## Power safe OPzV

The OPzV series adopts an Immobilized Gel and Tubular Positive Plate technology. It offers high reliability and stable performance. By using die-casted positive grid and patented active material formula, it exceeds the DIN standard values and offer 20+ years design life in float service. It is very suitable for cyclic use under extreme operating conditions. This series is recommended for telecom
 outdoor applications, renewable energy systems and other harsh environment applications.

## - SPECIFICATIONS

| Nominal Voltage (V) | 2 |
| :---: | :---: |
| Designed Floating Life( $20^{\circ} \mathrm{C}$ ) | 20+ Years |
| Terminal Type | Female Copper Insert M8 (torque:20N.m) |
| Max. Charge Current | 0.2 CA |
| Max. Discharge Current (5S) | 1.5 CA |
| Self Discharge | Approx. $2 \%$ per month @ $20^{\circ} \mathrm{C}$ |
| Ambient Temperature | Discharge: <br> Charge: $-40 \sim 65^{\circ} \mathrm{C}$ <br> Storage: $\quad-25 \sim 45^{\circ} \mathrm{C}$ |
| Float Charge Voltage ( $20 \sim 25^{\circ} \mathrm{C}$ ) | 2.25-2.29V (-3mV/ ${ }^{\circ} \mathrm{C} /$ cell $)$ |
| Equalize Charge Voltage ( $20 \sim 25^{\circ} \mathrm{C}$ ) | 2.35-2.40V ( $-5 \mathrm{mV} /{ }^{\circ} \mathrm{C} /$ cell $)$ |
| Container Material | ABS(UL94-V0 optional) |



## - DIMENSIONS



## - Power safe OPzV

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Long time discharge capacity for Solar \& Wind applications

| Capacity | $\mathrm{C}_{20}$ <br> $(\mathrm{Ah})$ | $\mathrm{C}_{24}$ <br> $(\mathrm{Ah})$ | $\mathrm{C}_{48}$ <br> $(\mathrm{Ah})$ | $\mathrm{C}_{72}$ <br> $(\mathrm{Ah})$ | $\mathrm{C}_{100}$ <br> $(\mathrm{Ah})$ | $\mathrm{C}_{120}$ <br> $(\mathrm{Ah})$ | $\mathrm{C}_{240}$ <br> $(\mathrm{Ah})$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Capacity coefficient C | 1.076 | 1.088 | 1.212 | 1.248 | 1.275 | 1.264 | 1.28 |  |
| such as 2500Ah | 2690 | 2720 | 3030 | 3120 | 3188 | 3160 | 3200 |  |
| Final Voltage | 1.80 V | 1.85 V |  |  |  |  |  |  |

Solar \& Wind applications parameters settings

| Over voltage disconnect: | $2.45 \pm 0.01 \mathrm{~V} /$ cell $@ 20 \sim 25^{\circ} \mathrm{C}$ |
| :--- | :--- |
| Regulation/equalize voltage: | $2.40 \pm 0.01 \mathrm{~V} / \mathrm{cell}$ @ $20 \sim 25^{\circ} \mathrm{C}$ |
| Array roconnection voltage: | $2.25 \pm 0.005 \mathrm{~V} /$ cell @ $20 \sim 25^{\circ} \mathrm{C}$ |
| Float voltage setting: | $2.27 \pm 0.005 \mathrm{~V} /$ cell @ $20 \sim 25^{\circ} \mathrm{C}$ |
| Low voltage alarm voltage: | $1.95 \pm 0.005 \mathrm{~V} /$ cell @ $20 \sim 25^{\circ} \mathrm{C}$ |
| Low voltage disconnect: | $1.90 \pm 0.005 \mathrm{~V} /$ cell @ $20 \sim 25^{\circ} \mathrm{C}$ |
| Load reconnect voltage: | $2.09 \pm 0.01 \mathrm{~V} /$ cell @ $20 \sim 25^{\circ} \mathrm{C}$ |
| Temp. compensate coefficienty: | $-5 \mathrm{mV} /$ cell $/{ }^{\circ} \mathrm{C}$ |

## - General Specifications

|  |  |  | Nominal <br> Capacity (Ah) <br> 10 hr rate <br> to 1.80 V <br> @20 | Nominal Dimensions |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PowerSafe ${ }^{\circledR} \mathrm{OPzV}$ Cell Types | Nominal Voltage ( V) | Terminal Pairs |  | Length mm | Width mm | Height mm | Total Height mm | Weight (kg) | Short Circuit Current(A) | Internal Resistance ( $\mathrm{m} \Omega$ ) |
| 4 OPzV 200 | 2 | 1 | 200 | 103 | 206 | 354 | 390 | 18 | 2195 | 0.95 |
| 5 OPzV 250 | 2 | 1 | 250 | 124 | 206 | 354 | 390 | 22.5 | 2737 | 0.76 |
| 6 OPzV 300 | 2 | 1 | 300 | 145 | 206 | 354 | 390 | 25 | 3175 | 0.66 |
| 5 OPzV 350 | 2 | 1 | 350 | 124 | 206 | 470 | 506 | 28 | 3410 | 0.61 |
| 6 OPzV 420 | 2 | 1 | 420 | 145 | 206 | 470 | 506 | 32 | 4043 | 0.51 |
| 7 OPzV 490 | 2 | 1 | 490 | 166 | 206 | 470 | 506 | 38 | 4607 | 0.45 |
| 6 OPzV 600 | 2 | 1 | 600 | 145 | 206 | 645 | 681 | 46 | 3796 | 0.55 |
| 8 OPzV 800 | 2 | 2 | 800 | 191 | 210 | 645 | 681 | 65 | 5200 | 0.40 |
| 10 OPzV 1000 | 2 | 2 | 1000 | 233 | 210 | 645 | 681 | 74 | 6460 | 0.32 |
| 12 OPzV 1200 | 2 | 2 | 1200 | 275 | 210 | 645 | 681 | 93 | 7675 | 0.27 |
| 12 OPzV 1500 | 2 | 2 | 1500 | 275 | 210 | 795 | 831 | 112 | 7510 | 0.28 |
| 16 OPzV 2000 | 2 | 3 | 2000 | 399 | 212 | 772 | 807 | 152 | 10048 | 0.21 |
| 20 OPzV 2500 | 2 | 4 | 2500 | 487 | 212 | 772 | 807 | 187 | 12606 | 0.17 |
| 24 OPzV 3000 | 2 | 4 | 3000 | 576 | 212 | 772 | 807 | 225 | 14964 | 0.14 |

Notes:
The electrical values shown in the table relate to loadings from a fully charged condition at ambient temperature of $+20^{\circ} \mathrm{C}$.
Height shown is overall height, including connectors and shrouds.
FINAL VOLTAGE SETTINGS RECOMMENDED ACCORDING TO THE DISCHARGE CURRENT

| Discharge Current $\mathrm{I}(\mathrm{A})$ | $\mathrm{I}<0.05 \mathrm{C}$ | $0.05 \mathrm{C} \leq \mathrm{I}<0.08 \mathrm{C}$ | $0.08 \mathrm{C} \leq \mathrm{I}<0.2 \mathrm{C}$ | $0.2 \mathrm{C} \leq \mathrm{I}<0.6 \mathrm{C}$ | $0.6 \mathrm{C} \leq \mathrm{I}<1.0 \mathrm{C}$ | $1 \mathrm{C} \leq \mathrm{I} \leq 2 \mathrm{C}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Final of Voltage | $\geq 1.90 \mathrm{~V}$ | $\geq 1.85 \mathrm{~V}$ | $\geq 1.80 \mathrm{~V}$ | $\geq 1.75 \mathrm{~V}$ | $\geq 1.7 \mathrm{~V}$ | $\geq 1.6 \mathrm{~V}$ |



