

Rechargeable lithium-ion battery

DHY 307

Extreme performance
in demanding military environments

The battery is assembled from two parallel branches of eight MP 176065 Saft lithium-ion cells in series (8s2p configuration) with a specifically designed electronic protection circuit.

Benefits

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

Key features

- Electronic protection against charger faults
- Very high energy density
- Built-in OCV (Open Circuit Voltage) independent fuel gauge
- 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 and designed in the EU
- Restricted for transport (Class 9)

Main applications

- Laser designator



Electrical characteristics

Nominal voltage (2.4 A rate at 20°C)	30.0V
Typical capacity at 20°C (under 6.8 A 21.6 V cut-off)	13.6 Ah

Mechanical characteristics

Length max	193 mm
Width max	74 mm
Height max (including contacts)	136 mm
Typical weight	3000 g

Operating conditions

Charge method	Constant Current/Constant Voltage
Max. recommended charge current	12 A at 20°C
Charge temperature range*	- 20°C to + 60°C
Time at 20°C	6 hours under 5 A constant
Max. recommended continuous discharge current	12 A at 20°C
Pulse discharge current (< 7 ms)	up to 18 A
Discharge cut-off voltage	21.6 V
Discharge temperature range	- 40°C to + 60°C

References

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)	6140-14-553-2742
Saft's Part Number	08101F

* Consult Saft for optimized charging below 0°C

Compliance with military specification

DHY 307

Technology

- Graphite-based negative electrode
- Lithium Cobalt oxide-based positive electrode
- Electrolyte: organic solvents
- Built-in redundant safety features

Independent OCV 10 segment fuel gauge

- Assess the battery state of charge while in storage
- Enables checking remaining capacity prior or during use

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

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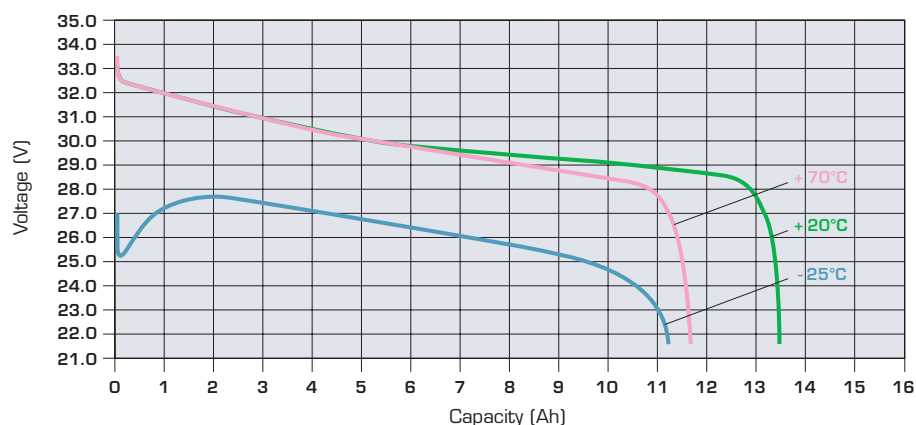
Transportation and storage

- 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

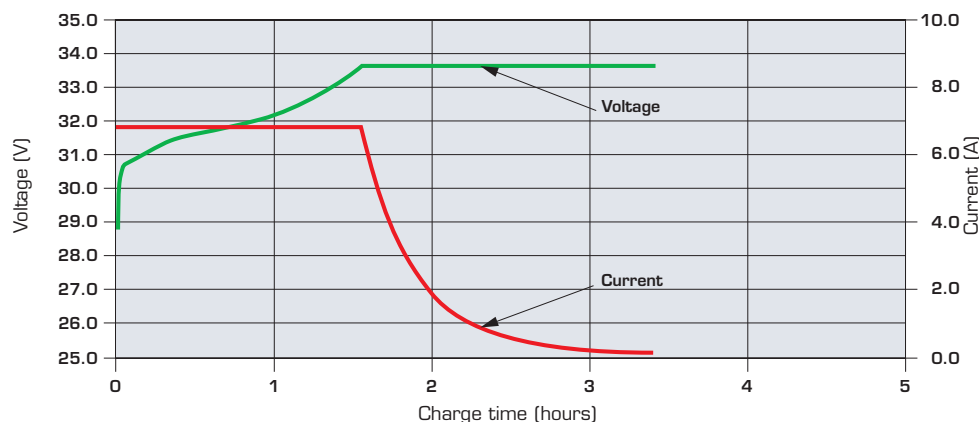
Protection circuit

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

Typical discharge profile under 2.7 A (C/5 rate) at +20°C



Charge characteristics to 33.6 V under 6.8 A (C/2) at +20°C



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