S Series General Purpose Battery
S-12180 (12V18AH) AGM Sealed Lead Acid

Specifications

Nominal Voltage 12V
Nominal Capacity
18 AH/0.90A (20 hr. to 1.80V/cell @ 77°F/25°C)
17 AH/1.67A (10 hr. to 1.80V/cell @ 77°F/25°C)
17 AH/2.07A (8 hr. to 1.75V/cell @ 77°F/25°C)
Length 7.14 in. (181.5±2mm)
Width 3.03 in. (77±1mm)
Total Height (with Terminal) 6.59 in. (167.5±2mm)
Approx. Weight Approx. 11.9 lb. (5.4kg)
Tab Terminal T3
Container Material ABS
Max. Discharge Current 270A (5s)
Internal Resistance Approx. 16mΩ
Operating Temp. Range
Discharge: 5°F to 130°F (-15°C to 55°C)
Charge: 32°F to 104°F (0°C to 40°C)
Storage: 5°F to 104°F (-15°C to 40°C)
Nominal Operating Temp. 77±5°F (25±3°C)
Cycle Use
Initial Charging Current less than 5.4A Voltage 14.4V to 15.0V at 77°F (25°C) Temp. Coefficient -30mV/°C
Stand by Use
Float Voltage: 13.5V at 77°F (25°C)
Equalize Voltage: 14.1V at 77°F (25°C)
Capacity Affected by Temperature
104°F (40°C) 103%
77°F (25°C) 100%
32°F (0°C) 86%
Self Discharge SBS S Series batteries may be stored for up to 6 months at 77°F (25°C) and then a freshening charge is required. For higher temperatures the time interval will be shorter.

Constant Current Discharge (Amperes) at 77°F (25°C)

<table>
<thead>
<tr>
<th>F.V./Time</th>
<th>5 min</th>
<th>10 min</th>
<th>15 min</th>
<th>20 min</th>
<th>30 min</th>
<th>45 min</th>
<th>1 hr</th>
<th>2 hr</th>
<th>3 hr</th>
<th>4 hr</th>
<th>5 hr</th>
<th>6 hr</th>
<th>8 hr</th>
<th>10 hr</th>
<th>20 hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.85V/cell</td>
<td>34.3</td>
<td>22.8</td>
<td>18.8</td>
<td>16.5</td>
<td>13.5</td>
<td>10.6</td>
<td>8.75</td>
<td>5.37</td>
<td>4.04</td>
<td>3.33</td>
<td>2.82</td>
<td>2.45</td>
<td>1.94</td>
<td>1.62</td>
<td>0.891</td>
</tr>
<tr>
<td>1.80V/cell</td>
<td>41.0</td>
<td>27.3</td>
<td>22.1</td>
<td>18.9</td>
<td>15.1</td>
<td>11.6</td>
<td>9.47</td>
<td>5.76</td>
<td>4.32</td>
<td>3.54</td>
<td>2.97</td>
<td>2.55</td>
<td>2.02</td>
<td>1.67</td>
<td>0.900</td>
</tr>
<tr>
<td>1.75V/cell</td>
<td>49.2</td>
<td>31.3</td>
<td>24.6</td>
<td>20.9</td>
<td>16.2</td>
<td>12.4</td>
<td>10.0</td>
<td>6.00</td>
<td>4.46</td>
<td>3.62</td>
<td>3.05</td>
<td>2.63</td>
<td>2.07</td>
<td>1.72</td>
<td>0.909</td>
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<tr>
<td>1.70V/cell</td>
<td>57.1</td>
<td>35.0</td>
<td>27.1</td>
<td>22.6</td>
<td>17.3</td>
<td>13.0</td>
<td>10.4</td>
<td>6.21</td>
<td>4.58</td>
<td>3.71</td>
<td>3.12</td>
<td>2.68</td>
<td>2.10</td>
<td>1.74</td>
<td>0.925</td>
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<tr>
<td>1.65V/cell</td>
<td>63.0</td>
<td>37.9</td>
<td>29.0</td>
<td>24.2</td>
<td>18.2</td>
<td>13.6</td>
<td>10.8</td>
<td>6.41</td>
<td>4.70</td>
<td>3.80</td>
<td>3.19</td>
<td>2.73</td>
<td>2.14</td>
<td>1.76</td>
<td>0.938</td>
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<td>1.60V/cell</td>
<td>69.5</td>
<td>41.0</td>
<td>31.2</td>
<td>25.6</td>
<td>19.2</td>
<td>14.1</td>
<td>11.2</td>
<td>6.57</td>
<td>4.82</td>
<td>3.90</td>
<td>3.25</td>
<td>2.80</td>
<td>2.18</td>
<td>1.79</td>
<td>0.943</td>
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</tbody>
</table>

Constant Power Discharge (Watts/cell) at 77°F (25°C)

<table>
<thead>
<tr>
<th>F.V./Time</th>
<th>5 min</th>
<th>10 min</th>
<th>15 min</th>
<th>20 min</th>
<th>30 min</th>
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<th>4 hr</th>
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<th>6 hr</th>
<th>8 hr</th>
<th>10 hr</th>
<th>20 hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.85V/cell</td>
<td>63.9</td>
<td>42.6</td>
<td>35.3</td>
<td>31.1</td>
<td>25.7</td>
<td>20.3</td>
<td>16.9</td>
<td>10.4</td>
<td>7.88</td>
<td>6.50</td>
<td>5.53</td>
<td>4.81</td>
<td>3.64</td>
<td>3.21</td>
<td>1.77</td>
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<tr>
<td>1.80V/cell</td>
<td>74.2</td>
<td>50.1</td>
<td>40.9</td>
<td>35.4</td>
<td>28.5</td>
<td>22.1</td>
<td>18.2</td>
<td>11.1</td>
<td>8.37</td>
<td>6.88</td>
<td>5.79</td>
<td>5.00</td>
<td>3.97</td>
<td>3.31</td>
<td>1.78</td>
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<td>1.75V/cell</td>
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<td>56.8</td>
<td>45.0</td>
<td>38.7</td>
<td>30.3</td>
<td>23.5</td>
<td>19.1</td>
<td>11.5</td>
<td>8.62</td>
<td>7.02</td>
<td>5.93</td>
<td>5.12</td>
<td>4.07</td>
<td>3.39</td>
<td>1.80</td>
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<tr>
<td>1.70V/cell</td>
<td>100.9</td>
<td>62.6</td>
<td>49.1</td>
<td>41.7</td>
<td>32.2</td>
<td>24.5</td>
<td>19.9</td>
<td>11.9</td>
<td>8.82</td>
<td>7.17</td>
<td>6.05</td>
<td>5.23</td>
<td>4.12</td>
<td>3.44</td>
<td>1.83</td>
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<tr>
<td>1.65V/cell</td>
<td>109.7</td>
<td>66.8</td>
<td>52.0</td>
<td>44.2</td>
<td>33.6</td>
<td>25.4</td>
<td>20.4</td>
<td>12.2</td>
<td>9.03</td>
<td>7.33</td>
<td>6.16</td>
<td>5.31</td>
<td>4.18</td>
<td>3.47</td>
<td>1.85</td>
</tr>
<tr>
<td>1.60V/cell</td>
<td>118.8</td>
<td>71.3</td>
<td>54.9</td>
<td>45.9</td>
<td>34.9</td>
<td>26.2</td>
<td>21.1</td>
<td>12.5</td>
<td>9.20</td>
<td>7.49</td>
<td>6.28</td>
<td>5.42</td>
<td>4.26</td>
<td>3.53</td>
<td>1.86</td>
</tr>
</tbody>
</table>

Applications
- Telecommunications
- Utility
- Industrial
- Deep cycle
- All purpose
**Dimensions**

- **T3 Terminal**
  - **Unit:** mm [inches]
  - Dimensions: 18.5 [0.73] x 16.5 [0.65]

**Discharge Characteristics**

- Temperature: 25°C (77°F)
- Discharge Time vs. Terminal Voltage

**Float Charging Characteristics**

- Charging Voltage vs. Temperature
- Charging Current vs. Temperature

**Temperature Effects in Relation to Battery Capacity**

- Capacity (%) vs. Temperature (°C)
  - 0°C, 0.25CA, 0.5CA, 1.0CA, 2.0CA, 3.0CA

**Effect of Temperature on Long Term Float Life**

- Battery Temperature vs. Life expectancy (months)
- Charging Voltage: 2.25V/cell

**Cycle Life in Relation to Depth of Discharge**

- Testing condition:
  - Discharging: 0.17C (FV 1.7V/cell)
  - Charging: 0.25C max, voltage 2.45V/cell
- Capacity (%) vs. Depth of Discharge
  - 100%, 50%, 30%

**Self Discharge Characteristics**

- Ambient Temperature: 25°C (77°F)
- Storage Time (months) vs. Remaining Capacity
  - 0°C, 25°C, 40°C

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**Notes:**

- No supplementary charge required.
- Supplementary charge required before use if 100% capacity is required.
- Optional charging may be required.
- Supplementary charge may often be required.
- The battery should never be left standing til this is reached.