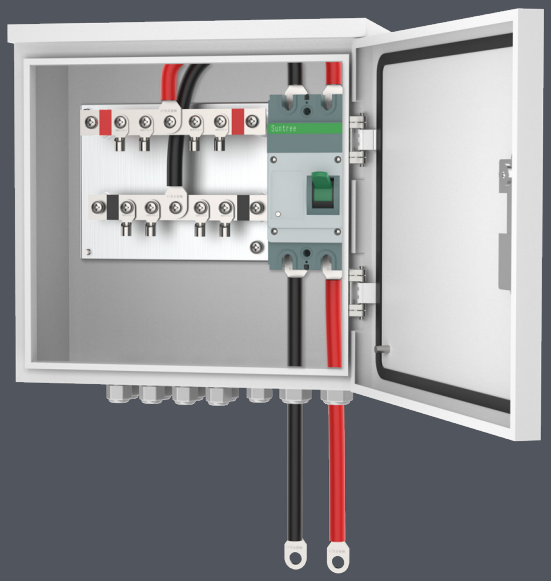
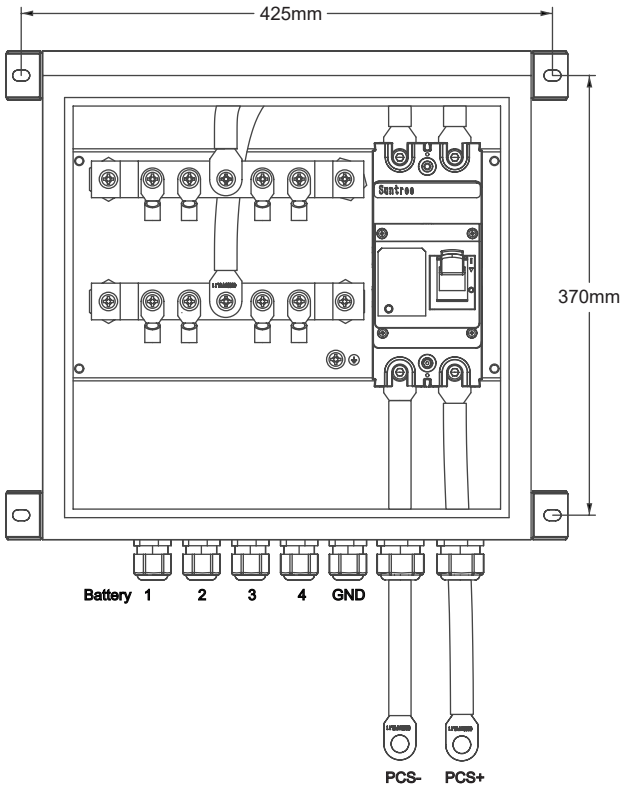
APstorage

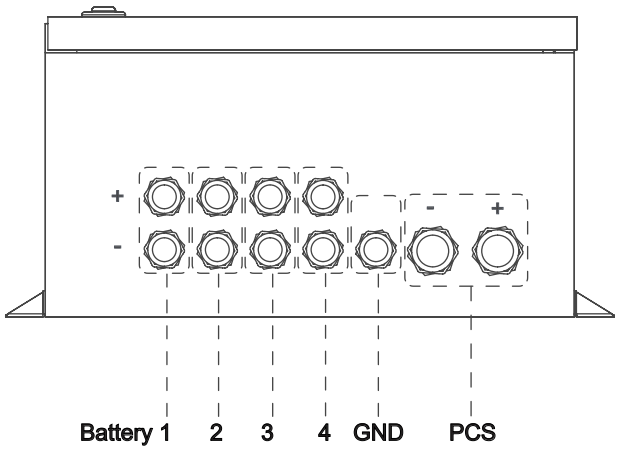
Safe and **Smart**
Energy Management System



AP DC Combiner

- Built-in one 320A DC circuit breaker
- Ingress protection IP65
- Can be connected to 4 batteries at most
- Increase the capacity of APstorage
- Extend the working hours of APstorage
- Simple installation and efficient distribution of electrical power across various circuits





2025/07/03 Rev1.1

Datasheet | AP DC Combiner

General Specifications

Dimensions W/H/D	444mm x 433mm x 225mm
Weight	14.6kg
Operating Ambient Temperature	-25°C ~ +65°C
Storage Temperature Range	-40°C ~ +85°C
Environment category	Outdoor
Relative Humidity	10%-90%
Ingress Protection	IP65
Ventilation	Natural convection
Permissible Altitude	≤2000m
Warranty	5 years

DC Input/Output Data

Nominal DC voltage	51.2VDC
DC operating voltage range	40-60VDC
Rated Current of Integrated Breaker	320A
DC cables length	1500mm

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Specifications subject to change without notice please ensure you are using the most recent update found at web : APsystems.com

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APsystems
ALTENERGY POWER

White Paper 2025

Parallel Connection Scheme of Energy Storage Batteries

By using AP DC Combiner for APstorage ELT-12/ELS-5K product



This document provides guidance on using APsystems' universal accessory, the AP DC Combiner as an common solution when multiple batteries needs to be connected to the ELT-12/ELS-5K . It covers important customer considerations and includes installation and usage instructions for the AP DC Combiner.

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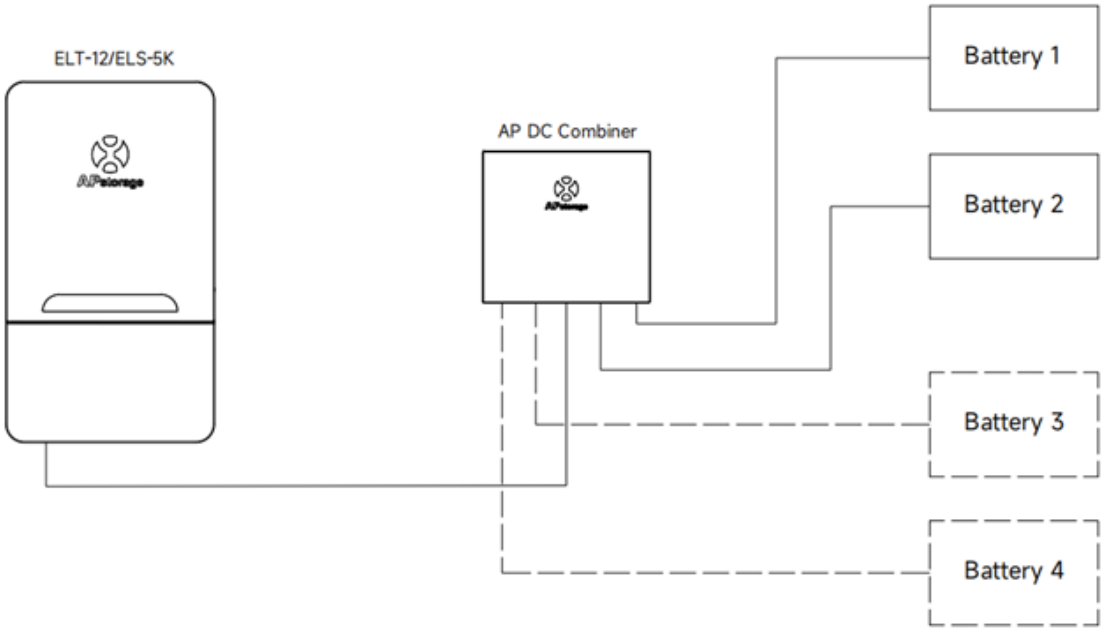
V1.0 2025/11

Notes

When you need to connect ELT-12/ELS-5K to the battery via the AP DC Combiner, please first confirm the following two points:

1. Ensure the battery you purchased is included in APsystems' Battery Compatibility List. (see Appendix) ;
2. The battery you purchased needs to be connected in parallel to ELT-12/ELS-5K.

☆ If the above two conditions are met, you can connect ELT-12/ELS-5K to the battery via the AP DC Combiner. The connection diagram is as follows:



The material specification information of AP DC Combiner is as follows:

AP DC Combiner Article No.	Specification	Nominal DC Voltage	DC Operating Voltage Range	Rated Current ofintegrated Breaker	Protection Rating	Region
913093	320A circuit breaker, 120mm² DC cable	51.2VDC	40-60VDC	320A	IP65	EMEA/AU
913106	125A circuit breaker, 25mm² DC cable	51.2VDC	40-60VDC	125A	IP65	EMEA/AU

AP DC Combiner Installation

Ensure that the installation location meets the following conditions:

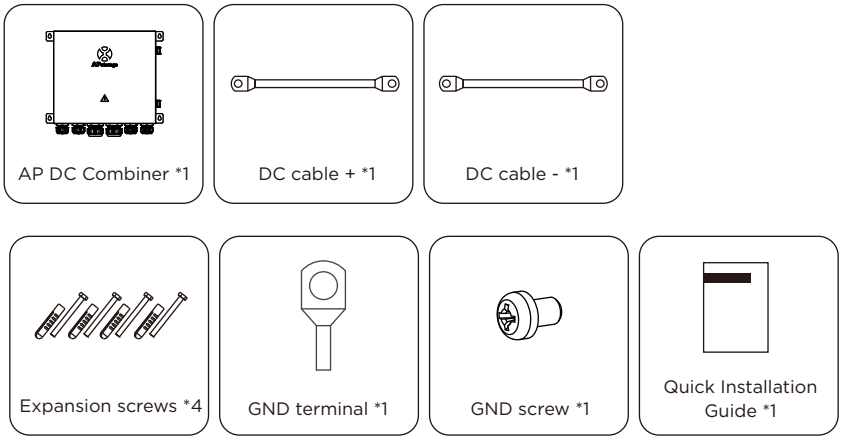
- The building is designed to withstand earthquakes.
- The location is far from the sea to avoid salt water and humidity, over 0.62 miles/1000 meters.
- There are no flammable or explosive materials, at a minimum of 3 ft/1 m.
- The ambience is shady and cool, away from heat and direct sunlight.
- The temperature and humidity remains at a constant level.
- There is minimal dust and dirt in area.
- There are no corrosive gases present, including ammonia and acid vapor.

NOTE: The AP DC Combiner is rated at IP65 and thus can be installed outdoors as well as indoors However, if installed outdoors, the AP DC Combiner shall not be exposed to direct sunlight and moisture.

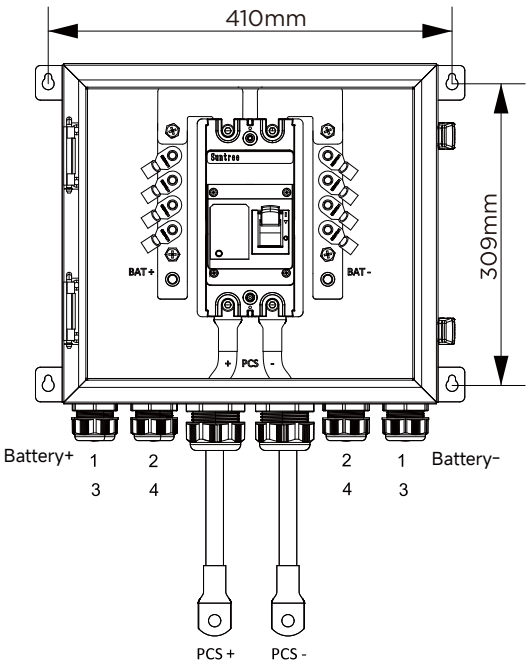
NOTE: If the ambient temperature exceeds the operating range, the battery pack will stop running to protect itself. Frequent exposure to harsh temperatures may deteriorate its performance and lifetime.

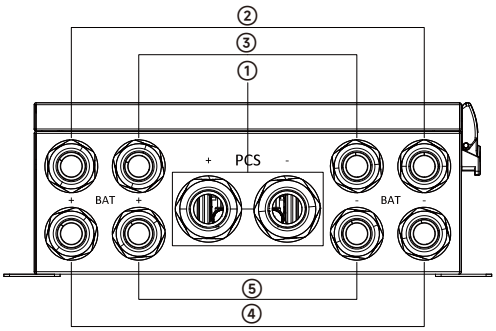
Packing list

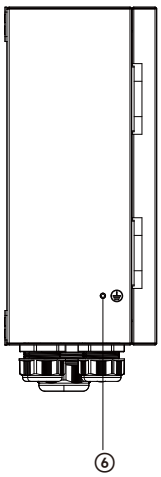
Inspect the equipment before installation. Please ensure that the packaging is not damaged. The package should contain the items shown in the image below:



Terminals of the AP DC Combiner



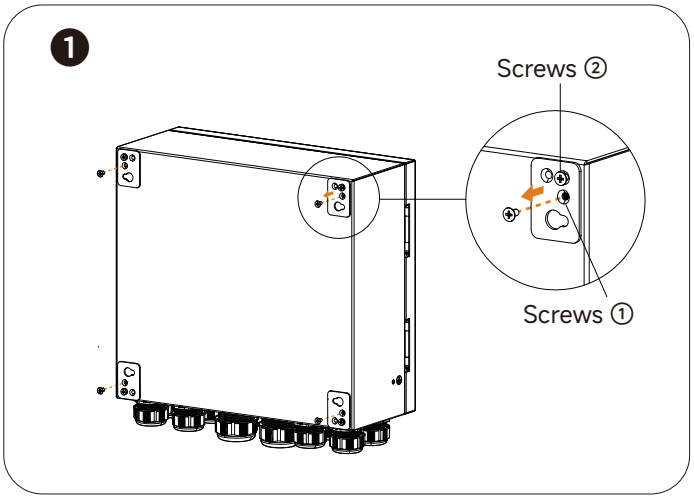


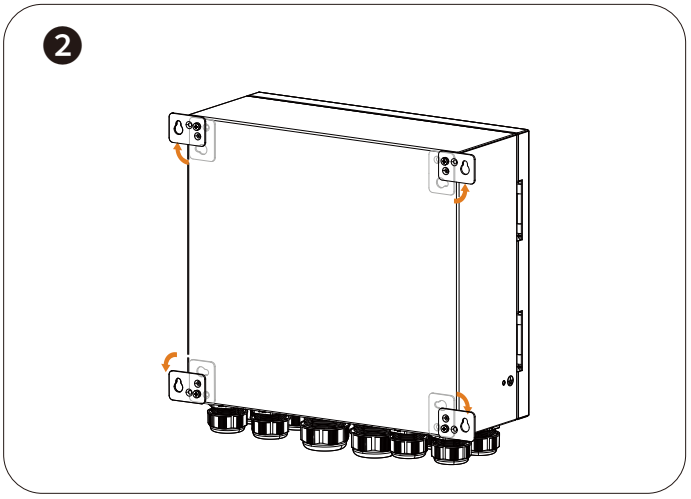


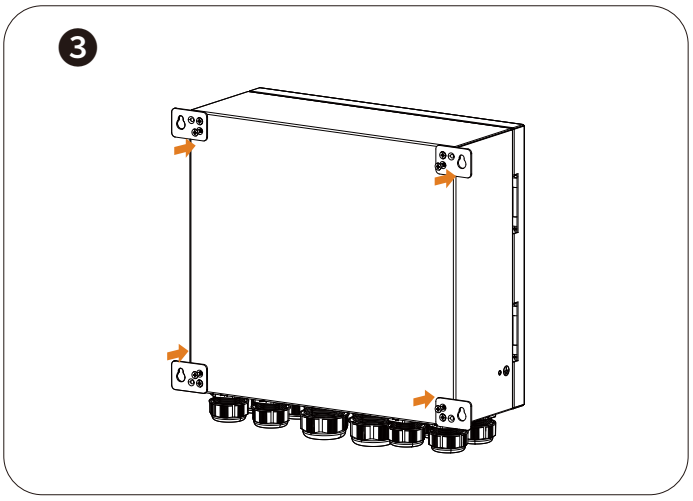
Object	Mark	Description
①	PCS+/PCS-	Connector PCS+/PCS- to BAT+/BAT- of PCS
②	BAT1+/BAT1-	Connector BAT1+/BAT1- to +/- of battery 1
③	BAT2+/BAT2-	Connector BAT2+/BAT2- to +/- of battery 2
④	BAT3+/BAT3-	Connector BAT3+/BAT3- to +/- of battery 3
⑤	BAT4+/BAT4-	Connector BAT4+/BAT4- to +/- of battery 4
⑥	GND	Grounding

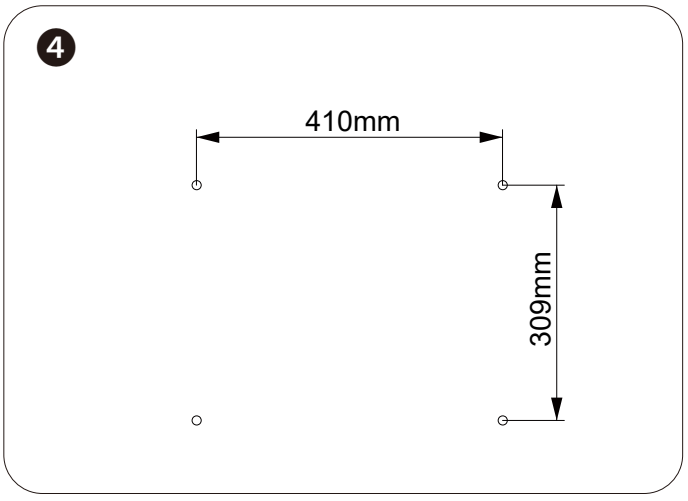
Installed on the Wall

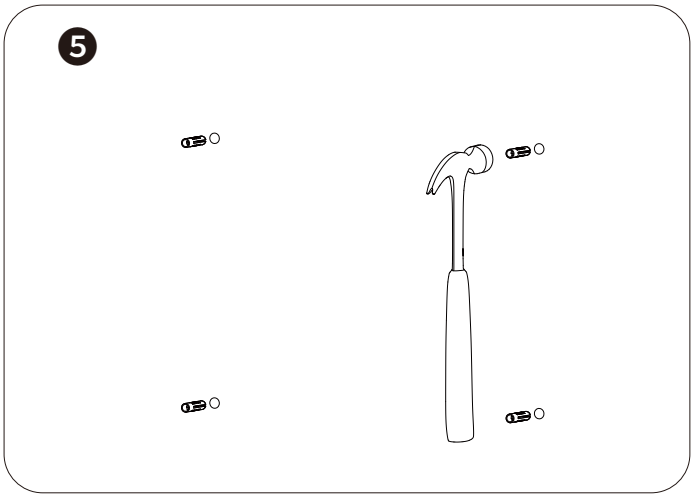
- **Step 1.** As shown in the figure, first remove the 4 screws ① from the wall-mounting brackets, then loosen the 4 screws ② on the wall-mounting brackets.
- **Step 2.** Rotate the 4 wall-mounting brackets by 90°.
- **Step 3.** Reinstall the removed screws and tighten all screws.
- **Step 4.** Mark the location of the holes on the wall and drill holes according to the type of wall and the type of expansion screws.
- **Step 5.** Insert the plastic expansion tube into the holes in the wall.
- **Step 6.** Use a screwdriver to tighten the expansion screws and secure the AP DC Combiner to the wall.

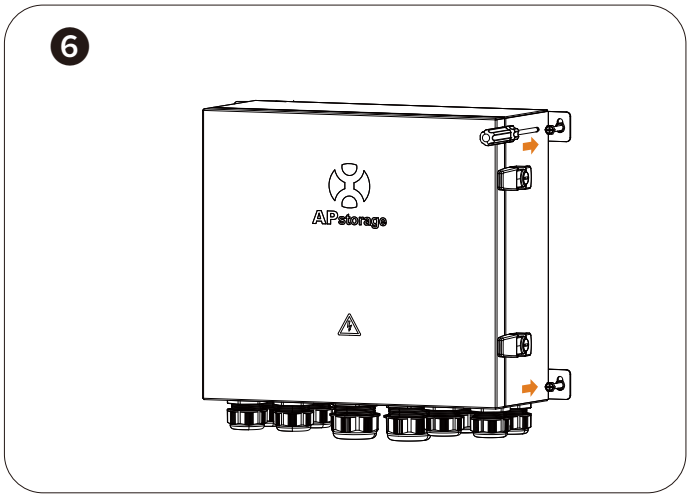








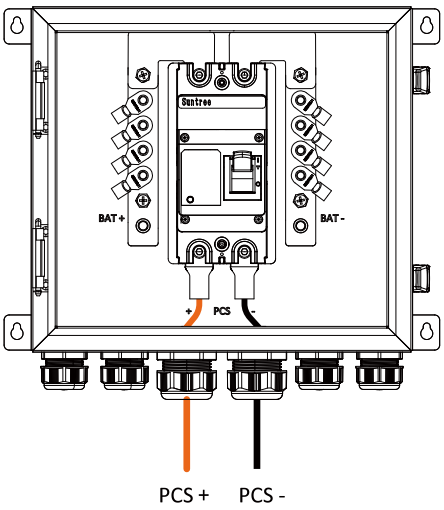


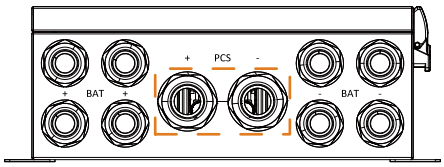


Connecting Cables to PCS

The terminal block for PCS connection is shown as below (Torque: 10 N·m).

For PCS+, please use red or orange cable, and for PCS -, please use black cable.



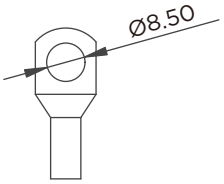


Connecting Cables to Battery

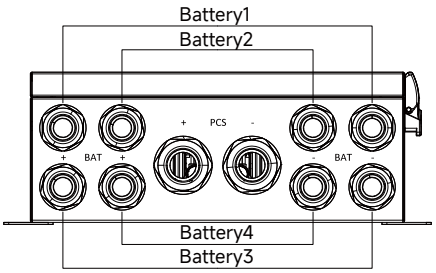
The terminal block for Battery connection is shown as below (Torque: 8N·m).

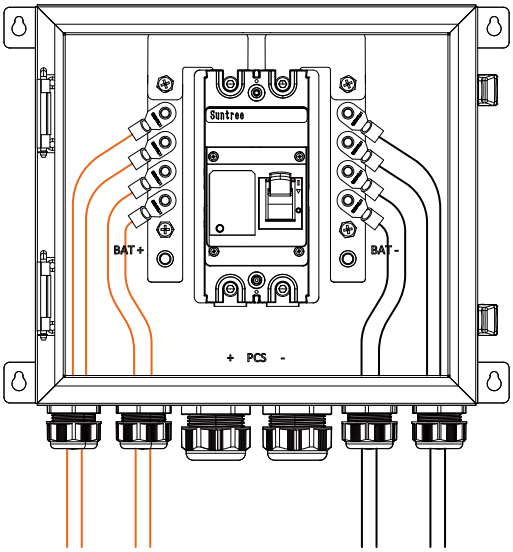
For BAT+, please use red or orange cables, and for BAT -, please use black cables.

The model of the BAT terminal is SC35-8. Please prepare 25mm² or 35mm² cables by yourself.



NOTE: If the cable on the battery does not match this terminal, you will need to purchase the appropriate terminal yourself.



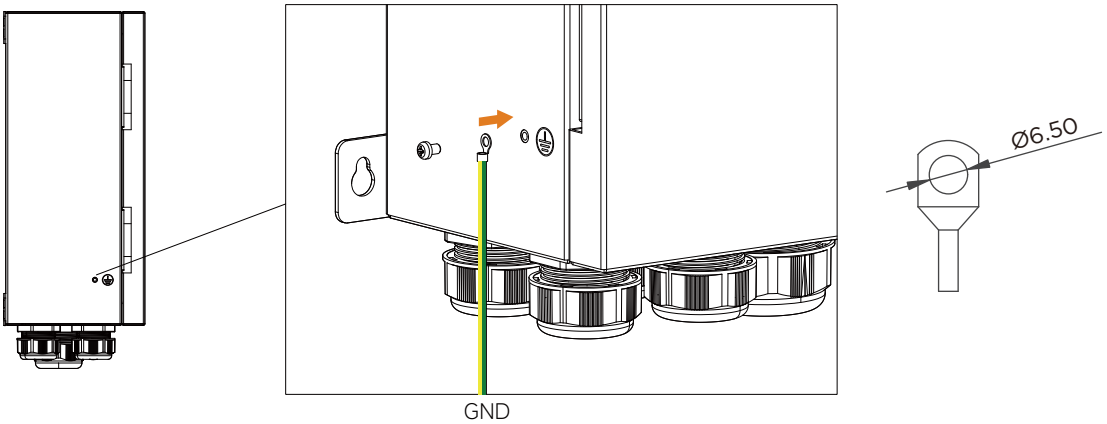


Ground Connection

The terminal block for GND connection is shown as below (Torque: 3N·m).

For GND, please use yellow-green cable.

The model of the GND terminal is SC10-6. Please prepare a 10mm2 cable by yourself.



Appendix 1

Compatible battery list of single-phase PCS

PCS	Type of battery	Brand	Model
ELS Series	Lithium battery	Soluna[1]	Soluna EOS 5K Pack / 10K Pack LV
		UZ energy	Power Lite Series L051100-A1 / L051100-B[2]
			PLPA-L1-5K1 / PLPA-L1-10K2
		XinyiES	XINERGY-U-48V/5.76KWh
		Dyness	PowerBox Pro / PowerBox G2 / A48100
			DL5.0C / PowerBrick / PowerBrick Pro
		APstorage	APbattery-48V/5.76KWh
			APbattery-51.2V/6.5KWh
			APbattery-51.2V/5.12KWh / APbattery-51.2V/10.24KWH
		DMEGC	L02-48100
		Fortress	eFlex 5.4
		KSTAR	BluE-PACK5.1
		PYTES	V5°α / E-BOX-48100R
		HOMEGRID	PF5-LFP04800-2A01/PF5-LFP09600-2A01 PF5-LFP14400-2A01/PF5-LFP19200-2A01 PF5-LFP24000-2A01/PF5-LFP28800-2A01 PF5-LFP33600-2A01/PF5-LFP38400-2A01
		Goldenmate	APOLLO-6-LV/APOLLO-9-LV/APOLLO-12-LV/APOLLO-15-LV
		PYLON	US2000/US2000C/US3000/US3000C US5000/UP5000/Force-L1/Force-L2
			Pelio-L-5.12
		GSL	GSL-051100A-B-GBP2/GSL-051200A-B-GBP2 GSL-051280A-B-GBP2/GSL-051314A-B-GBP2
		FELICITY[3][4]	LUX-X-48100LG01

Appendix 2

Compatible battery list of three-phase PCS

PCS	Type of battery	Brand	Model
ELT Series	Lithium battery	Soluna[1]	Soluna EOS 5K Pack
			10K Pack LV
		UZ energy	PLPA-L1-5K1/PLPA-L1-10K2
		Dyness	A48100 / PowerBox Pro / PowerBox G2
			DL5.0C / PowerBrick / PowerBrick Pro
		APstorage	APbattery-51.2V/6.5kWh
			APbattery-51.2V/5.12KWh / APbattery-51.2V/10.24KWH
		DMEGC	L02-48100
		Fortress	eFlex 5.4
		KSTAR	BluE-PACK5.1
		PYTES	V5°α / E-BOX-48100R
		HOMEGRID	PF5-LFP04800-2A01/PF5-LFP09600-2A01 PF5-LFP14400-2A01/PF5-LFP19200-2A01 PF5-LFP24000-2A01/PF5-LFP28800-2A01 PF5-LFP33600-2A01/PF5-LFP38400-2A01
		Goldenmate	APOLLO-6-LV/APOLLO-9-LV/APOLLO-12-LV/APOLLO-15-LV
		PYLON	US2000/US2000C/US3000/US3000C US5000/UP5000/Force-L1/Force-L2
			Pelio-L-5.12
		GSL	GSL-051100A-B-GBP2/GSL-051200A-B-GBP2 GSL-051280A-B-GBP2/GSL-051314A-B-GBP2
		FELICITY[2]	LUX-X-48100LG01

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