



PLHR-12405FT

Pure Lead High Rate  
PLHR - Pure Lead High Rate



Thin Plate Pure Lead batteries designed for Data Centers and UPS racks. High energy density and robust grid design enable reliable backup with streamlined service access for Data Center applications.

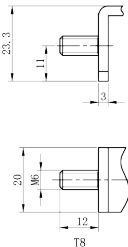
Configuration Options

- PLHR-12405FT FR M6

Performance Specs

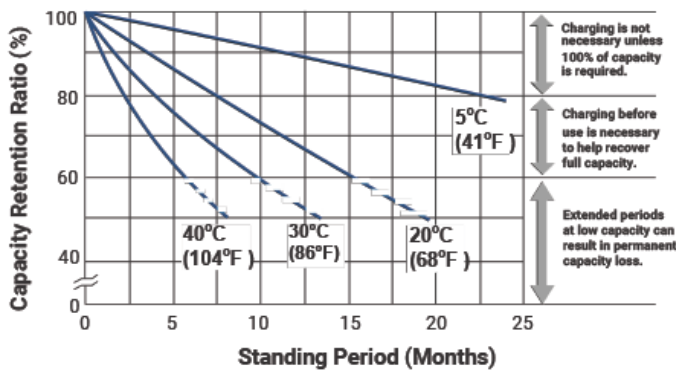
|                                                                 |                                                                                         |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Nominal Voltage                                                 | 12.0 Volts, (6.0 cells)                                                                 |
| Nominal Capacity                                                |                                                                                         |
| 20-hr. (5.2A to 10.8 Volts)                                     | 104.0Ah                                                                                 |
| 10-hr. (10.0A to 10.8 Volts)                                    | 100.0Ah                                                                                 |
| 5-hr. (19.4A to 10.2 Volts)                                     | 97.0Ah                                                                                  |
| 1-hr. (76.5A to 9.6 Volts)                                      | 76.5Ah                                                                                  |
| Approximate Weight                                              | 69.42lbs, (31.5kg)                                                                      |
| Dimensions                                                      |                                                                                         |
| +/- 0.08 in. (+/- 2mm) for length, width, and height dimensions | L: 15.96in, 405.4mm<br>W: 4.25in, 108.0mm<br>H: 11.3in, 287.0mm<br>TH: 11.29in, 287.0mm |
| Internal Resistance (approx.) mΩ                                | 4.4mΩ                                                                                   |
| Max Short Circuit Discharge Current                             | 2200.0A                                                                                 |
| Operating Temperature Range                                     |                                                                                         |
| Charge                                                          | -4°F (-20°C) to 129°F (54°C)                                                            |
| Discharge                                                       | -40°F (-40°C) to 149°F (65°C)                                                           |
| Case                                                            | ABS+PC Plastic Rated to UL94:V0                                                         |
| Recommended Power-Sonic Charger                                 | PSC-1212000ACX                                                                          |

Available Terminals (mm)

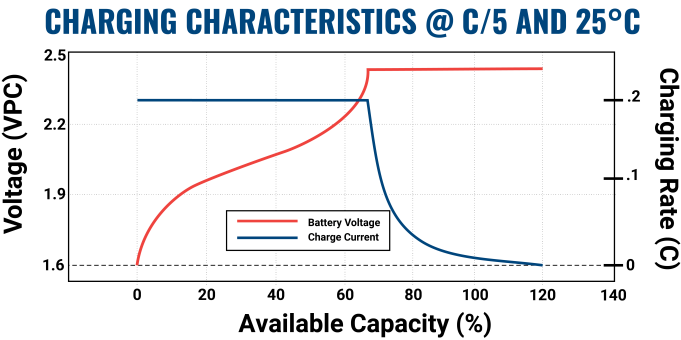


Graphs

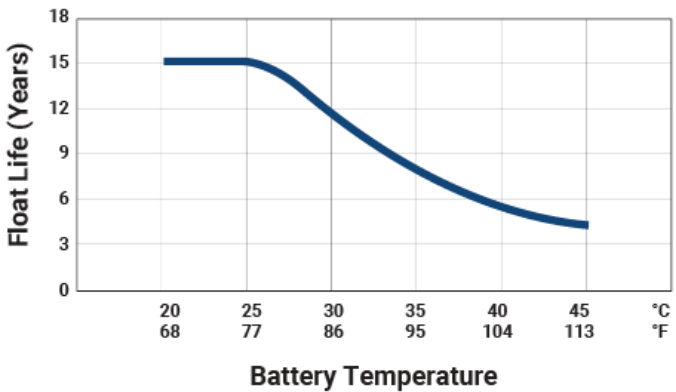
Capacity Retention TPPL



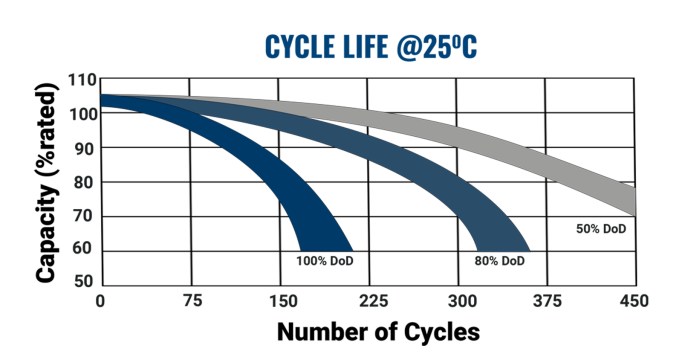
SLA Charging



SLA Float Life 20YR



TPPL Cycle Life



Constant Current

| VoltageOverTime | 5min  | 10min | 15min | 20min | 30min | 45min | 1h   | 1.5h | 2h   | 3h   | 4h   | 5h   | 6h   | 8h   | 10h   | 20h  |
|-----------------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|-------|------|
| 1.60V/cell      | 410.0 | 279.4 | 225.0 | 185.1 | 135.0 | 93.9  | 76.5 | 54.8 | 44.0 | 29.9 | 24.5 | 19.8 | 16.6 | 12.7 | 10.4  | 5.51 |
| 1.65V/cell      | 398.4 | 276.7 | 218.0 | 180.6 | 133.3 | 92.2  | 75.7 | 54.0 | 43.2 | 29.6 | 24.4 | 19.7 | 16.6 | 12.7 | 10.34 | 5.46 |
| 1.67V/cell      | 390.0 | 274.8 | 213.0 | 177.3 | 132.0 | 91.0  | 75.1 | 53.4 | 42.6 | 29.3 | 24.3 | 19.6 | 16.5 | 12.7 | 10.3  | 5.42 |
| 1.70V/cell      | 373.3 | 263.7 | 207.5 | 171.6 | 126.6 | 88.2  | 72.9 | 52.0 | 41.6 | 28.0 | 24.0 | 19.4 | 16.3 | 12.6 | 10.3  | 5.38 |
| 1.75V/cell      | 350.9 | 255.6 | 200.4 | 166.2 | 122.4 | 86.0  | 71.4 | 51.1 | 40.9 | 27.8 | 23.6 | 19.2 | 16.2 | 12.6 | 10.2  | 5.3  |
| 1.80V/cell      | 329.6 | 242.8 | 193.4 | 159.9 | 118.4 | 83.9  | 69.7 | 49.7 | 39.7 | 27.4 | 23.2 | 18.9 | 15.9 | 12.3 | 10.0  | 5.24 |
| 1.85V/cell      | 303.6 | 228.6 | 184.3 | 153.9 | 113.6 | 80.3  | 66.4 | 47.5 | 38.0 | 26.2 | 22.3 | 18.3 | 15.5 | 12.0 | 9.81  | 5.12 |

Constant Power

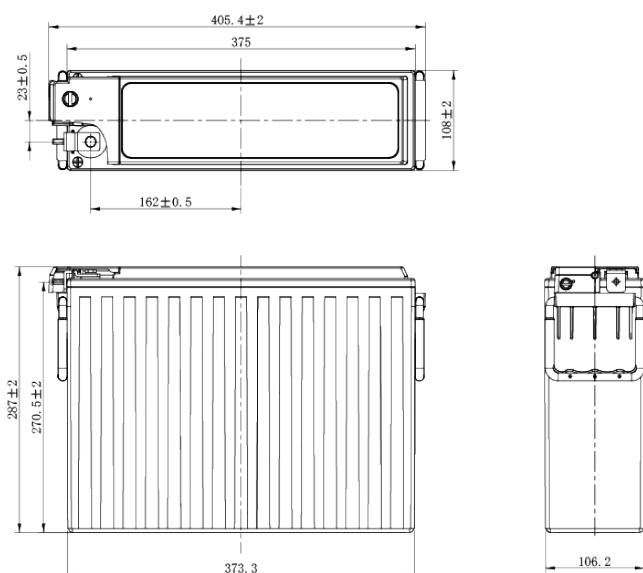
| VoltageOverTime | 10min | 15min | 20min | 30min | 45min | 1h    | 1.5h  | 2h   | 3h   | 4h   | 5h   | 6h   | 8h   | 10h  | 20h  |
|-----------------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|
| 1.60V/cell      | 506.1 | 410.0 | 343.9 | 250.0 | 179.3 | 147.2 | 106.0 | 85.4 | 59.6 | 50.0 | 40.3 | 33.7 | 25.5 | 20.5 | 11.2 |
| 1.65V/cell      | 503.3 | 407.1 | 337.6 | 247.1 | 177.9 | 146.4 | 105.1 | 84.4 | 59.1 | 49.6 | 40.0 | 33.5 | 25.5 | 20.5 | 11.1 |
| 1.67V/cell      | 501.2 | 405.0 | 333.0 | 245.0 | 176.8 | 145.8 | 104.4 | 83.7 | 58.8 | 49.3 | 39.8 | 33.4 | 25.5 | 20.5 | 11.0 |
| 1.70V/cell      | 491.6 | 392.2 | 325.7 | 242.5 | 170.9 | 142.1 | 102.0 | 81.9 | 57.6 | 48.4 | 39.3 | 33.1 | 25.4 | 20.4 | 10.9 |
| 1.75V/cell      | 480.1 | 382.6 | 318.4 | 236.4 | 167.7 | 140.0 | 100.5 | 80.8 | 56.0 | 47.9 | 38.8 | 32.6 | 24.9 | 20.4 | 10.7 |
| 1.80V/cell      | 461.2 | 372.9 | 309.2 | 230.6 | 164.9 | 137.4 | 98.4  | 78.9 | 55.3 | 47.0 | 38.4 | 32.2 | 24.6 | 20.3 | 10.7 |
| 1.85V/cell      | 438.9 | 357.7 | 299.5 | 222.7 | 158.6 | 131.7 | 94.4  | 75.8 | 52.8 | 45.4 | 37.3 | 31.4 | 24.3 | 20.1 | 10.5 |



## 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](http://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.



UL Recognized mark certifies safety-tested components for electrical reliability in battery and energy storage systems.