# PS-610

**General Purpose SLA**
**PS Series - General Purpose**

Versatile sealed lead acid batteries specifically engineered for use in general purpose float and light cyclic applications including fire and security systems, emergency lighting, UPS, toys and medical devices.

## Performance Specs

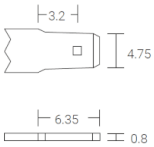
| | |
|---|---|
| **Nominal Voltage** | 6.0 Volts, (3.0 cells) |
| **Nominal Capacity** | |
| 20-hr. (0.05A to 5.25 Volts) | 1.0Ah |
| 10-hr. (0.1A to 5.25 Volts) | 0.95Ah |
| 5-hr. (0.18A to 5.1 Volts) | 0.9Ah |
| 1-hr. (0.64A to 4.8 Volts) | 0.64Ah |
| **Approximate Weight** | 0.55lbs, (0.25kg) |
| **Dimensions**<br>+/- 0.08 in. (+/- 2mm) for length, width, and height dimensions | **L:** 2.01in, 51.0mm<br>**W:** 1.65in, 42.0mm<br>**H:** 2.01in, 51.0mm<br>**TH:** 2.24in, 57.0mm |
| **Internal Resistance (approx.) mΩ** | 60.0mΩ |
| **Max Short Circuit Discharge Current** | 28.0A |
| **Operating Temperature Range** | |
| Charge | –4°F (–20°C) to 104°F (40°C) |
| Discharge | 5°F (–15°C) to 122°F (50°C) |
| **Case** | ABS (UL94 HB or V-0 optional) |
| **Recommended Power-Sonic Charger** | |

## Configuration Options

- PS-610 F1

## Available Terminals (mm)

**F1**
**FASTON**
0.187" x 0.032" quick disconnect tabs.

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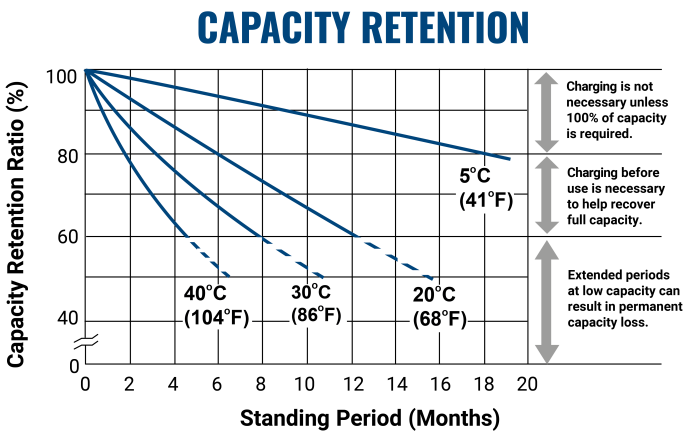
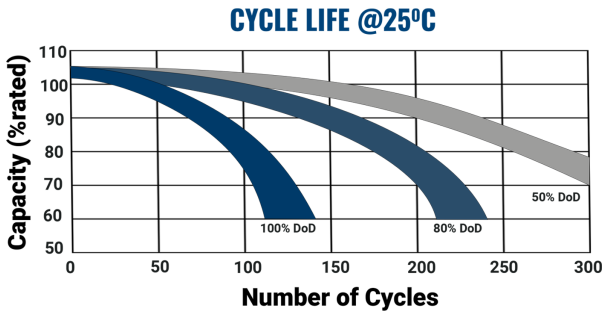
# Graphs

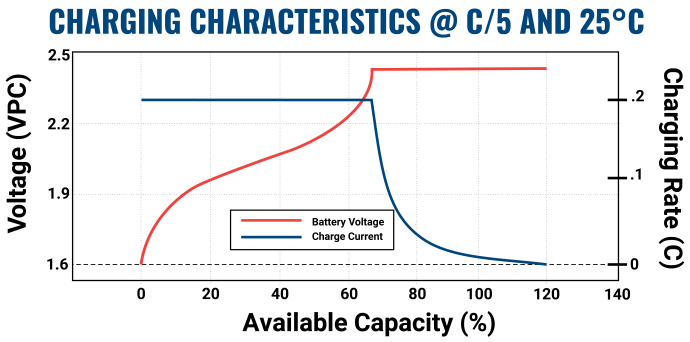
## Capacity Retention SLA



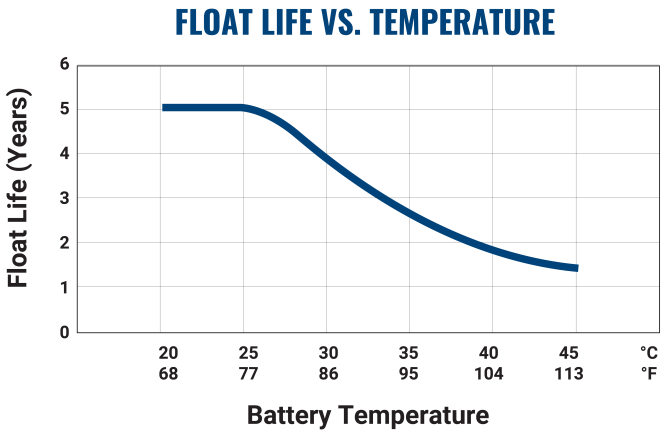

## PS Cycle Life




## SLA Charging




## SLA Float Life 5YR




## Constant Current

| VoltageOverTime | 5min | 10min | 15min | 20min | 30min | 45min | 1h | 1.5h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.60V/cell | 3.63 | 2.14 | 1.69 | 1.32 | 0.964 | 0.71 | 0.642 | 0.468 | 0.37 | 0.269 | 0.216 | 0.183 | 0.156 | 0.123 | 0.097 | 0.051 |
| 1.65V/cell | 3.46 | 2.09 | 1.66 | 1.3 | 0.949 | 0.695 | 0.632 | 0.461 | 0.365 | 0.266 | 0.213 | 0.181 | 0.155 | 0.122 | 0.096 | 0.051 |
| 1.67V/cell | 3.43 | 2.06 | 1.64 | 1.29 | 0.939 | 0.693 | 0.628 | 0.459 | 0.363 | 0.264 | 0.212 | 0.18 | 0.154 | 0.121 | 0.096 | 0.051 |
| 1.70V/cell | 3.31 | 2.0 | 1.6 | 1.26 | 0.922 | 0.682 | 0.618 | 0.453 | 0.359 | 0.262 | 0.21 | 0.179 | 0.153 | 0.12 | 0.096 | 0.05 |
| 1.75V/cell | 3.16 | 1.92 | 1.55 | 1.22 | 0.9 | 0.667 | 0.607 | 0.445 | 0.354 | 0.258 | 0.207 | 0.176 | 0.151 | 0.119 | 0.095 | 0.05 |
| 1.80V/cell | 3.0 | 1.85 | 1.5 | 1.19 | 0.877 | 0.653 | 0.595 | 0.437 | 0.347 | 0.254 | 0.205 | 0.174 | 0.149 | 0.118 | 0.094 | 0.049 |
| 1.85V/cell | 2.79 | 1.74 | 1.43 | 1.14 | 0.85 | 0.636 | 0.581 | 0.428 | 0.341 | 0.25 | 0.202 | 0.172 | 0.147 | 0.116 | 0.092 | 0.049 |

## Constant Power

| VoltageOverTime | 5min | 10min | 15min | 20min | 30min | 45min | 1h | 1.5h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.60V/cell | 6.49 | 3.92 | 3.15 | 2.49 | 1.83 | 1.35 | 1.23 | 0.901 | 0.715 | 0.523 | 0.422 | 0.359 | 0.307 | 0.242 | 0.193 | 0.103 |
| 1.65V/cell | 6.31 | 3.85 | 3.1 | 2.44 | 1.8 | 1.34 | 1.22 | 0.891 | 0.709 | 0.518 | 0.418 | 0.356 | 0.305 | 0.24 | 0.192 | 0.102 |
| 1.67V/cell | 6.24 | 3.81 | 3.07 | 2.43 | 1.79 | 1.33 | 1.21 | 0.886 | 0.704 | 0.515 | 0.416 | 0.354 | 0.304 | 0.239 | 0.191 | 0.102 |
| 1.70V/cell | 6.08 | 3.73 | 3.0 | 2.39 | 1.76 | 1.31 | 1.19 | 0.877 | 0.697 | 0.511 | 0.412 | 0.352 | 0.301 | 0.237 | 0.189 | 0.101 |
| 1.75V/cell | 5.86 | 3.61 | 2.92 | 2.33 | 1.72 | 1.28 | 1.17 | 0.864 | 0.689 | 0.504 | 0.407 | 0.347 | 0.298 | 0.235 | 0.188 | 0.1 |
| 1.80V/cell | 5.62 | 3.5 | 2.85 | 2.28 | 1.69 | 1.26 | 1.15 | 0.851 | 0.679 | 0.498 | 0.403 | 0.343 | 0.295 | 0.233 | 0.186 | 0.099 |
| 1.85V/cell | 5.28 | 3.32 | 2.73 | 2.21 | 1.64 | 1.23 | 1.13 | 0.836 | 0.668 | 0.491 | 0.398 | 0.339 | 0.291 | 0.23 | 0.184 | 0.098 |

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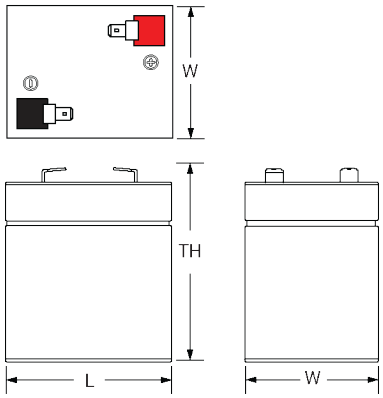
## Charging

Cycle Applications: Apply constant voltage charge at 2.35VPC – 2.45VPC (14.1 to 14.7 volts for 12V Monobloc) at 20°C. The initial charging current should be set at less than C/5 Amps. Switch to float charge when the current falls to a 3% capacity rate to avoid overcharging. Stand-By or "Float" Service: Apply constant voltage charge of 2.25VPC – 2.30VPC (13.5 to 13.8 volts for 12V Monobloc) at 20°C. When held at this voltage, the battery will seek its own current level and maintain itself in a fully charged condition. Temperature Compensation: Charging voltage for both cyclic and stand-by applications should be regulated in relation to ambient temperature. As temperature rises, charging voltage should be reduced to prevent overcharge and increased as the temperature falls to avoid undercharge. For further charging information, including temperature compensation factors, see the Power-Sonic Technical Manual.

## Engineering Drawing




## For Further Information

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

## Approvals

CE marking confirms a product meets EU safety, health, and environmental protection standards for battery and energy systems.

Conflict-free mineral certification ensuring ethical sourcing and transparent supply chain for responsible production.

Extended mineral reporting meets global supply chain transparency standards for responsible and ethical sourcing practices.

IEC 60896 standard ensures stationary lead-acid batteries meet safety, performance, and float charge application requirements.

ISO 9001:2015 certification ensures consistent quality management and manufacturing standards for energy storage products.

PFAS-free certification verifying environmentally responsible manufacturing of batteries and energy storage technologies.

California Proposition 65 compliant, providing consumer safety through reduced chemical exposure in battery manufacturing.

REACH compliant with EU chemical safety standards ensuring restricted substances are controlled in all battery components.

RoHS compliance ensures restriction of hazardous substances in electrical, electronic, and battery-powered products.

Sealed lead-acid batteries classified UN2800 non-spillable, certified safe for air, sea, and ground transport worldwide.

SVHC compliant with EU REACH regulations for Substances of Very High Concern used in electrical and energy storage products.

U.S. EPA TSCA compliance ensures toxic substances are regulated for safe manufacturing of batteries and electronic components.

UL 1989 certified for valve-regulated and vented lead-acid batteries used in UPS, emergency, and backup power applications.

VdS certified for tested reliability, quality, and safety of batteries in alarm, security, and backup power systems.

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