

Xcelion® 28V-LEV

Rechargeable lithium-ion battery system

Super lithium-iron phosphate low-rate energy variant battery

The Xcelion® 28V-LEV (low-rate energy variant) battery provides operating voltage from 20V-30V and is designed for repetitive cycling applications including defense, electric mobility, and UPS.

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

Features

- Built-in self-balancing
- Self shut-down in unsafe conditions
- Resettable short circuit protection
- IP67 ingress protection
- Internal battery management system

Applications

- Defense
- Back-up power storage
- UPS
- Electric mobility
- Applications requiring a balance of power and energy



Electrical characteristics

Nominal capacity	41 Ah
Nominal voltage	26.4 V
Voltage at full state of charge	30.4 VDC
Voltage at zero state of charge	20.0 VDC
Energy	1.08 kWh
Maximum discharge current (continuous)	80 A
Maximum charge current	60 A
Recommended for continuous cycling	20 A

Mechanical characteristics

Weight	10.7 kg (23.5 lb)
Height	254.5 mm (10.02 in)
Width	254.8 mm (10.03 in)
Length	117.3 mm (4.63 in)

Operating Conditions

Operating temperature *	-40 °C to +60 °C
Storage and transportation temperature**	-46 °C to +71 °C

*For cold temperatures of -32 °C and below, the battery can be commanded to self-heat to enable extreme cold temperature discharge. The battery will automatically engage the heaters during cold temperature charging to ensure maximum battery life.
 ** 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)

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.

