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 Startup shall 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 LifeGuard Remote Web Monitoring 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 utilize Recombinant 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 of mounting 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 of open 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 when securing 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 substantial base 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 fully document 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 the cabinet. 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 to any 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 Mode the 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 set off 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 for tripping. If any of the breakers trips, 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 input power 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 can be 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 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.

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 and demonstration. This option automatically extends the factory warranty from 2 years to 3 years.

7.11 Extended Battery Life (option code - EB)

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 (EPO) switch and provisions for connecting through an internal terminal block. The EPO option allows complete shut-down of all Inverter operation and is intended to be used in conjunction with Fire Safety and NFPA requirements.

8.0 Dimensions/Weights

Phase	Power Rating (kW)	Model #	# of Cabinets	Width (in.)	Height (in.)	Depth (in.)	Inverter Cabinet Weight (lbs.)	Battery Cabinet Weight (lbs.)	Shipping Weight
Three-Phase (3P)	3	LM3000	2	24	38	13	218	576	820
	4.2	LM4200	2	32	50	23	565	900	1570
	5.2	LM5200	2	32	50	23	565	1060	1737
	8.25	LM8250	2	32	50	23	565	1532	2210
	10.5	LM10500	2	32	50	23	565	1850	2530
	12.5	LM12500	2	32	50	23	565	2161	2850
	15.75	LM15750	3	32	50	23	565	2908	3630
	18.75	LM18750	3	32	50	23	565	3560	4150

9.0 Warranty

9.1 Electronics Warranty

Refer to standard *Central Power Systems Warranty* policy, which is available for download on the manufacturer'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 standard *Central Power Systems Warranty* policy, which is available for download on the manufacturer'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:
Repair 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:
Repair 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:
Repair or Replacement without charge – 1 year
Pro-Rated Charge Repair or Replacement – 19 years

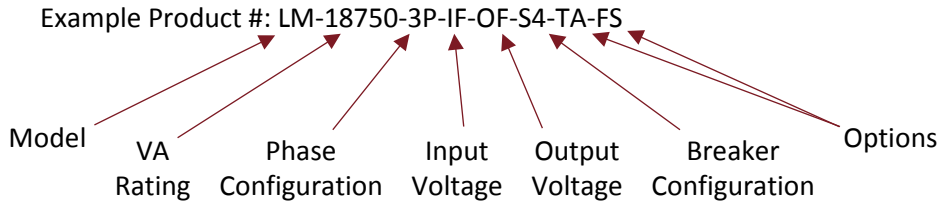
10.0 Support & Resources

Initial point of contact: Please contact your local inverter representative

Manufacturer Support: Evenlite Technical Support 1-800-526-5088
quotes@evenlite.com
https://www.evenlite.com/central-inverter-systems/

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

11.0 Ordering Instructions (Part Number)



Model	VA Rating	Phase Config	Input Voltage	Output Voltage	Output Breaker Configuration	Options
LM	**3000** **4200** **5200** **8250** **10500** **12500** **15750** **18750**	**3P** Three Phase	**IF** 120V/ 208V (L-N/L-L) **IG** 277V/ 480V (L-N/L-L)	**OF** 120V/ 208V (L-N/L-L) **OG** 277V/ 480V (L-N/L-L)	**C(n) -** 20A Normally On **O(n) -** 20A Normally Off **S(n) -** 20A Switched Output **(n) -** Quantity Required **BB -** Indicates Special Breaker Current Requirement (Contact Factory) *1000VA* 8x20A Normally On w/o TA 5x20A Normally On w/ TA 4x20A Normally Off 4x20A Switched *16000 - 3200VA* 11x20A Normally On w/o TA 7x20A Normally On w/ TA 6x20A Normally Off 6x20A Switched *4200 - 6250VA* 12x20A Normally On w/o TA 8x20A Normally On w/ TA 6x20A Normally Off 6x20A Switched *8250 - 12500VA* 24x20A Normally On w/o TA 16x20A Normally On w/ TA 12x20A Normally Off 12x20A Switched	**TA** Trip Alarm for all circuit breakers **TB** 1 Summary / 2 Programmable terminal block for form C dry contacts **MB** Internal Maintenance Bypass Switch **DT** Delayed Transfer, 60ms **Z4** Seismic Zone 4 Certified (includes KE) **RA** Remote Annunciator **KE** Keypad Lock (Keyed Enclosure) **M(n)** Maintenance Plan (n)=years [Max 5 years] **FS** Factory Startup (Onsite Commissioning) **EW** Extended Warranty to 5 years (EW requires FS option) **EO** Emergency Power Off

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