



## Maintenance-Free Rechargeable Sealed Lead-Acid Battery



# BP33-12(H)(F)

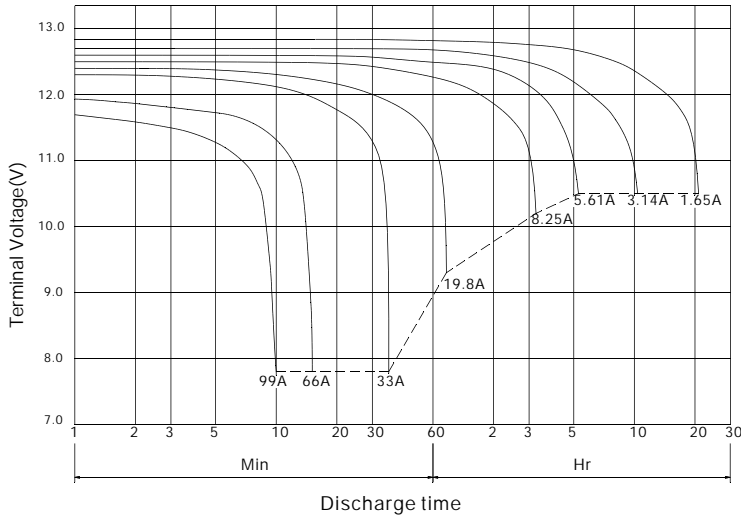
(H):Handle Type (F):Finger Type

The battery is constructed by plates, separators, safety valves and container. Since the electrolyte is held by a glass-mat separator and plates, the battery can use in any direction and position without leakage.

## PERFORMANCE SPECIFICATIONS

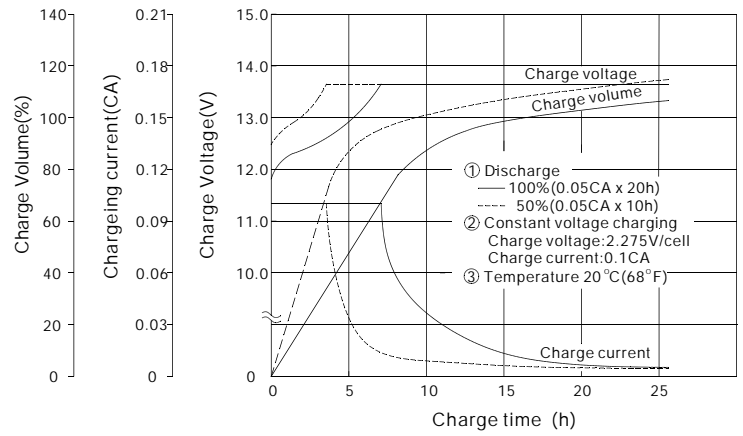
Nominal Voltage(V).....	12 volts(6cells in series)
Nominal Capacity(AH)	
20 hour rate F.V.(1.75V/cell) (1650mA to 10.50volts) .....	33A.H.
10 hour rate F.V.(1.75V/cell) (3140mA to 10.50volts) .....	31.4 A.H.
5 hour rate F.V.(1.75V/cell) (5610mA to 10.50volts) .....	28.1A.H.
1 hour rate F.V.(1.55V/cell) (19800mA to 9.30volts).....	19.8A.H.
Approximate Weight.....	11250g(24.81lbs.)
Terminal	
Standard.....	Type B2-1
Internal Resistance (Fully Charged Battery).....	<9mΩ
Maximum Discharge Current For 5 sec.(A).....	495A
Maximum Charge Current(A).....	9.9A
Ambient Temperature	
Charge.....	0°C(32°F)~40°C(104°F)
Discharge.....	-20°C(-4°F)~50°C(122°F)
Storage.....	-20°C(-4°F)~40°C(104°F)
Vibration test:	
Frequency: 16.7HZ	
Amplitude: 4mm	
Vibrate the battery horizontally or vertically for 60 minutes. The battery have no abnormality.	
Case.....	ABS
Dimension(mm/inch)	
Length           ±1.5mm.....	210/8.27
Width           ±1.5mm.....	129/5.08
Container Height ±1.5mm.....	168/6.61
Total Height    ±2mm.....	179/7.05
Application.....	Wheelchairs, Lawn Mowers, Electronic Medical Equipment, UPS, Golf-Carts.

## BP33-12(H)(F) Battery discharge characteristics (25°C/77°F)



## BATTERY CHARGING CHARACTERISTICS

(Typical example of charge characteristics for the standby use)

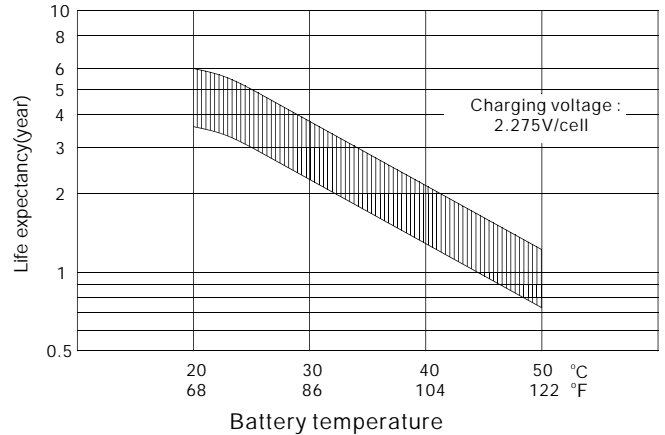


### Charging Procedure

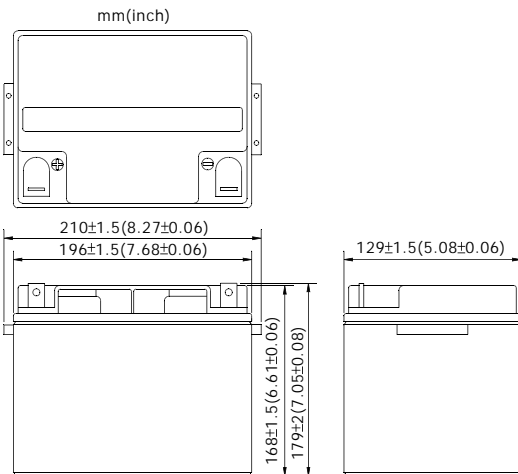
Application	Charging method	Charging Voltage at 20°C (V/cell)	Temperature compensation coefficient of charging voltage (mV/°C/cell)	Max. charging current (CA)	Charging time 0.1CA, 20°C (h)		Temp (°C)
					100% discharge	50% discharge	
For standby power Source	Constant voltage & Constant current charging (with current restriction)	2.25~2.30	-3	0.3	24	20	0-40 (32-104°F)
For cycle service		2.40~2.50	-4	0.3	16	10	

\*Temperature compensation of charging voltage is not needed, when using the batteries within 5°C to 35°C range.

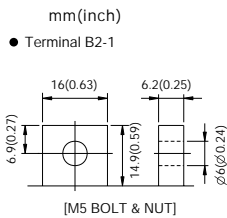
### Effect of Temperature on Long Term Float Life



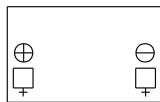
### OUTER DIMENSIONS



### TERMINAL TYPE



### TERMINAL POSITION



### Constant power discharge characteristics at 25°C/77°F

Final Voltage	Discharge time								
	5Min	10Min	15Min	30Min	1Hr	3Hr	5Hr	10Hr	20Hr
	Battery output power (W)								
10.80V	1193.1	878.3	703.9	418.8	240.18	96.19	66.32	37.06	19.38
10.50V	1381.0	951.6	736.2	434.7	247.38	98.11	67.32	37.62	19.80
10.20V	1467.3	985.8	759.0	444.7	251.83	99.00	67.69	37.81	19.89
9.90V	1533.2	1009.4	776.5	450.9	254.85	99.69	67.92	37.92	19.94
9.60V	1584.0	1029.6	792.0	455.4	257.40	100.29	68.13	37.92	19.94



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