MK Series-General Purpose

MK7-12H 12V7Ah (20hr)

迈科新能源 MK ENERGY



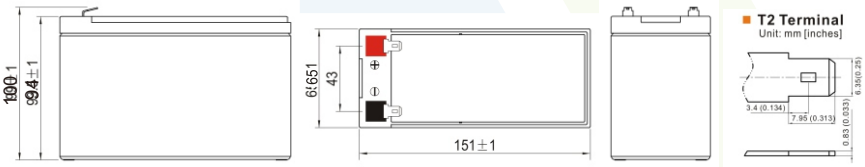
Application

- 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

Specification

Nominal Voltage	12V
Nominal Capacity	7Ah
Design life	5 years
Terminal	T1/T2
Approx. Weight	Approx 2.02 kg (4.45 lbs)
Container Material	ABS
Rated Capacity	7.00Ah 20Hour Rate (0.350A to 10.8V) 6.53Ah 10Hour Rate (0.653A to 10.8V) 5.13Ah 3Hour Rate (1.710A to 10.5V)
Internal resistance	Full charged at 25˚C: 28 Ohm
Max. Discharge Current	105A(5S)
Operating Temperature	Discharge: -15 ~50℃(5~ 122˚F) Charge : 0~40℃ (32~104˚F) Storage: -15~40℃(5~104˚F)
Charge Method (25 ˚C)	Max. charge Current: 2.8A 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

Unit: mm Dimension: 151(L)×65(W) ×94(H)×100(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	16.0	11.7	9.97	8.46	6.17	4.52	3.60	2.14	1.60	1.31	1.10	0.95	0.756	0.626	0.343
1.80V/cell	19.2	13.7	11.3	9.20	6.65	4.80	3.83	2.24	1.66	1.35	1.14	0.99	0.783	0.653	0.350
1.75V/cell	21.5	14.9	12.0	9.70	6.92	4.99	3.98	2.31	1.71	1.38	1.16	1.01	0.795	0.663	0.357
1.70V/cell	23.4	15.9	12.8	10.2	7.18	5.12	4.05	2.36	1.75	1.41	1.19	1.03	0.812	0.672	0.361
1.65V/cell	25.5	16.8	13.4	10.6	7.43	5.28	4.17	2.40	1.77	1.43	1.21	1.04	0.823	0.680	0.365
1.60V/cell	26.8	17.6	13.8	10.9	7.64	5.42	4.26	2.46	1.81	1.46	1.23	1.06	0.837	0.690	0.371

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	30.3	22.3	19.2	16.4	12.0	8.86	7.09	4.23	3.17	2.59	2.20	1.91	1.52	1.26	0.694
1.80V/cell	35.9	25.8	21.5	17.7	12.9	9.37	7.52	4.42	3.30	2.69	2.27	1.97	1.57	1.31	0.704
1.75V/cell	39.8	28.0	22.8	18.6	13.4	9.72	7.79	4.55	3.37	2.74	2.31	2.00	1.59	1.33	0.716
1.70V/cell	42.8	29.5	24.0	19.3	13.8	9.89	7.88	4.61	3.42	2.78	2.34	2.03	1.61	1.33	0.718
1.65V/cell	45.7	30.7	24.8	19.8	14.1	10.1	8.02	4.65	3.45	2.80	2.36	2.05	1.62	1.34	0.720
1.60V/cell	47.0	31.5	25.1	20.1	14.3	10.3	8.13	4.73	3.50	2.83	2.39	2.07	1.63	1.35	0.728

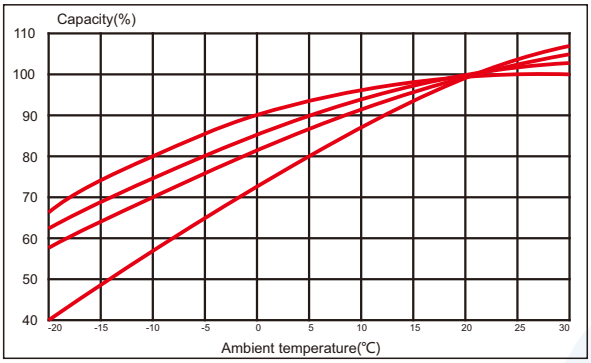
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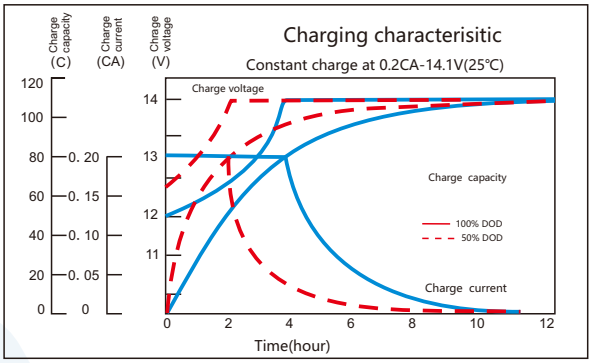
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Model Performance Diagrams

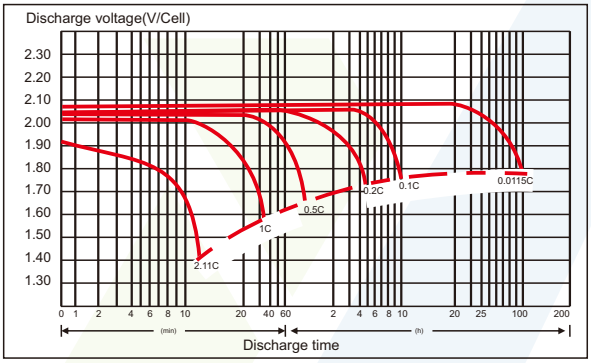
Curves of discharge capacity and ambient temperature



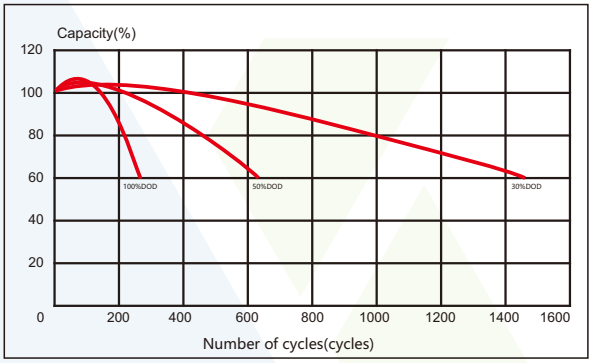
Curves of charging characteristics



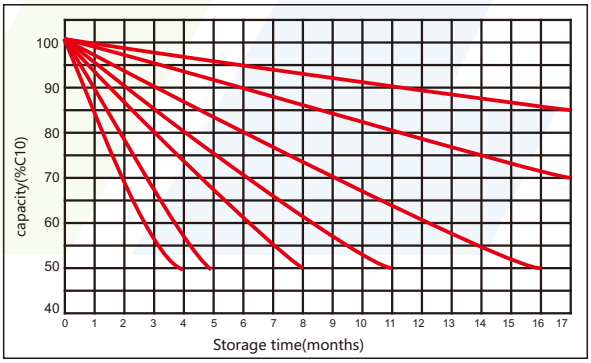
Discharge characteristics at different discharge rate(20℃)



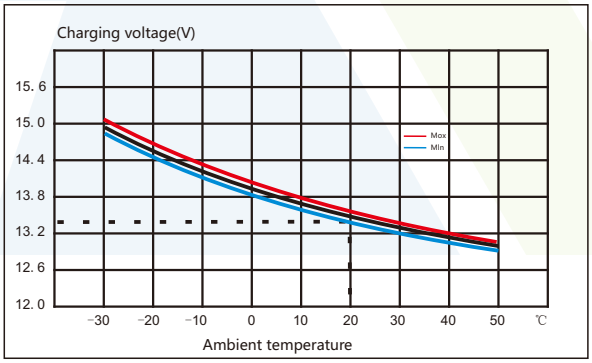
Curves of cycle life



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 (℃)	Set point	Temperature compensation	
Cycle use	25	14.4	-5mV/℃/cell	0.25C
Float use	25	13.65	-3mV/℃/cell	

The ralationship 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

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