



RL2300X (2V300Ah)

RL 2300X is a general purpose battery with 18 years floating design life. With heavy duty grid, thick plates, special additives, RL series battery maintain very long life time and stable performance.

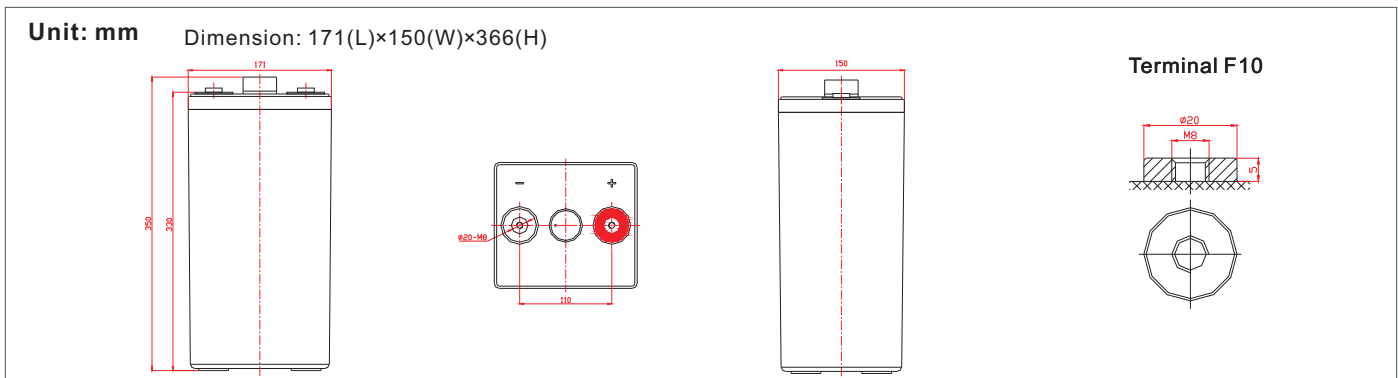


Specification

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|--|--|
| Cells Per Unit | 1 |
| Voltage Per Unit | 2 |
| Capacity | 300Ah@10hr-rate to 1.80V per cell @25°C |
| Weight | Approx. 19 Kg |
| Max. Discharge Current | 1500 A (5 sec) |
| Internal Resistance | Approx. 0.72 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 | 2.27 to 2.3 VDC/unit Average at 25°C |
| Recommended Maximum Charging Current Limit | 60 A |
| Equalization and Cycle Service | 2.43 to 2.47 VDC/unit Average at 25°C |
| Self Discharge | RITAR 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 | Thread insert & Bolt (F10) |
| Container Material | A.B.S. (UL94-HB), Flammability resistance of UL94-V1 can be available upon request. |



Dimensions



Constant Current Discharge Characteristics : A(25°C)

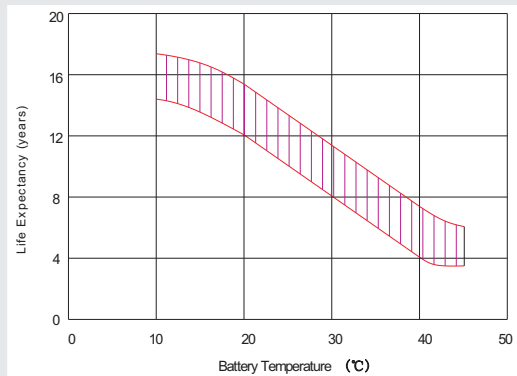
| F.V/Time | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 6HR | 8HR | 10HR |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.60V | 407.3 | 300.4 | 193.3 | 114.9 | 85.59 | 68.23 | 57.46 | 48.26 | 38.95 | 32.56 |
| 1.65V | 387.3 | 288.4 | 184.9 | 110.7 | 81.99 | 65.84 | 55.06 | 47.09 | 37.21 | 32.00 |
| 1.70V | 361.2 | 271.9 | 181.3 | 108.9 | 80.20 | 65.24 | 54.46 | 45.93 | 36.63 | 31.41 |
| 1.75V | 320.6 | 244.7 | 167.0 | 102.9 | 76.01 | 61.65 | 52.07 | 43.61 | 35.47 | 30.83 |
| 1.80V | 276.0 | 222.9 | 157.4 | 98.15 | 73.02 | 61.05 | 50.27 | 43.02 | 34.88 | 30.25 |
| 1.85V | 233.4 | 200.6 | 145.4 | 92.77 | 69.43 | 56.26 | 47.88 | 40.70 | 33.14 | 28.21 |

Constant Power Discharge Characteristics : W(25°C)

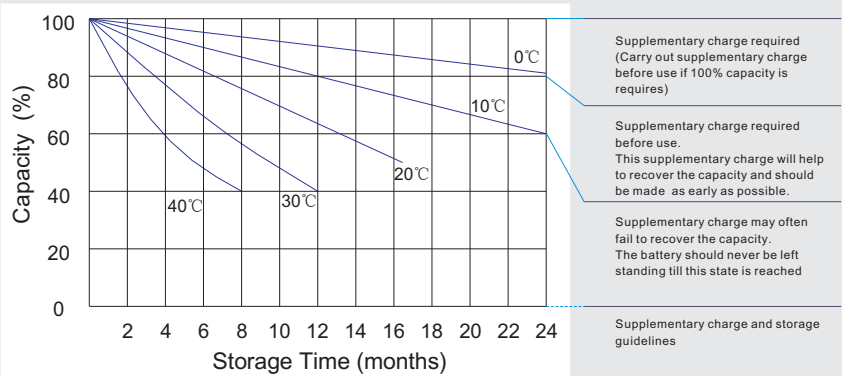
| F.V/Time | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 6HR | 8HR | 10HR |
|----------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|
| 1.60V | 713.1 | 547.4 | 354.0 | 212.9 | 159.5 | 128.2 | 108.6 | 93.11 | 74.13 | 62.86 |
| 1.65V | 694.4 | 544.5 | 352.7 | 209.8 | 156.4 | 126.3 | 107.4 | 91.92 | 73.50 | 62.27 |
| 1.70V | 656.0 | 515.3 | 346.3 | 206.7 | 154.0 | 125.8 | 106.4 | 89.78 | 72.37 | 61.30 |
| 1.75V | 584.3 | 464.4 | 319.0 | 195.7 | 148.5 | 119.5 | 101.94 | 85.36 | 70.09 | 60.32 |
| 1.80V | 505.7 | 423.7 | 300.8 | 186.9 | 142.3 | 119.0 | 98.63 | 84.35 | 68.96 | 58.17 |
| 1.85V | 431.3 | 382.0 | 278.1 | 176.9 | 135.6 | 110.2 | 94.12 | 79.91 | 65.53 | 56.01 |

All mentioned values are average values.

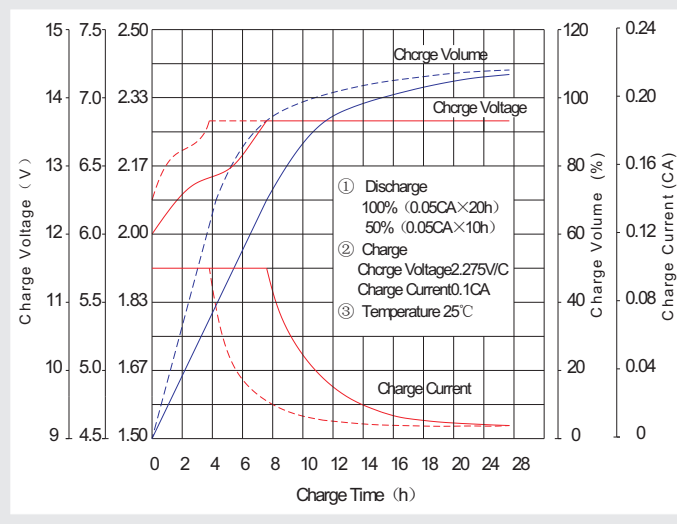
Effect of temperature on long term float life



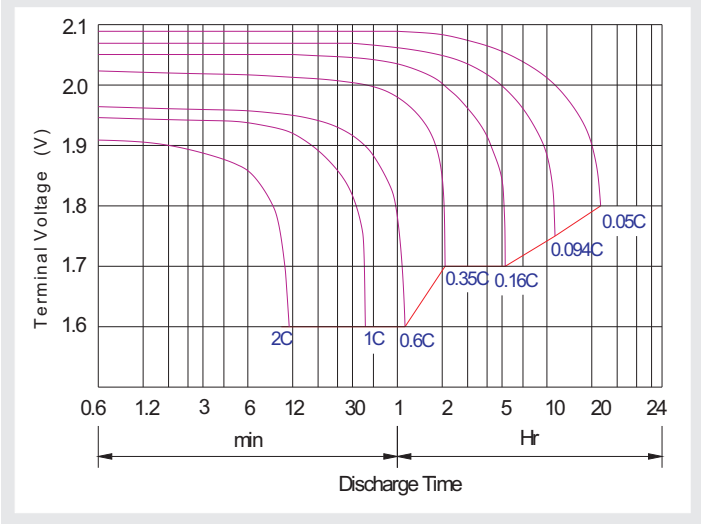
Storage characteristic



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 |

Maintenance & Cautions

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| 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 2.4-2.45V/Cell 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. |

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

Charging Method:

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|------------------|--|
| Constant Voltage | -0.2Cx2h+2.40~2.45V,24h,Max. Current 0.2CA |
| Constant Current | -0.2Cx2h+0.1CA×12h |
| Fast | -0.2Cx2h+0.3CAx4.0h |