ATMOCE

Data Sheet

M-ELV BattBank

MS-16K-U & MS-SCU-RES-U for Residential Applications

Key Features

Reliability

- Up to 15-year warranty[a]
- IP66 protection rating
- No single point of failure impacts system operation
- Maintenance-free design

Safety

- Inherent safety: Extra-low voltage below 60 Vdc
- Passive safety: Fire suppression built into every pack
- Active safety: Multi-sensor intelligence and protection

Smart

- Inter-pack automatic balancing
- Fast commissioning with smart system
- Pack-level monitoring for rapid fault location

Efficiency

- >90.0% AC round-trip efficiency[b]

Scalability

- Max. stackable capacity: 80.4 kWh/cluster
- Modular design for scalable adaptation

Scenario-based

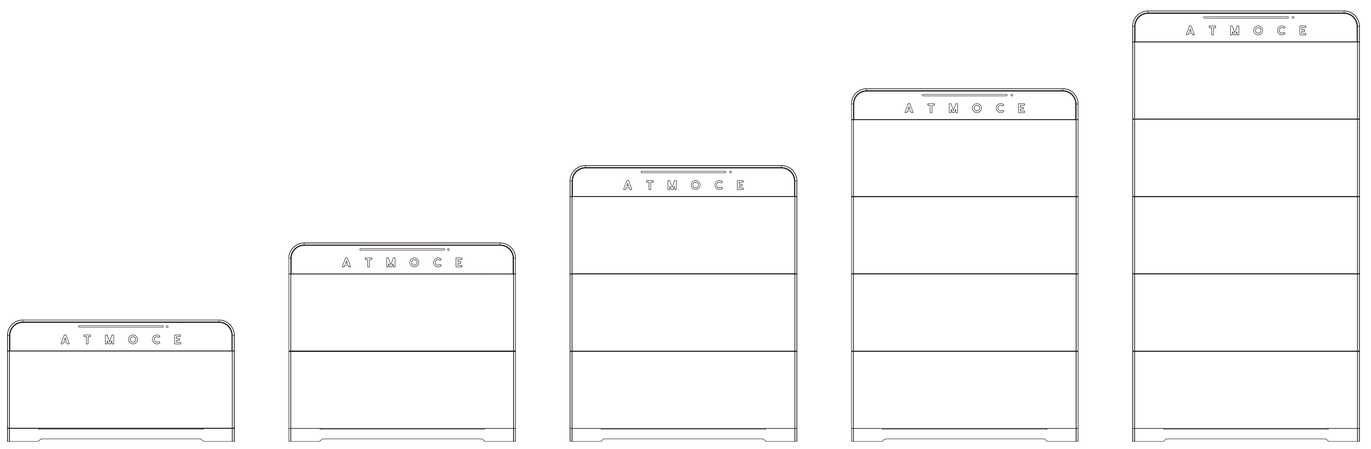
- Matrix phase control
- Compatible with all grid configurations

a. This warranty period is valid only when used with MS-SCU-RES-U.
b. Measured under the following conditions: Single battery pack charged and discharged at a constant power of 5 kW at ambient temperature.

Items	Unit	MS-SCU-RES-U[c]
General Data		
Indicator		LEDs for SOC & Status
Communication mode		FE, RS485, WLAN, Bluetooth, DI/DO, CAN
Cloud Service		ATMOCE Cloud & ATMOZEN APP
AC Output	A	63
Communication interface		
FE		2 x RJ45
DRM		1 x RJ45
PV CT		1 x RJ45
Grid CT		1 x RJ45
USB		1 x USB
COM		2 x RS485, 1x DI, 3 x 12V DO
CAN		Support
Mechanical Data		
Weight	kg	9.7
Dimensions	mm	880 × 120 × 483 (W x H x D)
Weight including base	kg	16.5
Dimensions including base	mm	880 × 170 × 483 (W x H x D)

Items	Unit	MS-16K-U[d]	
		Single Phase	Three Phase
Performance Specification			
Rated Output Apparent Power	kVA	6	8
Max. Output Apparent Power	kVA	7	10
Rated Input Apparent Power	kVA	6	8
Nominal Voltage	Va.c.	1/N/PE ~ 220, 1/N/PE ~ 230, 1/N/PE ~ 240	3/N/PE~220/380, 230/400, 240/415
Nominal Frequency	Hz	50 / 60	50 / 60
Frequency Range	Hz	45 to 55 @50 Hz, 55 to 65 @60 Hz	45 to 55 @50 Hz, 55 to 65 @60 Hz
Max. Intput Current	A	27.3 @220V, 26.1 @230V, 25.0 @240V	12.2 @ 380 Va.c., 11.6 @ 400 Va.c., 11.1 @ 415 Va.c.
Max. Output Current	A	31.8 @220V, 30.4 @230V, 29.2 @240V	15.2 @ 380 Va.c., 14.4 @ 400 Va.c., 13.9 @ 415 Va.c.
Peak Output Current (Off grid)	A	36.4 (10s)	18.2 (10s)
Power Factor (On grid)		0.8 leading…0.8 lagging	0.8 leading…0.8 lagging
Power Factor (Off grid)		1 leading…1 lagging	1 leading…1 lagging
AC Round-Trip Efficiency	%	90[e]	>90[e]
THDi	%	<3	<3
Battery Data			
Total Battery Capacity	kWh	16.08	
Nominal Battery Capacity	Ah	314	
Nominal DC Voltage	V	51.2	
Max. DC Voltage	V	57.6	
Chemistry		Lithium Iron Phosphate (LFP)	
DC Round-Trip Efficiency	%	96[f]	
BMS		YES	

Items	Unit	MS-16K-U[d]	
		Single Phase	Three Phase
System General Data			
Weight	kg	155	
Stack Dimensions	mm	880 × 300 × 483 (W x H x D)	
Mounting		Floor	
Max. Stackbale Amount		5	
Ambient Operating Temperature Range	℃	-30 to 55	
Optimum Operating Temperature Range	℃	0 to 30	
Storage Temperature	℃	-30 to 60	
Protection Class		I	
Ingress Rating		IP66	
Cooling		Intelligent Air Cooling	
Operating Humidity (RH)	%	4 to 100, Condensing	
Altitude	m	Up to 3,000	
Protection			
AC Port Overvoltage Class		III	
AC Surge Protection		TYPE II	
Galvanic Isolation		YES	
Insulation Resistance Monitor		YES	
Anti-Islanding Protection		YES	
Standard Compliance			
Compliance		UN38.3, IEC 62619, IEC 61000-6-1/-2/-3/-4, IEC 63056, IEC 62477-1, IEC 62040-1, VDE- AR-E 2510-50, ISO 13849, DIN VDEV0124-100, VDE-AR-N 4105/4110, EN 50549-1, AS4777	



Items	Unit					
Number of Battery Modules	pcs	1	2	3	4	5
Total Energy Capacity	kWh	16.08	32.16	48.24	64.32	80.4
Rated Single-Phase Input and Output Apparent Power	kVA	6	12	13.8[g]	13.8[g]	13.8[g]
Max Single-Phase Output Apparent Power	kVA	7	13.8[g]	13.8[g]	13.8[g]	13.8[g]
Rated Three-Phase Input and Output Apparent Power	kVA	8	16	24	32	40
Max Three-Phase Output Apparent Power	kVA	10	20	30	40	41.5
Total Weight	kg	171.5	326.5	481.5	636.5	791.5
Total Height	mm	470	770	1070	1370	1670
Total Width	mm			880		
Total Depth	mm			483		

c. MS-SCU-RES-U: Stack Control Unit (SCU) Cap & Base Kit of M-ELV BattBank for Residential Application.
d. MS-16K-U: 16 kWh M-ELV BattBank. Rated operating condition: In the on-grid scenario,100% depth of discharge (DoD), 0.5C rate charge & discharge at 25°C, and the AC output voltage is 400 Vac.
e. Measured under the following conditions: Single battery pack charged and discharged at a constant power of 5 kW at ambient temperature.
f. Measured under the following conditions: Single battery pack charged and discharged at a constant power of 0.2C.
g. Limited by the maximum output current of 63 A at AC output port

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