

# ESC 230-12

**AGM-VRLA**  
**12V - 230Ah**

## INTRODUCTION

The most popular series of ROCKET Batteries; The ESC series has been performing with a proven track record for more than 52 years. It has successfully exemplified its quality and reliability in some of the most demanding power conditions by providing unrelentless backup power supply.

With the same characteristics as that of the ES series, the ESC series provides power reliability to applications which require longer backup time.

This series is widely used in UPS as well as Telecommunication Applications in many parts of the world. The ESC series is world renowned and recognised as a Highly reliable Battery System in the industry.

## TECHNICAL FEATURES

- Non-Spillable Sealed Construction
- Absorbent Glass Mat System (AGM System)
- ABS (Acrylonitrile Butadiene Styrene) container and cover
- Gas Recombination
- Maintenance-Free Operation
- Low Pressure Venting System
- Heavy - Duty Grids
- Low Self-Discharge - Long Shelf Life
- Wide Operating Temperature Range

## APPLICATIONS

- UPS
- Telecom Communication Equipments
- Fire Alarm & Security Systems
- Medical Instruments
- Emergency Lighting
- Computer Backup

## COMPLAINTS STANDARD

- IEC 60896 PART 1 & 2
- BS6290-4,
- Eurobat Guide - HIGH Performance

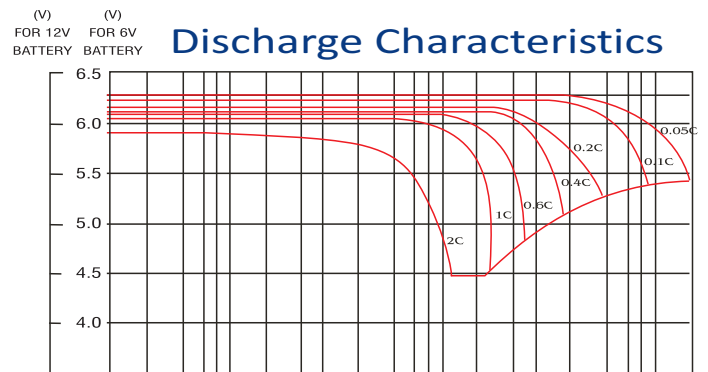
## SPECIFICATION

Nominal Voltage		12V
Capacity (20HR, 25°C)		230Ah
Dimension	Length	520mm (20.5inch)
	Width	269mm (10.6inch)
	Height	203mm (8.0inch)
	Total Height	208mm (8.2inch)
Approx Weight		72.6kg (160.1lbs)
Design Life		12 Years

## CHARACTERISTICS

Capacity 25°C (77°F)	10 hour rate	230Ah
	5 hour rate	223Ah
	1 hour rate	153Ah
Internal resistance (Fully charge, 25°C)		2.8mΩ
Self-discharge (20°C)	1 month	Remaining Capacity:97%
Operating temperature range	Discharge	-20°C~60°C
	Charge	-10°C~60°C
	Storage	-20°C~60°C
Maximum discharge current		77°F(25°C) 950A(5 Sec.)
Short circuit current		4300A
Charge Methods (Constant Voltage Charge 77°F(25°C)) - Cyclic Use	Cycle Use	14.4 to 14.7V
	Max. charging Current	69A
Charge Methods (Constant Voltage Charge 77°F(25°C)) - Standby Use	Standby Use	13.6-13.8V
	Temp. compensation	-30mV/°C
		Temp. compensation - 20mV/°C

**THE BATTERY CONTAINER AND COVER ARE AVAILABLE BOTH IN ABS plastic and Flame Retardant (FR).**



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### CONSTANT CURRENT DISCHARGE (Amperes) at 25°C

End Point Volts/Cell	15min	20min	25min	30min	35min	40min	45min	50min	55min
1.60V	371	307	268	241	216	197	182	170	161
1.65V	367	304	266	241	215	195	180	168	159
1.70V	365	302	265	240	214	194	179	167	158
1.75V	359	298	261	236	211	191	176	165	156
1.80V	348	290	256	233	208	189	174	164	155

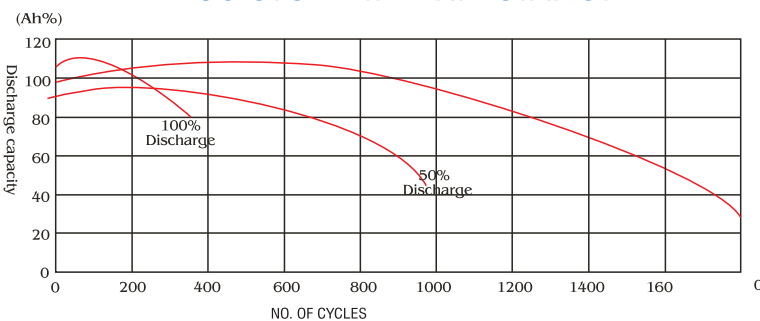
End Point Volts/Cell	1h	1.5h	2h	2.5h	3h	4h	5h	6h	7h	8h	9h	10h	12h	24h
1.60V	153	111	89.6	76.9	68.5	54.0	45.4	38.0	32.8	28.9	25.8	23.4	20.3	10.4
1.65V	151	110	88.8	76.4	68.2	53.8	45.1	37.9	32.7	28.8	25.7	23.3	20.2	10.4
1.70V	150	109	88.3	76.0	67.8	53.5	44.9	37.7	32.5	28.6	25.6	23.2	20.1	10.3
1.75V	149	108	87.3	75.0	66.8	53.0	44.6	37.5	32.3	28.5	25.5	23.1	20	10.3
1.80V	148	107.0	87.0	74.7	66.5	52.6	44.3	37.2	32.1	28.3	25.4	23	19.9	10.2

### CONSTANT POWER DISCHARGE (Watts per cell) at 25°C

End Point Volts/Cell	15min	20min	25min	30min	35min	40min	45min	50min	55min
1.60V	677	573	511	469	423	388	361	335	314
1.65V	673	570	507	466	420	386	359	333	312
1.70V	666	564	503	462	417	383	357	331	309
1.75V	658	558	499	459	415	381	355	328	306
1.80V	649	552	494	455	411	378	352	325	302

End Point Volts/Cell	1h	1.5h	2h	2.5h	3h	4h	5h	6h	7h	8h	9h	10h	12h	24h
1.60V	296	213	172	147	131	103	86.7	73	63.2	55.9	50.2	45.6	39.5	20.3
1.65V	294	212	171	146	130	103	86	73	63	55.7	50	45.4	39.4	20.3
1.70V	291	210	169	145	129	102	86	73	62.8	55.5	49.8	45.2	39.2	20.2
1.75V	288	208	168	144	128	101	86	72	62.5	55.5	49.6	45	39	20.1
1.80V	284	205	166	143	126	100	85.4	71.9	62.2	55	49.4	44.9	38.9	20

### ESC-CYCLE LIFE EXPECTANCY



### Discharge Characteristics

