



NEP MICROINVERTER PORTFOLIO

- ◆ MLPE Rising Star
- ◆ www.northernep.com

20
23



WHO WE ARE



For over a decade, Northern Electric Power (NEP) has been employing innovation and cutting-edge technology to shape the future of solar energy. From the United States to numerous countries worldwide, NEP's MLPE products have spearheaded a transformation in renewable energy solutions.

At the heart of NEP's dedication lies a focus on safety, reliability, cost-effectiveness, and customer satisfaction. Our unwavering commitment is to offer sustainable solutions that not only create value for their shareholders but also empower individuals worldwide to reap the benefits of clean energy sources. As a Benefit Corporation, NEP actively pursues positive environmental, social, and financial results.

WHO WE ARE



2009
NEP founded

2011

Launch of BDM-250
microinverters on the market

2013

Northern Electric & Power
Inc founded in Japan

BDM-300 microinverter
acquires UL certification

2015

Northern Electric & Power Inc.
acquires Japanese certification, the
only microinverter for sale in Japan

BDM-600 launched

2017

Rapid Shutdown Device
achieves UL certification

2018

NEP repositioned to the
research design and application
of MLPE (Module Level Power
Electronics)

2020

NEP reformulated as a Benefit
Corporation in America

BDM-800 launched

2021

Launch of globalization program

Second headquarter established
in Suzhou

Series-A Equity funding

2022

Production facility
established in Thailand

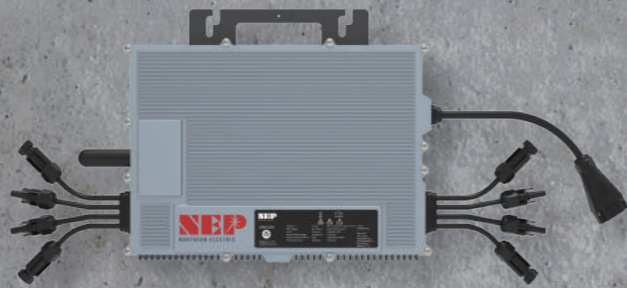
Globalized NEP

With years of development, NEP has two global headquarters in San Jose U.S. and Suzhou China. NEP has also reached out and set branches to provide localized service to clients.

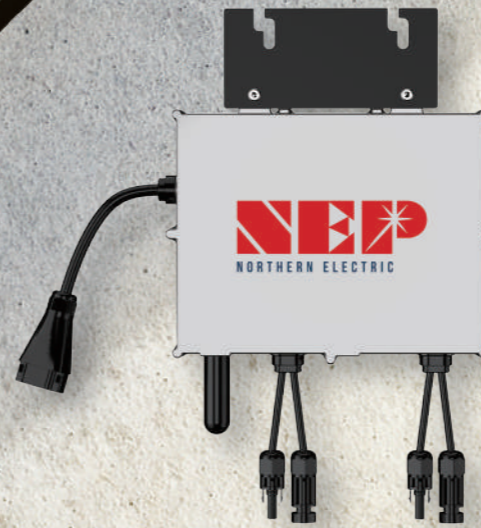




BDM-300/400
Micro Inverter



BDM-2000
Micro Inverter



BDM-800/1000
Micro Inverter



BDM-500/600/600X
Micro Inverter

CASE SHARE

NEP Monitoring Platform NEPViewer

Industrial Project, Fukuoka Japan

340kW Floating PV, with BDM-300



Web-based & mobile app monitoring
Data point plotted every 1 minute

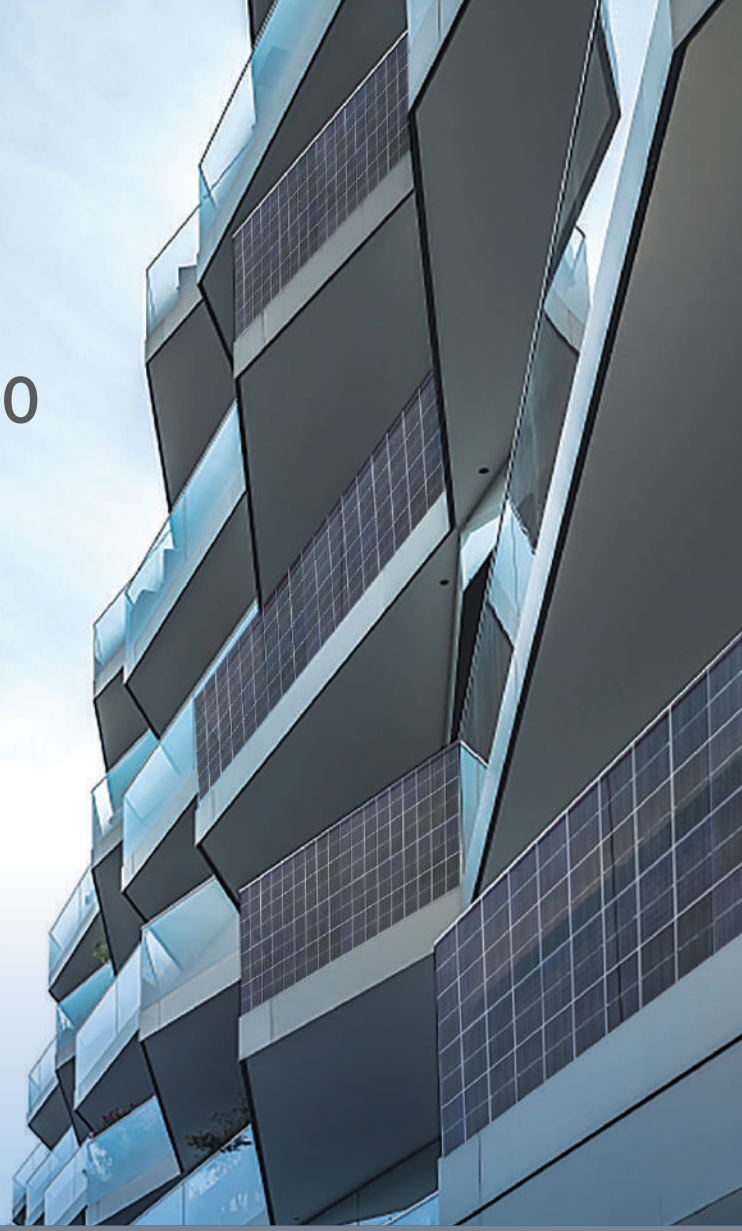


BDM-300/400/600X/800

Micro Inverter

BUILT-IN WIFI INSTANT PV

Balcony Solution



Features

efficiency

- MTTP tracking efficiency up to 99.9%
- CEC weighted average efficiency up to 96.5%
- independent MTTP tracking
- Different orientations & other "short board effects"

- Like system shadow occlusion

security

- maximum DC input voltage is 60V
- equipped with various protections such as GFDI, surge protection

reliability

- IP66/IP67 protection level
- 12 years warranty with 25 years extension.

- -40°C to 85°C operating temperature

flexibility

- plug and play installation
- easy to expand or change

- simple and convenient

certification

- UL, RED, EMC, ROHS, VDE, UTE, CEI, CE and others

Intelligence

- component level monitoring with built-in PLC and WiFi communication methods
- real-time control of power plant operation status
- automatic high temperature and fault warning
- accurate to every minute of data
- precise positioning of fault points

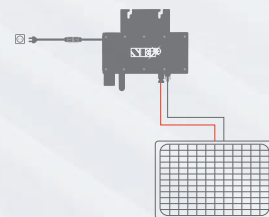
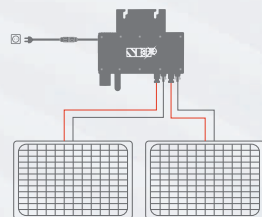


BDM-300/400

BDM-600X



BDM-800



Model

BDM-300/400/600X/800

Input DC	BDM-300	BDM-400	BDM-600X	BDM-800
Recommended PV Module Power Range /W	450	600	450 x 2	600 x 2
MPPT Voltage Range /V	22-55			
Startup Voltage /V	24			
Max. Input Voltage /V	60			
Max. Input Current /A	14		18 x 2	17 x 2
Overvoltage Protection Category	II			

Output AC	BDM-300	BDM-400	BDM-600X	BDM-800
Peak Output Power /VA	350	400	650	800
Max. Continuous Output Power /VA	300	350	600	750
Rated Output Voltage /V	230			
Nominal Output Voltage Range /V	207 ~ 253			
Max. Continuous Output Current /A	1.3	1.52	2.61	3.26
Nominal Frequency / Range /Hz	50 / Configurable			
Power Factor (Nominal/Adjustable Range)	1.0/0.9 leading...0.9 lagging			
AC Short Circuit Fault Current Over 3 cycles /Arms	2.2	2.4	4.4	8.2
THDi@Rated Power	<3%			
Overvoltage Protection Category	III			

Efficiency	BDM-300	BDM-400	BDM-600X	BDM-800
Peak Efficiency	97.1%	97.3%	97.1%	97.3%
MPPT Efficiency	>99.5%			
Night Power Consumption /mW	80		110	

General Data	BDM-300	BDM-400	BDM-600X	BDM-800
Operating Ambient Temperature Range /°C	-40~65			
Relative Humidity Range	0-100%			
Dimensions (W x H x D) /mm	180 x 186 x 25		227 x 132 x 50	268 x 250 x 42
Weight /kg	1.5		2.9	
DC Connector Type	MC4			
AC Connection Type	Plugin AC Connector			
AC Cable Length /m	5 (10, 15, 25 optional)			
Communication Method	WiFi			
Protection Class	IP-67			

BDM-300/400

Micro Inverter



Features

efficiency

- MTTP tracking efficiency up to 99.9%
- CEC weighted average efficiency up to 96.5%
- independent MTTP tracking
- Different orientations & other "short board effects"
- Like system shadow occlusion

security

- maximum DC input voltage is 60V
- equipped with various protections such as GFDI, surge protection

reliability

- IP66/IP67 protection level
- 12 years warranty with 25 years extension.
- -40°C to 85°C operating temperature

flexibility

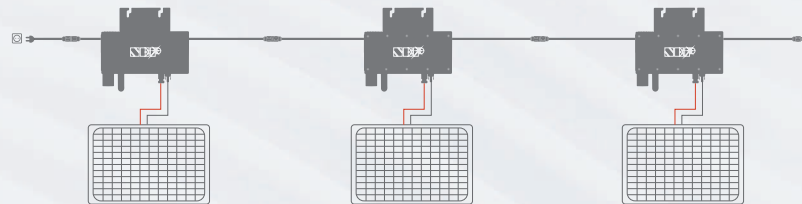
- plug and play installation
- easy to expand or change
- simple and convenient

certification

- RED, ROHS, UTE, EMC, CEI and others

Intelligence

- component level monitoring with built-in PLC and WiFi communication methods
- real-time control of power plant operation status
- accurate to every minute of data
- automatic high temperature and fault warning
- precise positioning of fault points



More effective | Max. Efficiency 97.1%

Global Certification | RED, ROHS, UTE, EMC, CEI

More secure | Built-in grounding
Lightning protection 6000V

More Reliability | IP67

Model

BDM-300/400

Input DC	BDM-300	BDM-400
Recommended PV Module Power Range /W	450	600
MPPT Voltage Range /V	22-55	
Startup Voltage /V	24	
Max. Input Voltage /V	60	
Max. Input Current /A	14	
Overvoltage Protection Category	II	
Output AC		
Peak Output Power /VA	350	400
Max. Continuous Output Power /VA	300	350
Rated Output Voltage /V	230	
Nominal Output Voltage Range /V	Configurable	
Max. Continuous Output Current /A	1.3	1.52
Nominal Frequency / Range /Hz	50 / Configurable	
Power Factor (Nominal/Adjustable Range)	1.0/0.9 leading...0.9 lagging	
AC Short Circuit Fault Current Over 3 cycles /Arms	2.2	2.4
THDi@Rated Power	<3%	
Max. Units per 20A Branch	12	10
Overvoltage Protection Category	III	
Efficiency		
Peak Efficiency	97.1%	97.3%
MPPT Efficiency	>99.5%	
Night Power Consumption /mW	80	
General Data		
Operating Ambient Temperature Range/°C	-40~65	
Relative Humidity Range	0-100%	
Dimensions (W x H x D) /mm	180 x 186 x 25	
Weight /kg	1.5	
DC Connector Type	MC4	
AC Connection Type (inverter-inverter)	Daisy Chain AC Bus	
Communication Method	PLC or WiFi	
Protection Class	IP-67	

1 The AC voltage range may vary depending on specific country grid
2 The AC frequency range may vary depending on specific country grid

BDM-500/600/600X

Micro Inverter



Features

efficiency

- MTTP tracking efficiency up to 99.9%
- CEC weighted average efficiency up to 96.5%
- Independent MTTP tracking
- Different orientations & other "short board effects"
- Like system shadow occlusion

security

- maximum DC input voltage is 60V
- equipped with various protections such as GFDI, surge protection

reliability

- IP66/IP67 protection level
- 12 years warranty with 25 years extension.
- -40°C to 85°C operating temperature

flexibility

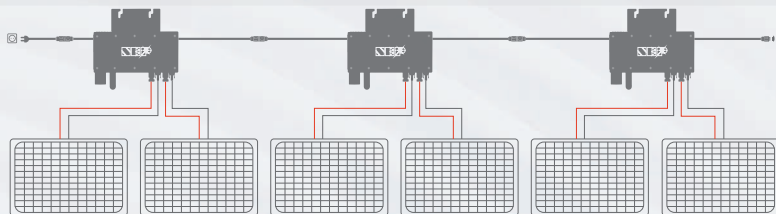
- plug and play installation
- easy to expand or change
- simple and convenient

certification

- EMC, RED, ROHS, CEI, VDE, CE and others

Intelligence

- component level monitoring with built-in PLC and WiFi communication methods
- real-time control of power plant operation status
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Lightning protection 6000V

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Model

BDM-500/600/600X

Input DC	BDM-500	BDM-600	BDM-600X
Recommended PV Module Power Range /W	375 x 2	450 x 2	
MPPT Voltage Range /V	22-55		
Startup Voltage /V	24		
Max. Input Voltage /V	60		
Max. Input Current /A	12.5 x 2	18 x 2	
Overvoltage Protection Category	II		
Output AC			
Peak Output Power /VA	550	600	650
Max. Continuous Output Power /VA	500	580	600
Rated Output Voltage /V	230		
Nominal Output Voltage Range /V	Configurable		
Max. Continuous Output Current /A	2.17	2.52	2.61
Nominal Frequency / Range /Hz	50 / Configurable		
Power Factor (Nominal/Adjustable Range)	1.0/0.9 leading...0.9 lagging		
AC Short Circuit Fault Current Over 3 cycles /Arms	4.4		
THDi@Rated Power	<3%		
Max. Units per 20A Branch	7	6	
Overvoltage Protection Category	III		
Efficiency			
Peak Efficiency	97.1%		
MPPT Efficiency	>99.5%		
Night Power Consumption /mW	110		
General Data			
Operating Ambient Temperature Range /°C	-40-65		
Relative Humidity Range	0-100%		
Dimensions (W x H x D) /MM	227 x 132 x 50		
Weight /kg	2.9		
DC Connector Type	MC4		
AC Connection Type (inverter-inverter)	Daisy Chain AC Bus		
Communication Method	PLC or WiFi		
Protection Class	IP-67		

1 The AC voltage range may vary depending on specific country grid
2 The AC frequency range may vary depending on specific country grid

BDM-800/1000

Micro Inverter



Features

efficiency

- MTTP tracking efficiency up to 99.9%
- CEC weighted average efficiency up to 96.5%
- independent MTTP tracking
- Different orientations & other "short board effects"
- Like system shadow occlusion

security

- maximum DC input voltage is 60V
- equipped with various protections such as GFDI, surge protection

reliability

- IP66/IP67 protection level
- -40°C to 85°C operating temperature
- 12 years warranty with 25 years extension.

flexibility

- plug and play installation
- easy to expand or change
- simple and convenient

certification

- UL, RED, ROHS, EMC, UTE, INMETRO, VDE, CE and others

Intelligence

- component level monitoring with built-in PLC and WiFi communication methods
- real-time control of power plant operation status
- accurate to every minute of data
- automatic high temperature and fault warning
- precise positioning pf fault points

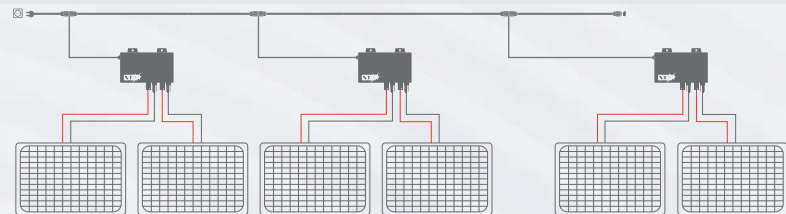


More effective | Max. Efficiency 97.1%

Global Certification | UL, RED, ROHS, EMC, UTE, INMETRO, VDE, CE

More secure | Built-in grounding
Lightning protection 6000V

More Reliability | IP67



Model

BDM-800/1000

Input DC	BDM-800	BDM-1000
Recommended PV Module Power Range /W	600 x 2	750 x 2
MPPT Voltage Range /V	22-55	
Startup Voltage /V	24	
Max. Input Voltage /V	60	
Max. Input Current /A	17 x 2	18 x 2
Overvoltage Protection Category	II	
Output AC		
Peak Output Power /VA	800	1000
Max. Continuous Output Power /VA	750	960
Rated Output Voltage /V	230	
Nominal Output Voltage Range /V	Configurable	
Max. Continuous Output Current /A	3.26	4.17
Nominal Frequency / Range /Hz	50 / Configurable	
Power Factor (Nominal/Adjustable Range)	1.0/0.9 leading...0.9 lagging	
AC Short Circuit Fault Current Over 3 cycles /Arms	8.2	
THDi@Rated Power	<3%	
Max. Units per 20A Branch	5	4
Overvoltage Protection Category	III	
Efficiency		
Peak Efficiency	97.3%	
MPPT Efficiency	>99.5%	
Night Power Consumption /mW	110	
General Data		
Operating Ambient Temperature Range /°C	-40-65	
Relative Humidity Range	0-100%	
Dimensions (W x H x D) /mm	268 x 250 x 42	
Weight /kg	2.9	
DC Connector Type	MC4	
AC Connection Type (inverter-inverter)	Trunk Cable	
Communication Method	PLC or WiFi	
Protection Class	IP-67	

1 The AC voltage range may vary depending on specific country grid
2 The AC frequency range may vary depending on specific country grid

BDM-2000

Micro Inverter



Features

efficiency

- MTTP tracking efficiency up to 99.9%
- CEC weighted average efficiency up to 96.5%
- independent MTTP tracking
- Different orientations & other "short board effects"
- Like system shadow occlusion

security

- maximum DC input voltage is 60V
- equipped with various protections such as GFDI, surge protection

reliability

- IP66/IP67 protection level
- -40°C to 85°C operating temperature
- 12 years warranty with 25 years extension.

flexibility

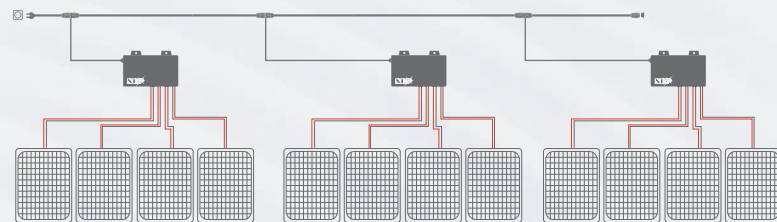
- plug and play installation
- simple and convenient
- easy to expand or change

certification

- UTE, INMETRO, CE and others

Intelligence

- component level monitoring with built-in PLC and WiFi communication methods
- real-time control of power plant operation status
- accurate to every minute of data
- automatic high temperature and fault warning
- precise positioning of fault points



More effective | Max. Efficiency 97.1%

Global Certification | UTE, INMETRO, CE

More secure | Built-in grounding
Lightning protection 6000V

More Reliability | IP67

Model

BDM-2000

Input DC	BDM-2000
Recommended PV Module Power Range /W	750 x 4
MPPT Voltage Range /V	22-55
Startup Voltage /V	24
Max. Input Voltage /V	60
Max. Input Current /A	18 x 4
Overvoltage Protection Category	II
Output AC	BDM-2000
Peak Output Power /VA	2000
Max. Continuous Output Power /VA	1920
Rated Output Voltage /V	230
Nominal Output Voltage Range /V	Configurable
Max. Continuous Output Current /A	8.3
Nominal Frequency / Range /Hz	50 / Configurable
Power Factor (Nominal/Adjustable Range)	1.0/0.9 leading...0.9 lagging
AC Short Circuit Fault Current Over 3 cycles /Arms	15.3
THDi@Rated Power	<3%
Max. Units per 20A Branch	2
Overvoltage Protection Category	III
Efficiency	BDM-2000
Peak Efficiency	97.3%
MPPT Efficiency	>99.5%
Night Power Consumption /mW	110
General Data	BDM-2000
Operating Ambient Temperature Range /°C	-40-65
Relative Humidity Range	0-100%
Dimensions (W x H x D) /mm	337 x 233 x 39.5
Weight /kg	6
DC Connector Type	MC4
AC Connection Type (inverter-inverter)	Trunk Cable
Communication Method	PLC or WiFi
Protection Class	IP-67

1 The AC voltage range may vary depending on specific country grid
2 The AC frequency range may vary depending on specific country grid

CONTACT US

- HEADQUARTERS
- BRANCHES
- SERVICE CONTACTS

SUZHOU / CHINA

- +86 0512 6285 8990
- Lv 9 Kangzhen Building
Louvang Rd 18, SIP

QINGDAO / CHINA

- +86 0532-87963900
- Changcheng South Road 6,
Chenavana District, Qingdao
266109, Shandong

RAYONG / THAILAND

- +66 61 985 4542
- 300/103 Moo.1 TTasitA Pluak
Daeng District 21140

Pleasanton / USA

- +1 888 598 9901
- 4615 First Street, #225
Pleasanton, CA 94566

Yokohama / JAPAN

- +81 090-1972-0847
- 7-33-15 Okurayama, Kohoku-ku,
Yokohama City, Kanagawa
Prefecture, 222-0037

EU Office

Frankfurt am Main/ Germany

Westhafenplatz 1, 60327,
Frankfurt am Main

Amsterdam/ Netherlands

Margriet Toren, Haaksbergweg 75,
Unit 9.1 WS21, 1101 BR Amsterdam

- +44 745 803 8131
+43 80 050 0563
- support_eu@northernep.com
support_dach@northernep.com
- Sales team:
sales.eu@northernep.com

