

STRIDENT⁺

BATTERIES

GP12-12FRW 12V 12Ah(20hr)

The rechargeable batteries are lead-acid, with flame-resistant casing and flame-arrestor vents, designed to prevent fire propagation and meet strict safety codes in sensitive installations. The dilute sulfuric acid electrolyte is absorbed by separators and plates and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special one-way valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore maintenance-free and leak proof. Batteries should be installed and operated in the upright position only.



Battery Construction

Component	Positive Plate	Negative Plate	Container	Cover	Safety Value	Terminal	Separator	Electrolyte
Raw Material	Lead Dioxide	Lead	ABS	ABS	Rubber	T2	Fibreglass	Sulfuric Acid

General Features

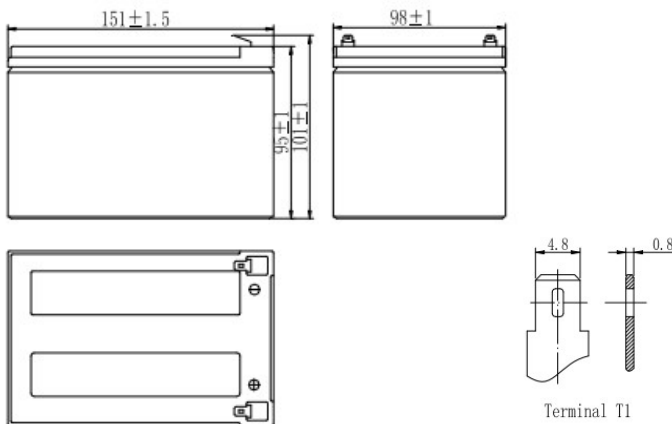
- Positive and negative plates in lead-calcium-tin alloy.
- Stable Quality & High Reliability
- Sealed Construction.
- Long Service Life.
- Maintenance-Free Operation
- Low Pressure Venting System
- Low Self Discharge
- U.L. and CE Component Recognition
- Design life 10 Years
- Flame Retardant (UL V0) ABS Container

Performance Characteristics

- Nominal Voltage: 12V
- Number of Cells: 6
- Nominal Capacity 77°F (25°C)
 - 10 Hour Rate (10.5V): 11.0Ah
 - 1 Hour Rate (9.60V): 7.8Ah
- Internal Resistance
 - Fully Charged Battery 77°F (25°C) 19m Ohms
- Capacity affected by temperature (20hr)
 - 40°C - 102%
 - 25°C - 100%
 - 0°C - 85%
 - 15°C - 65%
- Self-Discharge
 - 3 Month: Remaining Capacity: 91%
 - 6 Month: Remaining Capacity: 82%
 - 12 Month: Remaining Capacity: 65%
- Operating Temperature Range
 - Discharge: -15~ 50°C
 - Charge: -10~ 50°C
 - Storage: -20~ 50°C
- Max. Discharge Current 77°F (25°C): 180A (5s)
- Charge methods: Cyclic charging voltage 77°F (25°C)
 - Cycle use: 14.50 to 14.90V
 - Maximum charging current: 3.6A
 - Temperature Compensation: -30mV/°C
- Float charging voltage: 13.60 to 13.80V
 - Temperature compensation: -18mV/°C

Dimensions and Weight

Length (mm/inch)	151/5.94
Width (mm/inch)	98/3.86
Height (mm/inch)	95/3.74
Total Height (mm/inch)	101/3.98
Approx. Weight (kg/lbs)	3.40/7.50



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Discharge Data

Discharge Constant Current (Amperes at 77°F/25°C)									
End Point Volts/Cell	10min	15min	30min	1h	2h	3h	5h	10h	20h
9.60V	28.8	22.8	12.7	7.80	4.26	3.06	2.08	1.13	0.61
9.90V	27.9	22.3	12.5	7.68	4.24	3.04	2.07	1.13	0.61
10.2V	26.8	21.4	12.1	7.49	4.20	3.02	2.05	1.12	0.60
10.5V	25.6	20.7	11.8	7.34	4.14	3.00	2.04	1.12	0.60
10.8V	24.2	19.6	11.4	7.11	4.03	2.91	1.98	1.09	0.59

The above characteristics data are average values obtained with three charge/discharge cycles, not the minimum values.

Discharge Constant Power (Qatts at 77°F/25°C)									
End Point Volts/Cell	10min	15min	30min	1hr	2hr	3h	5h	10h	20h
9.60V	325	260	146	90.3	49.9	36.4	24.8	13.6	7.31
9.90V	315	254	143	89.0	49.6	36.1	24.7	13.5	7.28
10.2V	302	244	138	86.8	49.1	35.9	24.5	13.5	7.24
10.5V	289	236	135	85.0	48.4	35.6	24.4	13.4	7.20
10.8V	273	224	130	82.4	47.2	34.6	23.6	13.1	7.06

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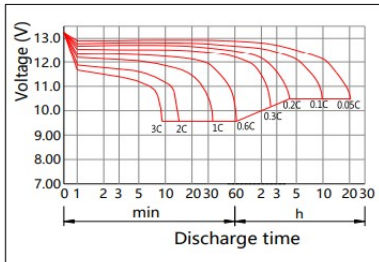
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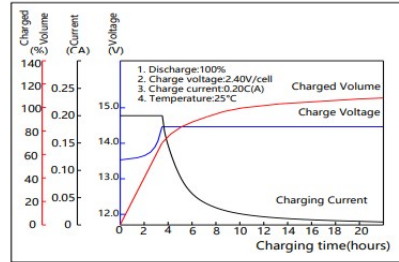
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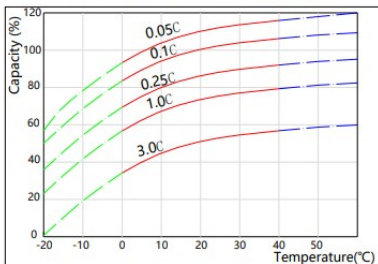
Discharge Characteristics(25°C)



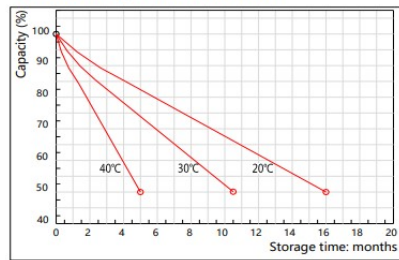
Charging Characteristics(25°C)



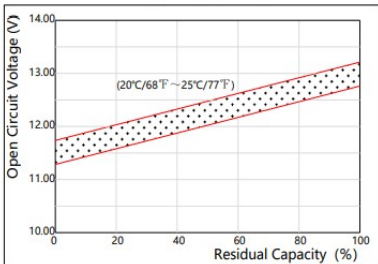
Effect of Temperature on Capacity



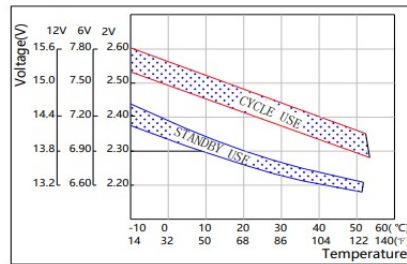
Self-discharge Characteristics



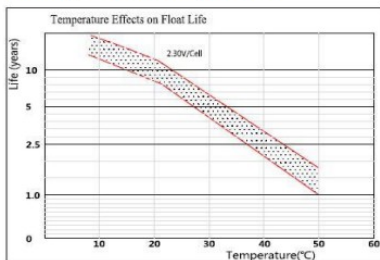
The Relationship for Open Circuit Voltage and Residual Capacity (25°C)



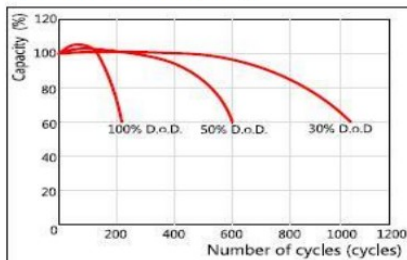
The Relationship for Charging Voltage and Temperature



Floating Life on Temperature



Cycle Life on D.O.D(25°C)



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