MOTOMA®
Power into the Future

VRLA BATTERY | **MS12V28** | **12V28Ah**

SLA BATTERY—STANDARD SERIES

Specification

Nominal Voltage	12V
Number of cell	6
Nominal Capacity	28Ah@20hr-rate (1.4A to 1.80V/cell @25℃)
Weight	Approx.8.3Kg
Terminal	F3&F13
Container Material	ABS (UL94-HB), Flammability resistance of UL94-V1 can be available upon request.
Rated Capacity	28.0Ah 20hr-rate (1.40A to 1.80V/cell @25℃) 27.1Ah 10hr-rate (2.71A to 1.80V/cell @25℃) 24.4Ah 5hr-rate (4.88A to 1.75V/cell @25℃) 19.5Ah 1hr-rate (19.5A to 1.60V/cell @25℃)
Max. Discharge Current	420A(5sec)
Internal Resistance	Approx.10mΩ(Fully charged)
Operating Temp. Range	Discharge: -20℃~50℃ Charge : -10℃~50℃ Storage : -20℃~40℃
Cycle Use	Charging Current:≤8.4A Voltage:14.6V~14.8V Temperature compensation:-30mV/℃
Standby Use	Charging Current:No limit Voltage:13.6V~13.8V Temperature compensation:-20mV/℃
Self-Discharge	less than 3% at 25℃
Design Life	6 years (floating charge)

Introduction

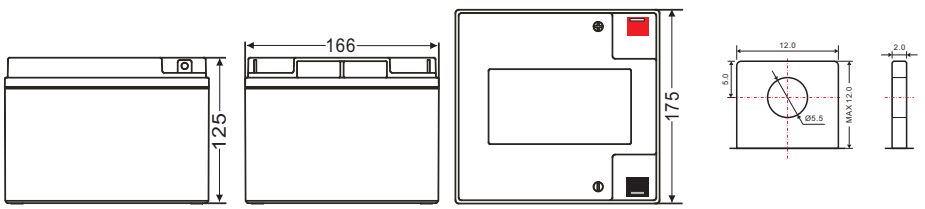
The MOTOMA standard series batteries designed with 6 years or more service life for general purpose, which designed with advanced technology, super heavy duty grid, high performance plates and electrolyte.The standard series batteries have long and reliable standby life and high consistency for better performance in series usage.

Applications

- *Auto control system &ATM machine*
- *Electronic apparatus and equipment*
- *Emergency light & Emergency backup power supply & Alarm/Security system*
- *Power generation system (solar and wind power system,etc.)*
- *Communication power & DC power*
- *Electric Power System(EPS)*
- *Uninterruptable Power System (UPS)*
- .....

Dimensions

Length	166±1mm (6.53 inches)
Width	175±1mm (6.89 inches)
Heigth	125±1mm (4.92 inches)
Total Heigth	125±1mm (4.92 inches)



Unit: mm

Constant Current Discharge Characteristics: A (25℃)

F. V/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V/cell	113.2	75.65	58.17	33.61	19.89	10.37	7.34	6.017	4.988	3.308	2.864	1.607
1.65V/cell	109.1	72.70	56.30	33.10	19.77	10.29	7.31	5.989	4.958	3.295	2.835	1.549
1.70V/cell	103.2	70.45	55.01	32.84	19.63	10.27	7.28	5.960	4.929	3.282	2.806	1.520
1.75V/cell	93.23	65.93	52.15	32.09	19.34	10.14	7.25	5.931	4.899	3.269	2.777	1.461
1.80V/cell	83.26	61.44	49.25	31.32	19.05	9.967	7.19	5.903	4.870	3.256	2.718	1.403
1.85V/cell	73.37	56.92	46.39	30.54	18.80	9.817	7.13	5.874	4.840	3.242	2.689	1.374

Constant Power Discharge Characteristics: W (25℃)

F. V/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V/cell	1238	804.6	653.8	403.3	238.5	124.2	87.85	71.86	70.30	39.78	33.86	18.93
1.65V/cell	1206	803.7	644.4	396.8	237.8	123.5	87.68	71.69	69.77	39.46	33.51	18.23
1.70V/cell	1181	779.6	629.6	394.2	237.3	123.2	87.51	71.69	69.59	39.41	33.17	17.89
1.75V/cell	1068	747.5	596.9	384.8	233.3	121.2	86.99	71.18	69.42	39.30	32.82	17.19
1.80V/cell	953.7	699.3	563.9	375.7	229.3	119.6	86.31	70.66	69.24	39.14	32.30	16.67
1.85V/cell	839.9	651.0	531.1	366.5	225.4	117.8	85.62	70.14	69.06	39.14	31.78	16.15

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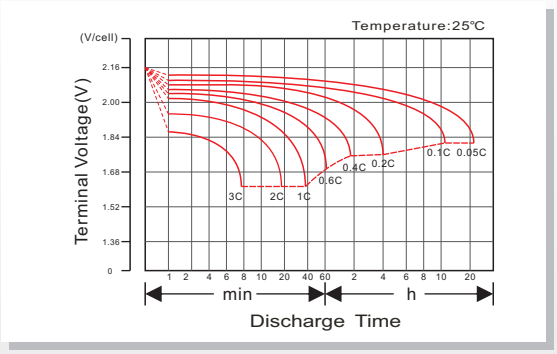
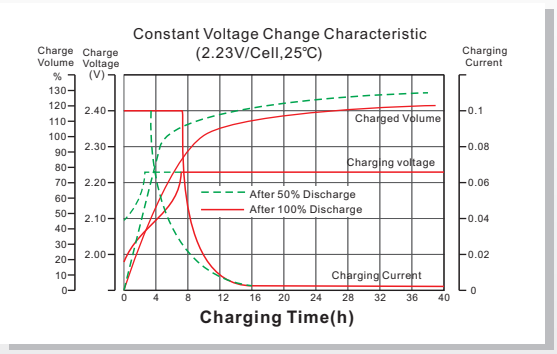
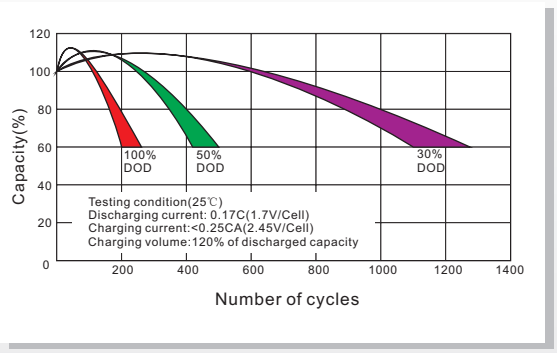
Discharge Characteristics Curve



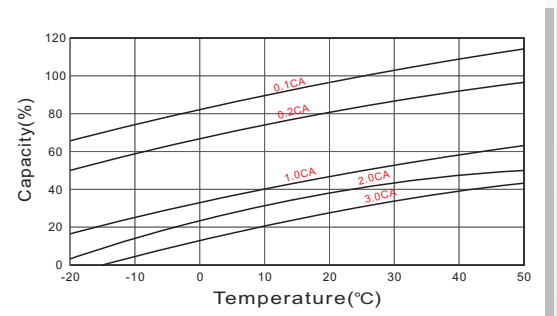
Charging Characteristics Curve



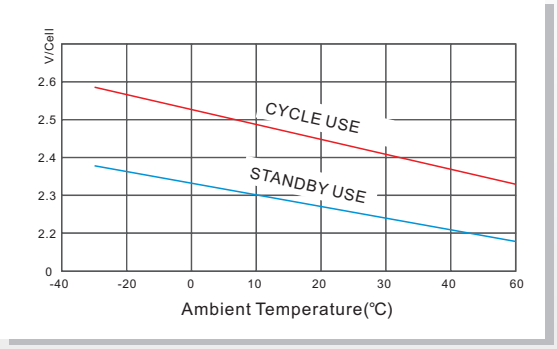
Cycle life in relation to depth of Discharge



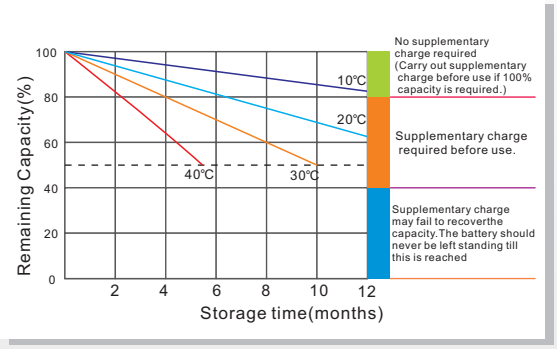
Temperature effects on Capacity



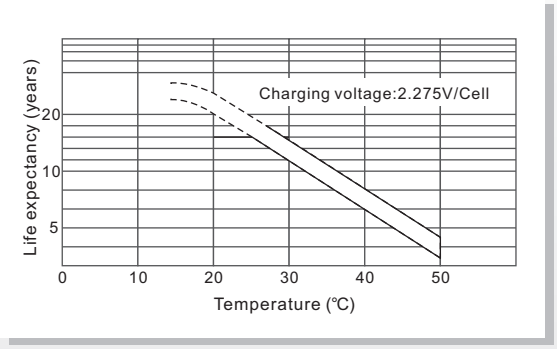
Relationship between charging voltage and temperature



Self-discharge Characteristics



Temperature effects on Float life



Life Characteristics of Standby use