



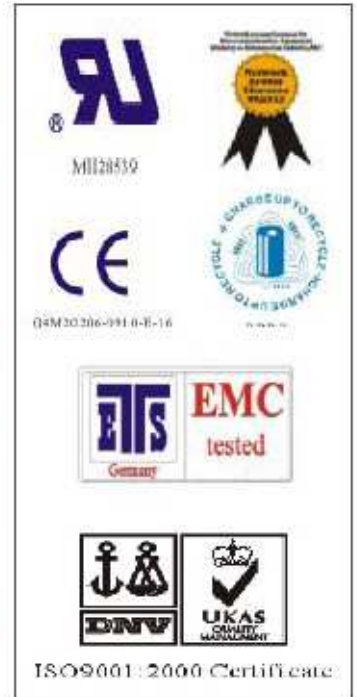
MS12-100H (12V 100Ah)

MS12-100H is a general purpose battery with 10 years design life time in float charging use. As with all MASTERSAFE batteries, all MS models are rechargeable, highly efficient, leak proof and maintenance free.



Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	100Ah@10hr- rate to 1.75 V per cell @25°C
Weight	Approx. 30 Kg
Max. Discharge Current	500 A (5 sec)
Internal Resistance	Approx. 5 mΩ
Operating Temperature Range	Discharge: -20°C -60°C Charge : 0°C-50°C Storage: -20°C-60°C
Normal Operating Temperature Range	25°C ± 5°C
Float charging Voltage	13.6 to 13.8 V DC/unit Average at 25°C
Recommended Maximum Charging Current Limit	30 A
Equalization and Cycle Service	14.4 to 15.0 V DC/unit Average at 25°C
Self Discharge	RITAR batteries can be stored for more than 6 months at 25°C. Please charge batteries before using. For higher temperature, the time interval will be shorter.
Terminal	Terminal F5/F12
Container Material	A.B.S. (UL94-HB) Flammability resistance of UL94-V1 can be available upon request.



Dimensions

Unit: mm

DISTRIBUIDOR:
SYE
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Terminal F12

Terminal F5

Constant Current Discharge Characteristics Unit: A (25°C)

F.V /Time	5MIN	10M IN	15MIN	30M IN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60 V	374	268	195	115	65.0	39.9	26.1	21.6	17.0	12.3	10.4	5.5
1.67 V	364	255	191	113	64.7	39.6	26.0	21.5	16.9	12.2	10.3	5.4
1.70 V	343	246	188	112	64.1	39.3	25.8	21.4	16.8	12.1	10.2	5.3
1.75 V	308	227	179	109	63.5	39.0	25.7	21.2	16.6	12.0	10.1	5.2
1.80 V	278	207	165	105	62.0	38.3	25.0	20.7	16.3	11.8	10.0	5.1
1.85 V	242	185	148	98	58.9	36.6	23.9	19.7	15.6	11.3	9.7	4.8

Constant Power Discharge Characteristics Unit: W (25°C)

F.V /Time	5MIN	10M IN	15MIN	30M IN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60 V	671	490	361	216	124	76.5	50.2	41.6	32.8	23.8	19.5	10.3
1.67 V	657	468	354	214	123	76.2	50.1	41.5	32.6	23.7	19.3	10.2
1.70 V	620	453	349	211	122	75.5	49.8	41.3	32.5	23.5	19.2	10.1
1.75 V	558	418	333	206	121	74.8	49.5	41.0	32.2	23.3	19.0	10.0
1.80 V	502	380	306	197	118	73.7	48.3	39.9	31.7	22.8	18.8	9.9
1.85 V	434	337	273	185	112	70.3	45.9	38.0	30.1	22.0	18.2	9.5

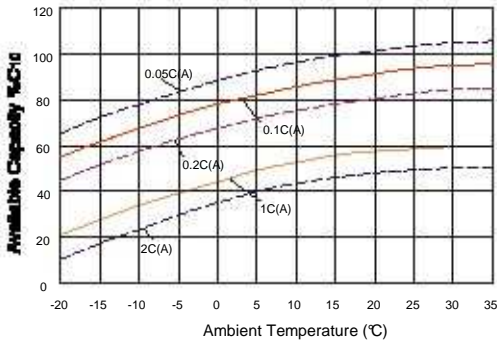
All mentioned values are average values.

MS12-100H

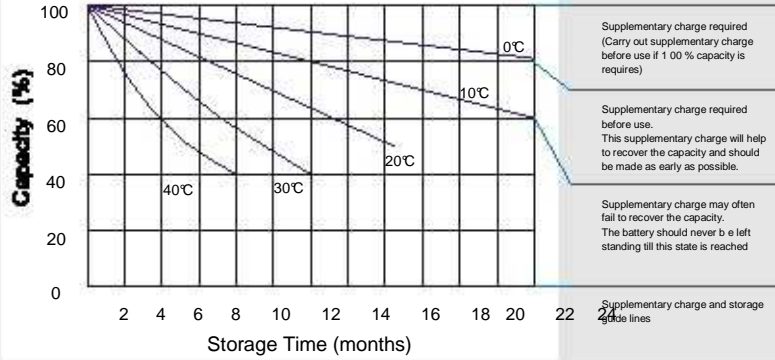
12V100Ah



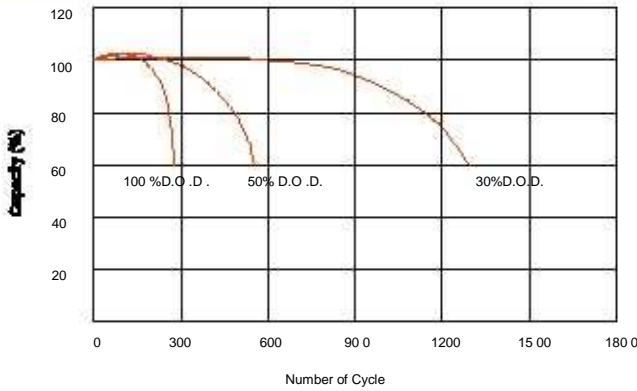
Temperature effects curve



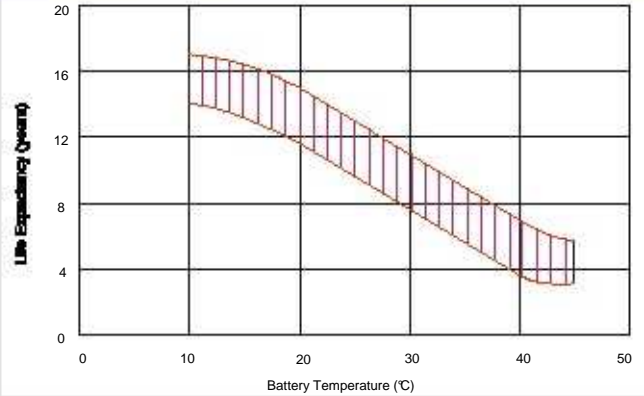
Storage characteristic



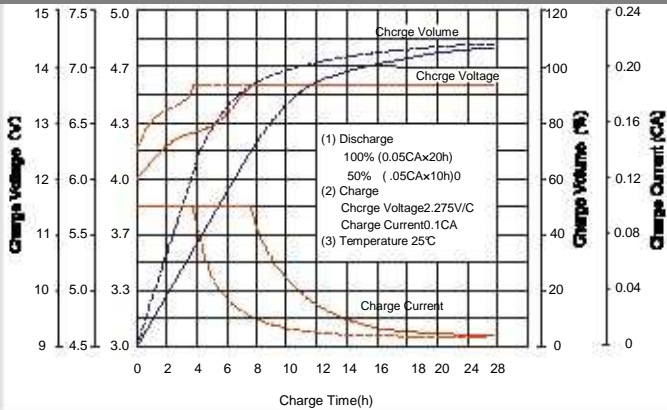
Life characteristics of cyclic use



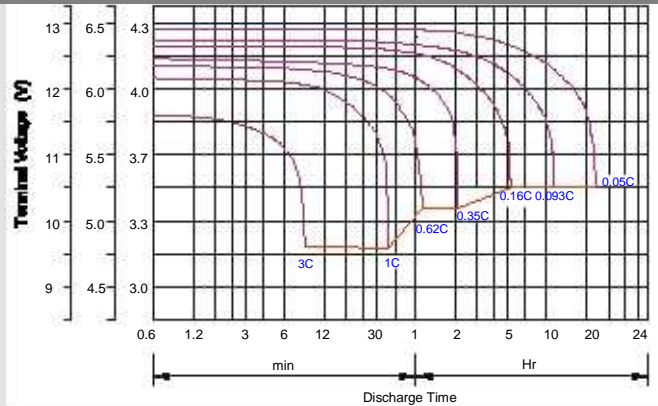
Effect of temperature on long term float life



Charge characteristic Curve for standby use



Discharge characteristic Curve



Charging Procedures(12V series)

Application	Charge Voltage (V)			Max. Charge Current
	Temperature	Set point	All owable range	
Cycle Use	25°C	14.7	14.4~15.0	0.3C
Standby	25°C	13.7	13.6~13.8	0.3C

Charge the batteries at least once every six months, if they are stored at 25°C.

Charging Method:

Constant Voltage	-0.2Cx2h +14.4~15.0V,24h,Max. Current 0.3CA
Constant Current	-0.2Cx2h +0.1CAx12h
Fast	-0.2Cx2h +0.3CAx4h

Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/cell	1.75V	1.70V	1.60V
Discharge Current (A)	(A) *0.2C	0.2C<(A) <1.0C	(A)* 1.0C

Charging Procedures(6V series)

Application	Charge Voltage (V)			Max. Charge Current
	Temperature	Set point	Allowable range	
Cycle Use	25°C	7.35	7.25~7.45	0.3C
Standby	25°C	6.85	6.8~6.9	0.3C

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