

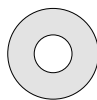
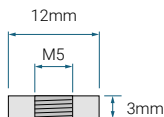
# PHR-12100

12V 27.0 AH @ 20-hr.  
93 W/Cell @ 15-min.

Rechargeable Sealed Lead Acid Battery  
PHR – High-Rate Series

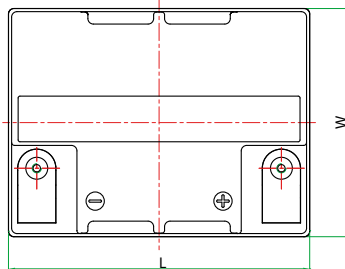
### TERMINALS: (mm)

T12: Threaded insert with 5mm stud fastener



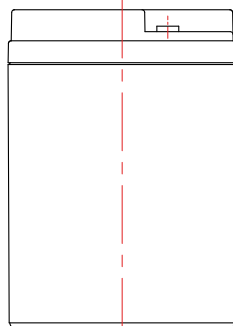
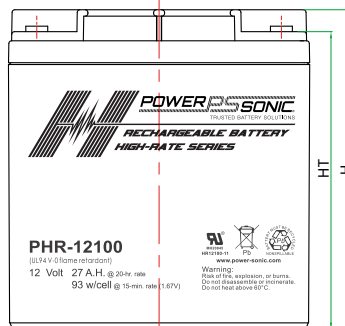
Torque: 2.0~3.0 Nxm

### DIMENSIONS: inch (mm)



**L:** 6.46 (164)  
**W:** 4.92 (125)  
**H:** 6.89 (175)  
**HT:** 6.50 (165)

Tolerances are +/- 0.04 in. (+/- 1mm) and +/- 0.08 in. (+/- 2mm) for height dimensions. All data subject to change without notice.



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## FEATURES

- Superb high-rate discharge characteristics that ensure reliable performance in UPS applications for up to 10 years
- Specifically designed for UPS and critical power backup applications
- Valve regulated, maintenance free spill proof construction
- Precision plate pasting for higher consistency with 100% load testing to ensure uniform capacity
- Patented dual-paste process for enhanced active material bonding and computer guided volumetric electrolyte control for precision filling
- Rugged vibration and impact resistant ABS case and cover flame retardant to UL94-V0

## APPROVALS

- Approved for transport by air. D.O.T., I.A.T.A., F.A.A. and C.A.B. certified
- U.L recognized
- ISO9001:2015 – Quality management systems

## PERFORMANCE SPECIFICATIONS

|  |   |
|--|---|
| <b>Nominal Voltage</b>                                   | 12 volts (6 cells)                      |
| <b>Nominal Power (15 min.)</b>                           | 93 W/Cell                               |
| <b>Rated Capacity</b>                                    |   |
| 20-hr. (1.35A to 10.80 volts)                            | 27.0 AH                                 |
| 10-hr. (2.66A to 10.50 volts)                            | 26.6 AH                                 |
| 8-hr. (3.22A to 10.50 volts)                             | 25.8 AH                                 |
| <b>Approximate Weight</b>                                | 20.9 lbs. (9.48 kg)                     |
| <b>Internal Resistance (approx.)</b>                     | 10.0 milliohms                          |
| <b>Max Discharge Current (5 Sec.)</b>                    | 540 amperes                             |
| <b>Shelf Life (% of nominal capacity at 68°F (20°C))</b> |   |
| 1 Month  | 97%                                     |
| 3 Month  | 91%                                     |
| 6 Month  | 83%                                     |
| <b>Operating Temperature Range</b>                       |   |
| Charge   | 5°F (-15°C) to 122°F (50°C)             |
| Discharge  | -4°F (-20°C) to 140°F (60°C)            |
| <b>Case and Cover</b>                                    | Flame Retardant ABS Plastic<br>UL94-V-0 |
| <b>Power Sonic Chargers</b>                              | PSC-124000-PC<br>PSC-243500-PC          |

## PHR-12100 12V 27.0 AH @ 20-hr. 93 W/Cell @ 15-min.

Rechargeable Sealed Lead Acid Battery  
PHR – High-Rate Series

### CONSTANT CURRENT DISCHARGE (AMPERES) AT 25°C (77°F)

| F.V/Time   | 5min | 10min | 15min | 20min | 30min | 45min | 1h   | 2h    | 3h   | 4h   | 5h   | 6h   | 8h   | 10h  | 20h  |
|------------|------|-------|-------|-------|-------|-------|------|-------|------|------|------|------|------|------|------|
| 1.85V/cell | 62.5 | 47.7  | 39.0  | 33.0  | 25.7  | 19.5  | 15.8 | 9.40  | 6.86 | 5.44 | 4.51 | 3.88 | 3.05 | 2.54 | 1.32 |
| 1.80V/cell | 71.2 | 52.8  | 42.2  | 34.9  | 27.2  | 20.6  | 16.8 | 9.88  | 7.12 | 5.61 | 4.67 | 4.01 | 3.15 | 2.61 | 1.35 |
| 1.75V/cell | 81.1 | 56.4  | 44.8  | 37.3  | 28.3  | 21.3  | 17.3 | 10.20 | 7.32 | 5.74 | 4.75 | 4.08 | 3.22 | 2.66 | 1.38 |
| 1.70V/cell | 89.1 | 60.3  | 46.8  | 38.6  | 29.2  | 21.9  | 17.7 | 10.40 | 7.47 | 5.88 | 4.87 | 4.19 | 3.29 | 2.71 | 1.40 |
| 1.65V/cell | 94.8 | 63.0  | 48.9  | 40.1  | 30.1  | 22.5  | 18.2 | 10.60 | 7.62 | 5.98 | 4.98 | 4.28 | 3.34 | 2.75 | 1.43 |
| 1.60V/cell | 98.5 | 65.1  | 50.5  | 41.5  | 31.1  | 23.0  | 18.6 | 10.80 | 7.76 | 6.12 | 5.10 | 4.37 | 3.41 | 2.81 | 1.47 |

### CONSTANT POWER DISCHARGE (WATTS/CELL) AT 25°C (77°F)

| F.V/Time   | 5min  | 10min | 15min | 20min | 30min | 45min | 1h   | 2h   | 3h   | 4h   | 5h   | 6h   | 8h   | 10h  | 20h  |
|------------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 121.5 | 93.3  | 76.8  | 65.3  | 51.0  | 38.9  | 31.7 | 18.9 | 13.9 | 11.0 | 9.18 | 7.91 | 6.26 | 5.22 | 2.74 |
| 1.80V/cell | 137.1 | 102.2 | 82.2  | 68.4  | 53.6  | 40.8  | 33.4 | 19.8 | 14.3 | 11.3 | 9.45 | 8.13 | 6.42 | 5.33 | 2.77 |
| 1.75V/cell | 154.5 | 108.1 | 86.6  | 72.3  | 55.3  | 41.7  | 34.1 | 20.2 | 14.6 | 11.5 | 9.55 | 8.23 | 6.52 | 5.42 | 2.82 |
| 1.70V/cell | 167.8 | 114.3 | 89.2  | 74.2  | 56.6  | 42.6  | 34.8 | 20.5 | 14.8 | 11.7 | 9.72 | 8.39 | 6.61 | 5.47 | 2.85 |
| 1.65V/cell | 177.1 | 118.7 | 92.8  | 76.3  | 57.9  | 43.4  | 35.5 | 20.8 | 15.0 | 11.8 | 9.89 | 8.53 | 6.70 | 5.54 | 2.89 |
| 1.60V/cell | 181.9 | 121.3 | 94.8  | 78.2  | 59.3  | 44.0  | 35.9 | 21.0 | 15.2 | 12.0 | 10.0 | 8.62 | 6.77 | 5.61 | 2.94 |

## CHARGING

**Cycle Applications:** Apply constant voltage charge at 2.35v/c - 2.45v/c (14.1 – 14.7v for 12v Monobloc) at 20°C. Initial charging current should be set at less than 0.25C Amps. Switch to float charge to avoid overcharging.

**“Float” or “Stand-By” Service:** Apply constant voltage charge of 2.25v/c – 2.30v/c (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 Standby applications should be regulated in relation to ambient temperature. As temperature rises charging voltage should be reduced to prevent overcharge and increased as temperature falls to avoid undercharge.

For further charging information including temperature compensation factors, see Power Sonic Technical Manual/ Power Sonic Charger specifications.

## APPLICATIONS

- High Rate UPS
- Data Centers

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## CHARGERS

Power Sonic offers a wide range of chargers suitable for batteries with a variety of capacities.

Please refer to our website for more information on our switch mode and transformer type chargers.

Please contact our technical department for advice if you have difficulty in locating a suitable charger.

## 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.

