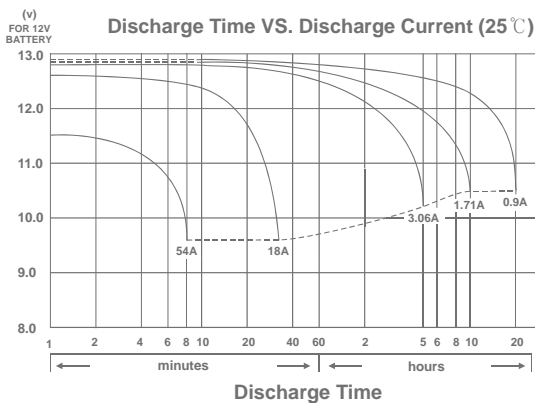
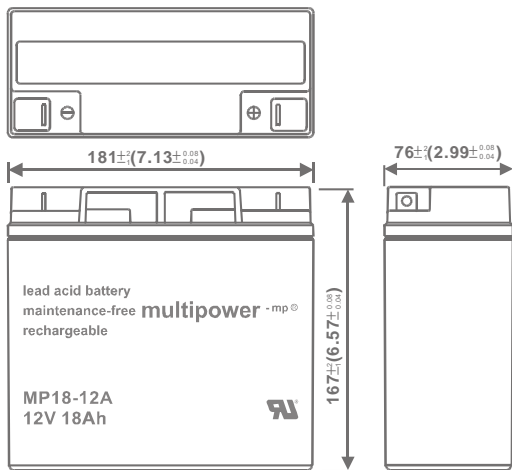
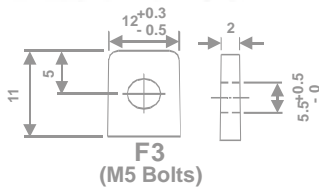


## RECHARGEABLE SEALED LEAD ACID BATTERY

## SPECIFICATION



### MP18-12A

**Nominal Voltage (V)** 12V

#### Nominal Capacity

|              |                   |         |
|--------------|-------------------|---------|
| 20 hour rate | (0.9A 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)    | 10.20Ah |
| 3 C          | (54A to 9.60V)    | 7.20Ah  |

**Weight** 6.3kg (13.86lbs)

**Internal Resistance (at 1KHz) Approx.** 10 mΩ

#### Maximum Discharge Current for

**5 seconds:** 270A

#### Charging Methods at 25°C (77°F)

|                           |                  |
|---------------------------|------------------|
| Cycle use:                |                  |
| Charging Voltage          | 14.70V to 14.80V |
| Coefficient               | -5.0mV/°C/cell   |
| Maximum Charging Current: | 5.4A             |
| Standby use:              |                  |
| Float Charging Voltage    | 13.50V to 13.80V |
| 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)

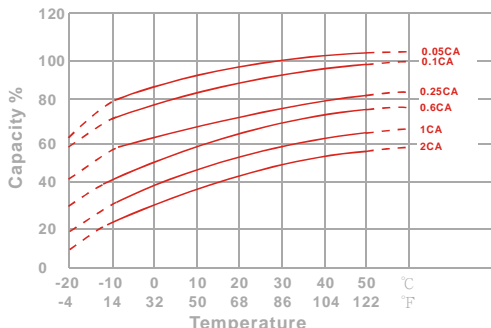
|         |     |
|---------|-----|
| 1 month | 92% |
| 3 month | 90% |
| 6 month | 80% |

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

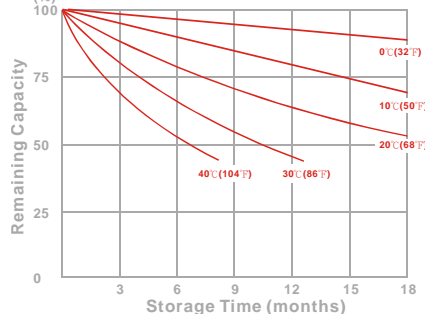
**Terminal** F3

## CHARACTERISTIC & PERFORMANCE DATA

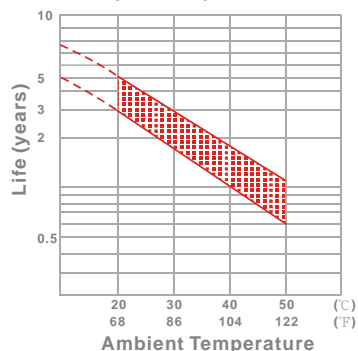
Effect of Temperature on Capacity 25°C(77°F)



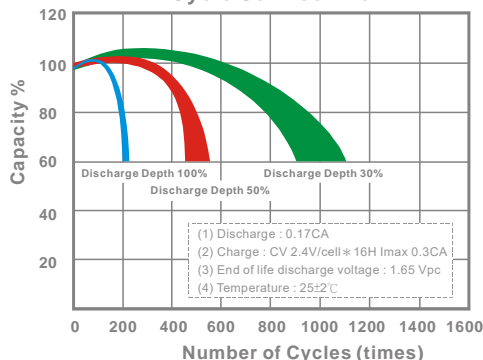
Capacity Retention Characteristic



Trickle (or float) Service Life



Cycle Service Life



### - PERFORMANCE DATA

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

| End Voltage |     | 1.85V | 1.80V | 1.75V | 1.70V | 1.67V | 1.65V | 1.60V |
|-------------|-----|-------|-------|-------|-------|-------|-------|-------|
| 5           | min | 101   | 118   | 130   | 137   | 139   | 141   | 143   |
| 10          | min | 70.7  | 80.8  | 88.2  | 92.7  | 93.8  | 95.4  | 96.6  |
| 15          | min | 61.2  | 68.5  | 73.4  | 76.5  | 77.3  | 78.2  | 79.1  |
| 30          | min | 33.2  | 35.6  | 38.2  | 39.9  | 40.3  | 40.8  | 41.3  |
| 60          | min | 20.3  | 21.3  | 22.2  | 22.8  | 23.0  | 23.3  | 23.7  |
| 120         | min | 11.7  | 12.3  | 12.6  | 13.0  | 13.1  | 13.2  | 13.4  |
| 180         | min | 8.73  | 9.08  | 9.32  | 9.52  | 9.58  | 9.67  | 9.76  |
| 240         | min | 6.87  | 7.17  | 7.35  | 7.50  | 7.55  | 7.62  | 7.70  |
| 300         | min | 5.95  | 6.18  | 6.30  | 6.40  | 6.43  | 6.48  | 6.54  |
| 600         | min | 3.55  | 3.67  | 3.75  | 3.82  | 3.83  | 3.87  | 3.90  |
| 1200        | min | 1.83  | 1.90  | 1.95  | 1.98  | 2.00  | 2.02  | 2.03  |

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

| End Voltage |     | 1.85V | 1.80V | 1.75V | 1.70V | 1.67V | 1.65V | 1.60V |
|-------------|-----|-------|-------|-------|-------|-------|-------|-------|
| 5           | min | 67.0  | 72.7  | 76.3  | 79.5  | 80.8  | 82.2  | 84.6  |
| 10          | min | 40.6  | 43.8  | 46.3  | 48.5  | 49.4  | 50.4  | 52.1  |
| 15          | min | 33.6  | 36.3  | 38.0  | 39.5  | 40.1  | 40.8  | 41.7  |
| 30          | min | 17.6  | 19.1  | 20.2  | 21.1  | 21.4  | 21.8  | 22.3  |
| 60          | min | 10.2  | 10.8  | 11.3  | 11.7  | 11.8  | 12.0  | 12.2  |
| 120         | min | 6.01  | 6.23  | 6.37  | 6.49  | 6.53  | 6.58  | 6.65  |
| 180         | min | 4.34  | 4.51  | 4.61  | 4.69  | 4.72  | 4.76  | 4.82  |
| 240         | min | 3.51  | 3.60  | 3.67  | 3.72  | 3.74  | 3.77  | 3.80  |
| 300         | min | 3.02  | 3.09  | 3.14  | 3.18  | 3.19  | 3.21  | 3.23  |
| 600         | min | 1.76  | 1.81  | 1.85  | 1.88  | 1.89  | 1.90  | 1.91  |
| 1200        | min | 0.939 | 0.958 | 0.973 | 0.984 | 0.987 | 0.991 | 0.995 |

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

The tolerance range : X<6min (+15%~-15%), 6min ≤ X < 10min (+12%~-12%), 10min ≤ X < 60min (+8%~-8%), X ≥ 60min (+5%~-5%)