

# Rechargeable Lithium-ion battery

## SAI 2590

### Extreme performance

The battery consists of two independent strings of four series connected VL 37570 genuine Saft lithium-ion cells which can be externally connected in a 4s2p or 8s1p configuration, protected by a specifically designed electronic protection circuit.

#### Benefits

- Extended life and durability in rugged mobile applications
- Wide effective operating temperature range in service
- Unrivalled low temperature performance
- Light weight for energy and performance
- Easy integration into many varied military and civilian applications

#### Key Features

- The battery is electronically protected against charger faults
- Long cycle life (over 85% of the initial capacity after 225 cycles at 100% depth of discharge)
- High energy density
- Built-in independent LED fuel gauge, push button operated
- Compatible with Saft and other standard military chargers
- Made and designed in the USA

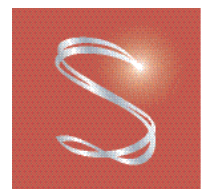
#### Typical applications

- SINGARS military radios
- Robotic equipment
- Other military equipment



Electrical characteristics	12 V mode	24 V mode
Nominal voltage (0.5 A at 21°C)	14.8 V	29.6 V
Typical capacity (+ 21°C, + 70°F)	13.6 Ah	6.8 Ah
Typical energy (+ 21°C, + 70°F)	200 Wh	200 Wh
Mechanical characteristics	Metric	Imperial
Length maximum	112 mm	4.41 in
Width maximum	63 mm	2.48 in
Height maximum	127 mm	5.0 in
Weight typical	1580 g	3.48 lbs
Battery casing	High impact plastic	
Operating conditions	12 V mode	24 V mode
Charge voltage	16.5 V	33.0 V
Charge current maximum*	13.6 A	6.8 A
Charge method	CC / CV	
Charge temperature range*	0°C to 50°C	32°F to 122°F
Discharge current	16 A	8 A
Discharge temperature range*	-30°C to 55°C	-22°F to 131°F
References		
Connector	6 pin socket SC-C 179495	
Mating connector	ITT CA 110821-6	
NSN	(Contact Saft for details)	
Saft part number	(Contact Saft for details)	

\*Consult Saft before operating the product outside of the published limits



**SAFT**

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## Technology

- Graphite-based anode
- Lithium Cobalt oxide-based cathode
- Electrolyte: organic solvents
- Built-in redundant safety protections
- Operational life of 600 cycles to 70% of the nominal capacity

## Independent 5-segment fuel gauge

- Asses the battery state of charge while in storage
- Check your spare battery prior to use
- Make full use of available battery energy

## Built-in protection devices at cell level ensure safety in case of:

- Exposure to heat
- Exposure to direct sunlight for extended periods of time
- Penetration by shrapnel
- Short circuit
- Overcharge
- Over discharge

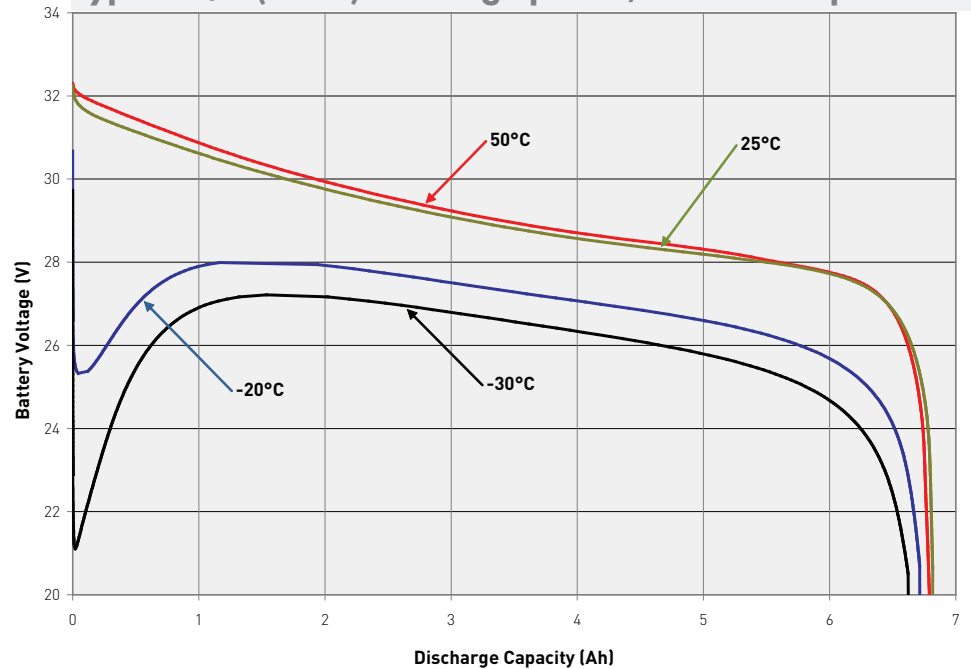
## Transportation and storage

- Store in a dry place at a temperature preferably not exceeding 30°C
- For long term storage, keep the battery within a window of  $(30 \pm 15)\%$  state of charge

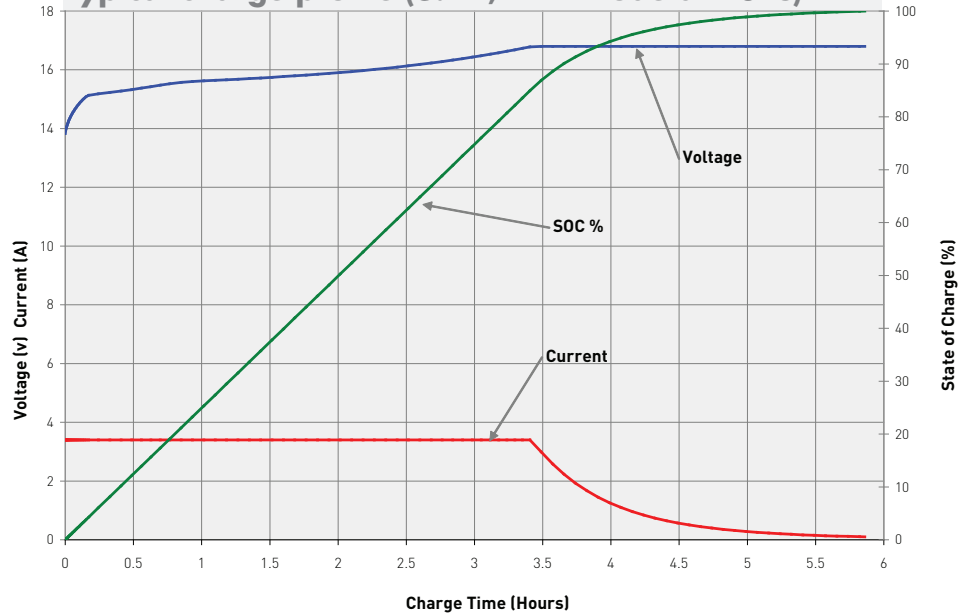
## Protection circuit

- Protection against over voltage (resettable)
- Protection against under voltage (resettable)
- Protection against over current during discharge (resettable)
- Equilization of cell voltages at end of discharge
- Internal thermal fuse for temperature protection

Typical C/2 (3.4 A) discharge profile, various temperatures



Typical charge profile (3.4A, 12V mode at 20°C)



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