Consistent
Energy Storage Concept
CESC

User Manual

MODEL: Orion 1000 MC

DC Coupling Micro Converter

CESC NEW ENERGY TECHNOLOGY CO., Ltd.

www.cescpower.com

30408006201

Contents

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02 Safety

⚠ CAUTION

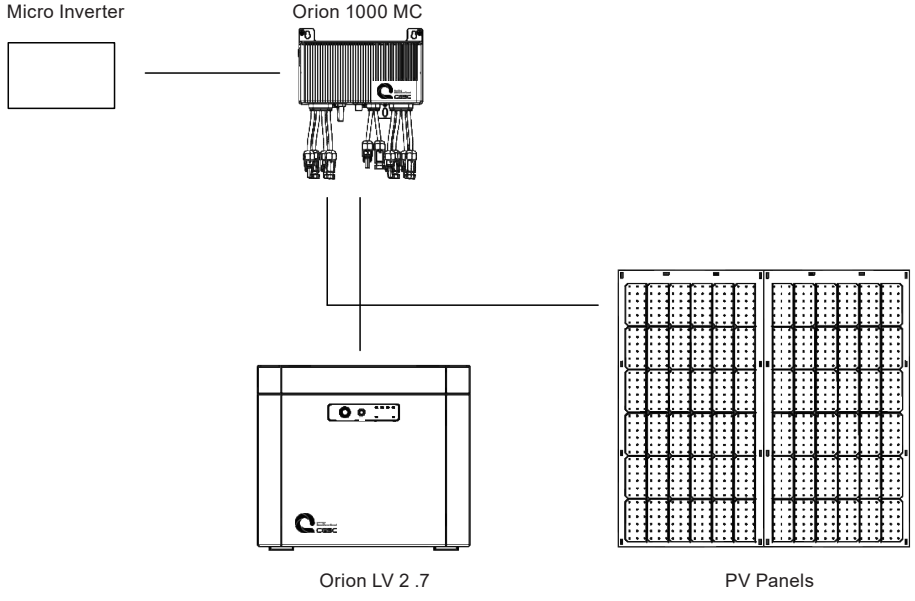
- Danger of burn injuries due to hot enclosure parts!
- During operation, the upper lid and the body of the enclosure will turn to be hot.
- During operation, touching the lower enclosure lid is allowed only.
- Comply with the local requirements for grounding the PV modules.

- Keep 20cm away from the inverter for a long time.
- All behaviors regarding transport, installation, start-up and maintenance must be operated by qualified, trained personnel in compliance with all prevailing codes and regulations.

⚠ WARNING

- Ensure that input DC voltage/current is less than Max. DC voltage/current.
- Over voltage/current may cause permanent damage or other losses to inverter, which is not included in warranty!
- Do not operate the inverter when the device is running.
- High leakage current!
- Earth connection is essential before connecting supply.
- Before installation, inspect the unit to escape any transport or handling damage which could affect insulation integrity or safety clearances.

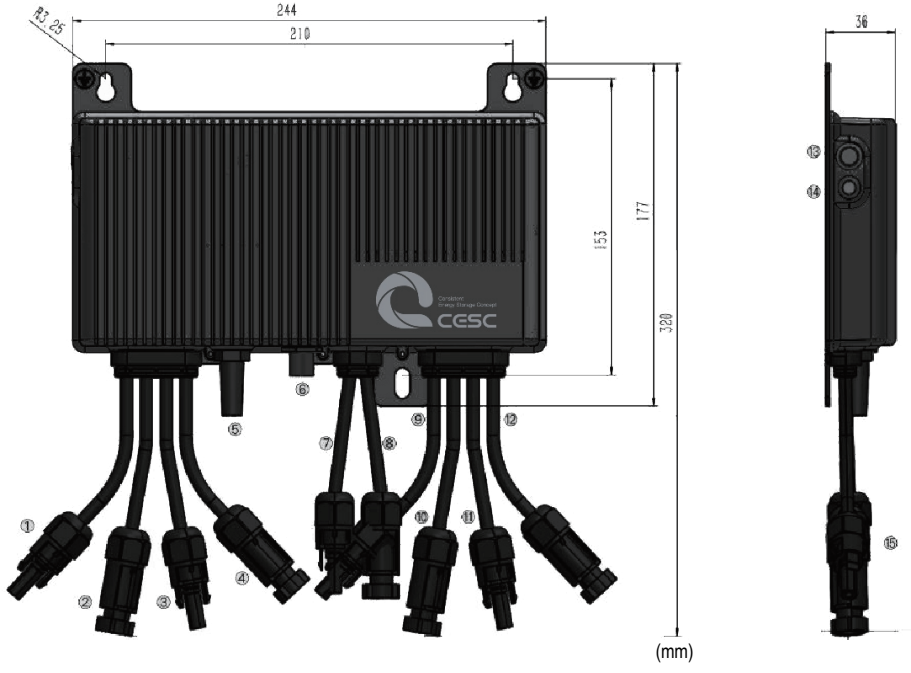
03 System introduction



The Orion 1000 MC DC-DC converter can provide power to your home in the powerful and effcient way. It is also incredibly reliable that has robust construction and advanced safety features. It can be installed on the balcony of apartments where it is convenient and space-saving to meet power needs.

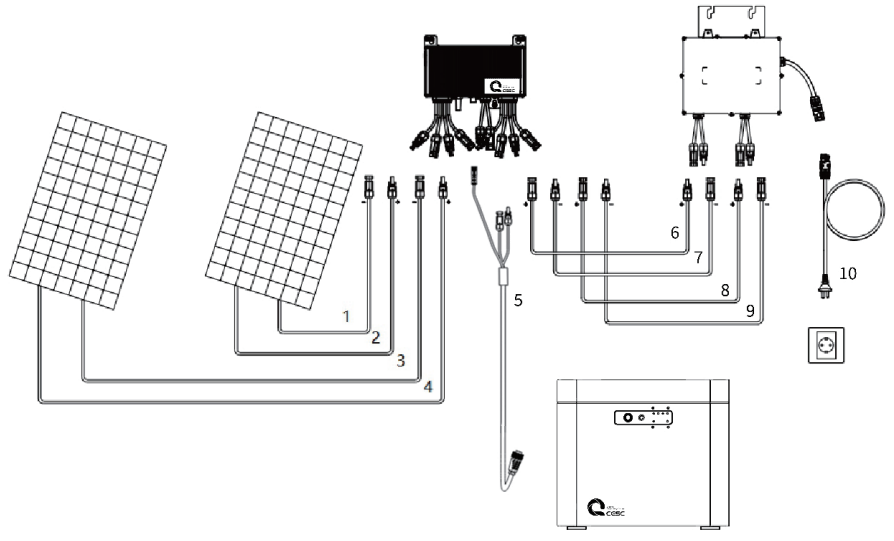
It can be used in conjunction with the battery to store excess energy generated during the day. This energy can be released to power home loads for later use, saving money on energy bills.

3.1 Product Description



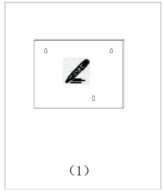
1	To Pv1(-)
2	To Pv1(+)
3	To PV2(-)
4	To Pv2(+)
5	WIFI Bar
6	Can communication
7	To Battery (-)
8	To Battery (+)
9	To Inverter 1(-)
10	To Inverter 1(+)
11	To Inverter 2(-)
12	To Inverter 2(+)
13	ON/OFF Button
14	Indicator
15	AC pigtail cable

3.2 Wiring



NO.	Wiring
1	PV1 DC-
2	PV1 DC+
3	PV2 DC-
4	PV2 DC+
5	a: Battery DC-
	b: Battery DC+
	c: Battery Communication: CAN bus
6	DC1+ to Micro-inverter
7	DC1- to Micro-inverter
8	DC2+ to Micro-inverter
9	DC2- to Micro-inverter
10	AC Extension Cable

3.3 Installation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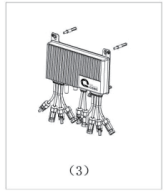
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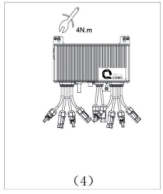
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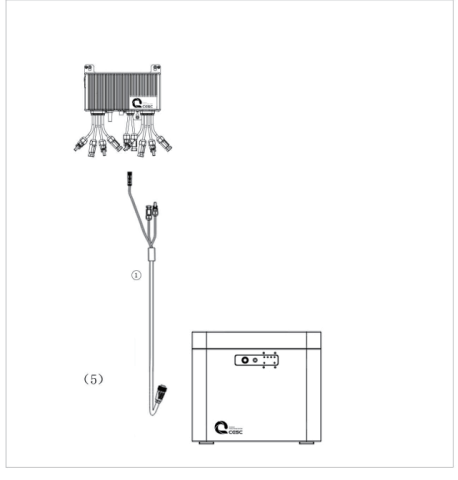
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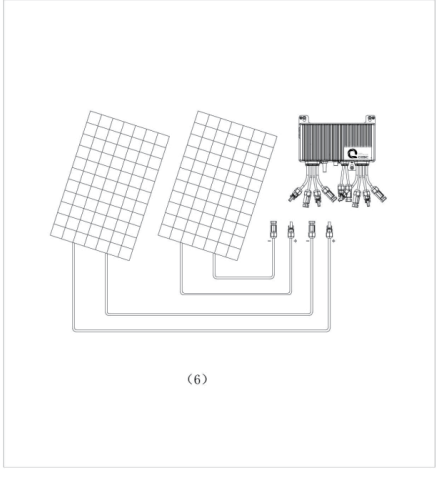
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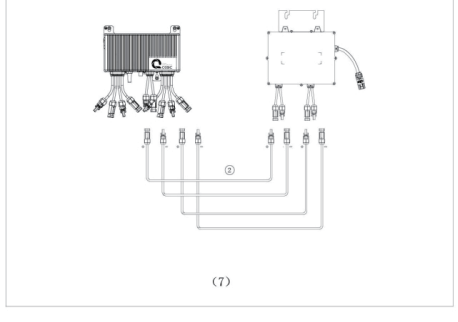
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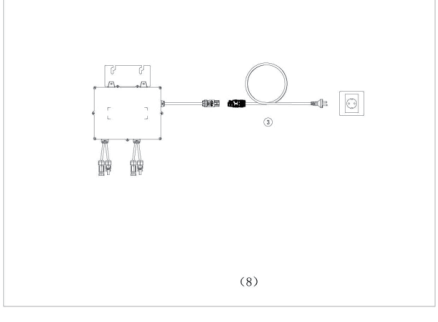
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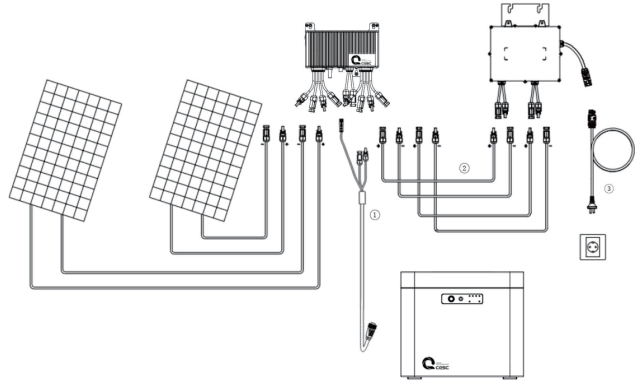
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04 Running status

LED Indicators	Long off	Fast Flash	Flash every 1 second	Flash every 2 seconds	Flash every 4 seconds
Red	Device shutdown	Network configuration mode	Device failure	Device failure	Device failure
Green	Device shutdown	Network configuration mode	Network configuration successful and device standby	Network configuration successful and device standby	Network configuration successful and device running
Orange	Device shutdown	Network configuration mode	Network configuration failure and device standby	Network configuration failure and device standby	Network configuration failure and device running

05 Specification

PV Input | DC		
Recommended PV Module	W	750*2
MPPT Voltage Range	V	22-55
Start-up Voltage	V	24
Max. Input Voltage	V	60

Max. Input Current	A	15*2
Min. Input Voltage	V	20
Max. DC Short Circuit Current	A	20*2
Battery Discharge to Orion 1000 I DC		
Max. Input Power	W	1000
Max. Input Current	A	20
Rated Voltage	V	51.2
Orion 1000 Charge to Battery I DC		
Max. Output Power	W	1000
Max. Output Current	A	30
Rated Voltage	V	51.2
Output to Micro-inverter I DC		
Recommended Micro-inverter Power	W	less than 1000
Max. Output Power	W	1000
Max. Output Current	A	20
Rated Voltage Range	V	22-60
Efficiency		
Peak Efficiency	%	97.3
MPPT Efficiency	%	>99.5
Protection		
Overvoltage Protection		Integrated
Overcurrent Protection		Integrated
Short Circuit Protection		Integrated
Temperature Protection		Integrated
General Data		
Operating Ambient Temperature Range	°C	-40-65
Relative Humidity Range	%	0-100
Dimensions (W*H*D)	mm	244*177*36
Weight (not including battery)	kg	2.2
Communication Method		WiFi
Protection Class		IP67