



LEAD-ACID RECHARGEABLE BATTERY
MODEL: BT-12M4.5AC (12V 4.5Ah)



Application

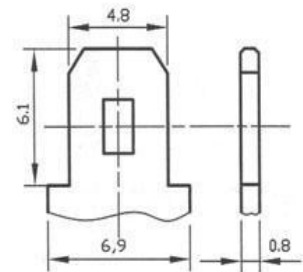
- ☆ Measuring equipment and instrument
- ☆ Telephone sets
- ☆ Lighting equipment
- ☆ Security systems
- ☆ UPS power supply

General Features

- ☆ Designed floating charging service life: 8 years (25°C)
- ☆ Sealed and maintenance free operation
- ☆ Safety valve installation for explosion proof
- ☆ Low self-discharge characteristic
- ☆ Wide operating temperature range from 10°C-40°C
- ☆ Lead Calcium Aluminum Tin alloy high energy, prevent corrosion

PHYSICAL SPECIFICATIONS		
Nominal Voltage		12V
Nominal Capacity (20HR)		4.5AH
Dimensions	Length	90±1mm
	Width	70±1mm
	Container height	101±2mm
	Total Height (with terminal)	107±2mm
Weight±3%		Approx 1.25 Kg(2.756lbs)
Internal Resistance(In full charge status)		≈40mΩ
Standard Terminals		F1 (standard)

F1
(187)



ELECTRICAL SPECIFICATIONS		
Rated Capacity	20 hour rate(225mA)	4.5AH
	10 hour rate(450mA)	4.28AH
	5 hour rate(720mA)	3.6AH
	27 minute rate(4.5A)	2.03AH
	7 minute rate(13.5A)	1.57AH
Capacity affected by Temperature (20Hour Rate)	40°C (104°F)	103%
	25°C(77°F)	100%
	0°C(32°F)	86%

Constant Current Discharge Data Sheet (Amperes at 25°C)										
End Voltage/cell	Minute (M)				Hour (H)					
	5	10	20	45	1	2	4	8	10	20
1.70	16.3	10.6	5.93	3.08	2.57	1.60	0.889	0.505	0.437	0.230
1.75	16.2	10.5	5.88	3.06	2.55	1.54	0.872	0.500	0.433	0.228
1.80	16.0	10.4	5.82	3.03	2.53	1.47	0.855	0.495	0.428	0.225

- Cycle Application**
1. Limit initial current less than 1.125A.
 2. Charge until battery voltage (under charge) reaches 14.1V to 14.4V at 25°C (77°F).
 3. Hold at 14.1V to 14.4V until current drop to under 0.027A for at least 3 hours.
 4. Temperature compensation coefficient of charging voltage is -30mV/°C.

Constant Power Discharge Data Sheet (Watt at 25°C)										
End Voltage/cell	Minute (M)				Hour (H)					
	5	10	20	45	1	2	4	8	10	20
1.70	196	127	71.1	37.0	30.8	19.1	10.7	6.06	5.20	2.73
1.75	193.5	126	70.5	36.7	30.6	18.4	10.5	6.00	5.15	2.72
1.80	191	125	69.8	36.3	30.4	17.7	10.3	5.94	5.09	2.68

- Standby Service**
1. Hold battery across constant voltage source of 13.6 to 13.8 volts with current limit 1.125A continuously. When held at this voltage, the battery will seek its own current level and maintain itself in a fully charge status.
 2. Temperature compensation coefficient of charging voltage is -18mV/°C.

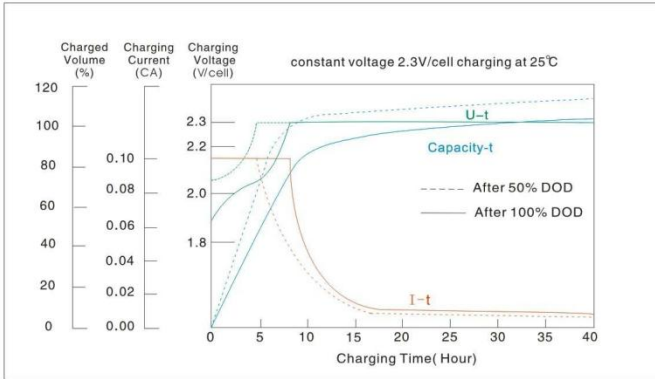
NOTE: The battery should be charged within 6 months of storage, Otherwise, permanent loss of capacity might occur as a result of sulfating.



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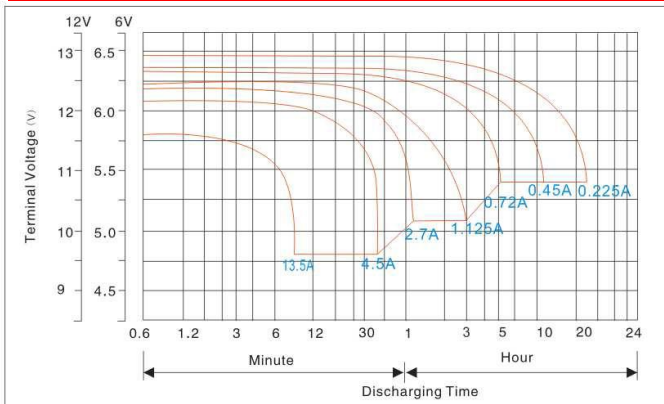


Charge Characteristics

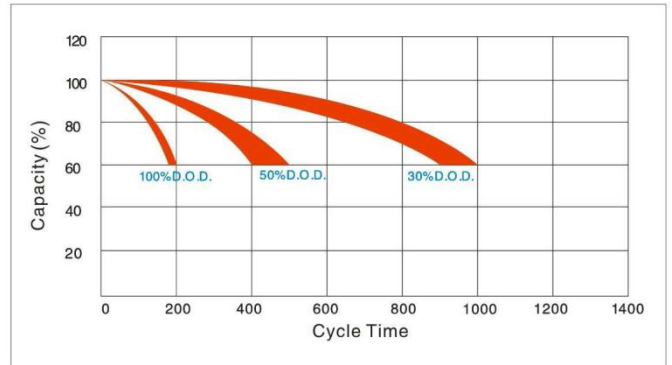


Discharge Current & Discharge Duration Time (25°C/77°C)

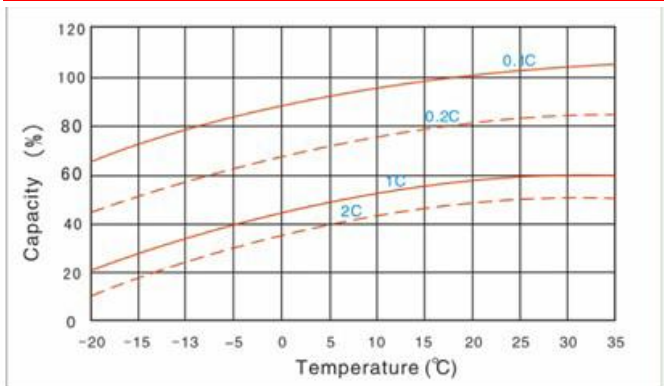
Discharge Characteristic (25°C/77°C)



The Relationship Between Lifetime and Depth Of Discharge(25°C/77°F)



Capacity Curve at Different Temperature



Storage Characteristics

