

# M-ELV BattBank

MS-16K-U



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# Key Features

## Reliability

- 5-year warranty
- IP66 protection rating
- No single point of failure impacts system operation
- Air-cooled, maintenance-free design

## Safety

- The world's first AC stackable C&I battery
- 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% AC round-trip efficiency<sup>a</sup>
- Max. discharge power: 10 kW/pack
- Max. stackable capacity: 112 kWh/cluster

## Scalability

- Flexible expansion with minimal inventory and simplified design
- Modular design for easy transportation and scalable adaptation
- Maximum battery capacity with minimal footprint

## Scenario-based

- Matrix phase control
- Compatible with all grid configurations



a. Measured under the following conditions: Single battery pack charged and discharged at a constant power of 5 kW at ambient temperature.

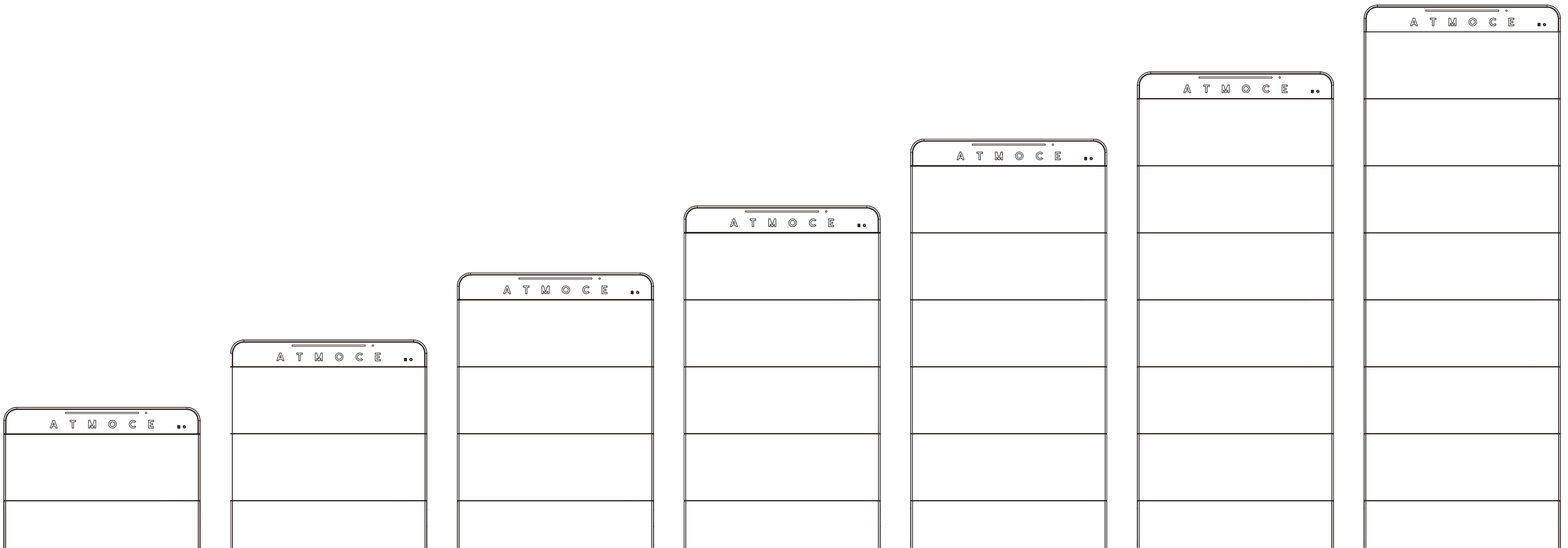
| Items                          | Unit | MS-SCU-CNI <sup>b</sup>                       |
|--------------------------------|------|-----------------------------------------------|
| <b>General Data</b>            |      |                                               |
| Indicator                      |      | LEDs for SOC & Status                         |
| Communication mode             |      | FE, RS485, WLAN, Bluetooth, DI/DO             |
| Cloud Service                  |      | ATMOCE Cloud & ATMOZEN APP                    |
| <b>Communication interface</b> |      |                                               |
| FE                             |      | 3 x RJ45                                      |
| DRM                            |      | 1 x RJ45                                      |
| USB                            |      | 1 x USB                                       |
| COM                            |      | 2 x RS485, 2 x DI, 1x 12V DO, 2 x AI, 1 x NTC |
| <b>Mechanical Data</b>         |      |                                               |
| Weight                         | kg   | 8.5                                           |
| Dimensions                     | mm   | 880 × 120 × 483 (W x H x D)                   |

| Items                            | Unit              | MS-16K-U <sup>c</sup>                                |
|----------------------------------|-------------------|------------------------------------------------------|
| <b>Performance Specification</b> |                   |                                                      |
| Rated Output Apparent Power      | kVA               | 8                                                    |
| Max. Output Apparent Power       | kVA               | 10                                                   |
| Rated Input Apparent Power       | kVA               | 8                                                    |
| Nominal Voltage                  | V <sub>a.c.</sub> | 3/N/PE~220/380, 230/400, 240/415                     |
| Nominal Frequency                | Hz                | 50 / 60                                              |
| Frequency Range                  | Hz                | 45 to 55 @50 Hz, 55 to 65 @60 Hz                     |
| Max. Intput Current              | A                 | 12.2 @ 380 Va.c., 11.6 @ 400 Va.c., 11.1 @ 415 Va.c. |
| Max. Output Current              | A                 | 15.2 @ 380 Va.c., 14.4 @ 400 Va.c., 13.9 @ 415 Va.c. |
| Peak Output Current (Off grid)   | A                 | 18.2 (10s)                                           |
| Power Factor (On grid)           |                   | 0.8 leading…0.8 lagging                              |
| Power Factor (Off grid)          |                   | 1 leading…1 lagging                                  |
| AC Round-Trip Efficiency         | %                 | >90 <sup>a</sup>                                     |
| THDi                             | %                 | <1.5                                                 |
| <b>Battery Data</b>              |                   |                                                      |
| 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)                         |
| Number of Cycles                 |                   | 10,000                                               |
| DC Round-Trip Efficiency         | %                 | 96 <sup>d</sup>                                      |
| BMS                              |                   | YES                                                  |
| <b>System General Data</b>       |                   |                                                      |
| Weight                           | kg                | 154                                                  |
| Stack Dimensions                 | mm                | 880 × 300 × 483 (W x H x D)                          |
| Mounting                         |                   | Floor                                                |
| Max. Stackbale Amount            |                   | 7                                                    |

b. MS-SCU-CNI: Stack Control Unit (SCU) Cap of M-ELV BattBank for C&I Application.  
c. MS-16K-U: 16kWh M-ELV BattBank.  
d. Measured under the following conditions: Single battery pack charged and discharged at a constant power of 0.2C.

| Items                               | Unit                                                                                                                                                                   | MS-16K-U <sup>c</sup>   |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Ambient Operating Temperature Range | °C                                                                                                                                                                     | -30 to 55               |
| Storage Temperature                 | °C                                                                                                                                                                     | -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             |
| Pollution Rating                    |                                                                                                                                                                        | PD3                     |
| 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            | MS-ACCB-CNI <sup>e</sup>    |
|----------------------|-----------------|-----------------------------|
| Mechanical Data      |                 |                             |
| Weight               | kg              | 36                          |
| Dimensions           | mm              | 880 × 220 × 483 (W x H x D) |
| Ingress Rating       |                 | IP66                        |
| Cable diameter range | mm <sup>2</sup> | 35 to 50                    |

| Items                               | Unit |  |       |       |       |       |       |        |
|-------------------------------------|------|--------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|--------|
| Number of Battery Modules           | pcs  | 1                                                                                    | 2     | 3     | 4     | 5     | 6     | 7      |
| Total Energy Capacity               | kWh  | 16.08                                                                                | 32.16 | 48.24 | 64.32 | 80.40 | 96.48 | 112.56 |
| Rated Input & Output Apparent Power | kVA  | 8                                                                                    | 16    | 24    | 32    | 40    | 48    | 56     |
| Max. Output Apparent Power          | kVA  | 10                                                                                   | 20    | 30    | 40    | 50    | 60    | 70     |
| Total Weight                        | kg   | 198.5                                                                                | 352.5 | 506.5 | 660.5 | 814.5 | 968.5 | 1122.5 |
| Total Height                        | mm   | 640                                                                                  | 940   | 1240  | 1540  | 1840  | 2140  | 2440   |
| Total Width                         | mm   | 880                                                                                  |       |       |       |       |       |        |
| Total Depth                         | mm   | 483                                                                                  |       |       |       |       |       |        |

e. MS-ACCB-CNI: AC Connection Base of M-ELV BattBank for C&I Application.  
f. Installed side by side, the distance between two battery clusters should be greater than 350 mm.