FT12-110G (12V110Ah)

DG (Deep Cycle GEL , 12 Volts) series is pure GEL battery with 12 years floating design life , it is ideal for standby or frequent cyclic discharge applications under extreme environments. By using strong grids, high purity lead and patented Gel electrolyte, the DG series offers excellent recovery after deep discharge under frequent cyclic discharge use, and can deliver 400 cycles at 100% DOD. Suitable for solar, CATV, marine , RV and deep discharge UPS, communication , and telecommunication , etc.

RITAR®

Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	110Ah@20hr-rate to 1.75V per cell @25℃
Weight	Approx. 33.0 Kg (Tolerance±2%)
Max. Discharge Current	1100 A (5 sec)
Internal Resistance	Approx. 7.2 mΩ
Operating Temperature Range	Discharge: -40℃~60℃ Charge:-20℃~50℃ Storage: -40℃~60℃
Normal Operating Temperature Range	25℃±5℃
Float charging Voltage	13.6 to 13.8 VDC/unit Average at 25℃
Recommended Maximum Charging Current	22A
Equalization and Cycle Service	14.2 to 14.4VDC/unit Average at 25℃
Self Discharge	RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25℃. Self-discharge ratio less than 3% per month at 25℃. Please charge batteries before using.
Terminal	Terminal F9
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

MH28539

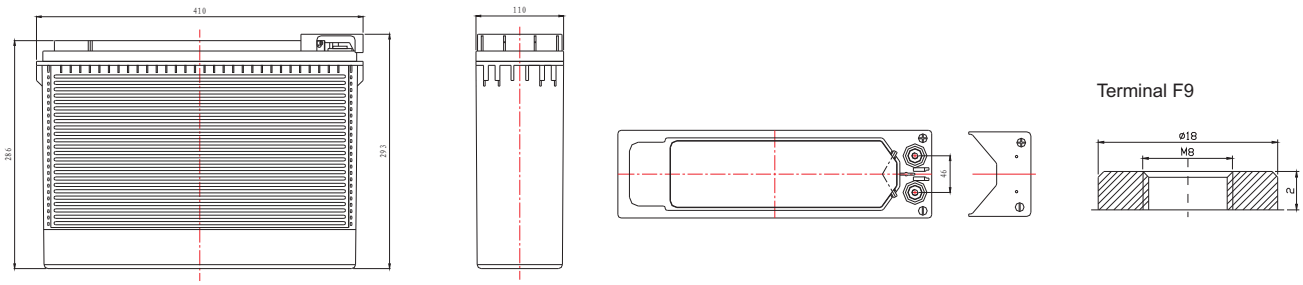
G4M20206-0910-E-16

IQNet CERTIFICATE Postcode.:421001 is in conformity with ISO 14001:2004 Standard

IQNet CERTIFICATE Postcode.:421001 is in conformity with OHSAS 18001:1999 Standard

Dimensions

Unit: mm Dimension: 410(L)×109(W)×293(H)



Constant Current Discharge Characteristics: A (25℃)(The capacity reaches the peak value after 5-20 cycles.)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	262.0	187.5	150.5	100.9	64.13	38.61	27.93	22.30	18.93	12.82	10.65	5.836
10.0V	254.4	178.4	147.4	100.0	63.84	38.32	27.83	22.19	18.82	12.72	10.54	5.729
10.2V	246.9	172.1	145.1	99.36	63.24	38.03	27.61	22.09	18.71	12.61	10.44	5.623
10.5V	224.3	160.7	139.8	97.82	62.65	37.74	27.50	21.88	18.49	12.51	10.34	5.500
10.8V	204.8	148.3	130.3	94.43	60.53	37.06	26.75	21.37	18.03	12.01	10.01	5.223
11.1V	176.9	134.0	118.3	89.31	57.50	35.42	25.58	20.34	17.26	11.50	9.714	4.915

Constant Power Discharge Characteristics: W (25℃)(The capacity reaches the peak value after 5-20 cycles.)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	2710	1997	1656	1150	741.1	455.1	333.2	265.8	225.9	153.1	127.2	69.97
10.0V	2656	1936	1629	1146	739.3	452.7	332.5	265.4	225.3	152.4	126.4	68.75
10.2V	2626	1884	1611	1140	733.6	450.0	331.1	264.9	224.5	151.4	125.3	67.48
10.5V	2419	1776	1554	1124	727.0	446.7	329.8	262.4	221.8	150.1	124.1	66.21
10.8V	2229	1656	1453	1088	706.1	441.0	320.8	256.4	216.4	144.1	120.2	62.67
11.1V	1980	1515	1323	1032	675.8	424.6	306.9	244.0	207.1	138.0	116.6	58.98

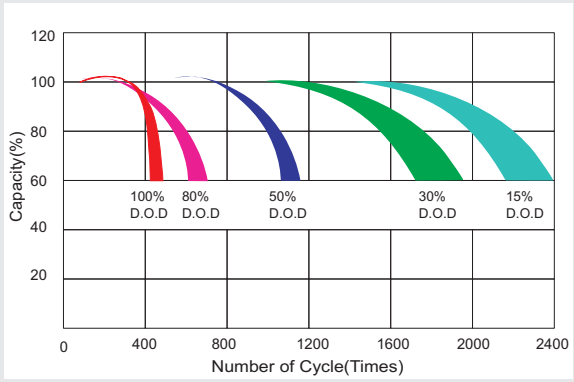
All mentioned values are average values (Tolerance ±2%).

FT12-110G

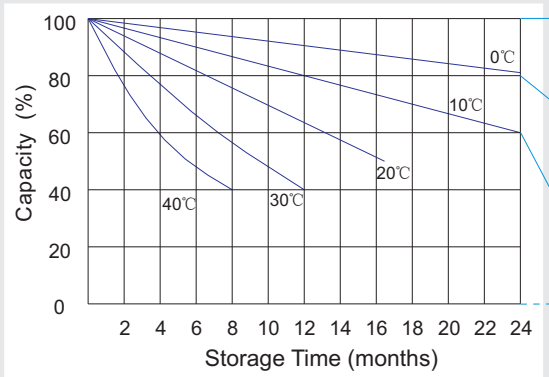
12V110Ah

RITAR®

Life characteristics of cyclic use



Storage characteristic



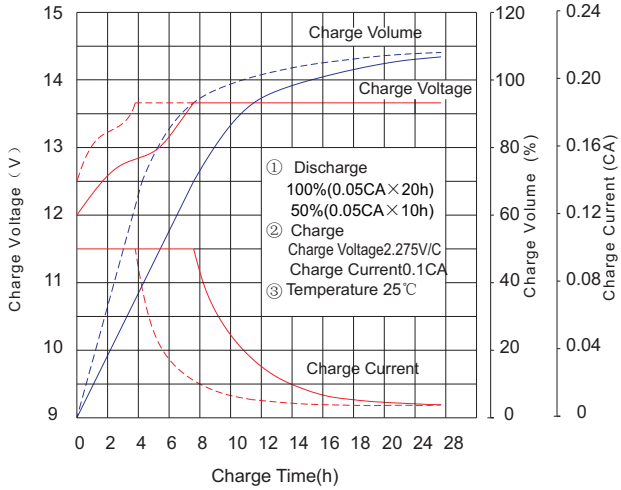
Supplementary charge required (Carry out supplementary charge before use if 100% capacity is requires)

Supplementary charge required before use. This supplementary charge will help to recover the capacity and should be made as early as possible.

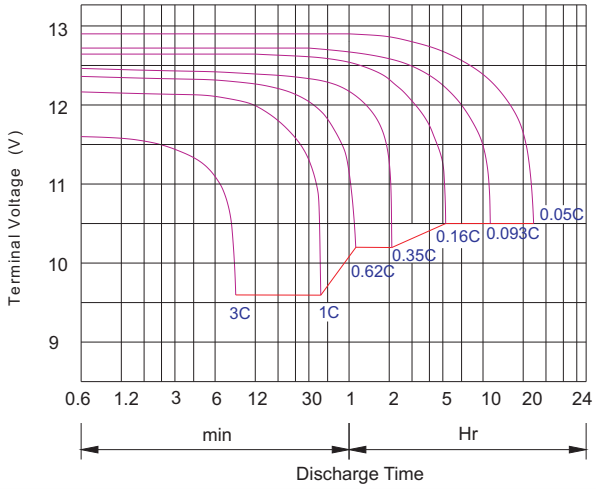
Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this state is reached

Supplementary charge and storage guidelines

Charge characteristic curve for cyclic use



Discharge characteristic curve



Capacity Factors With Different Temperature

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

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

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

Charging Method:

Constant Voltage	-0.2Cx2h+14.4-14.7Vx24h,Max. Current 0.2C
Constant Current	-0.2Cx2h+0.1Cx12h
Fast	-0.2Cx2h+0.2Cx6h

Bolt	M5	M6	M8
Terminal	F3 F4 F13 F18 T25 T26	F8 F11 F12-1 F15	F5 F9 F10 F12 F14 F16
Torque	6~7N-m	8~10N-m	10~12N-m

Maintenance & Cautions

Cycle service

※ Avoid battery over discharge, especially battery sereis connection use.

※ Charged with recommend voltage, ensure battery can be full recharged.

In general, recharge capacity should be 1.1-1.15 times discharge capacity.

※ Effect of temperature on cycle charge voltage: -4mV/℃/Cell.

※ There are a number of factors that will affect the length of cyclic service.

The most significant are depth of discharge, ambient temperature, discharge rate, and the manner in which the battery is recharged.

Generally specking, the most important factors is depth of discharge.

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