



MS9-12C (12V9Ah) Rechargeable VRLA Battery



FEATURES

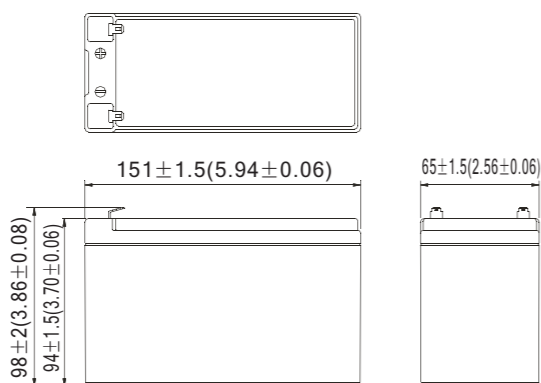
- AGM technology for efficient gas recombination and lower I.R.
- Individually tank-formated plates optimize uniformity of cell
- high performance alloy to secure corrosion-proof feature
- long service life, float or cyclic application
- Maintenance-free operation
- Sealed construction, no electrolyte leakage or spill
- Computer-aided design and manufacturing ensures quality products through control of process and standards

SPECIFICATION

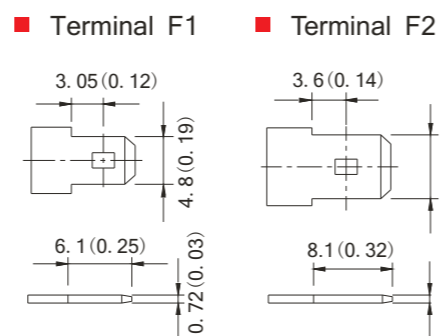
Nominal Voltage	12V	
Nominal Capacity	9Ah@20Hr-rate to 1.75V/cell	
Approx. Weight	2.55Kg (5.62Lbs)	
Internal Resistance	16mΩ(Fully Charged)@25°C	
Self-Discharge	Average 3% of capacity declined per month@25°C	
Nominal Operating Temp.	25±3°C (77±5°F)	
Operating Temp. Range	Discharge: -20°C ~ 50°C (-4 ~ 122°F)	
	Charge: -15~40°C (5 ~ 104°F)	
	Storage: -20°C ~ 40°C (-4 ~ 104°F)	
Max. Discharge Current	128A(5 sec.)	
	40°C (104°F)	102%
	25°C (77°F)	100%
	0°C (32°F)	85%
Capacity Affected by Temp.	0°C (32°F)	85%
	-15°C (5°F)	65%
Container Material	ABS(UL94-HB,UL94-V0 is optional)	

OUTER DIMENSION

- Length**
151±1.5(5.94±0.06)
- Width**
65±1.5(2.56±0.06)
- Height**
94±1.5(3.70±0.06)
- Total height**
98±2.0(3.86±0.06)

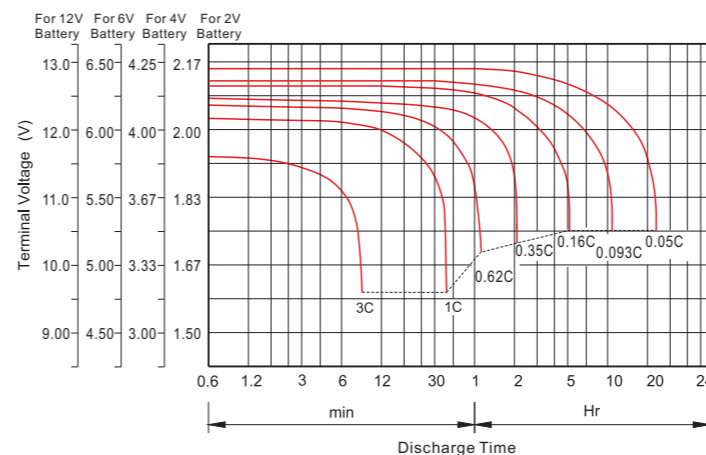


Terminal Type

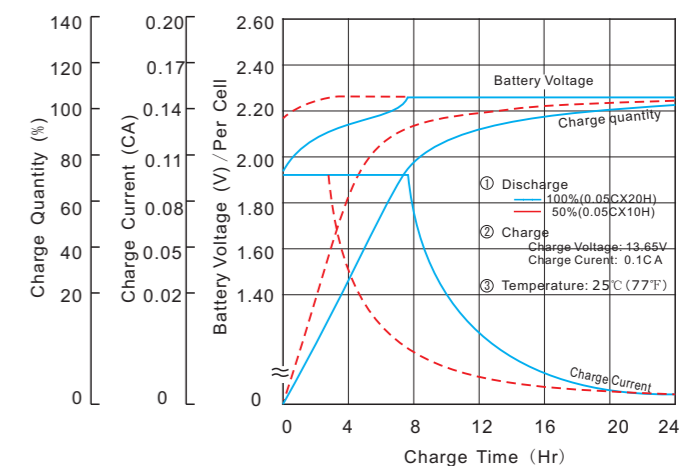


Unit: mm(inch)

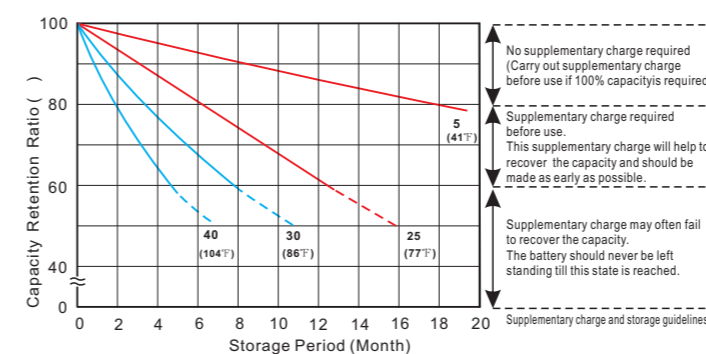
Discharge Characteristics@25



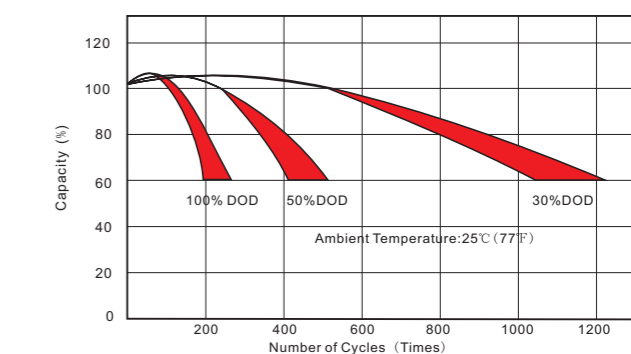
Charge Characteristics(Standby Use)



Capacity Retention Characteristics



Cycle Service life



APPLICATION

- All Purpose
- UPS
- Signal Light
- Alarm and Security System
- DC Power Supply
- Auto Control Sytem

APPLICABLE STANDARDS

- IEC61056-1/2
- JIS C8702-2003
- GB/T19639.1-2005



Charge Procedure

Application	Constant Voltage Charge(V/cell)			Max. Charge Current
	Temperature	Set Point	Allowable Range	
Cycle Use	25°C (77°F)	2.425	2.40~2.45	0.3C
Standby Use	25°C (77°F)	2.275	2.25~2.30	

Note: Temp. Compensation Coefficient of Charge Voltage, Cycle use:-4mV/°C/cell, Standby Use:-3mV/°C/cell

Discharge Retention vs. Discharge Voltage

Final Discharge Voltage(V/cell)	1.75	1.70	1.60	1.30
Discharge Current(A)	0.2C>(A)	0.2C<(A)<0.5C	0.5C<(A)<1C	(A)>1C

Constant Current (CC, Unit:A)&Constant Power(CP, Unit:W)Discgarge Table at 25 (77°F)

F.V. (V/cell)	Model	Time	5 Min	10 Min	15 Min	30 Min	1 Hr	2 Hr	3 Hr	4 Hr	5 Hr	8 Hr	10 Hr	20 Hr
			CC(A)	CP(W)	CC(A)	CP(W)	CC(A)	CP(W)	CC(A)	CP(W)	CC(A)	CP(W)	CC(A)	CP(W)
1.60V	CC(A)	32.4	21.2	15.8	10.4	5.4	3.15	2.32	1.86	1.58	1.04	0.85	0.47	
	CP(W)	382	240	182	110	62	36.5	26.81	21.53	18.26	12.04	9.86	5.40	
1.70V	CC(A)	29.7	20.3	14.5	9.8	5.1	3.02	2.25	1.80	1.55	1.02	0.84	0.45	
	CP(W)	360	227	171	109	59	35.0	26.06	20.85	17.93	11.85	9.68	5.25	
1.75V	CC(A)	27.0	19.0	13.5	9.5	4.9	2.96	2.21	1.71	1.54	1.01	0.83	0.45	
	CP(W)	347	221	163	108	57	34.3	25.61	19.80	17.81	11.74	9.60	5.21	
1.80V	CC(A)	26.0	18.2	12.6	9.3	4.7	2.89	2.18	1.68	1.46	0.99	0.81	0.44	
	CP(W)	304	214	157	108	55	33.6	25.31	19.56	17.03	11.25	9.38	5.10	
1.85V	CC(A)	24.0	17.1	11.7	9.0	4.6	2.81	2.06	1.65	1.40	0.96	0.79	0.43	
	CP(W)	294	207	150	107	54	33.4	24.56	19.50	16.65	10.87	9.19	5.06	

Note: The above data are average values, and can be obtained with 3 charge/discharge cycles.