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°C to +60°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

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical capacity (at C/5 rate, +20°C, 2.5V cut-off)</td>
<td>13.6 Ah</td>
</tr>
<tr>
<td>Nominal voltage</td>
<td>29.2 V</td>
</tr>
<tr>
<td>Nominal energy</td>
<td>397.1 Wh</td>
</tr>
<tr>
<td>Recommended maximum discharge current (^{(iii)} )</td>
<td>Continuous: 12.0 A (^{(i)} ) [+20°C] Pulse: 18.0 A (^{(i)} ) [+20°C]</td>
</tr>
</tbody>
</table>

### Physical characteristics (sleeved cell)

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

### Operating conditions

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical cut-off voltage</td>
<td>20.0 V</td>
</tr>
<tr>
<td>Charging method</td>
<td>Constant current/Constant voltage</td>
</tr>
<tr>
<td>Charging voltage</td>
<td>33.6 ± 0.05V</td>
</tr>
<tr>
<td>Maximum continuous charge current (^{(iii)} )</td>
<td>12.0 A (^{(i)} ) [–1C]</td>
</tr>
<tr>
<td>Operating temperatures</td>
<td>Charge(^{(ii)} ): –30°C to +60°C Discharge(^{(iii)} ): –35°C to +60°C</td>
</tr>
<tr>
<td>Storage &amp; transportation temperatures</td>
<td>Recommended: +10°C to +30°C Allowable: –40°C to +60°C</td>
</tr>
</tbody>
</table>

\(^{(i)} \) Can vary depending on temperature and discharge rate
\(^{(ii)} \) Can vary depending on temperatures. Consult Saft
\(^{(iii)} \) For optimised charging below 0°C and above +60°C, consult Saft
\(^{(iv)} \) Limited by the electronic protection circuit
DHY 307 rechargeable Li-ion battery

Environmental requirement | MIL-STD reference
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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/OTAN Stock Number (NSN) | 6140-14-596-9136
Saft’s Part Number | 08667D

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

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