



MSV 240

2V 240Ah

MSV 240 is a long service life battery up to 15 years expected life under normal float charge. As with all CSB batteries, all are rechargeable, highly efficient, leak proof and maintenance free.



Specification

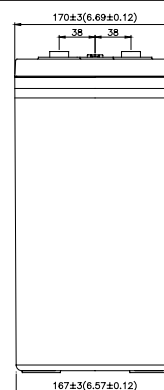
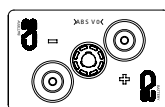
Cells Per Unit	1
Voltage Per Unit	2
Capacity	240Ah @ 10hr-rate to 1.80V per cell @25 °C (77°F)
Weight	Approx. 14.1 kg(31.09 lbs)
Maximum Discharge Current	1440A(5sec)
Internal Resistance	Approx. 0.52 mΩ
Operating Temperature Range	Discharge: -20°C~50°C (-4°F~122°F) Charge: 0°C~40°C (32°F~104°F) Storage: -20°C~40°C (-4°F~104°F)
Nominal Operating Temperature Range	25°C±3°C (77°F±5°F)
Float Charging Voltage	2.23±0.02/Cell at 25 °C (77°F) Temp. Coefficient ±3.3mV/°C (± 1.8mV/°F)
Recommended Maximum Charging Current Limit	72A
Equalization and Cycle Service	2.35V Temps coefficient ±3.3mV/°C (± 1.8mV/°F)
Terminal	Pb-Ca-Sn Alloy(L / Recessed Terminal)
Container Material	The container and cover are made of flame retardant plastics which meet ABS(UL 94-V0/File E88637) specifications. The oxygen index level is higher than 28



CSB-manufactured batteries are UL-recognized components under UL924 and UL1989. CSB is also certified by ISO 9001 and ISO 14001.

Dimensions

Unit:(mm)



Constant Current Discharge Characteristics Unit:A (25°C ,77°F)

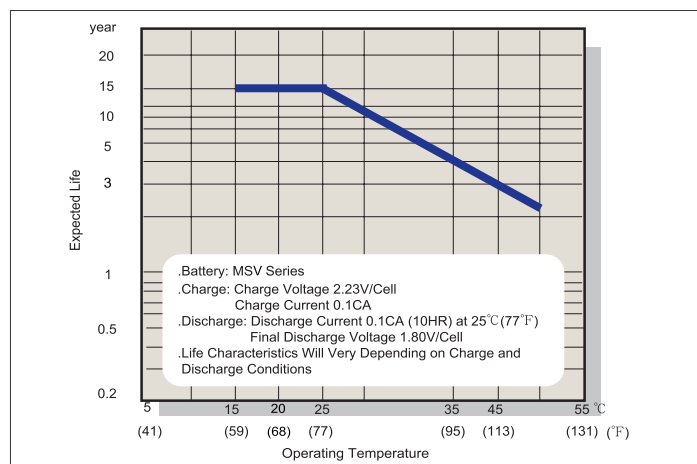
F.V/Time	15MIN	30MIN	60MIN	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	381	253	156	92.2	69.1	54.7	46.1	40.3	32.1	26.9
1.65V	357	240	149	89.3	66.2	52.8	44.6	39.4	31.1	25.9
1.70V	327	222	141	87.4	64.3	51.8	43.8	38.4	30.5	25.6
1.75V	291	204	134	82.6	61.4	49.9	42.2	36.5	29.8	25.0
1.80V	256	188	127	78.7	58.6	47.2	40.3	35.5	28.8	24.0
1.83V	219	169	117	74.9	55.7	45.1	38.4	33.6	27.3	23.0

Constant Power Discharge Characteristics Unit:W (25°C ,77°F)

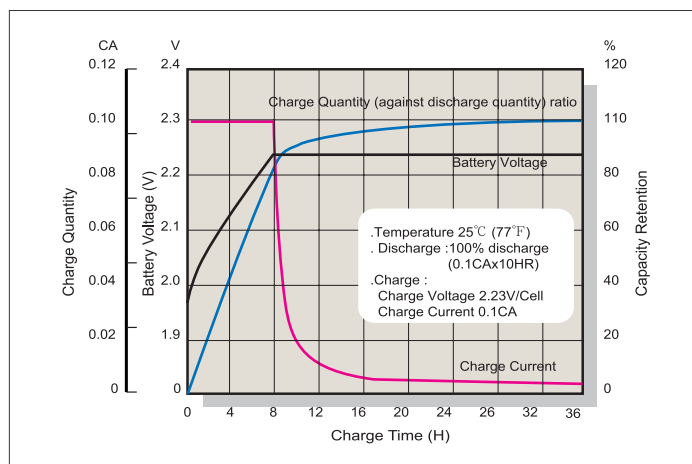
F.V/Time	15MIN	30MIN	60MIN	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	667	450	277	167	125	101	85.4	75.8	60.5	50.9
1.65V	632	437	276	164	123	100	84.5	74.1	59.5	50.4
1.70V	588	411	268	162	121	98	83.5	73.0	58.6	49.9
1.75V	534	375	250	155	116	95.0	79.7	70.1	57.6	49.0
1.80V	470	346	235	148	111	92.2	77.8	68.2	55.7	47.0
1.83V	398	312	217	139	107	86.9	73.9	65.0	53.5	46.1

- All mentioned values are average values.
- Cycle Information : 300~400 cycles@DOD80%, 600~700 cycles@DOD50%, 900~1200 cycles@DOD30%

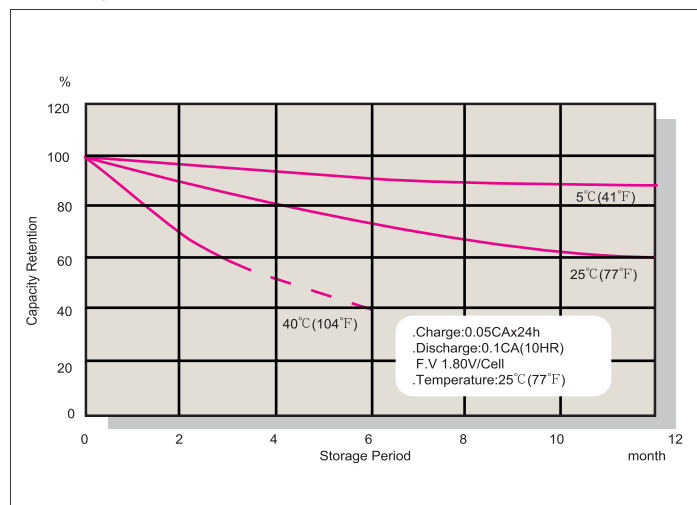
Expected Life V.S Operating Temperature



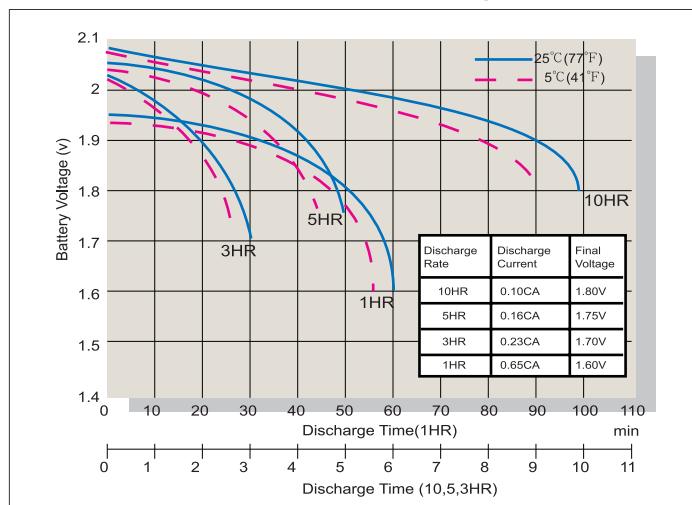
Typical Constant Voltage Charge Characteristics



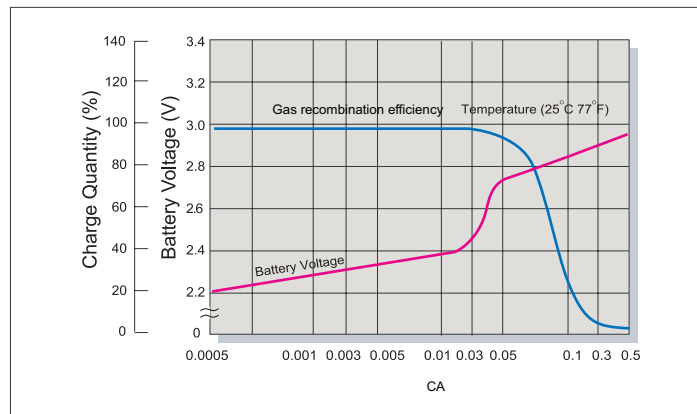
Capacity Retention Characteristics



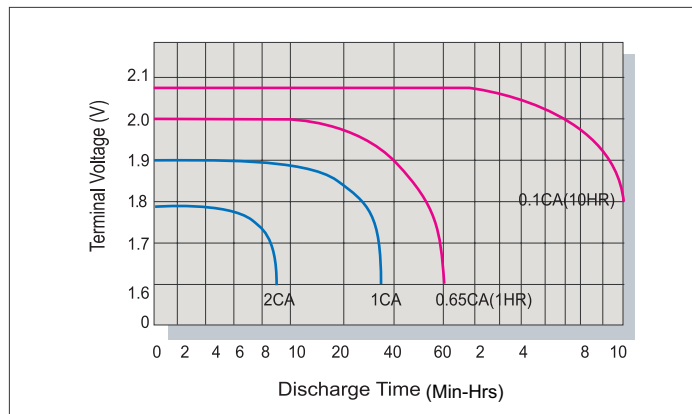
Discharge Characteristics



Oxygen Recombination Efficiency Chart



Terminal Voltage (V) and Discharge Time 25°C (77°F)



Charging Procedures

Application	Charge Voltage (V/Cell)			Max. Charge Current
	Temperature	Set Point	Allowable Range	
Standby	25°C (77°F)	2.23	2.21~2.25	0.3C

Discharge Current VS. Discharge Voltage

Discharge Current (A)	Final Discharge Voltage (V/Cell)
0.05C > A	1.90
0.15C > A ≥ 0.05C	1.80
0.20C > A ≥ 0.15C	1.75
0.40C > A ≥ 0.20C	1.70
A > 0.40C	1.60

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