

# 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	60 V
Voltage at full state of charge	60.8 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.

# Xcelion<sup>®</sup> 56V

## 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-FePO<sub>4</sub> 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.

## Saft America, Inc.

Space & Defense Division  
107 Beaver Ct.  
Cockeysville, MD 21030  
Tel.: +1 410-771-3200  
Fax: +1 410-771-1144  
Email: [SaftDefenceUS@saftbatteries.com](mailto:SaftDefenceUS@saftbatteries.com)  
[www.saftbatteries.com](http://www.saftbatteries.com)

## Saft SAS

Space & Defense Division  
Rue Georges Leclanché  
86000, Poitiers  
Tel.: +33 (0) 549 551 866  
Fax: ++33 (0) 549 554 780  
[www.saftbatteries.com](http://www.saftbatteries.com)

Doc N° 32055-2-0519  
Edition: May 2019  
Information in this document is subject to change without notice and becomes contractual only after written confirmation by Saft.  
Published by the Communications Department  
Photo credit: Saft

