SigmasTek

SP12-45
(12V45AH/NB)

Specifications

Nominal Voltage	12V	
Nominal Capacity (10HR)	45AH	
Dimension	Length	197mm (7.76 inches)
	Width	165mm (6.50 inches)
	Height	170mm (6.69 inches)
	Total Height (with Terminal)	170mm (6.69 inches)
Approximate Weight	14.5 kg (32.0 lbs)	
Battery Type	Valve Regulated Lead-Acid Battery, AGM Design	
Terminal Type	NB / IT	
Rated Capacity	47.2AH	(20hr,1.75V/cell,25°C/77°F)
	45.0AH	(10hr,1.75V/cell,25°C/77°F)
	38.7AH	(5hr,1.75V/cell,25°C/77°F)
	38.7AH	(3hr,1.60V/cell,25°C/77°F)
	27.5AH	(1hr,1.60V/cell,25°C/77°F)
Max. Discharge Current	540A	
Internal Resistance	9mΩ	
Operating Temp. Range	Discharge:	-20°C (-4°F)~50°C (122°F)
	Charge:	-20°C (-4°F)~50°C (122°F)
	Storage:	-20°C (-4°F)~40°C (104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Container Material	ABS (Option: 94-HB & 94-V0 flame retardant case)	
Capacity affected by Temperature	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	SigmasTek SP series batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is recommended. For higher temperatures the time interval will be shorter.	

Applications

- Uninterruptible Power Supply (UPS)
- Electric wheelchairs, scooters, bikes
- Electronic apparatus and equipment
- Alarm and security systems
- Emergency first responder equipment
- Emergency lighting
- Medical devices
- Electric carts
- Telecom equipment
- Switchgear
- Solar power systems

MH47929

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

F.V. (V/cell) \ Discharge Time	5min	10min	15min	30min	1h	2h	3h	5h	8h	10h	20h
1.60V	156.1	108.6	82.5	48.6	27.5	16.9	12.9	8.44	5.58	4.73	2.45
1.65V	141.5	100.0	77.1	46.0	26.5	16.3	12.5	8.17	5.53	4.68	2.44
1.70V	128.4	92.70	72.6	43.6	25.6	15.9	12.0	7.95	5.44	4.59	2.41
1.75V	116.6	85.00	68.0	41.9	24.9	15.3	11.7	7.74	5.36	4.55	2.36
1.80V	103.4	77.40	62.2	40.4	23.8	14.7	11.5	7.56	5.27	4.50	2.34
1.85V	77.00	60.60	51.5	34.2	21.2	13.5	10.7	7.03	4.97	4.25	2.32

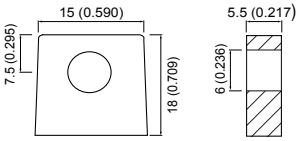
Constant Power Discharge (Watts Per Cell) at 25°C (77°F)

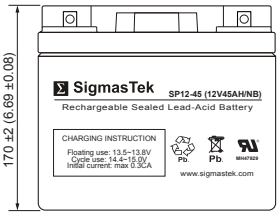
F.V. (V/cell) \ Discharge Time	5min	10min	15min	30min	1h	2h	3h	5h	8h	10h	20h
1.60V	258.8	184.5	144.4	88.6	51.6	32.1	24.7	16.3	10.9	9.31	4.83
1.65V	240.2	173.9	137.3	84.5	50.1	31.2	24.1	15.8	10.8	9.22	4.81
1.70V	220.9	162.7	130.1	80.8	48.8	30.5	23.2	15.4	10.7	9.05	4.75
1.75V	206.4	152.7	123.6	78.1	47.5	29.4	22.6	15.1	10.5	8.97	4.67
1.80V	187.0	141.2	114.5	75.8	45.6	28.4	22.3	14.7	10.4	8.89	4.63
1.85V	140.8	111.9	96.10	65.2	40.9	26.2	20.8	13.8	9.82	8.41	4.59

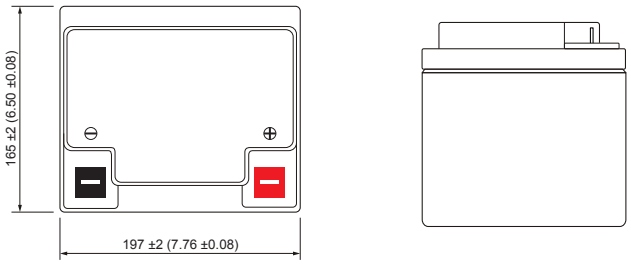
Dimensions

NB Terminal

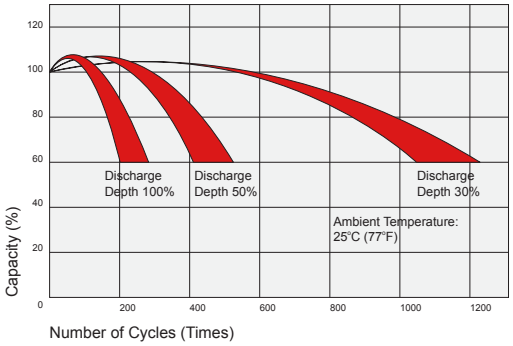
Unit: mm (inches)



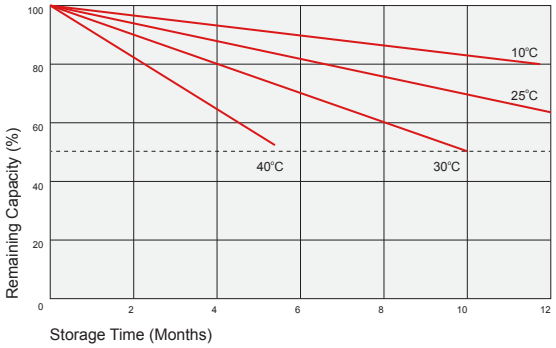




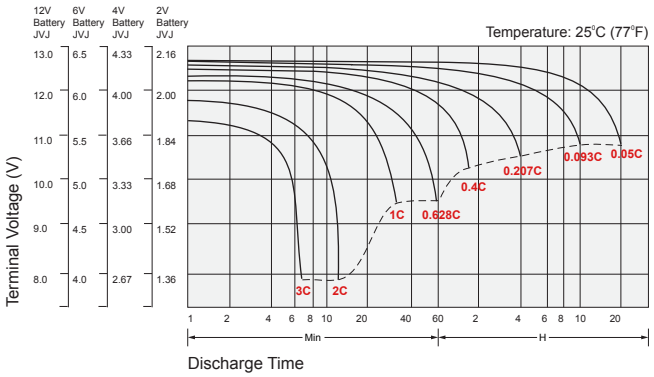
Cycle Service Life



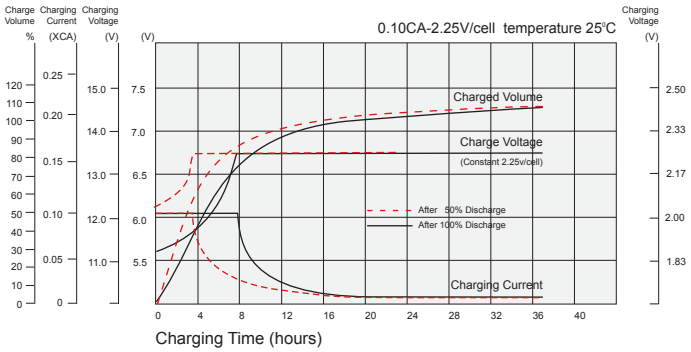
Self Discharge Characteristics



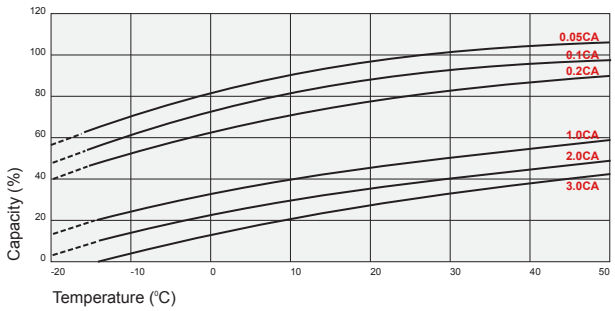
Discharge Characteristics



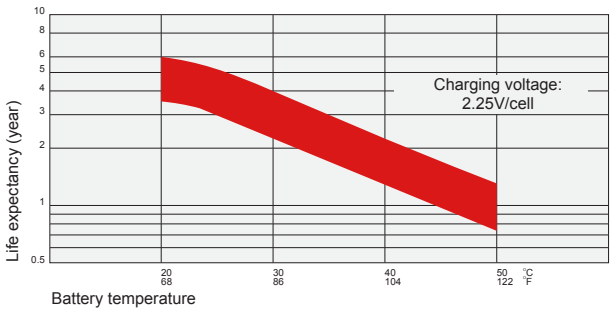
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Temperature Effects on Long Term Float Life



Contact Information

SigmasTek
7651 W 100th Place
Bridgeview, IL 60455, USA

T: (888) 988-8290
www.sigmastek.com
order@sigmastek.com