

MODEL **31-AES**
 VOLTAGE **12**
 CAPACITY **102Ah @ 20Hr**
 MATERIAL **Polypropylene**
 BATTERY **VRLA AGM / Non-Spillable / Maintenance-Free**
 COLOR **Maroon**
 WATERING **No Watering Required**



12 VOLT

PHYSICAL SPECIFICATIONS

BCI	MODEL NAME	TERMINAL TYPE	DIMENSIONS ° INCHES (mm)			WEIGHT ° LBS. (kg)	HANDLES	INSTALLATION ORIENTATION
			LENGTH	WIDTH	HEIGHT ° F			
29	31-AES	M8/DT				69 (31)	Plastic Handle	Horizontal and Vertical
			12.80 (325)	6.81 (173)	9.37 (238)			

ELECTRICAL SPECIFICATIONS

VOLTAGE	CRANKING PERFORMANCE		CAPACITY ° MINUTES	CAPACITY ° AMP-HOURS (Ah)				ENERGY (kWh)	INTERNAL RESISTANCE (mΩ)	SHORT CIRCUIT CURRENT (amps)
	C.C.A. ° @0°F	C.A. ° @32°F	@ 25 Amps	5-Hr	10-Hr	20-Hr	100-Hr	100-Hr		
12									4.80	2555
	657	788	180	82	-	102	-	-		

CHARGING INSTRUCTIONS

CHARGER VOLTAGE SETTINGS (AT 77°F/25°C)				
SYSTEM VOLTAGE	12V	24V	36V	48V
Maximum Charge Current (A)	50% of C ₂₀			
Absorption Voltage (2.40 V/cell)	14.40	28.80	43.20	57.60
Float Voltage (2.25 V/cell)	13.50	27.00	40.50	54.00

Do not install or charge batteries in a sealed or non-ventilated compartment. Constant under or overcharging will damage the battery and shorten its life as with any battery.

CHARGING TEMPERATURE COMPENSATION

ADD	SUBTRACT
0.005 volt per cell for every 1°C below 25°C 0.0028 volt per cell for every 1°F below 77°F	0.005 volt per cell for every 1°C above 25°C 0.0028 volt per cell for every 1°F above 77°F

OPERATIONAL DATA

OPERATING TEMPERATURE	SELF DISCHARGE
-40°F to 140°F (-40°C to +60°C). At temperatures below 32°F (0°C) maintain a state of charge greater than 60%.	Less than 3% per month depending on storage temperature conditions

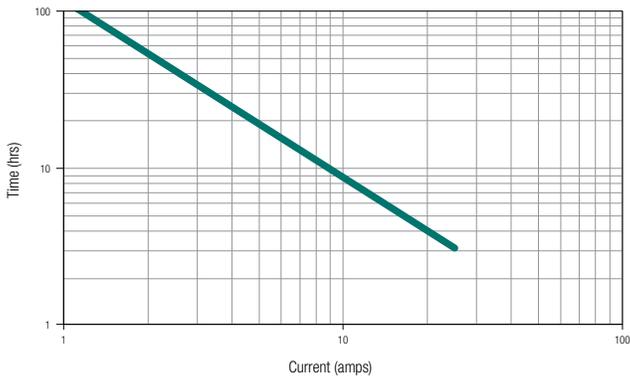
RECYCLE RESPONSIBLY



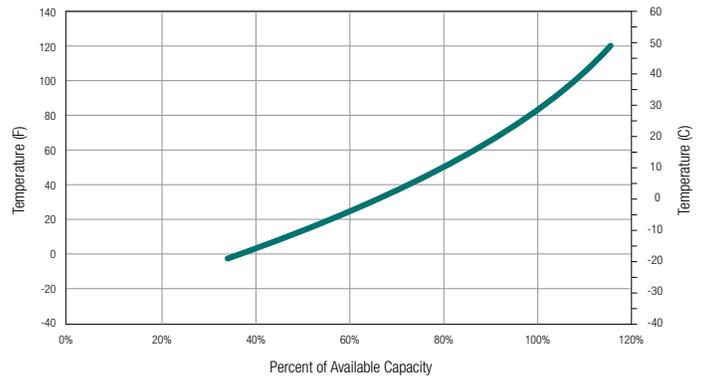
STATE OF CHARGE MEASURE OF OPEN-CIRCUIT VOLTAGE

PERCENTAGE CHARGE	CELL	12 VOLT
100	2.14	12.84
75	2.09	12.54
50	2.04	12.24
25	1.99	11.94
0	1.94	11.64

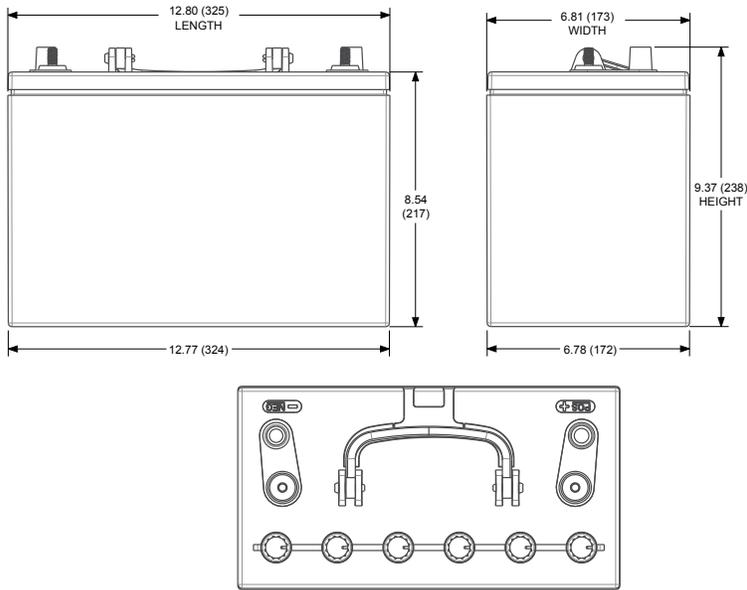
TROJAN 31-AES PERFORMANCE



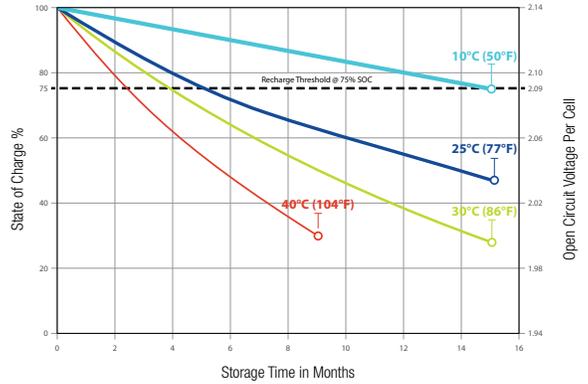
PERCENT CAPACITY VS. TEMPERATURE



BATTERY DIMENSIONS (shown with DT)



SELF DISCHARGE VS. TIME^H



TERMINAL TYPE^G

15	M8	M8	6	DT	AUTOMOTIVE POST & STUD
	<p>Battery Height with Terminal in Inches (mm) 8.69 (221)</p> <p>Torque Values in-lb (Nm) Bolt: 85 – 90 (10 – 11)</p>			<p>Battery Height with Terminal in Inches (mm) 9.37 (238)</p> <p>Torque Values in-lb (Nm) Connected to Stud: 95 – 105 (11 – 12) Connected to AP: 50 – 70 (6 – 8)</p> <p>Bolt Size 5/16" – 18</p>	

- A. The number of minutes a battery can deliver when discharged at a constant rate at 80°F (27°C) and maintain a voltage above 1.75 V/cell. Capacities are based on peak performance.
- B. The amount of amp-hours (Ah) a battery can deliver when discharged at a constant rate at 80°F (27°C) and maintain a voltage above 1.75 V/cell. Capacities are based on peak performance.
- C. Dimensions may vary depending on type of handle or terminal. Batteries should be mounted with 0.5 inches (12.7 mm) spacing minimum.
- D. C.C.A. (Cold Cranking Amps) - the discharge load in amperes which a new, fully charged battery can maintain for 30 seconds at 0°F (-18°C) at a voltage above 1.2 V/cell.
- E. C.A. (Cranking Amps) - the discharge load in amperes which a new, fully charged battery can maintain for 30 seconds at 32°F (0°C) at a voltage above 1.2 V/cell. This is sometimes referred to as marine cranking amps @ 32°F or M.C.A. @ 32°F.
- F. Height taken from bottom of the battery to the highest point on the battery. Heights may vary depending on type of terminal.
- G. Terminal images are representative only.
- H. Batteries in storage should be charged when they decline to 75% State of Charge (SOC).
- I. Weight may vary.



Designed in compliance with applicable BCI, DIN, BS and IEC standards.
Tested in compliance to BCI and IEC standards.



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