



by Honeywell

# BAT Series Batteries Sealed Lead-Acid or Gel Cell

## Description

**BAT Series Batteries** are Gamewell-FCI approved sealed lead-acid batteries that can be used for all your fire alarm system needs. Multiple brands of batteries are now offered under generic part numbers, reducing back order situations and permitting us to deliver these products in a more timely fashion. Gamewell-FCI has approved the multiple brands listed below as a possible product shipped for a given part number. Please note that any incoming orders for "PS Series" batteries will be converted to the equivalent BAT Series part numbers.

Current Part Number	Battery Description	Alternates Approved: Manufacturers and P/Ns Shipped under BAT P/Ns
BAT-1250	12V, 5AH, sealed.	BP5-12 (B&B Battery), PS-1250 (Power-Sonic), UB1250 (UPG).
BAT-1270	12V, 7AH, sealed.	BP7-12 (B&B Battery), PS-1270 (Power-Sonic), UB1270 (UPG).
BAT-12120	12V, 12AH, sealed.	BP12-12 (B&B Battery), PS-12120 (Power-Sonic), UB12120 (UPG).
BAT-12180	12V, 18AH, sealed	PS-12180 (Power-Sonic), SA UB12180 (UPG).
BAT-12260	12V, 26AH, sealed	BP26-12 (B&B Battery), PS-12260 (Power-Sonic), UB12260 (UPG).
BAT-1250	12V, 5AH, sealed	BP5-12 (B&B Battery), PS-1250 (Power-Sonic), SA 1250 (UPG).
BAT-12550	12V, 55AH, sealed	PS-12550 (Power-Sonic), UB12550 (UPG).
BAT-121000	12V, 100 AH, gel cell.	PS-121000 (Power-Sonic), XSA121000A (UPG).

MH19884 (B & B Battery)  
MH20727 (UPG)  
MH20845 (Power-Sonic)



MH20727



MH19884



MH20845

## Features

- Provide secondary power for control panels
- Sealed and maintenance-free
- Overcharge protected
- Easy handling with leakproof construction
- Ruggedly constructed, high-impact case (ABS, polystyrene, or polypropylene, depending on models)
- Long service life
- Compact design

An ISO 9000-2000 Company



### GAMEWELL-FCI

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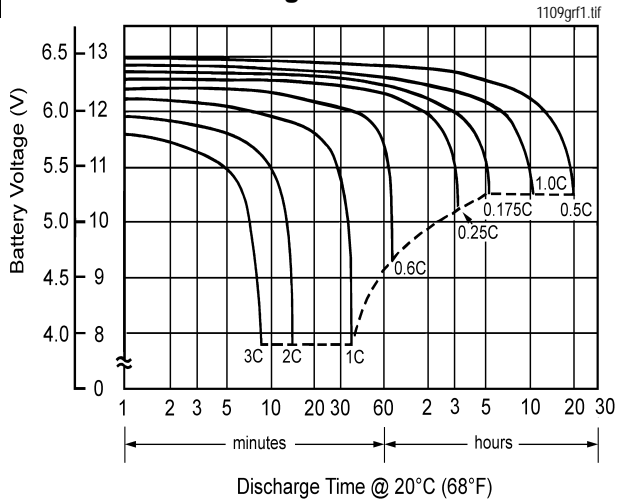
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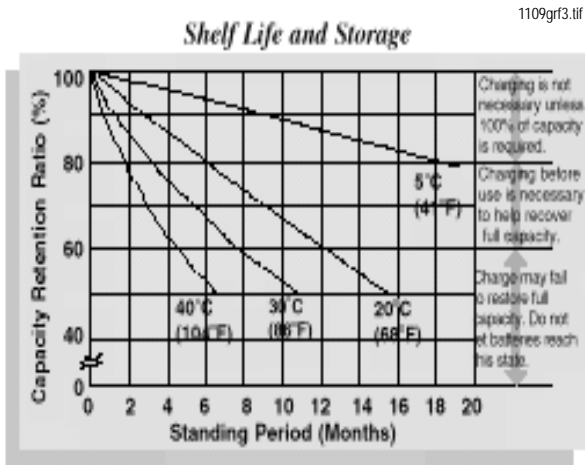
# POWER SONIC

Model	Nominal Voltage V	Nominal Capacity @ 20 hr. rate A.H.	Discharge Current @ 20 hr. rate mA	Dimensions									
				Width		Depth		Height		Height over Terminal		Weight	
				in.	mm.	in.	mm.	in.	mm.	in.	mm.	lbs.	kg.
PS-1250	12	5.0	250	3.54	90	2.76	70	4.02	102	4.21	107	4.1	1.9
PS-1270	12	7.0	325	5.94	151	2.56	65	3.70	94	3.86	98	5.7	2.6
PS-12120	12	12	600	5.94	151	3.86	98	3.70	94	3.86	98	8.8	4.0
PS-12180	12	18	875	7.13	181	2.99	76	6.57	167	6.57	167	12.8	5.8
PS-12250	12	25	1300	6.89	175	6.54	166	4.92	125	4.92	125	18.7	8.5
PS-12550	12	55	3000	10.25	260	6.60	168	8.20	208	9.45	240	39.7	18.0
PS-121000	12	100	5000	12.00	305	6.60	168	8.20	208	9.45	240	65.7	29.8

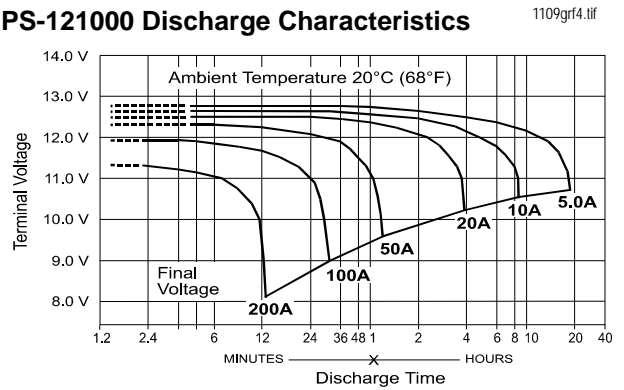
## Characteristic Discharge Curves



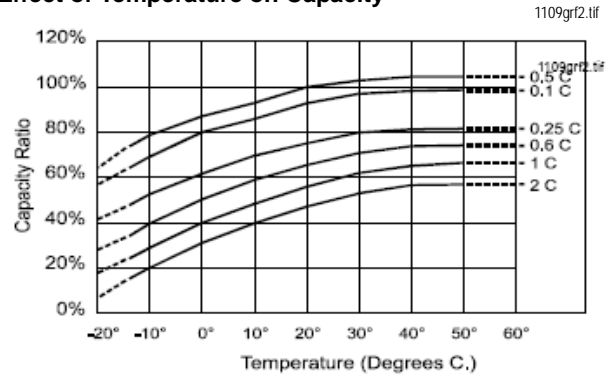
## PS-121000 Shelf-Life and Storage



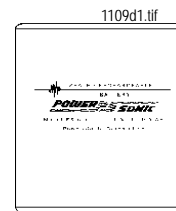
## PS-121000 Discharge Characteristics



## Effect of Temperature on Capacity



## PS-695



**B&B BATTERY**

Model	V	Nominal Capacity (AH)				Weight		Terminal				Dimensions							
								Standard		Optional		L		W		H		TH	
		20 hr	10 hr	5 hr	1 hr	kg	lbs	Type	Pos.	Type	Pos.	mm	in	mm	in	mm	in	mm	in
BP5-12	12	5.00	4.75	4.25	3.00	1.86	4.10	T1	3	T2		90	3.54	70	2.76	102	4.02	106	4.17
BP7-12	12	7.00	6.65	5.95	4.20	2.60	5.73	T2	5	T1		151	5.94	65	2.56	93	3.66	98	3.86
BP12-12	12	12.00	11.40	10.20	7.20	4.03	8.89	B1	5	T1		151	5.94	98	3.86	94	3.70	98	3.86
BP26-12	12	26.00	24.70	22.10	15.60	9.40	20.73	B1	7	T2,11	9	175	6.89	166	6.54	125	4.92	125	4.92

6933bb01.tbl

**Charging Procedure**

Application	Charging method	Charging voltage at 20°C (V/cell)	Temperature compensation coefficient of charging voltage (mV/°C/cell)	Maximum charging current (CA)	Charging time 0.1 CA, 20°C (h)		Temp (°C)
					100% discharge	50% discharge	
For standby power source	Constant voltage and constant current charging (with current restriction)	2.25 ~ 2.30	- 3	0.3	24	20	0 ~ 40°C (32~ 104°F)
For cycle service		2.40 ~ 2.50	- 4	0.3	16	10	

Temperature compensation of charging voltage is not needed when using the batteries within 5°C to 35°C range.

6933bbch.tbl

**At Left: Constant Power Discharge Characteristics at 25°C/77°F for BP5-12**

Final Voltage	Discharge Time								
	5 min	10 min	15 min	30 min	1 hr	3 hr	5 hr	10 hr	20 hr
	Battery Output Power (W)								
10.80 V	180.8	133.1	106.6	63.5	36.39	14.57	10.05	5.62	2.94
10.50 V	209.2	144.2	111.5	65.9	37.48	14.87	10.20	5.70	3.00
10.20 V	222.3	149.4	115.0	67.4	38.16	15.00	10.26	5.73	3.01
9.90 V	232.3	152.9	117.6	68.3	38.61	15.10	10.29	5.75	3.02
9.60 V	240.0	156.0	120.0	69.0	39.00	15.20	10.32	5.75	3.02

6933bb05.tbl

**At Left: Constant Power Discharge Characteristics at 25°C/77°F for BP7-12**

Final Voltage	Discharge Time								
	5 min	10 min	15 min	30 min	1 hr	3 hr	5 hr	10 hr	20 hr
	Battery Output Power (W)								
10.80 V	253.1	186.3	149.3	88.8	50.95	20.40	14.07	7.86	4.11
10.50 V	292.9	201.8	156.2	92.2	52.47	20.81	14.28	7.98	4.20
10.20 V	311.2	209.1	161.0	94.3	53.42	21.00	14.36	8.02	4.22
9.90 V	325.2	214.1	164.7	95.6	54.06	21.15	14.41	8.04	4.23
9.60 V	336.0	218.4	168.0	96.6	54.60	21.27	14.45	8.04	4.23

6933bb07.tbl

**At Left: Constant Power Discharge Characteristics at 25°C/77°F for BP12-12**

Final Voltage	Discharge Time								
	5 min	10 min	15 min	30 min	1 hr	3 hr	5 hr	10 hr	20 hr
	Battery Output Power (W)								
10.80 V	433.9	319.4	256.0	152.3	87.34	34.98	24.12	13.48	7.05
10.50 V	502.2	346.0	267.7	158.1	89.96	35.68	24.48	13.68	7.20
10.20 V	533.6	358.5	276.0	161.7	91.57	36.00	24.61	13.75	7.23
9.90 V	557.5	367.1	282.4	164.0	92.67	36.25	24.70	13.79	7.25
9.60 V	576.0	374.4	288.0	165.6	93.60	36.47	24.77	13.79	7.25

6933bb12.tbl

**At Left: Constant Power Discharge Characteristics at 25°C/77°F for BP26-12**

Final Voltage	Discharge Time								
	5 min	10 min	15 min	30 min	1 hr	3 hr	5 hr	10 hr	20 hr
	Battery Output Power (W)								
10.80 V	940.0	692.0	554.6	330.0	189.23	75.79	52.25	29.20	15.26
10.50 V	1088.0	749.7	580.0	342.5	194.91	77.30	53.04	29.64	15.60
10.20 V	1156.0	776.7	598.0	350.3	198.41	78.00	53.33	29.79	15.67
9.90 V	1208.0	795.3	611.8	355.2	200.79	78.54	53.52	29.88	15.71
9.60 V	1248.0	811.2	624.0	358.8	202.80	79.01	53.68	29.88	15.71

6933bb26.tbl

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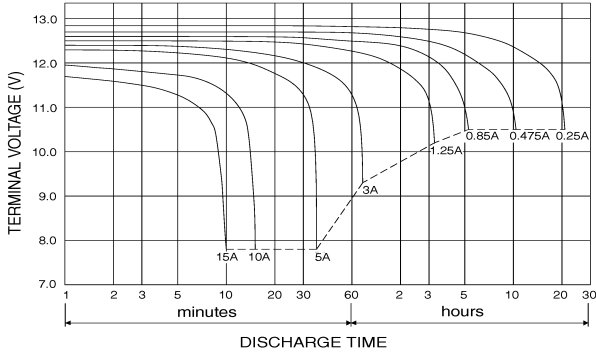
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# B&B Battery

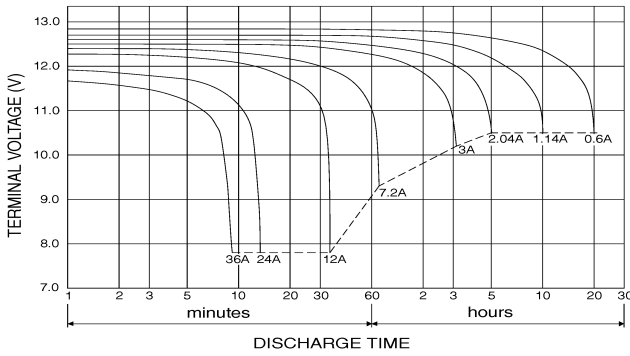
## BP5-12 Battery Discharge Characteristics (25°C/77°F)

BP05dis.tif



## BP12-12 Battery Discharge Characteristics (25°C/77°F)

BP12dis.tif



**BP5-12**

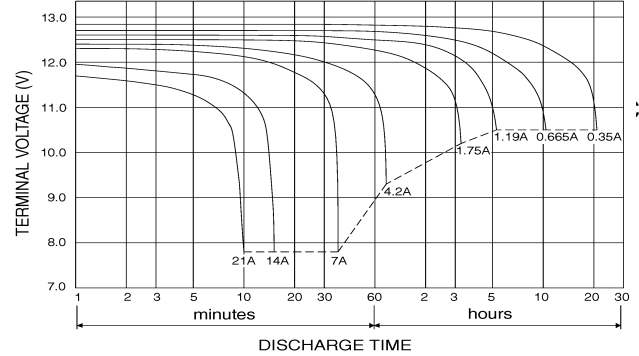


**BP12-12**



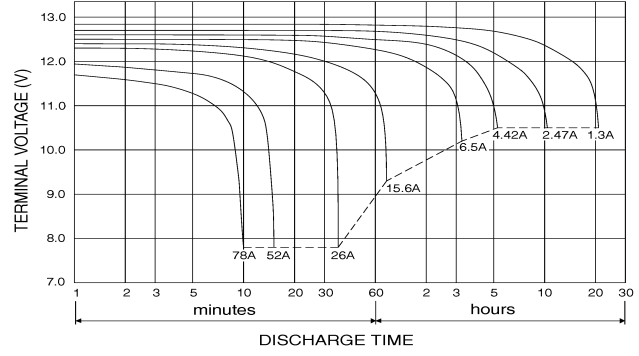
## BP7-12 Battery Discharge Characteristics (25°C/77°F)

BP07dis.tif



## BP26-12 Battery Discharge Characteristics (25°C/77°F)

BP26dis.tif



**BP26-12**



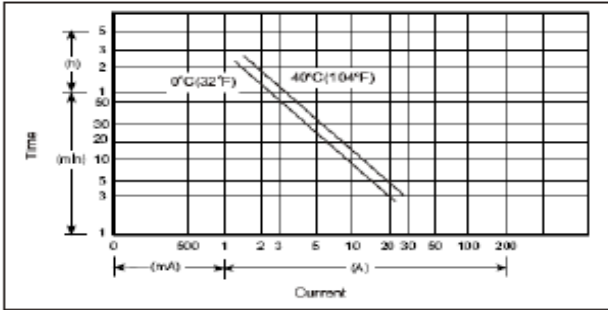
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**UPG BATTERY  
UB1250**

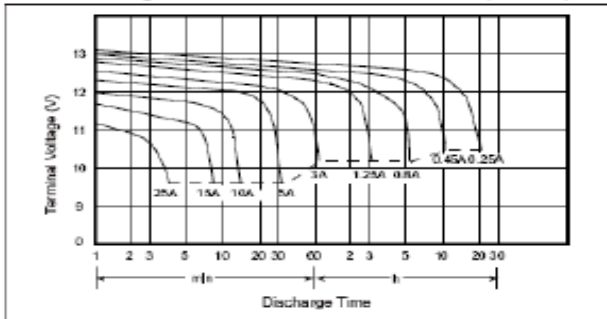
**UB1250 Discharge Current vs Time**

★ **Discharge Current vs Time**



**UB1250 Discharge Characteristics (25°C/77°F)**

★ **Discharge Characteristics 25 °C (77 °F)**



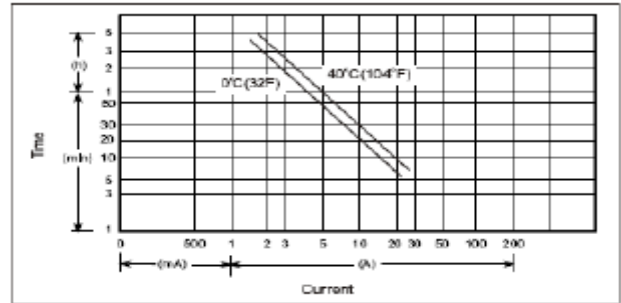
**UB1250 SPECIFICATIONS**

- Nominal voltage: 12 V.
- Nominal capacity (20 hr): 5.0 AH.
- **Dimensions:** Total height: 107 mm (4.21 in); Container height: 101 mm (3.98 in); Length: 90 mm (3.54 in); width: 70 mm (2.76 in).
- Weight: approximately 1.83 kg (4.03 lbs).
- Container material: UL94HB ABS, UL94V-0 ABS.
- Internal resistance: (25°C, 77°F): ~ 32 m.
- Discharge capacity under different temperatures:
  - 40°C: ~ 102%
  - 25°C: ~ 100%
  - 0°C: ~ 85%
- Capacity 25°C/77°F:
  - 20 hr @ 0.25 A: 5.0 AH.
  - 5 hr @ 0.8 A: 4.0 AH.
  - 1 hr @ 3.0 A: 3.0 AH.
  - 1 C @ 5.0 A: 2.5 AH.
- Charging voltage (25°C, 77°F):
  - Standby use: 13.65 V ± 0.15 V.
  - Cycle use: 14.7 V ± 0.3 V.
- Maximum discharge current: 60 A (5 sec).
- Maximum charging current: 1.5 A.
- Self-discharge residual capacity: (25°C, 77°F):
  - After 3 months: ~ 90%.
  - After 6 months: ~ 82%.
  - After 12 months: ~ 70%.

**UB1270**

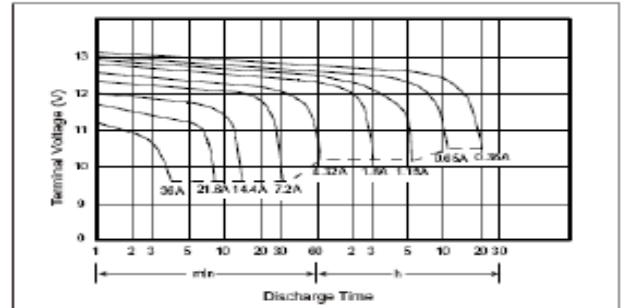
**UB1270 Discharge Current vs Time**

★ **Discharge Current vs Time**



**UB1270 Discharge Characteristics (25°C/77°F)**

★ **Discharge Characteristics @25 °C (77 °F)**



**UB1270 SPECIFICATIONS**

- Nominal voltage: 12 V.
- Nominal capacity (20 hr): 7.2 AH.
- **Dimensions:** Total height: 100 mm (3.94 in); Container height: 94 mm (3.70 in); Length: 151 mm (5.95 in); width 65 mm (2.56 in).
- Weight: approximately 2.66 kg (5.85 lbs).
- Container material: UL94HB ABS, UL94V-0 ABS.
- Internal resistance (25°C, 77°F): ~ 22 m.
- Discharge capacity under different temperatures:
  - 40°C: ~ 102%
  - 25°C: ~ 100%
  - 0°C: ~ 85%
- Capacity 25°C/77°F:
  - 20 hr @ 0.36 A: 7.2 AH.
  - 5 hr @ 1.15 A: 5.76 AH.
  - 1 hr @ 4.32 A: 4.32 AH.
  - 1 C @ 7.2 A: 3.6 AH.
- Charging voltage (25°C, 77°F):
  - Standby use: 13.65 V ± 0.15 V.
  - Cycle use: 14.7 V ± 0.3 V.
- Maximum discharge current: 90 A (5 sec).
- Maximum charging current: 2.16 A.
- Self-discharge residual capacity (25°C, 77°F):
  - After 3 months: ~ 90%.
  - After 6 months: ~ 82%.
  - After 12 months: ~ 70%.

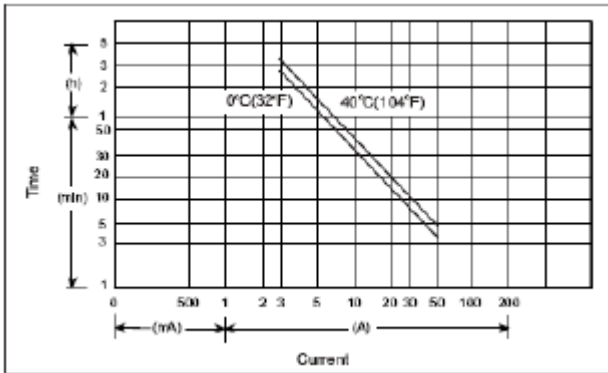
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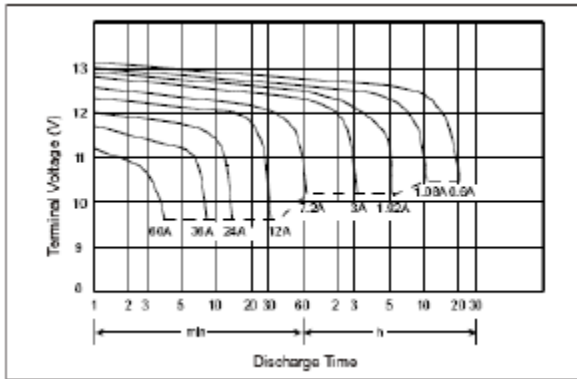
**UPG Battery**

**UB12120**

**UB12120 Discharge Current vs Time**



**UB12120 Discharge Characteristics (25°C/77°F)**

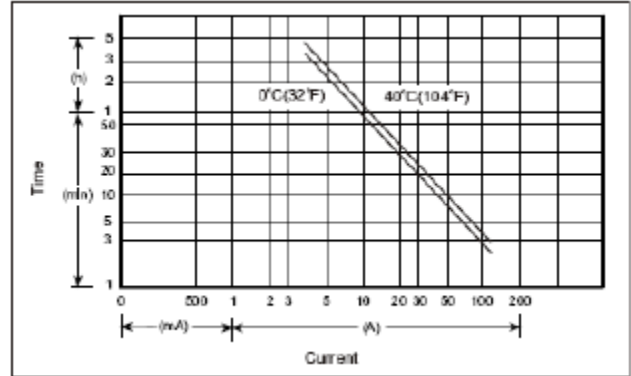


**UB12120 SPECIFICATIONS**

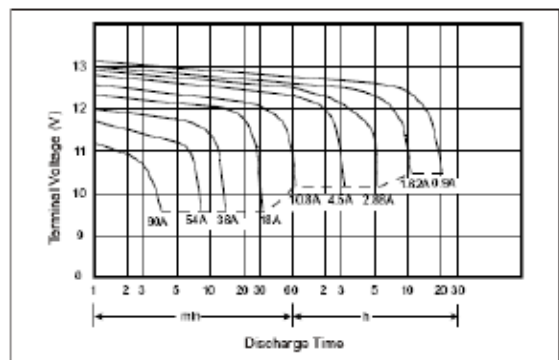
- Nominal voltage: 12 V.
- Nominal capacity (20 hr): 12.0 AH.
- **Dimensions:** Total height: 100 mm (3.94 in); Container height: 94 mm (3.70 in); Length: 151 mm (5.95 in); width 98 mm (3.86 in).
- Weight: approximately 4.10 kg (9.04 lbs).
- Container material: UL94HB ABS, UL94V-0 ABS.
- Internal resistance: (25°C, 77°F): ~ 14 m.
- Discharge capacity under different temperatures:
  - 40°C: ~ 102%
  - 25°C: ~ 100%
  - 0°C: ~ 85%
- Capacity 25°C/77°F:
  - 20 hr @ 0.6 A: 12.0 AH.
  - 5 hr @ 1.92 A: 9.6 AH.
  - 1 hr @ 7.2 A: 7.2 AH.
  - 1 C @ 12.0 A: 6.0 AH.
- Charging voltage: (25°C, 77°F):
  - Standby use: 13.65 V ± 0.15 V.
  - Cycle use: 14.7 V ± 0.3 V.
- Maximum discharge current: 120 A (5 sec).
- Maximum charging current: 3.6 A.
- Self-discharge residual capacity: (25°C, 77°F):
  - After 3 months: ~ 90%.
  - After 6 months: ~ 82%.
  - After 12 months: ~ 70%.

**UB12180**

**UB12180 Discharge Current vs Time**



**UB12180 Discharge Characteristics (25°C/77°F)**



**UB12180 SPECIFICATIONS**

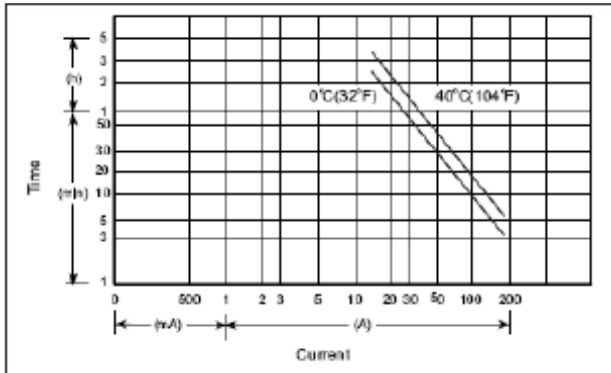
- Nominal voltage: 12 V.
- Nominal capacity (20 hr): 18.0 AH.
- **Dimensions:** total height: 167 mm (6.58 in); Container height: 167 mm (6.58 in); Length: 181 mm (7.13 in); width 76 mm (2.29 in).
- Weight: approximately 6.06 kg (13.36 lbs).
- Container material: UL94HB ABS, UL94V-0 ABS.
- Internal resistance (25°C, 77°F): ~ 13 m.
- Discharge capacity under different temperatures:
  - 40°C: ~ 102%
  - 25°C: ~ 100%
  - 0°C: ~ 85%
- Capacity 25°C/77°F:
  - 20 hr @ 0.9 A: 18.0 AH.
  - 5 hr @ 2.88 A: 14.4 AH.
  - 1 hr @ 10.8 A: 10.8 AH.
  - 1 C @ 18.0 A: 9.0 AH.
- Charging voltage (25°C, 77°F):
  - Standby use: 13.65 V ± 0.15 V.
  - Cycle use: 14.7 V ± 0.3 V.
- Maximum discharge current: 300 A (5 sec).
- Maximum charging current: 5.4 A.
- Self-discharge residual capacity (25°C, 77°F):
  - After 12 months: ~ 70%.
  - After 6 months: ~ 82%.
  - After 12 months: ~ 70%.

**GAMEWELL-FCI**

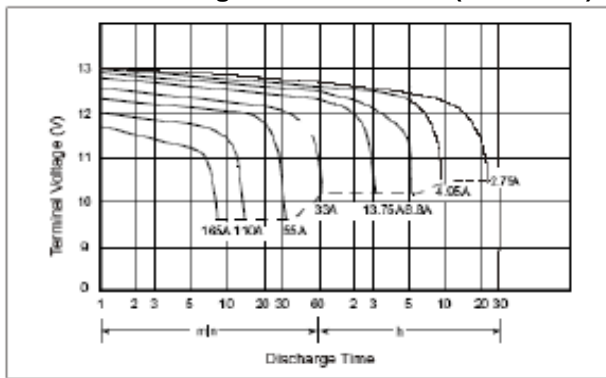
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**UPG BATTERY  
UB12550**

**UB12550 Discharge Current vs Time**



**UB12550 Discharge Characteristics (25°C/77°F)**

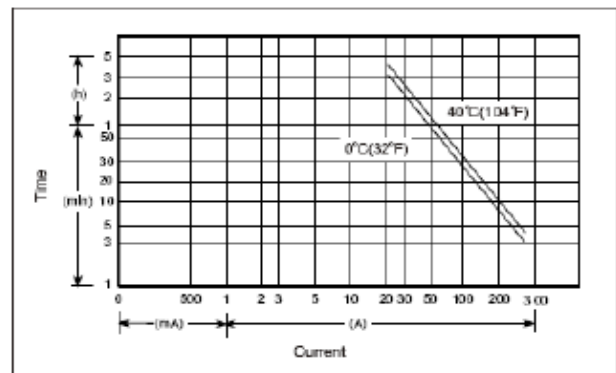


**UB12550 SPECIFICATIONS**

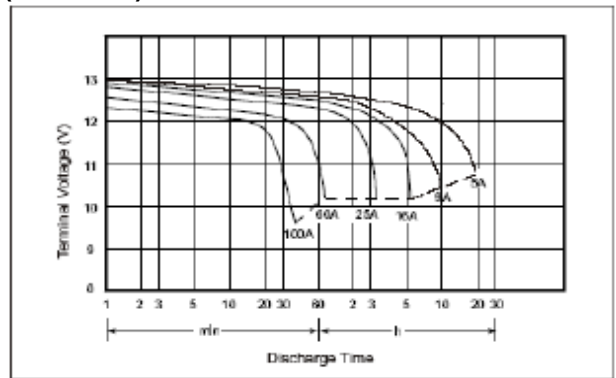
- Nominal voltage: 12 V.
- Nominal capacity (20 hr.): 55.0 AH.
- **Dimensions:** Total height: 234.5 mm (9.23 in); Container height: 216.5 mm (8.52 in); Length: 229 mm (9.02 in); width 138 mm (5.43 in).
- Weight: approximately 19.0 kg (41.8 lbs).
- Container material: UL94HB ABS, UL94V-0 ABS.
- Internal resistance: (25°C, 77°F): ~ 8 m.
- Discharge capacity under different temperatures:
  - 40°C: ~ 102%
  - 25°C: ~ 100%
  - 0°C: ~ 85%
- Capacity 25°C/77°F:
  - 20 hr. @ 2.75 A: 55.0 AH.
  - 5 hr. @ 8.8 A: 44.0 AH.
  - 1 hr. @ 33.0 A: 33.0 AH.
  - 1 C @ 55.0 A: 27.5 AH.
- Charging voltage: (25°C, 77°F):
  - Standby use: 13.65 V ± 0.15 V.
  - Cycle use: 14.7 V ± 0.3 V.
- Maximum discharge current: 600 A (5 sec.).
- Maximum charging current: 16.5 A.
- Self-discharge residual capacity: (25°C, 77°F):
  - After 3 months: ~ 90%.
  - After 6 months: ~ 82%.
  - After 12 months: ~ 70%.

**UPG BATTERY**

**UB30H/GEL Discharge Current vs Time**



**UB30H/GEL Discharge Characteristics (25°C/77°F)**



**UB30H/GEL SPECIFICATIONS**

- Nominal voltage: 12 V.
- Nominal capacity (20 hr.): 100.0 AH.
- **Dimensions:** Total height: 221 mm (8.70 in); Container height: 214 mm (8.43 in); Length: 329 mm (12.95 in); width: 172 mm (6.77 in).
- Weight: approximately 34.00 kg (74.8 lbs).
- Container material: UL94HB ABS, UL94V-0 ABS.
- Internal resistance (25°C, 77°F): ~ 6.5 m.
- Discharge capacity under different temperatures:
  - 40°C: ~ 102%
  - 25°C: ~ 100%
  - 0°C: ~ 85%
- Capacity 25°C/77°F:
  - 20 hr. @ 5.0 A: 100.0 AH.
  - 5 hr. @ 16.0 A: 80.0 AH.
  - 1 hr. @ 60.0 A: 60.0 AH.
  - 1 C @ 100.0 A: 50.0 AH.
- Charging voltage (25°C, 77°F):
  - Standby use: 13.65 V ± 0.15 V.
  - Cycle use: 14.7 V ± 0.3 V.
- Maximum discharge current: 600 A (5 sec.).
- Maximum charging current: 30 A.
- Self-discharge residual capacity (25°C, 77°F):
  - After 3 months: ~ 90%.
  - After 6 months: ~ 82%.
  - After 12 months: ~ 70%.

**GAMEWELL-FCI**

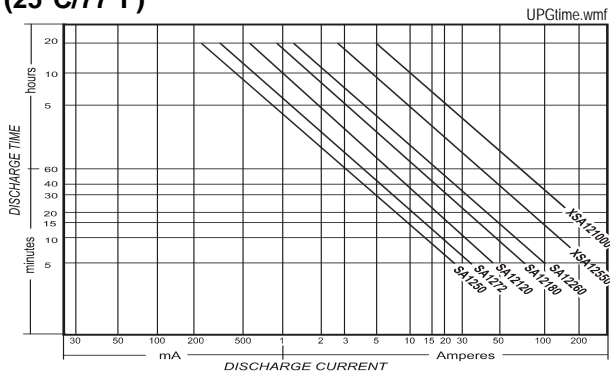
# Charging Procedure: UPG Battery

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Application	Charging method	Charging voltage at 25°C (V/cell)	Temperature compensation coefficient of charging voltage (mV/°C/cell)	Maximum charging current (CA)	Charging time 0.1 CA, 25°C (h)		Temp (°C)
					100% discharge	50% discharge	
For standby power source	Constant voltage and constant current charging (with current restriction)	2.25 – 2.30	- 3.3 (-1.8 mV/°F/cell)	0.3	T <sup>3</sup> 24	T <sup>3</sup> 20	0 – 40°C (32 – 104°F)
For cycle service		2.40 – 2.50	- 5 (-2.8 mV/°F/cell)	0.3	16 < T < 24	10 < T < 24	

*Temperature compensation of charging voltage is not needed when using the batteries within 5°C to 35°C range.*

## Summary Discharge Current vs. Time Curve (25°C/77°F)



## Summary Discharge Characteristics

