

## VRLA Rechargeable Battery

# BC42-12 (BC42-12FR)

### FEATURES

- Maintenance free(no water topping-up required)
- No free acid(Non-spillable battery)
- Can be used in any orientation(excluding used inverted)
- Absorbent Glass Mat technology for efficient gas recombination
- Its design life is up to 5 years in floating application

### APPLICATION

- UPS
- Wheelchairs
- Lawn Mowers
- Electronic Medical Equipment
- Golf-Carts

### SPECIFICATIONS

Nominal Voltage	12V	
Nominal Capacity	20 Hour Rate (2.10A, 10.5V)	42.0 Ah
	10 Hour Rate (3.99A, 10.5V)	39.9 Ah
	5 Hour Rate (7.14A, 10.5V)	35.7 Ah
	1 Hour Rate (25.20A, 9.3V)	25.2 Ah
Approx. Weight	12.5Kg(27.56lbs.)	
Terminals	B2 (Fitting M5 bolt & nut) , I1 and I2 are optional	
Max. Discharge Current	600 A (5 sec.)	
Max. Charge Current	12 A	
Operating Temperature Range	Charge	0°C~40°C(32°F~104°F)
	Discharge	-20°C~50°C(-4°F~122°F)
	Storage	-20°C~40°C(-4°F~104°F)
Self Discharge	< 3% per month (25°C)	
Internal Resistance	≤ 12mΩ (Fully Charged)	



### CONTAINER MATERIAL

- BC42-12:  
ABS: UL 94-HB (Dark gray color)
- BC42-12FR:  
ABS: UL 94-V0 (Light gray color)

 ISO 9001	 ISO14001
 MH19884 UL	 C4M20310-2474-E-16 CE
<ul style="list-style-type: none"> <li>● IEC61056</li> <li>● GB/T 19639</li> </ul>	<ul style="list-style-type: none"> <li>● JIS C 8702</li> </ul>

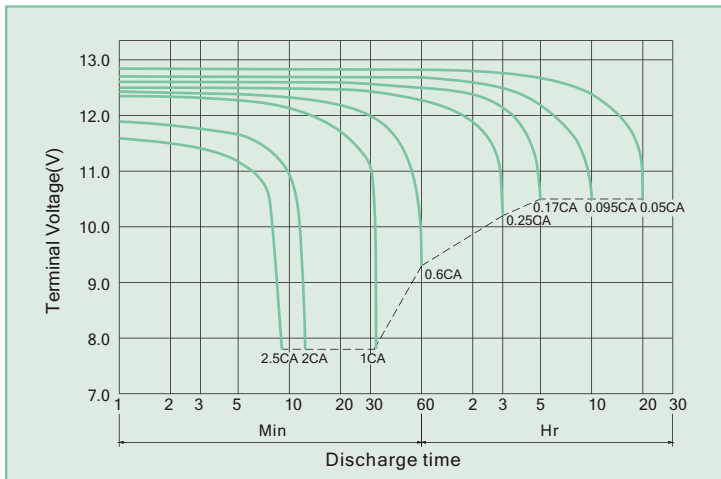
OUTER DIMENSIONS mm(inch)	Length (L)	Width (W)	Container Height (H)	Total Height (TH)
	197±1.5(7.76±0.06)	165±1.5(6.50±0.06)	171±1.5(6.73±0.06)	171±1.5(6.73±0.06)

### TERMINAL TYPE

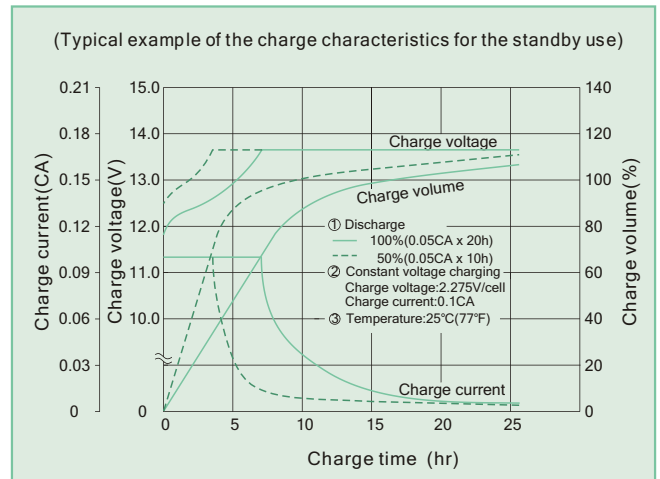
- Terminal B2
  - Dimensions: 15.0(0.59) x 7.5(0.30) x 17.0(0.67)
  - Terminal diameter: 5.2(0.20)
  - Terminal height: 5.5(0.22)
  - Hardware: [M5 BOLT & NUT]
- Terminal I1
  - Terminal diameter: M5x0.8
  - Terminal height: 2.0(0.08)
  - Hardware: [M5 BOLT & NUT]
- Terminal I2
  - Terminal diameter: M6x1.0
  - Terminal height: 2.0(0.08)
  - Hardware: [M6 BOLT]

Terminal Hardware Initial Torque:  
 B2,I1(4.0Nm±5%),I2(5.5Nm±5%)

**BC42-12 (BC42-12FR) discharge characteristics (25°C/77°F)**



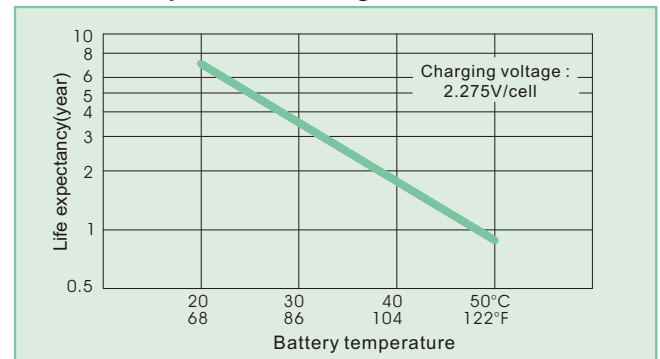
**Battery Charging Characteristics**



**Charging Procedure**

Application	Charging method	Charging Voltage at 25°C (V/cell)	Temperature compensation coefficient of charging voltage (mV/°C/cell)	Max. charging current (CA)	Charging time 0.1CA, 25°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	

**Effect Of Temperature On Long Term Float Life**



**Constant power discharge characteristics at 25 °C/77 °F Unit: W**

F.V. (V/cell) \ Discharge Time	5 Min	10 Min	15 Min	30 Min	1 Hr	3 Hr	5 Hr	10 Hr	20 Hr
1.80V	1055.6	860.7	702.7	476.0	299.6	122.4	84.4	47.2	24.8
1.75V	1185.7	932.2	734.8	494.4	308.6	124.9	85.7	47.9	25.2
1.70V	1297.9	964.3	757.1	505.6	314.1	126.0	86.1	48.1	25.3
1.65V	1356.4	988.9	774.9	512.7	317.8	126.8	86.4	48.3	25.4
1.60V	1401.3	1008.9	790.0	517.9	321.1	127.7	86.7	48.3	25.4

**Constant current discharge characteristics at 25 °C/77 °F Unit: A**

F.V. (V/cell) \ Discharge Time	5 Min	10 Min	15 Min	30 Min	1 Hr	3 Hr	5 Hr	10 Hr	20 Hr
1.80V	96.1	77.6	62.8	40.7	25.2	10.2	7.0	3.9	2.0
1.75V	109.9	84.1	65.7	42.3	25.9	10.4	7.1	4.0	2.1
1.70V	120.3	87.1	67.7	43.3	26.4	10.5	7.2	4.0	2.1
1.65V	128.1	90.9	69.3	43.9	26.7	10.6	7.2	4.0	2.1
1.60V	134.9	94.4	70.6	44.3	27.0	10.6	7.2	4.0	2.1

All data shall be changed without prior notice, BB reserves the right to explain and update the information contained hereinto.

Trial A/2 REV. Dec. 2010

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