NORTHERN ELECTRIC

BDS-1000

User Manual

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2. Safety

Caution!

1) **Danger of burn injuries due to hot enclosure parts!**

During operation, the upper lid of the enclosure and the body may become hot.
Only touch the lower enclosure lid during operation.

2) **Comply with the local requirements for grounding the PV modules.**

3) **Do not stay closer than 20 cm to the inverter for any length of time.**

4) **All operations regarding transport, installation and start-up.**

Including maintenance must be operated by qualified, trained personnel and in compliance with all prevailing codes and regulations.

Warning!

1) **Ensure input DC voltage/current ≤Max. DC voltage/current**

Over voltage/current may/cause permanent damage to inverter or other losses, which will not be included in warranty!

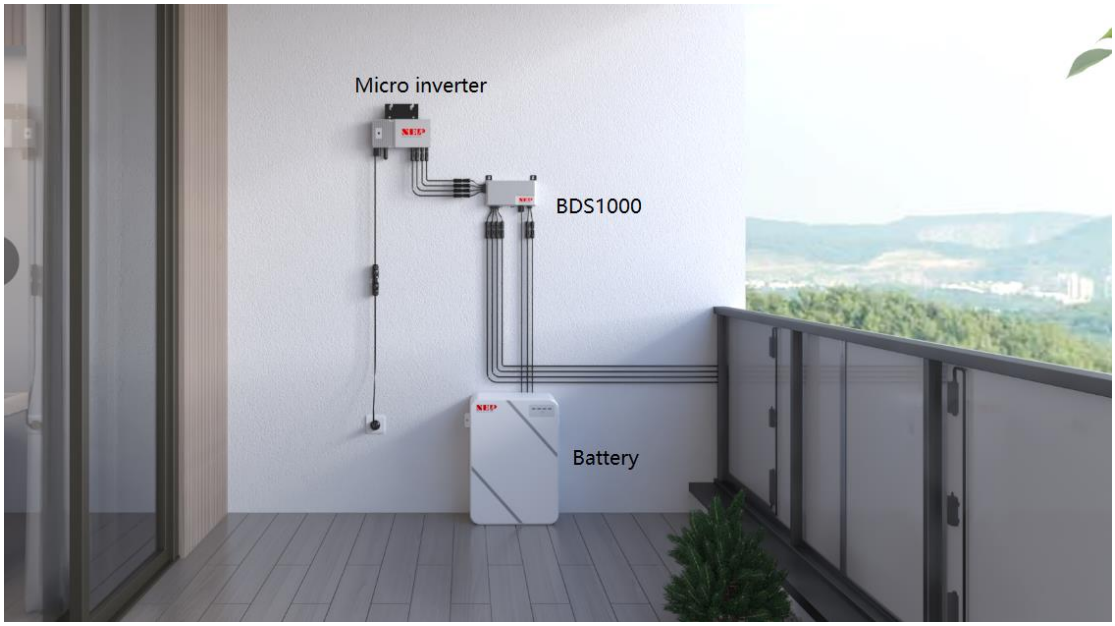
2) **Do not operate the inverter when the device is running**

3) **High leakage current!**

Earth connection essential before connecting supply

4) **Prior to installation, inspect the unit to ensure absence of any transport or handling damage, which could affect insulation integrity or safety clearances; failure to do so could result in safety Hazards**

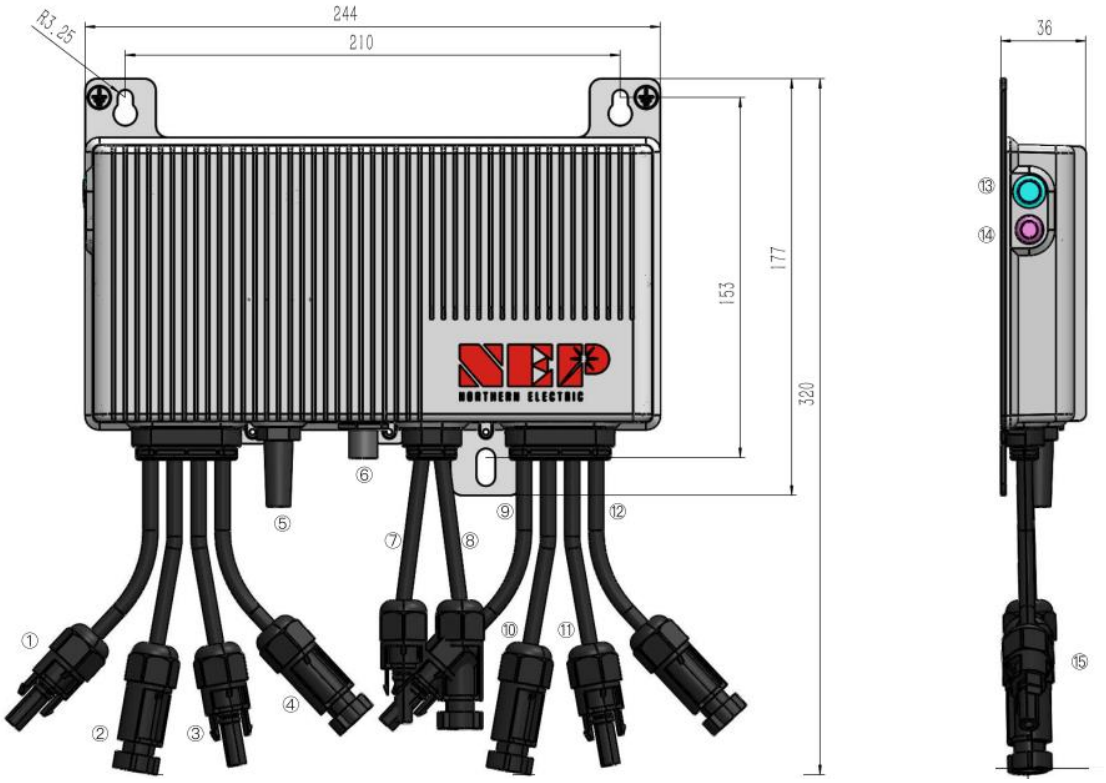
3. System Introduction



The BDS1000 DC-DC converter is a powerful and efficient way to power your home. It is also incredibly reliable, with robust construction and advanced safety features. It can be installed on the balcony of apartments, making it a convenient and space-saving solution for power needs.

It can be used in conjunction with a battery and the micro inverter to store excess energy generated during the day. This energy can then be released to power home loads for later use, helping you to save money on your energy bills.

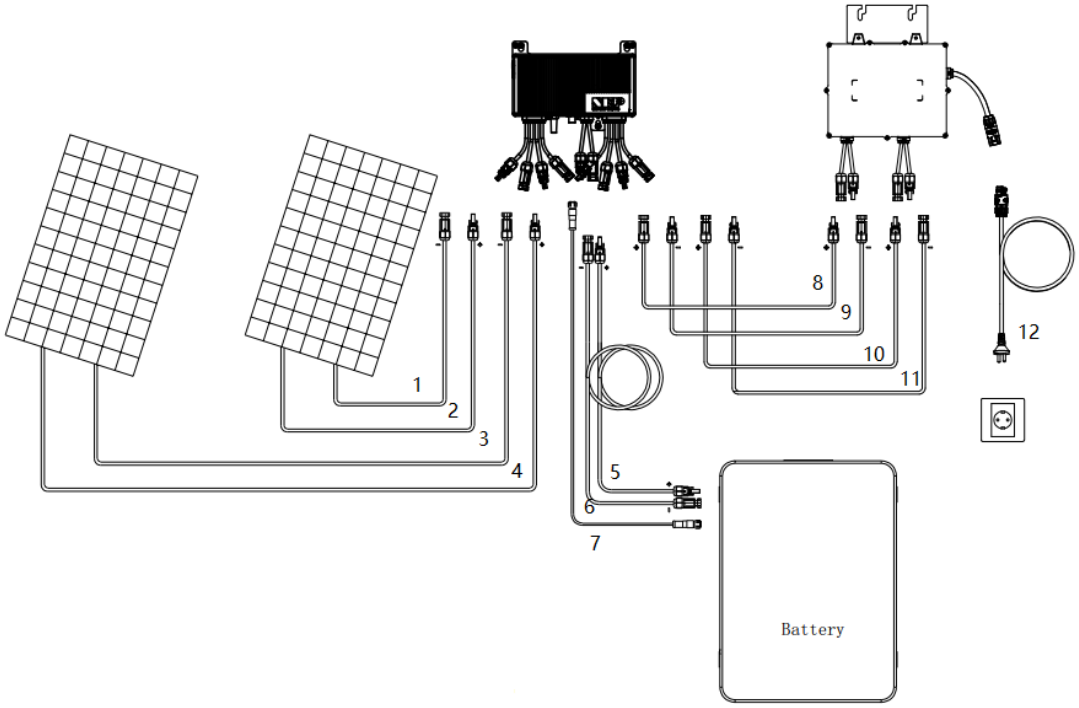
3.1. Product Description



(mm)

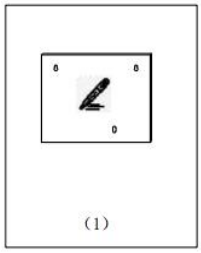
1	To PV1(-)
2	To PV1(+)
3	To PV2(-)
4	To PV2(+)
5	WIFI Bar
6	Can communication
7	To Battery (-)
8	To Battery (+)
9	To Inverter1(-)
10	To Inverter 1(+)
11	To Inverter 2(-)
12	To Inverter 2(+)
13	ON/OFF Button
14	Indicator
15	AC pigtail cable

3.2. Wiring



NO.	Wiring
1	PV1 DC-
2	PV1 DC+
3	PV2 DC-
4	PV2 DC+
5	Battery DC+
6	Battery DC-
7	Battery Communication: CAN bus
8	DC1+ to Microinverter
9	DC1- to Microinverter
10	DC2+ to Microinverter
11	DC2- to Microinverter
12	AC Extension Cable

3.3. Installation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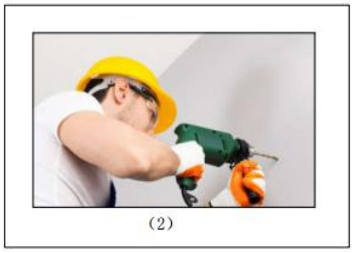
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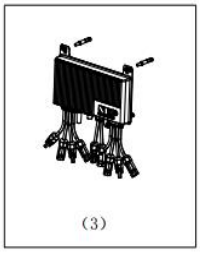
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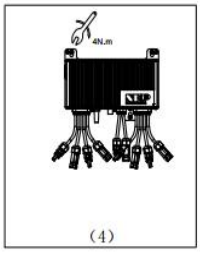

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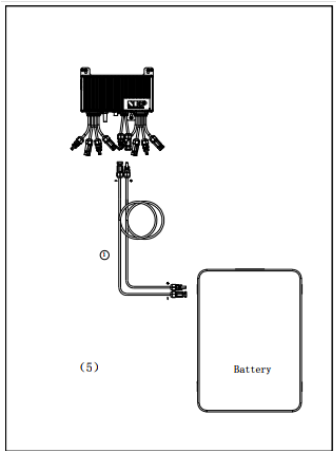

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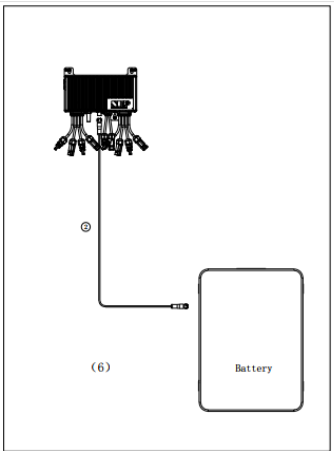

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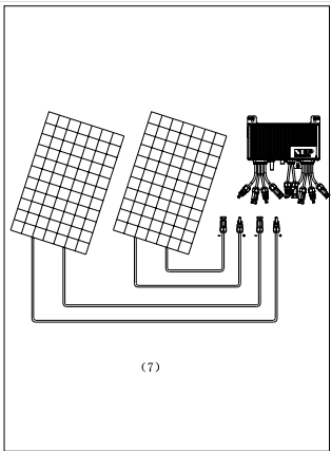
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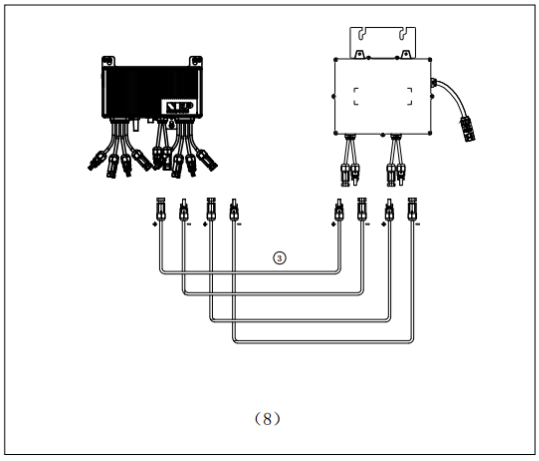
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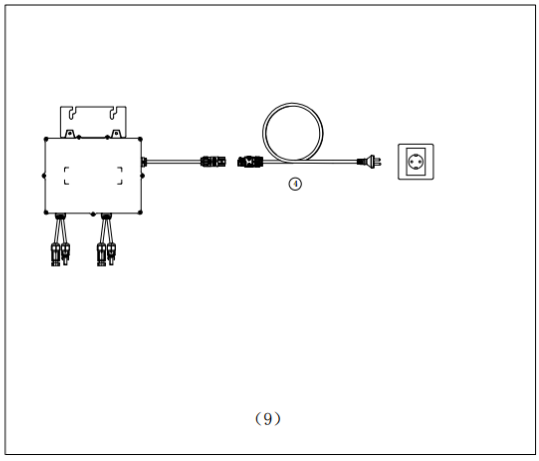
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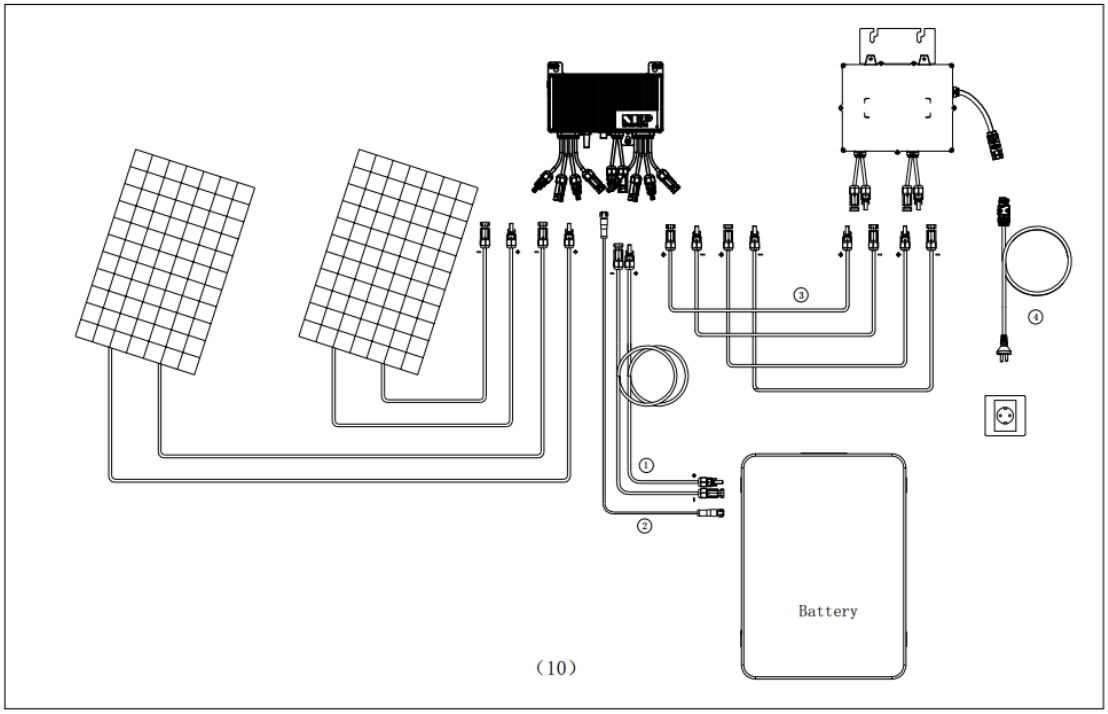

4. Running Status

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

5. Specification

PV Input | DC		
Recommended. PV Module	W	750 * 2
MPPT Voltage Range	V	22-55
Startup 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 BDS I DC		
Max.Input Power	W	1000
Max. Input Current	A	20
Rated Voltage	V	51.2
BDS Charge to Battery I DC		
Max. Output Power	W	1000
Max. Output Current	A	30
Rated Voltage	V	51.2
Output to Microinverter I DC		
Recommended. Microinverter Power	W	less than 1000 W
Max. Output Power	W	1000 W
Max. Output Current	A	20
Nominal 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	℃	-40-65
Relative Humidity Range	%	0-100%
Dimensions (W x H x D)	mm	180 x 244 x 31
Weight (not including battery)	kg	2.2
Communication Method		WiFi
Protection Class		IP67