



**EnerRocket™**  
CONTINUOUSLY SAFEGUARDING

# ES 33-12

SMF VRLA RECHARGEABLE BATTERY

**LONG  
LIFE  
SERIES**

## APPLICATIONS

- UPS Systems
- Telecommunication Systems
- Fire Alarm Safety & Security Systems
- Medical Equipment

## COMPLIANCE STANDARDS

- IEC 60896 PART 21 & 22
- BS6290-4

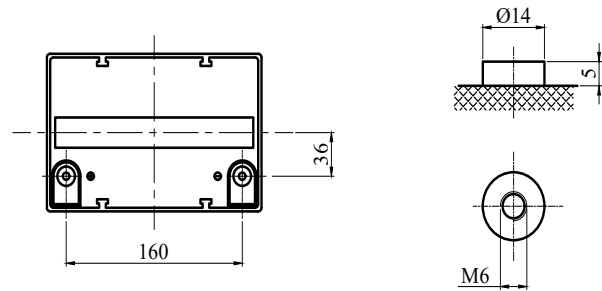
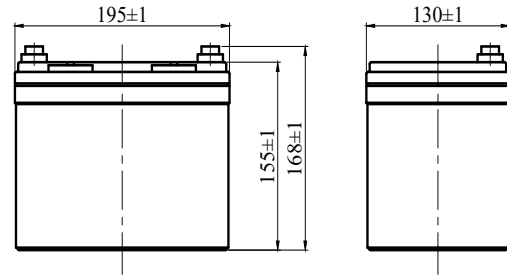
## TECHNICAL FEATURES



- Non-Spillable Sealed Construction
- Seal Lead Acid Battery
- Absorbent Glass Mat System (AGM System)
- ABS (Acrylonitrile Butadiene Styrene) construction (FR optional)
- Gas Recombination
- Venting System for low internal pressure
- Low Self-Discharge
- Heavy-Duty, Highly Optimized Grids
- High Power Output
- Wide Operating Temperature
- Maintenance-Free Operation

## CHARACTERISTICS

Nominal Voltage	12 V	
Design Life	10 Years	
Capacity 25°C (77°F)	10 Hour rate	33.0Ah
	5 Hour rate	27.9Ah
	1 Hour rate	22.3Ah
Internal Resistance (25°C, 100% Charge)	≤ 12mΩ	
Self Discharge (20°C)	1 Month	Remaining Capacity 97%
Operating Temperature	Discharge	-20°C - 60°C
	Charge	-10°C - 60°C
	Storage	-20°C - 60°C
Normal Operating Temperature	25°C ± 3°C	
Maximum Discharge current	330A (5sec)	
Maximum Charging current	9.9A	
Short Circuit Current	850A	
Charge Methods Constant Voltage Charge 77°F (25°C) - Cycle use	14.4 to 14.7V	
	Temp. Compensation -30mV/°C	
Charge methods Constant Voltage Charge 77°F (25°C) - Standby Use	13.4 to 13.8V	
	Temp. Compensation -20mV/°C	



## SPECIFICATIONS

Length	Width	Height	Total Height	Weight (kg)
195 mm	130 mm	155mm	168 mm	9.7 ± 3%

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

End Voltage Volts/Cell	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.60	90.0	69.3	57.1	32.6	22.3	9.08	6.3	3.36	1.81
1.65	81.0	65.0	54.1	31.3	21.9	8.97	6.25	3.35	1.79
1.70	79.0	60.0	51.4	30.4	21.2	8.45	6.15	3.32	1.78
1.75	67.0	56.1	47.8	29.4	20.3	8.25	5.58	3.31	1.78
1.80	59.5	51.4	44.8	28.8	19.8	8.18	5.50	3.30	1.76

### CONSTANT POWER DISCHARGE (Watts) AT 25°C

End Voltage Volts/Cell	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.60	144	122	100.0	65.3	40.9	17.4	12.2	6.0	3.2
1.65	140	116	98.6	61.7	40.5	17.3	11.9	5.9	3.2
1.70	135	110	95.7	60.0	39.9	16.8	11.5	5.8	3.2
1.75	126	104	92.0	58.0	39.1	16.0	11.3	5.8	3.1
1.80	119	97.7	89.0	56.0	38.3	15.2	11	5.7	3.1



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