

ILLUMINATOR NVP SINGLE PHASE INVERTER

The Illuminator NVP is a fast transfer central inverter system for HID and motor loads. The system features a single-cabinet design for units up to 16.7 kW, reducing the footprint and installation cost. With advanced communication features, the NVP offers the total solution.



FEATURES & SPECIFICATIONS

STANDARD FEATURES

- 98% Efficient (Typical)
- PWM/IGBT Technology
- Microprocessor Control
- User Programmable with Password Protection
- Automatic Event, Test & Alarm Log
- RS232 Communications Port
- Input Circuit Breaker
- 2ms Transfer Time
- Low Audible Noise
- Space-Saving, Single Cabinet Design
- 65kAIC Withstand Rating

OPTIONAL FEATURES

- Enhanced Communications
 - Expanded Building Management Protocols
 - BACnet or Modbus Communications Interface
 - IoT Connect Cloud Software
- Internal Maintenance Bypass
- Summary Alarm Dry Form C Contacts
- Status Monitoring Dry Form C Contacts
- Remote Meter Panel
- Output Circuit Breakers
 - 1500-5000W: 8 supervised
 - 6000-16700W: 18 supervised
- Factory Startup and Training
- Normally Off Output
- Output Trip Alarms
- Remote Summary and Remote Status Alarm Panels

SPECIFICATIONS

- Input 120, 277, 347VAC 1 Phase 2 Wire Plus Ground
- Output 120, 277, 347VAC 1 Phase 2 Wire Plus Ground
- Output Load Power Factor .5 Lag to .5 Lead
- Compatible with all LED Drivers
- Forced Air Cooling Only During Emergency Operation, No Filters Required
- Output Distortion Less than 3% THD for Linear Loads
- Generator Compatibility
- Custom & Mixed Voltages Available
- 30, 60, 90 and 120 minutes runtime available

APPROVALS

- cUL to CSA 22.2 #141-15

System Display Functions



The NVP Series is an uninterruptible lighting inverter. It transfers to inverter mode (battery power) when utility power is interrupted for less than 2ms. The line interactive design eliminates excessive transfers to battery power. The NVP Series is designed for all lighting loads including LED, Fluorescent, Incandescent, Quartz, and HID.



Meter Functions

- AC Voltage Input
- AC Voltage Output
- AC Current Output
- Battery Voltage
- System Days
- Battery Current
- VA Output
- Inverter Watts
- Ambient Temperature
- Inverter Minutes

Program Functions

- Date
- Time
- Month Test Date / Time
- Yearly Test Date / Time
- Load Fault Reduction Setting
- Low Battery Alarm
- Near Low Battery Alarm
- Low AC Voltage Alarm
- High AC Voltage Alarm
- Ambient Temperature Alarm

Control Functions

- Test Log & Event Log
- 75 Logs Stored
- Date, Time, Duration
- Output Voltage
- Output Current
- Ambient Temperature
- Alarms Preset
- Alarm Log
- 75 Logs Stored
- Date, Time, Alarm Type
- Test
- Buzzer On / Off

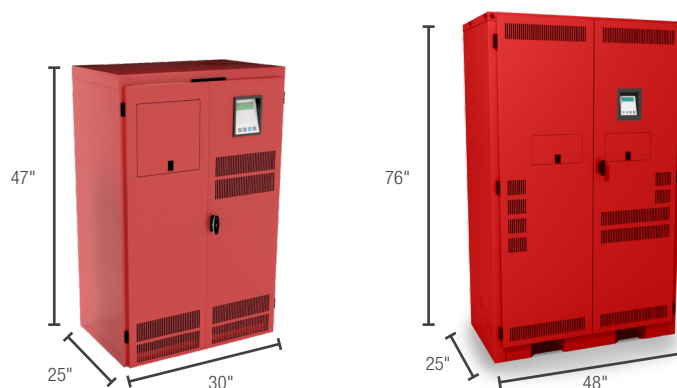
ORDERING GUIDE

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SERIES	VOLTAGE INPUT-OUTPUT	CAPACITY RATING [W]*	BATTERY TYPE	OUTPUT BREAKERS¹				OPTIONS	
				OUTPUT	VOLTAGE/POLES	AMP RATING	QUAN- TITY²		
NVP30	A-A - 120 INPUT;	1 500	S - STAN- DARD	O - NORMALLY ON	A - 120	10	T01	STANDARD FEATURES	
NVP60	120 OUTPUT	2 250			B - 208	16	T02	C -	STATUS MONITORING CONTACTS
NVP90	A-AE - 120 INPUT;	3 000		F - NORMALLY OFF	C - 240	20	T03	DRY FORM C	
NVP120	120/277 OUTPUT	3 750			E - 277	25	T04	DT -	DRIP TOP (NEMA 2)
	B-A - 208 INPUT;	5 000		H - 347	32	T05	OPTIONAL FEATURES		
	120 OUTPUT	6 000			40	T06	BBM -	INTERNAL MAINTENANCE BYPASS	
	C-AC - 240 INPUT;	8 000			50	T07	(BREAK-BEFORE-MAKE)		
	120/240 OUTPUT	10 000			63	T08	BL -	CIRCUIT BREAKER LOCK(S)	
	E-A - 277 INPUT;	12 500				T09	BTM -	BATTERY TEMPERATURE MONITOR	
	120 OUTPUT	16 700				T10	F -	FAST CHARGE	
	E-E - 277 INPUT;					T11	I -	INVERTER ON DRY FORM C	
	277 OUTPUT					T12	CONTACTS		
	E-EA - 277 INPUT;					T13	L -	LOAD CONTROL INTERFACE	
	277/120 OUTPUT					T14	(DIMMER / SWITCH BYPASS)		
	B-AC - 208 INPUT;					T15	MBB -	INTERNAL MAINTENANCE BYPASS	
	120/240 OUTPUT					T16	(MAKE-BEFORE-BREAK)		
	H-H - 347 INPUT;				T17	O -	OUTPUT TRANSFER DELAY		
	347 OUTPUT				T18	P -	REMOTE STATUS PANEL		
	B-AB - 208 INPUT;					(REQUIRES OPTION C)			
	120/208 OUTPUT					R -	REMOTE METER PANEL		
						RA -	REMOTE SUMMARY ALARM PANEL		
						S -	SUMMARY DRY FORM C CONTACTS		
						SM -	SEISMIC BRACING/MOUNTING³		
						PICK 1			
						BIP -	BACNET IP		
						IOT -	IOT INVERTER CLOUD CONNECT		
						MIP -	MODBUS TCP/IP		

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

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]	
1.5	120 OR 277	30	47	25	215	4	146	361
	347		69		339			485
2.25	120 OR 277	30	47	25	230	6	218	448
	347		69		354			572
3	120 OR 277	30	47	25	235	8	291	526
	347		69		365			656
3.75	120 OR 277	30	47	25	240	10	364	604
	347		69		376			740
5	120 OR 277	30	47	25	280	12	437	717
	347		69		425			862
6	120 OR 277	48	76	25	605	15	546	1 151
	347	78			784			1 330
8	120 OR 277	48	76	25	640	20	728	1 368
	347	78			832			1 560
10	120 OR 277	48	76	25	785	12	860	1 645
	347	78			990			1 850
12.5	120 OR 277	48	76	25	805	15	1076	1 881
	347	78			1025			2 101
16.7	120 OR 277	48	76	25	885	20	1434	2 319
	347	78			1120			2 554

POWER RATING [KW]			VOLTAGE IN-OUT [VAC]	CABINET DIMENSIONS				BATTERIES		TOTAL SYSTEM WEIGHT
60 MIN.	90 MIN.	120 MIN.		WIDTH [IN]	HEIGHT [IN]	DEPTH [IN]	WEIGHT [LBS]	NO. OF BATTERIES	WEIGHT [LBS]	
1.5	1.39	1.28	120 OR 277	30	47	25	215	4	287	502
			347		69		339			626
2.25	2.08	1.91	120 OR 277	30	47	25	230	6	430	660
			347		69		354			784
3	2.78	2.55	120 OR 277	30	47	25	235	8	574	809
			347		69		365			939
3.75	3.47	3.19	120 OR 277	30	47	25	240	10	717	957
			347		69		376			1093
5	4.63	4.25	120 OR 277	30	47	25	280	12	860	1140
			347		69		425			1285
6	5.55	5.1	120 OR 277	48	76	25	605	15	1076	1681
			347	78			784			1860
8	7.4	6.8	120 OR 277	48	76	25	640	20	1434	2074
			347	78			832			2266
10	9.25	8.5	120 OR 277	48	76	25	785	24	1721	2506
			347	78			990			2711
12.5	11.6	10.6	120 OR 277	48	76	25	805	30	2151	2956
			347	78			1025			3176
16.7	15.4	14.2	120 OR 277	48	76	25	885	40	2868	3753
			347	78			1120			3988

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)
1.50	102	1.50	102	1.39	95	1.28	87
2.25	153	2.25	153	2.08	142	1.91	130
3.00	205	3.00	205	2.78	189	2.55	174
3.75	256	3.75	256	3.47	237	3.19	217
5.00	341	5.0	341	4.63	315	4.25	290
6.00	409	6.0	409	5.55	379	5.10	348
8.00	546	8.0	546	7.40	505	6.80	464
10.0	682	10.0	682	9.25	631	8.50	580
12.5	853	12.5	853	11.6	789	10.6	725
16.7	1 139	16.7	1 139	15.4	1 054	14.2	968