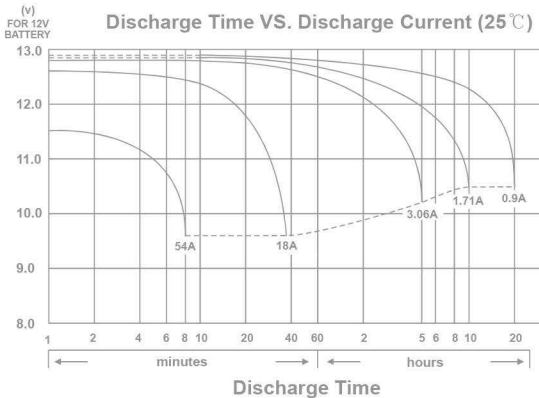
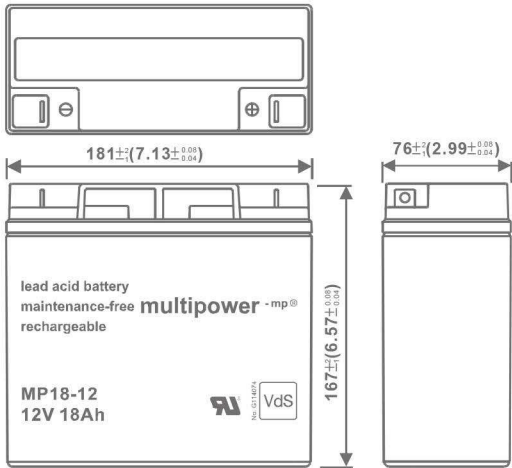
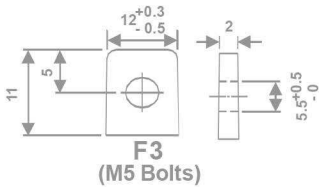


RECHARGEABLE SEALED LEAD ACID BATTERY

SPECIFICATION



MP18-12

Nominal Voltage(V) 12V

Nominal Capacity

20 hour rate	(0.9A to 10.50V)	18Ah
10 hour rate	(1.71A to 10.50V)	17.1Ah
5 hour rate	(3.06A to 10.20V)	15.3Ah
1 C	(18A to 9.60V)	10.2Ah
3 C	(54A to 9.60V)	7.2Ah

Weight Approx. 5.6kg(12.32Lbs.)

Internal Resistance (at 1KHz) Approx. 10.5 mΩ

Maximum Discharge Current for 5 seconds: 270A

Charging Methods at 25°C(77°F)

Cycle use:	
Charging Voltage	14.4 to 15.0V
Coefficient	-5.0mv/°C/cell
Maximum Charging Current:	5.4A
Standby use:	
Float Charging Voltage	13.5 to 13.8V
Coefficient	-3.0mv/°C/cell

Operating Temperature Range

Charge	-15°C(5°F) to 40°C(104°F)
Discharge	-15°C(5°F) to 50°C(122°F)
Storage	-15°C(5°F) to 40°C(104°F)

Charge Retention (shelf life) at 20°C(68°F)

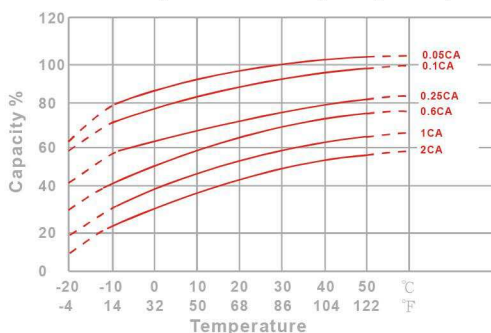
1 month	92%
3 month	90%
6 month	80%

Case Material ABS
(UL94 HB flame retardant case / cover)

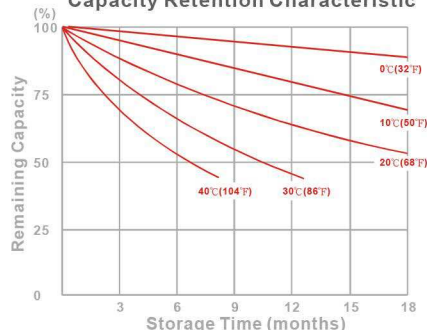
Terminal F3

CHARACTERISTIC & PERFORMANCE DATA

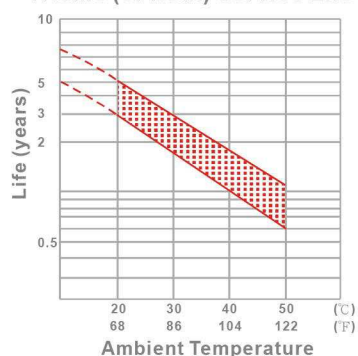
Effect of Temperature on Capacity 25°C(77°F)



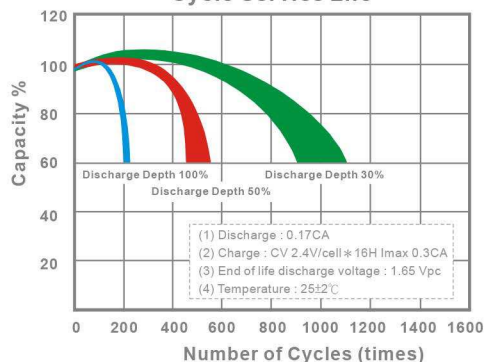
Capacity Retention Characteristic



Trickle (or float) Service Life



Cycle Service Life



- PERFORMANCE DATA

Discharge Rates in Watts to Various End Voltages at 25°C(77°F)

Time	End Voltage							
	1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V	
5	min	594	699	768	811	822	835	847
10	min	402	463	507	534	541	550	558
15	min	343	387	417	435	440	445	451
30	min	196	211	226	236	239	242	245
60	min	113	119	124	128	129	131	133
120	min	71.2	74.4	76.2	78.7	79.3	80.0	80.9
180	min	52.5	54.6	56.0	57.2	57.6	58.1	58.7
240	min	39.8	41.6	42.7	43.6	43.9	44.3	44.8
300	min	34.9	36.3	37.0	37.6	37.8	38.1	38.5
600	min	20.4	21.1	21.6	22.0	22.1	22.3	22.5
1200	min	10.6	11.0	11.3	11.5	11.6	11.7	11.8

- Discharge Rates in Amperes to Various End Voltages at 25°C(77°F)

Time	End Voltage							
	1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V	
5	min	62.6	68.3	71.9	75.1	76.4	77.8	80.2
10	min	38.6	41.8	44.3	46.5	47.4	48.4	50.1
15	min	31.9	34.6	36.3	37.7	38.2	38.8	39.7
30	min	17.4	18.7	19.8	20.7	21.0	21.4	21.9
60	min	9.74	10.3	10.7	11.0	11.1	11.3	11.5
120	min	5.98	6.23	6.39	6.53	6.58	6.64	6.72
180	min	4.35	4.52	4.64	4.73	4.76	4.80	4.85
240	min	3.43	3.52	3.58	3.62	3.63	3.65	3.68
300	min	2.96	3.02	3.07	3.11	3.12	3.14	3.16
600	min	1.73	1.77	1.80	1.82	1.83	1.84	1.85
1200	min	0.893	0.914	0.931	0.946	0.952	0.959	0.962

All data on the spec. sheet is an average value:

The tolerance range : $X < 6\text{min}$ (+15%~-15%), $6\text{min} \leq X < 10\text{min}$ (+12%~-12%), $10\text{min} \leq X < 60\text{min}$ (+8%~-8%), $X \geq 60\text{min}$ (+5%~-5%)