

## VRLA Rechargeable Battery

# MPL120-12

Handle Type

### FEATURES

- Maintenance free(no water topping-up required)
- No free acid(Non-spillable battery)
- Can be used in any orientation(excluding used inverted)
- The battery is designed with very lower resistance and exceeding high power performance
- Long life expectancy 10 years in float application
- Flame-arrestor is installed to ensure safety
- Carry handles for easy installation
- Absorbent Glass Mat technology for efficient gas recombination

### APPLICATION

- UPS
- Cable TV
- Golf-Carts
- Telecom
- Power station
- Marine

### SPECIFICATIONS

Nominal Voltage	12V	
Nominal Capacity	10 Hour Rate (11.3A, 10.5V)	113 Ah
	5 Hour Rate (19.6A, 10.5V)	98 Ah
	1 Hour Rate (82.0A, 9.6V)	82 Ah
	15 Min Rate (480W, 9.6V)	60 Ah
Approx. Weight	36.0kgs±2%(79.4lbs±2%)	
Terminals	I2, B3 (Fitting M6 bolt & nut) is optional	
Max. Charge Current	35.4 A	
Short Circuit Current	2900 A	
Operating Temperature Range	Charge	0°C~50°C(32°F~122°F)
	Discharge	-20°C~60°C(-4°F~140°F)
	Storage	-20°C~50°C(-4°F~122°F)
Self Discharge	< 3% per month (25°C)	
Internal Resistance	≤ 3mΩ (Fully Charged )	



### CONTAINER MATERIAL

- Standard: PP( UL 94-HB)  
Model Name: MPL120-12
- Optional: Flame Retardant PP(UL 94-V0)  
Model Name: MPL120-12FR

- IEC60896-21/22
- JIS C 8704-2
- GB/T 19638.2

OUTER DIMENSIONS mm(inch)	Length (L)	Width (W)	Container Height (H)	Total Height (TH)
	330±2.0(12.99±0.08)	173±2.0(6.81±0.08)	212±2.0(8.35±0.08)	B3: 241±2.0(9.49±0.08) I2: 218±2.0(8.59±0.08)

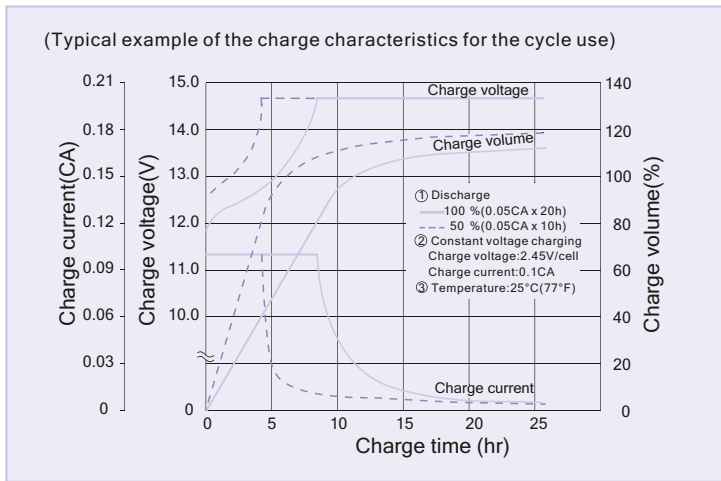
### TERMINAL TYPE

- Terminal B3
- Terminal I2

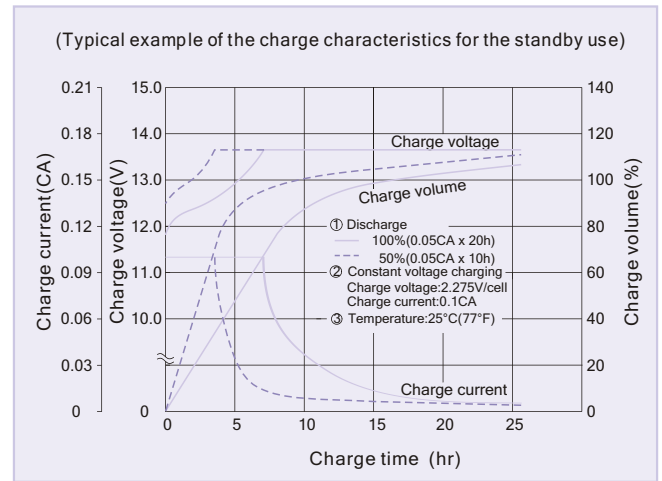
(M6 BOLT & NUT)

Terminal Hardware Initial Torque:  
B3,I2(5.5Nm±5%)

### MPL120-12 (MPL120-12FR) Charging Characteristics



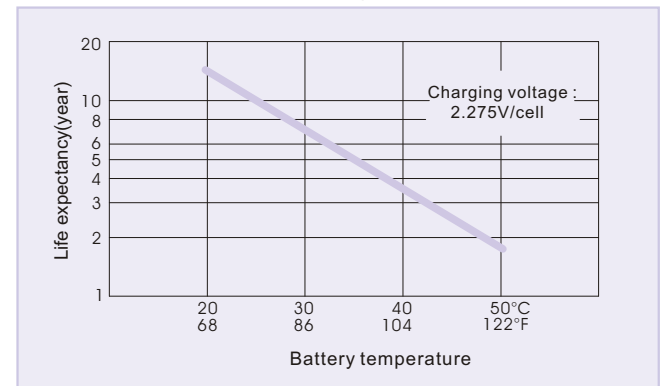
### Battery Charging Characteristics



### 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	0~50 (32~122°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

Discharge F.V.	5 Min	10 Min	15 Min	20 Min	25 Min	30 Min	40 Min	50 Min	60 Min	90 Min
10.8V	3974	3071	2538	2122	1839	1615	1300	1091	945	672
10.5V	4406	3296	2684	2204	1893	1656	1327	1113	960	683
10.2V	4727	3431	2776	2262	1931	1683	1345	1127	971	691
9.9V	4979	3537	2839	2304	1961	1701	1361	1139	980	696
9.6V	5119	3606	2880	2335	1985	1717	1375	1148	988	700

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

Discharge F.V.	5 Min	10 Min	15 Min	20 Min	25 Min	30 Min	40 Min	50 Min	60 Min	90 Min
10.8V	365	269	220	181	155	135	108	90.7	79.5	56.4
10.5V	401	291	232	189	161	140	111	93.3	80.7	57.3
10.2V	432	303	240	195	165	143	113	94.7	81.6	58.0
9.9V	460	312	247	199	168	145	115	96.0	82.4	58.5
9.6V	481	317	251	201	171	147	116	96.0	82.9	58.9

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

For operation, please refer to the instruction from technical manual.

SC(for Sader) A/0 REV. Oct. 2017

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