VRLA AGM battery

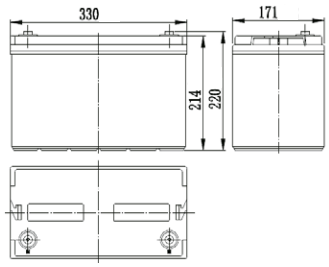
ATP 12-110AH

ATP series is a general Purpose battery. It meets with heavy duty grids, thicker plates, special additives and advanced AGM valve regulated technology, the ATP 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 telecommunications back-up power and EPS/UPS applications.

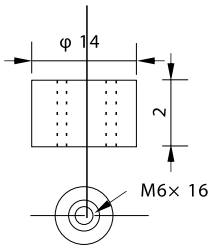
Specifications

Nominal Voltage		12V
Rated capacity (20 hour rate)		110Ah
Dimensions	Length	330±2mm(12.99inch)
	Width	171±2mm(6.73inch)
	Height	214±2mm(8.43inch)
	Total Height	220±2mm(8.66inch)
Approx. Weight		30.5kg(67.24lbs)±3%

Outer dimensions (mm)



Terminal Type (mm)



Characteristics

Capacity (25°C)	10HR(10.8V)	110Ah
	3HR(10.8V)	82.5Ah
	1HR(10.5V)	60.5Ah
Terminal type		T16A
Interna! resistance (Fully charged,25°C)		Approx.4.5m Ω
Capacity affected by temperature (10HR)	40°C	102%
	25°C	100%
	0°C	85%
	-15°C	65%
Self-discharge (25°C)	3 months	Remaining Capacity:91 %
	6 months	Remaining Capacity:82%
	12 months	Remaining Capacity:65%
Nominal operating temperature		25°C ±3°C(77°F ±5°F)
Operating temperature range	Discharge	-15°C-50°C(5°F-122°F)
	Charge	-10°C-50°C(14°F-122°F)
	Storage	-20°C-50°C(-4°F-122°F)
Float charging voltage(25°C)		13.50 to 13.80V Temperature compensation: -18mV/ °C
Cyclic charging voltage(25°C)		14.50 to 15.00V Temperature compensation: -30mV/°C
Maximum charging current		33A
Maximum discharge current		800A(5 sec.)
Designed floating life(20°C)		10 years

Construction

Component	Positive plate	Negative plate	Container	Cover	Separator	Electrolyte	Safety valve	Terminal
Raw material	Lead dioxide	Lead	ABS	ABS	AGM	Sulfuric acid	Rubber	Copper

Constant Current Discharge Characteristics Unit:A(25°C,77°F)

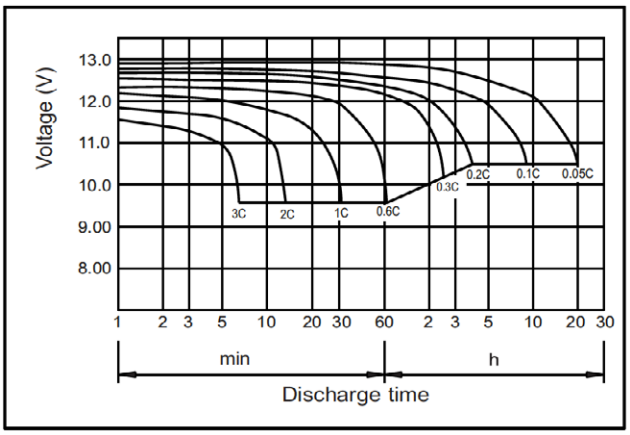
F.V/Time	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	231	178	107	65.5	38.7	27.9	22.2	19.1	13.0	10.8	5.72
9.90V	224	174	104	64.1	38.5	27.8	22.2	18.9	13.0	10.8	5.70
10.2V	215	167	101	62.9	38.2	27.6	21.9	18.8	12.9	10.7	5.69
10.5V	206	162	98.8	61.0	37.6	27.3	21.8	18.7	12.8	10.7	5.66
10.8V	194	153	95.1	58.9	36.7	26.5	21.2	18.1	12.4	10.6	5.62

Constant Power Discharge Characteristics Unit:W(25°C,77°F)

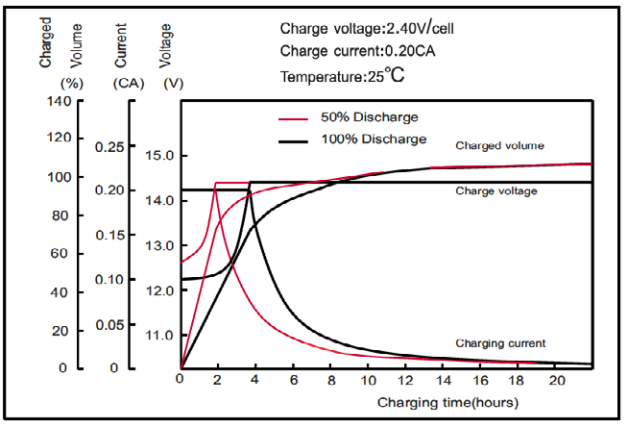
F.V/Time	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	2495	1956	1128	747	448	328	262	225	156	123	68.6
9.90V	2421	1801	1196	736	446	326	261	224	155	128	68.5
10.2V	2321	1838	1135	717	442	324	259	222	154	128	68.3
10.5V	2221	1776	1108	694	436	321	257	220	153	127	67.8
10.8V	2097	1681	1067	672	424	312	249	214	147	126	67.4

Note: The above characteristics data can be obtained within three charge or discharge cycles.

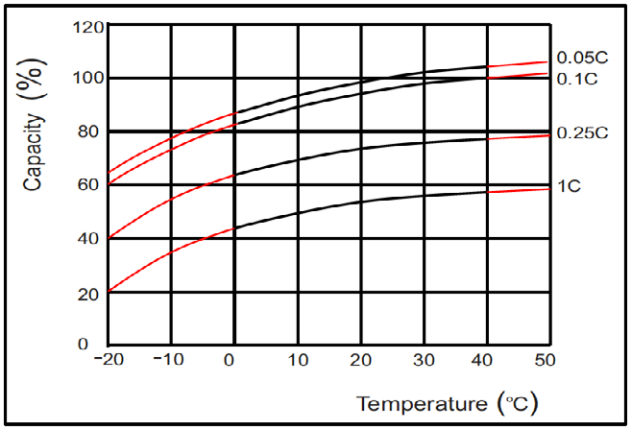
Discharge characteristics(25°C)



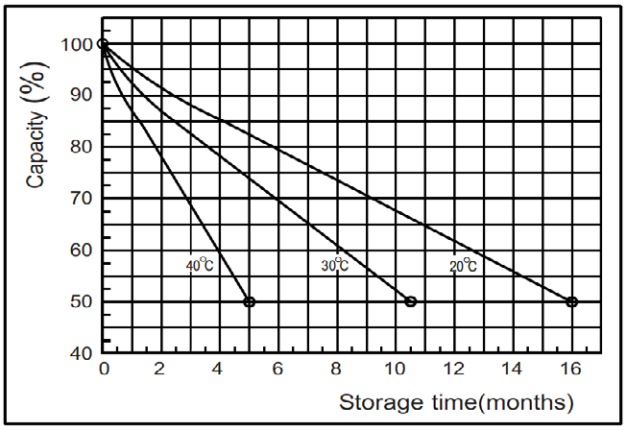
Charging characteristics



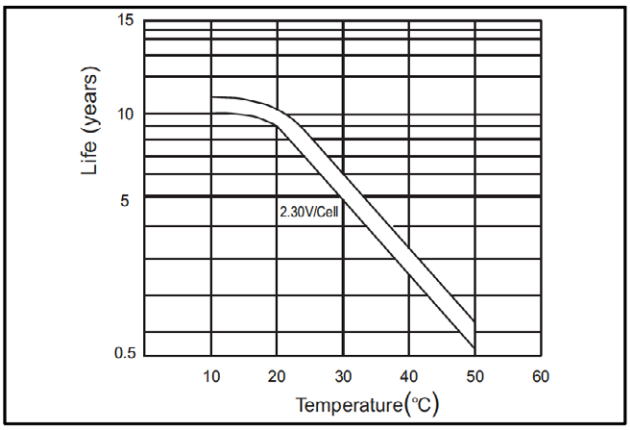
Effect of Temperature on Capacity



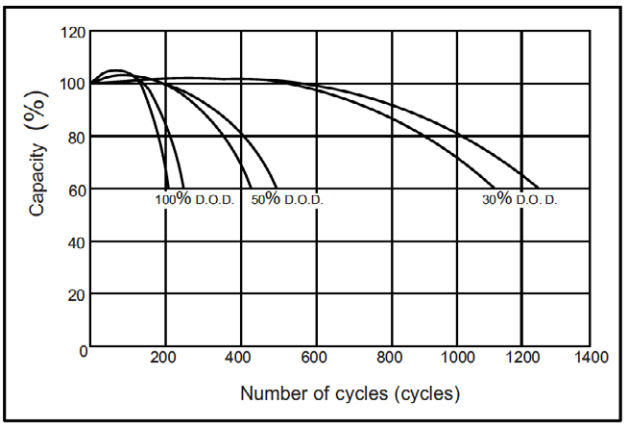
Self-discharge characteristics



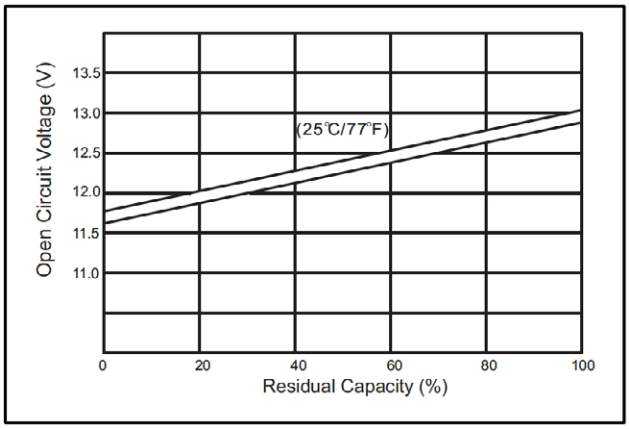
Temperature effects on float life



Cycle service life in relation to depth of discharge



The relationship for OCV and Capacity (25't)



The relationship for Charging voltage and Temperature