


REVISIONS				
REV	ECO	DESCRIPTION	DATE	BY
A	3391	- PRODUCTION RELEASE	4/16/01	BF

21023AGM BATTERY ISOLATOR



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES [MM] TOLERANCES ARE: XX ± [X ±] XXX ± [XX ±] < ± DO NOT SCALE THIS DRAWING		 SURE POWER INDUSTRIES, INC. <small>TUALATIN, OREGON USA 97082</small>	
APPROVALS DRAWN ENGR APPR		TITLE GM PART NO: 15032501 SURE POWER MODEL: 21023AGM MULTI BATTERY ISOLATOR W/EXCITATION SPECIFICATION/OUTLINE	
DATE 		SIZE B	CAGE CODE NO. 55156
		DWG NO. 21023AGM	REV A
		SCALE: None	FILE: 21023AGM
		SHEET 1	OF 4

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		-----See sheet 1-----		

FUNCTIONAL DESCRIPTION

The Battery Isolator Module is part of the vehicle Charging & Energy Storage System. It shall isolate the vehicle's main system battery/batteries from the vehicle's auxiliary battery during vehicle non-running, cranking and running operation while providing a connection to charge both systems. It is capable of conducting up to 170 amps at 100°C and 210 amps at 85°C. In addition, the Battery Isolator Module will provide a voltage feed to the generation output stud during ignition run operation. The Battery Isolator Module shall conform to Component Technical Specification TX – 133688 for 12 Volt, 210 Maximum Current operation.


ENVIRONMENTAL SPECIFICATIONS

The isolator is sealed and protected against dust, road splash, engine oil, gasoline, ethylene, brake fluid, washer solvent, and auto transmission fluid. The isolator is protected against shock and vibration.

Characteristic	Parameter	Units	Notes
Operational Temperature Range	-40 TO +100	°C	Ambient temperature measured 25mm from end of isolator
Storage Temperature Range	-45 TO +150	°C	
Humidity	0 to 100	%RH	
Sodium Chloride Spray	168	Hrs	Continuous at 35°C
Calcium Chloride Spray	168	Hrs	Continuous at 35°C

ELECTRICAL SPECIFICATIONS

Characteristic	Symbol	MIN	TYP	MAX	Unit	Notes:
“A” Terminal Input voltage	V _A	9	15	16	V	Guaranteed operation within specification.
“E” Terminal Input voltage	V _E	9	12.6	16	V	Guaranteed operation within specification.
Forward Voltage drop	V _F	0.5		1.2	V	

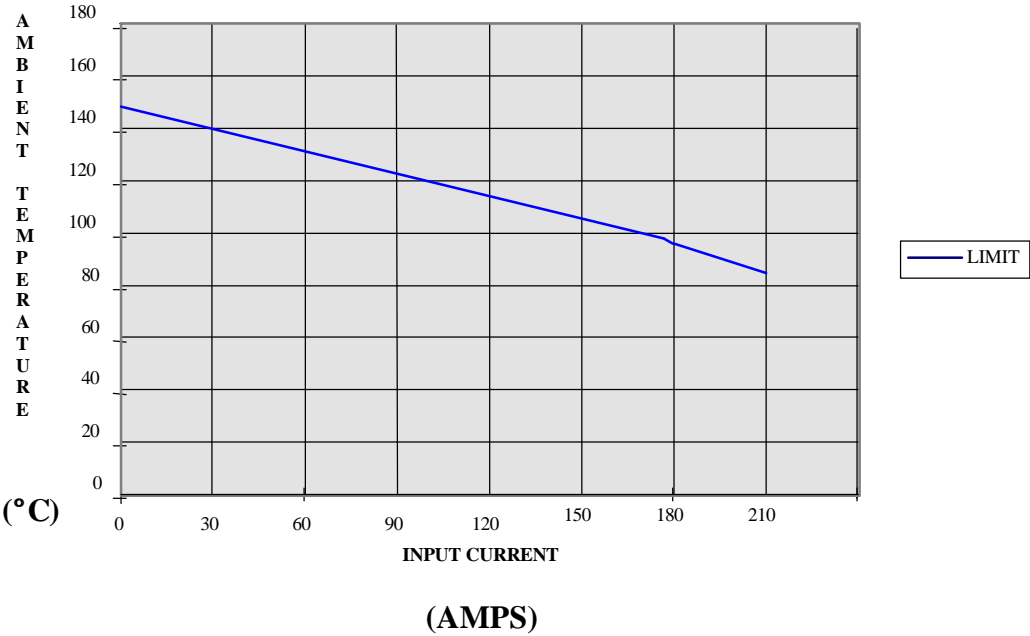
			
TITLE GM PART NO: 15032501 SURE POWER MODEL: 21023AGM MULTI BATTERY ISOLATOR W/EXCITATION SPECIFICATION/OUTLINE			
SIZE	CAGE CODE NO.	DWG NO.	REV
B	55156	21023AGM	A
SCALE: None		FILE: 21023AGM	SHEET 2 OF 4


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Electrical characteristics continued

Characteristic	Symbol	MIN	TYP	MAX	Unit	Notes:
Input Reverse Polarity	V _{REV}		12.6	300	V	Electronically protected
“E” Terminal Current	I _E			25	A	Shall be vehicle system protected with a 6 amp auto reset circuit breaker or equivalent.
Voltage drop deviation due to radiation	V _R			0.25	V	GM specification GM9112P
Radiated Emissions						GM specification GM9114P
Conducted Immunity						GM specifications GM9116P, GM9119P, GM9117P, and GM9105P
Leakage Current	I _{LEAK}			0.5	mA	25°C ambient temperature, 12.6V battery voltage

Maximum current for ambient temperature:





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 MULTI BATTERY ISOLATOR W/EXCITATION
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SCALE: None **FILE:** 21023AGM **SHEET** 3 **OF** 4

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MECHANICAL SPECIFICATIONS

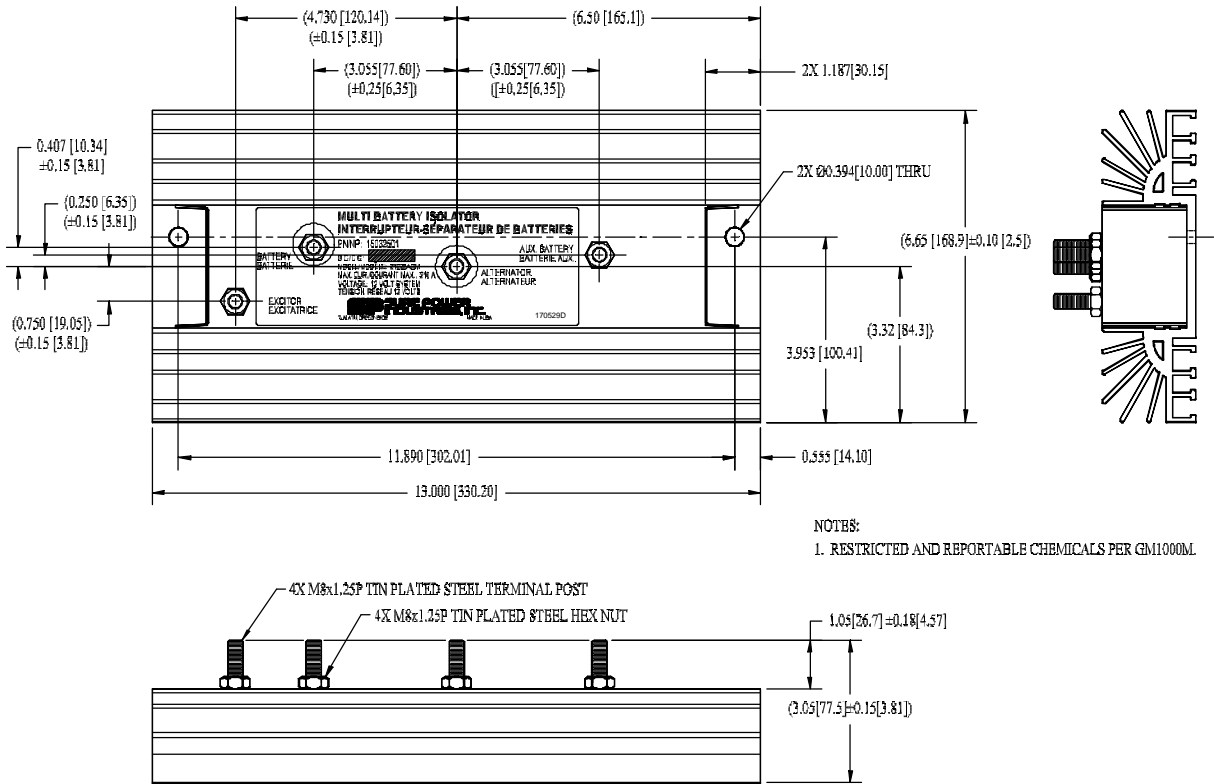
Connectors: Four (4) M8x1.25 tin-plated steel terminal posts, each with one (1) M8x1.25 tin-plated steel hex nut connected with a torque range of 5.5 – 7 Newton-meters. Tin is plated per ASTM B545 - 97, to a coating thickness of 0.0003 to 0.0005 inches. Connections to the terminals will be made with a nut torque range of 7 – 10 Newton-meters.

Housing: 6063-T5 aluminum, black anodized per ASTM B117 - 97 to a coating thickness of 0.002 inches, with epoxy encapsulation.

Label Material: White Computer Imprintable Mylar with Clear Gloss Mylar Laminate, meets GM6121M, Type B, High Temperature Resistance

Weight: 8.55lb / 3.88kg

UNIT DIMENSIONS



NOTES:
1. RESTRICTED AND REPORTABLE CHEMICALS PER GM1000M.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES [MM]
TOLERANCES ARE:
XX ± 0.25 [X ± 6.4]
XXX ± 0.030 [XX ± 0.76]
< ±
DO NOT SCALE THIS DRAWING

APPROVALS	DATE
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APPR	

TUALUM, OREGON USA 97082

TITLE		GM PART NO: 15032501	
SURE POWER MODEL: 21023AGM			
MULTI BATTERY ISOLATOR W/EXCITATION			
SPECIFICATION/OUTLINE			
SIZE	CASE CODE NO.	DWG NO.	REV
B	55156	21023AGM	A
SCALE: None	FILE: 21023AGM	SHEET 4	OF 4