

# VNM12-45

12V 45Ah / 10h



### Introduction

Samson VNM series is designed for standby use with 10-year design life in float service. The series battery is featured of high consistency, excellent performance and reliable standby service life. It is widely applied in float service, UPS/EPS, medical equipment, telecom, photovoltaic, control system and security system.

### Battery Features

- Low self-discharge
- Fully tank formed plates
- Low impurity electrolyte
- Spill proof / leak proof
- Multi-position usage
- ABS case and cover VO upon request
- very high purity lead

### Electrical Specification

Design floating Life @ 25°C (77°F)	10 years
Design Life Cycles @ 50% D.O.D. (25°C)	550 Cycles
Nominal Capacity @ 25°C / 77°F	
20 hour rate 2.33A to 1.75Vpc	46.6 Ah
10 hour rate 4.54A to 1.75Vpc	45.4 Ah

### Internal Resistance

(Fully charged battery @ 25°C / 77°F)	9mΩ
Max. Discharge Current @ 25°C / 77°F	420 A (5S)
Short Circuit Current	700 A
Charge Methods: Constant voltage charge @ 25°C / 77°F	
Cycle Use	14.7 ~ 14.9V
Max. Current	13.5 A
Max. Current for best battery life	11.0 A
Standby Use	13.6 - 13.8V

### Operating Temperature Range

-30 ~ 50°C  
Notes: battery voltage must be adjusted according to temperature. Please refer to our recommendation.

### Self-Discharge

3% of capacity declined per month @ 25°C (77°F).

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

V/cell	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	1hr	2hr	3hr	4hr	5hr	10hr	20hr
1,60	108,59	82,89	71,61	60,33	51,06	45,94	42,84	39,74	37,16	34,92	33,27	18,04	12,84	10,66	8,72	4,66	2,35
1,65	103,11	78,71	68,37	58,02	49,69	44,73	41,78	38,83	36,40	34,32	32,82	17,69	12,59	10,44	8,51	4,63	2,35
1,70	98,85	75,46	65,67	55,87	48,09	43,24	40,41	37,58	35,27	33,30	31,92	17,09	12,30	10,19	8,31	4,59	2,35
1,75	94,29	71,98	62,74	53,49	46,27	41,61	38,97	36,33	34,21	32,43	31,24	16,62	12,03	9,97	8,13	4,54	2,33
1,80	89,43	68,26	59,65	51,04	44,45	39,94	37,45	34,97	33,00	31,38	30,34	16,02	11,74	9,72	7,93	4,43	2,31

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

V/cell	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	1hr	2hr	3hr	4hr	5hr	10hr	20hr
1,60	188,58	143,96	126,69	109,42	95,38	86,04	79,92	73,81	68,62	64,23	60,66	33,35	24,27	20,14	16,58	9,29	4,90
1,65	181,89	138,85	122,45	106,05	92,87	83,76	77,87	71,99	67,03	62,87	59,53	32,67	24,04	19,91	16,36	9,20	4,90
1,70	174,90	133,51	117,90	102,29	89,91	81,10	75,52	69,94	65,29	61,44	58,40	31,88	23,60	19,57	16,11	9,02	4,84
1,75	167,29	127,70	112,96	98,22	86,71	78,21	72,94	67,67	63,32	59,78	57,05	30,87	22,93	19,08	15,82	8,96	4,75
1,80	159,08	121,43	107,64	93,85	83,29	75,10	70,13	65,17	61,13	57,89	55,46	29,78	22,32	18,60	15,46	8,87	4,70

Above discharge data (Amps/watts) is average values after batteries are fully charged.

Subject to revision without notice. Please contact our sales representatives for latest version.

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Version No.:

23-04-2021

### Battery Picture & Terminal Layout

Terminal Type: Female M6  
Terminal Torque: 9-11 Nm

ΦM6  
Φ16

197  
166  
176

### Dimension & Weight

Dimension (± 2mm)				Total Height	Weight (± 2%)
Length	Width	Height	Terminal Height		
197 mm	166 mm	176 mm	176 mm	14 kg	
7,8 inch	6,5 inch	6,9 inch	6,9 inch	30,9 lbs	

### Certificates



### Other relevant information

Contry of origin: China HS Code (harmonized system code): 85 07 20 00  
UN-Transport declaration: UN2800 Customs tariff number 8507 10 20 80

### Typical Applications

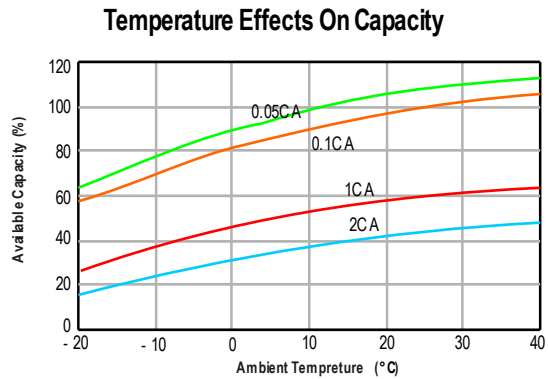
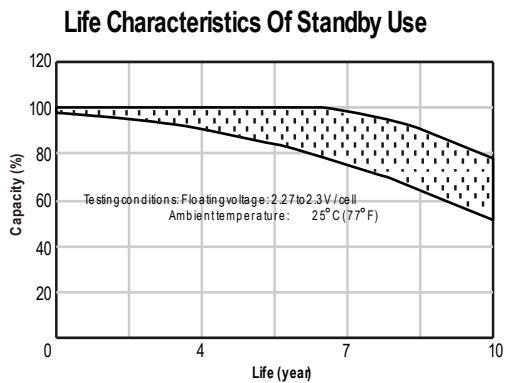
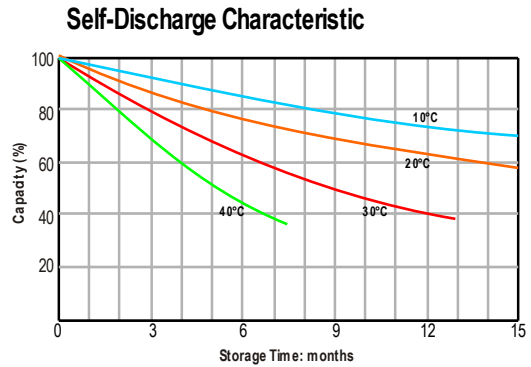
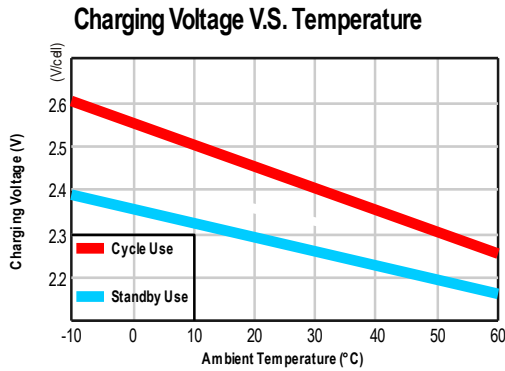
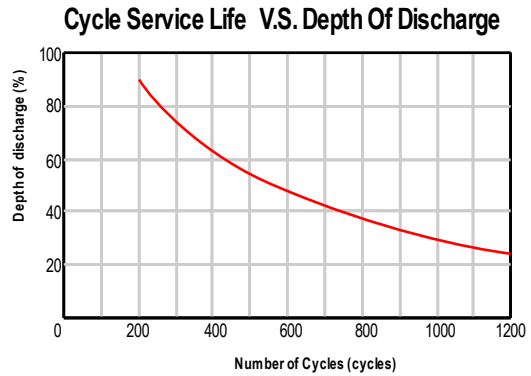
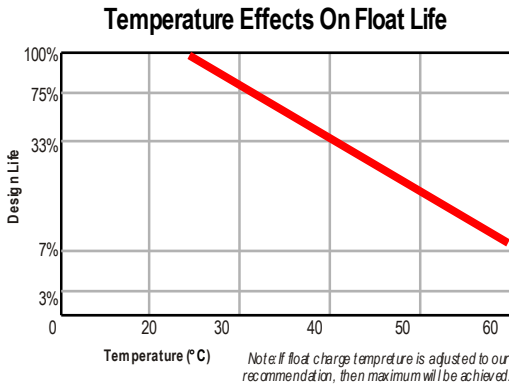
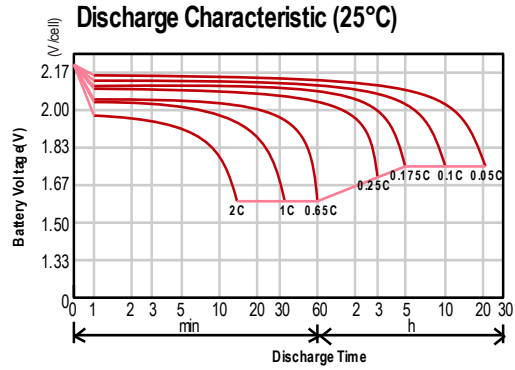
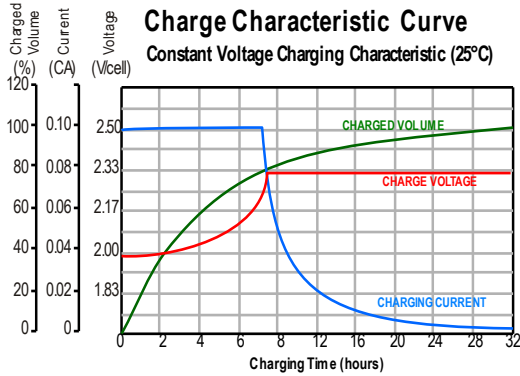
- Telecommunications  Power Utility  Data Center  UPS & EPS

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Graphs



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