



HL2-300 (2V300Ah)

HL series is a general purpose battery with 18 years design life in float service. With heavy duty grids, thicker plates, special additives and updated AGM valve regulated technology, the RL series battery provides consistent performance and long service life. The new grid design effectively reduces the internal resistance, which provides higher specific energy density and excellent high rate discharge characteristics. It is suitable for communications back-up power and EPS/UPS applications.



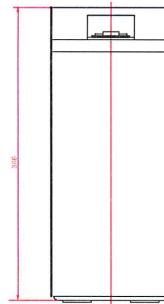
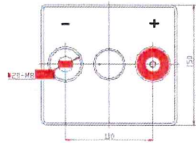
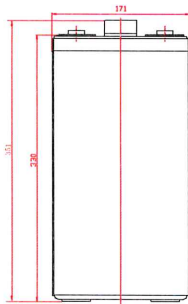
Specification

Cells Per Unit	1
Voltage Per Unit	2
Capacity	300Ah@10hr-rate to 1.80V per cell @25°C
Weight	Approx. 19 Kg (Tolerance±3%)
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	60 A
Equalization and Cycle Service	2.43 to 2.47 VDC/unit Average at 25°C
Self Discharge	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	Thread insert & Bolt (F10)
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

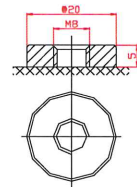


Dimensions

Unit: mm Dimension: 171 (L) × 150 (W) × 366 (H)



Terminal F10



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	187.3	114.9	85.59	61.41	53.75	48.26	38.95	31.25
1.65V	387.3	288.4	184.9	110.7	81.99	59.25	53.21	47.09	37.21	30.95
1.70V	361.2	271.9	181.3	108.9	80.20	58.71	52.44	45.93	36.63	30.65
1.75V	320.6	244.7	167.0	102.9	76.01	55.48	51.77	43.61	35.47	30.32
1.80V	276.0	222.9	157.4	98.15	73.02	54.94	50.87	43.02	34.88	30.04
1.85V	233.4	200.6	145.4	92.77	69.43	50.63	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	348.6	215.0	159.5	115.4	106.9	93.11	74.13	62.26
1.65V	694.4	544.5	346.7	211.9	156.4	113.7	105.9	91.92	73.50	61.67
1.70V	656.0	515.3	343.3	208.8	154.0	113.2	104.6	89.78	72.37	61.30
1.75V	584.3	464.4	322.0	197.7	148.5	107.6	103.1	85.36	70.09	60.68
1.80V	505.7	423.7	306.2	188.8	142.3	107.1	101.3	84.35	68.96	60.18
1.85V	431.3	382.0	284.1	178.7	135.6	99.2	95.62	79.91	65.53	56.70

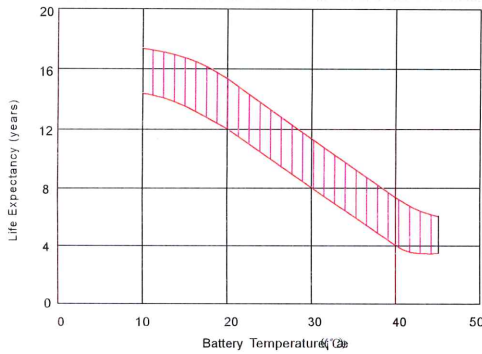
All mentioned values are average values (Tolerance ±2%).

HL2-300

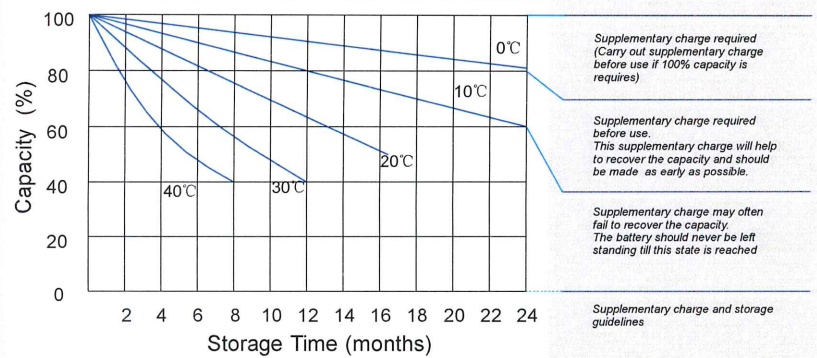
2V300Ah



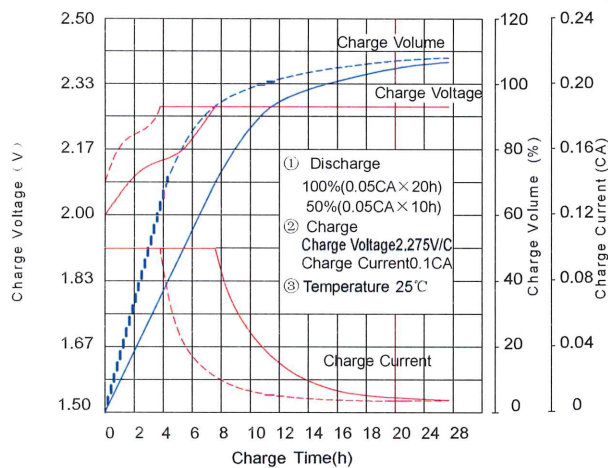
Effect of temperature on long term float life



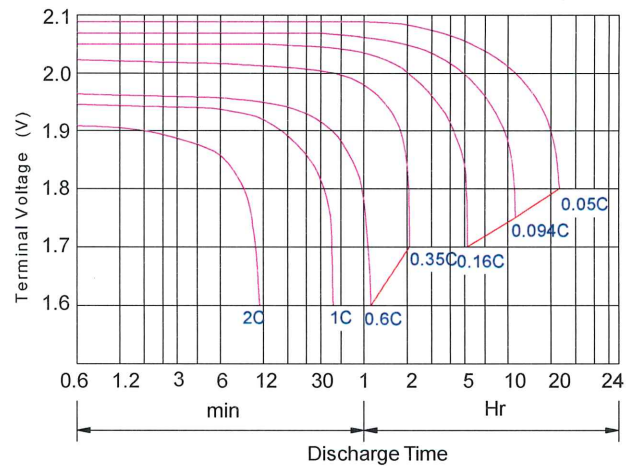
Storage characteristic



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

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 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:

Constant Voltage	-0.2Cx2h+2.4-2.45Vx24h, Max. Current 0.2C
Constant Current	-0.2Cx2h+0.1Cx12h
Fast	-0.2Cx2h+0.2Cx6h

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