**DATA SHEET**

### Trojan Battery Company with Quality Systems Certified by DNV

**Designed in compliance with applicable BCI, DIN, BS and IEC standards.**

**Tested in compliance to BCI and IEC standards.**

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**OPERATIONAL DATA**

**Operating Temperature**

-4°F to 122°F (-20°C to 50°C)

At temperatures below 32°F (0°C) maintain a state of charge greater than 60%

**Self Discharge**

Less than 3% per month depending on storage temperature conditions

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**PRODUCT + PHYSICAL SPECIFICATIONS**

**MODEL:** 31-AGM  
**VOLTAGE:** 12  
**MATERIAL:** Polypropylene  
**DIMENSIONS:** Inches (mm)  
**BATTERY:** VRLA AGM / Non-Spillable / Maintenance-Free  
**COLOR:** Maroon  
**WATERING:** No Watering Required

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**ELECTRICAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>BCI Group Size</th>
<th>Type</th>
<th>Voltage</th>
<th>Terminal Type</th>
<th>Dimensions (inches (mm))</th>
<th>Weight Lbs. (kg)</th>
</tr>
</thead>
</table>
| 31             | 31-AGM     | 12      | M8/DT         | Length: 12.80 (325)  
|                 |            |         |               | Width: 6.81 (173)    
|                 |            |         |               | Height: 9.37 (238)   |
|                 |            |         |               |                          | 67 (30)          |

**CHARGING INSTRUCTIONS**

**Charger Voltage Settings (at 77°F/25°C)**

<table>
<thead>
<tr>
<th>System Voltage</th>
<th>12V</th>
<th>24V</th>
<th>36V</th>
<th>48V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Charge Current (A)</td>
<td></td>
<td></td>
<td></td>
<td>20% of C20</td>
</tr>
<tr>
<td>Absorption Voltage (2.40 V/cell)</td>
<td>14.40</td>
<td>28.80</td>
<td>43.20</td>
<td>57.60</td>
</tr>
<tr>
<td>Float Voltage (2.25 V/cell)</td>
<td>13.50</td>
<td>27.00</td>
<td>40.50</td>
<td>54.00</td>
</tr>
</tbody>
</table>

Do not install or charge batteries in a sealed or non-ventilated compartment. Constant under or overcharging will damage the battery and shorten its life as with any battery.

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**CHARGING TEMPERATURE COMPENSATION**

<table>
<thead>
<tr>
<th>Add</th>
<th>Subtract</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.005 volt per cell for every 1°C below 25°C</td>
<td>0.005 volt per cell for every 1°C above 25°C</td>
</tr>
<tr>
<td>0.0028 volt per cell for every 1°F below 77°F</td>
<td>0.0028 volt per cell for every 1°F above 77°F</td>
</tr>
</tbody>
</table>

**STATE OF CHARGE MEASURE OF OPEN-CIRCUIT VOLTAGE**

<table>
<thead>
<tr>
<th>Percentage Charge</th>
<th>Cell</th>
<th>12 Volt</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>2.14</td>
<td>12.84</td>
</tr>
<tr>
<td>75</td>
<td>2.09</td>
<td>12.54</td>
</tr>
<tr>
<td>50</td>
<td>2.04</td>
<td>12.24</td>
</tr>
<tr>
<td>25</td>
<td>1.99</td>
<td>11.94</td>
</tr>
<tr>
<td>0</td>
<td>1.94</td>
<td>11.64</td>
</tr>
</tbody>
</table>
**BATTERY DIMENSIONS** (shown with DT)

- **MB**
  - Battery Height with Terminal in Inches (mm) 8.69 (221)
  - Torque Values: in-lb (Nm)
    - Bolt: 5/8 - 90 (10 - 11)

- **DT**
  - Battery Height with Terminal in Inches (mm) 9.37 (238)
  - Torque Values: in-lb (Nm)
    - Connected to Stud: 95 - 105 (11 - 12)
    - Connected to AP: 50 - 70 (6 - 8)
  - Bolt 5/16" - 18

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**SELF DISCHARGE VS. TIME**

- Estimation Purposes Only

**TROJAN 31-AGM PERFORMANCE**

**PERCENT CAPACITY VS. TEMPERATURE**

- 1. All dimensions are nominal.
- 2. Heat seal melt = 0.100"