



Rack-mounted Energy Storage Battery Series



Product Highlights

/ Flexible Investment

5kWh/10kWh modular design,
scalable from 5 to 150 kWh.

/ TÜV Certification

Battery IEC/ UL standard.

/ Perfect Compatibility

Compatible to most inverter brands on the market.

/ Safety

BMS & Breaker two Levelover current protection.

Compatible With Inverter Brands

MACQUARIE	SOROTEC	GROWATT	DEYE	VITVON	SERMATEC
SMA	GOODWE	SREN	HuiNeng	iYPower	OUKITEL
Voltronic	Pylontech	MustPower	SAKO	Senergy	Felicity
LUXPOWER	GSSTES	ROBOROCK	Sunsunk	KSTAR	Solis

MODEL	TG-R48100	TG-R48200	TG-R51100-3U	TG-R51100-4U	TG-R51200
Rate voltage(Vdc)	48		51.2		
Cell combination	15S1P	15S2P	16S1P	16S1P	16S2P
Rate capacity(AH)	100	200	100	100	200
Energy storage(KWH)	4.8	9.6	5.12	5.12	10.24
Cycle life	25±2℃, 0.5C/0.5C, EOL70%≥6000				
Charge voltage(V)	52.5		56		
Max.charge current(A)	100 (Optional 150/200A for 200AH pack)				
Max.discharge current(A)	100 (Optional 150/200A for 200AH pack)				
Discharge cut-off voltage(VDC)	40.5		43.2		
Charge cut-off voltage(VDC)	54.75		58.4		
Charge temperature	0℃ ~ 50℃@60 ± 25% Relative Humidity				
Discharge temperature	-20℃ ~ 50℃@60 ± 25% Relative Humidity				
Storage temperature	-20℃ ~ 50℃@60 ± 25% Relative Humidity				
IP class	IP20				
Material system	LiFePO4				
Case material	Metal				
Case type	Rack Mount				
Product dimension L*W*H(mm)	480*442*133 (3U)	680*442*178 (4U)	480*442*133 (3U)	480*442*178 (4U)	680*442*178 (4U)
Package dimension L*W*H(mm)	580*530*210	820*625*310	580*530*210	580*530*255	820*625*310
Net weight(kg)	42	84	44	44	88
Gross weight(kg)	47	93	49	49	97
Protocol(Optional)	CAN/RS485/RS232				
Certificates	UN38.3, MSDS, CE-EMC		UN38.3, MSDS, CE-EMC, IEC62619, UL1973	UN38.3, MSDS, CE-EMC	

Model	TP-48100R		TP-48200R
Voltage(V)	43.2~58.4V		
Cell	3.2V100Ah		3.2V206Ah
Module	16S1P		
Number of parallel machines	10PCS		
Nominal voltage(V)	51.2		
Nominal Capacity(Ah)	100		200
Nominal Energy(kWh)	5.12		10.24
Maximum power output(kW)	5.12		10.24
suggestion discharge current(A)	75A		150A
suggestion charging current(A)	50A		100A
Recommended cut-off voltage (Min) (V)	48(40V)		
Recommended charging voltage (Max) (V)	56V(58.4V)		
Cycles(25°C,0.5C,DOD80%)	≥6000		
Charging temperature(°C)	0~55		
Discharge temperature(°C)	-20~55		
Operating humidity	<95%R.H		
Communication mode	CAN/RS485		
Dry contact	Customized by demand		
Optional modules	Bluetooth, 4G module		
Product size(W*D*H,mm)	442*430*		550*442*
Packing size(W*D*H,mm)	155535*527*		222655*528*
Protection class	290	IP21	442
System weight(kg)			
Certification	Approx 48	IEC62619/UN38.3/MSDS	Approx 85





Wall-mounted Energy Storage Battery Series



Product Highlights

/ Flexible Investment

5kWh/10kWh modular design,
scalable from 5 to 150 kWh.

/ Fast Installation

Plug & Play battery interface.

/ Safety

BMS & Breaker two Level over current protection.

/ TÜV Certification

Battery IEC/ UL standard.

/ Perfect Compatibility

Compatible to most inverter brands on the market.

/ Fast Charge

High charge/ Discharge rates supporting safety
1C fast charge/ Discharge.

Compatible With Inverter Brands

MACQUARIE	SOROTEC	GROWATT	DEYE	VITVON	SERMATEC
SMA	GOODWE	SREN	HuiNeng	iYPower	OUKITEL
Voltronic	Pylontech	MustPower	SAKO	Senergy	Felicity
LUXPOWER	GSSTES	ROBOROCK	Sunsunk	KSTAR	Solis

MODEL	TG-H48100	TG-H48200	TG-H51100	TG-H51200
Rate voltage(Vdc)	48		51.2	
Cell combination	15S1P	15S2P	16S1P	16S2P
Rate capacity(AH)	100	200	100	200
Energy storage(KWH)	4.8	9.6	5.12	10.24
Cycle life	25±2°C, 0.5C/0.5C, EOL70%≥6000			
Charge voltage(V)	52.5		56	
Max. charge current(A)	100 (Optional 150/200A for 200AH pack)			
Max. discharge current(A)	100 (Optional 150/200A for 200AH pack)			
Discharge cut-off voltage(VDC)	40.8		43.2	
Charge cut-off voltage(VDC)	54.75		58.4	
Charge temperature	0°C ~ 50°C@60 ± 25% Relative Humidity			
Discharge temperature	-20°C ~ 50°C@60 ± 25% Relative Humidity			
Storage temperature	-20°C ~ 50°C@60 ± 25% Relative Humidity			
IP class	IP20			
Material system	LiFePO4			
Case material	Metal			
Case type	Wall Mount			
Product dimension L*W*H(mm)	580*390*185	690*485*226	580*390*185	690*485*226
Package dimension L*W*H(mm)	660*450*240	850*570*285	660*450*240	850*570*285
Net weight(kg)	42	85	44	88
Gross weight(kg)	47	95	49	98
Protocol(Optional)	CAN/RS485/RS232			
Monitoring	Bluetooth/WLAN Optional			
Certificates	UN38.3, MSDS, CE-EMC	UN38.3, MSDS, CE-EMC, IEC62619, UL1973	UN38.3, MSDS, CE-EMC	

Model	TP-24100W	TP-24200W	TP-48100W	TP-48200W
Voltage(V)	21.6~29.2V		43.2~58.4V	
Cell	3.2V100Ah			3.2V200Ah
Module	8S1P	8S2P	16S1P	16S1P
Number of parallel machines	10PCS			
Nominal voltage(V)	25.6		51.2	
Nominal Capacity(Ah)	100	200	100	200
Nominal Energy(kWh)	2.56	5.12		10.24
Maximum power output(kW)	2.56	5.12		
suggestion discharge current(A)	75A	150A	75A	150A
suggestion charging current(A)	50A	100A	50A	100A
Recommended cut-off voltage (Min) (V)	24V(20V)		48V(40V)	
Recommended charging voltage (Max) (V)	28V(29.2V)		56V(58.4V)	
Cycles(25°C,0.5C,DOD80%)	≥6000			
Charging temperature(°C)	0~55			
Discharge temperature(°C)	-20~55			
Operating humidity	<95%R.H			
Communication mode	CAN/RS485			
Dry contact	Customized by demand			
Optional modules	Bluetooth, 4G module			
Product size(W*D*H,mm)	400*410*	580*415*150		650*525*195
Packing size(W*D*H,mm)	150480*490*	652*487*265		722*597*315
Protection class	265	IP21		
System weight(kg)		Approx 50	Approx 50	Approx 50
Certification	Approx 50	IEC62619/UN38.3/MSDS		





Low Voltage Mobile Energy Storage Battery Series

CE MSDS  

Product Highlights

/ Perfect Compatibility

Compatible to most inverter brands on the market.

/ Fast Installation

Plug & Play battery interface.

/ Safety

BMS & Breaker two Level protection.

/ Premium Cell

BTier one new Grade A only.

/ Compact Design

Mobile type with small footprint.

/ Long Life

10000 cycles long working lifespan.

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Compatible With Inverter Brands

MACQUARIE	SOROTEC	GROWATT	DEYE	VITVON	SERMATEC
SMA	GOODWE	SREN	HuiNeng	iYPower	OUKITEL
Voltronic	Pylontech	MustPower	SAKO	Senergy	Felicity
LUXPOWER	GSSTES	ROBOROCK	Sunsunk	KSTAR	Solis

MODEL	TG-BM51100	TG-BM51205	TG-BM51280
Rate voltage(Vdc)	51.2		
Cell combination(SIP)	16		
Rate capacity(AH)	100	205	280
Energy storage(KWH)	5.12	10.5	14.3
Cycle life	25±2°C, 0.5C/0.5C, EOL70%≥6000		
Charge voltage(V)	56		
Max. charge current(A)	100 (Optional 150/200A for 205/280AH pack)		
Max. discharge current(A)	100 (Optional 150/200A for 205/280AH pack)		
Discharge cut-off voltage(VDC)	43.2		
Charge cut-off voltage(VDC)	58.4		
Charge temperature	0°C ~ 50°C@60 ± 25% Relative Humidity		
Discharge temperature	-20°C ~ 50°C@60 ± 25% Relative Humidity		
Storage temperature	-20°C ~ 50°C@60 ± 25% Relative Humidity		
IP class	IP20		
Material system	LiFePO4		
Case material	Metal		
Case type	Mobile Power		
Product dimension L*W*H(mm)	612*370*190	622*520*227	766*520*221
Package dimension L*W*H(mm)	712*535*298	722*695*328	866*695*328
Net weight(kg)	55	92	115
Gross weight(kg)	60	112	135
Protocol(Optional)	CAN/RS485/RS232		
Monitoring	Bluetooth/WLAN Optional		
Certificates	UN38.3, MSDS		UN38.3, MSDS, CE-EMC

System Specifications

Model	TP-48100V	TP-48200V	TP-48280V	TP-48300V
Voltage(V)	43.2~58.4V	43.2~58.4V	43.2~58.4V	43.2~58.4V
Cell	3.2V100Ah	3.2V200Ah	3.2V280Ah	3.2V300Ah
Module	16S1P			
Number of parallel machines	10PCS			
Nominal voltage(V)	51.2			
Nominal Capacity(Ah)	100	200	280	300
Nominal Energy(kWh)	5.12	10.24	14.33	15.36
Maximum power output(kW)	5.12	10.24	14.33	15.36
suggestion discharge current(A)	50A	100A	170A	
suggestion charging current(A)	75A	150A	120A	
Recommended cut-off voltage (Min) (V)	48V(40V)			
Recommended charging voltage (Max) (V)	56V(58.4V)			
Cycles(25°C,0.5C,DOD80%)	≥6000			
Charging temperature(°C)	0~55			
Discharge temperature(°C)	-20~55			
Operating humidity	<95%R.H			
Communication mode	CAN/RS485			
Dry contact	Customized by demand			
Optional modules	Bluetooth, 4G module			
Product size(W*D*H,mm)	550*420*230	680*510*230	760*560*230	710*510*
Packing size(W*D*H,mm)	685*497*315	815*587*315	885*640*290	230800*590*
Protection class	IP21			420
System weight(kg)		Approx 90	Approx 120	
Certification	IEC62619/UN38.3/MSDS			Approx 90





Vertical Low Voltage Stack Battery Series



Product Highlights

/ Perfect Compatibility

Compatible to most inverter brands on the market.

/ Fast Installation

Plug & Play battery interface.

/ Safety

BMS & Breaker modular level protection.

/ Compact Design

Small footprint/640*205mm.

/ Flexible Investment

Upto 20kWH per system and supporting up to 5 pcs parallel configuration.

/ Long Life

6000 cycles long working lifespan.

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MODEL	TG-P10LV	TG-P15LV	TG-P20LV
Rate voltage(Vdc)	51.2		
Energy storage(KWH)	10.24	15.36	20.48
Cycle life	25±2°C, 0.5C/0.5C, EOL70%≥6000		
Months self discharge	≤2%		
Charge voltage(V)	56		
Max. charge current(A)	200		
Max. discharge current(A)	200		
Discharge cut-off voltage(VDC)	43.2		
Charge cut-off voltage(VDC)	58.4		
Charge temperature	0°C ~ 50°C@60 ± 25% Relative Humidity		
Discharge temperature	-20°C ~ 50°C@60 ± 25% Relative Humidity		
Storage temperature	-20°C ~ 50°C@60 ± 25% Relative Humidity		
IP class	IP65		
Case type	Stand Stack		
Product dimension L*W*H(mm)	640*205*897	640*205*1239	640*205*1581
Package dimension L*W*H(mm)	760*335*450*2 705*395*240*1	760*335*450*3 705*395*240*1	760*335*450*4 705*395*240*1
Net weight(kg)	14+48*2	14+48*3	14+48*4
Gross weight(kg)	21+53*2	21+53*3	21+53*4
Protocol(Optional)	CAN/RS485/RS232		
Monitoring	Bluetooth/WLAN Optional		
Certificates	UN38.3, MSDS, CE-EMC, IEC62619, 63056		





Vertical High Voltage Stack Battery Series



Product Highlights

/ Perfect Compatibility

Compatible to most inverter brands on the market.

/ Fast Installation

Plug & Play battery interface/Plug in modular design.

/ Safety

BMS & Breaker modular level protection.

/ Compact Design

Small footprint/690*195mm.

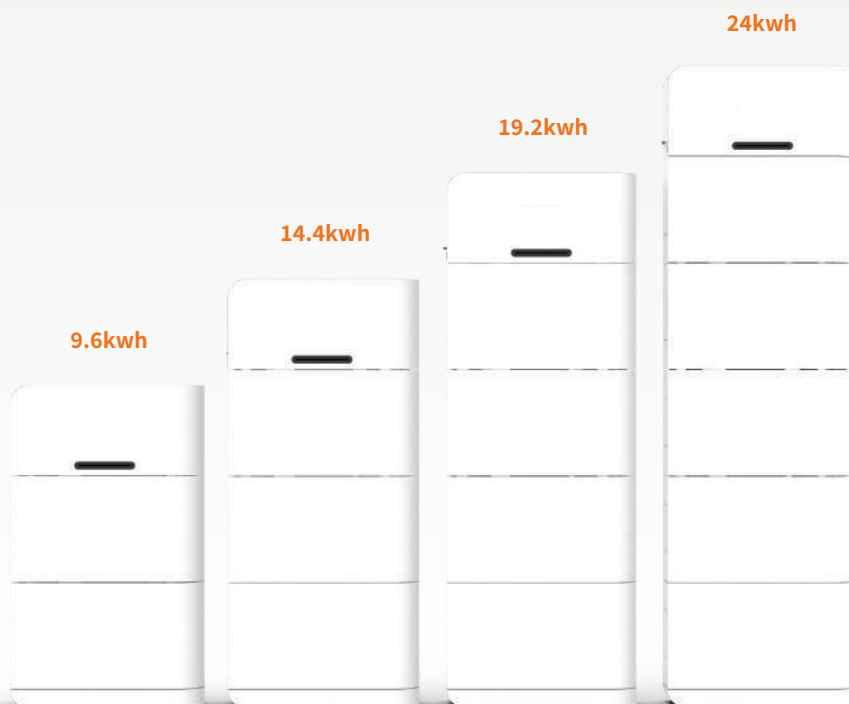
/ Flexible Investment

5.12kWh modular design/Scalable up to 25kWh.

/ Long Life

6000 cycles long working lifespan.

MODEL	TG-P10HV	TG-P15HV	TG-P20HV	TG-P25HV
Rate voltage(Vdc)	192	288	384	480
Cell combination(SIP)	30S1P*2S	30S1P*3S	30S1P*4S	30S1P*5S
Rate capacity(AH)	50			
Energy storage(KWH)	9.6	14.4	19.2	24
Cycle life	25±2°C, 0.5C/0.5C, EOL70%≥6000			
Charge voltage(V)	210	315	420	525
Max. charge current(A)	50			
Max. discharge current(A)	50			
Discharge cut-off voltage(VDC)	162	243	324	405
Charge cut-off voltage(VDC)	216	324	432	540
Charge temperature	0°C ~ 50°C@60 ± 25% Relative Humidity			
Discharge tempcraturc	-20°C ~ 50°C@60 ± 25% Relative Humidity			
Storage temperature	-20°C ~ 50°C@60 ± 25% Relative Humidity			
IP class	IP65			
Material system	LiFePO4			
Case material	Metal			
Case type	Stand Stack			
Product dimension L*W*H(mm)	680*185*1035	680*185*1425	680*185*1815	680*185*2205
Package dimension L*W*H(mm)	780*295*450*3	780*295*450*4	780*295*450*5	780*295*450*6
Net weight(kg)	14+49*2	14+49*3	14+49*4	14+49*5
Gross weight(kg)	21+53*2	21+53*3	21+53*4	21+53*5
Protocol(Optional)	CAN/RS485/RS232			
Monitoring	Bluetooth/WLAN Optional			
Certificates	UN38.3, MSDS, CE-EMC, IEC62619, 63056			





Off-grid-single phase 1.8KW-11KW



Product Highlights

Efficient power generation

- Pure sine wave inverter
- Maximum conversion efficiency 95%
- Maximum 25A string high current power generation

Safe and reliable

- IP21 protection level
- Intelligent air cooling
- Overload/overtemperature/short circuit protection
- Multiple monitoring methods available

user friendly

- $\leq 45^{\circ}\text{C}$ ambient temperature without derating, better environmental adaptability
- Intelligent air cooling, silent operation

Intelligent operation and maintenance

- UPS on-grid switching time is less than 10ms
- Intelligent terminal, grasp the running status of equipment in real time
- Support OTA remote upgrade and settings to reduce operation and maintenance costs

Items		GPEO-1K8L1-M	GPEO-3K6L1-M	GPEO-4KL1
PV (DC Input)	Recommended max. PV input power	650 W	1500 W	4000W
	Max. input voltage (Voc)	100 V	145 V	500V
	MPPT operating voltage range	15V-80V (@6V start up)	30V-120V (@30V start up)	85V-450V (@85V start up)
	Number of MPPT	1	1	1
	Max. number of input strings per MPPT	1	1	1
	Max. input current per MPPT	20 A	25 A	15 A
	Max. short-circuit current per MPPT	25 A	27 A	18 A
Grid (AC Input)	Max output power	2300 W	4000 W	5000 W
	Max output current	10 A	17.4 A	22 A
	Rated grid voltage	220/230/240 V (L,N,PE)	220/230/240 V (L,N,PE)	220/230/240V (L,N,PE)
	Rated grid frequency	50/60Hz	50/60Hz	50/60Hz
	Acceptable range	170-280Vac (for UPS) 90-280Vac (for home application)	170-280 Vac (for UPS) 90-280 Vac (for home application)	170-280vac (for UPS) 90-280Vac (for home application)
Battery Parameters (Bidirection)	Battery type	Lead-acid	LiFePO4 / Lead-acid	LiFePO4 / Lead-acid
	Battery voltage range	10~14.5 Vdc	20-30 Vdc	20~30 Vdc
	Rated Battery Voltage	12 Vdc	24 Vdc	24 Vdc
	Max. charge/discharge current	100A / 150A	120A / 180A	120A / 135A
	BMS communication mode	Rs232	RS232; Rs485	Rs485
Back-up Output (AC output)	Rated output power	1500W / 1800VA	3000W / 3600VA	4000W / 4000VA
	Rated output current	7.8 A	15.6 A	16.4 A
	Rated output voltage / Frequency	220/230/240V (L,N,PE) 50/60Hz	220/230/240V (L,N,PE) 50/60Hz	220/230/240V (L,N,PE) 50/60Hz
	Parallel capacity	-	-	-
	Surge power	3600VA 2s	7200VA 2s	7200VA 5s
	THDv (@ linear load)	< 3%	< 3%	< 3%
	Switching time	10ms typical (For UPS) 20ms	typical (For Home Appliances)	10ms typical (For UPS) 20ms typical (For Home Appliances)
Efficiency	Peak efficiency	95%	95%	95%
	Max. MPPT efficiency	93%	92%	99.9%
Protection	Inner protection	√ Output short-circuit protection	√ Output overvoltage protection	√ Output short-circuit protection √ Output overvoltage protection
	Surge protection	PV: Type III, AC: Type III		PV: Type III, AC: Type III
	IP rating	Ip21		Ip54
General Parameters	Operating temperature range	-10°C ~ 50°C		-10°C ~ 55°C
	Relative humidity range	5%~95%	10%~95%	5%~95%
	Max. operating altitude	>2000m derating	>2000m derating	>2000m derating
	Standby self-consumption	<10 W	<10 W	<10 W
	Installation type	Wall-mounted	Wall-mounted	Wall-mounted
	Cooling mode	Fan cooling	Fan cooling	Fan cooling
	Communication	Rs232	RS232; Rs485	RS232; RS485; Dry contact; WI-FI
Mechanical Specifications	Display	LCD	LCD	LCD
	Inverter dimensions (L*W*H)	350*290*105 mm	350*290*105 mm	444.7*346.6*120 mm
	Net weight	5.5 kg	6 kg	9.2 kg
	Carton dimensions (L*W*H)	495*385*165 mm	495*385*165 mm	560*465*240 mm
	Gross weight	6.5 kg	7 kg	11.4 kg
	Warranty Period	2 years		3 years



Off-grid-single phase 1.8KW-11KW



Product Highlights

Efficient power generation

- Pure sine wave inverter
- Maximum conversion efficiency 95%
- Maximum 25A string high current power generation

user friendly

- $\leq 45^{\circ}\text{C}$ ambient temperature without derating, better environmental adaptability
- Intelligent air cooling, silent operation

Safe and reliable

- IP21 protection level
- Intelligent air cooling
- Overload/overtemperature/short circuit protection
- Multiple monitoring methods available

Intelligent operation and maintenance

- UPS on-grid switching time is less than 10ms
- Intelligent terminal, grasp the running status of equipment in real time
- Support OTA remote upgrade and settings to reduce operation and maintenance costs

Items		GPE0-6KL1	GPE0-12KL1
PV (DC Input)	Recommended max. PV input power	6000W	12000W
	Max. input voltage (Voc)	500V	500V
	MPPT operating voltage range	85V-450V (@75V start up)	85V-450V (@75V start up)
	Number of MPPT	1	1
	Max. number of input strings per MPPT	1	1
	Max. input current per MPPT	27 A	27/13A (MAX:40A)
	Max. short-circuit current per MPPT	35 A	37A/17.5A
Grid (AC Input)	Max output power	11500 W	16000 W
	Max output current	50 A	70 A
	Rated grid voltage	220/230/240V (L,N,PE)	220/230/240V (L,N,PE)
	Rated grid frequency	50/60Hz	50/60Hz
	Acceptable range	170-280Vac (for UPS) 90-280Vac (for home application)	170-280Vac (for UPS) 90-280Vac (for home application)
Battery Parameters (Bidirection)	Battery type	LiFePO4 / Lead-acid	LiFePO4 / Lead-acid
	Battery voltage range	40-60 Vdc	40-60 Vdc
	Rated Battery Voltage	48 Vdc	48 Vdc
	Max. charge/discharge current	120A / 130A	120A / 240A
	BMS communication mode	Rs485	Rs485
Back-up Output (AC output)	Rated output power	6000W / 6000VA	12000W / 12000VA
	Rated output current	27.3 A	54.5 A
	Rated output voltage / Frequency	220/230/240V (L,N,PE) 50/60Hz	220/230/240V (L,N,PE) 50/60Hz
	Parallel capacity	Max. 12 units	Max. 12 units
	Surge power	12000VA 5s	22000VA 5s
	THDv (@ linear load)	< 3%	< 3%
	Switching time	10ms typical (For UPS) 20ms typical (For Home Appliances)	
Efficiency	Peak efficiency	98%	98%
	Max. MPPT efficiency	99.9%	99.9%
Protection	Inner protection	✓ Output short-circuit protection ✓ Output overvoltage protection	
	Surge protection	PV: Type III, AC: Type III	
	IP rating	Ip54	
General Parameters	Operating temperature range	-10°C ~ 55°C	
	Relative humidity range	5%~95%	10%~95%
	Max. operating altitude	>2000m derating	>2000m derating
	Standby self-consumption	<10 W	<20 W
	Installation type	Wall-mounted	Wall-mounted
	Cooling mode	Fan cooling	Fan cooling
	Communication	RS232; RS485; Dry contact; WI-FI	RS232; RS485; Dry contact; WI-FI
Mechanical Specifications	Display	LCD	LCD
	Inverter dimensions (L*W*H)	444.7*346.6*120 mm	630*535*125 mm
	Net weight	12.4 kg	25 kg
	Carton dimensions (L*W*H)	560*465*240 mm	745*650*240 mm
	Gross weight	14.6 kg	27.2 kg
	Warranty Period	3 years	



Off-grid-single-phase 3.6-6KW three-phase 10-15KW



Product Highlights

Efficient power generation

- 120V-550V wide MPPT voltage range
- DC over-configuration 1.3 times
- Compatible with lead-acid and lithium batteries, 50A high current charging and discharging

user friendly

- $\leq 45^{\circ}\text{C}$ ambient temperature without derating, better environmental adaptability
- Intelligent air cooling, silent operation

Safe and reliable

- IP65 protection level, reliable quality
- Five-year standard warranty, more secure to use
- -25°C - 60°C operating temperature range, no fear of heat or cold. Heat dissipation method

Intelligent operation and maintenance

- UPS on-grid switching time is less than 10ms
- Intelligent terminal, grasp the running status of equipment in real time
- Support OTA remote upgrade and settings to reduce operation and maintenance costs

Items		GPEX-3K6L1	GPEX-5KL1	GPEX-6KL1
PV (DC Input)	Recommended max. PV input power	4800 W	8000 W	8000 W
	Max. input voltage (Voc)	600 V	600 V	600 V
	MPPT operating voltage range	120-550 V	120-550 V	120-550 V
	Number of MPPT	1	2	2
	Max. number of input strings per MPPT	1	1	1
	Max. input current per MPPT	13 A	13/13 A	13/13 A
	Max. short-circuit current per MPPT	20 A	20 A	20 A
On-grid (Bidirection)	Max output power	3600 W	5000 W	6000 W
	Rated output current	15.7 A	21.7 A	26.1 A
	Rated grid voltage	230 V(L,N,PE) 50/60Hz	230 V(L,N,PE) 50/60Hz	230 V(L,N,PE) 50/60Hz
	THDi	<3%	<3%	<3%
	Power factor	-0.8~+0.8	-0.8~+0.8	-0.8~+0.8
Battery Parameters (Bidirection)	Battery type	SLA & LiFePO4	SLA & LiFePO4	SLA & LiFePO4
	Battery voltage range	40-60 Vdc	40-60 Vdc	40-60 Vdc
	Rated Battery Voltage	48 Vdc	48 Vdc	48 Vdc
	Max. charge/discharge current	50 A	100 A	100 A
	BMS communication mode	485; CAN	485; CAN	485; CAN
Back-up Output (AC output)	Rated output power	3600 W	5000 W	6000 W
	Rated output current	15.7 A	21.7 A	26.1 A
	Rated output voltage	230 V(L,N,PE) 50/60Hz	230 V(L,N,PE) 50/60Hz	230 V(L,N,PE) 50/60Hz
	Surge power	3960 VA	5500 VA	6600 VA
	THDv (@ linear load)	<3%	<3%	<3%
	Switching time	<10 ms	<10 ms	<10 ms
Efficiency	Max. MPPT efficiency	99.9%	99.9%	99.9%
	Max. efficiency	97.2%	98%	98%
	European efficiency	96.4%	97.1%	97.10%
	Battery charging/discharging efficiency	94%	94%	94%
Protection	Protection	√ DC switch √ PV reverse connection protection √ Battery reverse connection protection		
		√ Output short-circuit protection √ Output overvoltage protection		
		√ Insulation impedance detection √ Residual current detection √ Anti-island protection		
	Surge protection	PV: Type III, AC: Type III		
	IP rating	IP 65		
General Parameters	Operating temperature range	-25~60°C	-25~60°C	-25~60°C
	Relative humidity range	0~95%	0~95%	0~95%
	Installation type	Wall mounted	Wall mounted	Wall mounted
	Cooling mode	Natural cooling	Natural cooling	Natural cooling
	Communication	Wi-Fi; R485; CAN; GPRS	Wi-Fi; R485; CAN; GPRS	Wi-Fi; R485; CAN; GPRS
	Display	LCD; APP	LCD; APP	LCD; APP
Mechanical Specifications	Inverter dimensions (L*W*H)	535*485*198.5 mm	535*485*198.5 mm	535*485*198.5 mm
	Net weight	27.5 kg	29 kg	29 kg
	Carton dimensions (L*W*H)	715*565*331 mm	715*565*331 mm	715*565*331 mm
	Gross weight	31 kg	34.5 kg	34.5 kg
	Warranty Period	5 years standard (10 Years Optional)		



Off-grid-single-phase 3.6-6KW three-phase 10-15KW



Product Highlights

Efficient power generation

- 120V-550V wide MPPT voltage range
- DC over-configuration 1.3 times
- Compatible with lead-acid and lithium batteries, 50A high current charging and discharging

user friendly

- $\leq 45^{\circ}\text{C}$ ambient temperature without derating, better environmental adaptability
- Intelligent air cooling, silent operation

Safe and reliable

- IP65 protection level, reliable quality
- Five-year standard warranty, more secure to use
- -25°C - 60°C operating temperature range, no fear of heat or cold. Heat dissipation method

Intelligent operation and maintenance

- UPS on-grid switching time is less than 10ms
- Intelligent terminal, grasp the running status of equipment in real time
- Support OTA remote upgrade and settings to reduce operation and maintenance costs

Items		GPEX-10KH3	GPEX-12KH3	GPEX-15KH3
PV (DC Input)	Recommended max. PV input power	22800 W	22800 W	22800 W
	Max. input voltage (Voc)	1000 V	1000 V	1000 V
	MPPT operating voltage range	200-850 V (@200V start up)	200-850 V (@200V start up)	200-850 V (@200V start up)
	Number of MPPT	2	2	2
	Max. number of input strings per MPPT	1+2	1+2	1+2
	Max. input current per MPPT	15 A + 30 A	15 A + 30 A	15 A + 30 A
	Max. short-circuit current per MPPT	19.5/40 A	19.5/40 A	19.5/40 A
On-grid (Bidirection)	Max output power	10000 W	12000 W	15000 W
	Rated output current	14.5 A	17.4 A	21.7 A
	Rated grid voltage	400 V (L1, L2, L3, N, PE) 50/60Hz	400 V (L1, L2, L3, N, PE) 50/60Hz	400 V (L1, L2, L3, N, PE) 50/60Hz
	THDi	<3%	<3%	<3%
	Power factor	-0.8~+0.8	-0.8~+0.8	-0.8~+0.8
Battery Parameters (Bidirection)	Battery type	SLA & LiFePO4	SLA & LiFePO4	SLA & LiFePO4
	Battery voltage range	160-800 Vdc	160-800 Vdc	160-800 Vdc
	Rated Battery Voltage	400 Vdc	400 Vdc	400 Vdc
	Max. charge/discharge current	50 A	50 A	50 A
	BMS communication mode	485; CAN	485; CAN	485; CAN
Back-up Output (AC output)	Rated output power	10000 W	12000 W	15000 W
	Rated output current	14.5 A	17.4 A	21.7 A
	Rated output voltage	400 V (L1, L2, L3, N, PE) 50/60Hz	400 V (L1, L2, L3, N, PE) 50/60Hz	400 V (L1, L2, L3, N, PE) 50/60Hz
	Surge power	11000 VA	13200 VA	16500 VA
	THDv (@ linear load)	<3%	<3%	<3%
	Switching time	<10 ms	<10 ms	<10 ms
Efficiency	Max. MPPT efficiency	99.9%	99.9%	99.9%
	Max. efficiency	98%	98%	98%
	European efficiency	97.5%	97.5%	97.5%
	Battery charging/discharging efficiency	97%	97%	97%
Protection	Protection	√ DC switch √ PV reverse connection protection √ Battery reverse connection protection		
		√ Output short-circuit protection √ Output overvoltage protection		
		√ Insulation impedance detection √ Residual current detection √ Anti-island protection		
	Surge protection	PV: Type III, AC: Type III		
	IP rating	IP 65		
General Parameters	Operating temperature range	-20~60°C	-20~60°C	-20~60°C
	Relative humidity range	10~90%	10~90%	10~90%
	Installation type	Wall mounted	Wall mounted	Wall mounted
	Cooling mode	Smart cooling	Smart cooling	Smart cooling
	Communication	Wi-Fi; R485; CAN; GPRS	Wi-Fi; R485; CAN; GPRS	Wi-Fi; R485; CAN; GPRS
	Display	LCD; APP	LCD; APP	LCD; APP
Mechanical Specifications	Inverter dimensions (L*W*H)	480*425*202 mm	480*425*202 mm	480*425*202 mm
	Net weight	25 kg	26 kg	27 kg
	Carton dimensions (L*W*H)	637*545*326 mm	637*545*326 mm	637*545*326 mm
	Gross weight	29 kg	30 kg	31 kg
	Warranty Period	5 years standard (10 Years Optional)		



Single-phase Hybrid Grid Energy Storage Inverter Series



Product Highlights

Full Power UPS Mode

Seamless transition to backup mode to assure an uninterrupted power supply.

High PV Input Power

50% higher than competitors.

Active Safety

AFCL active arcing protection.

Product Certification

EU (NCRfG)/EN50549/RD1669RD661/RD413/
UNE217001UNE217002/NTS/G99/NRS097

MODEL	TG-HYB-3600	TG-HYB-5000	TG-HYB-6000
Input (DC)			
Recommend max.PV input power	8700Wp	10000Wp	11000Wp
Max. PV input voltage		600V	
Min.operating PV voltage		40V	
Start-up input voltage		50V	
Rated PV input voltage		360V	
No.of independent MPPT inputs/ Strings		2/1	
Input/Output (AC)			
Max. AC input power from grid	8700VA	10000VA	11000VA
Rated AC output power	3680W	5000W	6000W
Max. AC output power	3680VA	5000VA	6000VA
Rated AC voltage	220V/230V/240V		
AC voltage range	154-276V		
Rated grid frequency	50Hz/60Hz		
Grid type	Single phase		
Efficiency			
Max. efficiency	97.5%	97.7%	
European efficiency	97.0%	97.3%	
Protection&Function			
Protection	DC reverse polarity/AC short circuit/Leakage/Battery input reverse polarity		
Surge Protection	DC type II / AC type II		
DC swith(PV)/ DC fuse(battery)	Yes		
Battcry input rovarso polarity protection	Yes		
Battery Data			
Battcry typc	Li-ion battery		
Battery voltage	40-59V		
Max. charge/discharge current	100A		
Max. charge/discharge power	5000W		
General Data			
Product Dimension W*H*D(mm)	600*365*180		
Packing Dimension W*D*H(mm)	677*546*324		
Net weight(kg)	<27 kgs		
Gross weight(kg)	<30 kgs		
IP Class	IP65		
Operating ambient temperature range	-25℃ ~ 60℃, 0~100%		
Max. oprating altitude	4000m		
Backup Data (On Grid Model)			
Rated output power for backup load	6000W		
Rated output curront for backup load	27A		
Backup Data (Off Grid Model)			
Rated voltage	220V/230V/240V(±2%)		
Frequency range	50Hz/60Hz(±0.5%)		
Rated output power	3680W/3680VA	5000W/5000VA	6000W/6000VA
Peak output power	8400 VA,10s		
Certificates			
	IEC62109, IEC61000		



Three-phase Hybrid Grid Energy Storage Inverter Series



Product Highlights

/ Flexibe Application

150-600V wide battery voltage range.

/ Active Safety

AFCL active arcing protection.

/ High PV Modules

DC 15A string, matched with ultrapower solar panel.

/ Product Certification

EN 50549/RfG/NCRfgPTPiREE/VDE4105

MODEL	TG-HYB-5000-3P	TG-HYB-6000-3P	T5-HYB-8000-3P	TG-HYB-10000-3P
Input (DC)				
Recommend max.PV input power	7500W	9000W	12000W	15000W
Max. PV input voltage	1000V			
Start-up input voltage	180V			
Rated PV input voltage	600V			
MPPT voltage range	150-950V			200-950V
No.of independent MPPT inputs	2			
Default No. of PV strings per MPPT	1/1			1/2
Max. input current	32A(16A+16A)			48A(16A+32A)
Max. input short-circuit current	40A(20A+20A)			60A(20A+40A)
Input/Output(AC)				
Max. AC input power from grid	12500 VA	15000 VA	18600 VA	20500 VA
Rated AC output power	5000W	6000W	8000W	10000W
Max. AC output power	5500W	6600W	8800W	10000W
Rated AC output current	7.6A	9.1A	12.1A	15.2A
Max. AC output current	8.4A	10.0A	13.3A	16.7A
AC voltage range	270-480V			
Grid frequency range	45-55Hz			
Harmonic(THD) at rated burden	< 3%			
Power factor at rated power	> 0.99			
Adjustable power factor	0.8 leading...0.8 lagging...			
Efficiency				
Max. efficiency	98.00%	98.20%	98.40%	98.40%
European efficiency	97.20%	97.50%	97.90%	97.90%
Protection & Function				
Protection	LVRT/ DC reverse polarity/AC short circuit/Leakage current/Battery input reverse polarity			
Surge protection	DC type II / AC type II			
DC swith [PV/DCfuse(battery)]	Yes			
Battery Data				
Battery type	Li-ion battery			
Battery voltage	150-600V			
Max. charge/discharge current	30A			
Max. charge power	7500W	9000W	10600W	10600W
Max. discharge power	6000W	7200W	10600W	10600W
General Data				
Product dimension W*D*H(mm)	555*450*186			
Packing dimension W*D*H(mm)	677*546*324			
Net weight(kg)	<32			
Gross weight(kg)	<36			
Degree of protection	IP65			
Operating ambient temperature range	-25°C ~ 60°C, 0~100%			
Max.operating altitude	4000m			
Display	LED indicator			
Communication	RS485/CAN/WLAN			
Backup Data				
Rated voltage/ Frequency	3/N/PE 380V/400V/415V(±2%), 50Hz/60Hz(±0.5%)			
Total output THDV for liner load	≤2%			
Switch time to emergency model	≤10 ms			
Rated output power	5000W/5000VA	6000W/6000VA	8000W/8000VA	10000W/10000VA
Peak output power	6000VA 5min/ 10000 VA,10s	7200VA 5min/ 10000 VA,10s	9600VA 5min	12000VA 5min
Certificates				
	IEC62109, IEC61000			



Three-phase Hybrid Grid Energy Storage Inverter Series

Product Highlights

Outstanding Performance

- Max.50A battery charging and discharging design.
- 200% DC input overmatching.
- Three-phase asymmetrical output under 100% unbalanced loads.

Flexible Application

- Support multi-parallel connection
- Support single-phase power output mode
- 100~700V wide battery voltage range

Superb Off-Grid Load

- Whole-home backup
- Support half-wave load and shock load
- <10ms off-grid switching

Full Functiona

- <37kG ,lighter installation
- Die-casting design, fanless design , low noise
- Support AFCI
- Remote troubleshooting and program upgrading

MODEL	TG-HYB-15000-3P	TG-HYB-20000-3P	TG-HYB-22000-3P	TG-HYB-25000-3P	TG-HYB-30000-3P
INPUT(PV)					
Recommend Max.PV input power	30000Wp	40000Wp	44000Wp	50000Wp	60000Wp
Max.PV input voltage	1000V				
Min. PV/Startup input voltage	150V/180V				
Rated PV input voltage	650V				
MPPT voltage range	150V-950V				
No.of independent MPPT inputs	3				
No.of PV strings per MPPT	2/1/1	2/2/1	2/2/1	2/2/1	2/2/2
Max.PV input current	64A(32A+16A+16A)	80A(32A+32A+16A)	80A(32A+32A+16A)	80A(32A+32A+16A)	96A(32A+32A+32A)
Max.DC short-circuit current	80A(40A+20A+20A)	100A(40A+40A+20A)	100A(40A+40A+20A)	100A(40A+40A+20A)	120A(40A+40A+40A)
BATTERY					
Battery type	Li-ion battery				
Battery voltage	100V-800V				
Max.Charge/Discharge current	50A/50A*			60A/60A*	
Max.Charge/Discharge power	30000W/15000W	30000W/20000W	30000W/22000W	30000W/25000W	30000W/30000W
INPUT/OUTPUT(AC)					
Max.AC input power	15000W	20000W	22000W	25000W	30000W
Max.AC power from grid	43000W/43000VA	55000W/55000VA	30000W/30000VA	55000W/55000VA	55000W/55000VA
Rated AC output power	15000VA	20000VA	22000VA	25000VA	30000VA
Max.AC output apparent power	15000VA	20000VA	22000VA	25000VA	30000VA
Rated AC output apparent power	15000VA	20000VA	22000VA	25000VA	30000VA
Rated AC ouput current	21.8A	29A	31.9A	36.3A	43.5A
Max.AC output current	22.8A	30.3A	33.4A	37.9A	45.5A
Rated AC voltage	3/N/PE,220/380V;230/400V;240/415 V				
AC voltage range	270V-480V				
Rated grid frequency	50Hz/60Hz				
Grid frequency range	45Hz-55Hz/55Hz-65Hz				
Harmonic(THD)	< 3% (of rated power)				
Power factor at Rated power/ Adjustable power factor	> 0.99 / 0.8 leadingto 0.8 lagging				
Feed-in phases/connection phases	3/3-N-PE				
BACKUP DATA					
Rated voltage	3/3-N-PE, 220V; 230V; 240V				
Frequency range	50Hz/60HZ				
Total hamonic factor output voltage(Linear load)	2%				
Back-up switching time	< 10ms				
Rated output power	15000VA	20000VA	22000VA	25000VA	30000VA
Peak output power	25500W/25500VA 10S	32000W/32000VA 10S	37000W/37000VA 10S	36500W/36500VA 10S	45000W/45000VA 10S
Rated output power for backup loadduring on grid mode	30000W/30000VA(25℃)		40000W/40000VA(25℃)		
EFFICIENCY					
Max.efficiency/European efficiency	98.1%/97.6%		98.2%/97.8%		
PROTECTION & FUNCTION					
Grid monitoring	Yes				
DC reverse polarity protection	Yes				
AC short-circuit protection	Yes				
Leakage current protection	Yes				
DC switch (solar)	Yes				
Surge Protection	Typell, DC and AC				
PID recovery function	Yes				
On-grid parallel	Master-slave mode				
Battery input reverse polarity protection	Yes				
GENERAL DATA					
Topology(solar/battery)	Transformerless / Transformerless				
Degree of protection	IP65				
Dimensions(W*H*D)	615×465×245 mm				
Weight	34kg	36kg	36kg	36kg	37kg
Mounting method	Wall-mounting bracket				
Operating ambient temperature range	-25℃ ~ 60℃ (Derating above 45℃)				
Allowable relative humidity range (Non-condensing)	0%-100%				
Cooling method	Natural convection		Fan cooling		
Max.operating altitude	2000m				
Noise(Typical)	35dB (A)		50dB (A)		
Display	LED				
Communication	2 X RS485, WLAN, 2 x CAN,4 X DI, 2 X DO, DRMO				
DC connection type	MC4(PV, Max.6mm²),Plug and play connector (battery, Max.20mm²)				
AC connection type	OT Terminalss (grid/backup, Max.20mm²)				

*Depending on the connected battery

**Can be reached only ifpV and battery power is sufficient



Vertical All-in-one ESS Series



Product Highlights

- | All-in-one design
- | Long-term Cost-effective design
- | Suitable for PV only, Grid only, PV+Grid, UPS
- | High capacity and Long-life LiFePO4 battery
- | High power PV input
- | Simplified installation

MODEL	TP- PA3K8LV	TP- PA6K16LV
PV Specifications		
Max. PV input power	5000W	9000W
Nominal Dc voltage/ Voc	360Vdc/500Voc	360Vdc/500Voc
Start-up/ Min. operation voltage	60Vdc/40Vdc	120Vdc/60Vdc
No. of MPPTs/ Strings	1/1	1/1
Max. PV input current	18A	28A
Input/ Output (AC)		
Max. AC input power from grid	3600VA	5500VA
Rated/ Max. AC output powerRated	3600W/3600VA	5500W/5500VA
AC output current (at 230V)	15.1A	23.1A
Max. AC output current	16.3A	25.3A
Rated AC voltage	230V	230V
AC voltage range	200V~240V	200V~240V
Rated grid frequency	50Hz	50Hz
Grid frequency range	49~51Hz	49~51Hz
Harmonic(THD)	< 3%	< 3%
Power factor at rated power	> 0.92	> 0.94
Adjustable power factor	0.8 leading...0.8 lagging...	0.8 leading...0.8 lagging...
Grid type	Single phase	Single phase
Battery Data		
Rate voltage(Vdc)	25.6	51.2
Cell combination	8S1P	16S1P
Rate capacity(AH)	314	314
Energy storage(KWH)	8.03	16.07
Cycle life	25±2°C, 0.5C/0.5C, EOL70% ≥6000	
Charge voltage(Vdc)	28	56
Max. charge/discharge current(A)	100	100
Dischargec cut-off voltage(VDC)	24	48
Charge cut-off voltage(VDC)	29.2	58.4
Enviornment		
Charge temperature	0°C ~ 50 °C@60 ± 25% Relative Humidity	
Discharge temperature	-20 °C ~ 50 °C@60 ± 25% Relative Humidity	
Storage temperature	-20 °C ~ 50 °C@60 ± 25% Relative Humidity	
Mechanical		
IP class	IP 21	
Material system	LiFePO4	
Case material	Metal	
Case type	All in One Stack	
Product dimension L*W*H(mm)	480*240*835	670*240*935
Package dimension L*W*H(mm)	890*550*385	980*820*435
Net weight(kg)	85	130
Gross weight(kg)	95.7	155
Communication		
Protocol(Optional)	RS485/RS232/WIFI	
Certificates		
	UN38.3, MSDS, IEC62619	



Single Phase ESS Series



Product Highlights

/ Plug & Play

Plug & Play stackable design,
10 minutes fast commissioning.

/ Active Safety

AFCI active arcing protection.

/ High PV acceptance

40~600Vdc, 2X of rated power input.

/ More Options

3*5.12kWH battery module + Optional battery stack.

MODEL	TG-PA6k5LV		TG-PA6k10LV	TG-PA6k15LV
PV Specifications				
Max. PV input power	11000W			
Nominal DC voltage/ Voc	360Vdc/600Voc			
Start-up/ Min. operation voltage	50Vdc/40Vdc			
No. of MPPTs/ Strings	2/1			
Max. PV input/ Short circuit current	16A/ 20A			
Input/ Output (AC)				
Max. AC input power from grid	11000VA			
Rated/ Max. AC output power	6000W/6000VA			
Rated AC output current (at 230V)	26.1A			
Max. AC output current	27.3A			
Rated AC voltage	220V/230V/240V			
AC voltage range	154V~276V			
Rated grid frequency	50Hz/60Hz			
Grid frequency range	45~55Hz/ 55~65Hz			
Harmonic (THD)	< 3%			
Power factor at rated power	> 0.99			
Adjustable power factor	0.8leading...0.8lagging...			
Grid type	Single phase			
Rated output power for backup load	6000W			
Frequency range in off grid mode	50Hz/60Hz(±0.5%)			
Battery Data				
Rate voltage(Vdc)	51.2			
Cell combination	16S1P*1	16S1P*2	16S1P*3	
Rate capacity(AH)	100	200	300	
Energy storage(KWH)	5.12	10.24	15.36	
Cycle life	25±2℃, 0.5C/0.5C, EOL70%≥6000			
Charge voltage	57.6V			
Max. charge/discharge current(A)	100			
Discharge cut-off voltage(VDC)	43.2			
Charge cut-off voltage(VDC)	58.4			
Enviornment				
Charge temperature	0℃ ~ 50℃@60 ± 25% Relative Humidity			
Discharge temperature	-20℃ ~ 50℃@60 ± 25% Relative Humidity			
Storage temperature	-20℃ ~ 50℃@60 ± 25% Relative Humidity			
Mechanical				
IP class	IP65			
Material system	LiFePO4			
Case material	Metal			
Case typc	All in One Stack			
Product dimension L*W*H(mm)	640*205*1008	640*205*1350	640*205*1692	
Package dimension L*W*H(mm)	760*725*345+760*335*450*1	760*725*345+760*335*450*2	760*725*345+760*335*450*3	
Net weight(kg)	25+46*1	25+46*2	25+85*3	
Gross weight(kg)	30+51*1	30+51*2	89+92*3	
Communication				
Protocol(Optional)	RS485/RS232/WLAN Optional			
Certificates				
	EN, IEC, NRS, G99, UN38.3, MSDS, IEC62619, CE			



Single Phase ESS Series



Product Highlights

/ Flexible Investment

Plug & Play design, fast commissioning.

/ Active Safety

AFCI active arcing protection.

/ High PV acceptance

40~600Vdc, 2X of rated power input.

/ More Options

2*10.24kWh battery module + Optional battery stack.

MODEL	TG-PA6k10LV		TG-PA6k20LV	
PV Specifications				
Max. PV input power			11000W	
Nominal Dc voltage/ Voc			360Vdc/600Voc	
Start-up/ Min. operation voltage			50Vdc/40Vdc	
No. of MPPTs/ Strings			2/1	
Max. PV input/ Short circuit current			16A/ 20A	
Input/ Output (AC)				
Max. AC input power from grid			11000VA	
Rated/ Max. AC output powerRated			6000W/6000VA	
AC output current (at 230V)			26.1A	
Max. AC output current			27.3A	
Rated AC voltage			220V/230V/240V	
AC voltage range			154V~276V	
Rated grid frequency			50Hz/60Hz	
Grid frequency range			45~55Hz/ 55~65Hz	
Harmonic(THD)			< 3%	
Power factor at rated power			> 0.99	
Adjustable power factor			0.8 leading...0.8 lagging...	
Grid type			Single phase	
Rated output power for backup load			5000W	
Froquency rango in off grid mode			50Hz/60Hz(±0.5%)	
Battery Data				
Rate voltage(Vdc)			51.2	
Cell combination	16S2P*1		16S2P*2	
Rate capacity(AH)	200		400	
Energy storage(KWH)	10.24		20.48	
Cycle life			25±2°C, 0.5C/0.5C, EOL70%≥6000	
Charge voltage			57.6V	
Max. charge/discharge current(A)			100	
Dischargc cut-off voltage(VDC)			43.2	
Charge cut-off voltage(VDC)			58.4	
Enviornment				
Charge temperature			0°C ~ 50°C@60 ± 25% Relative Humidity	
Discharge temperature			-20°C ~ 50°C@60 ± 25% Relative Humidity	
Storage temperature			-20°C ~ 50°C@60 ± 25% Relative Humidity	
Mechanical				
IP class			IP65	
Material system			LiFePO4	
Case material			Metal	
Case type			All in One Stack	
Product dimension L*W*H(mm)	620*212*1302		620*212*1900	
Package dimension L*W*H(mm)	760*725*345+735*715*340*1		760*725*345+735*715*340*2	
Net weight(kg)	25+85*1		25+85*2	
Gross weight(kg)	30+92*1		30+92*2	
Communication				
Protocol(Optional)			RS485/RS232/WLAN Optional	
Certificates				
			EN, IEC, NRS, G99, UN38.3, MSDS, IEC62619, CE, UL1973	



Off-grid ESS Series

Product Highlights

/ Segment Load Management

Two level output management, energy keeps more for important load.

/ Fast Charge

Max 120A charge current.

/ Wide PV Range

60-500Vdc, dual booster design.

/ PF 1.0

KVA=KW More load carrying.

MODEL	TG-PA6kA5-LV	TG-PA6kA10-LV	TG-PA6kA15-LV	TG-PA6kA20-LV
PHASE	1-Phase In /1-Phase Out			
Maximum PV Input Power	6500W			
Maximum Main Output Power	6200VA/6200W			
Maximum Second Output Power	6200VA/6200W			
Maximum Total Output Power	6200VA/6200W			
AC INPUT				
Nominal Voltage	230VAC			
Acceptable Voltage Range	170-280VAC; 90-280VAC			
Frequency	50/60 Hz (Auto sensing)			
AC OUTPUT				
Nominal Voltage	220/230VAC+5%			
Surge Power	12400VA			
Frequency	50/60 Hz			
Waveform	Pure Sine wave			
Dual Outputs	Yes			
Transfer Time	10ms (For personal Computer); 20ms (For Home Appliances)			
Peak Efficiency	94%			
Overload Protection	5s@>=140%load; 10s@100%~140% load			
Admissible Power Factor	0.6~1 (inductive or capacitive)			
SOLAR CHARGER & AC CHARGER				
Solar Charger TYPE	MPPT			
Max.PV Array Power	6500W			
Max. PV Array Open Circuit Voltage	500VDC			
PV Array MPPT Voltage Range	60VDC~500VDC			
Max. Solar Input Current	1/27A			
Max. Solar Charge Current	120A			
Max. AC Charge Current	80A			
Max. Charge Current	120A			
Battery Data				
Rate voltage (Vdc)	51.2			
Cell combination	16S1P*1	16S1P*2	16S1P*3	16S1P*4
Rate capacity (AH)	100	200	300	400
Energy storage (KWH)	5.12	10.24	15.36	20.48
Discharge cut-off voltage (VDC)	43.2			
Charge cut-off voltage (VDC)	58.4			



Three Phase ESS Series



Product Highlights

/ Plug & Play

Plug & Play stackable design,
10 minutes fast commissioning.

/ Active Safety

AFCL active arcing protection.

/ Efficiency

Up to 98.4% European 97.9%.

/ More Options

2*9.6 kWh battery module
+ Optional battery stack.

MODEL	TG-PA10k10HV		TG-PA10k20HV	
PV Specifications				
Max. PV input power			15000W	
Nominal DC voltage/ Voc			600Voc	
Start-up/ Min.operation voltage			180Vdc	
MPPT voltage range			150-950Vdc	
No. of MPPTs/ Strings			2(1/2)	
Max. PV input current			48A (16A+32A)	
Input/ Output(AC)				
Max. AC input power from grid			20500VA	
Rated AC output power			10000W	
Max. AC output apparent power			11000VA	
Rated/ Max. AC output current			15.2A/16.7A	
Rated AC voltage	3/N/PE 220V/380V		230V/400V	240V/415V
AC voltage range			270-480V	
Rated grid frequency			50Hz/60Hz	
Grid frequency range			45~55Hz/55~65Hz	
Harmonic (THD)(of rated power)			< 3%	
Power factor at Rated power			> 0.99	
Adjustable power factor			0.8 leading...0.8 lagging...	
AC type			Three phase	
Battery Data				
Rate voltage(Vdc)	192		384	
Cell combination	60S1P*1		60S1P*2	
Rate capacity(AH)			50	
Energy storage(KWH)	9.6		19.2	
Cycle life			25±2°C, 0.5C/0.5C, EOL70%≥6000	
Charge voltage	219		438	
Max. charge/discharge current(A)			50	
Discharge cut-off voltage(VDC)	168		336	
Charge cut-off voltage(VDC)	210		420	
Enviornment				
Charge temperature			0°C ~ 50°C@60 ± 25% Relative Humidity	
Discharge temperature			-20°C ~ 50°C@60 ± 25% Relative Humidity	
Storage temperature			-20°C ~ 50°C@60 ± 25% Relative Humidity	
Mechanical				
IP class			IP65	
Material system			LiFePO4	
Case material			Meta	
Case type			All in One Stack	
Product dimension L*W*H(mm)			Inverter high-voltage box: 800*210*775/Battery box: 800*188*512(single)	
Package dimension L*W*H(mm)	Inverter high-voltage box: 1115*300*880 Battery box: 920*310*735(single) (Packaging size Including accessories)		Inverter high-voltage box: 1115*300*880 Battery box: 920*310*735(single)*2 (Packaging size Including accessories)	
Net weight(kg)	Inverter high-voltage box: 65kg Battery box: 95kg Accessory box: 9kg		Inverter high-voltage box: 65kg Battery box: 95kg*2 Accessory box: 9kg	
Gross weight(kg)			Inverter high-voltage box: 76kg (Including accessories) /Battery box: 105kg	
Communication				
Protocol(Optional)			RS485/RS232/WLAN Optional	
Certificates				
			EN, IEC, NRS, G99, UN38.3, MSDS, CE	



3U High Voltage Rack Battery

CE MSDS



Product Highlights

Convenient

Quick installation, standard of 19-inch embedded designed module is comfortable for installation and maintenance.

Safe and Reliable

Cathode material is made from LiFePO₄ with safety performance and long cycle life, The module has less self-discharge, up to 6 months without charging it on shelf, no memory effect, excellent performance of shallow charge and discharge.

Intelligent BMS

It has protection functions including over-discharge, over-charge, over-current and over-high or low temperature. The system can automatically manage charge and discharge state and balance current and voltage of each cell.

Eco-Friendly

The whole module is non-toxic, non-polluting and environmentally friendly.

Flexible Configuration

Multiple battery modules can be in parallel for expanding capacity and power. Support USB upgrade, wifi upgrade (optional), remote upgrade (Compatible with Deye inverter).

Wide Temperature

Working temperature range is from -20°C to 55°C, with excellent discharge performance and cycle life.

MODEL		TG-HVC204-20	TG-HVC256-25	TG-HVC307-30	TG-HVC358-35	TG-HVC409-40	TG-HVC460-46	TG-HVC512-51
Cell chemistry		LiFePO4						
Module energy(kWh)		5.12						
Module nominal voltage(V)		51.2						
Module capacity(Ah)		100						
Cell model/ Configuration		3.2V100Ah /64S1P	3.2V100Ah /80S1P	3.2V100Ah /96S1P	3.2V100Ah /112S1P	3.2V100Ah /128S1P	3.2V100Ah /144S1P	3.2V100Ah /160S1P
System nominal voltage(V)		204.8	256	307.2	358.4	409.6	460.8	512
System operating voltage(V)		185.6~227.2	232~284	278.4~340.8	324.8~397.6	371.2~454.4	417.6~511.2	464~568
System energy(kWh)		20.48	25.6	30.72	35.84	40.96	46.08	51.2
Charge/ Discharge Current(A)	Rcommend	50						
	Max	100						
Working temperaturc		Charge: 0°C ~ 50°C; DisCharge: -20°C ~ 55°C						
Communication port		CAN2.0/RS485/WIFI						
Humidity		5~85%RH Humidity						
Altitudc		≤2000 m						
IP rating of enclosure		IP20						
Dimension W*D*H(mm)		538*492*791	538*492*941	538*492*1091	538*492*1241	538*492*1391	538*492*1541	538*492*1691
Weight approximate(kg)		195	240	285	330	375	420	465
Installation locationStorage		Rack Mounting						
Storage temperature(°C)		0°C ~ 35°C						
Recommend depth of discharge		90%						
Cycle life		25±2°C, 0.5C/0.5C, EOL70%≥6000						
Certificates		UN38.3, MSDS, CE-EMC						





5U High Voltage Rack Battery

CE MSDS



Product Highlights

/ Safe and Reliable

Cathode material is made from LiFePO₄ with safety performance and long cycle life. The module has less self-discharge, up to 6 months without charging it on shelf, no memory effect, excellent performance of shallow charge and discharge.

/ Intelligent BMS

It has protection functions including over-discharge, over-charge, over-current and over-high or low temperature. The system can automatically manage charge and discharge state and balance current and voltage of each cell.

/ Eco-Friendly

The whole module is non-toxic, non-polluting and environmentally friendly.

/ Flexible Configuration

Multiple battery modules can be in parallel for expanding capacity and power. Support USB upgrade, wifi upgrade (optional), remote upgrade (Compatible with Deye inverter).

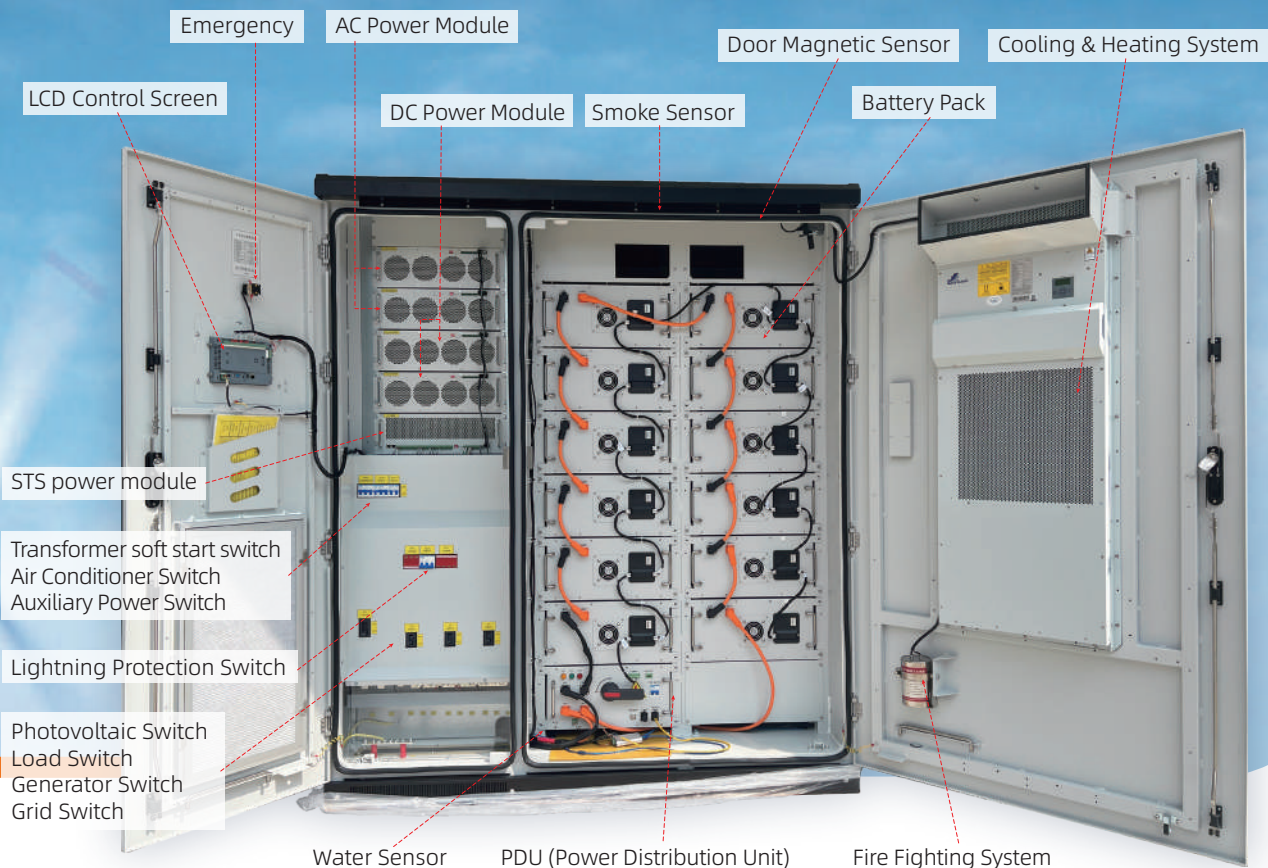
/ Wide Temperature

Working temperature range is from -20°C to 55°C, with excellent discharge performance and cycle life.

en.topakpower.com

MODEL	TG-HVC384-107F	TG-HVC512-143F	TG-HVC640-179F	TG-HVC704-197F	TG-HVC768-215F
Nominal voltage	384	512	640	704	768
Cell model/ Configuration	3.2V280Ah(EVE) /120S1P	3.2V280Ah(EVE) /160S1P	3.2V280Ah(EVE) /200S1P	3.2V280Ah(EVE) /220S1P	3.2V280Ah(EVE) /240S1P
Capacity(Ah)	280				
Rated energy(kwh)	107.52	143.36	179.2	197.12	215.04
Weight(Approx)(kg)	820	1080	1350	1500	1650
Dimension W*D*H(mm)	1992*950*550	1475*950*1100	1732*950*1100	1732*950*1100	1992*950*1100
Voltage range(Vdc)	348~426	464~568	580~710	638~781	696~852
Max.charge/discharge current(A)	140				
Scalability	up to 10 paralle				
Communieation	RS485 (B) -BAT/RS485 (A) -PC/Canbus-Inverter				
Cycle life	25±2°C, 0.5C/0.5C, EOL70%≥6000				
Design life	≥15年(25°C)				
Protection	BMS,Breaker				
Operation temperature(°C)	Charge: -10°C~50°C; Discharge: -20°C~50°C				
Altitude(m)	≤2000				
Humidity	<95%(Non-condensing)				
Certificates	UN38.3, MSDS, CE-EMC				





215Kwh BESS System

CE MSDS



Product Highlights

High Efficiency

- Transformer-less design, higher system efficiency.
- Wide AC Grid voltage range.
- Smart Air cooling, energy saving.
- Single battery string. No circular current. Saving battery capacity loss.

Flexible Application

- Modular Design, flexible configuration, small footprint.
- Power module supports "N+1" redundancy.
- All in One design. Easy Installation & maintenance.

Safety & Reliability

- Full function of heat management, fault detection and protection.
- Inbuilt BMS, PCS, MPPT and EMS. Multiple levels of software & Hardware protection.
- Two level fire extinguisher system.

Full Function

- Fast reaction of Active/Reactive power adjustment.
- STS Inbuilt Supporting On grid/ off grid transfer without interrupted.
- Standard with EMS function. Peak saving, virtual enlargement, EPS, New Energy power absorber.

MODEL	TG-eBank-215FS2
Battery Specification	
Battery type	LFP
Cell capacity	3.2V/280Ah
PACK config	1P20S
PACK Qty	12
Rated capacity	215kWh
Rated voltage	768V
Voltage range	636 ~ 864Vdc
Charge/Discharge rate	0.5C Rated
DOD	95%
Cooling system	Air Cooling
Fire fighting system	Two Level Protection, Standard: Aerosol+HFC-227ea, Optional: PERFLUORO
AC Specifications	
Rated voltage	400Vac
Voltage range	230 / 400Vac
Frequency range	50/60±2.5Hz (50/60Hz self-adaption)
Grid system	3P+N+PE
Isolation transformer	No
Rated power	100kW
Peak power	110kW
Rated current	144A
Over load capacity	≤110% Continues Running ≤120%1Min
Power factor	-0.99 ~ +0.99
On grid THDI/THDV(Off grid)	<3%, Full load
STS module power capacity	200kW
Transfer time(On-off Grid)	≤20ms
PV Specification	
Max. PV input voltage	1000V
Max. PV input power	110kW
No. of MPPT/String per MPPT	2/1
MPPT voltage range	350 ~ 1000V
MPPT current	200A (100A/100A)
MPPT efficiency	99%
System Specification	
Temperature range	-25°C ~ 65°C, >45°C power derating
Storage temperature	-40 ~ 75°C
Noise	<70 dB
Dimension W*D*H(mm)	1800*1250*2000
Weight(kg)	2600
IP class	IP54
Cooling type	Industry level Air Conditional
EMS	Manual Mode, Peak saving, virtual enlargement, New Energy power absorption, Anti-flow mode. Support remote management and control
Communication protocol	Modbus RTU, Modbus TCP, IEC104, MQTT, Etc.
Communication port	RS485/RJ45/4G/WIFI/DIDO
Certificates	
	UN38.3, MSDS, CE-EMC, IEC62619



BESS-100KW/215KWh



Product Highlights

High Efficiency

- Higher system efficiency.
- Wide AC Grid voltage range.
- Single battery string. No circular current. Saving battery capacity loss.

Flexible Application

- Modular Design, flexible configuration, small footprint.
- Power module supports "N+1" redundancy.
- All in One design. Easy Installation & maintenance.

Less Heat

- Two Smart Air cooling.
- Dual air conditioning cooling system for battery compartment and equipment compartment, less heat.

Safety & Reliability

- Full function of heat management, fault detection and protection.
- Inbuilt BMS, PCS, MPPT and EMS. Multiple levels of software & Hardware protection.
- Two level fire extinguisher system.

Full Functiona

- Fast reaction of Active/Reactive power adjustment.
- STS Inbuilt Supporting On grid / offgrid transfer without interrupted.
- Standard with EMS function. Peak saving, virtual enlargement, EPS, New Energy power absorptior.

MODEL	TP-BESS-100KW/215KWh-A-01
Battery Specification	
Battery type	LFP
Cell capacity	3.2V/280Ah
PACK config	1P20S
PACK Qty	12
Rated capacity	215KWh
Rated voltage	768V
Voltage range	600 - 876Vdc
Charge/Discharge rate	0.5C Rated
DOD	95%
Cooling system	Air Cooling
Fire fighting system	Two Level Protection, Standard: Aerosol+HFC-227ea, Optional: PERFLUORO
AC Specifications	
Rated voltage	400Vac
Voltage range	230 / 400Vac
Frequency range	50/60+2.5Hz (50/60Hz self-adaption)
Grid system	3P+N+PE
Isolation transformer	400Vac/100KVA
Rated power	100KW
Peak power	110KW
Rated current	144A
Over load capacity	≤110% Continues Running≤120%1Min
Power factor	-0.99 ~ +0.99
On grid THDI/THDV(Off grid)	<3%, Full load
STS module power capacity	150KW
Transfer time(On-off Grid)	≤20ms
PV Specification	
Max. PV input voltage	1000V
Max. PV input power	110KW
No. of MPPT/String per MPPT	2/1
MPPT voltage range	345 - 900V
MPPT current	200A (100A/100A)
MPPT efficiency	98.8%
System Specification	
Temperature range	-25°C ~ 65 °C, >45°C power derating
Storage temperature	-40 ~ 75 °C
Noice	<78 dB
Dimension W*D*H(mm)	2100*1250*2300
Weight(kg)	3650
IP class	IP54
Cooling type	Industry level Air Conditional*2PCS
EMS	Manual Mode, Peak saving, virtual enlargement, New Energy power absorption, Anti-flow mode. Support remcte management and control
Communication protocol	Modbus RTU, ModbUs TCP, IEC104, MQTT, Etc.
Communication port	RS485/RJ45/4G/WIFI/DIDO
Certificates	
	UN38.3, MSDS, CE-EMC, IEC62619



Industrial UPS

TG Series Digital UPS(10kVA-120kVA)3:3

Product Highlights

- DSP full digital control, stronger performance.
- Advanced battery management technology, charge management technology designed according to the charge and discharge characteristics of the battery, effectively prolong the service life of the battery.
- Equipped with combined utility power and battery power supply technology, support utility power and battery power distribution ratio setting, suitable for weak utility grid and large load working environment.
- Strong load adaptability, can carry motor and impact loads.
- Support 100% unbalanced load, single-phase full load, any two-phase full load, can operate normally.
- With self-detection function, to ensure initial start-up safe.
- With fan failure alarm, promptly notify users to replace it, to ensure reliable operation of the whole machine.
- Unique structure design, full front maintenance, reliable wall installation for some models, easy maintenance.
- Support ECO mode, efficiency up to 98% in ECO mode.
- Support parallel function.
- 7-inch LCD capacitive touch screen, providing users with intuitive and convenient operating experience.
- Possess complete fault record, operation record and status record function to facilitate maintenance and repair.
- Support RS232, RS485, CAN, USB, dry contact, SNMP card, WiFi/GPRS card, etc, to meet various needs.

Model	TG-UPS3310	TG-UPS3315	TG-UPS3320	TG-UPS3330	TG-UPS3340	TG-UPS3360	TG-UPS3380	TG-UPS33100	TG-UPS33120
Rated Capacity	10kVA/ 10KW	15kVA/ 15KW	20kVA/ 20KW	30kVA/ 30KW	40kVA/ 40KW	60kVA/ 60KW	80kVA/ 80KW	100kVA/ 100KW	120kVA/ 120KW
Size(W×D×H)mm	400×800×850			400×800×1100		600×800×1200		700×800×1800	
Net weight(KG)	150	160	165	200	240	440	560	600	650
Input Index									
Input phase number	3 phases 5 wires (3Φ+N+PE)								
Input rated voltage	380VAC/400VAC/415VAC (Default 380VAC)								
Variable input voltage range	304V-456V								
Input frequency variation range	40Hz-70Hz								
Input power factor	>0.95								
Input current limit	1.25 times the rated current (0.1-1.25 can be set)								
Rectifier delay start range	Default 10s (1-300 can be set)								
Bypass input voltage range	Upper limit 10%,15%,20%,25% can be set,Default 20%; Lower limit 10%,20%,30%,40%,50%,60% can be set,Default 20%								
Battery voltage	Default 360VDC (Can be set 336VDC、348VDC、372VDC、384VDC)								
Number of batteries	Default 12V 30 section (28、29、31、32 sections can be set)								
Battery charging current	Charge rate × battery capacity × battery pack number (charge rate, battery capacity, battery pack number can be set)								
ECO Mode									
Bypass voltage range	Upper limit 5%,10%,15% can be set,Default 5%; Lower limit 5%,10%,15% can be set,Default 5%								
Bypass frequency range	±1Hz,±2Hz,±3Hz can be set,Default ±2Hz								
Output Index									
Output phase number	3 phases 5 wires (3Φ+N+PE)								
Rated output voltage	380VAC/400VAC/415VAC (Default 380VAC)								
Output voltage regulation accuracy	±1%								
Output voltage fine adjustment	0V(±1-±5V can be set)								
Output frequency accuracy	Mains mode: tracking bypass input in synchronization state; Battery mode:50Hz/60Hz±0.1%								
Output power factor	1.0								
Output waveform distortion	≤2%(Resistive load); <5%(non-linear load)								
Waveform	Pure sine wave								
Output current crest factor	3:1								
Inverter overload capacity	When the load is < 105%, it can work for a long time; when 105% < load < 110%, it will switch to bypass output after 60 minutes; when 110% < load < 125%, switch to bypass output after 10 minutes; when 125% < load < 150%, switch to bypass output after 1 minute; when load > 150%, switch to bypass output after 200 milliseconds;								
System Indicators									
System efficiency	Online mode:≥93%,ECO mode:≥98%								
Switching time	0ms								
Number of parallel	≤8 sets								
Protective function	Output short circuit protection, output overload protection, over temperature protection, battery low voltage protection output over and under voltage protection, fan failure protection,etc.								
Communication Interface	Standard configuration: USB, CAN, EPO, RS232, RS485, dry contact; Optional configuration: SNMP card, temperature compensation accessories								
Display	7 inch LCD touch screen								
Working Environment									
Operating temperature	0-40℃								
Storage temperature	-25℃-55℃ (exclude battery)								
Relative humidity	0%-95% (No condensation)								
Altitude	Altitudes≤1000M, Mexceed 1000M, Power with increase of 100M it will reduce 1%								
Degree otprotection	IP30								
Noise	<65dB (1 meter from the device)								