NUOVOLT
FUTURE OF INTELLIGENT POWER

MPPT SMART INVERTER
datasheet

12kW 48V Plus Hybrid 230Vac Output

Features

* Dual AC outputs
* Built-in 3 MPPTs
* Parallel connection of up to 6 units
* Lithium battery activation via PV or grid
* LiFePO$_4$ battery compatibility via RS485
* Pure sine wave output
* Power factor: 1.0
* Maximum PV input voltage: 500/550 VDC
* Built-in 200 A MPPT solar charge controller
* Operation without battery
* Removable dust cover for harsh environments
* Remote monitoring via optional Wi-Fi
* Support for multiple output priorities, including SUB and SBU
* Equalization (EQ) function to optimize battery performance and extend service life



Dual MPPT

Dual Output

6 Units Paralleling

No Battery Mode

Built-in WiFi (Optional)

Color LCD

BMS
Lithium Battery Activation

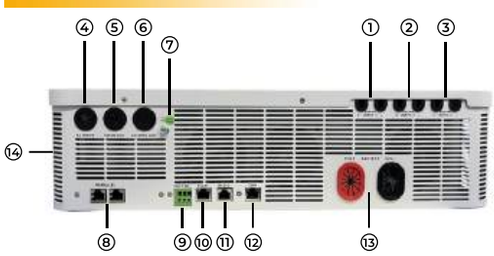
RGB LIGHTS
RGB Lights

Operating Mode



MODEL	48V 12kW (PLUS)
CAPACITY	12KVA / 12KW
Maximum PV Input Power	18KW
Twin AC Output Function	YES
Maximum Main Output Power	12KVA / 12KW
Maximum Second Output Power	6KVA / 6KW
Parallel Capability	YES, 6 units
Lithium Battery Communication	YES (RS485 + CAN)
Lithium Battery Activation	YES (By PV or Utility)
WIFI	Optional
Built-in MPPT	3
INPUT	
Nominal Voltage	230VAC
Acceptable Voltage Range	170 - 280VAC (For Personel Computer); 90 - 280VAC (For Home Appliances)
Frequency	50/60 Hz (Auto sensing)
OUTPUT	
Nominal Voltage	230VAC
Surge Power	24.000VA
Frequency	50/60 Hz
Waveform	Pure Sine Wave
Transfer Time	10ms (For Personel Computer); 20ms (For Home Appliances)
Peak Efficiency (PV in INV)	96%
Peak Efficiency (Battery in INV)	93%
Overload Protection	5s@ > = 140% Load; 10s@ 110% ~ 140% Load
Crest Factor	3:1
Admissible Power Factor	0.6 ~ 1 (Inductive or Capacivite)
BATTERY	
Battery Voltage	48VDC
Maximum Discharge Current	220A
Floating Charge Voltage	54VDC
Over Charge Protection	63VDC
Charging Method	CC / CV
SOLAR CHARGER & AC CHARGER	
Solar Charger TYPE	MPPT
Max. PV Array Power	6.000W*3 (18.000W)
Max. PV Array Open Circuit Voltage	550VDC
PV Array MPPT Voltage Range	60VDC ~ 550VDC
Max. Solar Input Current	27A*3 (60A Max.)
Max. Solar Charge Current	200A
Max. AC Charge Current	140A
Max. Charge Current	200A
PHYSICAL	
Dimensions, D x W x H (mm)	560 x 477 x 125
Package Dimensions, D x W x H (mm)	656 x 555 x 210
Net Weight (kgs)	15,5
Gross Weight (kgs)	19,5
Communication Interface	CAN / RS232 / RS485 / DRY CONTACT
LCD	YES
ENVIRONMENT	
Operating Temperature Range	-10 °C to 55 °C
Storage Temperature	-15 °C ~ 60 °C
Humidity	%5 to %95 Relative Humidity (Non-condensing)
Ingress Protection	IP21

Bottom View



1. Solar input 1
2. Solar input 2
3. Solar input 3
4. AC input
5. Main AC output
6. Secondary AC output
7. Grounding
8. Parallel connection
9. Dry contact
10. RS232 communication port
11. RS485 communication port
12. CAN communication port
13. Battery input
14. On/off switch

RGB Light Indicator



Green
Inverter Mode

Blue
AC Mode

Cyan
Standby Mode

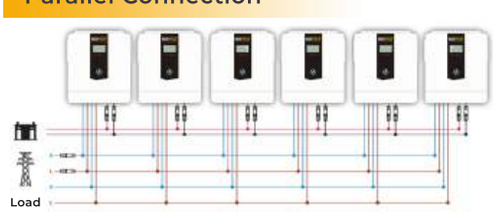


Red
Fault Mode

Purple
Bypass Mode

Yellow
Charging Mode

Parallel Connection



Product specifications are subject to change without prior notice.

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