# Valve Regulated Lead Acid Battery

# WP18-12N

## 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 |
| 1 C | (18A | to | 9.60V) | 10.2Ah |
| 3 C | (54A | to | 9.60V) | 7.2Ah |

### Weight

Approx. 6.3kg(13.86Lbs.)

### Internal Resistance (at 1KHz)

Approx. 10 mΩ

### Maximum Discharge Current for

5 seconds: 270A

### Charging Methods at 25℃(77℉)

| | |
|---|---|
| Cycle use: | |
| Charging Voltage | 14.4 to 15.0V |
| Coefficient -5.0mV/℃/cell | |
| Maximum Charging Current： | 5.4A |
| Standby use: | |
| Float Charging Voltage | 13.5 to 13.8V |
| Coefficient -3.0mV/℃/cell | |

### Operating Temperature Range

| | | | |
|---|---|---|---|
| Charge | -15℃(5℉) | to | 40℃(104℉) |
| Discharge | -15℃(5℉) | to | 50℃(122℉) |
| Storage | -15℃(5℉) | to | 40℃(104℉) |

### Charge Retention (shelf life) at 20℃(68℉)

| | |
|---|---|
| 1 month | 97% |
| 3 month | 92% |
| 6 month | 85% |

### Case Material

ABS UL94 HB

Option: Flammability resistance of (UL94 V-0)

### Design Life

EUROBAT(20℃): 3-5 YEARS STANDARD COMMERCIAL

### Terminal

F6

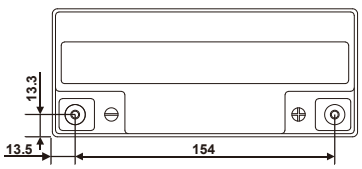
## Dimensions

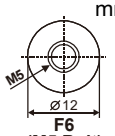
| | |
|---|---|
| Length (L) | $181^{+2}_{-1}$ ($7.13^{+0.08}_{-0.04}$) |
| Width (W) | $76^{+2}_{-1}$ ($2.99^{+0.08}_{-0.04}$) |
| Height (H) | $167^{+2}_{-1}$ ($6.57^{+0.08}_{-0.04}$) |
| Overall Height (HT) | $167^{+2}_{-1}$ ($6.57^{+0.08}_{-0.04}$) |

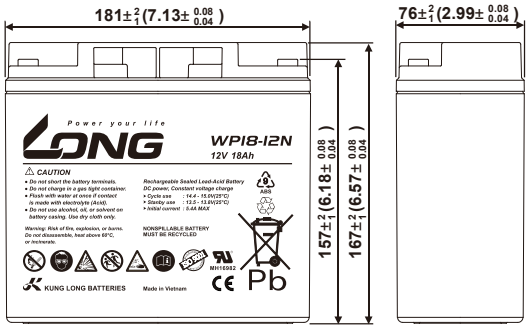
### Description of torque value of hard ware for the terminals:

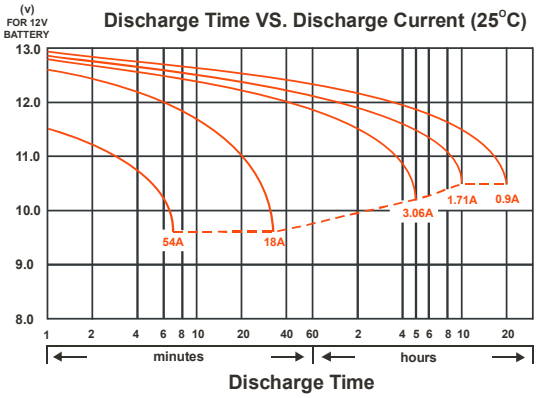
| | |
|---|---|
| Recommended torque value | M5: 4 N-m (41kgf-cm) |
| Maximum allowable torque value | M5: 6 N-m (61kgf-cm) |

mm(inch)



Power your life

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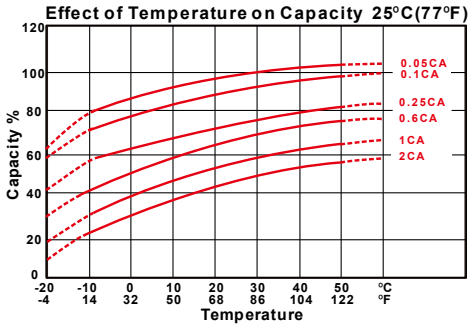


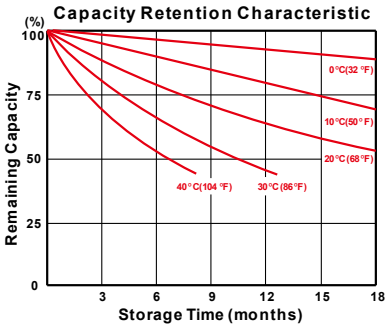


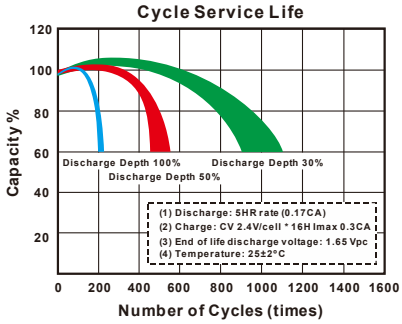


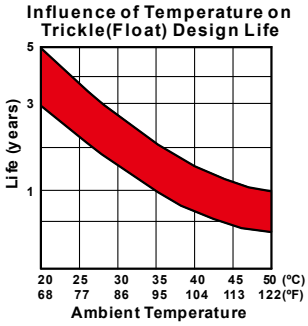


## - PERFORMANCE DATA

### Discharge Rates in Watts to Various End Voltages at 25℃(77℉)

| Time \ 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℃(77℉)

| Time \ 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%)

260626-1R


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