



RT1250 (12V5.0Ah)

RT series is a general purpose battery with 5 years design life in float service . It meets with IEC and JIS standards .With up-dated AGM valve regulated technology and high purity raw materials, the RT series battery has reliable standby service life. It is suitable for UPS/EPS, medical equipment, emergency light and security systems applications.



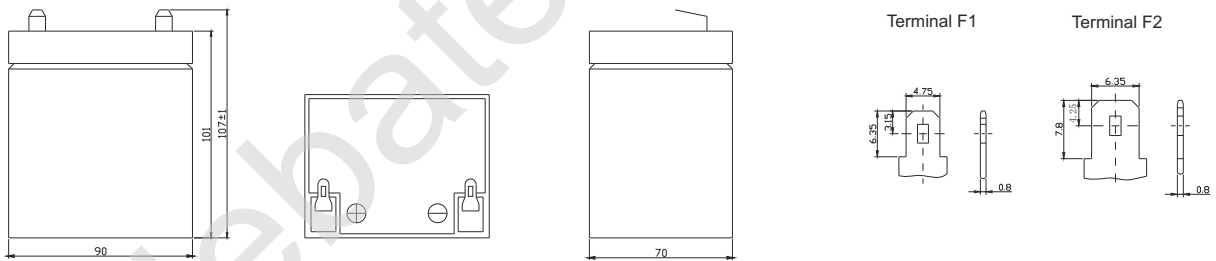
Specification

| | |
|--------------------------------------|---|
| Cells Per Unit | 6 |
| Voltage Per Unit | 12 |
| Capacity | 5.0Ah@20hr-rate to 1.75V per cell @25°C |
| Weight | Approx. 1.60 Kg(Tolerance ±4%) |
| Max. Discharge Current | 50 A (5 sec) |
| Internal Resistance | Approx. 35 mΩ |
| Operating Temperature Range | Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C |
| Normal Operating Temperature Range | 25°C ± 5°C |
| Float charging Voltage | 13.7 to 13.9 VDC/unit Average at 25°C |
| Recommended Maximum Charging Current | 1.5 A |
| Equalization and Cycle Service | 14.6 to 14.8 VDC/unit Average at 25°C |
| Self Discharge | RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using. |
| Terminal | Faston Tab 187(F1)/Faston tab 250(F2) |
| Constainer Material | A.B.S. UL94-HB, UL94-V0 Optional. |



Dimensions

Unit: mm Dimension: 90(L) × 70(W) × 107(H)



Constant Current Discharge Characteristics : A(25°C)

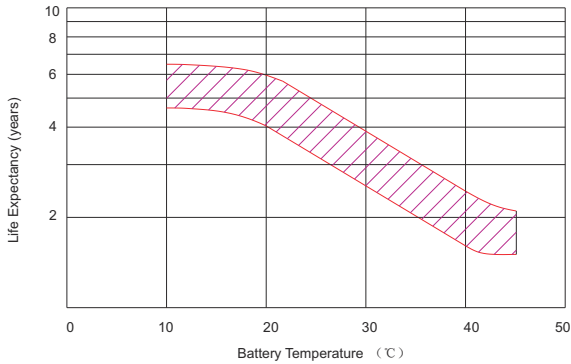
| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 9.60V | 19.72 | 12.93 | 9.63 | 5.126 | 3.250 | 1.868 | 1.309 | 1.067 | 0.876 | 0.577 | 0.500 | 0.268 |
| 10.0V | 19.01 | 12.61 | 9.32 | 5.060 | 3.206 | 1.830 | 1.285 | 1.051 | 0.869 | 0.575 | 0.495 | 0.265 |
| 10.2V | 17.89 | 11.98 | 9.062 | 4.983 | 3.176 | 1.811 | 1.274 | 1.041 | 0.863 | 0.570 | 0.487 | 0.258 |
| 10.5V | 16.08 | 11.20 | 8.548 | 4.846 | 3.137 | 1.787 | 1.262 | 1.025 | 0.856 | 0.565 | 0.485 | 0.252 |
| 10.8V | 14.41 | 10.45 | 8.065 | 4.686 | 3.093 | 1.772 | 1.248 | 0.990 | 0.852 | 0.562 | 0.477 | 0.242 |
| 11.1V | 12.61 | 9.580 | 7.440 | 4.508 | 3.020 | 1.737 | 1.223 | 0.976 | 0.848 | 0.558 | 0.469 | 0.238 |

Constant Power Discharge Characteristics : W(25°C)

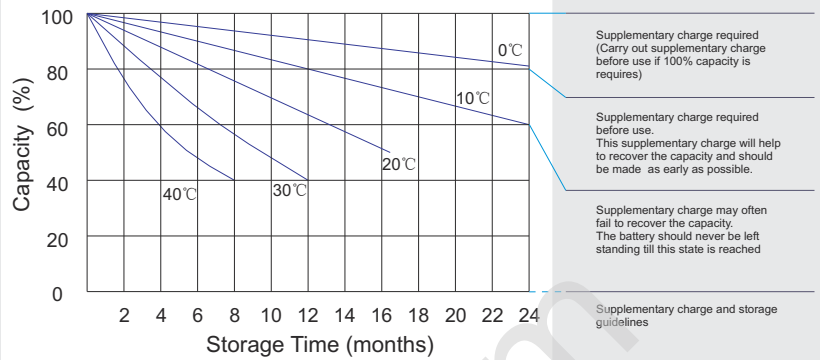
| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|----------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 9.60V | 213.88 | 141.78 | 106.26 | 58.68 | 38.85 | 22.01 | 15.66 | 12.77 | 10.50 | 6.913 | 5.988 | 3.210 |
| 10.0V | 208.31 | 138.83 | 104.74 | 58.07 | 38.28 | 21.72 | 15.40 | 12.59 | 10.41 | 6.886 | 5.931 | 3.184 |
| 10.2V | 198.14 | 133.34 | 103.35 | 57.57 | 38.00 | 21.53 | 15.27 | 12.47 | 10.34 | 6.835 | 5.855 | 3.102 |
| 10.5V | 180.85 | 127.84 | 97.97 | 56.39 | 37.48 | 21.30 | 15.16 | 12.30 | 10.26 | 6.777 | 5.814 | 3.050 |
| 10.8V | 163.16 | 119.59 | 92.56 | 55.06 | 36.99 | 21.15 | 14.98 | 11.89 | 10.21 | 6.747 | 5.726 | 2.928 |
| 11.1V | 143.88 | 111.34 | 87.18 | 53.55 | 36.18 | 20.84 | 14.69 | 11.71 | 10.18 | 6.700 | 5.640 | 2.881 |

All mentioned values are average values (Tolerance ±2%).

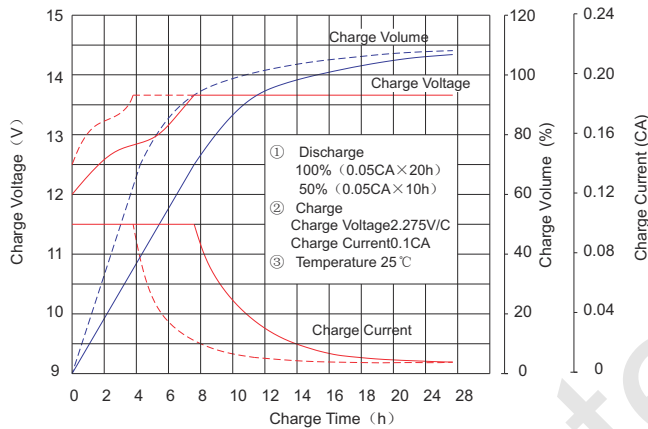
Effect of temperature on long term float life



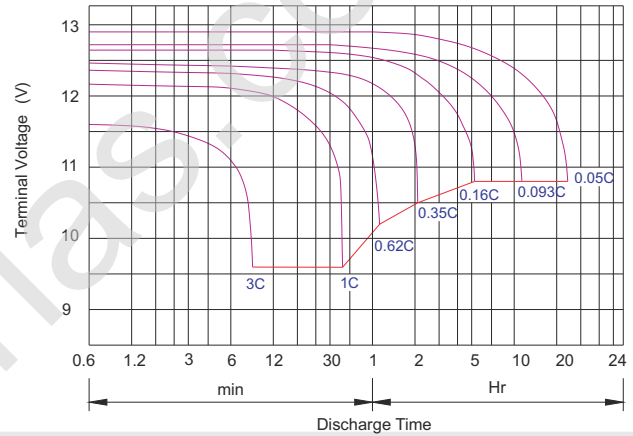
Storage characteristic



Charge characteristic Curve for standby use



Discharge characteristic Curve



Capacity Factors With Different Temperature

| Battery Type | | -20°C | -10°C | 0°C | 5°C | 10°C | 20°C | 25°C | 30°C | 40°C | 45°C |
|--------------|--------|-------|-------|-----|-----|------|------|------|------|------|------|
| GEL Battery | 6V&12V | 50% | 70% | 83% | 85% | 90% | 98% | 100% | 102% | 104% | 105% |
| | 2V | 60% | 75% | 85% | 88% | 92% | 99% | 100% | 103% | 105% | 106% |
| AGM Battery | 6V&12V | 46% | 66% | 76% | 83% | 90% | 98% | 100% | 103% | 107% | 109% |
| | 2V | 55% | 70% | 80% | 85% | 92% | 99% | 100% | 104% | 108% | 110% |

Discharge Current VS. Discharge Voltage

| Final Discharge Voltage V /cell | 1.75V | 1.70V | 1.60V |
|---------------------------------|------------|-------------------|------------|
| Discharge Current (A) | (A) ≤ 0.2C | 0.2C < (A) < 1.0C | (A) ≥ 1.0C |

Charge the batteries at least once every six months, if they are stored at 25°C.

Charging Method:

| | |
|------------------|--|
| Constant Voltage | -0.2Cx2h+14.4-14.7Vx24h, Max. Current 0.3C |
| Constant Current | -0.2Cx2h+0.1Cx12h |
| Fast | -0.2Cx2h+0.3Cx4h |

| | | | |
|-----------------|-----------------------|------------------|-----------------------|
| Bolt | M5 | M6 | M8 |
| Terminal | F3 F4 F13 F18 T25 T26 | F8 F11 F12-1 F15 | F5 F9 F10 F12 F14 F16 |
| Torque | 6-7N-m | 8-10N-m | 10-12N-m |

Maintenance & Cautions

Float Service:

- ※ Every month, recommend inspection every battery voltage.
- ※ Every three months, recommend equalization charge for one time.

Equalization charge method:

Discharge: 100% rate capacity discharge.

Charge: Max. current 0.3CA, constant voltage 14.4-14.7V charge 24h.

※ Effect of temperature on float charge voltage: -3mV/°C/Cell.

※ Length of service life will be directly affected by the number of discharge cycles, depth of discharge, ambient temperature and charging voltage.