

## Tubular Gel Battery

2 Volt 490 AH @ 10-hr. rate

2 Volt 619.4 AH @ 100-hr. rate

Rechargeable Sealed Lead Acid Battery

Designed for Cyclic, Standby, and Solar Applications



# PSOPzV490 2v490AH



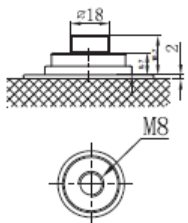
### Features

- Tubular plate and Gel electrolyte for increased performance, service life and reliability
- Gel electrolyte and spill proof construction allows safe operation and maintenance free
- Excellent cyclic performance
- Enhanced overcharge endurance
- Excellent recovery from over discharge situations
- Perfect for applications including
  - Solar / Wind energy storage
  - Telecommunications
  - UPS and critical power
  - Railway signaling
  - Utilities
- Rugged impact resistant ABS case
- Certified for transport by air, D.O.T., I.A.T.A., F.A.A. and C.A.B.
- 20 year design life in float applications

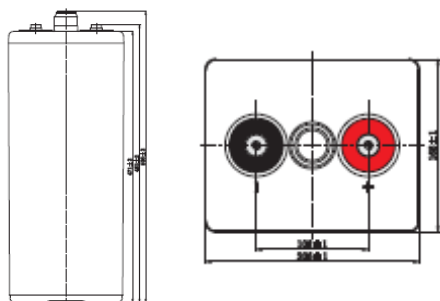
### Terminals

(mm)

- T11: Threaded insert  
8 mm stud fastener



### Physical Dimensions: in (mm)



L: 6.54 (166) W: 8.11 (206) H: 18.5 (471) TH: 19.9 (506)

Tolerances are +/- 0.11 in. (+/- 3mm) for all dimensions. All data subject to change without notice.

### Performance Specifications

**Nominal Voltage** ..... 2 volts

#### Nominal Capacity

100-hr. (1.80 volts) .....	619.4AH
20-hr. (1.80 volts) .....	523.8AH
10-hr. (1.80 volts) .....	490.0 AH
5-hr. (1.75 volts).....	426.5 AH
3-hr. (1.75 volts).....	378.0 AH
1-hr. (1.60 volts) .....	279.0 AH

**Approximate Weight** ..... 86 lbs. (39.0 kg)

**Internal Resistance** (approx.) .....0.73 milliohms

**Max. Discharge Current** (approx.) ..... 3920A (5s)

**Shelf Life** ..... <2% per month at 68 °F (20 °C)

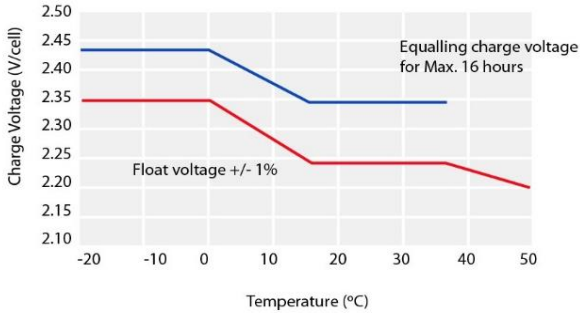
#### Operating Temperature Range

Charge ..... 32 °F (0 °C) to 104 °F (40 °C)

Discharge ..... -4 °F (-20 °C) to 131 °F (55 °C)

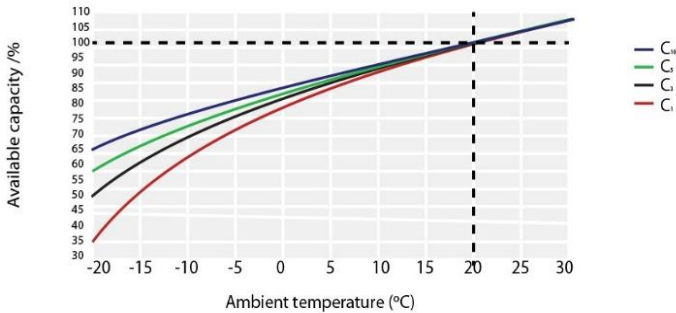
**Case** ..... ABS Plastic

TEMPERATURE EFFECTS IN RELATION TO CHARGE VOLTAGE



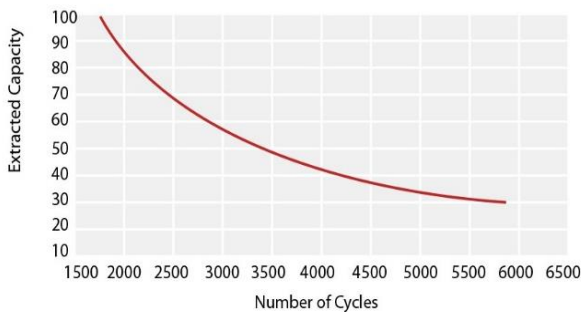
For continuous charging we recommend a voltage of 2.25V  
The charging voltage must be compensated to the curve for a continuously different battery ambient temperature

TEMPERATURE EFFECTS IN RELATION TO BATTERY CAPACITY

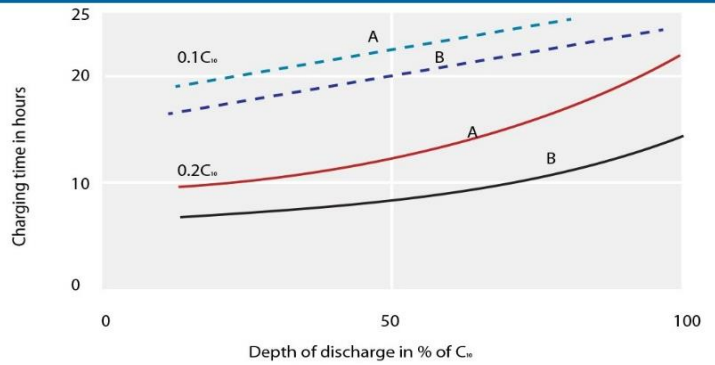


CYCLE LIFE IN RELATION TO DEPTH OF DISCHARGE

Acc. to IEC 896 (25°C/77°F)

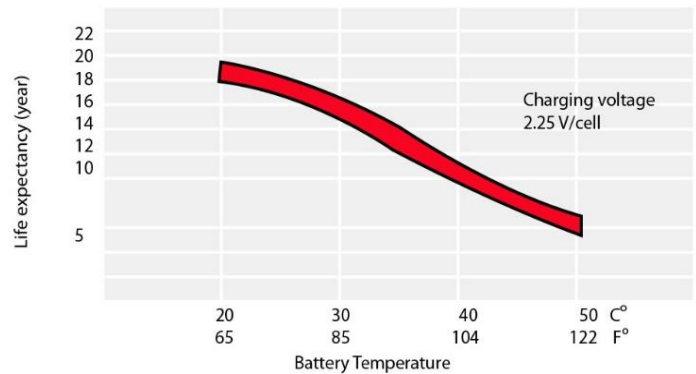


CHARGING CHARACTERISTICS



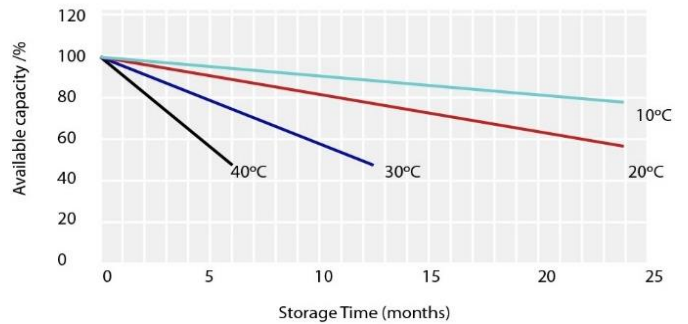
Charge voltage  
A - 2.25 V/cell  
B - 2.40 V/cell  
--- State of charge 100%  
— State of charge 90%

EFFECT OF TEMPERATURE ON LONG TERM FLOAT LIFE



GENERAL RELATION OF CAPACITY VS STORAGE TIME

Residual average capacity in % of C<sub>10</sub>



Charging

**Cycle Applications:** Limit initial current to less than 122.5A. Charge until battery voltage (under charge) reaches 2.40 to 2.50 volts at 68°F (20°C). Coefficient - 5mV/°C

**“Float” or “Stand-By” Service:** Hold battery across constant voltage source of 2.25 to 2.30 volts continuously. When held at this voltage, the battery will seek its own current level and maintain itself in a fully charged condition.

**Note:** Due to the self-discharge characteristics of this type of battery, it is imperative that they be charged within 6 months of storage, otherwise permanent loss of capacity might occur as a result of sulfation.

Chargers

Power-Sonic offers a wide range of chargers suitable for batteries up to 100AH. Please refer to the Charger Selection Guide in our specification sheets for “C-Series Switch Mode Chargers” and “Transformer Type A and F Series”. Please contact our Technical department for advice if you have difficulty in locating suitable models.

Further Information

Please refer to our website [www.power-sonic.com](http://www.power-sonic.com) for a complete range of useful downloads, such as product catalogs, material safety data sheets (MSDS), ISO certification, etc.

Contact Information



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