



## VRLA Rechargeable Battery

# MPL90-12 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 (8.8A, 10.5V)	88.0 Ah
	5 Hour Rate (15.3A, 10.5V)	76.5 Ah
	1 Hour Rate (62.2A, 9.6V)	62.2 Ah
	15 Min Rate (360W, 9.6V)	45.0 Ah
Approx. Weight	29.8Kg(65.7lbs.)	
Terminals	B3 (Fitting M6 bolt & nut) I2 is optional	
Max. Charge Current	26.4 A	
Cold Cranking Amp @ -18°C	780 A	
Short Circuit Current	2450 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	≤ 4mΩ (Fully Charged )	



### CONTAINER MATERIAL

- Standard: PP( UL 94-HB)  
Model Name: MPL90-12
- Optional: Flame Retardant PP(UL 94-V0)  
Model Name: MPL90-12FR

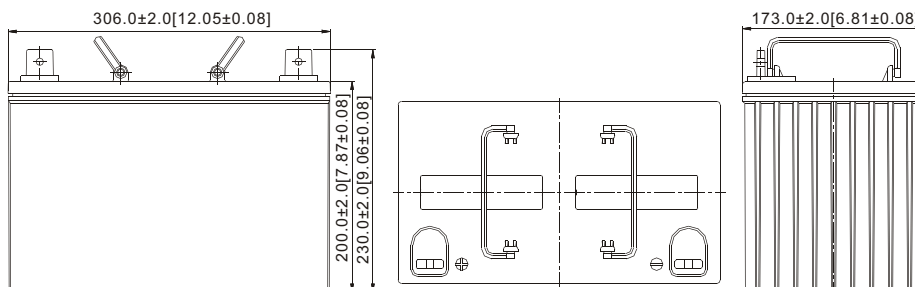
**WSF** ISO9001 **WSF** ISO14001 **WSF** OHSMS



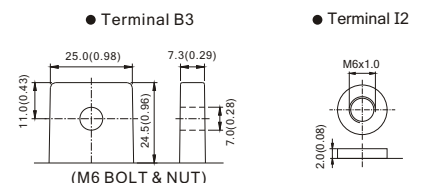
- IEC60896-21/22
- JIS C 8704-2
- GB/T 19638.2

### OUTER DIMENSIONS mm(inch)

Length (L)	Width (W)	Container Height (H)	Total Height (TH)
306±2.0(12.05±0.08)	173±2.0(6.81±0.08)	200±2.0(7.87±0.08)	B3: 230±2.0(9.06±0.08) I2: 207±2.0(8.15±0.08)

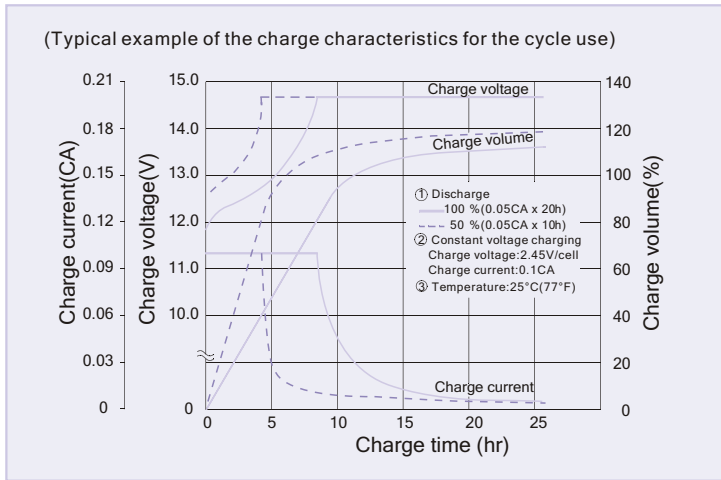


### TERMINAL TYPE

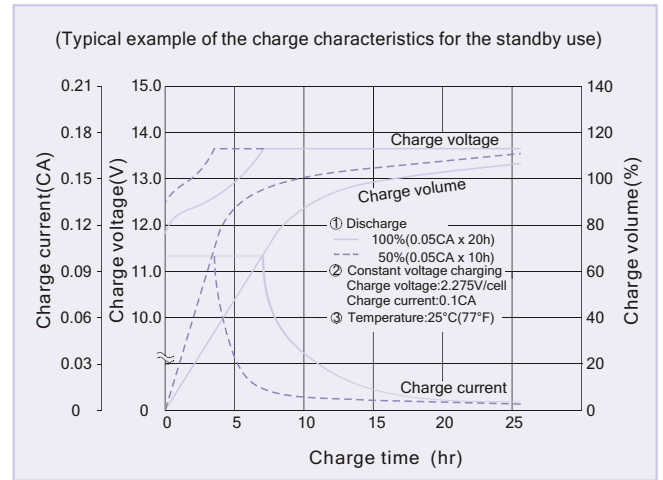


Terminal Hardware Initial Torque:  
B3,I2(5.5Nm±5%)

**MPL90-12(MPL90-12FR) Charging Characteristics**



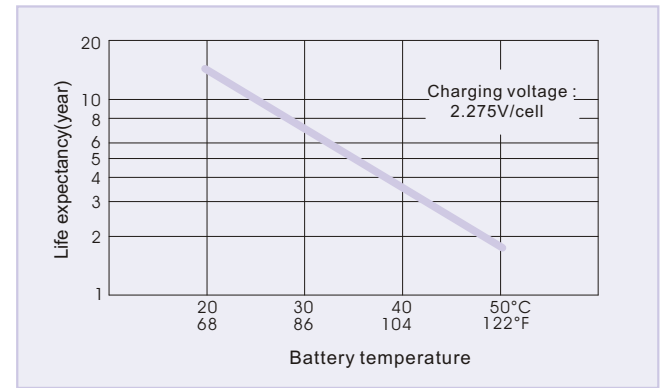
**Battery Charging Characteristics**



**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**

F.V. (V/cell) \ Discharge Time	5 Min	10 Min	15 Min	20 Min	25 Min	30 Min	40 Min	50 Min	60 Min	90 Min
1.80V	3117	2291	1903	1591	1379	1211	975	818	709	504
1.75V	3494	2459	2013	1653	1420	1242	995	835	720	512
1.70V	3726	2560	2082	1696	1448	1262	1009	845	728	518
1.65V	3878	2639	2129	1728	1471	1276	1021	854	735	522
1.60V	3993	2690	2160	1751	1489	1288	1031	861	741	525

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

F.V. (V/cell) \ Discharge Time	5 Min	10 Min	15 Min	20 Min	25 Min	30 Min	40 Min	50 Min	60 Min	90 Min
1.80V	290	201	165	136	116	101	81	68	59.6	42.3
1.75V	318	217	174	142	121	105	83	70	60.5	43.0
1.70V	339	226	180	146	124	107	85	71	61.2	43.5
1.65V	352	233	185	149	126	109	86	72	61.8	43.9
1.60V	363	237	188	151	128	110	87	72	62.2	44.2

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

A/4 REV. Jul. 2013

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