The Champion's Choice

Higher · Faster · Smarter

FOX ESS

Power Cube

THREE-PHASE HYBRID/AC

Power Cube is the latest generation of an integrated residential energy storage system, modularly designed to meet various installation scenarios.



INV: 5kW ···» 15kW
EV Charger: 11kW



Advanced System Monitoring
with **FoxCloud 2.0**

FLEXIBLE APPLICATION

- 0ms seamless switch.*
- Up to 200% PV input with 3 MPPTs, 20A per string.

EASY INSTALLATION

- Built-in gateway with 63A bypass for full house backup.
- No cables required between the inverter EV charger and batteries.

INTEGRATED AC EV CHARGER

- Dynamic load balancing.
- Direct surplus solar power for EV charging.
- Set the charging time flexible.
- EV Charger module optional.

REMOTE MONITORING

- Monitor your system remotely via smartphone App or Web portal.
- Ready for AI mode, dynamic trading and VPP.

www.fox-ess.com

DATASHEET

*The 0 ms transfer time applies under the following conditions: In the open-circuit state of the power grid, total load power does not exceed the rated output backup power, stable grid conditions.

TECHNICAL SPECIFICATIONS

MODEL	PQ3-5.0-NH2 PQ3-5.0-NA2	PQ3-6.0-NH2 PQ3-6.0-NA2	PQ3-8.0-NH2 PQ3-8.0-NA2	PQ3-10.0-LH2 PQ3-10.0-LA2	PQ3-10.0-NH2 PQ3-10.0-NA2	PQ3-12.0-NH2 PQ3-12.0-NA2	PQ3-15.0-NH2 PQ3-15.0-NA2
PV INPUT							
Max. Array Power[W]	11000	14000	18000	20000	20000	24000	30000
Max. Input Power [W]	11000	13200	17600	20000	20000	24000	30000
Max. Input Voltage [V]	1000[1]						
Nominal Operating Voltage [V]	620						
Max. MPPT Input Current [A]	20/20/20						
Max. MPPT Short-Circuit Current [A]	25/25/25						
Max. MPPT Input Power [W]	10000/10000/10000						
Min. Operating Input Voltage [V]	90[2]						
MPPT Voltage Range [V]	120 ~ 950						
Start-Up Input Voltage [V]	140						
MPPT Voltage Range (Full Load) [V]	120 ~ 850	120 ~ 850	140 ~ 850	175 ~ 850	175 ~ 850	210 ~ 850	263 ~ 850
No. of MPP Trackers	3						
Strings per MPP Tracker	1+1+1						
Max. Inverter Backfeed Current to the Array	0						
BATTERY CONNECTION							
Battery Type	Lithium-Ion battery (LFP)						
Battery Voltage [V]	80 ~ 800						
Min. Operating Battery Voltage [V]	80						
Min. Battery Voltage @ Full AC Load [V]	108	125	160	210	210	250	310
Max. Battery Charge Power [W]	5800	6800	8800	10800	10800	12800	16000
Max. Battery Discharge Power [W]	5800	6800	8800	10800	10800	12800	16000
Max. Charge/Discharge Current [A]	80/80						
Communication Interface	CAN						
EV CHARGER CONNECTION							
Norminal Voltage [V a.c.]	400/230;380/220,3L/N/PE						
Maximum Continuous Current [A a.c.]	16						
Nominal Frequency [Hz]	50/60						
Maximum Continuous Power [W]	11000						
Power Factor	1 (Adjustable from 0.8 leading to 0.8 lagging)						
AC OUTPUT							
Nominal Output Power [W]	5000	6000	8000	9999	10000	12000	15000
Max. Apparent Output Power [VA]	5500	6600	8800	9999	11000	13200	16500
Rated Grid Voltage [V]	400/230; 380/220, 3L/N/PE						
Rated Grid Frequency [Hz]	50/60						
Rated Output Current (Per Phase) [A]	7.2/7.6	8.7/9.1	11.6/12.1	14.5/15.2	14.5/15.2	17.4/18.2	21.7/22.7
Max. Output Current (Per Phase) [A]	8.0/8.3	9.6/10.0	12.8/13.3	14.5/15.2	15.9/16.7	19.1/20.0	23.9/25.0
Power Factor	1 (Adjustable from 0.8 leading to 0.8 lagging)						
THDI [%]	<3 @rated power						
AC INPUT							
Max. Input Power [VA]	43470						
Rated Grid Voltage [V]	400/230; 380/220, 3L/N/PE						
Rated Grid Frequency [Hz]	50/60						
Max. Input Current (Per Phase) [A]	63						
BACKUP OUTPUT(ON GRID MODE)							
Max. Output Power For Backup Load [W]	43470						
Max. Output Current For Backup Load Per Phase [A]	63						
BACKUP OUTPUT(OFF GRID MODE)							
Max. Apparent Output Power [VA]	5000	6000	8000	10000	10000	12000	15000
Rated Apparent Output Power [VA]	5000	6000	8000	10000	10000	12000	15000
Peak Apparent Output Power (60s) [VA]	6000	7200	9600	12000	12000	14400	15000
Rated Output Voltage [V]	400/230;380/220; 3L/N/PE						
Rated Output Current (Per Phase)[A]	7.2/7.6	8.7/9.1	11.6/12.1	14.5/15.2	14.5/15.2	17.4/18.2	21.7/22.7
Rated Grid Frequency [Hz]	50/60						
Max. Continuous Current (Per Phase) [A]	7.2/7.6	8.7/9.1	11.6/12.1	14.5/15.2	14.5/15.2	17.4/18.2	21.7/22.7
Step-Down Start	YES						
Backup Overload Automatic Recovery Time	Try 3 times(15s) everytime will alarm a fault, after 3 failures, stop the recovery logic, clients need to clear the fault manually.						
Power Factor	1 (Adjustable from 0.8 leading to 0.8 lagging)						
Parallel Operation	Yes @ Max. 4 pcs						
Switch Time (Single Device) [ms]	0[3]						
THDV [%]	<3 @rated power						
EFFICIENCY							
MPPT Efficiency [%]	99.90						
Max. Efficiency [%]	97.80	97.80	97.90	97.90	97.90	97.90	97.90
European Efficiency [%]	97.00	97.00	97.10	97.30	97.30	97.50	97.50
Max. Battery Charge Efficiency (PV to BAT) (@ Full Load) [%]	97.00	97.10	97.20	97.40	97.40	97.50	97.60
Max. Battery Discharge Efficiency (BAT to AC) (@ Full Load) [%]	97.00	97.10	97.20	97.20	97.20	97.20	97.20

TECHNICAL SPECIFICATIONS

MODEL	PQ3-5.0-NH2 PQ3-5.0-NA2	PQ3-6.0-NH2 PQ3-6.0-NA2	PQ3-8.0-NH2 PQ3-8.0-NA2	PQ3-10.0-LH2 PQ3-10.0-LA2	PQ3-10.0-NH2 PQ3-10.0-NA2	PQ3-12.0-NH2 PQ3-12.0-NA2	PQ3-15.0-NH2 PQ3-15.0-NA2
PROTECTION							
PV Reverse Polarity Protection	YES						
Battery Reverse Protection	YES						
Anti-Islanding Protection	YES						
Output Short Protection	YES						
Leakage Current Protection	YES						
Insulation Resistor Detection	YES						
Overvoltage Category	III (AC Side), II (DC Side)						
Reverse Connect Protection	YES						
Overcurrent Protection/Overtemperature Protection	YES						
DC/AC Surge Protection	Type II (PV)/Type II (AC)						
AFCI Protection	Optional						
DC Switch	YES						
GENERAL DATA							
Dimensions (W*H*D) [mm]	660*420*360 (Inverter)						
Dimensions of Packing (W*H*D) [mm]	793*550*592 (Inverter)						
Net Weight [kg]	46.5(Inverter)						
Gross Weight [kg]	69 (Inverter)						
Installation	Floor-mounted						
Operating Temperature Range [°C]	-25 ~ +55 (Derating at 45)						
Storage Temperature [°C]	-40 ~ +70						
Storage/Operation Relative Humidity [%]	0 ~ 100 (No condensation)						
Altitude [m]	≤3000 @ Derating Exceeding 3000						
Protection Class	I						
Ingress Protection	IP66 (For Outdoor Use)						
Standby Consumption [W]	<15 (Only PV and Battery)						
Idle Mode	YES						
Cooling	FAN Cooling						
Noise Level [dB]	<55						
Inverter Topology	Non-Isolated						
Monitoring Module (Integrated)	WIFI, LAN, 4G						
Communication Interface	Meter, WIFI/4G (Optional), Bluetooth, DRM, Ethernet, USB, RS485, Ripple Control, SG Ready, Dry Contact*2, DRM (0，AU), Airgate						
Display	LED, LCD, App, Website						
Button	Capacitive Touch Sensor						
Buzzer	1, Inside (EPS & Earth Fault)						
STANDARD							
Safety	EN/IEC62109-1, EN/IEC62109-2, EN /IEC 62477-1, EN 18031-1/2, VDE-AR-E 2510-50:2017-05, VDE-AR-E 2510-2:2021						
EMC	EN /IEC 61000-6-1/2/3/4, EN /IEC 62920, EN 301 489-1 V2.2.3:2019 a, EN 301 489-17 V3.3.1:2024 a						
Certification	VDE-AR-N 4105/03.26,DIN VDE V 0124-100/06.20 EN 50549-1:2019+A1, EN 50549-10:2022						

[1] For 1000V system, PV maximum operating voltage is 950V.

[2] The starting working voltage of the power supply is 90V.

[3] The 0 ms transfer time applies under the following conditions: In the open-circuit state of the power grid, total load power does not exceed the rated output backup power, stable grid conditions.

TECHNICAL SPECIFICATIONS

MODEL	VQ3-11.0-AN1
AC INPUT	
Rated Input Voltage [V ac]*1	400/230±20%
Rated Input AC Current [A ac]	16
Rated Input Frequency [Hz]	50/60
AC OUTPUT	
Rated Output Voltage [V ac]*1	400/230±20%
Rated Output AC Current [A ac]	16
Rated Output Frequency [Hz]	50/60
PROTECTION	
Output Overcurrent Protection	✓
Input Over/Under Voltage Protection	✓
Leakage Current Protection	✓
Ground Protection	✓
Surge Protection	✓
Over-temperature Protection	✓
GENERAL DATA	
Connector Type	Type 2 socket
Dimension (W*H*D)[mm] (without cable)	660*155*360
Net Weight (without cable) [kg]	12.9
Start Mode	App
Single/Three Phase Switching	✓
ISO 15118-compliant V2G and Plug&Charge for EU	✓
Installation	Floor Mounted
Operating Temperature Range [°C]	-25 to +55
Storage Temperature [°C]	-40 to +70
Operating Humidity [%]	0-100 (No condensation)
Operating Altitude [m]	≤3000
IP Protection Rating	IP66
IK Protection rating	IK10
Residual Current Detection [mA]	DC 6
Cooling	Self Cooling
Protective Class	Class I
EMC	Class B
Certification	CE,UKCA,CB,RCM,RoHS
Certification Standard	IEC 61851-1: 2017 EN/IEC 61851-1: 2019 EN/IEC 61851-21-2: 2021 AS/NZS 61851.1:2018 AS/NZS 61851.21:2018

* 1 For UK: The Rated input/output voltage of VQ3-11.0-AN1 is 400/230±15%.

TECHNICAL SPECIFICATIONS

MODEL	CQ5.5-S (w)	CQ7-S (w)
ELECTRICAL CHARACTERISTICS		
Battery Type	LFP (LiFePO4)	
Adaptive Inverter	2–12	
Nominal Voltage (V)	44.8	57.6
Nominal Energy (kWh)	5.42	6.96
Operating Voltage (V)	40.6~51.1	52.2~65.7
Recommend Charge/Discharge Current (A)	50	
Max. Charge/Discharge Current (A)*1	80	
Peak Discharge Current (60S) (A)	100	
Battery Pack Round-Trip Efficiency (%)*2	＞95	
Depth Of Discharge (%)	90	
Communication	CAN	
Display	LED*1	
OPERATING CONDITIONS		
Installation Location	Outdoor / Indoor	
Operating Temperature [°C] (warm up function off)*3	Charge: 0 ~ 55, Discharge: -10 ~ 55	
Operating Temperature [°C] (warm up function on)	Charge: -25 ~ 55, Discharge: -25 ~ 55	
Storage Temperature (°C)	-10–50	
Cooling Method	Natural Convection	
Humidity (%)	5-95 (No Condensation)	
Altitude (m)	≤3,000	
PROTECTION		
Fire Protection Function	YES	
MECHANICAL CHARACTERISTICS		
Dimensions (W*H*D) [mm]	660*155*360	
Weight (kg) (N.W) (±5%)	44.5	50.5
Cell weight (kg) (N.W) (±5%)	28.2	36.2
CERTIFICATES		
Safety	IEC 62619 / IEC 62477	
EMC	IEC 61000-6-1/2/3/4	
Transportation	UN38.3	
Ingress Protection	IP66	
WARRANTY		
Standard Warranty (year)*3	10	

*1 The current is affected by temperature, cell voltage and SOC;
*2 @25°C, 0.3C charging/discharging;
*3 Charge and discharge power reduction applies at low temperatures.