



**NOVA ELECTRIC**



### POPULAR OPTIONS

- Ruggedization Against High Shock, Vibration and Humidity



### CONTACT

100 School Street,  
Bergenfield, NJ 07621 USA

(201) 385-0500

novaelectric.com  
info@novaelectric.com

# NESR Series 1.6 KVA Pure Sinewave Modular Parallelable Inverters

• *Telecom  
Applications*

• *Commercial  
Applications*

• *Industrial  
Applications*



### GENERAL OVERVIEW

Nova Electric's NESR-Series is a highly reliable, modular DC-AC inverter system designed with advanced microprocessor technology, offering the following benefits:

- Paralleling capability supports up to 32 NESR modules (51.2KW)
- Seamless switching between AC and DC power sources
- Input and output fully isolated
- Wide AC Input Range – 90~130V (120V system) and 180~260V (230V system)
- High efficiency (~95%)
- Power factor  $\geq 99$

### Advanced Protection Features

- Standard Input Protection: Reverse Polarity / Under Voltage / Over Voltage
- Standard Output Protection: Short Circuit / Over Temperature

### Operating Modes

**AC Mode (Default):** In this Mode, AC utility power is the main source and DC power is the secondary source. PFC>0.99. Max efficiency is 95%. When the AC Utility fails, the inverter seamlessly switches to DC Input source.

**Ratio Mode:** Simultaneous DC and AC inputs. The percentage of AC and DC loads can be assigned to 100%. (E.g., if AC is set to 70%, then remaining 30% is DC.) Please note that the AC input power must be higher than 300W after assigning the AC and DC ratio.

**DC Mode:** In this Mode, DC power is the main source and AC utility power is the secondary source. THD is <3%. Max efficiency is 91%. When the DC input source fails, the inverter seamlessly switches to AC Input source.

***The Leader In Rugged Power Conversion Technology Since 1966***

## SPECIFICATIONS

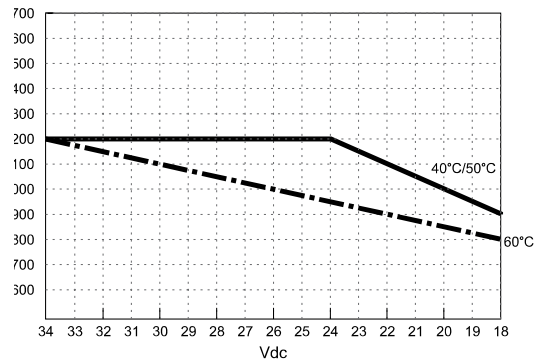
MODEL		NESR-1600-124	NESR-1600-148	NESR-1600-224	NESR-1600-248
AC OUTPUT	Rating Power	1200 W / 1600 VA	1600 W / 1600 VA	1200 W / 1600 VA	1600 W / 1600 VA
	Short Time Overload Capacity	105-150% – 15 sec.			
	Nominal Voltage (AC)	120 VAC		230 VAC	
	Output Voltage Range (AC)	100 – 120 VAC ±3%		200 – 240 VAC ±2%	
	Efficiency AC Mode (Max.)	94%		95%	
	Efficiency DC Mode (Max.)	89%	90%	90%	91%
	Frequency Range	50 / 60 Hz			
	THD (Above 80% Resistive Load)	< 3%			
	Turn On Delay	< 10 sec.			
Crest Factor at Nominal Value	DC Mode: 3:1 AC Mode: 6:1		DC Mode: 3:1 AC Mode: 10:1		
AC INPUT	Nominal Voltage (AC)	120 VAC		230 VAC	
	Voltage Range (AC)	90 ~ 130 VAC ±3%		180 ~ 260 VAC ±2%	
	Power Factor at Rating Power	> 0.99			
	Frequency Range	50 / 60 Hz			
	Synchronization Range	47 ~ 53 Hz, 57 ~ 63 Hz			
DC INPUT	Nominal Voltage (DC)	24 VDC	48 VDC	24 VDC	48 VDC
	Voltage Range (DC)	18 ~ 34 VDC ± 3%	36 ~ 68 VDC ± 3%	18 ~ 34 VDC ± 3%	36 ~ 68 VDC ± 3%
	Nominal Current (at 24 VDC / 48 VDC)	56 A	37 A	56 A	37 A
	Maximum Input Current (15 sec.)	90 A	60 A	90 A	60 A
SIGNAL & CONTROL	Indicator	LED			
	Advanced Control	RS485 Control Interface (MODBUS)			
	Failure Indication	Buzzer Alarm			
PROTECTION	DC Input	Over / Under Voltage, Reverse Polarity			
	AC Input	Over / Under Voltage, Over Current			
	Output	Short Circuit, Overload, Over Temperature			
TRANSFER PERFORMANCE	Inverter To Utility AC	Seamless			
	Utility AC To Inverter	Seamless			
ENVIRONMENT	Operating Temperature	-25°C ~ 40°C; Refer to NESR Power Derating Curve			
	Storage Temperature	-40°C ~ 70°C			
	Relative Humidity	95%; Non-Condensing			
	Vibration	BS EN 61373			
SAFETY & EMC	Safety Standards	Meets UL 60950-1		Certified EN60950-1	
	EMC Standards	Certified FCC CLASS B		Certified EN 55022 Class B; EN 61204-3; EN 55024; EN 61000-3-2, -3-3, -6-1, -6-3; IEC 61000-4-2, 3, 4, 5, 6, 8, 11	
OTHERS	Dimension Module (W x H x D)	4.13" x 3.27" x 16.14" [ 105 mm x 83 mm x 410 mm ]			
	Dimension Rack (W x H x D)	17.56" x 3.35" x 20.04" [ 446 mm x 85 mm x 509 mm ]			
	Weight (Module / Rack)	8.38 lbs [ 3.8 kg ] / 14.33 lbs [ 6.5 kg ]			

\*Specifications subject to change without notice.

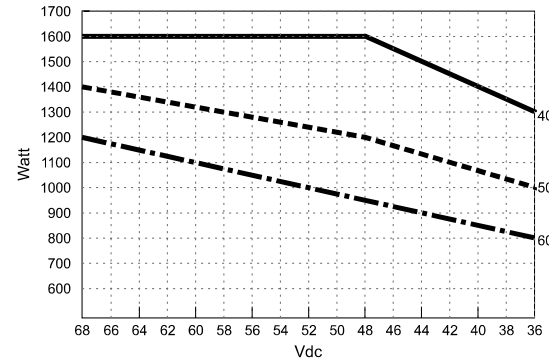


## Derating Curve

NESR-1600-124/224:



NESR-1600-148/248:



## Typical NESR-Series Inverter Dimensions

