



Stackable AIO

THREE-PHASE **HYBRID/AC**



FLEXIBLE APPLICATION

- Built-in 63A bypass for full house backup.
- 3 MPPTs, 20A per string.
- PV min. voltage of 120V and min. battery voltage of 80V.



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.

5kW ...>> 15kW



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

TECHNICAL SPECIFICATIONS

MODEL	PQ3-5.0 -M-P	PQ3-6.0 -M-P	PQ3-8.0 -M-P	PQ3-10.0-L -M-P	PQ3-10.0 -M-P	PQ3-12.0 -M-P	PQ3-15.0 -M-P
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]	85						
Min. Battery Voltage @ Full AC Load [V]	108	125	160	210	210	250	310
Max. Battery Charge Power [W]	6000	7200	9600	12000	12000	14400	15000
Max. Battery Discharge Power [W]	5000	6000	8000	10000	10000	12000	15000
Max. Charge/Discharge Current [A]	50						
Communication Interface	CAN						
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 (AC Voltage Range) [V]	400/230; 380/220, 3L/N/PE						
Rated Grid Frequency [Hz]	50/60, ±5						
Rated Output Current (Per Phase) [A]	7.6	9.1	12.1	15.2	15.2	18.2	22.7
Max. Output Current (Per Phase) [A]	8.3	10.0	13.3	15.2	16.7	20.0	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, ±5						
Max. Input Current (Per Phase) [A]	63						
EPS OUTPUT(ON GRID MODE)							
Max. Output Power For Backup Load (Per Phase) [W]	43470						
Max. Output Current For Backup Load [A]	3*63						
EPS OUTPUT(OFF GRID MODE)							
Max. 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; 3L/N/PE						
Rated Grid Frequency [Hz]	50/60						
Max. Continuous Current (Per Phase) [A]	7.2	8.7	11.6	14.5	14.5	17.4	21.7
Max. Unbalanced Load Power (Per Phase) [kW]	1.6	2.0	2.6	3.3	3.3	4.0	5.0
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)						
Parallel Operation	Yes @ Max. 4 pcs						
Switch Time (Single Device) [ms]	<20						
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

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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]				760*600*550 (Inverter)			
Net Weight [kg]				43.0 (Inverter)			
Gross Weight [kg]				55.0 (Inverter)			
Installation				Floor-mounted			
Operating Temperature Range [°C]				-25 ~ +60 (Derating at 45)			
Storage Temperature [°C]				-40 ~ +70			
Storage/Operation Relative Humidity [%]				0 ~ 100 (No condensation)			
Altitude [m]				<4000 @ Derating Exceeding 3000			
Protection Class				I			
Ingress Protection				IP66 (For Outdoor Use)			
Standby Consumption [W]				<15 (Only PV and Battery)			
Idle Mode				YES			
Cooling	Natural	Natural	Natural	Natural	Natural	FAN Cooling	FAN Cooling
Noise Level [dB]	<40	<40	<40	<40	<40	<55	<55
Inverter Topology				Non-Isolated			
Monitoring Module (Integrated)				WiFi, LAN, 4G			
Communication Interface				Meter, WiFi/4G (Optional), Bluetooth, DRM, Ethernet, USB, BMS (CAN), RS485, Ripple Control, SG Ready, Dry Contact*2			
Display				LED, LCD, App, Website			
Button				Capacitive Touch Sensor			
Buzzer				1, Inside (EPS & Earth Fault)			
STANDARD							
Safety				EN/IEC62109-1, EN/IEC62109-2			
EMC				IEC 61000-6-1, IEC 61000-6-2, IEC 61000-6-3, IEC61000-4-2/3/4/5/6/8			
Certification				AS4777.2-2020, VDE-AR-N 4105, VDE0126-1-1, G98, EN50549-1, CEI 0-21, IEC62116, IEC61727, IEC61683			

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

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

TECHNICAL SPECIFICATIONS

MODEL	CQ7-80 -L2 (w)	CQ7-80 -L3 (w)	CQ7-80 -L4 (w)	CQ7-80 -L5 (w)	CQ7-80 -L6 (w)	CQ7-80 -L7 (w)	CQ7-80 -L8 (w)	CQ7-80 -L9 (w)	CQ7-80 -L10 (w)	CQ7-80 -L11 (w)	CQ7-80 -L12 (w)
ELECTRICAL CHARACTERISTICS											
Battery Type	LFP (LiFePO ₄)										
Battery Module [CQ7-S-80 (w)]	2	3	4	5	6	7	8	9	10	11	12
Nominal Capacity [kWh]	14.04	21.06	28.08	35.10	42.12	49.14	56.16	63.18	70.20	77.22	84.24
Nominal Voltage [V]	115.2	172.8	230.4	288.0	345.6	403.2	460.8	518.4	576.0	633.6	691.2
Operating Voltage [V]	104.4 ~ 788.4										
Recommend Discharge Current [A]	50										
Max. Charge/Discharge Current [A] ^{*1}	80										
Peak Discharge Current [A]	110 @60sec										
Battery Pack Round-Trip Efficiency [%]	>95										
Depth of Discharge [%]	90										
Communication	CAN										
Display	LED*1										
Scalability	Max. 12 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*D*H) [mm]	660*360	660*360	660*360	660*360	660*360	660*360	660*725	660*725	660*725	660*725	660*725
	*310	*465	*620	*775	*930	*1085	*1085	*1085	*1085	*1085	*1085
Weight [kg]	97.6	146.4	195.2	244	292.8	341.6	390.4	439.2	488.0	536.8	585.6
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.