



EM Series

EM12-100(12V100Ah)

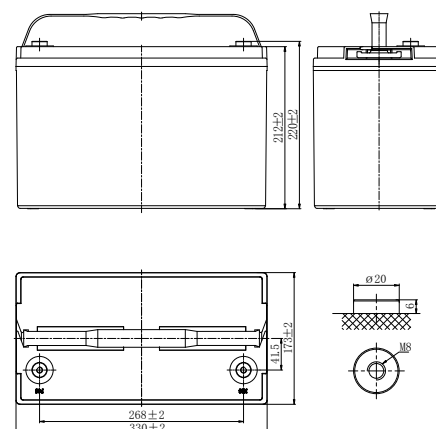


Specifications

Rated Voltage	12V	
Nominal Capacity	$C_{20}, 1.75V/\text{cell}$	100Ah
Dimension	Length	330±2mm (13.0 inches)
	Width	173±2mm (6.81 inches)
	Container Height	212±2mm (8.35 inches)
	Total Height	220±2mm (8.66 inches)
Approx Weight	28.0kg (61.7 lbs)	
Terminal	M8	
Container Material	ABS	
Rated Capacity(25°C)	100.0 Ah	C20(5.00A, 1.75V/cell)
	92.0 Ah	C10(9.20A, 1.75V/cell)
	81.5 Ah	C5(16.3A, 1.75V/cell)
	73.5 Ah	C3(24.5A, 1.75V/cell)
	61.3 Ah	C1(61.3A, 1.60V/cell)
Max. Discharge Current	1000A (5s)	
Internal Resistance(25°C)	Approx 5.5mΩ	
Operating Temp. Range	Discharge	-15 ~ 50°C (5 ~ 122°F)
	Charge	-20 ~ 40°C (-4 ~ 104°F)
	Storage	-15 ~ 40°C (5 ~ 104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Standby Use	Initial Charging Current less than 25A. Voltage	
	13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Cycle Use	Initial Charging Current less than 25A. Voltage	
	14.1V~14.4V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Effect of temp. to Capacity	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	EM series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	



Layout



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

F.V/Time	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	1392.1	1100.6	963.3	759.6	615.3	468.1	376.5	317.7	275.8	224.2	187.4	100.5
1.80V/cell	1573.8	1230.7	1066.1	831.0	669.5	506.5	405.9	342.2	295.8	240.0	200.0	106.0
1.75V/cell	1644.9	1280.7	1105.5	859.0	690.0	520.0	416.0	350.0	302.0	244.4	203.1	107.4
1.70V/cell	1756.4	1329.3	1146.1	888.0	712.0	535.2	426.5	358.0	308.5	248.7	206.3	108.7
1.67V/cell	1877.8	1359.2	1170.0	904.1	723.9	543.3	432.4	362.4	312.2	251.3	208.1	109.5
1.60V/cell	1899.3	1429.4	1226.9	944.4	754.1	563.3	446.8	373.5	320.9	257.2	212.5	111.5

Constant Power Discharge (Watts/cell) at 25°C (77°F)

F.V/Time	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	2690.4	2134.1	1872.4	1481.0	1202.6	917.8	739.9	625.5	543.8	442.9	370.9	199.8
1.80V/cell	3016.2	2368.8	2058.2	1611.1	1301.8	989.0	794.8	671.7	581.8	473.2	395.2	210.6
1.75V/cell	3125.8	2446.1	2119.2	1655.1	1334.4	1011.0	811.6	684.8	592.3	480.9	400.7	213.1
1.70V/cell	3307.4	2519.0	2181.9	1700.9	1369.8	1035.8	829.1	698.4	603.6	488.4	406.3	215.6
1.67V/cell	3502.0	2562.7	2216.8	1725.0	1387.8	1048.5	838.6	705.5	609.7	492.8	409.4	217.1
1.60V/cell	3511.8	2666.6	2302.8	1787.1	1435.1	1080.7	862.1	724.0	624.2	502.9	417.0	220.8



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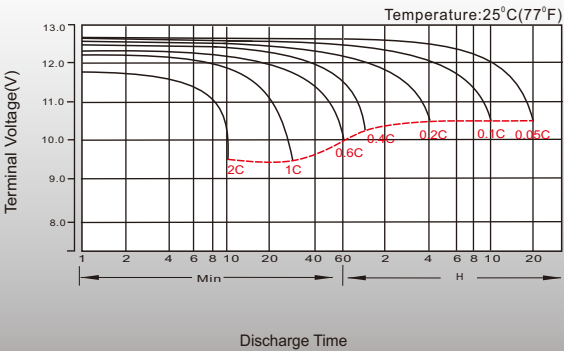
Applications

- All purpose
- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Alarm and security system
- Communication power supply
- DC power supply
- Auto control system

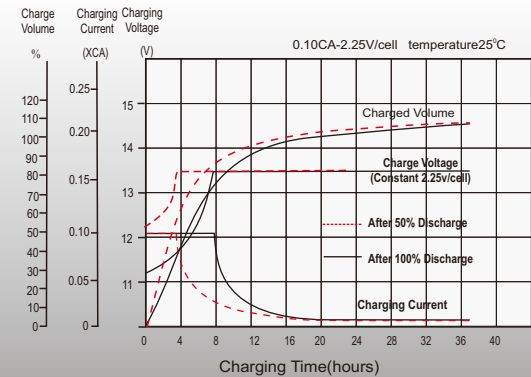
General Features

- 10 years design life(25°C)
- Special exhaust structure and sealing technology, safe and reliable, flexible installation, convenient maintenance
- PbCaSn alloy for plate grids: less gassing, less self-discharging
- High quality AGM separator: extend cycle life and prevent micro short circuit
- High purity raw material: ensure low self discharge rate

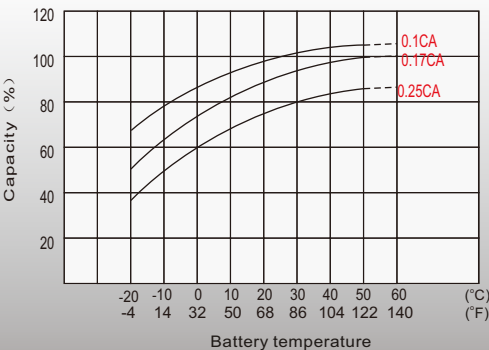
Discharge Characteristics



Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life

