

# ES17-12

# **SPECIFICATIONS**

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

 1C ( 18A to 9.60V )
 9.6Ah

 3C ( 54A to 9.60V )
 6.3Ah

Weight Approx. 12.89Lbs. (5.86kg)

Internal Resistance (at 1KHz) Approx. 12 m $\Omega$ 

**Maximum Discharge Current for** 

**5 seconds**: 270A

**Operating Temperature Range** 

 $\begin{array}{lll} \text{Charge} & -15^{\circ}\text{C ( 5^{\circ}\text{F ) to } 40^{\circ}\text{C (104^{\circ}\text{F )}}} \\ \text{Discharge} & -15^{\circ}\text{C ( 5^{\circ}\text{F ) to } 50^{\circ}\text{C (122^{\circ}\text{F )}}} \\ \text{Storage} & -15^{\circ}\text{C ( 5^{\circ}\text{F ) to } 40^{\circ}\text{C (104^{\circ}\text{F )}}} \\ \end{array}$ 

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

 1 month
 92%

 3 months
 90%

 6 months
 80%

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 13.50 to 13.80V

Coefficient -3.0mv / °C / cell

Case Material: ABS

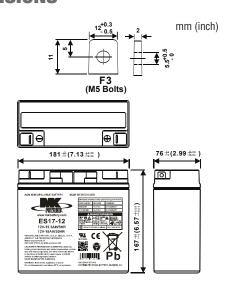
(Option: UL94 HB Flame Retardant Case Material)

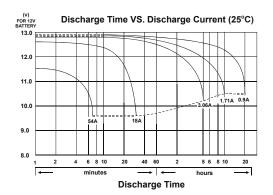
Terminal: F3

### Maintenance-Free Rechargeable Sealed Lead-Acid Battery



# **DIMENSIONS**







1631 South Sinclair Street • Anaheim, California 92806

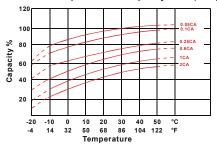
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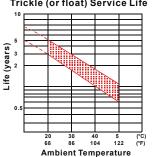


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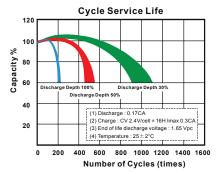
Effect of Temperature on Capacity 25°C (77°F)



Trickle (or float) Service Life



**Capacity Retention Characteristic** Remaining Capacity 6 9 12 1 Storage Time (months)



### - 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	99.8	117	129	136	138	140	142
10	min	69.0	79.1	86.5	91.1	92.2	93.7	94.9
15	min	63.5	70.8	75.8	78.8	79.7	80.6	81.4
30	min	32.8	35.3	37.9	39.5	40.0	40.5	40.9
60	min	19.8	20.8	21.7	22.3	22.5	22.8	23.2
120	min	11.5	12.0	12.3	12.7	12.8	13.0	13.1
180	min	8.60	8.95	9.18	9.38	9.45	9.53	9.63
240	min	6.78	7.08	7.27	7.42	7.47	7.53	7.61
300	min	5.87	6.10	6.22	6.32	6.35	6.40	6.46
600	min	3.47	3.58	3.67	3.73	3.75	3.79	3.82
1200	min	1.82	1.88	1.93	1.97	1.98	2.00	2.01

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

Blocharge reactor in Amporto to various Ena voltages at 20 o (17 1)											
Time	End Voltage	1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V			
5	min	64.9	70.6	74.2	77.4	78.7	80.1	82.5			
10	min	39.7	42.9	45.4	47.6	48.5	49.5	51.2			
15	min	32.8	35.5	37.2	38.7	39.3	40.0	40.9			
30	min	17.4	18.9	20.0	20.9	21.2	21.6	22.1			
60	min	9.9	10.5	11.0	11.4	11.5	11.7	11.9			
120	min	5.89	6.11	6.25	6.37	6.41	6.46	6.53			
180	min	4.28	4.45	4.55	4.63	4.66	4.70	4.76			
240	min	3.46	3.55	3.62	3.67	3.69	3.72	3.75			
300	min	2.98	3.05	3.10	3.14	3.15	3.17	3.19			
600	min	1.72	1.77	1.81	1.84	1.85	1.86	1.87			
1200	min	0.930	0.949	0.964	0.975	0.978	0.982	0.986			

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

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

## **MK Battery**

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