PHR-12100

High-Rate Discharge
PHR Series - High-Rate

High-rate batteries deliver quick bursts of power with low internal resistance and excellent power density, making them ideal for UPS systems, data centers, and emergency backup where reliable high-current performance is essential.

Configuration Options

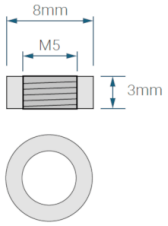
- PHR-12100 FR M5

Performance Specs

Nominal Voltage	12.0 Volts, (6.0 cells)
Nominal Capacity	
20-hr. (1.4A to 10.5 Volts)	28.0Ah
10-hr. (2.6A to 10.5 Volts)	26.0Ah
5-hr. (4.83A to 10.2 Volts)	24.15Ah
1-hr. (17.6A to 9.6 Volts)	17.6Ah
Approximate Weight	20.06lbs, (9.1kg)
Dimensions +/- 0.08 in. (+/- 2mm) for length, width, and height dimensions	**L:** 6.46in, 164.0mm **W:** 4.92in, 125.0mm **H:** 6.85in, 174.0mm **TH:** 6.42in, 163mm
Internal Resistance (approx.) mΩ	14.0mΩ
Max Short Circuit Discharge Current	700.0A
Operating Temperature Range	
Charge	−4°F (−20°C) to 104°F (40°C)
Discharge	−4°F (−20°C) to 131°F (55°C)
Case	ABS (UL94 HB or V-0 optional)
Recommended Power-Sonic Charger	PSC-122000ACX

Available Terminals (mm)

T15: Threaded insert with 5mm stud fastener



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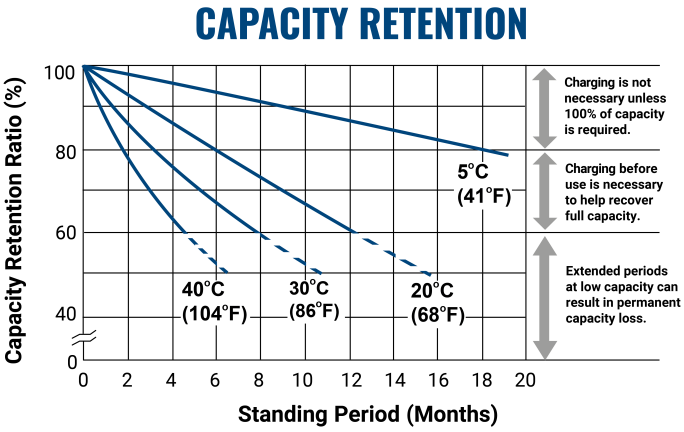
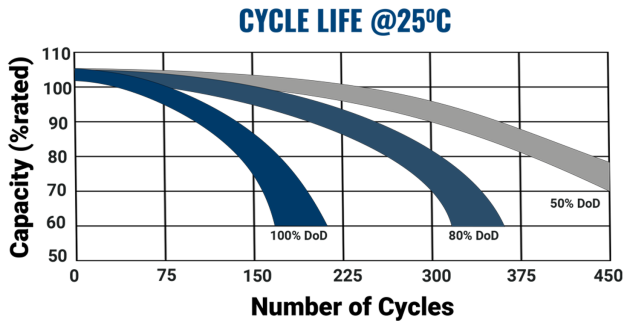
Graphs

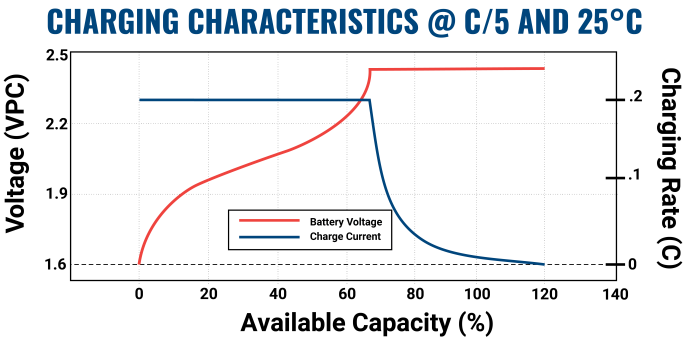
Capacity Retention SLA



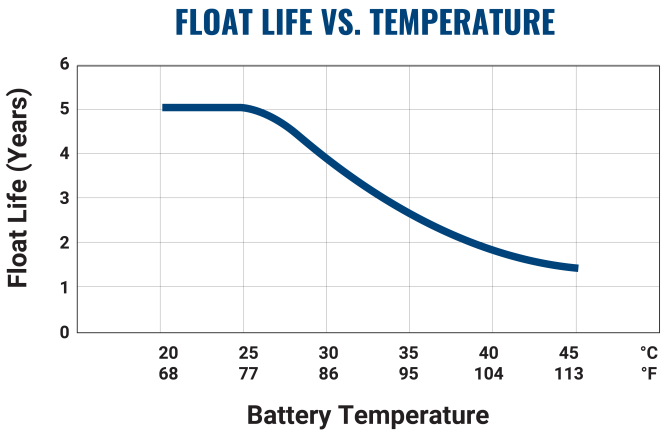
PHR Cycle Life



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	98.0	67.6	54.3	44.4	32.2	22.4	17.6	13.1	9.96	7.45	6.02	4.94	4.28	3.31	2.68	1.44
1.65V/cell	93.3	65.5	53.0	43.4	31.5	22.0	17.3	12.9	9.84	7.36	5.94	4.89	4.23	3.28	2.66	1.42
1.67V/cell	92.4	64.9	52.5	43.1	31.4	21.9	17.2	12.8	9.77	7.31	5.92	4.87	4.22	3.27	2.65	1.42
1.70V/cell	89.3	63.1	51.2	42.2	30.8	21.5	17.0	12.7	9.66	7.24	5.86	4.83	4.18	3.24	2.63	1.41
1.75V/cell	85.3	60.7	49.6	41.1	30.0	21.0	16.6	12.5	9.52	7.14	5.78	4.76	4.13	3.21	2.6	1.4
1.80V/cell	80.9	58.3	48.0	39.9	29.3	20.6	16.3	12.2	9.35	7.03	5.7	4.7	4.08	3.18	2.57	1.38
1.85V/cell	75.3	55.0	45.7	38.4	28.4	20.1	15.9	12.0	9.18	6.91	5.62	4.63	4.02	3.13	2.54	1.37

Constant Power

VoltageOverTime	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.60V/cell	174.9	123.7	101.1	83.5	61.0	42.6	33.7	25.2	19.3	14.5	11.8	9.69	8.4	6.54	5.31	2.88
1.65V/cell	169.7	121.4	99.3	82.1	60.0	42.0	33.3	24.9	19.0	14.3	11.6	9.6	8.32	6.48	5.26	2.85
1.67V/cell	168.1	120.2	98.4	81.5	59.7	41.8	33.1	24.8	18.9	14.3	11.6	9.56	8.3	6.46	5.24	2.84
1.70V/cell	163.8	117.5	96.3	80.1	58.8	41.3	32.6	24.5	18.8	14.1	11.5	9.49	8.23	6.41	5.21	2.82
1.75V/cell	158.0	113.8	93.8	78.2	57.6	40.5	32.2	24.2	18.5	14.0	11.4	9.37	8.15	6.35	5.16	2.8
1.80V/cell	151.6	110.2	91.3	76.5	56.4	39.8	31.6	23.8	18.3	13.8	11.2	9.27	8.07	6.29	5.11	2.77
1.85V/cell	142.4	104.7	87.6	74.0	54.9	38.9	31.0	23.4	18.0	13.6	11.1	9.15	7.95	6.21	5.05	2.74

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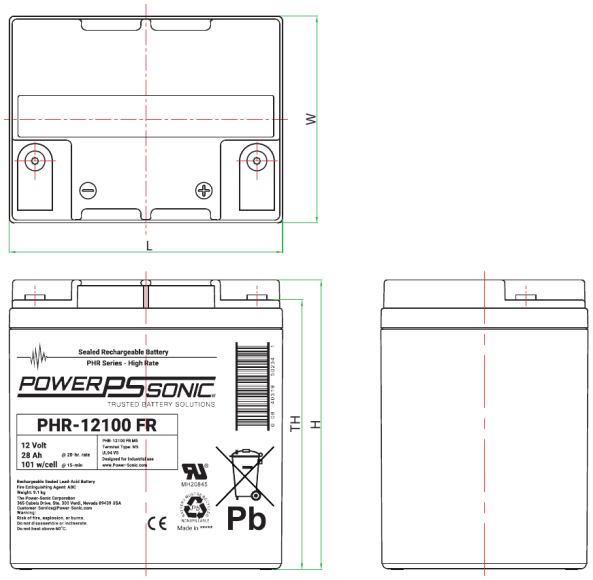
Charging

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.

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

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