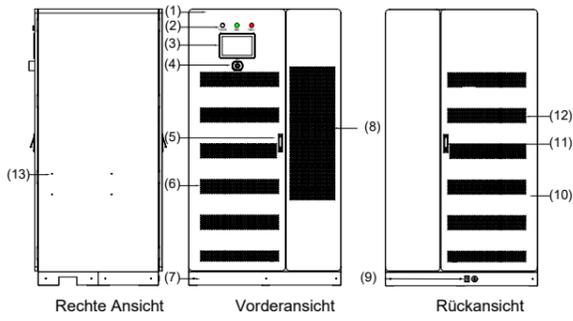
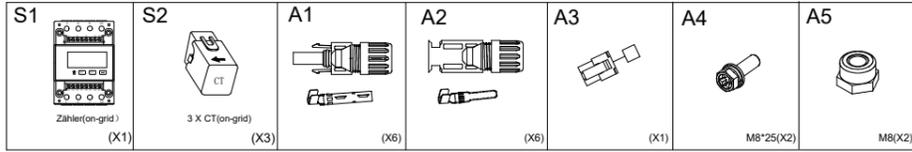


1. Produktübersicht

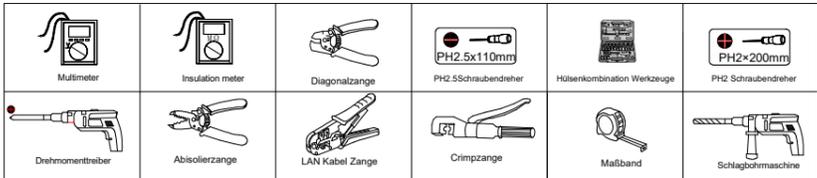
- (1).Vordertür
- (2).Indikator
- (3).HMI
- (4).EPO
- (5).Vordertürschloss
- (6).Luftauslass der Batteriekabine
- (7).Vorderseite
- (8).Elektrischer Luftauslass in der Kabine
- (9).Erdung
- (10).Hintertür
- (11).Hintertürschloss
- (12).Lufteinlass der Batteriekabine
- (13).ATS-Einsatz Hohlraumposition



1.1 Packlist

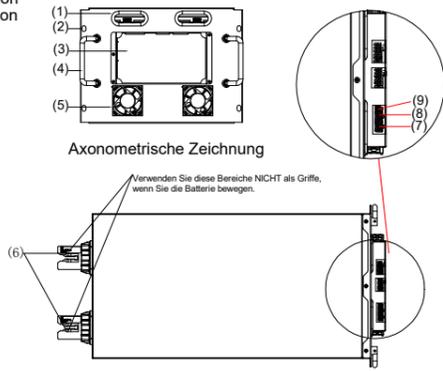


2. Installationswerkzeuge

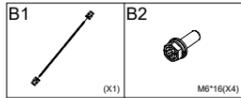


3. M7790-S Produktübersicht

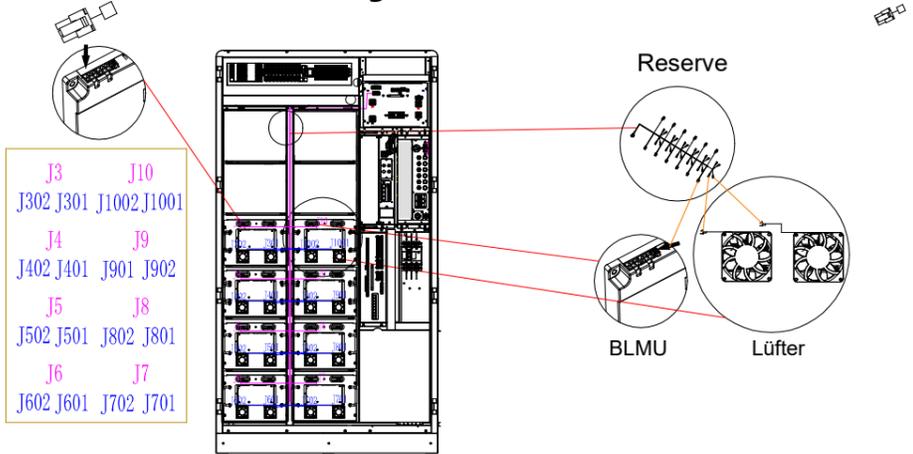
- (1).Kabelausgang für Batteriemuster x2
- (2).Befestigungsloch x4
- (3).BLMU
- (4).Handgriff x2
- (5).Lüfter x2
- (6).Stromstecker x2
- (7).Inter-Batterie-Kommunikation
- (8).Inter-Batterie-Kommunikation
- (9).BLMU-Stromversorgung



3.1 Packlist

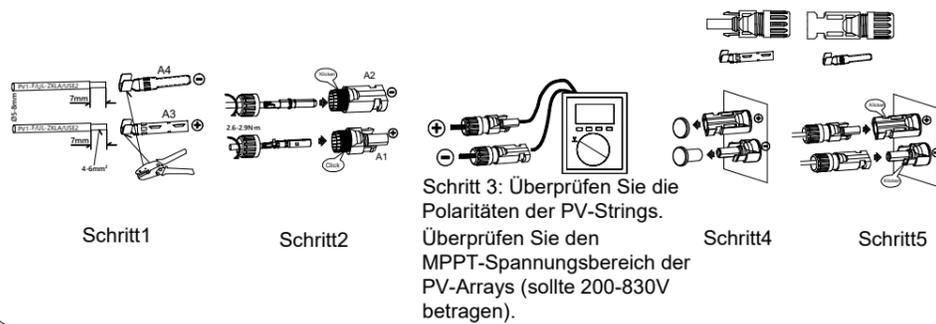


5.4 Elektrische Verkabelung

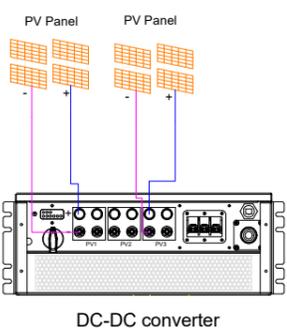


Schritt 5: Verkabelung des BLMU/FAN-Stromkabels und Anschluss des Widerstandskabels.

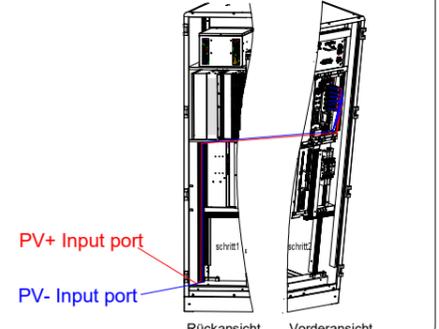
5.5 Anschließen des PV-Stromkabels



5.6 PV-Strominstallation

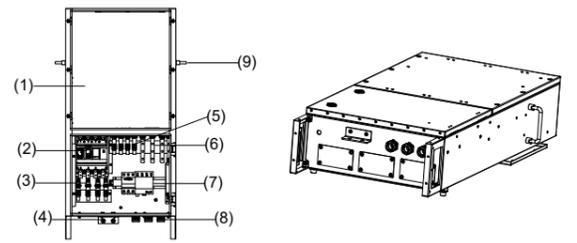


5.7 PV-Kabelweg

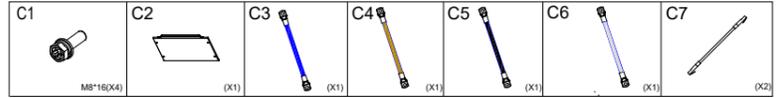


4. PWD-100M-O(ATS)

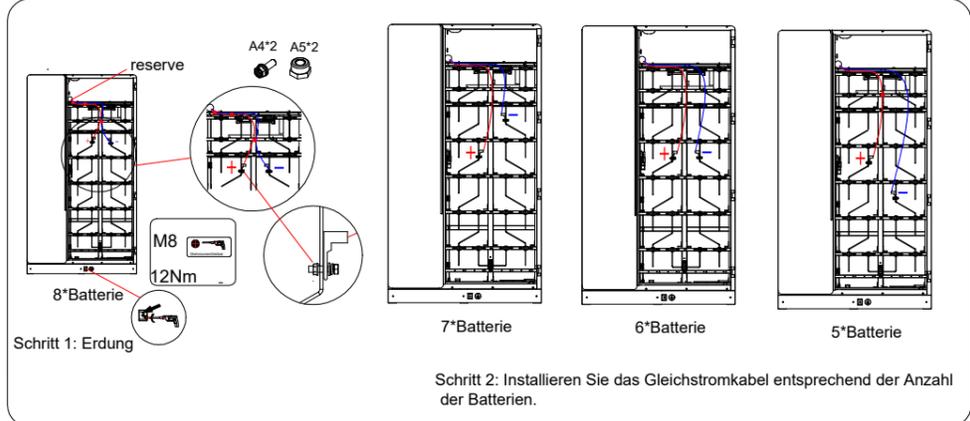
- (1).Abdeckplatte
- (2).AC-Leistungsschalter
- (3).Netzanschlussterminal
- (4).Erdungsklemme
- (5).Lastanschlussklemme
- (6).PCS-Anschlussklemme
- (7).SPD
- (8).Wasserdichtes Signal-Kabelterminal
- (9).Griff



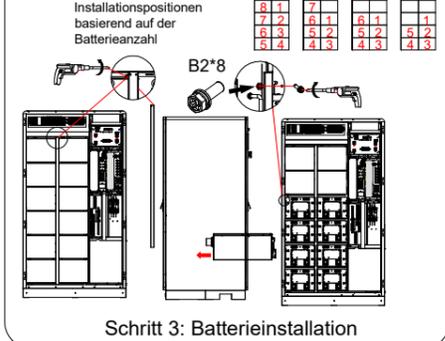
4.1 Packlist



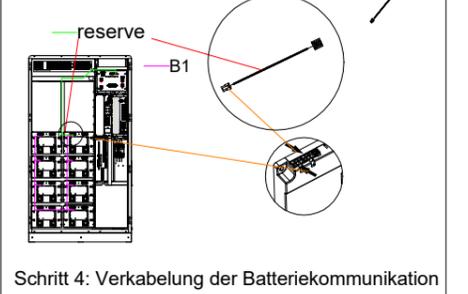
5. Installation des Produkts (Einzelgerät)



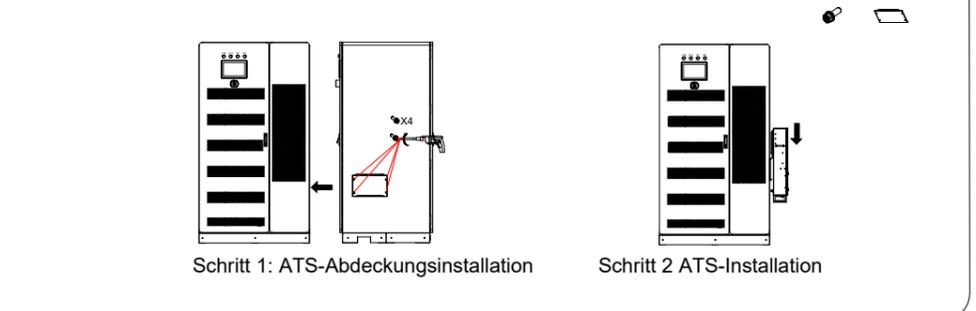
5.2 Batterieinstallation



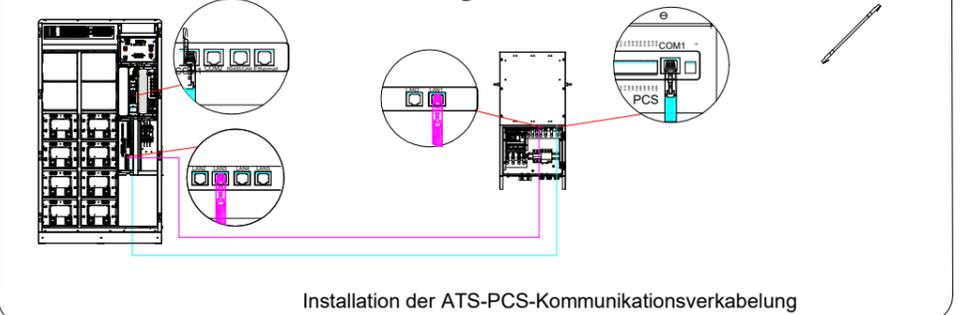
5.3 Verkabelung der Batteriekommunikation



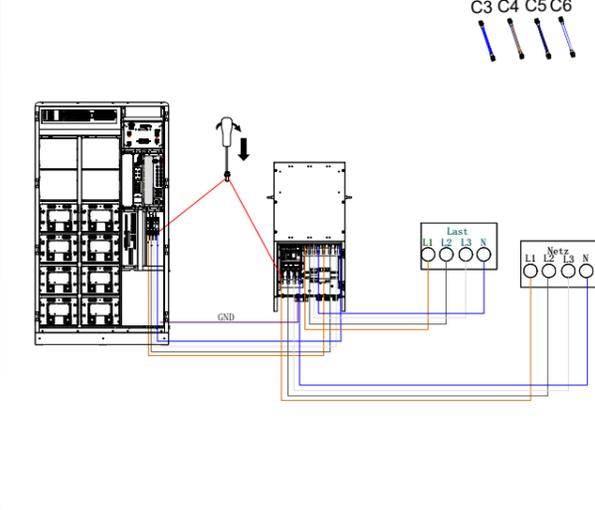
5.8 ATS-Installation



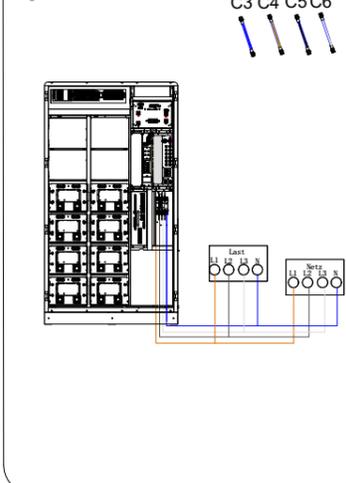
5.9 ATS-Kommunikationsverkabelung



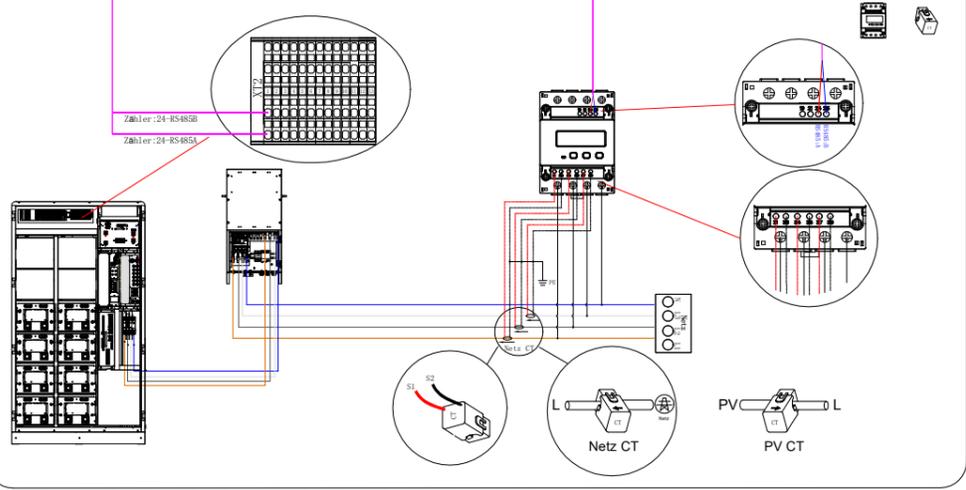
5.11 AC-seitige Verkabelung des Systems (mit ATS)



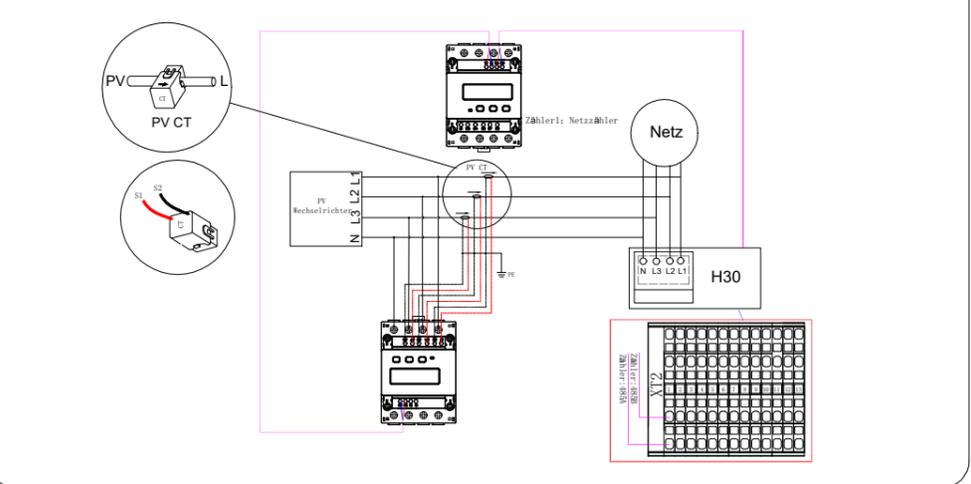
5.10 Ac-seitige Verkabelung des Systems (Ohne ATS)



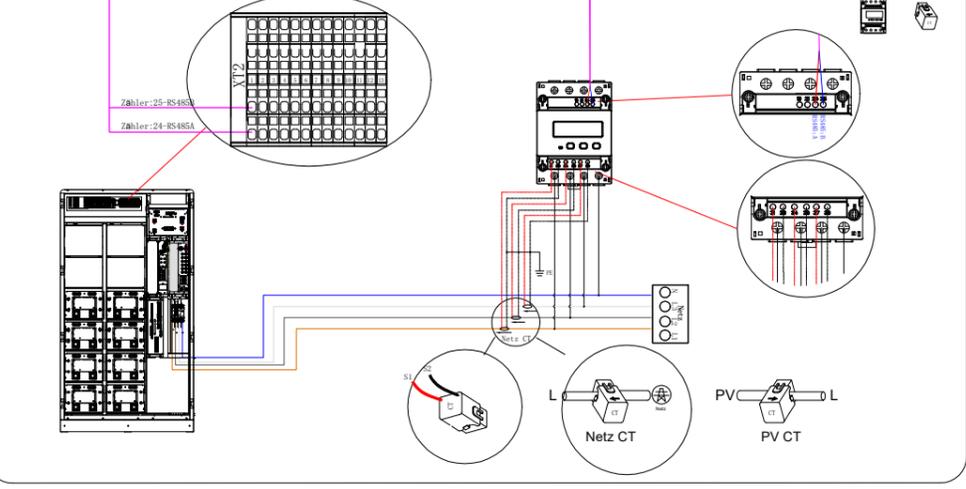
5.12 Zählerverdrahtung (mit ATS On-Grid)



5.14 Verdrahtung mehrerer Zähler



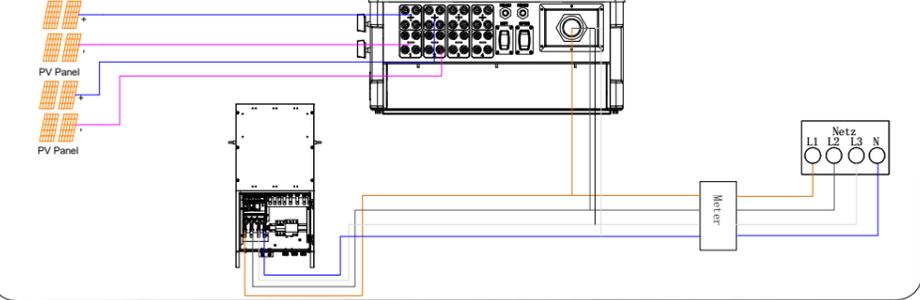
5.13 Zählerverdrahtung (Ohne ATS On-Grid)



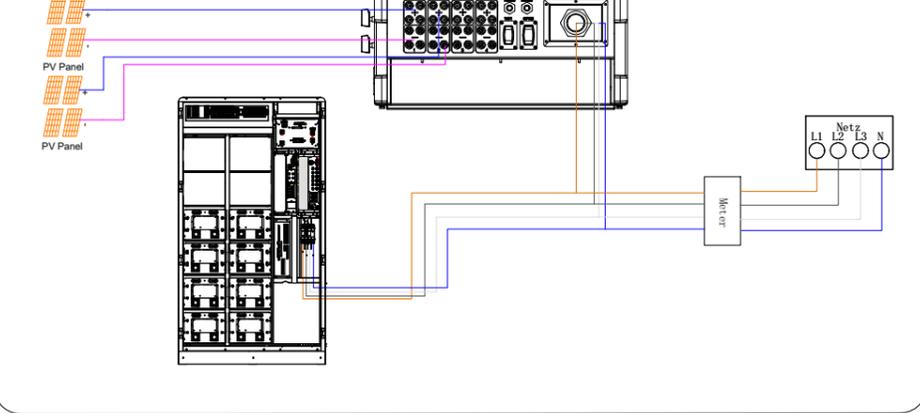
05

06

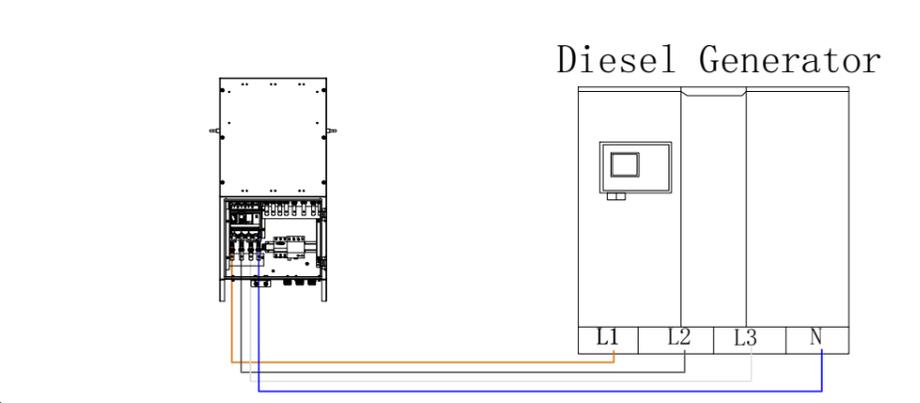
5.15 PV-Wechselrichter-Wechselstromkabelverkabelung (Anschluss an das Netz mit ATS)



5.16 PV-Wechselrichter AC-Kabelverkabelung (Anschluss an das Netz ohne ATS)



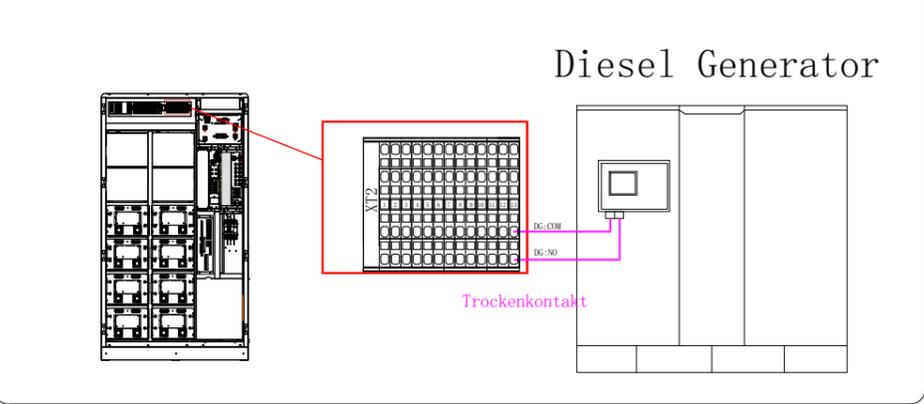
5.17 Dieselgenerator AC-seitige Verkabelung



07

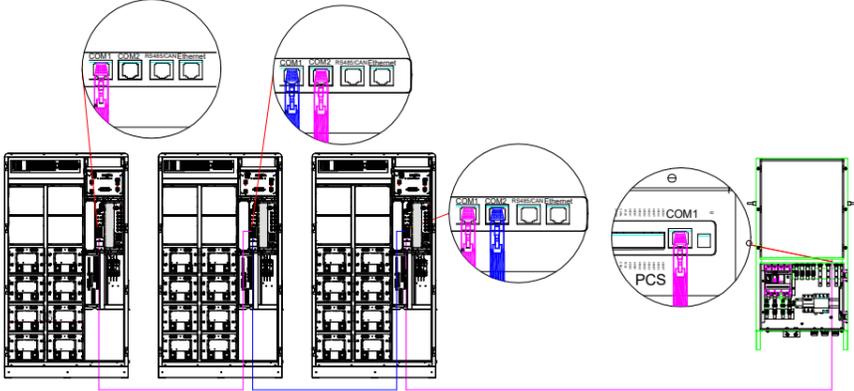
08

5.18 Dieselgenerator Trockenkontaktanschluss

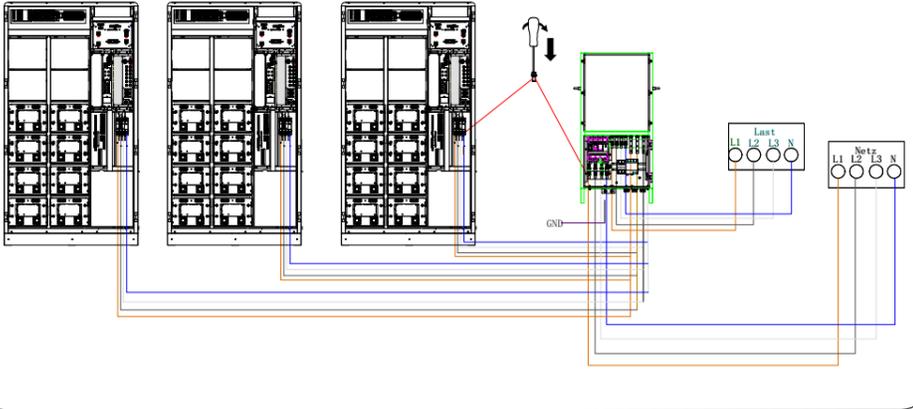


6. Installation des Produkts (Parallelbetrieb mit ATS)

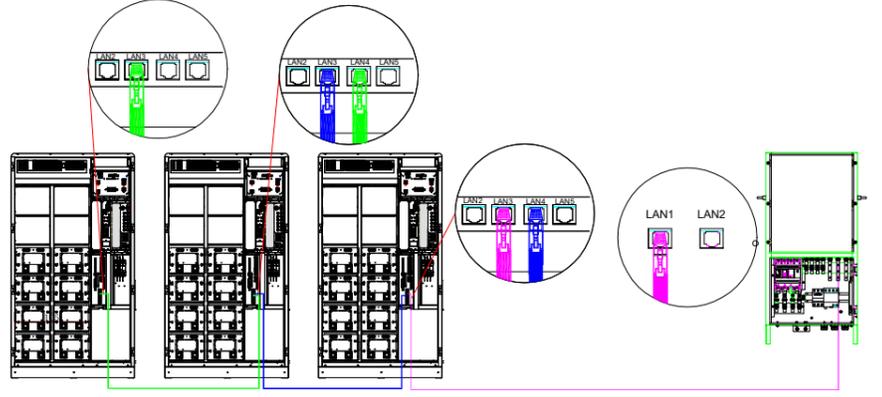
6.1 Parallelbetrieb Kommunikationsverkabelung (Mit ATS)



6.2 System AC-seitige Verkabelung (mit ATS)

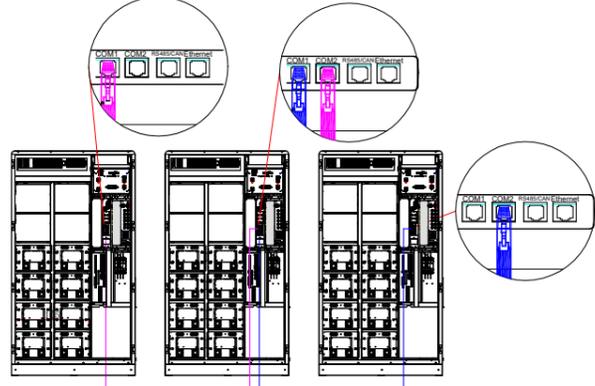


6.3 Parallelbetrieb LAN-Verkabelung (Mit ATS)

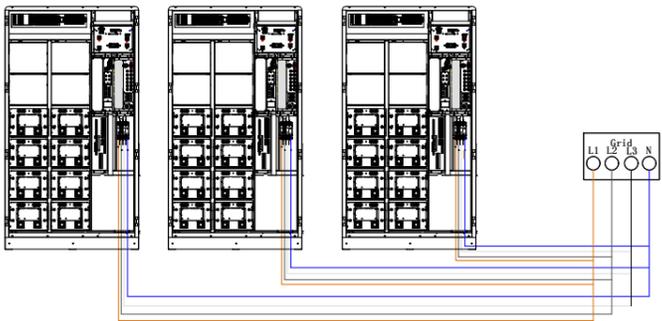


7. Installation des Produkts (Parallelbetrieb ohne ATS)

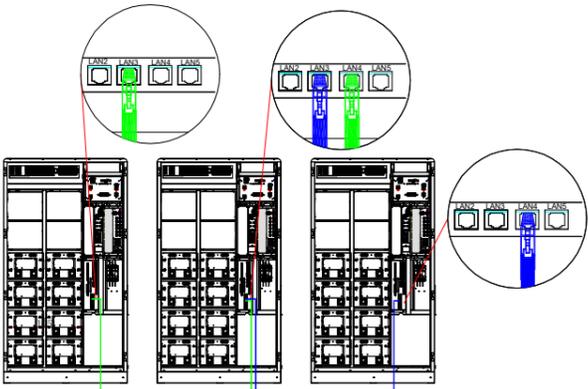
7.1 Parallelbetrieb Kommunikationsverkabelung (Ohne ATS)



7.2 System AC side wiring (Without ATS)



7.3 Parallel Operation LAN wiring (Without ATS)



8. Inbetriebnahme

8.1 Einschalten des Systems

- Schritt1: Schalten Sie den Gehäuseschutzschalter der HV-Box ein.
- Schritt2: Schalten Sie den PV-Schutzschalter des DC/DC-Wandlers ein.
- Schritt3: Schalten Sie den PCS-AC-Schutzschalter ein.
- Schritt4: Schalten Sie die Stromverteilungsschalter im Schrank ein, einschließlich des Hauptschalters, des Schalters für die Hilfsstromquelle, des Systemstromversorgungsschalters und des Schalters für das Klimagerät.

Schritt5: Wiederholen Sie diesen Schritt, um die drei H30s nacheinander einzuschalten.

⚠️ Wenn der H30 oder das ATS nicht funktionsfähig ist, schalten Sie den Bypass-Leistungsschalter ein, um das Netz mit der Last zu verbinden.

8.2 Systemeinstellung

Schritt1: Nutzen Sie Ihr Konto, um sich am System anzumelden
 Schritt2: Klicken Sie auf „Maintain“→„Configuration Management“→„Basic Parameters Configuration“.
 Schritt3: Klicken Sie nach der Einstellung der Parameter auf „Schreiben“.
 Schritt4: Klicken Sie auf „Maintain“→„Configuration Management“→„Control Strategy Configuration“.
 Schritt5: Klicken Sie nach der Einstellung der Parameter auf „Schreiben“.
 Tipps: Bitte lesen Sie das Benutzerhandbuch für weitere Systemeinstellungsoptionen
 Lage der Schnittstelle des Netzkabels: Das Netzkabel wird in die LAN2-Schnittstelle auf der Rückseite des Displays (SCADA) eingesteckt.

8.3 Schalten Sie das System aus

- Schritt1: Schalten Sie das SCADA aus.
- Schritt2: Schalten Sie die Stromverteilungsschalter im Schrank aus, einschließlich des Hauptschalters, des Schalters für die Hilfsstromquelle, des Systemstromversorgungsschalters und des Schalters für das Klimagerät.
- Schritt3: Schalten Sie den PCS-AC-Schutzschalter aus.
- Schritt4: Schalten Sie den PV-Schutzschalter des DC/DC-Wandlers aus.
- Schritt5: Schalten Sie den Gehäuseschutzschalter der HV-Box aus.

Schritt6: Wiederholen Sie diesen Schritt, um die drei H30 nacheinander auszuschalten.

⚠️ Vergewissern Sie sich, dass alle IT-Geräte (Display) ausgeschaltet sind, bevor Sie das System ausschalten.
 Wenn H30 oder das ATS nicht betriebsbereit ist, schalten Sie den Bypass-Schalter ein, um das Netz mit der Last zu verbinden.

9. Für weitere Informationen laden Sie bitte das System-Benutzerhandbuch und das System-Installationshandbuch herunter.



System-Installationshandbuch



System-Benutzerhandbuch



C&I AlphaCloud



C&I AlphaESS App

10. Fehlerbehebung

Fault category	LCD fault display	Fault name	Troubleshooting
BMS	Cell-Temp-Diff	Cell temperature different fault	Shut down the system about 1 hours, then restart the system to check if the fault is eliminated. If the problem is not resolved, please contact AlphaESS customer service.
	Chrg-Ov-Curr	Module charge over current fault	Restart the system to check if the fault is eliminated. If the problem is not resolved, stop any operation on the system and contact AlphaESS customer service.
	Disch-Ov-Curr	Module discharge over current fault	Restart the system, turn off some of the loads to check if the fault is eliminated. If the problem is not resolved, stop any operation on the system and contact AlphaESS customer service.
	Pole-Ov-Temp	Pole over temperature fault	Shut down the system for about 2 hours, then restart the system to see if the fault is eliminated. If the problem is not resolved, please contact AlphaESS customer service.
	Cell-Ov-Volt	Cell over volt fault	Restart the system, switch the system to the discharging state, if the error is not eliminated, stop any operation on the system and contact AlphaESS customer service.
	Cell-Volt-Diff	cell volt different fault	Restart the system to see if the fault is eliminated. If the problem is not resolved, please contact AlphaESS customer service.
	Disch-Low-Temp	cell discharge under temperature fault	Confirm that the ambient temperature is higher than -10℃. If it is lower than it, please turn on the heating equipment such as heater. If the ambient temperature is higher than -10℃, restart the system. If the problem is not resolved, please contact AlphaESS customer service.
	Cell-Low-Volt	Cell under volt fault	Restart the system to see if the fault is eliminated, if the problem is not solved, please contact AlphaESS customer service.
	Commu_fai_LMU	LMU Communication fault	Check if the communication cable connector between the HV-control box and the battery is not plugged in. If the problem is not resolved, please contact AlphaESS customer service.
	Cell-Ov-Temp	Cell over temperature fault	Stop charging and discharging and then run the system after the fault is eliminated. If the problem is not resolved, please contact AlphaESS customer service.
	Commu_fai_BMU	BMU Communication fault	Check if the communication cable connector between the HV-control box and the TOP BMU is not plugged in. If the problem is not resolved, please contact AlphaESS customer service.
	Chrg-Low-Temp	Cell charge under temperature fault	Confirm that the ambient temperature is higher than 0°. If it is lower than below, please turn on the heating equipment such as heater. If the ambient temperature is higher than 0°, restart the system.
	Insulation_err	Insulation fault	If the problem is not resolved, please contact AlphaESS customer service.
	SOC low	Low SOC	The battery energy is low. Charge the batteries.
	PCS	EPO	The EPO trigger fault signal
CAN C comm. Fault		The communication between PCS and ATS is lost	1. If the application of external switching device is not connected, set the inverter type to 0. 2. Check whether the matching resistor is connected according to the document. 3. Check whether there is bad contact between the communication line of the module and the switching device. 4. If the power grid fails and PCS is not in the off-grid operation state, the switching device will be in the power failure state, and PCS will report this alarm as normal.
EMS comm. connection timeout		1. The communication between EMS and PCS is interrupted. 2. The EMS is not connected	1. Check whether the connection cable between EMS and PCS is loose. 2. Check whether the EMS is working properly.
Module Fan fault 1		The fan of the PCS is stalled	1. Check whether the PCS fan cannot rotate because it is blocked by foreign objects. 2. Clean up the dust accumulation of PCS fan. 3. Check whether the PCS fan is damaged and cannot rotate.
Module over temperature 1		1. PCS detects overtemperature of AC radiator 2. PCS detects overtemperature of DC radiator	1. Check whether the PCS fan works normally. 2. Clean the vents of the PCS fan. 3. Check whether the ambient temperature of PCS is too high.
Ambient overtemp. fault		PCS detects that the ambient temperature is too warm	Check whether the ambient temperature of PCS is too high.
DC input over voltage		DC voltage higher than uniform charging voltage setting	1. According to the battery parameters, correctly configure the equalizing voltage setting. 2. When the DC input is disconnected during PCS charging operation, this alarm will be generated, and the alarm will be cleared automatically. 3. If the difference between DC voltage sampling and DC voltage measurement is large, contact the AlphaESS.
DC input under voltage		The DC voltage is lower than the DC lower limit voltage setting value	1. Correctly set the DC lower limit voltage according to the battery parameters. The DC lower limit voltage should be lower than the actual battery voltage. 2. Check whether the DC voltage is not connected, or the BMS disconnects the battery contactor due to an alarm. 3. If there is a large difference between the sampled DC voltage and the measured DC voltage, contact the AlphaESS.
DC overload alarm		When PCS is running off-grid, the current and power of DC side exceed the rated value	During off-network operation, the load exceeds the rated value, resulting in an alarm. If the load is reduced, the alarm is automatically cleared.
AC bus phase reversed		The phase sequence of the three-phase power grid line is reversed	If the phase sequence of the power grid incoming line does not meet the requirements, change the phase sequence of the power grid incoming line to be consistent with the phase sequence ABC at the power grid switch incoming line. If the phase sequence is correct, the alarm is automatically cleared.
AC bus phase lost		If the PCS detects an AC connection error	If PCS is set to 3P3W, but the AC incoming line is connected to the N line, this alarm will be reported. Disconnect the N line from the PCS, and then set the fault clearing command to clear the alarm.

Fault category	LCD fault display	Fault name	Troubleshooting
DCDC	Module_PV PV1 Side Input Over Voltage	Set the input voltage on the PV1 side to the maximum PV voltage on the PV1 side	1. Configure PV1 parameters based on the operation guide. 2. The PV1 side should be connected to a voltage that meets requirements.
	Module_PV PV2 Side Input Over Voltage	Set the input voltage on the PV2 side to the maximum PV voltage on the PV2 side	1. Configure PV2 parameters based on the operation guide. 2. The PV2 side should be connected to a voltage that meets requirements.
	Module_PV PV3 Side Input Over Voltage	Set the input voltage on the PV3 side to the maximum PV voltage on the PV3 side	1. Configure PV3 parameters based on the operation guide. 2. The PV3 side should be connected to a voltage that meets requirements.
	Module_PV PV1 Side Input Under Voltage	Input voltage on the PV1 side The voltage is lower than the lowest voltage set on the PV side	1. Set parameters on the PV side based on the operation guide. 2. The PV1 side should be connected to a voltage that meets requirements.
	Module_PV PV2 Side Input Under Voltage	Input voltage on the PV2 side The voltage is lower than the lowest voltage set on the PV side	1. Set parameters on the PV side based on the operation guide. 2. The PV2 side should be connected to a voltage that meets requirements.
	Module_PV PV3 Side Input Under Voltage	Input voltage on the PV3 side The voltage is lower than the lowest voltage set on the PV side	1. Set parameters on the PV side based on the operation guide. 2. The PV3 side should be connected to a voltage that meets requirements.
	Module_PV PV1 Side Input Reverse Connection	The two branches of PV1 are inversely connected	1. Check whether the positive and negative PVS of the two branches on the PV1 side are reversed. 2. After the positive or negative connection of PV1 ports is denied, check whether PV1 current sampling value Ipv1 is abnormal.
	Module_PV PV2 Side Input Reverse Connection	The two branches of PV2 are inversely connected	1. Check whether the positive and negative PVS of the two branches on the PV2 side are reversed. 2. After the positive or negative connection of PV2 ports is denied, check whether PV2 current sampling value Ipv2 is abnormal.
	Module_PV PV3 Side Input Reverse Connection	The two branches of PV3 are inversely connected	1. Check whether the positive and negative PVS of the two branches on the PV3 side are reversed. 2. After the positive or negative connection of PV3 ports is denied, check whether PV3 current sampling value Ipv3 is abnormal.
Module_PV Bus Side Reverse Connection	The port voltage on the BUS side is negative	1. Check whether the positive and negative ports on the BUS side are reversed. 2. After the positive and negative connections of BUS ports are denied, check whether the voltage sampling of BUS ports is abnormal.	
ATS	Grid over voltage	The power grid voltage exceeds the protection range	Check whether the power grid voltage exceeds the rated protection range.
	Grid under voltage	The power grid voltage is less than the protection range	Check whether the power grid voltage is lower than the rated protection range.
	Grid over frequency	The network frequency is greater than the protection range	Check whether the power grid output frequency is greater than the rated protection range.
	Grid under frequency	The network frequency is less than the protection range	Check whether the power grid output frequency is lower than the rated protection range.
	Grid phase reversed	The phase sequence of the grid is reversed	Check whether the interphase cable on the side of the grid is reversed.
	CAN A comm. Fault	The CAN communication between the ATS and PCS fails	Check whether the pcs and ATS are powered on, whether the communication network cable is in poor contact, and whether the dip switch is correct.