MNKID Sizing Tool

PV Module Data		
Power	100	Watts
VOC	22.50	Volts
VMP	18.9	Volts
ISC	5.75	Amps
IMP	5.29	Amps
VOC Temp Coef %	0.33	C
VMP Temp Coef %	0.45	Amps
Environmental Data		
Coldest Ambient Temperature	-30	C
Hottest Ambient Temperature	40	C
Nominal Battery Volts	12	Volts
PV Array		
Number Of Modules In Series	2	
Number Of Parallel Strings	3	
Total Modules	6	
Rated PV Array Power	600	Watts
Anticipated Array Power @ 40 C	560	Watts
Rated PV Array Current	15.87	Amps
Battery Charging Current @ 14.4V	41.7	Amps
VMP (Maximum Power Point Voltage	37.8	Volts
VOC (Open Circuit Voltage)	45	Volts
VMP @ -30 C	47.2	Volts
VOC @ -30 C	53.2	Volts

Charge Controller	
Max Operating Voltage	150
Max Non Operating VOC (HyperVOC) @ 48V Nominal Bat Voltage	162
Maximum Number Of Modules In Series Configuration	5
Max Allowable Output Current Per KID Based On This Current	30
Max Allowable Wattage Per KID Based On This Configuration	432
Present PV Array Wattage Of This Configuration	600
Design Check	
Max VOC	**OK**
Temp The MNKID Enters HyperVOC	-682 CÂ°
Array Power (Wattage)	**EXCESSIVE**
Classics Required	**1.4**

NOTE: MidNite Solar recommends a second controller be added after 1.2
WARNING: MidNite Solar makes no representation, warranty or assumption of liability regarding the use of the String Calculator. This tool uses data provided by other parties (such as PV module specs) and makes calculations based on assumptions which may or may not prove to be valid.

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