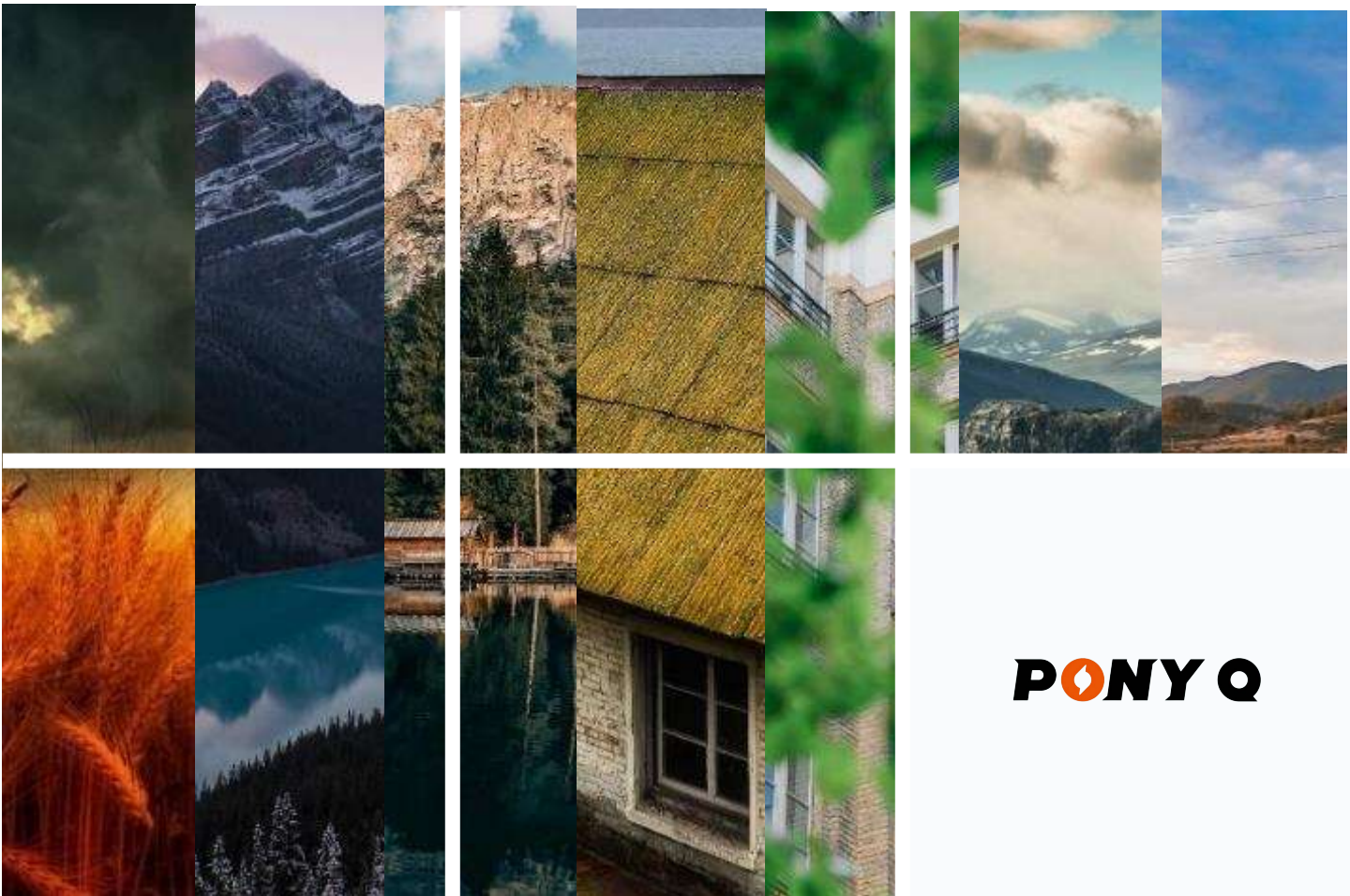


HomeESS

SOLAR ENERGY SYSTEM

PonyQ E2 *Rev.07/2024*



PONY Q

PonyQ-E



Energy Storage System (ESS) stores electric energy and utilize them for later consumption. In additional it also provides a wide array of technological approaches to managing our power to bring cost savings solution for you.

PonyQ Home ESS is a line of flexible Home ESS systems available as integrated unit or as divided in smaller modules.

All our systems are calculated to assure the best structural and electrical results by the professional engineering team.

PonyQ Home ESS adopts the best Lithium-Iron Phosphate cells for excellent safety, reliability and duration.

The hi-level BMS control system provides the optimized performance for the safest and most powerful response. BMS and PCS are matched together with extensive tests and releases, the final modules are carefully tested and certified to assure the most reliable product.

High-tech inverter is designed and developed with new cutting-edge technologies to provide efficiency and reliable products.

PonyQ Home ESS system is composed of separated modules: the one containing the power management system and those containing the energy storage system.

Our products are protected up to 10 years warranty and certificated CE,VDE,UL, IEC62133, IEC62619,MSDS,ROSH,UN38.3



PonyQ-E features

Home ESS is the system connecting individual power management module with battery modules.

B A T T E R Y M O D U L E

- 7.5, 10 and 15kWh modules connecting in series
- Continuous 100 - 200A discharge
- Supporting RS485 or CAN communication
- A set of matching output lines
- Touch screen
- Designed and developed to harmonize perfectly and to avoid any misalliance
- Movable with wheels

I N V E R T E R

- Single-phase Hybrid inverter
- Safe and reliable
- Support multi-parallel connections
- Support flexible access and diesel generator
- Compatible with lithium-ion and lead-acid battery
- Intelligent EMS management function
- On/off-grid automatic switching function, to ensure uninterrupted power when high loads are off-grid

CE VDE-AR-N 4105
VDE 0126-1-1



PonyQ-E energy modules

ESS. BATTERY MODULE - MAIN SPECIFICATIONS

ESS SPECIFICATIONS

Item	PonyQ E2-7,5	PonyQ E2-10	PonyQ E2-15
Type of cell	Lithium – Iron Phosphate		
Nominal energy	7,5kWh	10kWh	15kWh
Layout	15S3P	15S4P	15S6P
Rated Capacity	150Ah	200Ah	300Ah
Factory Voltage	51-53V	49V ~ 51V	51V ~ 53V
Internal Impedance	≤50mΩ	≤60 mΩ	≤60 mΩ
Standard Charge Current	30A	40A	60A
Maximum Continuous Charge	100A (T≥10°C)	100A (T≥10°C)	200A (T≥10°C)
Standard Discharge	30A	40A	60A
Maximum Continuous Discharge	100A (T≥10°C)	100A (T≥10°C)	200A (T≥10°C)
Discharge Cut-off	40V ~ 44V		
Operating Temperature	Charge: 0°C ÷ 45°C Discharge: -20°C ÷ 55°C		
Storage Temperature (60±25%R.H.)	<12 months <3 months <7 days	-10°C ÷ 35°C -10°C ÷ 45°C -20°C ÷ 65°C	
Storage Humidity	60±25% R.H.		
Dimensions (mm)	680/485/220		920/730/220
Weight	Approx. 75kg	Approx. 103kg	Approx. 120kg



PonyQ-E BMS

BATTERY MANAGEMENT SYSTEM SPECIFICATIONS

The BMS is designed for 15-16 series Lithium battery

F U N C T I O N S

- Over-charge detection
- Over-discharge detection
- Over-current detection
- Short circuit detection
- Temperature control
- Cell balancing function
- Communication
- Alarm
- Total capacity function
- Storage history

B M S S P E C I F I C A T I O N S

Items	Details	Standard
Cell over-charge protection	Over-charge detection voltage	3.65±0.025V
	Over-charge detection delay	Typical:1.0s
	Over-charge release voltage	3.38±0.02V
Cell over-discharge protection	Over-discharge detection voltage	2.5±0.02V
	Over-discharge detection delay	Typical:1.0s
	Over-discharge release voltage	2.9±0.02V
Over-current protection	Discharge Over-current protection current1	230±10A
	Discharge Over-current detection delay 1	1s
	Discharge Over-current protection current 2	250±10A
	discharge Over-current detection delay 2	≤100m±50ms
Short protection	Charge OC protection current	230±10A
	Short protection current	350±10A
	Protection condition	Load short
	Detection delay	≤300us
Temperature(T) protection	Protection release condition	Charging release
	Charge high T protection	55±3°C
	Charge high T recover	50±5°C
	Discharge high T protection	65±5°C
	Discharge high T recover	60±5°C
	Charge low T protection	-5±5°C
	Charge low T recover	0±5°C
Balance	Discharge low T protection	-20±5°C
	Discharge low T recover	-15±5°C
Communication	Balance threshold voltage	3.45V
	RS232/RS485 and canbus standard communication interface; real-time monitoring the capacity of battery bank, the voltage, current, environmental temperature and charging/discharging current.	
Alarms	Over-temperature; Over charge; Under-voltage; Over-current; Short circuit	

PonyQ-E protection systems

PROTECTION SYSTEMS

BATTERY PROTECTION SYSTEM

Item	Specification
Lithium Batteries Series	16
Over-charge Detection	YES
Over-discharge Detection	YES
Over-current Detection	YES
Short Circuit Detection	YES
Temperature Control	YES
Cell Balancing Function	YES
Communication Function	YES
Alarm	YES
Total Capacity Function	YES
Storage History	YES

INVERTER PROTECTION SYSTEM

Item	Specification
Reverse Polarity Protection	YES
Over-current Protection	YES
Over-voltage Protection	YES
Anti-islanding Protection	YES
AC Short Circuit Protection	YES
Leakage Current Protection	YES
Ground Fault Monitoring	YES
Grid Monitoring	YES
Ingress Protection	IP65 / NEMA4X
DC Switch	YES



PonyQ-E structure

STRUCTURE OF BATTERY CASE

DISPLAY DESCRIPTION

No.	Description	Screen	Remarks
1	UES0600	P+ P+	Output terminal
2	UES0600	P- P-	Output terminal
3	Reset button	RST	Reset the battery
4	Dial switch	ADS	Set the address
5	Do		
6	CANbus Port	CANbus	CANbus and inverter connection port
7	/	/	/
8	RS485B Port	RS485	RS485 parallel communication interface
9	RS485B port	RS485	RS485 parallel communication interface
10	LED	RUN	Operation indicator
11	LED	ALM	Alarm indicator
12	LED	CAPACITY	Capacity indicator
13	LCD		
14	LCD Key		
15	Switch		
16	Bracket		
17	Handle		



PonyQ-E inverter

INVERTER (Single Phase)

INVERTER SPECIFICATIONS

Item	CJ-5KSL1	CJ-6KSL1
INPUT DC(PV side)		
Max power (kW)	7	7
Max DC voltage (V)		550
MPPT voltage range (V)		125 - 500
Max Input current for single MPPT (A)		14
MPPT tracker / strings		2 / 1
AC OUTPUT		
Rated output power (kVA)	5	6
Max output current (A)	21,7	26
Grid output voltage (V)		230 / 176-270
Frequency (Hz)		50/60
Power factor		0,8 Blagging – 0,8 Breading
THDi		<3%
AC output topology		L + N + PE
BATTERY		
Battery ouput range (kVA)	5	6
Max charging voltage (VDC)		58
Max charge/discharge current (A)	95/104,2	95/110
Battery type		Lithium
Communication interface		CAN / RS458
EPS OUTPUT		
Rated power (kVA)	5	6
Rated output voltage (V)		230
Rated output current (A)	21,7	26
Rated frequency (Hz)		50/60
Automatic switching time (ms)		<20
THDu		<2%
Overload capacity		110%, 30S/120%, 10S/150%, 0.02S

TUV-CE LVD/EMC; IEC/EN62109-1/-2; IEC/EN61000-6-1/-6-3; ITS-G99

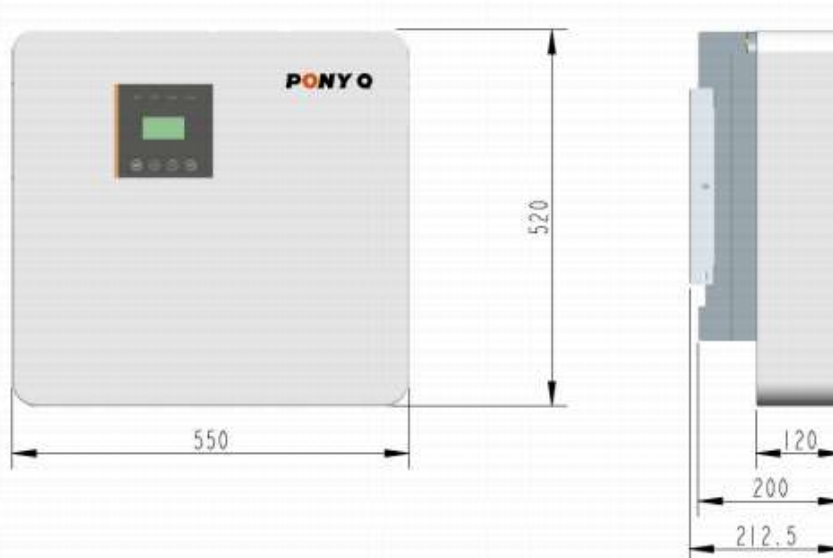


PonyQ-E inverter

INVERTER (Single Phase)

INVERTER SPECIFICATIONS

Item	CJ-5KSL1	CJ-6KSL1
GENERAL DATA		
Battery charge/discharge efficiency		95,0%
DC Max efficiency		97,6%
EU efficiency		97%
MPPT efficiency		99,9%
Ingress protection		IP65
Noise emission (dB)		<35
Operating temperature		+25°C ~ 60°C
Cooling system		Natural cooling
Relative humidity		0 ~ 95% (non condensing)
Altitude		2000m (>2000 derating)
Dimensions W*D*H (mm)		550*200*515
Weight (kg)		25
Isolation transformer		No
Self-consumption (W)		<3
DISPLAY and COMMUNICATION		
Display		LCD
Interface RS485 / Wifi / 4G / CAN / DRM		YES / Opt / Opt / YES / YES
Safety standard		IEC/EN 26109 -1/ -2
EMC		IEC/EN 6100-6-1; IEC/EN 61000-6-3
On-grid		UKCA G99



PonyQ-E inverter

INVERTER (Split Phase)

I N V E R T E R S P E C I F I C A T I O N S

Item	R8KLNA
INPUT DC(PV side)	
Max power (kW)	12
Max DC voltage (V)	500
MPPT voltage range (V)	125 - 500
Max Input current for single MPPT (A)	12
MPPT tracker / strings	4/1
AC OUTPUT	
Rated output power (kVA)	8
Max output current (A)	36.7
Grid output voltage (V)	110-120/220-240V split phase, 1Ø, 230 1 phase
Frequency (Hz)	50/60Hz (45 to 54.9Hz / 55 to 65Hz)
Power factor	0.8leading...0.8lagging
THDi	< 2%
AC output topology	
BATTERY	
Battery output range (kVA)	8
Max charging voltage (VDC)	60
Max charge/discharge current (A)	190/190
Battery type	48V Lithium
Communication interface	CAN / RS458
AC Output Data(Back-Up)	
Rated power (kVA)	8
MAX. Apparent Power Output (kVA)	8.8
Nominal Output Voltage L-N/L1-L2(V)	120/240
Rated frequency (Hz)	60
THDu	<2%
Efficiency	
Europe Efficiency	>=97.8%
MAX. Battery to Load Efficiency	>=97.2%

TUV-CE LVD/EMC; IEC/EN62109-1/-2; IEC/EN61000-6-1/-6-3; ITS-G99



PonyQ-E inverter

INVERTER (Split Phase)

INVERTER SPECIFICATIONS

Item	R8KLNA
GENERAL DATA	
Output Conduit (mm)	25.4
PV Input Conduit (mm)	25.4
BAT Input Conduit (mm)	34.5
Operating Temperature Range (°C)	-25 ~ +60
Operating Altitude (m)	0~4000
Ingress Protection	IP65/NEMA 3R
Weight (kg)	41
Size (Width*Height*Depth) (mm)	430 x 710 x 225
Cooling	Natural Convection
Noise emission (dB)	<38
Display	LCD
Supported communication interface	RS485, WLAN, 4G (optional)
Self-consumption at night (W)	< 2.5 (with battery enabling < 5)
Safety	UL1741SA all options, UL1699B, CSA 22.2
EMC	FCC Part 15 Class
Grid connection standards	IEEE 1547, IEEE 2030.5, Hawaii Rule 14H, Rule 21 Phase I,II,

Inverter Protection:

- Grounding detection
- Arc Fault Protection
- Island Protection
- Battery reverse Polarity
- Insulation Resistor Detection
- Residual Current Monitoring Unit
- Output Over Current Protection
- Back-up Output Short Protection
- Terminal temperature detection
- Output Over Voltage Protection
- Output Under Voltage Protection





ON-GRID / OFF-GRID



HOME / INDUSTRY

