Primary lithium battery system  
BA 5390/U

12 V Primary lithium manganese dioxide (Li-MnO₂) battery

The battery consists of 10 LM 33550 cells connected in 2 groups of 5 cells in series providing 2 nominal 12 V sections at connector. These sections can be connected in series (for 24 V) in parallel (for 12 V), or used as two separate 12 V units.

Benefits
- Equipped with a push button operated "State Of Charge Indicator" for capacity monitoring

Key Features
- A non-replaceable fuse is incorporated in the negative leg of each series group of cells
- A normally closed high temperature switch or thermal fuse is incorporated into each series leg of cells
- Internal series string short circuit protection incorporated into each leg of the battery
- A diode is incorporated into the positive leg of each series group of cells to prevent charging or flow of current into the battery
- A device consisting of a manually activated switch and resistors designed to discharge the battery to 0 V is built into the battery (optional)
- Optional design without state of charge indicator is available

Typical applications
- AN/PRC-104 Radio
- AN/PRC-113 Radio
- AN/PRC-117 Radio
- AN/PRC-119 Sincgars Radio
- KY-57, KY-65 Encryption set
- REMBASS Remotely monitored battlefield surveillance system
- PLRS position locator and reporting system
- RT-991 buoy radio
- RT-1175 buoy radio
- AN/TAS-4A TOW night sight

### Electrical characteristics

<table>
<thead>
<tr>
<th></th>
<th>12 V mode</th>
<th>24 V mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum OCV</td>
<td>16.5 V</td>
<td>33 V</td>
</tr>
<tr>
<td>Nominal voltage (at 500 mA)</td>
<td>13.5 V</td>
<td>27 V</td>
</tr>
<tr>
<td>Cut-off</td>
<td>10 V</td>
<td>20 V</td>
</tr>
<tr>
<td>Typical capacity +21˚C / +70˚F (at 2 A discharge current)</td>
<td>24.8 Ah at 12 V</td>
<td>12.4 Ah at 24 V</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-40˚C to +71˚C / -40˚F to +160˚F</td>
<td></td>
</tr>
<tr>
<td>Storage (Recommended max)</td>
<td>+35˚C / +95˚F</td>
<td></td>
</tr>
<tr>
<td>(Possible)</td>
<td>-40˚C to +71˚C / -40˚F to +160˚F</td>
<td></td>
</tr>
</tbody>
</table>

### Physical characteristics

<table>
<thead>
<tr>
<th></th>
<th>Metric</th>
<th>Imperial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical weight</td>
<td>1.41 kg</td>
<td>3.1 lbs</td>
</tr>
<tr>
<td>Weight of Li metal content</td>
<td>34.0 g</td>
<td>1.2 oz</td>
</tr>
<tr>
<td>Width</td>
<td>62.2 mm</td>
<td>2.45 in</td>
</tr>
<tr>
<td>Height</td>
<td>111.8 mm</td>
<td>4.40 in</td>
</tr>
<tr>
<td>Depth</td>
<td>127.0 mm</td>
<td>5.00 in</td>
</tr>
<tr>
<td>Battery case</td>
<td>Plastic</td>
<td></td>
</tr>
</tbody>
</table>

### References

- Mating connector: IT Cannon CA 110821-6
- Reference specifications: Saft standard specification
- Nato Stock Number: 6135-01-501-0833

*This battery does not require an export license under ITAR rules when shipped to more than 30 countries. Please consult Saft.*
Capacity vs. rate at various temperatures

Discharge Rate (Amps)

-20 degC  -10 degC  0 degC  21 degC  35 degC  54 degC

Discharge Capacity (Ah)

2 A discharge typical curves temperatures (24 V mode)

Tested at 50% Duty Load 5 min. No Load 5

Typical discharge curves at various rates at +21 °C

Discharge Rate (Amps)

2 Amp  1.5 Amp  1 Amp  0.5 Amp  0.1 Amp

Discharge Capacity to 20V Cutoff (Ah)