

Specification

Cells Per Unit	3
Voltage Per Unit	6
Capacity	335Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 48.0 Kg/105.84Lbs (Tolerance ±2%)
Internal Resistance	Approx. 1.8 mΩ
Terminal	F22
Max. Discharge Current	3000A (5 sec)
Cold Cranking Ampere(CCA)	970A
Cranking Ampere(CA)	1700A
Maximum Charging Current	100.5A
Reserve Capacity	850min@25A to 1.75V/Cell(25°C) 210min@75A to 1.75V/Cell(25°C)
Reference Capacity	C10 335.3AH C20 348.2AH
Float Charging Voltage	6.80 V~6.90 V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	7.30 V~7.40 V @ 25°C Temperature Compensation: -4mV/°C/Cell
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
Self Discharge	RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25°C. Please charged batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.



The series is specially designed for frequent discharge deep cycle application. By using the specially designed active material, strong grids and thick plate construction, the series battery offers reliable performance in high load situations and could provide competitive cycle performance. Suitable for Electric Vehicle and Golf cart; Industrial equipment, Floor machines, Forklifts, Aerial lifts, and Robotics; Marine, RV, and no-idle solutions; Mobility and Medical equipment; and most outdoor application.



ISO 9001



ISO 14001



OHSAS 18001

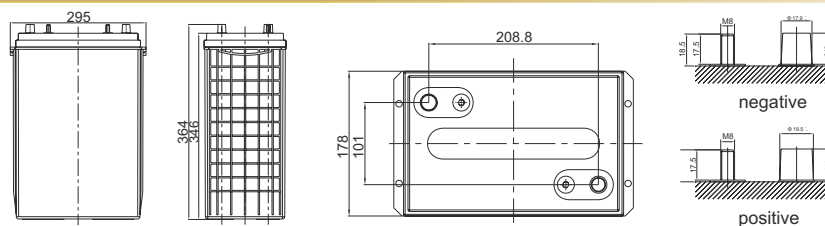


MH 60419



G4M20206-0910-E-16

Dimensions



Length	295±2mm (11.6 inches)
Width	178±2mm (7.01 inches)
Height	346±2mm (13.8 inches)
Total Height	364±2mm (14.3 inches)
Terminal	Value
M5	6~7 N*m
M6	8~10 N*m
M8	10~12 N*m

Unit: mm

Constant Current Discharge Characteristics : A(25°C)

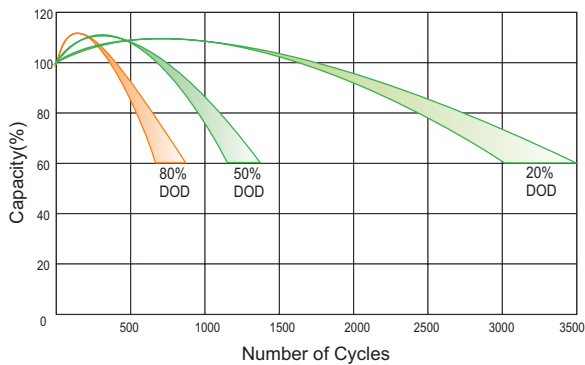
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
4.80V	1198	881.8	650.7	380.8	217.8	132.8	89.59	74.49	59.36	42.84	34.86	18.46
5.00V	1163	839.0	637.3	374.2	213.4	131.8	88.91	74.14	58.99	42.49	34.52	18.11
5.10V	1129	809.4	627.3	367.3	208.0	130.8	87.23	73.80	58.62	42.14	34.18	17.77
5.25V	1013	746.9	597.3	364.5	203.7	129.8	85.19	73.11	57.89	41.79	33.84	17.42
5.40V	914.7	681.1	550.6	358.3	197.7	127.5	83.79	71.38	57.45	41.10	33.53	17.24
5.55V	781.0	608.7	493.9	335.5	190.6	121.8	82.34	67.94	56.00	39.35	33.14	16.55

Constant Power Discharge Characteristics : W(25°C)

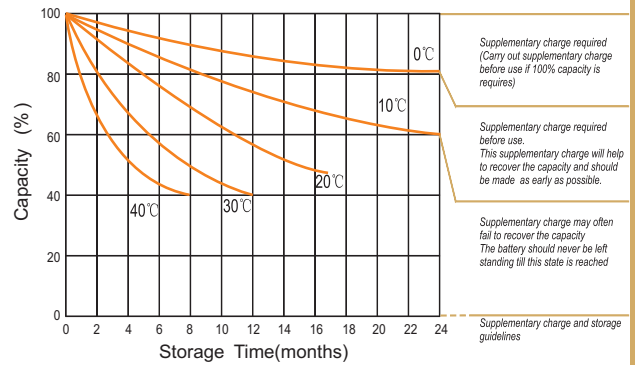
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
4.80V	6318	4742	3600	2179	1258	788.4	532.7	443.9	355.5	255.7	209.1	113.7
5.00V	6193	4597	3542	2153	1255	785.8	530.4	443.4	352.9	254.5	207.8	111.7
5.10V	6122	4476	3516	2134	1245	781.0	522.2	442.4	351.8	252.8	205.9	109.6
5.25V	5574	4168	3408	2144	1221	778.6	510.7	438.3	348.4	250.8	203.9	107.5
5.40V	5077	3842	3150	2110	1186	767.0	504.5	428.3	344.7	246.6	201.9	105.5
5.55V	4459	3507	2891	1987	1145	733.9	495.9	407.6	336.6	236.1	199.3	102.5

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.

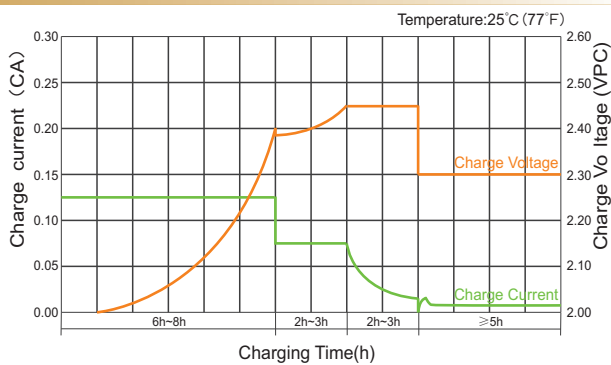
Cycle Life in Relation to Depth of Discharge



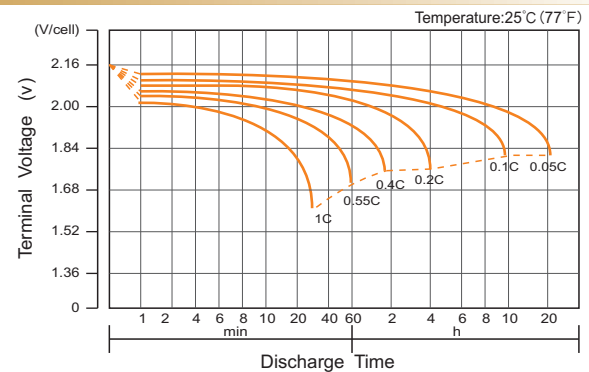
Storage Characteristics



Charge Characteristic Curve for Cycle Use(IUUU)



Discharge Characteristics Curve



CHARGE VOLTAGES

Charge Stage	Battery Voltage			
	12V	24V	36V	48V
Bulk	14.6	29.2	43.8	58.4
Absorption	14.6	29.2	43.8	58.4
Float	13.6	27.2	40.8	54.4
TC Factor: (-3mV/°C/cell) or (-4mV/°C/cell)				

Capacity Factors With Different Temperature

Battery Type	-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
GEL 6V&12V	50%	70%	83%	85%	90%	98%	100%	102%	104%	105%
Battery 2V	60%	75%	85%	88%	92%	99%	100%	103%	105%	106%
AGM 6V&12V	46%	66%	76%	83%	90%	98%	100%	103%	107%	109%
Battery 2V	55%	70%	80%	85%	92%	99%	100%	104%	108%	110%

Discharge Current VS. Discharge Voltage

Final D ischarge Voltage V /cell	1.75V	1.70V	1.60V
Discharge Current (A)	(A) ≤ 0.2C	0.2C < (A) < 1.0C	(A) ≥ 1.0C

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

Charging Method:

Constant Voltage	-0.2Cx2h+2.4-2.45V/cellx24h, Max. Current 0.3C
Constant Current	-0.2Cx2h+0.1Cx12h
Fast	-0.2Cx2h+0.3Cx4h

Maintenance & Cautions

Cycle Service

- ▶ Avoid battery overcharge, especially in series connection use.
- ▶ Charge with recommended voltage. Ensure battery fully recharges. In general, recharge capacity should be 1.1-1.15 times discharge capacity.
- ▶ Effect of temperature on cycle charge voltage: -4mV/°C / Cell
- ▶ The length of cycle service will be affected by depth of discharge, ambient temperature, discharge rate, and the manner in which the battery is recharged. Generally speaking, the most important factor is depth of discharge.

Float Service:

- ▶ Every month, recommend inspection of every battery's voltage.
 - ▶ Every three months, recommend a one time equalization charge.
- Equalization charge method:
- Discharge - 100% rate capacity discharge
- Charge - Max. current 0.3C, constant voltage 2.4-2.45V/Cell charge 24h.
- ▶ Effect of temperature on float charge voltage: -3mV/°C/Cell.
 - ▶ Length of service life will be affected by the number of discharge cycles, depth of discharge, ambient temperature, and charging voltage