

# Imagen Energy Storage System

## TURNKEY SOLUTIONS

A turn-key energy storage system (ESS) that is compact, modular, and scalable.

## APPLICATION

- Back-up power
- Microgrid Support
- Grid Load Leveling
- Datacenter Backup

## TECHNICAL SUPPORT

Imagen provides remote monitoring and asset management services.

For more information on any of our products or services, please contact us:

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Imagen Energy has developed an integrated inverter and Li-ion energy storage system (IM-100) at a significant reduction in cost and mechanical footprint compared to existing flywheel battery systems; in addition, the ESS substantially improves reliability compared to rotating energy storage products. Gone are the high-energy rotating inertia, the magnetic bearings, the high-speed motor/generator and vacuum system. In their place is a clean and safe modular battery featuring Lithium Ion technology and a compact, integrated inverter. These improvements are enabled by Imagen's novel high-frequency design and advanced digital control algorithms. The integrated Energy Storage System (iESS) is modular, scalable and highly efficient, giving customer's flexibility and improved performance required by the energy storage market. One of the key benefits of iESS is a reduced logistical footprint due to the independent Line Replaceable Units (LRUs) of the inverter and battery string.

The IM-100 series power converter, installed at the top of the battery enclosure, is a bi-directional, multi-level, 125kW rated inverter housed in a 4U, 24" x 17" x 7" rack mounted configuration with sliding rails for easy installation. Integrated L-C-L filters using specialized materials allow the inverter to deliver a three-phase output at full load with a Total Harmonic Distortion (THD) of <3.5% in both operating modes (charging and discharging). The 100kWhr battery and 125kW inverter are housed in a standard cabinet: 19" x 30" x 87" that is easily scalable for large energy storage installations by connecting iESS systems in parallel.



## System Specifications

| Item             | Specification                |
|------------------|------------------------------|
| AC Output        | 480 VAC                      |
| Rated AC Power   | 100 kW @ 40C                 |
| Peak AC Power    | 125 kW @ 40 C 3min           |
| Peak Efficiency  | 98.5%                        |
| THD              | <3.5% @ Rated Power          |
| Output Frequency | 50/60 Hz                     |
| Battery Capacity | 100 kWhr                     |
| Communication    | MODBUS TCP                   |
| Protection       | DC and AC Fuses included     |
| Disconnect       | AC and DC Contactor included |



**Imagen Energy**

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