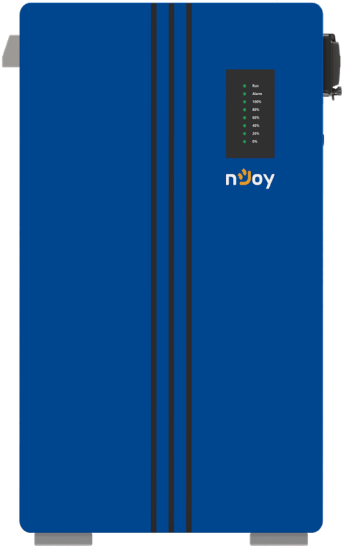
passion. create. smile.

Bastion F15K

User Manual

ESWMF15K5120BDA01B

Manual de utilizare



335.41.25.2

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

Contents / Cuprins

ENGLISH

1. Safety Information 2
1.1 General Safety 2
1.2 Personal Safety 2
1.3 Electrical & Environment Safety 3
1.4 Transportation Safety 5
2. Product Information 5
2.1 Battery Overview 5
2.2 Appearance 6
2.3 Dimensions 7
2.4 Capacity Options 8
2.5 Display 8
3. Installation 10
3.1 Unpacking and Inspection 10
3.2 Tools and Materials 11
3.3 Installation 12
3.4 Multiple Batteries Parallel Connection 14
4. Operation 15
4.1 Turn on / Turn off 15
4.2 Engineering debuging 16

ROMANA

1. Informatii de siguranta 20
1.1 Siguranta Generala 20
1.2 Siguranta Personala 20
1.3 Siguranta Electrica si de Mediu 21
1.4 Siguranta Transportului 23
2. Informatii despre Produs 23
2.1 Prezentare Generala a bateriei 23
2.2 Aspectul Produsului 24
2.3 Dimensiuni 25
2.4 Optiuni de Capacitate 26
2.5 Afisaj 26
3. Instalare 28
3.1 Continut Produs 28
3.2 Instrumente si Echipament de Siguranta 29
3.3 Instalare 30
3.4 Conectare in paralel (in cazul instalarii mai multor baterii) 32
4. Operare baterie 33
4.1 Pornire / Oprire baterie 33
4.2 Depanare produs 34

Forward

Please read through the manual carefully before installing and using the energy storage module, and keep the manual well for future reference.

Applicable Model
Bastion F15K

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.

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 “NOTE” statements in this document do not cover all the safety instructions. They are only supplements to the safety instructions.

To ensure human safety and effectively use this manual, use the appropriate symbol to highlight critical information. You must fully 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 fire happens.
	WARNING indicates a hazardous situation which, if not avoided will result in property loss or void warranty
NOTE!	NOTE indicates a normal situation which, if not avoided will result system doesn’t work.

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 responsible for installing or maintaining battery equipment must be trained, familiar with all necessary safety precautions, and capable of performing all operations correctly.
Only qualified professionals or trained personnel are allowed to install, operate, and maintain the equipment.

⚠ DANGER

- Do not place the battery where children or pets can reach it.
- Do not touch the energized battery, as the enclosure might be hot.
- Do not touch the energized battery terminals.
- Do not stand on, lean on, or sit on the battery.

1.3 Electrical & Environment Safety

Symbols on battery

There are some symbols on the battery related to electrical safety. Please make sure you have fully understood them before installation.

	Status Indicator	Status indicator shows the battery charge level from 0 to 100%
RUN	Working Indicator	Battery working indicator on front panel is for showing battery working status.
ALARM	Alarm Indicator	The red alarm light signals an alarm or fault condition.
	Electrical Danger	Voltage exists when the battery is powered on. Only qualified engineers are allowed to operate.
	Earth Connector	Earth connection.
+ −	DC + and - Connectors	Identify positive and negative connectors of DC power source.
CE	CE mark	The product meets CE certification.
	WEEE tag	Can't leave battery as garbage disposal.
	Recycle	Battery can be recycled

English

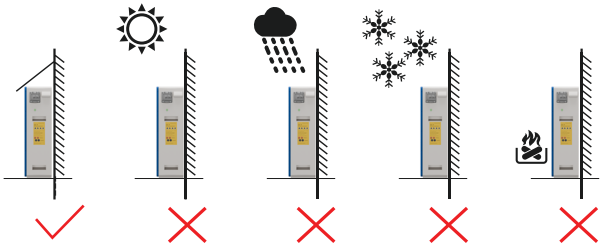
Română

⚠ 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 could result in electric arcs, sparks, fire, or injury.
- Before connecting a power cable, check the positive or negative connectors are correct.
- Do not parallel connect different batteries models.
- Do not connect battery with AC directly.
- Do not connect battery with PV wiring directly.
- Do not connect batteries in series.
- Do not connect battery to faulty or unqualified inverter or charger.
- Avoid causing short circuits through the battery's external connections
- Make sure cut-off grid and power-off battery before maintenance.
- Make sure earth cable connect correctly before operation

⚠ WARNING

- Use multimeter to make sure there is no voltage between positive and negative terminals after power-off battery when install or maintenance.
- 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 water sources such as taps, sewer pipes, and sprinklers to prevent water seepage.
- The bracket must be securely and horizontally installed.
- 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. The recommended operating temperature can be find in the datasheet.



1.4 Transportation Safety

⚠ WARNING

- The products passed certification UN38.3
- The products have MSDS.
- The products belong to class 9 dangerous goods.
- Please protect the packing case from the below situations.

1. Being dampened by rains, snows, or falling into water
2. Falling or mechanical impact
3. Being upside-down or tilted

2 Product Information

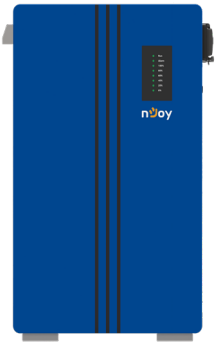
2.1 Battery Overview

The Bastion F15K battery is a lithium battery pack which consists of long life-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 residential energy storage system.

Features

- LiFePO4 prismatic cell.
- 6000 cycles at 80% DOD / 25°C / 0.5C condition.
- Maximum 0.7C charge and discharge capability.
- No dip switches, addressing automatic self-adaption.
- Scalable up to 15 packs can be connected in parallel.
- Protective and active BMS allows greater reliability and control.
- IP65 grade.
- Connectors built-in design.
- Fully recyclable at the end of life.
- Compact.
- Integrated Heating included.
- Fire suppression module built-in.
- Pressure relief valve.
- 10-year warranty.

2.2 Appearance



Front View

- Battery level indicators
- Working indicator
- Alarm indicator

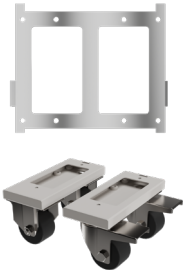


Side View

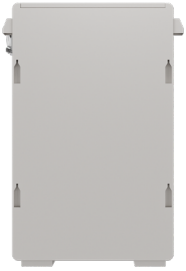
- Start button
- DC main breaker



Top View
(Removed Operation Panel)



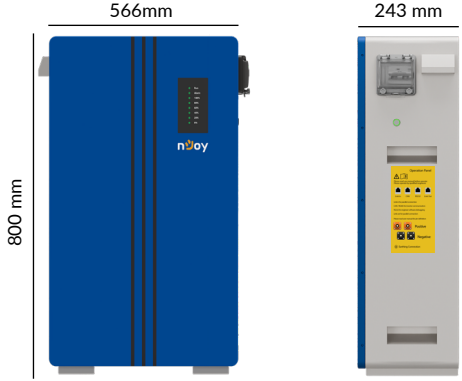
Accessories



Back View

Top View (Removed Operation Panel)	Accessories
• Communication ports • Power connectors • Grounding terminal • Pressure relief valve	• Wheel Base • Wall mounting bracket (Those can be purchased separately)

2.3 Dimensions



2.4 Capacity Options

The battery can be connected in parallel to increase its power capacity (kW) and energy capacity (kWh).

⚠ WARNING

- The maximum power(kW) is limited by main cables from master battery to inverter when more batteries are parallel connected.
- Maximum 15 battery packs can be installed in parallel to reach up to 215.04 kWh

NOTE!

Ensure a minimum clearance of 15 cm between the battery and all surrounding objects

2.5 Display

Status indicator



LED Indicators Instructions

		RUN	ALM	Battery Level Indicator					
Status		L8	L7	L6	L5	L4	L3	L2	L1
									
Shut down		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Standby		Flash 1	OFF	According to the battery level					
Charging	Normal	Light	OFF	According to the battery level					
	Full Charged*	Light	OFF	Light	Light	Light	Light	Light	Light
	Protection**	OFF	Light	OFF	OFF	OFF	OFF	OFF	OFF
Discharge	Normal	Flash 3	OFF	According to the battery level					
	UVP***	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	Protection***	OFF	Light	OFF	OFF	OFF	OFF	OFF	OFF
Fault****		OFF	Light	OFF	OFF	OFF	OFF	OFF	OFF

*Turn to standby, **Stop charging, ***Stop discharging, **** Stop charging & discharging

Charging Battery Level Indicators Instructions

Status		Charging							
Battery Level Indicator		L8	L7	L6	L5	L4	L3	L2	L1
									
Battery Level	0~17%	Light	OFF	OFF	OFF	OFF	OFF	OFF	Flash 2
	18~33%			OFF	OFF	OFF	OFF	Flash 2	Light
	34~50%			OFF	OFF	OFF	Flash 2	Light	Light
	51~66%			OFF	OFF	Flash 2	Light	Light	Light
	67~83%			OFF	Flash 2	Light	Light	Light	Light
	84~100%			Flash 2	Light	Light	Light	Light	Light
	Fully Charged			Light	Light	Light	Light	Light	Light

Discharging Battery Level Indicators Instructions

Status		Discharge							
Status Indicator (Battery Level)		L8	L7	L6	L5	L4	L3	L2	L1
Battery Level	0~17%	Flash 3	OFF	OFF	OFF	OFF	OFF	OFF	Light
	18~33%			OFF	OFF	OFF	OFF	Light	Light
	34~50%			OFF	OFF	OFF	Light	Light	Light
	51~66%			OFF	OFF	Light	Light	Light	Light
	67~83%			OFF	Light	Light	Light	Light	Light
	84~100%			Light	Light	Light	Light	Light	Light

NOTE!

Flash 1 - 0.25s light / 3.75s off
Flash 2 - 0.5s light / 0.5s off
Flash 3 - 0.5s light / 1.5s off

English
Română

3 Installation

3.1 Unpacking and Inspection

Please inspect all items when unpacking and ensure all of them are free of damage.

No.	Item	Description	QTY
1	Battery Pack	14.336 KWh battery pack	**1 pc**
2	Quick guide	Information about the product and the installation	**1 pc**
3	Power cables	Power cable red - L type (battery) to Pin type (invertor), length 2m Power cable black - L type (battery) to Pin type (invertor), length 2m	**1 pair**
4	Female Battery Connectors (for parallel connection)	Female Battery Conector (Orange) - 1 pc Female Battery Conector (Black) - 1 pc	**1 pair**
5	Communication Link Cable	Communication cable between master pack and inverter 2000mm - only for nJoy inverters	**1 pc**
6	Grounding cable	Mandatory for PE grounding, comes with 2 screws	**1 set**
7	Female Inverter Connectors	Female Inverter Connector (red) - 1 pc Female Inverter Connector (black) - 1 pc	**1 pair**

3.2 Tools and Safety gear

Please prepare the below needed tools, materials and safety gear before installation.

a) Tools


① Mark pen


② Screw driver


③ Wire cutter


④ RJ45 crimper


⑤ *Electric drill


⑥ Heavy duty wire cutter


⑦ M8 wrench sleeve


⑧ Hammer


⑨ Lug crimper


⑩ Network tester

b) Safety Gear


① Safety goggles


② Insulated shoes

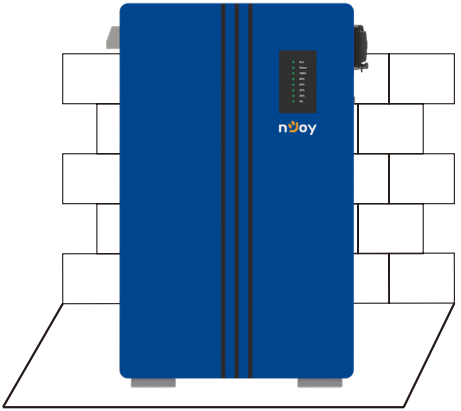


③ Insulated gloves

*Optional used for wall mounting

3.3 Installation

This battery is typically installed on the floor. For wall installation, please note that the wall mounting accessories are designed for concrete walls, and need to be purchase separately.

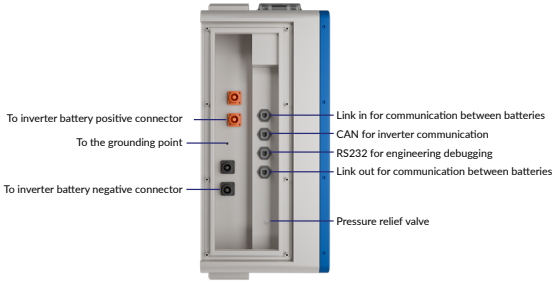


⚠ DANGER

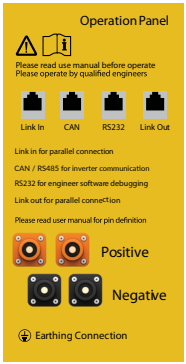
To prevent damage or injury due to the heavy battery falling, it must be carefully handled by at least two persons using its sides.

Please remove the top cover plate of the battery pack.
Connect the power cables, network cable and grounding cable in the correct ports. If your inverter's connector is not a PIN type and the battery-to-inverter cable supplied in the standard package does not fit, you can use the additionally provided connectors, found at position 7 of the accessories list in section 3.1 of this manual. In this scenario, you will need to cut off the PIN connectors from the supplied cable and attach the additionally provided connectors in their place.

For multiple batteries parallel connection, please see the section 3.4.



Power Connectors



NOTE!

- *Please use the accessory cable kit or connectors for battery power connection.*

- *If additional battery power cables are needed for installation, use cables with a 4/0 AWG gauge (≈107 mm², rated for 200 A.*

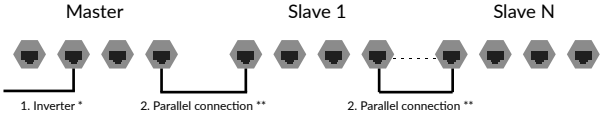
English

Română

3.4 Parallel connection (in case of multiple batteries installation)

To successfully make the parallel connection you must have the following: 1x Standard LAN Patch Cord (T568-B Straight-Through) with RJ45 head, 1x Heavy Duty Wire Cutter, 1x Lug Hydraulic Crimper, 1x Female Battery pair (they are provided in the product package); You will need to modify the power cables provided in the package and replace the inverter side connectors with female battery connectors so you can establish the parallel power connection.

Data cable connection

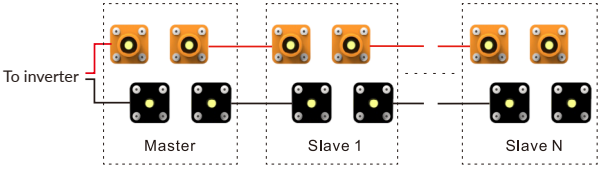


* The communication cable between the Master battery and the inverter is provided in the package (Item 5).
** The communication cable between parallel-connected batteries needs to be purchased separately.

⚠ WARNING

The communication cable included in the package is designed solely for connecting an nJoy inverter to the battery and is not suitable for parallel connection communication.

Power cable connection



4 Operation

4.1 Turn on / Turn off

Battery Start-up

1. Single Battery Pack Startup:
Turn on the DC switch and after that press and hold “POWER” button for 3 seconds. The Status Indicator, RUN, and ALARM indicators will all light up and flash 3 times. After that, the status indicator will remain on, and the RUN indicator will flash, indicating that the startup is complete.

2. Parallel Battery Scenario Start-up:
First, check if the communication connection cables are properly installed and turn on the DC switch on all batteries. Then, press and hold the “POWER” button on the master unit for 3 seconds, once the master is turned on all the slaves will be automatically activated (no need to turn them on separately). When communication is established, all LEDs on the Master and Slave units will illuminate and flash three times. Subsequently, the Master unit’s Status indicator will remain on, while the RUN indicator flashes. On the Slave unit, only the RUN indicator will flash, confirming that the Master-Slave battery pack startup is complete.

Battery Shutdown

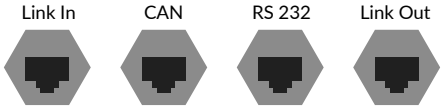
1. Single Battery Pack Shutdown:
Press and hold the “POWER” button for 3 seconds. The Status indicator, RUN, and ALARM indicators will light up one by one, and then all will turn off, indicating that the shutdown is complete.

2. Parallel Battery Pack Shutdown:
Press and hold the “POWER” button on the master unit for 3 seconds. The Status indicator, RUN, and ALARM indicators on the master unit will light up one by one, then all will turn off. The RUN indicator on the slave unit will turn off, indicating that the master-slave battery pack shutdown is complete.

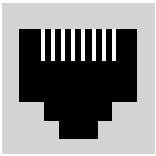
NOTE!

In case of commissioning the units after Shut-down please don’t forget to turn off the main DC switch.

4.2 Engineering debugging

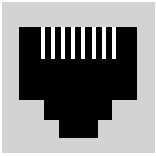


1. Link In port used for the communication cable connecting parallel-connected batteries.



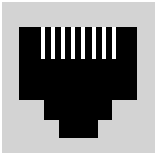
PIN	Definition	Description
Pin 1	NC	N.A
Pin 2	485A	Parallel communication connection
Pin 3	485B	
Pin 4	IN+	Transmit data and signals
Pin 5	IN-	
Pin 6	485B	Parallel communication connection
Pin 7	485A	
Pin 8	GND	

2. CAN port for inverter BMS commutation.



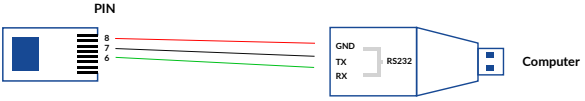
PIN	Definition	Description
Pin 1	RS485-B	External communication connection inverter
Pin 2	RS485-A	
Pin 3	NC	
Pin 4	CAN-H	External communication connection inverter
Pin 5	CAN-L	
Pin 6	GND	External communication connection inverter
Pin 7	RS485-A	
Pin 8	RS485-B	

3. RS232 port for engineering debugging.



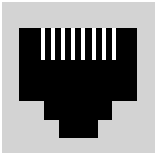
1 ~ 8

PIN	Definition	Description
Pin 1	GND	External communication
Pin 2	RS232-TX	
Pin 3	RS232-RX	
Pin 4	Empty	
Pin 5	Empty	
Pin 6	RS232-RX	External communication
Pin 7	RS232-TX	
Pin 8	GND	



RJ45 USB - RS232 Converter

4. Link Out port used for the communication cable connecting parallel-connected batteries.



1 ~ 8

PIN	Definition	Description
Pin 1	NC	N.A
Pin 2	485A	Parallel communication connection
Pin 3	485B	
Pin 4	IN+	Transmit data and signals
Pin 5	IN-	
Pin 6	485B	Parallel communication connection
Pin 7	485A	
Pin 8	GND	

NOTE!

- *Please be aware the battery BMS protocol need to be compatible with inverter.*
- *CAN communication baud rate is 500K.*
- *RS232 communication baud rate is 9600bps.*
- *Please communicate with inverter or engineer software by correct RJ45 Pin addresses.*



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.

Introducere

Va rugam sa cititi cu atentie manualul inainte de a instala si utiliza modulul de stocare a energiei si pastrati manualul pentru referinte ulterioare.

Model Aplicabil
Bastion F15K

Personal aplicabil
Acest manual de utilizare este destinat personalului care opereaza invertoare fotovoltaice (PV) si tehnicienilor electrici calificati.

NOTA!
Acest manual de utilizare este supus modificarilor fara o notificare prealabila.

1 Informatii de siguranta

1.1 Siguranta generala

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

Declaratiile „DANGER" (PERICOL), „WARNING" (AVERTISMENT) si „NOTE" „NOTA" din acest document nu acopera toate instructiunile de siguranta. Ele sunt doar suplimente la instructiunile de siguranta.

Pentru a asigura siguranta umana si a utiliza eficient acest manual, folositi simbolul corespunzator pentru a evidentia informatiile critice. Trebuie sa intelegeti pe deplin si sa respectati informatiile evidentiate pentru a evita vatamarile personale si daunele materiale. Simbolurile de siguranta relative sunt enumerate mai jos.

	PERICOL indica o situatie periculoasa care, daca nu este evitata, va duce la rani grave si la izbucnirea unui incendiu.
	AVERTISMENT indica o situatie periculoasa care, daca nu este evitata, va duce la pierderi materiale sau la anularea garantiei.
NOTA!	NOTA! indica o situatie normala care, daca nu este evitata, va duce la nefunctionarea sistemului.

Respectati legile si reglementarile locale atunci cand instalati, operati sau intretineti echipamentul. Instructiunile de siguranta din acest document sunt doar suplimente la legile si reglementarile locale.

1.2 Siguranta Personala

Cerinte Personale

Personalul responsabil pentru instalarea sau intretinerea echipamentului cu baterii trebuie sa fie instruit, familiarizat cu toate precautiile de siguranta necesare si capabil sa efectueze toate operatiunile corect.
Numai profesionisti calificati sau personal instruit sunt autorizati sa instaleze, opereze si intretina echipamentul.

⚠ PERICOL

- Nu plasati bateria intr-un loc accesibil copiilor sau animalelor de companie.
- Nu atingeti bateria energizata, deoarece carcasa poate fi fierbinte.
- Nu atingeti bornele bateriei energizate.
- Nu stati, nu va sprijiniti sau nu va asezati pe baterie.

1.3 Siguranta Electrica si de Mediu

Simboluri pe baterie

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

	Indicator de Stare	Indicatorul de stare arata nivelul de incarcare al bateriei de la 0 la 100%.
RUN	Indicator de Functionare	LED-ul verde este pentru a arata starea de functionare a bateriei.
ALARM	Indicator de Alarma	LED-ul rosu semnaleaza o alarma sau o conditie de defect.
	Pericol Electric	Exista tensiune atunci cand bateria este alimentata. Numai inginerii calificati sunt autorizati sa opereze.
	Impamantare	Conexiune la impamantare.
+ −	Conectori DC + si -	Identifica conectorii de tip pozitiv si negativ ai sursei de alimentare DC
CE	Marcaj CE	Produsul respecta certificarea CE.
	Simbol WEEE	Bateria nu poate fi aruncata la gunoi.
	Recicleaza	Bateria poate fi reciclata

English

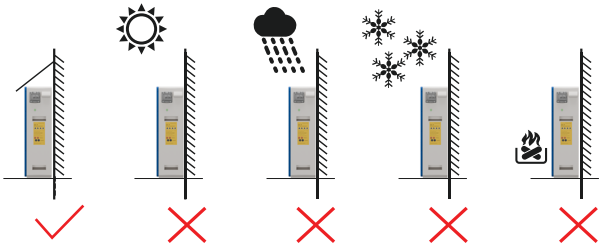
Română

⚠ PERICOL

- Inainte de instalare, asigurati-va ca echipamentul este intact. In caz contrar, pot aparea socuri electrice sau incendiu.
- Nu conectati sau deconectati cablurile de alimentare in timp ce bateria este pornita, deoarece acest lucru ar putea duce la arce electrice, scantei, incendiu sau vatamari.
- Inainte de a conecta un cablu de alimentare, verificati daca bornele pozitiv si negativ sunt corecte.
- Nu conectati in paralel modele diferite de baterii.
- Nu conectati bateria direct la curent alternativ (AC).
- Nu conectati bateria direct la cablajul fotovoltaic (PV).
- Nu conectati bateriile in serie.
- Nu conectati bateria la un invertor sau incarcator defect sau necalificat.
- Evitati scurtcircuitele prin conexiunile externe ale bateriei.
- Asigurati-va ca ati deconectat reteaua si ati oprit bateria inainte de intretinere.
- Asigurati-va ca impamantarea este conectata corect inainte de operare.

⚠ AVERTISMENT

- Folositi un multimetru pentru a va asigura ca nu exista tensiune intre bornele pozitiv si negativ dupa oprirea bateriei, la instalare sau la intretinere.
- Asigurati-va ca echipamentul este instalat intr-un mediu uscat si bine ventilat.
- Pozitia de instalare trebuie sa fie ferita de lumina directa a soarelui si de ploaie.
- Pozitia de instalare trebuie sa fie departe de surse de foc.
- Pozitia de instalare trebuie sa fie departe de surse de apa, cum ar fi robinete, tevi de canalizare si aspersoare, pentru a preveni infiltratiile de apa.
- Suportul trebuie instalat sigur si orizontal.
- Nu expuneti echipamentul la gaze sau fum inflamabile sau explozive.
- Nu efectuati nicio operatiune asupra echipamentului in astfel de medii.
- Functionarea si durata de viata a bateriei depind de temperatura de operare. Temperatura de operare recomandata poate fi gasita in fisa tehnica.



1.4 Siguranta Transportului

⚠ AVERTISMENT

- Produsele au trecut certificarea UN38.3.
- Produsele au fisa de securitate (MSDS).
- Produsele apartin clasei 9 de marfuri periculoase.
- Va rugam sa protejati ambalajul de urmatoarele situatii:

1. Umidificarea de ploi, ninsori sau caderea in apa
2. Cadere sau impact mecanic
3. Rasturnare sau inclinare

2 Informatii despre Produs

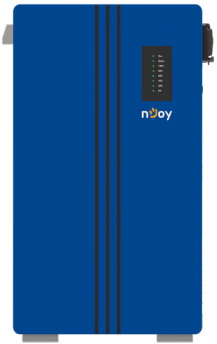
2.1 Prezentare generala a bateriei

Bateria Bastion F15K este un acumulator litiu-ion compus din celule LiFePO4 cu durata lunga de viata si un sistem functional de gestionare a bateriei (BMS). Aceasta poate stoca si elibera energie electrica in functie de cerintele controlerului invertorului. Este destinata in principal sistemelor de stocare a energiei pentru locuinte.

Caracteristici

- Baterii LiFePO4.
- 6000 de cicluri la 80% DOD 25°C / condiții de 0.5C.
- Capacitate maxima de incarcare si descarcare de 0.7C.
- Fara intrerupatoare DIP, adresare automata cu auto-adaptare.
- Extensibil pana la 15 module conectate in paralel.
- Sistem de gestionare a bateriei (BMS) protector si activ, care permite o fiabilitate si un control sporit.
- Grad de protectie IP65.
- Conectori integrati in design.
- Complet reciclabil la sfarsitul duratei de viata.
- Compact.
- Incalzire integrata inclusa.
- Modul de stingere a incendiilor incorporat.
- Supapa de descarcare a presiunii.
- Garantie de 10 ani.

2.2 Aspectul produsului



Vedere frontala

- Indicator procentaj baterie
- Indicator de functionare
- Indicator de alarma

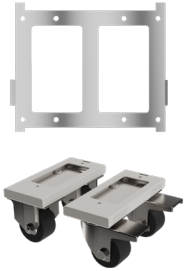


Vedere laterala

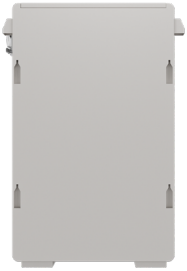
- Buton de start
- Intrerupator principal DC



Vedere de Sus
(Panou Indepartat)



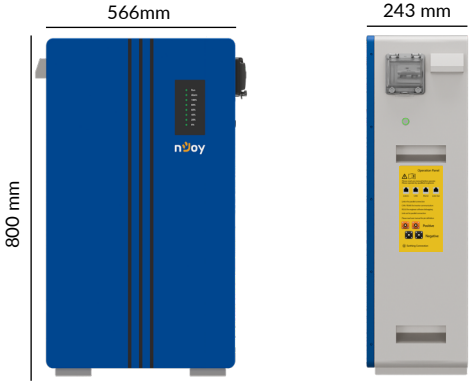
Accesorii



Vedere din spate

Vedere de Sus (Panou de protectie indepartat)	Accesorii
• Porturi de comunicare • Conectori de alimentare • Borna de impamantare • Supapa de suprapresiune	• Suport cu roti • Suport pentru fixare in perete (Acestea se pot achizitiona separat)

2.3 Dimensiuni



2.4 Optiuni de Capacitate

Bateria poate fi conectata in paralel pentru a-i creste capacitatea de putere (kW) si capacitatea energetica (kWh).

⚠ AVERTISMENT

- Puterea maxima (kW) este limitata de cablurile principale de la bateria master la invertor atunci cand sunt conectate mai multe baterii in paralel.
- Pot fi instalate maximum 15 module de baterii in paralel pentru a ajunge la o capacitate de pana la 215.04 kWh.

NOTA!

Asigurati o distanta minima de 15 cm intre baterie si toate obiectele din jur.

2.5 Display

Indicatori de stare



Instructiuni pentru Indicatorii LED

		Operare	ALM	Indicator de nivel al bateriei					
Stare		L8	L7	L6	L5	L4	L3	L2	L1
									
Oprire		Oprit	Oprit	Oprit	Oprit	Oprit	Oprit	Oprit	Oprit
Standby		Flash 1	Oprit	In functie de nivelul bateriei					
Incarcare	Normal	Pornit	Oprit	In functie de nivelul bateriei					
	Incarcat complet*	Pornit	OFF	Pornit	Pornit	Pornit	Pornit	Pornit	Pornit
	Protectie**	Oprit	Pornit	Oprit	Oprit	Oprit	Oprit	Oprit	Oprit
Descarcare	Normal	Flash 3	Oprit	In functie de nivelul bateriei					
	UVP***	Oprit	Oprit	Oprit	Oprit	Oprit	Oprit	Oprit	Oprit
	Protectie***	Oprit	Pornit	Oprit	Oprit	Oprit	Oprit	Oprit	Oprit
Eroare****		Oprit	Pornit	Oprit	Oprit	Oprit	Oprit	Oprit	Oprit

*Activeaza standby, **Stop incarcare, ***Stop descarcare, **** Stop incarcare & descarcare

Instructiuni pentru Indicatorii Nivelului de Incarcare al Bateriei

Stare		Incarcare							
Indicator de nivel al bateriei		L8	L7	L6	L5	L4	L3	L2	L1
									
Nivel Baterie	0~17%	Pornit	Oprit	Oprit	Oprit	Oprit	Oprit	Oprit	Flash 2
	18~33%			Oprit	Oprit	Oprit	Oprit	Flash 2	Pornit
	34~50%			Oprit	Oprit	Oprit	Flash 2	Pornit	Pornit
	51~66%			Oprit	Oprit	Flash 2	Pornit	Pornit	Pornit
	67~83%			Oprit	Flash 2	Pornit	Pornit	Pornit	Pornit
	84~100%			Flash 2	Pornit	Pornit	Pornit	Pornit	Pornit
	Incarcat Complet			Pornit	Pornit	Pornit	Pornit	Pornit	Pornit

Instructiuni pentru Indicatorii Nivelului de Descarcare al Bateriei

Stare		Descarcare							
Indicator Stare (Nivel Baterie)		L8	L7	L6	L5	L4	L3	L2	L1
									
Nivel Baterie	0~17%	Flash 3	Oprit	Oprit	Oprit	Oprit	Oprit	Oprit	Pornit
	18~33%			Oprit	Oprit	Oprit	Oprit	Pornit	Pornit
	34~50%			Oprit	Oprit	Oprit	Pornit	Pornit	Pornit
	51~66%			Oprit	Oprit	Pornit	Pornit	Pornit	Pornit
	67~83%			Oprit	Pornit	Pornit	Pornit	Pornit	Pornit
	84~100%			Pornit	Pornit	Pornit	Pornit	Pornit	Pornit

NOTA!

Flash 1 - 0.25s pornit / 3.75s oprit
Flash 2 - 0.5s pornitt / 0.5s oprit
Flash 3 - 0.5s pornit / 1.5s oprit

3 Instalare

3.1 Continut produs

Va rugam sa inspectati toate articolele la despachetare si sa va asigurati ca toate sunt fara defecte.

No.	Articol	Descriere	QTY
1	Modul Baterie	14.336 KWh modul baterie	**1 buc**
2	Ghid	Informatii despre Produs si Instalare	**1 buc**
3	Cablu de alimentare	Cablu de alimentare rosu - Tip L (baterie) la Tip Pin (invertor), lungime 2m Cablu de alimentare negru - Tip L (baterie) la Tip Pin (invertor), lungime 2m	**1 pereche**
4	Conectori de Baterie Tip Mama (pentru conexiune in paralel)	Conenctor de baterie tip mama (Portocaliu) - 1 buc Conector de Baterie Tip Mama (Negru) - 1 buc	**1 pereche**
5	Cablu de Comunicare	Cablu de comunicare intre invertor si baterie (master), 2000mm - doar pentru invertoarele nJoy.	**1 buc**
6	Cablu de impamantare	Obligatoriu pentru impamantarea PE, vine cu 2 suruburi.	**1 set**
7	Conectori Mama Invertor	Conectori Mama Invertor (rosu) - 1 pc Conectori Mama Invertor (negru) - 1 pc	**1 pereche**

3.2 Instrumente si Echipament de siguranta

Va rugam sa pregatiti instrumentele, materialele si echipamentul de siguranta necesare inainte de instalare.

a) Instrumente



① Marker



② Surubelnita



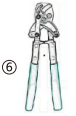
③ Cleste de taiat cabluri



④ Sertizor RJ45



⑤ *Bormasina electrica



⑥ Cleste de taiat cabluri



⑦ Cheie tubulara M8



⑧ Ciocan



⑨ Cleste de sertizat papuci



⑩ Tester Retea

b) Echipament de siguranta



① Ochelari de protectie



② Incaltaminte izolate



③ Manusi izolate

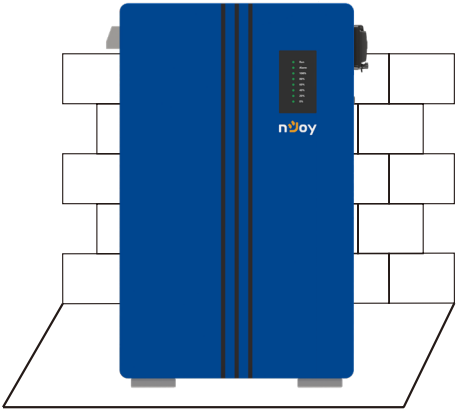
*Optional pentru fixarea in perete

English

Română

3.3 Instalare

Aceasta baterie este de obicei instalata pe podea. Pentru instalarea pe perete, va rugam sa retineti ca accesoriile pentru montarea pe perete sunt proiectate pentru pereti din beton si se cumpara separat.

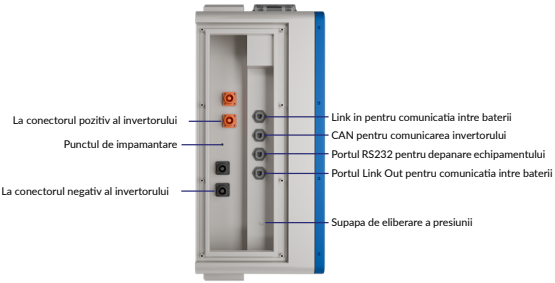


⚠ PERICOL

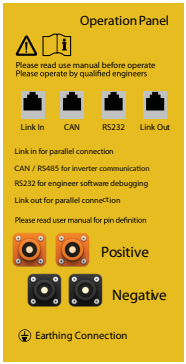
Pentru a preveni deteriorarea sau ranirea din cauza caderii bateriei grele, aceasta trebuie manevrata cu grija de cel putin doua persoane, folosind partile laterale.

Va rugam sa indepartati placa superioara de acoperire a pachetului de baterii. Conectati cablurile de alimentare, cablul de retea si cablul de impamantare in porturile corecte. Daca conectorul invertorului dumneavoastra nu este de tip PIN si cablul baterie-invertor furnizat in pachetul standard nu se potriveste, puteti utiliza conectorii suplimentari furnizati, gasiti la pozitia 7 din lista de accesorii in sectiunea 3.1 a acestui manual. In acest scenariu, va trebui sa taiati conectorii PIN de pe cablul furnizat si sa atasati conectorii suplimentari in locul lor.

Pentru conectarea in paralel a mai multor baterii, va rugam sa consultati sectiunea 3.4.



Conectori de alimentare



NOTA!

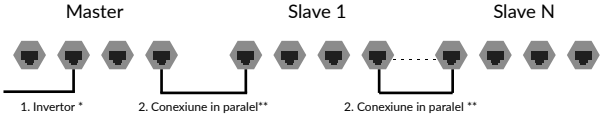
- *Va rugam sa utilizati kitul de cabluri accesorii sau conectorii pentru conectarea la alimentare a bateriei.*

- *Daca sunt necesare cabluri suplimentare de alimentare a bateriei pentru instalare, utilizati cabluri cu un diametru de 4/0 AWG (≈107 mm²), evaluate pentru 200 A.*

3.4 Conectare in paralel (in cazul instalarii mai multor baterii)

Pentru a realiza cu succes conexiunea in paralel trebuie sa aveti urmatoarele: 1x Cablu Patch LAN Standard (T568-B Straight-Through) cu cap RJ45, 1x Cleste de taiat cabluri Heavy Duty, 1x Cleste hidraulic pentru papuci, 1x Pereche de conectori de baterie tip mama (sunt furnizate in pachetul produsului); Va trebui sa modificati cablurile de alimentare furnizate in pachet si sa inlocuiti conectorii de pe partea invertorului cu conectori de baterie tip mama, astfel incat sa puteti stabili conexiunea de alimentare in paralel.

Conexiunea transmiteri de date

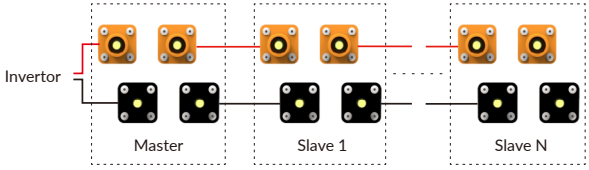


* Cablul de comunicare dintre invertor si baterie (master) este furnizat in pachetul produsului (Articolul 5).
** Cablul de comunicare dintre bateriile conectate in paralel trebuie achizitionat separat.

⚠ AVERTISMENT

Cablul de comunicare inclus in pachet este proiectat exclusiv pentru conectarea unui invertor nJoy la baterie si nu este potrivit pentru comunicarea in paralel.

Conexiunea pentru cablurile de alimentare



4 Operare baterie

4.1 Pornire / Oprire baterie

Pornirea Bateriei
1. Pornirea unui Singur modul de Baterii:
Porniti comutatorul DC si dupa aceea apasati si tineti apasat butonul „POWER" timp de 3 secunde. Indicatorul de stare, indicatorii RUN si ALARM se vor aprinde si vor clipi de 3 ori. Dupa aceea, indicatorul de stare va ramane aprins, iar indicatorul RUN va clipi, indicand ca pornirea este completa.

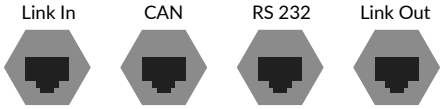
2. Pornirea a mai multor module de baterii in paralel:
Mai intai, verificati daca cablurile de Comunicare sunt instalate corect si porniti comutatorul DC de pe toate bateriile. Apoi, apasati si tineti apasat butonul „POWER" de pe unitatea master timp de 3 secunde, odata ce master-ul este pornit, toti slave-ii vor fi activati automat (nu este nevoie sa ii porniti separat). Cand comunicarea este stabilita, toate LED-urile de pe unitatile Master si Slave se vor aprinde si vor clipi de trei ori. Ulterior, indicatorul de stare al unitatii Master va ramane aprins, in timp ce indicatorul RUN clipeste. Pe unitatea Slave, doar indicatorul RUN va clipi, confirmand ca pornirea pachetului de baterii Master-Slave este completa.

Oprirea Bateriei
1. Oprirea unui singur modul de baterii:
Apasati si tineti apasat butonul „POWER" timp de 3 secunde. Indicatorul de stare, indicatorii RUN si ALARM se vor aprinde unul cate unul, apoi toti se vor stinge, indicand ca oprirea este completa.

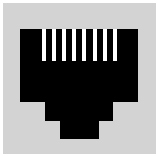
2. Oprirea unui singur modul de baterii:
Oprirea modulelor de baterii in paralel:
Apasati si tineti apasat butonul „POWER" de pe unitatea master timp de 3 secunde. Indicatorul de stare, indicatorii RUN si ALARM de pe unitatea master se vor aprinde unul cate unul, apoi toti se vor stinge. Indicatorul RUN de pe unitatea slave se va stinge, indicand ca oprirea pachetului de baterii master-slave este completa.

NOTA!
In cazul punerii in functiune a unitatilor dupa oprire, va rugam sa nu uitati sa opriti intrerupatorul principal DC.

4.2 Depanare produs

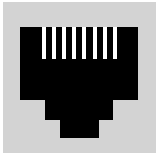


1. Port Link In folosit pentru cablul de comunicare care conecteaza bateriile in paralel.



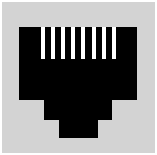
PIN	Definitie	Descriere
Pin 1	NC	N.A
Pin 2	485A	Conexiune de comunicare in paralel
Pin 3	485B	
Pin 4	IN+	Transmite date si semnale
Pin 5	IN-	
Pin 6	485B	Conexiune de comunicare in paralel
Pin 7	485A	
Pin 8	GND	

2. Port CAN pentru comutatia BMS invertor.



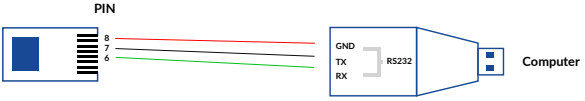
PIN	Definitie	Descriere
Pin 1	RS485-B	Conexiune de comunicare la externa invertor
Pin 2	RS485-A	
Pin 3	NC	
Pin 4	CAN-H	Conexiune de comunicare la externa invertor
Pin 5	CAN-L	
Pin 6	GND	Conexiune de comunicare la externa invertor
Pin 7	RS485-A	
Pin 8	RS485-B	

3. Portul RS232 este folosit pentru depanare (service).



1 ~ 8

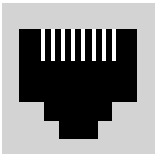
PIN	Definitie	Descriere
Pin 1	GND	Conexiune de Comunicare externa
Pin 2	RS232-TX	
Pin 3	RS232-RX	
Pin 4	Empty	
Pin 5	Empty	
Pin 6	RS232-RX	Conexiune de Comunicare externa
Pin 7	RS232-TX	
Pin 8	GND	



RJ45

USB - Convertor RS232

4. Port Link Out folosit pentru cablul de comunicare care conecteaza bateriile in paralel.



1 ~ 8

PIN	Definitie	Descriere
Pin 1	NC	N.A
Pin 2	485A	Conexiune de comunicare in paralel
Pin 3	485B	
Pin 4	IN+	Transmitere date si semnale
Pin 5	IN-	
Pin 6	485B	Conexiune de comunicare in paralel
Pin 7	485A	
Pin 8	GND	

NOTA!

- *Va rog sa retineti ca protocolul BMS al bateriei trebuie sa fie compatibil cu invertorul.*
- *Rata de transfer (baud rate) a Comunicarei CAN este de 500K.*
- *Rata de transfer (baud rate) a Comunicarei RS232 este de 9600bps.*
- *Va rugam sa comunicati cu invertorul sau cu software-ul utilizand adresele corecte ale pinilor RJ45.*

Memo



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.

