FOX ESS

DATASHEET

Power Cube

THREE-PHASE **HYBRID**



FLEXIBLE APPLICATION

- Three-phase 5-15kW
- Flexible modular capacity from 10.92 to 49.14 kWh
- Up to 200% PV input
- 20 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	PQ3-5.0-M_EQ5500-S_2S PQ3-10.0-L-M_EQ5500-S_2S PQ3-15.0-M_EQ5500-S_2S	PQ3-5.0-M_EQ5500-S_3S PQ3-10.0-L-M_EQ5500-S_3S PQ3-15.0-M_EQ5500-S_3S	PQ3-5.0-M_EQ5500-S_4S PQ3-10.0-L-M_EQ5500-S_4S PQ3-15.0-M_EQ5500-S_4S	PQ3-5.0-M_EQ5500-S_5S PQ3-10.0-L-M_EQ5500-S_5S PQ3-15.0-M_EQ5500-S_5S	PQ3-5.0-M_EQ5500-S_6S PQ3-10.0-L-M_EQ5500-S_6S PQ3-15.0-M_EQ5500-S_6S	PQ3-5.0-M_EQ5500-S_7S PQ3-10.0-L-M_EQ5500-S_7S PQ3-15.0-M_EQ5500-S_7S	PQ3-5.0-M_EQ5500-S_8S PQ3-10.0-L-M_EQ5500-S_8S PQ3-15.0-M_EQ5500-S_8S	PQ3-5.0-M_EQ5500-S_9S PQ3-10.0-L-M_EQ5500-S_9S PQ3-15.0-M_EQ5500-S_9S
Weight[kg]±5%	129.0	170.0	211.0	252.0	293.0	334.0	375.0	416.0
System Dimensions (W*D*H) [mm] [1]	*797	*934	*1071	*1208	570*380 *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 [Ah]	LFP ($LiFePO_4$) / 122
Dimensions (W*D*H) [mm]	570*380*137
Weight [kg] (per battery) (±5%)	41

Inverter Model	PQ3-5.0-M	PQ3-10.0-L-M	PQ3-15.0-M
Dimensions (W*D*H) [mm]	570*380*420		
Weight [kg] (±5%)	42.6	42.6	42.6

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

SYSTEM MODEL	**PQ3-5.0-M_EQ5500-S_2S** **PQ3-5.0-M_EQ5500-S_3S** **PQ3-5.0-M_EQ5500-S_4S** **PQ3-5.0-M_EQ5500-S_5S** **PQ3-5.0-M_EQ5500-S_6S** **PQ3-5.0-M_EQ5500-S_7S** **PQ3-5.0-M_EQ5500-S_8S** **PQ3-5.0-M_EQ5500-S_9S**	**PQ3-10.0-L-M_EQ5500-S_2S** **PQ3-10.0-L-M_EQ5500-S_3S** **PQ3-10.0-L-M_EQ5500-S_4S** **PQ3-10.0-L-M_EQ5500-S_5S** **PQ3-10.0-L-M_EQ5500-S_6S** **PQ3-10.0-L-M_EQ5500-S_7S** **PQ3-10.0-L-M_EQ5500-S_8S** **PQ3-10.0-L-M_EQ5500-S_9S**	**PQ3-15.0-M_EQ5500-S_2S** **PQ3-15.0-M_EQ5500-S_3S** **PQ3-15.0-M_EQ5500-S_4S** **PQ3-15.0-M_EQ5500-S_5S** **PQ3-15.0-M_EQ5500-S_6S** **PQ3-15.0-M_EQ5500-S_7S** **PQ3-15.0-M_EQ5500-S_8S** **PQ3-15.0-M_EQ5500-S_9S**

SYSTEM TECHNICAL SPECIFICATIONS

System Type	Three-Phase Hybrid Energy Storage System		
Nominal Grid Voltage [Vac]	400/230; 3L/N/PE		
Grid Frequency [Hz]	50		
Rated AC Output Power [W]	5000	9999	15000
Rated AC Output Apparent Power [VA]	5000	9999	15000
Max. AC Output Apparent Power [VA]	5500	9999	16500
Rated AC Output Current [A]	7.2	14.5	21.7
Max. AC Output Current [A]	8.0	14.5	23.9
Max. AC Input Apparent Power [VA]	43470		
Max. AC Input Current [A] [2]	63		
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]	Charge: 0 ~ +55, Discharge: -10 ~ +55 (Battery) -25 ~ +55 (Derating at 45) (Inverter)		
Ingress Protection	IP66 (For Outdoor Use)		
Altitude [m]	Max. 3,000		
Humidity [%]	0 ~ 100 (No Condensation)		
Cooling Method	Natural (Inverter)	Natural (Inverter)	FAN cooling (Inverter)
Cooling Method	Natural (Battery)		
Noise Emission (Average) [dB]	<40	<40	<55
Inverter Topology	Non-Isolated		
Communication Interface	Ethernet, EMS(RS485), Meter, WiLAN(WiFi+LAN+Bluetooth), 4G(Optional), DRM, Ripple Control, USB, SG Ready		
Display	LED, LCD, App, Website		
Export Limit Control	YES		
Button	Capacitive Touch Sensor		
Standard Warranty [year] [3]	10		
Country of Manufacture	China		

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SOLAR TECHNICAL SPECIFICATIONS			
Max. Array Power[W] [4]	11000	20000	30000
Max. Input Power [W] [5]	11000	20000	30000
Max. Input Voltage [V] [6]		1000	
Min. Input Voltage [V] [7]		90	
Start-Up Input Voltage [V]		140	
Nominal Voltage [V]		620	
Voltage Range [V]		120 ~ 950	
MPPT Voltage Range (Full Load) [V]	120 ~ 850	175 ~ 850	263 ~ 850
Max. PV Input Current [A]		20/20/20	
Max. Isc PV Current [A]		25/25/25	
No. of MPP Trackers		3	
Strings per MPP Tracker		1+1+1	
BACKUP PORT OUTPUT(ON GRID MODE)			
Max. Output Power For Backup Load [W]		43470	
Max. Output Current For Backup Load (Per Phase) [A]		63	
BACKUP PORT OUTPUT(OFF GRID MODE)			
Max. Apparent Output Power [VA]	5000	10000	15000
Rated Apparent Output Power [VA]	5000	10000	15000
Peak Apparent Output Power (60s) [VA]	6000	12000	15000
Rated Output Voltage [Vac]		400/230; 3L/N/PE	
Rated Output Current (Per Phase) [A]	7.2	14.5	21.7
Rated Output Frequency [Hz]		50	
Max. Continuous Current (Per Phase) [A]	7.2	14.5	21.7
Step-Down Start		YES	
EPS 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)	
Switch Time (Single Device) [ms]		<20	
THDV [%]		<3 @linear load	
SYSTEM EFFICIENCY			
MPPT Efficiency [%]		99.90	
Max. Efficiency [%]	97.80	97.90	97.90
Max. Battery Charge Efficiency (PV to BAT) (@ Full Load) [%]	97.00	97.40	97.60
Max. Battery Discharge Efficiency (BAT to AC) (@ Full Load) [%]	97.00	97.20	97.20
SYSTEM PROTECTION			
Battery Reverse Protection		YES	
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		III (AC Side), II (DC Side)	
Overcurrent Protection/Overtemperature Protection		YES	
Reverse Connect Protection		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			
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	PQ3-5.0-M_EQ5500-S_3S	PQ3-10.0-L-M_EQ5500-S_3S	PQ3-15.0-M_EQ5500-S_3S
	PQ3-5.0-M_EQ5500-S_4S	PQ3-10.0-L-M_EQ5500-S_4S	PQ3-15.0-M_EQ5500-S_4S
	PQ3-5.0-M_EQ5500-S_5S	PQ3-10.0-L-M_EQ5500-S_5S	PQ3-15.0-M_EQ5500-S_5S
	PQ3-5.0-M_EQ5500-S_6S	PQ3-10.0-L-M_EQ5500-S_6S	PQ3-15.0-M_EQ5500-S_6S
	PQ3-5.0-M_EQ5500-S_7S	PQ3-10.0-L-M_EQ5500-S_7S	PQ3-15.0-M_EQ5500-S_7S
	PQ3-5.0-M_EQ5500-S_8S	PQ3-10.0-L-M_EQ5500-S_8S	PQ3-15.0-M_EQ5500-S_8S
	PQ3-5.0-M_EQ5500-S_9S	PQ3-10.0-L-M_EQ5500-S_9S	PQ3-15.0-M_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 4777.2:2020+A1:2021+A2:2024
Battery Regulation	IEC62619:2022
Transportation	UN38.3

[1] Base on height of 103mm, Adjustment Range 73~103 mm.
[2] Configuration can be set on the platform according to requirements.
[3] Refer to the Fox ESS Warranty Terms and Conditions for details, excludes wear parts such as LCD and fans.
[4] Maximum total STC-rated PV module power (Wp) that can be connected.
[5] Maximum continuous DC power (Pdc max) the inverter can handle.
[6] For 1000V system, PV maximum operating voltage is 950V.
[7] The starting working voltage of the power supply is 90V.

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