



**SILENT KNIGHT**

5496 Power Expander Calculations  
Version 02.24.09

Global Project Values:

Project Name:   
Project ID:   
Prepared By:   
Date:

Standby Hours:   
Alarm Mins:   
Derating Factor:   
Voltage Drop Warning  
Threshold %:

Panel ID:   
Location:

Model: 5496 Power Expander  
Volts: 24 VDC

Max NAC Current: 3.0 Amps  
Max Panel Current: 6.0 Amps

Part.#	Description	Qty	Current Draw		Wire AWG & Type	Ohms Per 1000 Ft.	Length(ft) One-Way	Actual Ohms	Volts @ EOL	%Drop
			Standby	Alarm						
5496	5496 Pwr Module	1	0.040	0.160						
NAC #1	Notification Appl Circuit		0.000	1.400	#12 Solid	1.59		0.00	20.40	0.00%
NAC #2	Notification Appl Circuit		0.000	1.400	#12 Solid	1.59		0.00	20.40	0.00%
NAC #3	Notification Appl Circuit		0.000	0.540	#12 Solid	1.59		0.00	20.40	0.00%
NAC #4	Notification Appl Circuit		0.000	0.000	#12 Solid	1.59		0.00	20.40	0.00%
Total Standby Current (Amps)			0.040	3.500	Total Alarm Current (Amps)					
Standby Time In Hours			24	0.083	Alarm Time In Minutes / 60 (5 Mins)					
Total Standby AH Required			0.960	0.292	Total Alarm AH Required					
Total Combined AH Required			1.25		<b>Command Shortcuts</b>					
Multiply By The Derating Factor			1.20							
Minimum Battery AmpHours Required			<b>1.50</b>							

Wire resistance is taken from Chapter 9 Table 8 of the National Electric Code (NFPA70).