

MP-12120-AT

Features:

- >> All purpose
- >> Uninterruptable Power Supply (UPS)
- >> Electric Power System (EPS)
- >> Emergency backup power supply
- >> Emergency light
- >> Railway signal
- >> Aircraft signal
- >> Alarm and security system
- >> Electronic apparatus and equipment
- >> Communication power supply
- >> DC power supply
- >> Auto controlsystem



Technical Specifications

Model	MP-12120-AT	
Nominal Voltage	12V	
Nominal Capacity(20HR)	12AH	
Dimension	Length	151 ±1mm (5.95 inches)
	Width	98 ±1mm (3.86 inches)
	Container Height	95 ±1mm (3.74 inches)
	Total Height (with Terminal)	99.5 ±1mm (3.981inches)
Approx. Weight	Approx 3.4kg(7.5lbs)	
Terminal	T1/T2	
Container Material	ABS	
Rated Capacity	12.0 AH/0.60A	(20hr ,1.80V/cell,25°C/77°F)
	11.2 AH/1.12A	(10hr,1.80V/cell,25°C/77°F)
	10.2 AH/2.04A	(5hr,1.75V/cell,25°C/77°F)
	9.2AH/3.06A	(3hr,1.75V/cell,25°C/77°F)
	7.54AH/7.54A	(1hr,1.60V/cell,25°C/77°F)
Max. Discharge Current	180A (5s)	
Internal Resistance	Approx 17mΩ	
Operating Temp. Range	Discharge: -15 ~50°C (5 ~122°F)	
	Charge: 0 ~ 40°C (32 ~ 104°F)	
	Storage: -15 ~40°C (5 ~104°F)	
Nominal Operating Temp. Range	25 ± 3°C (77± 5°F)	
Cycle Use	Initial Charging Current less than 3.6A. Voltage 14.4V~14.9V at 25°C (77°F) Temp. Coe ffcient -30mV/°C	
Standby Use	No limit on Initial Charging Current Voltage 13.5V~13.8V at 25°C (77°F) Temp. Coefficient -20mV/°C	
Capacity affected by Temperature	40°C (104 °F)	103%
	25°C (77 °F)	100%
	0°C (32 °F)	86%
Self-Discharge	MEDAL POWER batteries may be stored for up to 6 months at 25°C (77°F) and battery should be recharge before use. for higher temperatures the time interval will be shorter.	

LEAVE POWER FOR MEDAL POWER

LEAVE POWER FOR MEDAL POWER

Constant Power Discharge (Watts) at 25 °C (77°F)

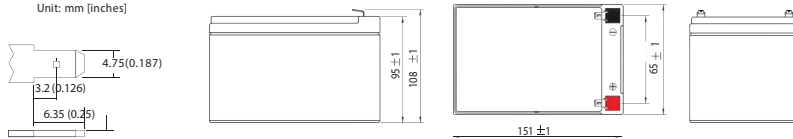
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	22.9	17.5	14.5	12.6	9.72	7.16	6.03	3.57	2.79	2.27	1.85	1.61	1.30	1.08	0.594
1.80V/cell	30.7	22.4	17.6	14.9	11.5	8.33	6.76	3.90	3.00	2.42	1.99	1.72	1.37	1.12	0.600
1.75V/cell	34.6	24.6	19.2	16.0	11.9	8.64	7.07	4.04	3.06	2.48	2.04	1.77	1.40	1.15	0.606
1.70V/cell	38.1	26.9	20.5	16.8	12.4	8.99	7.29	4.14	3.15	2.54	2.09	1.81	1.42	1.17	0.617
1.65V/cell	42.0	29.0	21.8	17.8	13.1	9.21	7.46	4.20	3.28	2.63	2.15	1.85	1.44	1.19	0.625
1.60V/cell	46.3	31.5	23.3	19.0	13.8	9.60	7.54	4.38	3.38	2.71	2.22	1.89	1.45	1.21	0.629

Constant Current Discharge (Amperes) at 25 °C(77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	41.8	32.4	27.1	23.7	18.5	13.8	11.6	6.93	5.44	4.44	3.63	3.16	2.56	2.14	1.18
1.80V/cell	55.5	40.9	32.3	27.6	21.5	15.9	13.0	7.51	5.82	4.71	3.88	3.37	2.71	2.21	1.19
1.75V/cell	61.2	44.3	34.9	29.4	22.2	16.3	13.5	7.76	5.91	4.80	3.97	3.46	2.75	2.26	1.20
1.70V/cell	65.6	47.1	36.7	30.7	22.9	16.9	13.9	7.94	6.06	4.92	4.06	3.52	2.78	2.31	1.22
1.65V/cell	71.3	50.4	38.7	32.3	24.0	17.2	14.1	8.01	6.29	5.07	4.16	3.59	2.82	2.35	1.23
1.60V/cell	76.8	53.5	40.8	34.1	25.2	17.8	14.2	8.31	6.45	5.21	4.28	3.65	2.84	2.37	1.24

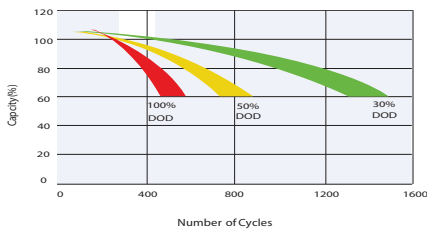
Dimensions

T1 Terminal
Unit: mm (inches)

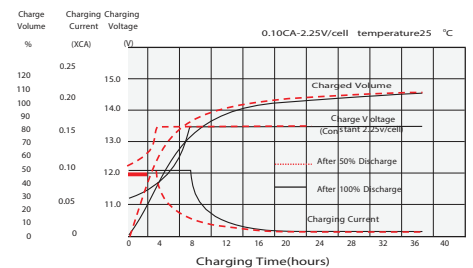


Cycle Life in Relation to Depth of Discharge

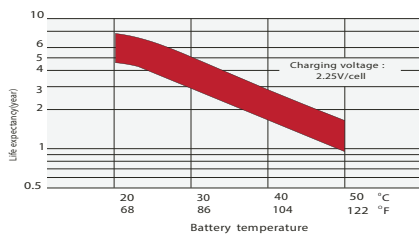
Testing condition
Discharging current 0.17C (FV 1.7V/cell);
Charging current 0.25C max, voltage 2.45V/cell;
Charging volume: 125% of discharged capacity.



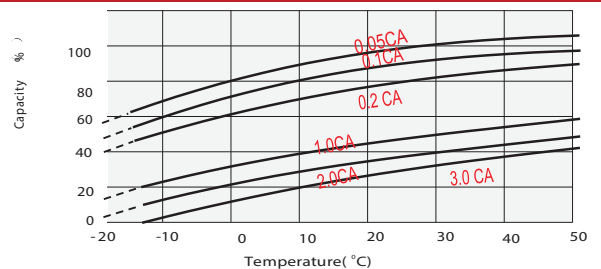
Float Charging Characteristics



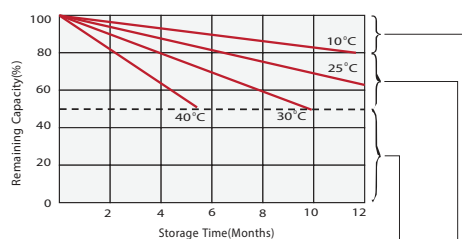
Effect of Temperature on Long Term Float Life



Temperature Effects in Relation to Battery Capacity



Self Discharge Characteristics



Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this is reached.

Supplementary charge required before use. Optional charging way as below:
1.Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
2.Charged for above 20hours at limited current 0.25CA and constant voltage 2.45V/cell.
3.Charged for 8-10hours at limited current 0.05CA.

No supplementary charge required
(Carry out supplementary charge before use if 100% capacity is required.)

Discharge Characteristics

