

ATHENA SERIES · RESIDENTIAL ENERGY STORAGE

Hybrid inverter

Three-phase hybrid inverter for high-voltage battery storage.

MQK-E3-8K-3P

MQK-E3-10K-3P

MQK-E3-12K-3P

**98.2 %**

Max. efficiency

15 A

PV input current per string

110 %

Unbalanced output

<10 ms

UPS-level switchover

RESIDENTIAL

THREE-PHASE

HV BATTERY

2 MPPTS



Optimal power and storage

98.2 % max. efficiency

15 A PV input current per string, 2 MPP trackers

110 % unbalanced output



Strong load and back-up

110 % continuous AC output overload

200 % max. back-up output overload for 60 s

Supports PV oversizing up to 150 %



Easy installation and operation

Plug-and-play terminals for fast wiring

Smart EMS supports multiple operating modes

OLED display and app for settings and data



Flexible design and use

Wide 135–750 V battery voltage range

IP65 for indoor and outdoor installation

Compact, quiet (<25 dB), natural convection

Hybrid inverter · Technical data

Three-phase · 8–12 kW

Model	MQK-E3-8K-3P	MQK-E3-10K-3P	MQK-E3-12K-3P
PV INPUT			
Recommended max. input power (kW)	12.0	15.0	18.0
Start-up voltage (V)		135	
Max. DC input voltage (V)		1000	
Rated DC input voltage (V)		620	
MPPT voltage range (V)		200–950	
No. of MPP trackers		2	
No. of DC inputs per MPPT		1 / 1	
Max. input current (A)		15 / 15	
Max. short-circuit current (A)		20 / 20	
BATTERY SIDE			
Battery type	Lithium battery (with BMS)		
Battery voltage range (V)	135–750		
Max. charge / discharge current (A)	25 / 25		
GRID SIDE			
Rated output power (kW)	8.0	10.0	12.0
Max. output apparent power (kVA)	8.8	11.0	13.2
Max. input apparent power (kVA)	16.0	16.5	16.5
Max. battery charging power (kW)	8.0	10.0	12.0
Rated AC voltage	3L/N/PE; 220/380 V, 230/400 V, 240/415 V		
Rated AC frequency (Hz)	50 / 60		
Max. output current (A)	13.3	16.5	20.0
Power factor	0.8 leading ... 0.8 lagging		
Max. total harmonic distortion	<3 % @ rated output power		
DC current injection	<0.5 % In		
BACK-UP SIDE			
Rated output power (kW)	8.0	10.0	12.0
Max. output apparent power (kVA)	8.8	11.0	13.2
Max. output current (A)	13.3	16.5	20.0
UPS switching time	<10 ms		
Rated output voltage	3L/N/PE; 220/380 V, 230/400 V, 240/415 V		
Rated output frequency (Hz)	50 / 60		
Voltage harmonic distortion	<3 % @ linear load		
EFFICIENCY			
Max. efficiency	98.2 %		
European efficiency	97.4 %		
GENERAL DATA			
Overvoltage category	PV: II, Mains: III		
Dimensions W × H × D (mm)	534 × 418 × 210		
Weight (kg)	26.0		
Protection degree	IP65		
Standby self-consumption (W)	<15		
Topology	Transformerless		
Operating temperature range (°C)	–30 to +60		
Relative humidity (%)	0–100		
Operating altitude (m)	3000 (derating above 3000 m)		
Cooling	Natural convection		
Noise level (dB)	<25		
Display	OLED & LED		
Communication	CAN, RS485, Wi-Fi / LAN (optional)		



ATHENA SERIES · RESIDENTIAL ENERGY STORAGE

Lithium-ion battery

Stackable high-voltage LFP battery, built from 2.56 kWh modules.

MQK-E3-BH2.56

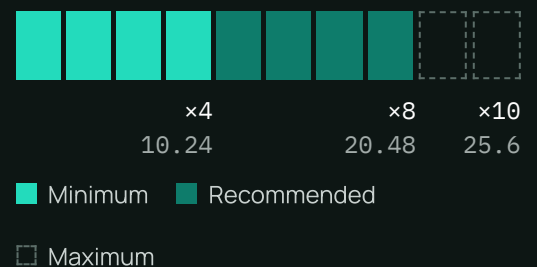
Max. capacity **25.6 kWh**

Module **51.2 V · 50 Ah**

Cycle life **6000 @ 80 % DoD**

- ✓ High-voltage LiFePO₄ solution; each module is 51.2 V, 50 Ah, 2.56 kWh
- ✓ 4 to 8 modules recommended, up to 10 modules
- ✓ Lithium iron phosphate (LFP) chemistry for safety, cycle life and power
- ✓ For hybrid, on-grid and off-grid systems
- ✓ Self-consumption optimisation for residential and commercial sites
- ✓ Modular design for easy transport and installation

MODULES PER STACK



10.24–25.6 kWh

Each module adds 2.56 kWh. Scale shows module count and kWh.

Lithium-ion battery · Technical data

MQK-E3-BH2.56

Configuration	4 modules	5 modules	6 modules	7 modules	8 modules
Nominal voltage (V)	204.8	256	307.2	358.4	409.6
Capacity (Ah)	50	50	50	50	50
Energy (kWh)	10.24	12.8	15.36	17.92	20.48
Operating voltage range (V)	172.8–224.64	216–280.8	259.2–336.96	302.4–393.12	345.6–449.28
Dimensions L × W × H (mm)	600×210×980	600×210×1140	600×210×1300	600×210×1460	600×210×1620
Net weight (kg)	129	155.5	182	208.5	235

GENERAL SPECIFICATIONS

Battery chemistry	LiFeP04 (LFP)
Module	51.2 V · 50 Ah · 2.56 kWh
Recommended charge current	10–25 A
Max. continuous charge current	50 A
Max. continuous discharge current	50 A
Communication	RS485 / CAN
Operating temperature	–20 to +55 °C
Environment	Indoor
Relative humidity	5–95 %
Cycle life	6000 cycles @ 80 % DoD
Dimensions L × W × H (mm)	High-voltage box 600 × 210 × 250 · Battery module 600 × 210 × 160
Battery module weight	26.5 kg
Certifications	CB, IEC 62619, CE-EMC, CE-GPDS, UKCA, UL 1973, UL 9540A, EN 62040, IEC 62040, UN 38.3, MSDS

SCALES TO

25.6 kWh

Up to 10 modules per stack

CYCLE LIFE

6000

Cycles at 80 % depth of discharge

PAIRS WITH

Athena hybrid inverter

All stack voltages sit within its 135–750 V battery input