



UPREME

Smart Innovation

Supremacy of Power and Quality



GENERAL PURPOSE BATTERIES

SP12-40 (12V 40Ah)

www.supremepowersystems.com

SP SERIES - SEALED LEAD ACID BATTERY

SP12-40 (12V 40Ah)

Features

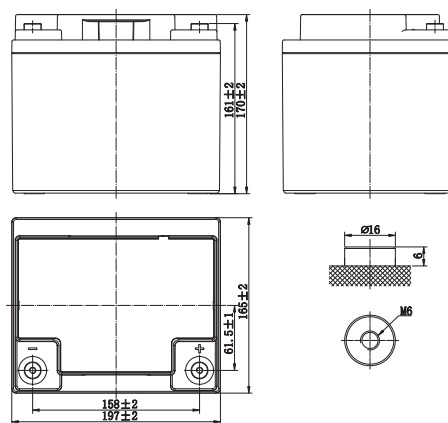
- ✓ 10 years design life (25°C)
- ✓ Special exhaust structure and sealing technology, safe and reliable, flexible installation, convenient maintenance
- ✓ PbCaSn alloy for plate grids: less gassing, less self-discharging
- ✓ High quality AGM separator: extend cycle life and prevent micro short circuit
- ✓ High purity raw material: ensure low self discharge rate

Applications

- ✓ All purpose
- ✓ Uninterruptable Power Supply (UPS)
- ✓ Electric Power System (EPS)
- ✓ Emergency backup power supply
- ✓ Alarm and security system
- ✓ Communication power supply
- ✓ DC power supply
- ✓ Auto control system
- ✓ Solar Power Systems
- ✓ Wheel chair and Mobility Scooters



LAYOUT



Standards

- ✓ Compliance with IEC 60896 standards, EU Battery Directive
- ✓ UL, CE Certified
- ✓ Manufactured at Supreme Power Systems, ISO Certified Production facilities® IATF 16949, ISO 45001, ISO 9001 and ISO 14001 certified production facilities

SPECIFICATIONS

Rated Voltage	12V	
Nominal Capacity	40.0Ah	(C ₅₄ , 1.80V/cell)
Dimensions	Length	197±2mm (7.76 inches)
	Width	165±2mm (6.50 inches)
	Container height	170±2mm (6.69 inches)
	Total height	170±2mm (6.69 inches)
Approx. weight	13.7 Kg (26.9 lbs)	
Terminal	M6	
	ABS	
Rated capacity (25°C)	42.0 Ah	C20(2.10A,1.80V/cell)
	40.0 Ah	C10(4.00A,1.80V/cell)
	36.4 Ah	C5(7.28A,1.75V/cell)
	33.3 Ah	C3(11.1A,1.75V/cell)
	25.5 Ah	C1(25.5A,1.60V/cell)
Max. discharge current	400A (5s)	
Internal resistance (25°C)	Approx 9.0mΩ	
Operating temp. range	Discharge	-15~50°C (5~122°F)
	Charge	-20~40°C (-4~104°F)
	Storage	-15~40°C (5~104°F)
Nominal operating temp. range	25±3°C (77±5°F)	
Cycle Use	Initial Charging Current less than 12.0A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Standby Use	Initial Charging Current less than 12.0A. Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Effect of temp. to Capacity	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self discharge	SP series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	

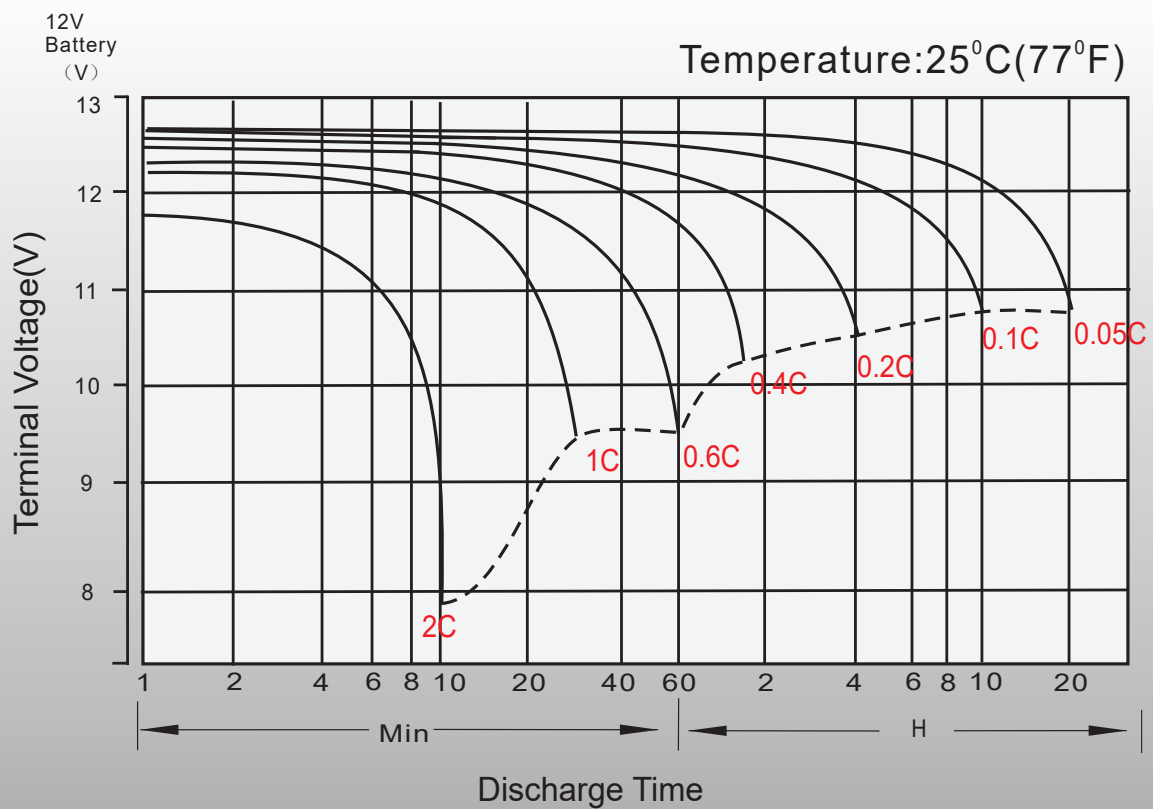
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	2h
1.85V/cell	83.2	59.2	51.3	40.3	36.1	26.4	22.3	16.2	13.6	9.99	7.84	6.80	5.99	4.61	3.82	2.03
1.80V/cell	94.6	67.2	58.1	45.6	39.3	28.0	23.1	16.7	14.1	10.8	8.36	7.15	6.44	4.85	4.00	2.10
1.75V/cell	102.8	72.8	62.9	49.2	40.1	29.0	24.3	17.6	14.8	11.1	8.52	7.28	6.49	4.88	4.04	2.12
1.70V/cell	109.9	77.7	66.9	52.2	40.9	29.5	24.8	18.0	15.1	11.3	8.67	7.40	6.52	4.95	4.08	2.14
1.67V/cell	113.7	80.1	68.8	53.6	41.5	30.0	25.1	18.2	15.3	11.4	8.80	7.55	6.55	5.02	4.13	2.17
1.60V/cell	117.8	82.9	70.9	55.0	42.1	30.4	25.5	18.5	15.5	11.5	8.91	7.66	6.60	5.09	4.18	2.19

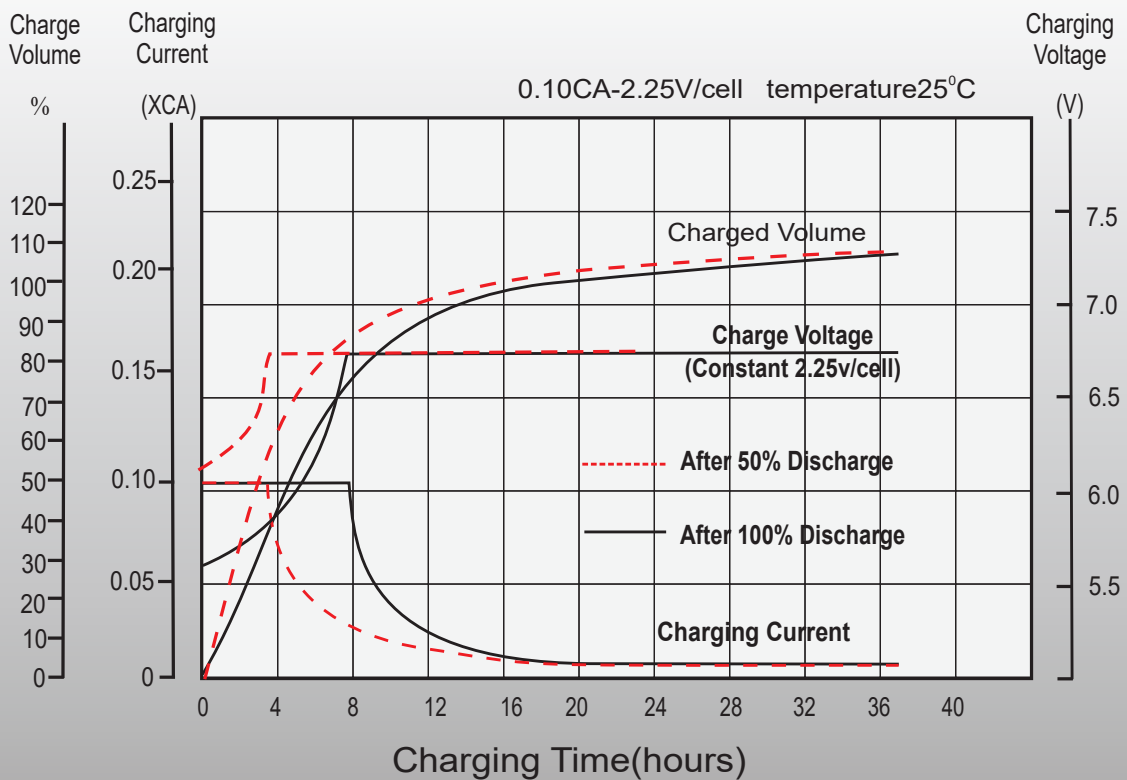
Constant Power Discharge (Watts/cell) at 25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	2h
1.85V/cell	155.4	111.3	97.1	76.7	70.3	50.7	44.1	32.0	27.0	19.9	15.7	13.7	11.8	9.33	7.75	4.12
1.80V/cell	173.9	124.5	108.7	85.8	75.9	53.4	45.4	33.0	27.8	21.5	16.7	14.3	12.7	9.79	8.10	4.26
1.75V/cell	185.6	132.9	116.0	91.6	76.9	55.0	47.4	34.5	29.1	21.9	16.9	14.5	12.7	9.82	8.17	4.30
1.70V/cell	195.1	139.7	121.9	96.3	77.8	55.7	48.1	35.0	29.6	22.2	17.2	14.7	12.8	10.0	8.25	4.34
1.67V/cell	198.3	142.0	123.9	97.9	78.3	56.2	48.6	35.4	29.9	22.3	17.4	15.0	12.8	10.1	8.34	4.39
1.60V/cell	201.0	144.0	125.6	99.3	78.7	56.5	48.9	35.6	30.1	22.4	17.5	15.1	12.9	10.2	8.42	4.43

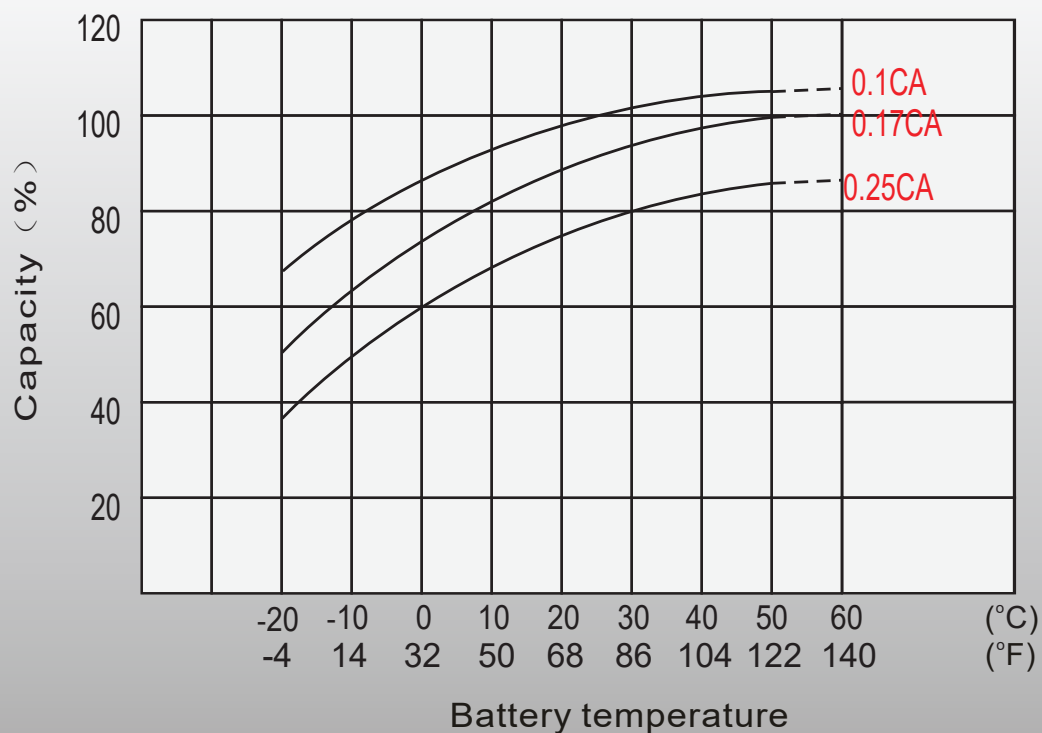
Discharge Characteristics



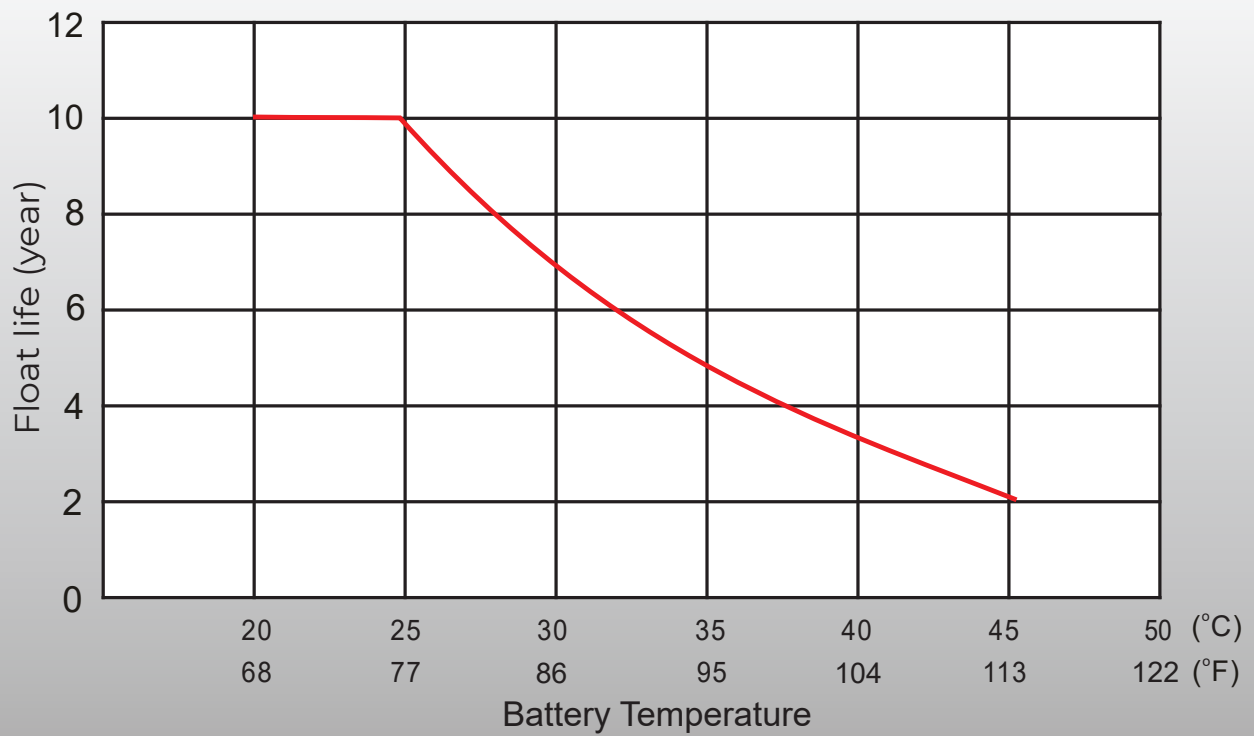
Float Charging Characteristics



Temperature Effects in relation to Battery Capacity



Float Service Life



SP12-40 (12V 40Ah)



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