

Specification



AP series is a general purpose battery with 6~8 years design life in float service. It meets with IEC, JIS, BS, GB/T and YD/T standards. With advanced AGM valve regulated technology and high purity raw material, the AP series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, medical equipment, emergency light and security system applications.



ISO 9001



ISO 14001



ISO 45001



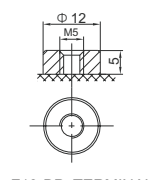
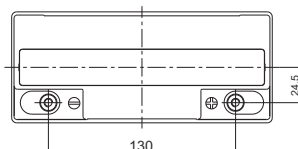
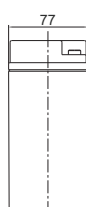
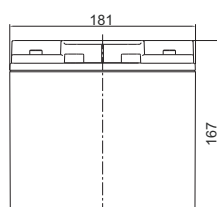
MH 28539



BSTXD210316008517EC

Cells Per Unit	6
Voltage Per Unit	12V
Nominal Capacity	18Ah@20hour-rate to 1.75V per cell @25°C
Weight	Approx. 4.85 Kg (Tolerance $\pm 5.0\%$)
Internal Resistance	$\leq 18 \text{ m}\Omega$ (Full Charge Condition @25°C)
Terminal	Default F13-BP(M5), F3(M5) Optional
Max. Discharge Current	180A (5 sec)
Short Circuit Current	750A
Design Life	6~8 years
Max. Charging Current	5.4 A
Reference Capacity	C ₃ 13.5Ah C ₅ 15.3Ah C ₁₀ 16.8Ah C ₂₀ 18.0Ah
Float Charging Voltage	13.5 V~13.8 V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 25°C Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
Normal Operating Temperature Range	25°C $\pm$ 5°C
Self Discharge	Apollo 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.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

Dimensions



F13-BP TERMINAL

Length	181 $\pm$ 2mm (7.13 inches)
Width	77 $\pm$ 2mm (3.03 inches)
Height	167 $\pm$ 2mm (6.57 inches)
Total Height	167 $\pm$ 2mm (6.57 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	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	66.25	47.30	34.54	19.84	11.00	6.752	5.076	4.098	3.395	2.185	1.775	0.937
1.65V	61.60	44.70	33.02	19.05	10.62	6.537	4.919	3.987	3.307	2.161	1.753	0.922
1.70V	55.58	41.15	30.93	18.21	10.27	6.321	4.786	3.879	3.221	2.127	1.727	0.911
1.75V	49.80	37.67	28.78	17.40	9.899	6.101	4.643	3.779	3.140	2.098	1.704	0.900
1.80V	43.72	34.10	26.58	16.63	9.521	5.882	4.499	3.671	3.059	2.062	1.682	0.891
1.85V	34.71	27.87	22.05	14.32	8.539	5.390	4.159	3.412	2.853	1.936	1.584	0.846

Constant Power Discharge Characteristics : W/Cell (25°C)

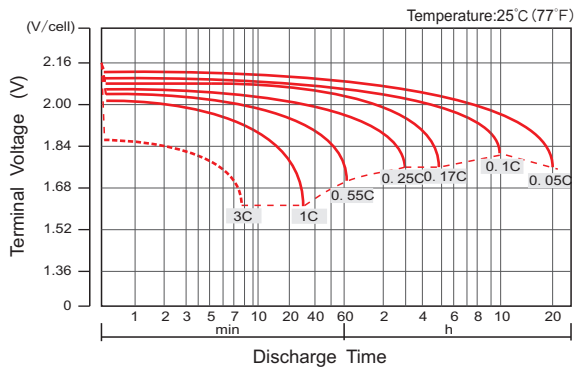
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	109.8	80.40	60.39	36.03	20.67	12.80	9.695	7.868	6.545	4.268	3.489	1.845
1.65V	103.3	77.44	58.59	34.96	20.07	12.45	9.435	7.683	6.399	4.229	3.451	1.819
1.70V	95.32	72.60	55.69	33.75	19.54	12.11	9.220	7.503	6.254	4.173	3.404	1.799
1.75V	87.30	67.65	52.58	32.59	18.94	11.74	8.983	7.338	6.118	4.123	3.363	1.779
1.80V	78.29	62.31	49.24	31.46	18.32	11.37	8.739	7.153	5.981	4.062	3.324	1.764
1.85V	63.45	51.83	41.44	27.37	16.53	10.48	8.115	6.674	5.596	3.823	3.134	1.677

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.
The battery must be fully charged before the capacity test. The C₂₀ should reach 95% after the first cycle and 100% after the third cycle.

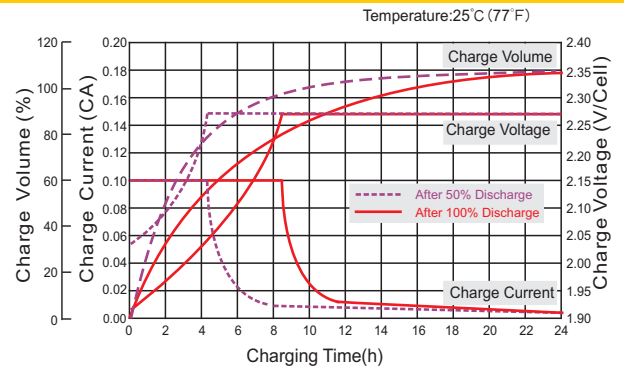
AP18-12 (12V18Ah)



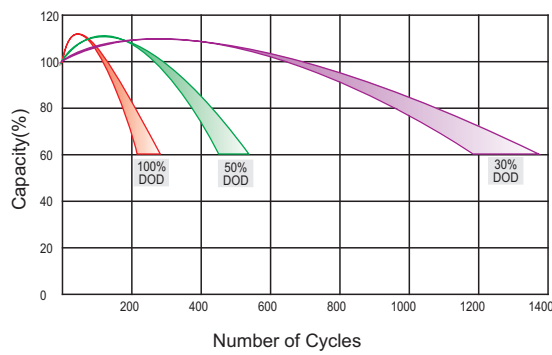
Discharge Characteristics Curve



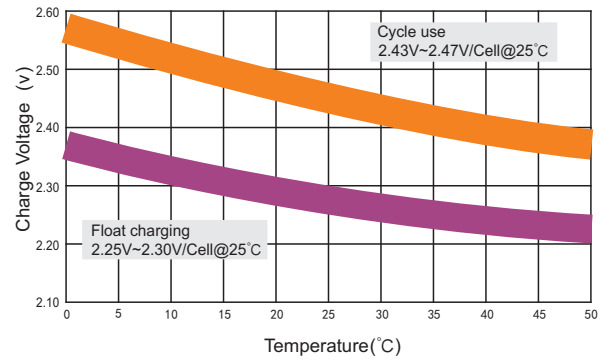
Charge Characteristic Curve For Standby Use(IU)



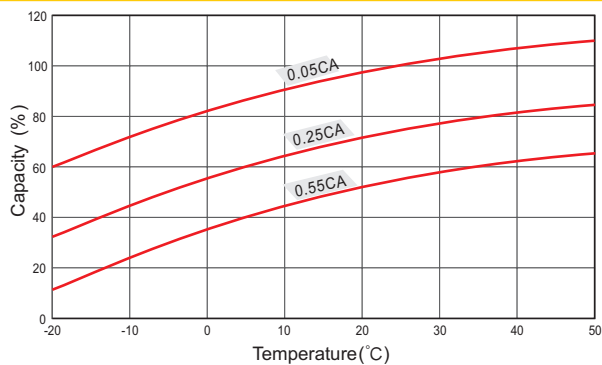
Cycle Life In Relation To Depth Of Discharge



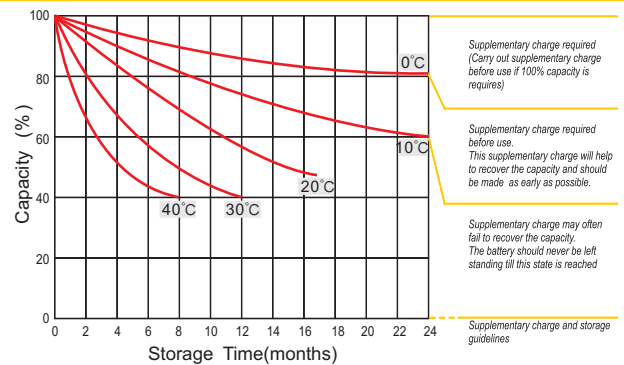
Relationship Between Charging Voltage And Temperature



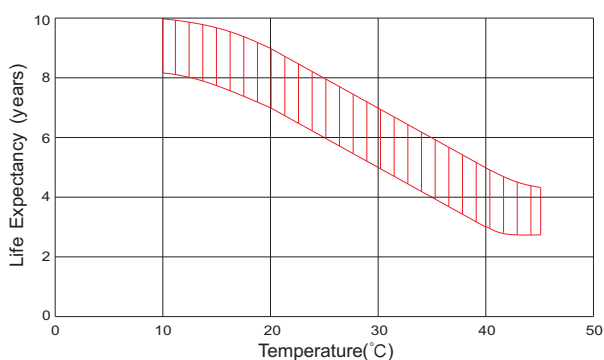
Temperature Effects On Capacity



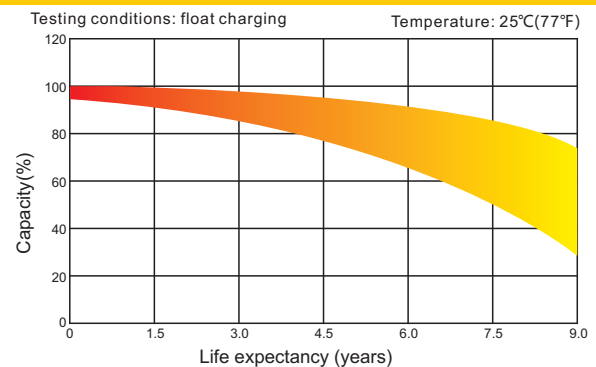
Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use



(Note) All above information shall be changed without prior notice, Apollo reserves the right to explain and update the latest information.