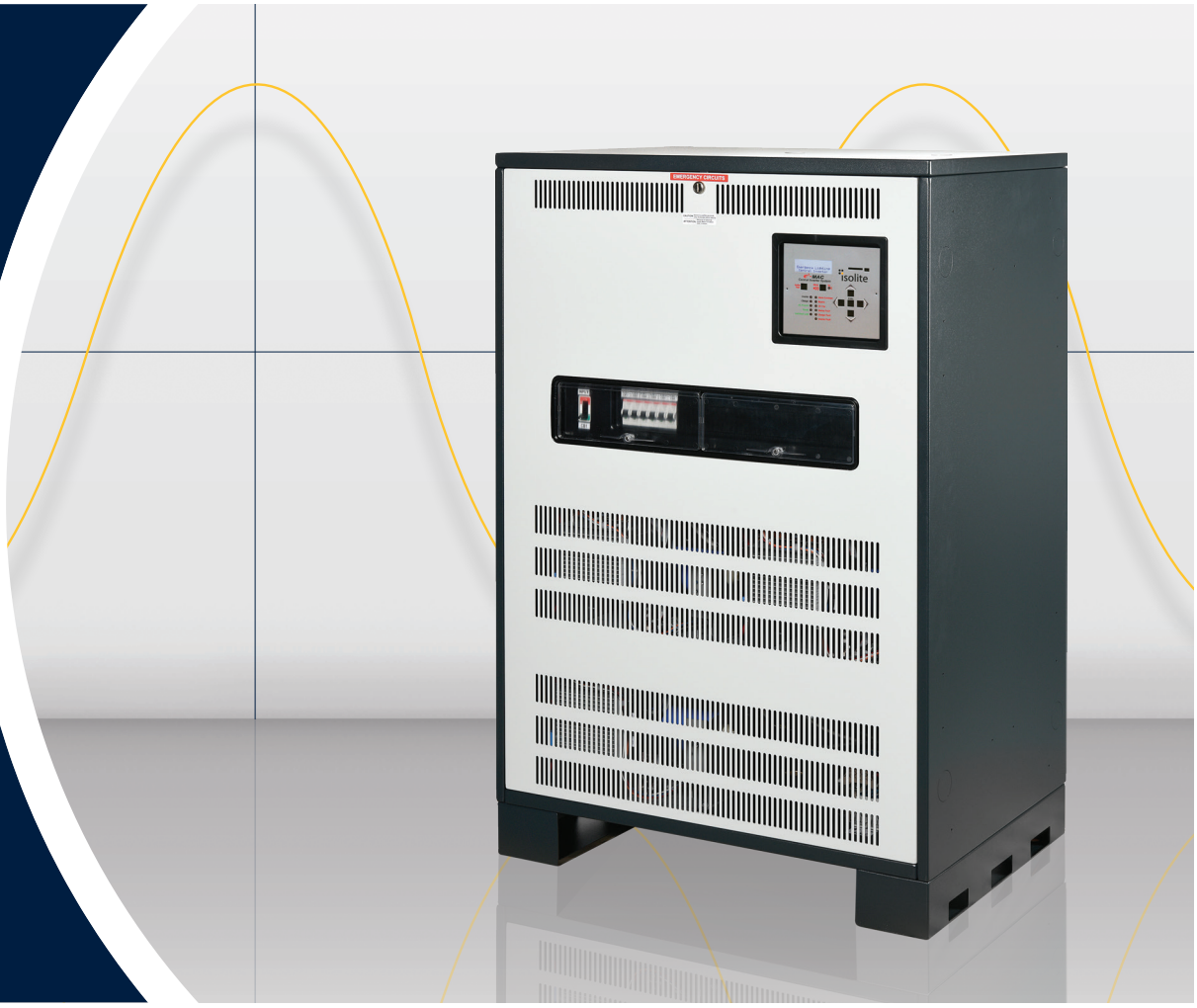
isolite

The Emergency Lighting Experts



E3MAC INVERTER SYSTEMS

D-7.2.3.0-45 Rev 0, 20180828

isolite

Building on our history of innovation, Isolite was the first to recognize the challenges and opportunities presented to the emergency lighting industry as the LED revolution took the lighting world by storm.

The emergency ballast had long been the “go to” solution to incorporate existing lighting fixtures into a facilities emergency lighting plan. When the industry converted to LED light sources, those were no longer an option as they were incompatible with all LED drivers.

Recognizing the problem, Isolite dedicated its engineering resources to find a solution. As a result, we were the first to offer a family of mini-inverters that provided pure sine wave power necessary to power the LED drivers. This breakthrough technological advancement made it possible to provide reliable emergency power to LED fixtures as well as all other lighting technologies.

Built right here in America, in our Pennsylvania manufacturing facility, the Isolite family of inverters grew from our 125 watt mini-inverter to our 18,000 watt modular system. All models provide powerful functionality and industry leading features that ensure a cost effective and easy to monitor and maintain emergency lighting power solution.

Isolite West
3563 Sueldo, Suite M
San Luis Obispo, CA 93401
800-799-5343
805-546-9669
805-546-9564 Fax

www.isolite.com

Isolite Headquarters
31 Waterloo Avenue
Berwyn, PA 19312
800-888-5483
610-647-8200
610-296-8952 Fax

Contents

To view the entire Isolite lineup, visit
us at: www.isolite.com

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- Single Phase units from 1kva to 12.5kva
- Three Phase units from 3kva to 18kva
- Website Monitoring - Easily view, interact, and download records as needed from any PC or mobile device. See page 9 for details.
- 4x20 LCD display and keypad. See page 8 for details.
- Isolite Inverters provide pure sine wave output with less than 3% THD (Total Harmonic Distortion).
- Automatic restart upon utility power return; no need to manually reset the system.
- Brownout protection set for 85% of nominal line voltage.
- Optional circuit breaker protected loads (Switched, Normally On, and Normally Off). See page 11 for details.
- Crest factor >4 overload protection for demanding, high in-rush loads.
- Compatible with all lighting loads, including HID.
- Fast transfer for HID compatibility ensures smooth operation of combined lighting loads (less than 2mS).
- Programmable transfer time - select between standard and fast transfer times for load and site compatibility.
- Fault summary alarm and 2 programmable alarms - Form C dry contacts (optional).
- Variable time delay - manually program time delay feature.
- 65KAIC rating
- Short circuit protected to 65KAIC; tested and approved to UL 6180-5-1 standard.
- UL listed 90 minute run-time.
- Start-Up diagnostic checks for proper installation. See page 8 for details.
- Automatic Low Voltage Disconnect (LVD) set at 1.67 VPC.
- Galvanized or painted steel parts for all modules and shelves for corrosion resistance and durability.
- Front access VRLA batteries with 10-Year pro-rated warranty. See page 34 for details.
- Battery recharges in less than 24 hours.
- Installer friendly front access terminals for easier and faster installation.
- All cabinets constructed from 14 gauge CRS and are powder coated with no visible bolts or hardware.
- Three Rate Charger circuit is fully temperature compensated for added reliability
- Temperature Rating: 68°F to 86°F

All Isolite E3MAC Inverters are Made in America

Further approvals and ratings include....

- OSHPD Seismic Certified (with purchase of Z4 option)
- NEMA Type 1 Enclosure
- New York City Approved, Calendar Number 51575
- City of Chicago Approved
- NFPA101 Life Safety Code
- NFPA70-NEC
- OSHA
- UL924

Optional Features Include...

- Programmable Terminal Block (TB)
  Allows inverter operations to be output to another system such as Lutron, or Crestron. Form C dry contact ensures integration into these systems with ease.
- Maintenance Bypass Switch (MB)
  Internal switch to bypass all inverter operations. When activated, input power is transferred directly to the output breakers, allowing inverter servicing.
- Delayed Transfer (DT)
  This slows down "Fast Transfer" from 2mS to a standard transfer time of 50mS. This option is ideal for movie theaters or other places with soft ambiance lighting to avoid premature deployment of emergency lighting power in a brownout situation.
- Trip Alarm (TA)
  Trip Alarm is a feature of Isolite Inverters that notifies the instrument panel if any breaker output is tripped. This will broadcast an alarm to the remote (*requires additional Remote Annunciator (RA) purchase).
- Long Delayed Transfer (LD)
  Customizable transfer time - desired transfer time must be specified (in seconds) upon order placement.
- Remote Annunciator (RA)
  An LED indicator and audible alarm which enables the user to monitor the status of the inverter from a remote location where the annunciator is mounted. An annunciator located in a separate office will alert those present that the inverter is in an alarm condition. See drawing on page 10.
- Keyed Entry (KE)
  Locking cabinet with key for areas where unauthorized tampering is a concern.
- Seismic Restraints (Z4)
  Seismic Restraints are shaker table tested and seismic certified to the latest California Building Code (CBC) 2016. Shake table testing was performed in accordance with International Code Council Evaluation Service Acceptance Criteria 156 (ICC-ES AC156) and is OSHPD approved. For more details, please reference our Seismic Certified Inverters booklet. Locked cabinet (KE) standard when Z4 is chosen.
- Factory Start-Up (FS)
  On-site Factory Start-Up includes an on-site visit from an Isolite Technician for inverter activation and demonstration. On-site Factory Start-Up increases electronics warranty from 2 to 3 years. Please see page 34 for full warranty details. To purchase and schedule Factory Start-Up, please visit our website and select "inverters" on the main menu and see "Start-Up Form." Fill out the form, and send it to the email address on the form.

  Free phone start-up is available as well. For over the phone assistance with your inverter or start-up, please call our Inverter Tech Support at 800-967-5573, and they will be happy to assist you. Note that the phone start-up does not increase the warranty.
- Maintenance Plan (M#):
  Customer may choose from 1 year (M1) to 5 year (M5) maintenance plans. Once per year an Isolite Technician will visit the site to perform maintenance and software upgrades. The maintenance includes battery voltage checks, torque setting verification, cleaning, and physically ensuring that the inverter is 100% operational. If any issues with the inverter are found, Isolite will fix or replace parts as necessary. All electronics warranty is extended to the duration of the maintenance plan. Note that the battery warranty is not extended and will keep the standard 10 year pro-rated schedule. For details, please see page 34.
- Extended Warranty (EW):
  Extended Warranty can be purchased only if the on-site Factory Start-Up has been purchased as well. Extended Warranty increases the electronics warranty from the standard 3 years (with Factory Start-Up) to a full 5 years. Please see page 34 for full warranty details.

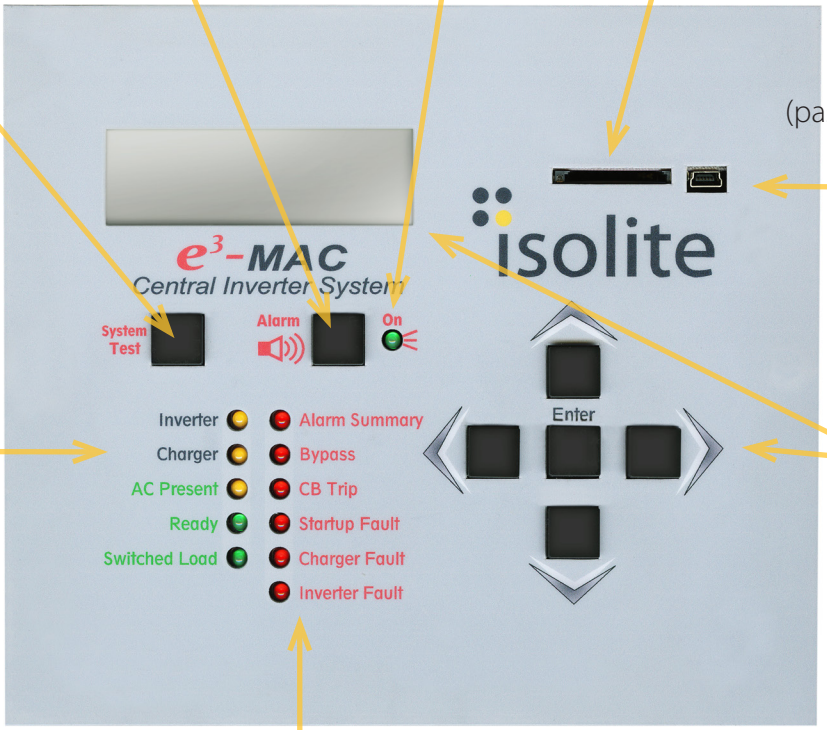
Alarm Silence On/Off Button:
Allows the user to silence the audible alarm.

Alarm On/Off LED:
Indicates when an audible alarm is enabled.

SD Memory Card:
Download and store all events, tests, and alarm logs (password protected).

System Test Button:
User initiated, 30 second test.

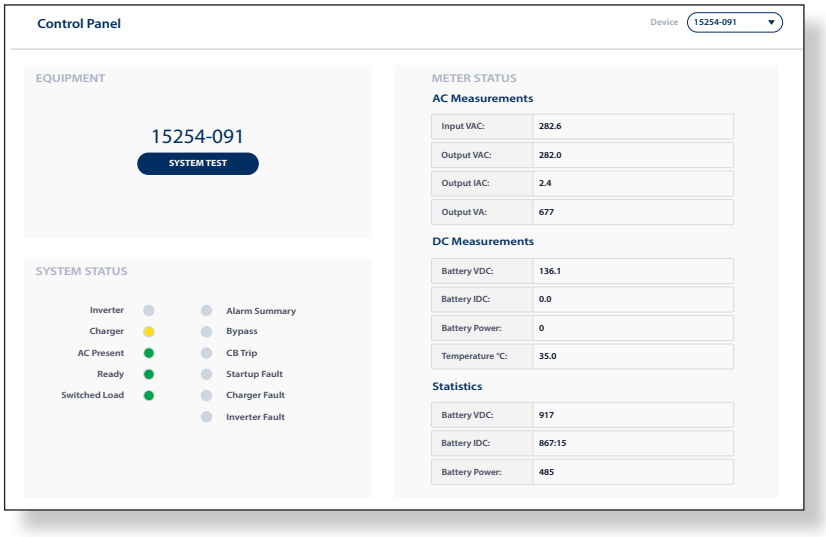
USB Connector:
Access up to 1,000 events, tests, and alarm logs (password protected).



Heads-up Diagnostic LEDs (status):
- Inverter (inverter power)
- Charger (battery charging)
- AC Present
- Ready
- Switched Load (switched load energized)

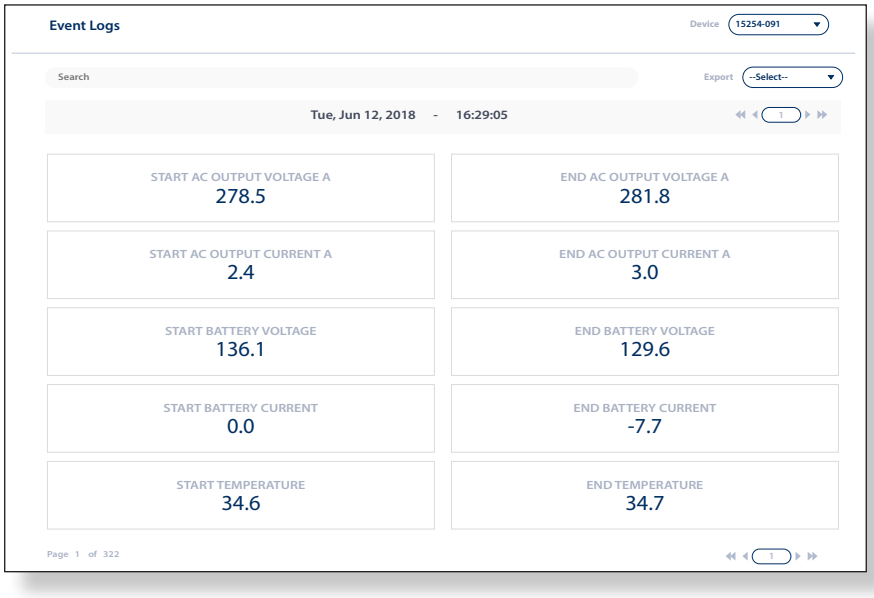
Keypad and LCD Display:
User interface & extensive status diagnostics. Self-Test, Self-Diagnostic in Compliance with UL924 is field configurable and stores 1,000 Test, Event, and Alarm Logs.

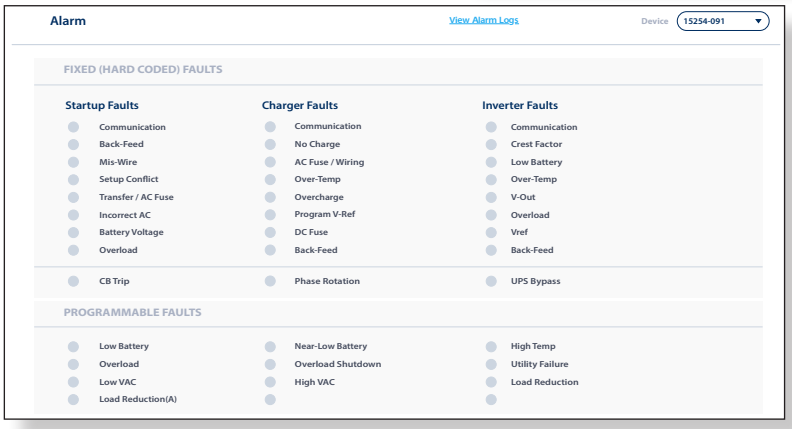
Heads-up Diagnostic LEDs (faults):
- Alarm Summary
- Bypass (unit in bypass)
- CB Trip (circuit breaker trip)
- Startup Fault
- Charger Fault
- Inverter Fault



Website monitoring feature allows the user to easily view, interact, and download records as needed on any PC or mobile device.

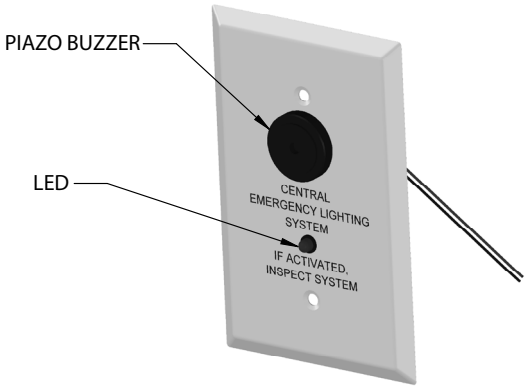
Users can view discharge events remotely. Details can be emailed directly to the user or viewed at a later date.

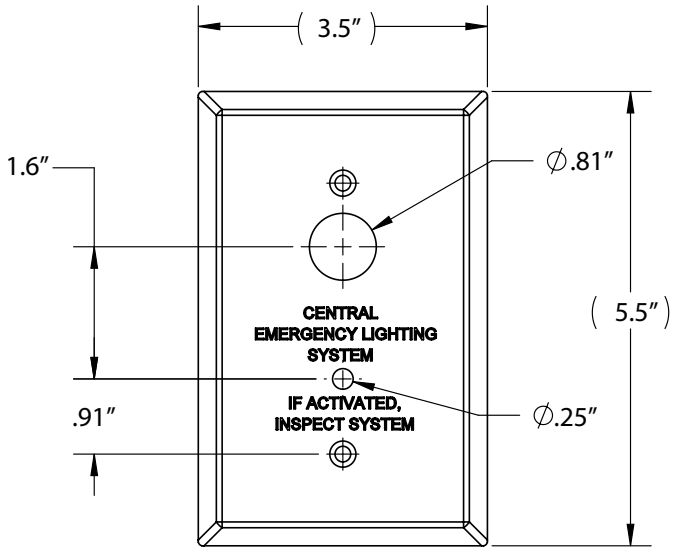


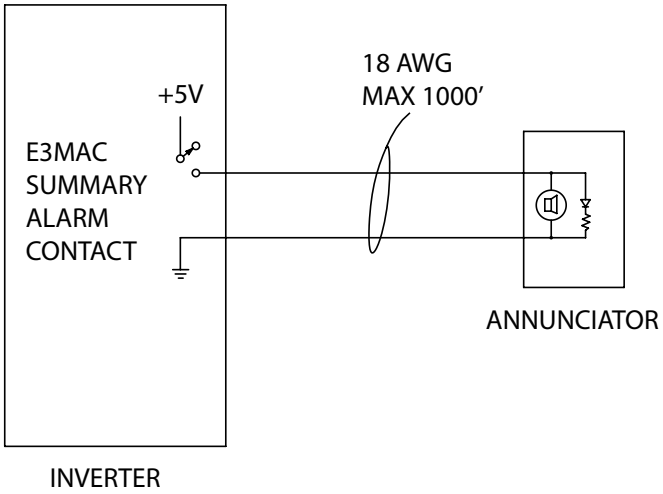


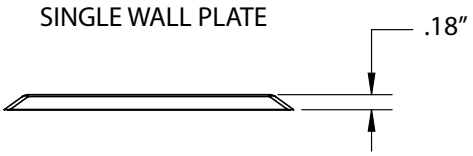
Faults can also be viewed remotely, with email notification available. In conjunction with the remote testing ability, this allows the Isolite inverter tech team to troubleshoot inverter problems remotely.

Remote Annunciator (RA) Wiring Drawing









Normally On Output

In typical inverter applications, Normally On is the standard output. Normally On output breakers are connected directly to existing light fixtures (without a switch or dimming device), assuming the load to always be on. In the event of a power failure, the inverter continues to fed the full rated line voltage, allowing for light fixtures to have continued AC power.

Normally Off Output

When connected directly to the lighting load (without a switch, or dimming device) it assumes the load to always be off. In the event of a power failure, the inverter continues to feed at full rated line voltage, providing full brightness in emergency mode.

Switched Output

The Switched Output is selected when a switched load (not suitable for dimmed (0-10v) applications) is required. The Switched Command Signal does not carry current and does not feed the load. When the Switched Command Signal is on, the lighting load (connected to the Switched Output) is fed from the line through an internal relay--the Switched Command Signal controls this relay.

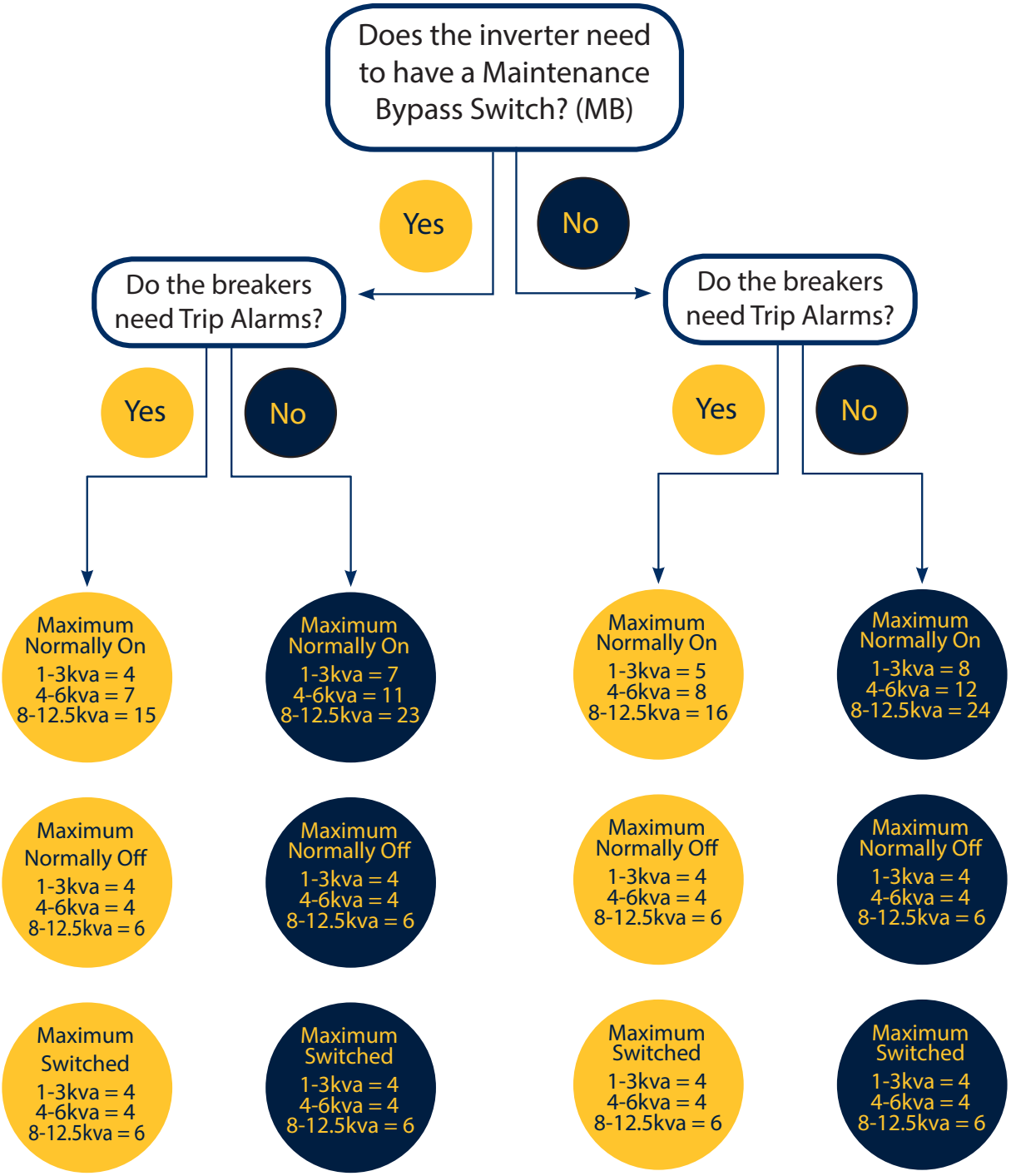
Breaker Supervision

For supervised breakers, Trip Alarms (TA) can be added so that the instrument panel is notified if any breaker output is tripped. This will also annunciate an alarm to the remote (*requires additional remote Annunciator (RA) purchase).

For information regarding max breaker quantities, please see the Optional Breaker Configurator and Ordering Guides (pages 13-19).

Current Chart and feeder breaker size recommendations on pages 31-32.

How many optional breakers can be selected?



Single Phase Ordering Guide

For Detailed Drawings...

E3MAC 1000 1P
Standard: Drawing A - Page 20
(Z4) Seismic Zone 4 option: Drawing H - Page 27

E3MAC 1600 1P
Standard: Drawing G - Page 26
(Z4) Seismic Zone 4 option: Drawing J - Page 28

E3MAC 2200 1P
Standard: Drawing G - Page 26
(Z4) Seismic Zone 4 option: Drawing J - Page 28

E3MAC 2800 1P
Standard: Drawing G - Page 26
(Z4) Seismic Zone 4 option: Drawing J - Page 28

E3MAC 3000 1P
Standard: Drawing G - Page 26
(Z4) Seismic Zone 4 option: Drawing J - Page 28

E3MAC 4000 1P
Standard: Drawing B - Page 21
(Z4) Seismic Zone 4 option: Drawing H - Page 27

E3MAC 5000 1P
Standard: Drawing B - Page 21
(Z4) Seismic Zone 4 option: Drawing H - Page 27

E3MAC 6000 1P
Standard: Drawing B - Page 21
(Z4) Seismic Zone 4 option: Drawing H - Page 27

E3MAC 8000 1P
Standard: Drawing E - Page 24
(Z4) Seismic Zone 4 option: Drawing K - Page 29

E3MAC 10,000 1P
Standard: Drawing E - Page 24
(Z4) Seismic Zone 4 option: Drawing K - Page 29

E3MAC 12,500 1P
Standard: Drawing E - Page 24
(Z4) Seismic Zone 4 option: Drawing K - Page 29

Series/VA Rating
E3MAC-1000
E3MAC-1600
E3MAC-2200
E3MAC-2800
E3MAC-3000
E3MAC-4000
E3MAC-5000
E3MAC-6000
E3MAC-8000
E3MAC-10,000
E3MAC-12,500

Phase
1P = Single Phase

Input/Output Voltage
IA/OA = 120V/120V[1]
IB/OB = 277V/277V

Output Breaker Normally On
C(n) = Normally On
(n) = Quantity (see breaker chart on page 12)

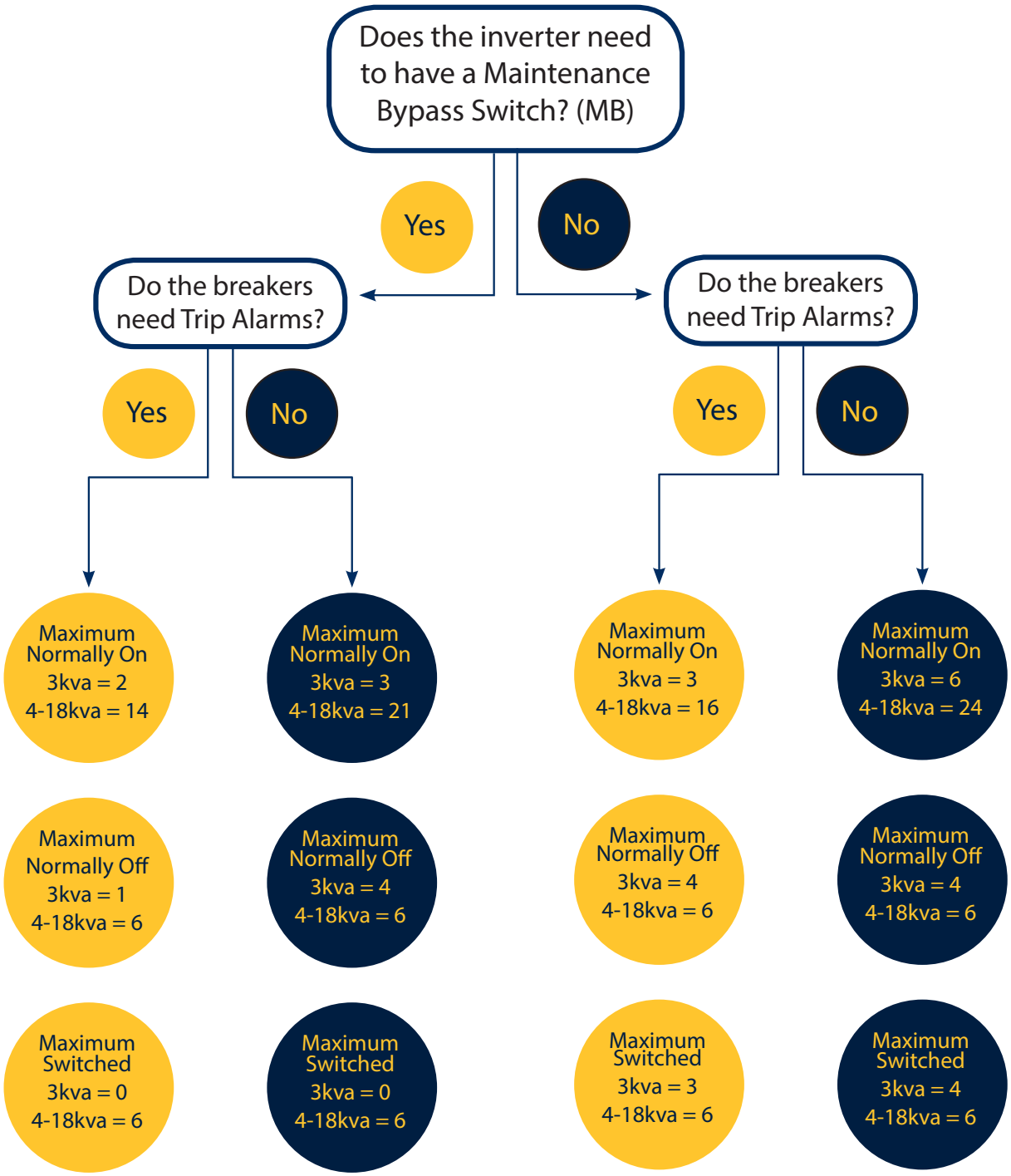
Output Breaker Normally Off
O(n) = Normally Off
(n) = Quantity (see breaker chart on page 12)

Output Breaker Switched
S(n) = Switched
(n) = Quantity (see breaker chart on page 12)

Options
TA = Trip Alarm
KE = Keyed Enclosure
LD = Long Delayed Transfer[2]
TB = Programmable Terminal Block
MB = Maintenance Bypass Switch
Z4 = Seismic Zone 4 (includes **KE**)
RA = Remote Annunciator
FS = Factory Start-Up
DT = Delayed Transfer
M(N) = Maintenance Plan (n) = Years (5 max)
EW = Extended Warranty to 5 years[3]
WB = Wall Mount Kit[4]

Notes
1 = Not available with E3MAC 10000, or 12500 units
2 = Must specify desired delay in seconds
3 = Only when purchased with Factory Start-Up
4 = E3MAC1000 only

How many optional breakers can be selected?



For Detailed Drawings...

E3MAC 3000 3P
Standard: Drawing C - Page 22
Drawing D - Page 23
(Z4) Seismic Zone 4 option: Drawing not available

E3MAC 4000 3P
Standard: Drawing E - Page 24
(Z4) Seismic Zone 4 option: Drawing K - Page 29

E3MAC 5000 3P
Standard: Drawing E - Page 24
(Z4) Seismic Zone 4 option: Drawing K - Page 29

E3MAC 8000 3P
Standard: Drawing E - Page 24
(Z4) Seismic Zone 4 option: Drawing K - Page 29

E3MAC 10,000 3P
Standard: Drawing E - Page 24
(Z4) Seismic Zone 4 option: Drawing K - Page 29

E3MAC 12,500 3P
Standard: Drawing E - Page 24
(Z4) Seismic Zone 4 option: Drawing K - Page 29

E3MAC 15,000 3P
Standard: Drawing F - Page 25
(Z4) Seismic Zone 4 option: Drawing L - Page 30

E3MAC 18,000 3P
Standard: Drawing F - Page 25
(Z4) Seismic Zone 4 option: Drawing L - Page 30

Series/VA Rating
E3MAC-3000
E3MAC-4000
E3MAC-5000
E3MAC-8000
E3MAC-10,000
E3MAC-12,500
E3MAC-15,000
E3MAC-18,000

Phase
3P = Three Phase

Input/Output Voltage
IF/OF = 120V/208V
IG/OG = 277V/480V

Output Breaker Normally On
Breakers for Three Phase Inverters should be ordered in multiples of 3
C(n) = Normally On
(n) = Quantity (see breaker chart on page 14)

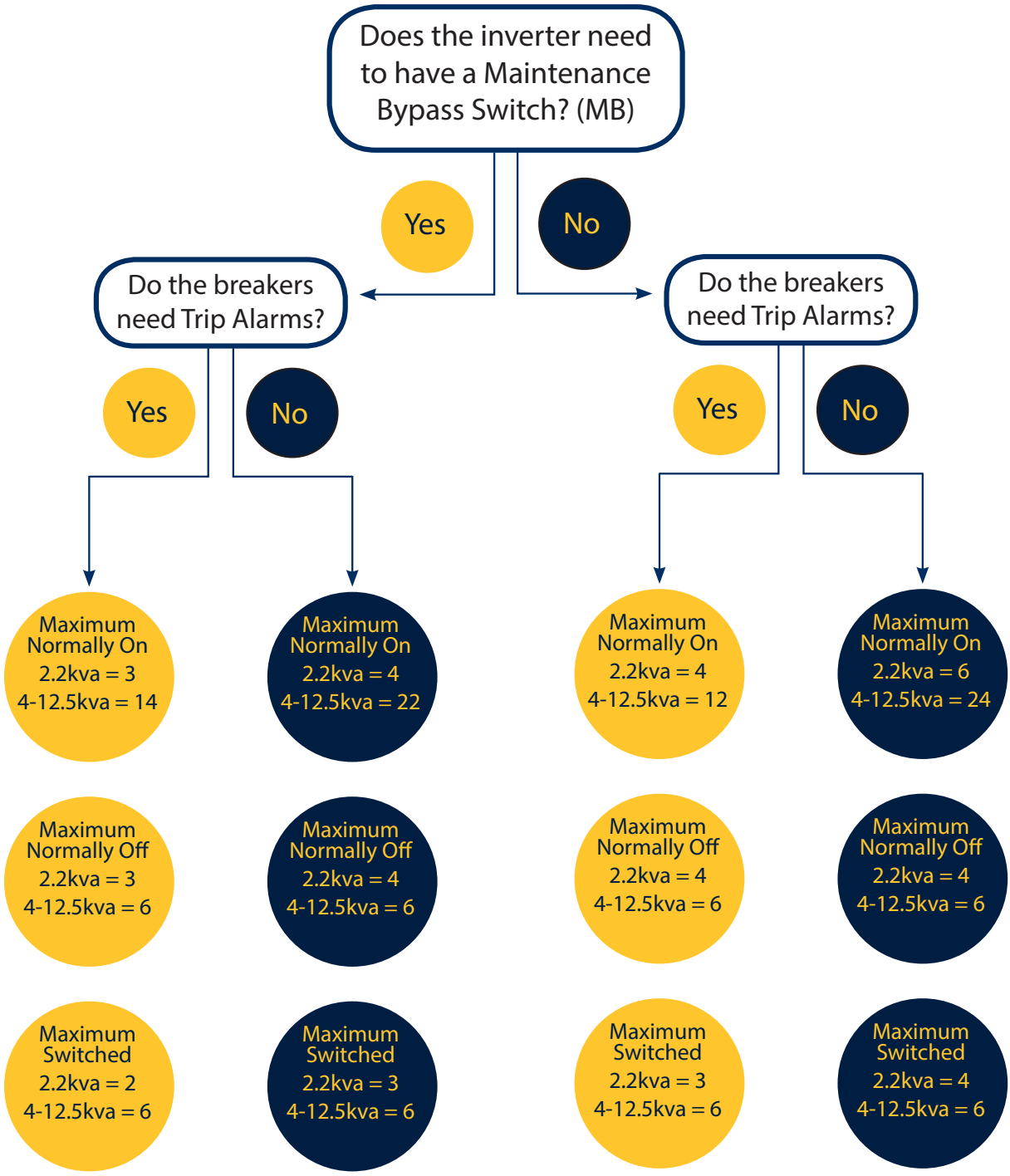
Output Breaker Normally Off
Breakers for Three Phase Inverters should be ordered in multiples of 3
O(n) = Normally Off
(n) = Quantity (see breaker chart on page 14)

Output Breaker Switched
Breakers for Three Phase Inverters should be ordered in multiples of 3
S(n) = Switched
(n) = Quantity (see breaker chart on page 14)

Options
TA = Trip Alarm
KE = Keyed Enclosure
LD = Long Delayed Transfer[1]
TB = Programmable Terminal Block
Z4 = Seismic Zone 4 (includes **KE**)
MB = Maintenance Bypass Switch
RA = Remote Annunciator
FS = Factory Start-Up
DT = Delayed Transfer
M(N) = Maintenance Plan (n) = Years (5 max)
EW = Extended Warranty to 5 years[2]

Note
1 = Must specify desired delay in seconds
2 = Only when purchased with Factory Start-Up

How many optional breakers can be selected?



For Detailed Drawings...

E3MAC 2200 2P
Standard: Drawing C - Page 22
Drawing D - Page 23
(Z4) Seismic Zone 4 option: Drawing not available

E3MAC 4000 2P
Standard: Drawing E - Page 24
(Z4) Seismic Zone 4 option: Drawing K - Page 29

E3MAC 5000 2P
Standard: Drawing E - Page 24
(Z4) Seismic Zone 4 option: Drawing K - Page 29

E3MAC 6000 2P
Standard: Drawing E - Page 24
(Z4) Seismic Zone 4 option not available

E3MAC 8000 2P
Standard: Drawing E - Page 24
(Z4) Seismic Zone 4 option: Drawing K - Page 29

E3MAC 10,000 2P
Standard: Drawing E - Page 24
(Z4) Seismic Zone 4 option: Drawing K - Page 29

E3MAC 12,500 2P
Standard: Drawing E - Page 24
(Z4) Seismic Zone 4 option: Drawing K - Page 29

Series/VA Rating
E3MAC-2200
E3MAC-4000
E3MAC-5000
E3MAC-6000
E3MAC-8000
E3MAC-10,000
E3MAC-12,500

Phase
2P = Two Phase

Input/Output Voltage
IC/OC = 120V/208V
IE/OE = 277V/480V

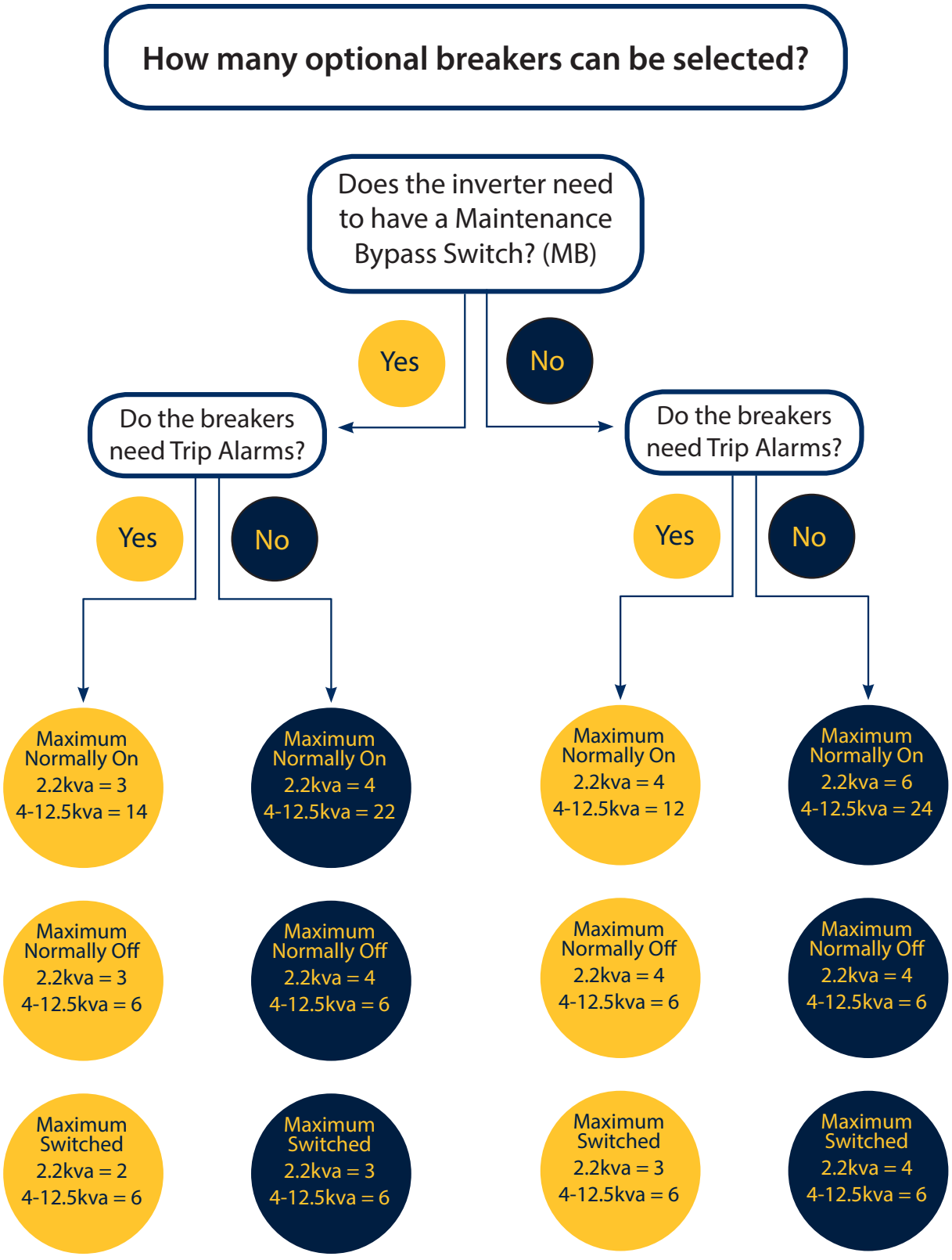
Output Breaker Normally On
Breakers for Two Phase Inverters should be ordered in multiples of 2
C(n) = Normally On
(n) = Quantity (see breaker chart on page 16)

Output Breaker Normally Off
Breakers for Two Phase Inverters should be ordered in multiples of 2
O(n) = Normally Off
(n) = Quantity (see breaker chart on page 16)

Output Breaker Switched
Breakers for Two Phase Inverters should be ordered in multiples of 2
S(n) = Switched
(n) = Quantity (see breaker chart on page 16)

Options
TA = Trip Alarm
KE = Keyed Enclosure
LD = Long Delayed Transfer[1]
Z4 = Seismic Zone 4[2] (includes **KE**)
TB = Programmable Terminal Block
MB = Maintenance Bypass Switch
RA = Remote Annunciator
FS = Factory Start-Up
DT = Delayed Transfer
M(N) = Maintenance Plan (n) = Years (5 max)
EW = Extended Warranty to 5 years[3]

Note
1 = Must specify desired delay in seconds
2 = Not available for 6000 watt unit
3 = Only when purchased with Factory Start-Up


How many optional breakers can be selected?
Does the inverter need to have a Maintenance Bypass Switch? (MB)
Yes
No
Do the breakers need Trip Alarms?
Yes
No
Do the breakers need Trip Alarms?
Yes
No
Maximum Normally On 2.2kva = 3 4-12.5kva = 14
Maximum Normally On 2.2kva = 4 4-12.5kva = 22
Maximum Normally On 2.2kva = 4 4-12.5kva = 12
Maximum Normally On 2.2kva = 6 4-12.5kva = 24
Maximum Normally Off 2.2kva = 3 4-12.5kva = 6
Maximum Normally Off 2.2kva = 4 4-12.5kva = 6
Maximum Normally Off 2.2kva = 4 4-12.5kva = 6
Maximum Normally Off 2.2kva = 4 4-12.5kva = 6
Maximum Switched 2.2kva = 2 4-12.5kva = 6
Maximum Switched 2.2kva = 3 4-12.5kva = 6
Maximum Switched 2.2kva = 3 4-12.5kva = 6
Maximum Switched 2.2kva = 4 4-12.5kva = 6

For Detailed Drawings...

E3MAC 2200 1S
Standard: Drawing C - Page 22
Drawing D - Page 23
(Z4) Seismic Zone 4 option: Drawing not available

E3MAC 4000 1S
Standard: Drawing E - Page 24
(Z4) Seismic Zone 4 option: Drawing K - Page 29

E3MAC 5000 1S
Standard: Drawing E - Page 24
(Z4) Seismic Zone 4 option: Drawing K - Page 29

E3MAC 6000 1S
Standard: Drawing E - Page 24
(Z4) Seismic Zone 4 option not available

E3MAC 8000 1S
Standard: Drawing E - Page 24
(Z4) Seismic Zone 4 option: Drawing K - Page 29

E3MAC 10,000 1S
Standard: Drawing E - Page 24
(Z4) Seismic Zone 4 option: Drawing K - Page 29

E3MAC 12,500 1S
Drawing E - Page 24
(Z4) Seismic Zone 4 option: Drawing K - Page 29

Series/VA Rating
E3MAC-2200
E3MAC-4000
E3MAC-5000
E3MAC-6000
E3MAC-8000
E3MAC-10,000
E3MAC-12,500

Phase
1S = Split Phase

Input/Output Voltage
ID/OD = 120V/240V

Output Breaker Normally On
Breakers for Two Phase Inverters should be ordered in multiples of 2
C(n) = Normally On
(n) = Quantity (see breaker chart on page 18)

Output Breaker Normally Off
Breakers for Two Phase Inverters should be ordered in multiples of 2
O(n) = Normally Off
(n) = Quantity (see breaker chart on page 18)

Output Breaker Switched
Breakers for Two Phase Inverters should be ordered in multiples of 2
S(n) = Switched
(n) = Quantity (see breaker chart on page 18)

Options
TA = Trip Alarm
KE = Keyed Enclosure
LD = Long Delayed Transfer[1]
Z4 = Seismic Zone 4[2] (includes **KE**)
TB = Programmable Terminal Block
MB = Maintenance Bypass Switch
RA = Remote Annunciator
FS = Factory Start-Up
DT = Delayed Transfer
M(N) = Maintenance Plan (n) = Years (5 max)
EW = Extended Warranty to 5 years[3]

Note
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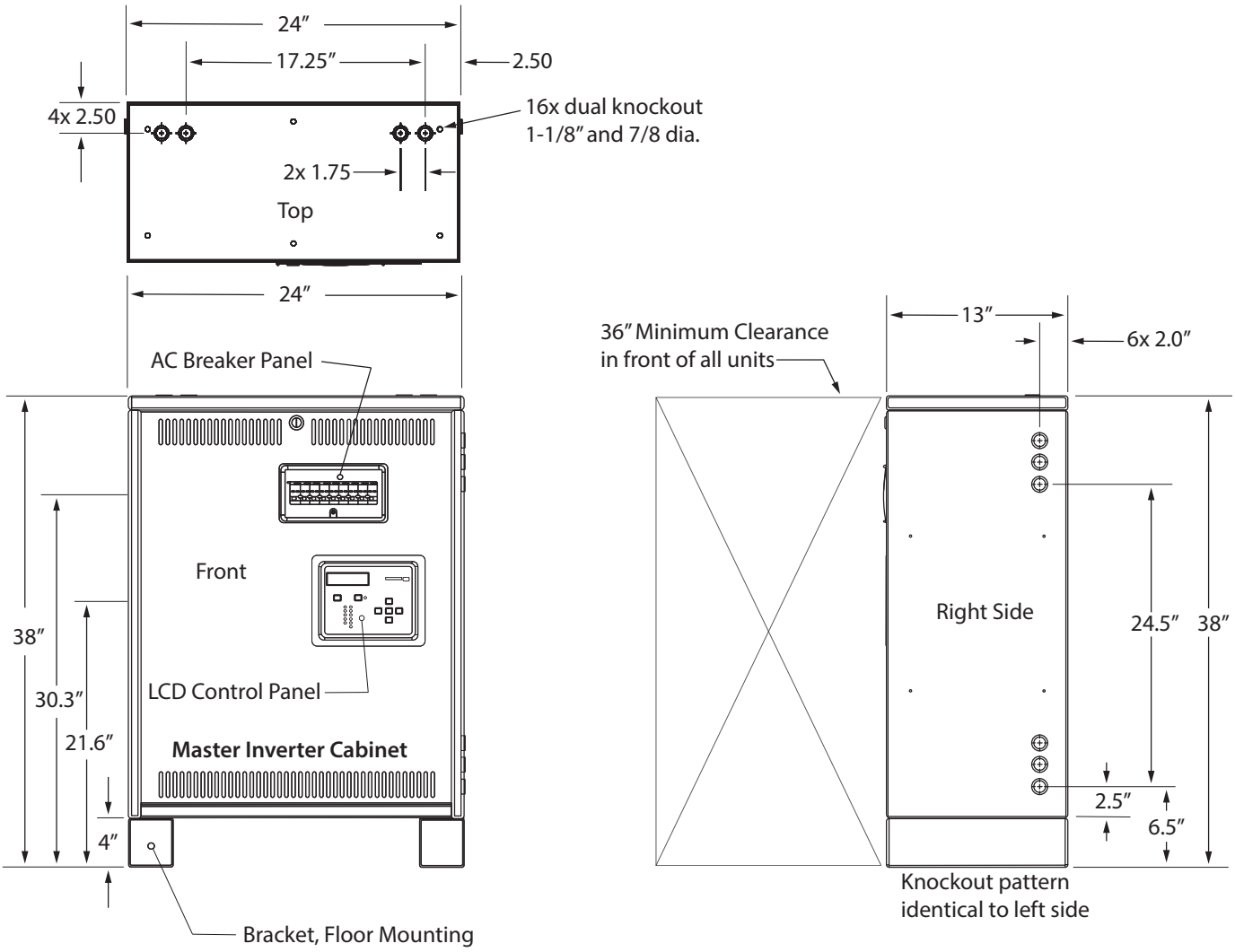
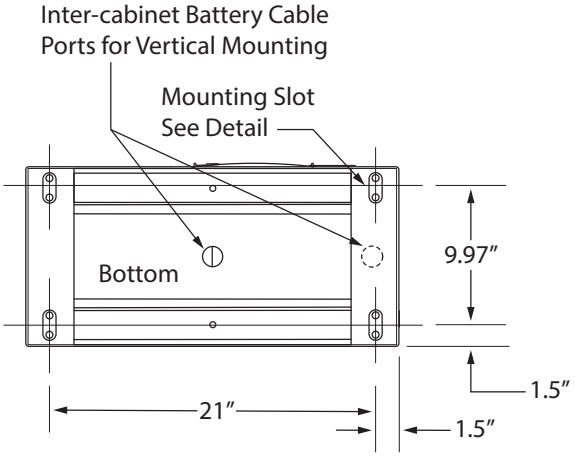
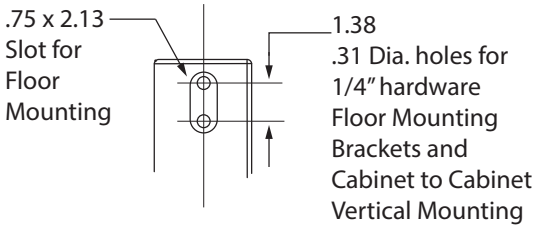
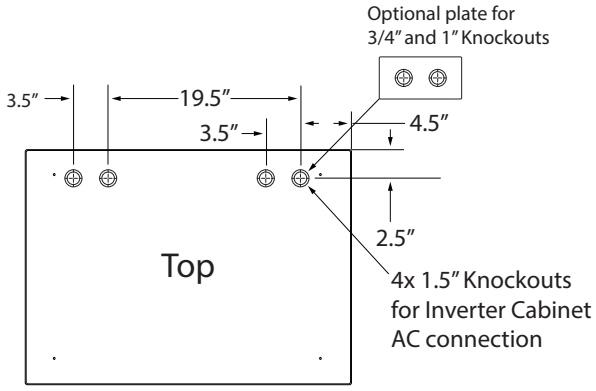
2 = Not available for 6000 watt unit
3 = Only when purchased with Factory Start-Up

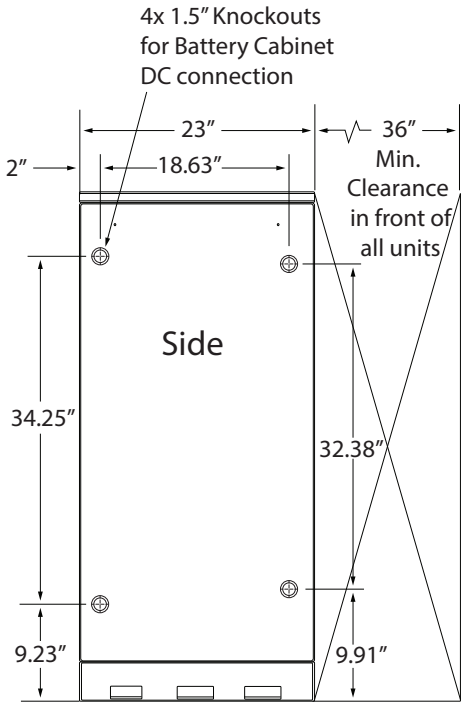


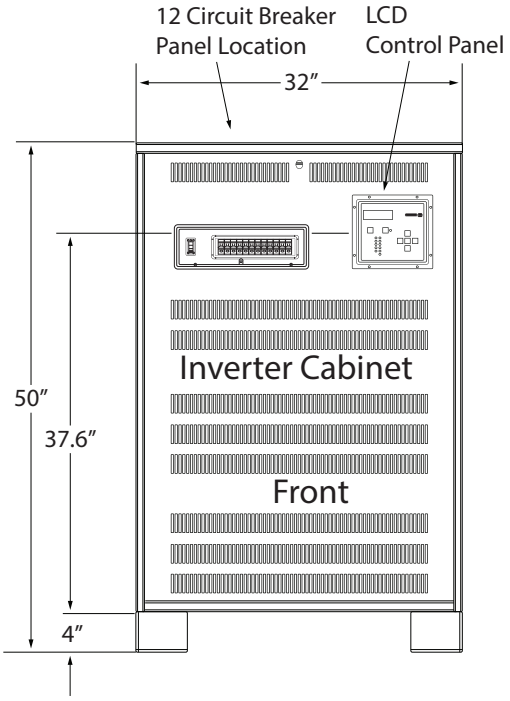




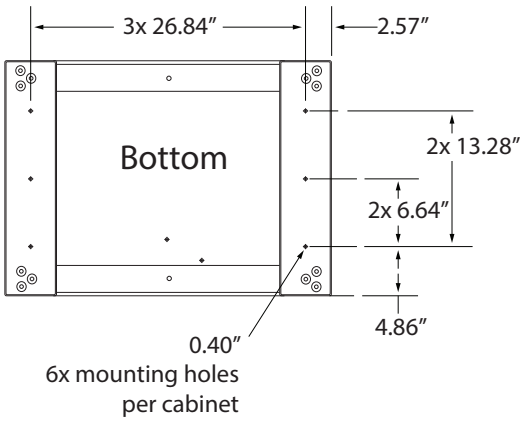
Mounting Slot Detail

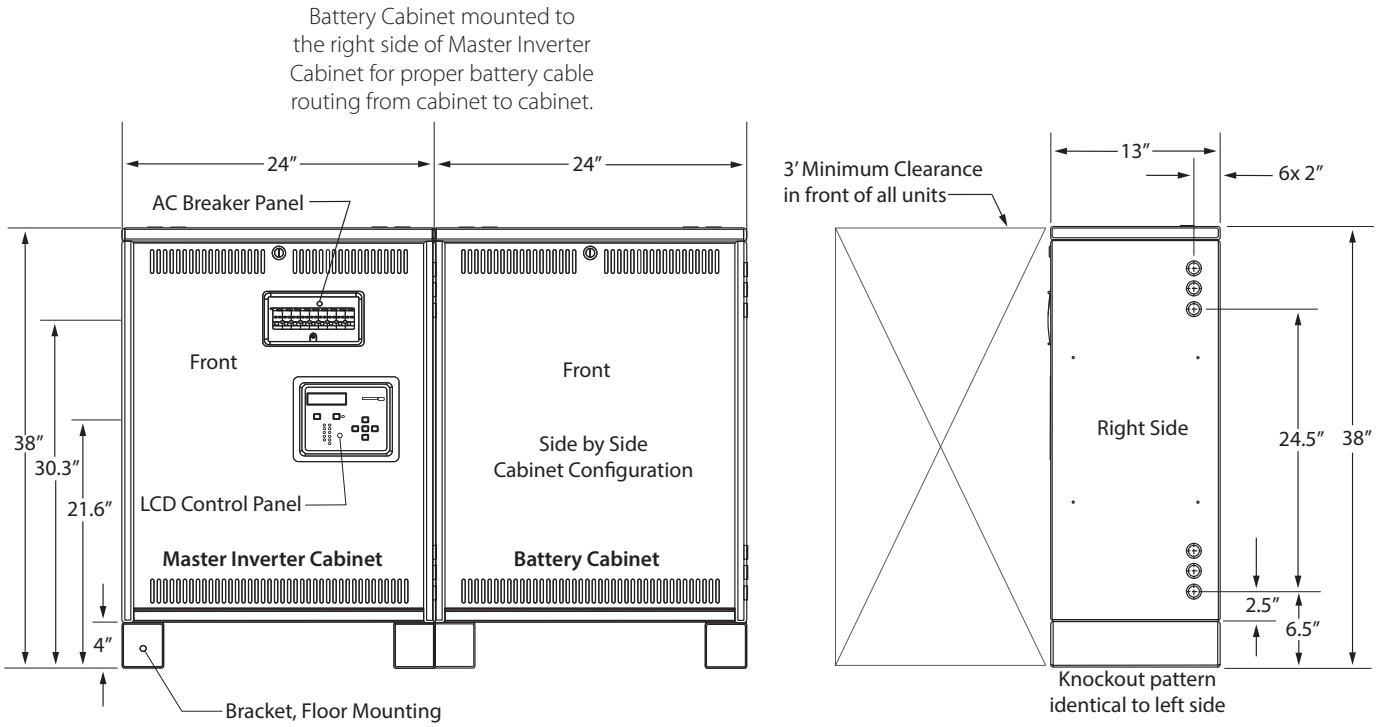


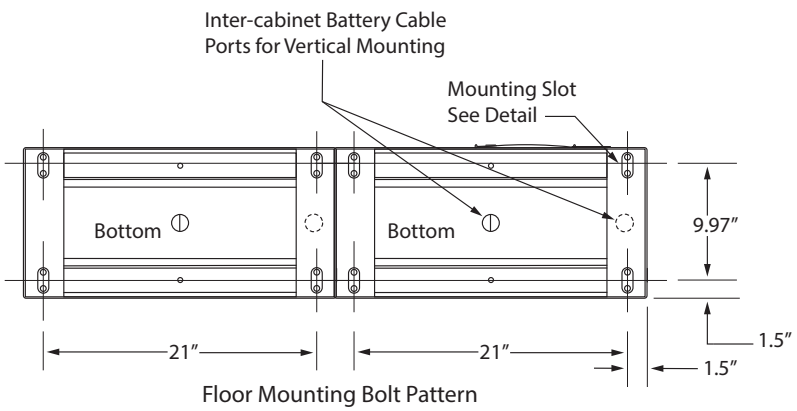


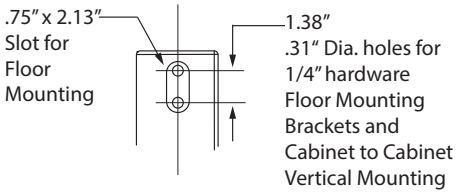


Floor Mounting Bolt Pattern

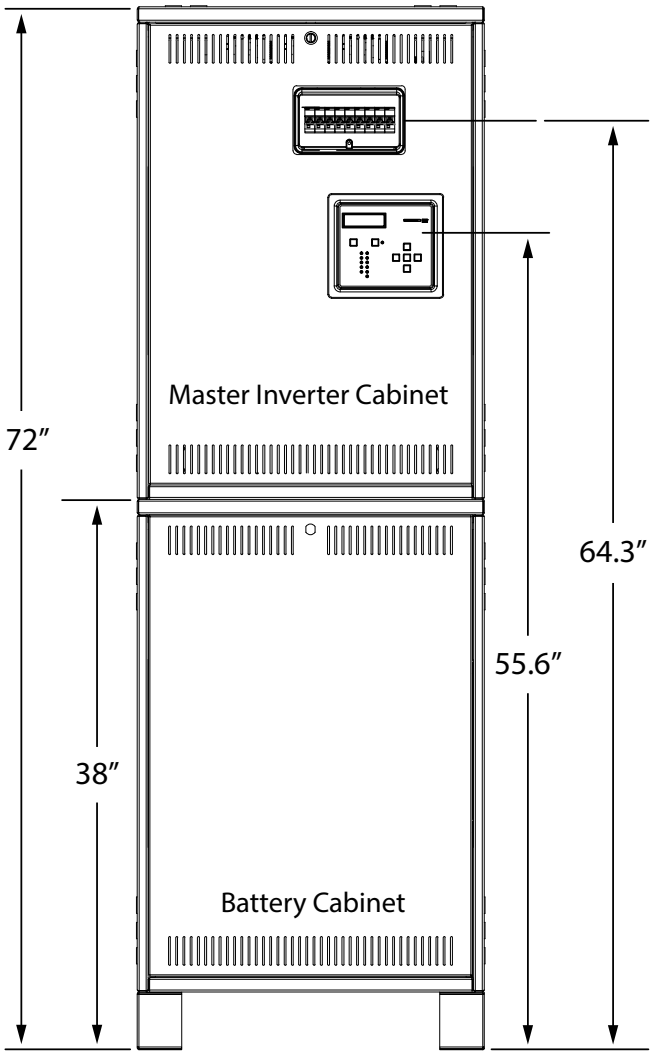


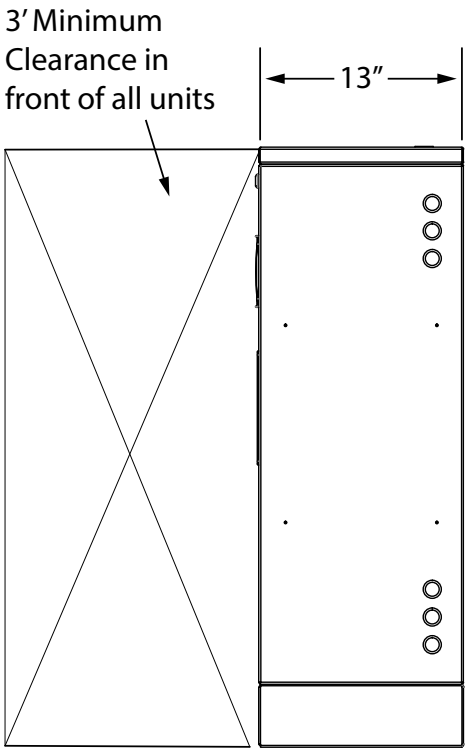


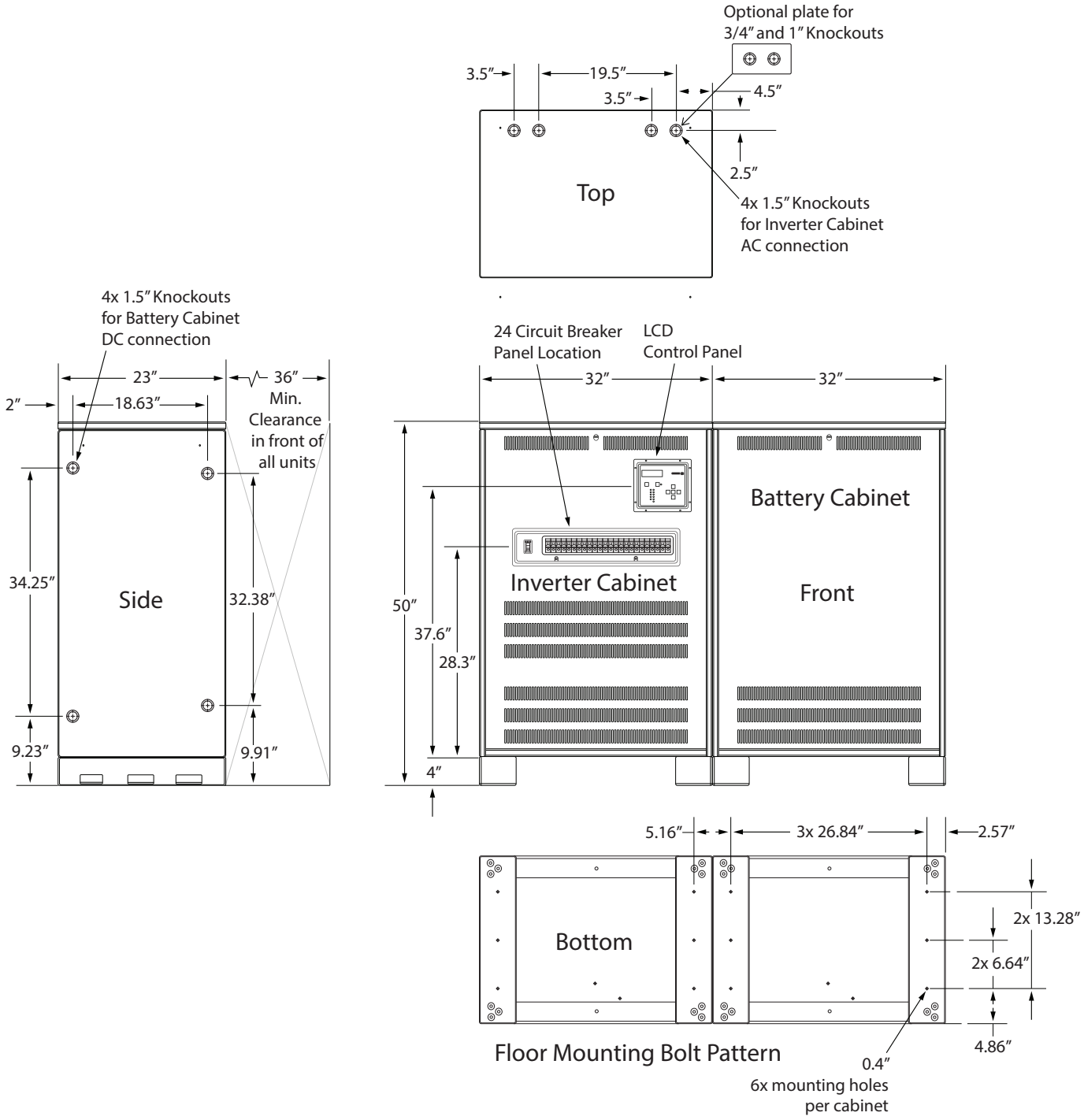


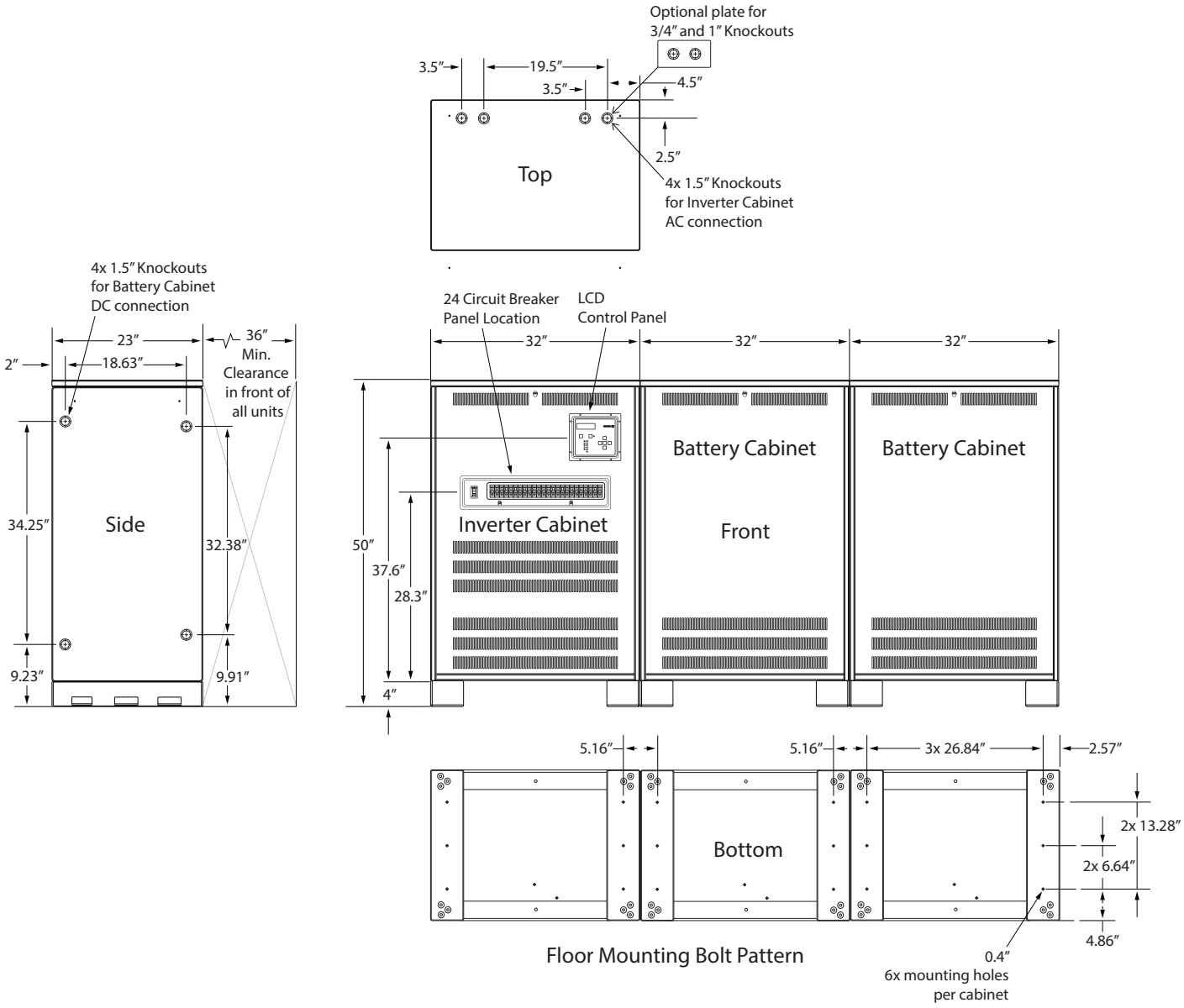


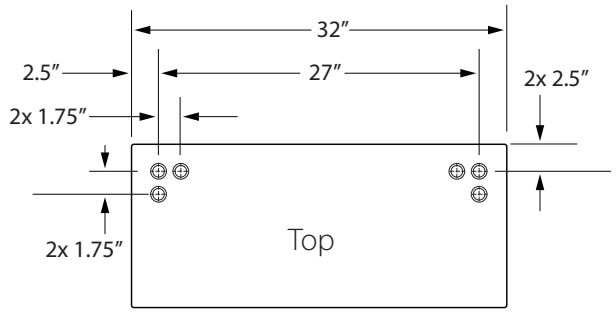
Mounting Slot Detail

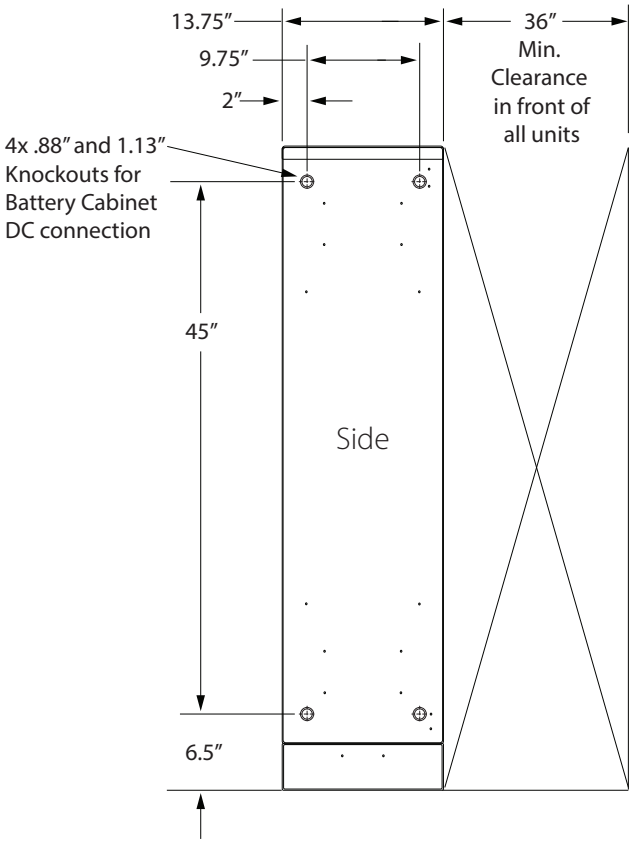

Master Inverter Cabinet
72″
64.3″
55.6″
38″
Battery Cabinet

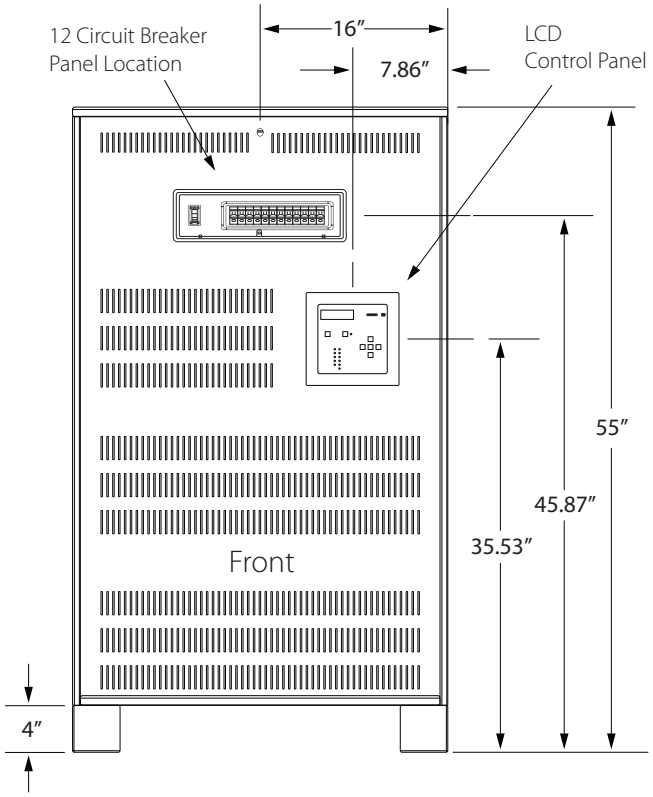

3′ Minimum
Clearance in
front of all units
13″

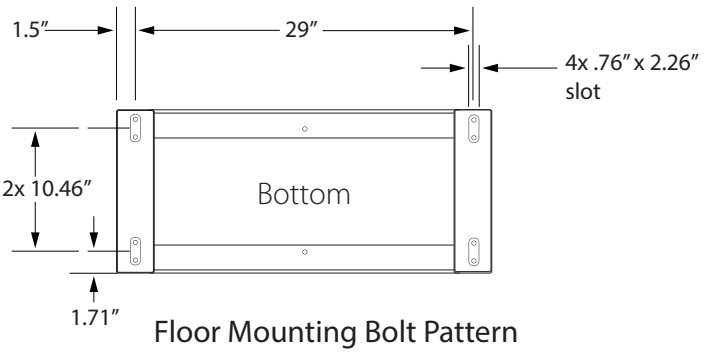

Optional plate for
3/4" and 1" Knockouts
3.5"
19.5"
3.5"
4.5"
2.5"
Top
4x 1.5" Knockouts
for Inverter Cabinet
AC connection
4x 1.5" Knockouts
for Battery Cabinet
DC connection
23"
36"
Min.
Clearance
in front of
all units
2"
18.63"
34.25"
Side
32.38"
9.23"
9.91"
24 Circuit Breaker
Panel Location
LCD
Control Panel
32"
32"
Battery Cabinet
Inverter Cabinet
Front
50"
37.6"
28.3"
4"
5.16"
3x 26.84"
2.57"
Bottom
2x 13.28"
2x 6.64"
4.86"
Floor Mounting Bolt Pattern
0.4"
6x mounting holes
per cabinet


Optional plate for
3/4" and 1" Knockouts
3.5"
19.5"
3.5"
4.5"
2.5"
Top
4x 1.5" Knockouts
for Inverter Cabinet
AC connection
4x 1.5" Knockouts
for Battery Cabinet
DC connection
2"
23"
18.63"
36"
Min.
Clearance
in front of
all units
34.25"
Side
32.38"
9.23"
9.91"
24 Circuit Breaker
Panel Location
LCD
Control Panel
32"
32"
32"
Battery Cabinet
Battery Cabinet
Inverter Cabinet
Front
50"
37.6"
28.3"
4"
5.16"
5.16"
3x 26.84"
2.57"
Bottom
2x 13.28"
2x 6.64"
4.86"
Floor Mounting Bolt Pattern
0.4"
6x mounting holes
per cabinet

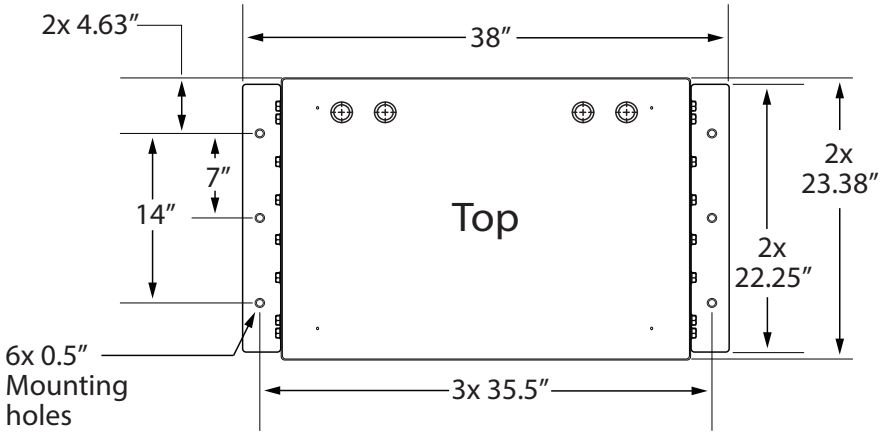


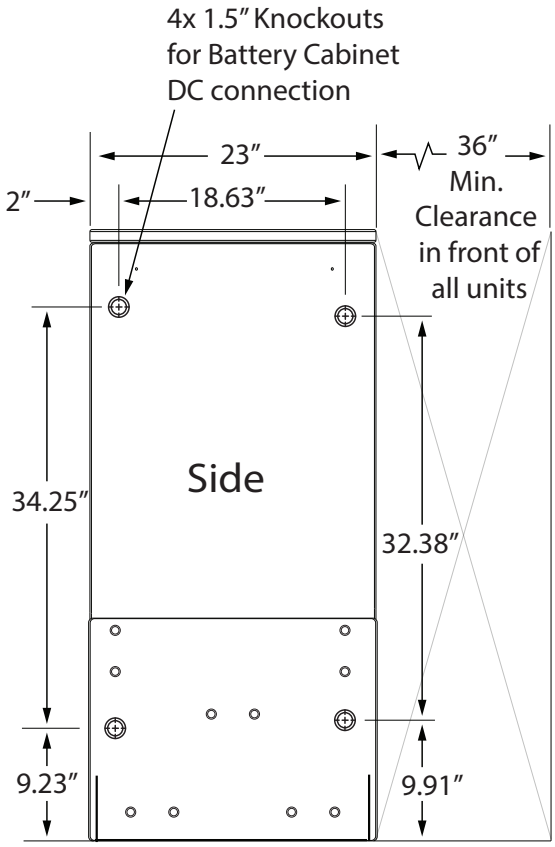


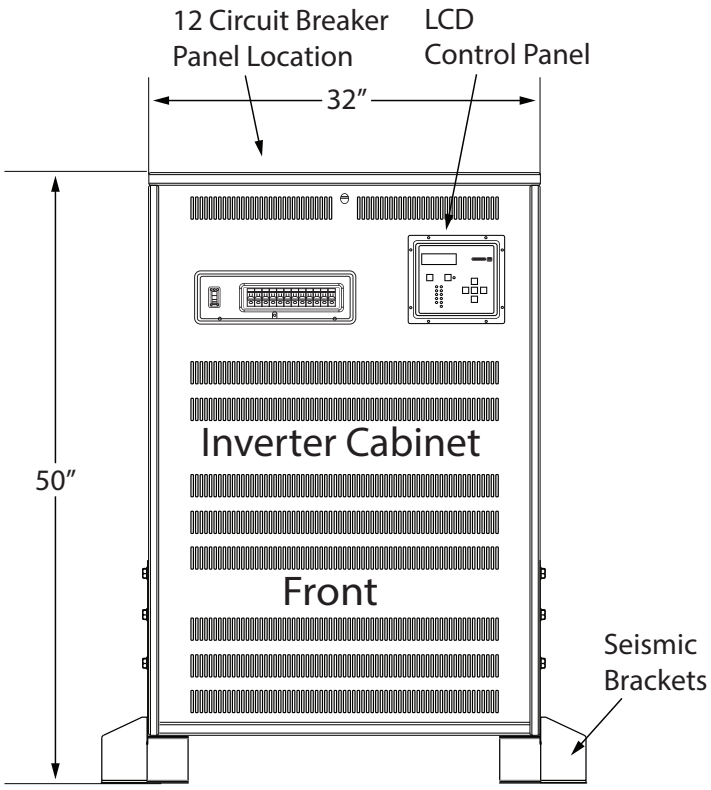




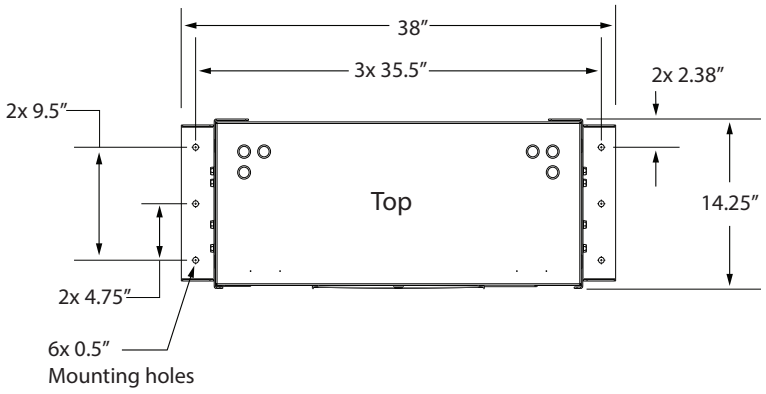
Floor Mounting Bolt Pattern

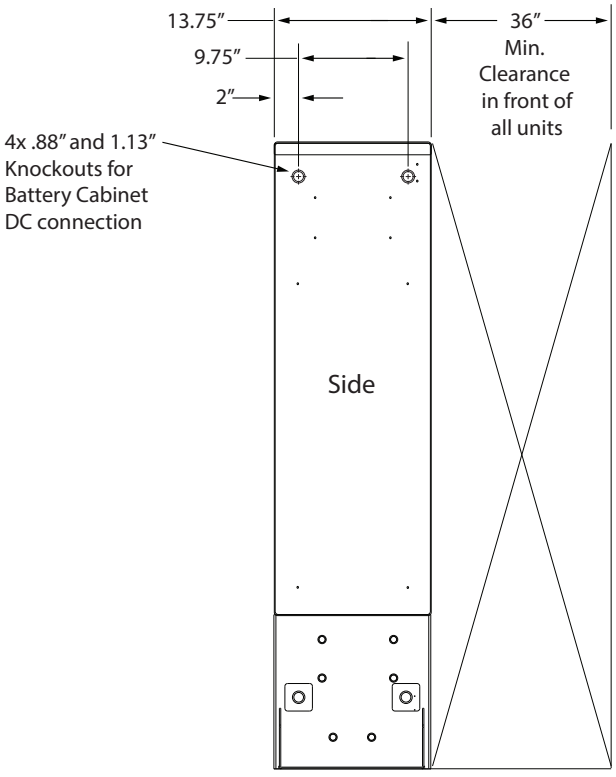

2x 4.63″
38″
7″
14″
Top
2x
23.38″
2x
22.25″
6x 0.5″
Mounting
holes
3x 35.5″

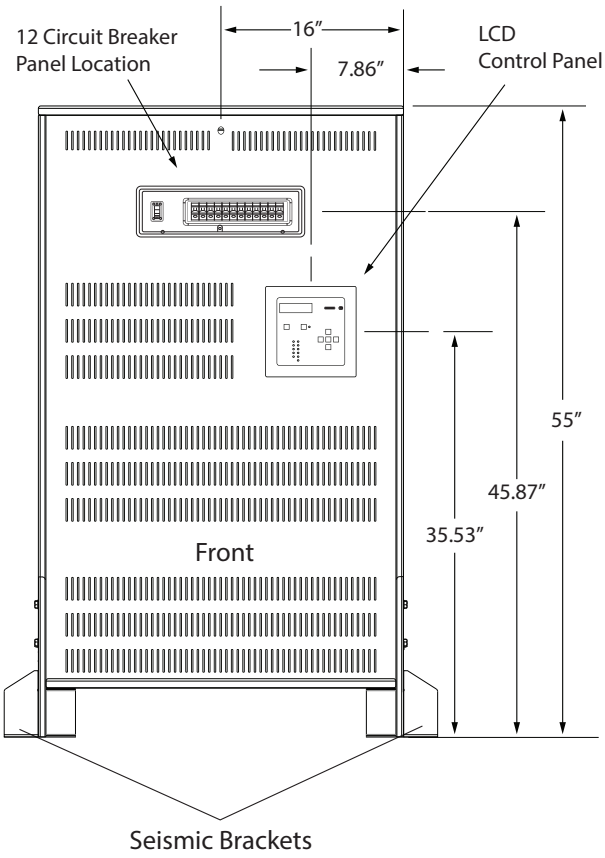

4x 1.5″ Knockouts
for Battery Cabinet
DC connection
23″
36″
Min.
Clearance
in front of
all units
2″
18.63″
Side
34.25″
32.38″
9.23″
9.91″

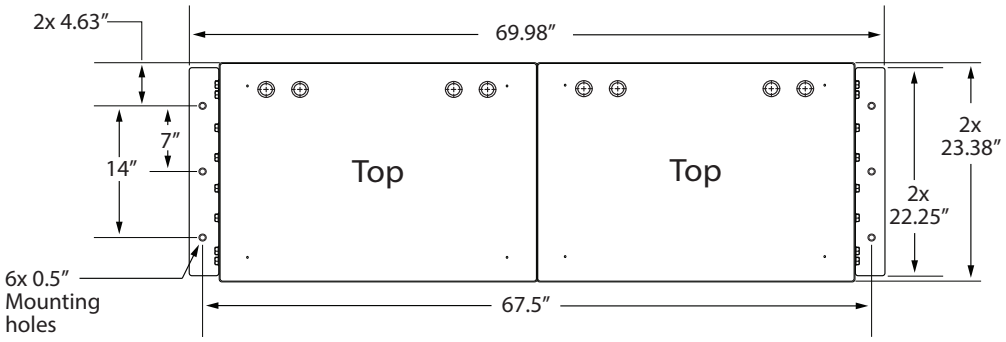

12 Circuit Breaker
Panel Location
LCD
Control Panel
32″
Inverter Cabinet
50″
Front
Seismic
Brackets

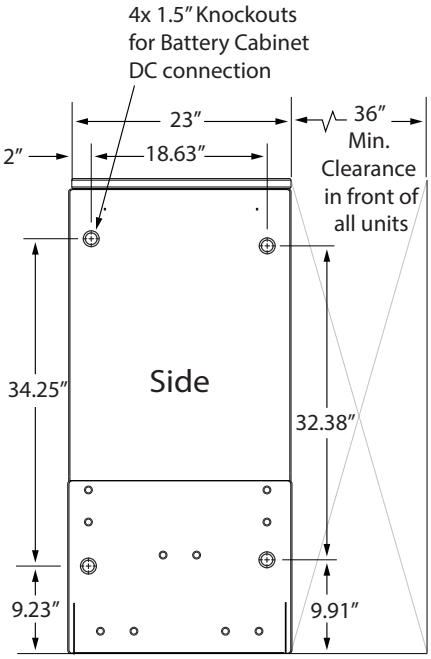
Drawing J
Single Cabinet 55x32x13.75 with Seismic Brackets

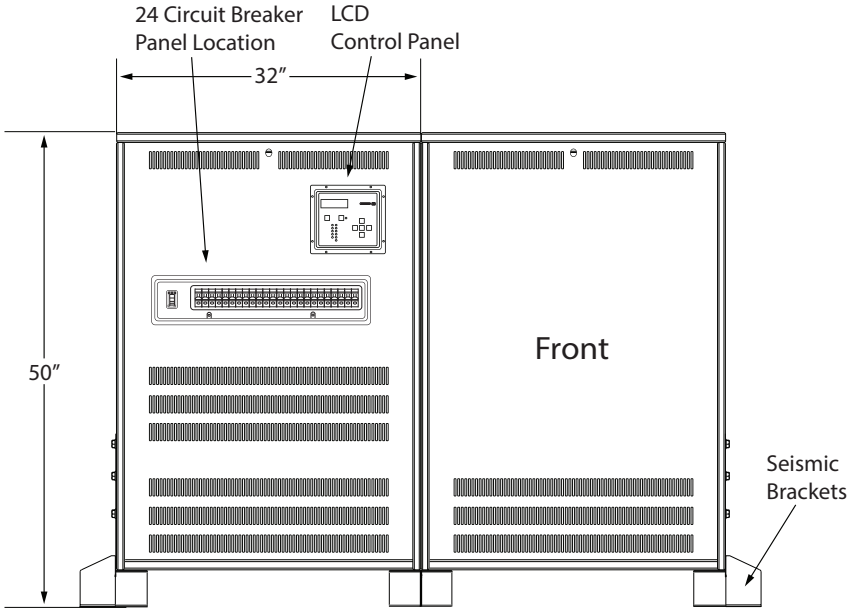


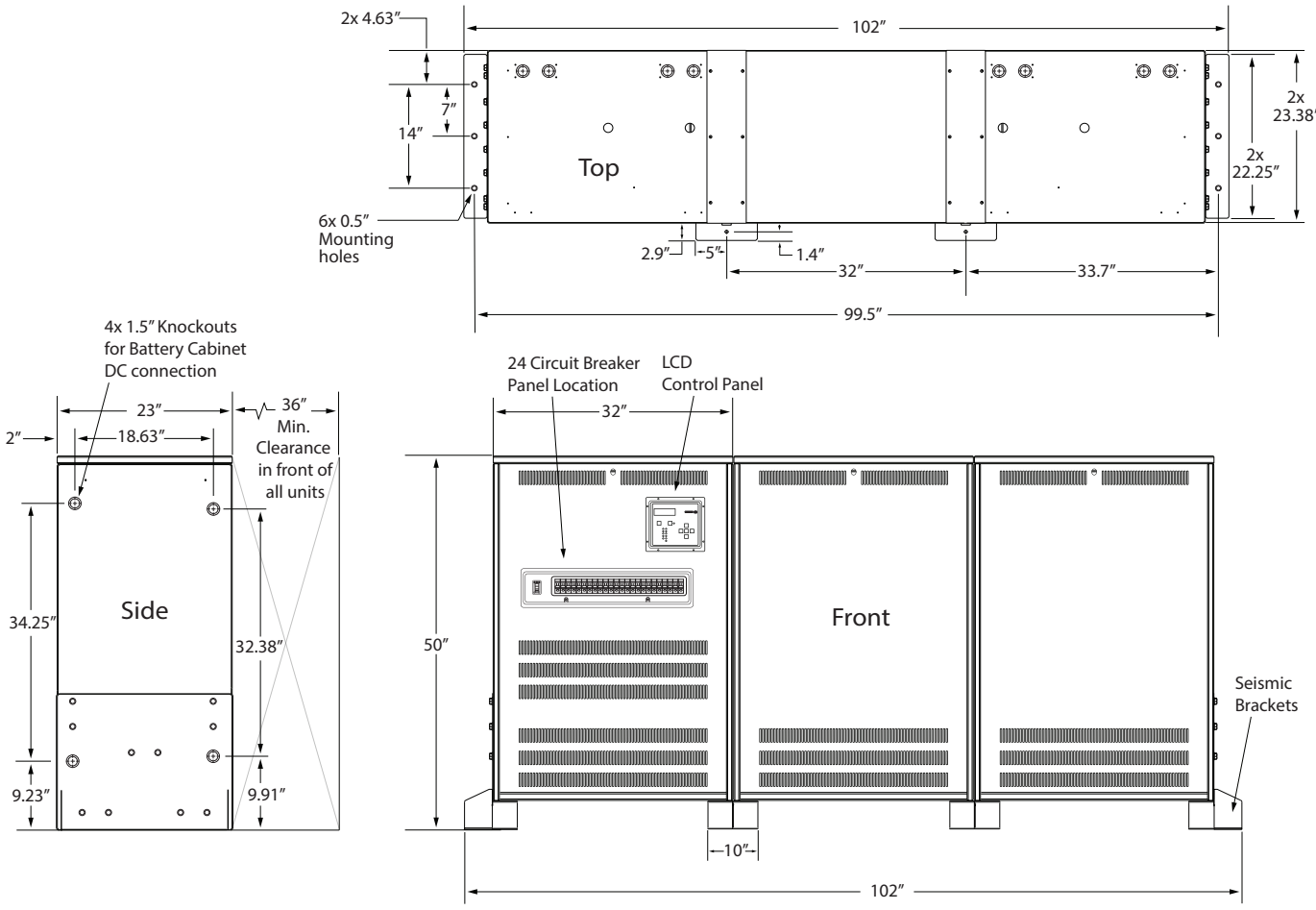





2x 4.63″
69.98″
7″
14″
Top
Top
2x
23.38″
2x
22.25″
6x 0.5″
Mounting
holes
67.5″


4x 1.5″ Knockouts
for Battery Cabinet
DC connection
23″
36″
Min.
Clearance
in front of
all units
2″
18.63″
34.25″
Side
32.38″
9.23″
9.91″


24 Circuit Breaker
Panel Location
LCD
Control Panel
32″
50″
Front
Seismic
Brackets


2x 4.63″
102″
7″
14″
Top
2x
23.38″
2x
22.25″
6x 0.5″
Mounting
holes
2.9″
5″
1.4″
32″
33.7″
99.5″
4x 1.5″ Knockouts
for Battery Cabinet
DC connection
23″
36″
Min.
Clearance
in front of
all units
2″
18.63″
Side
34.25″
32.38″
9.23″
9.91″
24 Circuit Breaker
Panel Location
LCD
Control Panel
32″
Front
50″
Seismic
Brackets
10″
102″

Single Phase Inverters Input/Output Current Chart

isolite

Output Power Watts/ VA	Input Voltage	Input Current	Minimum Breaker Required	Suggested Feed Breaker
1000	120	10.4	13.0	20
	208	6.0	7.5	20
	240	5.2	6.5	20
	277	4.5	5.6	20
	480	2.6	3.3	20
1600	120	16.7	20.8	30
	208	9.6	12.0	20
	240	8.3	10.4	20
	277	7.2	9.0	20
	480	4.2	5.2	20
2200	120	22.9	28.6	30
	208	13.2	16.5	20
	240	11.5	14.3	20
	277	9.9	12.4	20
	480	5.7	7.2	20
2800	120	29.2	36.5	40
	208	16.8	21.0	30
	240	14.6	18.2	20
	277	12.6	15.8	20
	480	7.3	9.1	20
3000	120	31.3	39.1	40
	208	18.0	22.5	30
	240	15.6	19.5	20
	277	13.5	169	20
	480	7.8	9.8	20
4000	120	41.7	52.1	60
	208	24.0	30.0	30
	240	20.8	26.0	30
	277	18.1	22.6	30
	480	10.4	13.0	20

Output Power Watts/ VA	Input Voltage	Input Current	Minimum Breaker Required	Suggested Feed Breaker
5000	120	52.1	65.1	70
	208	30.0	37.6	40
	240	26.0	32.6	40
	277	22.6	28.2	30
	480	13.0	16.3	20
6000	120	62.5	78.1	80
	208	36.1	45.1	50
	240	31.3	39.1	40
	277	27.1	33.8	40
	480	15.6	19.5	20
8000	120	83.3	104.2	110
	208	na	na	na
	240	na	na	na
	277	36.1	45.1	50
	480	na	na	na
10,000	120	na	na	na
	208	na	na	na
	240	na	na	na
	277	45.1	56.4	60
	480	na	na	na
12,500	120	na	na	na
	208	na	na	na
	240	na	na	na
	277	56.4	70.5	80
	480	na	na	na

Notes:
1. Input Current = Output Current + Max Charge Current
2. Suggested Feed Breaker sizes are rounded up in 10 Amp increments

na - Not Available

KAIC Rating for all models = 65KAIC
(UL rated per UL 61800-5-1)

Three Phase Inverter Input/Output Current Chart

Output Power Watts/VA	Input Voltage	Input Current	Minimum Breaker Required	Suggested Feed Breaker
3000	120/208	10.4	13.0	20
	277/480	4.5	5.6	20
4000	120/208	13.9	17.4	20
	277/480	6.0	7.5	20
5000	120/208	17.4	21.7	30
	277/480	7.5	9.4	20
8000	120/208	27.8	34.7	40
	277/480	12.0	15.0	20
10000	120/208	34.7	43.4	50
	277/480	15.0	18.8	20
12500	120/208	43.4	54.3	60
	277/480	18.8	23.5	30
15000	120/208	52.1	65.1	70
	277/480	22.6	28.2	30
18000	120/208	62.5	78.1	80
	277/480	27.1	33.8	40

Notes:
1. Input Current = Output Current + Max Charge Current
2. Suggested Feed Breaker sizes are rounded up in 10 Amp increments
3. Input Power requires 3 Wires--2 for Neutral and 1 for Ground. Neutral is passed through and carries current - Feeder Neutral to be same size as Line conductors

KAIC Rating for all models = 65KAIC (UL rated per UL 61800-5-1)

Inverter Phase	Inverter Model	Wattage	Battery Used	Pure Sulfuric Acid (lb)	Electrolyte Volume (Gal)	Battery Qty
E3MAC Single Phase	E3MAC 1000 1P	1KW	B250022	13.04	2.72	4
	E3MAC 1600 1P	1.6KW	B250022	19.56	4.08	6
	E3MAC 2200 1P	2.2KW	B250022	26.08	5.44	8
	E3MAC 2800 1P	2.8KW	B250022	32.6	6.8	10
	E3MAC 3000 1P	3KW	B250022	39.12	8.16	12
	E3MAC 4000 1P	4KW	B250023	43.2	9.04	8
	E3MAC 5000 1P	5KW	B250023	54	11.3	10
	E3MAC 6000 1P	6KW	B250023	64.8	13.56	12
	E3MAC 8000 1P	8KW	B250023	86.4	18.08	16
	E3MAC 10000 1P	10KW	B250023	108	22.6	20
	E3MAC 12500 1P	12.5KW	B250023	129.6	27.12	24
E3MAC Three Phase	E3MAC 3000 3P	3KW	B250022	39.12	8.16	12
	E3MAC 4000 3P	4KW	B250023	43.2	9.04	8
	E3MAC 5000 3P	5KW	B250023	54	11.3	10
	E3MAC 8000 3P	8KW	B250023	86.4	18.08	16
	E3MAC 10000 3P	10KW	B250023	108	22.6	20
	E3MAC 12500 3P	12.5KW	B250023	129.6	27.12	24
	E3MAC 15000 3P	15KW	B250023	162	33.9	30
	E3MAC 18000 3P	18KW	B250023	194.4	40.68	36
B250022 (LPF12-55) - 3.26 lb of pure sulfuric acid, 0.68 gal of electrolyte each						
B250023 (LPF12-100A) - 5.4 lb of pure sulfuric acid, 1.13 gal of electrolyte each						

WARRANTY: Isolite Inc. (Isolite) E3, E3MAC and IMI series central power systems electronic assemblies (except batteries) are warranted against defects in material and workmanship from date of shipment EX-Works for a period of 3 years. E3MAC 1KVA and larger electronic assemblies (except batteries) are warranted for two full years, three years with Factory Startup option (FS), or up to 5 Years with purchase of the Extended Warranty option (EW).
Isolite's warranty is limited to either repair or replacement of parts and equipment of ***PROPERLY INSTALLE***D central power systems which fail under normal operating conditions ***PROVIDED*** that the system is properly packed for road transport and returned transportation prepaid to the Isolite factory and Isolite's inspection determines it to be defective under the terms of the warranty. ***SUCH REPAIR OR REPLACEMENT SHALL BE THE PURCHASER'S EXCLUSIVE REMEDY.***
The warranty covers only equipment other than batteries manufactured, sold and warranted by Isolite and does not extend to transportation, installation or replacement charges, nor does it apply to any other equipment of another manufacturer used in conjunction with Isolite's central power systems.
Isolite's warranty shall be null and void under the following conditions:

a) Damage caused by abuse, misapplication, shipping damage, improper installation, or damage resulting from changes in circuitry or components made by other than authorized Isolite personnel or service companies authorized by Isolite.
b) Damage due to improper maintenance.
c) Damage resulting from installation(s) in areas with other than normal temperatures. Maximum ambient temperature must not exceed 90°F.
d) Environmental conditions, damages caused by fire and abuse or acts of God such as lightning, explosions, water leaks or acts of war are also not covered by the Warranty.

Replacement of fuses, pilot lights and lamps, and indicator lights and lamps, are not included in the Warranty. Warranties for batteries used in Isolite's AC central systems are described below.

Batteries included with the above Isolite central power systems shall be warranted as follows:

Type of Battery	Period of Repair or Replacement without Charge	Period or Pro-Rata charge for repair or replacement	Annual Adjustment Charge
LC Maintenance Free VRLA AGM Lead Acid	1 Year	9 Years	7%
EB Maintenance Free BAT20 - Extended Warranty VRLA AGM Lead Acid	1 Year	19 Years	3.5%
PL Maintenance Free Pure Lead VRLA AGM Lead Acid	3 Years	10 Years	5.4%

The period noted above during which repair or replacement is without charge (the "Guarantee Period") shall commence on the date of shipment. The period of pro-rata charge for replacement or repair (the Pro-rata Charge Period) shall commence on the expiration of the Guarantee Period. All warranties set forth herein, whether during the Guarantee Period or the Pro-rata Charge Period, are subject to:

a) The battery having been properly installed and continuously maintained in accordance with recommended practice together with documented history (both as set forth in the Isolite installation manual relating to the battery involved and national and local code requirements).
b) The average annual ambient temperature shall not exceed 77°F.
c) Cell temperatures shall not exceed 92°F for more than 30 days annually.
d) Battery service records must be maintained.
e) The batteries have not been contaminated by any foreign matter.
f) Not more than 300 discharges of 80% or less of the ampere hour capacity are incurred.
g) Batteries must be installed and placed on charge / energized within 120 days of shipment.

Should the battery fail to deliver 60% of its' rated capacity or a defect appear in a battery covered by the warranty during the Pro-Rata Charge period, on return of the defective battery transportation prepaid, Isolite will repair or replace such battery at a cost equal to the net LIST prices at the time of repair or replacement, reduced by a percentage of such price equal to the product of the number of full years remaining in the warranty period at the time of failure multiplied by the Annual Adjustment Charge % shown above for each battery type
Example:

Replacement List Price = $100
Pro-rata warranty years remaining = 4 Annual adjustment charge = 7%
$100 less ($100 x .07 x 4) = $72 replacement charge

REPAIR OR REPLACEMENT AT SUCH ADJUSTED PRICE SHALL BE PURCHASER'S EXCLUSIVE REMEDY.
In the event that the unit central power system input is de-energized for an extended period, the battery circuit breaker or fuse must be turned off/disengaged so as to eliminate any current drain. The battery warranty will be void if the fuse or circuit breaker is not turned off within thirty-six (36) hours after the unit is de-energized.
THE ISOLITE CENTRAL SYSTEMS SERIES WARRANTY AND THE BATTERY WARRANTY MENTIONED ABOVE ARE EXPRESSLY IN LIEU OF, AND THERE ARE NO OTHER EXPRESS OR IMPLIED GUARANTEES OR WARRANTIES INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE THAT RELATE TO THE PRODUCTS REFERRED TO HEREIN. IN NO EVENT WILL ISOLITE BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES WHICH MAY RESULT FROM THE USE OF THESE PRODUCTS. ISOLITE NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OR RESALE OF SUCH PRODUCTS AND EXCEPT AS STATED IN THE WARRANTIES, ISOLITE SHALL NOT BE LIABLE FOR ANY DEFECT IN, OR BREACH OF, ANY CONTRACT RELATING TO THE QUALITY OF, OR PERFORMANCE OF, THE CENTRAL POWER SYSTEMS OR BATTERIES UNDER ANY THEORY OF LAW INCLUDING, WITHOUT LIMITATION, CONTRACT, NEGLIGENCE, STRICT LIABILITY OR MISREPRESENTATION.

isolite

The Emergency Lighting Experts

Isolite West
3563 Sueldo, Suite M
San Luis Obispo, CA 93401
800-799-5343
805-546-9669
805-546-9564 Fax

www.isolite.com

Isolite Headquarters
31 Waterloo Avenue
Berwyn, PA 19312
800-888-5483
610-647-8200
610-296-8952 Fax