

# FT12-100DS (12V100AH)

**RITAR®**

## Specification

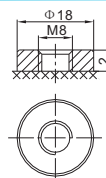
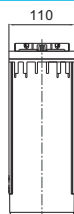
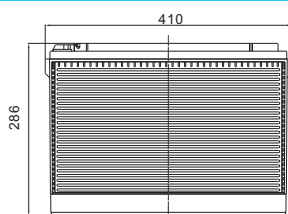


FTD (Front Terminal Deep Cycle) series batteries provide superior high integrity and reliability. It is specially designed for frequent cyclic charge and discharge. By using strong grids, thick plate and special active material are designed for repeated deep-discharge applications. The FTD series battery offers 30% more cyclic life than the standby series. And the dimensions are designed for 19" and 23" cabinet installation. It is suitable for telecom, solar and wind renewable energy storage, mobility and medical equipment, RV, telecom, broadband and cable TV, UPS systems etc.



<b>Cells Per Unit</b>	6
<b>Voltage Per Unit</b>	12
<b>Capacity</b>	100Ah@20hr-rate to 1.75V per cell @25°C
<b>Weight</b>	Approx. 31.0 Kg (Tolerance ±2%)
<b>Internal Resistance</b>	Approx. 5.5 mΩ
<b>Terminal</b>	F9(M8)
<b>Max. Discharge Current</b>	1000A (5 sec)
<b>Design Life</b>	15 years (floating charge)
<b>Maximum Charging Current</b>	30.0 A
<b>Reference Capacity</b>	C3 70.5AH C5 81.0AH C10 94.5AH C20 100.0AH
<b>Float Charging Voltage</b>	13.6 V~13.8 V @ 25°C Temperature Compensation: -3mV/°C/Cell
<b>Cycle Use Voltage</b>	14.2 V~14.4 V @ 25°C Temperature Compensation: -4mV/°C/Cell
<b>Operating Temperature Range</b>	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
<b>Normal Operating Temperature Range</b>	25°C ±5°C
<b>Self Discharge</b>	RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25°C. Please charged batteries before using.
<b>Container Material</b>	A.B.S. UL94-HB, UL94-V0 Optional.

## Dimensions



F9 Terminal

Length	410±2mm (16.1 inches)
Width	110±2mm (4.33 inches)
Height	286±2mm (11.3 inches)
Total Height	286±2mm (11.3 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°C)

F.V/Time	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	168.0	98.2	57.6	34.5	24.8	20.2	17.0	11.6	10.1	5.17
1.65V	163.6	96.1	56.6	34.0	24.5	19.9	16.8	11.5	10.0	5.13
1.70V	157.8	93.2	55.2	33.4	24.1	19.6	16.6	11.3	9.85	5.07
1.75V	150.3	89.5	53.3	32.5	23.5	19.2	16.2	11.1	9.68	5.00
1.80V	140.6	84.6	50.9	31.3	22.7	18.6	15.8	10.9	9.45	4.90
1.85V	128.4	78.5	47.7	29.8	21.7	17.8	15.2	10.5	9.16	4.77

### Constant Power Discharge Characteristics : WPC(25°C)

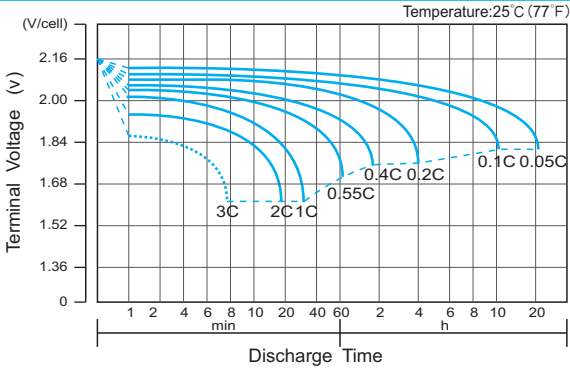
F.V/Time	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	298	181	109	66.4	48.2	39.3	33.3	23.0	20.1	10.3
1.65V	296	180	109	65.9	47.8	39.0	33.1	22.9	19.9	10.3
1.70V	288	175	106	64.8	47.1	38.5	32.7	22.6	19.7	10.2
1.75V	279	170	103	63.4	46.1	37.7	32.1	22.2	19.4	10.0
1.80V	264	163	99	61.4	44.8	36.7	31.3	21.7	19.0	9.85
1.85V	245	152	93.5	58.8	43.0	35.3	30.2	21.0	18.4	9.60

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.

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## Discharge Characteristics Curve



## Charge Characteristic Curve for Cycle Use(IU)



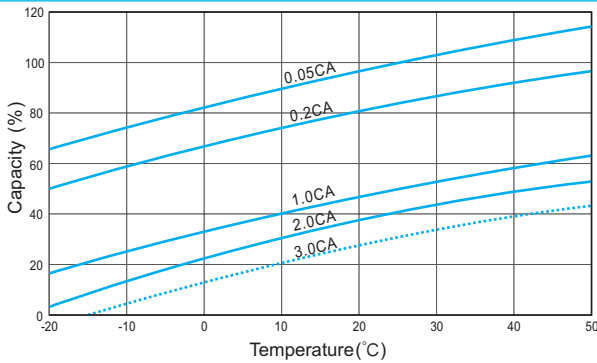
## Cycle Life in Relation to Depth of Discharge



## Relationship Between Charging Voltage and Temperature



## Temperature Effects on Capacity



## Storage Characteristics



## Effect of Temperature on Long Term Life



## Relationship of OCV And State of Charge(20°C)



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