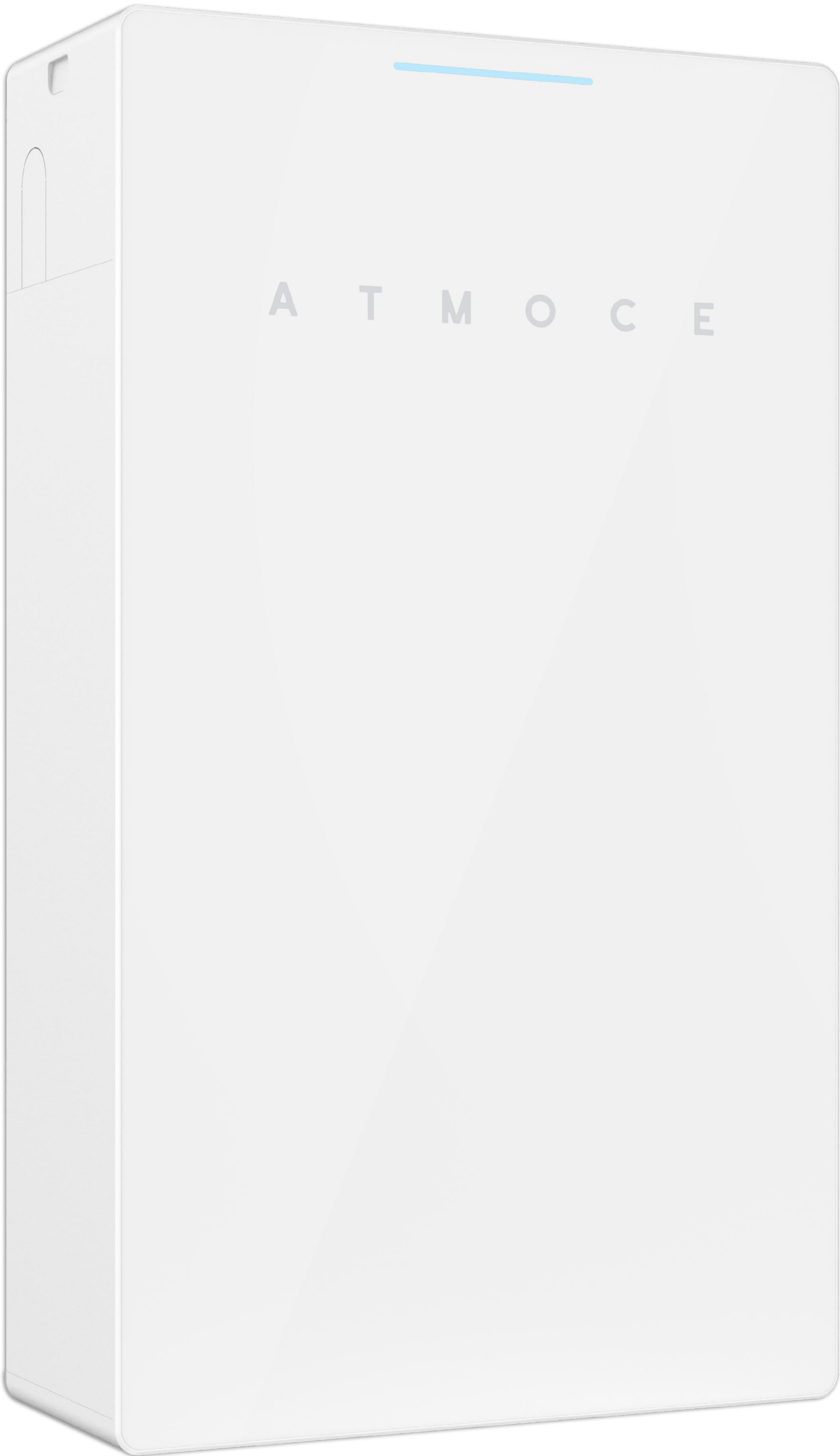


ATMOCE

Data Sheet

M-ELV Battery

MS-7K-U





# Key Features

## Ultimate Safety

- <30 Vdc extra low voltage
- Lithium iron phosphate (LFP) chemistry
- Cell level management and optimization
- Galvanic isolation between battery and grid

## Higher Power

- 90% AC round-trip efficiency<sup>a</sup>
- 3.75 kVA Max. continuous input power, 5 kVA Max. output power
- 126 kWh scalability<sup>b</sup>

## Flexibility & Adaptability

- One SKU for all 1-phase, 3-phase & stand alone installations
- AC coupling, compatible with 3rd-party PV and EMS systems
- Supports self-consumption, TOU and grid ancillary services modes

## More Reliability

- Up to 15-year warranty
- 10,000 cycles
- Electrolytic capacitors free



a. Measured under the following conditions: Charged and discharged at a constant power of 0.1C or 700 W at ambient temperature.  
b. This value defines the maximum scalable capacity achievable with one M-Gateway.



| Items                                    | Unit              | MS-7K-U                                                                                                                     |
|------------------------------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>Electrical Parameters<sup>b</sup></b> |                   |                                                                                                                             |
| Max. continuous output power             | kVA               | 4.5                                                                                                                         |
| Max. output power                        | kVA               | 5                                                                                                                           |
| Max. continuous input power              | kVA               | 3.75                                                                                                                        |
| Nominal voltage                          | V <sub>a.c.</sub> | 1/N/PE ~ 220, 1/N/PE ~ 230   3/N/PE ~ 220/380, 3/N/PE ~ 230/400                                                             |
| Operating voltage range (L to N)         | V <sub>a.c.</sub> | 176 - 276                                                                                                                   |
| Nominal frequency                        | Hz                | 50 / 60                                                                                                                     |
| Frequency range                          | Hz                | 45-55 @50 Hz, 55-65 @60 Hz                                                                                                  |
| Max. input current                       | A                 | 17.05 @ 220 V <sub>a.c.</sub> , 5.70 @ 380 V <sub>a.c.</sub>   16.30 @ 230 V <sub>a.c.</sub> , 5.41 @ 400 V <sub>a.c.</sub> |
| Max. output current                      | A                 | 22.73 @ 220 V <sub>a.c.</sub> , 7.58 @ 380 V <sub>a.c.</sub>   21.74 @ 230 V <sub>a.c.</sub> , 7.25 @ 400 V <sub>a.c.</sub> |
| Power factor (adjustable)                |                   | 0.8 leading...0.8 lagging                                                                                                   |
| AC round-trip efficiency                 | %                 | 90 <sup>a</sup>                                                                                                             |
| THDi                                     | %                 | <3                                                                                                                          |
| <b>Battery</b>                           |                   |                                                                                                                             |
| Rated battery energy                     | kWh               | 7                                                                                                                           |
| Nominal battery capacity                 | Ah                | 280                                                                                                                         |
| Nominal DC voltage                       | V                 | 25.6                                                                                                                        |
| Max. DC voltage                          | V                 | 28.8                                                                                                                        |
| Chemistry                                |                   | Lithium iron phosphate (LFP)                                                                                                |
| Number of cycles                         |                   | 10,000                                                                                                                      |
| DC round-trip efficiency                 | %                 | 96 <sup>c</sup>                                                                                                             |
| <b>Mechanical data</b>                   |                   |                                                                                                                             |
| Dimensions (without bracket)             | mm                | 830 × 480 × 195 (H x W x D)                                                                                                 |
| Lifting weight (without bracket)         | kg                | 73.5                                                                                                                        |
| Mounting                                 |                   | Floor or wall mount                                                                                                         |
| Ambient operating temperature range      | °C                | -20 to 55                                                                                                                   |
| Optimum operating temperature range      | °C                | 0 to 30                                                                                                                     |
| Storage temperature                      | °C                | -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>Protection</b>                        |                   |                                                                                                                             |
| AC port overvoltage class                |                   | III                                                                                                                         |
| AC surge protection                      |                   | TYPE II                                                                                                                     |
| Galvanic Isolation                       |                   | YES                                                                                                                         |
| Insulation resistance monitor            |                   | YES                                                                                                                         |

c. Measured under the following conditions: Charged and discharged at a constant power of 0.2C.



| Items                          | Unit | MS-7K-U                                                                                       |
|--------------------------------|------|-----------------------------------------------------------------------------------------------|
| <b>Features and compliance</b> |      |                                                                                               |
| Indicator                      |      | LEDs for SOC & Status                                                                         |
| Communication                  |      | CAN                                                                                           |
| Services <sup>d</sup>          |      | 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 |

d. Work together with ATMOCE Gateway.