

# TECHNICAL DATA SHEET FOR DEEP CYCLE BATTERY



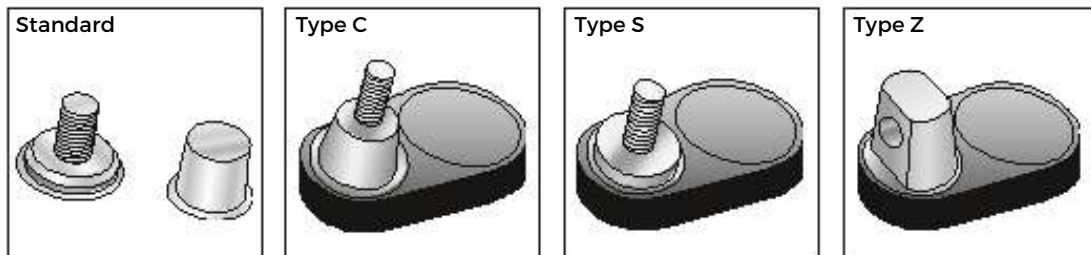
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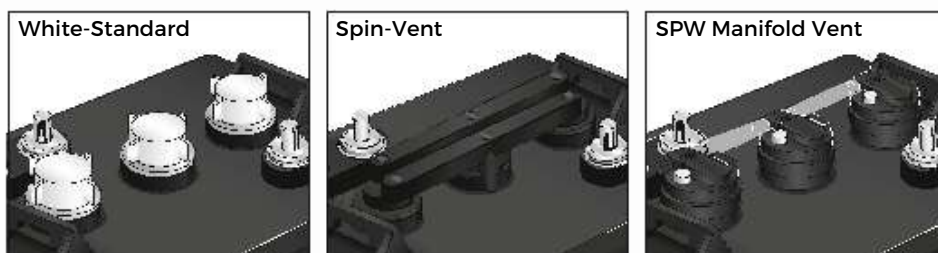
## Application

Crown Battery Manufacturing's team of research and development engineers welcome the opportunity to discuss your technical requirements during the design and specification stage. To access this technical assistance, please contact:

## AVAILABLE TERMINAL STYLES:



## VENT CAP OPTIONS:



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## PHYSICAL SPECIFICATIONS

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		
6PP-235	6V	10.25	260	7.06	179	9.88	251	10.94	278	63	28.6	Polypropylene	Heat Seal

## ELECTRICAL SPECIFICATIONS

Ampere Hour Capacity (Ah)							Discharge Capacity Minutes					KWH (kWh)	Internal Resistance
100Ah	72 Ah	48Ah	20Ah	10Ah	5Ah	2Ah	100A	75A	50A	25A	10A	100 Hr	80°F / 27°C
63	28.6	10.25	260	7.06	179	9.88	251	10.94	278	63	28.6	1.740	5.1mΩ

## CHARGING INSTRUCTIONS

Power Protectors specifies the following standard battery charge profile for the CR-235 deep cycle battery when used in an electric vehicle service:

**Phase 1: Constant Current (I1)I1 =**  
highest amperage available < 60 amps

**Phase 1: Constant Current (I1)I1 =**  
minimum amperage available > 25 amps Normal transition to Phase 2 at 2.37 Volts Per Cell.  
Safety transition to END OF CHARGE of  $dV / dt < 0V / 1 \text{ hr}$ ,  $dt = 1 \text{ hr}$ . (NEGATIVE SLOPE).  
Timeout for Phase 1 = 10 hours.

**Phase 2: Constant Voltage (U2)U2 =**  
2.37 VPC

Normal Transition to Phase 3 at  $I2 = 5.0 \text{ amps}$  or approximate.  
Safety transition to END OF CHARGE of  $I \text{ dI/dt } I < 0.4 \text{ amp} / 1 \text{ hr}$ ,  $dt = 1 \text{ hr}$ .

**Phase 3: Constant Current (I3)I3 =**  
5.0 amps or approximate

Normal transition to END OF CHARGE at  $I15 -118\%$  of AH returned.

## APPLICATION RECOMMENDATIONS

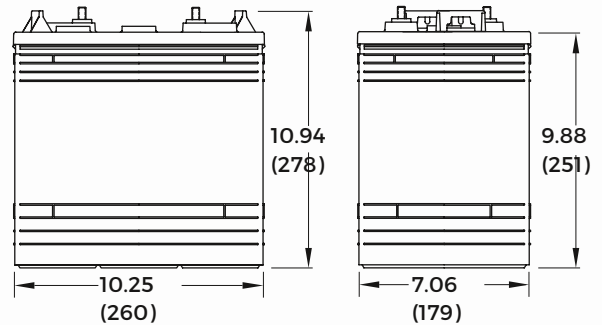
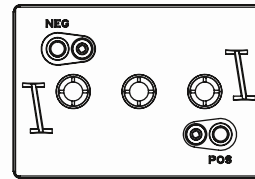
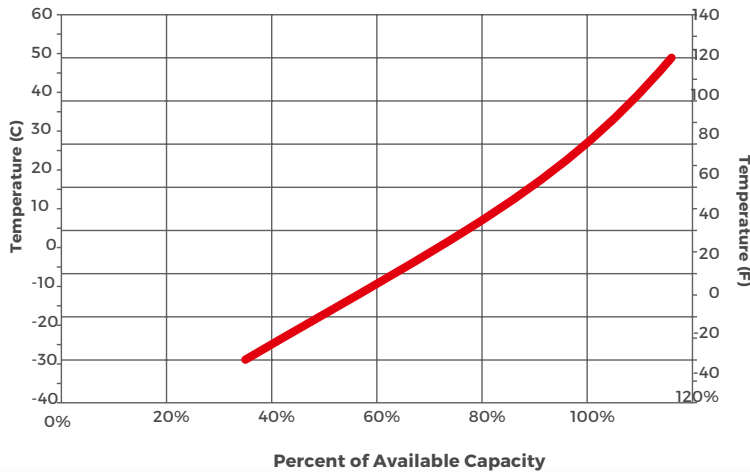
Specific Gravity	Operating Temperature Range	Self Discharge	Terminal Torque Specifications
Fully charged battery specific gravity (100% state-of-charge) is 1.275  Fully discharged battery specific gravity (100% depth-of-discharge) is 1.125	-40°F to 120°F (-40°C to 49°C). Flooded lead acid battery capacities are temperature sensitive: refer to the temperature / capacity projection chart below to identify available capacity at the application operating temperature. Application Note: Maintain a state of charge greater than 60 percent when operating flooded lead acid batteries at temperatures below 32°F (0°C).	Fully charged batteries that are stored at a temperature of 80°F (27°C) will self-discharge at a rate of 3.5% per week.	SAE / Automotive Terminal Style: 50 to 70 in-lbs / 6 to 8 Nm Stainless Threaded Terminal (Types C, S, Z): 100 to 120 in-lbs / 11 to 14 Nm

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**POWER  
PROTECTORS**  
www.power-protectors.com

## AVAILABLE CAPACITY AT APPLICATION OPERATING TEMPERATURE



## TYPICAL BATTERY CYCLE LIFE / DEPTH OF DISCHARGE

Battery Model	100% DOD Cycles	End Cycle Voltage	50% DOD Cycles	End Cycle Voltage	40% DOD Cycles	End Cycle Voltage	20% DOD Cycles	End Cycle Voltage
6PP-235	500	1.75 VPC	1200	1.94 VPC	1500	1.97 VPC	3000	2.05 VPC



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