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The Emergency Lighting Experts

Specification & Technical Guide
13.3 kVA through 17.0 kVA Single-Phase

E3MAX MODULAR INVERTER SERIES

Central Inverter for Emergency Lighting

Document Overview

This specification document will provide all technical data and/or specifications required to properlyspecify/quote the E3MAX Modular Emergency Lighting Central Inverter series. All phases of operation of this product will be detailed in this document. If additional technical information is required beyond this document, please contact Isolite directly.

Disclaimer

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Point(s) of Contact

Isolite Technical Support 1-800-967-5573

quotes@Isolite.com

1.0 General Information

1.1 Specification

This specification shall provide all electrical, technical and mechanical data relevant to the E3MAX Single-Phase Centralized Inverter system. The inverter shall supply Pure Sine Wave emergency power equivalent in quality to utility grade power. A high crest factor with substantial overload protection allows this inverter to drive difficult loads reliably. User interaction is maximized utilizing online Web Monitoring coupled with an intuitive Man Machine Interface (MMI) LCD Display. Start-Up Testing, Self-Diagnostics, and One-Button Push System Tests ensure industry-leading reliability.

1.2 Standards

UL 924
UL 65 KAIC tested per UL 61800-5-1
NFPA 101 Life Safety Code
NFPA 70 National Electrical Code
ICC-ES AC 156 (Seismic Certification)
IBC/CBC 2016
ANSI C62.41: ANSI C62.45 (Category A & B)
OSHA
OSHPD Preapproval of Manufacturer's Certification (OPM)

2.0 Product

2.1 Manufacturer

The Central Inverter referenced within this specification document shall be the E3MAX Modular Inverter manufactured by Isolate Corporation in Trevose, PA.

2.1.1 Manufacturer Quality Assurance

Manufacturer shall be registered to the ISO 9001:2015 quality standards.

2.2 Requirements

Furnish and install an Isolite E3MAX Modular Single-Phase Inverter that meets the followingrequirements for a minimum time period of 90 minutes:

Input Voltage _____ VAC
Output Voltage _____VAC
Rating _____ kW/kVA

2.3 Input Specifications

Phase Configuration	Single Phase (2-wire plus ground)
Input Voltage	120V or 277V as specified (208V and 480V available upon request)
Operating Range	± 10% Nominal Utility Voltage
Frequency Range	60 Hz ± 3 Hz
Power Factor	0.5 Lag/0.5 Lead [1]
Current Limit	125%
Efficiency	98%
Surge Protection	Compliant and tested per UL 924
Brown-Out Protection	87.5% of Nominal Utility Voltage
Short Circuit Withstand	65 KAIC

2.4 Output Specifications

Output Voltage	120V or 277V as specified
Crest Factor	≥ 4.0
Overload Capability	120% for 10 minutes, 400% for 500mS
Load Power Factor	0.5 Lag/0.5 Lead [2]
Power Factor Rating	KW = KVA [2]
Harmonic Distortion	≤ 3%
Frequency Range	60Hz +/- 0.02 Hz crystal controlled during emergency mode
Transfer Time	Less than 2mS (fast transfer)
Output Configuration	Configured for Normally On operation (See Section 6.0 for Normally Off or Switched options)

2.5 Battery

Run Time	90 Minutes
Type	VRLA Maintenance-Free Lead Calcium
Charging	Three Rate Charger circuit fully temperature compensated
Recharge Time	≤ 24 hours
Buss Voltage	48VDC through 144VDC (model dependent) 2.25 – 2.27V Float Voltage per cell 1.67-1.70 Low Voltage Disconnect per cell
Battery Warranty	1 year full, 9 years pro-rata
Fire Safety	Flame Retardant UL 94V-0
Design	Front Terminal (ease of access)
Battery Approval	IEC 60896-21 and 60896-22 Certified UL Certified

1. Input Power factor is heavily influenced from pass-through of connected load
2. The inverter can support wide power factor variations (0.5 Lag/0.5 Lead); however, the unity PowerFactor Rating (KW=KVA) specifies the maximum output limits that cannot be exceeded

2.6 Design

2.6.1 Modular Design

The inverter construction shall use a modular technique so that sizes shall be available in increments from 13.3 to 17 kVA capacities. Modules shall be interconnected to build the required system capacity and shall be field-upgradable to increase system size. Inverter modules shall be high frequency Pulse Width Modulated (PWM) using isolation transformers and IGBT or MOSFET switching schemes which allow for high quality pure sine wave and multi- voltage capabilities.

2.6.2 Convection Cooling

Thermal design performance shall achieve 100% reliance on natural convection during the standby or "Normal Operation" mode (99.9% of product life). Fans shall only be operational during "Emergency Operation" mode and bulk re-charging of the batteries. This increases efficiency, improves reliability, and eliminates the need for air filters and routine dust-removal maintenance commonly found with units employing continuous operation fans.

2.6.3 Front Access

All inverters shall utilize a front-facing access door on both the inverter cabinet and batterycabinet. The All inverters shall utilize a front-facing access door on both the inverter cabinet and battery cabinet. The batteries utilized in these units have front facing terminals. This design allows for easy access for troubleshooting and battery installation from the front face with no side access required.

2.6.4 DC Isolation from AC

Batteries shall have isolation from the incoming or outgoing AC line voltage and Earth Ground. This feature allows a direct short between any battery-to-chassis ground without damage. Minimum impedance to chassis ground shall be 100 kOhms.

2.6.5 Short Circuit Withstand Capability

The Inverter's internal AC distribution shall be capable of a short circuit withstand of 65,000 Ampere Interrupting Capacity (65 KAIC). The inverter shall be tested and listed in compliance with the IEC testing standards UL 61800-5-1 and shall also include this rating when using optional output circuit breakers which are UL 489 rated.

2.6.6 Inverter Compliance

The inverter shall be tested and listed by Underwriters Laboratory to the UL 924 standard which also includes the Self-testing and Self-Diagnostic portion of the standard. Self-Testing shall be performed monthly for a minimum of 30 seconds and annually for a minimum of 90 minutes to comply and contain fully programmable, password protected Load-Reduction fault programming capabilities.

2.7 User Interface/Alarms

The inverter shall include an intuitive four-line, 20 character LED-backlit display and five button keypad user interface referred to as the Man-Machine Interface (MMI). This interface shall allow the user to scroll through all meters, alarms, test logs and programming functions via the keypad and display. An SD Memory Slot and Mini-USB connection shall also allow for easy offloading of events/records.

2.7.1 MMI Features

The following features are standard on all modular inverters.

A. Password Protected
   All user configurable system features exist in a Password Protected menu within the unit.

B. One-Button System Test
UL 924 compliance is easily achievable by the press of one button on the front panel of the inverter. A 30 second test willinitiate self-testing and self-diagnostics by analyzing battery voltages and output loads.

C. Scheduled Testing
The inverter can be programmed to automatically perform monthly and annual 90-minute NFPA compliance tests. User can specify minute, hour, day and month.

2.7.2 Metering Functions

The MMI shall allow the user to monitor the following meter functions via the LCD screen:

A. Input Voltage (L-N)
B. Output Voltage (L-N)
C. Output Current
D. Output VA
E. Battery Voltage
F. Battery Current
G. Battery Power
H. Temperature
I. System Days
J. Inverter Minutes
K. Inverter Events.

2.7.3 Alarms

The active alarms shall be displayed in the Alarm Menu when alarms are present. All alarms shall signal the user with both an Audible Alarm and a Visual Alarm LED on the unit's front panel.

A. **Startup Mode Alarms**
Communication, Setup Conflict, Battery Voltage, Back- Feed, Transfer /AC Fuse, Overload, Mis-Wire, Incorrect AC(*Fixed Alarms, Not Configurable)*

B. **Charger Mode Alarms**
Communication, Over-Temperature, DC Fuse, No Charge, Overcharge, Back-Feed, AC Fuse/Wiring, ProgramReference (*Fixed Alarms, Not Configurable)*

C. **Startup Mode Alarms**
Communication, Setup Conflict, Battery Voltage, Back- Feed, Transfer /AC Fuse, Overload, Mis-Wire, Incorrect AC(*Fixed Alarms, Not Configurable)*

D. **Non-Mode Dependent Alarms**
Phase Rotation (unavailable on single-phase), CB Trip (requires Trip Alarm [TA] option), UPS Bypass (requiresMaintenance Bypass [MB] option), Overload, OverloadShutdown. *(Fixed Alarms, Not Configurable)*

E. **User Programmable Alarms**
Low Battery, Near Low Battery, High Temperature, Utility Failure, Low VAC, High VAC, Load Reduction. *(Password Protected, Configurable)*

2.7.4 Onboard Event/Test/Alarm Logging

Event Logs, Test Logs and Alarm Logs shall be stored on board the inverter's MMI. The system shall store up to 1000 of each type in a First in – First out process. All data can be downloaded via local SD, local USB, and the Remote Web Monitoring system.

A. **Event Log**
During an Event, the system shall keep a record of each critical parameter Including: Start/End Time, Date of the event, Start/End Output Voltage, Start/End Output Current (Phase A, B, and C), Start/EndOutput VA, Start/End Battery Voltage, Battery Current, Start/End Temperature

B. **Test Log**
Identical to the Event Log with the exception that the Test Log is only storedwhen a system test is either:
1. User Initiated by pressing the Test Button on the front panel keypad or via the "Test Button" on the Remote Web Monitoring system control panel *OR*
2. When the system is instructed by the programmable automatic monthlyor yearly test

C. **Alarm Log**
In the event an alarm occurs from any of the sources detailed in Section 2.7.3, the alarm is immediately stored into memory.

2.7.5 User Setup Menu:

The password protected User Menu shall allow adjustments to the following parameters:

A. Date (MM,DD,YY)
B. Time (24hr)
C. Month Test
D. Year Test
E. Low VAC Alarm
F. High VAC Alarm
G. Near Low Battery Alarm
H. Utility Failure Alarm
I. High Temperature Alarm
J. Time Delay
K. Load Reduction Alarm
L. Alarm Relay(s)
M. Backup Logs
N. Contact Name
O. Contact Phone Number

2.8 Remote Web Monitoring (24/7/365)

The Remote Web Monitoring system shall be available as an optional feature on the inverters. This user-friendly feature shall ensure code compliance 24hrs a day/365 days a year by providing real-timemonitoring and logging of all essential tests and data within the system. All user-adjustable settings available on the MMI shall be available via Remote Web Monitoring system (refer to Sections 2.7.1 through 2.7.5).

2.8.1 Email

The Remote Web Monitoring shall notify users via email when email alerts and alarms areconfigured. Up to 5 Email addresses can be set up as alert/alarm recipients.

2.8.2 Access Anywhere

The Remote Web Monitoring shall allow users to log on, view, interact, and download recordsas needed anywhere, anytime, from any computer, tablet, or mobile device.

2.8.3 Remote Diagnostics

The Remote Web Monitoring diagnostics and troubleshooting allow for quick response anddiagnosis, potentially alleviating the need for on-site field service.

2.9 Quality Assurance

2.9.1 Manufacturer Testing

All inverters shall be manufactured in Trevose, PA. End-of-line quality tests shall be performed by the build team. Each unit produced shall be 100% load tested and run througha series of durability tests, fault tests and unit-specific option tests by the Quality Control Team. The inverter shall then be inspected a third time to ensure 100% specification compliance prior to shipping.

2.9.2 Self-Testing

Each inverter shall utilize several different methods of self-testing. On start-up, each unit shalltest the following prior to entering Normal Operation Mode: Communications, Set-Up Conflict, Low Battery, Back-feed, Transfer/AC Fuse, Short/Overload, Miswire, and Incorrect ACInput. Scheduled Self-Tests can be programmed into the unit for Monthly tests and Yearly 90-minute NFPA compliance tests. In addition, each unit shall continuously test itself and notify users of issues via the Onboard Diagnostics and the Online Remote Monitoring.

2.10 Fabrication

2.10.1 Cabinet Construction

The inverter cabinets shall be made from 14 gauge cold-rolled steel. All corners and seams shall be welded and ground smooth before powder coating. Internally, each inverter module and shelf shall have galvanized or painted steel parts to resist corrosion and providehigh durability. There is no visible hardware on the outside of the cabinet, with all components contained within the enclosure. Each cabinet design shall have multiple pre- punched Electrical Knock Outs (EKO) on the top and sides for quick and clean conduit installation by a qualified electrician. Seismic Certified Brackets shall be available as an option (see Section 7.0 “Options”). All Cabinets are designed for NEMA Type-1 compliance.

2.10.2 Cabinet Finish

Each inverter cabinet is powder coated with 2-tone TIGER Drylac®.
Cabinet: TIGER Drylac® Texture Matte Finish Powder Coat - 09/71420 RAL 7016 (GREY)
Door: TIGER Drylac® Texture Smooth Finish Powder Coat - 49/73510 RAL 7035 (LT GREY)

2.10.3 Manufacturing Method/Location

Each inverter shall be designed, developed, and manufactured in Trevose, PA. Each unitshall be built to order and therefore fully custom. Each unit shall be 100% tested for an extended period of time before being released to be shipped.

3.0 Functionality

3.1 Normal Operation (Pass-Through Mode)

When normal utility power is present, the inverter shall run in Pass-Through Mode. Utility Power will be the source of power for all circuits, simply passing through the inverter unit to supply thosecircuits. The inverter unit will consume a small amount of power to run internal monitoring circuits and provide float charging to the battery circuit.

3.2 Emergency Operation (Discharging Mode)

When a loss of utility power occurs the inverter shall detect this and switch to Discharging Mode. The inverter shall transfer to supplying AC to the connected circuits in less than 2 mS. Once utility power is restored, the inverter shall switch back to using utility power tosupply the connected circuits.

3.3 Recharge Operation (Charging Mode)

The inverter shall revert to Charging Mode when utility power is returned to the unit. If batteriesare fully depleted, they shall be fully recharged within 24 hours. The Three Rate Charger circuit isfully temperature-compensated for added reliability.

4.0 Environment

4.1 Recommended Location

The manufacturer recommends that all Inverter Cabinets reside in a dry, conditioned space withnormal ventilation. Relative Humidity shall be <95% non-condensing. All Cabinets are designed for NEMA Type-1 compliance.

4.2 Operating Temperature

Normal operating temperature is defined as between 68°F (20°C) to 86°F (30° C). Ambient temperatures above 77°F (25°C) will reduce the service life of the batteries.

4.3 Storage Temperature

Storage before installation is critical for battery life expectancy and warranty. Batteries should be stored indoors in a clean, dry, and cool location. Storage at higher temperatures will result in accelerated rates of self-discharge and possible deterioration of battery performance and life. Therecommended storage schedule based on temperature is as follows:

32°F (0°C) to 50°F (10°C)	9 Months
51°F (11°C) to 77°F (25°C)	6 Months
78°F (26°C) to 92°F (33°C)	3 Months

4.4 Elevation

No derating required up to 1,600 Meters (5,280 ft.)
Apply derating of 2% per 125M up to maximum of 2,500 Meters (8,250 ft.)Consult factory for elevations greater than 2,500 Meters (8,250ft)

5.0 Installation

5.1 Factory Start-up (Onsite Commissioning)

Factory Start-up shall be an available option on all inverters (option FS, see section 7.10). Using the manufacturer's Field Service to start-up the unit will ensure proper installation, system longevity, and extend the standard electronics warranty from 2 years to 3 years. Factory Startupshall include, but is not limited to the following:

A. Perform visual inspection of all input and output connections made by electrician
B. Inspect all bolts and battery buss bars for proper torque specification
C. Setup and configure all settings, alerts and alarms per specification
D. Calibrate the inverter
E. Run diagnostic tests and alert/alarm tests
F. Record all current settings on inverter to set a baseline for future servicing
G. Perform training for user or point of contact when present
H. Setup Remote Web Monitoring system per specification
I. Test all modes of operation: Normal Mode, Emergency Mode, and Charging Mode

5.2 Site Requirements

The following Site Requirements are imperative to proper system installation.

5.2.1 Battery Chemistry

The inverter shall be supplied with Valve Regulated Lead Acid (VRLA) batteries standard. These VRLA Batteries shall use Absorbent Glass Material (AGM) as the separator and utilizeRecombinant Technology, which helps minimize gas emissions The electrolyte used in the VRLA batteries shall not exceed 50 gallons in total, which is compliant with current IFC/UFC codes.

5.2.2 Ventilation

As previously stated in section “2.6.2 Convection Cooling”, each inverter shall be cooled by natural convection. For VLRA battery systems, the ventilation requirements for human occupancy and electronic equipment will meet or exceed the requirements for the batteries. No additional HVAC engineering shall be necessary for VRLA battery ventilation. The choice ofmounting location should
made based upon the location being clean and dust free. Do not choose a location where particulate matter is present from industrial processes or manufacturing.

5.2.3 Clearance

Clearance requirements follow compliance to NEC Section 110-26 requirements of 3 feet ofopen space in front of the inverter.

5.2.4 Floor Preparation

Mounting holes shall be provided in the base of each inverter cabinet. Each hole will accommodate 3/8” mounting hardware. It is recommended that all four holes are used whensecuring this unit. The floor shall support the dimensions and weight listed in “Section 8.0 Dimensions and Weights”.

5.3 Best Practices

The following suggestions are recommended by the manufacturer based upon the substantialbase of installed products throughout the world.

5.3.1 Inspection

Upon receipt of the inverter from the freight shipping company, inspect all cabinets and/or boxes for damage or potential impact. Should any damage be present, take pictures and fullydocument the occurrence. Any damage should be notated on the shipping carrier’s *Bill of Lading*. This information should then be communicated to your local inverter representative.

5.3.2 Cabinet Modification

At no time, should any inverter cabinet be modified. This includes drilling and cutting into thecabinet. Drilling or cutting the cabinet will cause metal shavings to be present which could ultimately fall onto electrical components causing a short in the unit. If you believe modification of the cabinet is necessary, please contact Inverter Tech Support to discuss.

6.0 Breaker Configuration

The standard output configuration on all inverters shall be Normally On. Breakers can be added toany output type. Breakers shall be a UL 489 type approved for field wiring and maintain a 65KAIC rating. (See ordering guide for available breaker and trip alarm configurations)

6.1 Normally On Output

Shall be energized 24/7 in all modes.

6.2 Normally Off Output

Shall only be energized in Emergency Operation Mode.

6.3 Switched Output

Shall be energized/de-energized with a switched command signal. In Emergency Operation Modethe load shall be energized regardless of the switch command signal.

6.4 Trip Alarm

This is an additional option for all circuit breaker load types. When tripped, the inverter shall setoff audible and visible alarms.

7.0 Options

7.1 Trip Alarm (option code - TA)

When Trip Alarm Breakers are purchased, the inverter shall monitor each of those outputs fortripping. If any of the breakers trip, the unit will broadcast an alarm.

7.2 Terminal Block (option code - TB)

1 Summary / 2 Programmable terminal blocks. Allows inverter operations to be output to a BMS System via a Form C dry contact closure. The programmable terminal block can be field, or factory configured for the following:

A. AC Present
B. Battery Charging
C. High-Temperature Alarm
D. Utility Failure Alarm
E. Near Low Battery Alarm
F. Low Battery Alarm
G. High VAC Alarm
H. Low VAC Alarm

7.3 Internal Maintenance Bypass Switch (option code - MB)

This internal switch shall bypass all inverter operations when activated. Upon activation, the inputpower is directly connected to output breakers, allowing the inverter to be safely serviced.

7.4 Delayed Transfer (option code - DT)
This slows down the Fast Transfer time of 2mS to a standard transfer time of 50mS

7.5 Seismic Certified (option code - Z4)
The inverters are seismic certified with OSHPD Preapproval of Manufacturer's Certification (OPM)when the Seismic Zone 4 (Z4) option is included. Inverters were shake table tested to ICC-ES AC 156 code and Seismic Certified. All inverters are compliant to International Building Code (IBC) / California Building Code (CBC) 2016.

7.6 Remote Annunciator (option code - RA)
The Remote Annunciator (RA) option is available on all Modular Inverters. This remote panel canbe located near the end-user monitoring the system, should the inverter be located in an inconvenient area or an area not easily accessible

7.7 Keyed Lock (option code - KE)
This option shall add a lock and key to the cabinet to prevent unauthorized entry.

7.8 Maintenance Plan (option code - M(n); (n)=years)
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 settingverification, 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.

7.9 Extended Warranty (option code - EW)
Extended Warranty can be purchased if the Factory Startup (FS) option has been purchased with the unit. The extended warranty period shall be for 5 years. For more information, please see "Section 9.0 Warranty".

7.10 Factory Startup (option code - FS)
Factory Startup shall include a visit from a factory-certified technician for inverter activation anddemonstration. This option automatically extends the factory warranty from 2 years to 3 years.

7.11 Extended Battery Warranty (option code – EBW20)
This option shall extend the battery warranty to be 1-year full coverage without charge and 19 additional years of Pro-Rata coverage.

7.12 Emergency Power Off Switch (option code - EO)
This option includes an externally mounted Emergency Power Off (EO) switch and provisions forconnecting through an internal terminal block. The EO option allows complete shut-down of all Inverter operations and is intended to be used in conjunction with Fire Safety and NFPA requirements.

7.13 Battery Thermal Management System (option code - BTMS)
This option allows for the measurement of each pair of batteries within the inverter and battery enclosure. This allows for tighter coupling of the thermal protection systems to the batteries within the system.

7.14 BMS Integration (option code - BI)
This option allows for the integration of BACNet/MSTP, BACNet/IP, ModBus, and ModBus/RTU systems with the E3MAX inverter system. Alarms and real-time information generated from the E3MAX system are propagated to the BMS system.

7.15 Web-Based Monitoring Connection (option code – WEB)

The web-based monitoring connection option allows for the inverter to be connected to the free monitoring service available at https://isolite.com.

8.0 Dimensions/Weights

WEIGHT & DIMENSIONS									
Phase	Power Rating (kW)	# of Cabinets	Width (in)	Height (in)	Depth (in)	Inverter Cabinet Weight (lbs)	Battery Cabinet Weight (lbs)	Shipping Weight (lbs)	# of Batteries
Single-Phase (1P)	13.3 kW	2	53	77	25	790	2336	3161	16
	17.0 kW	2	53	77	25	790	2820	3645	20

9.0 Warranty

9.1 Electronics Warranty

Refer to the standard *Central Power Systems Warranty* policy, which is available for download on themanufacturer's website. All information within the Central Power Systems Warranty supersedes this document.

9.1.1 Standard Manufacturer Warranty

The standard manufacturer's electronics warranty shall be for a period of 2 full years.

9.1.2 Enhanced Manufacturer Warranty

The enhanced manufacturer's electronics warranty shall be for a period of 3 full years, if optional Startup Commissioning (FS) is included.

9.1.3 Extended Manufacturer Warranty

The extended manufacturer's electronics warranty shall be for a period of 5 full years, if options Extended Warranty (EW) and Startup Commissioning (FS) are included.

9.2 Battery Warranty

Refer to the standard *Central Power Systems Warranty* policy, which is available for download on themanufacturer's website. All information within the Central Power Systems Warranty supersedes this document.

9.2.1 VRLA Batteries

The manufacturer's warranty on VRLA batteries follows the following warranty schedule:
Repairs or Replacement without charge – 1 year
Pro-Rated Charge Repair or Replacement – 9 years

9.2.2 Pure Lead Batteries

The manufacturer's warranty on Pure Lead batteries follows the following warranty schedule:
Repairs or Replacement without charge – 3 years
Pro-Rated Charge Repair or Replacement – 10 years

9.2.3 Extended Battery Life Option

The Extended Battery Life option shall extend the battery warranty to be the following:
Repairs or Replacement without charge – 1 year
Pro-Rated Charge Repair or Replacement – 19 years

10.0 Support & Resources

Initial point of contact: Please contact your local inverter representative manufacturer support**:**

Isolite Technical Support **1-800-526-5088**
quotes@Isolite.com
https://isolite.com/products/e3max/

***NOTE:** Phone Assisted Startup is available from the manufacturer. Contact technical support to schedule a representative for phone startup.

SEE NEXT PAGE FOR ORDERING LOGIC

11.0 Ordering Logic

ORDERING INFORMATION *E3MAX-13300-1P-LC-IB-OB-C##-O##-S##*

1. SERIES	2. VA RATING	3. PHASE	4. BATTERY TYPE	5. INPUT VOLTAGE	6. OUTPUT VOLTAGE
E3MAX		1P	LC	IB	OB
	13300 13300 VA Single Phase **17000** 17000 VA Single Phase	**1P** Single Phase	**LC** Lead Calcium	**IB** 277V	**OB** 277V

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	**WB**	Wall Mounting Bracket[1]	**WEB**	Web Monitoring Connection[2]
CB	Custom Breaker	**TA**	Trip Alarm with Breaker	**BI**	BMS Integration		
DT	Delayed Transfer	**RA**	Remote Annunciator (Not Included with TB)	**BTMS**	Battery Thermal Management System		
EBW20	Extended Battery Warranty	**TB**	Programmable Terminal Block (Not Included with RA)	**EO**	Emergency Power Off		

NOTE

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

ORDERING NOTES

1. WB option only available on 1KVA inverters.
2. In order to use the web-based monitoring available at **Isolite.com**, the -WEB option must be selected.

MAXIMUM BREAKERS								
Phase	# 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 TA + EO	# of Breakers Normally On with MB + EO	# of Breakers Normally On with TA + MB + EO
Single-Phase (1P)	36	24	35	35	23	23	34	22