

EV12-18(12V18Ah)

RITAR®

Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	18Ah@20hr-rate to 1.75V per cell @25℃
Weight	Approx. 5.90 Kg (Tolerance±5.0%)
Internal Resistance	Approx. 14.0 mΩ
Terminal	F13-BP(M5)
Max. Discharge Current	234A (5 sec)
Cold Cranking Ampere(CCA)	180A
Maxi. Charging Current	5.4A
Reference Capacity	C3 14.0AH C5 15.5AH C10 17.0AH C20 18.0AH
Float Charging Voltage	13.7 V~13.9 V @ 25℃ Temperature Compensation: -3mV/℃/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 25℃ Temperature Compensation: -4mV/℃/Cell
Operating Temperature Range	Discharge: -20℃~60℃ Charge: 0℃~50℃ Storage: -20℃~60℃
Normal Operating Temperature Range	25℃±5℃
Self Discharge	RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25℃ and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25℃.Please charged batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

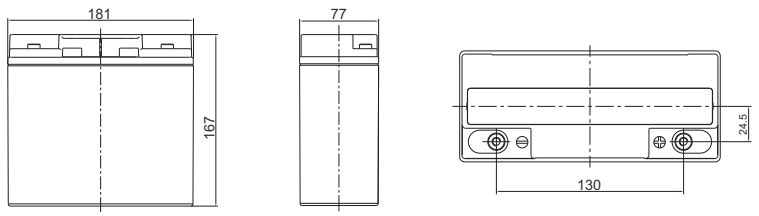


EV (Electric Vehicle) series is specially designed for frequent discharge deep cycle application. By using the specially designed active material, strong grids and thick plate construction, the EV series battery offers reliable performance in high load situations and could provide competitive cycle performance. It is suitable for Electric Vehicle and Golf cart, Floor Machines, Forklifts, Aerial lifts, Robotics, Marine, RV, Mobility and Medical Equipment, and most outdoor application.

ISO 9001 ISO 14001 OHSAS 18001

MH 28539

Dimensions



F13-BP TERMINAL

Length	181±2mm (7.13 inches)
Width	77±2mm (3.03 inches)
Height	167±2mm (6.57 inches)
Total Height	167±2mm (6.57 inches)
Terminal	Value
M5	6~7 N*m
M6	8~10 N*m
M8	10~12 N*m

Unit: mm

Constant Current Discharge Characteristics : A(25℃)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	75.26	49.34	36.75	21.13	12.40	7.075	4.997	3.907	3.261	2.203	1.823	0.936
1.65V	72.47	47.70	35.65	20.68	12.17	6.954	4.920	3.853	3.221	2.179	1.804	0.928
1.70V	68.85	45.55	34.20	20.10	11.86	6.795	4.819	3.782	3.167	2.146	1.780	0.916
1.75V	64.03	42.68	32.26	19.30	11.43	6.576	4.679	3.683	3.092	2.101	1.746	0.900
1.80V	57.63	38.84	29.65	18.20	10.85	6.274	4.486	3.546	2.989	2.037	1.699	0.879
1.85V	48.98	33.60	26.05	16.66	10.02	5.842	4.208	3.348	2.839	1.945	1.630	0.846

Constant Power Discharge Characteristics : WPC(25℃)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	127.6	83.87	64.25	38.37	23.19	13.41	9.54	7.50	6.29	4.30	3.58	1.84
1.65V	126.2	83.22	63.63	38.13	22.99	13.28	9.46	7.44	6.24	4.27	3.55	1.83
1.70V	121.2	80.37	61.59	37.25	22.48	13.01	9.28	7.31	6.15	4.21	3.51	1.81
1.75V	114.7	76.66	58.94	36.14	21.79	12.65	9.05	7.15	6.02	4.13	3.45	1.78
1.80V	105.1	70.98	54.93	34.44	20.77	12.13	8.71	6.91	5.84	4.01	3.36	1.74
1.85V	90.89	62.49	48.94	31.82	19.32	11.36	8.21	6.55	5.57	3.84	3.22	1.68

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.
The battery must be fully charged before the capacity test. The C_{20} should reach 95% after the first cycle and 100% after the third cycle.



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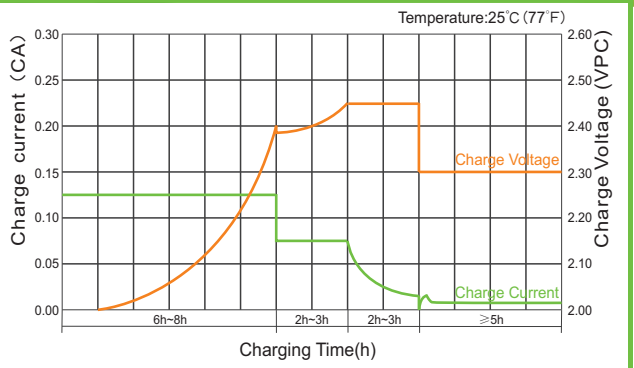
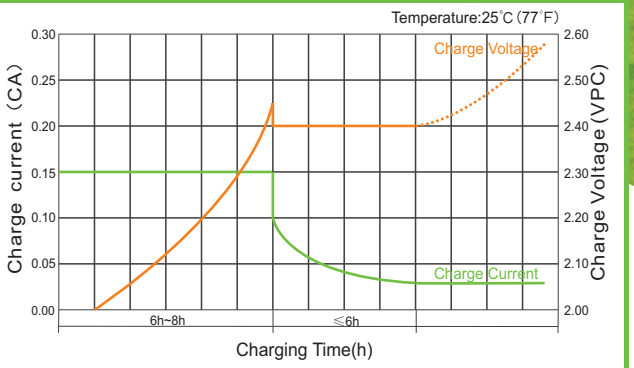
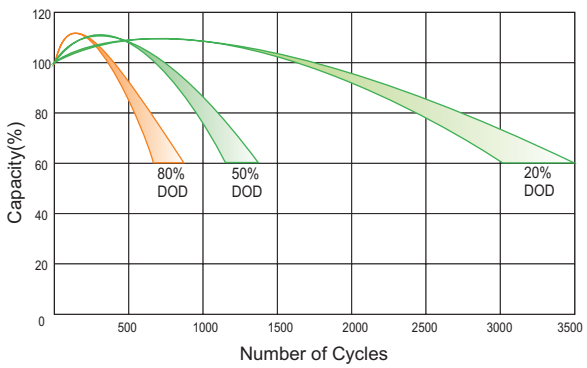
Charge Characteristic Curve for Cycle Use(IIUU)



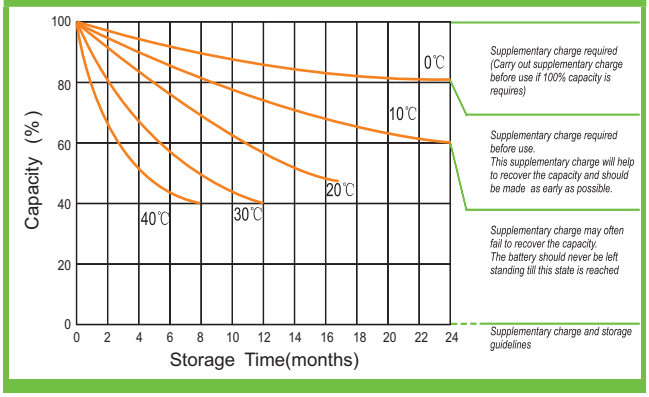
Charge Characteristic Curve For Cycle Use(IUI)



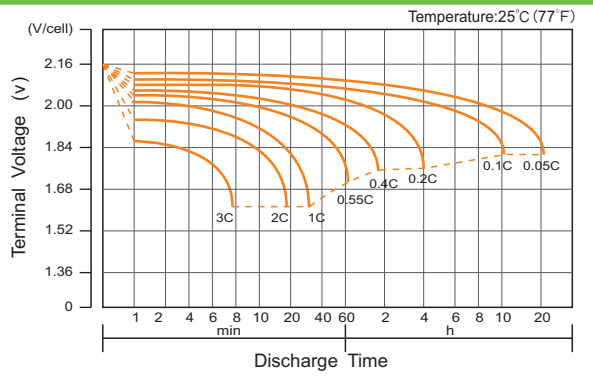
Cycle Life in Relation to Depth of Discharge



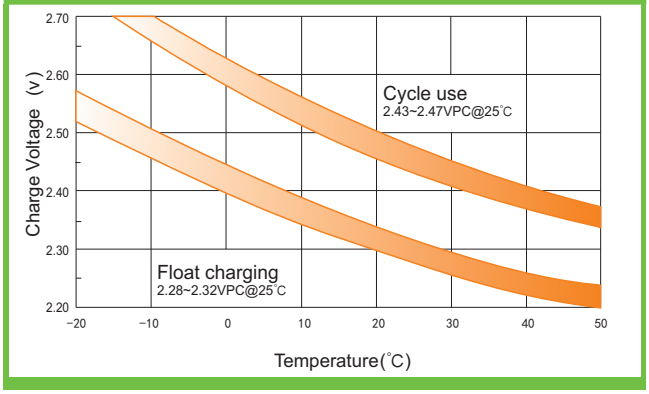
Storage Characteristics



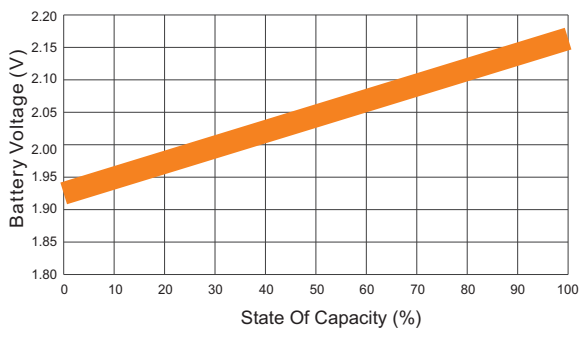
Discharge Characteristics Curve



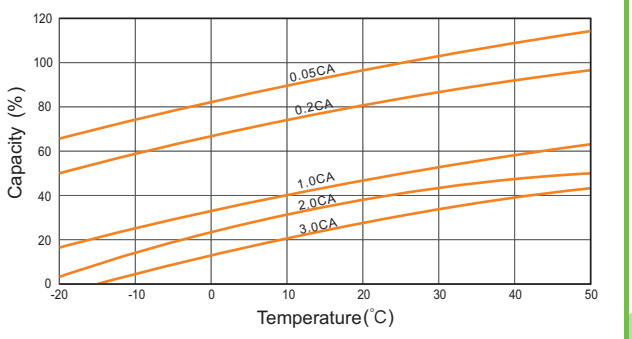
Relationship Between Charging Voltage and Temperature



Relationship of OCV And State of Charge(20℃)



Temperature Effects on Capacity



(Note) All above information shall be changed without prior notice, Ritar reserves the right to explain and update the latest information.

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