

Lithium Storage Batteries Designer & Manufacturer

Bring You A Safe,
Green,Smart Life

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SmarTEC

(since 2007)



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Solar Energy Storage Solution

Green Power, Green Life

Company Profile

SmarTEC engaged in the field of new energy more than 15years which covers the R&D, sales and manufacture of lithium battery protection circuits(pcm), battery management system(bms), lithium ion / NMC/ lifepo4 batteries, off-grid all-in-one energy storage system (ESS),etc.

Keeping up with the development trend of global green environmental protection, Smartec has constantly updated the advanced production technology and established a good quality assurance system to ensure the green power with high efficiency.

Now Smartec has already become a professional supplier of one-stop solutions in the storage area based on the following solutions:

1. All-in-one energy storage system (ESS) / All-in-one off-grid power system(integrated solution with solar charge inverter+ MPPT controller+ lithium storage batteries)
2. Lithium storage batteries (Lifepo4)

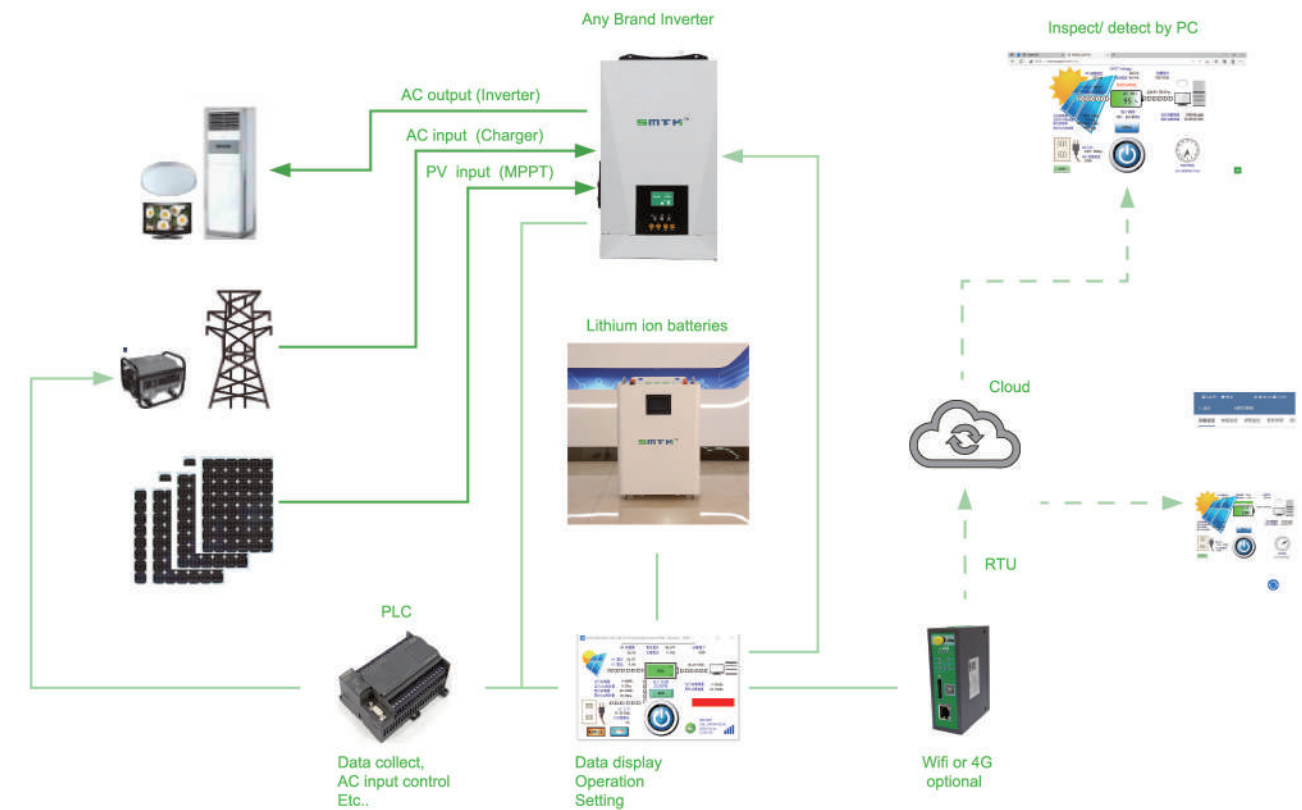


Smart home energy storage technology can realize the storage and utilization of home energy, so that the energy generated by the home will no longer be wasted. By obtaining electric energy from non-traditional energy sources such as solar energy and wind power, and then storing the electric energy, the continuous supply of household electricity can be realized and waste can be avoided. At the same time, during peak hours, smart home energy storage technology can also realize the regulation function of the grid, reduce the pressure on the grid, and ensure the safety of household electricity consumption.

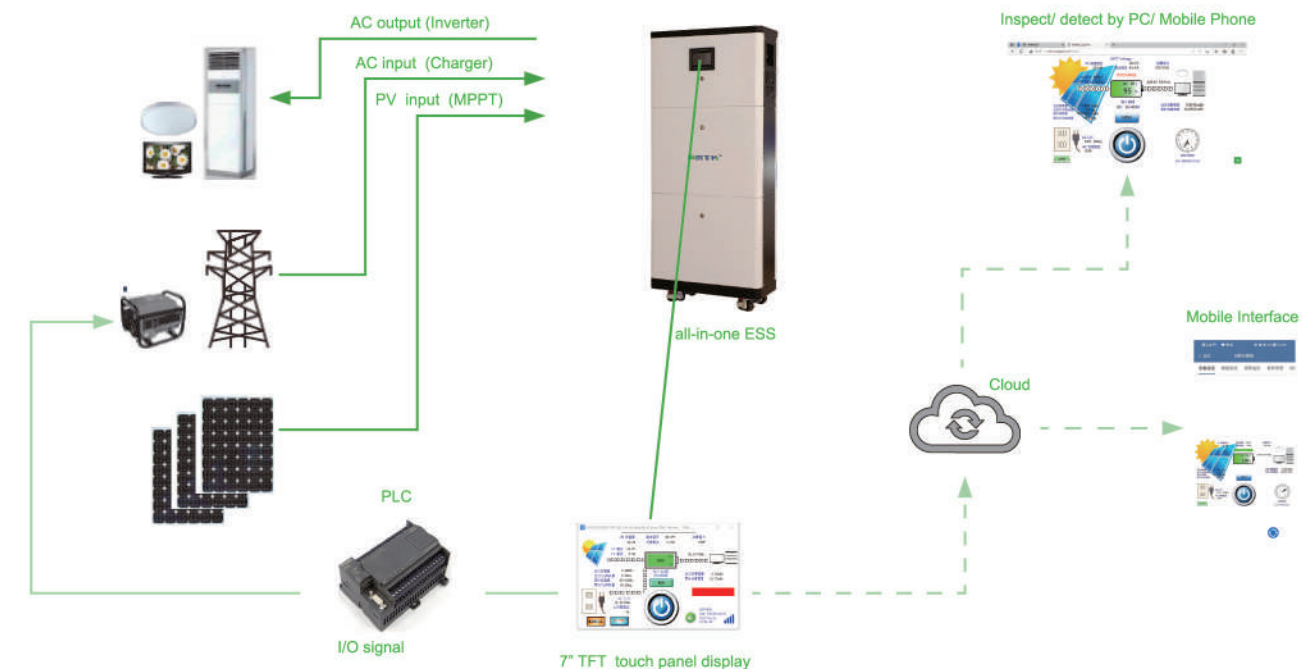
SmarTEC has been committed to the field of new energy since 2007:

- 2007 shenzhen smartec technology co.,ltd with brand " **SmarTEC** (focus on the domestic and Europe/ US market)
- 2008 production line for lithium battery standard PCM (ensure a safe life with lithium batteries)
- 2010 production line for lithium battery smart BMS (provide a intelligent battery states monitoring)
- 2011 production line for lithium battery pack (provide a customized batteries service with our PCM/BMS)
- 2015 obtained the honorary title of high-tech enterprise issued by shenzhen government
- 2017 dongguan smartec new energy co.,ltd (expansion of production base)
- 2022 launch the new products of "home storage batteries series" (smart touch panel display to bring a easy life)
- 2023 updated new company brand **SmarTEC**

How to work with Lithium storage batteries



How to work with all-in-one ESS solution



Stand Alone Off-grid Power System / All-in-one Energy Storage System (Ess) (Solar Inverter + Mppt Controller + Storage Batteries)

Model: SMTK-ESS series

Output power of Inverter	(SMTK-ESS)	Apperance	Specifications	Features	Weight	Dimension	Battery Capacity
1.5KW	SMTK-ESS-5KW	Stackable	DC20-31V 100A max EVE-INR18650/33V 7S16P 1.28WH wifi BLE	Type A & Type C Fast Charge WIFI BLE	40kg	battery unit: 116*140*370mm (one layer*4pcs) control unit: 220*143*370mm	25.2V 51.2Ah (1290Wh) 1290Wh*4PCS (5160Wh)
2KW	SMTK-ESS-3KW	Vertical	DC24V- 2KVA/2000W, 145V/60A MPPT;	Movable Power Supply PV connection USB & DC & AC output	42kg	467*342*670	2560WH (25.6V 100AH)
3KW	SMTK-ESS-3KW	Vertical	DC24V-3KVA /3000W, 145V/60A MPPT;	Movable Power Supply PV connection USB & DC & AC output	55kg	439*388*690	2560WH (25.6V 100AH)
5KW	SMTK-ESS-7KW	Vertical	All in one solar charge inverter inside. (MPPT controller+ AC charger+ Inverter) • Hybrid charge available. IoT remote monitoring available. 4G/ wi-fi. PV in/ AC consumption/ Batteries status, etc	Main control screen Remote monitoring, switching. RS485, dtu, soc	100kg	580* 406* 1340	7200wh (48V 50AH*3PCS)
5KW	SMTK-ESS-10KW	Vertical	Built-in DTU remote monitoring built-in * SOC control AC charging function	Main control screen Remote monitoring, switching.	130kg	576*254*1344	10240WH (51.2V 100AH*2pcs)
5KW	SMTK-ESS-20KW	stackable	51.2V 300AH 400AH 500AH AC 5000W power out Movable & As a storage system/ UPS system.	CAN2.0/RS232/RS485 ≤96%CE (battery) UN38.3 (battery) UL1642 & IEC62133 (cells)	190kg	537*498*830	4-6layers , 51.2V 100Ah (5120Wh*4pcs)

Lithium Battery Storage (LiFePO4 Batteries)

Model: SMTK-LFP series

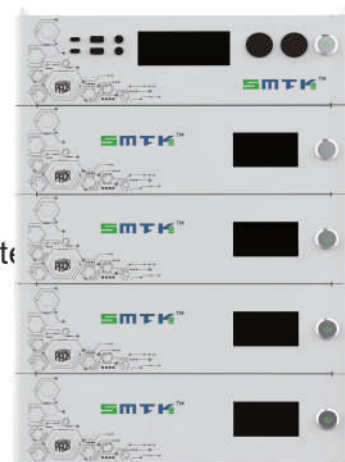
Support the external inverter	(SMTK-LFP)	Apperance	Specifications	Features	Weight	Dimension	Battery Capacity
1KW 2KW 3KW	SMTK-LFP 24100H	horizontal	1. Battery Type: LifePo4 2. Normal Battery Voltage: 25.6V 3. Normal Capacity(25℃, 0.2C) : 2560WH 4. Max.continue discharge current: 100A 5. Cycle life>3000(+25℃ 0.2C) 6. EVE/BYD/CATL prismatic cell 7. With plastic battery case	Optional with bluetooth function	20.5kg	218*240*522	2560WH (25.6V 100AH)
3KW 5KW	SMTK-LFP 24200H	horizontal	1. Battery Type: LifePo4 2. Normal Battery Voltage: 25.6V 3. Normal Capacity(25℃, 0.2C) : 5120WH 4. Max.continue discharge current: 200A 5. Cycle life>3000(+25℃ 0.2C) 6. EVE/BYD/CATL prismatic cell 7. With plastic battery case	Optional with bluetooth function	41kg	520*269*220	5120WH (25.6V 200AH)
2KW 3KW	SMTK-LFP 24100P	Power Wall	1. Battery Type: LifePo4 2. Normal Battery Voltage: 25.6V 3. Normal Capacity(25℃, 0.2C) : 2560WH 4. Max. continue discharge current: 50A 5. Cycle life>3000 (+25℃ 0.2C) 6. BYD cell	easy for installation.	26KG	L314*W218 *H380	2560WH (25.6V 100AH)
3KW 5KW	SMTK-LFP 24200P	Power Wall	1. Battery Type: LifePo4 2. Normal Battery Voltage: 25.6V 3. Normal Capacity(25℃, 0.2C) : 5120WH 4. Max.continue discharge current: 150A 5. Cycle life>3000(+25℃ 0.2C)	Powerwall style, easy for installation.	31kg	406*421*258	2560WH (25.6V 100AH)
5KW 6KW	SMTK-LFP 48100R	Rack- mounted	1. Battery Type: LifePo4 2. Normal Battery Voltage: 51.2V 3. Normal Capacity(25℃, 0.2C) : 5120WH 4. Max.continue discharge current: 100A 5. Recommended Charge Voltage: 57.6V 6. Recommended Charge Current: 20A 7. Cycle life>4000(80% DOD)	Communication CAN2.0/RS232/RS485	44kg	482*480*133	5120WH (51.2V 100AH)
5KW 6KW	SMTK-LFP 48100P1	Power Wall	* Rating power: 51.2V-100Ah/ 48V-100Ah (5kWh) * Monitoring system with 4.3" touch panel display * RS485 Communication. additional battery available. * DTU monitoring: optional. * Invertor: external * SOC control AC charge (external SSR)	touch panel display, RS485 Communication, additional battery available.	60kg	806*586*180	5120WH (51.2V 100AH)
5KW 6KW	SMTK-LFP 48100P2	Power Wall	* Rating power: 51.2V-100Ah/ 48V-100Ah (5kWh) * Monitoring system with 4.3" touch panel display * RS485 Communication. additional battery available. * DTU monitoring: optional. * Invertor: external * SOC control AC charge (external SSR)	touch panel display, RS485 Communication, additional battery available.	60kg	645*438*180	5120WH (51.2V 100AH)

Type 1: All-in-one energy storage system (ESS)

5KW stackable energy storage system

Model: SMTK-ESS-5KW

SMTK-ESS all-in-one energy storage solution, support 1.5KW and 3KW Peak output for different load appliances. It's based on the original cabinet design, stacked with solar energy storage lithium battery, and built in battery protection to retain the use of load power in applications of residential, school, commercial and public utility area.



3000W Peak Pure sine wave inverter	1kwh 2kwh 5kwh Energy storage	2 USB-A ports 2 USB-C ports 12V DC cigarette lighter*2
500+ Charge cycle	USB Plug & play use	

- Features higher capacities for greater compatibility with more power-hungry devices, and the latest in USB-C Power Delivery capable of charging larger USB devices like laptops.
- Includes pre-installed solar charging optimization module that functions as a maximum power point tracker (MPPT), resulting in up to 40% faster charge times.
- Built in Multi safety protection that include short circuit, overload and over-temperature and error code reporting.

Specifications

MODEL		SMKT-ESS-1.5KW				
Inverter	Rated power	1500W Continuously , 3000W for 5 seconds				
	Input	DC20-31V 100A max				
	Output voltage regulation	AC 220V +/-5%,50Hz +/-0.5Hz				
	Output frequency	>92%				
	Peak efficiency	98%				
PV Input	Nominal DC input voltage	24Vdc (±0.3)				
	Max solar power input	200W				
	PV max charging current	<6A				
	Combined charging current	10A (±4A)				
	Max efficiency	95%				
AC Input	PV array open circuit voltage	22VDC				
	PV Working Voltage	18VDC				
	AC input voltage	AC 220V-230V				
	Acceptable input voltage range	AC 220V +/-5%,				
AC Charge	Nominal input frequency	50Hz +/-0.5Hz				
	Transfer time	20ms				
Output	Charging current @ Nominal input voltage	10A (±4A)				
	Charging Algorithm	According to the battery capacity				
	AC output	AC 220V +/-5%,50Hz +/-0.5Hz				
	USB-A (5V 2.4A) *2	DCP/ QC/ AFC/ FCP/ SFCP/ SCP/ PE/ BC1.2/ SAMSUNG				
Lithium Battery	USB-C (5V 2.4A) *2	DCP/ QC/ AFC/ FCP/ SFCP/ SCP/ BC1.2/ SAMSUNG				
	DC12V Cigarette lighter *2	2* Cigarette lighter connector				
	Energy	1290Wh	2580Wh	3870Wh	5160Wh	
	Nominal voltage	25.2V	25.2V	25.2V	25.2V	
	Battery capacity	51.2AH	102.4Ah	153.6Ah	204.8Ah	
	Standard charging and discharge current	60A	60A	60A	60A	
	Maximum continuous charging & discharge current	80A	80A	80A	80A	
	Operation temperature	Charge	0~50°C			
		Discharge	-20~60°C			
	Dimension	Product Size (LxWxH) (mm)	336*143*370mm	452*143*370mm	568*142*370mm	684*143*370mm
Packing Size (LxWxH) (mm)		400*250*500mm	530*250*500mm	700*250*500mm	800*250*500mm	
Net Weight (kg)		20kg	32kg	43kg	55kg	
Gross Weight (kg)		25kg	39kg	50kg	63kg	

PRODUCT	ENERGY	Efficient Bulb (5W)	Fan (45W)	Laptop (30W fully charged)	32 Inch Lcd TV (60W)	Refrigerator (140W)	Microwave (650W)
SMKT-ESS-1.5KW	1.29kwh	258 HRS	29 HRS	43 HRS	22 HRS	10 HRS	2 HRS
SMKT-ESS-1.5KW	3.87kwh	774 HRS	86 HRS	129 HRS	65 HRS	28 HRS	6 HRS
SMKT-ESS-1.5KW	5.16kwh	1100 HRS	145 HRS	172 HRS	86 HRS	37 HRS	8 HRS

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ALL-IN-ONE ENERGY STORAGE SOLAR SYSTEM

Model: SMTK- ESS-2KW SMTK-ESS-3KW

Support 1000W / 2000W / 3000W

Pure sine wave inverter

Support 2kwh / 3kwh/6.4Kwh Energy storage

4000+ Charge cycles

24/7 : USB Plug & play use

2 USB ports: for DC load



SMTK-ESS all-in-one energy storage solution, support 1KW 2KW 3KW output for different-load appliances.

it's based on the original cabinet design, stacked with solar energy storage lithium battery 1kwh, 2kwh, 3kwh, 6.4kwh, and built in battery protection system, fully retain the use of load power in applications of residential, school, commercial and public utility area.

Features higher capacities for greater compatibility with more power-hungry devices, and the latest in USB-C Power Delivery capable of charging larger USB devices like laptops.

Includes pre-installed solar charging optimization module that functions as a maximum power point tracker (MPPT), resulting in up to 40% faster charge times.

Built in Multi safety protection that include short circuit, overload and over-temperature and error code reporting.

Specifications

Inverter	Rated power	2000W	3000W		
	Output voltage waveform	Pure sine wave	Pure sine wave		
	Output voltage regulation	230Vac ±5%	230Vac ±5%		
	Output frequency	50Hz / 60Hz (±0.2Hz)	50Hz / 60Hz (±0.2Hz)		
	Peak efficiency	90%	90%		
	Nominal DC input voltage	24Vdc (±0.3)	24Vdc (±0.3)		
	Standby Consumption	< 25W	< 25W		
PV Input	Max solar power input	1800W	1800W		
	PV max charging current	60A (±3A)	60A (±3A)		
	Combined charging current	70A (±4A)	80A (±4A)		
	Max efficiency	98.0% max	98.0% max		
	PV array open circuit voltage	100VDC	145VDC		
	PV Array MPPT Voltage Range	30~80VDC	30~120VDC		
AC Input	AC input voltage	230Vac ±5%	230Vac ±5%		
	Acceptable input voltage range	90-280VAC	90-280VAC		
	Nominal input frequency	50Hz / 60Hz (Auto detection)	50Hz / 60Hz (Auto detection)		
	Transfer time	10ms typical (UPS, VDE); 20ms typical (APL)			
AC Charge	Charging current @ Nominal input voltage	10/20A (±4A)	20A/30A (±4A)	20A/30A (±4A)	
	Charging Algorithm	4-step (Li)	4-step (Li)	4-step (Li)	
Output	AC output	230Vac	230Vac	230Vac	
	USB (5V 2.4A)	DC output*2pcs	DC output*2pcs	DC output*2pcs	
	USB (12V 1A)	DC output*1pcs	DC output*1pcs	DC output*1pcs	
Lithium Battery	Energy	2000Wh	6400Wh	3200Wh	6400Wh
	Nominal voltage	25.6V	25.6V	25.6V	25.6V
	Battery capacity	92Ah	250Ah	150Ah	250Ah
	Standard charging and discharge current	50A	100A	50A	100A
	Maximum continuous charging&discharge current	100A	200A	100A	200A
	Operation temperature	Charge	0~45℃	0~45℃	0~45℃
	Discharge	-10~60℃	-10~60℃	-10~60℃	-10~60℃
Dimension	Product Size (LxWxH) (mm)	379*254*498.5	/	351*300*538.5	/
	Packing Size (LxWxH) (mm)	467*342*670	/	439*388*690	/
	Net Weight (kg)	31	/	39.5	/
	Gross Weight (kg)	42	/	55	/

PRODUCT	ENERGY	Efficient Bulb (5W)	Fan (45W)	Laptop (30W fully charged)	32 Inch Lcd TV (60W)	Ref rigerator (140W)	Microwa e (650W)
SMKT-ESS-2KW	2kwh	400 HRS	44 HRS	66 HRS	32 HRS	14 HRS	3 HRS
SMKT-ESS-3KW	3kwh	600 HRS	67 HRS	99 HRS	48 HRS	21 HRS	4.5 HRS
SMKT-ESS-2KW/3KW	6.4kwh	1280 HRS	142 HRS	213 HRS	106 HRS	46 HRS	10 HRS

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Stand along Off-grid power system 7KM

Model: SMTK-ESS-7KW (with Touch Panel Display)

SMKT-ESS all-in-one energy storage solution: solar charger inverter + mppt controller + lithium storage batteries support 5kw output for different load appliances. It's based on the original cabinet design, stacked with solar energy storage lithium battery 7.68Kwh, and built in battery protection system, fully retain the use of load power in applications of residential, school, commercial and public utility area.

Output power of inverter: 5000w 230vAC

Pv Solar power input: 4400w

2000+ charge cycles

7.68kwh energy storage system

Lithium Storage batteries: 48v150AH

(48v 50AH *3PCS in parallel)

Features:

With communication: RS485

DTU monitoring: optional

Real time display the status of system operation

IOT remote monitoring available (4G / WIFI)

PV in / AC consumption / batteries status, etc.

supports all brand of solar inverter

shows the BMS information through RS485 communicated with SmarTEC-BMS



(Custom-Design)

Specifications

Inverter	Operation	Charge and discharge normally Available for solar charge and AC line charge at the same time
	Output voltage/ Fq.	AC220V 50/ 60Hz pure Sin. Wave
	Output power	5000W (peak.6500W)
	All in one solar charger inverter	MTTP portion
AC charger portion		Input AC100V, Charge: CC/20A, CV/53.2V
Inverter portion		Batteries DC40V~60V, Output AC220V 50Hz/ 60Hz, Pure Sin. Wave 3500W
Battery	3 batteries in parallel (available to up to 6 setsbatteries.)	LiFePO4 3.2V 100Ah (cell)
		15S-1P 50Ah (cell) 48V 50AH (2560Wh)
		15S1P in 3 parallel. 48V-150Ah (4800Wh)
Input	Solar panel	4400W-145V (max.)
	AC LINE	AC220V , 50/60Hz
Method of charge	Hybrid charge available	Solar panel charge priority
		SOC control, auto start/ stop the AC lone input.
		Default : 10% AC IN Start, 85%AC IN stop. Range resettable.
Charging time	AC LINE charger	About 3hr. (0→ 100%) with 3000W-96V
		about 5h (0→ 100%)
Output	Rating output voltage	AC220V±10% 50Hz/ 60Hz Pure Sin. wave
	Rating output power	5000W
	Overload	102%~110%: Output stop after alarm 5 min.
		110%~125%: Output stop after alarm 10 sec. >125%: Output stop after alarm 5 sec.
Efficiency	≥91%	
Operation time	Full charge, No Solar charge in \ 3.5Hr.with load 2kW	
Display	Touch panel display	Refer to below introduction for contains of display.
Battery low power alarm		SOC 10%: alarm active
Charge stop		Charge to SOC 11%: alarm release
Inverter output stop		Full charge 53.2V.
		Stop: Battery voltage at 40V Release: Battery voltage at 42V

PRODUCT	ENERGY	Efficient Bulb (5W)	Fan (45W)	Laptop (30W fully charged)	32 Inch Lcd TV (60W)	Ref rigerator (140W)	Microwav e (650W)
SMKT-ESS-5KW	4.8kwh	1440 HRS	160 HRS	240 HRS	120 HRS	50 HRS	11 HRS

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Stand along Off-grid power system

NEW

Model: SMKT-ESS-10KW (with Touch Panel Display)

SMKT-ESS all-in-one energy storage solution: solar charger inverter + mppt controller + lithium storage batteries support 5kw output for different load appliances. It's based on the original cabinet design, stacked with solar energy storage lithium battery 10kwh, and built in battery protection system, fully retain the use of load power in applications of residential, school, commercial and public utility area.



Output power of inverter: 5000w 230vAC

Pv Solar power input: 4400w

2000+ charge cycles

10.24kwh energy storage system

Lithium Storage batteries: 48v200AH(48v 100AH *2PCS in parallel)

Features:

With communication: RS485

DTU monitoring: optional

Hybrid charge available

supports all brands of solar inverters

Real time display the status of system operation

IOT remote monitoring available (4G / WIFI)

PV in / AC consumption / batteries status, etc.

shows the BMS information through RS485 communicated with "Smartec-BMS"

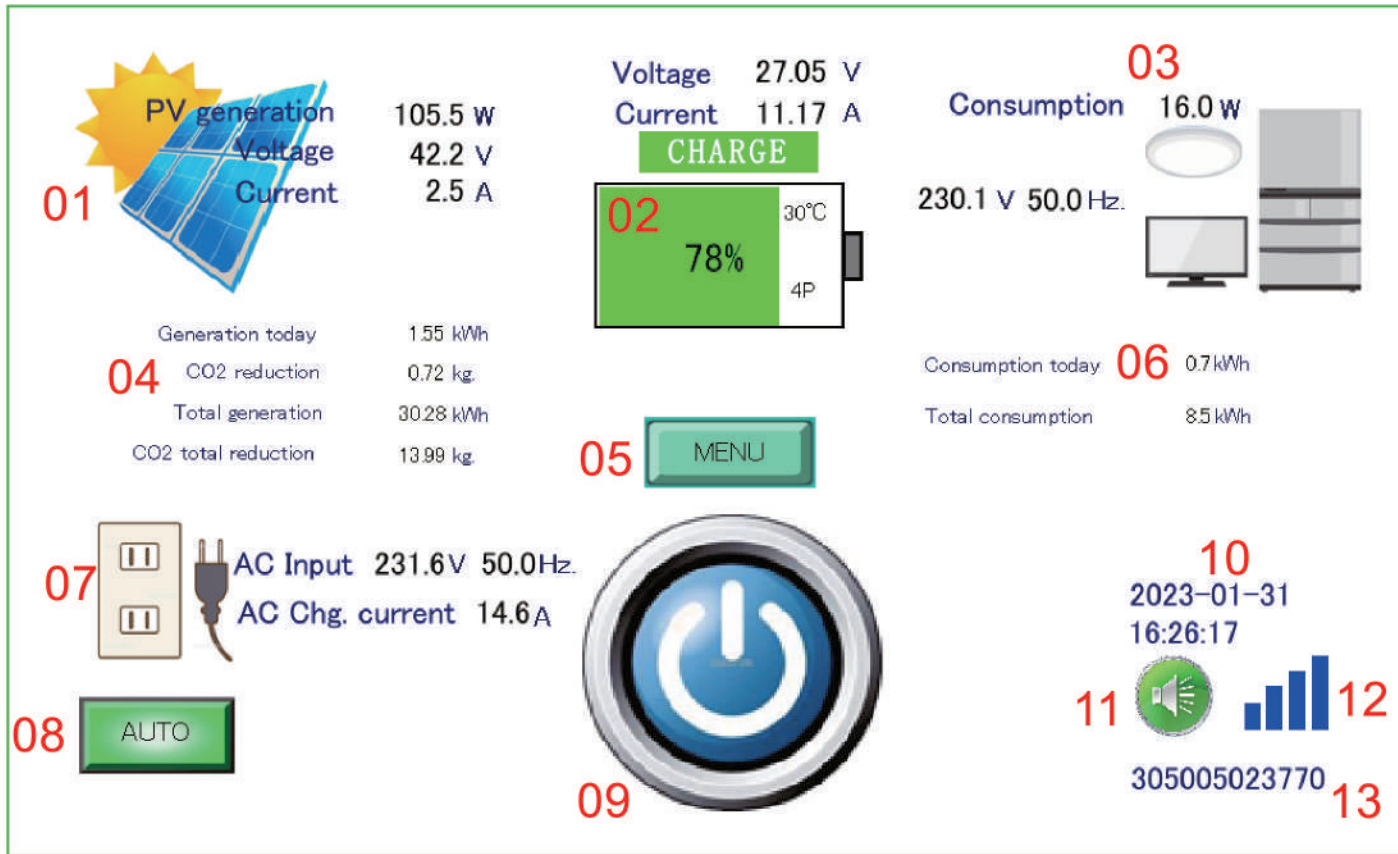
Specifications

Inverter	Operation	Charge and discharge normally Available for solar charge and AC line charge at the same time
	Output voltage/ Fq.	AC220V 50/ 60Hz pure Sin. Wave
	Output power	5000W (peak.6500W)
	All in one solar charger inverter	MTTP portion
AC charger portion		Input AC100V, Charge: CC/20A, CV/53.2V
Inverter portion		Batteries DC40V~60V, Output AC220V 50Hz/ 60Hz, Pure Sin. Wave 3500W
Battery	2 batteries in parallel (available to up to 6 setsbatteries.)	LiFePO4 3.2V 100Ah (cell)
		15S-1P 48V-100Ah (4800Wh)
		15S1P in 2 parallel. 48V-200Ah (4800Wh)
Input	Solar panel	4400W-145V (max.)
	AC LINE	AC220V , 50/60Hz
Method of charge	Hybrid charge available	Solar panel charge priority
		SOC control, auto start/ stop the AC lone input.
		Default : 10% AC IN Start, 85%AC IN stop. Range resettable.
Charging time	AC LINE charger	About 3hr. (0→ 100%) with 3000W-96V
		約5h (0→ 100%)
Output	Rating output voltage	AC220V±10% 50Hz/ 60Hz Pure Sin. wave
	Rating output power	5000W
	Overload	102%~110%: Output stop after alarm 5 min.
		110%~125%: Output stop after alarm 10 sec.
>125%: Output stop after alarm 5 sec.		
Efficiency	≥91%	
Operation time	Full charge, No Solar charge in 、 3.5Hr.with load 2kW	
Display	Touch panel display	Refer to below introduction for contains of display.
Battery low power alarm	SOC 10%: alarm active	
	Charge to SOC 11%: alarm release	
Charge stop	Full charge 53.2V.	
Inverter output stop	Stop: Battery voltage at 40V	
	Release: Battery voltage at 42V	

PRODUCT	ENERGY	Efficient Bulb (5W)	Fan (45W)	Laptop (30W fully charged)	32 Inch Lcd TV (60W)	Ref rigerator (140W)	Microwave (650W)
SMKT-ESS-5KW	4.8kwh	960 HRS	100 HRS	160 HRS	80 HRS	30 HRS	7 HRS
SMKT-ESS-10KW	9.6kwh	1920 HRS	200 HRS	320 HRS	160 HRS	60 HRS	14 HRS

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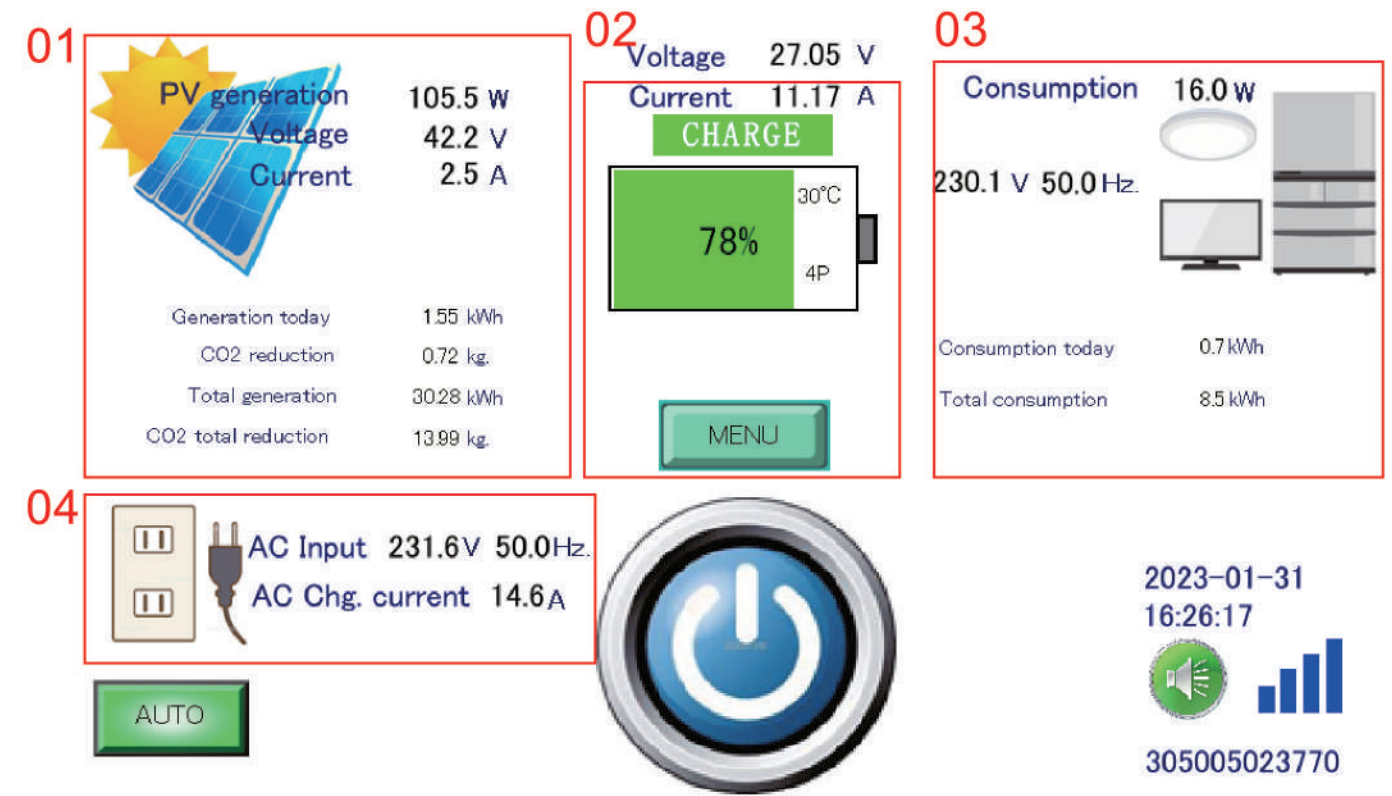
Touch Panel Display



- The display Shows the real time information of ESS on main page.
- System setting and detail data check by enter to menu page.
- Available for Inverter AC ON/ OFF on display
- Devises/ batteries error alarm. Available for alarm mute.
Battery information at real time

- 01** PV information at real time
- 02** Battery Information At Real Time
- 03** Inverter AC output information at real time
- 04** PV information, accumulated.
- 05** Menu (to system setting /detail information check)
- 06** Inverter AC output Information, accumulated.
- 07** AC input information, AC charge current
- 08** AC INPUT control by SOC. AUTO/ Manual mode
- 09** Inverter AC output ON/ OFF SW
- 10** Date, Time
- 11** Alarm/ mute Menu, to system setting
- 12** DTU signal, WIFI or 4G
- 13** S/N of DTU

What You Can Yeard?



01

PV information	data	unit	Note
Real time	Generation	W	1 sec. refresh
	PV input	V	1 sec.refresh
	PV input	A	1 sec.refresh
Accumulated	Generation today	kwh	00:00 reset
	CO2 reduction today	kg	00:00 reset
	Total generation	kWh	from setup
	Total CO2 reduction	kg	from setup

02

Battery information	data	Unit	Note
Real time	Voltage	V	avg
	Charge current	A	sum
	Discharge current	A	sum
	soc	%	avg
	Batteries in parallel	P	1~6 batt
	Temperature of battery	°C	max.
	Remain time of discharge	D:H:M	discharge
	Status of battery	discharge	1<0
	Charge	1>0	

04

AC input information	data	Unit	Note
Real time	AC input (by-pass)	W	AC
	AC input voltage	V	AC
	AC input frequency	Hz.	AC
	Charge current	A	to batteries

03

Inverter output information	data	Unit	Note
Real time	Consumption	W	AC
	Output voltage	V	AC
	Output frequency	Hz.	AC
Accumulated	Consumption today	kWh	00:00reset
	Total consumption	kWh	From setup

Stacked Mounted Off-grid power system

Model:SMTK-ESS 20KW

SMKT-ESS all-in-one energy storage solution, support 5KW output for different load appliances. It's based on the original cabinet design, stacked with solar energy storage lithium battery, 5kwh and 10kwh,20kwh, and built in battery protection system, fully retain the use of load

power in applications of residential, school, commercial and public utility area.



5000W Pure sine wave inverter	20kwh Energy storage	LCD Display Control unit Parallel Port
4000+ Charge cycle	24/7 USB Plug & play use	

- Features higher capacities for greater compatibility with more power-hungry devices, and the latest in USB-C Power Delivery capable of charging larger USB devices like laptops.
- Includes pre-installed solar charging optimization module that functions as a maximum power point tracker (MPPT), resulting in up to 40% faster charge times.
- Batteries status display of multiple batteries in parallel, by individual and summary
- Built in Multi safety protection that include short circuit, overload and over-temperature and error code reporting.

Specifications

support external inverter	Rated power	5000W		
	Output voltage waveform	Pure Sine		
	Output voltage regulation	AC 220V +/-5%,50Hz+/-0.5Hz		
	Peak efficiency	98%		
	Nominal DC input voltage	51.2Vdc (±0.3)		
PV Input	Max solar power input	4400W		
	PV max charging current	60A (±3A)		
	Max efficiency	98%		
	PV array open circuit voltage	145VDC		
	PV Array MPPT Voltage Range	45~145VDC		
AC Input	AC input voltage	AC 220V-230V		
	Acceptable input voltage range	AC 220V +/-5%,		
	Nominal input frequency	50Hz+/-0.5Hz		
	Transfer time	20ms		
AC Charge	Charging current @ Nominal input voltage	50A/220V		
	Charging Algorithm	According to the battery capacity		
Output	AC output	AC 220V +/-5%,50Hz+/-0.5Hz		
Lithium Battery	Energy	10000Wh	20000Wh	
	Nominal voltage	51.2V	51.2V	
	Battery capacity	200Ah	400Ah	
	Standard charging and discharge current	100A	100A	
	Maximum continuous charging & discharge current	200A	200A	
	Operation temperature	Charge	0~60 °C	
		Discharge	-20~60 °C	
Dimension	Product Size (LxWxH) (mm)	537*498*697mm	537*498*962mm	
	Packing Size (LxWxH) (mm)	600*580*230mm 600*580*		
	Net Weight (kg)	130KG	230	
	Gross Weight (kg)	160KG	280	

PRODUCT	ENERGY	Efficient Bulb (5W)	Fan (45W)	Laptop (30W fully charged)	32 Inch Lcd TV (60W)	Refrigerator (140W)	Microwave (650W)
SMKT-ESS-5KW	10kwh	2000 HRS	220 HRS	330 HRS	160 HRS	70 HRS	15 HRS
SMKT-ESS-5KW	20kwh	4000 HRS	440 HRS	660 HRS	320 HRS	140 HRS	30 HRS

The technical specifications of this document are subject to change without any notice

Type 2: Lithium storage batteries (LiFepo4)

Model: SMTK-LFP24100H,LFP24200H)

- Superior safety and reliability
- Top brand cell such as CATL, BYD or GOTION,EVE.
- Cells cycles times: more than 3000 times.
- Long lifespan: 3 years warranty, 5+ years life design.
- With intelligent BMS system to optimize the performance.
- Built in 1.2A cell equalizer, can balance all cells in short time.
- Max discharge current up to 200A, compatible with Solar system.
- Excellent standby self-consumption as low as 4mA.
- High density, small size and weight.
- All around protection and unattended operation.
- Optional for LCD display or communication (CAN/RS485/RS232)



LFP-24100H



LFP-24200H

TECHNICAL PARAMETER (2.56kwh - 5.12kwh)

MODEL		SMTK-LFP2410H	SMTK-LFP24200H
Power Wall Design Lithium Iron Battery Pack	Normal Battery Voltage(Vdc)	25.6V	25.6V
	Normal Capacity(25C, 0.2C) (WH)	2560WH	2560WH
	Voltage Range (Vdc)	20~29.2V	20~29.2V
	Max.continue discharge current	100A	200A
	Max.pulse discharge current	200A 30Sec.	300A 30Sec.
	Max.continue charge current	50A	100A
	Cycle life(+25C 0.2C 80%DOD)	>3000-5000 Cycles	>3000-5000 Cycles
	Cell Equalizer Current(A)	1~5A Max	1~5A Max
	Terminal	M6/ M8	M6/ M8
	Storage temperature	0C~50C	0C~50C
	Storage duration	6 months at 25C	6 months at 25C
	Safety standard	UN38.3,IEC62619,MSDS,CE	UN38.3,IEC62619,MSDS,CE
	IP degree	IP20	IP20
	Protection	Over-charge protection、 Over-discharge protection、 Over-current protection、 Shortcircuit protection、 Over-temperature protection	
Ambient	Noise(dB)	< 40dB (1 meter)	
	Working Temperature	-20C~+60C	
	Humidity	0-95% (no condensation)	
Dimension	LxWxH (products size) mm	L218*W240*H522mm	
	LxWxH (package size)mm	L520*W269*H220mm	
	Weight(NW Kg)	25	
	Weight(GW Kg)	44	

Power Wall Design Lithium Iron Battery Pack 3 Years Warranty

Model:SMTK-LFP24100P, LFP-24200P

- Superior safety and reliability
- Top brand cell such as CATL, BYD or GOTION,EVE.
- Cells cycles times: more than 3000 times.
- Long lifespan: 3 years warranty, 5+ years life design.
- With intelligent BMS system to optimize the performance.
- Built in 1.2A cell equalizer, can balance all cells in short time.
- Max discharge current up to 200A, compatible with Solar system.
- Excellent standby self-consumption as low as 4mA.
- High density, small size and weight.
- Wall mounted design, easy installation.
- All around protection and unattended operation.
- Optional for LCD display or communication (CAN/RS485/RS232)



TECHNICAL PARAMETER (2.56Kwh-5.12Kwh)

MODEL		SMTK-LFP24100P	SMTK-LFP24200P
Power Wall Design Lithium Iron Battery Pack	Normal Battery Voltage(Vdc)	25.6V	25.6V
	Normal Capacity(25C, 0.2C) (WH)	2560WH	2560WH
	Voltage window (Vdc)	22.4~29.2V	22.4~29.2V
	Folat Charge Voltage(Vdc)	27.6V	27.6V
	Max.continue discharge current	100A	150A
	Max.pulse discharge current	200A 30Sec.	200A 30Sec.
	Max.continue charge current	50A	100A
	Cycle life(+25C 0.2C 80%DOD)	>3000-5000 Cycles	>3000-5000 Cycles
	Cell Equalizer Current(A)	1~5A Max	1~5A Max
	Terminal	M8	M8
	Storage temperature	0C~30C	0C~30C
	Storage duration	6 months at 25C	6 months at 25C
	Safety standard	UN38.3,IEC62619,MSDS,CE	UN38.3,IEC62619,MSDS,CE
	IP degree	IP20	IP20
	Protection	Over-charge protection、 Over-discharge protection、 Over-current protection、 Shortcircuit protection、 Over-temperature protection	
	Ambient	Noise(dB)	< 40dB (1 meter)
Working Temperature		-10C~+50C	
Humidity		0-95% (no condensation)	
Sea Level(m)		=1500	
Dimension	LxWxH (products size) mm	L314*W218*H380mm	L534W385*H218mm
	LxWxH (package size)mm	L395*W250*H442mm	L611W442*H250mm
	Weight(NW Kg)	25	44
	Weight(GW Kg)	26	45

Rack Mounted Lithium Iron Battery Pack 3 Years Warranty

MODEL:SMTK-LFP48100R (51.2V100AH*4PCS)

Top brand cells

supports 4U Rack design

Long lifespan

Smart BMS system inside

Built in 1.2A cell equalizer

Max discharge current up to 100A

High density, small size and weight

Optional for LCD display or communication (CAN/RS485/RS232)



TECHNICAL PARAMETER (5.12kwh - 20.48kwh)

MODEL		48V100AH	48V200AH
Power Wall Design Lithium Iron Battery Pack	Normal Battery Voltage(Vdc)	51.2V	51.2V
	Normal Capacity(25C, 0.2C) (WH)	5120WH	10240WH
	Voltage window (Vdc)	44.8~58.4V	44.8~58.4V
	Folat Charge Voltage(Vdc)	55.2V	55.2V
	Max.continue discharge current	100A	150A
	Max.pulse discharge current	200A 30Sec.	200A 30Sec.
	Max.continue charge current	50A	50A
	Cycle life(+25C 0.2C 80%DOD)	>3000 Cyeles	>3000 Cyeles
	Cell Equalizer Current(A)	1~5A Max	1~5A Max
	Terminal	M6	M6
	Storage temperature	0C~30C	0C~30C
	Storage duration	6 months at 25C	6 months at 25C
	Safety standard	UN38.3,IEC62619,MSDS,CE	UN38.3,IEC62619,MSDS,CE
	IP degree	IP20	IP20
Protection	Over-charge protection、 Over-discharge protection、 Over-current protection、 Shortcircuit protection、 Over-temperature protection		
Ambient	Working Temperature	-10C~+50C	
	Humidity	0-95% (no condensation)	
	Sea Level(m)	=1500	
Dimension	LxWxH (products size) mm	L475*W440*H176mm	
	LxWxH (package size)mm	L590W483*H178mm	
	Weight(NW Kg)	42	
	Weight(GW Kg)	43	

Power wall mounted LiFePO4 batteries

MODEL:SMTK-LFP48100P1, LFP48100P2

NEW

* Rating power: 51.2V-100Ah/ 48V-100Ah (5kWh)

* Monitoring system with 4.3" touch panel display

* RS485 Communication、 additional battery available.

* DTU monitoring: optional.

* Inverter: external

* SOC control AC charge (external SSR)

* Weight: about 60kg.



TECHNICAL PARAMETER (5.12kwh)

MODEL		48V 100AH	48V 100AH
Power Wall Design Lithium Iron Battery Pack	Normal Battery Voltage(Vdc)	51.2V	51.2V
	Normal Capacity(25C, 0.2C) (WH)	5120WH	5120WH
	Voltage Range (Vdc)	40V-58.4V	40V-58.4V
	Max.continue discharge current	100A	100A
	Max.pulse discharge current	300A	300A
	Max.continue charge current	50A	50A
	Cycle life(+25C 0.2C 80%DOD)	>3000-5000 Cycles	>3000-5000 Cycles
	Terminal		
	Storage temperature	0-50°C	0-50°C
	Storage duration	6 months at 25C	6 months at 25C
	Safety standard	UN38.3,IEC62619,MSDS,CE	UN38.3,IEC62619,MSDS,CE
	IP degree	IP20	IP20
	Protection	Over-charge protection、 Over-discharge protection、 Over-current protection、 Shortcircuit protection、 Over-temperature protection	
	Ambient	Noise(dB)	< 40dB (1 meter)
Working Temperature		-20C~+60C	
Humidity		0-95% (no condensation)	
Dimension	LxWxH (products size) mm	806*586*180mm	645*438*180mm
	LxWxH (package size)mm	850*620*230mm	680*480*230mm
	Weight(NW Kg)	60kg	60kg
	Weight(GW Kg)	70kg	70kg

01

BMS Designer & manufacturer since 2007
(BMS is the brain of storage batteries)

02

Lithium storage batteries designer & manufacture
(batteries is the key part of off-grid energy system)

03

Rich experiences in the filed of BMS & Lithium batteries

04

Touch Panel Display Module specially designed for off-grid Lithium storage solutions

05

To manage the whole ESS system
(PV/Solar Inverter/ Storage batteries/AC Input)

06

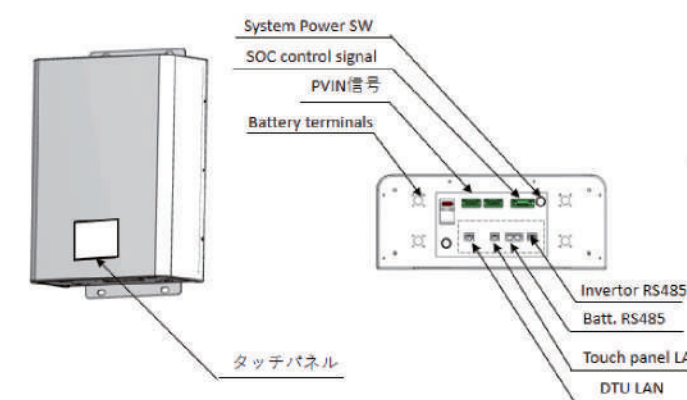
Customized Design For Lithium storage batteries/ Solar ESS solutions as "one-stop" service

Type 1: Lithium(LiFePO4) storage batteries

It can be connected with your inverter as a back-up power storage, and Support series/ parallel connection between batteries.

If you want to make a custom-design, please confirm:

1. What's the power of your solar inverter output and PV Input?
2. How about the storage environment of the battery?
3. Are you interested in battery and complete system monitoring and remote control functions?
4. do you need to add power and increase capacity?



Type 2: Off-Grid All-In-One Energy Storage System

ESS is all-in-one system which contains the Solar Inverter,MPPT controller, Storage batteries, and it has a variety of output ports including AC, 12VDC. USB-C.etc,also it supports disassembly to increase or decrease capacity.

If you want to make a custom-design, please check:

1. What's the power of your solar inverter output and PV input?
2. Do you need the remote monitoring?
3. Do you need to use it as an outdoor power source?
It is portable with wheels which can be assembled according to the amount of power you need, disassembled, etc.
4. Is there any limited space for this system?

STAND ALONG ESS システム
—10kWh

