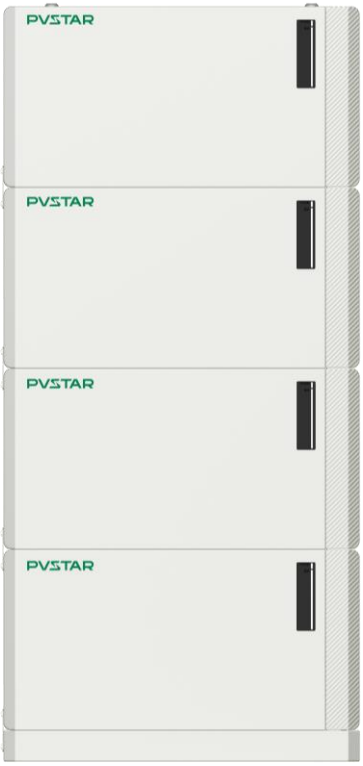


Quick Installation Guide

PVS-LBS 5k-G1/ PVS-LBS 10k-G1
PVS-LBS 15k-G1/ PVS-LBS 20k-G1

English

1 General Information

This quick installation guide should be read together with the user manual. In case of doubt and uncertainties, the content in the user manual takes precedence over the content in this guide.

The contents of this guide may be updated or revised due to on-going product development and continuous improvement. The information in this guide is subject to change without notice. The latest version of this document and the user manual for installation, commissioning, configuration and decommissioning are to be found in PDF format at www.chintpvstar.com.

2 Safety

2.1 Intended use

The product is a residential low-voltage Li-ion battery system with an integrated BMS, designed for PVSTAR solar hybrid inverters. It supports on-grid, off-grid, and backup modes with compatible PVSTAR inverters. Suitable for indoor and outdoor use within a temperature range of -18°C to 58°C.

The battery system must only be used as stationary equipment.

Modifications to the product are prohibited without written approval from PVSTAR. PVSTAR will not be held liable for any damage caused by such illegal changes.

The product is not suitable for supplying life-sustaining medical devices. Please ensure that no personal injury would lead due to the power outage of the battery system.

The product must only be used in countries for which it is approved by PVSTAR and the grid operator.

Use the product only in accordance with the information provided in this guide , the user manual and with the locally applicable standards and directives. Any other application may cause personal injury or damage to property.

The type label must be permanently attached to the product and must be in a legible condition.

This document does not replace any regional, state, provincial, federal or national laws, regulations or standards that apply to the installation, electrical safety and use of the product.

2.2 Important safety instructions

The product has been designed and tested strictly according to the international safety requirements. As with all electrical or electronical devices, there are residual risks despite

careful construction. To prevent personal injury and property damage and to ensure long-term operation of the product, read this section carefully and observe all safety information at all times.

⚠ DANGER

Danger to life due to DC voltages of the battery!

When the battery system is connected to the inverter and the ON/OFF switch is ON, the batteries generate DC voltage, energizing the DC cable and live components.

- Do not touch non-insulated parts or cable ends.
- Do not touch the DC conductors.
- Do not touch any live components of the product.
- Do not open the product.
- All work on the product must only be carried out by qualified personnel who have read and fully understood all safety information contained in this document and the user manual.
- Disconnect the product from all voltage and energy sources and ensure it cannot be reconnected before working on the product.
- Wear suitable personal protective equipment, in accordance with local regulations, for all work on the product.

⚠ WARNING

Danger to life due to risk of fatal electric shock from damages to the measuring device caused by overvoltage!

Overvoltage can damage a measurement device and result in voltage being present in the enclosure of the measuring device. Touching the live enclosure of the measuring device results in death or lethal injuries due to electric shock.

- Only use measuring devices with a measurement span equal to or higher than the maximum voltage rating of the product.

⚠ WARNING

Risk of injury due to weight of product!

Injuries may result if the product is incorrectly handled or dropped while being transported or mounted.

- Transport and lift the product carefully. Take the weight of the product into account.
- Wear suitable personal protective equipment, in accordance with local regulations, for all work on the product.

NOTICE

Damage to the battery system due to electrostatic discharge!

Internal components of the battery system can be irreparably damaged by electrostatic discharge.

- Ground yourself before touching any component.

NOTICE

Damage to the battery due to particles and water!

Particles such as dust and sand can damage the battery and impair its functionality.

- Open the battery cover is forbidden!

2.3 Symbols on the label



Beware of a danger zone!
This symbol indicates that the product must be additionally grounded if additional grounding or equipotential bonding is required at the installation site.



Beware of DC voltage and operating current!
The battery operates at DC voltage and current. Work on the battery must only be carried out by skilled and authorized electricians.



Beware of explosion!
The battery is an electrochemical device and poses a risk of explosion under extreme conditions. Maintain a safe distance if such a situation arises.



Beware of danger to children!
The battery must be inaccessible to children.



Beware: Flammable!
Keep the battery system away from open flames or ignition sources.



WEEE designation
Do not dispose of the product together with the household waste. Dispose the product in accordance with local disposal regulations for electronic waste applicable in the country of installation.



CE marking
The product complies with the requirements of the applicable EU directives.



Certification mark
The product has been tested by TÜV and obtained the quality certification mark.



RCM (Regulatory Compliance Mark)
The product complies with the requirements of the applicable Australian standards.



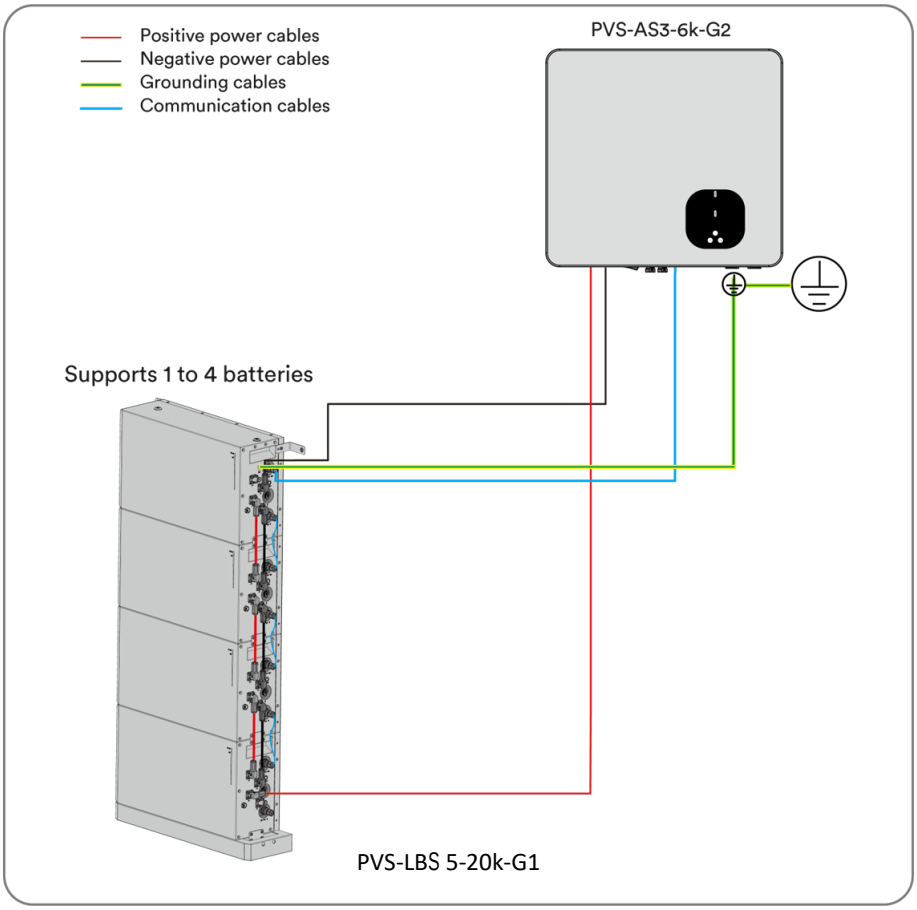
The battery is recyclable
The battery can be recycled by a professional recycling organization, please refer to the relevant local regulations.



Observe the documentation
Observe all documentation supplied with the product.

3 System Wiring Diagram

Wiring with one set of output cables (max. current: 120 A)


Positive power cables
Negative power cables
Grounding cables
Communication cables
PVS-AS3-6k-G2
Supports 1 to 4 batteries
PVS-LBS 5-20k-G1

4 EU Declaration of Conformity

Within the scope of the EU directives:

-Electromagnetic compatibility directive 2014/30/EU

(L 96/79-106, March 29, 2014)(EMC)

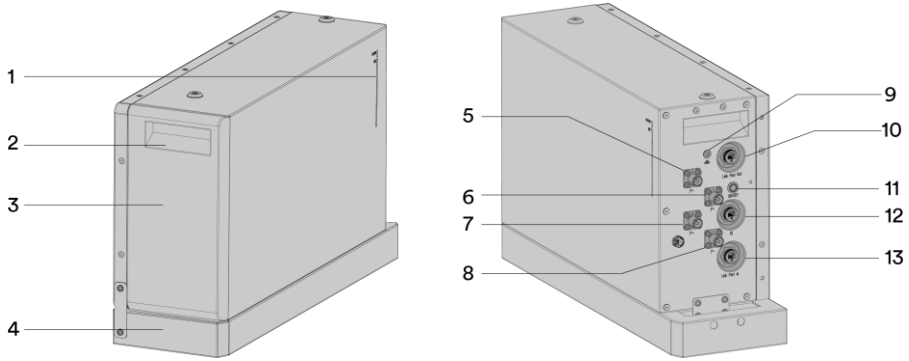
-Low voltage directive 2014/35/EU (L 96/357-374, March 29, 2014)(LVD)

Restriction of the use of certain hazardous substances 2011/65/EU

(L 174/88, June 8, 2011) and 2015/863/EU (L 137/10, March 31,2015) (RoHS)

Chint PVSTAR Energy Solution GmbH confirms herewith that the products described in this document are in compliance with the fundamental requirements and other relevant provisions of the above mentioned directives. The entire EU Declaration of Conformity can be found at www.chintpvstar.com.

5 Overview



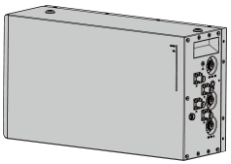
Object	Description
1	LED indicator
2	Concealed handle
3	Battery module
4	Base
5	P+ (refer to wiring diagrams for clarification)
6	P- (refer to wiring diagrams for clarification)
7	P+ (refer to wiring diagrams for clarification)
8	P- (refer to wiring diagrams for clarification)
9	Grounding terminal
10	Link port out

11	On/Off button
12	DI (Digital input)
13	Link port in

6 Scope of Delivery

6.1 Standard package

Battery Module Package



A

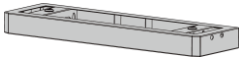


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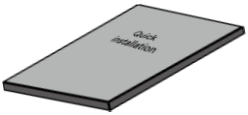


C

Base Package



D



E



F



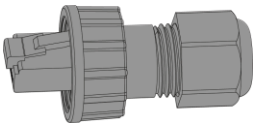
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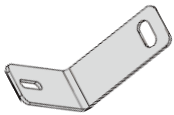
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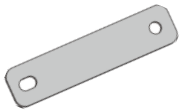
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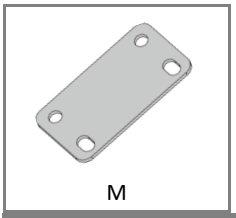
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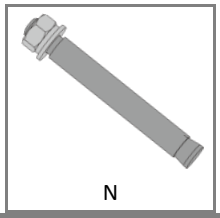


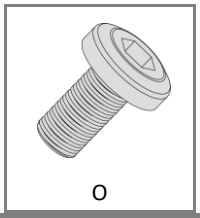
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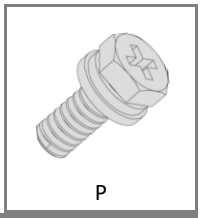


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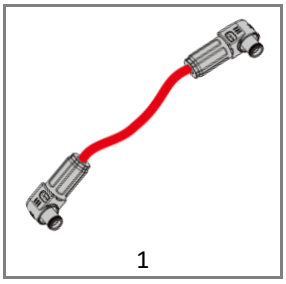

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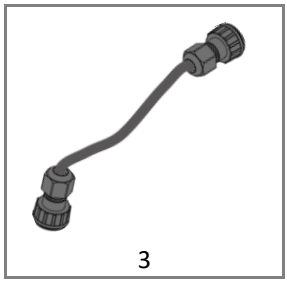
Object	Description	Quantity
A	Battery module	1
B	M5x16 screw	1
C	Decorative cover	1
D	Base	1
E	Quick installation guide	1
F	BMS communication cable	1
G	Positive battery cable (2 m)	1
H	Negative battery cable (2 m)	1
I	Potential earth (PE) cable	1
J	Terminating resistor	1
K	L-bracket	2
L	Module locking plate (left)	1
M	Module locking plate (right)	1
N	Expansion anchor bolt (M8 X 80)	2
O	M5X10 screw	8
P	Hexagon screw (M6 X 16)	1

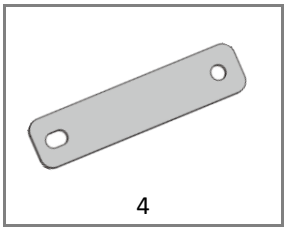
6.2 Optional package

Parallel Connection Package (only in parallel version)

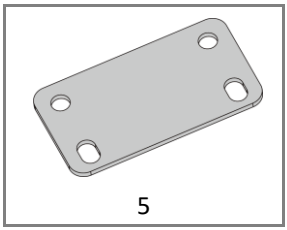

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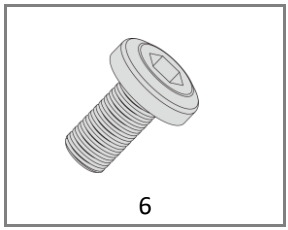

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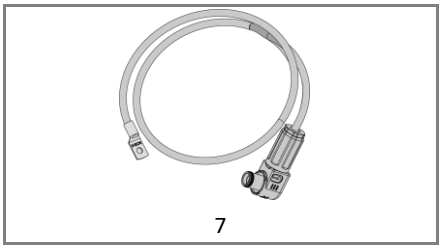


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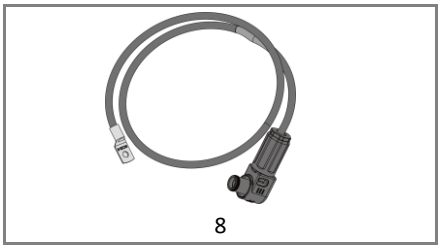


6

Output Cable (3m) Package

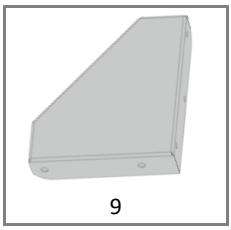


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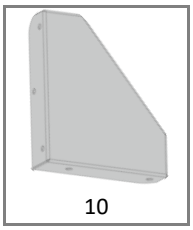


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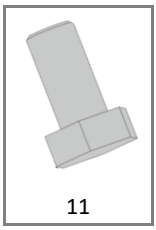
Wall Mounting Optional Package



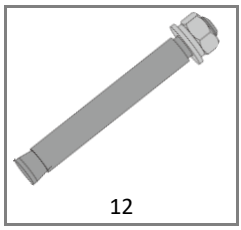
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10



11

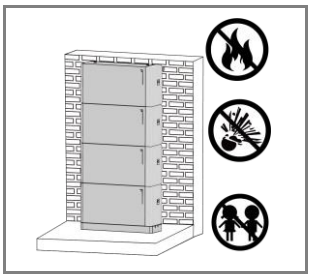


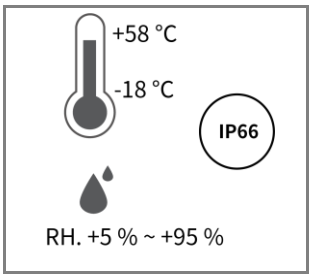
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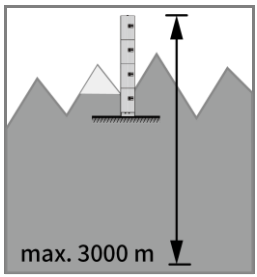
Object	Description	Quantity
1	Parallel positive battery cable	1
2	Parallel negative battery cable	1
3	Parallel communication cable	1
4	Module locking plate (left)	1
5	Module locking plate (right)	1
6	M5X10 screw	6
7	Positive cable-optional (3 m)	1
8	Negative cable-optional (3 m)	1

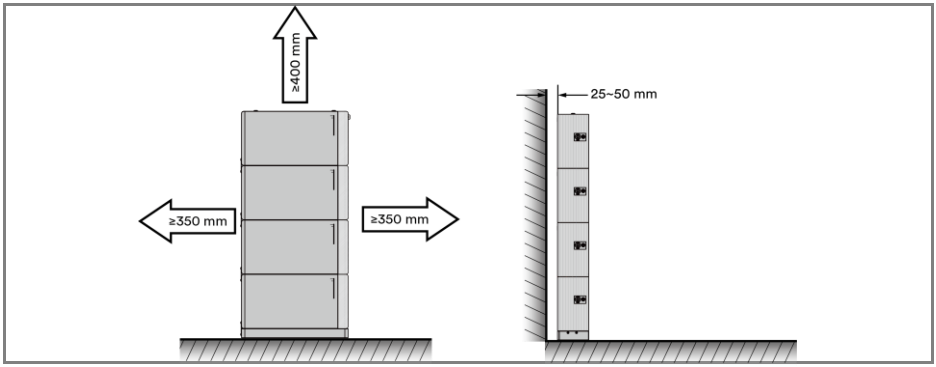
9	Wall bracket (left)	1
10	Wall bracket (right)	1
11	M10*20 bolt	4
12	Expansion anchor bolt (M8*80)	6

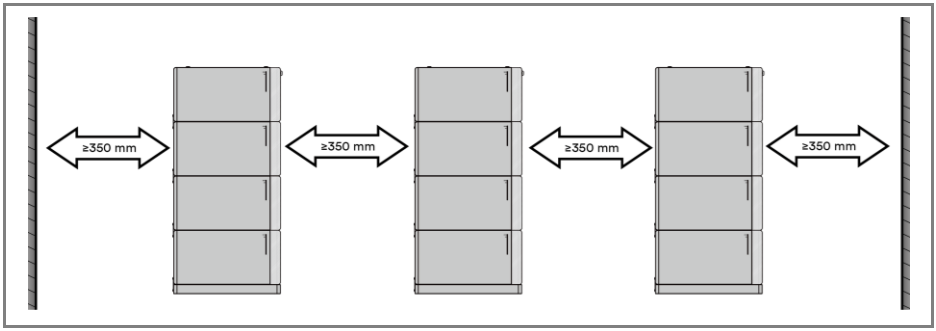
7 Mounting Environment

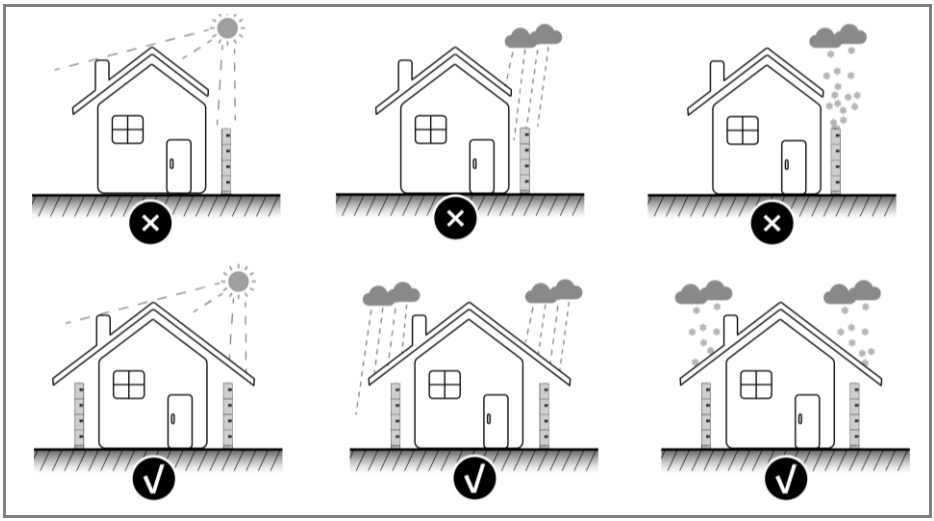




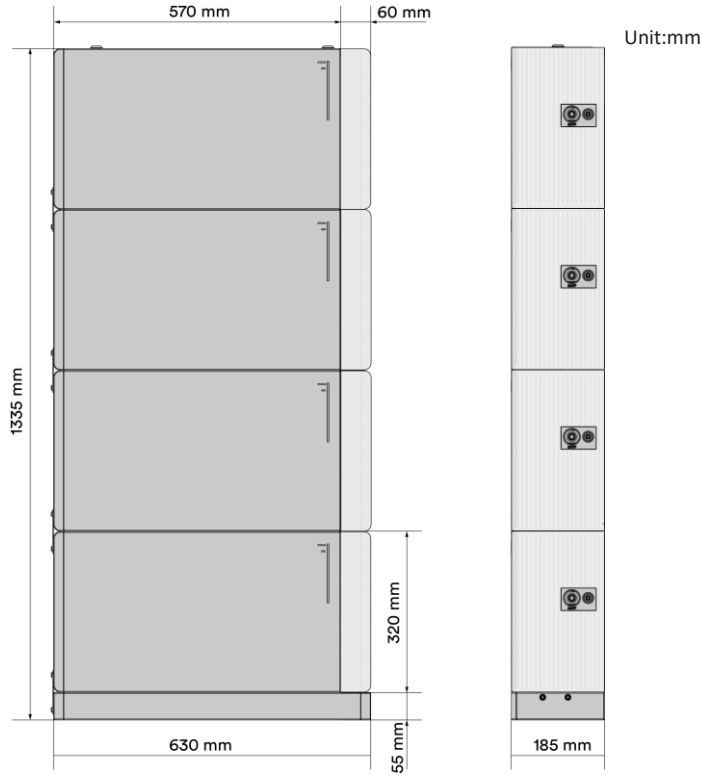




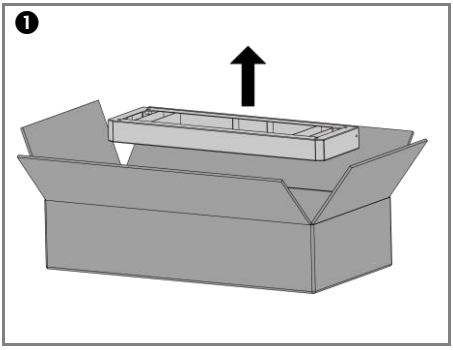


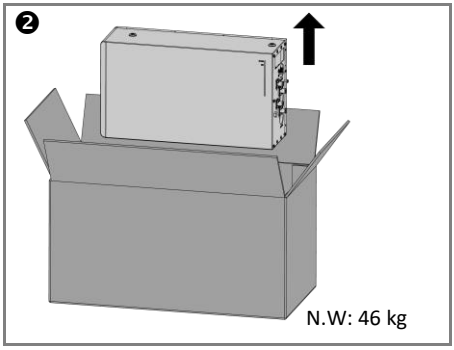


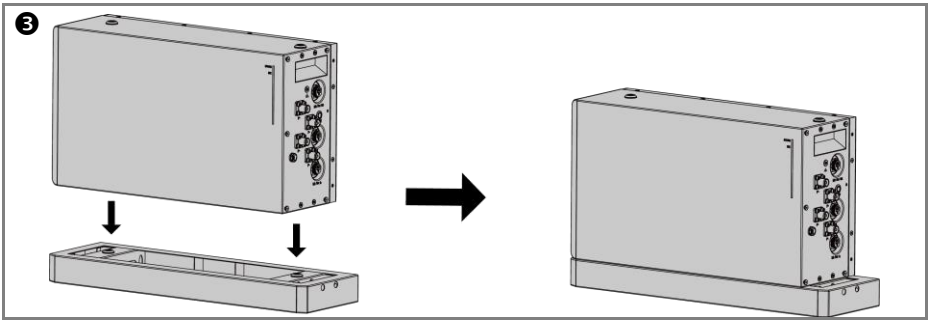
8 Dimensions

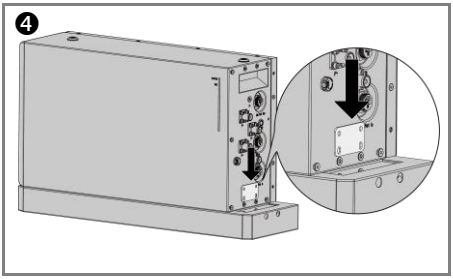


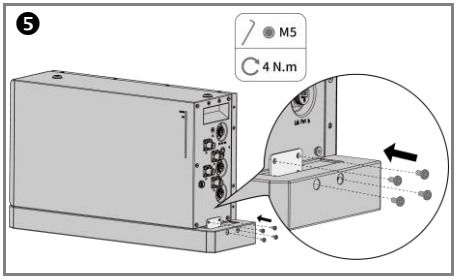
9 Mounting

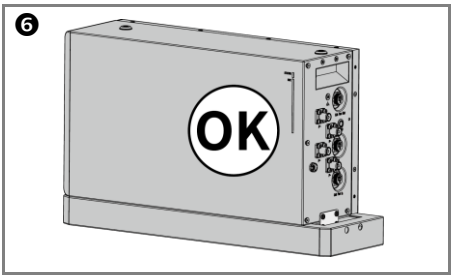


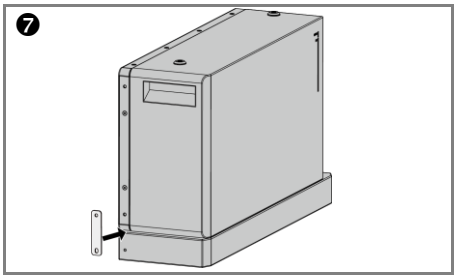


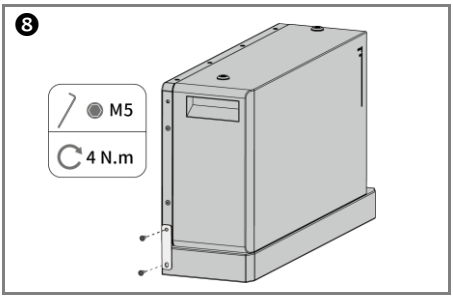


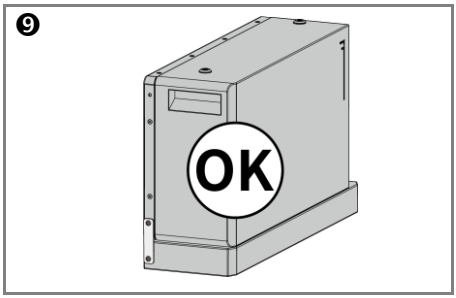


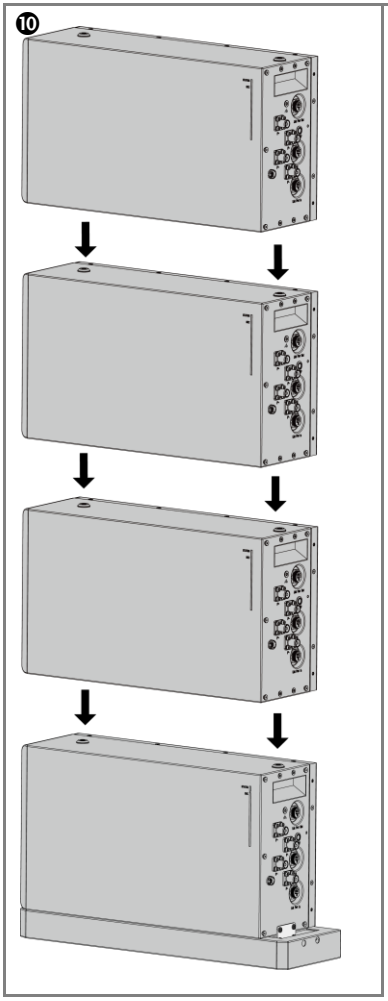


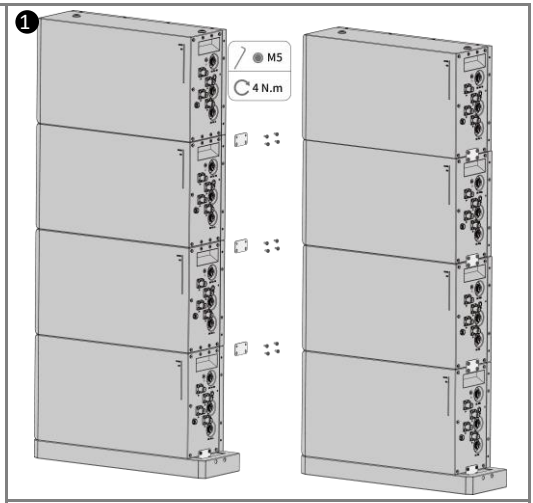


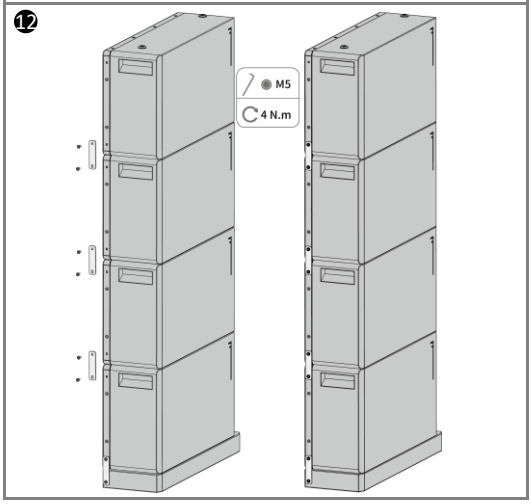


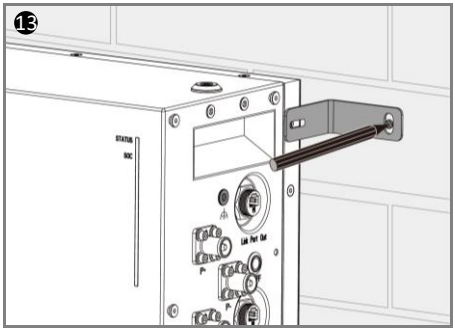

8
M5
4 N.m

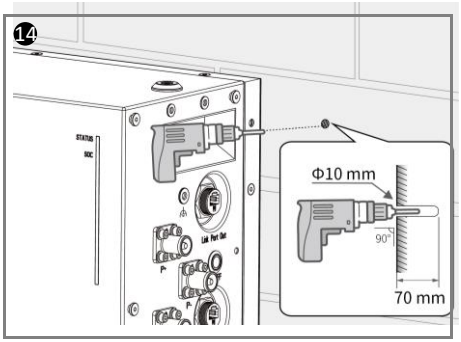

9
OK

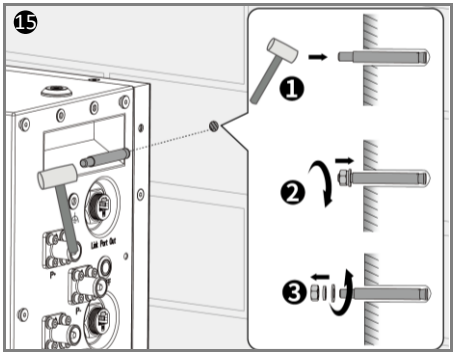

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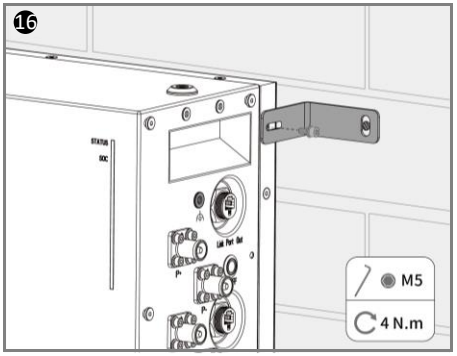

1
M5
4 N.m

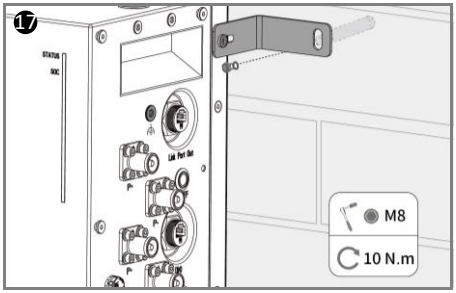

12
M5
4 N.m

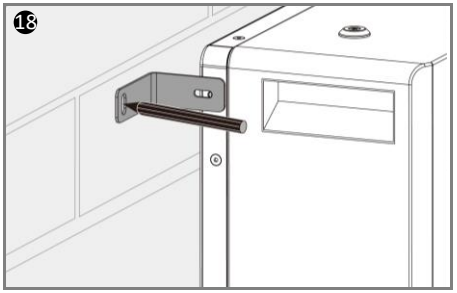

13

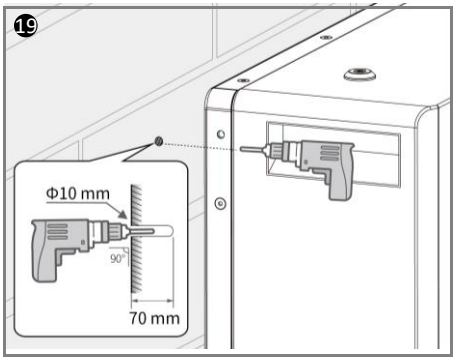

14
Φ10 mm
90°
70 mm

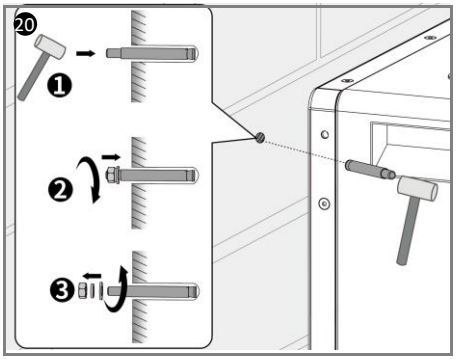

15
1
2
3

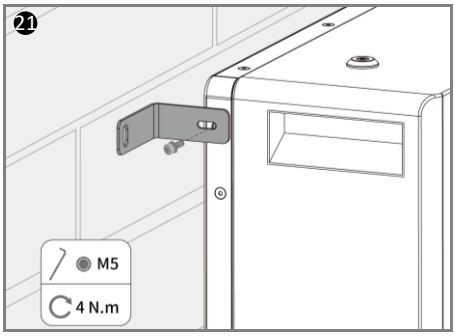

16
M5
4 N.m

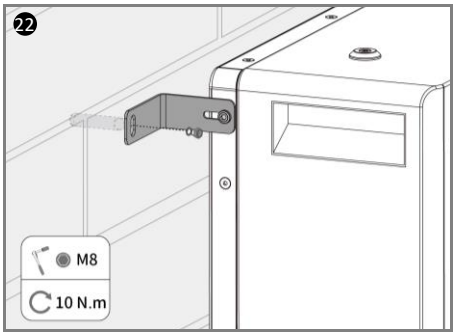

17
M8
10 N.m

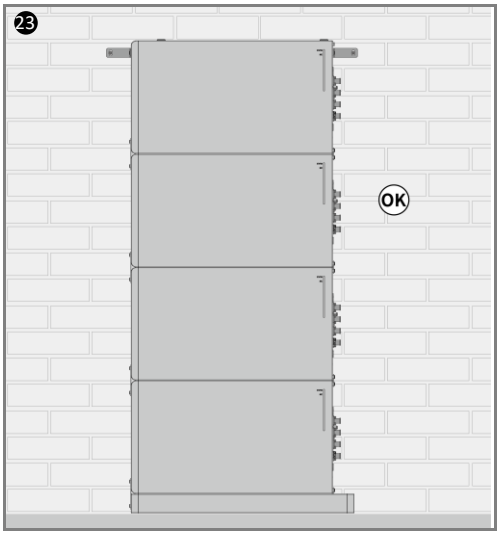

18


19
Φ10 mm
90°
70 mm

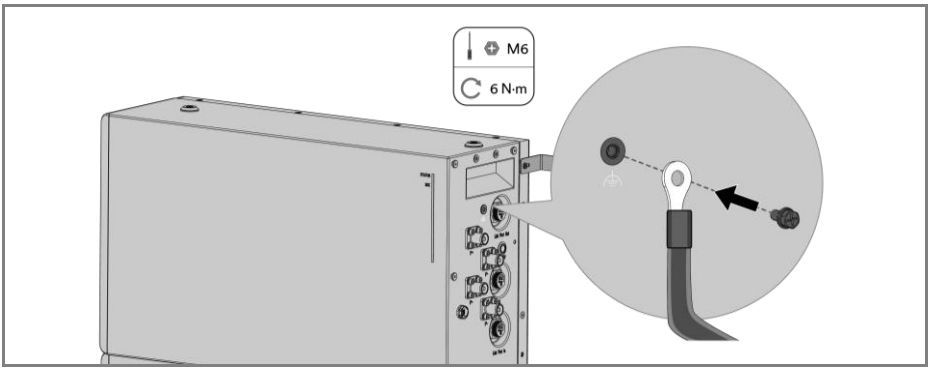

20
1
2
3







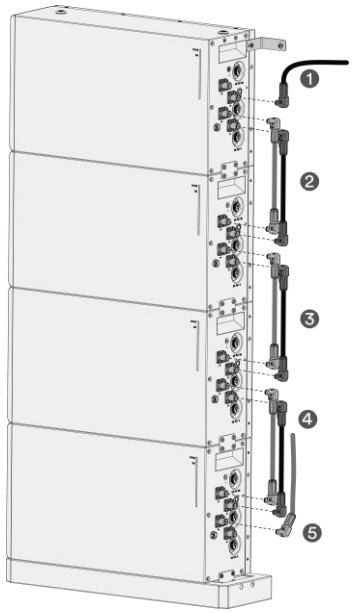
10 Secondary protective grounding



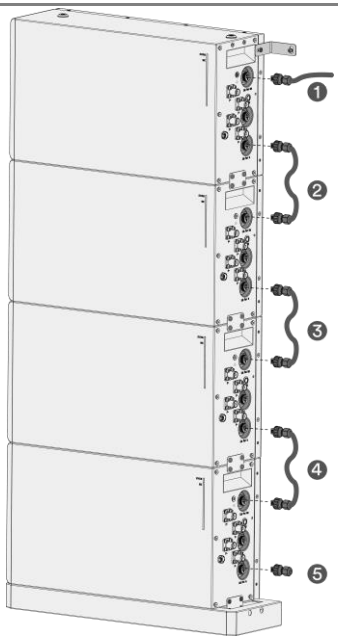
11 Battery Connection

1-4 batteries connected with one set of output cables (**120 A max**.)

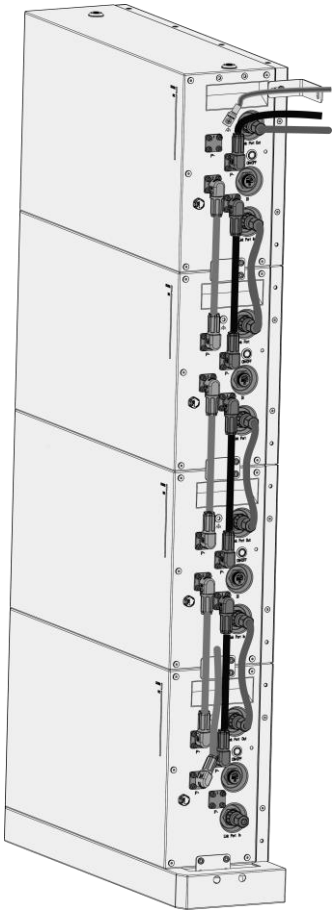
❶



❷

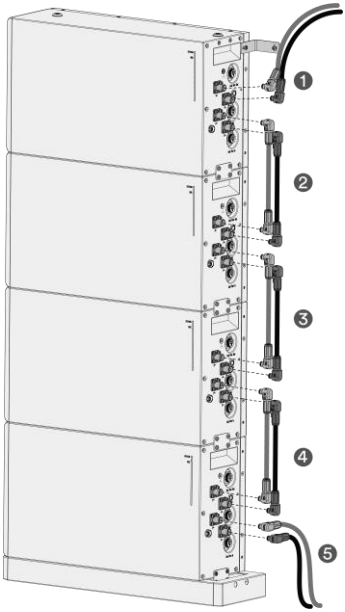


❸

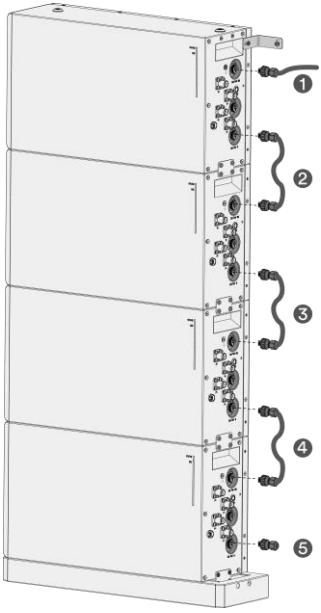


2-4 batteries connected with two sets of output cables in parallel (**210 A max.**)

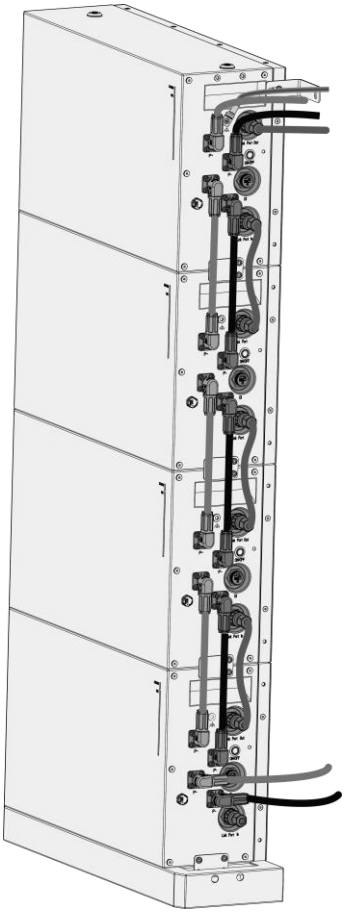
❶



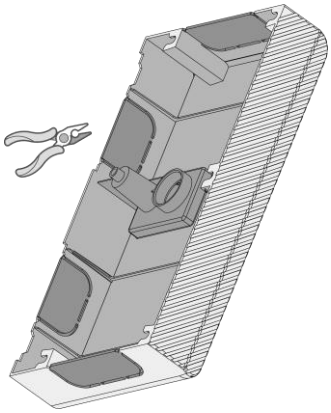
❷



❸

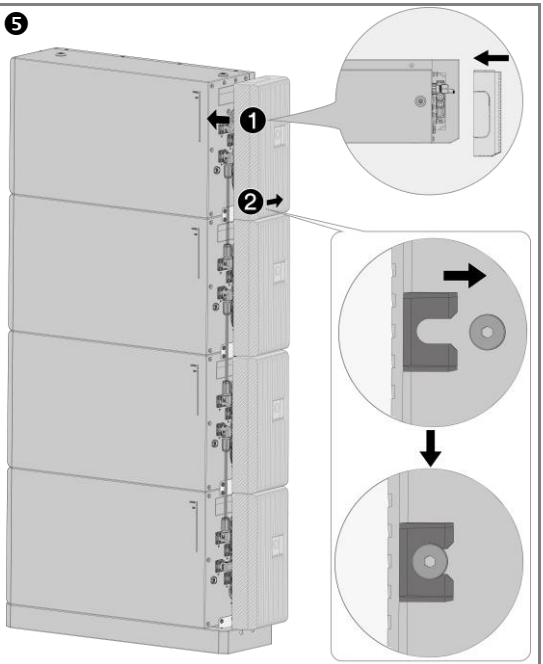


❹

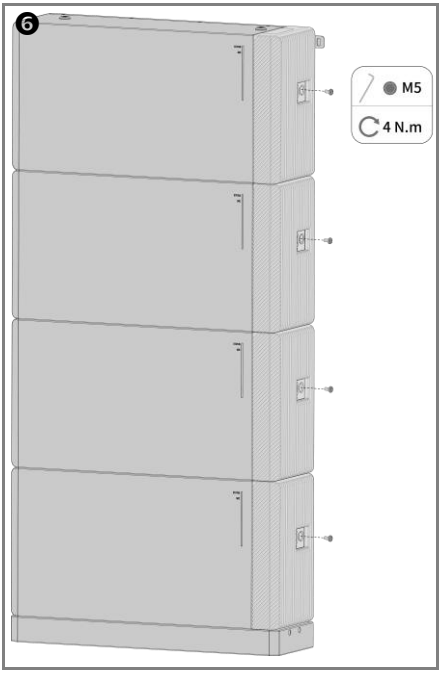


Cut the cable hole according to the wiring mode.

❺



❻



❼



12 Contact

Please contact our Service Department if you have any technical questions about our products.

The following information is needed to provide necessary assistance:

——Battery model

——Battery series number

——Fault code

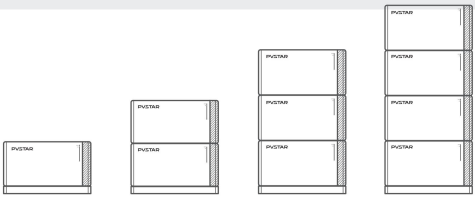
——Installation location

Chint PVSTAR Energy Solution GmbH

Service email: tech@pvstar.com

Web: www.chintpvstar.com

Add.: Ludwig-Erhard-Straße30-34,65760 Eschborn,Hesse,Germany

Model	PVS-LBS 5k-G1	PVS-LBS 10k-G1	PVS-LBS 15k-G1	PVS-LBS 20k-G1
System Data				
Module number				
Cell type	LiFePO4			
Rated capacity	100 Ah			
Nominal energy [1]	5.12 kWh	10.24 kWh	15.36 kWh	20.48 kWh
Usable energy [2]	4.86 kWh	9.72 kWh	14.59 kWh	19.45 kWh
Nominal battery voltage	51.2 V			
Battery voltage range	40 V ~ 58.4 V			
Recommended charge / discharge current	60 A	120 A	180 A	210 A
Max. charge / discharge current	100 A	200 A	210 A	210 A
Rated charge / discharge power	3.07 kW	6.14 kW	9.22 kW	10.75 kW
Max. charge / discharge power	5.12 kW	10.24 kW	10.75 kW	10.75 kW
General data				
Dimensions (W / D / H)	630 / 185 / 375 mm	630/ 185 / 695 mm	630 / 185 /1015 mm	630 / 185 /1335 mm
Module weight	46.0 kg	92.0 kg	138.0kg	184.0kg
Base weight	2.6 kg			
Installation location	Indoor / Outdoor			
Mounting method	Floor mounted / Wall mounted			
Operating temperature range	Charging: -8°C ~ 58°C; Discharging: -18°C ~ 58 °C			
Storage temperature range	-20°C ~ 60°C			
Cooling concept	Natural convection			
Protective class	II			
Degree of protection	1P66			
Relative humidity	5 % ~ 95 % RH, non-condensing			
Max. operating altitide	4000 m (> 3000 m derating)			
Communication	CAN			
Certification	IEC 62619, IEC 62040, IEC 62477, IEC 63056, IEC 61000			
Life cycles [3]	6000 times			
Round-trip efficiency	≥ 95%			

1 Nominal energy is defined under the following conditions: battery voltage 40 ~ 58.4V, 0.5C charge & discharge at +25 °C.
2. Usable energy is defined under the following conditions: 0.5C charge & discharge at +25 °C, 95 % DOD.
3. Life ycle is defined under the following conditions: 0.5C charge & discharge at 25°C (One cycle a day), 90 % DOD, 70 % EOL.
*For reference only. Please refer to the official release for final content.

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