



## MP18-12I

Nominal Voltage(V) 12V

### Nominal Capacity

20 hour rate	(0.90A to 10.50V)	18.00Ah
10 hour rate	(1.71A to 10.50V)	17.10Ah
5 hour rate	(3.06A to 10.20V)	15.30Ah
1 C	(18A to 9.60V)	11.40Ah
3 C	(54A to 9.60V)	7.20Ah

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	14.7 to 14.8V
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

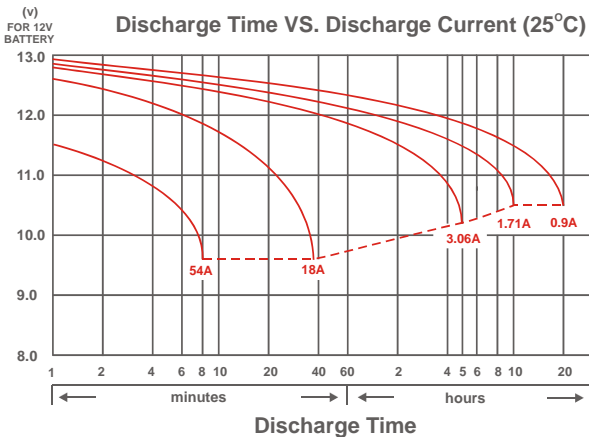
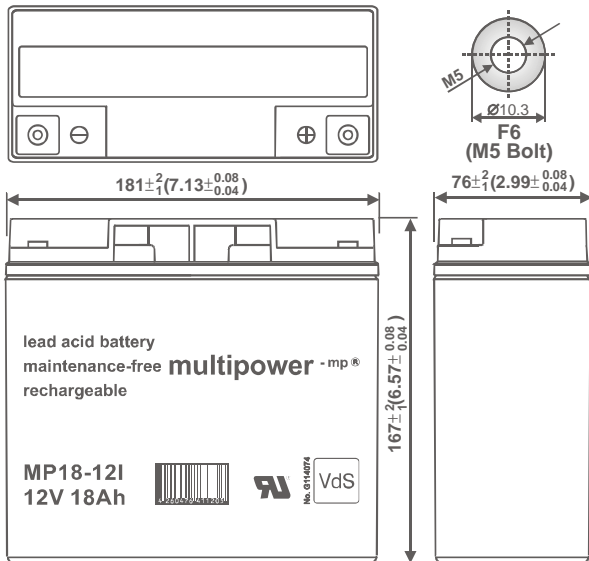
ABS UL94 HB

### Terminal

F6

### Description of torque value of hard ware for the terminals:

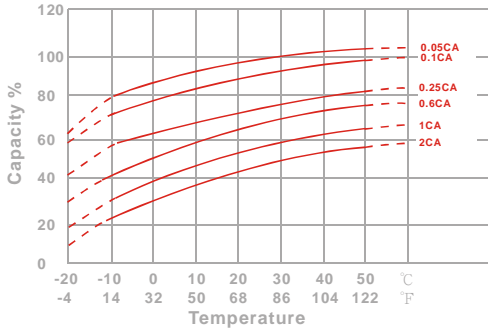
Recommended torque value	M5: 4 N·m (41 kgf·cm)
Maximum allowable torque value	M5: 6 N·m (61 kgf·cm)



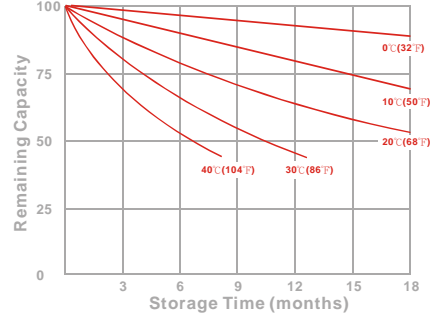


## CHARACTERISTIC & PERFORMANCE DATA

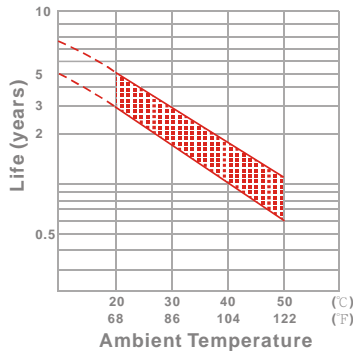
**Effect of Temperature on Capacity 25°C(77°F)**



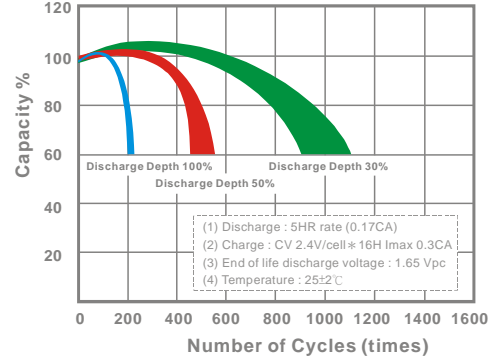
**Capacity Retention Characteristic**



**Trickle (or float) Service Life**



**Cycle Service Life**



### - PERFORMANCE DATA

**Discharge Rates in Watts per Cell 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	98.9	116	128	135	137	139	141
10	min	67.0	77.1	84.5	89.1	90.2	91.7	92.9
15	min	57.2	64.5	69.4	72.5	73.3	74.2	75.1
30	min	32.7	35.1	37.7	39.4	39.8	40.3	40.8
60	min	18.8	19.8	20.7	21.3	21.5	21.8	22.2
120	min	11.9	12.4	12.7	13.1	13.2	13.3	13.5
180	min	8.75	9.10	9.33	9.53	9.60	9.68	9.78
240	min	6.63	6.93	7.12	7.27	7.32	7.38	7.46
300	min	5.82	6.05	6.17	6.27	6.30	6.35	6.41
600	min	3.40	3.52	3.60	3.67	3.68	3.72	3.75
1200	min	1.77	1.83	1.88	1.92	1.93	1.95	1.96

**- Discharge Rates in Amperes per Battery 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%)