



# ES75-12

## SPECIFICATIONS

**Nominal Voltage (V)** 12V

### Nominal Capacity

20 hour rate ( 3.75A to 10.50V )	75Ah
10 hour rate ( 7.5A to 10.50V )	75Ah
5 hour rate ( 12.75A to 10.20V )	63.75Ah
1 hour rate ( 45A to 9.60V )	45Ah
1C ( 75A to 9.60V )	47.5Ah

**Weight** Approx. 53.68Lbs. (24.4kg)

**Internal Resistance (at 1KHz)** Approx. 5.5 mΩ

**Maximum Discharge Current for 5 seconds :** 900A

### 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	98%
3 months	94%
6 months	85%

### Charging Methods at 25°C ( 77°F )

**Cycle Use :** Charging Voltage 14.4 to 15.0V  
Coefficient -5.0mv / °C / cell  
Maximum Charging Current : 22.5A

**Standby Use :** Float Charging Voltage 13.50 to 13.80V  
Coefficient -3.0mv / °C / cell

**Case Material :** ABS UL94 HB

**Terminal :** F8

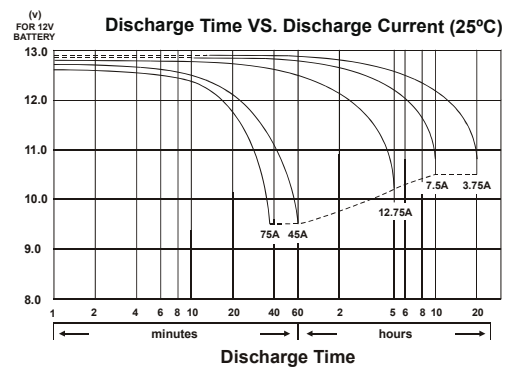
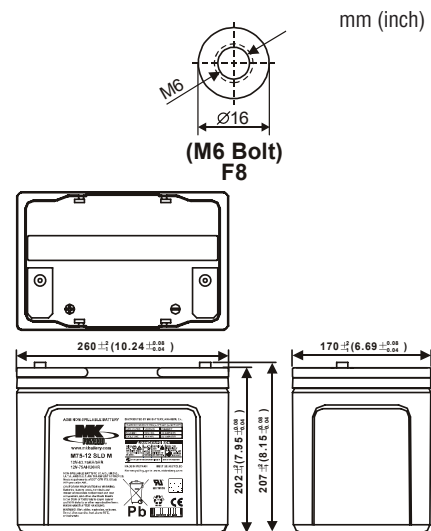
### Terminal Hardware Torque Value :

Recommended	M6: 7 Nm (71kgf-cm)
Maximum Allowable	M6: 9 Nm (92kgf-cm)

## Maintenance-Free Rechargeable Sealed Lead-Acid Battery



## DIMENSIONS



## MK Battery

1631 South Sinclair Street • Anaheim, California 92806

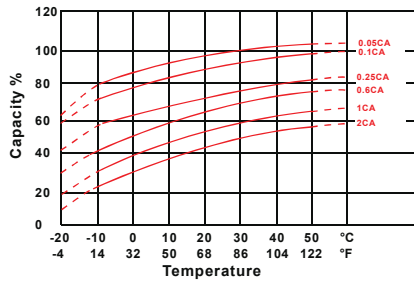
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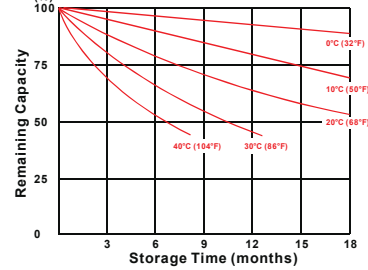


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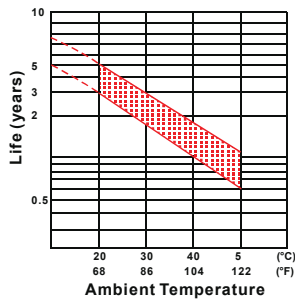
Effect of Temperature on Capacity 25°C (77°F)



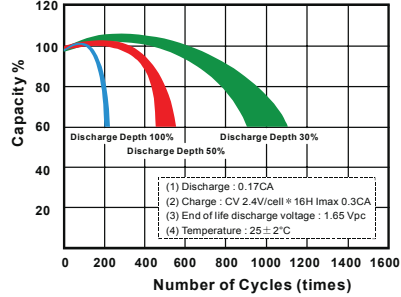
Capacity Retention Characteristic



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	390	412	472	500	515	530	544
10	min	267	282	323	343	353	363	373
15	min	174	221	235	269	274	281	288
30	min	136	146	152	156	157	159	162
60	min	80.8	85.3	87.8	89.8	90.5	91.3	92.3
120	min	47.2	49.8	51.3	52.7	53.2	53.7	54.3
180	min	34.0	35.8	36.8	37.7	38.0	38.3	38.8
240	min	27.8	28.8	29.7	30.3	30.5	30.8	31.2
300	min	24.8	25.3	25.7	26.0	26.2	26.3	26.5
600	min	15.0	15.2	15.3	15.5	15.5	15.6	15.6
1200	min	7.85	7.97	8.07	8.15	8.20	8.23	8.28

## - 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	171	205	235	261	269	280	292
10	min	108	137	160	179	184	191	199
15	min	88.7	107	122	135	138	142	147
30	min	61.9	71.1	77.8	82.8	83.9	85.5	87.2
60	min	38.6	41.5	43.3	44.8	45.3	45.9	46.7
120	min	20.2	22.4	23.9	25.0	25.4	25.8	26.3
180	min	15.8	17.4	18.4	19.3	19.6	20.0	20.4
240	min	12.9	13.9	14.7	15.3	15.6	15.9	16.2
300	min	11.8	12.6	13.1	13.4	13.6	13.8	14.1
600	min	7.53	7.62	7.69	7.74	7.76	7.81	7.85
1200	min	3.87	3.93	3.98	4.02	4.03	4.05	4.08

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%)

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