

## Specifications

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| Nominal Voltage |  | 12 V |
| :---: | :---: | :---: |
| Rated capacity (10 hour rate) | 60 Ah |  |
|  | Total Height | $179 \mathrm{~mm}(7.05$ inches $)$ |
|  | Height | $179 \mathrm{~mm}(7.05$ inches $)$ |
|  | Length | $259 \mathrm{~mm}(10.2$ inches $)$ |
|  | Width | $169 \mathrm{~mm} \mathrm{(6.65} \mathrm{inches)}$ |
| Approx. Weight |  | $18.2 \mathrm{Kg}(40.2 \mathrm{lbs})$ |
| Terminal |  | T 16 |
| Terminal Torque |  | 12 Nm |


| Characteristics |  |  |  |
| :---: | :---: | :---: | :---: |
| Capacity$25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ |  | 10 hour rate(6.0 A) <br> 5 hour rate(9.6 A ) <br> 1 hour rate ( 36 A) | 60 AH <br> 48 AH <br> 36 AH |
| Internal Resistance |  | Full charged Battery at $25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ | Approx <br> $7 \mathrm{~m} \Omega$ |
| Capacity affected by Temperature (20hour rate) |  | $\begin{aligned} & 40^{\circ} \mathrm{C}\left(104^{\circ} \mathrm{F}\right) \\ & 25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right) \\ & 0^{\circ} \mathrm{C}\left(32^{\circ} \mathrm{F}\right) \\ & -15^{\circ} \mathrm{C}\left(5^{\circ} \mathrm{F}\right) \end{aligned}$ | $\begin{gathered} 102 \% \\ 100 \% \\ 85 \% \\ 65 \% \end{gathered}$ |
| Self-Discharge at $25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ |  | Capacity after 3 month storage Capacity after 6 month storage Capacity after 12 month storage | $\begin{aligned} & \hline 91 \% \\ & 82 \% \\ & 64 \% \end{aligned}$ |
| Charge (constant Voltage) | Cycle Float | Initial Charging Current less than <br> Voltage 14.10-14.40V <br> Voltage $13.50-13.80 \mathrm{~V}$ | $15 \mathrm{~A} .$ |
| Design Life |  | 12 Years (float charging) |  |

- Outer Dimensions (mm)



## Terminal Type (mm)



T16

## - Construction

| Component | Positive <br> plate | Negative <br> plate | Container | Cover |
| :---: | :---: | :---: | :---: | :---: |
| Raw <br> material | Lead <br> dioxide | Lead | ABS <br> $(\mathrm{VO} / \mathrm{HB})$ | ABS <br> $(\mathrm{V} 0 / \mathrm{HB})$ |
| Component <br> Raw <br> material | Separator | Electrolyte | Safety <br> valve | Terminal |

High Sn positive plate, SiO2 Gel electrolyte.

- Product Compliance

IEC: 60896-21/22:2004;
GB/T: 19639-2014;
JIS: CB704-1:2006;
Manufacturer's Certificates

| ISO: | $9001: 2005$ |
| :--- | :--- |
| ISO: | $14001: 2015$ |
| OHSAS: | $18001: 2007$ |


| Constant Current(Amp) and Constant Power(Watt) Discharge Table at $25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time |  | 5 min | 10min | 15 min | 30min | 1h | 2h | 3h | 4h | 5h | 8h | 10h | 20h |
| 9.60 V | A | 192 | 127 | 102 | 68 | 36 | 21 | 15 | 12 | 10 | 7 | 6 | 3 |
|  | W | 1983 | 1352 | 1094 | 735 | 389 | 231 | 172 | 135 | 113 | 80 | 73 | 40 |
| 10.20V | A | 186 | 114 | 96 | 65 | 34 | 20 | 15 | 12 | 10 | 7 | 6 | 3 |
|  | W | 1988 | 1276 | 1076 | 734 | 383 | 231 | 174 | 136 | 113 | 80 | 73 | 39 |
| 10.50V | A | 180 | 102 | 84 | 61 | 33 | 20 | 15 | 12 | 10 | 7 | 6 | 3 |
|  | W | 1966 | 1162 | 959 | 704 | 379 | 227 | 171 | 135 | 113 | 80 | 72 | 39 |
| 10.80V | A | 174 | 96 | 78 | 56 | 32 | 19 | 14 | 11 | 9 | 7 | 6 | 3 |
|  | W | 1947 | 1111 | 900 | 653 | 369 | 223 | 168 | 134 | 111 | 78 | 71 | 39 |
| 11.10V | A | 168 | 90 | 72 | 50 | 31 | 19 | 14 | 11 | 9 | 6 | 6 | 3 |
|  | W | 1902 | 1045 | 839 | 590 | 360 | 220 | 164 | 131 | 109 | 77 | 69 | 37 |

## ALPHA HOUSE

intelligent power


- Discharge Characteristics Curve


Floating Life On Temperature



Cycle Life In Relation To Depth Of Discharge


- The Relationship of OCV and Capacity $\left(25^{\circ} \mathrm{C}\right)$



## Self-Discharge Characteristics



- Temperature Effects On Capacity


Disclaimer: The manufacturer reserves the right to amend and/or vary the specifications and parameters of the product and apply updates accordingly at any time. It is the sole responsibility of the buyer and user of the product to ensure all applicable product specifications referred to are valid and up to date. All product specifications are available upon request. Batteries must be installed in accordance with standard BS EN IEC 62485-2:2018, and in accordance with manufacturer's guidelines. (available upon request)

