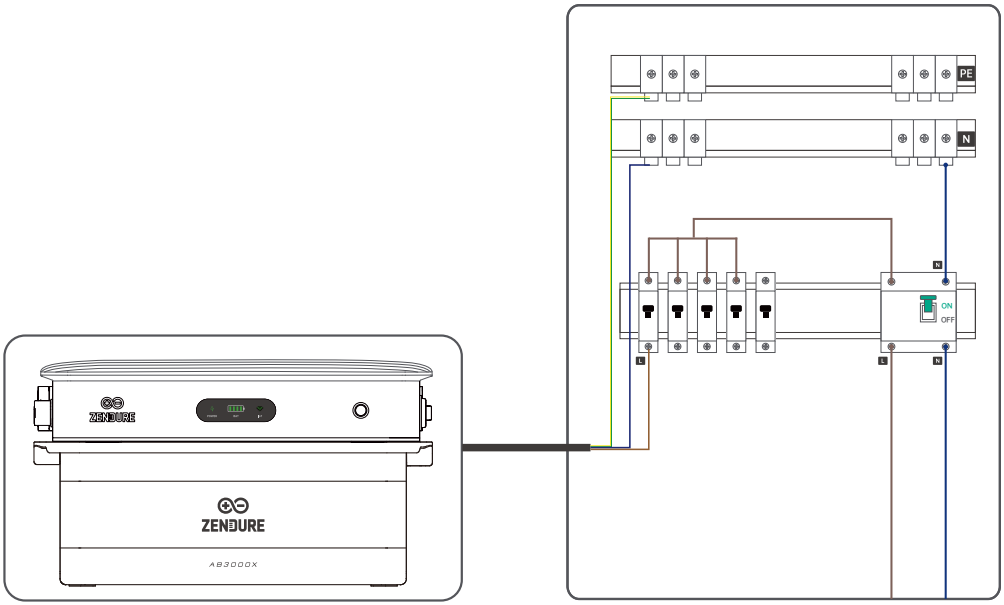


4. Connect the power cable to the electrical panel:
(1) Connect the live wire to an available circuit breaker.
(2) Connect the neutral wire and ground wire to the neutral and ground bars in the household panel, respectively.

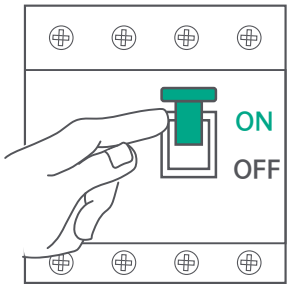
Three-phase power household installation diagram

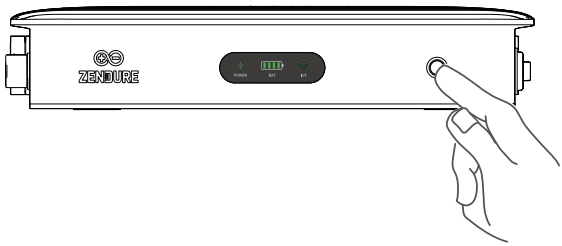


Single-phase power household installation diagram



5.Power On
(1) Check that all connections are safe and error-free before powering up the device.
(2) Turn on the main circuit breaker of your home electrical system.
(3) Press and hold the button on the SolarFlow 2400 AC for 2 seconds to power on.





6. Zendure App Setup

1. The Zendure app is continually being improved and may change over time. If there are any differences between the instructions in this guide and in the app, follow the in-app instructions.
2. Privacy Policy: By using Zendure Products, Applications and Services, you consent to the Zendure Terms of Use and Privacy Policy, which you can access via the "About" section of the "User" page in the Zendure app.

The Zendure app allows users to monitor and manage power systems, offering real-time power monitoring, historical records, charge/discharge scheduling, and more.

1. To download the Zendure app, scan the QR code or search "Zendure" in the Apple App Store® or Google Play Store.
2. Open the Zendure app. Log In or sign up.
3. Follow the in-app instructions to add your SolarFlow 2400 AC Coupled Inverter.
4. Please update the firmware to the latest version in the settings before using.

7. Off-Grid Power Socket Usage Instructions

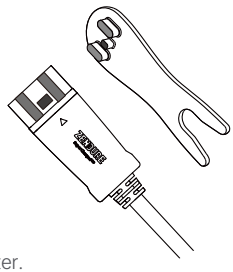
The off-grid power socket provides electricity independently from the main power grid, using energy stored in the battery system. It is ideal for backup power, remote areas, or situations where grid access is unavailable. The off-grid socket function is disabled by default and can be enabled through the Zendure App. Once activated, simply plug in your device to use the socket. After use, please ensure to turn off the function in the App.

1. Ensure Sufficient Battery Power: Before using the off-grid socket, check that the battery has enough charge to support the connected devices.
2. Maximum Output Power Limit: The off-grid socket has a maximum output power of 2400W. Do not connect devices that exceed this limit to avoid triggering the protection mechanism, system shutdown, or safety risks.
3. Waterproofing of Off-Grid Socket: The socket is not waterproof during use, nor when the waterproof cover is not securely closed. If using the off-grid socket, it is recommended to install the inverter indoors. For outdoor installations, only use the socket on clear days, and promptly close the waterproof cover after use to prevent water ingress, device damage, electric shock, or fire hazards.

8. Remove the Inverter

8.1 Remove the Inverter from Socket

1. Disconnect the AC power cable. Please disconnect the AC cable from the AC socket end first, then press the AC connector on the inverter to pull it out with the wrench.
2. Press the button on the inverter for 6 seconds to power it off.
3. Release the brackets fixed between the devices and the wall.
4. Remove the inverter from the batteries.



8.2 Remove the Inverter from the Circuit Breaker

⚠ Risk of Electric Shock:
The devices must be removed by a qualified electrician with caution.
Before disconnecting any wires, ensure that the circuit is de-energized.

1. Put on insulating gloves (Note: Not included, to be provided by electrician/user)
2. Turn off the main power supply first. You can verify power is off using a voltage tester.
3. Carefully disconnect wires from the breaker.
4. Double-check all connections are secure, Slowly restore power by turning on the main circuit breaker. Monitor for any unusual sounds or behavior.
5. Press the AC connector on the inverter to pull it out. with wrench.
6. Release the brackets fixed between the devcies and the wall.
7. Remove the inverter from the batteries.

9. Technical Specifications

On-grid Terminal	
Nominal Input/Output Voltage	230V a.c.
Nominal Input/Output Frequency	50Hz
Max. Input/Output Power	2400W
Off-grid Terminal	
Nominal Output Voltage	230V a.c.
Nominal Output Frequency	50Hz
Max. Output Power	2400W
Battery Charge/Discharge	
Battery Voltage Range	37.5V d.c. to 54.75V d.c.
Battery Charge/Discharge Power	2400W/2600W Max
Battery Charge/Discharge Current	60A/54.17A d.c.
General Information	
Power Factor	0.8(lagging)-0.8(leading)
Protective Class	I
Operating Temperature	-20° C~60° C
Type of Enclosure	IP65(The device does not maintain IP65 waterproof protection when the off-grid socket is in use (plugged in) or when the waterproof cover is not properly sealed.)
Product Size	448*303.6*88mm
Net Weight	10.12KG
Gross Weight	12.96KG
Wireless Information	
Bluetooth	Protocol: Bluetooth 5.0
	Frequency: 2402-2480MHz
	Maximum Transmit Power: 20.0 dBm
Wi-Fi	Protocol: 802.11 b/g/n
	Frequency: 2412-2472MHz
	Maximum Transmit Power: 20.0 dBm

Certificat de Conformité

Numéro de Certificat :CN-PVES-250129

Sur la base des essais effectués, le(s) échantillon<s>du produit ci-dessous s'est(se sont) avéré(s) conforme(s) aux exigences de la(des) spécification<s>/norme<s> référencée(s) au moment où les essais ont été effectués. Cela n'implique pas qu'Intertek ait effectué une surveillance ou un contrôle du(des) fabricant(s). Le (les) fabricant(s) doit(doivent) s'assurer que le procédé de fabrication garantit la conformité des unités de production avec les produits examinés mentionnés dans le présent certificat.

Demandeur :	Zendure USA Inc. 1765 E BAYSHORE RD # 201 EAST PALO ALTO, CA 94303-5501 USA
Produit :	SolarFlow 2400 Onduleur CA Couplé
Évaluations & Caractéristiques principales :	Voir l'annexe du Certificat de Conformité
Modèle :	ZDSF2400AC
Nom de marque <s> :	ZENDURE SuperCharged+-
Produit conforme à :	EN 50549-1 : 2019+A1:2023, Exigences relatives aux centrales électriques destinées à être raccordées en parallèle à des réseaux de distribution Partie 1 : Raccordement à un réseau de distribution BT - Centrales électriques jusqu'au Type B inclus EN 50549-10:2022, Exigences relatives aux centrales électriques destinées à être raccordées en parallèle à des réseaux de distribution - Partie 10 : Essais pour l'évaluation de la conformité des unités de production Homologation de type des types A et B
Nom et adresse du bureau de certification :	Intertek Testing Services Ltd. Shanghai West Area, 2nd Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China Authentifié par ACCREDIA conformément à l'ISO/IEC 17065:2012
Rapport d'essai No.<s> :	250114190GZU-001, 18 Mar 2025

Conformément à l'annexe H de la norme EN 50549-1:2019, les centrales électriques conformes aux dispositions de la présente norme européenne sont réputées conformes aux dispositions pertinentes du RÈGLEMENT (UE) 2016/631 de la COMMISSION, à condition que tous les paramètres fournis par le GRD et la partie responsable soient respectés. Informations complémentaires en Annexe.

Signature

Directeur de la Certification : Grady Ye
Date : 20 mars 2025

PRD N° 306B

Ce Certificat est à l'usage exclusif du client d'Intertek et fourni conformément à l'Accord signé entre Intertek et son client. La responsabilité d'Intertek est limitée aux termes et aux conditions de cet Accord. Intertek n'assume aucune responsabilité envers toute partie autre que le cilent conformément à l'Accord pour toute perte, dépense ou dommage occasionné par l'utilisation de ce Certificat. Seul le client est autorisé à faire la copie ou la distribution de ce Certificat. Toute utilisation du nom Intertek ou de l'une de ses marques pour la vente ou la publicité du matériel, du produit, ou du service testé doit être approuvée préalablement par écrit par Intertek.

ANNEXE : Certificat de Conformité

Il s'agit d'une annexe du certificat de conformité dont le numéro est : CN-PVES-250129

Modèle	ZDSF2400AC
Plage de tension de la batterie	37.5-54.75 V dc
Courant de charge de la batterie	60 A dc
Courant de décharge de la batterie	54.17 A dc
Tension de sortie nominale	230 V ac
Fréquence de sortie nominale	50 Hz
Courant de sortie maximal	10.43 A
Puissance de sortie maximale	2400 W
Puissance apparente maximale	2400 VA
Plage de facteur de puissance	0.8leading~0.8lagging
Niveau de sécurité	Class I
Indice de protection	IP 65
Température ambiante de fonctionnement	-20℃ - +60℃
Version de logiciel	V1

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ANNEXE : Certificat de Conformité

Il s'agit d'une annexe du certificat de conformité dont le numéro est : CN-PVES-250129

Paramètres de protection de l'interface conformément à la norme EN 50549-1			
Paramètres	Temps de déconnexion maximal	Temps de fonctionnement minimal	Valeur de déclenchement
Seuil de sous-tension étape 1 [27 <]	100s	0.1s (0.1 s steps)	Trip value Config. from 0.2 to 1 Un (0.01 Un steps)
Seuil de sous-tension étape 2 [27 <<]	5s	0.1s (0.05 s steps)	Trip value Config. from 0.2 to 1 Un (0.01 Un steps)
Seuil de surtension étape 1 [59 >]	100s	0.1s (0.1 s steps)	Trip value Config. from 1.0 to 1.2 Un (0.01 Un steps)
Seuil de surtension étape 2 [59>>]	5s	0.1s (0.05 s steps)	Trip value Config. from 1.0 to 1.3 Un (0.01 Un steps)
Protection moyenne de 10 min contre les surtensions	Trip time Config≤ 3s not adjustable Time delay setting = 0 ms		Trip value Config. from 1.0 to 1.15Un (0.01 Un steps)
Seuil de sous-fréquence étape 1 [81 <]	100s	0.1s (0.1s steps)	Trip value Config. from 47.0 to 50.0Hz (0.1Hz steps)
Seuil de sous-fréquence étape 2 [81 <<]	5s	0.1s (0.05 s steps)	Trip value Config. from 47.0 to 50.0Hz (0.1Hz steps)
Seuil de sur-fréquence étape 1 [81 >]	100s	0.1s (0.1s steps)	Trip value Config. from 50.0 to 52.0Hz (0.1Hz steps)
Seuil de sur-fréquence étape 2 [81 >>]	5s	0.1s (0.05 s steps)	Trip value Config. from 50.0 to 52.0Hz (0.1Hz steps)
Paramètres de démarrage et de reconnexion pour la tension		50%-120% adjustable, 85%Un≤ U≤1.10Un default	
Démarrage de la production d'énergie électrique		47Hz – 52Hz adjustable, 49.5Hz≤ U≤50.1Hz default	
Paramètres de reconnexion pour la fréquence		47Hz – 52Hz adjustable, 49.5Hz≤ U≤50.2Hz default	
Temps d'observation		10s-60s adjustable, 60s default	
Gradient d'augmentation de la puissance active		6%-3000%/min adjustable, 10%/min default	
Injection permanente de courant continu		0.5% of rated inverter output	
Perte de puissance conformément à la norme EN 62116		Within 2s	

Declaration: If there are any discrepancies between the English version and the translated version of the certificate, the English version will prevail.

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