



NOVA ELECTRIC



POPULAR OPTIONS

- Ruggedization Against High Shock, Vibration and Humidity
- MS Connector Mates
- Multiple Output Outlets
- Chassis Slide Guides
- Electromechanical Transfer Switch
- Custom Enclosures
- 3Ø Power Input
- Premium Wide-Temp Range
- VRLA Batteries with Up to 12 Year Life
- "LIFE" models feature internal Lithium Iron Phosphate batteries with embedded Battery Management System for substantial weight savings and longer run time.
- Additional Run Time via External Batteries
- 400 Hz input and / or output
- CAD Free Connectors
- Non-PVC Wiring
- 28 VDC Input
- High IP Protection for front / rear panels (typically IP32,) including louvers on all intake and exhaust, as well as fully gasketed breakers, switches, and indicators.
- AUX DC Outputs
- RTCA/DO-160G Compliant Aircraft Grade Package
- Power Distribution Units (PDUs)
- Environmental Stress Screening Services

CONTACT

100 School Street,
Bergenfield, NJ 07621 USA
(201) 385-0500
novaelectric.com
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NERM-C Series 20-800 kVA/kW Three Phase Output True Online Modular / Redundant COTS UPS



Typical 6 Module NERM Cabinet



Typical 10 Module NERM Cabinet

GENERAL OVERVIEW

Nova Electric's NERM-C Series True Online UPS provides a modular backup solution for data centers, computer systems, and any other critical equipment which demands dependable backup power. The NERM's state of the art design combines the latest IGBT three-level technology along with modern DSP Control for maximum reliability, low THD-i, and extremely high system efficiency. Modules can be stacked from 20 kVA/kW to 800 kVA/kW, offering hot-swappable flexibility with the highest quality, at a price you can afford. Power expansion is very simple to achieve by adding more individual power modules to the system, which can reach 200 KVA power in a single rack. Two racks can be paralleled for 400 KVA power!

Modular Hot Swap Design

Each UPS power module is designed to be hot swappable for hassle-free power expansion and system maintenance. Each module is controlled independently, thus avoiding a single point failure risk. If any individual module fails or disconnects, the system continues to operate and supply power without interruption, ensuring a high level of reliability and protection.

Easy Operation and Installation

The modular flexibility of the NERM-Series UPS dramatically reduces technician time spent on installation and maintenance. A large touchscreen LCD panel ensures that users can quickly and easily access vital information.

Intelligent Battery Management

Each UPS module contains a powerful battery charger rated at up to 20% of the module rating, and multiple chargers can be paralleled or increased rating. These chargers are DSP controlled with intelligent digital algorithms designed specifically to prolong battery life.

The Smart Protection System

Each individual power module and the overall system are protected by both hardware and software. Protection functions include abnormal current, incorrect input or output voltage, over temperature, and short circuit. The combination of these hardware and software protection functions results in extremely high reliability, with a very user friendly interface.

High Reliability Design

The low-loss integrated three-level IGBTs used in each NERM-Series power module result in higher efficiency and enhanced reliability due to lower heatsink temperatures.

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Specifications subject to change without notice. Some optional equipment shown.

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Key Features

- High input power factor (>0.99) with low input THD-i (<3%)
- Low adaptability for linear and nonlinear load. Accepts linear and nonlinear loads
- Low audible noise system design (<55db)
- Double DSP controller for each individual power module
- Digital control for all major UPS subassemblies including rectifier, inverter, battery charger, and battery discharge
- IGBT modules rather than discrete semiconductor components are used in the power module for high reliability
- Conformal coated boards for humidity resistance
- Built in PDU circuit breakers for cabinet AC input, AC output and maintenance bypass
- Digital paralleling technology with very low circulating current between power modules
- Front access cabinet with both top and bottom cable connections
- Each individual module is configured with an independent DSP controller to avoid single point of failure risk
- Generator-friendly interface
- RS232, RS485, and dry contacts all standard



Hot-swap building block modules rated at 12-20 kVA/kW @ 120/208 VAC and 20 kVA/kW to 50 kVA/kW modules @ 220/380 VAC through 277/280 VAC.

- Independent control.
- Designed for parallel operation with active current sharing.
- Designed for (N+1) redundancy.
- Capable of hot swap.
- Automatic mechanical disconnection in case of failure or maintenance.

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SPECIFICATION	
CAPACITY	10-400 KVA (to 800 KVA with 2 racks) and N+1 capable
MAIN INPUT	
INPUT VOLTAGE (WITH NEUTRAL)	220/380, 230/400, 240/415 or 277/480 VAC (with optional transformer)
INPUT FREQUENCY	50/60 Hz
INPUT POWER FACTOR	>0.99
INPUT CURRENT THD (TOTAL HARMONIC DISTORTION)	<3%
INPUT VOLTAGE WINDOW	-20% to +20% at full load; -40% to +20% at 70% load or less
FREQUENCY WINDOW	40-70 HZ Programmable
BATTERY	
BATTERY VOLTAGE	±240 VDC (Nominal)
CHARGER POWER	20%*Power
CHARGER VOLTAGE PRECISION	1%
BYPASS	
BYPASS VOLTAGE	220/380, 230/400, 240/415 or 277/480 VAC (with optional transformer)
BYPASS VOLTAGE WINDOW	-20%~ +15%, full load, settable
BYPASS OVERLOAD CAPABILITY	< 125%, long term operation (2 hours maximum)
	125%
	130%
	>1000%, for more than 100 ms
OUTPUT	
OUTPUT VOLTAGE	220/380, 230/400, 240/415 or 277/480 VAC (with optional transformer)
VOLTAGE PRECISION	±0.5% (balanced load), ±1% (unbalanced load)
VOLTAGE THD (TOTAL HARMONIC DISTORTION)	THD<1.5% (linear load), THD<5% (nonlinear load)
POWER FACTOR	0.8
PHASE TOLERANCE	120°±0.5°(balance and unbalance load)
CREST FACTOR	3:1
OVERLOAD CAPABILITY	Up to 105%, continuous operation
	Up to 110%, transfer to bypass after 1 hour
	Up to 125%, transfer to bypass after 10 minutes
	Up to 150%, transfer to bypass after 1 minute
	>150%, transfer to bypass after 200 ms
SYSTEM	
SYSTEM EFFICIENCY	Normal mode: 95%
	ECO mode: 99%
BATTERY MODE EFFICIENCY	95%
DISPLAY	LCD+LED, Touch screen and keyboard
IP CLASS	IP20
INTERFACE (COMMUNICATION PORTS)	RS232, RS485, Dry Contacts, SNMP Card, EPO, Generator Interface
INSTALLATION/CONNECTION	Top or bottom cable connection
OPERATION TEMPERATURE	0-40°C (to 50°C with 15% derating)
STORAGE TEMPERATURE (ELECTRONICS)	-25°C to +70°C (Battery may be different)
RELATIVE HUMIDITY	0-95% (non-condensing)
NOISE (DB)	<55dB

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- 400 Hz input and / or output
- CAD Free Connectors
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WEIGHT (KG/LB) Note: Cabinets do not need to be fully populated. Model names will vary with the configuration.	6-module Cabinet	NERM036/06L, NERM972/12L	150kg/330Lb
	10-module Cabinet	NERM072/06L, NERM120/12L	180kg/396Lb
	NEPM06L 6KVA	20kg/44Lb	
	NEPM12L 12KVA	22kg/49Lb	
	NEPM20L 20kVA/kW	22kg/49Lb	
DIMENSION (W*D*H)(MM/INCH)	6-module Cabinet	600*900*1600 / 23.6*35.5*63	
	10-module Cabinet	600*900*2000 / 23.6*35.5*78.8	
	10-module HV Enclosure	Varies (consult factory)	
	Module (10/20/40 KVA)	440*600*134 / 17.3*23.6*5.27	

SPECIFICATION

CAPACITY	10-120 KVA (to 240 KVA with 2 racks) and N+1 capable
MAIN INPUT	
INPUT VOLTAGE (WITH NEUTRAL)	120/208 VAC
INPUT FREQUENCY	50/60 Hz
INPUT POWER FACTOR	>0.99
INPUT CURRENT THD (TOTAL HARMONIC DISTORTION)	<3%
INPUT VOLTAGE WINDOW	-20% to +20% at full load, -40% to +20% at 70% load or less
FREQUENCY WINDOW	40-70 HZ Programmable
BATTERY	
BATTERY VOLTAGE	±120 VDC (Nominal)
CHARGER POWER	20%*Power
CHARGER VOLTAGE PRECISION	1%
BYPASS	
BYPASS VOLTAGE	120/208 VAC
BYPASS VOLTAGE WINDOW	-20%~ +15%, full load, settable
BYPASS OVERLOAD CAPABILITY	< 125%, long term operation (2 hours maximum)
	125%
	130%
	>1000%, for more than 100 ms
OUTPUT	
OUTPUT VOLTAGE	120/208 VAC
VOLTAGE PRECISION	±1% (balance load), ±2% (unbalance load)
VOLTAGE THD (TOTAL HARMONIC DISTORTION)	THD<2% (linear load), THD<5% (nonlinear load)
POWER FACTOR	0.8
PHASE TOLERANCE	120°±0.5°(balance and unbalance load)
CREST FACTOR	3:1
OVERLOAD CAPABILITY	Up to 105%, continuous operation
	Up to 110%, transfer to bypass after 1 hour
	Up to 125%, transfer to bypass after 10 minutes
	Up to 150%, transfer to bypass after 1 minute
	>150%, transfer to bypass after 200 ms

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SYSTEM			
SYSTEM EFFICIENCY		Normal mode: 90%	
		ECO mode: 99%	
BATTERY MODE EFFICIENCY		90%	
DISPLAY		LCD+LED, Touch screen and keyboard	
IP CLASS		IP20	
INTERFACE (COMMUNICATION PORTS)		RS232, RS485, Dry Contacts, SNMP Card, EPO, Generator Interface	
INSTALLATION/CONNECTION		Top or bottom cable connection	
OPERATION TEMPERATURE		0-40°C (to 50°C with 15% derating)	
STORAGE TEMPERATURE (ELECTRONICS)		-25°C to +70°C (Battery may be different)	
RELATIVE HUMIDITY		0-95% (non-condensing)	
NOISE (DB)		<55dB	
WEIGHT (KG/LB) Note: Cabinets do not need to be fully populated. Model names will vary with the configuration.	6-module Cabinet	NERM036/06L, NERM072/12L	150kg/330Lb
	10-module Cabinet	NERM072/06L, NERM120/12L	180kg/396Lb
	NEPM06L 6KVA	20kg/44Lb	
	NEPM12L 12KVA	22kg/49Lb	
	NEPM20L 20 kVA/kW	22kg/49Lb	
DIMENSION (W*D*H)(MM/INCH)	6-module Cabinet	600*900*1600 / 23.6*35.5*63	
	10-module Cabinet	600*900*2000 / 23.6*35.5*78.8	
	Module (6/12 KVA)	430*600*134 / 17.3*23.6*5.27	

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RUGGED AC POWER SYSTEMS



SELECT UNITS QUALIFIED TO MIL-STD-810, MIL-S-901, MIL-STD-1399, MIL-STD-461, MIL-STD-167, MIL-STD-740, RTCA/DO-160, AND MORE

RUGGED TRUE ONLINE UPS



500 W – 500+ KW

Rack Mount, Bulkhead Mount, and Freestanding

Single and Three Phase

50, 60, and 400 Hz.

PURE SINEWAVE DC-AC INVERTERS



100 W – 500+ KW

Rack Mount, Bulkhead Mount, and Freestanding

Single and Three Phase

50, 60, and 400 Hz.

SOLID-STATE FREQUENCY CONVERTERS



100 W – 500+ KW

Rack Mount, Bulkhead Mount, and Freestanding

Single and Three Phase

50, 60, and 400 Hz.

POWER DISTRIBUTION UNITS (PDUs)



Basic, Switched, Auto-Transfer Switching, and Metered Configurations

Rack Mount, Bulkhead Mount, and Freestanding

Single and Three Phase

CUSTOM EMI FILTERS



For MIL-STD-461 Compliance

Rack Mount, Bulkhead Mount, and Freestanding

Single and Three Phase

RUGGED PORTABLE TRANSFORMERS



100 W – 500+ KW

Rack Mount, Bulkhead Mount, and Freestanding

Single and Three Phase

EXTERNAL MAINTENANCE BYPASS SWITCHES (MBSSs)



Rack Mount, Bulkhead Mount, and Freestanding

Single and Three Phase

CUSTOM DESIGNS



Designed & Built to Spec

Integrated AC & DC Capabilities

Multiple Outputs

RELIABLE AC POWER WHEN AND WHERE YOU NEED IT SEVERE ENVIRONMENT PRODUCTS



- AIRBORNE
- SHIPBOARD
- MOBILE
- RACK MOUNT & FREESTANDING

- 50, 60, AND 400 Hz
- AIR & WATER COOLED
- SINGLE AND THREE PHASE
- LIGHTWEIGHT DESIGNS

