

# HIGH-VOLTAGE LFP BATTERY SYSTEMS

Proventia modular high-voltage LFP battery packs are designed for full electric applications and can be configured from 190V up to 1000V. Standard packs are available in configurations of 5, 6, or 8 modules that can be connected in series to reach the desired system voltage. Engineered for continuous operation over extended periods, these packs perform excellently in extreme temperatures.



## KEY FEATURES

- Compact and robust construction
- IP67 rating
- Stainless steel housing
- Remote monitoring available
- Pressure equalizer vent for added safety
- Water-glycol cooling integrated into the enclosure to minimize leaks
- Heavy-duty automotive-grade BMS system
- Multi-string support for up to 10 pcs of parallel-connected battery systems
- Low carbon footprint
- Made in Europe

## BENEFITS

- Thermally stable and environmentally friendly Lithium Iron Phosphate chemistry (LFP)
- Excellent lifetime (up to 6500 cycles)
- Discharging possible between [-20...+55°C]
- Charging possible between [0...+55°C]
- Wide usable SOC range
  - Excellent input/output characteristics over a wide SOC range of 0-100%, making it possible to reduce the nominal battery capacity or the number of batteries necessary for a system

## CONTACT US

Interested in our products and services?  
Give us a call or send an email!



**JARI GRANATH**

Business Manager, Electric Powertrain  
jari.granath@proventia.com  
+358 40 725 4078

# HIGH-VOLTAGE LFP BATTERY SYSTEMS

## TECHNICAL SPECIFICATIONS

Lifetime	> 6500 cycles <sup>1</sup>
Cell type	Prismatic LFP
Charge continuous current	100A <sup>2</sup>
Discharge continuous current	200A <sup>2</sup>
Self-discharge	7.5% [90 days] <sup>3</sup>

<sup>1</sup> SOH70% - Cycle characteristics depend on cycle and usage conditions.

<sup>2</sup> Cell temperature should not exceed the maximum operating temperature.

<sup>3</sup> 25°C starting state of charge 25%

## OPERATING CONDITIONS

Discharging temperature range <sup>1</sup>	-20...55°C
Charging temperature range	0...55°C
Storage temperature (max recommended)	-20...45°C
Storage Humidity	< 70%

<sup>1</sup> The stated operation temperature range is valid without active thermal management. Operation beyond this range is possible with properly designed heating/ cooling system.

## SYSTEM LEVEL DESIGN AND VALIDATION

- IEC 62619 Industrial li-ion battery safety
- IEC 60664-1:2020 Clearance and creepage
- IEC 62485-6 Safe operation of traction batteries
- UN 38.3
- ISO16750 1-4 on component level
- EN 60529 IP 67
- REGULATION 2023/1542 [EU Battery Regulation]

## TYPICAL APPLICATIONS

For full electric and hybrid applications:

- Mining & construction
- Material handling
- Agricultural
- Marine & offshore applications
- Rail and heavy-duty transport systems
- Backup power and stationary energy storage
- Industrial machines in high vibration environments

### ELECTRICAL CHARACTERISTICS

	5M	6M	8M
Nominal voltage [V]	192	230	307
Capacity [kWh]	19	23	31
Continuous power [kW]	19	23	31
Peak power [kW]	38	46	61

### PHYSICAL DIMENSIONS

Width [mm]	750	750	750
Length [mm]	1106	1291	1661
Height [mm]	170	170	170

Note: All specifications are subject to change without prior notice.