

E3MAC-1P

1,000-12,500 VA Single 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
- Single 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-1000-1P-LC-IA-OA-C##-O##-S##*

1. SERIES	2. VA RATING	3. PHASE	4. BATTERY TYPE	5. INPUT VOLTAGE	6. OUTPUT VOLTAGE						
E3MAC	-	1P	LC	-	-						
1000	1000 VA Single Phase	5000	5000 VA Single Phase	1P	Single Phase	LC	Lead Calcium	IA	120V	OA	120V
1600	1600 VA Single Phase	6000	6000 VA Single Phase	IB	277V	OB	277V	IC	208V ³	IE	480V ³
2200	2200 VA Single Phase	8000	8000 VA Single Phase ⁴								
2800	2800 VA Single Phase	10000	10000 VA Single Phase ⁴								
3000	3000 VA Single Phase	12500	12500 VA Single Phase ⁴								
4000	4000 VA Single Phase										

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)	BTMS Battery Thermal Management System
CB Custom Breaker	KE Keyed Enclosure	Z4 Seismic Zone 4 Restraints (Includes KE)	EO Emergency Power Off
DT Delayed Transfer	TA Trip Alarm with Breaker	WB Wall Mounting Bracket ¹	WEB Web Monitoring Connection ²
EBW20 Extended Battery Warranty	RA Remote Annunciator (Not Included with TB)	BI BMS Integration	

NOTE

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

ORDERING NOTES

- WB option only available on 1KVA inverters.
- In order to use the web-based monitoring available at isolite.com, the -WEB option must be selected.
- Upon special request, requires extra transformer(s), cabinet configuration may change.
- 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
- 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.



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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-1000-1P	8	5	7	7	4	6	4	3	4	4
E3MAC-1600-1P	11	7	10	10	6	9	6	5	6	6
E3MAC-2200-1P	11	7	10	10	6	9	6	5	6	6
E3MAC-2800-1P	11	7	10	10	6	9	6	5	6	6
E3MAC-3000-1P	11	7	10	10	6	9	6	5	6	6
E3MAC-4000-1P	12	8	11	11	7	10	7	6	4	4
E3MAC-5000-1P	12	8	11	11	7	10	7	6	4	4
E3MAC-6000-1P	12	8	11	11	7	10	7	6	4	4
E3MAC-8000-1P	24	16	23	23	15	22	15	14	12	12
E3MAC-10000-1P	24	16	23	23	15	22	15	14	12	12
E3MAC-12500-1P	24	16	23	23	15	22	15	14	12	12

WEIGHT & DIMENSIONS

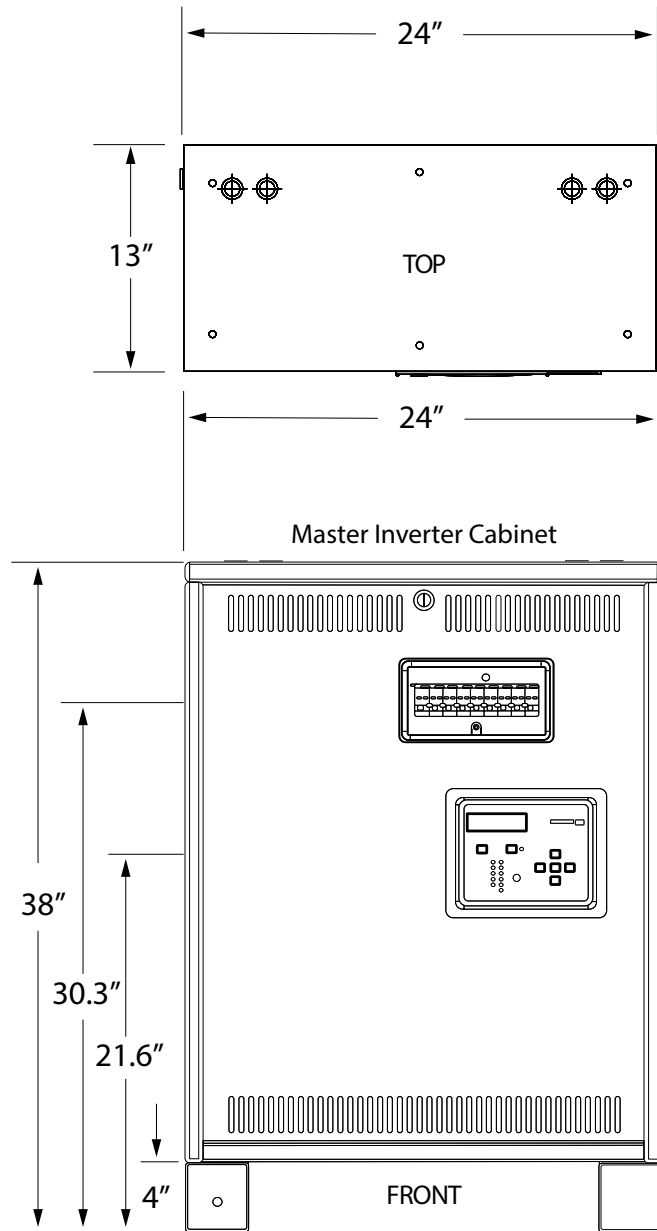
Model	Cabinet Config (See Next Page)	# of Cabinets	Inverter Cabinet Weight	Battery Cabinet Weight	Battery Count	Pallet Count	Total Weight
E3MAC-1000-1P	A	1	308		4	1	343
E3MAC-1600-1P	G	1	414		6	1	549
E3MAC-2200-1P	G	1	492		8	1	627
E3MAC-2800-1P	G	1	570		10	1	705
E3MAC-3000-1P	G	1	648		12	1	783
E3MAC-4000-1P	B	1	995		8	2	1060
E3MAC-5000-1P	B	1	1155		10	2	1220
E3MAC-6000-1P	B	1	1280		12	2	1380
E3MAC-8000-1P	E/H	2	400	1570	16	3	2020
E3MAC-10000-1P	E/H	2	400	1890	20	3	2340
E3MAC-12500-1P	E/H	2	400	2210	24	3	2660

ELECTRICAL DATA

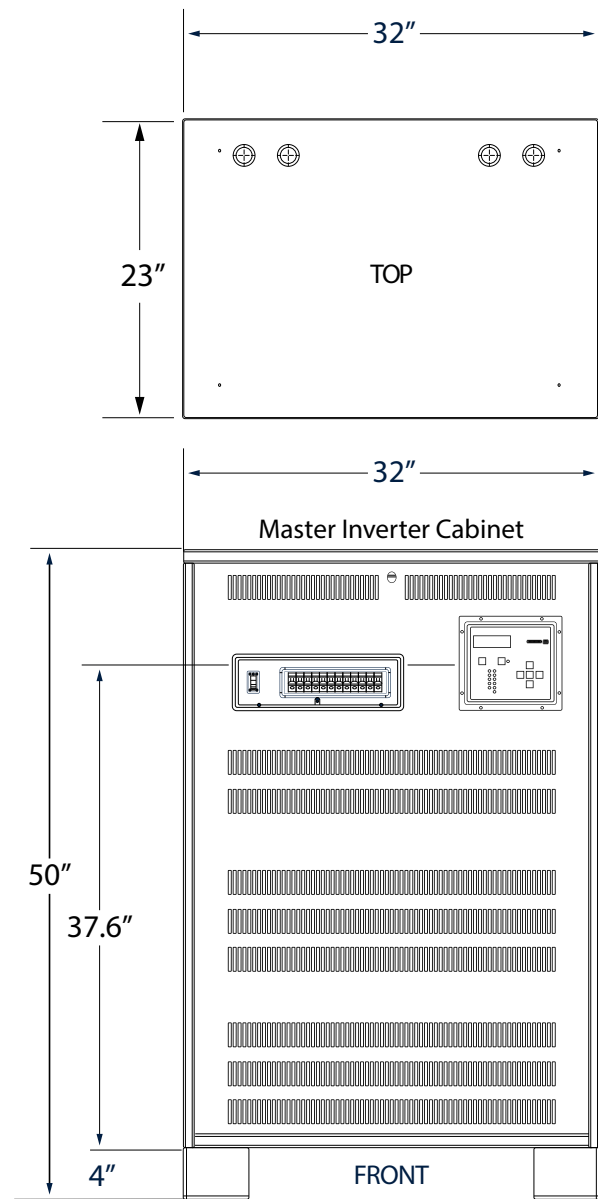
Model	Power Rating (kW)	Minimum Feed Breaker					Suggested Feed Breaker					Full Load BTU/Hr
		Input Voltage IA	Input Voltage IB	Input Voltage IC	Input Voltage ID	Input Voltage IE	Input Voltage IA	Input Voltage IB	Input Voltage IC	Input Voltage ID	Input Voltage IE	
E3MAC-1000-1P	1.0 kW	13.0 A	5.6 A	7.5 A	6.5 A	3.3 A	20 A	20 A	20 A	20 A	20 A	68
E3MAC-1600-1P	1.6 kW	20.8 A	9.0 A	12.0 A	10.4 A	5.2 A	30 A	20 A	20 A	20 A	20 A	109
E3MAC-2200-1P	2.2 kW	28.6 A	12.4 A	16.5 A	14.3 A	7.2 A	30 A	20 A	20 A	20 A	20 A	150
E3MAC-2800-1P	2.8 kW	36.5 A	15.8 A	21.0 A	18.2 A	9.1 A	40 A	20 A	30 A	20 A	20 A	190
E3MAC-3000-1P	3.0 kW	39.1 A	16.9 A	22.5 A	19.5 A	9.8 A	40 A	20 A	30 A	20 A	20 A	209
E3MAC-4000-1P	4.0 kW	52.1 A	22.6 A	30.0 A	26.0 A	13.0 A	60 A	30 A	40 A	30 A	20 A	286
E3MAC-5000-1P	5.0 kW	65.1 A	28.2 A	37.6 A	32.6 A	16.3 A	70 A	30 A	40 A	40 A	20 A	355
E3MAC-6000-1P	6.0 kW	78.1 A	33.8 A	45.1 A	39.1 A	19.5 A	80 A	40 A	50 A	40 A	20 A	426
E3MAC-8000-1P	8.0 kW	104.2 A	45.1 A				110 A	50 A				563
E3MAC-10000-1P	10.0 kW		56.4 A					60 A				716
E3MAC-12500-1P	12.5 kW		70.5 A					80 A				852

DIAGRAMS

CONFIGURATION A

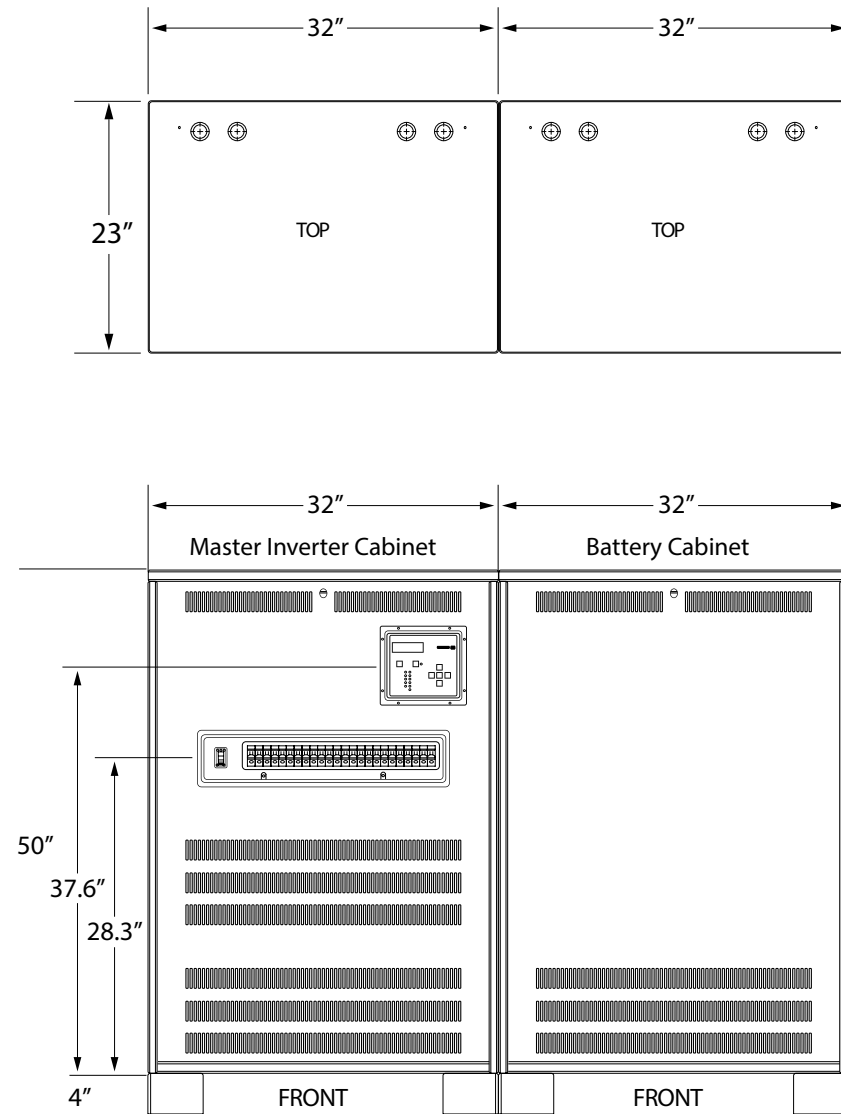


CONFIGURATION B

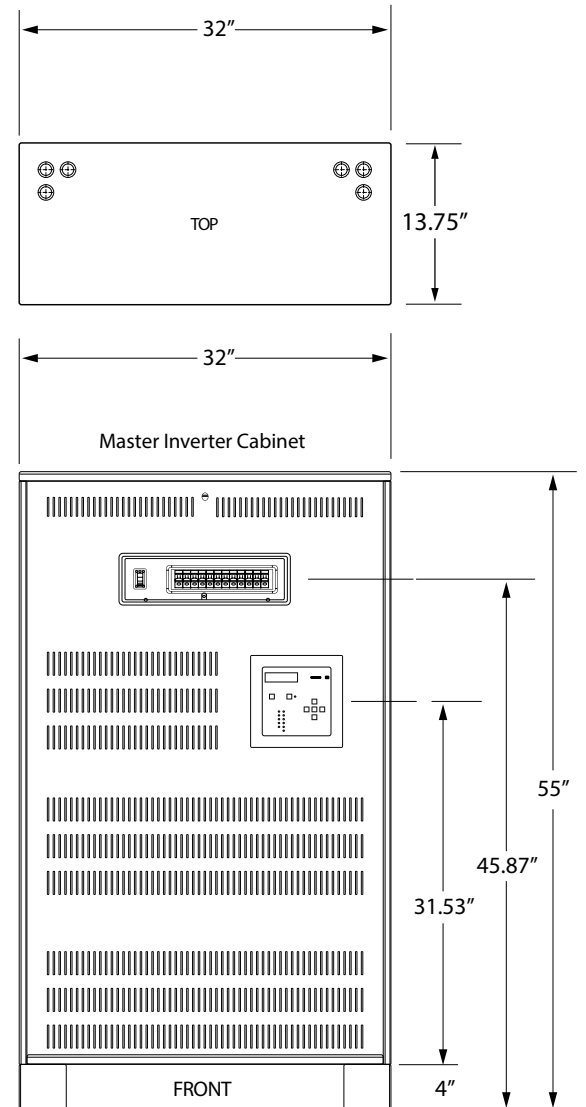


DIAGRAMS (CONTINUED)

CONFIGURATION E

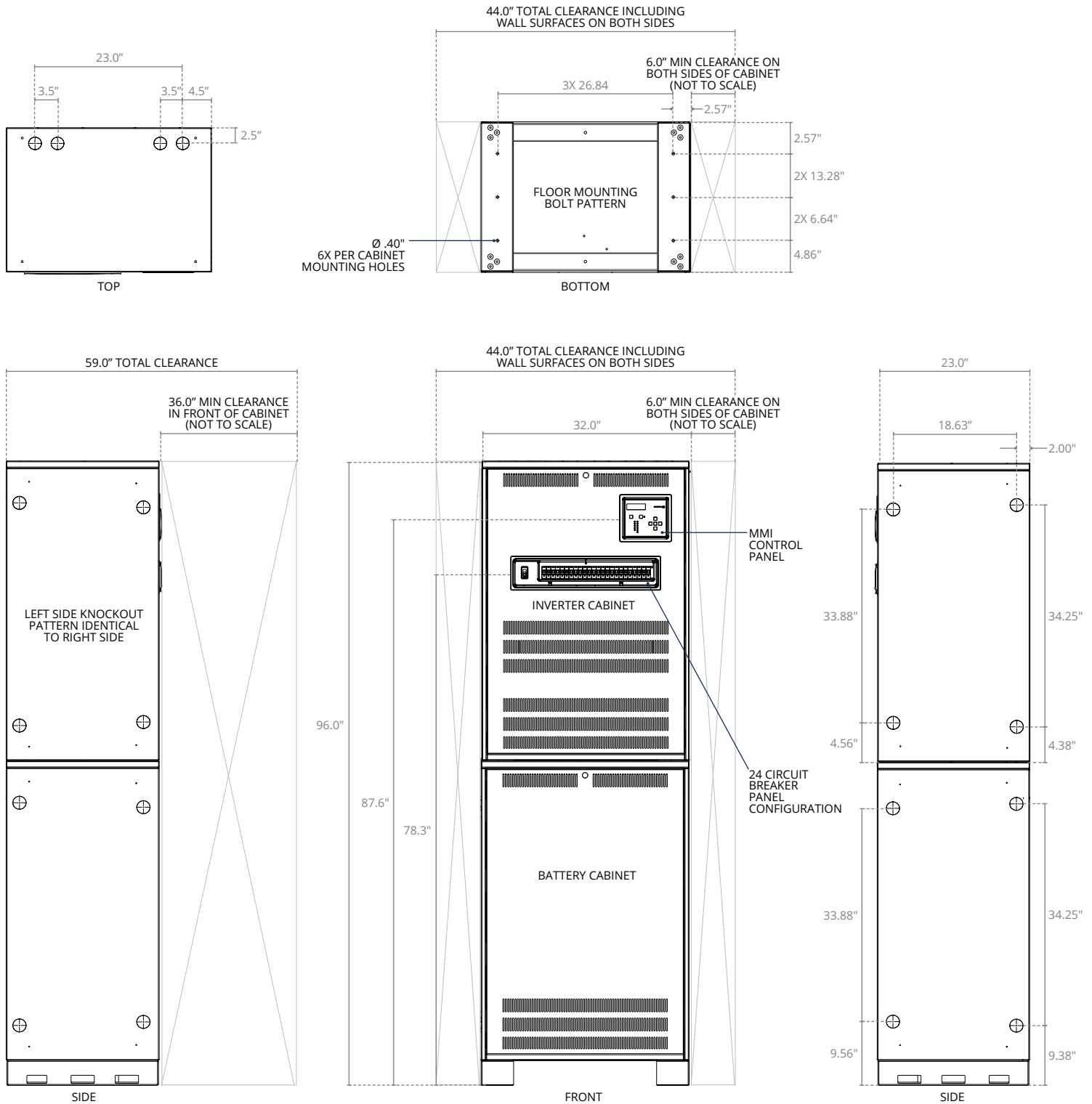


CONFIGURATION G



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)