

# DHY 307

## Military rechargeable Li-ion battery

29.2V high energy Li-ion battery with high performance and **reliability**

Saft's DHY 307 battery is compatible with military applications requiring safety, reliability, long operating life under cycling conditions and offers excellent performance in temperature environments from  $-35^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ .

### Benefits

- Excellent operating lifetime in calendar and cycling with a very stable internal resistance
- Long shelf life with extremely low capacity loss in storage
- Smaller environmental footprint than other technologies

### Key features

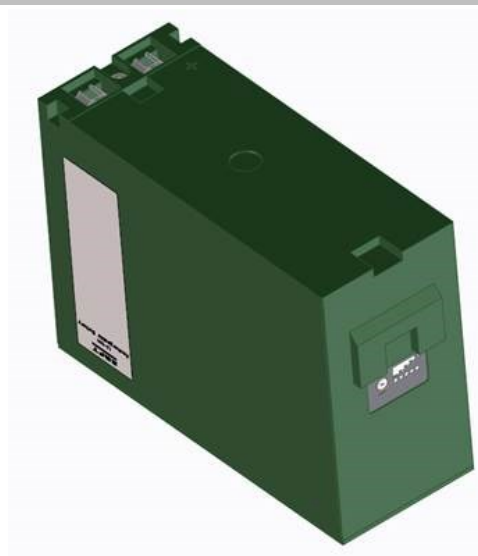
- High energy density (204 Wh/l and 136 Wh/kg)
- Cycle life more than 1800 cycles at 100% DoD at C/2 discharge, C/ charge
- ABS NATO green casing
- Ingress protection (IP 68)
- Operates in any orientation
- Maintenance free
- No memory effect
- **Manufactured in the EU**

### Designed to meet all major quality, safety and environmental standards

- Safety: UL 1642 and IEC 62133-2:2017
- Transport: UN 3480, UN 38.3
- Quality: ISO 9001:2009
- Environment: ISO 14001, RoHS and REACH compliant

### Typical applications

- Combat net radio
- Laser designator
- Tactical ground radar
- Surveillance equipment



### Electrical characteristics

Typical capacity (at C/5 rate, $+20^{\circ}\text{C}$ , 2.5V cut-off) <sup>[i]</sup>	13.6 Ah	
Nominal voltage	29.2 V	
Nominal energy	397.1 Wh	
Recommended maximum discharge current <sup>[ii]</sup> (limited by the electronic protection circuit)	Continuous	12.0 A <sup>[iv]</sup> ( $+20^{\circ}\text{C}$ )
	Pulse	18.0 A <sup>[iv]</sup> ( $+20^{\circ}\text{C}$ )

### Physical characteristics (sleeved cell)

Length (maximum)	193.0 mm	
Width (maximum)	74.0 mm	
Height (maximum including terminals)	136.0 mm	
Typical weight	3.0 kg	
Volume (including terminals)	1.94 l	
IEC battery designation	8INP/74/193/136-2	
Saft internal battery designation	8s2p MP176065 xlr	
Saft part number	08667D	
NATO / OTAN stock number (NSN)	6140-14-596-9136	

### Operating conditions

Typical cut-off voltage	20.0 V	
Charging method	Constant current/Constant voltage	
Charging voltage	$33.6 \pm 0.05\text{V}$	
Maximum continuous charge current <sup>[iii]</sup>	12.0 A <sup>[iv]</sup> ( $\sim 1\text{C}$ )	
Operating temperatures	Charge <sup>[iii]</sup>	$-30^{\circ}\text{C}$ to $+60^{\circ}\text{C}$
	Discharge <sup>[iii]</sup>	$-35^{\circ}\text{C}$ to $+60^{\circ}\text{C}$
Storage & transportation temperatures	Recommended	$+10^{\circ}\text{C}$ to $+30^{\circ}\text{C}$
	Allowable	$-40^{\circ}\text{C}$ to $+60^{\circ}\text{C}$

[i] Can vary depending on temperature and discharge rate

[ii] Can vary depending on temperatures. Consult Saft

[iii] For optimised charging below  $0^{\circ}\text{C}$  and above  $+60^{\circ}\text{C}$ , consult Saft

[iv] Limited by the electronic protection circuit

# DHY 307 rechargeable Li-ion battery



## Independent five segment fuel gauge

- Asses and verify the batteries state of charge at any time.
- Verify the state of charge prior to transportation or use.
- The fuel gauge does not use any energy while the display is inactive

## Electronic Protection Circuit

Built-in protection devices at battery and cell level ensures safe operation and user safety in case of abusive or extreme conditions. These conditions include, but are not limited to;

- Exposure to excessive heat
- Sustained exposure to direct sunlight
- External short circuit
- Overcharging the battery (resettable)
- Over discharging the battery (resettable)
- Mechanical damage

## Transport and Storage

- The storage area should be clean, cool (preferably between +10°C and +30°C), dry and ventilated
- For long-term storage, keep the battery state of charge within a 30% to 15% range.

## Warnings

- Do not crush, short-circuit, incinerate, dismantle, immerse in any liquid or heat above +85°C
- Observe charging conditions at all times
- Do not solder or weld directly to battery terminals
- Do not disassemble
- Do not disable, disconnect or modify the electronic protection circuit

Environmental requirement	MIL-STD reference
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
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