passion. create. smile.

Powerhill HV5K-50-C - PDU
Powerhill HV5K-50-C - Battery Module

User Manual

ESPD10205005PDA01B
ESLP51H10250PDA01B

Manual de utilizare



335.43.25.0

Before using this product, carefully read all product documentation and retain it for future reference.

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EN

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Forward

Please read this manual before using the product.

This user manual introduces the energy storage module in terms of its installation, electrical connections, operation, commissioning, maintenance, and troubleshooting. Please read through the manual carefully before installing and using the energy storage module, and keep the manual for future reference.

Application Model

Powerhill HV5K-50-C - PDU
Powerhill HV5K-50-C - Battery Module

Applicable Personnel

This user manual is intended for photovoltaic (PV) inverter operating personnel and qualified electrical technicians.

NOTE!

This user manual is subject to change without prior notice.

Package Contents

Battery Module

No.	Item	Used for	Quantity
1	Battery module	Battery module	1
2	Fixing plate	Wall hanging bracket	1
3	Wall pendant	Wall hanging bracket	1
4	Philips Hexagon screw	To fix the fixing plate	4
5	Positioning pin	Used for positioning multiple packs	4
6	304 stainless steel wall plug	To fix the wall hanging bracket	2
7	2g moisture-proof desiccant	Moisture-proof	2

PDU

No.	Item	Used for	Quantity
1	PDU	Install at the top of the battery	1
2	Foot	To let the base stand on	4
3	The base	To put at the bottom of the battery	1
4	Fixing plate	Wall hanging bracket	1
5	Wall pendant	Wall hanging bracket	1
6	Cross shaped hexagonal three combination screw	Lock base L parallel machine fixing plate	4
7	Positioning pin	Used for position multiple packs	4
8	304 stainless steel Wall plug	To fix the the wall bracket	2
9	Power line with network cable	Used to connect the battery to the invertor	1
10	Grounding cable	Used for the grounding	1
11	Communication network cable	Battery - Battery parallel communication	2
12	Moisture-proof pack	Moisture proof	1
13	Waterproof cover		2
14	Water proof RJ45 connectors	Connectors used to protect the connection	2
15	Screw for grounding cable		1
16	Screws for the waterproof cover		8

1 Safety Information

1.1 General Safety

Please carefully read the manual safety precautions, and observe all the safety instructions on the equipment and in this document.

The “DANGER”, “WARNING”, and “NOTICE” statements in this document do not cover all the safety instructions. They are only supplements to the safety instructions.

For user safety and utilization efficiency of this manual, a list of symbols are designed to alert people from danger. You must understand and comply with the emphasized information to avoid personal injury and property damage. Relative safety symbols have been listed below

	DANGER indicates a hazardous situation which, if not avoided will result in serious injury and
	WARNING indicates a hazardous situation which, if not avoided will result in property loss or void warranty.
NOTE!	**NOTE!** indicates normal situation which, if not avoided will result in that battery doesn’t work.

NOTE!

Follow local laws and regulations when installing, operating, or maintaining the equipment. The safety instructions in this document are only supplements to local laws and regulations.

1.2 Personal Safety

Personal Requirements

Personnel who plan to install or maintain battery equipment must be trained, understood all necessary safety precautions, and be able to perform all operations correctly.
Only qualified professionals or trained personnel are allowed to install, operate, and maintain the equipment.

DANGER

- Keep the batteries away from children and pets.
- Do not touch the energized battery, the temperature of the battery enclosure may increase during operation.
- Do not touch the energized battery terminals.
- Do not stand on, lean on, or sit on the battery.

1.3 Electrical Safety

Symbols on battery

There are some electrical symbols on battery relate to electrical safety. Please make sure you have fully understand them before installation.

	Electrical danger	Voltage exits when the battery is powered on. Only qualified engineers are allowed to operate.
	Earth connector	Earth connection
	DC positive and negative connect	Identify positive and negative connectors of DC power
	CE mark	The product meets CE certification
	WEEEtag	This product cannot be thrown away as household waste
	Recycle	Battery can be recycled

DANGER

- Before installation, ensure that the equipment is intact. Otherwise, electric shocks or fire may occur.
- Do not connect or disconnect power cables while the battery is powered on, as this may cause electric arcs, sparks, fire, or even personal injury.
- Before connecting a power cable, check the positive or negative connectors are correct.
- Do not connect the battery with different batteries in parallel.
- Do not connect battery with AC directly.
- Do not connect battery with PV wiring directly.
- Do not connect the batteries in series.
- Do not connect battery to faulty or unqualified inverter or charger.
- Do not create short circuits with the external connection.
- Make sure the grid is cut off and the battery is powered off before maintenance.
- Make sure earth cable connect correctly before operation.
- Make sure the earth cable is connected correctly before operation.

WARNING

- Recharge the battery in every six months if not in use.
- Recharge battery within 10 days after battery is fully discharged.
- Ensure the battery cable is installed correctly.
- When the battery is being installed or repaired, ensure the battery is powered off and and isolated. Using a multimeter check to ensure there is no voltage in the positive and negative terminals.

NOTE!

- Please use dedicated insulated tools for installation and maintenance.
- Please check the LED status indicator when the battery is powered on.
- Please ensure the communication cable is connected correctly between the battery and the inverter.
- Please check for inverter alarms and the Battery charge reading once communication is established between the inverter and the battery.

1.4 Environment Safety

WARNING

- Ensure that the equipment is installed in a dry and well-ventilated environment.
- The installation position must be away from direct sunlight and rain.
- The installation position must be far away from fire sources.
- The installation position must be far away from all sources of water.
- The bracket must be installed solid and horizontal.
- Do not expose the equipment to flammable or explosive gas or smoke.
- Do not perform any operation on the equipment in such environments.
- The operation and service life of the battery depend on the operating temperature. Operate the battery at a temperature equal to or better than the ambient temperature. The recommended operating temperature ranges from 0°C to 30°C.

1.5 Transportation Safety

WARNING

- The products have passed UN38.3 certification.
- The products have MSDS documents available.
- The products belong to class 9 dangerous goods.
- Please protect the packing case from the below situations:
  - Being dampened by rains, snow, falling into water.
  - Falling or mechanical impact.
  - Being upside-down or tilted.

2 Product Information

2.1 Battery Overview

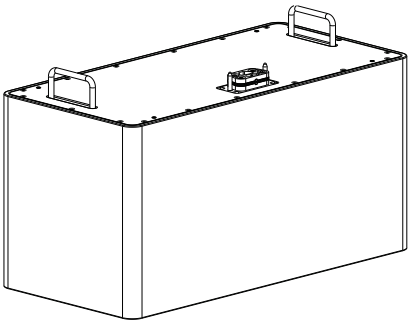
The Powerhill HV5K-50-C is a high-voltage battery storage system which consists of long span LiFePO4 battery cells and functional BMS. It can store and release electric energy based on the requirements of the inverter controller. It is mainly for home energy storage system.

Features

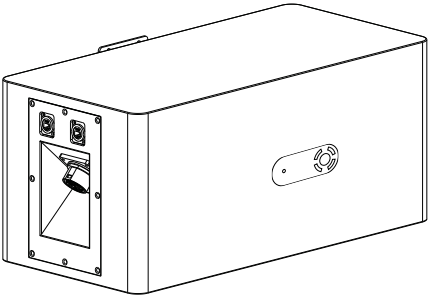
- LiFePO4 prismatic cell.
- 6000 cycles @ 80% DOD & 25°C.
- Protective and active BMS allows greater reliability and controll
- IP 65 grade
- Fire suppression module built-in
- Remote Assistance
- Scalable up to 4 systems with 20 battery modules to 102.4 KWh
- Scalable up to maximum 5 packs
- Connectors built-in design
- Fully recyclable at the end of life
- Compact

2.2 System Information

2.2.1 Battery Module

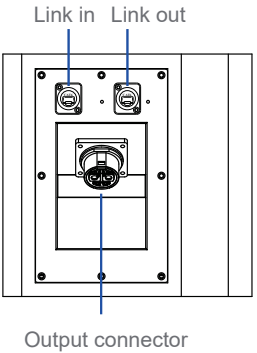


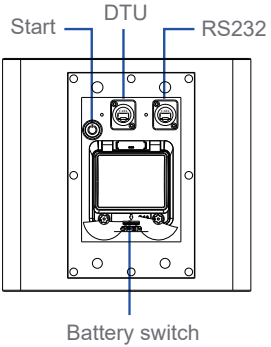
2.2.2 High Voltage PDU



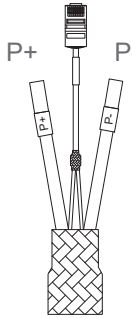
2.3 Port definitions

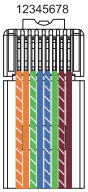
2.3.1 Connection Area





Communication





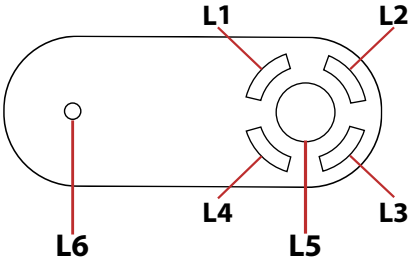
Pins	Definitions
1	485B
2	485A
3	NC
4	CANH
5	CANL
6	GND
7	NC
8	NC

2.3.2 ON/OFF

ON

For multiple Battery Modules in series, long press (for more than 5 seconds) Start button of the PDU (which is connected to the inverter), the Normal LED indicator on the front panel will flash. L1 to L4 show the battery charge level, L5/L6 shows the battery status.

The PDU which contains the BMS will automatically encode and assign an ID to each battery module and the battery will operate normally.



NOTE!

For multiple batteries in parallel, only the LED State of Charge indicator of the Master battery will flash to show the battery charge level of the whole system, and the LED State of Charge indicators of the slave batteries will turn off, while the Normal&Alarm LED indicators will operate normally.

OFF

Press Start button of the PDU (which is connected to the inverter) for more than 5s, the LED indicator on the front panel will flash, and then release the button, the master pack will shut down after all the slave packs shut down (Sleep Mode).

Tip: If the system does not work, keep the internal DC switch on the battery cluster closed.

2.3.3 Indicator Definition



flash 1 - 0.25s on/3.75s off

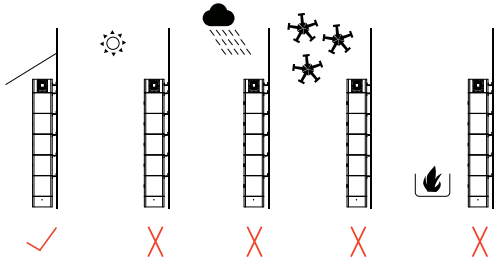
flash 2 - 0.5s on/ 0.5s off

flash 3 - 0.5s on/ 1.5s off

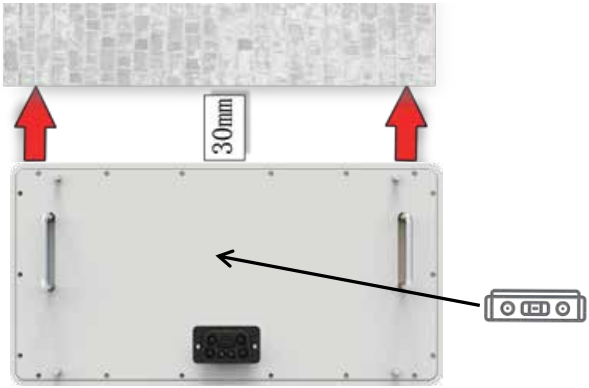
LED Indicators Definitions

Status	Normal/Alarm/ Protection	ALM	Battery Level Indicator					Instruction
Shut down	Sleep	●	●	●	●	●	●	
		off	off	off	off	off	off	All off
Standby	Normal	off	According to the battery level					Standby state
	Alarm	flash3						Module of low voltage
Charging	Normal	off	According to the battery level					The highest capacity LED indicator flashes(flash 2), others lighting
	Alarm	flash3						
	Protection	off	On normally	on normally	on normally	on normally	on normally	Turn to standby status when charger off
	Temperature, over current, fail-safe protection	on normally	off	off	off	off	off	Stop charging
Discharging	Normal	off	According to the battery level					
	Alarm	flash3						
	Protection	off	off	off	off	off	off	Stop discharging
	Protection	on normally	off	off	off	off	off	Stop discharging
Failure		on normally	off	off	off	off	off	Stop charging and discharging

2.4 Installation

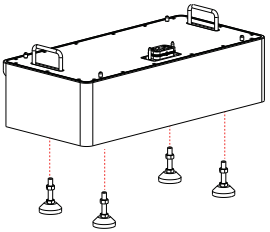


Step 1
Place the base against the wall, the distance between the base and the wall is 30mm as followed.

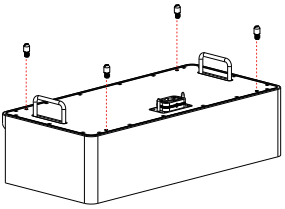


NOTE!
Levelness of the base is less than 2mm

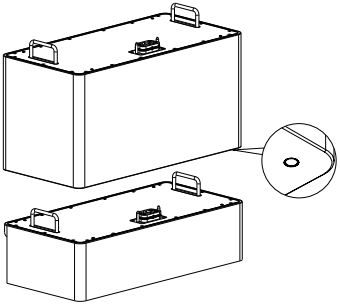
Step 2
Screw the foot cup into the base, then place the first battery pack on the base.



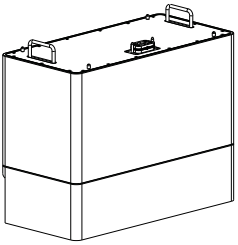
(2.1)



(2.2)

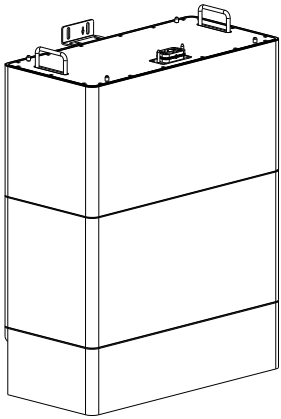


(2.3)

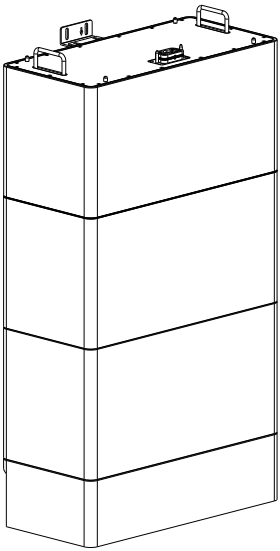


(2.4)

Step 3
As shown in the photos,Start on the first floor, each floor needs to be fixed to the wall with fixing plates.



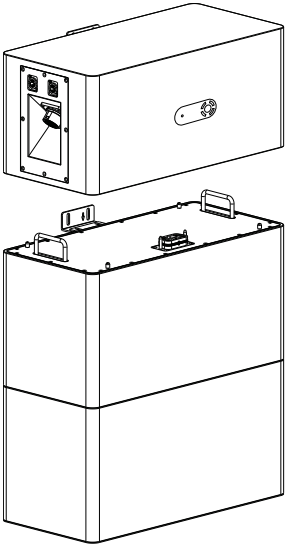
(3.1)



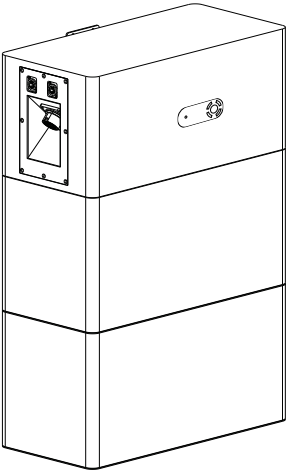
(3.2)

Step 4

Place the next battery module on top of the first battery module and secure the battery modules with the fixing plate. Repeat this step until all battery modules have been installed. Place the PDU on top of the last module and secure it using the L-shape wall hanging bracket.

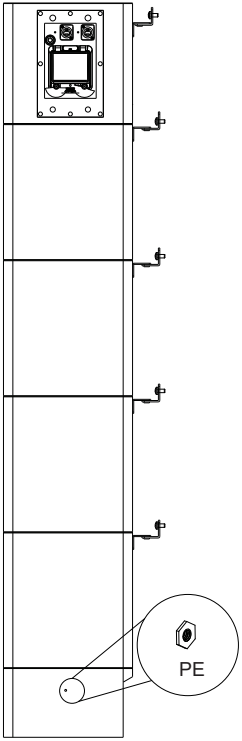


(4.1)



(4.2)

Step 5
Fix the L-shaped wall hanging bracket on the wall as shown in the picture.



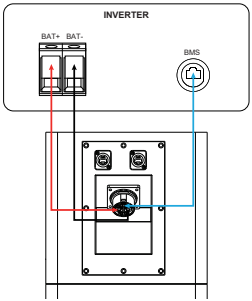
Step 6
Plug the power and data cables into the linker until you hear a “click” sound. Make sure the metal clip on the plug is facing up.



Step 7
Remove cover on the side of the high pressure case, lift the battery switch protection cover, turn the lever up to open the circuit breaker, then press the switch button, and the system is up and running.

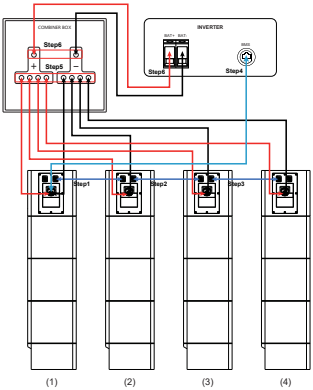


Single cluster connection method:
Connect the power through P+ and P-
Connect the first PDU Link Com Terminal to the inverter BMS port for communication beween inverter and battery.



Multi-clusters connection method:
1. Connect the first Link Com Terminal to the inverter BMS port for communication beween inverter and battery.

2. Then the P+ and P- ports of the connected single cluster are combined for output through the combiner box.



English
Română

3 Product Information

After all the cable (power and communication) connections are completed, please ensure the following:

- Ensure the DC switch on the inverter is OFF.
- Ensure the AC switch that is connected to the grid and EPS output (if used) of the inverter is OFF.
- Ensure the DC switch on the PDU is OFF

For commissioning we recommend the following steps:

- Turn the DC switch on the PDU ON.
- Refer to section 3.3.2 Start for turning on the battery.
- Wait until the PDU LED´s on.
- Wait until the inverter LED´s on.
- Turn on the DC switch on the inverter.
- Set up the battery and the inverter on the App.
- Turn on the AC switch that is connected to the grid and EPS output of the inverter.

4 Maintenance

- Recharge Requirements During Normal Storage

Battery should be stored in an environment with temperature range between -10°C ~ +45°C and maintained regularly according to following table with 0.5C(25A) current till 100% Battery Charge after long storage time.

Storage Environment Temperature	Relative Humidity of Storage Environment	Storage Time	Battery charge
Below - 10°C	/	Prohibit	/
- 10 ~ 25°C	5% ~ 70%	≤ 12 months	30% ≤ battery charge 60% ≤
25 ~ 35°C	5% ~ 70%	≤ 6 months	30% ≤ battery charge 60% ≤
35 ~ 45°C	5% ~ 70%	≤ 3 months	30% ≤ battery charge 60% ≤
Above 45°C	/	Prohibit	/

• Recharge Requirements When Over Discharged

Over discharged (90%DOD) battery should be recharged according to following table, otherwise over discharged battery will be damaged.

Storage Environment Temperature	Storage Time	Note
- 10 ~ 25°C	≤ 15 days	Battery Pack disconnected to inverter
25 ~ 35°C	≤ 7 days	
35 ~ 55°C	≤ 12 days	Battery Pack connected to inverter



Disposal of Old Electrical & Electronic Equipment

(Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste.

Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment.

By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.

The recycling of materials will help to conserve natural resources.

Prefata

Cititi acest manual in totalitate inainte de a utiliza produsul.

Acest manual prezinta instalarea, conectarea electrica, operarea, punerea in functiune, mentenanta si depanarea modulelor de baterie. Cititi acest manual in totalitate inainte de a-l instala si utiliza cabinetul de baterii modular si pastrati-l pentru viitoare. Referinte.

Model caruia se aplica

Powerhill HV5K-50-C - PDU
Powerhill HV5K-50-C - Battery Module

Personal caruia ii se aplica

Acest manual este dedicat exclusiv personalului autorizat de instalatii fotovoltaice si tehnicieni in instalatii electrice.

NOTA!

Acest manual poate fi modificat fara avertisment in prealabil.

Continutul cutiei

Modul de baterie

No.	Denumirea piesei	Used for	Utilizat pentru
1	Baterie	Baterie	1
2	Placa de fixare	Suport de perete	1
3	Suport de perete	Suport de perete	1
4	Surub hexagonal Phillips cu trei saibe	Pentru fixarea suportului	4
5	Pin de pozitionare	Utilizat pentru poizitionarea corecta a bateriilor	4
6	Diblu din otel inoxidabil 304	Pentru fixarea suportul de perete	2
7	Desicant rezistent la umiditate	Protectie impotriva umezelii	2

PDU

Nr.	Articol	Utilizat pnetru	Cantitate
1	PDU	Instalarea deasupra primei baterii	1
2	Picior	Pentru elementul de la baza sistemului	1
3	Baza	A se instala La baza sistemului de baterii	4
4	Suport de perete	Suport de perete	2
5	Suport	Pentru fixarea suportul de perete	4
6	Surub hexagonal Phillips cu trei saibe	Pentru fixarea placii L	1
7	Pin de pozitionare	Utilizat pentru poizitionarea corecta a bateriilor	1
8	Diblu din otel inoxidabil 304	Pentru fixarea suportul de perete	4
9	Linie electrica cu cablu de retea	Pentru conectarea bateriei la invertor	1
10	Cablu galben-verde	Cablu impamantare	1
11	Cablu comunicatie	Cablu comunicatie	1
12	Desicant rezistent la umiditate	Protectie impotriva umezelii	2
13	Capac impermeabil		2
14	Conectori RJ45 impermeabili	Utilizat pentru a proteja conexiunea 2	2
15	Surub pentru cablul de impamantare		1
16	Suruburi pentru capacul impermeabil		8

1 Informatii de siguranta

1.1 Conditii de siguranta generala

Va rugam sa cititi cu atentie masurile de siguranta ale manualului si sa respectati toate instructiunile de pe echipament si din acest document.

Anunturile „PERICOL", „AVERTISMENT" si „NOTA" din acest document nu acopera toate conditiile de siguranta. Sunt doar suplimentari.

Pentru siguranta utilizatorului si utilitatea acestui manual, o lista de simboluri sunt descrise pentru a alerta personalul de situatiile periculoase. Trebuie intelese si respectate informatiile subliniate pentru a evita vatamarea corporala si pagube materiale. Simbolurile de siguranta sunt explicate mai jos.

	PERICOL Indica o situatie periculoasa, care daca nu este tratata cu maxima precautie va rezulta in vatamari grave chiar moartea
	AVERTISMENT Indica o situatie periculoasa care daca nu este evitata va rezulta in deteriorarea produsul sau pierderea garantiei.
NOTA!	NOTA Indica o situatie comuna, dar care daca nu este evitata va duce la functionarea proasta a bateriei.

Respectati reglementarile locale atunci cand instalati, utilizati sau intretineti echipamentul. Instructiunile de siguranta din acest document sunt doar suplimentari la reglementarile locale.

1.2 Siguranta personalului

Cerinte

Personalul care intentioneaza sa instaleze sau sa intretina echipamentul trebuie sa fie instruit in prealabil, sa inteleaga toate masurile de siguranta necesare si sa poata efectua corect toate operatiunile.
Doar personal instruit are permisiunea sa instaleze, sa opereze si sa intretina echipamentul.

PERICOL

- Nu asezati bateria intr-o zona usor accesibila pentru copii sau animale de companie.
- Nu atingeti bateria sub tensiune, temperatura carcasei bateriei poate creste in timpul functionarii.
- Nu atingeti bornele bateriei sub tensiune.
- Nu va sprijiniti si nu va asezati pe baterie.

1.3 Siguranta electrica

Simbolurile de pe modul

Exista cateva simboluri electrice pe modul legate de siguranta electrica. Va rugam sa va asigurati ca le-ati inteles pe deplin inainte de instalare.

	Pericol de electrocutare	Echipamentul este sub tensiune atunci cand este pornit. Doar personal calificat poate opera acest echipament.
	Impamantare	Impamantare
	CC pozitiv si negativ	Identificati terminalul +/- pentru curentul continuu CC.
	Insemanrea CE	Acest produs este agreat de certificarea CE.
	Eticheta WEEE	Acest produs nu poate fi aruncat ca gunoi menajer
	Reciclare	Bateria poate fi reciclata

English

Română

⚠ PERICOL

- Inainte de instalare, asigurati-va ca echipamentul este intact. In caz contrar, poate genera socuri electrice sau incendii.
- Nu conectati sau deconectati cablurile de alimentare cand bateria este pornita. Se pot genera arcuri electrice si scantei, incendiu sau vatamare corporala.
- Inainte de a conecta un cablu de alimentare, verificati conectorii +/- sa fie corect conectati.
- Nu conectati bateria cu baterii diferite in paralel.
- Nu conectati bateria direct la curent alternativ (CA)
- Nu conectati bateria direct la cablajul fotovoltaic.
- Nu conectati bateriile in serie.
- Nu conectati bateria la invertorul defect.
- Nu creati scurtcircuite cu conexiune externa.
- Asigurati-va ca intrerupeti alimentarea de la retea si opriti bateria inainte de mentenanta.
- Asigurati-va ca cablul de impamantare este conectat corect inainte de utilizare.

⚠ AVERTISMENT

- Incarcati bateria la fiecare sase luni.
- Reincarcati bateria in 10 zile dupa descarcarea completa a bateriei.
- Asigurati-va ca amplasarea cablului bateriei este corect.
- Cand bateria este instalata sau reparata, asigurati-va ca bateria este oprita si izolata. Folositi un multimetru pentru a verifica daca nu exista tensiune in bornele pozitive si negative.

NOTA!

- Va rugam sa utilizati instrumente izolate dedicate pentru instalare si mentenanta.
- Va rugam sa va asigurati ca toate bateriile sunt oprite atunci cand adaugati module de baterii aditionale.
- Va rugam sa verificati secventa de lumini atunci cand bateria este pornita.
- Asigurati-va ca conexiunea de comunicare dintre baterie si invertor este corect facuta.
- Va rugam sa verificati alarma invertorului sau citirea nivelului bateriei daca BMS comunica cu invertorul.

1.4 Mediu de siguranta

AVERTISMENT

- Asigurati-va ca echipamentul este instalat intr-un loc uscat si bine ventilat.
- Locul de instalare trebuie sa fie ferit de lumina directa a soarelui si de ploaie.
- Locul de instalare trebuie sa fie departe de sursele de foc.
- Locul de instalare trebuie sa fie departe de sursele de apa precum robinete, conducte de canalizare si sprinklere pentru a preveni infiltrarea apei.
- Suportul trebuie sa fie solid si orizontal.
- Nu expuneti echipamentul la gaze inflamabile, explozive sau fum.
- Nu efectuati nicio operatiune asupra echipamentului in conditii precare.
- Functionarea si durata de viata a bateriei depind de temperatura. Utilizati bateria la o temperatura apropiata de temperatura ambianta. Temperatura de functionare recomandata este de la 0°C la 30°C.

1.5 Siguranta transportului

AVERTISMENT

- Produsele au obtinut certificarea UN38.3.
- Produsele dispun de documente MSDS
- Produsele fac parte din clasa 9 marfuri periculoase.
- Va rugam sa protejati cutia de ambalare de ploi, ninsori sau caderi in apa, cadere de la inaltime sau impact mecanic, plasarea in pozitii diferite de cea indicata pe cutie.

2 Informatii produs

2.1 Descrierea bateriei

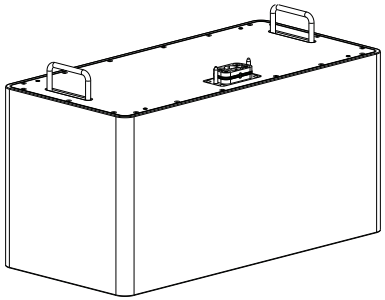
Powerhill HV5K-50-C este un sistem de stocare a energiei cu baterii de inalta tensiune, care consta din celule de baterie LiFePO4 de lunga durata si BMS integrat. Poate stoca si furniza energie electrica in functie de cerintele controlerului invertorului. Este utilizata in principal pentru sistemul fotovoltaic din medii rezidentiale.

Caracteristici

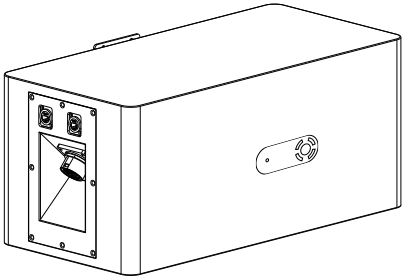
- Celula prismatica LiFePO4.
- 6000 de cicluri @ 0.5C si 25 °C.
- BMS protector si activ permite o fiabilitate si un control mai mare.
- Scalabil pana la 5 bucati.
- Scalabil pana la 4 sisteme cu 20 de module de baterii la 102,4 KWh
- Clasa IP 65
- Conectori incorporati in design
- Reciclabil complet la sfarsitul duratei de viata
- Compact

2.2 Informatii despre sistem

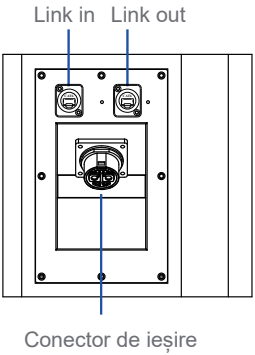
2.2.1 Modul baterie

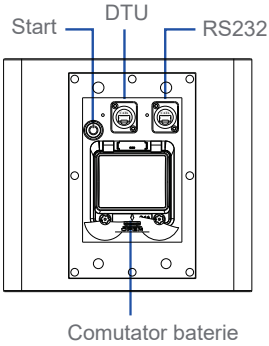


2.2.2 PDU

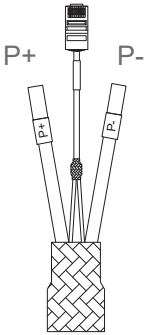


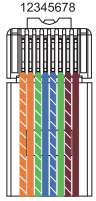
2.3 Definitii porturi
2.3.1 Zona de conexiuni





Communication



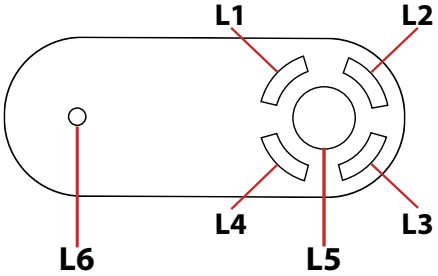


Pini	Definitii
1	485B
2	485A
3	NC
4	CANH
5	CANL
6	GND
7	NC
8	NC

2.3.2 PORNIRE / OPRIRE

PORNIRE

Pentru mai multe module de baterii in serie, apasati lung (mai mult de 5 secunde) butonul Start al PDU (care este conectata la invertor), indicatorul LED Normal de pe panoul frontal va clipi. L1 pana la L4 afiseaza nivelul bateriei, L5/L6 afiseaza starea bateriei. PDU care contine BMS va codifica automat si va atribui un ID fiecarui modul de baterie, iar bateria va functiona normal.



NOTA!

In cazul utilizarii mai multor baterii conectate in paralel, doar indicatorul LED de stare a incarcarii de pe bateria principala va clipi pentru a arata nivelul de incarcare (Nivelul bateriei) al intregului sistem. Indicatorii LED de stare a incarcarii de pe bateriile secundare vor fi opriti, in timp ce indicatorii LED pentru modul Normal si Alarma vor functiona normal pe toate bateriile.

OPRIRE

Apasati butonul Start al PDU (care este conectata la invertor) timp de mai mult de 5 secunde, indicatorul LED de pe panoul frontal va clipi, apoi eliberati butonul, pachetul principal se va opri dupa ce toate pachetele secundare se vor opri (modul de repaus).

Sfat: daca sistemul nu functioneaza, mentineti comutatorul DC intern al grupului de baterii inchis.

2.3.3 Definitii indicatoare



clipeste de 1x - 0.25s pornit/3.75s oprit

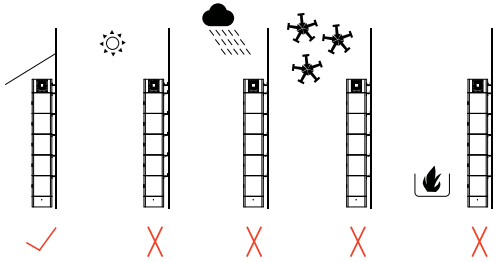
clipeste de 2x - 0.5s pornit/ 0.5s oprit

clipeste de 3x - 0.5s pornit/ 1.5s oprit

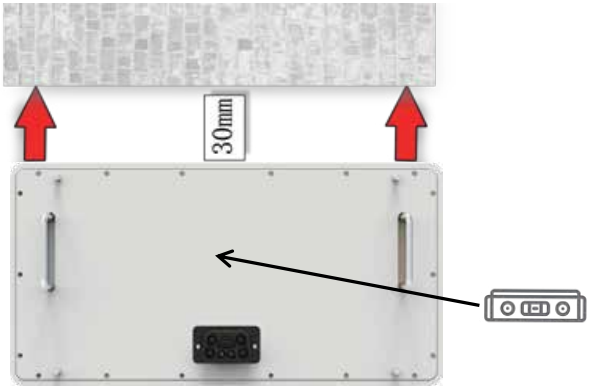
Definitii indicatoare LED

Stare	Normal/Alarmă/ Protecție	ALM	Nivel Baterie (LED indicator alimentare)					Instructiuni
Inchidere	Repaus	●	●	●	●	●	●	
			oprit	oprit	oprit	oprit	oprit	Toate oprite
Standby	Normal	oprit	In functie de nivelul bateriei					Stare standby
	Alarma	Clipeste 3x						Modul de joasă tensiune
Incarcare	Normal	oprit	In functie de nivelul bateriei					LED putere maxima Intermitent 2
	Alarma	Clipeste 3x						
	Protectie	oprit	Aprinde	Aprinde	Aprinde	Aprinde	Aprinde	Dacă nu există alimentare de la retea, indicatorul este în stare standby
	Protectie la temperatura, supracurent, defectiuni	Aprinde	oprit	oprit	oprit	oprit	oprit	Opriți încărcarea
Descarcare	Normal	oprit	In functie de nivelul bateriei					
	Alarma	Clipeste 3x						
	Protectie	oprit	oprit	oprit	oprit	oprit	oprit	Opriți încărcarea
	Protectie	Aprinde	oprit	oprit	oprit	oprit	oprit	Opriți încărcarea
Vina		Aprinde	oprit	oprit	oprit	oprit	oprit	Opriți încărcarea si descarcarea

2.4 Instalare

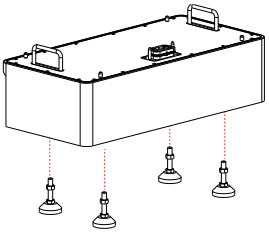


Pasul 1
Asezati baza pe perete, distanta dintre baza si perete fiind de 30 mm, dupa cum se arata in imagine.

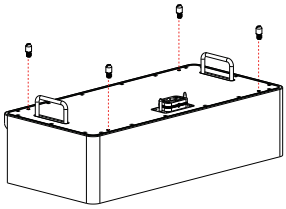


NOTA!
Abaterea de la planitatea bazei este mai mica de 2 mm.

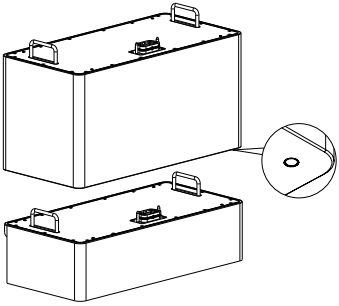
Pasul 2
Insurubati picioarele in baza, apoi asezati primul pachet de baterii pe baza.



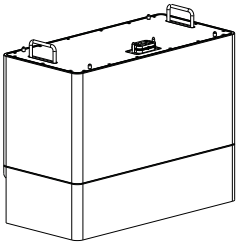
(2.1)



(2.2)

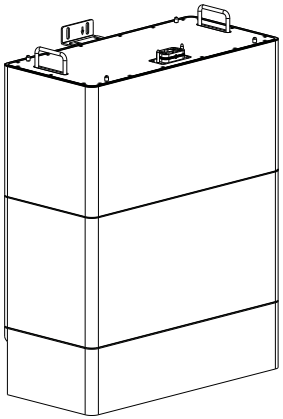


(2.3)

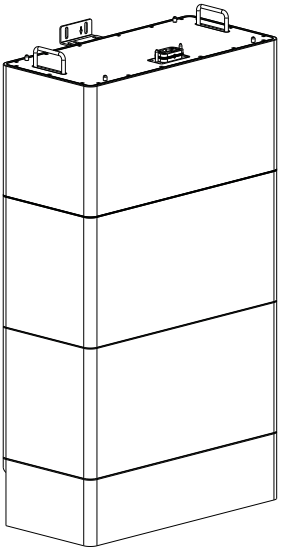


(2.4)

Pasul 3
Asa cum se arata in fotografii, incepeti de la primul etaj, fiecare etaj trebuie fixat pe perete cu placi de fixare.

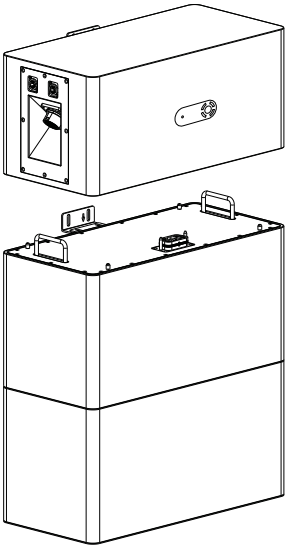


(3.1)

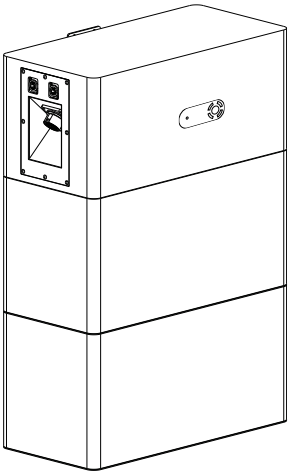


(3.2)

Pasul 4
Asezati urmatorul modul de baterie deasupra primului modul de baterie si fixati modulele de baterie cu placa de fixare. Repetati acest pas pana cand toate modulele de baterie au fost instalate. Asezati PDU deasupra ultimului modul si fixati-o folosind suportul de perete in forma de L.

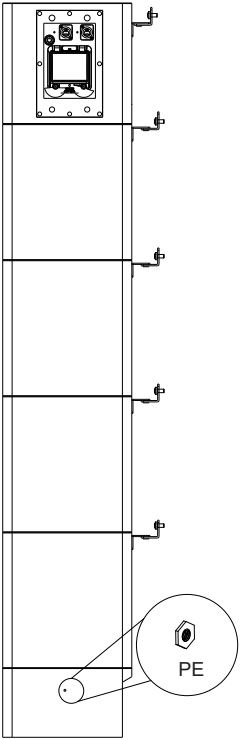


(4.1)



(4.2)

Pasul 5
Fixati suportul de perete in forma de L pe perete, asa cum se arata in imagine.



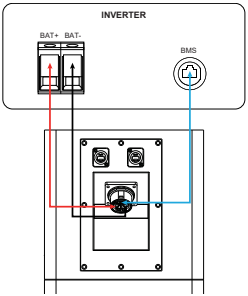
Pasul 6
Conectati cablurile de alimentare si de date la dispozitivul de conectare pana cand auziti un sunet de „clic”. Asigurati-va ca clema metalica de pe mufa este orientata in sus.



Pasul 7
Scoateti capacul magnetic al trapei de pe partea laterala a carcasei de inalta presiune, ridicati capacul de protectie al comutatorului bateriei, rotiti maneta in sus pentru a deschide intrerupatorul de circuit, apoi apasati butonul comutatorului, iar sistemul este gata de functionare.

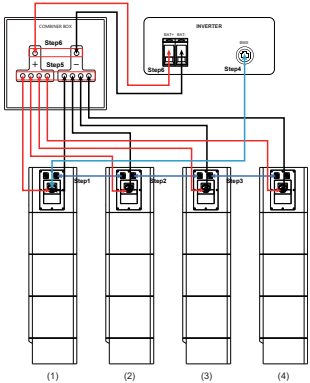


Metoda de conectare cu un singur sistem:
Conectati alimentarea prin P+ si P-
Conectati primul terminal Link Com al PDU la portul BMS al invertorului pentru comunicarea intre invertor si baterie.



Metoda de conectare pentru mai multe sisteme in paralel:
1. Conectati primul terminal Link Com al PDU la portul BMS al invertorului pentru comunicarea intre invertor si baterie.

2. Apoi, porturile P+ si P- ale clusterului unic conectat sunt combinate pentru iesire prin combiner box.



3 Informatii despre produs

Dupa ce toate conexiunile de cabluri (de alimentare si de comunicatie) sunt finalizate, va rugam sa va asigurati de urmatoarele:
• Asigurati-va ca intrerupatorul DC de pe invertor este OPRIT.
• Asigurati-va ca intrerupatorul AC, care este conectat la retea si la iesirea EPS (daca este utilizata) a invertorului, este OPRIT.
• Asigurati-va ca intrerupatorul DC de pe cutia de inalta tensiune (PDU) este OPRIT.

Pentru punerea in functiune, se recomanda urmatorii pasi:
• Porniti intrerupatorul DC de pe cutia de inalta tensiune (PDU).
• Consultati sectiunea 3.3.2 Pornire pentru activarea bateriei.
• Asteptati pana cand LED-urile de pe cutia PDU se aprind.
• Asteptati pana cand LED-urile de pe invertor se aprind.
• Porniti intrerupatorul DC de pe invertor.
• Configurati bateria si invertorul in aplicatie.
• Porniti intrerupatorul AC, care este conectat la retea si la iesirea EPS a invertorului.

4 Mentenanta

• Cerinte de reincarcare in timpul depozitarii normale
Bateria trebuie depozitata intr-un mediu cu o temperatura cuprinsa intre -10°C si +45°C si intretinuta periodic conform tabelului de mai jos, prin incarcare cu un curent de 0,5C (25A) pana la 100% nivel de incarcare, dupa perioade lungi de depozitare.

Mediul de depozitare Temperatura	Umiditatea relativa a mediului de depozitare	Timp de depozitare	Nivel de incarcare al bateriei
Sub - 10°C	/	Interzis	/
- 10 ~ 25°C	5% ~ 70%	≤ 12 luni	30% ≤ Incarcarea bateriei 60% ≤
25 ~ 35°C	5% ~ 70%	≤ 6 luni	30% ≤ Incarcarea bateriei 60% ≤
35 ~ 45°C	5% ~ 70%	≤ 3 luni	30% ≤ Incarcarea bateriei 60% ≤
Peste 45°C	/	Interzis	/

• Cerinte de reincarcare dupa descarcare excesiva

Bateria descarcata excesiv (90% DOD) trebuie reincarcata conform tabelului de mai jos, altfel bateria descarcata excesiv se va deteriora.

Mediul de depozitare Temperatura	Timp de depozitare	Nota
- 10 ~ 25°C	≤ 15 days	Pachetul de baterii deconectat de la invertor
25 ~ 35°C	≤ 7 days	
35 ~ 55°C	≤ 12 days	Pachetul de baterii conectat la invertor



Dezafectarea echipamentelor electrice si electronice vechi

(Se aplica pentru ţarile membre ale Uniunii Europene si pentru alte tari europene cu sisteme de colectare separata)

Acest simbol aplicat pe produs sau pe ambalajul acestuia indica faptul ca acest produs nu trebuie tratat ca pe un deseu menajer.

El trebuie predat punctelor de reciclare a echipamentelor electrice si electronice.

Asigurandu-va ca acest produs este dezafectat in mod corect, veţi ajuta la prevenirea posibilelor consecinte negative asupra mediului si a sanatatii umane, care ar fi putut surveni daca produsul ar fi fost dezafectat in mod necorespunzator.

Reciclarea materialelor va ajuta la conservarea resurselor naturale.

Memo

Memo

Memo

