Project _____ Type _____

Catalogue n° _____ Date _____

NVR
SUPERNOVA
SINGLE PHASE INVERTER

The Supernova NVR is a single phase inverter, designed with the industry-leading compact footprint and are available with robust communication options. These highly efficient systems range from 1.75 kW to 16.7 kW.

FEATURES & SPECIFICATIONS

STANDARD FEATURES

- 98% Efficient (Typical)
- PWM/IGBT Technology and Micro-Controller
- User Programmable with Password Protection
- Automatic Event, Test and Alarm Log
- RS232 Communications Port
- Input Circuit Breaker
- 2ms Transfer Time
- Low Audible Noise
- NEMA Type 1 Single Cabinet Space-Saving Design
- 65kAIC Interrupting Rating

OPTIONAL FEATURES

- Enhanced Communications
  - Expanded Building Management Protocols
  - IoT Connect Cloud Software
- Internal or External Maintenance Bypass
- Summary Dry Form C Contacts
- Remote Meter Panel
- Output Circuit Breakers
  - 1 750-5 000W: up to 11 supervised
  - 6 250-7 500W: up to 16 supervised
  - 10 000-16 700W: up to 22 supervised
- Normally Off Output
- Output Trip Alarms
- Remote Summary Alarm Panel

SPECIFICATIONS

- Input 120, 277 or 347VAC 1 Phase 2 Wire Plus Ground
- Output 120, 277 or 347VAC 1 Phase 2 Wire Plus Ground
- Output Load Power Factor .5 Lag to .5 Lead
- Compatible with LED Drivers
- Forced Air Cooling Only During Emergency Operation; No Filters Required
- Output Voltage Distortion Less than 3% THD for Linear Loads
- Compatible with Generators
- 30, 60, 90, 120 Minute Runtime available
- Inverter Operating Temperature 0°C to 40°C
- Battery Operating Temperature 20°C to 30°C

APPROVALS

- cUL to CSA 22.2 #141-15

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System Display Functions

ADVANCED TECHNOLOGY

Designed with advanced Pure Sine Wave technology, the Hypernova NVQ provides direct AC power and full illumination to all lighting sources. With industry-leading efficiencies, they run cool and reduce the overall operating costs of emergency lighting systems.

INDUSTRY LEADING COMPACT FOOTPRINT

Designed with industry leading compact footprint, the Hypernova NVQ allows building owners to comply with emergency lighting codes without sacrificing valuable floor-space. Featuring a NEMA Type 1 space-saving design these inverters fit easily into electrical rooms where floor space is limited!

INVERTER.CONNECT

Inverter Connect is a cloud-based platform that allows users to monitor and receive alerts about their emergency lighting inverter systems. IoT Inverter Connect streamlines system communications and sends users notifications on their computers, tablets or smartphone devices.
The web-based platform allows any device that connects to the internet to log in to the system.

Enhances Building Safety

- Proactively monitors & notifies of critical issues that could affect building safety.
- Proactive maintenance solidifies confidence that the lights will illuminate during an emergency.

Saves Times

- User-friendly design makes it easy to find the most crucial information quickly.
- Easy-to-use dashboard enables a status check of a fleet of inverters from anywhere.

Connectivity

- Receive status and alarm notifications by SMS and/or email.
- See the results of your inverters' periodic self-tests. View detailed real-time inverter telemetry.
- Accessible from any device connected to the internet.

Future-Ready Design

- Software is adaptable to meet the demands of future technological advances.

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ORDERING GUIDE

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SERIES	VOLTAGE	CAPACITY RATING (W)*	BATTERY TYPE	OUTPUT BREAKERS[1]			
				OUTPUT	VOLTAGE/POLES	AMP RATING	QUANTITY[2]
NVR30	A-A - 120 INPUT; 120 OUTPUT	1 750	S - STANDARD	O - NORMALLY ON	A - 120V 1-POLE	10	T01-T22
NVR60	A-AE - 120 INPUT; 120/277 OUTPUT	2 500		F - NORMALLY OFF	B - 208V 2-POLES	16	
NVR90	B-A - 208 INPUT; 120 OUTPUT	3 750			C - 240V 2-POLES	20	
NVR120	C-AC - 240 INPUT; 120/240 OUTPUT	5 000			E - 277V 1-POLE	25	
	E-A - 277 INPUT; 120 OUTPUT	6 250			H - 347V	32	
	E-EA - 277 INPUT; 277/120 OUTPUT	7 500			K - 480V 2-POLES	40	
	B-AC - 208 INPUT; 120/240 OUTPUT	10 000				50	
	B-AB - 208 INPUT; 120/208 OUTPUT	12 500				63	
	H-H - 347 INPUT; 347 OUTPUT	16 700					

OPTIONS	
STANDARD FEATURES	
C -	STATUS MONITORING CONTACTS DRY FORM C
DT -	DRIP TOP (NEMA 2)
OPTIONAL FEATURES	
BBM -	INTERNAL MAINTENANCE BYPASS (BREAK BEFORE MAKE)
BL -	OUTPUT CIRCUIT BREAKER LOCK(S)
BTM -	BATTERY TEMPERATURE MONITOR[3]
F -	FAST CHARGE
I -	INVERTER ON DRY FORM C CONTACT
L -	LOAD CONTROL RELAY (LINE VOLTAGE DIMMER OR SWITCH BYPASS)
MBB -	INTERNAL MAINTENANCE BYPASS (MAKE BEFORE BREAK)
O -	OUTPUT TRANSFER DELAY
P -	REMOTE STATUS PANEL (STATUS WITH ALARMS & SILENCE SWITCH; REQUIRES C OPTION)
R -	REMOTE METER PANEL
RA -	REMOTE SUMMARY ALARM PANEL
S -	SUMMARY FAULT FORM C DRY CONTACTS
SM -	SEISMIC MOUNTING[4]
PICK 1	
BIP -	BACNET IP
IOT -	IOT INVERTER CLOUD CONNECT
MIP -	MODBUS TCP/IP

[1] Output breakers are optional
[2] Maximum out breakers available:
1 750-5 000W: 11 supervised
6 250-7 500W: 16 supervised
10 000-16 700W: 22 supervised
347V : 14 supervised
[3] BTM option only available on the following sizes: 1 750, 2 500, 3 750, 5 000, 6 250, 7 500W
[4] Anchorage based on calculations. For systems requiring OSHPD/Withstand testing, please contact the factory

* Capacity changes with runtime. See list below.

CAPACITY RATING AS PER ORDERING GUIDE	ACTUAL CAPACITY RATING (KW)			
	NVR30	NVR60	NVR90	NVR120
1750	1.75	1.75	1.53	1.31
2500	2.5	2.5	2.19	1.88
3750	3.75	3.75	3.28	2.81
5000	5	5	4.38	3.75
6250	6.25	6.25	5.47	4.69
7500	7.5	7.5	6.56	5.63
10000	10	10	8.75	7.5
12500	12.5	12.5	10.9	9.38
16700	16.7	16.7	14.6	12.5

OPTION TABLE

OPTION CODE	OPTION NAME	DESCRIPTION
BBM	INTERNAL MAINTENANCE BYPASS (BREAK-BEFORE-MAKE)	TOGGLE SWITCH DESIGNED TO DISCONNECT INVERTER FROM ELECTRICAL SYSTEM FOR MAINTENANCE (BREAK BEFORE MAKE)
BIP	BACNET IP	"MSTP" ALLOW UPLOAD OF FMP DATA VIA RS232 INTERMEDIATE DEVICE. THIS INFO CAN THEN BE DOWNLOADED TO CUSTOMER DEVICE. ALLOWS DIRECT COMMUNICATION VIA IP
BL	OUTPUT CIRCUIT BREAKER LOCK(S)	ALLOWS CUSTOMER TO LOCK THE OUTPUT CIRCUIT BREAKER IN ON OR OFF POSITION
BTM	BATTERY TEMPERATURE MONITOR	1. WARNING ALARM: WARNS WHEN BATTERY TEMPERATURE IS GETTING TOO HIGH. 2. ABSOLUTE ALARM: WHEN TEMPERATURE REACHES HIGH TEMP THIS SHUTS DOWN THE STRING OF BATTERIES WHERE THE HOT BATTERY IS.
C	STATUS MONITORING CONTACTS	5 FORM C DRY CONTACTS: 1. SYSTEM IN BYPASS 2. SUMMARY ALARM: ANY ALARM IN THE FMP 3. OUTPUT TRIP ALARM 4. UTILITY FAILURE 5. INVERTER ON
DT	DRIP TOP (NEMA 2)	METAL PIECE DESIGNED TO DIRECT FALLING WATER AWAY FROM THE UNIT
EMBP	EXTERNAL MAINTENANCE BYPASS (MAKE-BEFORE-BREAK)	MAINTENANCE BYPASS SWITCH MOUNTED EXTERNAL TO THE SYSTEM (CANNOT USE WITH OUTPUT CIRCUIT BREAKERS)
F	FAST CHARGE	ALLOWS THE SYSTEM TO RECHARGE IN 12 HOURS FROM LVD
I	INVERTER ON DRY FORM C CONTACT	FORM C DRY CONTACT WHICH OPENS WHEN INVERTER IS ON
IOT	IOT INVERTER CONNECT CLOUD COMMUNICATION	SYSTEM USING THE CLOUD TO ALLOW MONITORING OF MULTIPLE SYSTEMS IN ONE LOCATION
L	LOAD CONTROL RELAY (LINE VOLTAGE DIMMER OR SWITCH BYPASS)	LOAD CONTROL RELAY (LINE VOLTAGE DIMMER OR SWITCH BYPASS)
MBB	INTERNAL MAINTENANCE BYPASS MAKE BEFORE BREAK	TOGGLE SWITCH DESIGNED TO DISCONNECT INVERTER FROM ELECTRICAL SYSTEM FOR MAINTENANCE (MAKE BEFORE BREAK)
MIP	MODBUS TCP/IP	"MSTP" ALLOW UPLOAD OF FMP DATA VIA RS232 INTERMEDIATE DEVICE. THIS INFO CAN THEN BE DOWNLOADED TO CUSTOMER DEVICE. ALLOWS DIRECT COMMUNICATION VIA IP
O	OUTPUT TRANSFER DELAY	DEVICE DESIGNED TO DELAY TRANSFER ADJUSTABLE 0-7.5 SECONDS, FACTORY SET AT 3 SECONDS. USED WHEN CONTROL SYSTEM CANNOT DETECT THE FAST TRANSFER
P	REMOTE STATUS PANEL (STATUS ALARMS, REQUIRES C OPTION)	SINGLE GANG BOX SHOWING STATUS OF ALARMS, REQUIRES C OPTION
R	REMOTE METER PANEL	FULL SIZE METER PANEL MOUNTED REMOTELY IN A NEMA 1 ENCLOSURE
RA	REMOTE SUMMARY ALARM PANEL	LED INDICATOR AND SOUND ALERT
S	SUMMARY FAULT FORM C CONTACTS	RELAY CONTACT SHOWING ANY ALARM
SM	SEISMIC MOUNTING	INSTRUCTIONS AND HARDWARE FOR MOUNTING SYSTEM IN STANDARD SEISMIC APPLICATIONS
T	OUTPUT TRIP ALARM	ALARMS WHEN ANY OUTPUT CIRCUIT BREAKER IS TRIPPED

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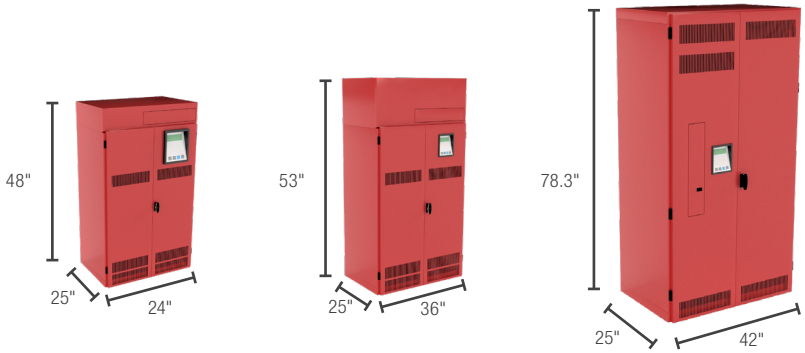
DIMENSIONS



POWER RATING (KW) 30 MIN.	VOLTAGE IN-OUT (VAC)	CABINET DIMENSIONS				BATTERIES		TOTAL SYSTEM WEIGHT
		WIDTH (IN)	HEIGHT (IN)	DEPTH (IN)	WEIGHT (LBS)	NO. OF BATTERIES	WEIGHT (LBS)	
1.75	120 OR 277	24	48	25	247	4	287	534
	347	54			396			683
2.50	120 OR 277	24	48	25	263	4	287	550
	347	54			412			699
3.75	120 OR 277	24	48	25	280	6	430	710
	347	54			441			871
5.00	120 OR 277	24	48	25	297	8	574	871
	347	54			467			1 041
6.25	120 OR 277	36	53	25	418	10	717	1 135
	347	66			597			1 314
7.50	120 OR 277	36	53	25	444	12	860	1 304
	347	66			636			1 496
10.0	120 OR 277	42	78.3	25	940	12	860	1 800
	347	72			1 145			2 005
12.5	120 OR 277	42	78.3	25	980	15	1 076	2 056
	347	72			1 200			2 276
16.7	120 OR 277	42	78.3	25	1 030	20	1 434	2 464
	347	72			1 265			2 699

POWER RATING (KW) 60 MIN.	90 MIN.	120 MIN.	VOLTAGE IN-OUT (VAC)	CABINET DIMENSIONS				BATTERIES		TOTAL SYSTEM WEIGHT
				WIDTH (IN)	HEIGHT (IN)	DEPTH (IN)	WEIGHT (LBS)	NO. OF BATTERIES	WEIGHT (LBS)	
1.75	1.53	1.31	120 OR 277	24	48	25	247	4	287	534
			347	54			396			683
2.50	2.19	1.88	120 OR 277	24	48	25	263	4	397	660
			347	54			412			809
3.75	3.28	2.81	120 OR 277	24	48	25	280	6	595	875
			347	54			441			1 036
5.00	4.38	3.75	120 OR 277	24	48	25	297	8	794	1 091
			347	54			467			1 261
6.25	5.47	4.69	120 OR 277	36	53	25	418	10	992	1 410
			347	66			597			1 589
7.50	6.56	5.63	120 OR 277	36	53	25	444	12	1 190	1 634
			347	66			636			1 826
10.0	8.75	7.50	120 OR 277	42	78.3	25	940	12	1 428	2 368
			347	72			1 145			2 573
12.5	10.9	9.38	120 OR 277	42	78.3	25	980	15	1 785	2 765
			347	72			1 200			2 985
16.7	14.6	12.5	120 OR 277	42	78.3	25	1 030	20	2 380	3 410
			347	72			1 265			3 645

Data is based upon tests performed in a controlled environment. Actual performance can vary depending on operating conditions.
All products are subject to change or may be discontinued any time without notice.

HEAT LOSS TABLE

30 MINUTE RUN TIME		60 MINUTE RUN TIME		90 MINUTE RUN TIME		120 MINUTE RUN TIME	
OUPUT RATING (KW)	HEAT LOSS (BTU/H)	OUPUT RATING (KW)	HEAT LOSS (BTU/H)	OUPUT RATING (KW)	HEAT LOSS (BTU/H)	OUPUT RATING (KW)	HEAT LOSS (BTU/H)
1.75	119	1.75	119	1.53	104	1.31	90
2.50	171	2.50	171	2.19	149	1.88	128
3.75	256	3.75	256	3.28	224	2.81	192
5.00	341	5.00	341	4.38	298	3.75	256
6.25	426	6.25	426	5.47	373	4.69	320
7.50	512	7.50	512	6.56	448	5.63	384
10.0	682	10.0	682	8.75	597	7.50	512
12.5	853	12.5	853	10.9	746	9.38	639
16.7	1 139	16.7	1 139	14.6	997	12.5	854