

Xcelion® 56V-E

Rechargeable lithium-ion battery system

Super lithium-iron phosphate high energy battery

The Xcelion® 56V battery provides operating voltage from 40V-60V and is designed for 48V applications such as military microgrids, electric mobility and stationary power.

This ruggedized battery uses Saft's proprietary Super-Phosphate® chemistry which is ideally suited for high performance applications. requiring high levels of safety.



Benefits

- Significant weight savings and life cycle costs compared to lead-acid technology
- Maintenance free
- Commercial off-the-shelf solution
- Communicates over J1939 CAN Bus protocol
- Compatible with MIL-STD-1275E power bus

Features

- Built-in self-balancing
- Fast charging under varying conditions*
- Self shut-down in unsafe conditions
- Internal battery management system

Applications

- Military microgrids
- Silent watch
- Electric mobility applications
- Applications requiring a balance of power and energy

Electrical characteristics

Nominal capacity	41 Ah
Nominal voltage	52.8 V
Voltage at full state of charge	60 VDC
Voltage at zero state of charge	40.0 VDC
Energy	2.16 kWh
Maximum discharge current	
Continuous	100 A
Maximum charge current	
Continuous	20 A

Mechanical characteristics

Weight	20.7 kg	46 lb
Height	230 mm	9.2 in
Width	256 mm	10.1 in
Length	269 mm	10.6 in

Operating Conditions

Operating temperature	
Discharge	-30°C to +60°C
Charge*	
Storage and transportation temperature**	-46°C to +71°C

*Battery manages charge energy to ensure maximum battery life. At low temperature, the battery will automatically engage built-in heaters for optimum charging.

** Sustained high temperature storage will reduce life.

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Top-level system functions

- Graphical User Interface Tool allows detailed view of battery status
- Communication of battery state of charge, temperature, and other key parameters via J1939 CAN Bus
- Redundant overcharge protection
- Overload protection
- Short circuit protection
- Over-discharge protection
- Battery reserve protection
- Battery monitoring
- Built-in-Test
- Cell heating (allows full battery capability over operating temperature)
- Continuous cell balancing

Safety heritage

- System design includes Saft's field proven electronic control architecture that includes overcharge protection, and over discharge, over temperature and overload protection.
- Cells equipped with hermetic seal and over pressure safety vent
- Rechargeable Li-FePO₄ cells ideally suited for applications requiring high discharge, continuous or pulse power, fast re-charge, long cycle and calendar life, and high levels of safety.

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