AH12-50

(12V-50Ah)

VRLA AGM

ALPHA HOUSE

intelligent power

Applications

- UPS / EPS
- Power systems
- Telecommunications system
- Emergency lighting, Auto control system
- Solar / Wind generating storage cyclic
- Other general purpose

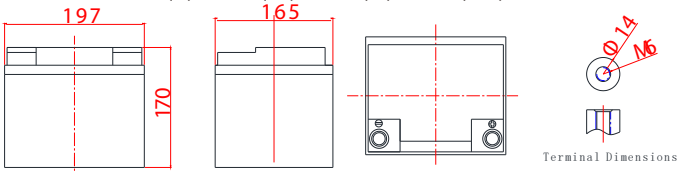
General Features

- High corrosion resistant performance: Pb-Ca multi-alloy grid
- High energy density and power density
- Optimized capability of instant high-current discharging
- Excellent charge acceptance ability
- Excellent deep cycle discharge capability
- Strong high and low temperature performance
- Precision sealing technology
- Long life

Manufacturer's Certificates

ISO 9001 CQM · ISO 14001 CQM · OHSAS 18001 CQM · RoHS

Dimension: 197(L) × 165(W) × 170(H) × 170(TH) Unit: mm



Specification

Nominal Voltage	12V	
Nominal Capacity	50Ah	
Design life	10 years	
Terminal	T16 (M6)	
Terminal Torque	3~4 Nm	
Approx. Weight	14.5kg (32.0lbs)	
Container Material	ABS	
Rated Capacity	49.2Ah	20Hour Rate (2.46A to 9.6V)
	45.0Ah	10Hour Rate (4.50A to 10.8V)
	36.3Ah	3Hour Rate (12.1A to 10.8V)
	29.5Ah	1Hour Rate (29.5A to 10.5V)
Internal Resistance	Full charged at 25˚C:	11.8 mΩ
Max. Discharge Current	540A(5S)	
Operating Temperature	Discharge:	-20 ~50℃(-4~ 122˚F)
	Charge:	-20 ~50℃(-4~ 122˚F)
	Storage:	-20 ~50℃(-4~ 122˚F)
Charge Method (25 ˚C)	Charge Current:	Max. 11.3A；Recom.4.5A
	Float Charge Voltage(-3mV/℃）:	
	13.5-13.8V,recom.13.5V(Full floating system)	
	13.5-13.8V,recom.13.62V(Cycle use system)	
	Equalize Charge:13.8-14.1V,recom.14.1V(-4mV/ ˚C)	
	Cycle Charge:14.4-15.0V,recom.14.4V(-5mV/ ˚C)	
Self discharge	3% of capacity declined per month at 25˚C	

Constant Current Discharge Characteristics Unit: A (25℃, 77℉)

FV/Time	5min	15min	30min	1h	2h	3h	5h	8h	10h	20h
1.60V	159	85.2	51.8	30.3	17.4	12.6	8.47	5.56	4.68	2.46
1.65V	154	82.6	50.9	30.1	17.3	12.5	8.38	5.51	4.64	2.44
1.70V	148	80.8	50.1	29.9	17.2	12.3	8.29	5.47	4.59	2.43
1.75V	136	78.2	49.6	29.5	16.9	12.2	8.20	5.42	4.55	2.42
1.80V	122	72.9	47.5	28.7	16.6	12.1	7.98	5.38	4.50	2.41
1.85V	108	65.0	43.3	26.6	15.7	11.4	7.59	5.16	4.37	2.37

Constant Power Discharge Characteristics Unit: W/cell (25℃, 77℉)

FV/Time	5min	15min	30min	1h	2h	3h	5h	8h	10h	20h
1.60V	266	150	93.8	57.3	32.9	24.0	16.1	10.8	9.00	4.86
1.65V	256	147	92.9	56.8	32.8	23.7	16.0	10.7	8.91	4.84
1.70V	254	146	92.9	56.4	32.6	23.5	15.8	10.7	8.82	4.82
1.75V	237	145	92.4	56.0	32.5	23.4	15.7	10.6	8.73	4.79
1.80V	218	137	90.2	55.5	32.4	23.3	15.6	10.5	8.64	4.77
1.85V	195	122	82.7	51.6	30.9	22.2	14.9	10.1	8.51	4.73

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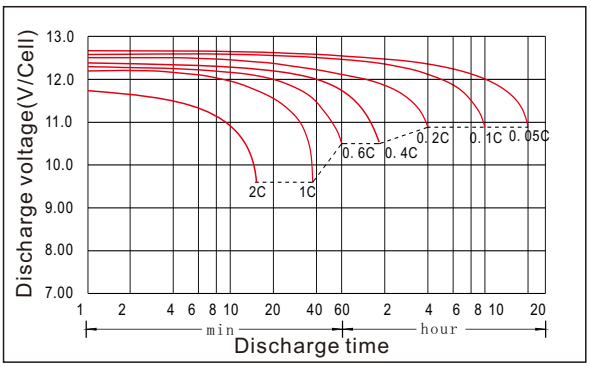
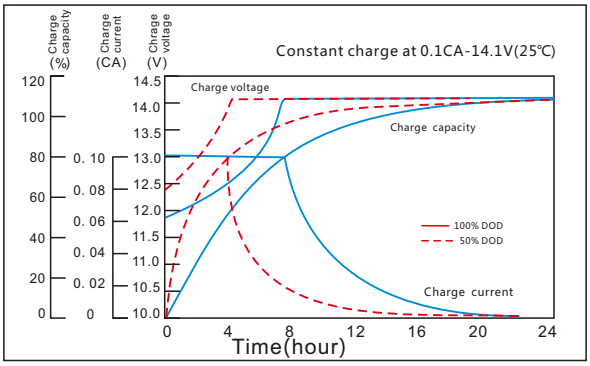
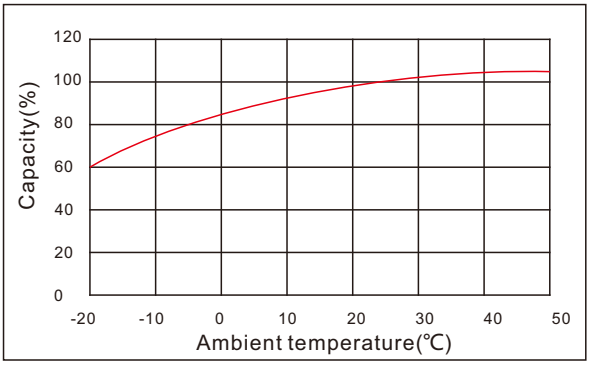
Discharge characteristic



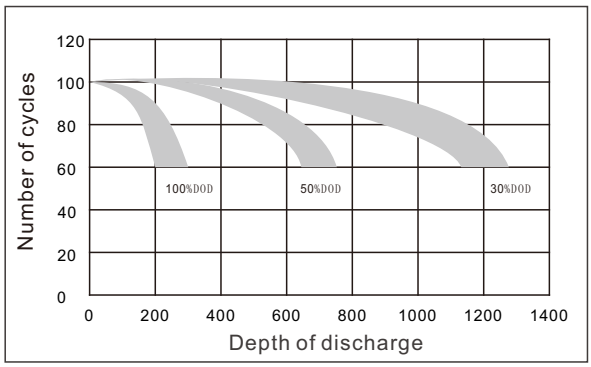
Charging characteristic



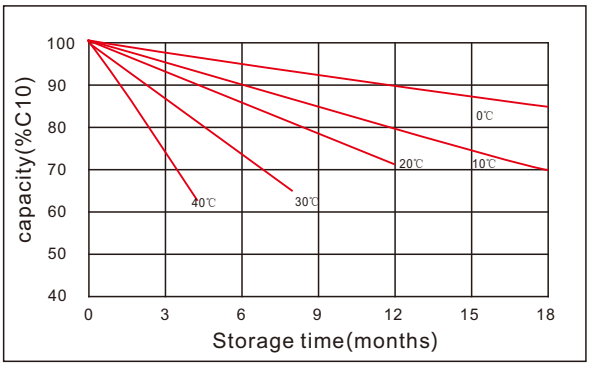
The effect of temperature on capacity



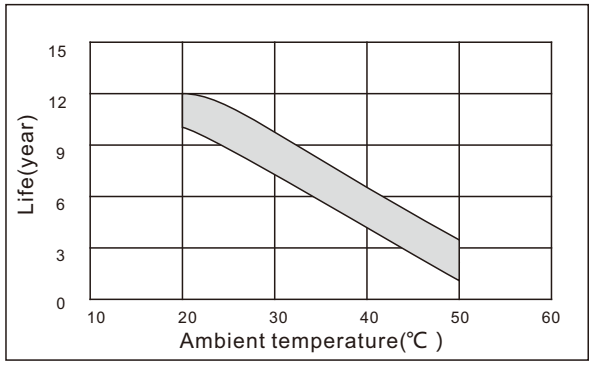
The impact of discharge depth on capacity



Curves of self-discharge



The effect of temperature on float life



Disclaimer: The manufacturer reserves the right to amend and/or vary the specifications and parameters of the product and apply updates accordingly at any time. It is the sole responsibility of the buyer and user of the product to ensure all applicable product specifications referred to are valid and up to date. All product specifications are available upon request. Batteries must be installed in accordance with standard BS EN IEC 62485-2:2018, and in accordance with manufacturer's guidelines. (available upon request)

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