FOX ESS

DATASHEET

Power Cube

SINGLE-PHASE **HYBRID**



FLEXIBLE APPLICATION

- Single-phase 5-12kW
- Flexible modular capacity from 10.92 to 49.14 kWh
- Up to 200% PV input
- 4 ms seamless switching

EASY INSTALLATION

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

SAFE AND DURABLE

- Active and passive safety protection.
- IP66 and Type II DC/AC surge protection.
- 10-year warranty.

REMOTE MONITORING

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



Advanced System Monitoring
with FoxCloud **V2.0**



For more information about the Fox ESS range, visit:
au.fox-ess.com

MECHANICAL SPECIFICATIONS AND BATTERY DATA

System Model	PQI-5.0_EQ5500-S_2S	PQI-5.0_EQ5500-S_3S	PQI-5.0_EQ5500-S_4S	PQI-5.0_EQ5500-S_5S	PQI-5.0_EQ5500-S_6S	PQI-5.0_EQ5500-S_7S	PQI-5.0_EQ5500-S_8S	PQI-5.0_EQ5500-S_9S
Weight[kg]±5%	123.4	164.4	205.4	246.4	287.4	328.4	369.4	410.4
System Model	PQI-8.0_EQ5500-S_2S PQI-10.0_EQ5500-S_2S PQI-12.0_EQ5500-S_2S	PQI-8.0_EQ5500-S_3S PQI-10.0_EQ5500-S_3S PQI-12.0_EQ5500-S_3S	PQI-8.0_EQ5500-S_4S PQI-10.0_EQ5500-S_4S PQI-12.0_EQ5500-S_4S	PQI-8.0_EQ5500-S_5S PQI-10.0_EQ5500-S_5S PQI-12.0_EQ5500-S_5S	PQI-8.0_EQ5500-S_6S PQI-10.0_EQ5500-S_6S PQI-12.0_EQ5500-S_6S	PQI-8.0_EQ5500-S_7S PQI-10.0_EQ5500-S_7S PQI-12.0_EQ5500-S_7S	PQI-8.0_EQ5500-S_8S PQI-10.0_EQ5500-S_8S PQI-12.0_EQ5500-S_8S	PQI-8.0_EQ5500-S_9S PQI-10.0_EQ5500-S_9S PQI-12.0_EQ5500-S_9S
Weight[kg]±5%	125.6	166.6	207.6	248.6	289.6	330.6	371.6	412.6
System Dimensions (W*D*H) [mm] [1]	*797	*934	*1071	570*380 *1208	*1345	*1482	*1619	*1756
System Nominal / Usable Energy [kWh]	10.92 / 10.92	16.38 / 16.38	21.84 / 21.84	27.30 / 27.30	32.76 / 32.76	38.22 / 38.22	43.68 / 43.68	49.14 / 49.14
Depth of Discharge	100%							
Min. Operating Battery Voltage [V]	80							
Max. Operating Battery Voltage [V]	500							
Nominal Operating Battery Voltage [V]	89.6	134.4	179.2	224.0	268.8	313.6	358.4	403.2
Max. Charge/Discharge Current [A]	50/50							
Rated Charge/Discharge Current [A]	50/50							

Battery Model / Energy [kWh]	EQ5500-S / 5.46
Battery Cell Chemistry / Capacity	LFP ($LiFePO_4$) / 122 [Ah]
Dimensions (W*D*H) [mm]	570*380*137
Weight [kg] (per battery)	41±5%

Inverter Model	PQI-5.0	PQI-8.0	PQI-10.0	PQI-12.0
Dimensions (W*D*H) [mm]	570*380*420			
Weight [kg]	37.0	39.2	39.2	39.2

Base Dimensions: 570*103*380 mm, Weight 4.4 kg.

SYSTEM MODEL				
	PQ1-5.0_EQ5500-S_2S	PQ1-8.0_EQ5500-S_2S	PQ1-10.0_EQ5500-S_2S	PQ1-12.0_EQ5500-S_2S
	PQ1-5.0_EQ5500-S_3S	PQ1-8.0_EQ5500-S_3S	PQ1-10.0_EQ5500-S_3S	PQ1-12.0_EQ5500-S_3S
	PQ1-5.0_EQ5500-S_4S	PQ1-8.0_EQ5500-S_4S	PQ1-10.0_EQ5500-S_4S	PQ1-12.0_EQ5500-S_4S
	PQ1-5.0_EQ5500-S_5S	PQ1-8.0_EQ5500-S_5S	PQ1-10.0_EQ5500-S_5S	PQ1-12.0_EQ5500-S_5S
	PQ1-5.0_EQ5500-S_6S	PQ1-8.0_EQ5500-S_6S	PQ1-10.0_EQ5500-S_6S	PQ1-12.0_EQ5500-S_6S
	PQ1-5.0_EQ5500-S_7S	PQ1-8.0_EQ5500-S_7S	PQ1-10.0_EQ5500-S_7S	PQ1-12.0_EQ5500-S_7S
	PQ1-5.0_EQ5500-S_8S	PQ1-8.0_EQ5500-S_8S	PQ1-10.0_EQ5500-S_8S	PQ1-12.0_EQ5500-S_8S
	PQ1-5.0_EQ5500-S_9S	PQ1-8.0_EQ5500-S_9S	PQ1-10.0_EQ5500-S_9S	PQ1-12.0_EQ5500-S_9S

SYSTEM TECHNICAL SPECIFICATIONS

System Type	Single-Phase Hybrid Energy Storage System			
Nominal Grid Voltage	230 V, L/N/PE			
Grid Frequency [Hz]	50/60			
Rated AC Output Power [W]	5000	8000	10000 [2]	12000
Rated AC Output Apparent Power [VA]	5000	8000	10000 [2]	12000
Max. AC Output Apparent Power [VA]	5500	8800	11000 [2]	13200
Rated AC Output Current [A]	21.7	34.8	43.5	52.2
Max. AC Output Current [A]	23.9	38.3	47.8 [3]	57.4
Max. AC Input Apparent Power [VA]	8800	14500 [4]	14500 [4]	14500 [4]
Max. AC Input Current [A]	40.0	63.0 [4]	63.0 [4]	63.0 [4]
THDI [%]	<3 @rated power			
AC Input & Output Power Factor	1 (Adjustable from 0.8 leading to 0.8 lagging)			
Installation	Floor-mounted			
Operating Temperature [°C]	Battery: Charge: 0 ~ +55, Discharge: -10 ~ +55 Inverter: -25 ~ +55 (Derating at 45)			
Ingress Protection	IP66 (For Outdoor Use)			
Altitude [m]	Max. 3,000			
Humidity [%]	0 ~ 100 (No Condensation)			
Cooling Method (Inverter)	Natural	FAN cooling	FAN cooling	FAN cooling
Cooling Method (Battery)	Natural			
Noise Emission (Average) [dB]	<35	<50	<50	<50
Inverter Topology	Non-Isolated			
Communication Interface	Ethernet, EMS(RS485), Meter, WiLAN(WiFi+LAN+Bluetooth), 4G(Optional), DRM, Ripple Control, USB, BMS(CAN), SG Ready			
Display	LED, LCD, App, Website			
Export Limit Control	YES			
Button	Capacitive Touch Sensor			
Standard Warranty [year]	10 [5]			
Country of Manufacture	China			

SYSTEM MODEL	PQ1-5.0_EQ5500-S_2S PQ1-5.0_EQ5500-S_3S PQ1-5.0_EQ5500-S_4S PQ1-5.0_EQ5500-S_5S PQ1-5.0_EQ5500-S_6S PQ1-5.0_EQ5500-S_7S PQ1-5.0_EQ5500-S_8S PQ1-5.0_EQ5500-S_9S	PQ1-8.0_EQ5500-S_2S PQ1-8.0_EQ5500-S_3S PQ1-8.0_EQ5500-S_4S PQ1-8.0_EQ5500-S_5S PQ1-8.0_EQ5500-S_6S PQ1-8.0_EQ5500-S_7S PQ1-8.0_EQ5500-S_8S PQ1-8.0_EQ5500-S_9S	PQ1-10.0_EQ5500-S_2S PQ1-10.0_EQ5500-S_3S PQ1-10.0_EQ5500-S_4S PQ1-10.0_EQ5500-S_5S PQ1-10.0_EQ5500-S_6S PQ1-10.0_EQ5500-S_7S PQ1-10.0_EQ5500-S_8S PQ1-10.0_EQ5500-S_9S	PQ1-12.0_EQ5500-S_2S PQ1-12.0_EQ5500-S_3S PQ1-12.0_EQ5500-S_4S PQ1-12.0_EQ5500-S_5S PQ1-12.0_EQ5500-S_6S PQ1-12.0_EQ5500-S_7S PQ1-12.0_EQ5500-S_8S PQ1-12.0_EQ5500-S_9S
SOLAR TECHNICAL SPECIFICATIONS				
Max. Array Power[W][6]	16000	24000	24000	24000
Max. Input Power [W][7]	16000	20000	22000	24000
Max. Input Voltage [V]	600 [8]			
Min. Input Voltage [V]	75			
Start-Up Input Voltage [V]	80			
Nominal Voltage [V]	360			
Voltage Range [V]	80 ~ 550			
MPPT Voltage Range (Full Load) [V]	130 ~ 550	105 ~ 550	130 ~ 550	155 ~ 550
Max. PV Input Current [A]	20/20	20/20/20/20	20/20/20/20	20/20/20/20
Max. Isc PV Current [A]	25/25	25/25/25/25	25/25/25/25	25/25/25/25
No. of MPP Trackers	2	4	4	4
Strings per MPP Tracker	1+1	1+1+1+1	1+1+1+1	1+1+1+1
BACKUP OUTPUT				
Max. Apparent Power [VA]	5000	8000	10000	12000
Rated Apparent Power [VA]	5000	8000	10000	12000
Load Start Capability [A]	122 @2s			
Rated Output Voltage [V]	230, L/N/PE			
Rated Output Current [A]	21.7	34.8	43.5	52.2
Rated Grid Frequency [Hz]	50/60			
Max. AC Bybass Output Current	40.0	63.0	63.0	63.0
Max. Output Current For Backup Load [A]	40.0	63.0	63.0	63.0
Max Output Current [A]	21.7	34.8	43.5	52.2
Power Factor	1 (Adjustable from 0.8 leading to 0.8 lagging)			
Switch Time [ms]	<4			
THDV [%]	<3 @linear load			
SYSTEM EFFICIENCY				
Max. Static MPPT Efficiency [%]	99.90			
Max. Conversion Efficiency [%]	97.62			
Max. Battery Charge Efficiency (PV to BAT) (@ Full Load) [%]	97.20			
Max. Battery Discharge Efficiency (BAT to AC) (@ Full Load) [%]	97.33			
SYSTEM PROTECTION				
PV Reverse Polarity Protection	YES			
Anti-Islanding Protection	Active Frequency Drift Positive Feedback			
Output Short Protection	YES			
Leakage Current Protection	YES			
Insulation Resistor Detection	YES			
Overvoltage Category	YES			
Overcurrent Protection/Overtemperature Protection	YES			
Earth Fault	YES			
DC/AC Surge Protection	Type II (PV)/Type II (AC)			
AFCI Protection	Optional			
DC Switch	TGHX3S-63P			
Protection Class	I			
Pollution Degree	PD3 (PD2 inside)			

SYSTEM MODEL				
	PQ1-5.0_EQ5500-S_2S	PQ1-8.0_EQ5500-S_2S	PQ1-10.0_EQ5500-S_2S	PQ1-12.0_EQ5500-S_2S
	PQ1-5.0_EQ5500-S_3S	PQ1-8.0_EQ5500-S_3S	PQ1-10.0_EQ5500-S_3S	PQ1-12.0_EQ5500-S_3S
	PQ1-5.0_EQ5500-S_4S	PQ1-8.0_EQ5500-S_4S	PQ1-10.0_EQ5500-S_4S	PQ1-12.0_EQ5500-S_4S
	PQ1-5.0_EQ5500-S_5S	PQ1-8.0_EQ5500-S_5S	PQ1-10.0_EQ5500-S_5S	PQ1-12.0_EQ5500-S_5S
	PQ1-5.0_EQ5500-S_6S	PQ1-8.0_EQ5500-S_6S	PQ1-10.0_EQ5500-S_6S	PQ1-12.0_EQ5500-S_6S
	PQ1-5.0_EQ5500-S_7S	PQ1-8.0_EQ5500-S_7S	PQ1-10.0_EQ5500-S_7S	PQ1-12.0_EQ5500-S_7S
	PQ1-5.0_EQ5500-S_8S	PQ1-8.0_EQ5500-S_8S	PQ1-10.0_EQ5500-S_8S	PQ1-12.0_EQ5500-S_8S
	PQ1-5.0_EQ5500-S_9S	PQ1-8.0_EQ5500-S_9S	PQ1-10.0_EQ5500-S_9S	PQ1-12.0_EQ5500-S_9S

COMPLIANCE INFORMATION

Safety	EN/IEC 62109-1, EN/IEC 62109-2, EN/IEC62477-1, EN/IEC 62040(AU), IEC 62619
EMC	EN IEC 61000-6-1:2019, EN IEC 61000-6-3:2021, EN IEC 61000-6-2:2019, EN IEC 61000-6-4:2019, IEC 62920:2017, EN IEC 61000-6-1/2/3/4
Grid Regulation	AS/NZS 4777.2:2024
Battery Regulation	IEC62619:2022
Transportation	UN38.3

[1] Base on height of 103mm, Adjustment Range 73~103 mm.
[2] For the Australian market, this model is supplied with a maximum apparent power limited to 9999.
[3] For the Australian market, this model is supplied with a maximum AC Output current is 43.5A.
[4] Configuration can be set on the platform according to requirements.
[5] Refer to the Fox ESS Warranty Terms and Conditions for details, excludes wear parts such as LCD and fans.
[6] Maximum total STC-rated PV module power (Wp) that can be connected.
[7] Maximum continuous DC power (Pdc max) the inverter can handle.
[8] Voltages exceed 600V may damage the inverter.