



***SEALED PERFORMANCE BATTERIES***

**PROVIDING SEALES LEAD ACID BATTERY FOR SOLAR ENERGY**

 **VOLTINGER**  
SOLAR BATTERIES

# VOLTINGER SOLAR Battery

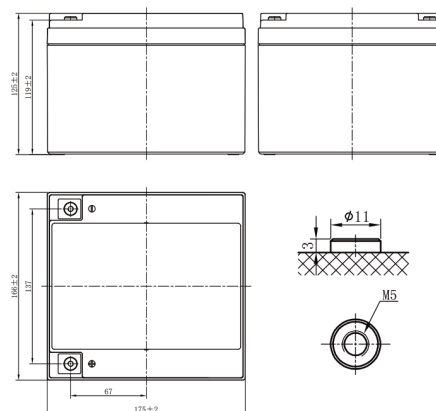
## SRG20012V28AH(12V28Ah)

### Specifications

Rated Voltage	12V	
Nominal Capacity	C <sub>20</sub> , 1.80V/cell	24Ah
Dimension	Length	166±2mm (6.54 inches)
	Width	175±2mm (6.89 inches)
	Container Height	125±2mm (4.92 inches)
	Total Height	125±2mm (4.92 inches)
Approx Weight	8.6 Kg (18.96 lbs)	
Terminal	M5	
Container Material	ABS	
Rated Capacity(25°C)	28.00 Ah	(20hr, 1.40A, 1.75V/cell)
	26.30 Ah	(10hr, 2.63A, 1.75V/cell)
	23.85 Ah	(5hr, 4.77A, 1.75V/cell)
	21.87 Ah	(3hr, 7.29A, 1.75V/cell)
	18.40 Ah	(1hr, 18.4A, 1.60V/cell)
Max. Discharge Current	420A (5s)	
Internal Resistance(25°C)	Approx 12.0mΩ	
Operating Temp. Range	Discharge	-20 ~ 55°C (-4 ~ 131°F)
	Charge	-20 ~ 40°C (-4 ~ 104°F)
	Storage	-15 ~ 50°C (5 ~ 122°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Standby Use	Initial Charging Current less than 6.0A. Voltage 2.23V~2.27V at 25°C(77°F)Temp. Coefficient -3mV/°C	
Equalization Use	Initial Charging Current less than 6.0A. Voltage 2.30V~2.37V at 25°C(77°F)Temp. Coefficient -4mV/°C	
Cycle Use	Initial Charging Current less than 6.0A. Voltage 2.40V~2.50V at 25°C(77°F)Temp. Coefficient -5mV/°C	
Effect of temp. to Capacity	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	SRG20012V28AH batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	



### Layout



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

F.V/Time	20min	30min	45min	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	20h
1.85V/cell	20.3	15.9	12.2	10.2	6.46	4.92	4.07	3.52	3.04	2.69	2.42	2.22	2.10	1.15
1.80V/cell	23.3	17.8	13.4	11.2	6.98	5.27	4.32	3.70	3.19	2.81	2.54	2.33	2.19	1.20
1.75V/cell	26.1	19.6	14.5	12.0	7.40	5.57	4.52	3.84	3.30	2.91	2.62	2.40	2.23	1.22
1.70V/cell	28.2	21.0	15.4	12.7	7.85	5.80	4.67	3.96	3.42	3.01	2.70	2.46	2.28	1.24
1.67V/cell	29.3	21.8	15.9	13.2	8.05	5.98	4.79	4.04	3.47	3.05	2.74	2.50	2.31	1.25
1.60V/cell	31.8	23.3	17.1	14.0	8.38	6.22	4.97	4.17	3.56	3.12	2.79	2.55	2.36	1.27

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

F.V/Time	20min	30min	45min	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	20h
1.85V/cell	38.9	30.7	23.6	19.8	12.6	9.64	8.00	6.95	6.01	5.34	4.82	4.41	4.18	2.30
1.80V/cell	43.9	34.0	25.8	21.8	13.6	10.3	8.50	7.27	6.29	5.57	5.04	4.63	4.36	2.39
1.75V/cell	48.8	37.0	27.7	23.2	14.4	10.8	8.80	7.53	6.50	5.75	5.19	4.76	4.44	2.44
1.70V/cell	52.0	39.3	29.2	24.4	15.1	11.3	9.10	7.74	6.71	5.93	5.34	4.89	4.54	2.47
1.67V/cell	53.5	40.4	30.0	25.1	15.5	11.6	9.30	7.88	6.80	6.00	5.41	4.94	4.58	2.49
1.60V/cell	57.4	42.9	32.0	26.6	16.0	12.0	9.60	8.10	6.94	6.12	5.49	5.03	4.67	2.52

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## SRG20012V28AH(12V28Ah)

### Applications

- Solar Energy system
- Renewable energy
- Wind power system
- of-grid projects

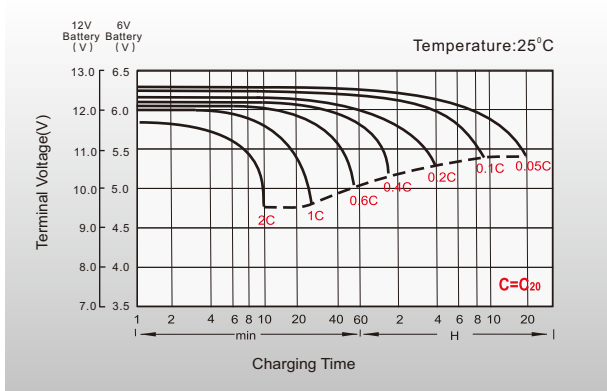
### General Features

- Battery design life up to 10 years
- Special plate design guarantees battery floating life more than 4000 times
- High thermal capacity reduce the risk of thermal out of control and drying hard, and the battery can be used in bad environment
- Advanced GEL and higher technology for Solar application

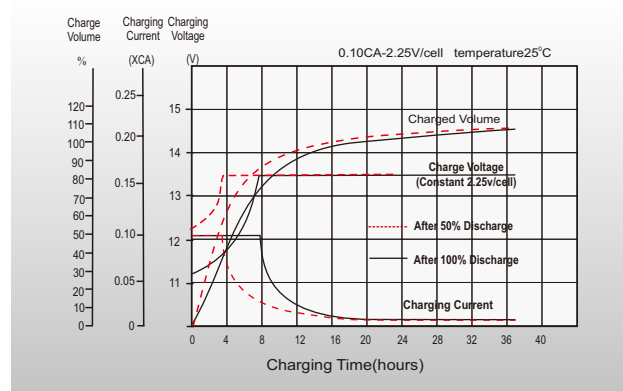
### Standards

- IEC 60896-21, IEC 60896-22
- Classified as "Long Life" according to Eurobat
- UL Certified
- Manufactured in Leoch® IATF16949, ISO 9001, ISO 14001 and ISO 45001 certified production facilities

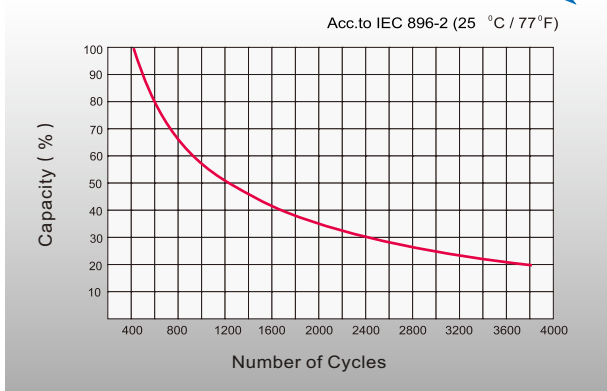
### Discharge Characteristics



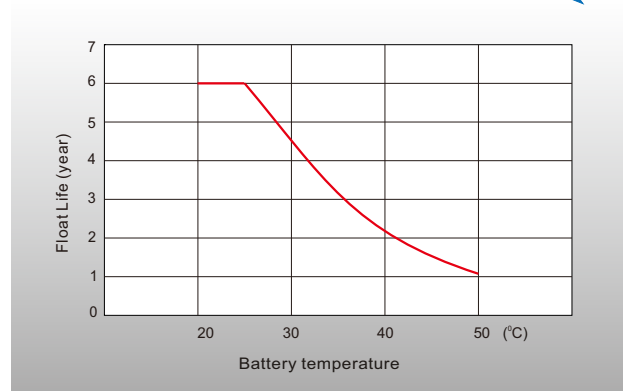
### Float Charging Characteristics



### Cycle Life in Relation to Depth of Discharge



### Effect of Temperature on Long Term Float Life



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