

END IDLING IN YOUR FLEET



ENGINES CAN'T POLLUTE AT **ZERORPM**
IDLE MITIGATION SYSTEMS®



PRODUCT BENEFITS

- PATENTED AUTOMATIC EMERGENCY RELIEF VALVE FOR INDUSTRY-LEADING SAFETY
- SCALABLE BATTERY TECHNOLOGY TO FIT YOUR NEEDS
- ON-BOARD BATTERY MANAGEMENT SYSTEM WITH OVERCHARGE AND OVERDISCHARGE PROTECTION
- MILITARY GRADE POWER CONNECTOR AND BATTERY CONTACTOR
- DURABLE ALUMINUM AND STEEL CONSTRUCTION
- LIGHTWEIGHT DESIGN
- COMPACT FORM FACTOR

EM100E48V

ZeroRPM Energy Modules are a safe and space-efficient solution to add lithium power to your vehicle. This module is designed to power lights, radios, computers, inverters and other electronics with your engine off. Energy modules of the same voltage may be added in parallel to increase the run-time of your system. Energy modules contain an on-board battery management system. ZeroRPM energy modules use lightweight lithium-iron* batteries. This chemistry makes ZeroRPM battery technology among the safest on the market. This unit can be charged using 48V power from an alternator, solar panels, or other 48V power source.

Note: This product requires other ZeroRPM IMS components. Reference ZeroRPM.com/systems for more information.

*"Lithium-Iron" is marketing term for ZeroRPM's LiFeMnPO4 packaged energy storage systems.

INTELLIGENT DESIGN WITH UNPARALLELED PERFORMANCE

- ✓ **REPORTS OVER THE CAN BUS**
OUR ON-BOARD BMS REPORTS DATA OVER CAN BUS FOR REAL-TIME MONITORING VOLTAGE AND TEMPERATURE FOR EVERY CELL. THE BMS ALSO PROVIDES STATE OF CHARGE, VOLTAGE, AND CURRENT MONITORING THE ENTIRE PACK.
- ✓ **PUT PACKS IN PARALLEL OR SERIES**
STATE OF CHARGE AGGREGATION AND NORMALIZATION ACROSS PARALLEL PACKS FOR CLUSTERING AND REDUNDANCY. TWO PACKS CAN BE PLACED IN SERIES.
- ✓ **POWER WHEN YOU NEED IT**
EXPORT POWER @ **250 AMPS** CONTINUOUSLY.
- ✓ **FLEXIBILITY FOR YOUR NEEDS**
OUR ON-BOARD BMS ALLOWS FOR FLEXIBLE SETTINGS THAT ALLOWS US TO TAYLOR THE PACK TO YOUR SPECIFIC APPLICATION. THIS MAKES IT POSSIBLE TO HAVE CUSTOM SETTINGS FOR SPECIAL APPLICATIONS SUCH AS HIGH CURRENT OR HIGH TEMPERATURE APPLICATIONS.

END IDLING

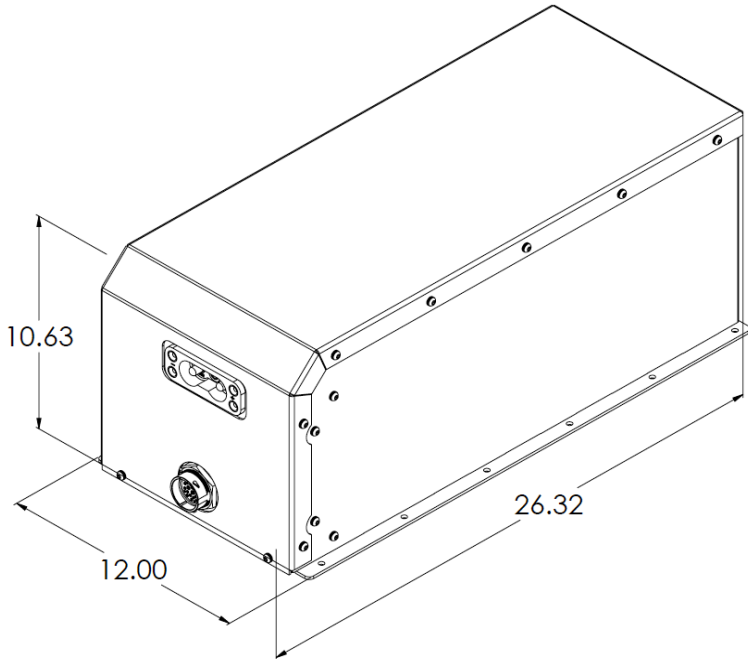
IN YOUR FLEET



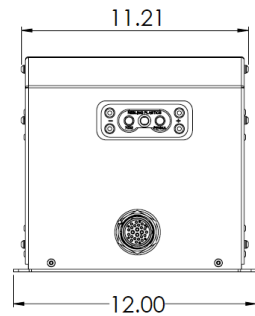
EM100E48V

PRODUCT DIMENSIONS

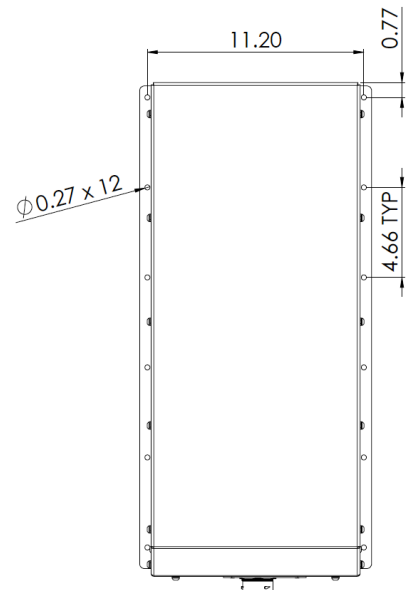
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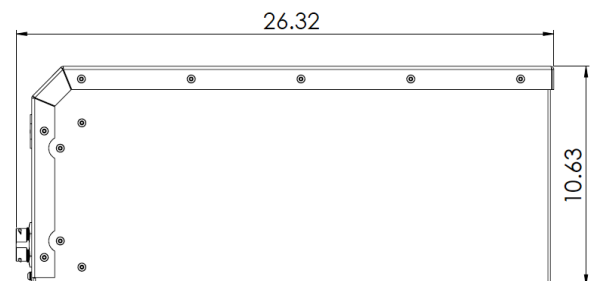
FRONT



TOP



SIDE



SIGNAL CONNECTOR



31 PIN
MATING CONNECTOR
PART NUMBER:

DEUTSCH
HDP26-24-31SE

POWER CONNECTOR



48V POWER
MATING CONNECTOR
PART NUMBER:
ZERORPM
6441-40389

6" CLEARANCE
NEEDED FOR
CONNECTIONS

FOR WIRING OF THE
SYSTEM PLEASE
REFERENCE THE
SYSTEM SCHEMATIC

For more information, visit www.zerorpm.com/products

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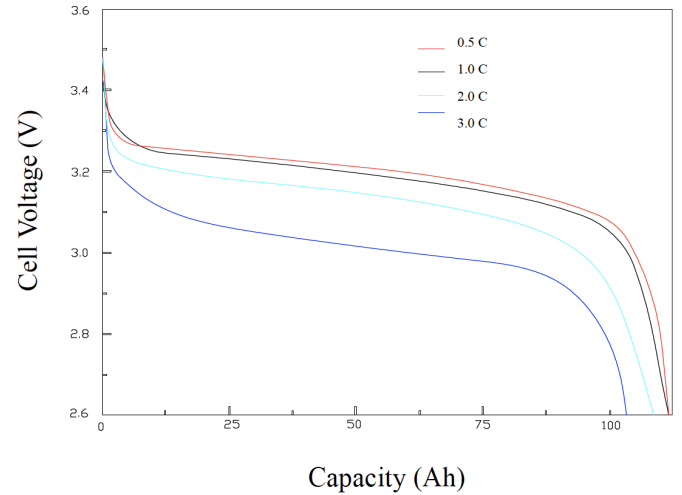


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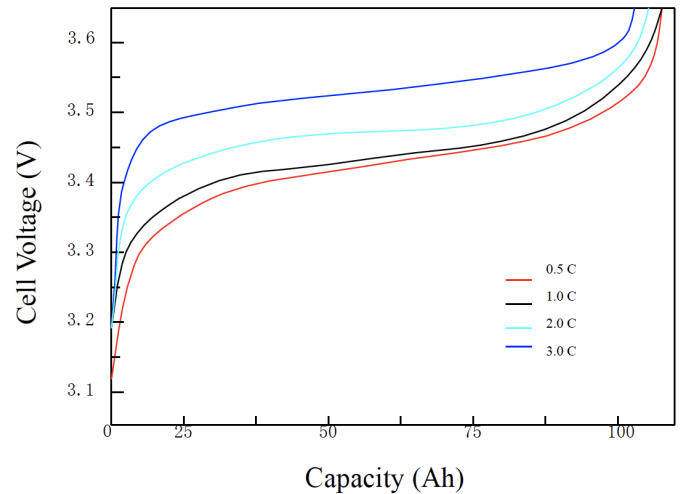
SPECIFICATIONS

ITEM	RATING
Battery Chemistry	Lithium-Iron (LiFeMnPO4)
Nominal Voltage	51.2V
Capacity	100Ah
Total Energy	5.12kWh
Usable Energy	4.1kWh
Continuous Discharge Current	250A
Discharge Voltage Range	44.8V - 56.8V
Max. Discharge Current	1000A (10 sec.)
Cut-off Voltage	40V
Charge Voltage Range	48V - 57.6V
Charge Temperature Range	32 ~ 150F / 0 ~ 65C
Discharge Temperature Range	-4F ~ 150F / -20 ~ 65C
Storage Temp Range	-4F ~ 150F / -20 ~ 65C
Continuous Charge Current	250A
Number of 12V Battery Modules	4
Number of Cells per Module	4
Enclosure Material	Powder-coated Galvanized Steel and Aluminum
Weight	140 lbs/63.5 kg
BMS	Yes
Cell V/T Monitoring	Yes
Cell Balancing	Yes
Contactor	Yes
Battery Connections	Rebling 2-Pole Connector
Internal Fuse Rating	300A (slow blow)
Cycle Life @ 100% DOD	2000 Minimum/3500 Typical
Internal Impedance	6.4 mΩ
Self-Discharge	1% per month
Certifications	UL 1642 (cells)
Transportation	UN DOT 38.3 Lithium-Ion

DISCHARGING CURVE



CHARGING CURVE



WE ARE DIFFERENT

OUR BMS USES STATE OF CHARGE AND DEPTH OF DISCHARGE AS THE PRIMARY METHOD OF CAPACITY MANAGEMENT. AS A SAFETY BACKUP, WE ALSO MONITOR CELL VOLTAGE. THIS DIFFERENTIATES US FROM MANY OF OUR COMPETITORS THAT ONLY USE PACK OR CELL VOLTAGE.

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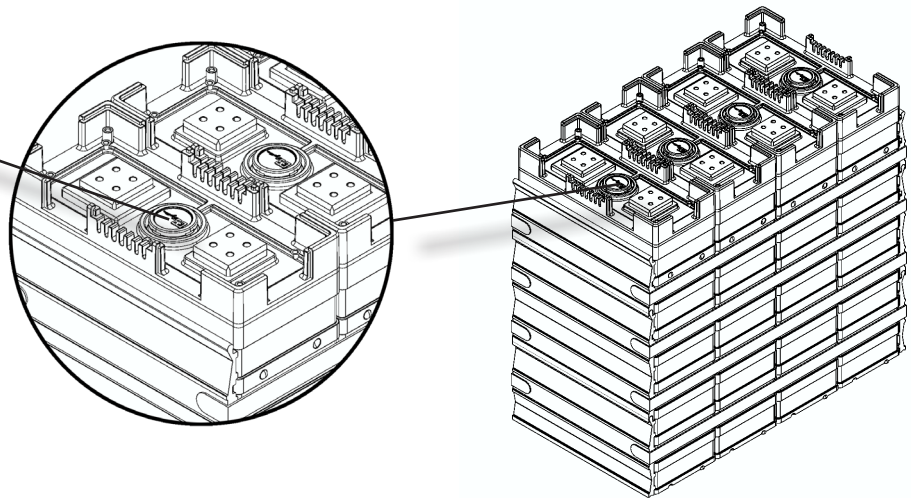


EM100E48V

SAFETY

RELIEF VALVE

The image to the right is the battery pack inside of a ZeroRPM Energy Module. Every cell has a patented relief valve. The valve is designed so that if the battery builds internal pressure from critical damage or a short, the battery will vent the pressure instead of exploding like some other batteries.



PRODUCT INSTALLATION NOTES & BATTERY CARE

- Storage temperature: -4 °F to 150 °F / -20 °C to 65 °C.
- The unit must be mounted securely and upright.
- In shipping or storage, do not stack more than one product on top of one another (i.e. two unit stack maximum).
- The unit must be mounted so the lid is removable.
- The unit must be mounted as closely to the loads and supply as possible.
- If the unit has been in storage for more than 90 days, the voltage must be checked to ensure that the batteries have not discharged past the acceptable threshold.
- There must be adequate provisions for drainage below the unit to prevent flooding.
- There must be at least 6" of clearance on the right side of the unit for the main power connectors.
- The unit must be mounted in a well-ventilated compartment. In extreme hot or cold environments, it is ideal to mount the unit in a temperature controlled compartment.
- The unit must be mounted with vibration-dampening material. The material must be installed between the unit's feet and the mounting surface.
- Exporting at maximum current for an extended amount of time will substantially reduce the life of the battery pack.
- Do not put the unit on its side or upside down without written approval from ZeroRPM.

SUPPORT

WE ARE HERE FOR YOU

If you have any questions or issues with your ZeroRPM product, please call our technical support team. We are here to support you and ensure that your application takes maximum advantage of our technology.

MAIN PHONE
1-855-ZERORPM (937-6776)

MAIN EMAIL
INFO@ZERORPM.COM

TECHNICAL SUPPORT PHONE
1-844-ZERORPM (937-6776)

TECHNICAL SUPPORT EMAIL
SUPPORT@ZERORPM.COM