

CROWN[®]

THE POWER OF 1

VRLA AGM | Non-Spillable | Maintenance-Free

Power Sheet.

12CRV33 AGM Deep Cycle



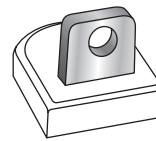
Crown Battery Manufacturing's team of product and application experts welcome the opportunity to discuss your technical requirements during the design and specification stage. To access this support, please contact:

Crown Battery Manufacturing's Product Support Department

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TERMINAL STYLE

Type B2



PHYSICAL SPECIFICATIONS

BCI Group Size	Model Description	Nominal Voltage	Length		Width		Container Height		Terminal Height		Weight		Cover & Container Material	Case to Cover Seal Method
			in	mm	in	mm	in	mm	in	mm	lbs	kgs		
U1L	12CRV33	12	7.68	195	5.12	130	5.95	151	7.36	187	22	10.0	ABS	Heat Seal

ELECTRICAL SPECIFICATIONS

Ampere Hour Capacity (Ah)					Discharge Capacity Minutes					KWH (kWh)	Int Res.	Short Circuit Current
CCA	CA	100 Hr	20 Hr	5 Hr	56A	25A	20A	15A	5A	100 Hr	80°F / 27°C	Amperes
170	210	39	33	28	7	32	54	79	177	0.45	—	330

AGM BATTERY STATE OF CHARGE MEASUREMENT

State of Charge Percentage	100%	75%	50%	25%	0%
Open Circuit Voltage - Cell	2.14	2.09	2.04	1.99	1.94
Open Circuit Voltage - Battery	12.84	12.54	12.24	11.94	11.64

APPLICATION NOTES

Operating Temperature Range	Self Discharge	Terminal Torque Specifications	Best Practices
<p>Maximum Limit -4°F to 120°F (-20°C to 49°C) with proper temperature compensation controls. Lead acid batteries are temperature sensitive: refer to the temperature / capacity projection chart to identify available capacity at the application operating temperature.</p> <p>Application Note: Maintain a state of charge greater than 60% when operating batteries at temperatures below 32°F (0°C).</p>	<p>Approximately 3% per month at 80°F (27°C). Rate of self discharge will vary depending on storage temperature.</p> <p>Freshening charge recommended for inventory at 75% SOC voltage.</p>	<p>SAE / Automotive Terminal: 50 to 70 in-lbs / 6 to 8 Nm</p> <p>Stainless Threaded Terminal: 100 to 120 in-lbs / 11 to 14 Nm</p> <p>Battery terminal connections should be secured and tight at all times. Replace torn or damaged cabling or connectors.</p>	<p>Safety is Your Responsibility! Keep sparks, flames and cigarettes away from batteries at all times. Maintain good ventilation when working on or charging batteries.</p> <p>Keep batteries and terminal connections clean, dry and free of dirt and corrosion. Do not tamper with vent structures.</p> <p>Optimize the life of your batteries by limiting duty cycle depth of discharge to 75% or less.</p> <p>Charging service must be performed with equipment configured to support the charging recommendations herein. Opportunity charging service can be performed when batteries are no more than 50% discharged. Batteries must be fully recharged after the termination of duty cycle usage. Chronic under-charge or over-charge will shorten battery life.</p>

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CYCLIC CHARGING

Constant Voltage Charging	
CYCLE CHARGE:	14.40 - 14.82 V
FLOAT CHARGE:	13.20 V
TEMPERATURE CORRECTION:	+/- 3 mV / °C
RECOMMENDED CHARGE CURRENT:	5 Amperes
MAXIMUM CHARGE CURRENT:	10 Amperes

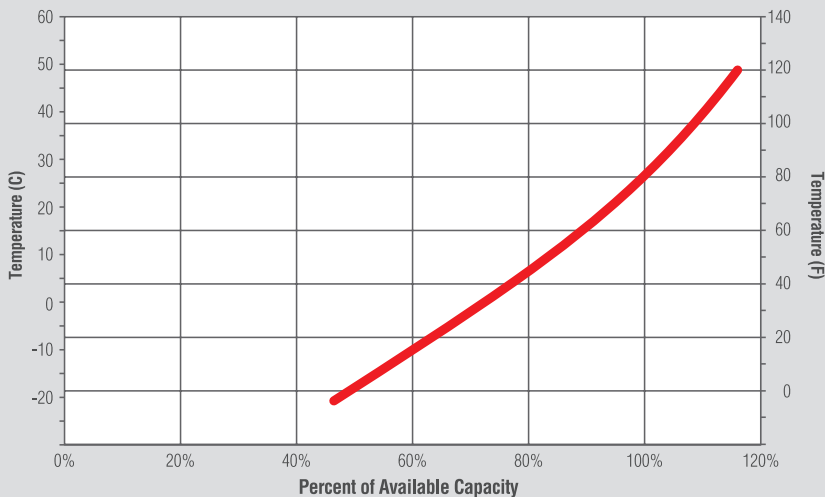
Cyclic applications exceeding 50% depth-of-discharge may require different charger voltage set points. Contact Crown Battery to discuss your application requirements.

RENEWABLE POWER CHARGING

Proper charging of renewable power batteries is essential to optimize the performance and life of the batteries. To ensure dependability and life batteries should be charged after each discharge period. Regular monitoring of battery voltage condition is recommended to verify system recharging performance. Refer to the following table for additional charge control setting information.

Voltage Setting	VPC	System Voltage		
		12 Volts	24 Volts	48 Volts
Bulk	2.40-2.45	14.40-14.70	28.80-29.40	57.60-58.80
Absorption	2.47	14.82	29.64	59.28
Float	2.20	13.20	26.40	52.80

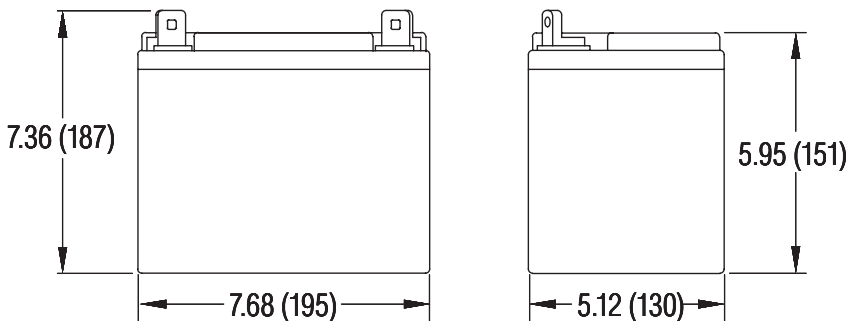
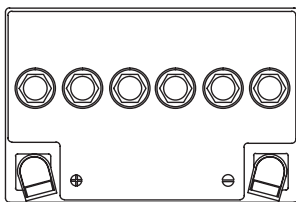
AVAILABLE CAPACITY AT APPLICATION OPERATING TEMPERATURE



Effect of Ambient Temperature on Battery Life

Typical battery life is based upon a baseline operating temperature of 80°F / 27°C. Temperature increases of 15°F / 10°C over the baseline will cause the battery's rate of internal chemical reactions to double – something that will reduce battery life due to the accelerated deterioration of internal components.

Please contact Crown Battery to discuss any minimal requirements for battery life when operating batteries in temperatures greater than 80°F / 27°C.



The Power Behind Performance



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The data shown are nominal and should not be construed as maximum or minimum values for specification or final design. Data for this product type may vary from that shown herein.

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