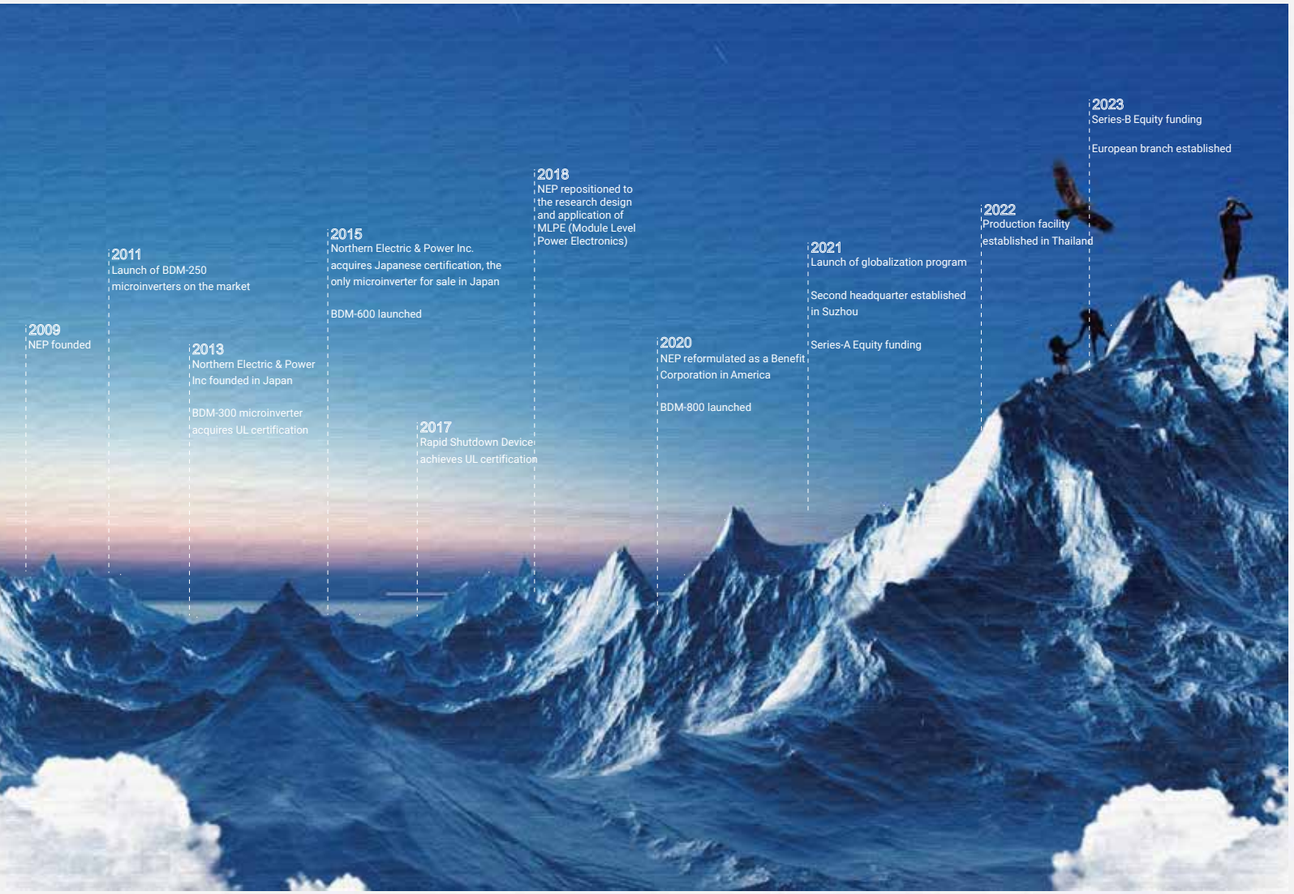
www.northernep.com

NEP PRODUCT PORTFOLIO

- MLPE Rising Star
- www.northernep.com

2025

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.

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-300/350/400

Micro Inverter

Features

efficiency
- MPPT tracking efficiency up to 99.5%
- CEC weighted average efficiency up to 96.5%

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

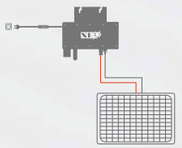
reliability
- IP67 protection level
- -40℃ to 65℃ operating temperature
- 12 years warranty with 25 years extension.

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

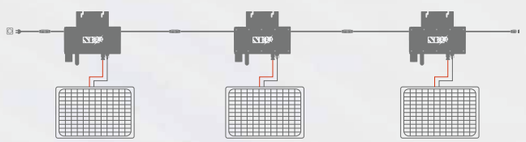
certification
- RED, ROHS, UTE, EMC, CEI and others

Intelligence
- Panel level monitoring with built-in WiFi or PLC communication
- 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

Balcony Solution



Rooftop Solution



More effective — Max. Efficiency 97.1%

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

More secure — Built-in GFDI, Lightning protection 6000V

More Reliability — IP67

Model

BDM-300/350/400

Input | DC	BDM-300	BDM-350	BDM-400
Recommended PV Module Power Range /W	450	520	600
MPPT Voltage Range /Vdc	22-55		
Startup Voltage /Vdc	24		
Max. Input Voltage /Vdc	60		
Max. Input Current /A	14	16	18
Overvoltage Protection Category	II		
Output | AC			
Peak Output Power /VA	300	350	400
Max. Continous Output Power /VA	300	350	400
Rated Output Voltage /Vac	220/230/240		
Nominal Output Voltage Range /Vac	Configurable		
Max. Continous Output Current /A	1.36/1.4/1.25	1.59/1.53/1.46	1.81/1.74/1.67
Nominal Frequency / Range /Hz	50 / 60		
Power Factor (Nominal/Adjustable Range)	>0.99(full load)		
AC Short Circuit Fault Current Over 3 cycles /Arms	2.2	2.4	2.4
THDi@Rated Power	<5%		
Max. Units per 20A Branch	12	11	10
Overvoltage Protection Category	III		
Efficiency			
Peak Efficiency	97.1%	97.3%	97.3%
MPPT Efficiency	>99.5%		
Night Power Consumption /mW	80		
General Data			
Operating Ambient Temperature Range/℃	-40~65		
Relative Humidity Range	0-100%		
Dimensions (W x H x D) /mm	180 x 186 x 25		
Weight /kg	2.1		
DC Connector Type	QC4		
AC Connection Type (inverter-inverter)	Plugin AC Connector or Daisy Chain AC Bus		
Communication Method	PLC or WiFi(2.4G)		
Protection Class	IP66/IP67		

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

Micro Inverter

Features

efficiency
- MPPT tracking efficiency up to 99.5%
- CEC weighted average efficiency up to 96.5%

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

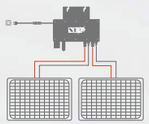
reliability
- IP67 protection level
- -40℃ to 65℃ operating temperature
- 12 years warranty with 25 years extension.

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

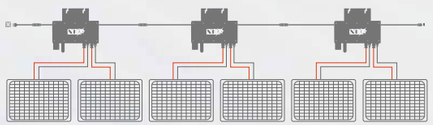
certification
- EMC, RED, ROHS, CEI, VDE, CE and others

Intelligence
- component level monitoring with built-in WiFi or PLC communication
- 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

Balcony Solution



Rooftop Solution



More effective — Max. Effciency 97.1%

Global Certification — EMC, RED, ROHS, CEI, VDE, CE

More secure — Built-in GFDI Lightning protection 6000V

More Reliability — IP67

Model	BDM-500/600	
Input | DC	**BDM-500**	**BDM-600**
Recommended PV Module Power Range /W	375 x 2	450 x 2
MPPT Voltage Range /Vdc	22-55	
Startup Voltage /Vdc	24	
Max. Input Voltage /Vdc	60	
Max. Input Current /A	12.5 x 2	14 x 2
Overvoltage Protection Category	II	
Output | AC		
Peak Output Power /VA	550	650
Max. Continous Output Power /VA	500	600
Rated Output Voltage /Vac	220/230/240	
Nominal Output Voltage Range /Vac	Configurable	
Max. Continous Output Current /A	2.27/2.17/2.09	2.73/2.6/2.5
Nominal Frequency / Range /Hz	50 / 60	
Power Factor (Nominal/Adjustable Range)	>0.99(full load)	
AC Short Circuit Fault Current Over 3 cycles /Arms	4.4	
THDi@Rated Power	<5%	
Max. Units per 20A Branch	7	6
Overvoltage Protection Category	III	
Effciency		
Peak Effciency	97.1%	
MPPT Effciency	>99.5%	
Night Power Consumption /mW	110	
General Data		
Operating Ambient Temperature Range /℃	-40~65	
Relative Humidity Range	0-100%	
Dimensions (W x H x D) /MM	277 x 132 x 50	
Weight /kg	3.9	
DC Connector Type	QC4	
AC Connection Type (inverter-inverter)	Plugin AC Connector or Daisy Chain AC Bus	
Communication Method	PLC or WiFi(2.4G)	
Protection Class	IP66/IP67	

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
- MPPT tracking efficiency up to 99.5%
- CEC weighted average efficiency up to 96.5%

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

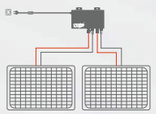
reliability
- IP67 protection level
- -40℃ to 65℃ operating temperature
- 12 years warranty with 25 years extension.

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

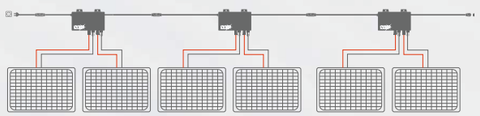
certification
- UL, RED, ROHS, EMC, UTE, INMETRO, VDE, CE and others

Intelligence
- Panel level monitoring with built-in PLC and WiFicommunication 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

Balcony Solution



Rooftop Solution



More effective — Max. Efficiency 97.1%

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

More secure — Built-in GFDI 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 /Vdc	22-55	
Startup Voltage /Vdc	24	
Max. Input Voltage /Vdc	60	
Max. Input Current /A	17 x 2	18 x 2
Overvoltage Protection Category	II	
Output | AC		
Peak Output Power /VA	800	1000
Max. Continous Output Power /VA	800	1000
Rated Output Voltage /Vac	220/230/240	
Nominal Output Voltage Range /Vac	Configurable	
Max. Continous Output Current /A	3.64/3.48/3.34	4.55/4.4/4.17
Nominal Frequency / Range /Hz	50 / 60	
Power Factor (Nominal/Adjustable Range)	>0.99(full load)	
AC Short Circuit Fault Current Over 3 cycles /Arms	8.2	
THDi@Rated Power	<5%	
Max. Units per 20A Branch	5	4
Overvoltage Protection Category	III	
Effciency		
Peak Effciency	97.3%	
MPPT Effciency	>99.5%	
Night Power Consumption /mW	110	
General Data		
Operating Ambient Temperature Range /℃	-40~65	
Relative Humidity Range	0-100%	
Dimensions (W x H x D) /mm	268 x 250 x 30.5	268 x 250 x 46.5
Weight /kg	3.0	3.4
DC Connector Type	QC4	
AC Connection Type (inverter-inverter)	Plugin AC Connector or Daisy Chain AC Bus	Plugin AC Connector or Daisy Chain AC Bus or Trunk Cable
Communication Method	PLC or WiFi(2.4G)	
Protection Class	IP66/IP67	

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-1200-LV/BDM-1600-LV

Micro Inverter

Features

US UL1741. SB certification

Plug-and-Play Wall Outlet for DIY Installation

- Installs in minutes by plugging directly into a standard wall outlet (120V)

Triple PV Inputs for Maximum Energy Harvest

- Connect 4 solar panels (up to 500W each) to a single inverter, with adaptive voltage tracking to optimize output across shading, angles, or mixed panel conditions.

UL 1741 & IEEE 1547 Certified

- Fully compliant with U.S. grid safety and interoperability standards

Scalable 1200W Output with High Efficiency

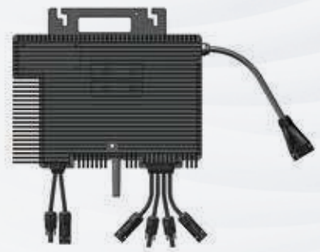
- Generate up to 1.2kW continuous power per inverter

Built-in WiFi & Intuitive Mobile App

- Monitor real-time performance, troubleshoot issues, and receive alerts via a smartphone app (iOS/Android), with over-the-air firmware updates for future-proofing.

AC Coupling for Battery Storage Compatibility

- Integrates effortlessly with AC-coupled batteries to store excess energy, enabling backup power without retrofitting existing wiring.



Model

BDM-1200-LV/BDM-1600-LV

INPUT (PV DC)	BDM-1200-LV	BDM-1600-LV
Recommended PV module maximum power	600W×3	600W×4
PV Input Voltage Range	20~60V	
MPPT Operating Voltage Range	22~55V	
Start-up Voltage	25V	
No. of MPP Trackers	3	4
Max PV current	20A×3	20A×4
Grid		
Rated AC Voltage	120V	
Rated AC Frequency	50Hz/60Hz	
Rated AC Output Current	10A@120V	13.3A@120V
Rated AC Output Power	1200W	1600W
PF	>0.99(Adjustable from 0.9 leading to 0.9 lagging)	
THDi	<5%	
Efficiency		
Max. MPPT Efficiency	99.9%	
Max. Efficiency	97.5%	
CEC Efficiency	96.5%	
Protection		
PV Reverse Polarity Protection	YES	
Over Current/Voltage Protection	YES	
Anti-islanding Protection	YES	
AC Short-circuit Protection	YES	
Ground fault monitoring	YES	
Leakage Current Protecion	YES	
AC/DC Surge Protection Type II	YES	
RSD	YES	
General		
Dimensions(W*H*D)	321mm*271mm*42.5mm	
Weight	3.1kg	
Ingress Protection Rating	NAME 4X	
Relative Humidity	0~100%	
Operating Temperature Range	-40~65℃	
Storage Temperature Range	-40~85℃	
Communication Interface	PLC/WI-FI	
Display	LED LIGHT	
Topology	Transformer	
Altitude	<2000m	
Standards&Certification		
UL STD.1741,1741SA,1741SB	IEEE STD.1547,1547.1,1547a	HECO SRD-IEEE-1547.1:2020 Ed.2.0
CSA STD.C22.2 No.107.1 and 330	UL1998:2018; 2030.5	E5000,SA17-18; PCS CRD:2019

BDM-1600/2000/2250

Micro Inverter

Features

US UL1741. SB certification

effciency
- MPPT tracking efficiency up to 99.9%
- CEC weighted average efficiency up to 96.5%

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

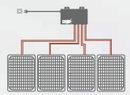
reliability
- IP67 protection level
- -40℃ to 65℃ operating temperature
- 12 years warranty with 25 years extension.

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

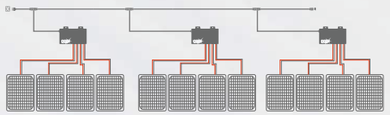
certification
- UTE, INMETRO, CE and others

Intelligence
- Panel level monitoring with built-in WiFicommunication 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

Balcony Solution



Rooftop Solution



More effective | Max. Efficiency 97.1%

Global Certification | UTE, INMETRO, CE

More secure | Built-in GFDI, Lightning protection 6000V

More Reliability | IP67

Model BDM-1600/2000/2250

Input | DC	BDM-1600	BDM-2000	BDM-2250
Recommended PV Module Power Range /W	600 x 4	750 x 4	750 x 4
MPPT Voltage Range /Vdc	22-55	22-55	22-55
Startup Voltage /Vdc	24	24	24
Max. Input Voltage /Vdc	60	60	60
Max. Input Current /A	4 x 18	4 x 18	4 x 18
Overvoltage Protection Category	II	II	II
Output | AC			
Peak Output Power /VA	1600	2000	2250
Max. Continous Output Power /VA	1600	2000	2250
Rated Output Voltage /Vac	220/230/240	220/230/240	220/230/240
Nominal Output Voltage Range /Vac	Configurable	Configurable	Configurable
Max. Continous Output Current /A	7.27/7/6.67	9.09/8.69/8.34	10.23/9.78/9.38
Nominal Frequency / Range /Hz	59.3-60.5(Adjustable)	59.3-60.5(Adjustable)	59.3-60.5(Adjustable)
Power Factor (Nominal/Adjustable Range)	>0.99(full load)	>0.99(full load)	>0.99(full load)
AC Short Circuit Fault Current Over 3 cycles /Arms	15.3	15.3	15.3
THDi@Rated Power	<3%	<3%	<3%
Max. Units per 20A Branch	2	2	2
Overvoltage Protection Category	III	III	III
Efficiency			
Peak Efficiency	97.3%		
MPPT Efficiency	>99.5%		
Night Power Consumption /mW	110		
General Data			
Operating Ambient Temperature Range /℃	-40~65		
Relative Humidity Range	0-100%		
Dimensions (W x H x D) /mm	351 x 275.5 x 39.5		
Weight /kg	6.0		
DC Connector Type	QC4		
AC Connection Type (inverter-inverter)	Plugin AC Connector or Daisy Chain AC Bus or Trunk Cable		
Communication Method	PLC or WiFi(2.4G)		
Protection Class	IP66/IP67		

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-2000T-208/BDM-2000T-480

Micro Inverter

Features

US UL1741. SB certification

effciency
- MPPT tracking efficiency up to 99.9%
- CEC weighted average efficiency up to 96.5%

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

reliability
- IP67 protection level
- -40℃ to 65℃ operating temperature
- 12 years warranty with 25 years extension.

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

certification
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Intelligence
- Panel level monitoring with built-in WiFicommunication methods
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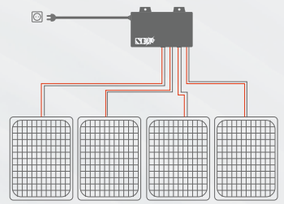
Balcony Solution



More effective | Max. Efficiency 97.1%

Global Certification | UTE, INMETRO, CE

More secure | Built-in GFDI, Lightning protection 6000V

More Reliability | IP67

Model BDM-2000T-208/BDM-2000T-480

Input (DC)	BDM-2000T-208	BDM-2000T-480
Recommended Max PV Powe	400 to 670W	400 to 670W
Max DC Open Circuit Voltage	65Vdc	
Max DC Input Current	20A X 4	20A X 4
MPPT Tracking Accuracy	>99.8%	
MPPT Tracking Range	18~60Vdc	
ISC PV (Absolute Maximum)	25A X 4	
Maximum Backfeed Current to Array	0A	0A 0A
Output (AC)		
Peak AC Output Power	2250W	2250W
Max Continuous Output Power(Three phase)	2000W	2000W
Nominal Power Grid Voltage	208Vac	480Vac
Allowable Power Grid Voltage	183-228 Vac,3ϕ	422-528 Vac,3ϕ
Rated Output Current	6.3A	2.7A
Allowable Power Grid Frequency	55-65 Hz	
THD	< 3% (at rated power)	
Power Factor	>0.99 default 0.8leading~0.8lagging	
Nominal Frequency	60 Hz	
System Efficiency		
Weighted Average Efficiency (CEC)	96.5%	
Nighttime Tare Loss	0.2W	
Protection Function		
Over/Under Voltage Protection	Yes	
Over/Under Frequency Protection	Yes	
Anti-Islanding Protection	Yes	
Over Current Protection	Yes	
Reverse DC Polarity Protection	Yes	
Overload Protection	Yes	
Protection Degree	NEMA-6 / IP-66 / IP-67	
Ambient Temperature	-40°F to +149°F (-40°C to +65°C)	
Operating Temperature	-40°F to +185°F (-40°C to +85°C)	
Display	LED Light	
Communications	Power line Communications / WiFi	
Environment Category	Indoor and outdoor	
Wet Location	Suitable	
Pollution Degree	PD 3	
Over Voltage Category	II(PV), III (AC MAINS)	

BDH-800

Micro-Hybrid-Inverter

Features

- Max. Charging power up to 1000w
- Plug and Play installation, Easy to install.
- Die casting design and glue filling technology, better thermal dissipation.
- Built in WiFi communication
- Suitable for 48V/51.2V Lithium battery
- IP67 outdoor design

The BDH-800 micro-hybrid inverter 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 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.

Model BDH-800

PV Input | PV	BDH-800
Recommended. PV Module /W	600 x 2
MPPT Voltage Range /V	22-55
Startup Voltage /V	24
Max. Input Voltage /V	60
Max. DC Short Circuit Current /A	2 x 17
PV Overvoltage Protection Category	II
AC Output (On grid)	
Max. Continuous AC Output Power /VA	800 *
Rated AC Output Voltage /Vac	230
Max. Continuous Output Current /A	3.48
Nominal Frequency /Hz	50 / 60
Power Factor @ full load	>0.99 (at full load)
THD @ rated power	<5%(at rated power)
AC Overvoltage Protection Category	III
Max. efficiency /%	97.30%
DC Output (Battery)	
Battery Type	LFP
Battery Voltage /Vdc	40~60
Max Charge / Discharge current /A	30 / 20
Max Charge / Discharge power /W	1000 / 1000
Others	
Operating Ambient Temperature Range /℃	-40 ~+65
Relative Humidity Range	0-100%
Communications	WIFI(2.4G)
Protection Class	IP67
Cooling	Natural convection
Dimension (W*D*H) /mm	315 x 244 x 39
Weight /kg	4.5

* Output power can convert to 600 through NEPViewer APP

BDHX-1000/2000

Micro-Hybrid-Inverter

Features

US UL1741. SB certification

Flexible output Configuration

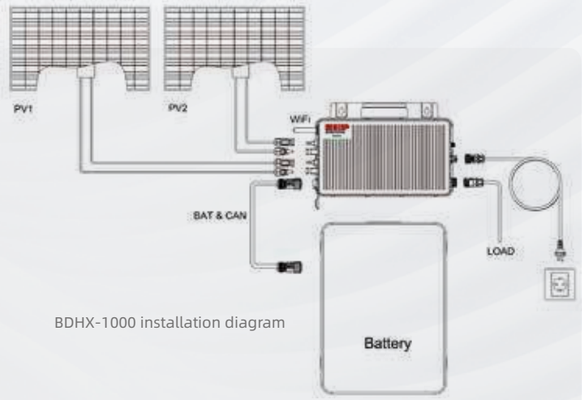
- The Inverter output support 4 PCS prallel
- Before parallel operation, the inverter need connect with CAN communicaiton

Intelligent Management

- Remote WIFI And Local Monitoring

Application Modes

- Inverter output Mode
- On Grid Modes
- Self Used Mode
- Back-up mode
- Force Time Use Mode



BDHX-1000 installation diagram

Combining PV, battery, AC coupling, on/off-gird, NEP offers an all-in-one residential energy solution that helps you lower utility bill and reliance on the gird.

You can set up different mode as you need and check the inverter work status by APP easily

Model

BDHX-1000/2000

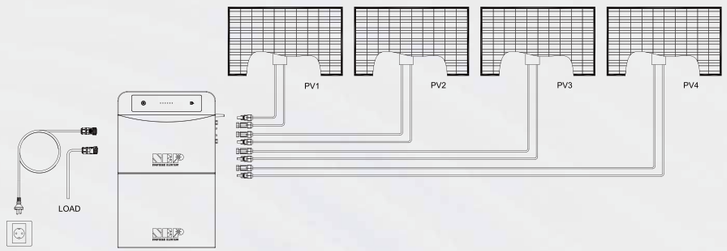
PV Input	BDHX-1000	BDHX-2000
Recommended. PV Module /W	600 x 2	600 x 4
MPPT Voltage Range /V	22-55	
Startup Voltage /V	25	
Max. Input Voltage /V	60	
Max. DC Short Circuit Current /A	20 x 2	40 x 2
PV Overvoltage Protection Category II	II	
AC output(On-Grid)		
Max. Continuous AC Output Power/VA	1000	2000
Rated AC Output Voltage/V	230	
Max. Continuous Output Current /A	4.35	8.69
Nominal Frequency /Hz	50/60	
Power Factor	-0.8—+0.8	
THD @ rated power	<5%(at rated power)	
AC output(OFF-Grid)		
Rated AC Output Voltage/V	230	
Rated AC Output Power/VA	1000	2000
Nominal Frequency/Hz	50/60	
Max AC Output Power/W	2000(last for 20s)	3000(last for 20s)
Battery		
Battery Type	LFP	
Battery Voltage/V	40-60	
PV Max Charge current/A	30	40
AC Charge rated power/W	1000	2000
Max Discharge power/W	1000	2000
Others		
Operating Ambient Temperature Range/℃	-40 ~+65	
Communications	Wifi/ blue tooth	
Protection Class	IP65	
Cooling	Natural convection	
UPS function	Yes	
OFF-Grid output paralell	4PCS	

BDH1-2000

Hybrid Micro inverter

Features

- Used both on-grid and off-grid
- Bidirectional power conversion
- Improve power grid stability
- Maximize the utilization of photovoltaic power generation



Model

BDH1-2000

Battery	BDH1-2000
Battery Type	Lithium Iron Phosphate
Battery voltage range	40~60V
Maximum continuous discharge current	37.5A
Maximum continuous charging current	37.5A
Maximum charging power	2.5kW
Maximum discharge power	2.5kW
DC input	
Maximum input power	600W×4
Maximum input voltage	60V
MPPT voltage range	22V~55V
Starting voltage	22V
Maximum input current of each MPPT	20A
Maximum short-circuit current of each MPPT	25A
MPPT quantity	4
AC output [On-grid side]	
Rated output power	2kW
Peak apparent power	2kW 20s
Maximum continuous current	8.69A
Rated output voltage	L/N/PE,230V
Rated output frequency	50Hz/60Hz
THD	<5%
Power Factor	-0.8 ~ 0.8
AC output [Off-grid side]	
Rated output power	2kW
Peak apparent power	2.4kW 20s
Maximum continuous current	8.69A
Rated output voltage	L/N/PE,230V
Rated output frequency	50Hz/60Hz
THD	<5%
Power Factor	-0.8 ~ 0.8
Battery charging	
Rated input power (AC+MPPT)	2.5kW
Rated AC charging power	2kW
Rated MPPT charging power	2kW

BDH-5KT/6KT/8KT/10KT

Residential Hybrid Inverter--Three Phase

Features

Conformidade： AS/NZS 4777.2:2020

Conformidade： VDE AR-N 4105: 2018

Reliable

- IP65 rated design for outdoor use
- UPS backup during blackout

High Efficiency

- High efficiency up to 98%, save more energy
- Multiple models, easy to control

Easy Operation

- Fast & easy to install and commissioning
- Lower weight and space saving
- User-friendly App, easy to control

Model

BDH-5KT/6KT/8KT/10KT

Battery		BDH-5KT	BDH-6KT	BDH-8KT	BDH-10KT
Battery Type		Li-Ion			
Battery Voltage Range	V	180~600			
Rated Charging Current	A	30			
Rated Discharging Current	A	30			
Rated Charging Power	kW	5	6	8	10
Rated Discharging Power	kW	5	6	8	10
DC Input					
Max. Input Power		7.5	9	12	15
Max. Input Voltage		1000			
MPPT Operating Voltage Range		180~900			
Start-up Voltage	V	180			
Rated Input Voltage	V	600			
Max. Input Current per MPPT	A	15			
Max. Short Circuit Current per MPPT	A	18			
No. of MPP Trackers		2			
No. of Strings per MPPT		1			
AC Output Data (On-grid)					
Rated Output Power	kW	5	6	8	10
Max. Apparent Power	kVA	5.5	6.6	8.8	11
Rated AC Current @230Vac	A	7.2	8.7	11.6	14.5
Max. AC Current	A	8.3	10	13.3	16.7
Rated AC Voltage		3L/N/PE,380V/400V			
Rated Output Frequency		50Hz/60Hz±5			
Power Factor[cosφ]		0.8 leading~0.8 lagging			
Total Harmonic Distortion[THDi]		＜3%			
AC Output Data (Back-up)					
Rated Output Power	kW	5	6	8	10
Peak Output Apparent Power	kVA,s	10 , 60	12 , 60	16 , 60	16.5 , 60
Max. Output Current	A	8.0	9.6	12.8	15.9
Rated Output Voltage		3L/N/PE,380V/400V			
Rated Output Frequency		50Hz/60Hz±5			
Output THDv (@Linear Load)		＜3%			
Efficiency					
Max. Efficiency		98.30%			
European Efficiency		97.65%			
Max. Battery Charging/ Discharging Efficiency		97.60%			
Protection					
PV Insulation Resistance Detection		Integrated			
Residual Current Monitoring		Integrated			
AC Overcurrent Protection		Integrated			
AC Overvoltage Protection		Integrated			
Input Reverse Protection		Integrated			
Anti-islanding Protection		Integrated			
DC Switch		Integrated			
AC Surge Protection		Type II			
DC Surge Protection		Type II			
AFCI		Optional			
General Data					
Topology		Non-isolated			
Operating Temperature Range	℃	-40~+60 (45~60 with derating)			
Relative Humidity		0%~100% non-condensing			
Max. Operating Altitude		4000m（>3000m power derating）			
Display		LED+APP			
Communication Port		CAN/RS485/RS232/DRM			
Communication		WIFI/4G(Optional)			
Cooling Method		Natural convection			
Noise	dB	＜30			
Weight	kg	22.5			
Dimension(H*W*D)	mm	455*440*206			
Ingress Protection Rating		IP65			
Mounting Method		Wall Mounted			

BDH-8KSP-LB/BDH-10KSP-LB/BDH-12KSP-LB

HYBRID INVERTER PRESENTATION

Features

- US UL1741. SB certification
- All-In-One Solution (PV, Generator, On/Off Grid, AC/DC Coupling)
- Max. 18 kW PV Power Delivered to Battery &AC Outputs
- Whole Home 200A AC Passthrough and Backup
- Support up to 10pcs in parallel
- Multiple application
  - Generator input mode
  - Micro/String inverter input mode
  - SmartLoad
- Integrated AC & DC Breakers for Fast Installation & Commissioning
- Integrated AFCI&NEP RSD
- Integrated Panel Level Monitoring
- Intelligent Management-Remote WIFI And Local Monitoring

The BDH-12KSP-LB is a 48V split phase, hybrid inverter/charger capable of utilizing 18kW of PV and efficiently outputting 12kW of power while charging your battery bank. You can parallel up to 10 units for 120kWs of AC power and control multiple stations and units using the new NEP monitoring software.

Model BDH-8KSP-LB/BDH-10KSP-LB/BDH-12KSP-LB

INPUT (PV DC)	BDH-8KSP-LB	BDH-10KSP-LB	BDH-12KSP-LB
Maximum Utilized Solar Power	12000W	15000W	18000W
Rated PV Input Voltage		360V	
PV Input Voltage Range		100~600V	
MPPT Operating Voltage Range		120~500V	
Start-up Voltage		140V	
No. of MPP Trackers	2	2	3
No. of Strings per MPPT	1/1	1/1	2/1/1
Max. Input Current per MPPT	25A/25A	25A/25A	25A/15A/15A
Max. Short Circuit Current per MPPT	31A/31A	31A/31A	31A/19A/19A
Battery			
Battery Type		Lithium-ion/Lead-Acid	
Rated Battery Voltage		48V	
Battery Voltage Range		40~60V	
Max. Charging/Discharging current	167A	210A	250A
Max. Charging/Discharging power	8000W	10000W	12000W
Force wake up battery from PV function		YES	
Grid			
Rated AC Voltage		120V/240V;120V/208V	
Rated AC Frequency		50Hz/60Hz	
Rated AC Output Current	33.3A@240V/38.5A@208V	41.6A@240V/48A@208V	50A
Rated AC Output Power	8000W	10000W	12kW@240V/10.4kW@208V
Max. AC Intput Current		200A	
Max. AC Intput Power		48000W	
PF		0.99(Adjustable from 0.9 leading to0.9 lagging)	
THDi		< 3%	
AC Bypass (Grid)		200A	
EPS			
Rated Output Voltage		120V/240V;120V/208V;240V	
Rated Output Frequency		50Hz/60Hz	
Rated Output Current	33.3A@240V/38.5A@208V	41.6A@240V/48A@208V	50A
Rated Output Power	8000W	10000W	12kW@240V/10.4kW@208V
Peak Power	With PV: 8.8kW (2h),9.6kW (15 min), 10.4kW (7.5 min), 13.2kW (750ms) Without PV: 8.8kW (10 min)	With PV: 11kW (2h),12kW (15 min), 13kW (7.5 min), 16.6kW (750ms) Without PV: 11kW (10 min)	With PV: 13.2kW (2h),14.4kW (15 min), 15.6kW (7.5 min), 20kW (750ms) Without PV: 13.2kW (10 min)
Switching Time		15ms	
THDv		< 3%	
AC Bypass (Generator)		90A	
Efficiency			
Max. MPPT Efficiency		99.9%	
Max. Efficiency		97.5%	
Max. Battery Charging/ Discharging Efficiency		94.5%	
CEC Efficiency		96.5%	
Protection			
PV Reverse Polarity Protection		YES	
Over Current/Voltage Protection		YES	
Anti-islanding Protection		YES	
AC Short-circuit Protection		YES	
Ground fault monitoring		YES	
Leakage Current Protecion		YES	
AC/DC Surge Protection Type II		YES	
AFCI		YES	
RSD		YES	
DC Switch		YES	
Load Switch(Current)		200A	
Battery Switch(Current/Voltage)		2*200A/80VDC	
General			
Dimensions(W*H*D)		500*860*290mm/19.68*33.86*11.42inch	
Weight		52kg/121.2lbs	
Ingress Protection Rating		NAME 4X	
Relative Humidity		0~100%	
Operating Temperature Range		25~60℃, >45℃ derating	
Storage Temperature Range		-25~60℃	
Communication Interface		RS485/CAN/Wi-Fi	
Display		Color Touch LCD	
Cooling Method		Smart Cooling	
Topology		Transformer-less	
Altitude		<2000m	
Warranty		10years	
Standards&Certification			
UL STD.1741,1741SA,1741SB	IEEE STD.1547,1547.1,1547a	HECO SRD-IEEE-1547.1:2020 Ed.2.0	
CSA STD.C22.2 No.107.1 and 330	UL1998:2018; 2030.5	E5000,SA17-18; PCS CRD:2019	

BDH-5KS-AS/BDH-10KS-AS/BDH-10KT-AS

HYBRID INVERTER PRESENTATION

Features

High reliability

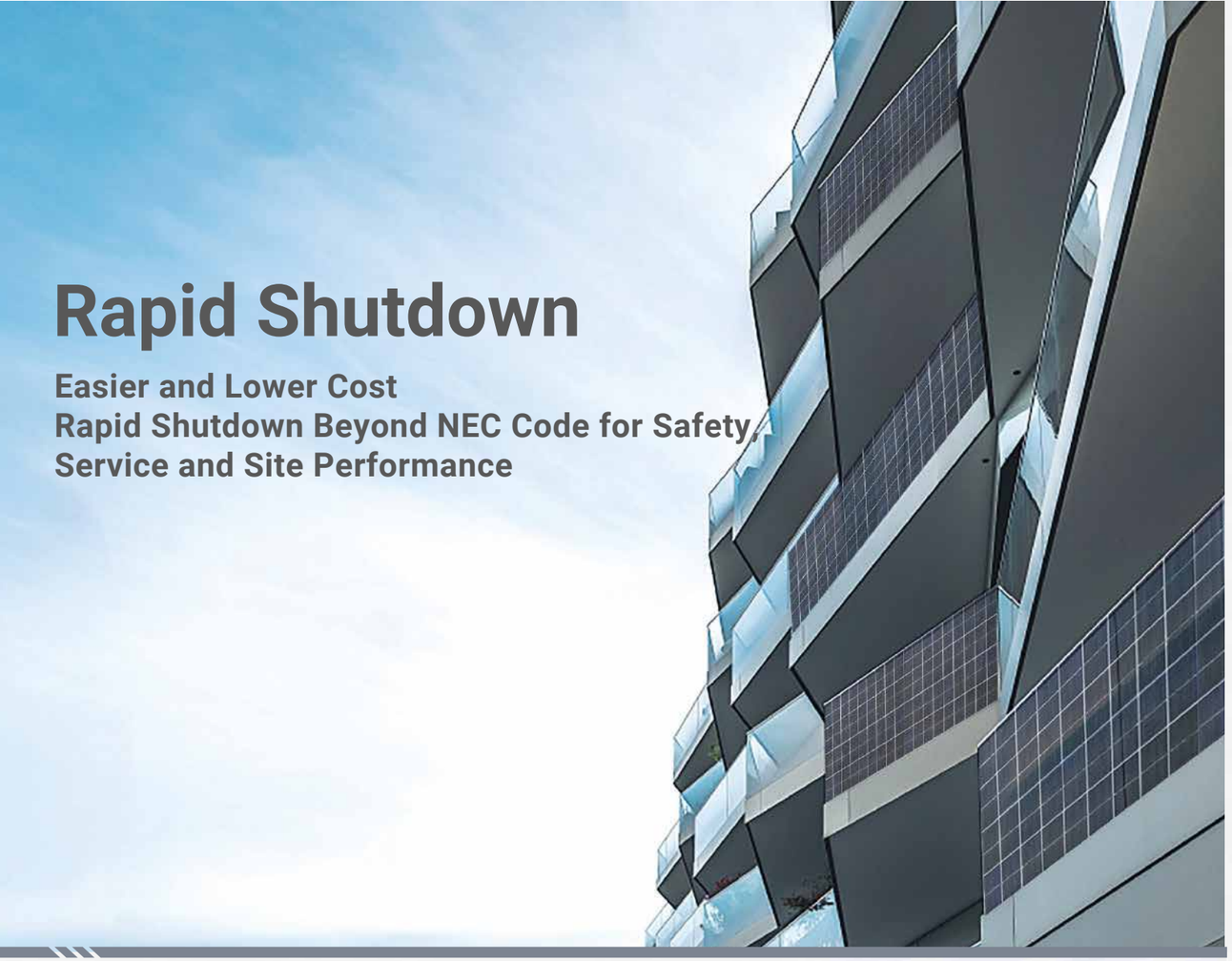
- UPS level redundant protection against backup load breakdown
- Three-level firmware and two-level hardware battery protection
- Multiple temperature monitoring, delicate thermal management
- Max.6 Inverters in parallel to increase power availability

High intelligence

- Internal EMS optimizes home energy supply automatically
- Built-in electric power service, FCAS,VPP, etc
- Online monitoring, online diagnosis, online service

Model BDH-5KS-AS/BDH-10KS-AS/BDH-10KT-AS

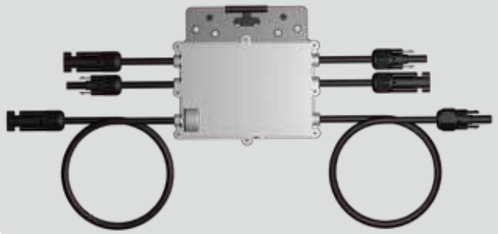
Battery Input	BDH-5KS	BDH-10KS	BDH-10KT-AS
Battery Type	Li-Ion		
Battery Voltage Range	85~450V		180~600V
Rated Charging Current	50A		30A
Rated Discharging Current	50A		30A
Rated Charging Power	5kW	10kW	10kW
Rated Discharging Power	5kW	10kW	10kW
AC Output Data (On-grid)			
Rated Output Power	5kW	10kW	10kW
Rated AC Current @230Vac	21.7A	43.5A	14.5A
Rated AC Voltage	L/N/PE,220V/230V		3L/N/PE,380V/400V
Rated Output Frequency	50Hz/60Hz±5		
Power Factor[cosφ]	0.8 leading~0.8 lagging		
Total Harmonic Distortion[THDi]	＜3%		
AC Output Data (Back-up)			
Rated Output Power	5kW	10kW	10kW
Peak Output Apparent Power	10kVA	20kVA	16.5kVA,60s
Rated Output Current @230Vac	21.7A	43.5A	14.5A
Rated Output Voltage	L/N/PE,220V/230V		3L/N/PE,380V/400V
Rated Output Frequency	50Hz/60Hz±5		
Output THDv (@Linear Load)	＜3%		
Efficiency			
Max. Efficiency	98.00%		98.30%
European Efficiency	97.50%		97.65%
Max. Battery Charging/ Discharging Efficiency	97.00%		97.60%
Protection			
Residual Current Monitoring	Integrated		
AC Overcurrent Protection	Integrated		
AC Overvoltage Protection	Integrated		
Anti-islanding Protection	Integrated		
Battery Switch	Integrated		
AC Surge Protection	Type II		
General Data			
Topology	Non-isolated		
Operating Temperature Range	-40℃~+60℃(45℃~60℃， with derating)		
Relative Humidity	0%~100%non-condensing		
Max. Operating Altitude	4000m（>3000mpower derating）		
Display	LED+APP		
Communication Port	CAN/RS485/DRM		
Communication	WIFI		WIFI/4G(Optional)
Cooling Method	Natural convection		
Weight	18.5kg		22.5kg
Dimension(H*W*D)	620*440*210mm		455*440*206mm
Ingress Protection Rating	IP65		
Mounting Method	Wall Mounted		



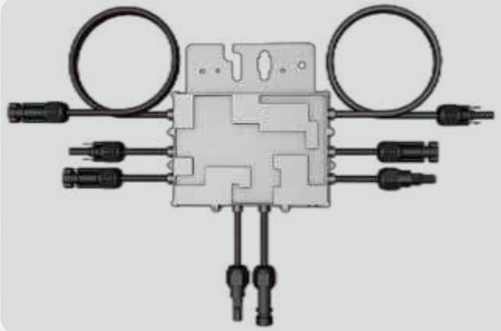
Rapid Shutdown

Easier and Lower Cost
Rapid Shutdown Beyond NEC Code for Safety
Service and Site Performance

Transformer



PVG-2-L 20A
PVG-2-L 25A



PVG-3-L 20A
PVG-3-L 25A

Features

- Metal case
- Module level rapid shutdown: dual (2) and triple (3) modules
- Module level monitoring for commissioning, service diagnostics
- 1-minute PV data granularity for precise performance assessment
- Cellular, WiFi and Ethernet connectivity options
- Over temperature protection (auto-RSD function)
- PVRSS certified with multiple inverters and as independent system
- Zero cross talk interference through patented signaling design
- Optional customized cable/connector harness
- Staubli MC4 standard connectors
- IV Curve Trace Test mode for efficient commissioning
- String voltage test tool available
- Rail or module frame mount (optional PV mounting clip available)
- Multiple US patents

Technical Data

Input/Output	PVG-1-L	PVG-2-L	PVG-3-L
Input:Max DC Open Circuit Voltage per Input	90Vdc		
Input:Max DC Current per Input	25A		
Output:Max Output Voltage	Voc(module)*1	Voc(module)*2	Voc(module)*3
System Voltage Maximum	1500Vdc		
Mechanical			
PV Cable	12 AWG		
PV Connectors	MC4 Staubli(Custom configurations available)		
Size (PVGbody-15A)	120 x 110 x 19(mm)	146 x 130 x 25(mm)	176 x 168 x 25(mm)
Size (PVGbody-20A)	120 x 110 x 19(mm)	138 x 130 x 21(mm)	157 x 157 x 21(mm)
Protection Degree	NEMA 6		
Operating Ambient Temperature	-40℃ - +85℃		
Mounting Method	Rail via supplier MLPE hardware, PVFrame with optional NEP		
Certifications			
Certifications	PVRSS Intertek,UL1741,CSA C22.2 No.107.1,NEC		
RSD Data Signal			
RSD Data Signal	Two-way,PLC Communications between PVG's and Transmitter		

Options
Micro Inverter

Options for microinverter with WiFi communication		
BDNZ-WiFi	Export management (net zero)	
WiFi-Bridge	WiFi-Bridge could automatically serch the SN of microinverter to monitor the BDM-WiFi	

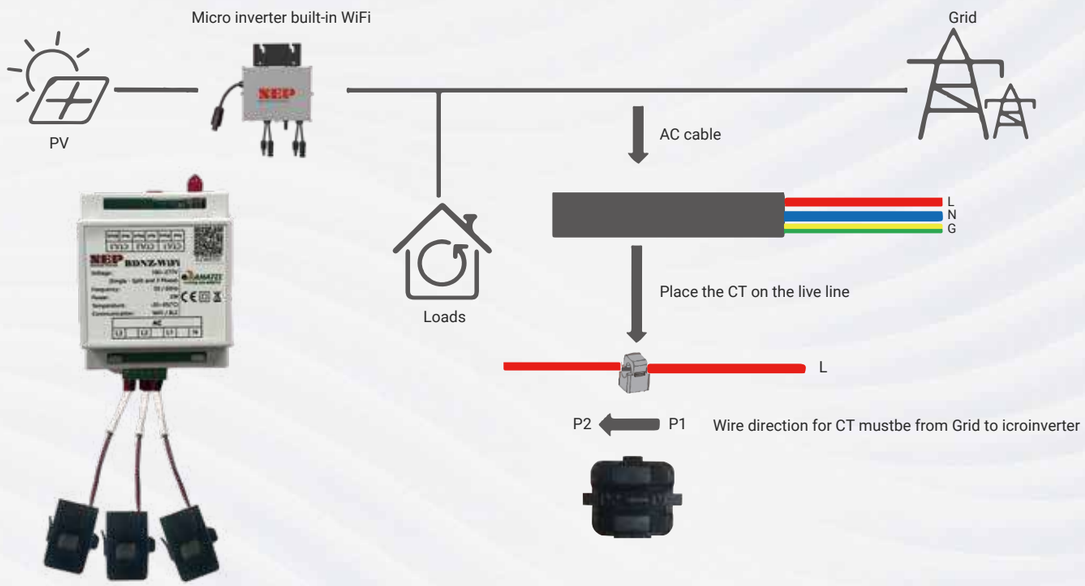
Model

OPTIONS

Options for microinverter with PLC communication		
BDG-256	Gateway (must for PLC communication)	
Consumption Meter (A)	Export management (net zero) for single-phase (work with Gateway)	
Consumption Meter (B)	Export management (net zero) for split phase (work with Gateway)	
Consumption Meter (C)	Export management (net zero) for 3 phase (work with Gateway)	

BDNZ-WiFi

Net Zero control Device



Model

BDNZ-WiFi

Parameters	
Nominal Voltage	230VAC, 50/60Hz
Temperature Operating Range	-20°C~65°C
Modulation Type	DSSS, OFDM
Modulation Technology	802.11b/g/n20
Operating Frequency	802.11b, 802.11g, 802.11n (HT20):2412MHz~2472MHz
Number of Channel	802.11b, 802.11g, 802.11n (HT20):13
Adaptive/Non-Adaptive	adaptive Equipment without the possibility to switch to a non-adaptive mode
EIRP Power (Measured Max. Average)	18.06dBm
Antenna Type	PCB Antenna
Antenna Gain	3dBi
CT	CT type: Open type CT cable: 100cm

BDG-256/256P3

Monitoring Gateway

Features

Convenient

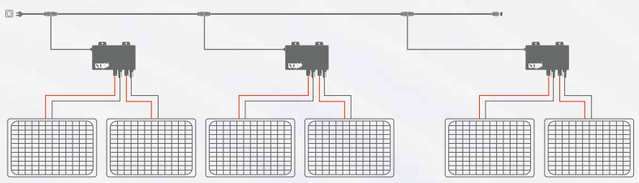
- WiFi, Ethernet, or Cell
- Easy to configure web portal
- Touch screen for easy Configuration and Troubleshooting
- Supports dual voltage (100/240) and dual frequency (50/60 Hz)

Safe and reliable

- Supports local monitoring without internet

Globally Certified

- UL 60950-1 2nd edition, CSA C22.2 2nd edition, FCC Part 15 Clase B AS/NZS 60950.1:2011 Inc A1, AS/NZS CISPR 22: 2009+A1:2010
- EN 60950-1:2006+A11:2009+A1:2010
- Revenue Grade Production Monitoring ANSI C12.20 +/- 0.5%



More efficiency | Maximum 3.5W

Certification global | UL 60950-1 2.ª edition, CSA C22.2 2.ª edition, FCC Part 15 Clase B

More reliability | IP30

Model

BDG-256/256P3

Communications interface	BDM-256	BDM-256P3
Communication with Microinverter	PLC	
Ethernet	10/100 auto-sensing, auto-negotiation	
USB	USB 2.0 interface, auto-sensing, auto-negotiation	
Wi-Fi	Support	
Monitoring Capability	255 devices (depending on power grid interference)	
Human interface		
Visual display	LCD touch screen	
Power requirements		
AC input	100-240 Vac, 50/60Hz, 60mA	208 Vca, 380 Vca, 50/60 Hz
Energy consumption	3.5 Watts maximum	
Mechanical data		
Dimensions	170 x 110 x 37 mm	199 x 161 x 46 mm
Weight	150g	
Ambient temperature range	40˚C to +55˚C -40˚C to +49˚C (if installed in a cabinet)	
Cooling	Natural convection - no fans	
Environmental Rating	IP30. For installation indoors or in an NRTL-certified NEMA type 3R enclosure	
Characteristics		
Standard warranty term	1 year	
Compliance	UL 60950-1 2nd Edition Rev Dec 19, 2011 CSA C22.2 2nd Edition Rev Dec 19, 2011 FCC Part 15 Class B AS/NZS 60950.1:2011 Inc A1 AS/NZS CISPR 22: 2009+A1:2010 EN 60950-1:2006+A11:2009+A1:2010 +A12:2011 EN 55022:201 EN 61000-3-2:2006+A1:2009+A2:2009 EN 61000-3-3:2008 EN 55024:2010 EMC Directive 2004/108/EC	

NEP Monitoring Platform
NEPViewer

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

APP（NEPViewer）

iPhone Download　Android Download

<Download APP>

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