



HR12-18W



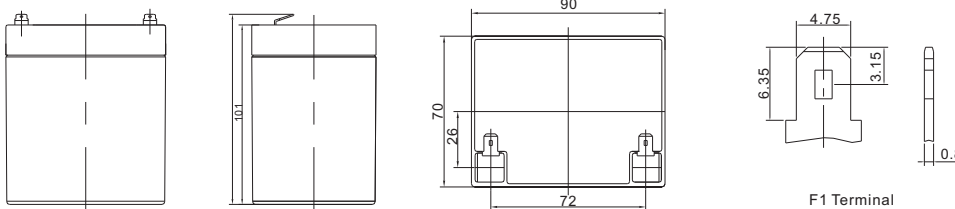
Specification

| | |
|--------------------------------------|---|
| Cells Per Unit | 6 |
| Voltage Per Unit | 12 |
| Capacity | 18W@15min-rate to 1.67V per cell @25°C |
| Weight | Approx. 1.60 Kg (Tolerance ±4.0%) |
| Internal Resistance | Approx. 35 mΩ |
| Terminal | F1/F2 |
| Max. Discharge Current | 45A (5 sec) |
| Short Circuit Current | 250A |
| Design Life | Could Reach 8 years |
| Recommended Maximum Charging Current | 1.35 A |
| Reference Capacity | C10 4.2AH C20 4.5AH |
| Standby Use Voltage | 13.7 V~13.9 V @ 25°C |
| Cycle Use Voltage | 14.6 V~14.8 V @ 25°C |
| 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 |
| Self Discharge | RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25°C. Please charge batteries before using. |
| Constainer Material | A.B.S. UL94-HB, UL94-V0 Optional. |

The HR (High Rate) series Valve Regulated Lead Acid (VRLA) battery is designed for heavy load discharge applications with 8 years design life in float service. By using strong grids and specially designed active material the HR series is with lower I.R, lower self discharge rate, high power, and longer service life performance. Generally the HR series offers 30% more power output than the standard range. Suitable for high power standby and cycling situation, such as UPS, datacenter, electric tools et al.



Dimensions



| | |
|--------------|-----------------------|
| Length | 90±1mm (3.54 inches) |
| Width | 70±1mm (2.76 inches) |
| Height | 101±1mm (3.98 inches) |
| Total Height | 106±1mm (4.17 inches) |
| Terminal | Value |
| M5 | 6~7 N*m |
| M6 | 8~10 N*m |
| M8 | 10~12 N*m |

Unit: mm

Constant Current Discharge Characteristics : A (25°C)

| F.V/Time | 3MIN | 5MIN | 8MIN | 10MIN | 15MIN | 20MIN | 30MIN | 60MIN | 90MIN |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.60V | 20.68 | 17.99 | 14.95 | 13.19 | 10.20 | 8.255 | 6.044 | 3.524 | 2.569 |
| 1.67V | 19.14 | 16.64 | 14.03 | 12.38 | 9.67 | 7.701 | 5.762 | 3.359 | 2.445 |
| 1.70V | 18.34 | 15.95 | 13.53 | 11.93 | 9.37 | 7.407 | 5.599 | 3.262 | 2.372 |
| 1.75V | 17.33 | 15.07 | 12.86 | 11.20 | 8.93 | 7.204 | 5.441 | 3.209 | 2.319 |
| 1.80V | 16.30 | 14.17 | 12.18 | 10.47 | 8.48 | 6.991 | 5.274 | 3.145 | 2.263 |
| 1.85V | 15.21 | 13.22 | 11.45 | 9.71 | 8.00 | 6.747 | 5.079 | 3.070 | 2.195 |

Constant Power Discharge Characteristics : WPC (25°C)

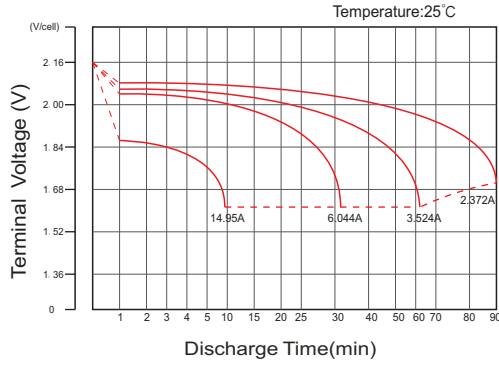
| F.V/Time | 3MIN | 5MIN | 8MIN | 10MIN | 15MIN | 20MIN | 30MIN | 60MIN | 90MIN |
|----------|------|------|------|-------|-------|-------|-------|-------|-------|
| 1.60V | 37.5 | 32.6 | 27.5 | 24.4 | 19.0 | 15.2 | 11.1 | 6.5 | 4.8 |
| 1.67V | 35.0 | 30.4 | 26.0 | 23.1 | 18.2 | 14.3 | 10.7 | 6.3 | 4.6 |
| 1.70V | 33.9 | 29.5 | 25.4 | 22.5 | 17.8 | 13.9 | 10.5 | 6.2 | 4.5 |
| 1.75V | 32.5 | 28.2 | 24.5 | 21.4 | 17.2 | 13.7 | 10.4 | 6.1 | 4.5 |
| 1.80V | 31.0 | 26.9 | 23.5 | 20.3 | 16.6 | 13.5 | 10.2 | 6.1 | 4.4 |
| 1.85V | 29.5 | 25.6 | 22.5 | 19.2 | 15.9 | 13.3 | 10.0 | 6.1 | 4.4 |

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.

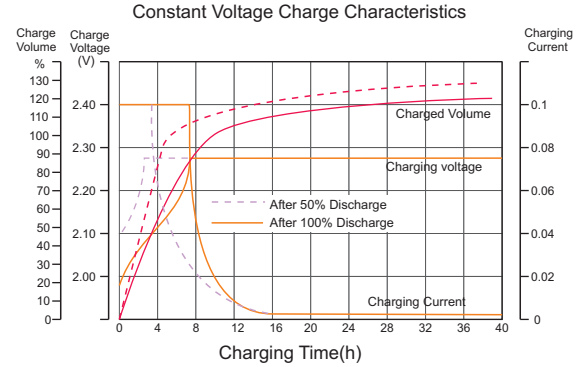
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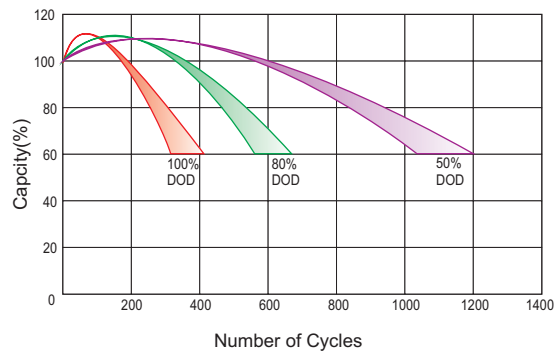
Discharge Characteristics Curve



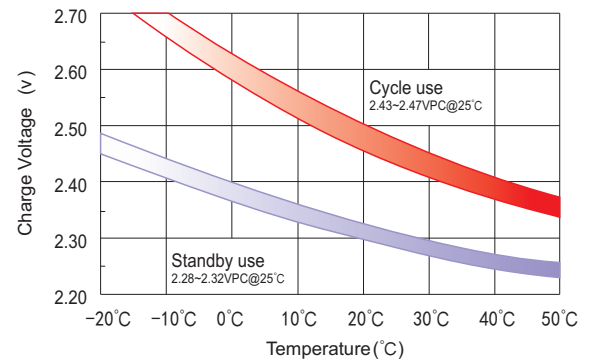
Charge Characteristic Curve For Standby Use



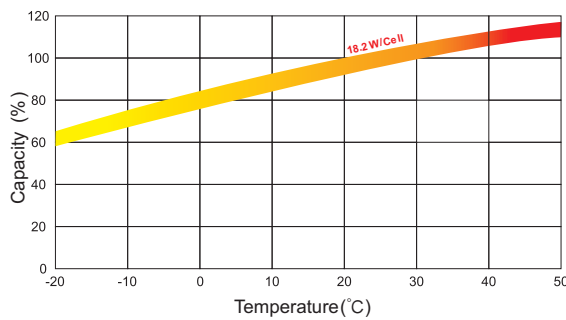
Cycle Life In Relation To Depth Of Discharge



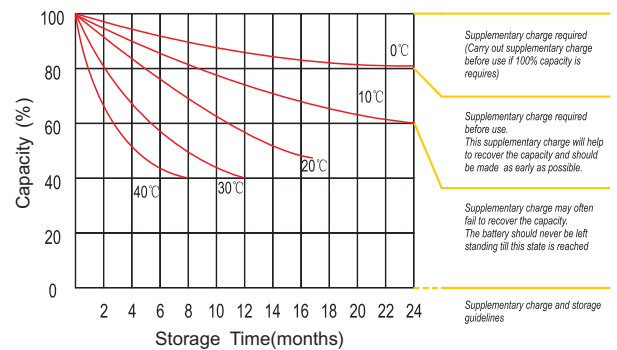
Relationship Between Charging Voltage And Temperature



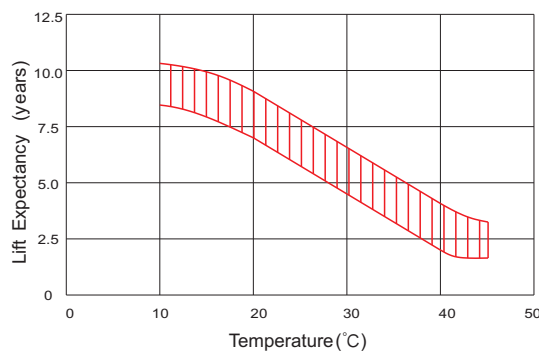
Temperature Effects On Capacity



Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use

