

# E3MAC-SP

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

DATE:	COMMENTS:
PROJECT	

## FEATURES

- Website monitoring – easily view, interact, and download 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-ID-OD-C##-O##-S##*

1. SERIES	2. VA RATING	3. PHASE	4. INPUT VOLTAGE	5. OUTPUT VOLTAGE
E3MAC	-	SP	ID	OD
	2200 2200 VA Split Phase 4000 4000 VA Split Phase 5000 5000 VA Split Phase 6000 6000 VA Split Phase	8000 8000 VA Split Phase 10000 10000 VA Split Phase 12500 12500 VA Split Phase	SP Split Phase    ID 120V/120V/240V	OD 120V/120V/240V

6. OUTPUT BREAKER - NORMALLY ON*	7. OUTPUT BREAKER - NORMALLY OFF*	8. OUTPUT BREAKER - SWITCHED*
C* * Normally On Breakers	O* * Normally Off Breakers	S* * Switched Breakers

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

## 9. OPTIONS

BLANK = NO OPTION		
MB Maintenance Bypass Switch	EEW Extended Electronics Warranty	TB Programmable Terminal Block (Not Included with RA)
CB Custom Breaker	KE Keyed Enclosure	Z4 Seismic Zone 4 Restraints (Includes KE)
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
		EO Emergency Power Off

NOTE: MAXIMUM NUMBER OF OUTPUT BREAKERS SUPPORTED DEPENDS ON SIZING AND OPTION SELECTION. CONTACT FACTORY FOR SPECIFIC DETAILS.

### ACCESSORIES ON BACK

**ACCESSORIES; ORDER SEPARATELY**

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

**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

**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**

- UL924
- OSHPD Seismic Certified (with Z4 option)
- New York City approved, Calendar Number 51575
- NFPA101 Life Safety Code
- NFPA70-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.

**NOTES**

- Due to power factor calculations, we recommend only loading the E3MAC inverter to 90% of load wattage
- Max power for any phase (L-N, L-L) is 1/3 of total power capacity
- For Single Phase, Two Phase, or Three Phase, see E3MAC-1P, E3MAC-SP, or E3MAC-3P

**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-10000-3P	24	16	22	23	14	21	15	13	12	12
E3MAC-12500-3P	24	16	22	23	14	21	15	13	12	12

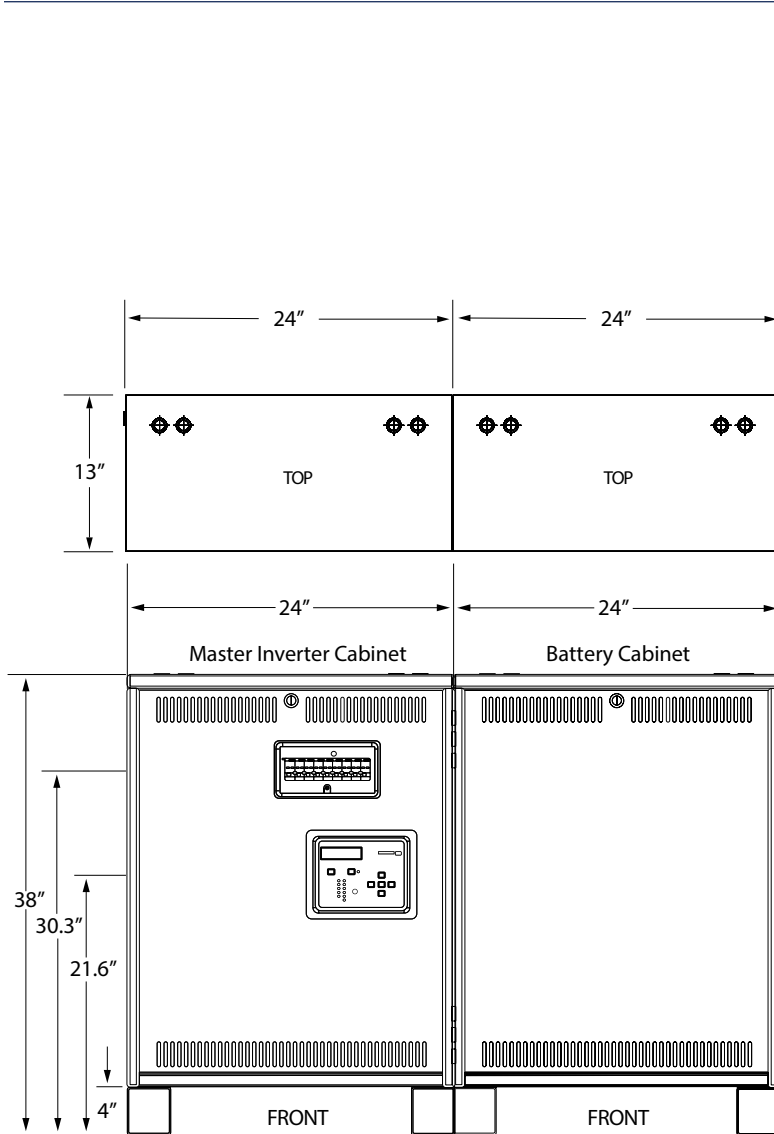
**WEIGHT & DIMENSIONS**

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	2	350	680	8	3	1030
E3MAC-5000-SP	E	2	350	840	10	3	1190
E3MAC-6000-SP	E	2	350	1000	12	3	1350
E3MAC-8000-SP	E	2	375	1570	16	3	2020
E3MAC-10000-SP	E	2	375	1890	20	3	2340
E3MAC-12500-SP	E	2	375	2210	24	3	2660

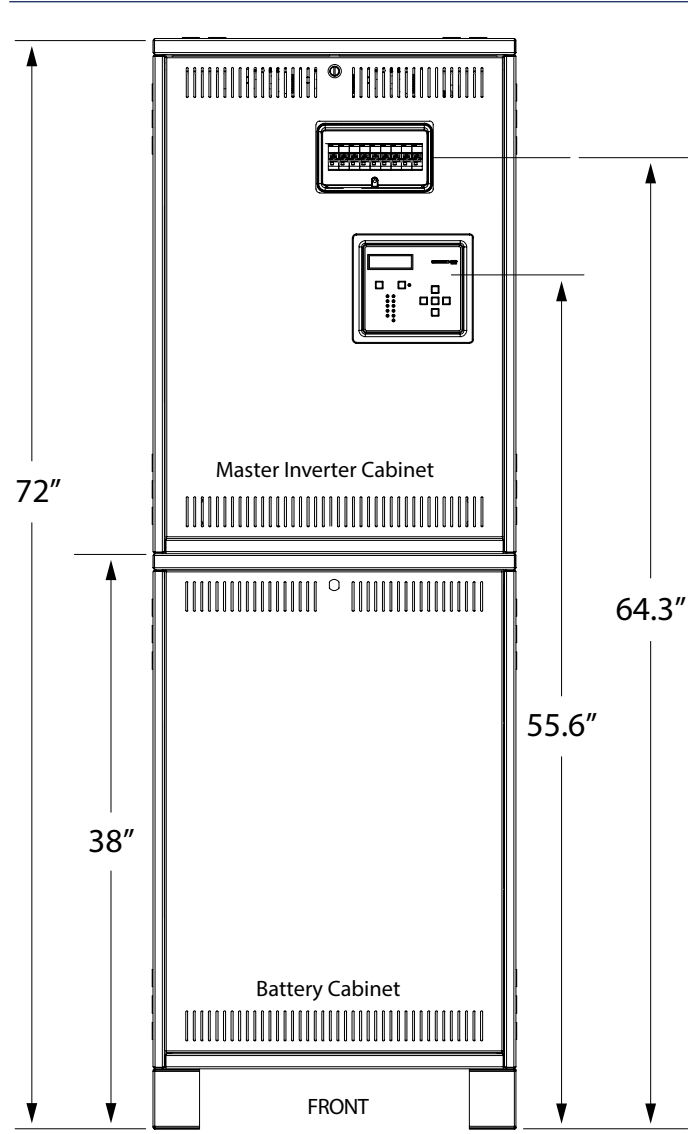
**ELECTRICAL DATA**

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

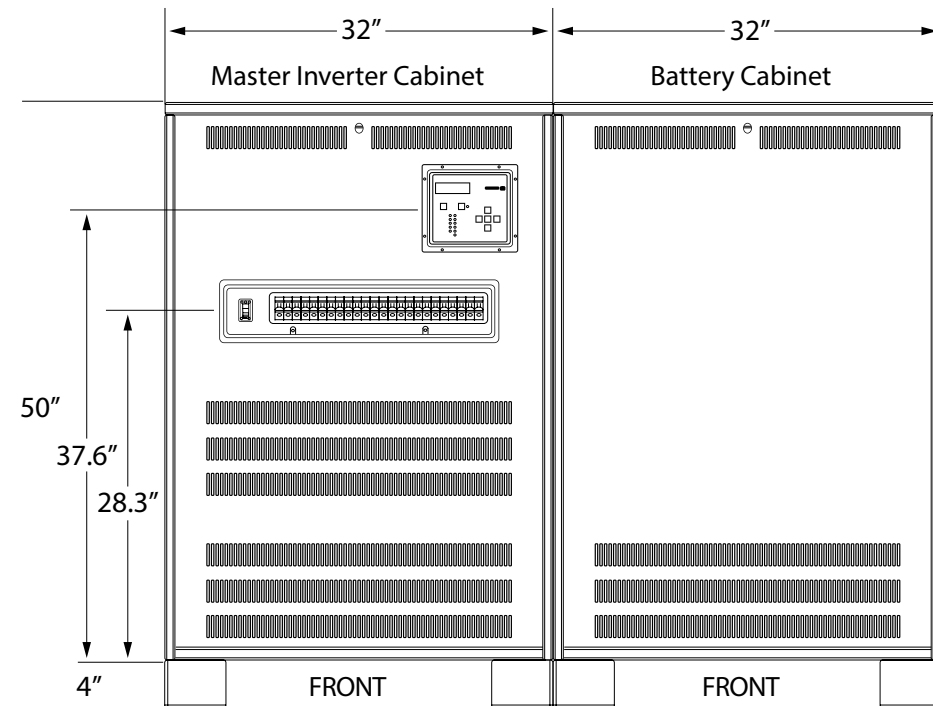
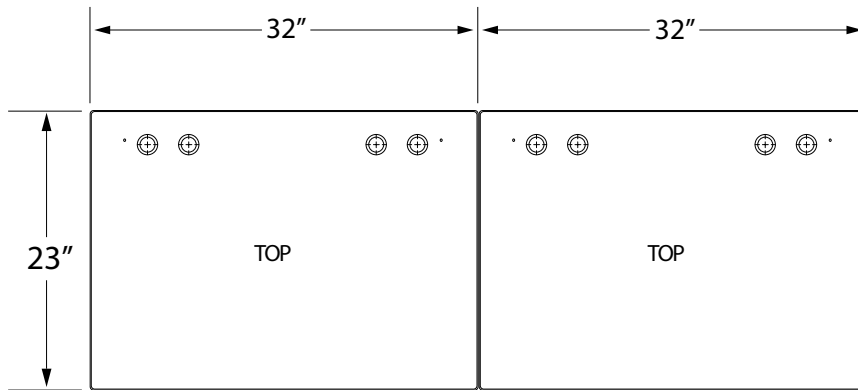
CONFIGURATION C



CONFIGURATION D



CONFIGURATION E



**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)