

Project _____
Catalogue n° _____

Type _____
Date _____

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 including HID and LED.



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 including HID/LED
- Input Circuit Breaker
- One Output Circuit Breaker
- No Break 2ms Transfer Time
- Wall Hung Units (No Mounting Brackets)
- RS-232 Communication Port

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	QUANTITY ²		
NVM30	A-A - 120 INPUT; 120 OUTPUT	1 000	S - STANDARD	D - NORMALLY ON	A - 120V 1-POLE	10	T01	STANDARD FEATURES	
NVM60	A-AE - 120 INPUT; 120/277 OUTPUT	1 600			B - 208V 2-POLES	16	T02		C - STATUS MONITORING CONTACTS DRY FORM C
NVM90	A-AE - 120 INPUT; 120/277 OUTPUT	2 200			F - NORMALLY OFF	C - 240	20		T03
NVM120	B-A - 208 INPUT; 120 OUTPUT	2 800		E - 277		25	T04		OPTIONAL FEATURES
	C-AC - 240 INPUT; 120/240 OUTPUT			H - 347		32	T05	BBM - INTERNAL MAINTENANCE BYPASS (BREAK-BEFORE-MAKE)	
	E-A - 277 INPUT; 120 OUTPUT				40	T06	BL - CIRCUIT BREAKER LOCK(S)		
	E-E - 277 INPUT; 277 OUTPUT				50		BS - BATTERY STRAPPING		
	E-EA - 277 INPUT; 277/120 OUTPUT				63		BTM - BATTERY TEMPERATURE MONITOR		
	B-AC - 208 INPUT; 120/240 OUTPUT						L - LOAD CONTROL RELAY (LINE VOLTAGE DIMMER OR SWITCH BYPASS)		
	B-AB - 208 INPUT; 120/208 OUTPUT						MBB - INTERNAL MAINTENANCE BYPASS (MAKE-BEFORE-BREAK)		
	H-H - 347 INPUT; 347 OUTPUT						O - OUTPUT TRANSFER DELAY		
							P - REMOTE STATUS PANEL (REQUIRES OPTION C)		
						RA - REMOTE SUMMARY ALARM PANEL			
						S - SUMMARY FAULT FORM C CONTACTS			
						PICK 1			
						BIP - BACNET IP			
						IOT - IOT INVERTER CLOUD CONNECT			
						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:
1000-2800W: 6 supervised
347V : 14 supervised

³ Anchorage based on calculations. For systems requiring OSHPD/Withstand testing, please contact the factory

* Capacity changes with runtime. See table page 5 for actual capacity rating.

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 0-75 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
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
		WIDTH [IN]	HEIGHT [IN]	DEPTH [IN]	WEIGHT [LBS]	NO. OF BATTERIES	WEIGHT [LBS]	
30 MIN.	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]						
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.