EVENLITE
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Project Name:	Approved By:
Catalog No:	Type No:

LITEMINDER SINGLE PHASE

1,000VA - 12,500VA Central Inverter System

The LiteMinder Central Inverter System provides an innovative Emergency Lighting solution for today's complex energy-saving systems, light sources, and maintenance requirements. LiteMinder represents the pinnacle of engineering excellence with features not found in the traditional systems currently available.

DESCRIPTION

- **Modularity:** LiteMinder features unique inverter modules available in increments from 1,000VA to 12,500VA capacities. Modules are interconnected to build the required system capacity, and can even be field upgraded to increase system sizes!
- **Control Features:** A keypad and LCD display provides user interface and extensive status diagnostics. Self test, Self-Diagnostics, in compliance with UL 924, is field configurable.
- **Web Site Monitoring:** Unique web interface constantly monitors the system status and records all essential data. Users can log on, view, interact and download records as needed. The factory can also monitor, diagnose remotely. Website monitoring free on every inverter (must use option code LGM).
- **Diagnostics:** In addition to Self-test, Self-Diagnostics, LiteMinder also includes unique startup diagnostics to aid in installation and maintenance: eight individual startup alarms (Communications, Set-Up Conflict, Low Battery, Back-feed, Transfer/AC Fuse, Short/ Overload, Miswire, Incorrect AC Input) eight individual Charger Alarms and eight individual Inverter Alarms.

SPECIFICATIONS

- PWM MOSFET and IGBT (Model Dependant) Inverter provide Pure Sine Wave output with less than 3% THD, and fully compatible with LED Lighting Loads
- Fast transfer for H.I.D. compatibility ensures smooth operation of combined lighting loads, transfers in less than 2 mS
- Less than 3% THD, load power factor 0.5 Lag to 0.5 Lead, 98% efficient in standby mode
- Automatic Low Voltage Disconnect (LVD) set at 1.67 VPC
- Shorted circuit protected to 65KAIC tested and approved to UL 6180-5-1 standard
- Crest factor >4 for high inrush demanding loads, overload 120 percent for 10 minutes, 400 percent for 500mS
- VRLA Maintenance Free Lead Calcium Battery's provide the required 90 minute minimum run time in Emergency mode
- Battery recharge time is less than 24 hours, meets all UL 924 and NFPA101 Life Safety Code requirements
- Operating temperature 20˚ to 30˚ C
- Brownout protection set for 85% of the nominal line voltage

FEATURES

- Modular inverter allows operation for single phase operation
- Automatic restart upon utility power return, no need to manually reset the system
- Input circuit breaker is provided sized to system rating
- Monthly and the annual 90 minute test can be programmed by the user for a specific date and time to ensure NFPA Code Compliance
- Up to 1000 events stored in the memory log on a "FIFO" basis, and is easily accessible through the MMI (Man-Machine Interface) Panel
- MMI consists of a 5 button keypad for easy menu navigation
- A 4x20 backlit White display with heads-up LED's allow for a quick diagnosis of the system status and alarms
- Five LED indicators provide the status of the Inverter, Charger, AC present, Ready, and Switched Load (if provided with Switched Output Circuit Breakers)
- An additional six LED indicators provide the alarm status for Alarm Summary, Bypass (if equipped with Maintenance Bypass option) , CB Trip, Startup Fault, Charger Fault, and Inverter Fault
- A dedicated System Test button is provided for a user initiated 30 second on demand test
- An Alarm On/Off LED is provided to indicate that an alarm is present.
- A dedicated Alarm Silence On/Off push button allows the user to silence the audible alarm
- SD card slot allows the user to download all Test, Event and Alarm Logs
- The Meter Menu allows the user to access the Input and Output Voltages, Output Current, Output VA, Battery Voltage, Battery Current, Battery Power, Temperature, System Days, Inverter minutes and Inverter Events
  The inverter and battery cabinets are constructed from 14 gauge CRS and are powder painted with no visible hardware
- Internally, the inverter has all galvanized or painted steel parts and shelves to resist corrosion and provide high durability and longevity
- Installer friendly front mounted battery terminals for easier and faster installation
- Three Rate Charger circuit is fully temperature compensated for added reliability

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CERTIFICATION

- UL924 compliant Self-Test/Self-Diagnostics are standard, with interactive LCD display (MMI)
- Listed to UL924, and meets NFPA101 Life Safety Code, NFPA70-NEC and OSHA Requirements,1.0-2.8KVA models meet CSA C22.2 No. 141-10
- Buy American Act compliant
- Trade Agreements Act compliant

WARRANTY

- Electronics are warranted for 2 years, extended out to 3 years with the purchase of factory startup. VRLA batteries have a 10-year warranty consisting of 1 year full and 9 years pro-rata - view complete warranty terms online at www.evenlite.com/terms-warranty.
- An extended warranty is available with the purchase of Factory Startup (FS). The Extended Warranty increases electronics coverage to five years. For complete details, please refer to the Central Power Systems Warranty.
- An extended battery warranty is also available, offering coverage periods of either 15 years (EB15) or 20 years (EB20), as specified in the Ordering Guide. This warranty includes one year of full replacement coverage at no charge, followed by 14 (EB15) or 19 (EB20) additional years of pro-rata coverage.

ORDERING GUIDE

LM-12500-1P-LC-IB-OB-S4-TA-FS

MODEL	VA RATING			CONFIGURATION	BATTERY TYPE	INPUT VOLTAGE	OUTPUT VOLTAGE
LM	**1000** 1000VA	**3200** 3200VA	**8250** 8250VA	**1P** Single Phase[2] (L-N)	**LC** Lead Calcium	**IA** 120V (L-N)	**OA** 120V (L-N)
	1600 1600VA	**4200** 4200VA	**10500** 10500VA[1]			**IB** 277V (L-N)	**OB** 277V (L-N)
	2200 2200VA	**5200** 5200VA	**12500** 12500VA[1]			**IC** 208V (L-L-N)[3]	
	2800 2800VA	**6250** 6250VA					
LM				**1P**	**LC**		

OUTPUT BREAKER CONFIGURATION[4]	OPTIONS		
C(n) 20A Normally On Output Breaker	**TA** Trip Alarm for All Circuit Breakers	**RA** Remote Annunciator	**EB15** 15 Year Extended Battery Warranty[11]
O(n) 20A Normally Off Output Breaker	**TB** 1 Summary/2 Programmable Terminal Block[6]	**KE** Keyed Lock	**EB20** 20 Year Extended Battery Warranty[12]
S(n) 20A Switched Output Breaker	**MB** Internal Maintenance Bypass Switch[7]	**BTMS** Battery Thermal Management System	**UP** Ship Inverter Less Batteries
(n)= Quantity Required	**BI** BACnet Integration Module	**WM** Wall Mount Kit[8,15]	**EPO** Emergency Power Off[7]
BB Special Breaker Current Requirement[5]	**LGM** LifeGuard® Monitoring	**FS** On-Site Startup Commissioning	**BL** Output Breaker Locks[13]
	DT 60ms Delayed Transfer	**EW** 5 Year Extended Warranty[9]	**SK** Stacked Cabinet Configuration[14, 15]
	Z4 Seismic Zone 4 Certified	**M(n)** Maintenance Plan[10]	

ORDERING NOTES

1 277VAC only
2 120VAC or 277VAC
3 Only offered on systems up to 6.25 kVA (MUST BE ORDERED WITH OA Output) – For any other configuration please refer to Two Phase spec sheet.
4 See Output Breaker Quantity Limitations table
5 Contact factory
6 For form C dry contacts
7 Reduces maximum output breakers by 1. Make before break.
8 1kW only
9 Requires On-Site Startup Commissioning [FS]
10 N=years (minimum: 2 / maximum: 5)
11 1 full year with 14 years pro-rated
12 1 full year with 19 years pro-rated
13 1 provided per output circuit breaker specified
14 Only available with 8,250VA to 12,500VA
15 Not Seismic Certified

Fill in fields from categories above and complete type and part number.

Type No:

Full Part No:

OUTPUT BREAKER QUANTITY LIMITATIONS
Any Combination Of Output Types

1000VA	1600 - 3200VA	4200 - 6250VA	8250 - 12500VA
8X20A Normally On Without [TA]	**11X20A** Normally On Without [TA]	**12X20A** Normally On Without [TA]	**24X20A** Normally On Without [TA]
4X20A Normally Off With or Without [TA]	**6X20A** Normally Off With or Without [TA]	**8X20A** Normally Off With or Without [TA]	**12X20A** Normally Off With or Without [TA]
4X20A Switched With or Without [TA]	**6X20A** Switched With or Without [TA]	**8X20A** Switched With or Without [TA]	**12X20A** Switched With or Without [TA]
5X20A Normally On With [TA]	**7X20A** Normally On With [TA]	**8X20A** Normally On With [TA]	**16X20A** Normally On With [TA]

DIMENSIONS, WEIGHT & LOAD CAPACITY

MODEL	NO. OF CABINETS	CABINET WIDTH	CABINET HEIGHT	CABINET DEPTH	CABINET WEIGHT	BATTERY CABINET WEIGHT	TOTAL BATTERY WEIGHT	TOTAL SHIPPING WEIGHT	MAX BTUs HOUR AT FULL LOAD	MAX CONNECTED LOAD	
										90 MINUTE RUNTIME	120 MINUTE RUNTIME
LM-1000	1	24"	38"	13"	152 lbs	-	156 lbs	428 lbs	69	1,000 VA	750 VA
LM-1600	1	32"	52"	13.75"	180 lbs	-	234 lbs	534 lbs	110	1,600 VA	1,200 VA
LM-2200	1	32"	52"	13.75"	180 lbs	-	312 lbs	612 lbs	151	2,200 VA	1,650 VA
LM-2800	1	32"	52"	13.75"	180 lbs	-	390 lbs	690 lbs	192	2,800 VA	2,100 VA
LM-3200	1	32"	52"	13.75"	180 lbs	-	468 lbs	768 lbs	219	3,200 VA	2,400 VA
LM-4200	1	32"	50"	23"	315 lbs	-	624 lbs	1,059 lbs	287	4,200 VA	3,150 VA
LM-5200	1	32"	50"	23"	315 lbs	-	780 lbs	1,215 lbs	355	5,200 VA	3,900 VA
LM-6250	1	32"	50"	23"	315 lbs	-	936 lbs	1,371 lbs	427	6,250 VA	4,687 VA
LM-8250	2	32"	50"	23"	365 lbs	270 lbs	1,248 lbs	2,063 lbs	564	8,250 VA	6,187 VA
LM-10500	2	32"	50"	23"	365 lbs	270 lbs	1,560 lbs	2,375 lbs	717	10,500 VA	7,875 VA
LM-12500	2	32"	50"	23"	365 lbs	270 lbs	1,872 lbs	2,687 lbs	854	12,500 VA	9,375 VA

INPUT CURRENT & BTU CHART

INPUT POWER	INPUT VOLTAGE	INPUT CURRENT	OUTPUT CURRENT	SUGGESTED FEED BREAKER	MAX BTUS HOUR AT FULL LOAD
1000	120	10.8	8.3	20	69
	277	4.7	3.6	20	
1600	120	17.3	13.3	30	110
	277	7.5	5.8	20	
2200	120	23.8	18.3	30	151
	277	10.3	7.9	20	
2800	120	30.3	23.3	40	192
	277	13.1	10.1	20	
3200	120	34.7	26.7	50	219
	277	15.0	11.6	20	
4200	120	45.5	35.0	60	287
	277	19.7	15.2	30	
5200	120	56.3	43.3	70	355
	277	24.4	18.8	30	
6250	120	67.7	52.1	90	427
	277	29.3	22.6	40	
8250	120	89.4	68.8	125	564
	277	38.7	29.8	50	
10500	-	-	-	-	717
	277	49.3	37.9	60	
12500	-	-	-	-	854
	277	58.7	45.1	80	

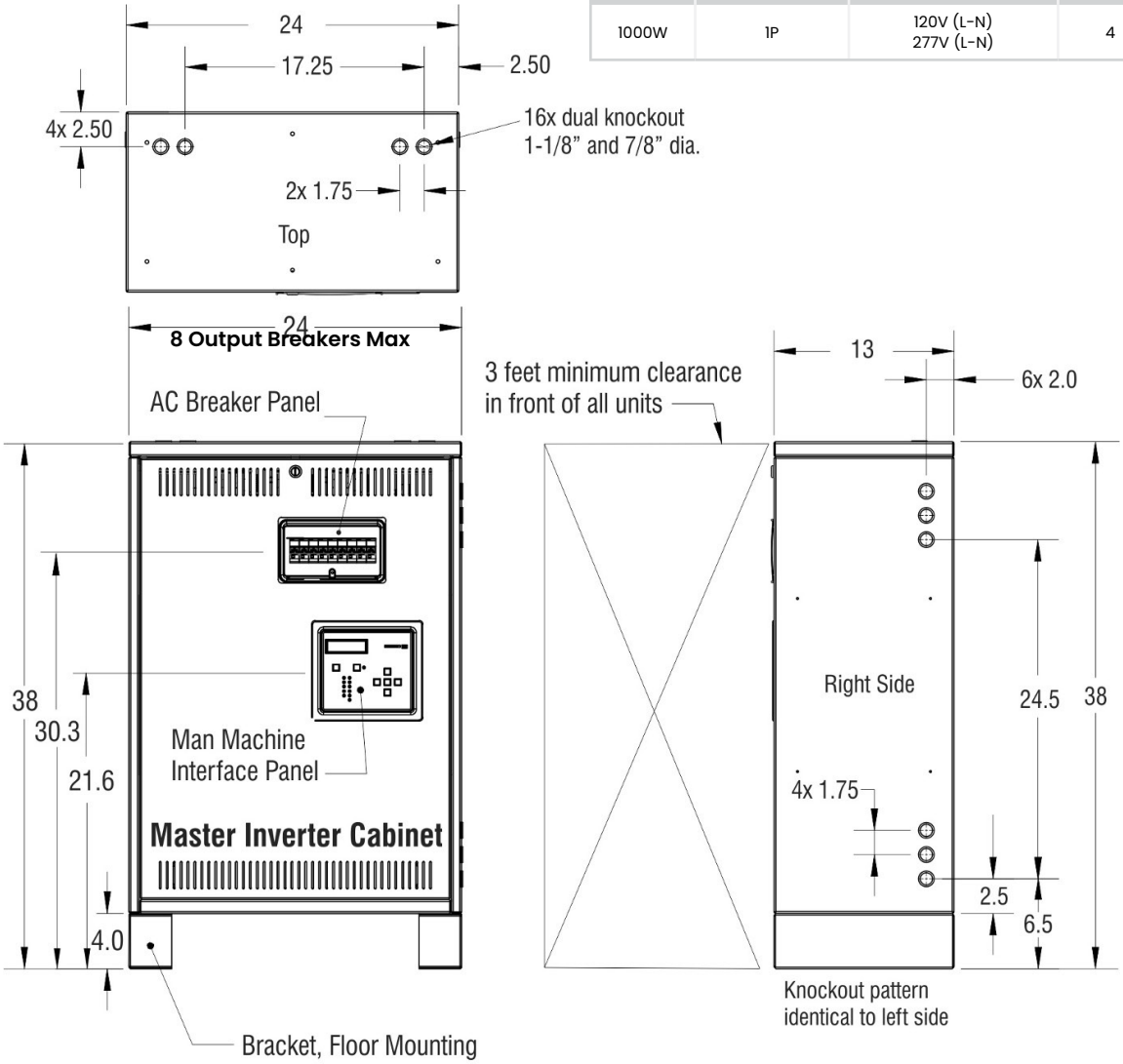
NOTES

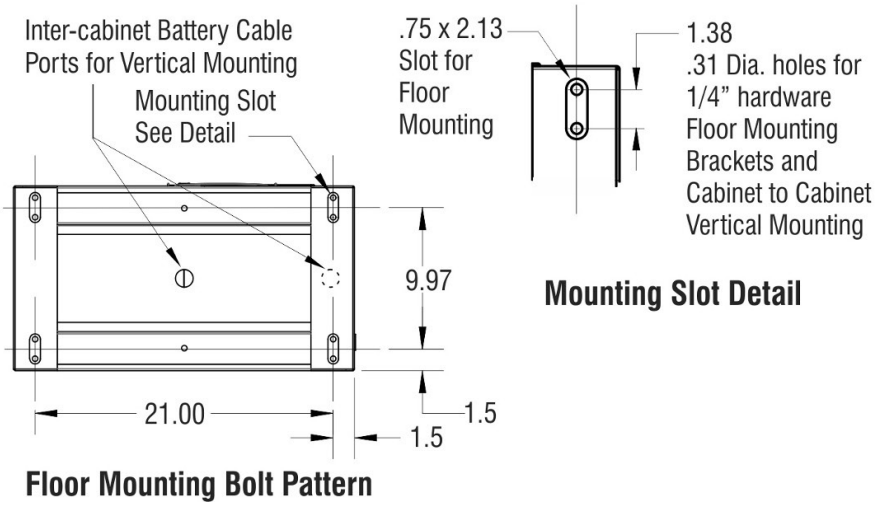
- Input Current = Output Current + Max Charge Current
- Suggested Feed Breaker sizes are rounded up in 10 Amp increments
- Input Power requires 3 wires, Neutral and Ground. Neutral is passed through and current carrying - Feeder Neutral to be sized same as line conductors.
- KAIC Rating for all models = 65KAIC (UL rated per UL 61800-5-1)
- Short Circuit current rating = 65KA for ALL models.

DIMENSIONS

1,000VA INVERTER

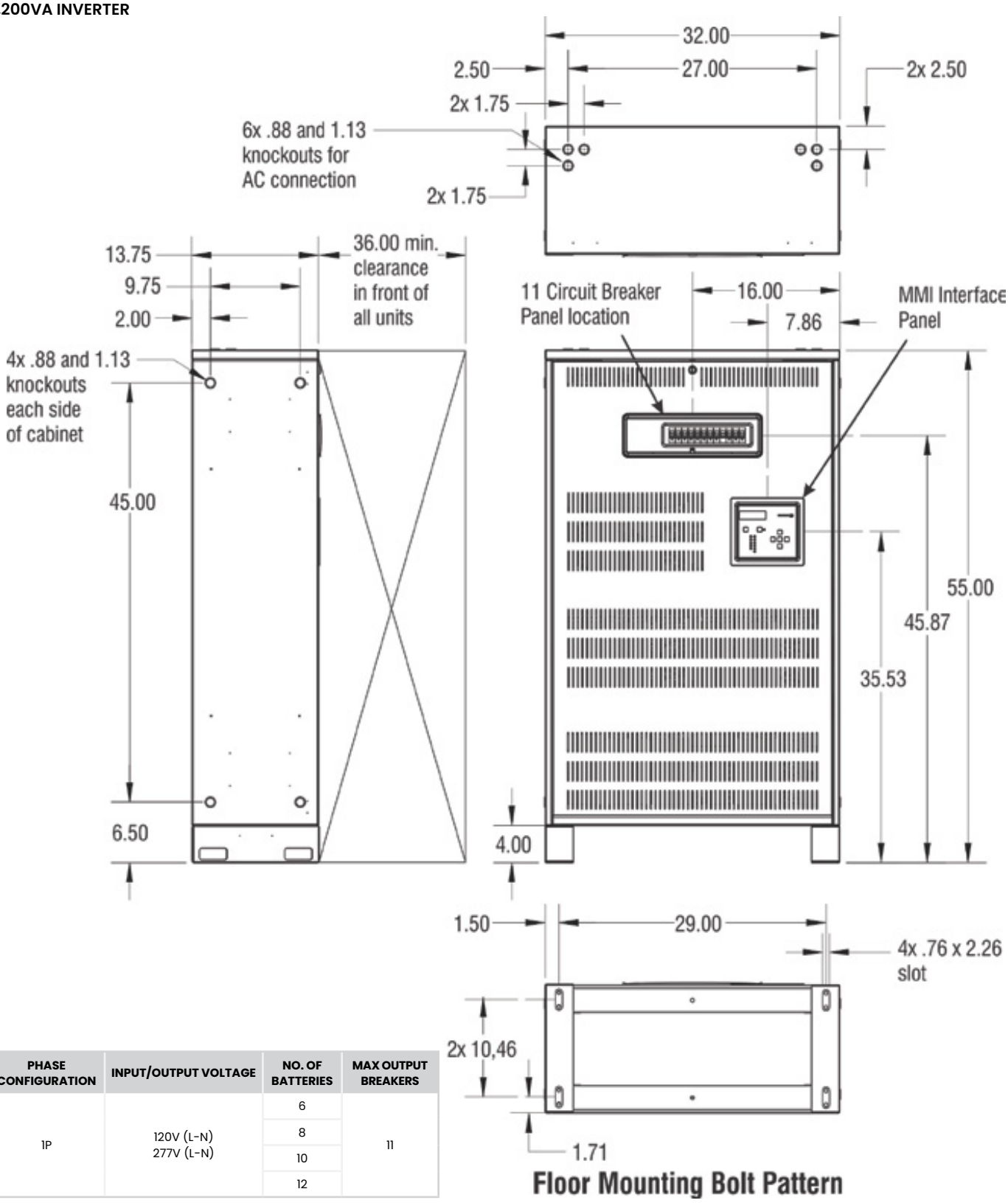
POWER VA RATING	PHASE CONFIGURATION	INPUT/OUTPUT VOLTAGE	NO. OF BATTERIES	MAX OUTPUT BREAKERS
1000W	1P	120V (L-N) 277V (L-N)	4	8





DIMENSIONS

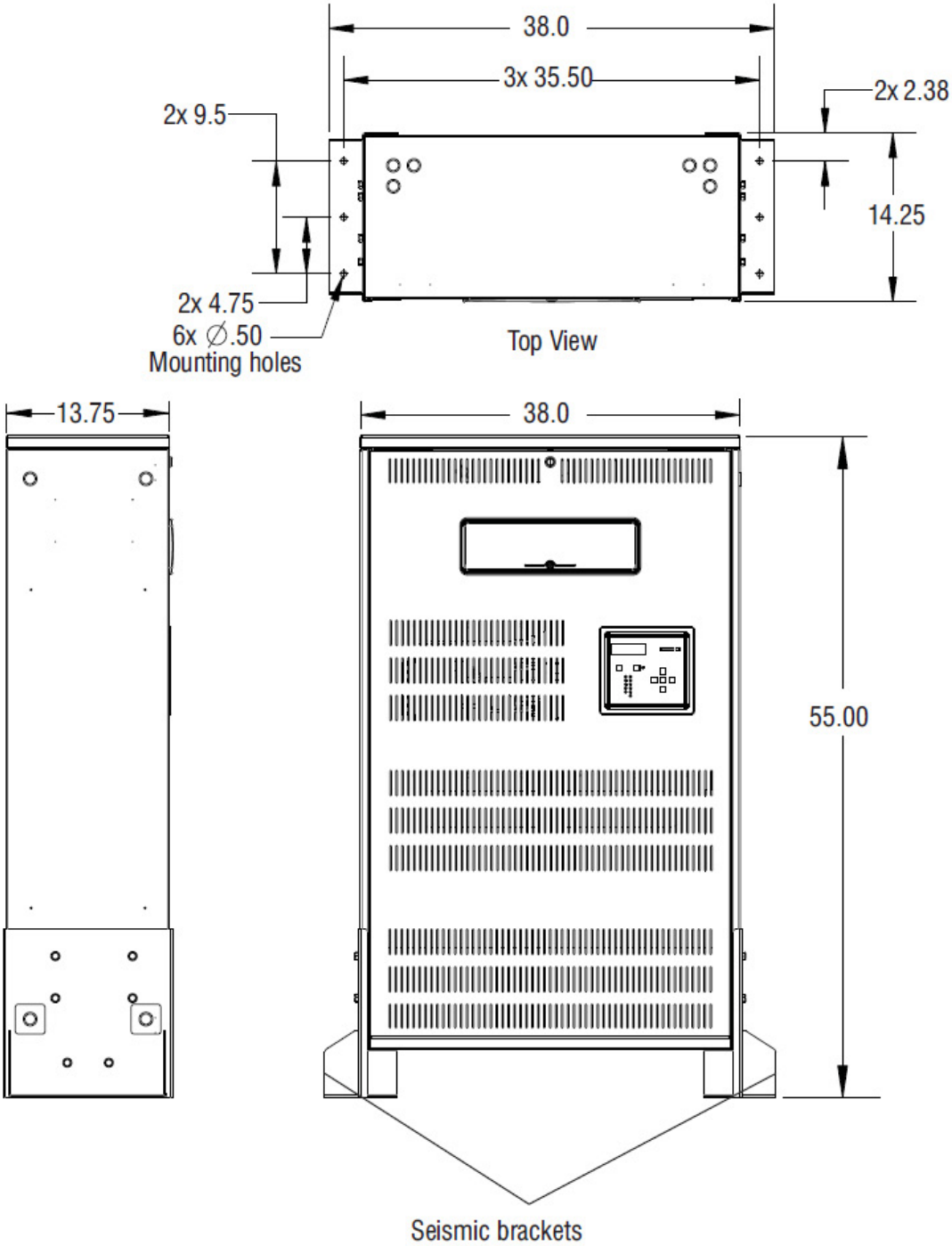
1,600VA - 3,200VA INVERTER



POWER VA RATING	PHASE CONFIGURATION	INPUT/OUTPUT VOLTAGE	NO. OF BATTERIES	MAX OUTPUT BREAKERS
1600W	1P	120V (L-N) 277V (L-N)	6	11
2200W			8	
2800W			10	
3200W			12	

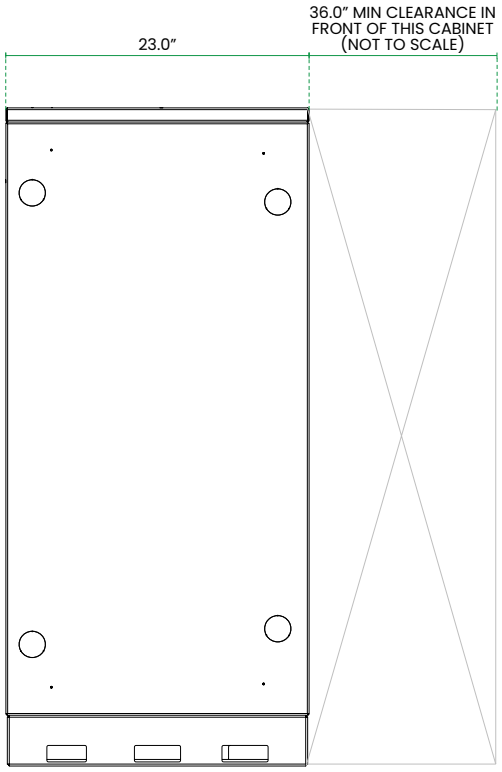
DIMENSIONS

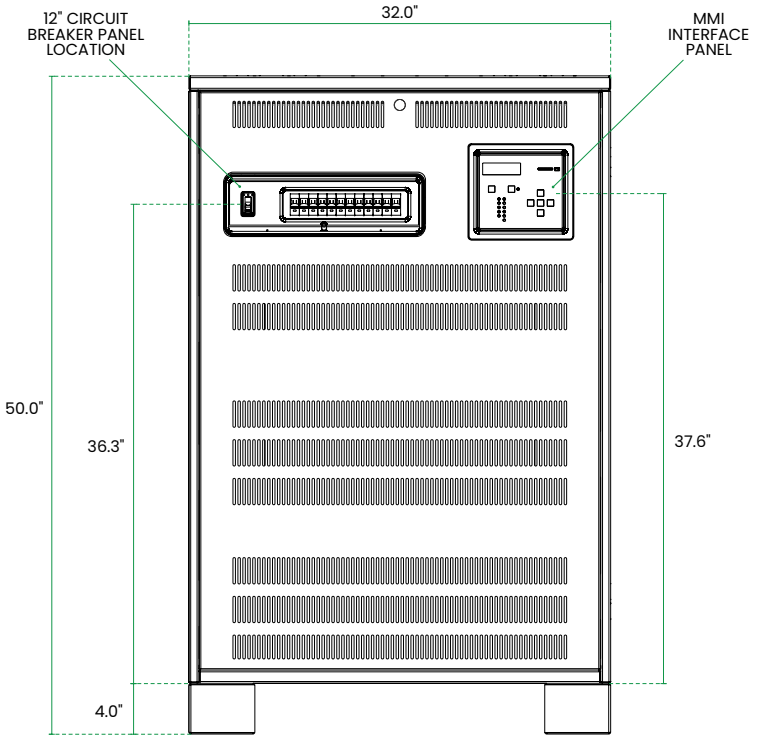
1,600VA - 3,200VA INVERTER WITH SEISMIC BRACKETS

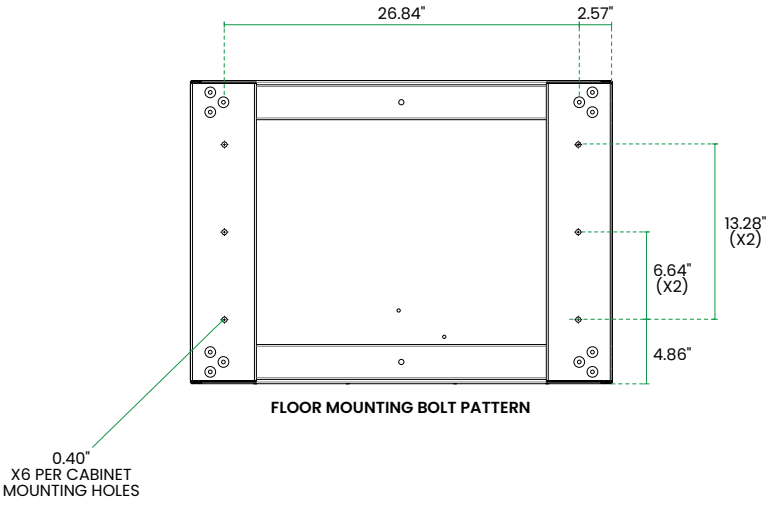


DIMENSIONS

4,200VA - 6,250VA INVERTER



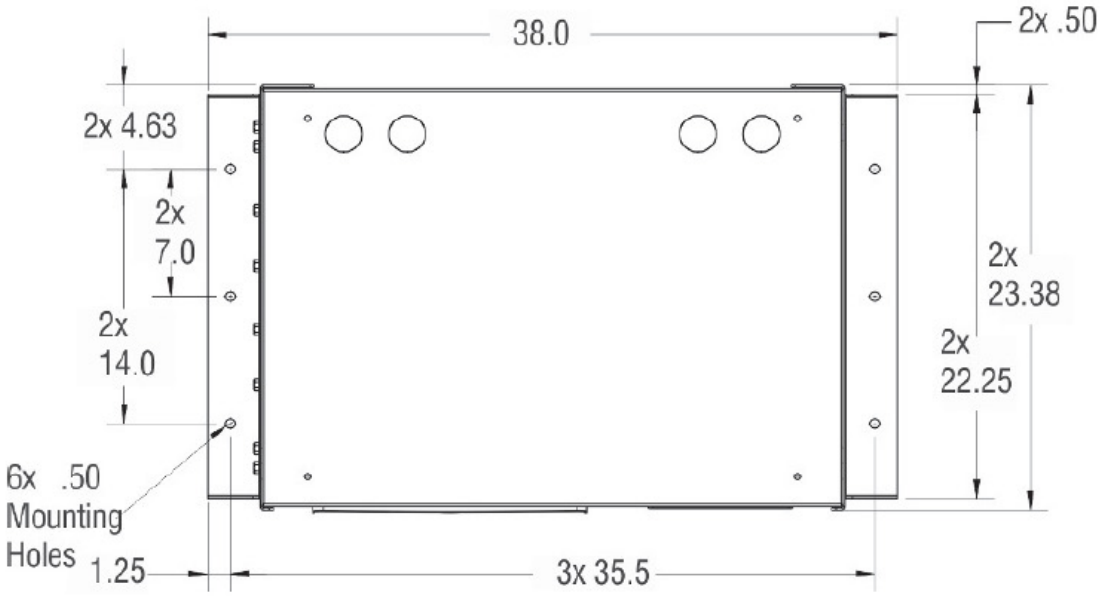




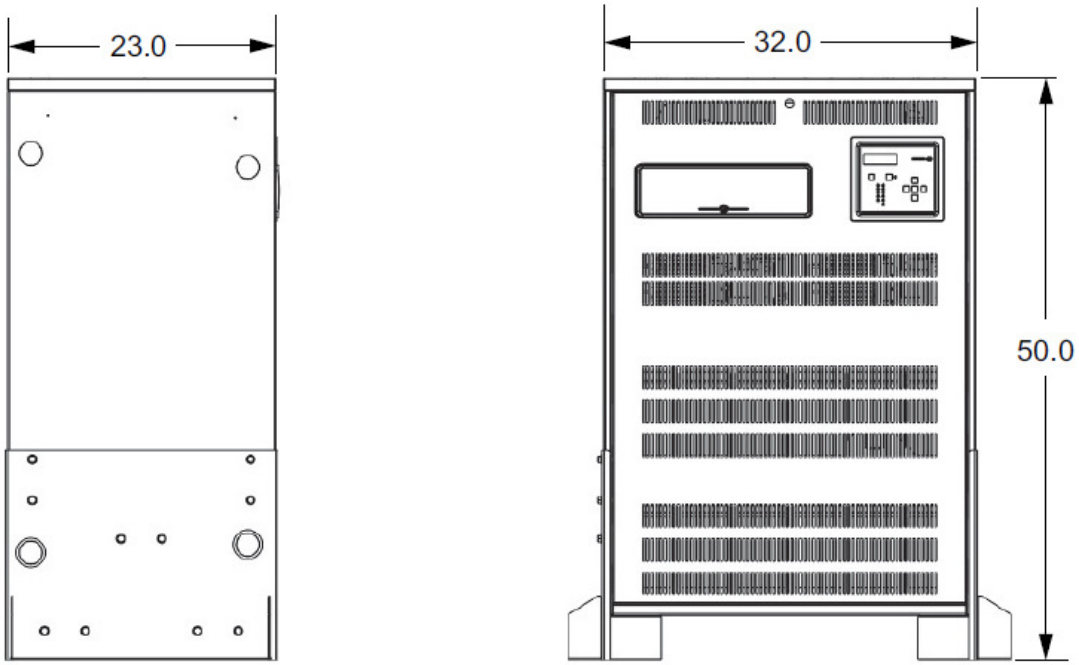
POWER VA RATING	PHASE CONFIGURATION	INPUT/OUTPUT VOLTAGE	NO. OF BATTERIES	MAX OUTPUT BREAKERS
4200W	1P	120V (L-N) 277V (L-N)	8	12
5200W			10	
6250W			12	

DIMENSIONS

4,200VA - 6,250VA INVERTER WITH SEISMIC BRACKETS

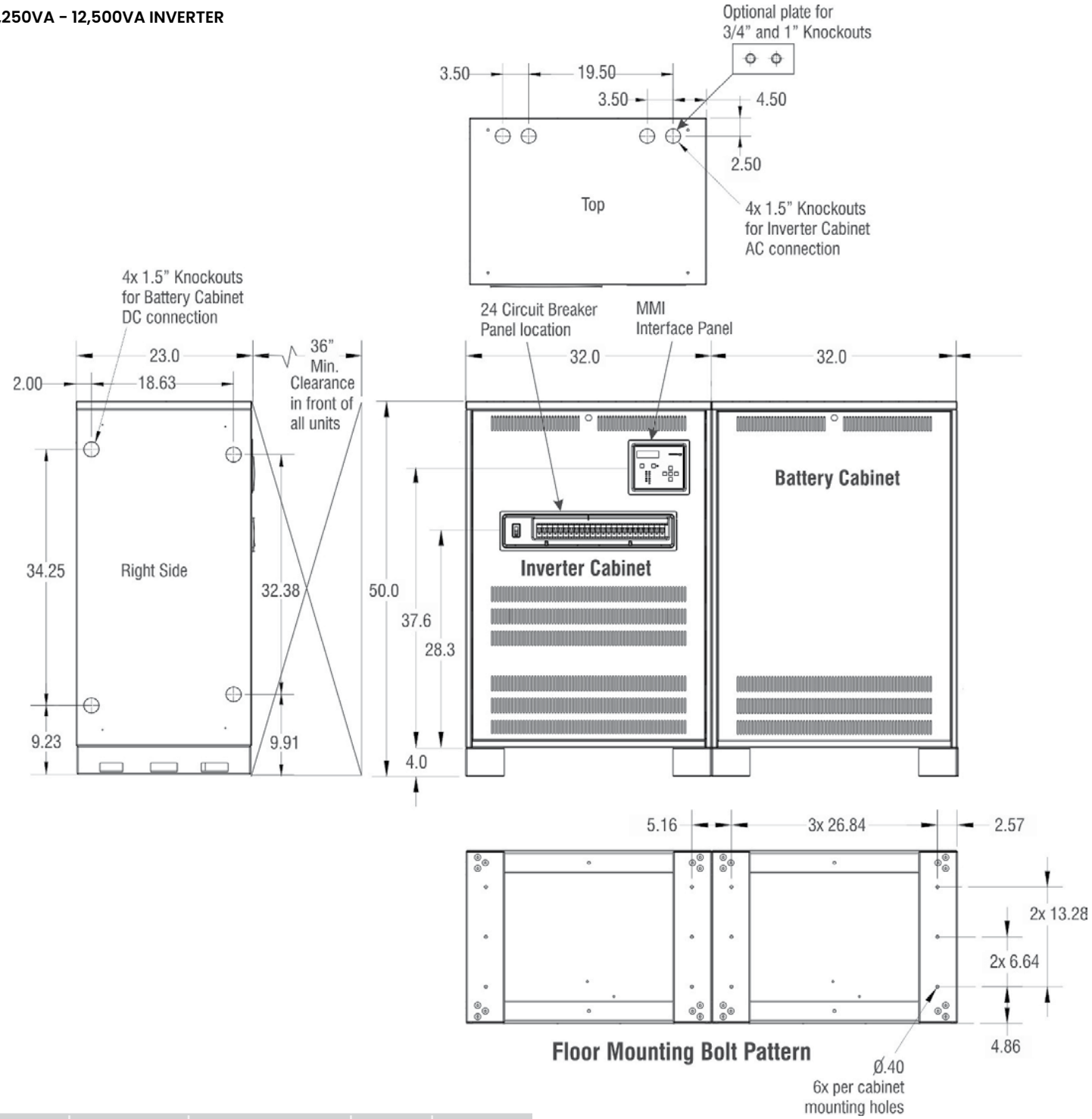


Top View



DIMENSIONS

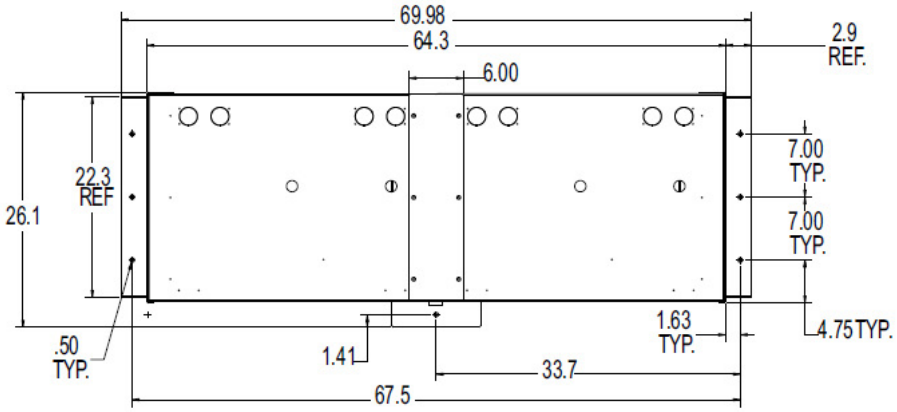
8,250VA - 12,500VA INVERTER

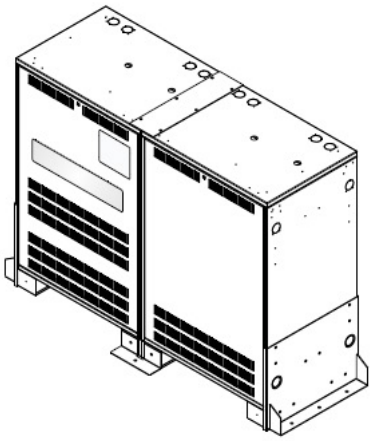


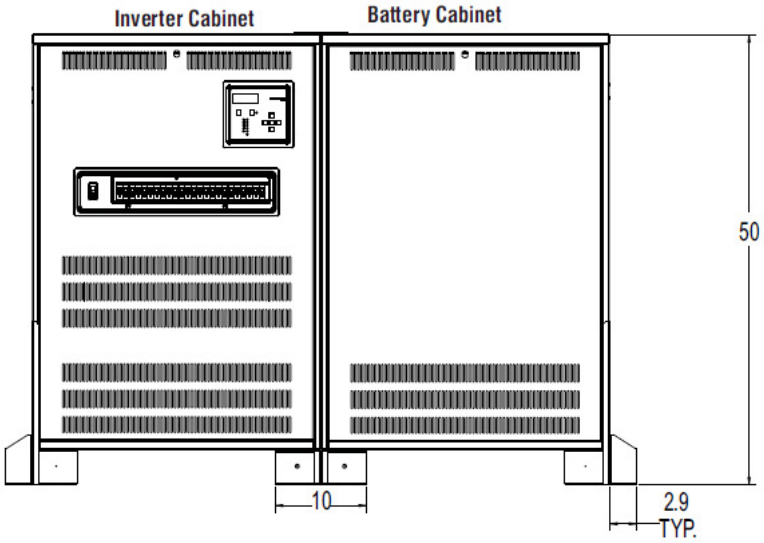
POWER VA RATING	PHASE CONFIGURATION	INPUT/OUTPUT VOLTAGE	NO. OF BATTERIES	MAX OUTPUT BREAKERS
8250W	1P	120V (L-N) / 277V (L-N)	16	24
10500W		277V (L-N)	20	
12500W		277V (L-N)	24	

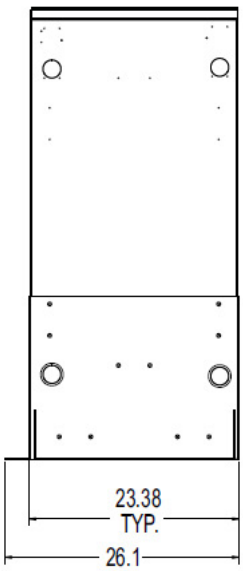
DIMENSIONS

8,250VA - 12,500VA INVERTER WITH SEISMIC BRACKETS



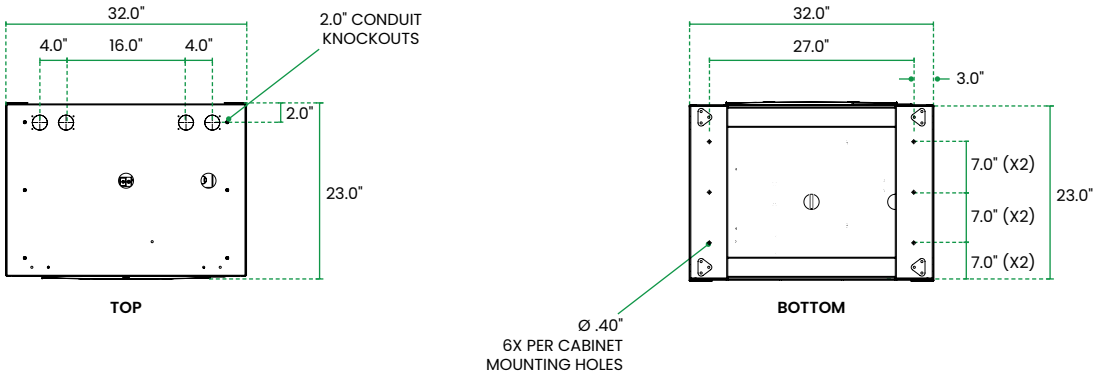


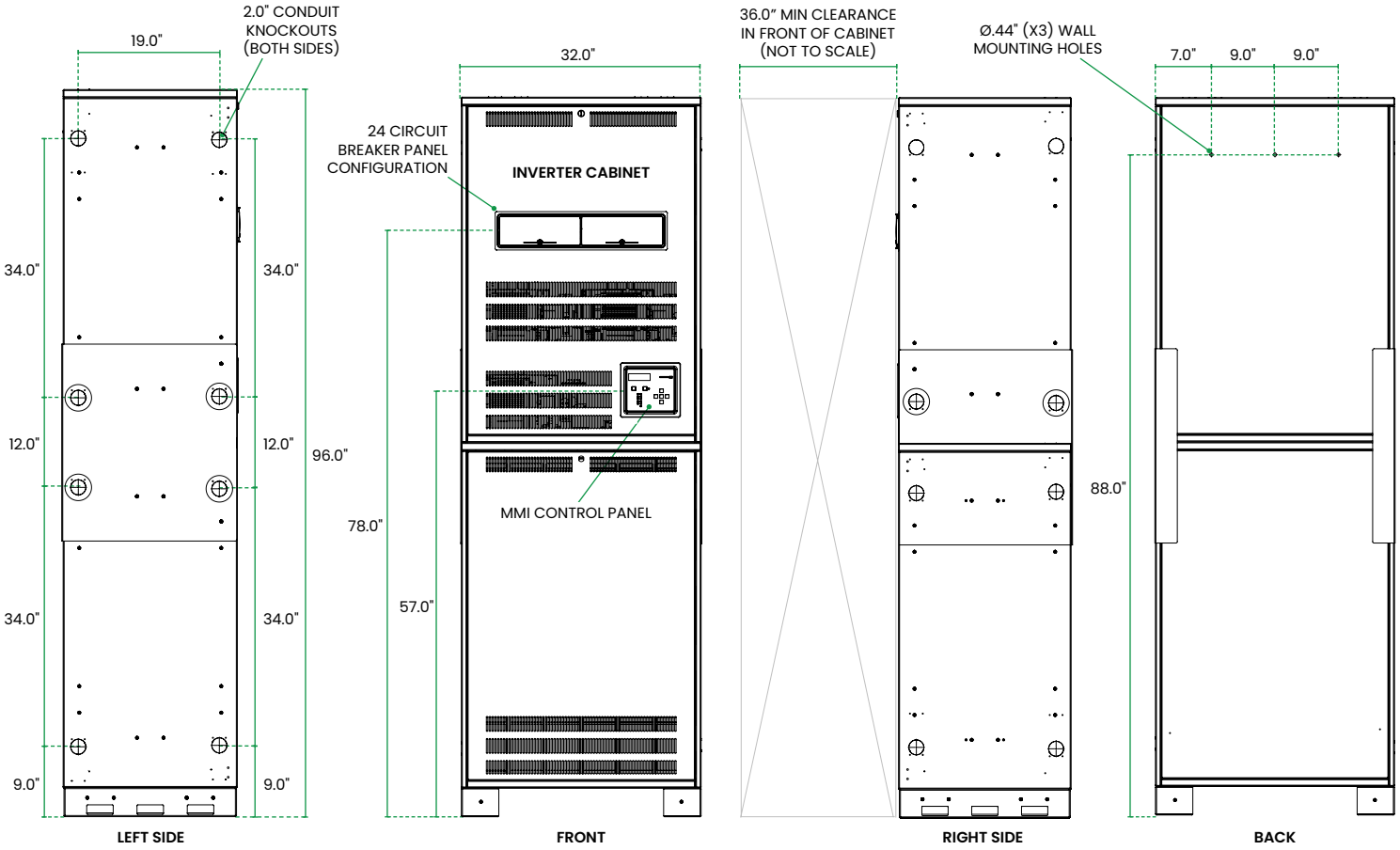




DIMENSIONS

8,250VA - 12,500VA STACKED CONFIGURATION





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	30113/3014 (UINT32)
System Events	AI	20	30115/30116 (UINT32)