



SANTAK® Battery

Castle Battery

C12-7AH

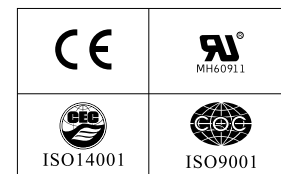
PRODUCT FEATURES

STK CASTLE series battery uses high magnification lead paste formulations and high corrosion resistant alloy multi-grid, and special exhaust structure and sealing technology. It has many excellent features like high discharge capacity, long life, safe and reliable, very low self-discharge rate, flexible installation, convenient maintenance etc.



APPLICATION

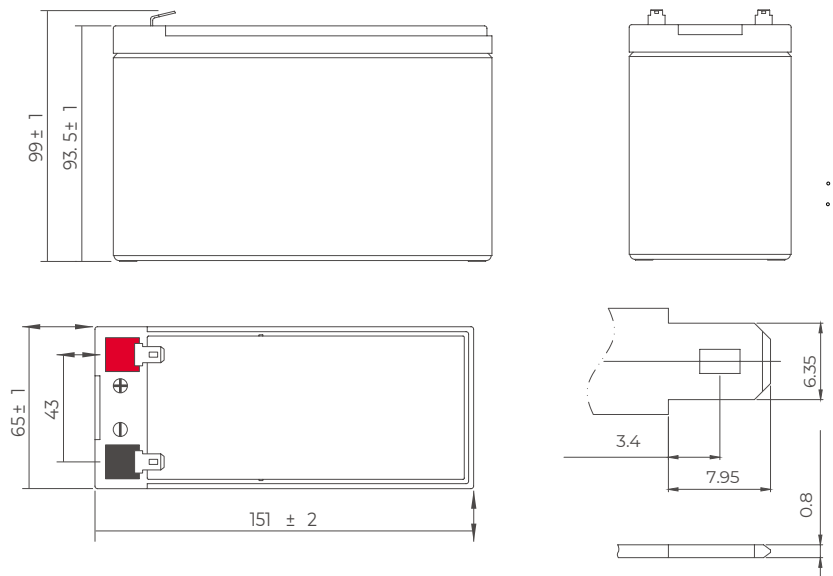
For Network connection equipment, power system, UPS, power station systems, railway and marine systems.



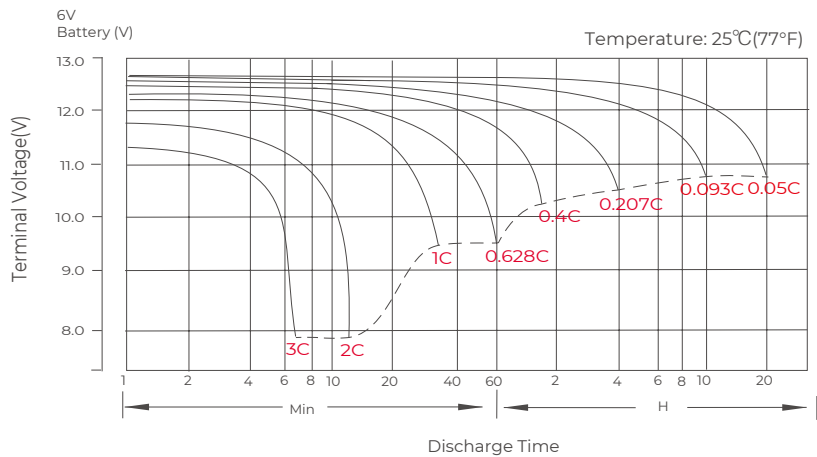
SPECIFICATION

Nominal Voltage	12V
Nominal Capacity(20HR)	7.0 Ah
Dimension	Length: 151mm (5.94 in.) Width: 65mm (2.56 in.) Total Height (with Terminal): 99mm (3.90 in.)
Approx Weight	2.18 Kg(4.81 lbs)
Terminal	T2
Container Material	ABS
Max. Discharge Current	105A (5s)
Internal Resistance	16~26mΩ
Operating Temp.Range	Discharge: -20°C~55°C (-4 °F~131 °F) Charge: 0°C~40°C (32 °F~104 °F) Storage: -15°C~50°C (5 °F~122 °F)
Nominal Operating Temp. Range	25°C±3°C (77 °F±5 °F)
Standby Use (25°C)	Charging Current: ≤1.95A Charging Voltage: 13.5V~13.8V Temp. Coefficient: -3mV/cell/°C
Capacity affected by Temperature	40°C (104 F) : 106% 25°C (77 F): 100% 0°C (32 F): 86%
Self Discharge	≤2% per month at 20°C

DIMENSIONS



DISCHARGE CHARACTERISTICS



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

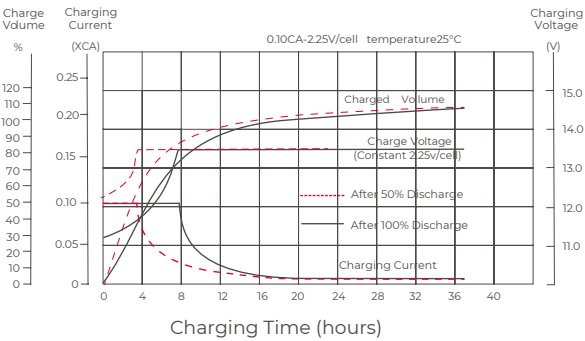
F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	24.8	16.0	12.00	10.1	8.20	5.87	4.84	2.89	2.22	1.71	1.38	1.14	0.99	0.79	0.640	0.350
1.80V/cell	26.5	17.0	13.5	10.6	8.30	6.21	4.90	3.16	2.43	1.95	1.48	1.23	1.06	0.84	0.670	0.371
1.75V/cell	28.3	17.5	13.8	11.0	8.42	6.42	4.97	3.27	2.51	2.01	1.52	1.26	1.08	0.85	0.690	0.377
1.70V/cell	30.0	18.0	14.0	11.3	8.48	6.59	5.05	3.38	2.60	2.02	1.56	1.30	1.11	0.86	0.700	0.382
1.67V/cell	31.8	18.5	14.2	11.7	8.60	6.75	5.10	3.44	2.66	2.03	1.59	1.31	1.12	0.87	0.709	0.385
1.60V/cell	33.5	19.0	14.5	12.0	8.68	6.94	5.15	3.59	2.78	2.05	1.65	1.37	1.17	0.89	0.720	0.390

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

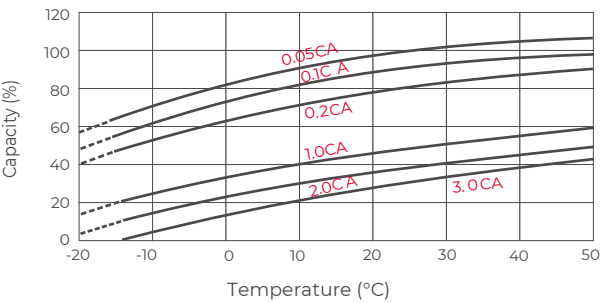
F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	45.0	31.0	24.4	19.6	16.1	11.2	9.67	6.80	4.70	3.66	2.56	2.15	1.85	1.48	1.30	0.660
1.80V/cell	48.0	32.5	25.8	20.4	16.3	11.6	9.80	7.00	5.00	3.68	2.74	2.29	1.98	1.57	1.33	0.690
1.75V/cell	50.7	33.5	26.1	20.9	16.4	12.1	10.00	7.12	5.24	3.70	2.81	2.35	2.01	1.60	1.35	0.700
1.70V/cell	53.5	34.7	26.5	21.4	16.6	12.5	10.10	7.30	5.50	3.72	2.88	2.40	2.06	1.61	1.37	0.710
1.67V/cell	56.3	35.7	26.9	22.0	16.8	13.0	10.30	7.50	5.77	3.73	2.92	2.43	2.08	1.63	1.38	0.716
1.60V/cell	59.0	36.0	27.2	22.6	17.0	13.4	10.40	7.65	6.00	3.75	3.02	2.51	2.14	1.65	1.40	0.720

CASTLE BATTERY C12-7AH TYPICAL CURVES

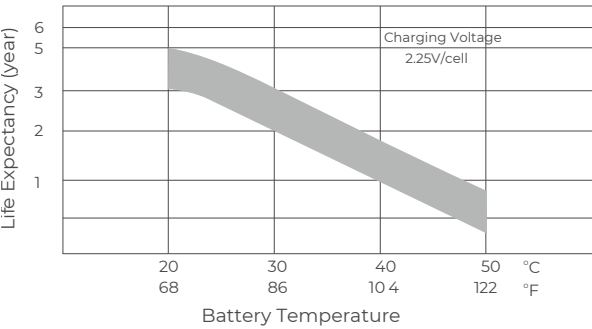
Float Charging Characteristics



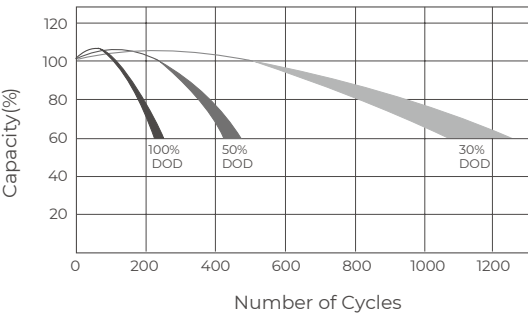
Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics

