ATMOCE

Data Sheet

M-ELV Battery

MS-7K-U / MS-8K-U / MS-8K-U PRO



Key Features

Reliability

- Up to 25-year warranty
- DAB-based AC architecture
- Up to 15,000-cycle LFP battery

Efficiency

- 90.0% AC round-trip efficiency[a]
- Up to 8 kWh capacity with 5 kW output
- Maximizes self-consumption

Safety

- Human-safe voltage under 30 V
- Built-in safe AC system, no DC arc
- Precision sensing, thermal control and fire suppression system

Scalability

- One SKU for all retrofit scenarios
- Compatible for 1-phase/3-phase/split-phase
- Compatible with 3rd-party PV systems

Smart

- Dynamic tariff optimisation
- VPP-ready architecture

Scenario-based

- Matrix phase control for higher self-consumption
- Backup power support



a. Measured under the following conditions: Charged and discharged at a constant power of 0.1C or 700 W at ambient temperature.

Items	Unit	MS-7K-U	MS-8K-U	MS-8K-U PRO
Electrical Parameters[b]				
Max. continuous output power	kVA		4.5	
Max. output power	kVA		5	
Max. continuous input power	kVA	3.75	4	4
Nominal voltage	Va.c.		1/N/PE ~ 220, 1/N/PE ~ 230 | 3/N/PE ~ 220/380, 3/N/PE ~ 230/400	
Operating voltage range (L to N)	Va.c.		176 - 276	
Nominal frequency	Hz		50 / 60	
Frequency range	Hz		45-55 @50 Hz, 55-65 @60 Hz	
Max. intput current	A	17.05 @ 220 Va.c., 5.70 @ 380 Va.c. 16.30 @ 230 Va.c., 5.41 @ 400 Va.c.	18.18 @ 220 Va.c., 6.08 @ 380 Va.c. 17.39 @ 230 Va.c., 5.77 @ 400 Va.c.	18.18 @ 220 Va.c., 6.08 @ 380 Va.c. 17.39 @ 230 Va.c., 5.77 @ 400 Va.c.
Max. output current	A	22.73 @ 220 Va.c., 7.58 @ 380 Va.c. 21.74 @ 230 Va.c., 7.25 @ 400 Va.c.	22.73 @ 220 Va.c., 7.60 @ 380 Va.c. 21.74 @ 230 Va.c., 7.22 @ 400 Va.c.	22.73 @ 220 Va.c., 7.60 @ 380 Va.c. 21.74 @ 230 Va.c., 7.22 @ 400 Va.c.
Power factor (on-grid)			0.8 leading···0.8 lagging	
Power factor (off-grid)			1.0 leading···1.0 lagging	
AC round-trip efficiency	%		90[a]	
THDi	%		<3	
Standby Power	W		<6.5	
Battery				
Total battery energy[c]	kWh	7.17	8.04	8.01
Nominal battery capacity	Ah	280	314	313
Nominal DC voltage	V		25.6	
Max. DC voltage	V		28.8	
Chemistry			Lithium iron phosphate (LFP)	
DC round-trip efficiency	%		96[d]	
Mechanical data				
Dimensions (without bracket)	mm		830 × 480 × 195 (H x W x D)	
Lifting weight (without bracket)	kg	73.5	75.5	75.5
Mounting			Floor or wall mount	
Ambient operating temperature range	℃		-20 to 55	
Optimum operating temperature range	℃		0 to 30	
Storage temperature	℃		-20 to 55	
Protection class			I	
Ingress Rating			IP66	
Cooling			Intelligent air cooling	
Operating Humidity (RH)	%		4 to 100, condensing	
Altitude	m		Up to 3,000	
Pollution Rating			PD3	
Operation Noise	dB		< 35	

b. On-site power limit settings can be configured in accordance with grid requirements.
c. 100% depth of discharge (DoD), 0.2C rate charge & discharge at 25°C±3℃.
d. Measured under the following conditions: Charged and discharged at a constant power of 0.2C.

Items	Unit	MS-7K-U	MS-8K-U	MS-8K-U PRO
Protection				
AC port overvoltage class			III	
AC surge protection			TYPE II	
Galvanic Isolation			YES	
Insulation resistance monitor			YES	
Features and compliance				
Indicator			LEDs for SOC & Status	
Communication			CAN	
Services [e]			Self-consumption, TOU, Grid ancillary services	
Cloud Service			ATMOCE Cloud & ATMOZEN APP	
Compliance		IEC 62619, ISO 13849, IEC 61000-6-1, IEC 61000-6-3, IEC 63056, IEC 62477-1, VDE-AR-E 2510-50	IEC 62619, ISO 13849, IEC 61000-6-1, IEC 61000-6-3, IEC 63056, IEC 62477-1, VDE-AR-E 2510-50, UL 9540A	IEC 62619, ISO 13849, IEC 61000-6-1, IEC 61000-6-3, IEC 63056, IEC 62477-1, VDE-AR-E 2510-50

e. Work together with ATMOCE Gateway.

Rev. 1.0.0 Data subject to change.
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