

BA 684A

Rechargeable lithium-ion battery – extreme performance

The battery is assembled from MP 176065 Saft lithium-ion cells connected in series (2s1p configuration) and protected by a specific electronic monitoring circuit.

Benefits

- Extended autonomy and life
- Wide operating temperature range
- Recommended for ruggedized designs
- Easy integration into compact and light systems
- Unrivalled low temperature performance
- Maintenance-free
- Light weight

Key features

- Electronic protection against charger faults
- Built-in LED fuel gauge – visible at night – without any capacity loss during storage
- Compatible with Saft and other military chargers
- Excellent charge recovery after long storage, even at high temperature
- Long cycle life (over 70 % initial capacity after 500 cycles 100 % DoD)
- Made in the EU
- Restricted for transport (class 9)

Main applications

- Combat net radios
- Tactical radios

Technology

- Graphite-based anode
- Lithium Cobalt oxide-based cathode
- Electrolyte: organic solvents
- Built-in redundant safety protections
- Battery comprises two MP 176065 cells in series and features an electronic protection circuit



Electrical characteristics

Nominal voltage (under 1.35 A at 20°C)	7.5 V
Typical capacity at 20°C (under 1.35 A 5.4 V cut-off)	6.8 Ah (when charged up to 8.4 V) 6.1 Ah (when charged up to 8.2 V)

Mechanical characteristics

Length (max)	67.4 mm (2.654 in)
Width (max)	38.1 mm (1.461 in)
Height (max including contacts)	89 mm (3.504 in)
Typical weight	450 g (15.87 oz)

Charging conditions

Charge method	Constant Current/Constant Voltage
Max. recommended charge current	5 A at 20°C
Charge temperature range*	-20°C to +60°C (-4°F to +140°F)
Time at 20°C	5 hours under 5 A constant
Identifiant resistor	13 kΩ
Recommended charger	SAFT EcMC ² 250W, EcMC ² 350W with IB4 interface

Discharging conditions

Max. recommended continuous discharge current	5 A at 20°C
Pulse discharge current	up to 9 A
Discharge cut-off voltage	5.4 V
Discharge temperature range	-40°C to +70°C (-40°F to +158°F)

* Consult Saft for optimized charging below 0°C



SAFT

Independent 5 segment fuel gauge

- Assess the battery state of charge while in storage
- Check your spare battery during or prior to use
- Make full use of available battery



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

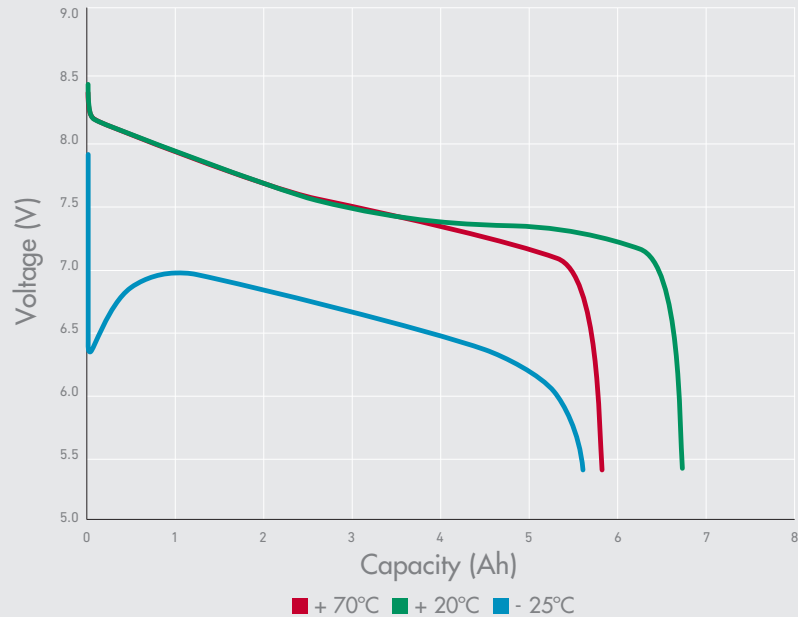
- Store in a dry place at a temperature preferably not exceeding 30°C
- For long-term storage, keep the battery within a (30 ± 15) % state of charge

Protection circuit

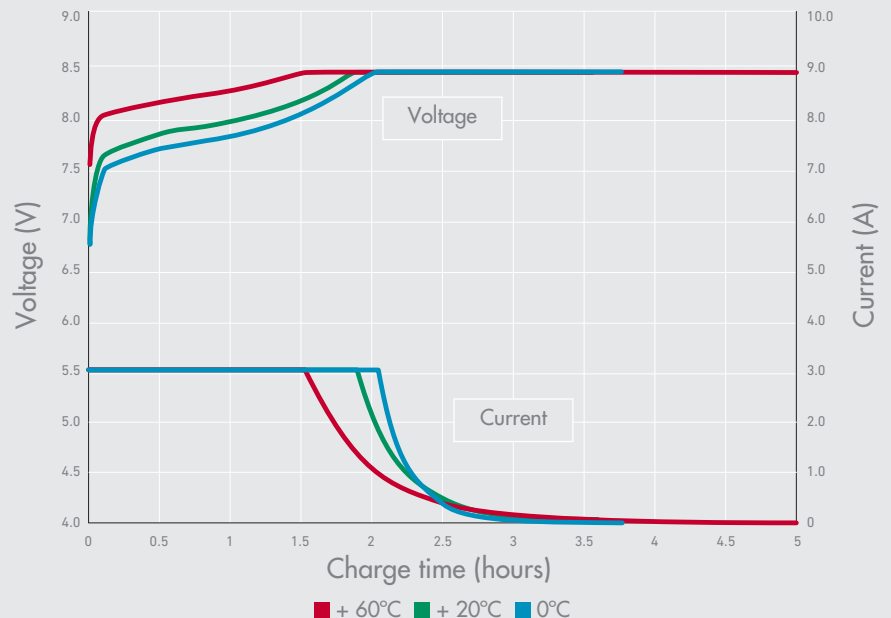
- Protection against over voltage (resettable)
- Protection against under voltage (resettable)
- Protection against over current during discharge
- End of discharge equalising

References	Compliance with military specification
High Temperature	MIL-STD 810E, 501.3 (+ 60°C)
Low Temperature	MIL-STD 810E, 502.3 (- 20°C)
Vibration	MIL-STD 810C 514.2 H
Shock	MIL-STD 810E 516.4
Salt Fog	MIL-STD 810E 509.3 I
Immersion	MIL-STD 810E 512.3
NATO Stock Number (NSN)	6140-14-529-5971
Saft's Part Number	06544W

Typical discharge profile (1.35 A - C/5 rate - charge 8.4 V)



Charge characteristics to 8.4 V versus temperature (3 A rate)



Saft

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