

AP12-35-GXD

High Temperature Gel Battery

Datasheet



The AP12-35-GXD is a gel battery with 12-year design life designed for frequent deep cycling and for high temperature applications. The battery is made with a heavy duty Calcium Tin alloy as well as double thickness of plates; the plates are made of a special alloy designed to reduce corrosion thus resulting in the long battery life. These features also mean that batteries will operate safely and reliably in high temperature and outdoor applications.

The AP12-35-GXD comes with 3 years warranty provided it is installed and have been having regular maintenance in accordance with manufacturer recommendation and specification.

Key features include:

- High temperature outdoor battery
- Gelled Electrolyte Technology
- Compact design
- Stable quality and high reliability
- Maintenance-free operation
- 12 years design time at 25°C

Applications include:

- Solar and wind system
- UPS
- Fire alarm and security systems
- Auto control system
- Communication power supply
- Telecommunication system
- DC power supply

Alpha Power Systems

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Power Systems

Product Specifications

Model / Part Number	AP12-35-GXD / GXD-035
Nominal Voltage	12V _{DC} (6 cells)
Nominal Capacity @25°C	37.1Ah (20hr 1.80V/cell) 35.0Ah (10hr 1.80V/cell) 29.8Ah (5hr 1.75V/cell) 21.0Ah (1hr 1.60V/cell)
Dimension	Length 195 ± 2mm Width 130 ± 2mm Container Height 164 ± 2mm Total Height 178 ± 2mm
Weight	Approx. 11.2kg
Terminal	T2 or F5
Container Material	ABS
Max. Discharge Current	490A (5S)
Internal Resistance	Approx. 11mΩ
Operating Temperature Range	Discharge -15 – 50°C Charge 0 – 40°C Storage -15 – 40°C
Nominal Operating Temperature Range	25 ± 3°C
Cycle Use	14.4 – 14.8V @ 25°C Temp. Coefficient -30mV/°C Initial Charging Current < 10.5A
Standby Use	13.5 – 13.8V @ 25°C Temp. Coefficient -20mV/°C No limit on Initial Charging Current
Capacity affected by Temperature	40°C 130% 25°C 100% 0°C 86%
Self-Discharge	Can be stored for up to 6 months @ 25°C Then a freshening charge is required For higher temperature the freshening time interval will be shorter

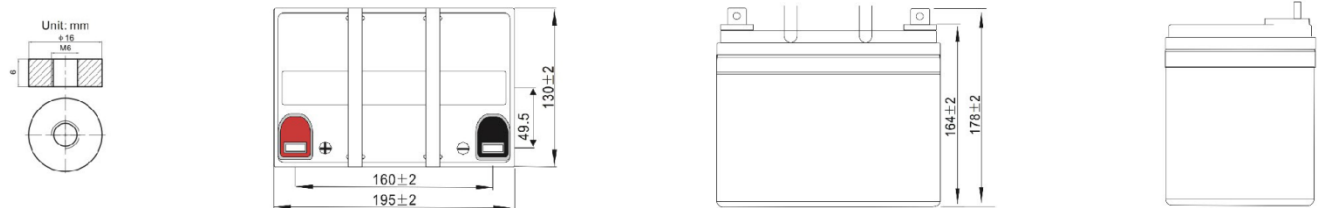
Constant Current Discharge (Amperes at 25°C)

F.V/Time	5min	10min	15min	30min	45min	1h	2h	3h	5h	10h	20h
1.80V/cell	86.85	62.51	50.99	31.78	24.45	19.91	11.63	8.73	6.01	3.53	1.86
1.75V/cell	94.86	68.67	55.30	33.1	25.37	20.54	11.96	8.95	6.15	3.59	1.88
1.70V/cell	102.59	73.34	59.72	34.23	26.19	21.13	12.29	9.15	6.26	3.64	1.90
1.65V/cell	110.59	78.21	63.12	36.11	27.28	21.96	12.64	9.41	6.38	3.67	1.93
1.60V/cell	118.23	83.58	66.01	37.72	28.29	22.70	12.99	9.57	6.50	3.71	1.95

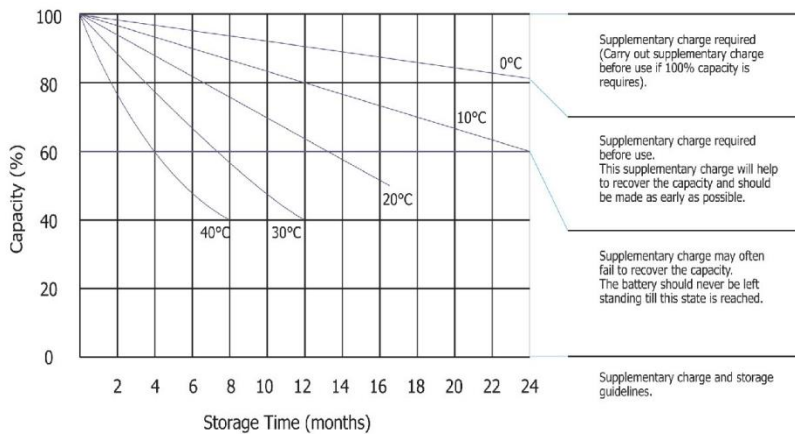
Constant Power Discharge (Watts per cell at 25°C)

F.V/Time	5min	10min	15min	30min	45min	1h	2h	3h	5h	10h	20h
1.80V/cell	162.42	114.55	96.74	59.72	46.45	38.77	22.39	16.94	11.87	7.00	3.66
1.75V/cell	172.64	122.78	101.59	62.16	48.38	39.64	22.99	17.30	12.05	7.09	3.71
1.70V/cell	182.61	129.22	106.87	64.26	49.94	40.20	23.54	17.64	12.19	7.15	3.75
1.65V/cell	196.85	135.24	110.81	67.76	51.39	41.52	24.04	17.96	12.45	7.19	3.78
1.60V/cell	108.09	140.74	115.60	69.85	52.73	42.82	24.52	18.30	12.62	7.25	3.82

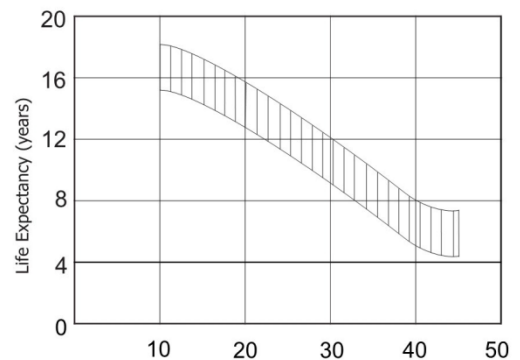
Product Dimensions



Storage Characteristics



Effect of Temperature on Float Life

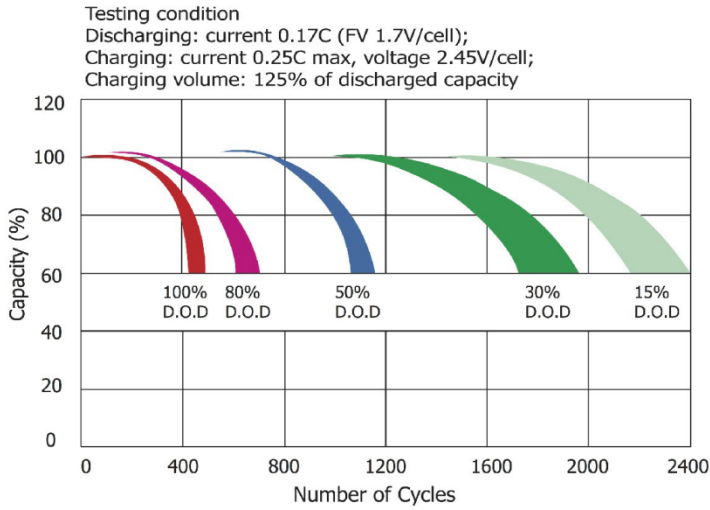


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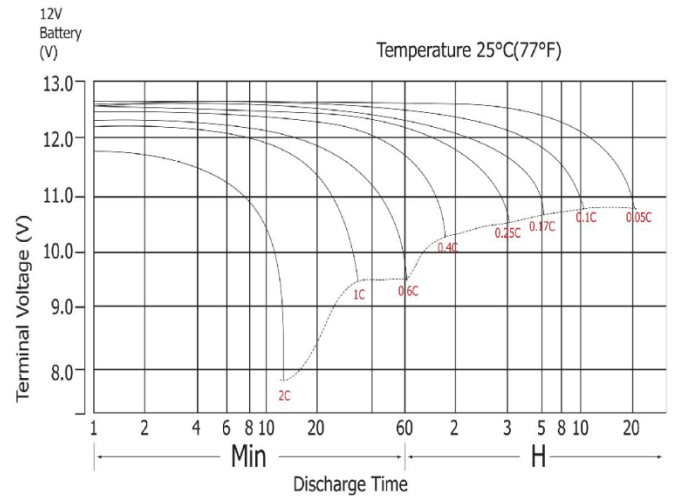
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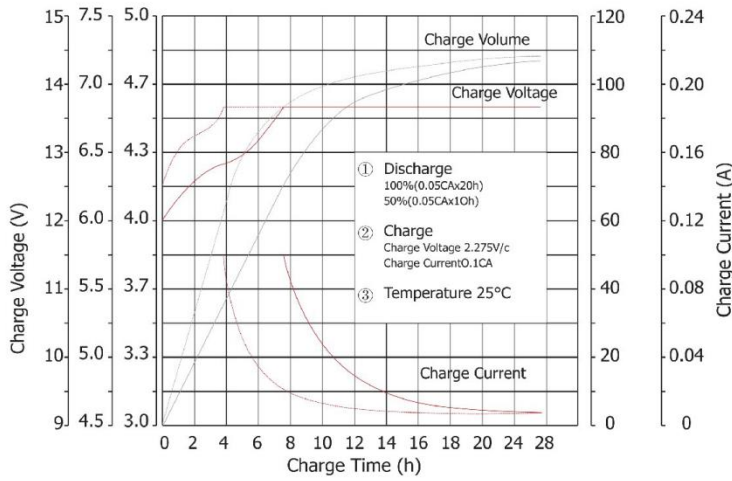
Cycle Life with Depth of Discharge (D.O.D)



Discharge Characteristics Curve



Charge Characteristics Curve for Standby Use



Temperature Effects with Capacity

