

# SP Series

## SP12-33 12V33Ah



SP series VRLA battery uses AGM technology and high-purity raw materials. Its good floating back up and large current discharge performance makes it optimal and economical choice for UPS/EPS.

### Benefits

- Long life according to EUROBAT Classification
- Maximum charge efficiency
- High gas recombination efficiency
- Low self-discharge rate
- Easy installation and handling
- Vertical or horizontal installation

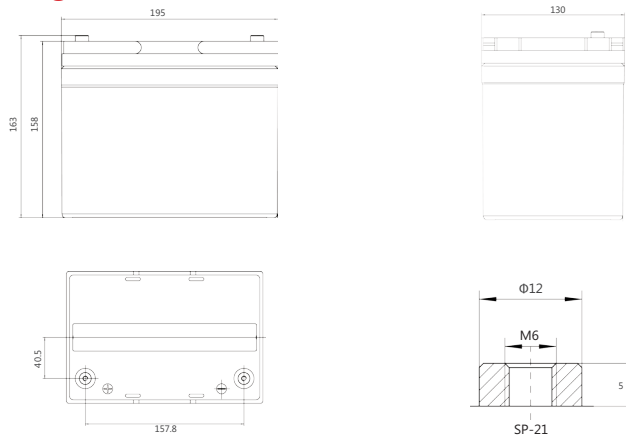
### Applications

- UPS units
- Emergency power
- Starting generators
- EPS units

### Standards

- IEC 61056-1/2
- JIS C8702-1/2
- EUROBAT guide

### Drawing



### Specifications

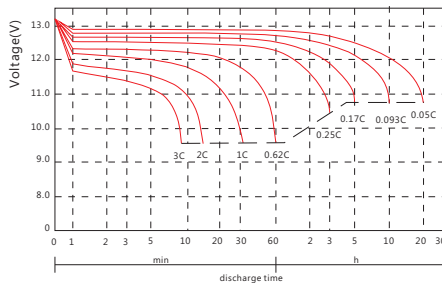
Battery Model	SP12-33			
Design Life (years, 25°C)	10			
Capacity (Ah, 25°C)	20HR (1.65A, 1.75V)	10HR (3.07A, 1.75V)	5HR (5.6A, 1.75V)	1HR(20.03A, 1.70V)
	33	30.7	28	20.03
Dimensions (mm)	Length	Width	Height	Total Height
	195	130	158	163
Approx. Weight (kg)	10.5			
Reference Internal Resistance (mΩ)	10.2 ( full charged @ 25°C)			
Maximum Discharge Current (A/5 Sec.)	495			
Self-Discharge (25°C)	< 3% per month			
Charge Voltage (V/cell, 25°C)	Cycle use		Float use	
	2.45 (-3.5mV/°C/cell), max charge current: 9.9 A		2.27 (-3.5mV/°C/cell)	
Short Circuit Current (A)	850			

## Discharge Data

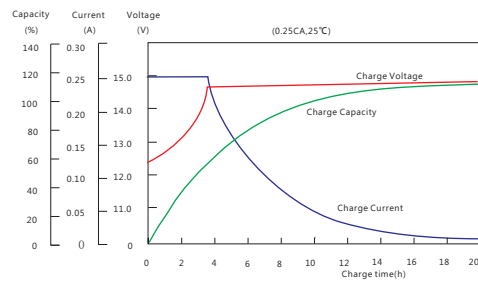
Constant Current Discharge Data (25°C, A)													
End Voltage (V/cell)	min						h						
	5	10	15	20	30	45	1	1.5	2	3	5	10	20
1.60	104.0	74.90	60.63	49.63	35.58	25.79	20.34	14.56	12.02	8.685	5.812	3.167	1.700
1.65	97.00	72.00	59.19	49.14	35.31	25.58	20.19	14.46	11.95	8.624	5.772	3.154	1.691
1.67	94.60	70.60	58.72	48.91	35.14	25.48	20.11	14.42	11.90	8.602	5.751	3.141	1.685
1.70	92.94	69.30	58.41	48.58	34.95	25.38	20.03	14.36	11.86	8.571	5.730	3.127	1.678
1.75	86.00	66.60	56.34	47.03	33.89	24.64	19.47	13.97	11.55	8.360	5.600	3.070	1.650
1.80	77.22	63.08	54.10	45.28	32.72	23.89	18.92	13.59	11.25	8.170	5.494	3.029	1.635

Constant Power Discharge Data (25°C, W/cell)													
End Voltage (V/cell)	min						h						
	5	10	15	20	30	45	1	1.5	2	3	5	10	20
1.60	183.8	138.4	114.4	94.71	68.38	49.90	39.61	28.49	23.63	17.19	11.56	6.341	3.411
1.65	175.1	134.3	112.5	94.31	68.22	49.78	39.44	28.39	23.58	17.11	11.51	6.332	3.401
1.67	172.7	132.5	112.0	94.16	68.13	49.71	39.42	28.40	23.56	17.13	11.50	6.324	3.396
1.70	171.1	130.9	111.8	93.84	67.97	49.66	39.42	28.36	23.55	17.10	11.49	6.309	3.390
1.75	159.3	126.2	108.1	91.07	66.09	48.35	38.41	27.67	22.99	16.72	11.25	6.205	3.341
1.80	144.3	120.4	104.3	87.99	64.06	47.09	37.44	27.02	22.49	16.40	11.07	6.140	3.324

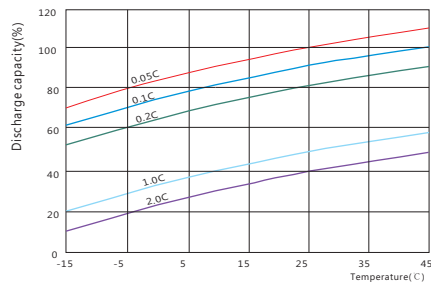
## Performance Curve



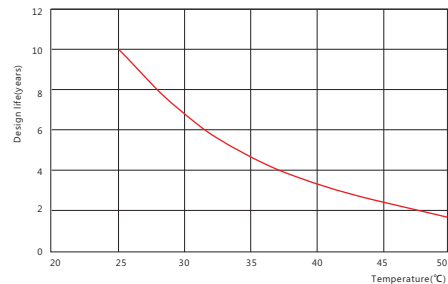
Discharge voltage vs. discharge time



Charge capacity vs. charge time



Discharge capacity vs. temperature



Design life vs. temperature

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