VRLA AGM battery

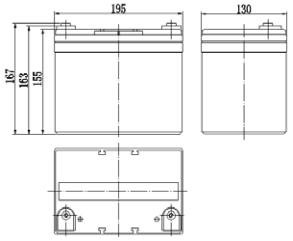
ATP 12-33AH

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.

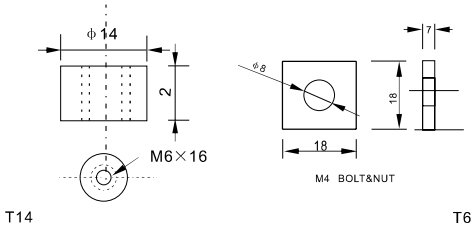
Specifications

Nominal Voltage		12V
Rated capacity (20 hour rate)		33Ah
Dimensions	Length	195±2mm(7.68inch)
	Width	130±2mm(5.12inch)
	Height	155±2mm6.10inch)
	Total Height	T14:167±2mm(6.57inch) T6:180±2mm(7.09inch)
Approx. Weight		10kg(22.0lbs)±4%

Outer dimensions (mm)



Terminal Type (mm)



Characteristics

Capacity (25°C)	10HR(10.8V)	33Ah
	3HR(10.8V)	24Ah
	1HR(10.5V)	19Ah
Terminal type		T14/T6
Interna! resistance (Fully charged,25°C)		Approx.11m 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		9.9A
Maximum discharge current		330A(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/lead

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

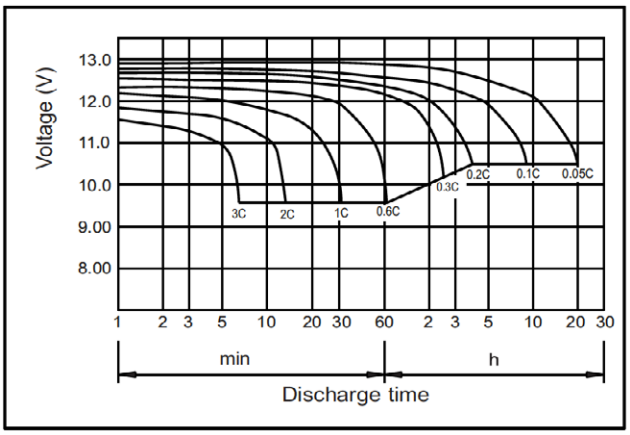
F.V/Time	10min	15min	30min	60min	2h	3h	4h	Sh	Bh	10h	20h
9.60V	71.9	55.4	33.2	20.4	12.1	8.68	6.93	5.92	4.07	3.36	1.78
9.90V	69.8	54.1	32.5	20.1	12.0	8.63	6.89	5.89	4.05	3.35	1.78
10.2V	66.9	52.1	31.5	19.6	11.9	8.57	6.85	5.85	4.02	3.34	1.77
10.5V	64.0	50.3	30.7	19.0	11.7	8.51	6.80	5.81	3.99	3.32	1.76
10.8V	60.4	47.7	29.6	18.4	11.4	8.26	6.59	5.63	3.87	3.30	1.75

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

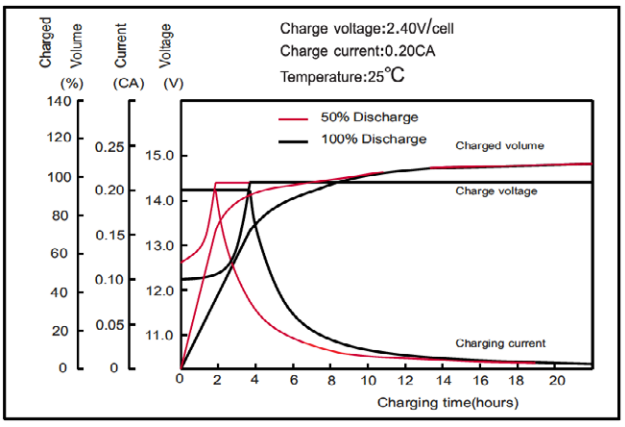
F.V/Time	10min	15min	30min	60min	2h	3h	4h	Sh	Bh	10h	20h
9.60V	777	609	372	232	140	102	81.5	70.0	48.4	40.1	21.4
9.90V	754	594	365	229	139	102	81.1	69.6	48.1	40.0	21.3
10.2V	723	572	354	223	138	101	80.5	69.1	47.8	39.9	21.3
10.5V	691	553	345	216	136	100	79.9	68.7	47.4	39.7	21.1
10.8V	653	524	332	209	132	97.1	77.5	66.6	46.0	39.4	21.0

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

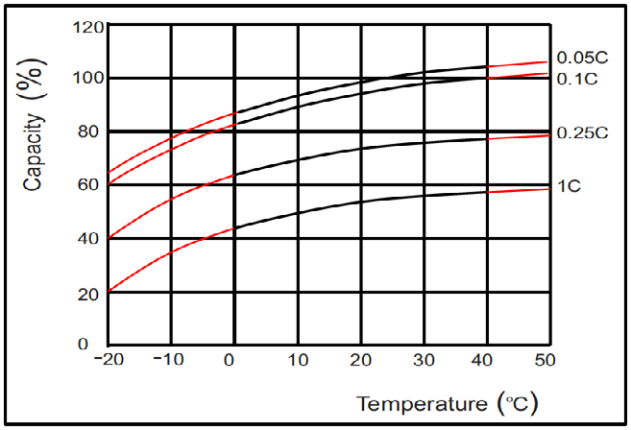
Discharge characteristics(25°C)



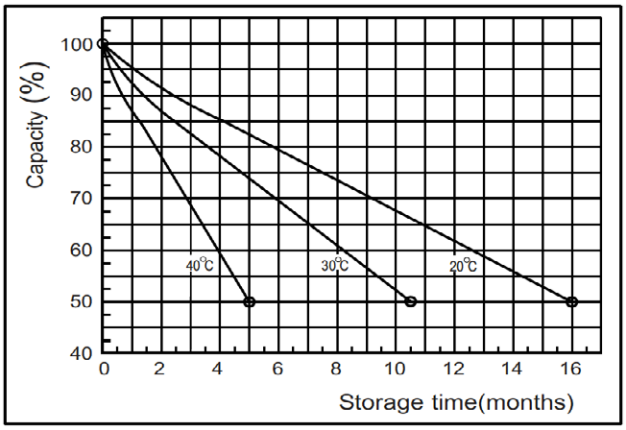
Charging characteristics



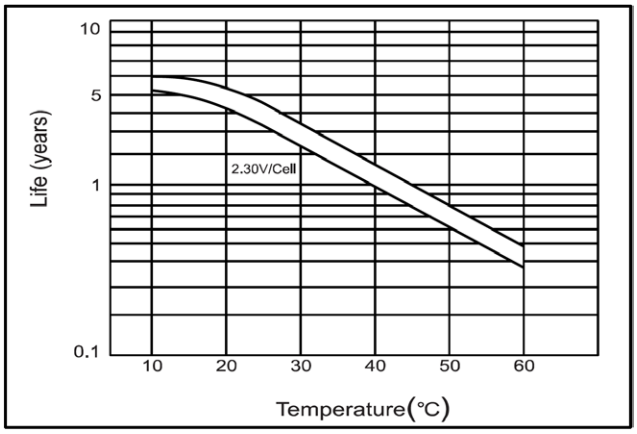
Effect of Temperature on Capacity



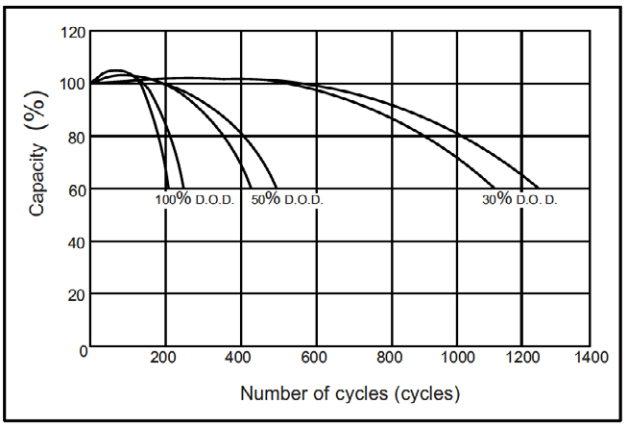
Self-discharge characteristics



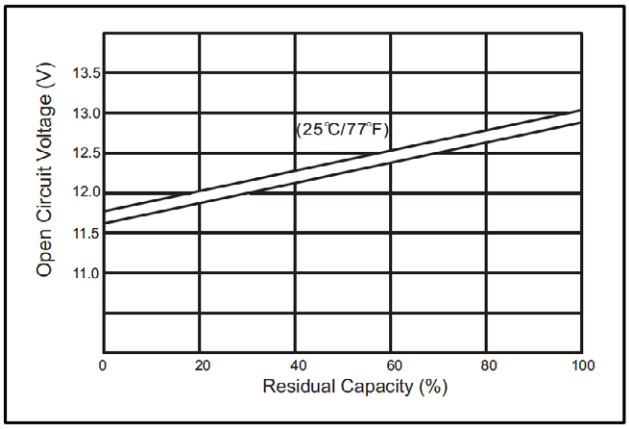
Temperature effects on float life



Cycle service life in relation to depth of discharge



The relationship for OCV and Capacity (25't)



The relationship for Charging voltage and Temperature