

BDM-250 Micro Inverter





BDM-250 Spec

MODEL		BDM-250-240A	BDM-250-208A
INPUT(DC)	Max Recommended PV Power (Wp)	285	
	Max DC Open Circuit Voltage (V)	60	
	Max DC Input Current (A)	12	
	MPPT Tracking Accuracy	>99.5%	
	MPPT Tracking Range (V)	22-55	
OUTPUT(AC)	Rated AC Output Power (W)	220	
	Nominal Power Grid Voltage (V)	240 / 220	208/220
	Allowable Power Grid Voltage (V)	211-264/198-253	186-228/198-253
	Allowable Power Grid Frequency (Hz)	59.3-60.5/45.5-52.5	59.3-60.5/45.5-52.5
	THD	<2% (at rated power)	
	Power Factor (cos phi, fixed)	>0.99%	
SYSTEM EFFICIENCY	Peak Efficiency	96.3%	95.70%
	CEC Efficiency	95%	
	Night Time Tare Loss (W)	0.17	
PROTECTION FUNCTIONS	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	
	Environment Temperature	-40℃——+65℃	
OTHER PARAMETERS	Environment Humidity	100%, condensation	
	Display	LED LIGHT	
	Communications	Power Line	
	Dimension (D-W-H mm)	230*138*35	
	Weight (Kg)	2	

Global Standards Compliance



Region	Standards
North America	UL 1741-2 nd Ed. Rev. January 28, 2010 CSA C22.2 No. 107.1-01 rev. September 2006
Europe	IEC 62109-1:2010, EN62109-1:2010, IEC 62109-2:2011, EN 62109-2:2011, DIN V VDE V0126-1-1/ A1:2012 , VDE-AR-N 4105:2011-08 , DIN V VDE V0124-100:2012-07 EN 50438, C10/11
UK	G83/2
Australia	AS/NZS 3100:2009+A1:2010; AS 4777.2:2005; AS 4777.3:2005; IEC 62109-1:2010; IEC 62109-2:2011
Asia, Middle East, Africa	IEC 61727

EMC	EN 61000 FCC part 15
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Micro-inverter: Certificate List



No.	Product	Certificate
1	Micro-inverter BDM-250	UL1741 certified by ETL
		CSA certificate
		German TUV certificate
		German VDE-4105 certificate
		German VDE-0126 certificate
		Europe CE certificate
		G83 certificate for United Kingdom
		SAA for Australia
		C-tick for Australia
		CEC efficiency: 95% (US)
		Denmark certificate
2	Gateway	ETL certificate for US
		SAA certificate for Australia
		C-tick certificate for Australia
		CE for Europe

Micro-inverter: Certificate List

北电能源
Northern Electric



No.	Product	Certificate
1	Micro-inverter BDM-250	France
		Italy
		Belgium
		Holland
		Portugal
		Czech
		Norway
		Finland
		Spain
		Greek
2	Gateway	

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Micro-inverter: Installation in the US



CEC Certified Efficiency: 95%

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Rated Maximum Continuous Output Power: 225.19 W

Night Tare Loss: 0.17 W

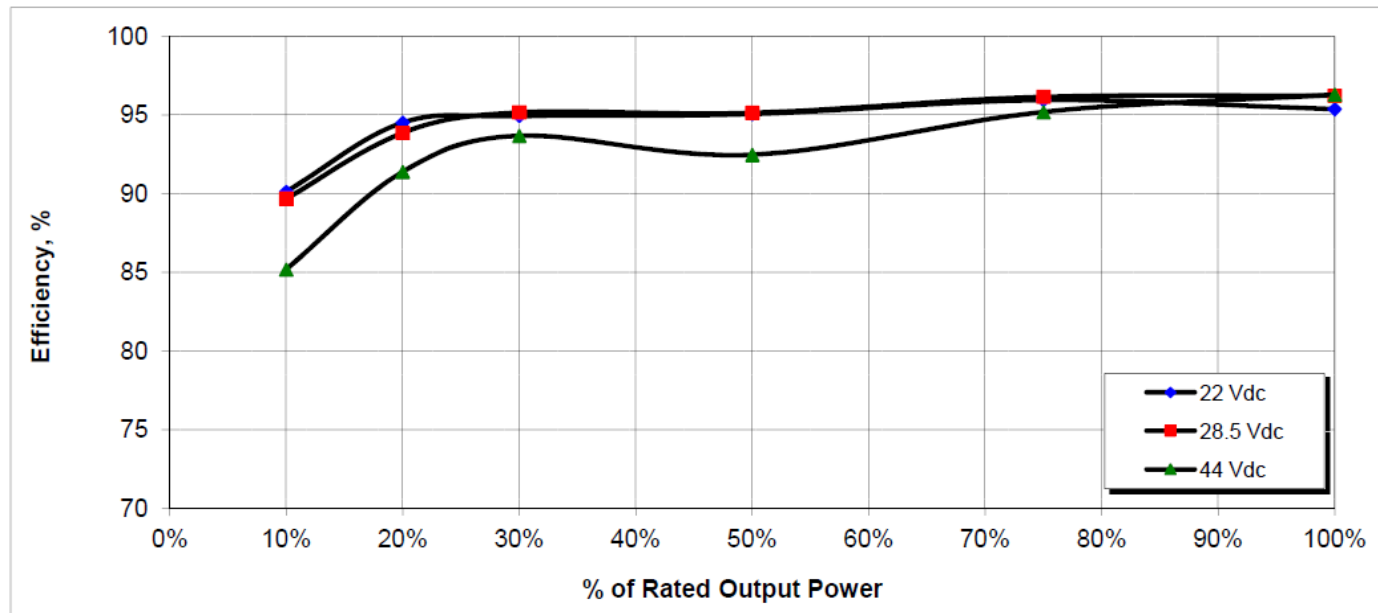
Vmin: 22.0 Vdc

Vnom: 28.5 Vdc

Vmax: 44.0 Vdc

Input Voltage (Vdc)		Power Level (%; kW)						Wtd
		10%	20%	30%	50%	75%	100%	
Vmin	22.0	22.52	45.04	67.56	112.60	168.89	225.19	95.3
Vnom	28.5	90.1	94.5	94.9	95.1	95.9	95.4	95.5
Vmax	44.0	89.7	93.9	95.2	95.1	96.2	96.2	95.5
		85.2	91.4	93.7	92.5	95.2	96.3	93.9

CEC Efficiency = 95.0%



http://www.gosolarcalifornia.ca.gov/equipment/inverter_tests/summaries/Northern%20Electric%20BDM-250-240A.pdf

NEP

Extremely Low DC Component and iTHD

Uover: ■ ■ ■ ■ ■

Iover: ■ ■ ■ ■ ■

YOKOGAWA

***** I 1 List *****				***** I 1 List *****			
Or.	I[A]	Hdf[%]		Or.	I[A]	Hdf[%]	
PLL	I1	1.0587		dc	-0.0000	-0.00	
Freq	50.016 Hz	1	1.0586	2	0.0013	0.12	
		3	0.0018	4	0.0018	0.17	
U1	220.59 V	5	0.0114	6	0.0017	0.16	
I1	1.0587 A	7	0.0062	8	0.0015	0.14	
P1	0.2329kW	9	0.0040	10	0.0013	0.12	
S1	0.2335kVA	11	0.0027	12	0.0010	0.09	
Q1	0.0169kvar	13	0.0016	14	0.0008	0.08	
λ1	0.9974	15	0.0009	16	0.0006	0.06	
φ1	4.14 °	17	0.0006	18	0.0005	0.05	
Uthd1	0.59 %	19	0.0008	20	0.0003	0.03	
Ithd1	1.39 %	21	0.0008	22	0.0003	0.03	
Pthd1	0.00 %	23	0.0007	24	0.0002	0.02	
Uthf1	0.03 %	25	0.0006	26	0.0002	0.02	
Ithf1	0.39 %	27	0.0006	28	0.0002	0.02	
Utif1	1.05	29	0.0004	30	0.0001	0.01	
Itif1	13.15	31	0.0003	32	0.0001	0.01	
hvf1	0.35 %	33	0.0003	34	0.0001	0.01	
hcf1	0.58 %	35	0.0003	36	0.0001	0.01	
F1	220.59 V	37	0.0002	38	0.0001	0.01	
F2	1.0586 A	39	0.0002	40	0.0001	0.01	
F3	-----	41	-----	42	-----	-----	
F4	-----	43	-----	44	-----	-----	
φU1-U2	-----	45	-----	46	-----	-----	

iTHD=1.39%

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Uover: ■ ■ ■ ■ ■ ■
Iover: ■ ■ ■ ■ ■ ■

PLL Src: I1

YOKOGAWA ◆

	U1	230.50 V	
	I1	0.9495 A	
	P1	218.10 W	
	$\lambda 1$	0.9966	
	Q1	17.90 var	
	U1(1)	230.50 V	
	I1(1)	0.9494 A	
	P1(1)	218.10 W	

Power Factor

$\lambda 1$ 0.9966

显示

格式

数值

项目数量

8(4)

谐波项目号

5

数值显示项目

向上页滚动

向下页滚动

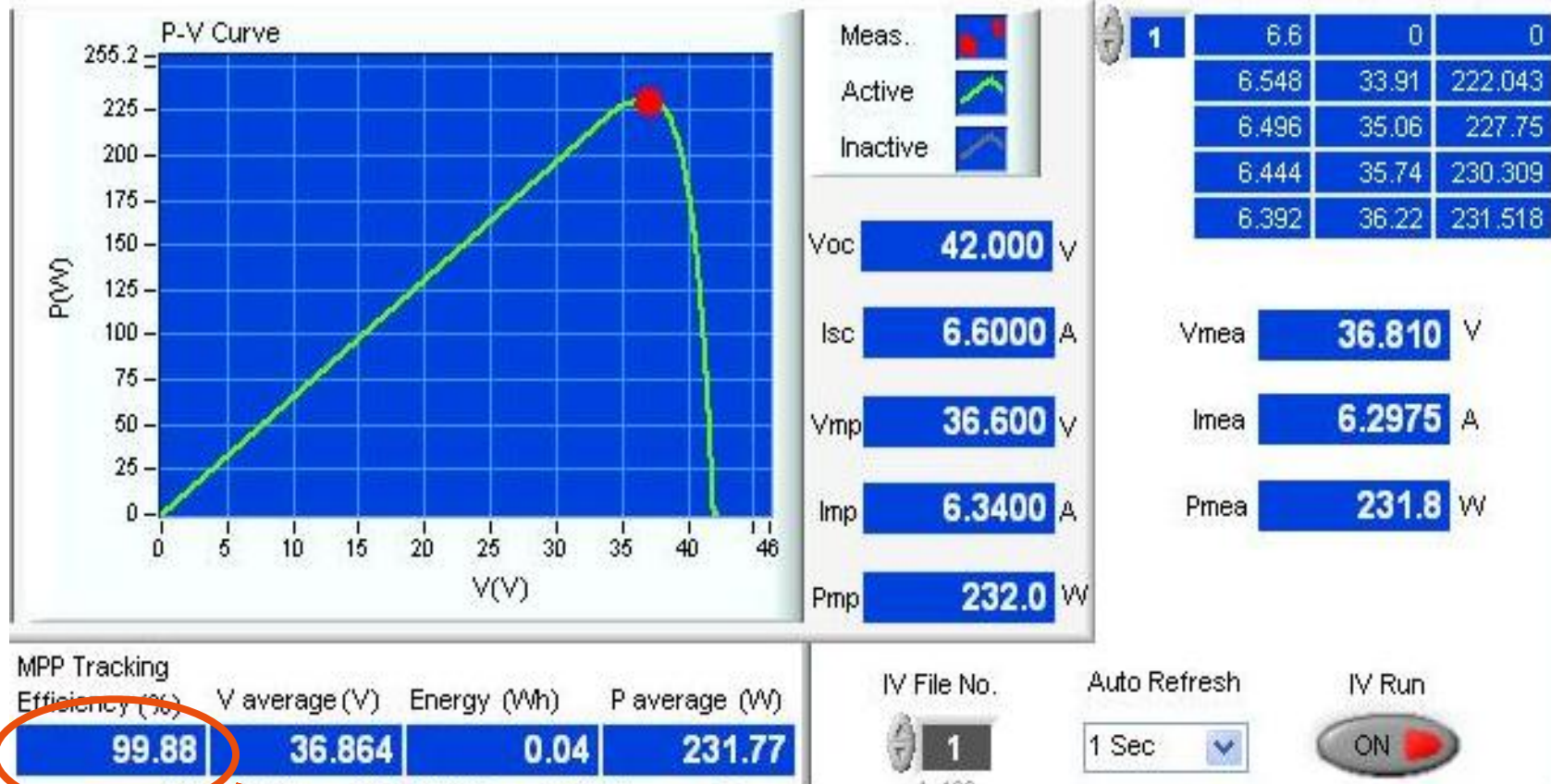
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High MPPT Tracking Accuracy



FW Version: CHROMA ATE,62150H-600S,00088,01.10



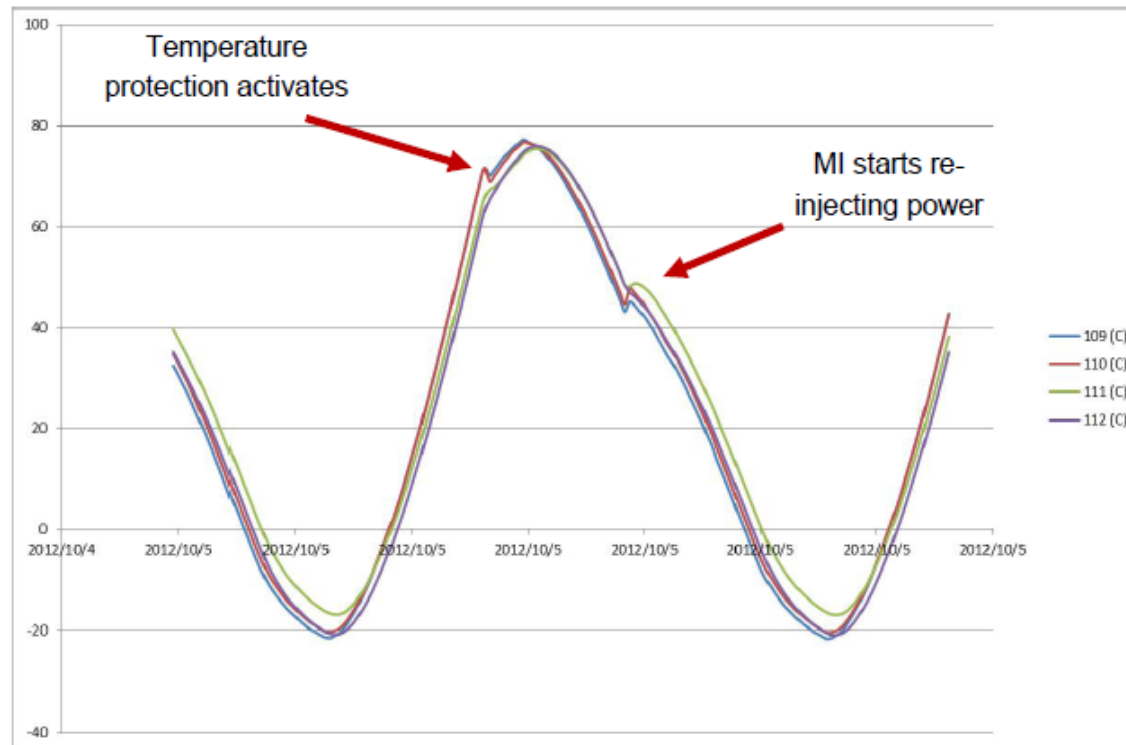
MPPT efficiency = 99.88%

NEP

Anti-islanding Function



TC200 Testing



- Ambient temperature cycled from -20 to 80 degrees for 200 cycles in a chamber
- BDM-250 running on full power
- Test last for 3 month
- BDM-250 temperature protection circuit protects at a harmful temperature, and restarts at a lower temperature



- Features
 - Touch screen with LCD energy output display
 - Support USB, Ethernet interface
 - Built-in web server
 - Support remote web server and database
 - UL60950 certified, FCC complied



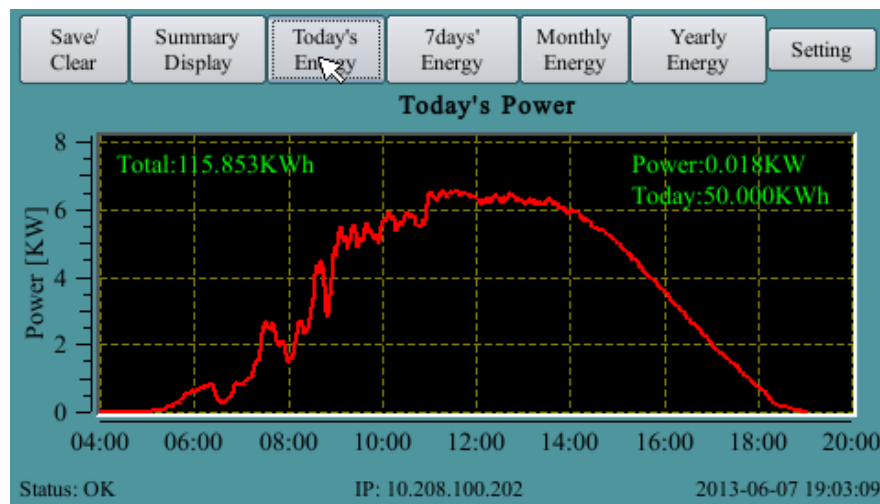
BDG-256 Gateway



Communications Interface	
Communication with Micro Inverter	Power Line Communication
Ethernet	10/100 auto-sensing, auto-negotiation
USB	USB 2.0 interface, auto-sensing, auto-negotiation
Monitoring capacity	255 micro inverters
Human Interface	
Display	LCD touch screen
Power Requirements	
AC inlet	100 - 240 Vac, 50/60 Hz, 60mA
Power consumption	3.5 watts maximum
Mechanical Data	
Dimensions (WxHxD)	6.69" x 4.33" x 1.46" (170 mm x 110mm x 37mm)
Weight	5.29 oz (150g)
Ambient temperature range	-40°C to +55°C (-40° to 131°F)
Cooling	Natural convection – no fans
Enclosure environmental rating	Indoor - NEMA 1
Features	
Standard warranty term	1 year
Compliance	UL 60950-1, FCC Part 15 Class B IEC 61000



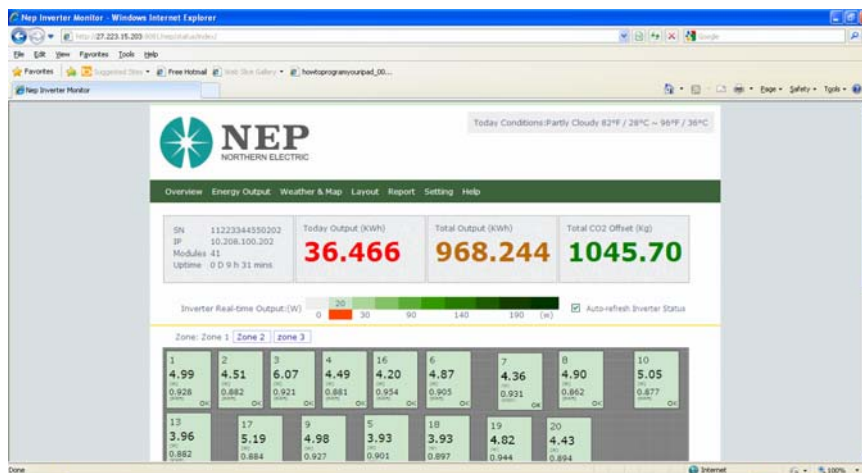
- Touch screen provide user friendly interface



BDG-256 Gateway



- Built-in web server provides flexible web based monitoring
 - On PC or any smart mobile devices



**Thanks for your
attention!**

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