

FT12-160D (12V160Ah)

RITAR®

Specification

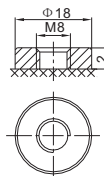
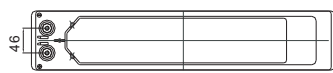
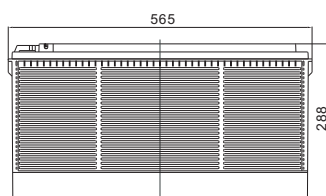


FTD (Front Terminal Deep Cycle) series batteries provide superior high integrity and reliability. It is specially designed for frequent cyclic charge and discharge. By using strong grids, thick plate and special active material are designed for repeated deep-discharge applications. The FTD series battery 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.



Cells Per Unit	6
Voltage Per Unit	12
Capacity	160Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 49.0 Kg (Tolerance ± 1.5%)
Internal Resistance	Approx. 4.0 mΩ
Terminal	F9(M8)
Max. Discharge Current	1600A (5 sec)
Design Life	15 years (floating charge)
Maximum Charging Current	48 A
Reference Capacity	C3 111.6AH C5 128.5AH C10 151.0AH C20 160.0AH
Float Charging Voltage	13.6 V~13.8 V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.2 V~14.4 V @ 25°C Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
Normal Operating Temperature Range	25°C ± 5°C
Self Discharge	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.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

Dimensions



F9 Terminal

Length	565±2mm (22.2 inches)
Width	110±2mm (4.33 inches)
Height	288±2mm (11.3 inches)
Total Height	288±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	252.8	154.0	90.4	54.2	39.4	32.0	27.0	18.4	16.1	8.27
1.65V	246.2	150.7	88.7	53.4	38.8	31.6	26.7	18.2	16.0	8.21
1.70V	237.5	146.2	86.5	52.3	38.1	31.0	26.3	18.0	15.8	8.12
1.75V	226.2	140.3	83.6	50.9	37.2	30.3	25.7	17.6	15.5	8.00
1.80V	211.6	132.7	79.8	49.1	36.0	29.4	25.0	17.2	15.1	7.84
1.85V	193.2	123.1	74.9	46.7	34.4	28.2	24.0	16.6	14.6	7.64

Constant Power Discharge Characteristics : WPC(25°C)

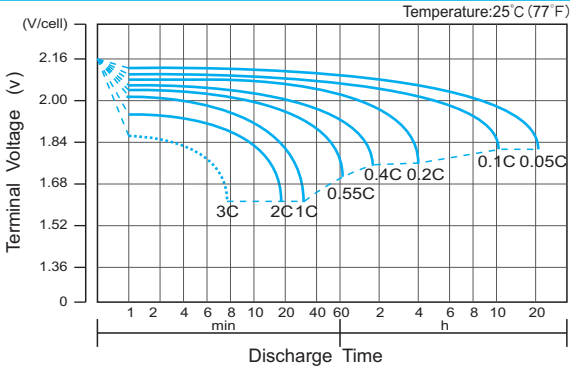
F.V/Time	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	449	284	172	104	76.3	62.3	52.8	36.5	32.1	16.5
1.65V	446	282	170	103	75.7	61.8	52.5	36.2	31.9	16.4
1.70V	434	275	166	102	74.6	60.9	51.7	35.8	31.5	16.3
1.75V	419	267	162	99	73.1	59.8	50.8	35.2	31.0	16.1
1.80V	398	255	155	96	71.0	58.2	49.6	34.4	30.3	15.8
1.85V	368	239	147	92.1	68.1	56.0	47.8	33.3	29.4	15.4

(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)



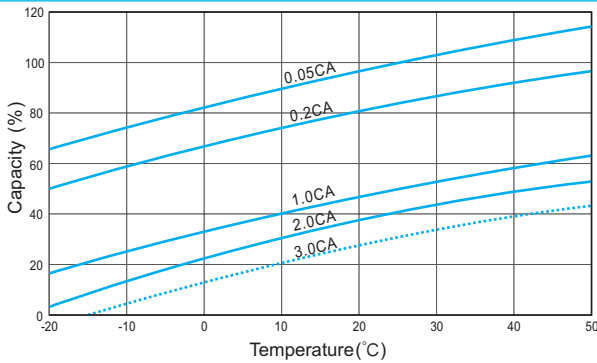
Cycle Life in Relation to Depth of Discharge



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.