

ILLUMINATOR NVM INTERMEDIATE INVERTER

The Illuminator NVM inverter features the industry's smallest cabinetry, even when all optional equipment is incorporated. It can be either wall or floor mounted. Our fast transfer technology is 98% efficient and can support all lamp sources.



FEATURES & SPECIFICATIONS

STANDARD FEATURES

- 98% Efficient (Typical)
- 65KAIC Input Rating
- NFPA 101 Self Testing and Data Logging
- User Programmable with Password Protection
- Automatic Event, Test and Alarm Log
- Compatible with all lighting loads
- Input Circuit Breaker
- One Output Circuit Breaker
- No Break 2ms Transfer Time
- Wall Hung Units (No Mounting Brackets)
- RS-232 Communication Port
- 65kAIC Withstanding Rating

OPTIONAL FEATURES

- Enhanced Communications
 - Expanded Building Management Protocols
 - BACnet or Modbus Communications Interface
 - NEW IoT Connect Cloud Software
- Internal or External Maintenance Bypass
- Summary Form C Contacts
- Status Monitoring Contacts
- Output Circuit Breakers
- Normally Off Output with Variable Time Delay
- Output Trip Alarms
- Remote Summary Alarm Panel
- Wall Brackets, Floor, or Seismic Mounting

SPECIFICATIONS

- Input Voltage: 120, 277, 347VAC 1 Phase 2 Wire Plus Ground
- Output Voltage: 120, 277, 347VAC 1 Phase 2 Wire Plus Ground
- Output Load Power Factor .5 Lag to .5 Lead
- Output Distortion Less than 3% THD for Linear Loads
- Forced Air Cooling Only During Emergency Operation; No Filters Required
- Electronic and Magnetic Ballast Compatible
- Generator Compatibility
- Custom Voltages Available
- 30, 60, 90 and 120 Minute Run Time Standard

APPROVALS

- cUL to CSA 22.2 #141-15

System Display Functions



ADVANCED TECHNOLOGY

Designed with Pure Sine Wave technology, our inverters provide 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.

DESIGNED WITH THE FIELD IN MIND

The small cabinet, with wall or floor mount capabilities, allows clients to install the system virtually anywhere in the building with minimal space requirements. All lighting inverters perform and log the monthly and yearly tests as required by the national building codes, and the intelligent front meter panel allows easy access to this information. In addition, this front meter panel displays system status and allows for real time diagnostics of the system's electronics.



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

SERIES	VOLTAGE INPUT-OUTPUT	CAPACITY RATING [W]*	BATTERY TYPE	OUTPUT BREAKERS ¹				OPTIONS		
				OUTPUT	VOLTAGE/POLES	AMP RATING	QUAN-TITY ²			
NVM30	A-A - 120 INPUT;	1 000	S - STANDARD	D - NORMALLY ON F - NORMALLY OFF	A - 120V 1-POLE	10	T01	STANDARD FEATURES		
NVM60	120 OUTPUT	1 600			B - 208V 2-POLES	16	T02	C -	STATUS MONITORING CONTACTS DRY FORM C	
NVM90	A-AE - 120 INPUT;	2 200			C - 240	20	T03	DT -	DRIP TOP (NEMA 2)	
NVM120	120/277 OUTPUT	2 800			E - 277	25	T04	OPTIONAL FEATURES		
	B-A - 208 INPUT;				H - 347	32	T05	BBM -	INTERNAL MAINTENANCE BYPASS (BREAK-BEFORE-MAKE)	
	120 OUTPUT					40	T06	BL -	CIRCUIT BREAKER LOCK(S)	
	C-AC - 240 INPUT;					50		BS -	BATTERY STRAPPING	
	120/240 OUTPUT					63		BTM -	BATTERY TEMPERATURE MONITOR	
	E-A - 277 INPUT;							L -	LOAD CONTROL RELAY (LINE VOLT-AGE DIMMER OR SWITCH BYPASS)	
	120 OUTPUT							MBB -	INTERNAL MAINTENANCE BYPASS (MAKE-BEFORE-BREAK)	
	E-E - 277 INPUT;							O -	OUTPUT TRANSFER DELAY	
	277 OUTPUT							P -	REMOTE STATUS PANEL (REQUIRES OPTION C)	
	E-EA - 277 INPUT;							RA -	REMOTE SUMMARY ALARM PANEL	
	277/120 OUTPUT							S -	SUMMARY FAULT FORM C CONTACTS	
	B-AC - 208 INPUT;							PICK 1		
	120/240 OUTPUT							BIP -	BACNET IP	
	H-H - 347 INPUT;							IOT -	IOT INVERTER CLOUD CONNECT	
	347 OUTPUT							MIP -	MODBUS TCP/IP	
								MOUNTING OPTION PICK 1		
								BLANK -	STANDARD WALL	
								FL -	FLOOR MOUNT BRACKET (ADDS 4" TO TOTAL SYSTEM HEIGHT)	
								SM -	SEISMIC / RAISED FLOOR (ADDS 4" TO TOTAL SYSTEM HEIGHT)	
								W -	WALL MOUNT BRACKETS	

¹ Output breakers are optional

² Maximum out breakers available:

1 000-2 800 W: 6 supervised

347 V : 14 supervised

³ 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)			
	NVM30	NVM60	NVM90	NVM120
1 000	1	1	0.9	0.8
1 600	1.6	1.6	1.44	1.28
2 200	2.2	2.2	1.98	1.76
2 800	2.8	2.8	2.52	2.24

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
BS	BATTERY STRAPPING	STRAPPING OF THE BATTERIES TO STOP MOVEMENT
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]
FL	FLOOR MOUNT BRACKET [ADD 4" TO HEIGHT OF SYSTEM]	ALLOWS CLIENT TO GET THE EM OFF THE FLOOR
IOT	IOT INVERTER CONNECT CLOUD COMMUNICATION	SYSTEM USING THE CLOUD TO ALLOW MONITORING OF MULTIPLE SYSTEMS IN ONE LOCATION
L	LOAD CONTROL RELAY DIMMER OR BYPASS SWITCH	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
W	WALL MOUNT BRACKET	BRACKET FOR MOUNTING SYSTEM ON THE WALL

DIMENSIONS



POWER RATING [KW]		VOLTAGE IN-OUT [VAC]	CABINET DIMENSIONS				BATTERIES		TOTAL SYSTEM WEIGHT
30 MIN.			WIDTH [IN]	HEIGHT [IN]	DEPTH [IN]	WEIGHT [LBS]	NO. OF BATTERIES	WEIGHT [LBS]	
1		120 OR 277	24.25	27.5	10.5	121	4	93	214
		347		43.25		199			292
1.6		120 OR 277	24.25	43.25	10.5	165	6	139	304
		347		55		237			376
2.2		120 OR 277	24.25	43.25	10.5	171	8	186	357
		347		55		237			423
2.8		120 OR 277	24.25	55	10.5	203	10	232	435
		347		70.75		281			513

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	0.9	0.8	120 OR 277	24.25	27.5	10.5	121	4	146	267
			347		43.25		199			345
1.6	1.44	1.28	120 OR 277	24.25	43.25	10.5	165	6	218	383
			347		55		237			455
2.2	1.98	1.76	120 OR 277	24.25	43.25	10.5	171	8	291	462
			347		55		237			528
2.8	2.52	2.24	120 OR 277	24.25	55	10.5	203	10	364	567
			347		70.75		281			645

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]
1.00	68	1.00	68	0.90	61	0.80	55
1.60	109	1.60	109	1.44	98	1.28	87
2.20	150	2.20	150	1.98	135	1.76	120
2.80	191	2.80	191	2.52	172	2.24	153

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.