

Rechargeable lithium-ion battery

AA 86A

Extreme performance



The battery consists of three MP 174865 Saft lithium-ion cells in series and a specifically designed electronic protection circuit.

Benefits

- Extended autonomy and life for mobile systems
- Wide operating temperature range
- Very high energy density
- Long cycle life
(over 70 % initial capacity after 500 cycles 100 % DoD)
- Unrivalled low temperature performance
- Recommended for ruggedized designs
- Easy integration into compact and light systems
- Maintenance-free
- Light weight

Key features

- Electronic protection against charger faults
- Built-in end of discharge alarm
- Compatible with Saft and other military chargers
- Made and designed in the EU
- Excellent charge recovery after long storage, even at high temperature
- Restricted for transport (class 9)

Main applications

- Thermal imager
- Military thermal camera

Electrical characteristics

Nominal voltage (1.2 A rate at 20°C)	11.25 V
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Typical capacity (under 1.2 A at 20°C 8.1 V cut-off)	5.3 Ah
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Mechanical characteristics

Length max	145 mm
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Width max	62.6 mm
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Height max (including contacts)	55.5 mm
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Typical weight	530 g
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Operating conditions

Charge method	Constant Current/Constant Voltage
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Max. recommended charge current	4.8 A at 20°C
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End charge voltage	12.6 V
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Charge temperature range*	-20°C to +60°C
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Max. recommended continuous discharge current*	5 A at 20°C
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Pulse discharge current (< 7 ms)	up to 21 A (~4C rate)
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Discharge cut-off voltage	8.1 V
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Discharge temperature range	-50°C to +60°C
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References

High Temperature	MIL-STD 810E, 501.3 (+ 60°C)
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Low Temperature	MIL-STD 810E, 502.3 (- 20°C)
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Vibration	MIL-STD 810C, 514.2 H
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Shock	MIL-STD 810E, 516.4
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Salt Fog	MIL-STD 810E, 509.3 I
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Immersion	MIL-STD 810E, 512.3
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NATO Stock Number (NSN)	6140 14 527 4774
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Saft's Part Number	06554G
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Compliance with military specification

* Consult Saft for optimized charging below 0°C
Lower performance to be expected when cycling repeatedly at elevated temperature. Consult Saft.



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Technology

- Graphite-based anode
- Lithium Cobalt oxide-based cathode
- Electrolyte: organic solvents
- Built-in redundant safety protections
- Battery comprises three MP 174865 cells in series and features an electronic protection circuit

End of discharge alarm

- Automatically signals that the battery is able to deliver a last current shot before reaching cut-off

Built-in protection devices ensure safety in case of:

- Exposure to heat
- Exposure to direct sunlight for extended periods of time
- Short circuit
- Overcharge
- Overdischarge
- Shrapnel penetration

When handling Saft MP batteries:

- Do not solder directly to battery terminals
- Do not disassemble
- Do not remove the protection circuit
- Do not incinerate

Transportation and storage:

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

Protection circuit

- Protection against over voltage (*resettable*)
- Protection against under voltage (*resettable*)
- Protection against over current during discharge
- Equalising cell voltages during discharge

Saft

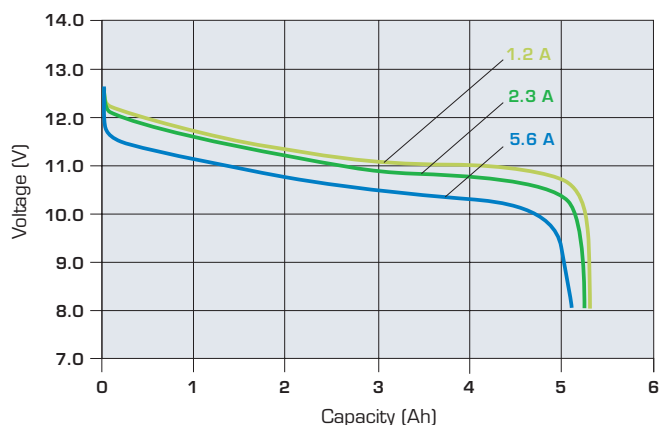
Specialty Battery Group

12, rue Sadi Carnot
93170 Bagnolet - France
Tel.: +33 (0)1 49 93 19 18
Fax: +33 (0)1 49 93 19 69

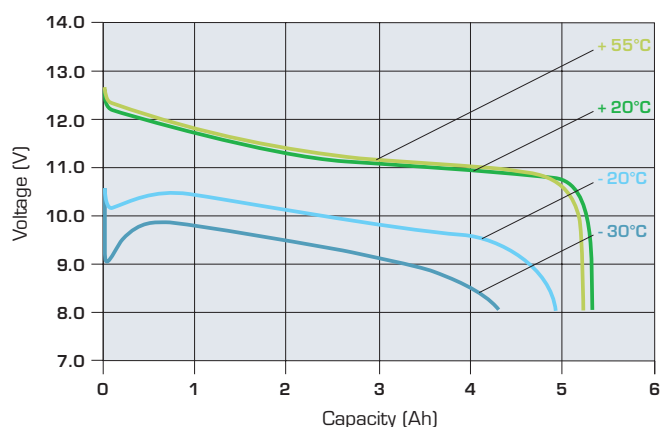
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Valdese, NC 28690 - USA
Tel.: +1 (828) 874 41 11
Fax: +1 (828) 879 39 81

www.saftbatteries.com

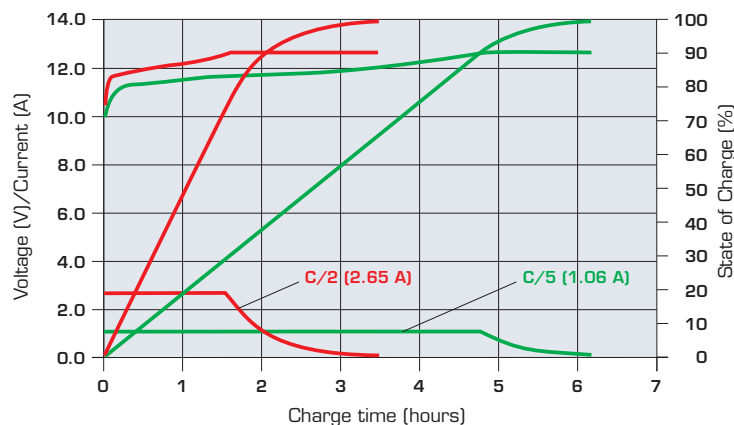
Capacity versus current at +20°C



Capacity versus temperature under 1.2 A constant discharge



Charge characteristics 12.6 V at +20°C at C/5 and C/2 rates



Doc. N° 54052-2-1107

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Published by the Communications Department.

Photo credit: Saft.

Société anonyme au capital de 31 944 000 €
RCS Bobigny B 383 703 873

Produced by Arthur Associates Limited. Printed in the UK.



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