POWER PS SONIC

PS-12280

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.

Configuration Options

- PS-12280 F2
- PS-12280 M5
- PS-12280 NB2

Performance Specs

Nominal Voltage	12.0 Volts, (6.0 cells)

Nominal Capacity

20-hr. (1.27A to 10.5 Volts)	25.4Ah
10-hr. (2.33A to 10.5 Volts)	22.3Ah
5-hr. (4.14A to 10.2 Volts)	20.7Ah
1-hr. (15.1A to 9.6 Volts)	15.1Ah

Approximate Weight	18.63lbs, (8.45kg)

Dimensions	**L:** 6.46in, 164.0mm
+/- 0.08 in. (+/- 2mm) for length, width, and height dimensions	**W:** 4.92in, 125.0mm
	H: 6.85in, 174mm
	TH: 6.85in, 174mm

Internal Resistance (approx.) mΩ	15mΩ
Max Short Circuit Discharge Current	635A

Operating Temperature Range

Charge	−4°F (−20°C) to 104°F (40°C)
Discharge	5°F (−15°C) to 122°F (50°C)

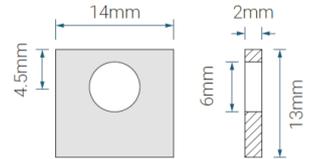|	
Case	ABS (UL94 HB or V-0 optional)
Recommended Power-Sonic Charger	PSC-126000ACX

Available Terminals (mm)
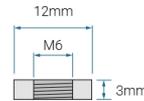
NB1
TERMINAL POSTS
With nut & bolt connectors

12mm 2mm
4.8mm 5.6mm 12mm

Torque: 2.0~3.0 Nxm

12mm
M6
3mm
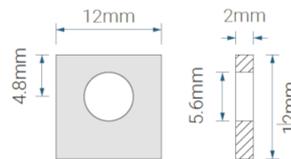
Torque: 2.0~3.0 Nxm

NB2
TERMINAL POSTS
With nut & bolt connectors

14mm 2mm
4.5mm 6mm 13mm

Torque: 3.9~5.4 Nxm

Graphs

Capacity Retention SLA

CAPACITY RETENTION

Y-axis: Capacity Retention Ratio (%) — 0, 40, 60, 80, 100
X-axis: Standing Period (Months) — 0 2 4 6 8 10 12 14 16 18 20

5°C (41°F)
40°C (104°F)
30°C (86°F)
20°C (68°F)

Charging is not necessary unless 100% of capacity is required.

Charging before use is necessary to help recover full capacity.

Extended periods at low capacity can result in permanent capacity loss.
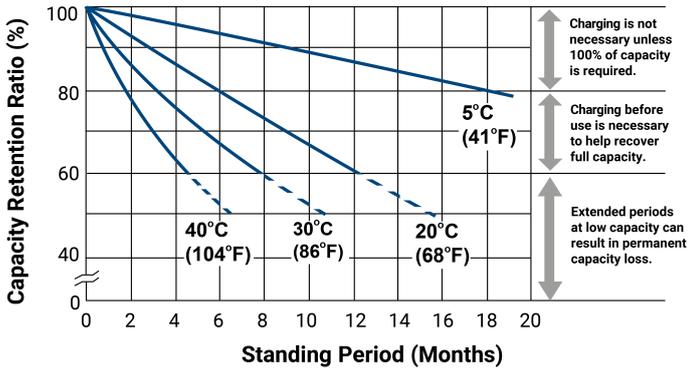
PS Cycle Life

CYCLE LIFE @25⁰C

Y-axis: Capacity (%rated) — 50, 60, 70, 80, 90, 100, 110
X-axis: Number of Cycles — 0 50 100 150 200 250 300

100% DoD, 80% DoD, 50% DoD
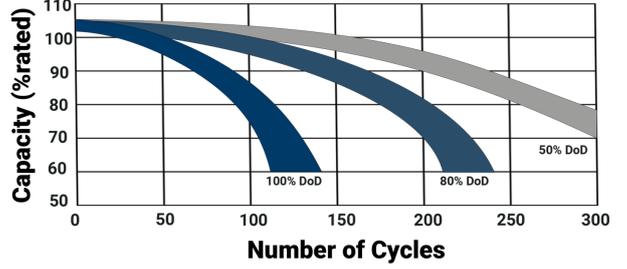
SLA Charging

CHARGING CHARACTERISTICS @ C/5 AND 25°C

Left Y-axis: Voltage (VPC) — 1.6, 1.9, 2.2, 2.5
Right Y-axis: Charging Rate (C) — 0, .1, .2
X-axis: Available Capacity (%) — 0 20 40 60 80 100 120 140

Battery Voltage
Charge Current
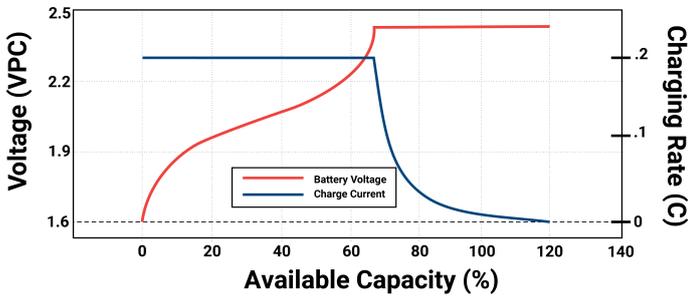
SLA Float Life 5YR

FLOAT LIFE VS. TEMPERATURE

Y-axis: Float Life (Years) — 0 1 2 3 4 5 6
X-axis: Battery Temperature
20/68, 25/77, 30/86, 35/95, 40/104, 45/113 (°C/°F)
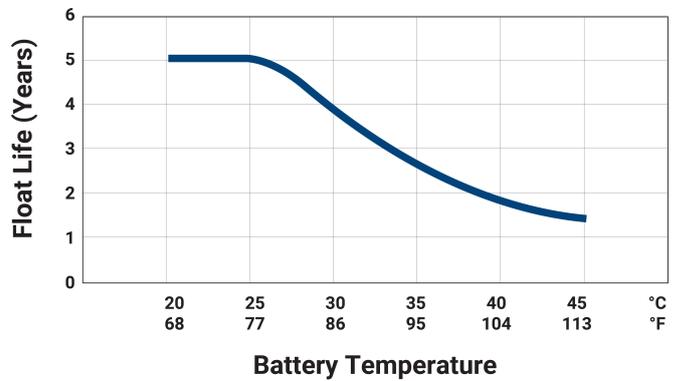
Constant Current

VoltageOverTime	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.60V/cell	84.0	58.0	46.6	38.0	27.6	19.2	15.1	11.2	8.54	6.39	5.17	4.24	3.67	2.84	2.3	1.3
1.65V/cell	79.9	56.1	45.3	37.1	27.0	18.8	14.8	11.1	8.42	6.3	5.1	4.18	3.62	2.81	2.28	1.3
1.67V/cell	79.2	55.6	45.1	36.9	26.9	18.7	14.7	11.0	8.37	6.27	5.08	4.17	3.61	2.8	2.27	1.29
1.70V/cell	76.5	54.1	44.0	36.2	26.4	18.4	14.5	10.9	8.28	6.21	5.03	4.14	3.58	2.78	2.25	1.28
1.75V/cell	73.1	52.0	42.5	35.1	25.8	18.0	14.3	10.7	8.16	6.12	4.96	4.08	3.54	2.75	2.23	1.27
1.80V/cell	69.4	50.0	41.2	34.2	25.1	17.7	14.0	10.5	8.02	6.02	4.89	4.03	3.5	2.72	2.21	1.26
1.85V/cell	64.5	47.2	39.2	32.9	24.3	17.2	13.6	10.3	7.87	5.93	4.82	3.97	3.45	2.68	2.18	1.24

Constant Power

VoltageOverTime	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.60V/cell	149.9	106.1	86.8	71.5	52.3	36.5	28.8	21.6	16.5	12.4	10.1	8.3	7.2	5.61	4.55	2.61
1.65V/cell	145.5	104.1	85.3	70.4	51.5	36.0	28.4	21.4	16.3	12.3	9.96	8.22	7.14	5.55	4.51	2.59
1.67V/cell	144.1	103.1	84.5	69.8	51.1	35.8	28.3	21.3	16.2	12.2	9.94	8.19	7.12	5.53	4.5	2.58
1.70V/cell	140.4	100.9	82.7	68.5	50.4	35.4	28.0	21.0	16.1	12.1	9.86	8.13	7.06	5.49	4.47	2.56
1.75V/cell	135.4	97.7	80.5	67.0	49.3	34.7	27.5	20.7	15.9	12.0	9.74	8.03	6.98	5.44	4.42	2.54
1.80V/cell	129.9	94.6	78.4	65.5	48.3	34.1	27.1	20.4	15.7	11.8	9.62	7.94	6.91	5.39	4.39	2.51
1.85V/cell	122.0	89.8	75.1	63.3	47.1	33.3	26.5	20.1	15.4	11.6	9.51	7.84	6.82	5.32	4.33	2.49

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
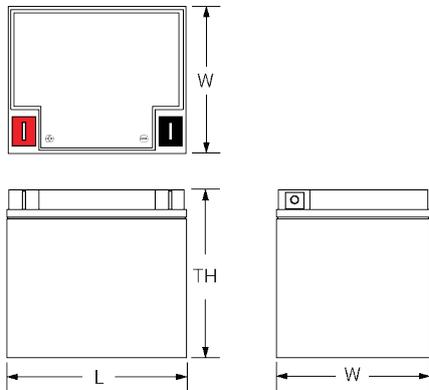
For Further Information

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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