

High Discharge C-Rating Range Lithium-Ion Battery Energy Storage System



High Power Density Module



These images may differ from the final product

The rated voltage of the systems is ± 240 volts with optional rated capacities of 50, 100, 150AH. Manufactured with safety as the primary objective the high discharge range LiFePO₄ (Lithium Iron Phosphate) batteries achieve both well defined performance and long term stability. The core of each system is a high power density 48 volt module which consists of prismatic LiFePO₄ cells configured using a fully automated robotic production technic delivering a high quality product.

The system cabinet consists of 10 modules and a touch screen display control module which monitors the running status of the battery system in real time. Providing information on the operating status, capacity, voltage of each cell for equalisation status and details of charge / discharge performance.

Combined with an advanced three level architecture BMS design control system ensures adaptive equalisation for each cell maximising energy storage and discharge / charge performance while protecting the safety of the battery system at all times.

- » **Significant capacity density**
- » **High performance discharge and recharge**
- » **Modular design, easy to expand, convenient maintenance**
- » **Multiple systems can be used in parallel**
- » **Proven safety and quality**
- » **Expected design life of 15 – 20 years**
- » **High number of cycles over 4,500**
- » **Wide temperature range**

High Discharge C-Rating Range Technical Specification

BATTERY MODULE SPECIFICATIONS			
Module Code	1Px15S50	2Px15S50	3Px15S50
Cell	3.2V 45Ah		
Combination	15S1P	15S2P	15S3P
Configuration	15 cells	30 cells	45 cells
Rated Energy @ 25°C, kWh	2.4kWh	4.8kWh	7.2kWh
Maximum Discharge Power kW	9.6kW (4C)	19.2kW (4C)	14.4kW (3C)
Terminal Output	Connectors		
Dimensions (mm) WxDxH	424 x 445 x 177	424 x 610 x 177	424 x 850 x 177
Net Weight (kgs)	25	45	60
CABINET SYSTEM SPECIFICATIONS			
Cabinet Model Number	PTG480vLFP50/24/4C	PTG480vLFP100/48/4C	PTG480vLFP150/72/3C
Configuration	10 battery modules (model code as above) + 1 control module		
Rated Charge Rate @ 25°C	1C		
Max. Discharge Rate 25°C	4C	4C	3C
Max. Capacity	50Ah	100Ah	150Ah
Rated Energy	24kWh	48kWh	72kWh
Maximum Continuous Discharge kW	96kW (4C)	192kW (4C)	216kW (3C)
Rated Voltage Nominal	±240VDC		
Battery Voltage Range	±210 - ±266VDC		
Communication	CAN, RS485, DRY Contacts		
BMS	Adaptive BMS		
Dimensions (mm) WxDxH	600 x 550 x 2000	600 x 800 x 2000	600 x 950 x 2000
Net Weight (kgs)	550	720	950

Lead-Acid Batteries vs Lithium Ion Batteries

- Less weight
- Less space
- No structure
- Reinforcement required

- Longer life
- Convenient maintenance
- No oversizing required

- Higher Charge Rate
- Shorter backup time
- Less battery capacity needed

- Higher cycle life when compared to Lead acid batteries

