

NVQ HYPERNOVA THREE PHASE INVERTER



The Hypernova NVQ inverter is our sleekest and smartest three-phase units. The equipment has been designed with industry leading compact footprint and feature many communication options, such as the new IoT Inverter Connect cloud connectivity solution. The modular battery cabinet configurations optimize mechanical space requirements. These highly efficient systems range from 5 kW to 50 kW and are perfect for all commercial applications.

FEATURES & SPECIFICATIONS

STANDARD FEATURES

- 98% Efficient Typical
- PWM/IGBT Technology and Micro-Controller
- Internal Maintenance Bypass
- User Programmable with Password Protection
- Automatic Event, Test and Alarm Log
- RS232 Communications Port
- Input Circuit Breaker
- 2ms Transfer Time
- Low Audible Noise
- Space-Saving Design
- 65KAIC Withstanding Rating

OPTIONAL FEATURES

- Enhanced Communications
 - Expanded Building Management Protocols
 - BACnet or Modbus Communications Interface
 - IoT Connect Cloud Software
- External Maintenance Bypass
- Summary Alarm Dry Form C Contacts
- Internal Output Distribution Circuit Breakers
- Normally Off Output
- Output Trip Alarms
- Remote Panels (Meter, Status or Summary Alarm)

SPECIFICATIONS

- Input Voltage: 120/208, 277/480, 347/600 VAC 3-Phase 4 Wire Wye Configuration
- Output Voltage: 120/208, 277/480, 347/600 VAC 3-Phase Wye or Delta Configuration
- Output Load Power Factor .5 Lag to .5 Lead
- Compatible with all lighting including LED Drivers
- Forced Air Cooling Only During Emergency Operation; No Filters Required
- Output Distortion Less than 3% THD for Linear Loads
- Compatible with Generators
- 30, 60, 90 and 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

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.

ORDERING GUIDE

SERIES	VOLTAGE INPUT-OUTPUT	CAPACITY RATING [W]*	BATTERY TYPE	OUTPUT BREAKERS¹				QUAN-TITY²	OPTIONS
				OUTPUT	VOLTAGE/POLES	AMP RATING			
NVQ30	AB-AB - 120/208 INPUT;	5 000	S - STAN-DARD	O - NORMALLY ON F - NORMALLY OFF	A - 120V 1-POLE	10	TD1 - T30	STANDARD FEATURES	
NVQ60	120/208 OUTPUT	7 500			B - 208V 2-POLES	16		C - STATUS MONITORING CONTACTS DRY FORM C	
NVQ90	EK-EK - 277/480 INPUT;	10 000			C - 240V 2-POLES	20		DT - DRIP TOP (NEMA 2)	
NVQ120	277/480 OUTPUT	12 500			E - 277V 1-POLE	25		OPTIONAL FEATURES	
	HS-HS - 347/600 INPUT; 347/600 OUTPUT	16 700			AB - 120/208V	32		BCF - BATTERY CABINET FAN	
		25 000			3-POLES	40		BTM - BATTERY TEMPERATURE MONITOR	
		33 200			AK - 277/480V	50		F - FAST CHARGEOUTPUT TRANSFER	
		37 500			3-POLES	63		I - INVERTER ON DRY FORM C CONTACT	
		50 000			H - 347V			L - LOAD CONTROL RELAY (DIMMER OR SWITCH BYPASS)³	
					K - 480V 2-POLES			O - OUTPUT TRANSFER DELAY	
								P - REMOTE STATUS PANEL (STATUS ALARMS, REQUIRES C OPTION)	
								R - REMOTE METER PANEL	
								RA - REMOTE SUMMARY ALARM PANEL	
					S - SUMMARY FAULT FORM C CONTACTS				
					SM - SEISMIC MOUNTING⁴				
					PICK 1				
					BIP - BACNET IP				
					IOT - IOT INVERTER CLOUD CONNECT				
					MIP - MODBUS TCP/IP				

¹ Output breakers are optional

² Maximum out breakers available: 5 000-10 000W: 19 supervised poles
12 500-16 700W: 27 supervised poles
25 000-50 000W: 30 supervised poles
Combinations of 1, 2 and/or 3 pole breakers available (consult factory)
347V : 14 supervised

³ Contact factory

⁴ Anchorage based on calculations. For systems requiring OSHPD/Withstand testing, please contact the factory.

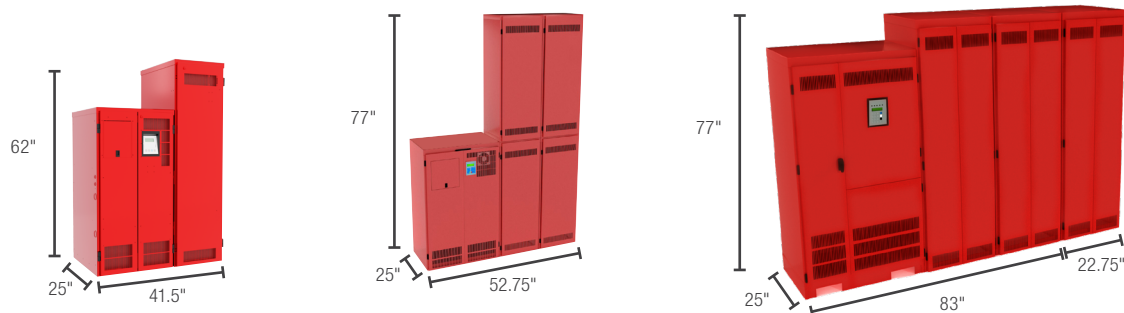
* Capacity changes with runtime. See list below.

CAPACITY RATING AS PER ORDERING GUIDE	ACTUAL CAPACITY RATING (KW)			
	NVQ30	NVQ60	NVQ90	NVQ120
5000	5	5	4.38	3.75
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
25000	25	25	21.9	18.8
33200	33.2	33.2	29.1	24.9
37500	37.5	37.5	32.8	28.1
50000	50	50	43.8	37.5

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)
BCF	BATTERY CABINET FAN	FAN IN BATTERY CABINETS (ALWAYS RUNNING)
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)
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 0-75 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

DIMENSIONS



POWER RATING (KW)	VOLTAGE IN-OUT [VAC]	ELECTRONICS CABINET DIMENSIONS				BATTERIES		BATTERY CABINET DIMENSIONS				TOTAL SYSTEM WEIGHT
		WIDTH (IN)	HEIGHT (IN)	DEPTH (IN)	WEIGHT (LBS)	NO. OF BATTERIES	WEIGHT (LBS)	WIDTH (IN)	HEIGHT (IN)	DEPTH (IN)	WEIGHT (LBS)	
5	120/208 OR 277/480	24	47	25	485	12	860	17.5	62	25	285	1 630
	347/600		69		675							1 820
7.5	120/208 OR 277/480	24	47	25	485	12	860	17.5	62	25	285	1 630
	347/600		69		675							1 820
10	120/208 OR 277/480	24	47	25	590	12	860	17.5	62	25	285	1 735
	347/600		69		802							1 947
12.5	120/208 OR 277/480	30	47	25	640	15	1076	22.75	77	25	375	2 091
	347/600		69		746							2 197
16.7	120/208 OR 277/480	30	47	25	640	20	1434	22.75	77	25	375	2 449
	347/600		69		746							2 555
25	120/208 OR 277/480	37.5	72	25	1 150	40	2868	45.5	77	25	750	4 768
	347/600	67.5			1 285							4 903
33.2	120/208 OR 277/480	37.5	72	25	1 150	40	2868	45.5	77	25	750	4 768
	347/600	67.5			1 302							4 920
37.5	120/208 OR 277/480	37.5	72	25	1 360	60	4302	68.25	77	25	1125	6 787
	347/600	67.5			1 531							6 958
50	120/208 OR 277/480	37.5	72	25	1 360	60	4302	68.25	77	25	1125	6 787
	347/600	67.5			1 550							6 977

POWER RATING (KW)			VOLTAGE IN-OUT [VAC]	ELECTRONICS CABINET DIMENSIONS				BATTERIES		BATTERY CABINET DIMENSIONS				TOTAL SYSTEM WEIGHT
				WIDTH (IN)	HEIGHT (IN)	DEPTH (IN)	WEIGHT (LBS)	NO. OF BATTERIES	WEIGHT (LBS)	WIDTH (IN)	HEIGHT (IN)	DEPTH (IN)	WEIGHT (LBS)	
5	4.38	3.75	120/208 OR 277/480	24	47	25	485	12	860	17.5	62	25	285	1 630
			347/600		69		675							1 820
7.5	6.56	5.63	120/208 OR 277/480	24	47	25	485	12	1 190	17.5	62	25	285	1 960
			347/600		69		675							2 150
10	8.75	7.5	120/208 OR 277/480	24	47	25	590	12	1 428	17.5	62	25	285	2 303
			347/600		69		802							2 515
12.5	10.9	9.38	120/208 OR 277/480	30	47	25	640	15	1 785	22.75	77	25	375	2 800
			347/600		69		746							2 906
16.7	14.6	12.5	120/208 OR 277/480	30	47	25	640	20	2 380	22.75	77	25	375	3 395
			347/600		69		746							3 501
25	21.9	18.8	120/208 OR 277/480	37.5	72	25	1 150	40	3 968	45.5	77	25	750	5 868
			347/600	67.5			1 285							6 003
33.2	29.1	24.9	120/208 OR 277/480	37.5	72	25	1 150	40	4 760	45.5	77	25	750	6 660
			347/600	67.5			1 302							6 812
37.5	32.8	28.1	120/208 OR 277/480	37.5	72	25	1 360	60	5 952	68.25	77	25	1125	8 437
			347/600	67.5			1 531							8 608
50	43.8	37.5	120/208 OR 277/480	37.5	72	25	1 360	60	7 140	68.25	77	25	1125	9 625
			347/600	67.5			1 550							9 815

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	
OUTPUT RATING [KW]	HEAT LOSS [BTU/H]	OUTPUT RATING [KW]	HEAT LOSS [BTU/H]	OUTPUT RATING [KW]	HEAT LOSS [BTU/H]	OUTPUT RATING [KW]	HEAT LOSS [BTU/H]
5.00	341	5.00	341	4.38	298	3.75	256
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
25.0	1 705	25.0	1 705	21.9	1 492	18.8	1 279
33.2	2 264	33.2	2 264	29.1	1 981	24.9	1 698
37.5	2 558	37.5	2 558	32.8	2 238	28.1	1 918
50.0	3 410	50.0	3 410	43.8	2 984	37.5	2 558