1-800-831-9889
www.richsolar.com
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1900 Mountain Ave, Norco, CA 92860

NOVA 3K24

3kW 24V OFF-GRID INVERTER

MODEL: NOVA 3K24

FEATURES

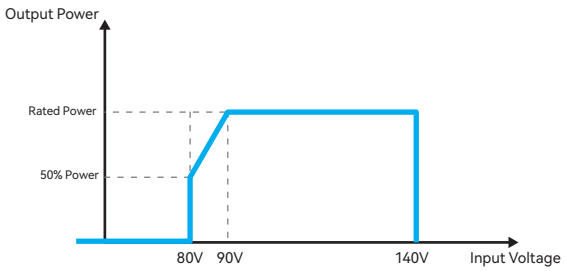
- Pure sine wave inverter
- Built-in MPPT solar charge controller
- Configurable input voltage range for home appliances and personal computers via LCD setting
- Configurable battery charging current based on applications via LCD setting
- Configurable AC/Solar Charger priority via LCD setting
- Compatible to mains voltage or generator power
- Auto restart while AC is recovering
- Overload / Over temperature / short circuit protection
- Smart battery charger design for optimized battery performance
- Cold start function

SPECIFICATION

Line Mode

Model	NOVA 3K24
Input Voltage Waveform	Sinusoidal (utility or generator)
Nominal Input Voltage	120 VAC
Low Loss Voltage	90 VAC ±7V (UPS), 80 VAC ±7V (Appliances)
Low Loss Return Voltage	100 VAC ±7V (UPS), 90 VAC ±7V (Appliances)
High Loss Voltage	140 VAC ±7V
High Loss Return Voltage	135 VAC ±7V
Max AC Input Voltage	150 VAC
Nominal Input Frequency	50Hz / 60Hz (Auto detection)
Low Loss Frequency	40Hz ±1Hz
Low Loss Return Frequency	42Hz ±1Hz
High Loss Frequency	65Hz ±1Hz
High Loss Return Frequency	63Hz ±1Hz

Output Short Circuit Protection	Line mode: Circuit Breaker Battery mode: Electronic Circuits
Efficiency (Line Mode)	>95% (Rated R load, battery full charged)
Transfer Time	10ms typical (UPS); 20ms typical (Appliances)



RICH SOLAR | NOVA™ Series Inverters

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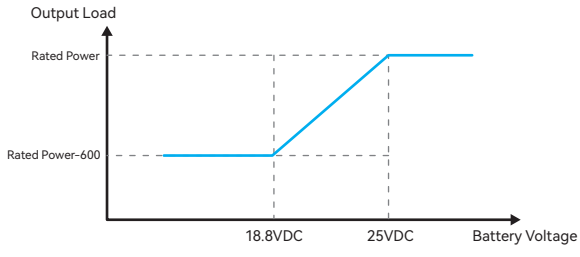
Inverter Mode

Model	NOVA 3K24
Rated Output Power	3KVA/3KW
Output Voltage Waveform	Pure Sine Wave
Output Voltage Regulation	120 VAC±5%
Output Frequency	60Hz / 50Hz
Peak Efficiency	91%
Overload Protection	100ms@≥205% load; 5s@≥150% load; 10s@ ≥110~150% load
Surge Capacity	2* rated power for 5s
Nominal DC Voltage	24 VDC
Cold Start Voltage	23.0 VDC
Low DC Warning Voltage	
@ load < 20%	23.0 VDC
@ 20 ≤ load < 50%	21.4 VDC
@ load ≥ 50%	20.2 VDC
Low DC Warning Return Voltage	
@ load < 20%	24.0 VDC
@ 20 ≤ load < 50%	22.4 VDC
@ load ≥ 50%	21.2 VDC
Low DC Cut-off Voltage	
@ load < 20%	22.0 VDC
@ 20 ≤ load < 50%	20.4 VDC
@ load ≥ 50%	19.2 VDC
High DC Recovery Voltage	32 VDC
High DC Cut-off Voltage	33 VDC
DC Voltage Accuracy	+/-0.3%@ no load
THDV	<5% for linear load,<10% for non-linear load @ nominal voltage
DC Offset	≤100mV

Power Limitation

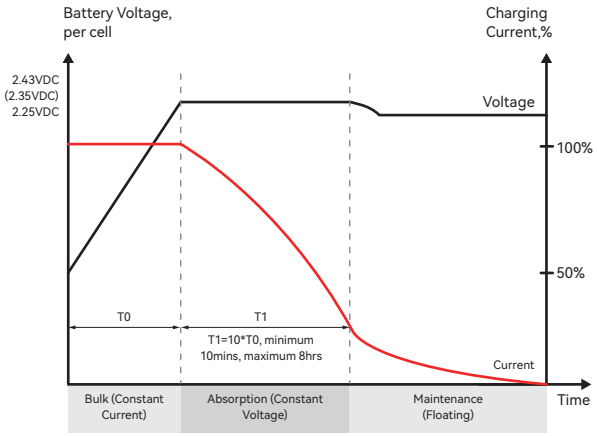
If the output load is high de-rate power. The AC output voltage will be decrease until the outout power reduce to de-rate power. The lower limit of AC output voltage is 95V.



Charging Mode

Model	NOVA 3K24
Charging Current (UPS) @Nominal input voltage	80A
Bulk Charging Voltage	
Flooded Battery	29.2
AGM / GEL Battery	28.8
Charging Floating Voltage	27.6 VDC
Overcharge Protection	33 VDC
Charging Algorithm	3-Step

Charging Curve



Solar Input Mode

Model	NOVA 3K24
Rated Power	3000W
Max. PV Array Open Circuit Voltage	250 VDC
PV Array MPPT Voltage Range	90 VDC~230 VDC
Max. Input Current	18A
Start-up Voltage	80V+/- 5VDC

General Specification

Model	NOVA 3K24
Operation Temperature Range	14°F ~ 104°F (-10°C ~ 40°C)
Storage Temperature Range	5°F ~ 140°F (-15°C ~ 60°C)
Humidity	5% ~ 95% Relative humidity, Non-condensing
Dimension (D*W*H)	5.6*12.1*18.8in (142.4*307.8*477.6mm)
Net Weight	26.5lb (12kg)