



# E3MAC-SP

2,200-12,500 VA Split Phase Modular AC Inverter

DATE:	COMMENTS:
PROJECT:	

## FEATURES



- Optional Web-based Monitoring Platform – easily view, interact with, download and manage records as needed on any PC or mobile device
- Programmable and password protected user interface
- 98% efficient for minimal BTU losses
- PWM Inverter provides pure sine wave output with less than 3% THD
- Crest factor >4 overload protection for demanding high in-rush loads
- Programmable transfer time – select between standard and fast transfer times for load and site compatibility
- UL listed 90 minute run-time
- Compatible with all lighting loads, including HID
- Variable time delay
- Battery recharges in less than 24 hours
- Two Phase output
- Start-Up Diagnostics checks for proper installation

## SEISMIC CERTIFIED

- Optional Zone 4 Seismic Restraints are shaker table tested and seismic certified to the latest California Building Code (CBC) 2016
- The shake table testing was performed in accordance with International Code Council-Evaluation Service Acceptance Criteria 156 (ICC-ES AC156)
- OSHPD (California Office of Statewide Health Planning and Development)



## ORDERING INFORMATION *E3MAC-2200-SP-LC-ID-OD-C##-O##-S##*

1. SERIES	2. VA RATING	3. PHASE	4. BATTERY TYPE	5. INPUT VOLTAGE	6. OUTPUT VOLTAGE
E3MAC	-	SP	LC	ID	OD
	2200 2200 VA Split Phase 4000 4000 VA Split Phase <sup>2</sup> 5000 5000 VA Split Phase <sup>2</sup> 6000 6000 VA Split Phase <sup>2</sup> 8000 8000 VA Split Phase <sup>2</sup> 10000 10000 VA Split Phase <sup>2</sup> 12500 12500 VA Split Phase <sup>2</sup>	SP Split Phase	LC Lead Calcium	ID 120V/120V/240V	OD 120V/120V/240V

7. OUTPUT BREAKER - NORMALLY ON*	8. OUTPUT BREAKER - NORMALLY OFF*	9. OUTPUT BREAKER - SWITCHED*
-	-	-

C\* \* Normally On Breakers

O\* \* Normally Off Breakers

S\* \* Switched Breakers

**SEE BREAKER CONFIGURATION TABLE ON PAGE 3 FOR MAXIMUM BREAKERS**

## 10. OPTIONS

BLANK = NO OPTION

MB Maintenance Bypass Switch	EEW Extended Electronics Warranty	TB Programmable Terminal Block (Not Included with RA)	EO Emergency Power Off
CB Custom Breaker	KE Keyed Enclosure	Z4 Seismic Zone 4 Restraints (Includes KE)	WEB Web Monitoring Connection <sup>1</sup>
DT Delayed Transfer	TA Trip Alarm with Breaker	BI BMS Integration	
EBW20 Extended Battery Warranty	RA Remote Annunciator (Not Included with TB)	BTMS Battery Thermal Management System	

## NOTE

Maximum number of OUTPUT breakers supported depends on sizing and option selection. Contact factory for specific details.

## ORDERING NOTES

- In order to use the web-based monitoring available at [Isolite.com](http://Isolite.com), the -WEB option must be selected.
- Indicated VA ratings may be ordered as a stacked unit using Configuration H. This configuration is not seismic certified. Contact factory for specific details.

**ACCESSORIES ON NEXT PAGE**

**ACCESSORIES; ORDER SEPARATELY**

- **E3MAC-MP#** = Maintenance Plan plus number of years (#)

**SPECIFICATIONS**
**OPTIONAL FEATURES**

- Maintenance bypass switch
- Circuit breakers – supervised or unsupervised
- Maintenance contract/plan
- Remote Annunciator
- Factory startup – increases electronics warranty to 3 years
- Seismic Zone 4 – OSHPD approval, available July 2017
- Circuit breaker protected loads (switched, normally on, and normally off)
- Fault summary alarm and 2 programmable alarms – form C dry contacts
- Keyed lockable enclosure

**FRONT PANEL**

- Modern 4x20 LCD character display with white LED back-light
- Heads-up diagnostic LEDs include 5 status (AC present, battery charging, inverter power, system ready, switched load energized), fault summary LED, and 5 specific faults (unit in bypass, circuit breaker trip, startup fault, charger fault, inverter fault)
- Dedicated System Test button – initiates 30-second test with UL compliant diagnostics
- 5-button keypad for menu navigation
- Sonic alarm with dedicated enable/disable pushbutton with heads-up LED Alarm silence has 24-hour ring-back for alarm reminder
- SD memory card – download and store all events, tests, and alarm logs (password protected)
- USB connector – access to all event, tests, and alarm logs (password protected)
- Ethernet – 10 BASE-T, TCP/IP web serving

**BATTERY**

- Front access VRLA batteries with 10-Year pro-rated warranty

**TEMPERATURE RATING**

- From 68°F to 86°F

Battery service life will be negatively impacted at ambient temperatures above 77°F

**ENVIRONMENTAL**

- Operating temp: 20C° to 30C° (68°F to 86°F)
- Storage temp: Electronics - 20C° to 70C° (68°F to 158°F)

BATTERY STORAGE TEMP	
51°F (11°C) TO 77°F (25°C)	180 DAYS
78°F (26°C) TO 92°F (33°C)	90 DAYS

- Relative humidity: <95 % (non-condensing)

**MAINTENANCE PLAN**

- Once per year the manufacturer’s technician shall visit the site to perform maintenance and software upgrades as needed. Maintenance shall include battery voltage checks, torque setting verification, cleaning, and a thorough visual inspection. All electronics warranties shall be extended to the duration of the Maintenance Plan. Maintenance Plans can be purchased for a duration of 1 year to 5 years.

**APPROVALS**

- UL 924
- OSHPD Seismic Certified (with Z4 option)
- New York City Approved, Calendar Number 51575
- NFPA 101 Life Safety Code
- NFPA 70-NEC
- OSHA
- NEMA Type 1 enclosure

**BMS INTEGRATION**

- BACNet IP
- BACNet MS/TP
- Modbus TCP
- Modbus RTU

**WARRANTY**

- Isolite warrants the E3MAC series electronics assembly against defects in material and workmanship for a period of 2 years, or 3 years with factory startup option. Extended Warranty options available.
- Isolite warrants the E3MAC series lead calcium batteries for a 1-year full and 9-year pro-rated limited warranty.
- For further details, refer to General Warranty and Obligations in the Isolite manual or on our website.
- The EEW option extends the electronics warranty to 5 years. Batteries are not included in the extended warranty.

**MAXIMUM BREAKERS**

Model	# of Breakers Normally On	# of Breakers Normally On with TA	# of Breaker Normally On with MB	# of Breaker Normally On with EO	# of Breakers Normally On with TA + MB	# of Breakers Normally On with MB + EO	# of Breakers Normally On with TA + EO	# of Breakers Normally On with TA + MB + EO	# of Breakers Normally Off	# of Breakers Switched
E3MAC-2200-SP	6	4	4	5	2	3	3	1	4	4
E3MAC-4000-SP	24	16	22	23	14	21	15	13	12	12
E3MAC-5000-SP	24	16	22	23	14	21	15	13	12	12
E3MAC-6000-SP	24	16	22	23	14	21	15	13	12	12
E3MAC-8000-SP	24	16	22	23	14	21	15	13	12	12
E3MAC-10000-SP	24	16	22	23	14	21	15	13	12	12
E3MAC-12500-SP	24	16	22	23	14	21	15	13	12	12

**WEIGHT & DIMENSIONS**

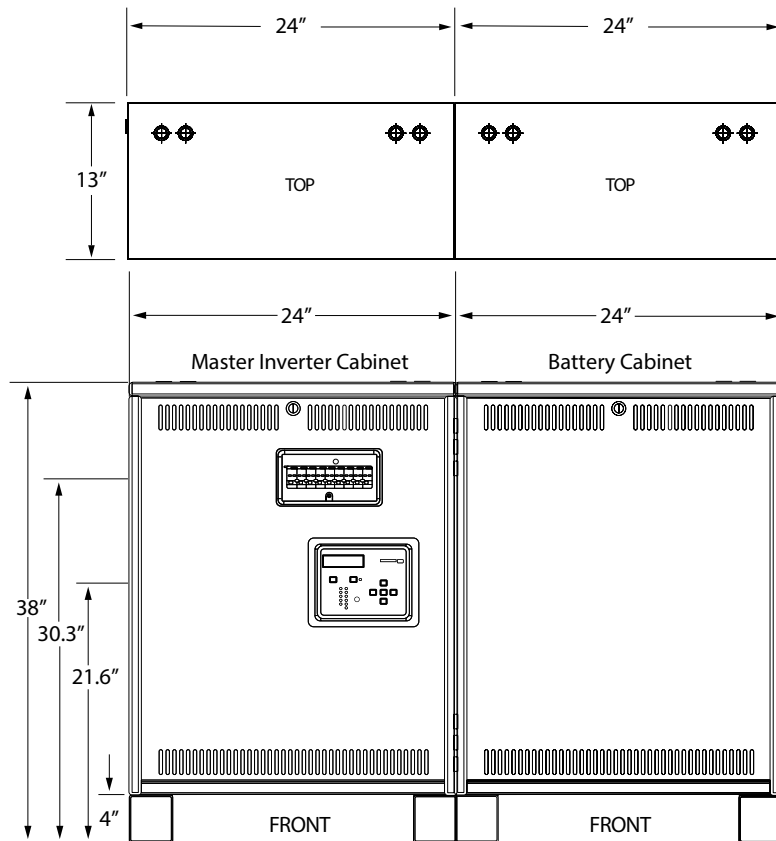
Model	Cabinet Config (See Next Page)	# of Cabinets	Inverter Cabinet Weight	Battery Cabinet Weight	Battery Count	Pallet Count	Total Weight
E3MAC-2200-SP	C/D	2	200	420	8	1	635
E3MAC-4000-SP	E/H	2	350	680	8	3	1030
E3MAC-5000-SP	E/H	2	350	840	10	3	1190
E3MAC-6000-SP	E/H	2	350	1000	12	3	1350
E3MAC-8000-SP	E/H	2	375	1570	16	3	2020
E3MAC-10000-SP	E/H	2	375	1890	20	3	2340
E3MAC-12500-SP	E/H	2	375	2210	24	3	2660

**ELECTRICAL DATA**

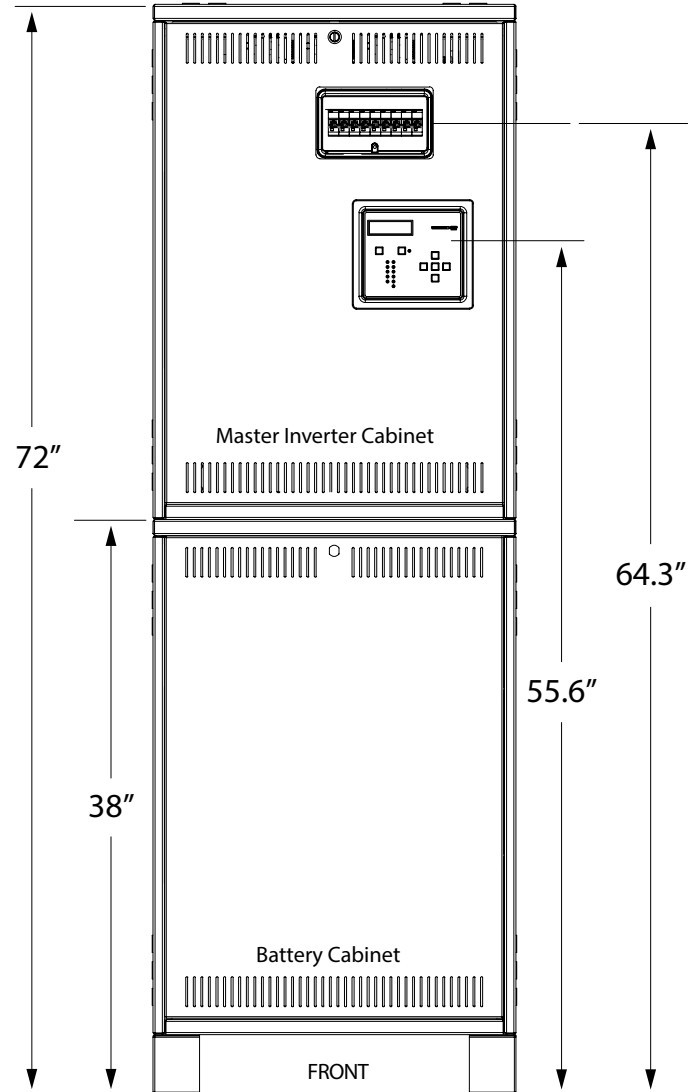
Model	Power Rating (kW)	Minimum Feed Breaker	Suggested Feed Breaker	Full Load BTU/Hr
		Input Voltage ID	Input Voltage ID	
E3MAC-2200-SP	2.2 kW	14.3 A	20 A	150
E3MAC-4000-SP	4.0 kW	26.0 A	30 A	286
E3MAC-5000-SP	5.0 kW	32.6 A	40 A	355
E3MAC-6000-SP	6.0 kW	39.1 A	40 A	426
E3MAC-8000-SP	8.0 kW	52.1 A	60 A	563
E3MAC-10000-SP	10.0 kW	65.1 A	70 A	716
E3MAC-12500-SP	12.5 kW	81.4 A	90 A	852

**DIAGRAMS**

CONFIGURATION C

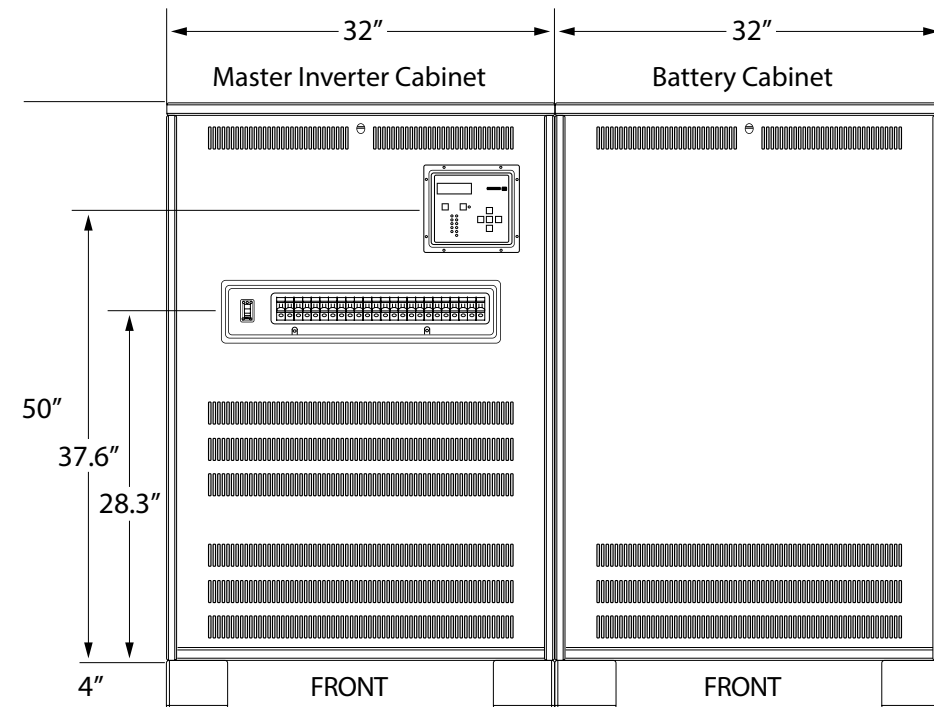
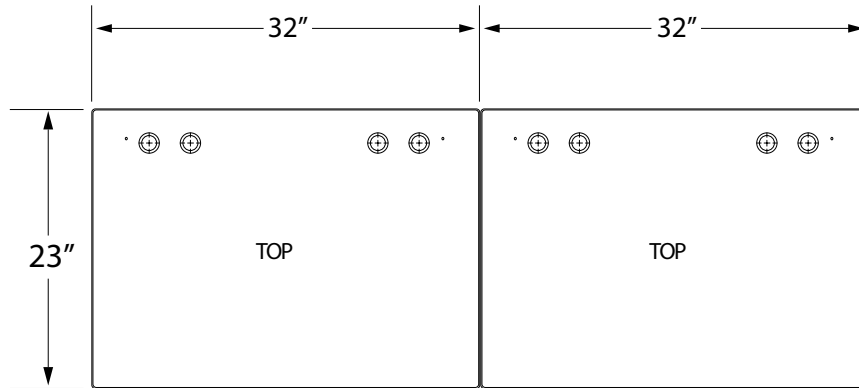


CONFIGURATION D



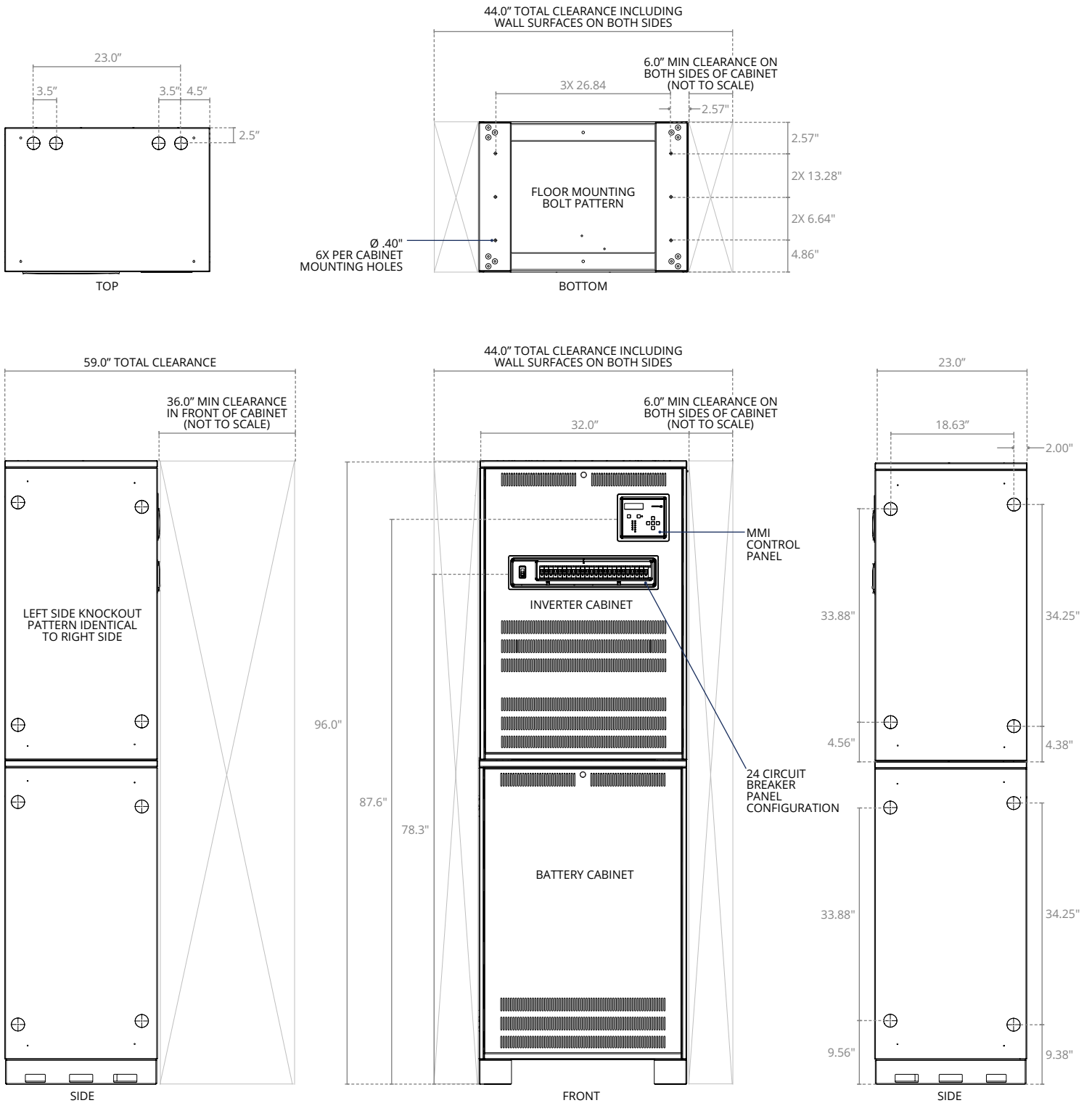
DIAGRAMS (CONTINUED)

CONFIGURATION E



DIAGRAMS (CONTINUED)

CONFIGURATION H



**BMS INTERFACE POINTS LIST**

POINT NAME	BACNET OBJECT TYPE	BACNET OBJECT ID	MODBUS REGISTER
Inverter	BI	1	10001
Charger	BI	2	10002
AC Present	BI	3	10003
Ready	BI	4	10004
Switched Load	BI	5	10005
Alarm Summary	BI	6	10006
Bypass	BI	7	10007
Circuit Breaker Tip	BI	8	10008
Startup Fault	BI	9	10009
Charger Fault	BI	10	100010
Inverter Fault	BI	11	100011
Input Voltage (Phase A)	AI	1	30001/30002 (FLOAT)
Input Voltage (Phase B)	AI	2	30003/30004 (FLOAT)
Input Voltage (Phase C)	AI	3	30005/30006 (FLOAT)
Output Voltage (Phase A)	AI	4	30007/30008 (FLOAT)
Output Voltage (Phase B)	AI	5	30009/30010 (FLOAT)
Output Voltage (Phase C)	AI	6	30011/30012 (FLOAT)
Output Current (Phase A)	AI	7	30013/30014 (FLOAT)
Output Current (Phase B)	AI	8	30015/30016 (FLOAT)
Output Current (Phase C)	AI	9	30017/30018 (FLOAT)
Battery Voltage	AI	10	30019/30020 (FLOAT)
Battery Current	AI	11	30021/30022 (FLOAT)
Temperature	AI	12	30023/30024 (FLOAT)
Output VA (Phase A)	AI	13	30101/30102 (UINT32)
Output VA (Phase B)	AI	14	30103/30104 (UINT32)
Output VA (Phase C)	AI	15	30105/30106 (UINT32)
Battery Power	AI	16	30107/30108 (UINT32)
System Runtime (Days)	AI	17	30109/30110 (UINT32)
Inverter Runtime (Minutes)	AI	18	30111/30112 (UINT32)
Inverter Runtime (Seconds)	AI	19	30113/30114 (UINT32)
System Events	AI	20	30115/30116 (UINT32)