EverExceed®
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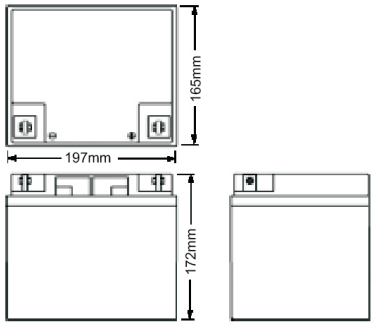
# AINO MICRO Range VRLA

# HIGH PERFORMANCE

# AM 12-40

## SEALED RECHARGEABLE LEAD ACID BATTERY

### Dimensions and Terminal



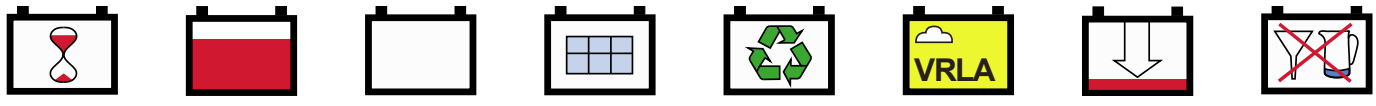

| Length:197mm | Width:165mm | Height :172mm |
|---|---|---|
| Total Height :172mm | | |

### Innovative Features

- 5~8 years design life @ 20˚C(68˚F) ambient temperature, 80% remaining capacity;
- Rechargeable VRLA batteries with an electrolyte retained in a glass mat with a very fine glass fiber structure.
- High-Compression Absorbed Glass Mat technology (AGM) for over 99% recombine action efficiency.
- Proprietary Fixed Orifice Plate Pasting technology applying active materials on both sides of the grid for consistent cell-to-cell performance, higher capacity and uniform grid protection.
- Perfect combination between energy storage performance and reliability;
- Operates at a low internal pressure;
- Low self-discharge rate (less than 3% / month @ 20˚C(68˚F);
- Grid plate construction consisting of a Lead Calcium Tin alloy;
- High impact resistant ABS resin cases and covers;
- Available in V-0 Flame Retardant Material;
- In compliance with IEC 896-2;
- Wide operating temperature range;

### Performance Specifications

| | | |
|---|---|---|
| **Normal Voltage** | 12V | |
| **Normal Capacity** | 20 hour rate (2.00 A to 10.5 volts): 40.0 Ah<br>10 hour rate (3.71 A to 10.5 volts): 37.1 Ah<br>5 hour rate (6.62 A to 10.2 volts): 33.1 Ah<br>1 hour rate (24.0 A to 9.00 volts): 24.0 Ah | |
| **Internal Resistance** | 7.50 milliohms | |
| **Approximate Weight** | 13.2 kg (29.4 lbs) | |
| **Applicable Operating Temperature Range** | -40°C(-40°F) to +70°C (+158°F) | |
| **Ideal Operating Temperature Range** | +20°C (+68°F) to +28°C (+82.4°F) | |
| **Charge Retention (Shelf Life) at 68°F(20°C)** | 1 month<br>3 month<br>6 month | 97%<br>91%<br>85% |
| **Standby Service** | 8 years | |
| **Cycle Service** | 100% depth of discharge<br>50% depth of discharge<br>30% depth of discharge | 350 cycles<br>650 cycles<br>1300 cycles |
| **Standard Terminals** | F-M6 | |



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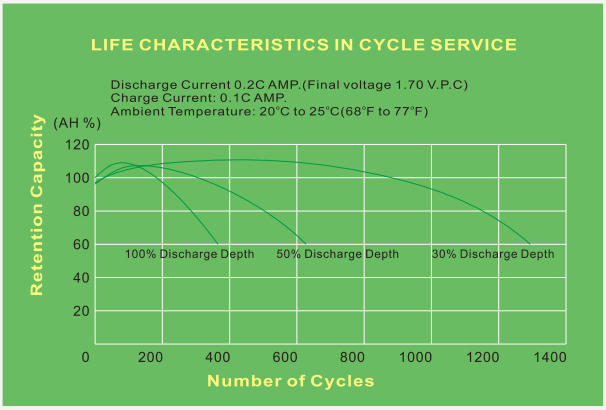
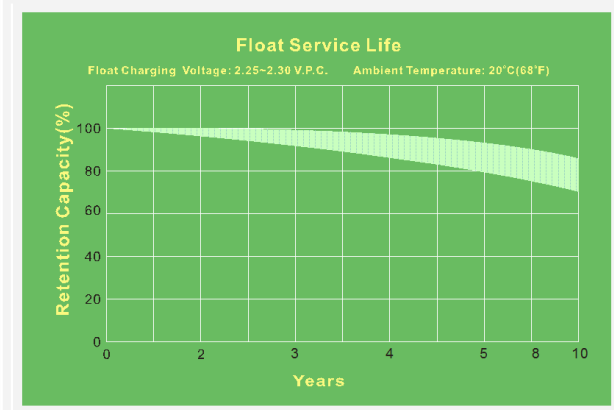
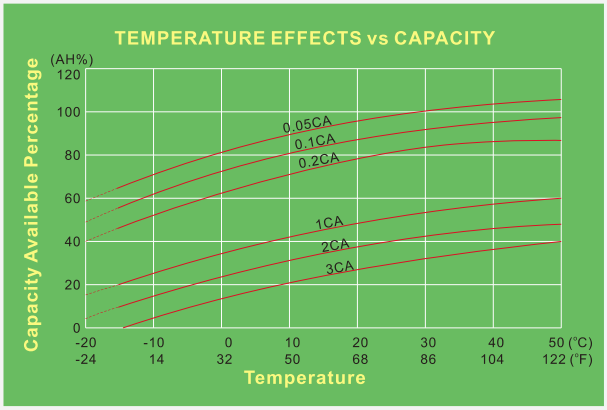
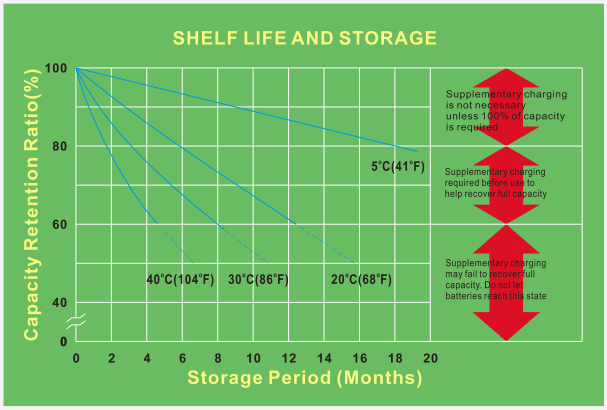
## Performance Curves




## Discharge Characteristics

| Constant Current Discharge Characteristics - Amperes @ 20°C (68°F) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Final VPC | 5min | 10min | 15min | 20min | 25min | 30min | 45min | 60min | 90min | 120min | 180min | 240min |
| 1.80 | 108 | 79.5 | 63.9 | 53.6 | 46.1 | 40.6 | 29.2 | 21.4 | 16.0 | 13.8 | 9.09 | 7.51 |
| 1.75 | 114 | 83.7 | 67.3 | 56.3 | 48.5 | 42.7 | 30.7 | 22.4 | 16.8 | 14.5 | 9.55 | 7.91 |
| 1.67 | 128 | 90.9 | 71.3 | 58.6 | 50.0 | 43.6 | 31.4 | 23.1 | 17.1 | 14.7 | 9.63 | 7.91 |

| Constant Current Discharge Characteristics - Watts Per Cell @ 20°C (68°F) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Final VPC | 5min | 10min | 15min | 20min | 25min | 30min | 45min | 60min | 90min | 120min | 180min | 240min |
| 1.80 | 213 | 153 | 119 | 99.2 | 85.9 | 75.6 | 54.3 | 40.6 | 30.7 | 26.7 | 17.8 | 14.8 |
| 1.75 | 218 | 156 | 124 | 104 | 89.7 | 78.9 | 56.8 | 42.6 | 32.2 | 28.0 | 18.6 | 15.5 |
| 1.67 | 251 | 166 | 135 | 113 | 94.6 | 82.6 | 59.4 | 44.5 | 32.9 | 28.7 | 19.5 | 15.8 |