

## VALVE REGULATED LEAD-ACID RECHARGEABLE BATTERY

### DC Series

Deep Cycle series batteries are designed to have a large amount of stored current discharged between charging sessions, with very heavy non-porous battery plates to withstand repeated major discharging and charging cycle(deep cycle). The Deep-cycle batteries uses a different chemistry for the plates active paste material, and a slightly stronger electrolyte than normal battery electrolyte, which allows for a much longer life in deep cycle applications.

FL12330DC

(12V33Ah/10hr)

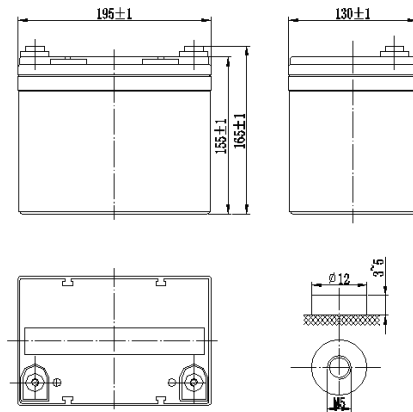


### Application

- Alarm System
- Cable Television
- Power tools
- Emergency Power System
- Security System
- Medical Equipment
- Solar and Wind Power System
- Communication Equipment
- Control Equipment
- Toys

### General Features

- Sealed and maintenance free operation.
- Non-Spillable construction design.
- ABS containers and covers (UL94HB, UL94V-0) optional.
- Safety valve installation for explosion proof .
- High quality and high reliability.
- Exceptional deep discharge recovery performance.
- Low self discharge characteristic.
- Flexibility design for multiple install positions.



### CONSTRUCTION

Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

### TECHNOLOGY PARAMETER

Battery model	FL12330DC			
Designed Cycle Life	>350 Cycles @ -0.5CA to 9.6V			
Capacity (25°C)	20HR(1.68A, 10.8V)	10HR(3.3A, 10.5V)	5HR(4.96A, 10.5V)	1HR(19.8A, 9.60V)
	33.6Ah	33Ah	24.8Ah	19.8Ah
Dimensions	Length	Width	Height	Total Height
	195±2mm	130±2mm	155±2mm	165±2mm
Approx. weight (±3%)	10.3Kg (22.70 lbs)			
Internal resistance	Full charged at 25°C: Approx. 10mOhms			
Self discharge	3% of capacity declined per month at 25°C (average)			
Capacity Affected by Temp.(20HR)	40 °C	25 °C	0 °C	-15 °C
	102%	100%	85%	65%
Charge Voltage (25°C)	Cycle use		Float use	
	14.4-14.7V(-30mV/°C), max. Current: 8.25A		13.6-13.8V(-20mV/°C)	

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### FL12330DC (12V33Ah/10hr)

Constant current discharge ratings-amperes at 25°C

End Point Volts/Cell	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.60V	116	81.2	61.8	34.8	19.8	8.29	5.42	3.40	1.73
1.65V	110	77.5	58.8	33.4	19.4	8.02	5.27	3.38	1.72
1.70V	104	73.2	55.8	32.0	18.9	7.76	5.11	3.34	1.70
1.75V	97.1	68.8	52.7	30.4	18.1	7.42	4.96	3.30	1.69
1.80V	90.6	65.2	49.7	28.8	17.3	7.09	4.81	3.30	1.68

Constant power discharge ratings-watts at 25°C

End Point Volts/Cell	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.60V	209	147	112	63.7	36.4	15.3	10.1	6.36	3.25
1.65V	197	140	106	60.8	35.5	14.8	9.74	6.28	3.21
1.70V	184	131	100	57.8	34.5	14.2	9.41	6.18	3.17
1.75V	172	123	94.4	54.7	32.8	13.5	9.08	6.07	3.13
1.80V	159	115	88.5	51.6	31.1	12.8	8.76	6.04	3.09

