MASTERCRAFT ELECTRICAL

entelar ENERGY

Bringing solar home

Your trusted local partner for solar energy solutions.



Agenda

1) About Entelar Energy
2) Introduce our range
3) Installation Scenarios
4) Our Software
5) Battery Benefits
6) Technical Support



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About
Entelar Energy

Local Team and Support
Our team are all around NZ to offer support.

Trusted Partners
We partner with leading distributors.

Seamless Experience
Independently built software and app.



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Decentralized warehousing



Auckland

To service the North Island





Christchurch

To service the South Island



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Join us at our training centre

Get hands on with our commercial and residential systems.





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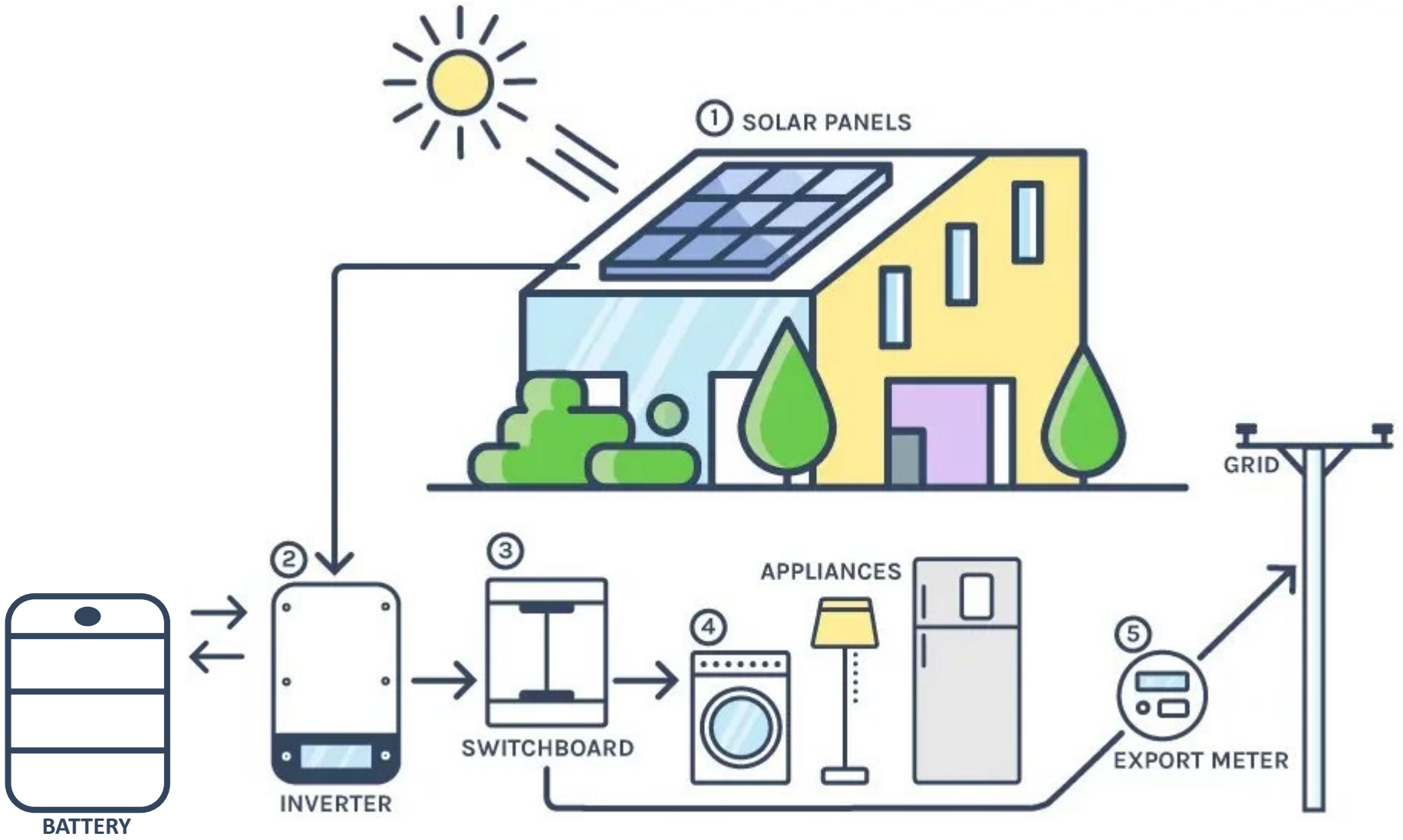
Or we'll come to you !!

Get hands on with our commercial and residential systems.



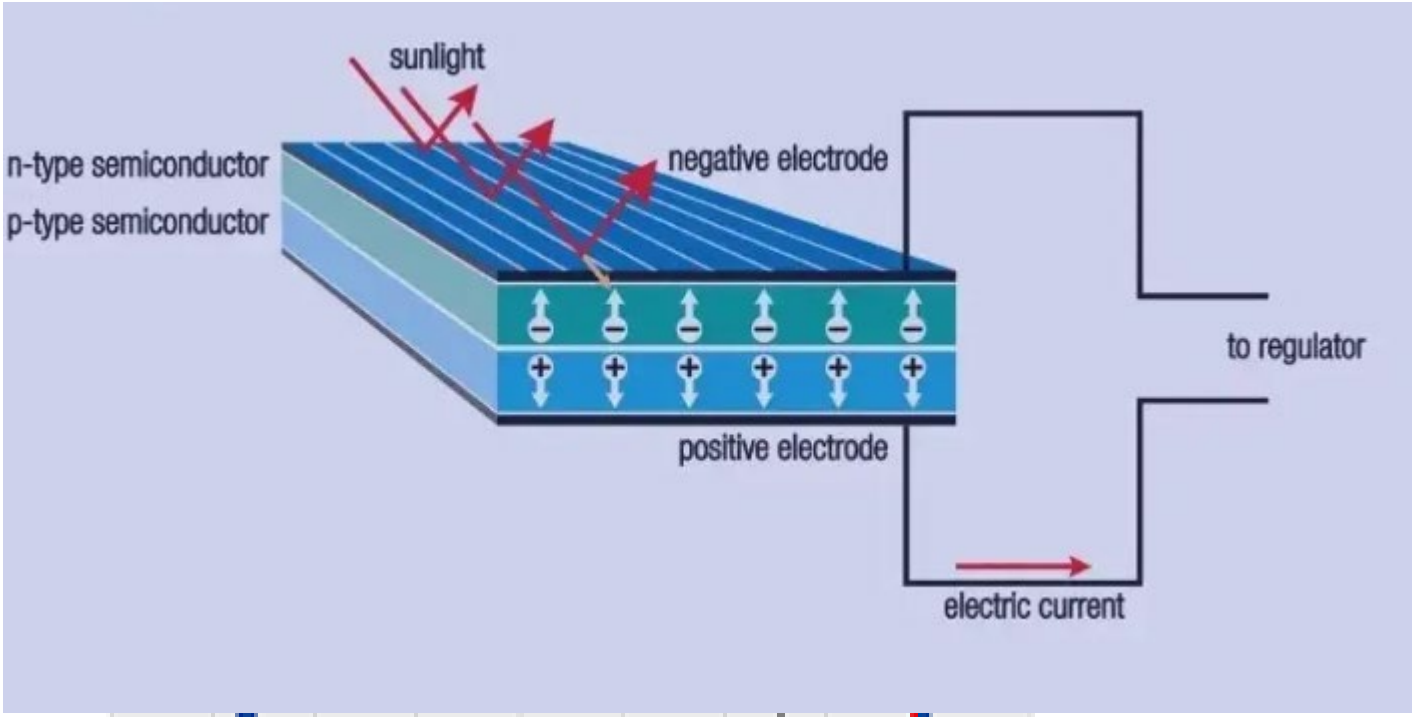
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How solar works?!



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Common solar power Terms !!





Degradation

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Entelar Energy – Our Range



Residential Range



Single Phase
Hybrid Inverter

EESOLAR-5/6KTL-L1

MPPT/Input: 2/2

Max. Current per MPPT/Short-circuit: 12.5A/18A

EESOLAR-10KTL-LC0

MPPT/Input: 3/3

Max. Current per MPPT/Short-circuit: 16A/20A



Three Phase
Hybrid Inverter

EESOLAR-6/10KTL-M1

MPPT/Input: 2/2

Max. Current per MPPT/Short-circuit: 13.5A/19.5A

EESOLAR-20KTL-MB0

MPPT/Input: 2/4

Max. Current per MPPT (two strings) /Short-circuit: 30A/40A

Smart String Energy Storage System

EESTORE-(5-30)

Lithium Iron Phosphate (LFPO4) Cell

Single Phase: 350V-560V

Three Phase: 600-980V





WLAN-FE Smart Dongle

EEDongleA-05

Can manage 10 devices



Smart Meter

DDSU666-H (Single Phase)

DTSU666-HW/YDS60-80 (Three Phase)

DTSU666-H 100A (Three Phase)

DTSU666-H 250A (Three Phase)

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Huawei Accessories



(SINGLE-PHASE BACKUP BOX)

Backup Box-B0

Backup Load | Grid Inverter AC | COM(DI)

Supported inverter: EESOLAR-5/6KTL-L1
Rated voltage: 220 V/230 V
AC output voltage range: 198 V–253 V
Max. Output Current: 22.7A
Switching time: 3s
Overload auto-recovery in off-grid mode: supported
Maximum off-grid apparent power: 5000 VA



(THREE-PHASE BACKUP BOX)

Backup Box-B1

Backup Load | Grid Inverter AC | COM(DI)

Supported inverter: EESOLAR-6/10KTL-M1
Rated voltage: 380 V/400 V
AC output voltage range:
On-Grid: 3 phase, 342 V–440 V **Off-Grid:** Single phase, 220/230V **Max. Output Current:** 15.2 A **Switching time:** 3s
Overload auto-recovery in off-grid mode: supported
Maximum off-grid apparent power: 3 300 VA for all M1 modules



(4G DONGLE)

SDongleB-06-AU

Can manage up to 10 devices

ResidentialRange

Product	Accessory BOM Number	Configuration Rule (the default value is 1%, rounded up)
EESTORE-(5-30)	EE21155238	Accessories for wall-mounted installation
	EE02233JQS	**Inverter Accessory Package** Key components in the accessory package: 14191131: female PV connector, 2 PCS 14191133: male PV connector, 2 PCS 14180540: signal terminal, 1 PCS
EESOLAR-5/6KTL-L1	EE02233DXX	**Inverter Accessory Package** Key components in the accessory package: 14191131: female PV connector, 3 PCS 14191133: male PV connector, 3 PCS 14190919: AC connector, 1 PCS 14210053-002: COM connector, 1 PCS
EESOLAR-6/10KTL-M1	EE02233HNV	**Inverter Accessory Package** Key components in the accessory package: 14190937: female PV connector, 2 PCS 14190939: male PV connector, 2 PCS 14191312: AC connector, 1 PCS 14191328: DC female connector for battery, 1 PCS 14191330: DC male connector for battery, 1 PCS 14191315: COM connector, 1 PCS
EESOLAR-29.9/40/50KTL-M3	EE02233ETX	**Inverter Accessory Package** Key lower-layer materials of the fitting bag: 14191131: PV wiring female terminal, 2 PCS 14191133: PV wiring male terminal, 2 PCS 14191315: COM port female terminal, 1 PCS 14170213: Single Cord End Terminal



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Commercial Inverters

Three Phase Grid-tied Inverter

EESOLAR-29.9/40KTL-M3

MPPT/Input: 4/8

Max. Current per MPPT/Short-circuit: 27A/40A

Natural Convection



Three Phase Grid-tied Inverter

EESOLAR-50KTL-M3

MPPT/Input: 4/8

Max. Current per MPPT/Short-circuit: 30A/40A

Smart Air Cooling

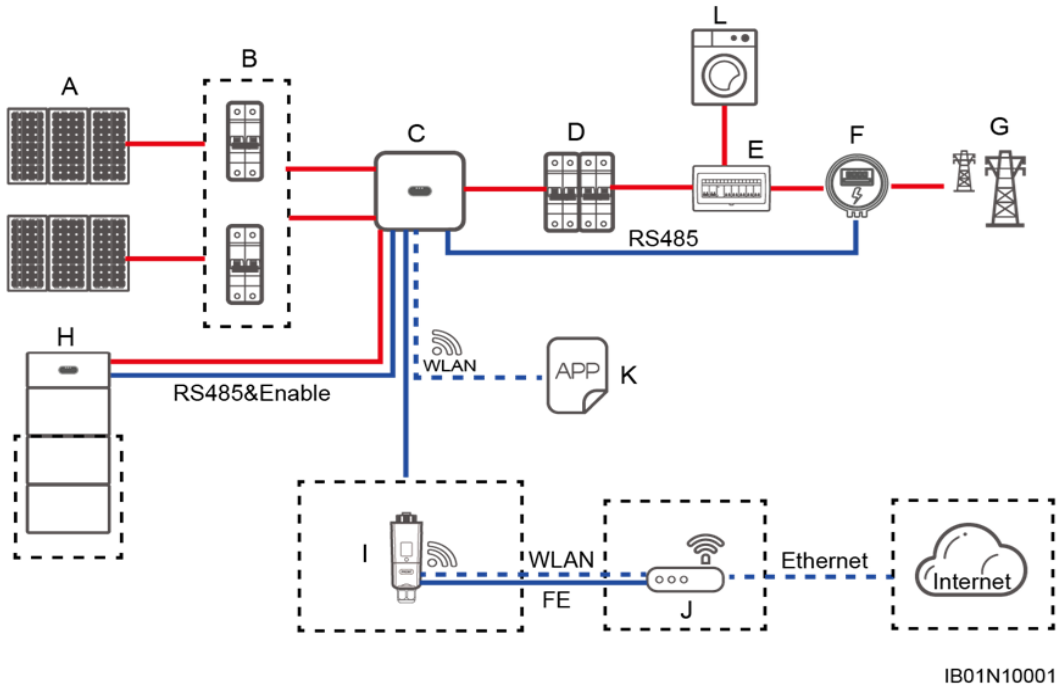




Installation Scenarios



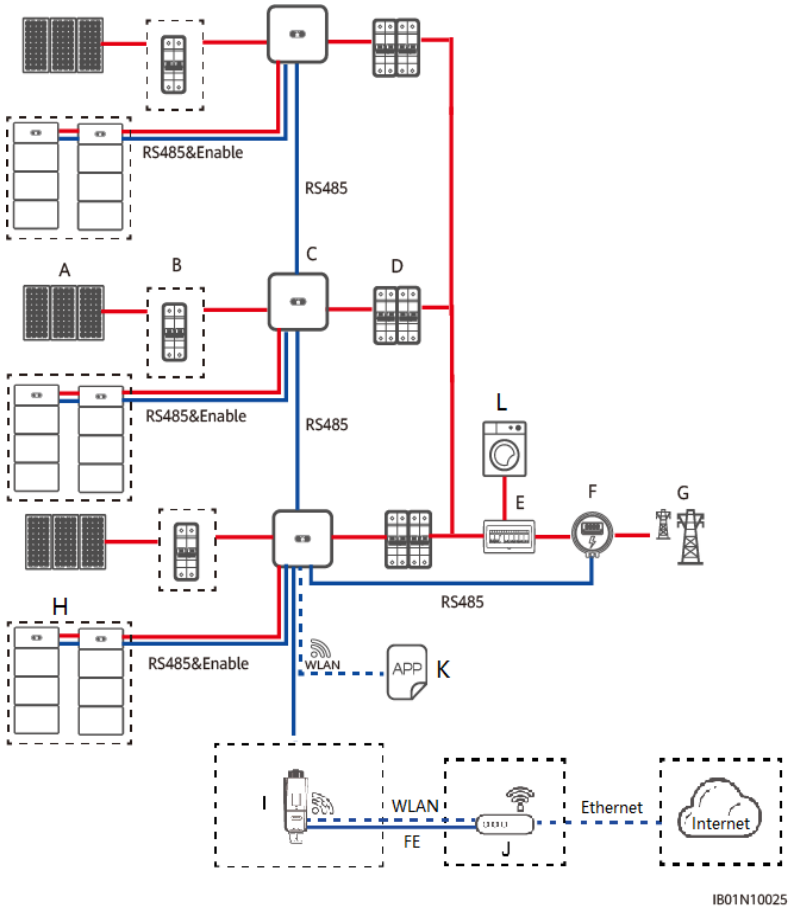
Grid-tied ESS Networking 1



(A)PV string
(B)DC switch
(C)Inverter
(D)AC switch
(E)PDB
(F)Smart Power Sensor
(G)Power grid
(H)Energy Storage
(I)WLAN-FE Smart Dongle
(J)Router
(K)HiSolar app
(L)Load
(M)Univers EMS

Configure the components in the dashed-line boxes as required.

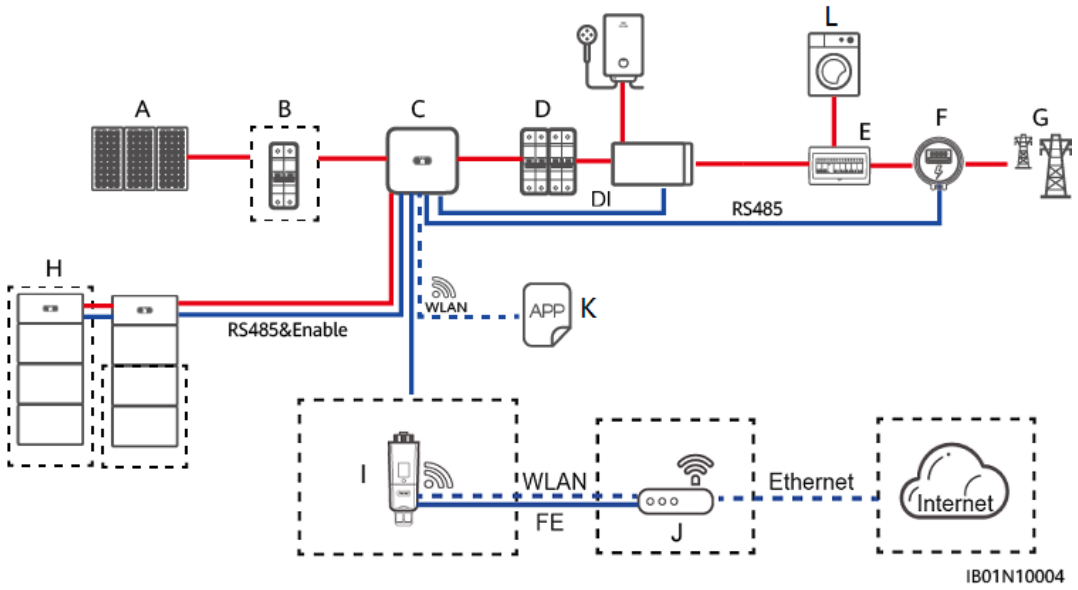
Grid-tied ESS Networking 2



(A)PV string
(B)DC switch
(C)Inverter
(D)AC switch
(E)PDB
(F)Smart Power Sensor
(G)Power grid
(H)Energy Storage
(I)WLAN-FE Smart Dongle
(J)Router
(K)HiSolar app
(L)Load
(M)Univers EMS

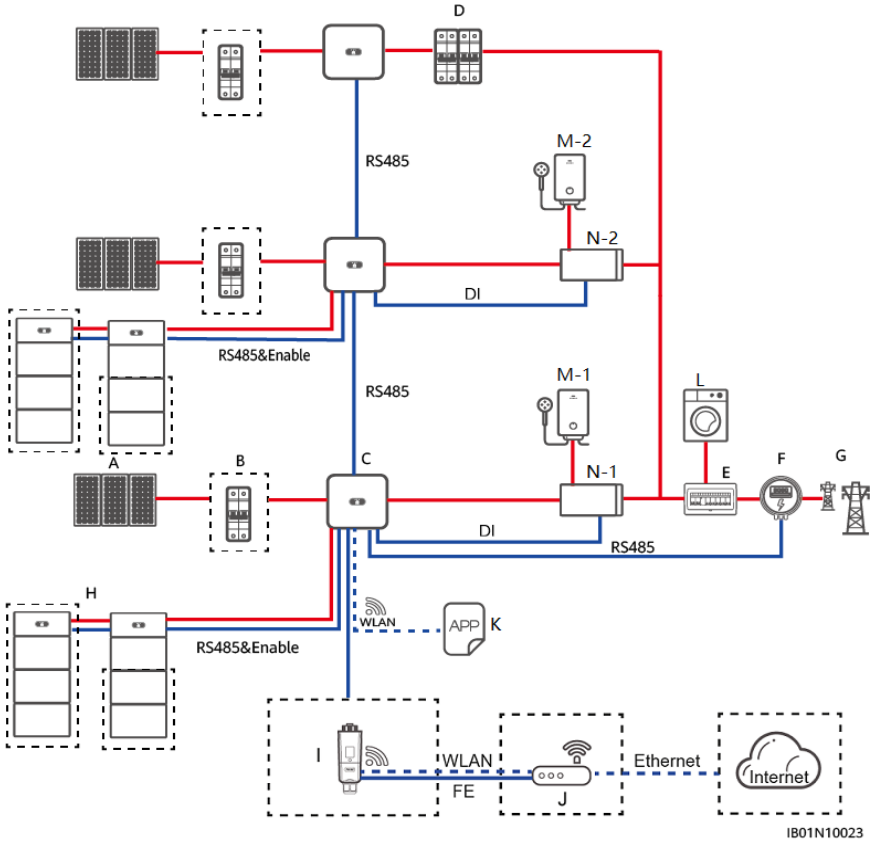
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Grid-tied and Back-up ESS Networking 1



(A)PV string
(B)DC switch
(C)Inverter
(D)AC switch
(E)PDB
(F)Smart Power Sensor
(G)Power grid
(H)Energy Storage
(I)WLAN-FE Smart Dongle
(J)Router
(K)HiSolar app
(L)Load
(M)Univers EMS

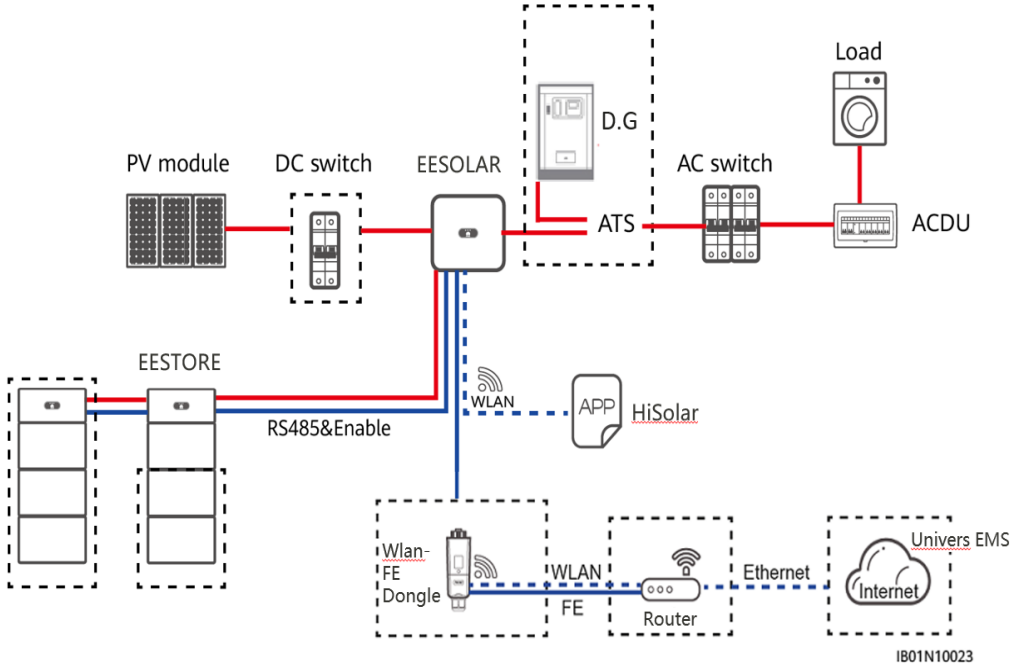
Grid-tied and Back-up ESS Networking 2



(A)PV string
(B)DC switch
(C)Inverter
(D)AC switch
(E)PDB
(F)Smart Power Sensor
(G)Power grid
(H)Energy Storage
(I)WLAN-FE Smart Dongle
(J)Router
(K)HiSolar app
(L)Load
(M)Univers EMS

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Pure Off-grid ESS Networking



(A)PV string
(B)DC switch
(C)Inverter
(D)AC switch
(E)PDB
(F)Smart Power Sensor
(G)Power grid
(H)Energy Storage
(I)WLAN-FE Smart Dongle
(J)Router
(K)HiSolar app
(L)Load
(M)Univers EMS

EESOLAR-5/6KTL-L1 Scenario Cable Connections

DANGER

Before connecting cables, ensure that all switches are OFF. Otherwise, electric shocks may occur.

NOTICE

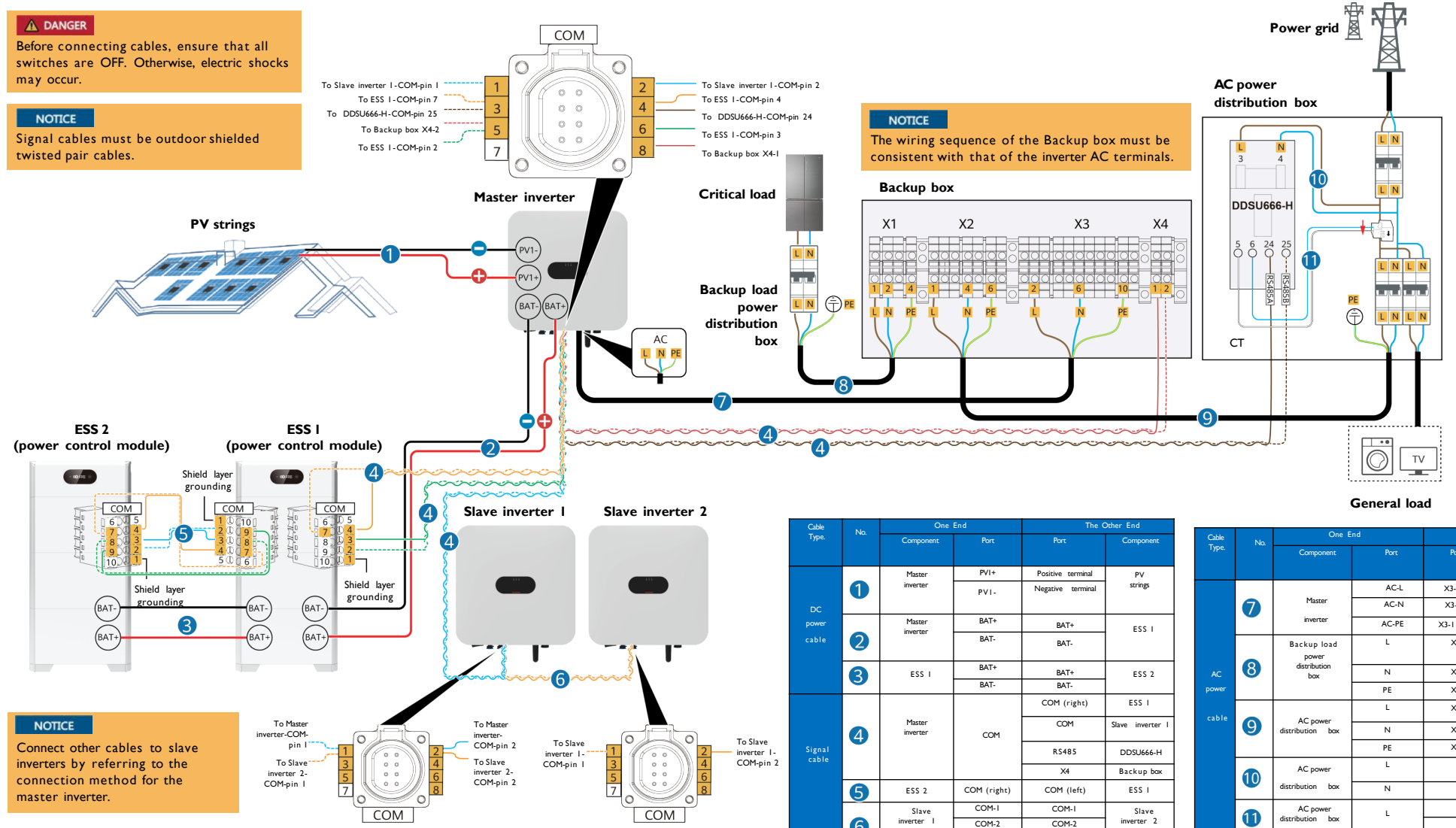
Signal cables must be outdoor shielded twisted pair cables.

NOTICE

The wiring sequence of the Backup box must be consistent with that of the inverter AC terminals.

NOTICE

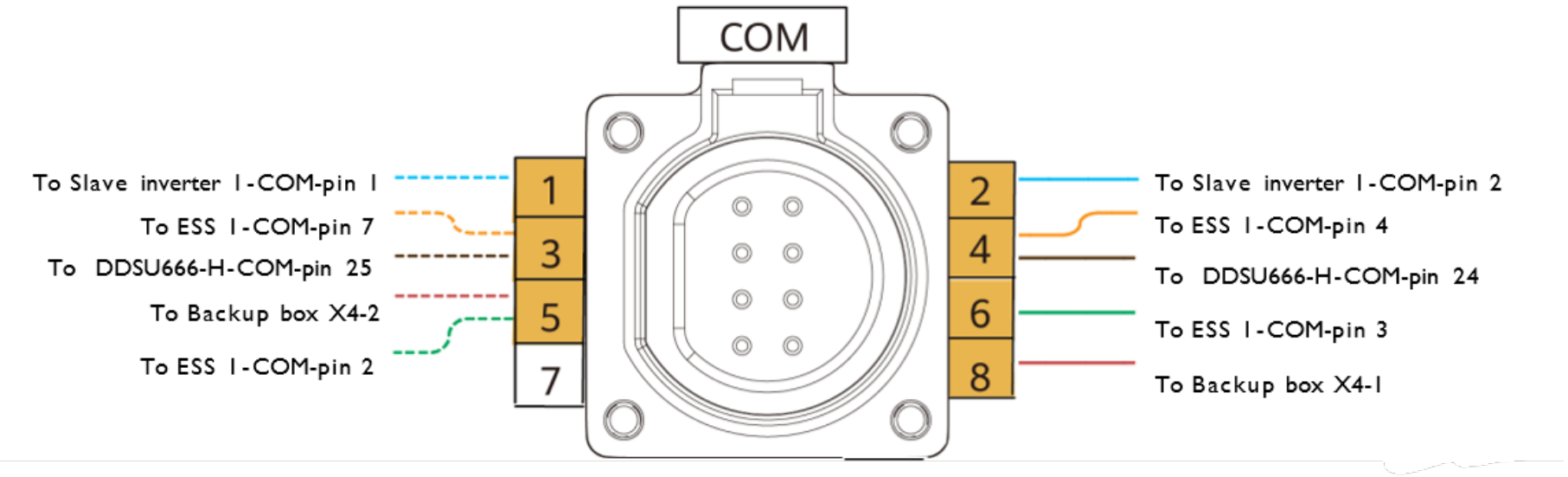
Connect other cables to slave inverters by referring to the connection method for the master inverter.



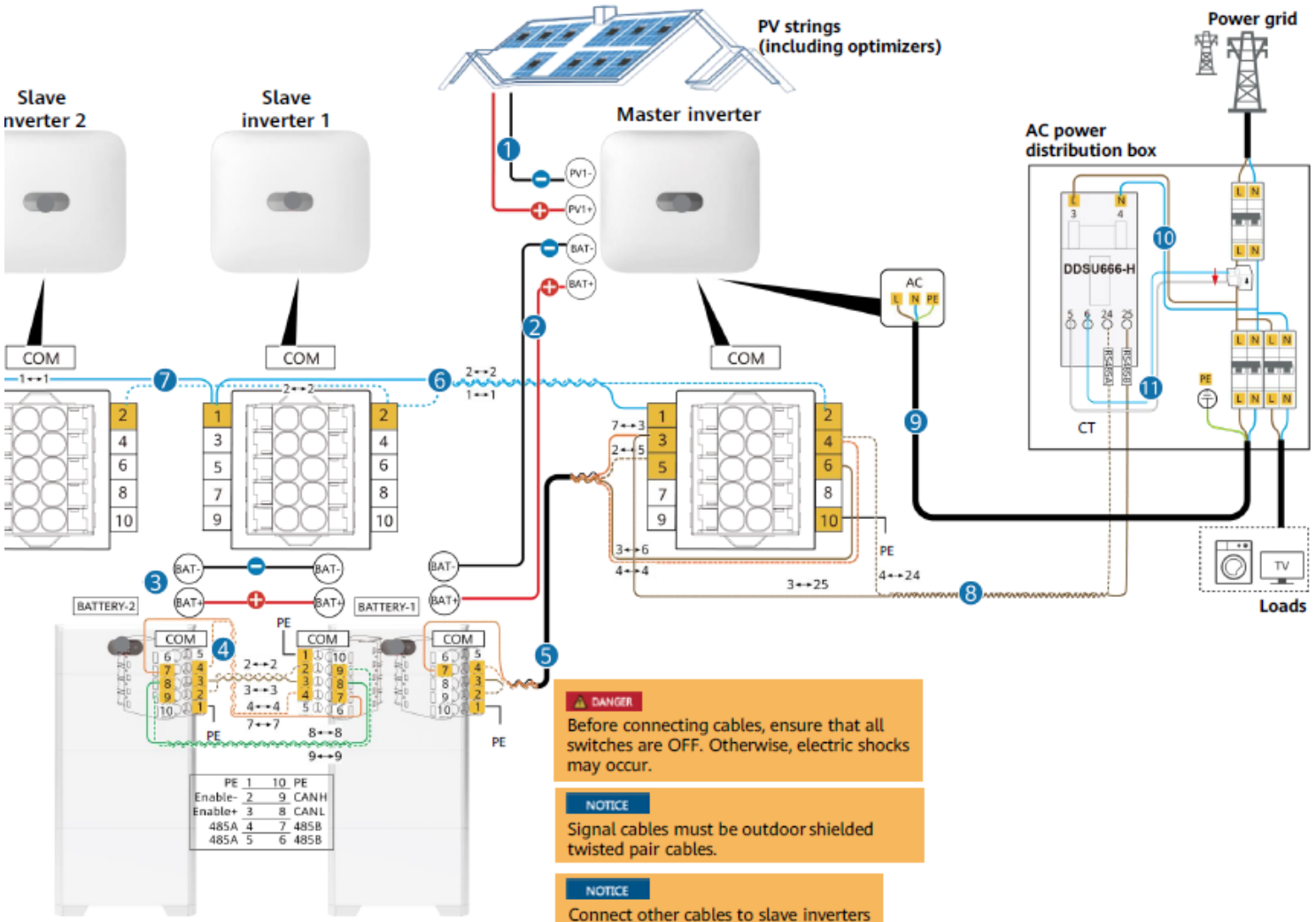
Cable Type	No.	One End		The Other End	
		Component	Port	Port	Component
DC power cable	1	Master inverter	PV1+	Positive terminal	PV strings
			PV1-	Negative terminal	
	2	Master inverter	BAT+	BAT+	ESS 1
			BAT-	BAT-	
	3	ESS 1	BAT+	BAT+	ESS 2
			BAT-	BAT-	
Signal cable	4	Master inverter	COM	COM (right)	ESS 1
				COM	Slave inverter 1
				RS485	DDSU666-H
				X4	Backup box
	5	ESS 2	COM (right)	COM (left)	ESS 1
	6	Slave inverter 1	COM-1	COM-1	Slave inverter 2
			COM-2	COM-2	

Cable Type	No.	One End		The Other End	
		Component	Port	Port	Component
AC power cable	7	Master inverter	AC-L	X3-2 (L)	Backup box
			AC-N	X3-6 (N)	
			AC-PE	X3-10 (PE)	
	8	Backup load power distribution box	L	X1-1	Backup box
			N	X1-2	
			PE	X1-4	
	9	AC power distribution box	L	X2-1	Backup box
			N	X2-4	
			PE	X2-6	
	10	AC power distribution box	L	3	DDSU666-H
			N	4	
	11	AC power distribution box	L	5	DDSU666-H CT
				6	

EESOLAR-5/6KTL-L1 Inverter COM Cable



EESOLAR-10KTL-LC0 Scenario Cable Connections



DANGER

Before connecting cables, ensure that all switches are OFF. Otherwise, electric shocks may occur.

NOTICE

Signal cables must be outdoor shielded twisted pair cables.

NOTICE

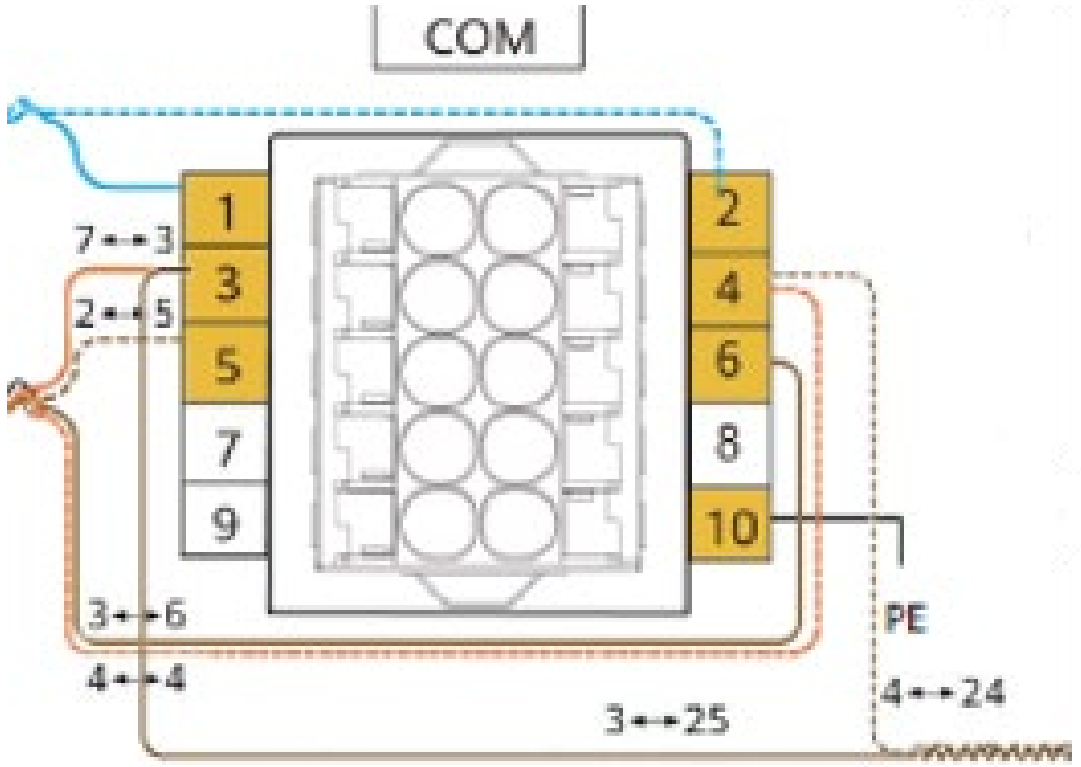
Connect other cables to slave inverters by referring to the connection method for the master inverter.

Cable Type	No.	One End		The Other End	
		Component	Port	Port	Component
DC power cable	1	Master inverter	PV1+	Positive terminal	PV strings
			PV1-	Negative terminal	
	2	Master inverter	BAT+	BAT+	ESS 1
			BAT-	BAT-	
	3	ESS 1	BAT+	BAT+	ESS 2
			BAT-	BAT-	
Signal cable	4	ESS 1	COM-2 (left)	COM-2 (right)	ESS 2
			COM-3 (left)	COM-3 (right)	
			COM-4 (left)	COM-4 (right)	
			COM-7 (left)	COM-7 (right)	
			COM-8 (left)	COM-8 (right)	
			COM-9 (left)	COM-9 (right)	
	5	Master inverter	COM-3	COM-7 (right)	ESS 1
			COM-4	COM-4 (right)	
			COM-5	COM-2 (right)	
			COM-6	COM-3 (right)	

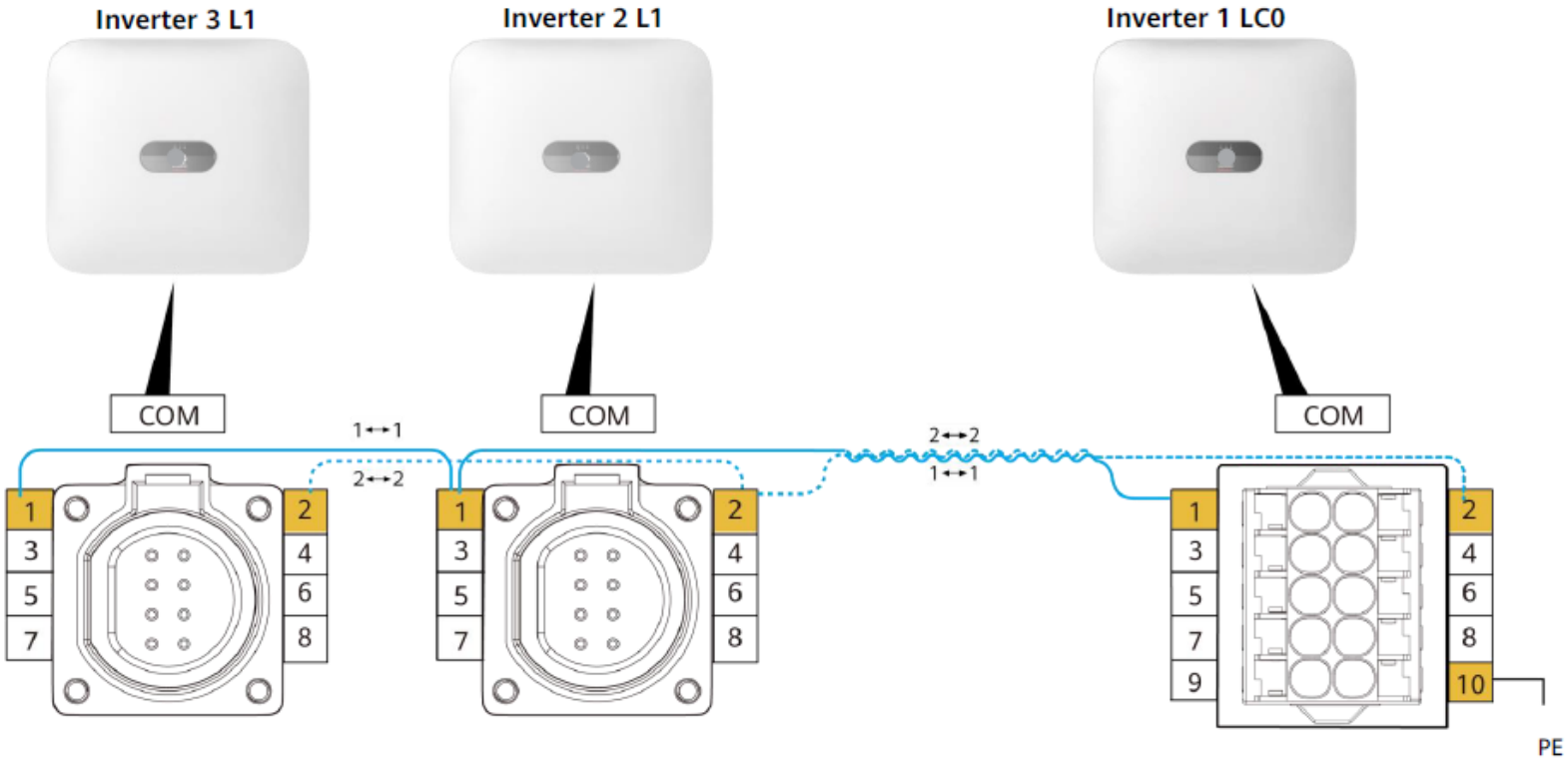
Cable Type	No.	One End		The Other End	
		Component	Port	Port	Component
Signal cable	6	Slave inverter 1	COM-1	COM-1	Slave inverter 2
			COM-2	COM-2	
	7	Master inverter	COM-1	COM-1	Slave inverter 1
			COM-2	COM-2	
	8	Master inverter	COM-3	25	DDSU666-H
			COM-4	24	

Cable Type	No.	One End		The Other End	
		Component	Port	Port	Component
AC power cable	9	Master inverter	AC-L	L	AC power Power distribution box
			AC-N	N	
			AC-PE	PE	
	10	AC power distribution box	L	3	DDSU666-H
			N	4	
	11	AC power distribution box	L	5	DDSU666-H CT
				6	

EESOLAR-10KTL-LC0 Inverter COM Cable



Cable Connections (Single-Phase Inverter LC0/L1Cascading)



Cable Connections (Three-Phase Inverter M1 +Battery + Backup Box B1 + Smart Dongle)

DANGER

Before connecting cables, ensure that all switches are OFF. Otherwise, electric shocks may occur.

NOTICE

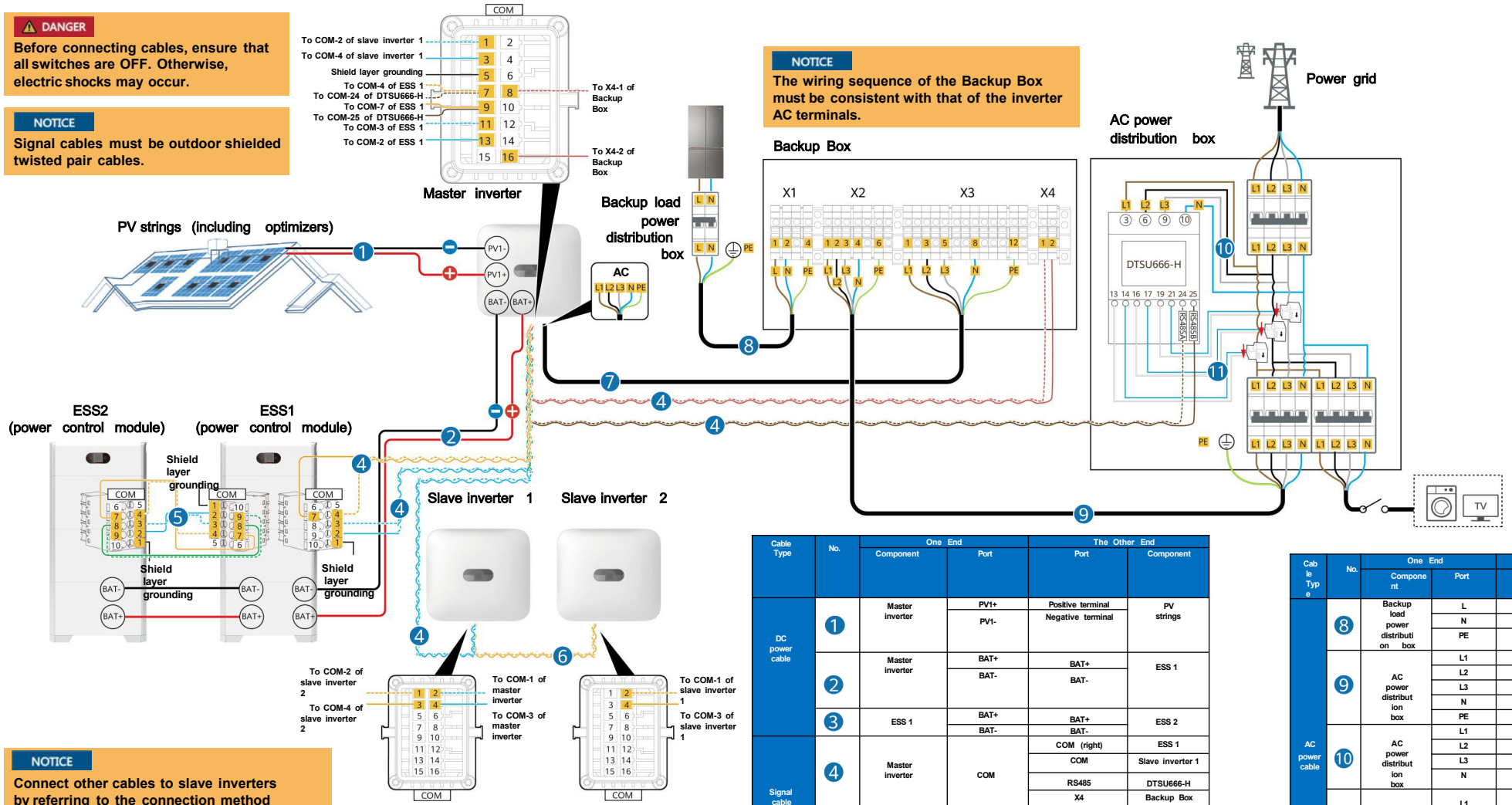
Signal cables must be outdoor shielded twisted pair cables.

NOTICE

Connect other cables to slave inverters by referring to the connection method for the master inverter.

NOTICE

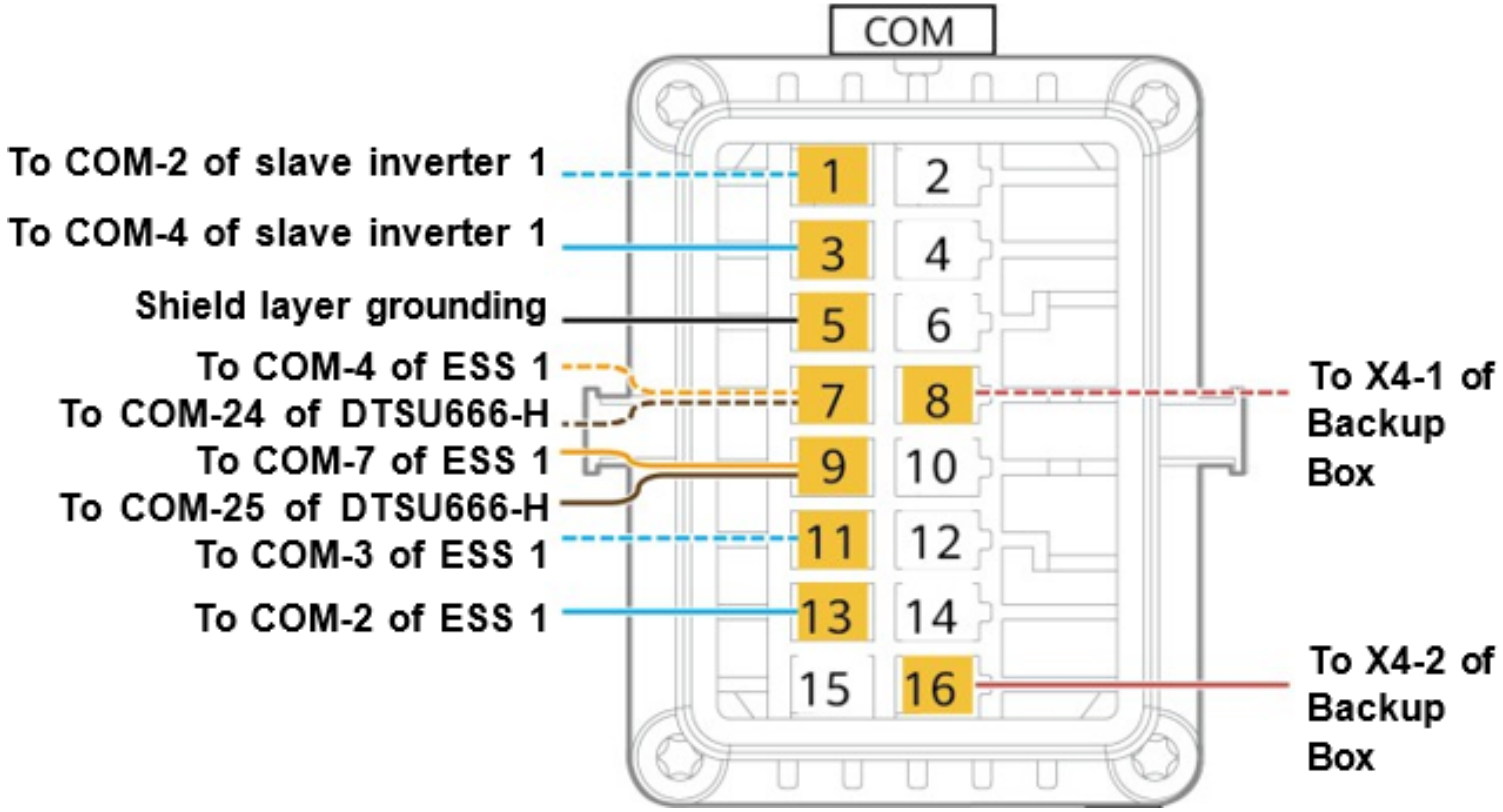
The wiring sequence of the Backup Box must be consistent with that of the inverter AC terminals.



Cable Type	No.	One End		The Other End	
		Component	Port	Port	Component
DC power cable	1	Master inverter	PV1+	Positive terminal	PV strings
			PV1-	Negative terminal	
	2	Master inverter	BAT+	BAT+	ESS 1
			BAT-	BAT-	
	3	ESS 1	BAT+	BAT+	ESS 2
			BAT-	BAT-	
Signal cable	4	Master inverter	COM	COM (right)	ESS 1
				COM	Slave inverter 1
				RS485	DTSU666-H
				X4	Backup Box
	5	ESS 2	COM (right)	COM (left)	ESS 1
	6	Slave inverter 1	COM-1	COM-2	Slave inverter 2
			COM-3	COM-4	
AC power cable	7	Master inverter	AC-L1	X3-1 (L1)	Backup Box
			AC-L2	X3-3 (L2)	
			AC-L3	X3-5 (L3)	
			AC-N	X3-8 (N)	
			AC-PE	X3-12 (PE)	

Cable Type	No.	One End		The Other End	
		Component	Port	Port	Component
AC power cable	8	Backup load power distribution box	L	X1-1	Backup Box
			N	X1-2	
			PE	X1-4	
	9	AC power distribution box	L1	X2-1	Backup Box
			L2	X2-2	
			L3	X2-3	
			N	X2-4	
			PE	X2-6	
	10	AC power distribution box	L1	3	DTSU666-H
			L2	6	
			L3	9	
			N	10	
	11	AC power distribution box	L1	13	DTSU666-H CT
				14	
			L2	16	
				17	
			L3	19	
				21	

EESOLAR-6/10KTL-M1 Inverter COM Cable



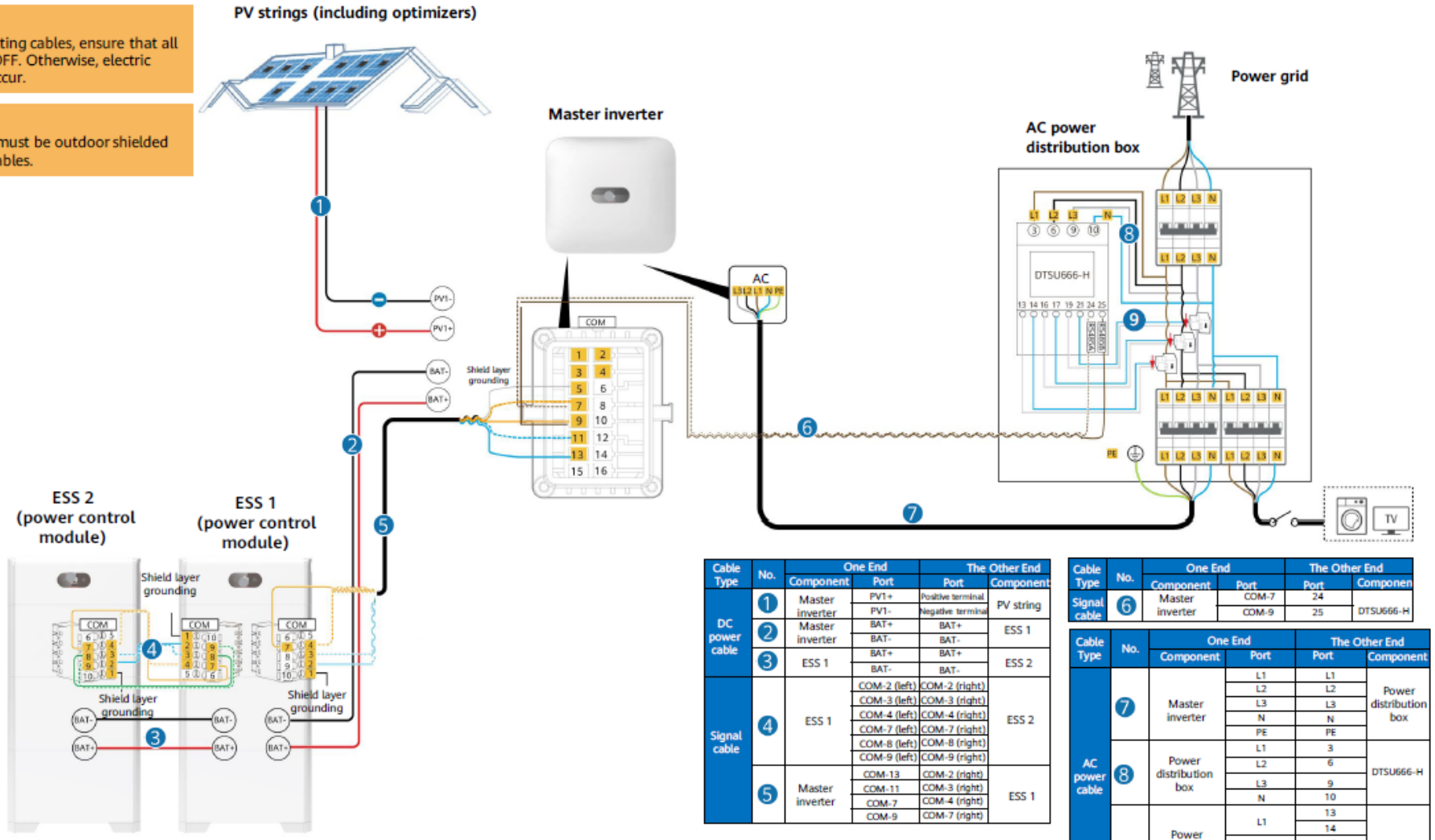
EESOLAR-20KTL-MB0 Scenario Cable Connections

DANGER

Before connecting cables, ensure that all switches are OFF. Otherwise, electric shocks may occur.

NOTICE

Signal cables must be outdoor shielded twisted pair cables.

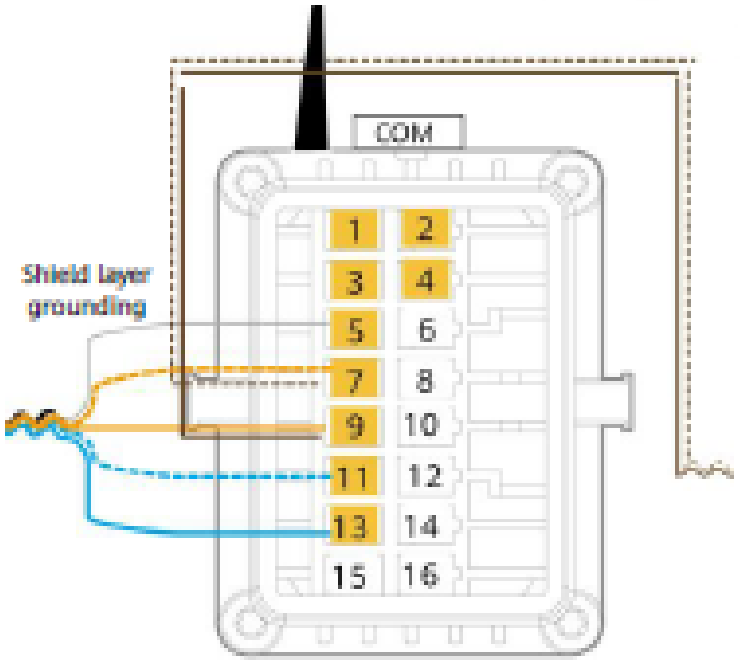


Cable Type	No.	One End		The Other End	
		Component	Port	Port	Component
DC power cable	1	Master inverter	PV1+	Positive terminal	PV string
			PV1-	Negative terminal	
	2	Master inverter	BAT+	BAT+	ESS 1
			BAT-	BAT-	
	3	ESS 1	BAT+	BAT+	ESS 2
			BAT-	BAT-	
Signal cable	4	ESS 1	COM-2 (left)	COM-2 (right)	ESS 2
			COM-3 (left)	COM-3 (right)	
			COM-4 (left)	COM-4 (right)	
			COM-7 (left)	COM-7 (right)	
			COM-8 (left)	COM-8 (right)	
			COM-9 (left)	COM-9 (right)	
	5	Master inverter	COM-13	COM-2 (right)	ESS 1
			COM-11	COM-3 (right)	
			COM-7	COM-4 (right)	
			COM-9	COM-7 (right)	

Cable Type	No.	One End		The Other End	
		Component	Port	Port	Componen
Signal cable	6	Master inverter	COM-7	24	DTSU666-H
			COM-9	25	

Cable Type	No.	One End		The Other End	
		Component	Port	Port	Component
AC power cable	7	Master inverter	L1	L1	Power distribution box
			L2	L2	
			L3	L3	
			N	N	
			PE	PE	
	8	Power distribution box	L1	3	DTSU666-H
			L2	6	
			L3	9	
			N	10	
	9	Power distribution box	L1	13	DTSU666-H CT
				14	
			L2	16	
				17	
			L3	19	
				21	

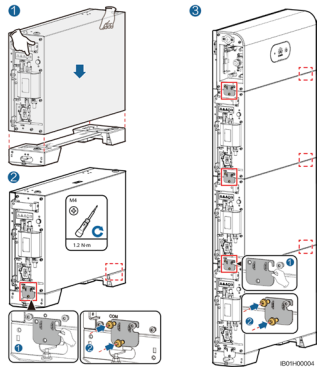
EESOLAR-20KTL-MB0 Inverter COM Cable



Installing the Battery

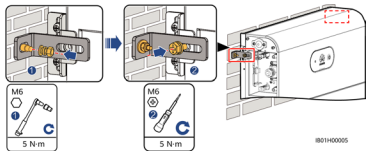
1. Installing the Floor Support

Install the battery expansion modules and power control module on the support.



1. Align the first battery expansion module with the support on the floor support.
2. Install the connecting pieces on both sides and tighten the four screws.
3. Install the remaining battery modules and power module from bottom to top. After installing a module, secure the left and right connecting pieces, and then install the next module.

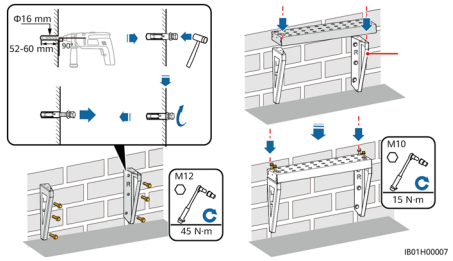
2. Secure the power control module to the wall.



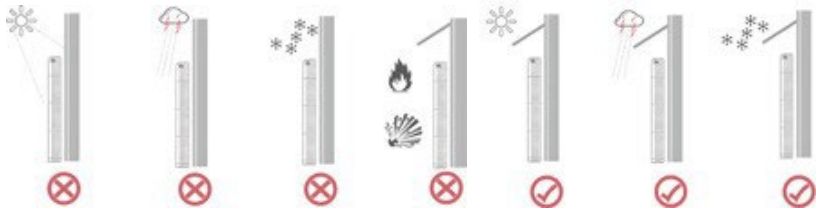
1. You can adjust the connecting piece vertically to align with the screw holes.

3. Wall-mounted Installation

For floor-mounted installation, the base is 50 mm high. If waterproofing requirements cannot be met, the battery can be installed on a wall. The mounting kits need to be purchased separately. Ensure that the wall and floor meet the load-bearing requirements (one battery expansion module weighs 50 kg).



Installation Environment Requirements



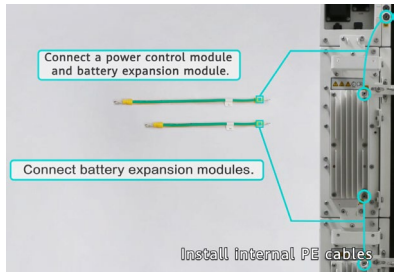
- Install the battery in a dry and well-ventilated environment to ensure good heat dissipation.
- You are advised to install the battery in a sheltered place or install an awning over it.
- Install the battery in a clean environment that is free from sources of strong infrared radiation, organic solvents, and corrosive gases. Avoid exposing the battery to direct sunlight or water.
- The installation position must be far away from fire sources.
- The installation position must be far away from water sources such as taps, sewer pipes, and sprinklers to prevent water seepage.
- The battery must be placed on a solid and flat supporting surface.
- Do not place any flammable or explosive materials around the battery.
- To prevent fire due to high temperature, ensure that the ventilation vents or heat dissipation system are not blocked when the battery is running.
- Do not expose the battery to flammable or explosive gas or smoke. Do not perform any operation on the battery in such environments.
- The battery system site must be equipped with qualified fire extinguishing facilities, such as fire extinguishing sands and powder fire extinguishers.

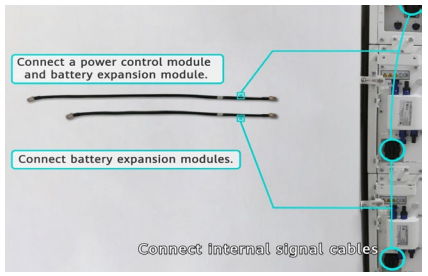
Installation Tips

1. Ensure that the floor is level when the cabinet is installed on the ground.

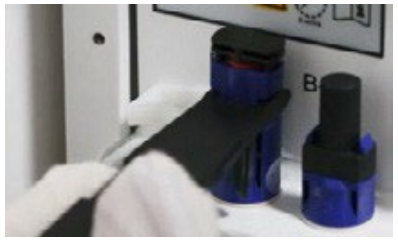


2. Cable lengths between modules are different.



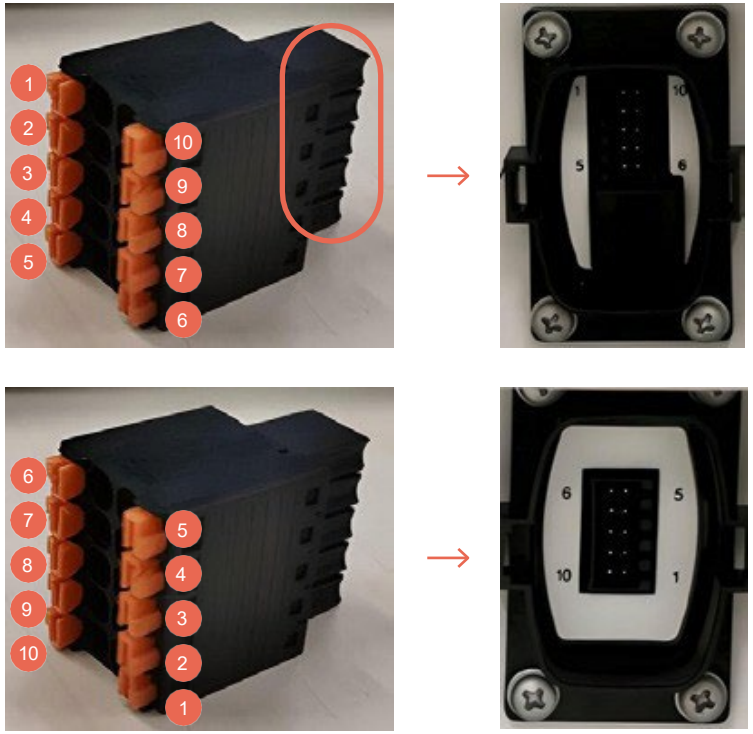


3. When you use the tool delivered with the box to obtain the dustproof caps, the following figure shows the B+\B- and BAT+\BAT modes.





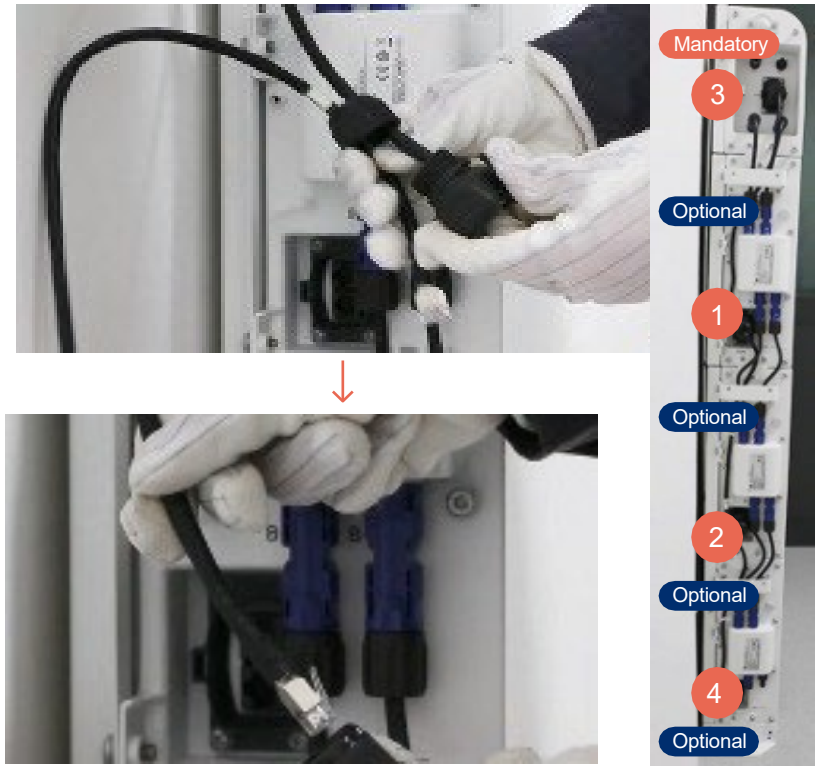
4. Identify the pins according to the figure. The silkscreens of the communication ports on both sides of the DC-DC converter are different. Insert the pins according to the figure.



6–10 pins close to the groove

Installation Tips

5. When connecting the signal cables between the DCDC and battery modules, install the terminals of the two communications cables first, and then the terminals of the single communications cable.



6. The power control module (DCDC) must be fixed on the wall using expansion bolts. The expansion bolts for the floor mounting bracket and battery expansion modules are optional. If the device is installed in an area prone to earthquakes or vibration, it is recommended that you use expansion bolts to secure the floor mounting bracket and battery expansion modules to ensure that the device is securely installed.



7. The terminals connected to the BAT+ and BAT-sides of the ESS inverter are the same.

8. Place the protective housing close to the module edge, move the protective housing outwards slightly, align it with the buckles, and push the housing inward.









Our Software

HiSolar App

Commissioning

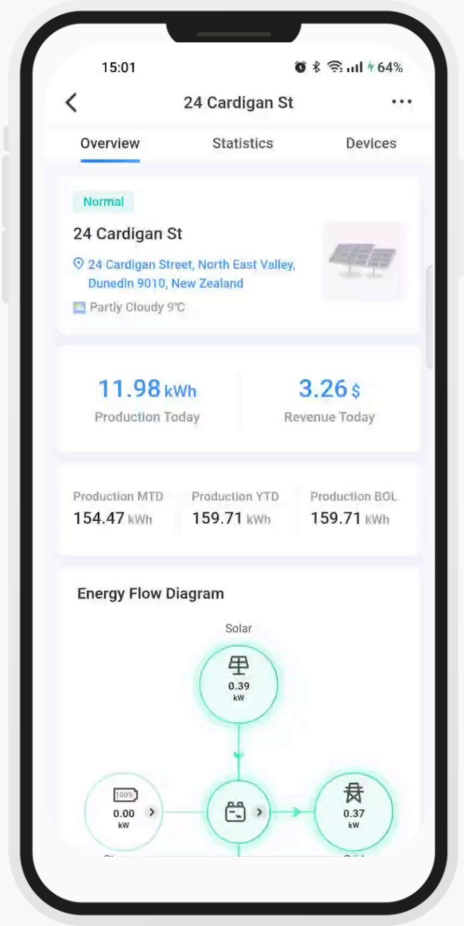
Univers EMS App

Monitoring and controlling

Software and App

Your gateway to solar insights

- Independently built app
- User friendly interface
- App and customer data hosted in Europe
- Offsite monitoring and plant management





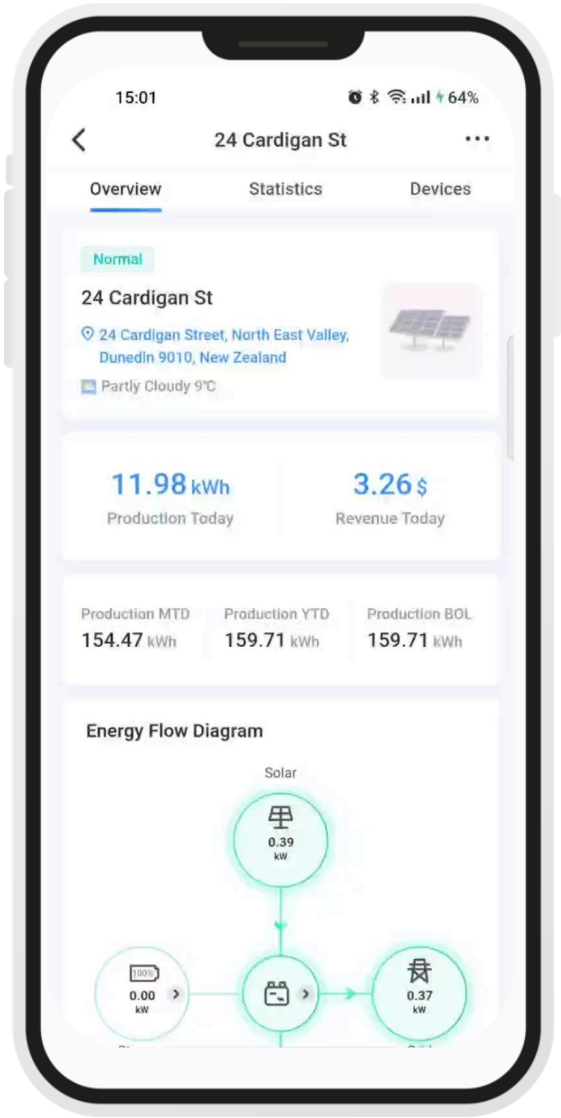
entelar ENERGY

Software and App

How you've helped us improve

Developments from initial launch:

- Added self -registration function
- Added web portal Fleet Map function
- Added TOU (Time of use) function for battery
- Added emergency shut down function
- API manual available for PPA and VPP project
- Simplify the device redetect function
- Added Entelar Energy logo on the account verification email
- Export the device log from the web portal
- Modify the CT direction



entelar ENERGY

Battery Benefits



Battery Benefits

Energy Independence:

Reduce reliance on the grid by storing excess solar energy.

Resilience & Backup power:

Keep essential appliances running during grid outages.

Optimizing Solar Usage:

Smart energy management for better efficiency and cost savings.



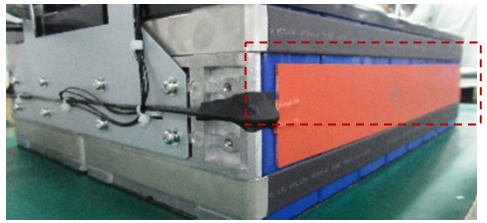
entelar ENERGY

Wider Ambient Temperature Adaptability to Ensure Normal Operation Under Extreme Weather Conditions



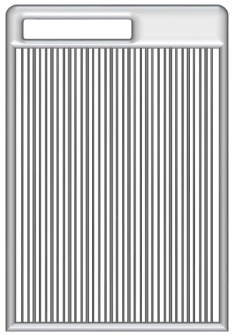
-20℃ ～
55℃

Heating films

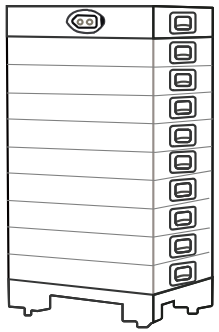


Entelar EESTORE ESS Solution

- Each battery pack has two heating films to adapt to a wider temperature range of –20 °C to 55 °C.



-10～45℃



-10～50℃

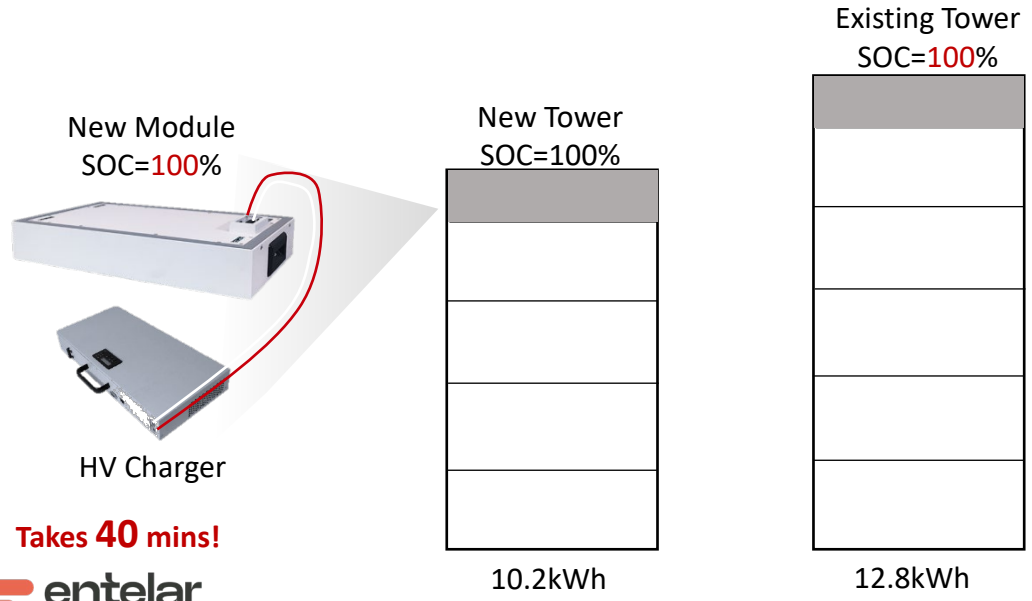
Other High Voltage ESS Solution

- Without heating function, when the battery is charged outdoor at low temperature (lower than 0℃), lithium crystals form on the negative side and causing damage to the battery.
- Charging derating will occur between -10 ℃~0 ℃, dropping to 20%.

entelar ENERGY

No Pre-charging Before Extension or Replacement





Entelar EESTORE ESS Solution

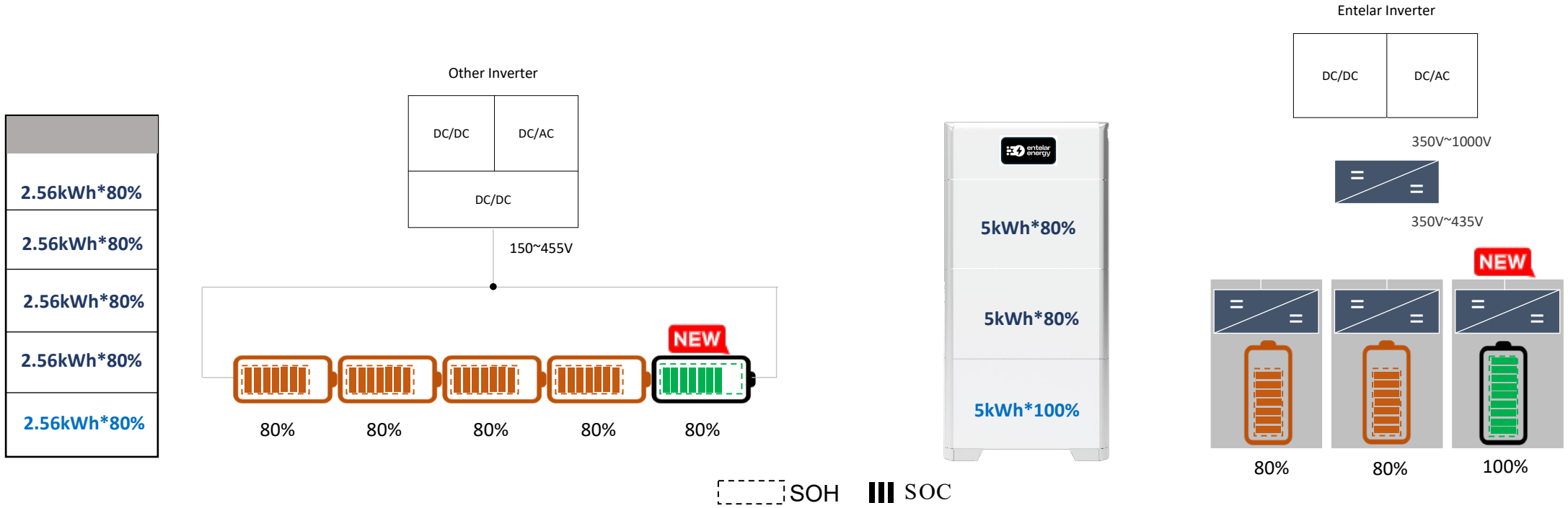
- New module extension by simple plug-in without pre-charging.
- SOC of New Pack will automatically synchronize with existing pack after one cycle of charge/discharge thanks to the built-in Energy Optimizer.

Other High Voltage ESS Solution

- New module & existing tower require pre-charging to 100% in order to combine for larger system.
- At least 40 minutes required to adjust SOC before extension or replacement.

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Supports New & Old Pack In One System Without Any Usable Capacity Loss



Other High Voltage ESS Solution

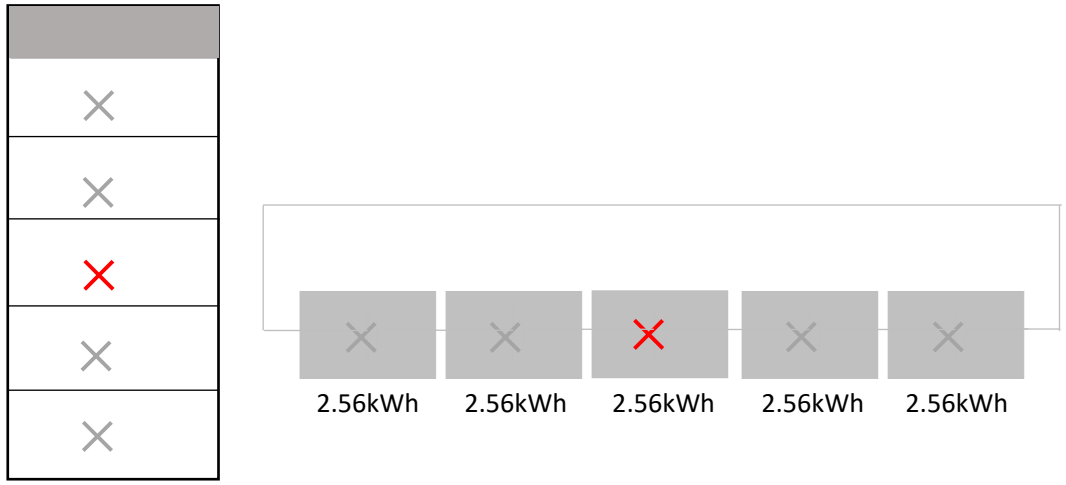
- Internal resistance of old battery pack increases due to operating degradation, which results in ESS SOH (capacity) decreasing gradually .
- When new battery module is mixed with old modules, new battery is limited to old battery max capability ie. Max charge will be only 80%

Entelar EESTORE ESS Solution

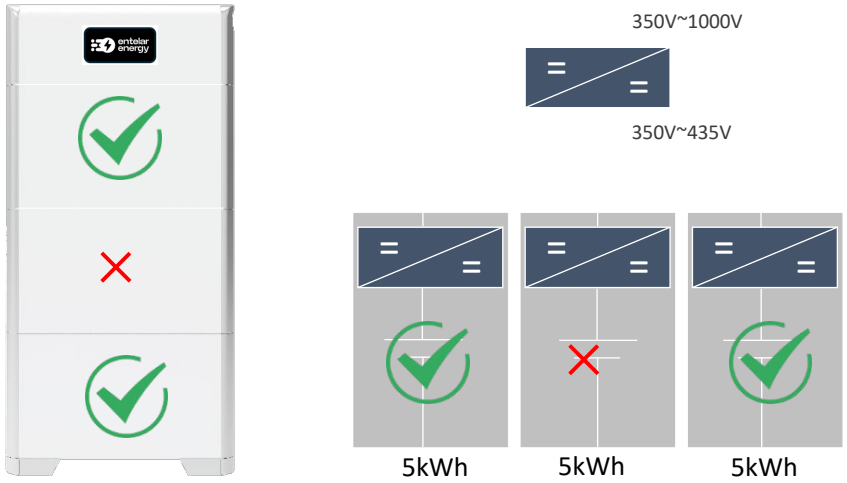
- Each battery module is charged/discharged independently by Energy Optimizer (DC/DC).
- The new battery module can use its full capacity without any loss. Saving 10%~30% more usable energy comparatively .

entelar ENERGY

Pack - level Fault Auto Isolation



Total: 12.8 kWh



Total: 15 kWh

Other High Voltage ESS Solution

- Utilize serial connection with each battery module (contains 32 cells per module) added up to make up a larger system.
- One failing cell (1 out of 160) will lead to entire system failure.

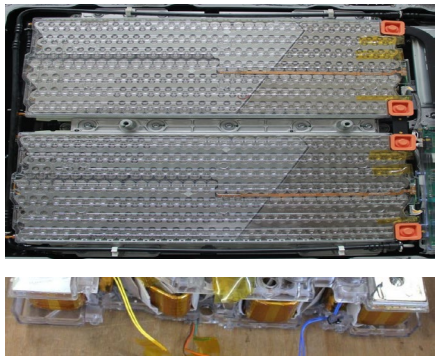
Entelar EESTORE ESS Solution

- Utilize parallel connection with each battery module equipped with unique Energy Optimizer (DC/DC) to isolate faulty module.
- One failing cell (1 out of 16) only affect one battery module's performance, no negative impacts on others.

Cell- level Temperature Control



Only 2 Sensors
Per Pack for 42 Cells

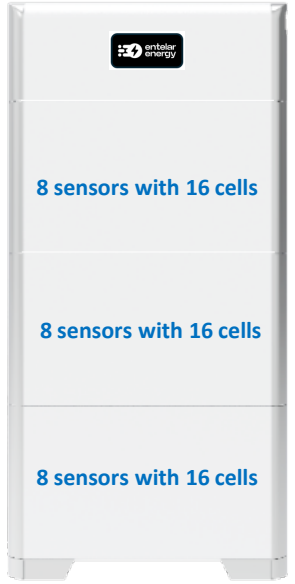


Only 4 Sensors
Per Pack for Thousands of Cells

Module Level

VS

Cell Level



Energy Storage System

Other High Voltage ESS Solution

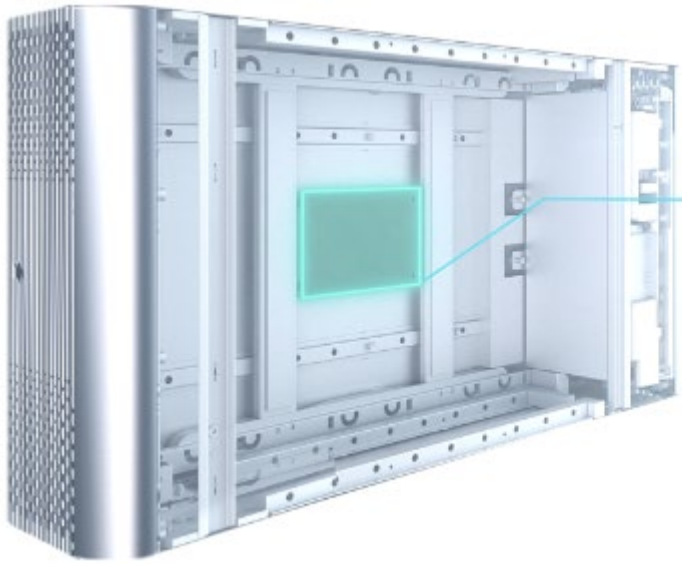
- The battery pack has only 2 or 4 temperature sensors, which are unable to fully detect cell temperature, posing the risk of battery pack overheating.
- Temperature control is at the module level.

Entelar EESTORE ESS Solution

- 8 sensors per pack to supervise operating status, temperature control is at the cell level.
- Each sensor works independently and monitors only 2 cells, achieving higher monitoring precision.

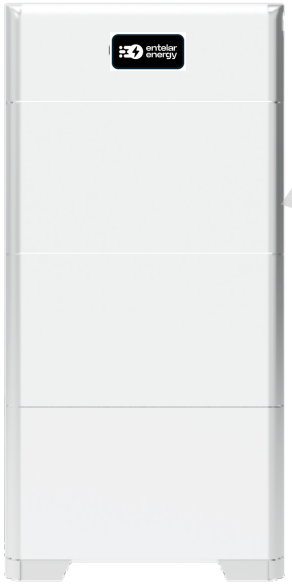
entelar ENERGY

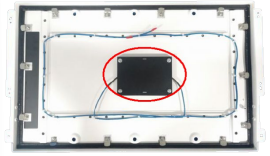
Self- extinguishing Bag For Higher Safety



Fire extinguishing module

15s fast fire extinguishing





170 ℃ (Trigger Temp.)
self-extinguishing Bag

- Energy storage safety weighs more than anything. With 4layer protection from cell level to electrical level, structural level and emergency protection level, Entelar Energy redefines energy storage system safety.
- The built -in intelligent extinguish bag fitted in every battery pack can quickly eliminate safety risks if any in 15s, safeguarding you as an internal fire-fighter.

Battery working modes



- Maximum self consumption
- Time of use Price
- Fully fed to grid
- Pure off grid

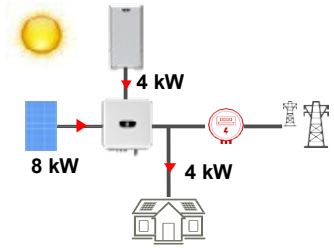
entelar ENERGY

Battery Working Mode – Maximum Self-Consumption

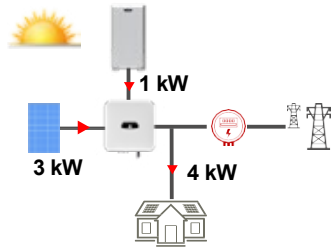
Surplus PV energy (relative load) is stored in batteries. When PV power is insufficient or no PV power is generated at night, batteries discharge to supply power to the loads, improving the self-consumption rate of the PV system and the self- sufficiency rate in the residential energy system, and reducing electricity costs.

Assume that an EESOLAR-5KTL inverter has 10 kWh battery capacity. (1) PV energy flow: load > battery charging > grid connection

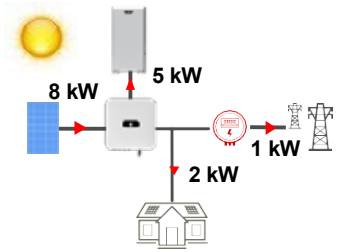
(2) Load Energy: PV output >battery discharge>Grid supply



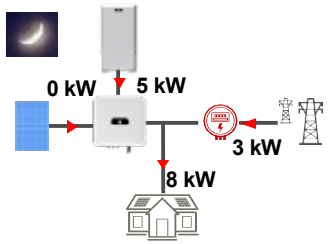
When the PV sunlight is sufficient, the PV module outputs 8 kW power, the loads consume 4 kW power, and the battery charges 4 kW power.



When the PV sunlight is weak, the PV module outputs 3 kW power, the loads consume 4 kW power, and the battery discharges 1 kW power to the loads.



When the PV sunlight is sufficient, the PV module outputs 8 kW power, the loads consume 2 kW power, the battery charges 5 kW power, and the inverter connects to the grid with the power of 1 kW.



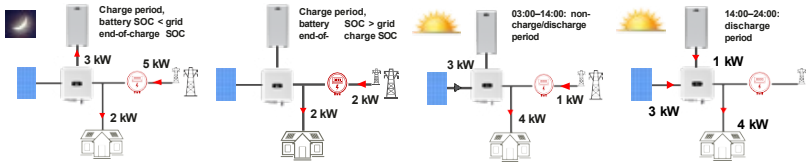
When the PV sunlight becomes weak, the PV module outputs 0 kW power, the loads consume 8 kW power, the batteries discharge 5 kW power to the loads, and the grid supplies 3 kW power.

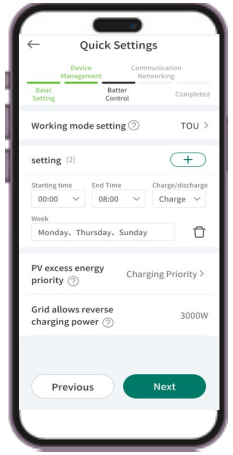
Battery Working Mode – Time-of-Use Price

When the electricity price reaches the peak value, the battery discharges to supply power to residential loads.

When the electricity price is in the off-peak period, the grid reversely charges the battery.

Assume that an EESOLAR-5KTL inverter has 10 kWh battery capacity. Set the charge time period. Set 00:00 to 03:00 as the charge time period, 14:00 to 24:00 as the discharge time period, and set the surplus PV energy to be preferentially used for charging.





1. Set the low-price time at night (00:00 to 03:00) as the charge time.
2. Set 14:00–24:00 as the discharge period to supply power to loads.
3. Non-charge/discharge period 03:00–14:00:

   The surplus PV energy can be used to charge the battery. The battery does not discharge. When the PV power is insufficient, the grid supplies power.

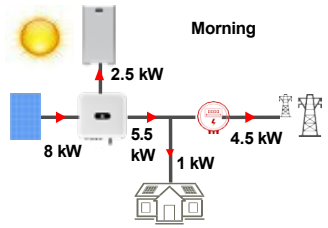
   The battery is not charged from the grid and cannot be discharged. When the system is switched to the backup mode, the battery can be discharged.

The grid-tied power setting takes precedence over the “Charge”setting.

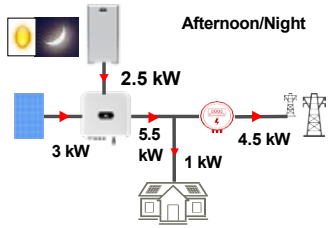
Battery Working Mode – Fully Fed to Grid

This mode maximizes the PV energy for grid connection. When the generated PV energy in the daytime is greater than the maximum output capability of the inverter, the battery is charged to store energy. When the PV energy is less than the maximum output capability of the inverter (5–5.5 kW), the battery discharges to maximize the output energy of the inverter to the grid. The grid-tied power setting takes precedence over the “Fully Fed to Grid”setting.

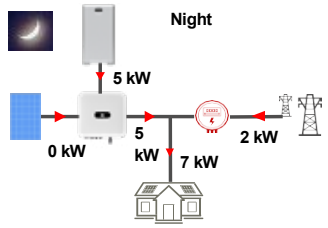
Assume that an EESOLAR-5KTL inverter has 10 kWh battery capacity, and the grid-connected power is not set.



When the PV module generates 8 kW power, the EESOLAR-5KTL inverter connects to the grid with the maximum output power of 5.5 kW, and the battery charges 2.5 kW power.



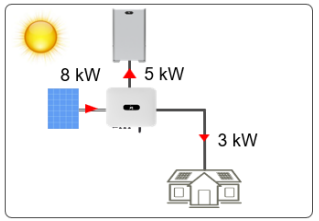
When the PV sunlight becomes weak, the PV module generates 3 kW power, the battery charges 2.5 kW power, and the inverter connects to the grid with the power of 5.5 kW.



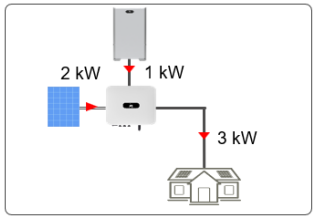
When there is no irradiation at night, the battery outputs 5 kW power, the loads consumes 7 kW power, and the grid supplies 2 kW power.

Battery Working Mode – Pure Off-Grid

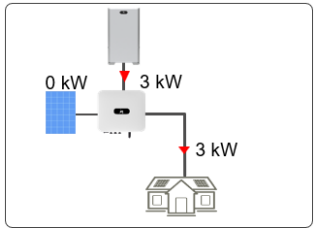
- The off-grid function can be enabled only when batteries are configured. If no battery is configured, the off-grid code cannot be set.
- The inverter works in voltage source mode and supplies stable power to loads. When the PV power generation is greater than the loads, the battery is charged. When the PV power generation is less than the loads, the battery is discharged.
- This mode applies only to single-phase inverter L1. During deployment, you can set the pure off-grid grid code to implement this mode. 220 V, 230 V, 240 V and 50/60 Hz output are supported.
- After the batteries discharge to the end-of-discharge SOC at night, the PV power generates electricity for the battery on the next day and then supplies power to loads.
- In the off-grid scenario, it’s not supported to configure optimizers.



When the PV sunlight is sufficient, the PV module generates 8 kW power, the battery charges 5 kW power, and the loads consumes 3 kW power.



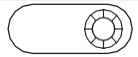
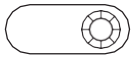
When the PV sunlight becomes weak, the PV module generates 2 kW power, the loads consume 3 kW power, and the battery supplies 1 kW power to the loads.

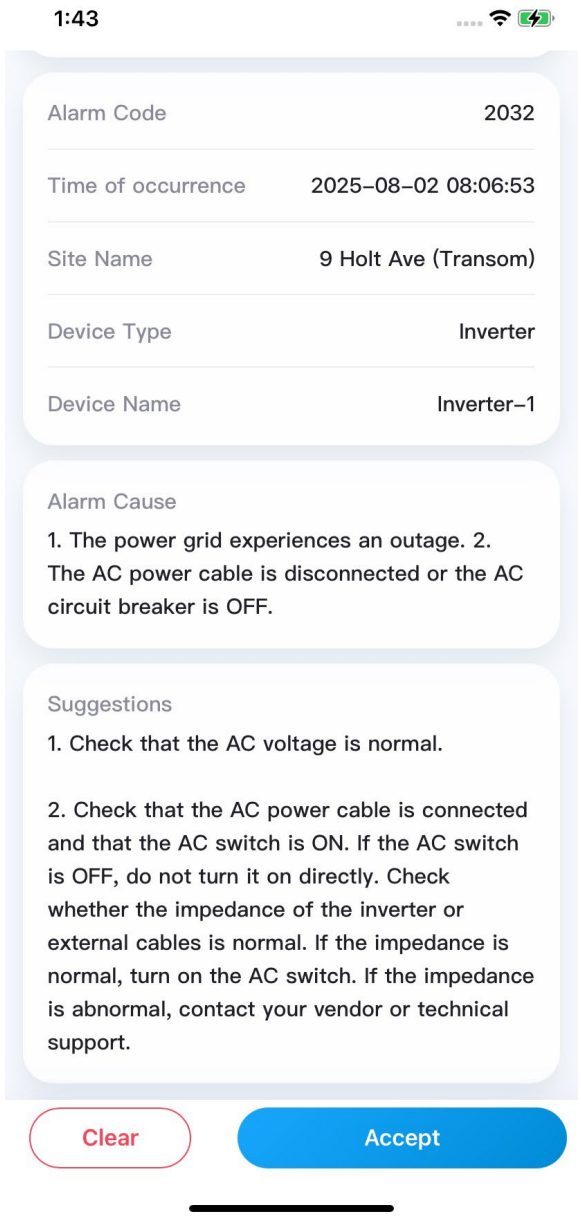


If the PV module has no output, the battery supplies 3 kW power to the loads.

Checking the Indicator Status

Category	Status (Blinking Slowly: On for 1s and then Off for 1s; Blinking Fast: On for 0.2s and then Off for 0.2s)		Meaning
Running indication	LED1 	LED2 	N/A
	Steady green	Steady green	The inverter is operating in grid-tied mode.
	Blinking green slowly	Off	The DC is on and the AC is off.
	Blinking green slowly	Blinking green slowly	Both the DC and AC are on, and the inverter is not exporting power to the power grid.
	Off	Blinking green slowly	The DC is off and the AC is on.
	Off	Off	Both the DC and AC are off.
	Blinking red fast	N/A	There is a DC environmental alarm, such as High String Input Voltage, String Reverse Connection, or Low Insulation Resistance.
	N/A	Blinking red fast	There is an AC environmental alarm, such as Grid Undervoltage, Grid Overvoltage, Grid Overfrequency, or Grid Underfrequency.
	Steady red	Steady red	The inverter is faulty.
Communication indication	LED3 		N/A
	Blinking green fast		Communication is in progress.
	Blinking green slowly		A mobile phone is connected to the inverter.
	Off		There is no communication.

Category	Status (Blinking at long intervals: On for 1s and then Off for 1s; Blinking at short Intervals: On for 0.2s and then Off for 0.2s)		Meaning
Running indication			N/A
	Steady green	Steady green	Operating mode
	Blinking green at long intervals	Blinking green at long intervals	Standby mode
	Off	Off	Sleep mode
	Blinking red at short intervals	N/A	Battery power control module environment alarm
	N/A	Blinking red at short intervals	Battery expansion module environment alarm
	Steady red	N/A	Battery power control module fault
	N/A	Steady red	Battery expansion module fault
Battery system indication			N/A
	Display green		Indicates battery level. One bar represents 10%.
	Steady red		The first three bars indicate the number of faulty battery expansion modules.



Plant Alarm Notification

- The cause and recommended actions for plant alarms can be viewed on both the Univers Website and the Univers EMS App.
- Detailed descriptions of each alarm code are available in the user manual.
- All Entelar Energy products use the same alarm code system.

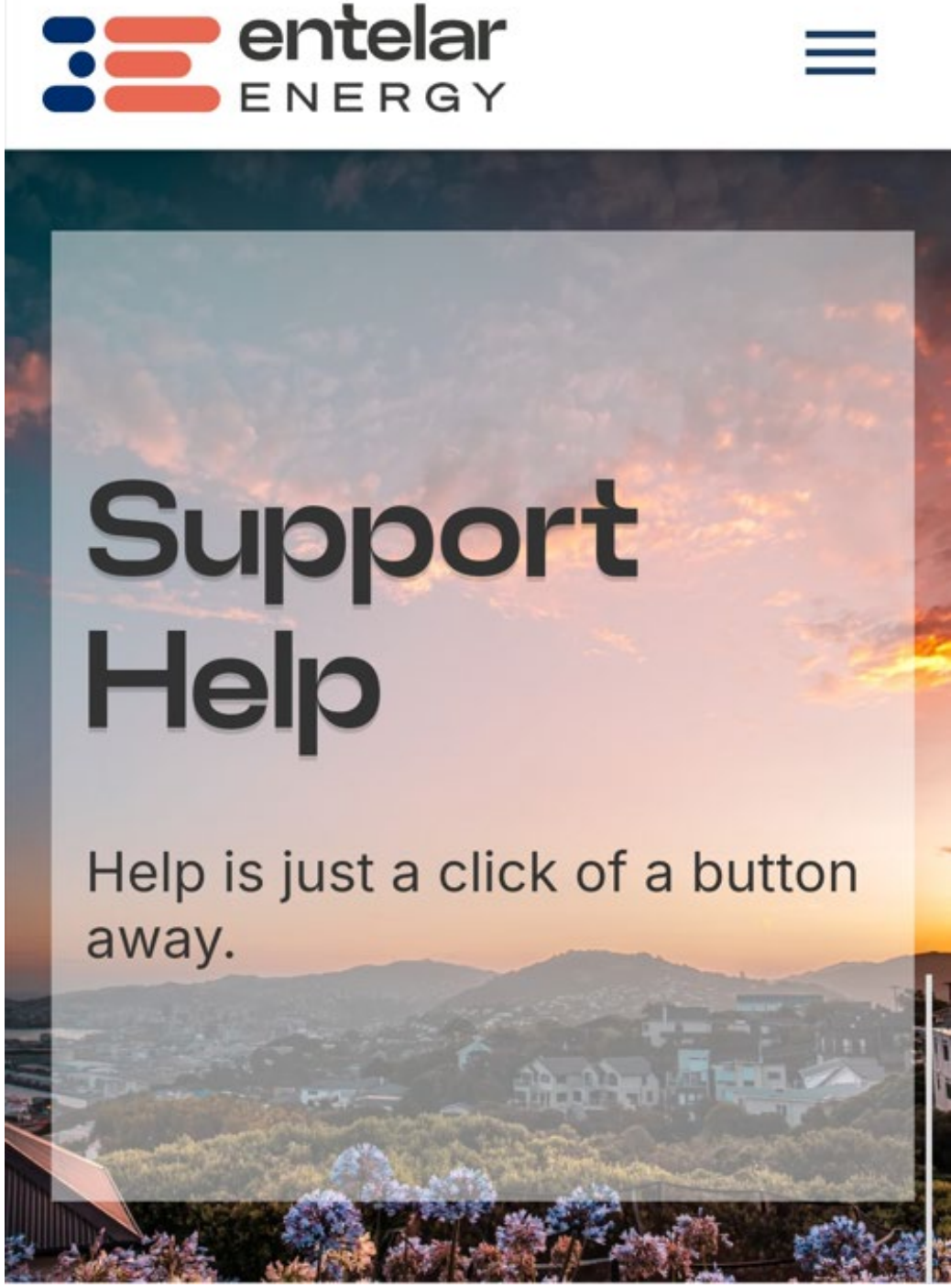
Technical Support



Technical Support

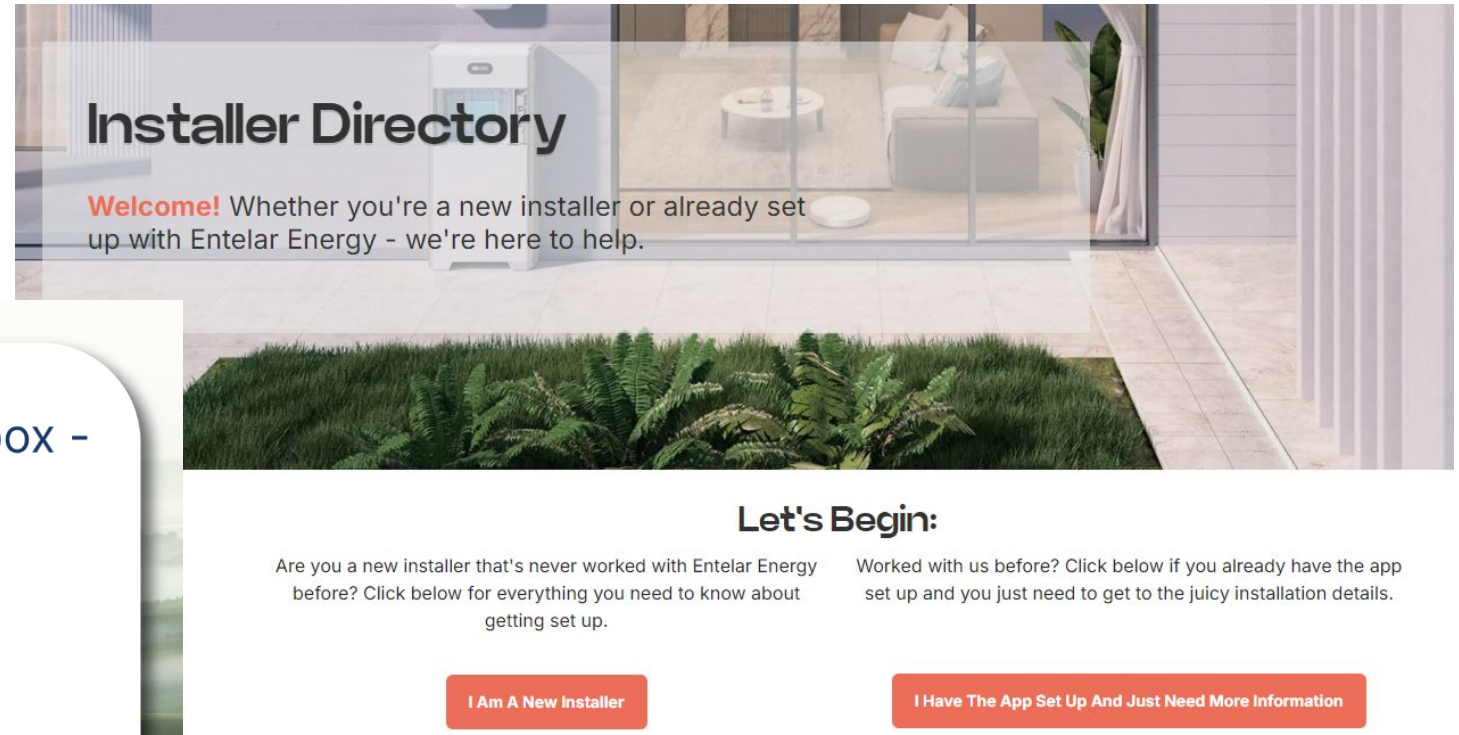
Helpdesk – 0800 835 3447
Option 4

https://insights.entelargroup.co.nz/entelar-energy-support



Technical Support





entelar ENERGY

Installer Incentive Scheme



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Thank You

Your trusted local partner for solar energy solutions.

entelar energy .co.nz

