



Stackable AIO

SINGLE-PHASE **HYBRID/AC**



FLEXIBLE APPLICATION

- Built-in 63A bypass for full house backup.
- 4ms seamless switch.
- Up to 200% PV input with 4 MPPTs, 20A per string.



EASY INSTALLATION

- Integrated configuration, plug and play set-up.



SAFE AND DURABLE

- Integrating active and passive safety.
- Intelligent AFCI function.
- IP66 and type II DC/AC surge protection.



REMOTE MONITORING

- Monitor your system remotely via smartphone App or Web portal.
- Ready for AI and VPP Apps.



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



Stackable AIO is the latest generation of an integrated residential energy storage system, modular designed to meet various installation scenarios.

3.7kW ...>> 12kW



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

TECHNICAL SPECIFICATIONS

MODEL	PQ1-3.7	PQ1-5.0	PQ1-6.0	PQ1-7.0	PQ1-8.0	PQ1-10.0	PQ1-12.0
PV INPUT							
Max. Array Power[W]	16000	16000	20000	20000	24000	24000	24000
Max. Input Power [W]	13700	15000	18000	19000	20000	22000	24000
Max. MPPT Input Power (Per) [W]				8000			
Max. Input Voltage [V]				600 [1]			
Min. Input Voltage [V]				75			
Start-Up Input Voltage [V]				80			
Nominal Voltage [V]				360			
MPPT Voltage Range [V]				80 ~ 550			
MPPT Voltage Range (Full Load) [V]	96 ~ 550	130 ~ 550	105 ~ 550	121 ~ 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	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	25/25/25/25	25/25/25/25
No. of MPP Trackers	2	2	3	3	4	4	4
Strings per MPP Tracker	1+1	1+1	1+1+1	1+1+1	1+1+1+1	1+1+1+1	1+1+1+1
BATTERY CONNECTION							
Battery Type	Lithium-Ion battery (LFP)						
Battery Voltage [V]	80 ~ 500						
Min. Operating Battery Voltage [V]	80						
Min. Battery Voltage @ Full AC Load [V]	78	105	125	145	165	207	247
Max. Battery Charge Power [W]	12000						
Max. Battery Discharge Power [W]	3680	5000	6000	7000	8000	10000	12000
Max. Charge/Discharge Current [A]	50/50						
Depth of Discharge [%]	90						
Scalability	YES						
AC OUTPUT							
Rated Output Power [W]	3680	5000	6000	7000	8000	10000	12000
Rated Apparent Power [VA]	3680	5000	6000	7000	8000	10000 [2]	12000
Max. Apparent Power [VA]	3680	5500	6600	7700	8800	11000 [2]	13200
Rated Grid Voltage [V]	220/230/240, L/N/PE						
Rated Grid Frequency [Hz]	50/60, ±5						
Rated Output Current [A]	16.7	22.7	27.3	31.8	36.4	45.5	54.5
Max. Output Current [A]	16.7	25.0	30.0	35.0	40.0	50.0	60.0
Power Factor	1 (Adjustable from 0.8 leading to 0.8 lagging)						
THDI [%]	<3 @rated power						
AC INPUT							
Max. Apparent Power [VA]	7000	8800	11000	14500 [3]	14500 [3]	14500 [3]	14500 [3]
Rated Grid Voltage [V]	220/230/240, L/N/PE						
Rated Grid Frequency [Hz]	50/60, ±5						
Max. Input Current [A]	32.0	40.0	50.0	63.0 [3]	63.0 [3]	63.0 [3]	63.0 [3]
Power Factor	1 (Adjustable from 0.8 leading to 0.8 lagging)						
EPS OUTPUT							
Max. Apparent Power [VA]	3680	5000	6000	7000	8000	10000	12000
Load Start Capability [A]	122 @2s						
Rated Output Voltage [V]	220/230/240, L/N/PE						
Rated Grid Frequency [Hz]	50/60						
Max. Output Current for Backup Load (Bybass) [A]	32.0	40.0	50.0	63.0	63.0	63.0	63.0
Max. Output Current [A]	16.7	22.7	27.3	31.8	36.4	45.5	54.5
Power Factor	1 (Adjustable from 0.8 leading to 0.8 lagging)						
Parallel Operation	Yes @ Max. 3 pcs						
Switch Time [ms]	<4						
THDV [%]	<3 @linear load						
EFFICIENCY							
Max. Static MPPT Efficiency [%]	99.90						
Max. Conversion Efficiency [%]	97.60	97.62	97.62	97.62	97.62	97.62	97.62
European Efficiency [%]	97.16	97.20	97.20	97.20	97.20	97.20	97.20
Max. Battery Charge Efficiency (PV to BAT) (@ Full Load) [%]	97.33						
Max. Battery Discharge Efficiency (BAT to AC) (@ Full Load) [%]	96.40						

TECHNICAL SPECIFICATIONS

MODEL	PQ1-3.7	PQ1-5.0	PQ1-6.0	PQ1-7.0	PQ1-8.0	PQ1-10.0	PQ1-12.0
PROTECTION							
PV Reverse Polarity Protection				YES			
Anti-Islanding Protection				YES			
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			
Battery Warming Function				Optional			
DC Switch				YES			
GENERAL DATA							
Dimensions (W*H*D) [mm]				570*420*380 (Inverter)			
Dimensions of Packing (W*H*D) [mm]				654*538*464 (Inverter)			
Net Weight [kg]				35.0 (Inverter)			
Gross Weight [kg]				40.5 (Inverter)			
Installation				Floor-mounted			
Operating Temperature Range [°C]				-25 ~ +60 (Derating at 45)			
Storage Temperature [°C]				-10 ~ +55 (-25 ~ +55 after warm up)			
Storage/Operation Relative Humidity [%]				0 ~ 95 (No condensation)			
Altitude [m]				<4000 @ Derating Exceeding 2000			
Protection Class				I			
Overvoltage Category				III (AC), II (DC)			
Pollution Degree				PD3 (PD2 inside)			
Ingress Protection				IP66 (For Outdoor Use)			
Standby Consumption [W]				<15 (Only PV and Grid)			
Cooling	Natural	Natural	Natural	FAN cooling	FAN cooling	FAN cooling	FAN cooling
Noise Emission (Average) [dB]	<35 [4]	<35 [4]	<35 [4]	<50 [4]	<50 [4]	<50 [4]	<50 [4]
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							
Safety				EN/IEC 62109-1, EN/IEC 62109-2, EN/IEC62477-1, EN/IEC 62040(AU)			
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			
RED				EN 50665:2017, ENIEC 62311:2020, EN 301 489-1 V2.2.3 (2019-11), EN 301 489-17 V3.2.4 (2020-09), EN 300 328 V2.2.2(2019-07), EN 55032:2015+A11:2020+A1:2020, EN 55035:2017+A11:2020			
Grid Regulation				AS/NZS 4777.2:2020			
Battery Regulation				IEC62619:2022			

[1] Voltages exceed 600V may damage the inverter.

[2] According to Australian standards, the maximum apparent power is 9999VA.

[3] Configuration can be set on the platform according to requirements.

[4] Excludes wear parts such as LCD and fans.

TECHNICAL SPECIFICATIONS

MODEL	TQ5000-S -L2	TQ5000-S -L3	TQ5000-S -L4	TQ5000-S -L5	TQ5000-S -L6
ELECTRICAL CHARACTERISTICS					
Battery Type	LFP (LiFePO ₄)				
Battery Module	2*TQ5000-S	3*TQ5000-S	4*TQ5000-S	5*TQ5000-S	6*TQ5000-S
Nominal Capacity [kWh]	9.84	14.76	19.68	24.60	29.52
Nominal Voltage [V]	128	192	256	320	384
Operating Voltage [V]	116 ~ 146	174 ~ 219	232 ~ 292	290 ~ 365	348 ~ 438
Recommend Discharge Current [A]	38.5				
Max. Charge/Discharge Current [A] ¹	50				
Peak Discharge Current [A]	65 @60sec				
Battery Pack Round-Trip Efficiency [%]	>95				
Depth of Discharge [%]	90				
Communication	CAN				
Display	LED*1				
Scalability	Max. 6 Modules in Series				
OPERATING CONDITIONS					
Installation Location	Outdoor/ Indoor				
Operating Temperature [°C]	Charge: 0 ~ 55, Discharge: -10 ~ 55				
Operating Temperature [°C] (warm up function on, optional)	Charge: -25 ~ 55, Discharge: -25 ~ 55				
Storage Temperature [°C]	-10 ~ 50				
Cooling Method	Natural Convection				
Humidity [%]	5 ~ 95 (No Condensation)				
Altitude [m]	Max. 3,000				
PROTECTION					
Fire Protection Function	YES				
MECHANICAL CHARACTERISTICS					
Dimensions (W*H*D) [mm]	570*375*380	570*510*380	570*645*380	570*780*380	570*915*380
Weight [kg]	97.2	140.7	184.2	227.7	271.2
CERTIFICATES					
Safety	IEC 62619				
EMC	IEC 61000-6-1/2/3/4				
Transportation	UN38.3				
Ingress Protection	IP65				

*1, The current is affected by temperature, cell voltage and SOC.