ATMOCE

Residential Solar Solution

Creating a Better World with Renewable Energy

Making Clean Energy Accessible Through Smarter Solar Solution

The atmosphere quietly sustains life.
the beauty we see in rainbows,

Filtering harmful radiation and creating
auroras and clear blue skies.

M-ELV Battery

MS-7K-U

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
- 3.75 kVA Max. continuous input power
  5 kVA Max. output power
- 126 kWh scalability [a]

Flexibility & Adaptability

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

More Reliability

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

a. This value defines the maximum scalable capacity achievable with one M-Gateway.

Items	Unit	MS-7K-U
Electrical Parameters		
Max. Continuous Output Power	kVA	4.5
Max. Output Power	kVA	5
Max. Continuous Input Power	kVA	3.75
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.
Max. Output Current	A	22.73 @ 220 Va.c., 7.58 @ 380 Va.c. 21.74 @ 230 Va.c., 7.25 @ 400 Va.c.
Power Factor (Adjustable)		0.8 leading···0.8 lagging
AC Round-Trip Efficiency	%	90
THDi	%	<3
Battery		
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
BMS		YES
Mechanical data		
Dimensions (without Bracket)	mm	480 × 830 × 195 (W × H × D)
Lifting Weight (without Bracket)	kg	73.5
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	%	4 to 100, condensing
Altitude	m	Up to 3,000
Pollution Rating		PD3
Operation Noise	dB	< 35

Items	Unit	MS-7K-U
Protection		
AC Port Overvoltage Class		III
AC Surge Protection		TYPE II
Galvanic Isolation		YES
Insulation Resistance Monitor		YES
Anti-Islanding Protection		YES
Features and Compliance		
Indicator		LEDs for SOC & Status
Communication		CAN
Services [b]		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

b. Work together with ATMOCE Gateway.

Disclaimer: Performance figures are obtained under specific testing conditions by ATMOCE's internal laboratory. These values are not guarantees, and actual performance is subject to variation depending on the final product design, software versions, user behavior, and the operational environment.

M-Combiner Pro

MC100PRO-T3P / MC100PRO-S1P

Safety & Reliability

- IP65 design for indoor and outdoor installations
- Reliability verification in extreme scenarios
- Reinforced insulation for improved safety

Power Outage Protection

- On-grid / off-grid mode
- Seamless switching < 10 ms
- Integrates diesel generator and 3rd party solar power

Flexibility & Intelligence

- Remote management of home electricity
- Bi-directional communication between devices and ATMOCE-Cloud

Easy Installation

- Pre-installed and pre-connected
- Easy system activation by using the ATMOZEN APP
- Simplified wiring

Items	Unit	MC100PRO-T3P	MC100PRO-S1P
What's In The Combiner PRO			
M-Gateway MG100		1 × MG100	1 × MG100
Gateway Breaker		1 × unit, 10 A, 3-pole	1 × unit, 10 A, 1-pole
3rd Party PV-side Breaker [a]		1 × unit, 63 A, 3-pole	1 × unit, 63 A, 1-pole
PV-side Breaker [a]		1 × unit, 63 A, 3-pole	1 × unit, 63 A, 1-pole
Grid-side Breaker		1 × unit, 63 A, 3-pole	1 × unit, 63 A, 1-pole
Non Backup Terminal		1× unit, 3-pole	1 × unit, 1-pole
Battery-side Breaker		1 × unit, 63 A, 3-pole	1 × unit, 63 A, 1-pole
Bypass Breaker		1 × unit, 63 A, 3-pole	1 × unit, 63 A, 1-pole
Backup Load Breaker		1 × unit, 63 A, 3-pole	1 × unit, 63 A, 1-pole
PV CT		3 × CTs, accurate up to 0.1%	1 × CT, accurate up to 0.1%
Battery CT		3 × CTs, accurate up to 0.1%	1 × CT, accurate up to 0.1%
Consumption CT Interface		3 × CTs, accurate up to 0.1%	1 × CT, accurate up to 0.1%
Electrical Parameters			
Grid Setup		Three-phase	Single-phase
Nominal Voltage	V	380/400/415Va.c.	220/230/240Va.c.
Operating Voltage Range (L to N)	V	176 to 276	176 to 276
Nominal Frequency	Hz	50/60	50/60
Extended Frequency Range	Hz	45 to 65	45 to 65
Overvoltage Category		III	III
Mechanical Parameters			
Dimensions (W × H × D)	mm	475 × 650 × 150	
Weight	kg	22	
Ambient Temperature Range	℃	-30 to 50	
Cooling		Natural convection	
Enclosure Environmental Rating		Outdoor, IP65	
Wire Sizes [b]	mm^2	Pv side: 6 to 16| Grid side: 6 to 16 | Battery side: 2.5 to 16	
Communication Cable Sizes	mm^2	0.25 to 0.75	
Communication		PLC, Wi-Fi, BLE, ETH, CAN, RS485	
Noise	dB	<35	
Altitude	m	3000	
Protection Class		II	
Pollution Degree		III	

Items	Unit	MC100PRO-T3P	MC100PRO-S1P
Communication Interfaces			
Grid Side	DRM0	Support	
Battery Side	CAN	Support	
Load Side	ETH	1 × Interface, 100 Mb/10 Mb Auto-adaptability	
	Digital I/O	4 × 12 V DO, 3 × DI	
	RS485	Support	
	Digital I/O for Generator	1 × DO, 1 x DI, 1 × RS485	
Atmoce-Cloud	Wi-Fi	2.4 GHz	
	ETH	1 × Interface, 100 Mb/10 Mb Auto-adaptability	
Atmozen App	BLE	2.4 GHz	
Indicators		5 × LEDs	
Compliance			
Safety		IEC 61439-1/-2	
Health		IEC 62311	
EMC		EN 301 489-1/-17, IEC 61000-6-1/-3	
Radio Spectrum		EN 300 328	
PLC		EN 50065-1/-2	

a. The standard configuration of the PV-side breaker is 20A, which can be replaced with a 25A / 32A rated circuit breaker, supporting a maximum of 30kW.

b. Refer to the local electrical regulations to select the cable size.

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ATMOCE Retrofit Cases

Location: **Brisbane, Australia**

Capacity: **3.5kWp + 21kWh**

Configuration: **MS-7K-U × 3, M-Backup × 1, MG100 × 1**

Location: **Brisbane, Australia**

Capacity: **10kWp + 14kWh**

Configuration: **MS-7K-U × 2, M-Backup × 1, MG100 × 1**

Location: **Wassenaar, the Netherlands**

Capacity: **5kWp + 7kWh**

Configuration: **MS-7K-U × 1, MG100 × 1**

Location: **Bielsk Podlaski, Poland**

Capacity: **4.92kWp + 7kWh**

Configuration: **MS-7K-U × 1, MG100 × 1**

ATMOCE Installation Cases

Location: **Mont d'Or, France**

Capacity: **9kWp**

Configuration: **MI-500 × 18, MC100 × 1**

Location: **Staufen im Breisgau, Germany**

Capacity: **23.5kWp + 21kWh**

Configuration: **MI-400 × 51, MC100-T × 1, MS-7K-U × 3**

Location: **Hauterives, France**

Capacity: **8.1kWp**

Configuration: **MI-450 × 18, MC100-T × 1**

Location: **Ruppoldsried, Switzerland**

Capacity: **21.6kWp + 28kWh**

Configuration: **MI-450 × 48, MC100 × 1, MS-7K-U × 4**

ATMOSPHERE CLEAN ENERGY

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