Test Verification of Conformity

Verification Number: 240102085GZU-VOC001

On the basis of the tests undertaken, the sample<s> of the below product have been found to comply with the requirements of the referenced specification<s>/standard<s> at the time the tests were carried out. This verification is part of the full test report<s> and should be read in conjunction with it <them>.

Applicant Name & Address:	Energie Volthium Inc 2600 Boulevard Ford #100, Chateauguay, Quebec J6J 4Z2, Canada
Product Description:	$LiFePO_4$ battery system
Ratings & Principle Characteristics:	See Appendix: Test Verification of Conformity
Models/Type References:	See Appendix: Test Verification of Conformity
Brand Names:	Volthium (Volthium)
Specification<s>/Standards:	ANSI/CAN/UL 9540A:2019 Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems Unit level test (clause 9.1-9.8)
Verification Issuing Office Name & Address:	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch. Room 101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, Huangpu District, Guangzhou, Guangdong, China
Date of Tests:	19 May 2024 to 21 May 2024
Test Report Number(s):	240102085GZU-001

Additional information in Appendix.

Jason Fu

Signature

Name: Jason Fu
Position: Supervisor
Date: 14 June 2024

APPENDIX: Test Verification of Conformity

This is an Appendix to Test Verification of Conformity Number: 240102085GZU-VOC001.

Ratings & Principle Characteristics:

Model	51.2-100-R-3U-C-2, 51.2-100-R-H-3U-C-2	51.2-100-R-3U-C-3, 51.2-100-R-H-3U-C-3	51.2-100-R-3U-C-4, 51.2-100-R-H-3U-C-4
Rated capacity (Ah):	200	300	400
Rated energy (kWh):	10.24	15.36	20.48
Nominal voltage (V):	51.2	51.2	51.2
Weight(kg):	2*(48±1)	3*(48±1)	4*(48±1)
Module series and/or parallel configuration:	1S2P	1S3P	1S4P
Model	51.2-100-R-3U-C-5, 51.2-100-R-H-3U-C-5	51.2-100-R-3U-C-6, 51.2-100-R-H-3U-C-6	51.2-100-R-3U-C-7, 51.2-100-R-H-3U-C-7
Rated capacity (Ah):	500	600	700
Rated energy (kWh):	25.6	30.72	35.84
Nominal voltage (V):	51.2	51.2	51.2
Weight(kg):	5*(48±1)	6*(48±1)	7*(48±1)
Module series and/or parallel configuration:	1S5P	1S6P	1S7P

Jason Fu

Signature

Name: Jason Fu
Position: Supervisor
Date: 14 June 2024

APPENDIX: Test Verification of Conformity

This is an Appendix to Test Verification of Conformity Number: 240102085GZU-VOC001.

Ratings & Principle Characteristics:

Model	51.2-100-R-3U-C-8, 51.2-100-R-H-3U-C-8	51.2-100-R-3U-C-951.2-100-R-H-3U-C-9	51.2-100-R-3U-C-10, 51.2-100-R-H-3U-C-10
Rated capacity (Ah):	800	900	1000
Rated energy (kWh):	40.96	46.08	51.2
Nominal voltage (V):	51.2	51.2	51.2
Weight(kg):	8*(48±1)	9*(48±1)	10*(48±1)
Module series and/or parallel configuration:	1S8P	1S9P	1S10P
Model	51.2-100-R-3U-C-11, 51.2-100-R-H-3U-C-11	51.2-100-R-3U-C-12, 51.2-100-R-H-3U-C-12	51.2-100-R-3U-C-13, 51.2-100-R-H-3U-C-13
Rated capacity (Ah):	1100	1200	1300
Rated energy (kWh):	56.32	61.44	66.56
Nominal voltage (V):	51.2Vdc	51.2Vdc	51.2Vdc
Weight(kg):	11*(48±1)	12*(48±1)	13*(48±1)
Module series and/or parallel configuration:	1S11P	1S12P	1S13P

Jason Fu

Signature

Name: Jason Fu
Position: Supervisor
Date: 14 June 2024

APPENDIX: Test Verification of Conformity

This is an Appendix to Test Verification of Conformity Number: 240102085GZU-VOC001.

Ratings & Principle Characteristics:

Model	51.2-100-R-3U-C-14, 51.2-100-R-H-3U-C-14
Rated capacity (Ah):	1400
Rated energy (kWh):	71.68
Nominal voltage (V):	51.2
Weight(kg):	14*(48±1)
Module series and/or parallel configuration:	1S14P
Standard charge method:	
Charge current (A):	50A*
End of charge voltage (V):	56V
Standard discharge method:	
Discharge current (A):	50A*
End of discharge voltage (V):	44.8V
Rest time between charge and discharge	30min
(*) represent one module's end of charge/discharge current.	

Jason Fu

Signature

Name: Jason Fu
Position: Supervisor
Date: 14 June 2024

CERTIFICATE
OF COMPLIANCE

This certificate confirms the model(s) for the product listed are in compliance and authorized to bear the Certification Mark(s) shown below when made in accordance with the conditions set forth in the Certification Agreement and Listing Report.

Energie Volthium Inc

Address: 2600 Boulevard Ford #100,
Chateauguay, Quebec J6J 4Z2

Country: Canada

Report Issuing Office: Intertek Testing Services Shenzhen Limited Guangzhou Branch

Control Number: 5025601 **Authorized by:** Jordan Holbert

for L. Matthew Snyder, Certification Manager

VALID LISTING MARKS

RECOGNIZED COMPONENT
C ETL US LISTED
Intertek

Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667

Standard(s):	Batteries for Use in Stationary and Motive Auxiliary Power Applications [ANSI/CAN/UL 1973:2022 Ed.3]
Product:	LiFePO4 Battery
Brand Name:	VOLTHIUM
Models:	51.2-100-R-3U-C, 51.2-100-R-H-3U-C

AUTHORIZATION TO MARK

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

This document is the property of Intertek Testing Services and is not transferable. The certification mark(s) may be applied only at the location of the Party Authorized To Apply Mark.

Applicant: Energie Volthium Inc

Address: 2600 Boulevard Ford #100,
Chateauguay, Quebec J6J 4Z2

Country: Canada

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Intertek Testing Services Shenzhen Limited Guangzhou Branch

Control Number: *5029806* **Authorized by:** _____
for L. Matthew Snyder, Certification Manager

This document supersedes all previous Authorizations to Mark for the noted Report Number.

Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	Energy Storage Systems and Equipment [ANSI/CAN/UL 9540:2023 Ed.3]
Product:	Energy Storge Systems
Brand Name:	Volthium

Models:	51.2-100V2–LUX 12K1, 51.2-100V3–LUX 12K1, 51.2-100V4–LUX 12K1, 51.2-100V5–LUX 12K1, 51.2-100V6–LUX 12K1, 51.2-100V7–LUX 12K1, 51.2-100V8–LUX 12K1, 51.2-100V9–LUX 12K1, 51.2-100V10–LUX 12K1, 51.2-100V11–LUX 12K1, 51.2-100V12–LUX 12K1, 51.2-100V13–LUX 12K1, 51.2-100V14–LUX 12K1, 51.2-100V4–LUX 12K2, 51.2-100V5–LUX 12K2, 51.2-100V6–LUX 12K2, 51.2-100V7–LUX 12K2, 51.2-100V8–LUX 12K2, 51.2-100V9–LUX 12K2, 51.2-100V10–LUX 12K2, 51.2-100V11–LUX 12K2, 51.2-100V12–LUX 12K2, 51.2-100V13–LUX 12K2, 51.2-100V14–LUX 12K2, 51.2-100V15–LUX 12K2, 51.2-100V16–LUX 12K2, 51.2-100V17–LUX 12K2, 51.2-100V18–LUX 12K2, 51.2-100V19–LUX 12K2, 51.2-100V20–LUX 12K2, 51.2-100V21–LUX 12K2, 51.2-100V22–LUX 12K2, 51.2-100V23–LUX 12K2, 51.2-100V24–LUX 12K2, 51.2-100V25–LUX 12K2, 51.2-100V26–LUX 12K2, 51.2-100V27–LUX 12K2, 51.2-100V28–LUX 12K2, 51.2-100V2–LUX 11.4K1, 51.2-100V3–LUX 11.4K1, 51.2-100V4–LUX 11.4K1, 51.2-100V5–LUX 11.4K1, 51.2-100V6–LUX 11.4K1, 51.2-100V7–LUX 11.4K1, 51.2-100V8–LUX 11.4K1, 51.2-100V9–LUX 11.4K1, 51.2-100V10–LUX 11.4K1, 51.2-100V11–LUX 11.4K1, 51.2-100V12–LUX 11.4K1, 51.2-100V13–LUX 11.4K1, 51.2-100V14–LUX 11.4K1, 51.2-100V4–LUX 11.4K2, 51.2-100V5–LUX 11.4K2, 51.2-100V6–LUX 11.4K2, 51.2-100V7–LUX 11.4K2, 51.2-100V8–LUX 11.4K2, 51.2-100V9–LUX 11.4K2, 51.2-100V10–LUX 11.4K2, 51.2-100V11–LUX 11.4K2, 51.2-100V12–LUX 11.4K2, 51.2-100V13–LUX 11.4K2, 51.2-100V14–LUX 11.4K2, 51.2-100V15–LUX 11.4K2, 51.2-100V16–LUX 11.4K2, 51.2-100V17–LUX 11.4K2, 51.2-100V18–LUX 11.4K2, 51.2-100V19–LUX 11.4K2, 51.2-100V20–LUX 11.4K2, 51.2-100V21–LUX 11.4K2, 51.2-100V22–LUX 11.4K2, 51.2-100V23–LUX 11.4K2, 51.2-100V24–LUX 11.4K2, 51.2-100V25–LUX 11.4K2, 51.2-100V26–LUX 11.4K2, 51.2-100V27–LUX 11.4K2, 51.2-100V28–LUX 11.4K2

1.0 Reference and Address			
Report Number	240229127GZU-001	Original Issued: 18-Jun-2024	Revised: None
Standard(s)	Energy Storage Systems and Equipment [ANSI/CAN/UL 9540:2023 Ed.3]		

Applicant	Energie Volthium Inc	Manufacturer	
Address	2600 Boulevard Ford #100, Chateauguay, Quebec J6J 4Z2	Address	
Country	Canada	Country	
Contact	Yanni Samson	Contact	
Phone	514-989-9586	Phone	--
FAX	--	FAX	
Email	yanni.samson@volthium.com	Email	

2.0 Product Description	
Product	Energy Storge Systems
Brand name	Volthium
Description	The product covered by this report are intelligent energy storage systems. It includes an grid support hybrid inverter and a lithium iron battery system (LiFePO4). Installation should be located where specified in installation manual as well as in accordance with the National Electrical Code (NEC) and the Canadian Electrical Code (CEC).
Models	51.2-100V2–LUX 12K1, 51.2-100V3–LUX 12K1, 51.2-100V4–LUX 12K1, 51.2-100V5–LUX 12K1, 51.2-100V6–LUX 12K1, 51.2-100V7–LUX 12K1, 51.2-100V8–LUX 12K1, 51.2-100V9–LUX 12K1, 51.2-100V10–LUX 12K1, 51.2-100V11–LUX 12K1, 51.2-100V12–LUX 12K1, 51.2-100V13–LUX 12K1, 51.2-100V14–LUX 12K1, 51.2-100V4–LUX 12K2, 51.2-100V5–LUX 12K2, 51.2-100V6–LUX 12K2, 51.2-100V7–LUX 12K2, 51.2-100V8–LUX 12K2, 51.2-100V9–LUX 12K2, 51.2-100V10–LUX 12K2, 51.2-100V11–LUX 12K2, 51.2-100V12–LUX 12K2, 51.2-100V13–LUX 12K2, 51.2-100V14–LUX 12K2, 51.2-100V15–LUX 12K2, 51.2-100V16–LUX 12K2, 51.2-100V17–LUX 12K2, 51.2-100V18–LUX 12K2, 51.2-100V19–LUX 12K2, 51.2-100V20–LUX 12K2, 51.2-100V21–LUX 12K2, 51.2-100V22–LUX 12K2, 51.2-100V23–LUX 12K2, 51.2-100V24–LUX 12K2, 51.2-100V25–LUX 12K2, 51.2-100V26–LUX 12K2, 51.2-100V27–LUX 12K2, 51.2-100V28–LUX 12K2, 51.2-100V2–LUX 11.4K1, 51.2-100V3–LUX 11.4K1, 51.2-100V4–LUX 11.4K1, 51.2-100V5–LUX 11.4K1, 51.2-100V6–LUX 11.4K1, 51.2-100V7–LUX 11.4K1, 51.2-100V8–LUX 11.4K1, 51.2-100V9–LUX 11.4K1, 51.2-100V10–LUX 11.4K1, 51.2-100V11–LUX 11.4K1, 51.2-100V12–LUX 11.4K1, 51.2-100V13–LUX 11.4K1, 51.2-100V14–LUX 11.4K1, 51.2-100V4–LUX 11.4K2, 51.2-100V5–LUX 11.4K2, 51.2-100V6–LUX 11.4K2, 51.2-100V7–LUX 11.4K2, 51.2-100V8–LUX 11.4K2, 51.2-100V9–LUX 11.4K2, 51.2-100V10–LUX 11.4K2, 51.2-100V11–LUX 11.4K2, 51.2-100V12–LUX 11.4K2, 51.2-100V13–LUX 11.4K2, 51.2-100V14–LUX 11.4K2, 51.2-100V15–LUX 11.4K2, 51.2-100V16–LUX 11.4K2, 51.2-100V17–LUX 11.4K2, 51.2-100V18–LUX 11.4K2, 51.2-100V19–LUX 11.4K2, 51.2-100V20–LUX 11.4K2, 51.2-100V21–LUX 11.4K2, 51.2-100V22–LUX 11.4K2, 51.2-100V23–LUX 11.4K2, 51.2-100V24–LUX 11.4K2, 51.2-100V25–LUX 11.4K2, 51.2-100V26–LUX 11.4K2, 51.2-100V27–LUX 11.4K2, 51.2-100V28–LUX 11.4K2
Model Similarity	All models are identical only except the incorporating grid support hybrid inverter and the number of battery moduels. About series model 51.2-100Vx-LUX xKx The suffix "51.2-100" denotes the battery module. The suffix "Vx" denotes the number of battery moduels (2 to 28). The suffix "LUX xK" denotes the maximum output power of PCS, it can be 12K, 11.4K. 12K represents output power is 12kW. 11.4K represents output power is 11.4kW. The last suffix "x" denotes the number of inverter (1 to 2). The battery module model 51.2-100-R-H-3U-C is identical to 51.2-100-R-3U-C, except that the internal heating sheets can be controlled by software. The wall mounted energy storge system only for model that system energy less than or equal to 20kWh.
Ratings	Please refer to section 7.0, Illustration 3, 3a to 3u for details.
Other Ratings	Please refer to section 7.0, Illustration 3, 3a to 3u for details.

3.0 Product Photographs

Photo 1 - Overall view of the battery system

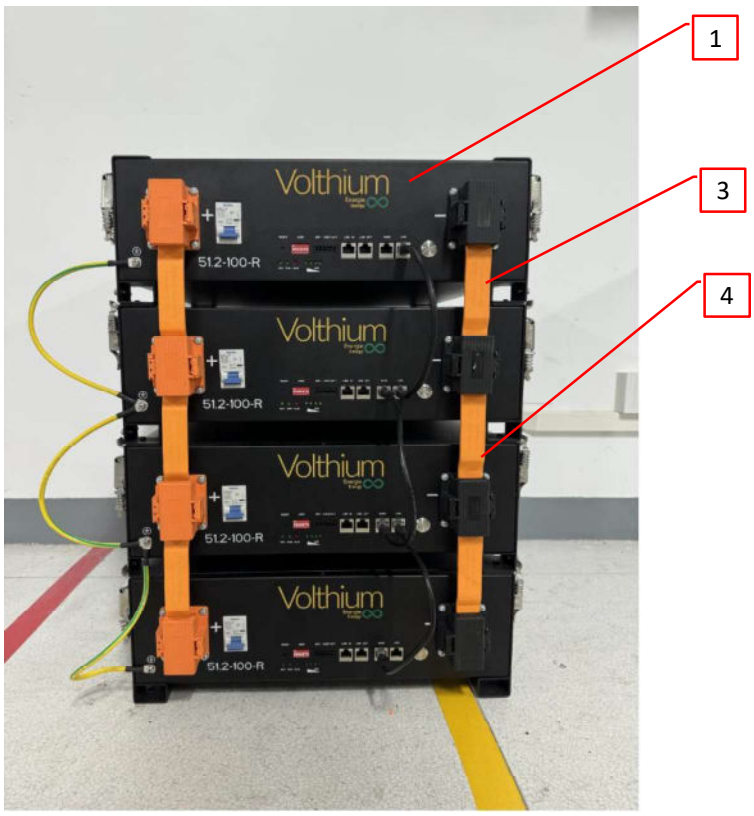


Photo 2 - Overall view of the inverter

4.0 Critical Components						
Photo #	Item no.[1]	Name	Manufacturer/ trademark[2]	Type / model[2]	Technical data and securement means	Mark(s) of conformity [3]
1	1	Lithium iron battery system	Energie Volthium Inc	51.2-100-R-3U-C	May be used with 2 to 28 battery modules for a system Type of battery: LiFePO4 Normal Voltage: 51.2Vdc Max. continue charging current: 70A Max. continue discharging current: 100A Rated capacity: 100Ah Rated energy: 5.12kWh	cETLus
				51.2-100-R-H-3U-C	May be used with 2 to 28 battery modules for a system Type of battery: LiFePO4 Normal Voltage: 51.2Vdc Max. continue charging current: 70A Max. continue discharging current: 100A Rated capacity: 100Ah Rated energy: 5.12kWh	cETLus
2	2	Inverter	Shenzhen Sea Star Industry Co., Ltd	LXP-LB-US 12K	PV input: 120-500d.c.V (Max.600d.c.V), 25/15/15d.c.A (Max.31/19/19d.c.A) Battery side: 48-60d.c.V, chargedand discharge current 250d.c.A Grid side: 208/240a.c.V, 50a.c.A,max.12000VA(240a.c.A), max.10400VA(208a.c.A), 60Hz off-grid side: 208Vac, 120/240Vac split phase, 50a.c.A, max.12000VA(240a.c.A), max.10400VA(208a.c.A), 60Hz Enclosure type: NEMA 4X	cETLus
				LXP-LB-US 11.4K	PV input: 120-500d.c.V (Max.600d.c.V), 25/15/15d.c.A (Max.31/19/19d.c.A) Battery side: 48-60d.c.V, chargedand discharge current 238d.c.A Grid side: 208/240a.c.V, 47.5a.c.A, max.11400VA(240a.c.A), max.9880VA(208a.c.A), 60Hz off-grid side: 208Vac, 120/240Vac split phase, 50a.c.A, max.11400VA(240a.c.A), max.9880VA(208a.c.A), 60Hz Enclosure type: NEMA 4X	cETLus

4.0 Critical Components

Photo #	Item no.[1]	Name	Manufacturer/ trademark[2]	Type / model[2]	Technical data and securement means	Mark(s) of conformity [3]
1	3	Copper bar	Dongguan Zhongzhi Electronics Technology Co.,Ltd	528*25*4	COOPER, 528*25*4, pressed nickel	NR
			Various	Various	COOPER, 528*25*4, pressed nickel	NR
			Dongguan Zhongzhi Electronics Technology Co.,Ltd	200*25*4	COOPER, 200*25*4, pressed nickel	NR
			Various	Various	COOPER, 200*25*4, pressed nickel	NR
1	4	Tube	PENGYUAN ELECTRONICS MATERIAL CO LTD	RDHF	600V, 125°C, thickness: 1-2mm	cURus
			Various	Various	600V, 125°C, thickness: 1-2mm	cURus
1	5	Interconnecting cord per a battery port between inverter and battery （not shown）	SHENZHEN MYSUN INSULATION MATERIALS CO LTD	3512	600V, 200°C, 2/0 AWG	cURus
			Various	Various	600V, 200°C, 2/0 AWG	cURus
1	6	Label (not shown)	Various	Various	Adhesive-Type, Min. 80°C	UR

NOTES:

1) Not all item numbers are indicated (called out) in the photos, as their location is obvious.

2) “Various“ means any type, from any manufacturer that complies with the "Technical data and securement means" and meets the "Mark(s) of conformity" can be used.

3) Indicates specific marks to be verified, which assures the agreed level of surveillance for the component. "NR" - indicates Unlisted and only visual examination is necessary. "See 5.0" indicates Unlisted components or assemblies to be evaluated periodically refer to section 5.0 for details.

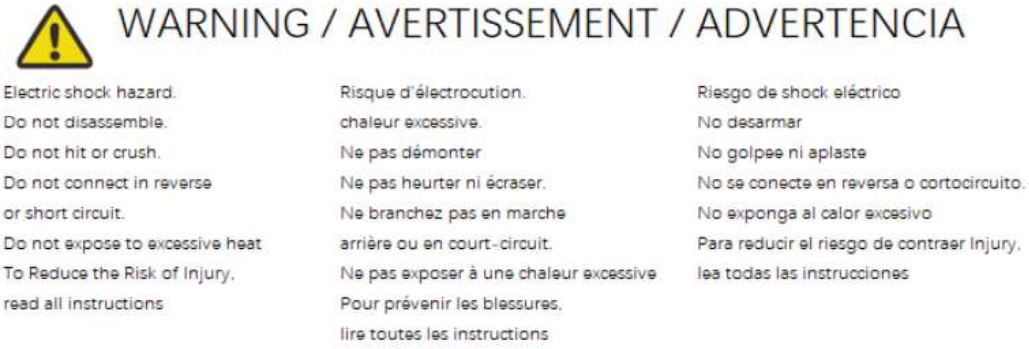
5.0 Critical Unlisted CEC Components

No Unlisted CEC components are used in this report.

6.0 Critical Features
Recognized Component - A component part, which has been previously evaluated by an accredited certification body with restrictions and must be evaluated as part of the basic product considering the restrictions as specified by the Conditions of Acceptability. Listed Component - A component part, which has been previously Listed or Certified by an accredited Certification Organization with no restrictions and is used in the intended application within its ratings. Unlisted Component - A part that has not been previously evaluated to the appropriate designated component standard. It may also be a Listed or Recognized component that is being used outside of its evaluated Listing or component recognition. Critical Features/Components - An essential part, material, subassembly, system, software, or accessory of a product that has a direct bearing on the product's conformance to applicable requirements of the product standard.
Construction Details - For specific construction details, reference should be made to the photographs and descriptions. All dimensions are approximate unless specified as exact or within a tolerance. In addition to the specific construction details described in this Report, the following general requirements also apply.
1. Mechanical Assembly - Components such as switches, fuseholders, connectors, wiring terminals and display lamps are mounted and prevented from shifting or rotating by the use of lockwashers, starwashers, or other mounting format that prevents turning of the component.
2. Corrosion Protection - All ferrous metal parts are protected against corrosion by painting, plating or the equivalent.
3. Accessibility of Live Parts - All uninsulated live parts in primary circuitry are housed within a metal and non-metallic enclosure constructed with no openings other than those specifically described in Sections 4 and 5.
4. Grounding - All exposed dead-metal parts and all dead-metal parts within the enclosure that are exposed areconnected to the grounding lead of the power supply cord or the equipment grounding terminal.
5. Polarized Connection - This product is provided with a polarized power supply connection. All single pole switches and fuses are connected only to the ungrounded supply circuit conductor.
6. Internal Wiring - Internal wiring is routed away from sharp or moving parts. Internal wiring leads terminating in soldered connections are made mechanically secure prior to soldering. Recognized Component separable (quick disconnect) connectors of the positive detent type, closed loop connectors, or other types specifically described in the text of this report are also acceptable as internal wiring terminals. At points where internal wiring passes through metal walls or partitions, the wiring insulation is protected against abrasion or damage by plastic bushings or grommets.
7. Markings - The product is marked as follows: Applicant's brand name, model number, date of manufacturer;electrical ratings.
8. Cautionary Markings - refer to Illustration 1 for details.
9. Installation, Operating and Safety Instructions - Instructions for installation and use of this product areprovided by the manufacturer. Refer to Illustrations 2, 2a to 2r for details.

7.0 Illustrations

Illustration 1 - Caution and warning labels



7.0 Illustrations

Illustration 2 - User manual(partly)

2. Safety

2.1 Safety precautions

DANGER

Explosion risk

- Do not impact the battery with heavy objects.
- Do not squeeze or pierce the battery pack.
- Do not throw the battery pack into the fire.

WARNING

Fire risk

- Do not expose the battery pack to the condition over 80°C.
- Do not put the battery near a heat source, such as a fireplace.
- Do not expose the battery pack to direct sunlight or raining.

CAUTION

Electric shock risk

- Do not allow non-qualified person to disassemble the battery pack.
- Do not touch the battery pack with wet hands.
- Do not expose the battery pack to moisture or liquid environment.

NOTICE

Damage risk

- Do not short-circuit or reverse connect the battery.
- Do not use chargers or charging devices unapproved by the manufacturer to charge the battery.
- Do not mix batteries from different manufacturers or different kinds, types or brands.

2.2 Safety instructions

The battery has been designed and tested in accordance with international (such as UL, IEC, UN38.3 etc.)

7.0 Illustrations

Illustration 2a - User manual(partly)

safety requirements. However, due to various factors during the whole lifetime process, Volthium cannot guarantee absolute safety, in order to prevent personal injury and property damage and ensure long-term operation of the battery, please do read the below section carefully to operate the battery and handle emergency situations.

2.2.1 Safety gear

It is required to wear the following safety gear when installing and handling the battery pack.

Insulated gloves

Safety Glasses

Safety Shoes

2.2.2 Emergency safety measures

Water invasion

Please cut off the AC power supply of the system first and then disconnect all switched under the premise of ensuring safety.

Electrolyte or gas leakage

If the battery pack leaks electrolyte, avoid contact with the leaking liquid or gas. If one is exposed to the leaked substance, immediately perform the actions described below.

- **Gas Inhalation:** Evacuate the people in the contaminated area and seek medical aid immediately.
- **Eye Contact:** Flush your eye with clean and flowing water for 15 min, and seek medical aid immediately.
- **Skin Contact:** Thoroughly rinse the exposed area with soap and water to be sure no chemical or soap is left on them, and seek medical aid immediately.
- **Ingestion:** Induce vomiting, and seek medical help immediately.

⚠ WARNING
In case of fire situations, please use carbon dioxide fire extinguisher rather than liquid to put out fires.

2.2.3 Other Tips

- All the product are strictly inspected before shipment, please contact your supplier for replacement if you notice there's any defectives such as swelling.
- Do not disassemble batteries and components, otherwise the manufacturer will not be responsible for any damage caused by unauthorized disassembly or repair.
- Do enable the battery to be safely grounded before use to make sure the system in safe and normal operation.
- Please ensure that the electric parameters of these devices are compatible mutually before connecting the battery to other devices.
- Please take the environmental factors into careful considerations to ensure that the system can work in a suitable condition as the environment and storage methods have a certain impact on the service life and reliability of this product.

7.0 Illustrations

Illustration 2b - User manual(partly)

4.3 Start Installation

⚠Qualified person

4.3.1 Remainder

Please check again the following conditions or equipment whether meet the requirements before installation:

- Check if there's enough space for installation, and if the load-bearing capacity of the bracket or cabinet meets the weight requirements.
- Check whether the power cable pair(s) used meets the maximum current requirement for operation.
- Check whether the overall layout of power supply equipment and batteries at the construction site is reasonable.
- Check whether the installer is wearing anti-static wristband.
- Check whether there're two people on the construction site for installation work.
- Check if there's potential risks at location of installation site, e.g flooding, sun exposure, corrosion, and salt spray.

4.3.2 Procedures

⚠CAUTION
Injuries may result if the product is lifted incorrectly or dropped while being transported or mounted. Wear suitable personal protective equipment for all work on the product.

⚠CAUTION
Ensure that no lines are laid in the wall which could be damaged when drilling holes.

4.3.2.1 Rack mounted

7.0 Illustrations

Illustration 2c - User manual(partly)

1.Take the battery pack out from carton.
2.Get the Rack or cabinet ready and place it horizontally at a reasonable location.
3.Place the battery on the rack or cabinet tray via manual-lift, Insert the screws and fasten the battery to the rack or cabinet.
4.Finish the cable connection

4.3.2.2 Stack mounted

1.Take the battery pack out from carton.	
2.Remove the mounting ear from both side of the battery.	
3.Install the stacking component at four corners of the battery.	
4.Remove the hook on the stacking component of the bottom battery of each stack.	
5.Put another battery on top of the previous module, and align the locating holes and connect the 4 lockers together.	

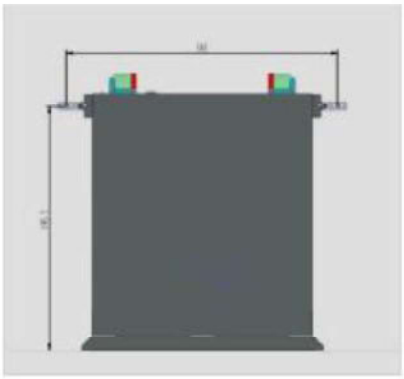
7.0 Illustrations

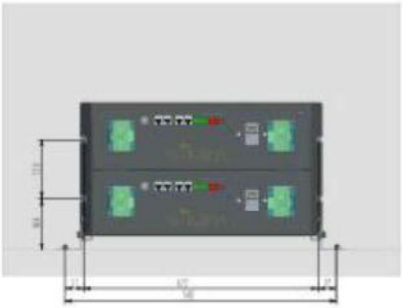
Illustration 2d - User manual(partly)

6.The maximum number in each stack is 4 modules. 7.Finish the cable connection	

Note: Do not stack the batteries directly.

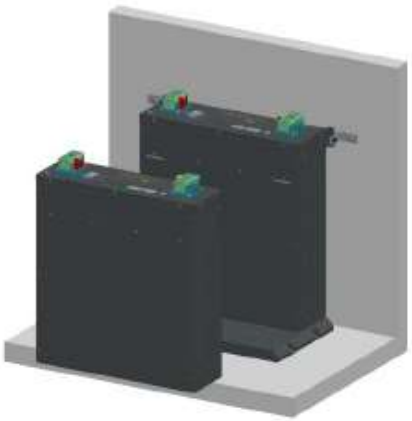
4.3.2.1 Floor mounted





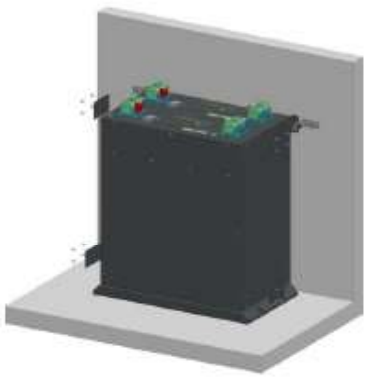
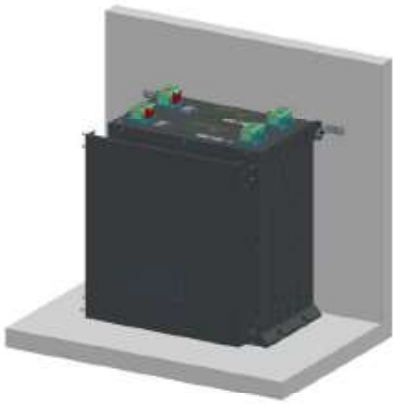
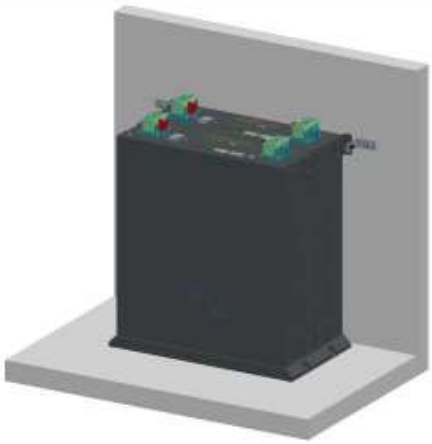
7.0 Illustrations

Illustration 2e - User manual(partly)

1. Place the base against the wall on the ground and drill holes according to the position.	
2. Fix the wall bracket onto the battery.	
3. Place two batteries on the base and secure the wall bracket	

7.0 Illustrations

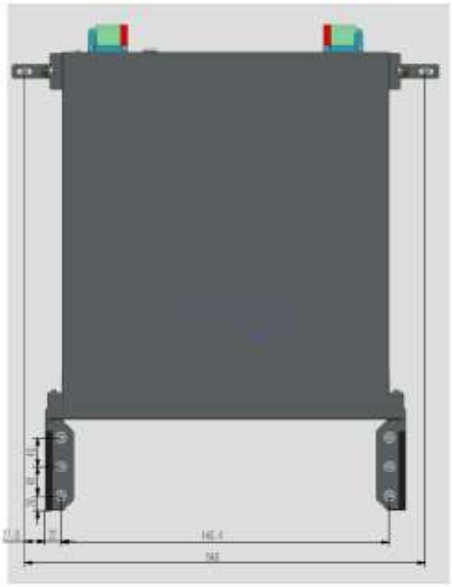
Illustration 2f - User manual(partly)

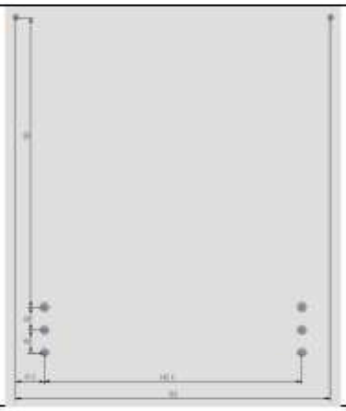
4. Install the battery mounting bracket.	
5. Secure the decorative cover plate lock.	
6. The installation is completed.	

7.0 Illustrations

Illustration 2g - User manual(partly)

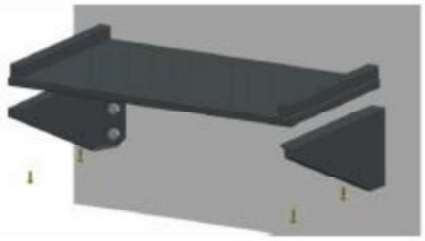
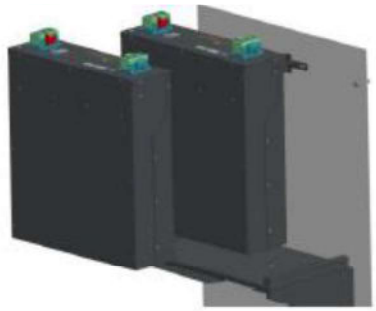
4.3.2.1 Wall mounted



1. Drill holes on the wall according to the dimensions in the picture	

7.0 Illustrations

Illustration 2h - User manual(partly)

2. Fix the wall mounting bracket to the wall.	
3.Place the battery on the wall mount bracket.	
4.Fix the side fixing piece between the battery and the wall.	
5. Secure the decorative cover plate lock.	

7.0 Illustrations

Illustration 2i - User manual(partly)

6. The bracket installation is completed.	

4.3.3 Tips

4.3.3.1 Installation not allowed

Direct upside down	Left side flip	Right side flip
 X	 X	 X

4.3.3.2 Other Installation

Hang on the wall with Holder	Placing on the desk
 Please make sure the holder can handle a minimum weight of 50kg	 Please make sure the desk can bear the total weight.

NOTICE

ANY others installations, please avoid the battery directly contacting the ground and avoid of high salinity, humidity to prevent the product from rusting and corrosion.

7.0 Illustrations

Illustration 2j - User manual(partly)

6. LUX installation

6.1 Safety precautions

General Safety Instructions

International safety regulations have been strictly observed in the design and testing of the inverter Prior to any work, carefully read all safety instructions and observe them at all times when working on or with the inverter. The installation must adhere to all applicable national or international standards or regulations.

Incorrect operation or work may cause:

- injury or death to the operator or a third party
- damage to the inverter and other properties belonging to the operator or a third party.

Important Safety Notifications

There are various safety issues that must be carefully conveyed prior to during and after the installation, as well as during future operation and maintenance. The following are important safety notifications for the operator, owner, and user of this product under normal conditions of use.

⚠ DANGER Dangers of High Voltages and Large Current

- Beware of high PV voltage. Please turn-off the DC switch of PV Panel output before and during the installation to avoid electric shock.
- Beware of high grid voltage. Please turn-off the AC switch at the grid connection before and during the installation to avoid electric shock.
- Beware of large current of the battery output. Please turn-off the battery module before and during the installation to avoid electric shock.
- Do not open the inverter when it's working to avoid electric shock and damage from live voltage and current from the system.
- Do not operate the inverter when it's working, only the LCD and buttons can be touched in limited cases by qualified personnel, Other parts of the inverter can be touched when the inverter is in a a safe state (e.g. fully shut-down).
- Do not connect or disconnect any connections (PV, battery, grid, communication etc.) of the inverter when it's working.
- Make sure the inverter is well grounded, An operator should make sure he is well protected by reasonable and professional insulation measurements (e.g. personal protective equipment (PPE).
- Inspect relevant existing wiring on-site of the installation is in good condition before installation, operation or maintenance.
- Inspect that connections are good between the inverter and PV, battery and grid during installation to prevent damages or injuries caused by bad connections.

7.0 Illustrations

Illustration 2k - User manual(partly)

WARNING **Avoid Misoperation and Inappropriate Usage**

- All the work of this product (system design, installation, operation, setting, configuration and maintenance must be carried out by qualified personnel as required.
- All connections must be in accordance with local and national regulations and standards.
- The inverter and system can inter-connected with the utility grid only if the utility grid permits it.
- All the warning labels or nameplates on the inverter must be clearly visible and must not be removed, covered or pasted.
- The installation should consider the safety of future users when choosing the right position and location as specified in this manual.
- Please keep the children away from touching or misusing the inverter and relevant systems.
- Beware of burning hurt, the inverter and some parts of the system could be hot when working, please do not touch the inverter surface or most of the parts when they are working. During inverter working states, only the LCD and buttons could be touched.

NOTICE

- Please carefully read this manual before any work is carried out on this inverter, the installation, please keep this manual carefully stored and easy to access at any time.
- The qualified personnel should have had training in the installation and commissioning of the electrical system as well as dealing with hazards, also they should have the knowledge of the manual and other related documents. As the installer or operator they are required to be familiar with local regulations and directives.

7.0 Illustrations

Illustration 2I - User manual(partly)

6.2 Packaging List & Storing

Packaging List

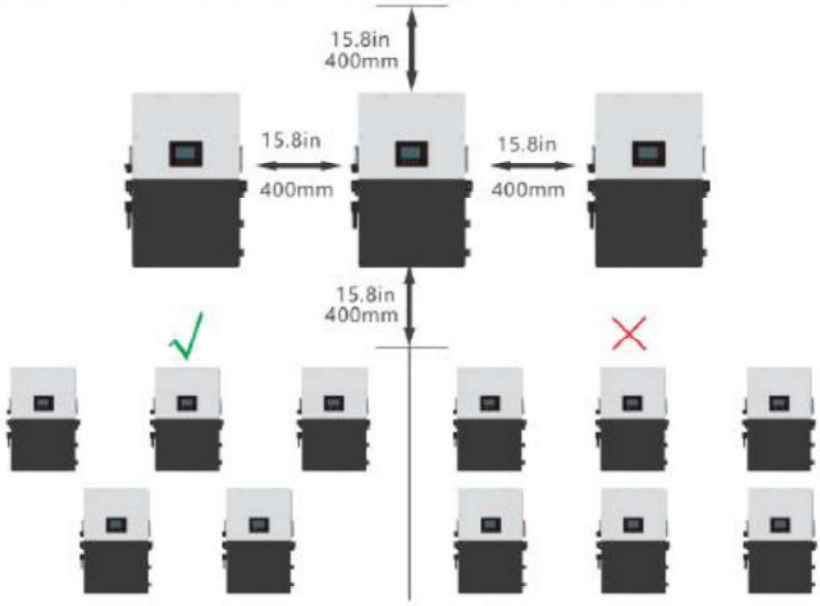
When the packaging is unpacked, the inner components should match those listed in the list below.

6.3 Location Selection and Installation

1. Requirements for installation location

a. The mounting wall should be strong enough to bear the weight of the inverter.

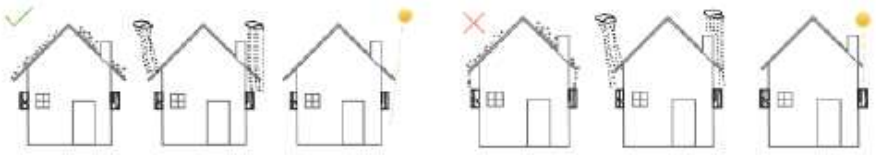
b. Please maintain the minimum clearances presented below for adequate heat dissipation.



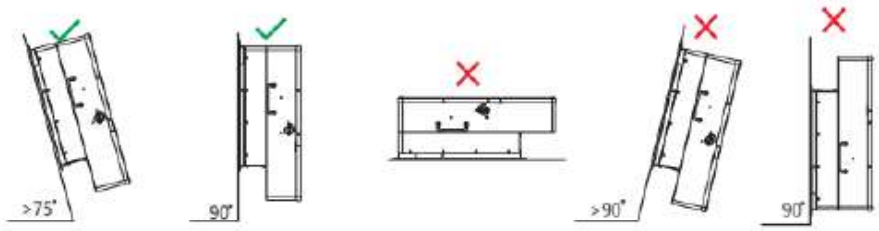
7.0 Illustrations

Illustration 2m - User manual(partly)

c. Never position the inverter in direct sunlight, rain, or snow. Please refer to the figure below and choose a well-shaded site or a shed to protect the inverter from direct sunlight, rain, and snow etc. PROTECT the LCD screen from excessive UV exposure

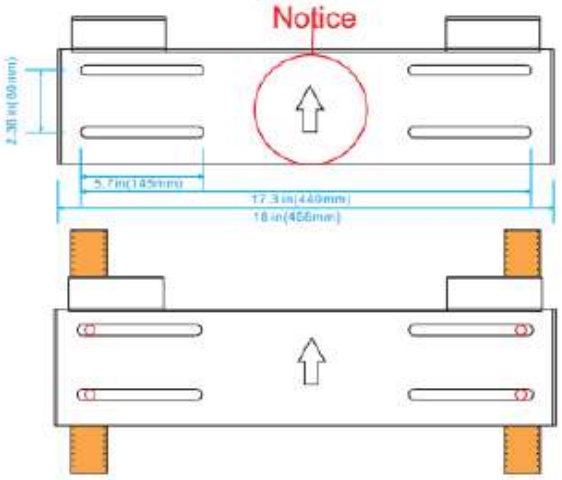


d. The inverter should be installed upright on a vertical surface.



2. Installing the inverter

The inverter is wall-mounted type and, should be installed on a vertical, solid mounting surface, such as wood studs, brick or concrete wall. Two or more persons may be needed to install the inverter due to its weight. The slots on the mounting bracket can accommodate various stud spacings from 12inches(305mm) to 16inches(406mm).

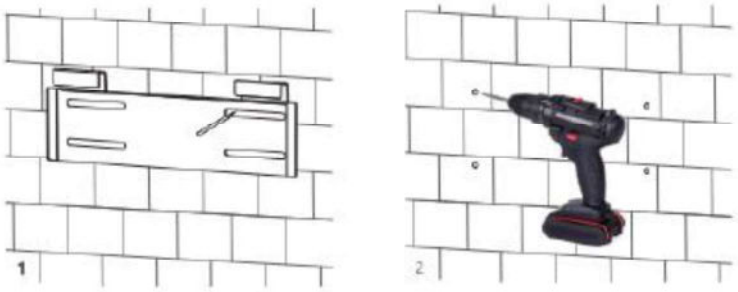


The mounting steps are as below: (Use brick wall as example)

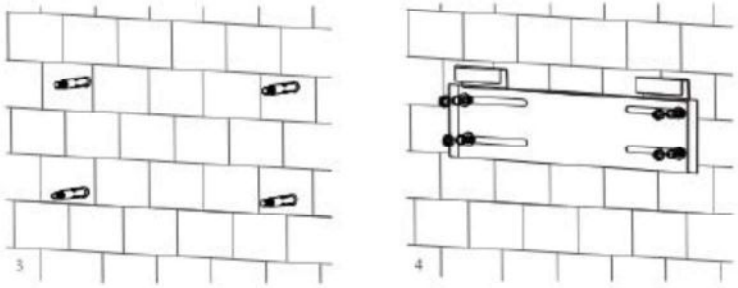
7.0 Illustrations

Illustration 2n - User manual(partly)

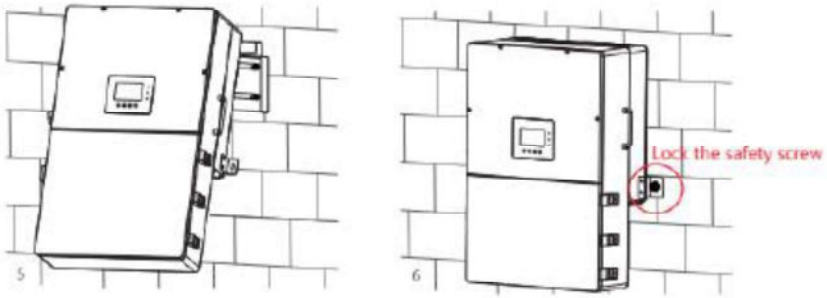
Step1. Mark the drill holes positions with the mounting bracket, then drill four48mm(5/16inch) diameter holes, making sure the depth of the holes is deeper than 50mm(2inches).



Step2. Install and tighten the expansion bolts into the holes.Then use the corresponding nuts and washers (packaged together with the expansion bolts) to install and fix the wall-mounting bracket on the wall.



Step3. Hang the inverter onto the wall-mounting bracket and lock the inverter on the wall using 2 self-tapping screws on the top of the inverter, lock the safety screws on the left and right sides.



For installation on wood studs

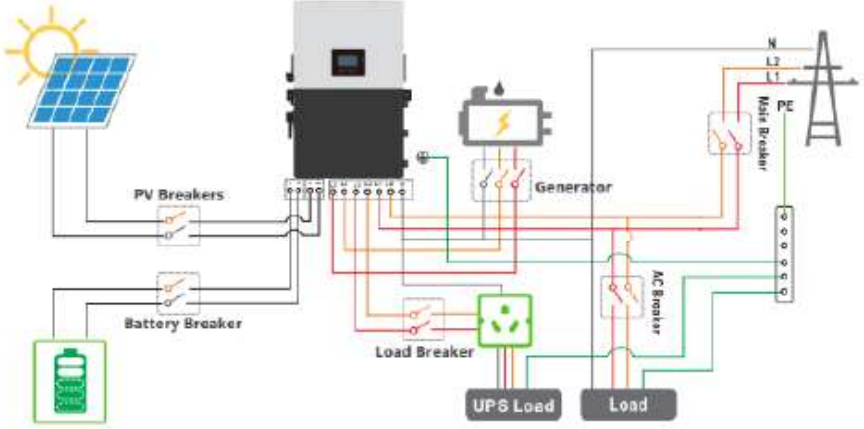
6.4 Connection Overview

1. System Connection

7.0 Illustrations

Illustration 2o - User manual(partly)

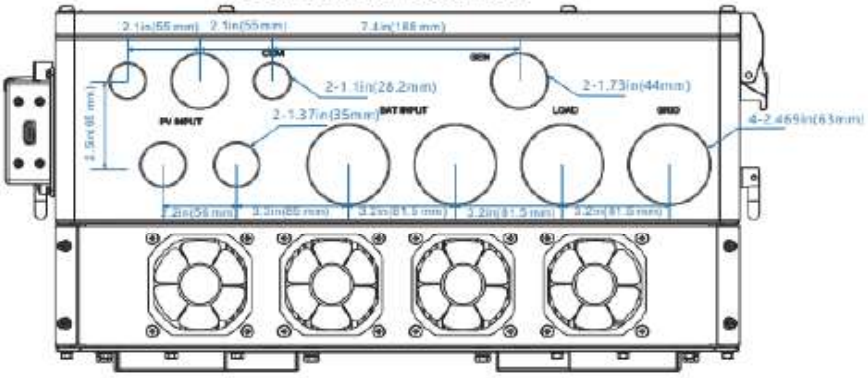
The system connection diagram is as below(for US version):



Breakers selection recommendation for both DC and AC

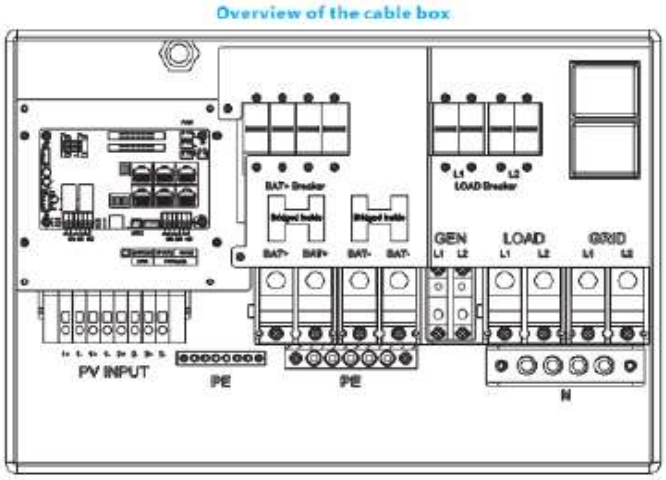
Inverter model	12K
PV Breakers(2Px4)	MPPT1 string 1 : 600V/20A MPPT1 string 2 : 600V/20A MPPT2: 600V/20A MPPT3: 600V/20A
Main Breaker(2P)	200A/240Vac when ups is used for whole home backup 100A/240Vac when ups is used for partial load backup
Generator breaker	100A/240Vac
Integrated Battery Breaker	200A x 2
Integrated Load Breaker	L1:200A L2:200A

Overview of Connection Ports

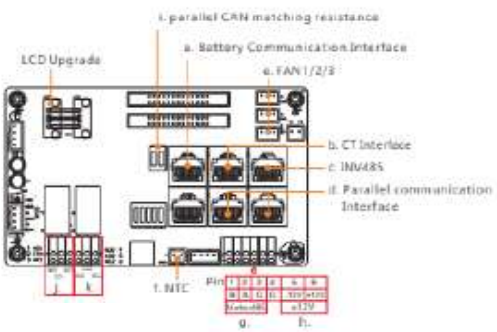


7.0 Illustrations

Illustration 2p - User manual(partly)



The inverter has integrated Load breaker and BAT breaker, and the Load breaker is 200A, the BAT breaker is 2x200A



a). Battery communication port(CAN&RS485)
please check Chapter 3.5.2 for Pin definition
b). CT Interface: please check Chapter 3.6.4 for CT connection
c). INV 485: Debugging port
d). Parallel communication port
please check Chapter 3.9 for Parallel connection
e). FAN1/2/3
f). NTC: Connection for temperature sensor of lead-acid battery
g). Meter 485B&485A: For Meter communication
h). +12V: Reserved for customer to use, Max 500mA
i). CAN Matching resistance: Set DIP switch when use inverters in parallel
j). GEN(NO, NC): Connection for generator auto-start function
k). DRY(NO,NC): reserved

2. PV Connection

The PV connection of this hybrid inverter is the same as that a traditional on-grid solar inverter (string inverter).

Cable Requirement:

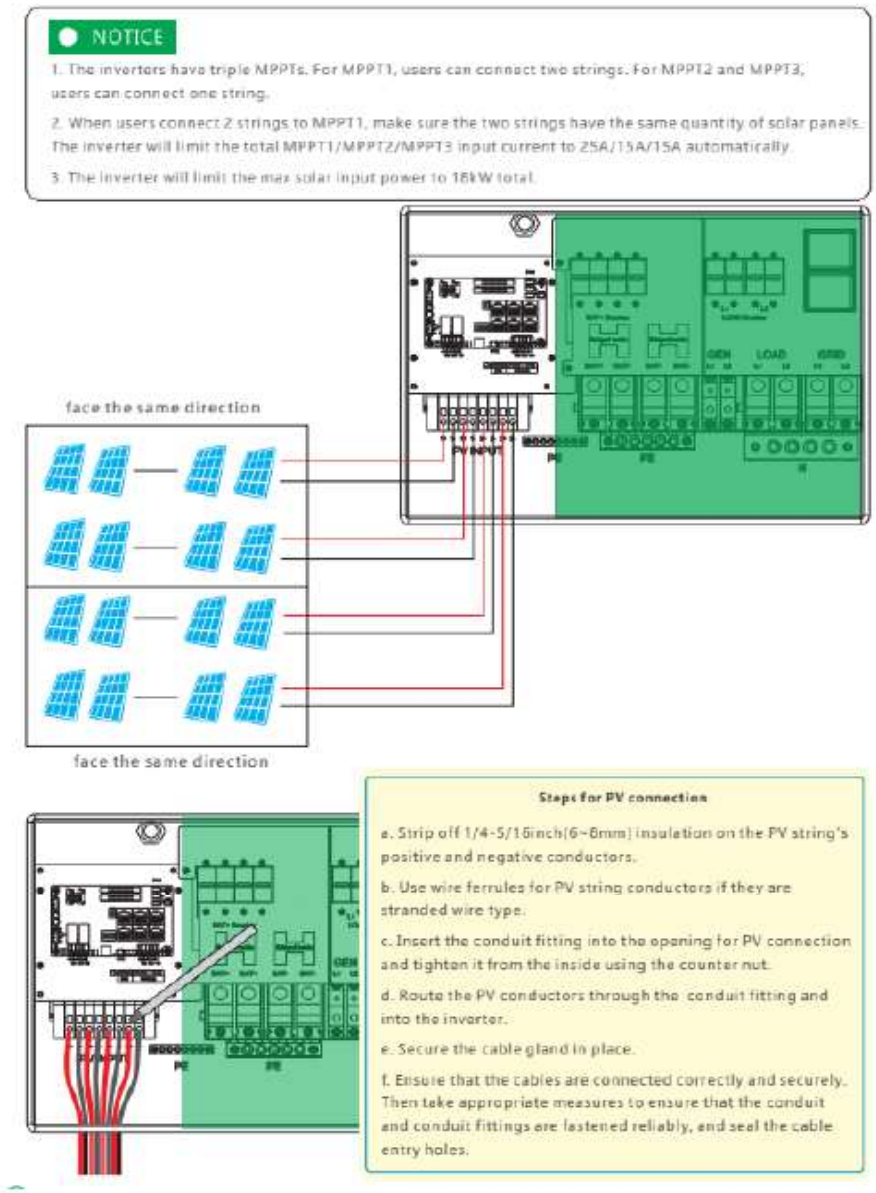
Cable Size	Minimum Voltage
10-8AWG(5 - 8 mm²)	600V

⚠ WARNING

* Please double check the lowest ambient temperature of the installation location. The rated Voc on solar panel nameplate is obtained at 25℃As the ambient temperature drops, the Solar panel Voc increases. Please ensure the Maximum solar string voltage corrected at the lowest temperature does not exceed the inverter's maximum input voltage of 550V.

7.0 Illustrations

Illustration 2q - User manual(partly)



3. Battery Connection

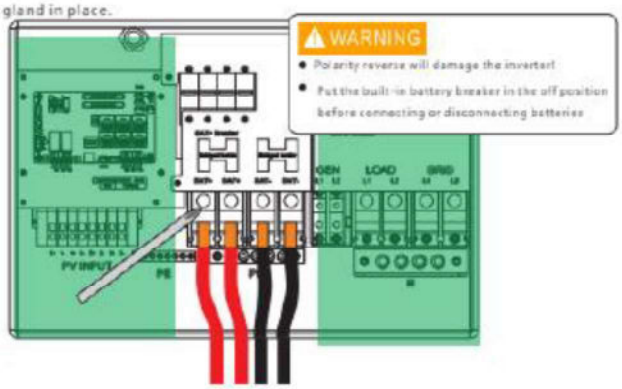
7.0 Illustrations

Illustration 2r - User manual(partly)

Cable Requirement:

Model	Cable Size	Minimum Voltage	Torque for cable connection
12K	2/0-3/0 AWG(65-85 mm²)	600V	9-18(N.M)

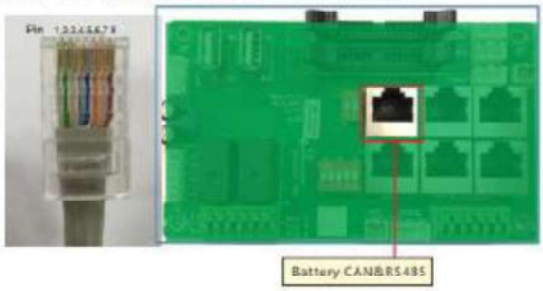
Step 1: Strip 1/4-5/16inch(6-8mm) insulation from the cable end and crimp OT rings for the cable ends.
Step 2: Route the battery power cable, connect positive to BAT+,negative to BAT-.
Step 3: Secure the conduit fitting to the enclosure using the counter nut.
Step 4: Fasten the OT rings of battery positive and negative cables to the lugs according to the markings.
Step 5: Fix the cable gland in place.



4. Battery communication cable connection

Correct battery communication cable must be used to connect the battery to the invertor when users choose lithium-ion battery type. Please select 'Lead-acid ' type if the lithium battery can not communicate with the inverter. The battery communication port on inverter is an RJ45 socket, Pin for the RJ45 plug of the communication cable is as below. Make the communication cable according to the below inverter Pin and the correct pinout of communication port on battery. The inverter supports both CAN and Rs485 communication.

Pin	Description
1	NC
2	GND
3	NC
4	BAT CAN H
5	BAT CAN L
6	NC
7	BAT RS485 A
8	BAT RS485 B



7.0 Illustrations

Illustration 3 - Ratings

Model	51.2-100V2-LUX 12K1	51.2-100V3-LUX 12K1	51.2-100V4-LUX 12K1	51.2-100V5-LUX 12K1
Battery data				
Battery type	LiFePO4			
Total capacity	200Ah	300Ah	400Ah	500Ah
Total energy	10.24kWh	15.36kWh	20.48kWh	25.6kWh
Battery voltage range	44.8-57.6 d.c.V			
Nominal voltage	51.2 d.c.V			
Max. charge current	140 d.c.A	210 d.c.A	250 d.c.A	250 d.c.A
Max. discharge current	200 d.c.A	250 d.c.A	250 d.c.A	250 d.c.A
Parallel Number	1S2P	1S3P	1S4P	1S5P
PV Input data				
Max. input voltage	600 d.c.V			
PV input voltage range	120-500 d.c.V			
Max. input continuous current	25/15/15 d.c.A			
Max. short circuit current	31/19/19 d.c.A			
AC input/output for grid				
Nominal voltage	240/208Vac			
Max. input/output current	50 a.c.A @ 240 a.c.V 50 a.c.A @ 208 a.c.V			
Max. short circuit current and duration	156A peak @100us, 1pcs			
Nominal input/output power	12KW @ 240 a.c.V 10.4KW @ 208 a.c.V			
Max. output apparent Power	12KVA @ 240 a.c.V 10.4KVA @ 208 a.c.V			
Max. output over current protection	63A, 1pcs			
Output power factor rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
AC output for off-grid				
Nominal voltage	208Vac, 120/240Vac Split Phase			
Max. continuous current	50 a.c.A @ 240 a.c.V 50 a.c.A @ 208 a.c.V			
Max. AC power	12kVA @ 240 a.c.V 10.24kVA @ 208 a.c.V			
AC frequency	60Hz			
Output power factor rating	0.8 Leading to 0.8 Lagging			
General Data				
Charging Temperature Range	-5℃ to 50℃			
Discharging Temperature Range	-20℃ to 55℃			
Install Location	Indoor use			
Protection Class	IP20			

7.0 Illustrations

Illustration 3a - Ratings

Model	51.2-100V6-LUX 12K1	51.2-100V7-LUX 12K1	51.2-100V8-LUX 12K1	51.2-100V9-LUX 12K1
Battery data				
Battery type	LiFePO4			
Total capacity	600Ah	700Ah	800Ah	900Ah
Total energy	30.72kWh	35.84kWh	40.96kWh	46.08kWh
Battery voltage range	44.8-57.6 d.c.V			
Nominal voltage	51.2 d.c.V			
Max. charge current	250 d.c.A	250 d.c.A	250 d.c.A	250 d.c.A
Max. discharge current	250 d.c.A	250 d.c.A	250 d.c.A	250 d.c.A
Parallel Number	1S6P	1S7P	1S8P	1S9P
PV Input data				
Max. input voltage	600 d.c.V			
PV input voltage range	120-500 d.c.V			
Max. input continuous current	25/15/15 d.c.A			
Max. short circuit current	31/19/19 d.c.A			
AC input/output for grid				
Nominal voltage	240/208Vac			
Max. input/output current	50 a.c.A @ 240 a.c.V 50 a.c.A @ 208 a.c.V			
Max. short circuit current and duration	156A peak @100us, 1pcs			
Nominal input/output power	12KW @ 240 a.c.V 10.4KW @ 208 a.c.V			
Max. output apparent Power	12KVA @ 240 a.c.V 10.4KVA @ 208 a.c.V			
Max. output over current protection	63A, 1pcs			
Output power factor rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
AC output for off-grid				
Nominal voltage	208Vac, 120/240Vac Split Phase			
Max. continuous current	50 a.c.A @ 240 a.c.V 50 a.c.A @ 208 a.c.V			
Max. AC power	12kVA @ 240 a.c.V 10.24kVA @ 208 a.c.V			
AC frequency	60Hz			
Output power factor	0.8 Leading to 0.8 Lagging			
General Data				
Charging Temperature Range	-5℃ to 50℃			
Discharging Temperature Range	-20℃ to 55℃			
Install Location	Indoor use			
Protection Class	IP20			

7.0 Illustrations

Illustration 3b - Ratings

Model	51.2-100V10-LUX 12K1	51.2-100V11-LUX 12K1	51.2-100V12-LUX 12K1	51.2-100V13-LUX 12K1
Battery data				
Battery type	LiFePO4			
Total capacity	1000Ah	1100Ah	1200Ah	1300Ah
Total energy	51.2kWh	56.32kWh	61.44kWh	66.56kWh
Battery voltage range	44.8-57.6 d.c.V			
Nominal voltage	51.2 d.c.V			
Max. charge current	250 d.c.A	250 d.c.A	250 d.c.A	250 d.c.A
Max. discharge current	250 d.c.A	250 d.c.A	250 d.c.A	250 d.c.A
Parallel Number	1S10P	1S11P	1S12P	1S13P
PV Input data				
Max. input voltage	600 d.c.V			
PV input voltage range	120-500 d.c.V			
Max. input continuous current	25/15/15 d.c.A			
Max. short circuit current	31/19/19 d.c.A			
AC input/output for grid				
Nominal voltage	240/208Vac			
Max. input/output current	50 a.c.A @ 240 a.c.V 50 a.c.A @ 208 a.c.V			
Max. short circuit current and duration	156A peak @100us, 1pcs			
Nominal input/output power	12KW @ 240 a.c.V 10.4KW @ 208 a.c.V			
Max. output apparent Power	12KVA @ 240 a.c.V 10.4KVA @ 208 a.c.V			
Max. output over current protection	63A, 1pcs			
Output power factor rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
AC output for off-grid				
Nominal voltage	208Vac, 120/240Vac Split Phase			
Max. continuous current	50 a.c.A @ 240 a.c.V 50 a.c.A @ 208 a.c.V			
Max. AC power	12kVA @ 240 a.c.V 10.24kVA @ 208 a.c.V			
AC frequency	60Hz			
Output power factor rating	0.8 Leading to 0.8 Lagging			
General Data				
Charging Temperature Range	-5℃ to 50℃			
Discharging Temperature Range	-20℃ to 55℃			
Install Location	Indoor use			
Protection Class	IP20			

7.0 Illustrations

Illustration 3c - Ratings

Model	51.2-100V14-LUX 12K1
Battery data	
Battery type	LiFePO4
Total capacity	1400Ah
Total energy	71.68kWh
Battery voltage range	44.8-57.6 d.c.V
Nominal voltage	51.2 d.c.V
Max. charge current	250 d.c.A
Max. discharge current	250 d.c.A
Parallel Number	1S14P
PV Input data	
Max. input voltage	600 d.c.V
PV input voltage range	120-500 d.c.V
Max. input continuous current	25/15/15 d.c.A
Max. short circuit current	31/19/19 d.c.A
AC input/output for grid	
Nominal voltage	240/208Vac
Max. input/output current	50 a.c.A @ 240 a.c.V 50 a.c.A @ 208 a.c.V
Max. short circuit current and duration	156A peak @100us, 1pcs
Nominal input/output power	12KW @ 240 a.c.V 10.4KW @ 208 a.c.V
Max. output apparent Power	12KVA @ 240 a.c.V 10.4KVA @ 208 a.c.V
Max. output over current protection	63A, 1pcs
Output power factor rating	0.8 Leading to 0.8 Lagging
Frequency	60Hz
AC output for off-grid	
Nominal voltage	208Vac, 120/240Vac Split Phase
Max. continuous current	50 a.c.A @ 240 a.c.V 50 a.c.A @ 208 a.c.V
Max. AC power	12kVA @ 240 a.c.V 10.24kVA @ 208 a.c.V
AC frequency	60Hz
Output power factor rating	0.8 Leading to 0.8 Lagging
General Data	
Charging Temperature Range	-5℃ to 50℃
Discharging Temperature Range	-20℃ to 55℃
Install Location	Indoor use
Protection Class	IP20

7.0 Illustrations

Illustration 3d - Ratings

Model	51.2-100V4-LUX 12K2	51.2-100V5-LUX 12K2	51.2-100V6-LUX 12K2	51.2-100V7-LUX 12K2
Battery data				
Battery type	LiFePO4			
Total capacity	400Ah	500Ah	600Ah	700Ah
Total energy	20.48kWh	25.6kWh	30.72kWh	35.84kWh
Battery voltage range	44.8-57.6 d.c.V			
Nominal voltage	51.2 d.c.V			
Max. charge current	280 d.c.A	350 d.c.A	420 d.c.A	490 d.c.A
Max. discharge current	400 d.c.A	500 d.c.A	500 d.c.A	500 d.c.A
Parallel Number	1S4P	1S5P	1S6P	1S7P
PV Input data				
Max. input voltage	600 d.c.V			
PV input voltage range	120-500 d.c.V			
Max. input continuous current	25/15/15 d.c.A *2			
Max. short circuit current	31/19/19 d.c.A *2			
AC input/output for grid				
Nominal voltage	240/208Vac			
Max. input/output current	100 a.c.A @ 240 a.c.V 100 a.c.A @ 208 a.c.V			
Max. short circuit current and duration	156A peak @100us, 1pcs			
Nominal input/output power	24KW @ 240 a.c.V 20.8KW @ 208 a.c.V			
Max. output apparent Power	24KVA @ 240 a.c.V 20.8KVA @ 208 a.c.V			
Max. output over current protection	63A, 1pcs			
Output power factor rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
AC output for off-grid				
Nominal voltage	208Vac, 120/240Vac Split Phase			
Max. continuous current	100 a.c.A @ 240 a.c.V 100 a.c.A @ 208 a.c.V			
Max. AC power	24KVA @ 240 a.c.V 20.8KVA @ 208 a.c.V			
AC frequency	60Hz			
Output power factor rating	0.8 Leading to 0.8 Lagging			
General Data				
Charging Temperature Range	-5℃ to 50℃			
Discharging Temperature Range	-20℃ to 55℃			
Install Location	Indoor use			
Protection Class	IP20			

7.0 Illustrations

Illustration 3e - Ratings

Model	51.2-100V8-LUX 12K2	51.2-100V9-LUX 12K2	51.2-100V10-LUX 12K2	51.2-100V11-LUX 12K2
Battery data				
Battery type	LiFePO4			
Total capacity	800Ah	900Ah	1000Ah	1100Ah
Total energy	40.96kWh	46.08kWh	51.2kWh	56.32kWh
Battery voltage range	44.8-57.6 d.c.V			
Nominal voltage	51.2 d.c.V			
Max. charge current	500 d.c.A	500 d.c.A	500 d.c.A	500 d.c.A
Max. discharge current	500 d.c.A	500 d.c.A	500 d.c.A	500 d.c.A
Parallel Number	1S8P	1S9P	1S10P	1S11P
PV Input data				
Max. input voltage	600 d.c.V			
PV input voltage range	120-500 d.c.V			
Max. input continuous current	25/15/15 d.c.A *2			
Max. short circuit current	31/19/19 d.c.A *2			
AC input/output for grid				
Nominal voltage	240/208Vac			
Max. input/output current	100 a.c.A @ 240 a.c.V 100 a.c.A @ 208 a.c.V			
Max. short circuit current and duration	156A peak @100us, 1pcs			
Nominal input/output power	24KW @ 240 a.c.V 20.8KW @ 208 a.c.V			
Max. output apparent Power	24KVA @ 240 a.c.V 20.8KVA @ 208 a.c.V			
Max. output over current protection	63A, 1pcs			
Output power factor rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
AC output for off-grid				
Nominal voltage	208Vac, 120/240Vac Split Phase			
Max. continuous current	100 a.c.A @ 240 a.c.V 100 a.c.A @ 208 a.c.V			
Max. AC power	24KVA @ 240 a.c.V 20.8KVA @ 208 a.c.V			
AC frequency	60Hz			
Output power factor rating	0.8 Leading to 0.8 Lagging			
General Data				
Charging Temperature Range	-5℃ to 50℃			
Discharging Temperature Range	-20℃ to 55℃			
Install Location	Indoor use			
Protection Class	IP20			

7.0 Illustrations

Illustration 3f - Ratings

Model	51.2-100V12-LUX 12K2	51.2-100V13-LUX 12K2	51.2-100V14-LUX 12K2	51.2-100V15-LUX 12K2
Battery data				
Battery type	LiFePO4			
Total capacity	1200Ah	1300Ah	1400Ah	1500Ah
Total energy	61.44kWh	66.56kWh	71.68kWh	76.8kWh
Battery voltage range	44.8-57.6 d.c.V			
Nominal voltage	51.2 d.c.V			
Max. charge current	500 d.c.A	500 d.c.A	500 d.c.A	500 d.c.A
Max. discharge current	500 d.c.A	500 d.c.A	500 d.c.A	500 d.c.A
Parallel Number	1S12P	1S13P	1S14P	1S15P
PV Input data				
Max. input voltage	600 d.c.V			
PV input voltage range	120-500 d.c.V			
Max. input continuous current	25/15/15 d.c.A *2			
Max. short circuit current	31/19/19 d.c.A *2			
AC input/output for grid				
Nominal voltage	240/208Vac			
Max. input/output current	100 a.c.A @ 240 a.c.V 100 a.c.A @ 208 a.c.V			
Max. short circuit current and duration	156A peak @100us, 1pcs			
Nominal input/output power	24KW @ 240 a.c.V 20.8KW @ 208 a.c.V			
Max. output apparent Power	24KVA @ 240 a.c.V 20.8KVA @ 208 a.c.V			
Max. output over current protection	63A, 1pcs			
Output power factor rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
AC output for off-grid				
Nominal voltage	208Vac, 120/240Vac Split Phase			
Max. continuous current	100 a.c.A @ 240 a.c.V 100 a.c.A @ 208 a.c.V			
Max. AC power	24KVA @ 240 a.c.V 20.8KVA @ 208 a.c.V			
AC frequency	60Hz			
Output power factor rating	0.8 Leading to 0.8 Lagging			
General Data				
Charging Temperature Range	-5℃ to 50℃			
Discharging Temperature Range	-20℃ to 55℃			
Install Location	Indoor use			
Protection Class	IP20			

7.0 Illustrations

Illustration 3g - Ratings

Model	51.2-100V16-LUX 12K2	51.2-100V17-LUX 12K2	51.2-100V18-LUX 12K2	51.2-100V19-LUX 12K2
Battery data				
Battery type	LiFePO4			
Total capacity	1600Ah	1700Ah	1800Ah	1900Ah
Total energy	81.92kWh	87.04kWh	92.16kWh	97.28kWh
Battery voltage range	44.8-57.6 d.c.V			
Nominal voltage	51.2 d.c.V			
Max. charge current	500 d.c.A	500 d.c.A	500 d.c.A	500 d.c.A
Max. discharge current	500 d.c.A	500 d.c.A	500 d.c.A	500 d.c.A
Parallel Number	1S16P	1S17P	1S18P	1S19P
PV Input data				
Max. input voltage	600 d.c.V			
PV input voltage range	120-500 d.c.V			
Max. input continuous current	25/15/15 d.c.A *2			
Max. short circuit current	31/19/19 d.c.A *2			
AC input/output for grid				
Nominal voltage	240/208Vac			
Max. input/output current	100 a.c.A @ 240 a.c.V 100 a.c.A @ 208 a.c.V			
Max. short circuit current and duration	156A peak @100us, 1pcs			
Nominal input/output power	24KW @ 240 a.c.V 20.8KW @ 208 a.c.V			
Max. output apparent Power	24KVA @ 240 a.c.V 20.8KVA @ 208 a.c.V			
Max. output over current protection	63A, 1pcs			
Output power factor rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
AC output for off-grid				
Nominal voltage	208Vac, 120/240Vac Split Phase			
Max. continuous current	100 a.c.A @ 240 a.c.V 100 a.c.A @ 208 a.c.V			
Max. AC power	24KVA @ 240 a.c.V 20.8KVA @ 208 a.c.V			
AC frequency	60Hz			
Output power factor rating	0.8 Leading to 0.8 Lagging			
General Data				
Charging Temperature Range	-5℃ to 50℃			
Discharging Temperature Range	-20℃ to 55℃			
Install Location	Indoor use			
Protection Class	IP20			

7.0 Illustrations

Illustration 3h - Ratings

Model	51.2-100V20-LUX 12K2	51.2-100V21-LUX 12K2	51.2-100V22-LUX 12K2	51.2-100V23-LUX 12K2
Battery data				
Battery type	LiFePO4			
Total capacity	2000Ah	2100Ah	2200Ah	2300Ah
Total energy	102.4kWh	107.52kWh	112.64kWh	117.76kWh
Battery voltage range	44.8-57.6 d.c.V			
Nominal voltage	51.2 d.c.V			
Max. charge current	500 d.c.A	500 d.c.A	500 d.c.A	500 d.c.A
Max. discharge current	500 d.c.A	500 d.c.A	500 d.c.A	500 d.c.A
Parallel Number	1S20P	1S21P	1S22P	1S23P
PV Input data				
Max. input voltage	600 d.c.V			
PV input voltage range	120-500 d.c.V			
Max. input continuous current	25/15/15 d.c.A *2			
Max. short circuit current	31/19/19 d.c.A *2			
AC input/output for grid				
Nominal voltage	240/208Vac			
Max. input/output current	100 a.c.A @ 240 a.c.V 100 a.c.A @ 208 a.c.V			
Max. short circuit current and duration	156A peak @100us, 1pcs			
Nominal input/output power	24KW @ 240 a.c.V 20.8KW @ 208 a.c.V			
Max. output apparent Power	24KVA @ 240 a.c.V 20.8KVA @ 208 a.c.V			
Max. output over current protection	63A, 1pcs			
Output power factor rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
AC output for off-grid				
Nominal voltage	208Vac, 120/240Vac Split Phase			
Max. continuous current	100 a.c.A @ 240 a.c.V 100 a.c.A @ 208 a.c.V			
Max. AC power	24KVA @ 240 a.c.V 20.8KVA @ 208 a.c.V			
AC frequency	60Hz			
Output power factor rating	0.8 Leading to 0.8 Lagging			
General Data				
Charging Temperature Range	-5℃ to 50℃			
Discharging Temperature Range	-20℃ to 55℃			
Install Location	Indoor use			
Protection Class	IP20			

7.0 Illustrations

Illustration 3i - Ratings

Model	51.2-100V24-LUX 12K2	51.2-100V25-LUX 12K2	51.2-100V26-LUX 12K2	51.2-100V27-LUX 12K2
Battery data				
Battery type	LiFePO4			
Total capacity	2400Ah	2500Ah	2600Ah	2700Ah
Total energy	122.88kWh	128kWh	133.12kWh	138.24kWh
Battery voltage range	44.8-57.6 d.c.V			
Nominal voltage	51.2 d.c.V			
Max. charge current	500 d.c.A	500 d.c.A	500 d.c.A	500 d.c.A
Max. discharge current	500 d.c.A	500 d.c.A	500 d.c.A	500 d.c.A
Parallel Number	1S24P	1S25P	1S26P	1S27P
PV Input data				
Max. input voltage	600 d.c.V			
PV input voltage range	120-500 d.c.V			
Max. input continuous current	25/15/15 d.c.A *2			
Max. short circuit current	31/19/19 d.c.A *2			
AC input/output for grid				
Nominal voltage	240/208Vac			
Max. input/output current	100 a.c.A @ 240 a.c.V 100 a.c.A @ 208 a.c.V			
Max. short circuit current and duration	156A peak @100us, 1pcs			
Nominal input/output power	24KW @ 240 a.c.V 20.8KW @ 208 a.c.V			
Max. output apparent Power	24KVA @ 240 a.c.V 20.8KVA @ 208 a.c.V			
Max. output over current protection	63A, 1pcs			
Output power factor rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
AC output for off-grid				
Nominal voltage	208Vac, 120/240Vac Split Phase			
Max. continuous current	100 a.c.A @ 240 a.c.V 100 a.c.A @ 208 a.c.V			
Max. AC power	24KVA @ 240 a.c.V 20.8KVA @ 208 a.c.V			
AC frequency	60Hz			
Output power factor rating	0.8 Leading to 0.8 Lagging			
General Data				
Charging Temperature Range	-5℃ to 50℃			
Discharging Temperature Range	-20℃ to 55℃			
Install Location	Indoor use			
Protection Class	IP20			

7.0 Illustrations

Illustration 3j - Ratings

Model	51.2-100V28-LUX 12K2
Battery data	
Battery type	LiFePO4
Total capacity	2800Ah
Total energy	143.36kWh
Battery voltage range	44.8-57.6 d.c.V
Nominal voltage	51.2 d.c.V
Max. charge current	500 d.c.A
Max. discharge current	500 d.c.A
Parallel Number	1S28P
PV Input data	
Max. input voltage	600 d.c.V
PV input voltage range	120-500 d.c.V
Max. input continuous current	25/15/15 d.c.A *2
Max. short circuit current	31/19/19 d.c.A *2
AC input/output for grid	
Nominal voltage	240/208Vac
Max. input/output current	100 a.c.A @ 240 a.c.V 100 a.c.A @ 208 a.c.V
Max. short circuit current and duration	156A peak @100us, 1pcs
Nominal input/output power	24KW @ 240 a.c.V 20.8KW @ 208 a.c.V
Max. output apparent Power	24KVA @ 240 a.c.V 20.8KVA @ 208 a.c.V
Max. output over current protection	63A, 1pcs
Output power factor rating	0.8 Leading to 0.8 Lagging
Frequency	60Hz
AC output for off-grid	
Nominal voltage	208Vac, 120/240Vac Split Phase
Max. continuous current	100 a.c.A @ 240 a.c.V 100 a.c.A @ 208 a.c.V
Max. AC power	24KVA @ 240 a.c.V 20.8KVA @ 208 a.c.V
AC frequency	60Hz
Output power factor rating	0.8 Leading to 0.8 Lagging
General Data	
Charging Temperature Range	-5℃ to 50℃
Discharging Temperature Range	-20℃ to 55℃
Install Location	Indoor use
Protection Class	IP20

7.0 Illustrations

Illustration 3k - Ratings

Model	51.2-100V2-LUX 11.4K1	51.2-100V3-LUX 11.4K1	51.2-100V4-LUX 11.4K1	51.2-100V5-LUX 11.4K1
Battery data				
Battery type	LiFePO4			
Total capacity	200Ah	300Ah	400Ah	500Ah
Total energy	10.24kWh	15.36kWh	20.48kWh	25.6kWh
Battery voltage range	44.8-57.6 d.c.V			
Nominal voltage	51.2 d.c.V			
Max. charge current	140 d.c.A	210 d.c.A	238 d.c.A	238 d.c.A
Max. discharge current	200 d.c.A	238 d.c.A	238 d.c.A	238 d.c.A
Parallel Number	1S2P	1S3P	1S4P	1S5P
PV Input data				
Max. input voltage	600 d.c.V			
PV input voltage range	120-500 d.c.V			
Max. input continuous current	25/15/15 d.c.A			
Max. short circuit current	31/19/19 d.c.A			
AC input/output for grid				
Nominal voltage	240/208Vac			
Max. input/output current	47.5 a.c.A @ 240 a.c.V 47.5 a.c.A @ 208 a.c.V			
Max. short circuit current and duration	156A peak @100us, 1pcs			
Nominal input/output power	11.4KW @ 240 a.c.V 9.88KW @ 208 a.c.V			
Max. output apparent Power	11.4KVA @ 240 a.c.V 9.88KVA @ 208 a.c.V			
Max. output over current protection	63A, 1pcs			
Output power factor rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
AC output for off-grid				
Nominal voltage	208Vac, 120/240Vac Split Phase			
Max. continuous current	47.5 a.c.A @ 240 a.c.V 47.5 a.c.A @ 208 a.c.V			
Max. AC power	11.4KVA @ 240 a.c.V 9.88KVA @ 208 a.c.V			
AC frequency	60Hz			
Output power factor rating	0.8 Leading to 0.8 Lagging			
General Data				
Charging Temperature Range	-5℃ to 50℃			
Discharging Temperature Range	-20℃ to 55℃			
Install Location	Indoor use			
Protection Class	IP20			

7.0 Illustrations

Illustration 3I - Ratings

Model	51.2-100V6-LUX 11.4K1	51.2-100V7-LUX 11.4K1	51.2-100V8-LUX 11.4K1	51.2-100V9-LUX 11.4K1
Battery data				
Battery type	LiFePO4			
Total capacity	600Ah	700Ah	800Ah	900Ah
Total energy	30.72kWh	35.84kWh	40.96kWh	46.08kWh
Battery voltage range	44.8-57.6 d.c.V			
Nominal voltage	51.2 d.c.V			
Max. charge current	238 d.c.A	238 d.c.A	238 d.c.A	238 d.c.A
Max. discharge current	238 d.c.A	238 d.c.A	238 d.c.A	238 d.c.A
Parallel Number	1S6P	1S7P	1S8P	1S9P
PV Input data				
Max. input voltage	600 d.c.V			
PV input voltage range	120-500 d.c.V			
Max. input continuous current	25/15/15 d.c.A			
Max. short circuit current	31/19/19 d.c.A			
AC input/output for grid				
Nominal voltage	240/208Vac			
Max. input/output current	47.5 a.c.A @ 240 a.c.V 47.5 a.c.A @ 208 a.c.V			
Max. short circuit current and duration	156A peak @100us, 1pcs			
Nominal input/output power	11.4KW @ 240 a.c.V 9.88KW @ 208 a.c.V			
Max. output apparent Power	11.4KVA @ 240 a.c.V 9.88KVA @ 208 a.c.V			
Max. output over current protection	63A, 1pcs			
Output power factor rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
AC output for off-grid				
Nominal voltage	208Vac, 120/240Vac Split Phase			
Max. continuous current	47.5 a.c.A @ 240 a.c.V 47.5 a.c.A @ 208 a.c.V			
Max. AC power	11.4KVA @ 240 a.c.V 9.88KVA @ 208 a.c.V			
AC frequency	60Hz			
Output power factor rating	0.8 Leading to 0.8 Lagging			
General Data				
Charging Temperature Range	-5℃ to 50℃			
Discharging Temperature Range	-20℃ to 55℃			
Install Location	Indoor use			
Protection Class	IP20			

7.0 Illustrations

Illustration 3m - Ratings

Model	51.2-100V10-LUX 11.4K1	51.2-100V11-LUX 11.4K1	51.2-100V12-LUX 11.4K1	51.2-100V13-LUX 11.4K1
Battery data				
Battery type	LiFePO4			
Total capacity	1000Ah	1100Ah	1200Ah	1300Ah
Total energy	51.2kWh	56.32kWh	61.44kWh	66.56kWh
Battery voltage range	44.8-57.6 d.c.V			
Nominal voltage	51.2 d.c.V			
Max. charge current	238 d.c.A	238 d.c.A	238 d.c.A	238 d.c.A
Max. discharge current	238 d.c.A	238 d.c.A	238 d.c.A	238 d.c.A
Parallel Number	1S10P	1S11P	1S12P	1S13P
PV Input data				
Max. input voltage	600 d.c.V			
PV input voltage range	120-500 d.c.V			
Max. input continuous current	25/15/15 d.c.A			
Max. short circuit current	31/19/19 d.c.A			
AC input/output for grid				
Nominal voltage	240/208Vac			
Max. input/output current	47.5 a.c.A @ 240 a.c.V 47.5 a.c.A @ 208 a.c.V			
Max. short circuit current and duration	156A peak @100us, 1pcs			
Nominal input/output power	11.4KW @ 240 a.c.V 9.88KW @ 208 a.c.V			
Max. output apparent Power	11.4KVA @ 240 a.c.V 9.88KVA @ 208 a.c.V			
Max. output over current protection	63A, 1pcs			
Output power factor rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
AC output for off-grid				
Nominal voltage	208Vac, 120/240Vac Split Phase			
Max. continuous current	47.5 a.c.A @ 240 a.c.V 47.5 a.c.A @ 208 a.c.V			
Max. AC power	11.4KVA @ 240 a.c.V 9.88KVA @ 208 a.c.V			
AC frequency	60Hz			
Output power factor rating	0.8 Leading to 0.8 Lagging			
General Data				
Charging Temperature Range	-5℃ to 50℃			
Discharging Temperature Range	-20℃ to 55℃			
Install Location	Indoor use			
Protection Class	IP20			

7.0 Illustrations

Illustration 3n - Ratings

Model	51.2-100V14-LUX 11.4K1
Battery data	
Battery type	LiFePO4
Total capacity	1400Ah
Total energy	71.68kWh
Battery voltage range	44.8-57.6 d.c.V
Nominal voltage	51.2 d.c.V
Max. charge current	238 d.c.A
Max. discharge current	238 d.c.A
Parallel Number	1S14P
PV Input data	
Max. input voltage	600 d.c.V
PV input voltage range	120-500 d.c.V
Max. input continuous current	25/15/15 d.c.A
Max. short circuit current	31/19/19 d.c.A
AC input/output for grid	
Nominal voltage	240/208Vac
Max. input/output current	47.5 a.c.A @ 240 a.c.V 47.5 a.c.A @ 208 a.c.V
Max. short circuit current and duration	156A peak @100us, 1pcs
Nominal input/output power	11.4KW @ 240 a.c.V 9.88KW @ 208 a.c.V
Max. output apparent Power	11.4KVA @ 240 a.c.V 9.88KVA @ 208 a.c.V
Max. output over current protection	63A, 1pcs
Output power factor rating	0.8 Leading to 0.8 Lagging
Frequency	60Hz
AC output for off-grid	
Nominal voltage	208Vac, 120/240Vac Split Phase
Max. continuous current	47.5 a.c.A @ 240 a.c.V 47.5 a.c.A @ 208 a.c.V
Max. AC power	11.4KVA @ 240 a.c.V 9.88KVA @ 208 a.c.V
AC frequency	60Hz
Output power factor rating	0.8 Leading to 0.8 Lagging
General Data	
Charging Temperature Range	-5℃ to 50℃
Discharging Temperature Range	-20℃ to 55℃
Install Location	Indoor use
Protection Class	IP20

7.0 Illustrations

Illustration 3o - Ratings

Model	51.2-100V4-LUX 11.4K2	51.2-100V5-LUX 11.4K2	51.2-100V6-LUX 11.4K2	51.2-100V7-LUX 11.4K2
Battery data				
Battery type	LiFePO4			
Total capacity	400Ah	500Ah	600Ah	700Ah
Total energy	20.48kWh	25.6kWh	30.72kWh	35.84kWh
Battery voltage range	44.8-57.6 d.c.V			
Nominal voltage	51.2 d.c.V			
Max. charge current	280 d.c.A	350 d.c.A	420 d.c.A	476 d.c.A
Max. discharge current	400 d.c.A	476 d.c.A	476 d.c.A	476 d.c.A
Parallel Number	1S4P	1S5P	1S6P	1S7P
PV Input data				
Max. input voltage	600 d.c.V			
PV input voltage range	120-500 d.c.V			
Max. input continuous current	25/15/15 d.c.A *2			
Max. short circuit current	31/19/19 d.c.A *2			
AC input/output for grid				
Nominal voltage	240/208Vac			
Max. input/output current	95 a.c.A @ 240 a.c.V 95 a.c.A @ 208 a.c.V			
Max. short circuit current and duration	156A peak @100us, 1pcs			
Nominal input/output power	22.8KW @ 240 a.c.V 19.76KW @ 208 a.c.V			
Max. output apparent Power	22.8KVA @ 240 a.c.V 19.76KVA @ 208 a.c.V			
Max. output over current protection	63A, 1pcs			
Output power factor rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
AC output for off-grid				
Nominal voltage	208Vac, 120/240Vac Split Phase			
Max. continuous current	95 a.c.A @ 240 a.c.V 95 a.c.A @ 208 a.c.V			
Max. AC power	22.8KVA @ 240 a.c.V 19.76KVA @ 208 a.c.V			
AC frequency	60Hz			
Output power factor rating	0.8 Leading to 0.8 Lagging			
General Data				
Charging Temperature Range	-5℃ to 50℃			
Discharging Temperature Range	-20℃ to 55℃			
Install Location	Indoor use			
Protection Class	IP20			

7.0 Illustrations

Illustration 3p - Ratings

Model	51.2-100V8-LUX 11.4K2	51.2-100V9-LUX 11.4K2	51.2-100V10-LUX 11.4K2	51.2-100V11-LUX 11.4K2
Battery data				
Battery type	LiFePO4			
Total capacity	800Ah	900Ah	1000Ah	1100Ah
Total energy	40.96kWh	46.08kWh	51.2kWh	56.32kWh
Battery voltage range	44.8-57.6 d.c.V			
Nominal voltage	51.2 d.c.V			
Max. charge current	476 d.c.A	476 d.c.A	476 d.c.A	476 d.c.A
Max. discharge current	476 d.c.A	476 d.c.A	476 d.c.A	476 d.c.A
Parallel Number	1S8P	1S9P	1S10P	1S11P
PV Input data				
Max. input voltage	600 d.c.V			
PV input voltage range	120-500 d.c.V			
Max. input continuous current	25/15/15 d.c.A *2			
Max. short circuit current	31/19/19 d.c.A *2			
AC input/output for grid				
Nominal voltage	240/208Vac			
Max. input/output current	95 a.c.A @ 240 a.c.V 95 a.c.A @ 208 a.c.V			
Max. short circuit current and duration	156A peak @100us, 1pcs			
Nominal input/output power	22.8KW @ 240 a.c.V 19.76KW @ 208 a.c.V			
Max. output apparent Power	22.8KVA @ 240 a.c.V 19.76KVA @ 208 a.c.V			
Max. output over current protection	63A, 1pcs			
Output power factor rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
AC output for off-grid				
Nominal voltage	208Vac, 120/240Vac Split Phase			
Max. continuous current	95 a.c.A @ 240 a.c.V 95 a.c.A @ 208 a.c.V			
Max. AC apparent power	22.8KVA @ 240 a.c.V 19.76KVA @ 208 a.c.V			
AC frequency	60Hz			
Output power factor rating	0.8 Leading to 0.8 Lagging			
General Data				
Charging Temperature Range	-5℃ to 50℃			
Discharging Temperature Range	-20℃ to 55℃			
Install Location	Indoor use			
Protection Class	IP20			

7.0 Illustrations

Illustration 3q - Ratings

Model	51.2-100V12-LUX 11.4K2	51.2-100V13-LUX 11.4K2	51.2-100V14-LUX 11.4K2	51.2-100V15-LUX 11.4K2
Battery data				
Battery type	LiFePO4			
Total capacity	1200Ah	1300Ah	1400Ah	1500Ah
Total energy	61.44kWh	66.56kWh	71.68kWh	76.8kWh
Battery voltage range	44.8-57.6 d.c.V			
Nominal voltage	51.2 d.c.V			
Max. charge current	476 d.c.A	476 d.c.A	476 d.c.A	476 d.c.A
Max. discharge current	476 d.c.A	476 d.c.A	476 d.c.A	476 d.c.A
Parallel Number	1S12P	1S13P	1S14P	1S15P
PV Input data				
Max. input voltage	600 d.c.V			
PV input voltage range	120-500 d.c.V			
Max. input continuous current	25/15/15 d.c.A *2			
Max. short circuit current	31/19/19 d.c.A *2			
AC input/output for grid				
Nominal voltage	240/208Vac			
Max. input/output current	95 a.c.A @ 240 a.c.V 95 a.c.A @ 208 a.c.V			
Max. short circuit current and duration	156A peak @100us, 1pcs			
Nominal input/output power	22.8KW @ 240 a.c.V 19.76KW @ 208 a.c.V			
Max. output apparent Power	22.8KVA @ 240 a.c.V 19.76KVA @ 208 a.c.V			
Max. output over current protection	63A, 1pcs			
Output power factor rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
AC output for off-grid				
Nominal voltage	208Vac, 120/240Vac Split Phase			
Max. continuous current	95 a.c.A @ 240 a.c.V 95 a.c.A @ 208 a.c.V			
Max. AC power	22.8KVA @ 240 a.c.V 19.76KVA @ 208 a.c.V			
AC frequency	60Hz			
Output power factor rating	0.8 Leading to 0.8 Lagging			
General Data				
Charging Temperature Range	-5℃ to 50℃			
Discharging Temperature Range	-20℃ to 55℃			
Install Location	Indoor use			
Protection Class	IP20			

7.0 Illustrations

Illustration 3r - Ratings

Model	51.2-100V16-LUX 11.4K2	51.2-100V17-LUX 11.4K2	51.2-100V18-LUX 11.4K2	51.2-100V19-LUX 11.4K2
Battery data				
Battery type	LiFePO4			
Total capacity	1600Ah	1700Ah	1800Ah	1900Ah
Total energy	81.92kWh	87.04kWh	92.16kWh	97.28kWh
Battery voltage range	44.8-57.6 d.c.V			
Nominal voltage	51.2 d.c.V			
Max. charge current	476 d.c.A	476 d.c.A	476 d.c.A	476 d.c.A
Max. discharge current	476 d.c.A	476 d.c.A	476 d.c.A	476 d.c.A
Parallel Number	1S16P	1S17P	1S18P	1S19P
PV Input data				
Max. input voltage	600 d.c.V			
PV input voltage range	120-500 d.c.V			
Max. input continuous current	25/15/15 d.c.A *2			
Max. short circuit current	31/19/19 d.c.A *2			
AC input/output for grid				
Nominal voltage	240/208Vac			
Max. input/output current	95 a.c.A @ 240 a.c.V 95 a.c.A @ 208 a.c.V			
Max. short circuit current and duration	156A peak @100us, 1pcs			
Nominal input/output power	22.8KW @ 240 a.c.V 19.76KW @ 208 a.c.V			
Max. output apparent Power	22.8KVA @ 240 a.c.V 19.76KVA @ 208 a.c.V			
Max. output over current protection	63A, 1pcs			
Output power factor rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
AC output for off-grid				
Nominal voltage	208Vac, 120/240Vac Split Phase			
Max. continuous current	95 a.c.A @ 240 a.c.V 95 a.c.A @ 208 a.c.V			
Max. AC power	22.8KVA @ 240 a.c.V 19.76KVA @ 208 a.c.V			
AC frequency	60Hz			
Output power factor rating	0.8 Leading to 0.8 Lagging			
General Data				
Charging Temperature Range	-5℃ to 50℃			
Discharging Temperature Range	-20℃ to 55℃			
Install Location	Indoor use			
Protection Class	IP20			

7.0 Illustrations

Illustration 3s - Ratings

Model	51.2-100V20-LUX 11.4K2	51.2-100V21-LUX 11.4K2	51.2-100V22-LUX 11.4K2	51.2-100V23-LUX 11.4K2
Battery data				
Battery type	LiFePO4			
Total capacity	2000Ah	2100Ah	2200Ah	2300Ah
Total energy	102.4kWh	107.52kWh	112.64kWh	117.76kWh
Battery voltage range	44.8-57.6 d.c.V			
Nominal voltage	51.2 d.c.V			
Max. charge current	476 d.c.A	476 d.c.A	476 d.c.A	476 d.c.A
Max. discharge current	476 d.c.A	476 d.c.A	476 d.c.A	476 d.c.A
Parallel Number	1S20P	1S21P	1S22P	1S23P
PV Input data				
Max. input voltage	600 d.c.V			
PV input voltage range	120-500 d.c.V			
Max. input continuous current	25/15/15 d.c.A *2			
Max. short circuit current	31/19/19 d.c.A *2			
AC input/output for grid				
Nominal voltage	240/208Vac			
Max. input/output current	95 a.c.A @ 240 a.c.V 95 a.c.A @ 208 a.c.V			
Max. short circuit current and duration	156A peak @100us, 1pcs			
Nominal input/output power	22.8KW @ 240 a.c.V 19.76KW @ 208 a.c.V			
Max. output apparent Power	22.8KVA @ 240 a.c.V 19.76KVA @ 208 a.c.V			
Max. output over current protection	63A, 1pcs			
Output power factor rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
AC output for off-grid				
Nominal voltage	208Vac, 120/240Vac Split Phase			
Max. continuous current	95 a.c.A @ 240 a.c.V 95 a.c.A @ 208 a.c.V			
Max. AC power	22.8KVA @ 240 a.c.V 19.76KVA @ 208 a.c.V			
AC frequency	60Hz			
Output power factor	0.8 Leading to 0.8 Lagging			
General Data				
Charging Temperature Range	-5℃ to 50℃			
Discharging Temperature Range	-20℃ to 55℃			
Install Location	Indoor use			
Protection Class	IP20			

7.0 Illustrations

Illustration 3t - Ratings

Model	51.2-100V24-LUX 11.4K2	51.2-100V25-LUX 11.4K2	51.2-100V26-LUX 11.4K2	51.2-100V27-LUX 11.4K2
Battery data				
Battery type	LiFePO4			
Total capacity	2400Ah	2500Ah	2600Ah	2700Ah
Total energy	122.88kWh	128kWh	133.12kWh	138.24kWh
Battery voltage range	44.8-57.6 d.c.V			
Nominal voltage	51.2 d.c.V			
Max. charge current	476 d.c.A	476 d.c.A	476 d.c.A	476 d.c.A
Max. discharge current	476 d.c.A	476 d.c.A	476 d.c.A	476 d.c.A
Parallel Number	1S24P	1S25P	1S26P	1S27P
PV Input data				
Max. input voltage	600 d.c.V			
PV input voltage range	120-500 d.c.V			
Max. input continuous current	25/15/15 d.c.A *2			
Max. short circuit current	31/19/19 d.c.A *2			
AC input/output for grid				
Nominal voltage	240/208Vac			
Max. input/output current	95 a.c.A @ 240 a.c.V 95 a.c.A @ 208 a.c.V			
Max. short circuit current and duration	156A peak @100us, 1pcs			
Nominal input/output power	22.8KW @ 240 a.c.V 19.76KW @ 208 a.c.V			
Max. output apparent Power	22.8KVA @ 240 a.c.V 19.76KVA @ 208 a.c.V			
Max. output over current protection	63A, 1pcs			
Output power factor rating	0.8 Leading to 0.8 Lagging			
Frequency	60Hz			
AC output for off-grid				
Nominal voltage	208Vac, 120/240Vac Split Phase			
Max. continuous current	95 a.c.A @ 240 a.c.V 95 a.c.A @ 208 a.c.V			
Max. AC power	22.8KVA @ 240 a.c.V 19.76KVA @ 208 a.c.V			
AC frequency	60Hz			
Output power factor rating	0.8 Leading to 0.8 Lagging			
General Data				
Charging Temperature Range	-5℃ to 50℃			
Discharging Temperature Range	-20℃ to 55℃			
Install Location	Indoor use			
Protection Class	IP20			

7.0 Illustrations

Illustration 3u - Ratings

Model	51.2-100V28-LUX 11.4K2
Battery data	
Battery type	LiFePO4
Total capacity	2800Ah
Total energy	143.36kWh
Battery voltage range	44.8-57.6 d.c.V
Nominal voltage	51.2 d.c.V
Max. charge current	476 d.c.A
Max. discharge current	476 d.c.A
Parallel Number	1S28P
PV Input data	
Max. input voltage	600 d.c.V
PV input voltage range	120-500 d.c.V
Max. input continuous current	25/15/15 d.c.A *2
Max. short circuit current	31/19/19 d.c.A *2
AC input/output for grid	
Nominal voltage	240/208Vac
Max. input/output current	95 a.c.A @ 240 a.c.V 95 a.c.A @ 208 a.c.V
Max. short circuit current and duration	156A peak @100us, 1pcs
Nominal input/output power	22.8KW @ 240 a.c.V 19.76KW @ 208 a.c.V
Max. output apparent Power	22.8KVA @ 240 a.c.V 19.76KVA @ 208 a.c.V
Max. output over current protection	63A, 1pcs
Output power factor rating	0.8 Leading to 0.8 Lagging
Frequency	60Hz
AC output for off-grid	
Nominal voltage	208Vac, 120/240Vac Split Phase
Max. continuous current	95 a.c.A @ 240 a.c.V 95 a.c.A @ 208 a.c.V
Max. AC power	22.8KVA @ 240 a.c.V 19.76KVA @ 208 a.c.V
AC frequency	60Hz
Output power factor rating	0.8 Leading to 0.8 Lagging
General Data	
Charging Temperature Range	-5℃ to 50℃
Discharging Temperature Range	-20℃ to 55℃
Install Location	Indoor use
Protection Class	IP20

8.0 Test Summary					
Evaluation Period	29-Feb-2024 to 24-May-2024			Project No.	240229127GZU
Sample Rec. Date	29-Feb-2024	Condition	Prototype	Sample ID.	S240229127-005~008, S240229127-010
Test Location	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch Room 101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, HuangpuDistrict Guangzhou, Guangdong, China				
Test Procedure	Testing Lab				
Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria.					
The following tests were performed:					

Test Description	[ANSI/CAN/UL 9540:2023 Ed.3] Clause
Normal Operations Test	30
Dielectric Voltage Withstand Test	32
Impulse Test	33
Equipment Grounding and Bonding Test	34
Insulation Resistance Test	35
Electromagnetic Immunity Tests	36
Wall mount fixture/test	40.1

8.1 Signatures			
A representative sample of the product covered by this report has been evaluated and found to comply with the applicable requirements of the standards indicated in Section 1.0.			
Completed by:	Qifa Lai	Reviewed by:	Joss Huang
Title:	Engineer	Title:	Reviewer
Signature:	Qifa Lai	Signature:	Joss Huang.

9.0 Correlation Page For Multiple Listings	
The following products, which are identical to those identified in this report except for model number and Listee name, are authorized to bear the ETL label under provisions of the Intertek Multiple Listing Program.	
BASIC LISTEE	Energie Volthium Inc
Address	2600 Boulevard Ford #100, Chateauguay, Quebec J6J 4Z2
Country	Canada
Product	Energy Storge Systems

MULTIPLE LISTEE 1	None
Address	
Country	
Brand Name	
ASSOCIATED MANUFACTURER	
Address	
Country	

MULTIPLE LISTEE 1 MODELS	BASIC LISTEE MODELS

MULTIPLE LISTEE 2	None
Address	
Country	
Brand Name	
ASSOCIATED MANUFACTURER	
Address	
Country	

MULTIPLE LISTEE 2 MODELS	BASIC LISTEE MODELS

MULTIPLE LISTEE 3	None
Address	
Country	
Brand Name	
ASSOCIATED MANUFACTURER	
Address	
Country	

MULTIPLE LISTEE 3 MODELS	BASIC LISTEE MODELS

10.0 General Information

The Applicant and Manufacturer have agreed to produce, test and label ETL Listed products in accordance with the requirements of this Report. The Manufacturer has also agreed to notify Intertek and to request authorization prior to using alternate parts, components or materials.

COMPONENTS

Components used shall be those itemized in this Intertek report covering the product, including any amendments and/or revisions.

LISTING MARK

The ETL Listing mark applied to the products shall either be separable in form, such as labels purchased from Intertek, or on a product nameplate or other media only as specifically authorized by Intertek. Use of the mark is subject to the control of Intertek.

The mark must include the following four items:

1) applicable country identifiers "US" and/or "C" or "US", "C" and "EU"
2) the word "Listed" or "Classified" or "Recognized Component" (whichever is appropriate)
3) a control number issued by Intertek
4) a product descriptor that identifies the standards used for certification. Example:

For US standards, the words, “Conforms to” shall appear with the standard number along with the word, “Standard” or “Std.” Example: “Conforms to ANSI/UL Std. XX.”

For Canadian standards, the words “Certified to CAN/CSA Standard CXX No. XX.” shall be used, or abbreviated, “ Cert. to CAN/CSA Std. CXX No. XX.”

Can be used together when both standards are used.

If all standards on the ATM have the same standard title, the shared title or its abbreviation may be used in place of the examples above. Example: "Medical Electrical Equipment" or "MEE"; "Information Technology Equipment" or "ITE"; "Audio/Video Information And Communication Technology Equipment" or "A/V ICTE".

Note: A facsimile must be submitted to Intertek, Attn: Follow-up Services for approval prior to use.
The facsimile need not have a control number. A control number will be issued **after signed Certification Agreements** have been received by the Follow-up Services office, approval of the facsimile of your proposed Listing Mark, satisfactory completion of the Listing Report, and scheduling of a factory assessment in your facility.

MANUFACTURING AND PRODUCTION TESTS

Manufacturing and Production Tests shall be performed as required in this Report.

FOLLOW-UP SERVICE

Periodic unannounced audits of the manufacturing facility (and any locations authorized to apply the mark) shall be scheduled by Intertek. An audit report shall be issued after each visit. Special attention will be given to the following:

1. Conformance of the manufactured product to the descriptions in this Report.
2. Conformance of the use of the ETL mark with the requirements of this Report and the Certification Agreement.
3. Manufacturing changes.
4. Performance of specified Manufacturing and Production Tests.

In the event that the Intertek representative identifies non-conformance(s) to any provision of this Report, the Applicant shall take one or more of the following actions:

1. Correct the non-conformance.
2. Remove the ETL Mark from non-conforming product.
3. Contact the issuing product safety evaluation center for instructions.

10.1 Evaluation of Unlisted Components

Because Unlisted Components are uncontrolled, and they do not fall under a third party follow up program, Intertek may require these components to be tested and/or evaluated at least once annually, more often for certain components, as part of the independent certification process. The Unlisted Components in Section 5.0 require testing and/or evaluation as indicated.

The Applicant will be notified, in writing, via the applicable contact methods, as defined in Section 1.0, when these components must be selected and sent to Component Evaluation Center (CEC) for re-evaluation.

Due to particular testing requirements, some components may be requested to be shipped to specific labs. Thus, specific shipment destination(s) for each sample will be provided in the written notification.

Managing CEC Location:
Intertek Testing Services Shenzhen Limited Guangzhou Branch
ETL Component Evaluation Center
Room 101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, Huangpu District
Guangzhou, Guangdong, China
Attn: Ms. Joey Kuang
Sample Disposition: Due to the destructive nature of the testing, all samples will be discarded at the conclusion of testing unless, the manufacturer specifically requests the return of the samples. The request for return must accompany the initial component shipment.

11.0 Manufacturing and Production Tests

The manufacturer agrees to conduct the following Manufacturing and Production Tests as specified:

Required Tests

None

12.0 Revision Summary				
The following changes are in compliance with the declaration of Section 8.1:				
Date/ Proj # Site ID	Project Handler/ Reviewer	Section	Item	Description of Change
				None