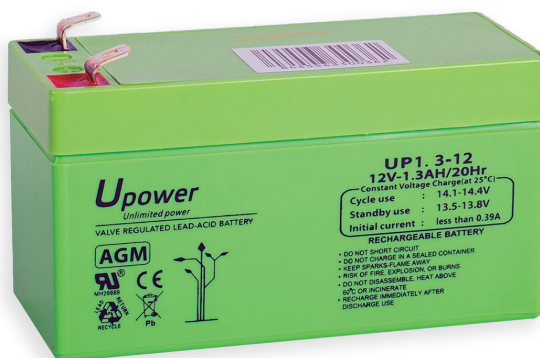


UP Series

UP1.3-12

GENERAL PURPOSE AGM



Main Features

- **High Reliability**

Extensive control processes, from raw materials to delivery to the end customer, within the international quality standards implemented in the company.

- **Valve Regulated Lead Acid batteries**

Designed for better gas recombination, with minimal hydrogen losses, aid to inner pressure regulation, increasing its performance and security.

Technical Specifications

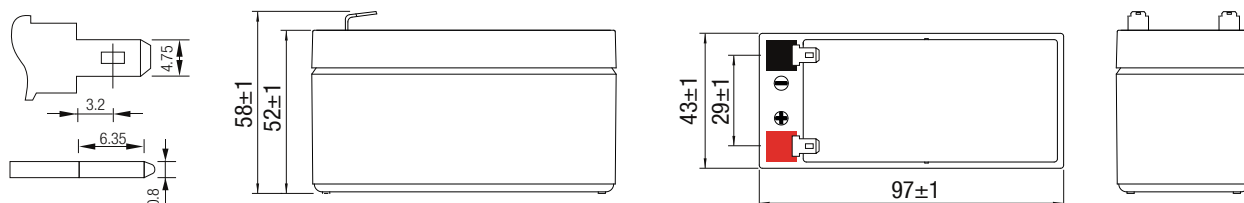
Nominal Voltage (V)	12
Nominal Capacity (20 Hr)	1.3 Ah
Dimensions	Length: 97 ± 1 mm (3.82 inches)
	Width: 43 ± 1 mm (1.69 inches)
	Container Height: 52 ± 1 mm (2.04 inches)
	Total Height (+terminal): 58 ± 1 mm (2.28 inches)
Approx. Weight	0.57 kg (1.26 lbs)
Terminal	F1
Container Material	ABS
Rated Capacity	1.30 Ah / 0.650 A (20hr, 1.80V/cell, 25°C / 77°F)
	1.21 Ah / 0.121 A (10hr, 1.80V/cell, 25°C / 77°F)
	1.105 Ah / 0.221 A (5hr, 1.75V/cell, 25°C / 77°F)
	0.996 Ah / 0.332 A (3hr, 1.75V/cell, 25°C / 77°F)
	0.817 Ah / 0.817 A (1hr, 1.60V/cell, 25°C / 77°F)
Maximum Discharge Current	18 A (5s)
Internal Resistance	Approx. 90 mΩ
Operating Temperature Range	Discharge: -15 ~ 50°C (5 ~ 122°F)
	Charge: 0 ~ 40°C (32 ~ 104°F)
	Storage: -15 ~ 40°C (5 ~ 104°F)
Nominal Operating Temperature Range	25 ± 3°C (77 ± 5°F)
Cycle Use	Initial Charging Current less than 0.36 A Voltage. 14.4~15V at 25°C (77°F) Temp. Coefficient -30mV/°C
Standby Use	No limit on Initial Charging Current Voltage. 13.5~13.8V at 25°C (77°F) Temp. Coefficient -20mV/°C
Capacity affected by Temperature	40°C (104°F) 103%
	25°C (77°F) 100%
	0°C (32°F) 86%
Self Discharge	Batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required.



Battery Dimensions

Terminal F1

Unit: mm (inches)



Battery Discharge Tables

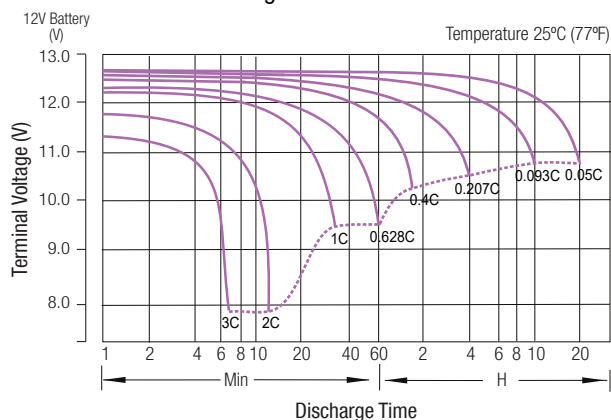
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	2.48	1.90	1.57	1.37	1.05	0.776	0.653	0.387	0.302	0.246	0.200	0.174	0.141	0.117	0.0644
1.80V/cell	3.33	2.43	1.91	1.61	1.25	0.902	0.732	0.423	0.325	0.262	0.216	0.186	0.148	0.121	0.0650
1.75V/cell	3.75	2.67	2.08	1.73	1.29	0.936	0.766	0.438	0.332	0.269	0.221	0.192	0.152	0.125	0.0657
1.70V/cell	4.13	2.91	2.22	1.82	1.34	0.974	0.79	0.449	0.341	0.275	0.226	0.196	0.154	0.127	0.0668
1.65V/cell	4.55	3.14	2.36	1.93	1.42	0.998	0.808	0.455	0.355	0.285	0.233	0.200	0.156	0.129	0.0677
1.60V/cell	5.02	3.41	2.52	2.06	1.50	1.040	0.817	0.475	0.366	0.294	0.241	0.205	0.157	0.131	0.0681

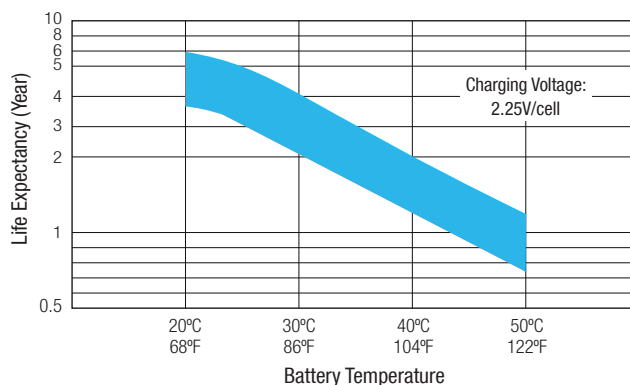
Constant Power Discharge (Watts) at 25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	4.53	3.51	2.94	2.57	2.00	1.49	1.26	0.751	0.589	0.481	0.393	0.342	0.277	0.232	0.1278
1.80V/cell	6.01	4.43	3.49	2.99	2.33	1.72	1.41	0.814	0.631	0.510	0.420	0.365	0.294	0.239	0.1289
1.75V/cell	6.63	4.79	3.78	3.19	2.41	1.77	1.46	0.841	0.640	0.520	0.430	0.375	0.298	0.245	0.1300
1.70V/cell	7.11	5.10	3.98	3.33	2.48	1.83	1.51	0.860	0.657	0.533	0.429	0.381	0.301	0.250	0.1322
1.65V/cell	7.72	5.46	4.19	3.50	2.60	1.86	1.53	0.868	0.681	0.549	0.451	0.389	0.306	0.255	0.1333

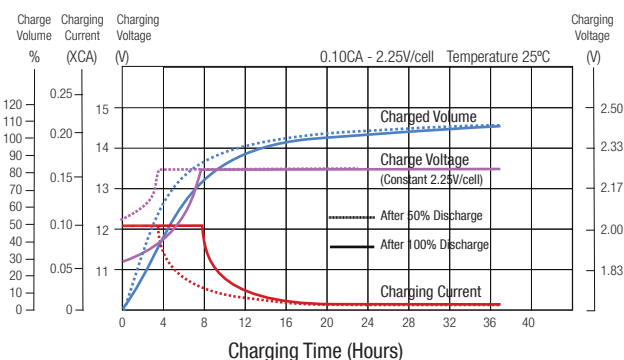
Discharge Characteristics



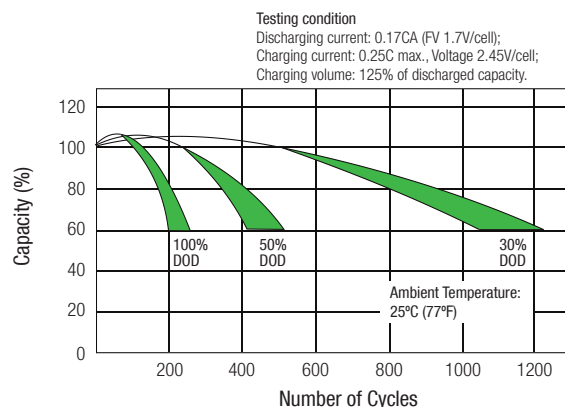
Effect of Temperature on Long Term Float Life



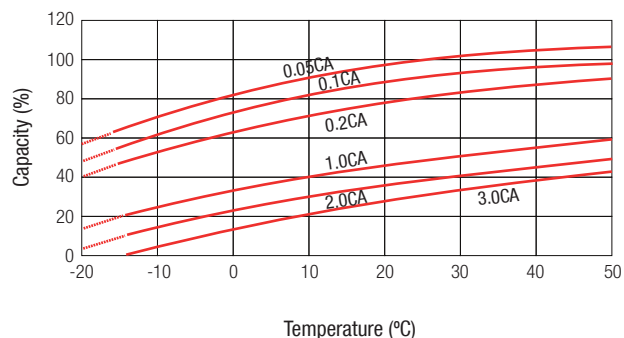
Float Charging Characteristics



Cycle Life in Relation to Depth of Discharge



Temperature Effects in Relation to Battery Capacity



Self Discharge Characteristics

