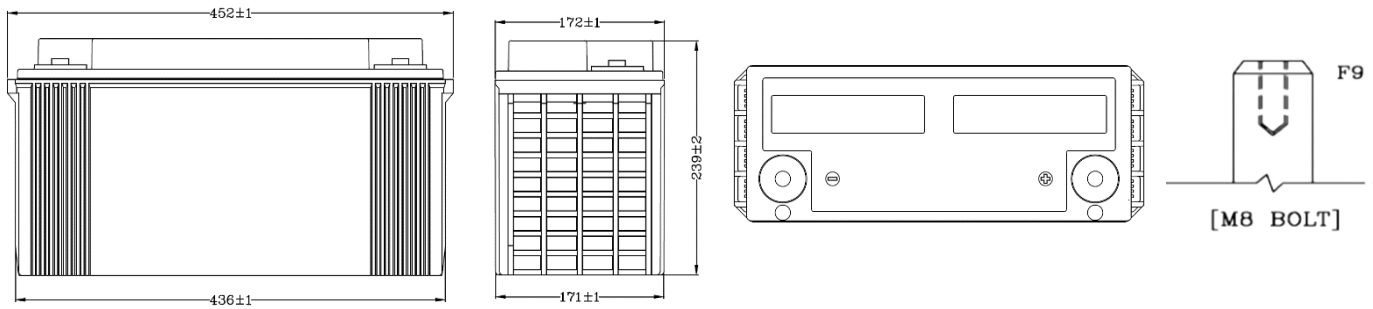


## TECHNICAL DATA SHEET FOR EP 120-12 (12V 120AH) VRLA BATTERY

### BATTERY OUTLINE



**CONSTRUCTION:**

- ▶ Positive and negative plates in lead-tin-calcium alloy. ▶ Separator - low resistance micro porous glass fiber.
- ▶ The electrolyte is absorbed within this material, preventing acid leakage in case of accidental damage.
- ▶ Terminals with a large surface area with brass insert to provide maximum conductivity. ▶ Self-regulating pressure relief valve. ▶ 100% ensured capacity (through Data-logger) during manufacturing. ▶ Stronger, sturdier & attractive packaging. ▶ Especially suited for UPS & Power Application.

**FEATURES: -**

- ▶ International Size. ▶ Free from Orientation Constraints. ▶ Eco-Friendly. ▶ Easy Handling. ▶ Ready to Use. ▶ Long Service Life. ▶ Low Self-discharge. ▶ Excellent Charge retention & recovering ability. ▶ Superior High Rate Discharge. ▶ High Reliability.

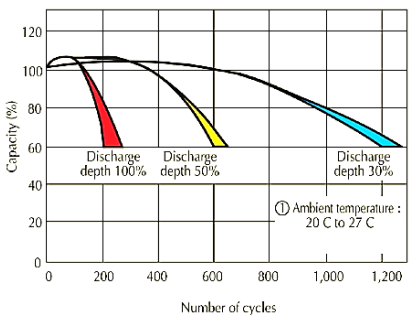
Performance Characteristics conforming to JISC8702

Battery Type	Nominal Voltage (V)	Rated Capacity (Ah) at 27°C						Dimensions (mm)				Weight (Kg) (±5%)
		20 hr 1.75V/cell	10 hr 1.75V/cell	3 hr 1.7 V/cell	1.5 hr 1.7V/cell	1 hr 1.6V/cell	30min 1.6V/cell	Overall Height ±2	Height up to lid top ±2	Length ±1	Width ±1	
EP120-12	12	120	109	90	86.4	72	60	239.0	239.0	452.0	172.0	38.0

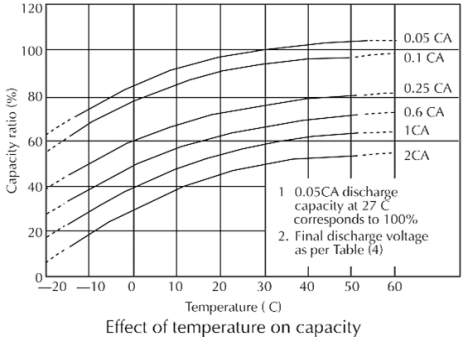
### NOTES ON OPERATION

Mode of Operation	Voltage setting per 12V unit for ambience Temp. 20-30 °C	Current setting
FLOAT	13.7V ± 0.1V	Maximum :0.3CA Minimum: 0.1CA
BOOST	14.1V ± 0.1V	
CYCLE	14.7V ± 0.1V	

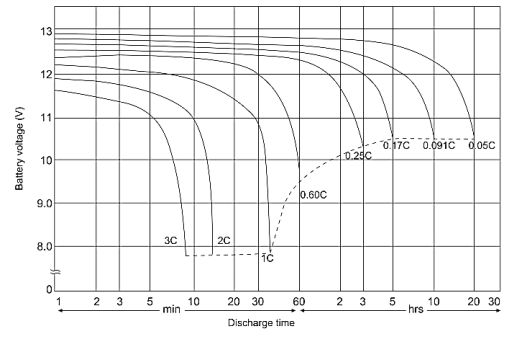
#### Number of Cycle



#### Effect of Temp on Capacity



#### Discharge Characteristics



### Constant Power Discharge Rating in Watts per Battery for POWERSAFE PLUS @27°C

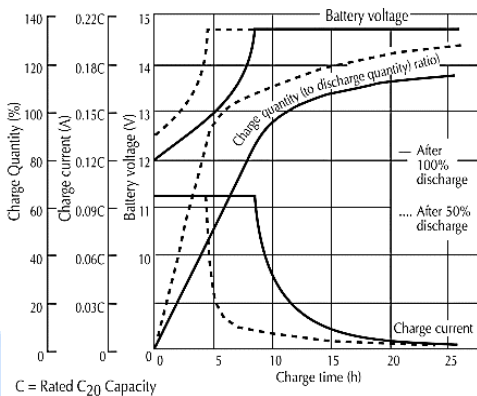
	Ah	5Min	10Min	15Min	20Min	30Min	60Min
Watt/Battery @ 1.60V	120Ah	4601	3083	2418	1942	1448	899
Watt/Battery @ 1.70V		4392	2899	2338	1899	1440	869
Watt/Battery @ 1.80V		3968	2788	2172	1789	1350	818

### Discharge Current & Recommended Final Discharge Voltage

Discharge Current (A)	Final Discharge Voltage(V/Cell)
0.2 C > (A) or intermittent discharge	1.75
0.2 C < or = (A) < 0.5 C	1.70
0.5 C < or = (A) < 1.0 C	1.55
1.0 C < or = (A)	1.30

#### CYCLIC use

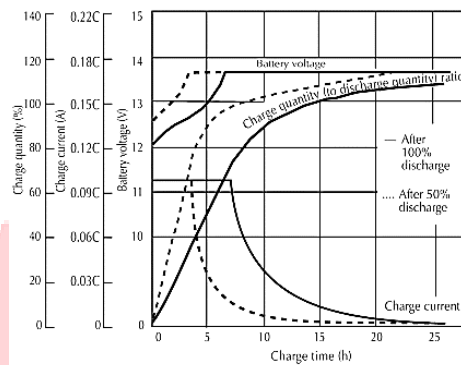
(Recharge at 2.45 V/cell)



C = Rated C<sub>20</sub> Capacity

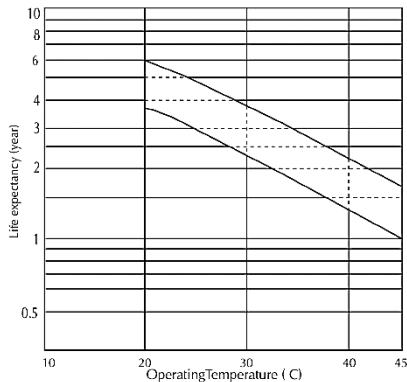
#### STANDBY use

(Recharge at 2.275 V/cell)

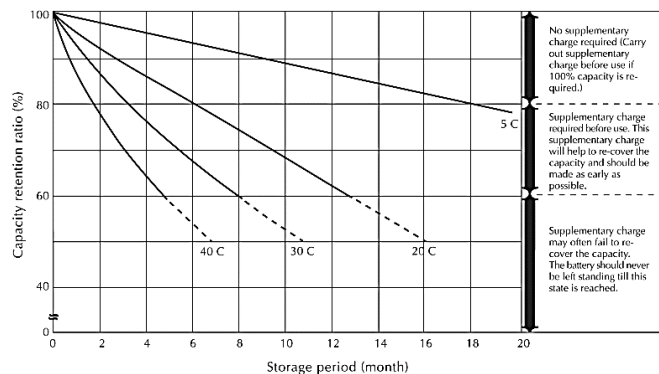


C = Rated C<sub>20</sub> Capacity

#### STANDBY use



Charge Voltage = 2.275 V/cell



Capacity retention characteristic and the supplementary charge and storage guideline

Product Details	
AH Efficiency	>90%
WH Efficiency	>80%
Internal Resistance	6 mΩ Max @ full charge 27°C
Short Circuit Current	2619 Amps
Operating Temperature Range	0°C to 45°C
Self-Discharge/Month @ 27deg C	<3% of Rated Capacity
Recommended period of storage	3 months from the date of manufacturing and to be stored in a covered place at 27 °C
Material of container	PPCP (FR Grade Optional)
Type of +ve & -ve plate	Flat Pasted
Recommended Terminal Torque	12.3 N-m

## MAXIMUM DISCHARGE CURRENT FOR VARIOUS DURATION & CUT-OFF

END VOLTAGE/ CELL	TEMP(C)	DISCHARGE TIME												
		10min	15min	20min	30min	1 hrs	1.5 hrs	2 hrs	3 hrs	4 hrs	5 hrs	6 hrs	8 hrs	10 hrs
<b>1.80</b>	<b>25</b>	2.0C	1.65C	1.4C	1.1C	0.64C	0.42C	0.36C	0.27C	0.210C	0.17C	0.145C	0.11C	0.090C
	<b>5</b>	1.65C	1.3C	1.1C	0.95C	0.59C	0.34C	0.29C	0.230C	0.182C	0.147C	0.129C	0.098C	0.080C
	<b>-5</b>	1.3C	1.0C	0.86C	0.76C	0.48C	0.28C	0.24C	0.198C	0.154C	0.125C	0.115C	0.087C	0.071C
<b>1.75</b>	<b>25</b>	2.15C	1.72C	1.45C	1.12C	0.65C	0.45C	0.38C	0.28C	0.22C	0.180C	0.15C	0.12C	0.099C
	<b>5</b>	1.72C	1.40C	1.15C	0.97C	0.60C	0.36C	0.30C	0.24C	0.190C	0.150C	0.130C	0.100C	0.088C
	<b>-5</b>	1.45C	1.10C	0.93C	0.81C	0.50C	0.30C	0.25C	0.20C	0.160C	0.130C	0.119C	0.090C	0.078C
<b>1.70</b>	<b>25</b>	2.3C	1.8C	1.5C	1.15C	0.67C	0.48C	0.40C	0.29C	0.230C	0.19C	0.165C	0.13C	0.108C
	<b>5</b>	1.8C	1.5C	1.2C	1.0C	0.62C	0.39C	0.32C	0.250C	0.199C	0.164C	0.143C	0.116C	0.096C
	<b>-5</b>	1.6C	1.2C	1.0C	0.86C	0.53C	0.32C	0.27C	0.213C	0.168C	0.139C	0.123C	0.103C	0.086C
<b>1.65</b>	<b>25</b>	2.35C	1.85C	1.55C	1.2C	0.69C	0.50C	0.41C	0.300C	0.240C	0.200C	0.170C	0.135C	0.110C
	<b>5</b>	1.9C	1.6C	1.3C	1.05C	0.64C	0.40C	0.33C	0.260C	0.208C	0.173C	0.147C	0.120C	0.098C
	<b>-5</b>	1.6C	1.25C	1.05C	0.88C	0.54C	0.34C	0.27C	0.220C	0.176C	0.147C	0.125C	0.107C	0.087C
<b>1.60</b>	<b>25</b>	2.4C	1.9C	1.6C	1.25C	0.7C	0.51C	0.42C	0.310C	0.250C	0.210C	0.180C	0.140C	0.115C
	<b>5</b>	2.0C	1.7C	1.4C	1.10C	0.66C	0.41C	0.34C	0.270C	0.216C	0.182C	0.156C	0.125C	0.102C
	<b>-5</b>	1.65C	1.3C	1.1C	0.9C	0.55C	0.34C	0.28C	0.227C	0.183C	0.154C	0.132C	0.111C	0.091C

Note: C represents the C20 rated capacity