

MK12-18 12V18Ah (20hr)



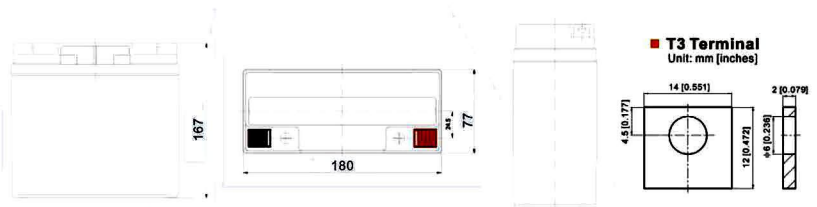
Specification

Nominal Voltage	12V
Nominal Capacity	18Ah
Design life	5 years
Terminal	T3
Approx. Weight	Approx 5.10 kg (11.35lbs)
Container Material	ABS
Rated Capacity	18 Ah 20Hour Rate (0.90A to 10.8V)
	16.7Ah 10Hour Rate (1.67A to 10.8V)
	13.4Ah 3Hour Rate (4.46A to 10.5V)
Internal resistance	Full charged at 25 °C: 16 Ohm
Max. Discharge Current	270A(5S)
Operating Temperature	Discharge: -15 ~50°C (5~ 122°F)
	Charge: 0~40°C (32~104°F)
	Storage: -15~40°C (5~104°F)
Charge Voltage(25 °C)	Max. charge Current: 5.4A
	Cycle use: 14.4-15.0V(-30mV/°C)
	Float use : 13.5-13.8V(-20mV/°C)
Self discharge	3% of capacity declined per month at 20°C

Application

- > General purpose
- > Uninterruptable Power Supply
- > Electric Power System (EPS) Emergency
- > Backup power supply
- > Auto control system
- > Emergency light
- > Railway signal
- > Aircraft signal
- > Alarm and security system Electronic
- > Medical equipments

Unit: mm Dimension: 180(L)×77(W)×167(H)×167(TH)



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	34.3	22.8	18.8	16.5	13.5	10.6	8.75	5.37	4.04	3.33	2.82	2.45	1.94	1.62	0.891
1.80V/cell	41.0	27.3	22.1	18.9	15.1	11.6	9.47	5.76	4.32	3.54	2.97	2.55	2.02	1.67	0.900
1.75V/cell	49.2	31.3	24.6	20.9	16.2	12.4	10.0	6.00	4.46	3.62	3.05	2.63	2.07	1.72	0.909
1.70V/cell	57.1	35.0	27.1	22.6	17.3	13.0	10.4	6.21	4.58	3.71	3.12	2.68	2.10	1.74	0.925
1.65V/cell	63.0	37.9	29.0	24.2	18.2	13.6	10.8	6.41	4.70	3.80	3.19	2.73	2.14	1.76	0.938
1.60V/cell	69.5	41.0	31.2	25.6	19.2	14.1	11.2	6.57	4.82	3.90	3.25	2.80	2.18	1.79	0.943

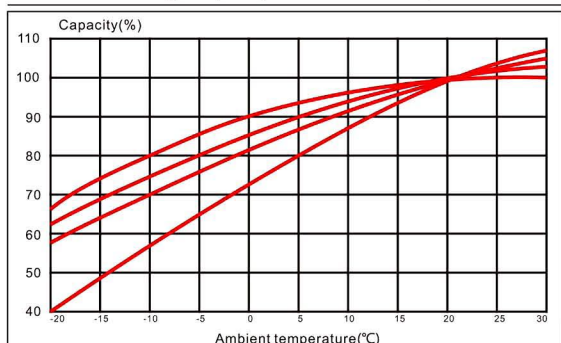
Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	63.9	42.6	35.3	31.1	25.7	20.3	16.9	10.4	7.88	6.50	5.53	4.81	3.84	3.21	1.77
1.80V/cell	74.2	50.1	40.9	35.4	28.5	22.1	18.2	11.1	8.37	6.88	5.79	5.00	3.97	3.31	1.78
1.75V/cell	88.2	56.8	45.0	38.7	30.3	23.5	19.1	11.5	8.62	7.02	5.93	5.12	4.07	3.39	1.80
1.70V/cell	100.9	62.6	49.1	41.7	32.2	24.5	19.9	11.9	8.82	7.17	6.05	5.23	4.12	3.44	1.83
1.65V/cell	109.7	66.8	52.0	44.2	33.6	25.4	20.4	12.2	9.03	7.33	6.16	5.31	4.18	3.47	1.85
1.60V/cell	118.8	71.3	54.9	45.9	34.9	26.2	21.1	12.5	9.20	7.49	6.28	5.42	4.26	3.53	1.86

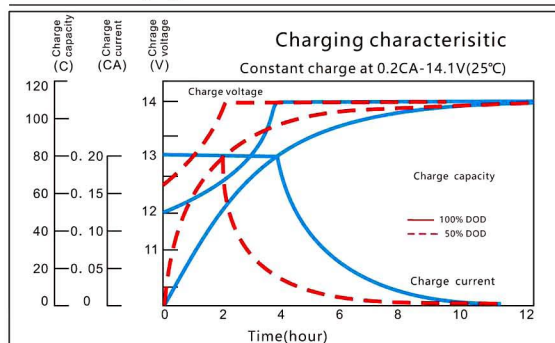
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Model Performance Diagrams

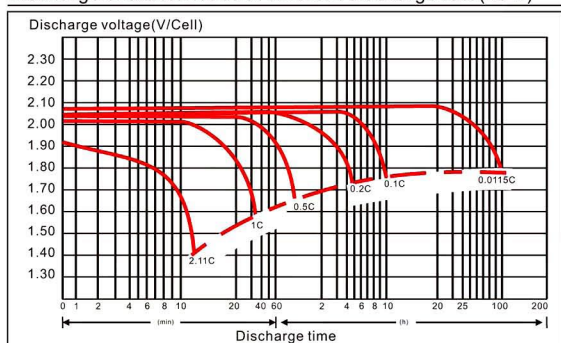
Curves of discharge capacity and ambient temperature



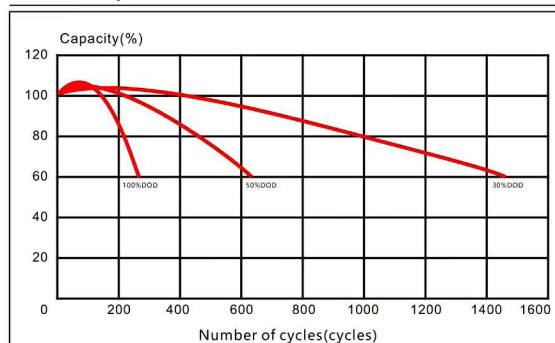
Curves of charging characteristics



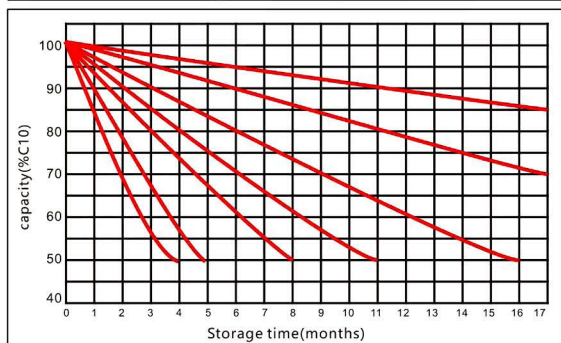
Discharge characteristics at different discharge rate(20°C)



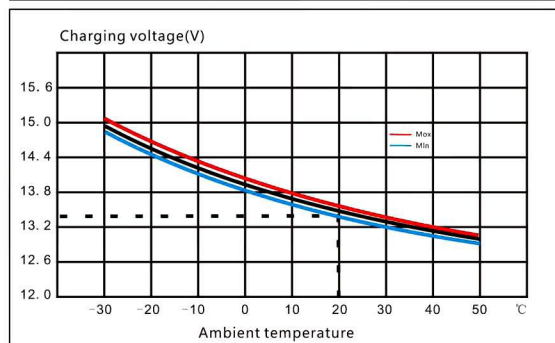
Curves of cycle life



Curves of self-discharge and storage time



Curves of float voltage and ambient temperature



Charging procedures				
Application type	Charge Voltage(V)			Max charge current (A)
	Temp (°C)	Set point	Temperature compensation	
Cycle use	25	14.4	-5mV/°C/cell	0.25C
Float use	25	13.65	-3mV/°C/cell	

The relationship between discharge current and voltage				
Discharge rate	1hr	3hr	8hr	10hr
End voltage (V)	10.5	10.8	10.8	10.8
Discharge current (A)	0.55C	0.25C	0.12C	0.1C

