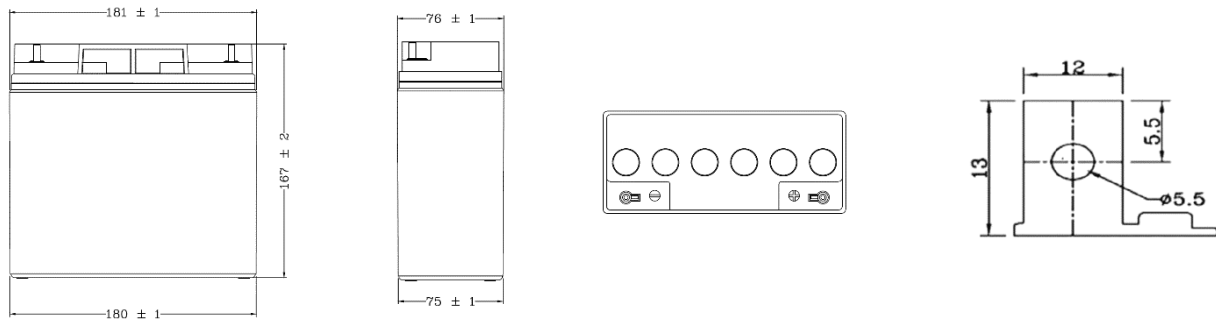


TECHNICAL DATA SHEET FOR EP 18-12 (12V 18AH) VRLA BATTERY

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 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.

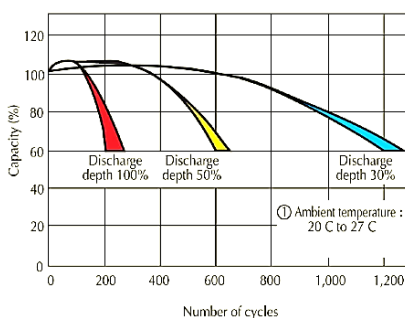
Performance Characteristics confirming to JISC8702

Battery Type	Nominal Voltage (V)	Rated Capacity (Ah) at 27°C						Dimensions (mm)				Weight (Kg) ($\pm 5\%$)
		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	
EP18-12	12	18	16.9	13.7	13.0	10.8	9.0	167.0	167.0	181.0	76.0	5.0

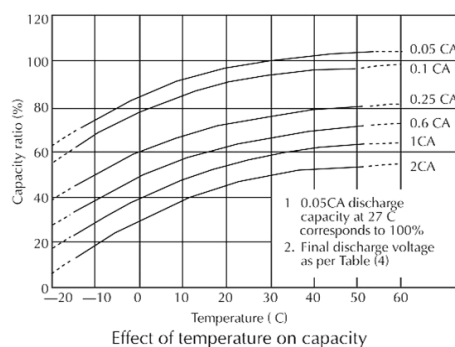
NOTES ON OPERATION

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

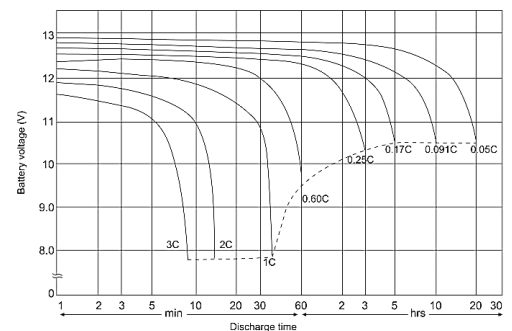
Number of Cycle



Effect of Temp on Capacity



Discharge Characteristics

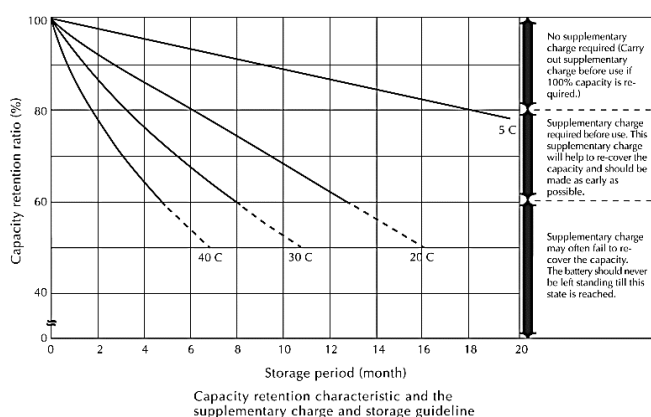
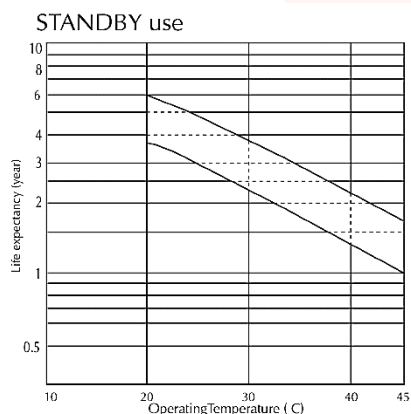
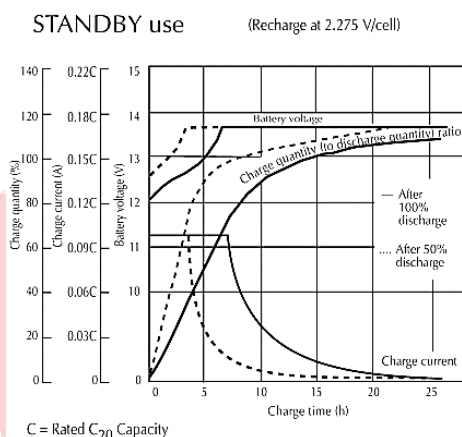
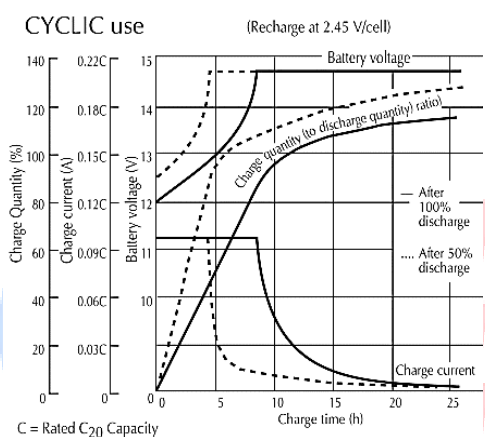


Constant Power Discharge Rating in Watts per Battery for POWERSAFE PLUS @27°C

	Ah	5Min	10Min	15Min	20Min	30Min	60Min
Watt/Battery @ 1.60V	18Ah	632	434	334	270	200	123
Watt/Battery @ 1.70V		600	421	321	262	194	117
Watt/Battery @ 1.80V		541	376	299	248	184	111

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



Product Details

AH Efficiency	>90%
WH Efficiency	>80%
Internal Resistance @ full charge	15 mΩ
Operating Temperature Range	0°C to 45°C
Self-Discharge/Month @ 27°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	ABS (FR Grade Optional)
Type of +ve & -ve plate	Flat Pasted
Recommended Terminal Torque	2.5 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
1.80	25	2.3C	1.8C	1.5C	1.1C	0.64C	0.42C	0.36C	0.270C	0.210C	0.170C	0.145C	0.110C	0.090C
	5	1.75C	1.4C	1.2C	0.95C	0.59C	0.34C	0.29C	0.230C	0.182C	0.147C	0.129C	0.098C	0.080C
	-5	1.4C	1.1C	0.96C	0.76C	0.48C	0.28C	0.24C	0.198C	0.154C	0.125C	0.115C	0.087C	0.071C
1.75	25	2.4C	1.85C	1.55C	1.12C	0.65C	0.45C	0.38C	0.280C	0.220C	0.180C	0.155C	0.120C	0.098C
	5	1.9C	1.5C	1.25C	0.98C	0.61C	0.37C	0.31C	0.24C	0.191C	0.156C	0.136C	0.107C	0.088C
	-5	1.6C	1.2C	1.03C	0.81C	0.51C	0.3C	0.26C	0.206C	0.161C	0.132C	0.119C	0.095C	0.079C
1.70	25	2.5C	1.9C	1.6C	1.15C	0.67C	0.48C	0.40C	0.290C	0.230C	0.190C	0.165C	0.130C	0.108C
	5	2.0C	1.6C	1.3C	1.0C	0.62C	0.39C	0.32C	0.250C	0.199C	0.164C	0.143C	0.116C	0.096C
	-5	1.7C	1.3C	1.1C	0.86C	0.53C	0.32C	0.27C	0.213C	0.168C	0.139C	0.123C	0.103C	0.086C
1.65	25	2.7C	2.0C	1.65C	1.2C	0.69C	0.50C	0.41C	0.300C	0.240C	0.200C	0.170C	0.135C	0.110C
	5	2.1C	1.7C	1.4C	1.05C	0.64C	0.40C	0.33C	0.260C	0.208C	0.173C	0.147C	0.120C	0.098C
	-5	1.7C	1.35C	1.15C	1.88C	0.54C	0.34C	0.27C	0.220C	0.176C	0.147C	0.125C	0.107C	0.087C
1.60	25	2.8C	2.1C	1.7C	1.25C	0.7C	0.51C	0.42C	0.310C	0.250C	0.210C	0.180C	0.140C	0.115C
	5	2.2C	1.8C	1.5C	1.10C	0.66C	0.41C	0.34C	0.270C	0.216C	0.182C	0.156C	0.125C	0.102C
	-5	1.75C	1.4C	1.2C	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

