SK-4 Battery Calculation

Secondary Power Source Requirements

	Standby Current (amps)					Secondary Alarm Current (amps)				
Device Type	**Qty**		**Current Draw**		**Total**	**Qty**		**Current Draw**		**Total**
SK-4 Fire Panel	1	x	0.085000	=	0.085000	1	x	0.175000	=	0.175000
SK-XRM24		x	0.000000	=			x	0.000000	=	
SK-4XTM		x	0.005000	=			x	0.011000	=	
SK-CAC-4		x	0.001000	=			x	0.001000	=	
SK-4XZM		x	0.004000	=			x	0.008000	=	
SK-RZA4		x	0.004000	=			x	0.019000	=	
SK-4XLM		x	0.000000	=			x	0.000000	=	
Conventional Detectors	1	x	0.000050	=	0.000050	1	x	0.000000	=	0.000000
EOLR-1		x	0.020000	=			x	0.020000	=	
Miscellaneous Device 1		x	0.000000	=			x	0.000000	=	
Miscellaneous Device 2		x	0.000000	=			x	0.000000	=	
Miscellaneous Device 3		x	0.000000	=			x	0.000000	=	
Miscellaneous Device 4		x	0.000000	=			x	0.000000	=	
Miscellaneous Device 5		x	0.000000	=			x	0.000000	=	
NAC 1							x	0.000000	=	
NAC 2							x	0.000000	=	
Resettable 1			0.000000	=				0.000000	=	
Constant-Power 1			0.000000	=				0.000000	=	
			Total Standby Load		**0.085050**			**Total Alarm Load**		**0.175000**

SK-4 Battery Calculation

Note 1: You are fully responsible for verifying these calculations.
Note 2: Use the dropdowns in the **yellow** cells to enter values.

Calculation in Total Sheet

		Required Standby Time in Hours			
		24 Hours			
Standby Load Current	**0.08505 Amps**	x	24	=	2.041 AH
		Required Alarm Time in Minutes			
		5 Minutes			
Alarm Load Current (Amps)	**0.17500 Amps**	x	0.084	=	0.015 AH
			Total Current Load		**2.056 AH**
	Multiply by the Derating Factor		1.2	=	x 1.20
			Total Ampere Hours Required		**2.47 AH**

Recommended Batteries:	**BAT-1270 - 7AH Batteries**

Battery Check
The batteries can be charged by the SK-4 Charger.
The batteries can be housed in the SK-4 Cabinet.

Current Draw Check
NAC#1 current is within the limitations of the circuit.
NAC#2 current is within the limitations of the circuit.
SK-4 Control Panel: The output current is within the panel's limitations.

SK-4 Circuit Detail

NAC 1

Device	**Qty**		**Non-Alarm Draw**		**Total**	**Qty**		**Alarm Draw**		**Total**
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
			Total Standby Load		**0.000000**			**Total Alarm Load**		**0.000000**

NAC 2

Device	**Qty**		**Non-Alarm Draw**		**Total**	**Qty**		**Alarm Draw**		**Total**
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
			Total Standby Load		**0.000000**			**Total Alarm Load**		**0.000000**

Resettable 1

Device	**Qty**	**Non-Alarm Draw**	**Total**	**Qty**	**Alarm Draw**	**Total**

		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		Total Standby Load			**0.000000**		**Total Alarm Load**			**0.000000**

Constant-Power 1										
Device	**Qty**	**Non-Alarm Draw**			**Total**	**Qty**	**Alarm Draw**			**Total**
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		Total Standby Load			**0.000000**		**Total Alarm Load**			**0.000000**

Honeywell SILENT KNIGHT

SK-4 EOL Voltage Drop

Starting Voltage	20.4 Volts
Minimum Voltage @ EOL	16 Volts
Voltage Drop Warning %	10.00%

	Current Draw	Wire Type	Resistance	Length	Actual Resistance	Voltage @ EOL	Percent Drop
Circuit Name	Amps	AWG	Ohms/1000 ft.	Feet (One Way)	Ohms	Volts	Percent
NAC 1	0.000	#14 Solid	3.07	0	0.00	20.40	0.00%
NAC 2	0.000	#14 Solid	3.07	0	0.00	20.40	0.00%

DIAMOND ELECTRONICS	P2	SK-PS10 Battery Calculation								
		Secondary Power Source Requirements								
		Standby Current (amps)					Secondary Alarm Current (amps)			
Device Type	Qty	Current Draw			Total		Qty	Current Draw		Total
SK-PS10 Power Module	1	X	0.1560	=	0.1560		1	X	0.1850	=	0.1850
NAC / Output # 1			0.0000	=	0.0000				2.1690	=	2.1690
NAC / Output # 2			0.0000	=	0.0000				0.8470	=	0.8470
NAC / Output # 3			0.0000	=	0.0000				0.7390	=	0.7390
NAC / Output # 4			0.0000	=	0.0000				0.7390	=	0.7390
NAC / Output # 5			0.0000	=	0.0000				1.8600	=	1.8600
NAC / Output # 6			0.0000	=	0.0000				2.1690	=	2.1690
NAC / Output # 7			0.0000	=	0.0000				0.0000	=	0.0000
			Total Standby Load		0.1560				Total Alarm Load		8.7080

DIAMOND ELECTRONICS	P2	SK-PS10 Battery Calculation
	Note 1: You are fully responsible for verifying these calculations. Note 2: You only need to make entries in the yellow cells	

Calculation in Total Sheet

		Required Standby Time in Hours			
		24 Hours			
Standby Load Current (Amps)	0.1560 Amps	X	24	=	3.744 AH
		Required Alarm Time in Hours			
		5 Minutes			
Alarm Load Current (Amps)	8.7080 Amps	X	0.084	=	0.731 AH
			Total Current Load		4.48 AH
	*Multiply by the Derating Factor		1.2	=	x 1.20
			Total Ampere Hours Required		5.37 AH

Recommended Batteries:	BAT-1270 - 7AH Batteries

* Derating Factor required to compensate for the non-linear discharge characteristic of a battery.

DIAMOND ELECTRONICS	P2	SK-PS10 Circuit Detail								
		NAC / Output # 1								
Device	Qty	Non-Alarm Draw			Total		Qty	Alarm Draw		Total
P2WK @ 15 Candela	1	x	0.000000	=	0.000000		1	x	0.091000	=	0.091000
P2WH-LF @ 185 Candela	4	x	0.000000	=	0.000000		4	x	0.417000	=	1.668000
SWL @ 15 Candela	2	x	0.000000	=	0.000000		2	x	0.043000	=	0.086000
HWL-LF	3	x	0.000000	=	0.000000		3	x	0.108000	=	0.324000
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
			Total Standby Load		0.000000				Total Alarm Load		2.169000

NAC / Output # 2											
Device	Qty	Non-Alarm Draw			Total		Qty	Alarm Draw		Total
P2WK @ 15 Candela	1	x	0.000000	=	0.000000		1	x	0.091000	=	0.091000
HWL-LF	7	x	0.000000	=	0.000000		7	x	0.108000	=	0.756000
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
			Total Standby Load		0.000000				Total Alarm Load		0.847000

NAC / Output # 3											
Device	Qty	Non-Alarm Draw			Total		Qty	Alarm Draw		Total
P2WK @ 15 Candela	1	x	0.000000	=	0.000000		1	x	0.091000	=	0.091000
HWL-LF	6	x	0.000000	=	0.000000		6	x	0.108000	=	0.648000
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	

		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
Total Standby Load					**0.000000**	**Total Alarm Load**				**0.739000**

NAC / Output # 4										
Device	**Qty**	**Non-Alarm Draw**			**Total**	**Qty**	**Alarm Draw**			**Total**
P2WK @ 15 Candela	1	x	0.000000	=	0.000000	1	x	0.091000	=	0.091000
HWL-LF	6	x	0.000000	=	0.000000	6	x	0.108000	=	0.648000
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
Total Standby Load					**0.000000**	**Total Alarm Load**				**0.739000**

NAC / Output # 5										
Device	**Qty**	**Non-Alarm Draw**			**Total**	**Qty**	**Alarm Draw**			**Total**
P2WK @ 15 Candela	1	x	0.000000	=	0.000000	1	x	0.091000	=	0.091000
P2WH-LF @ 185 Candela	3	x	0.000000	=	0.000000	3	x	0.417000	=	1.251000
SWL @ 15 Candela	2	x	0.000000	=	0.000000	2	x	0.043000	=	0.086000
HWL-LF	4	x	0.000000	=	0.000000	4	x	0.108000	=	0.432000
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
Total Standby Load					**0.000000**	**Total Alarm Load**				**1.860000**

NAC / Output # 6										
Device	**Qty**	**Non-Alarm Draw**			**Total**	**Qty**	**Alarm Draw**			**Total**
P2WK @ 15 Candela	1	x	0.000000	=	0.000000	1	x	0.091000	=	0.091000
P2WH-LF @ 185 Candela	4	x	0.000000	=	0.000000	4	x	0.417000	=	1.668000
SWL @ 15 Candela	2	x	0.000000	=	0.000000	2	x	0.043000	=	0.086000
HWL-LF	3	x	0.000000	=	0.000000	3	x	0.108000	=	0.324000
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
Total Standby Load					**0.000000**	**Total Alarm Load**				**2.169000**

NAC / Output # 7										
Device	**Qty**	**Non-Alarm Draw**			**Total**	**Qty**	**Alarm Draw**			**Total**
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
Total Standby Load					**0.000000**	**Total Alarm Load**				**0.000000**

DIAMOND ELECTRONICS	**P2**	**SK-PS10 EOL Voltage Drop**
Starting Voltage	20.4 Volts	
Minimum Voltage @ EOL	16 Volts	
Voltage Drop Warning %	10.00%	

	Current Draw	Wire Type	Resistance	Length	ual Resista	oltage @ E	Percent Drop
Circuit Name	Amps	AWG	Ohms/1000 ft.	Feet (One Way)	Ohms	Volts	Percent
NAC / Output # 1	2.169	#14 Solid	3.07	100	0.61	19.07	6.53%
NAC / Output # 2	0.847	#14 Solid	3.07	100	0.61	19.88	2.55%
NAC / Output # 3	0.739	#14 Solid	3.07	125	0.77	19.83	2.78%
NAC / Output # 4	0.739	#14 Solid	3.07	125	0.77	19.83	2.78%
NAC / Output # 5	1.860	#14 Solid	3.07	150	0.92	18.69	8.40%
NAC / Output # 6	2.169	#14 Solid	3.07	150	0.92	18.40	9.79%
NAC / Output # 7	0.000	#14 Solid	3.07	0	0.00	20.40	0.00%

DIAMOND ELECTRONICS	P3	SK-PS10 Battery Calculation								
		Secondary Power Source Requirements								
		Standby Current (amps)					Secondary Alarm Current (amps)			
Device Type	Qty		Current Draw		Total		Qty		Current Draw		Total
SK-PS10 Power Module	1	X	0.1560	=	0.1560		1	X	0.1850	=	0.1850
NAC / Output # 1			0.0000	=	0.0000				0.8470	=	0.8470
NAC / Output # 2			0.0000	=	0.0000				0.8470	=	0.8470
NAC / Output # 3			0.0000	=	0.0000				0.7390	=	0.7390
NAC / Output # 4			0.0000	=	0.0000				0.7390	=	0.7390
NAC / Output # 5			0.0000	=	0.0000				0.8470	=	0.8470
NAC / Output # 6			0.0000	=	0.0000				0.8470	=	0.8470
NAC / Output # 7			0.0000	=	0.0000				0.0000	=	0.0000
			Total Standby Load		0.1560				Total Alarm Load		5.0510

DIAMOND ELECTRONICS	P3	SK-PS10 Battery Calculation			
	Note 1: You are fully responsible for verifying these calculations. Note 2: You only need to make entries in the yellow cells				
	Calculation in Total Sheet				
			Required Standby Time in Hours		
			24 Hours		
Standby Load Current (Amps)	0.1560 Amps	X	24	=	3.744 AH
			Required Alarm Time in Hours		
			5 Minutes		
Alarm Load Current (Amps)	5.0510 Amps	X	0.084	=	0.424 AH
			Total Current Load		4.17 AH
	*Multiply by the Derating Factor		1.2	=	x 1.20
			Total Ampere Hours Required		5.00 AH

Recommended Batteries:	BAT-1270 - 7AH Batteries

* Derating Factor required to compensate for the non-linear discharge characteristic of a battery.

DIAMOND ELECTRONICS	P3	SK-PS10 Circuit Detail								
		NAC / Output # 1								
Device	Qty		Non-Alarm Draw		Total		Qty		Alarm Draw		Total
P2WK @ 15 Candela	1	x	0.000000	=	0.000000		1	x	0.091000	=	0.091000
HWL-LF	7	x	0.000000	=	0.000000		7	x	0.108000	=	0.756000
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
			Total Standby Load		0.000000				Total Alarm Load		0.847000

NAC / Output # 2											
Device	Qty		Non-Alarm Draw		Total		Qty		Alarm Draw		Total
P2WK @ 15 Candela	1	x	0.000000	=	0.000000		1	x	0.091000	=	0.091000
HWL-LF	7	x	0.000000	=	0.000000		7	x	0.108000	=	0.756000
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
			Total Standby Load		0.000000				Total Alarm Load		0.847000

NAC / Output # 3											
Device	Qty		Non-Alarm Draw		Total		Qty		Alarm Draw		Total
P2WK @ 15 Candela	1	x	0.000000	=	0.000000		1	x	0.091000	=	0.091000
HWL-LF	6	x	0.000000	=	0.000000		6	x	0.108000	=	0.648000
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	

		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
Total Standby Load					**0.000000**	**Total Alarm Load**				**0.739000**

NAC / Output # 4										
Device	**Qty**	**Non-Alarm Draw**			**Total**	**Qty**	**Alarm Draw**			**Total**
P2WK @ 15 Candela	1	x	0.000000	=	0.000000	1	x	0.091000	=	0.091000
HWL-LF	6	x	0.000000	=	0.000000	6	x	0.108000	=	0.648000
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
Total Standby Load					**0.000000**	**Total Alarm Load**				**0.739000**

NAC / Output # 5										
Device	**Qty**	**Non-Alarm Draw**			**Total**	**Qty**	**Alarm Draw**			**Total**
P2WK @ 15 Candela	1	x	0.000000	=	0.000000	1	x	0.091000	=	0.091000
HWL-LF	7	x	0.000000	=	0.000000	7	x	0.108000	=	0.756000
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
Total Standby Load					**0.000000**	**Total Alarm Load**				**0.847000**

NAC / Output # 6										
Device	**Qty**	**Non-Alarm Draw**			**Total**	**Qty**	**Alarm Draw**			**Total**
P2WK @ 15 Candela	1	x	0.000000	=	0.000000	1	x	0.091000	=	0.091000
HWL-LF	7	x	0.000000	=	0.000000	7	x	0.108000	=	0.756000
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
Total Standby Load					**0.000000**	**Total Alarm Load**				**0.847000**

NAC / Output # 7										
Device	**Qty**	**Non-Alarm Draw**			**Total**	**Qty**	**Alarm Draw**			**Total**
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
Total Standby Load					**0.000000**	**Total Alarm Load**				**0.000000**

DIAMOND ELECTRONICS

P3

SK-PS10 EOL Voltage Drop

Starting Voltage	20.4 Volts
Minimum Voltage @ EOL	16 Volts
Voltage Drop Warning %	10.00%

	Current Draw	Wire Type	Resistance	Length	ual Resista	oltage @ E	Percent Drop
Circuit Name	Amps	AWG	Ohms/1000 ft.	Feet (One Way)	Ohms	Volts	Percent
NAC / Output # 1	0.847	#14 Solid	3.07	125	0.77	19.75	3.19%
NAC / Output # 2	0.847	#14 Solid	3.07	125	0.77	19.75	3.19%
NAC / Output # 3	0.739	#14 Solid	3.07	150	0.92	19.72	3.34%
NAC / Output # 4	0.739	#14 Solid	3.07	150	0.92	19.72	3.34%
NAC / Output # 5	0.847	#14 Solid	3.07	175	1.07	19.49	4.46%
NAC / Output # 6	0.847	#14 Solid	3.07	175	1.07	19.49	4.46%
NAC / Output # 7	0.000	#14 Solid	3.07	0	0.00	20.40	0.00%

DIAMOND ELECTRONICS	P4	SK-PS10 Battery Calculation								
		Secondary Power Source Requirements								
		Standby Current (amps)					Secondary Alarm Current (amps)			
Device Type	Qty	Current Draw			Total		Qty	Current Draw		Total
SK-PS10 Power Module	1	X	0.1560	=	0.1560		1	X	0.1850	=	0.1850
NAC / Output # 1			0.0000	=	0.0000				0.8470	=	0.8470
NAC / Output # 2			0.0000	=	0.0000				0.8470	=	0.8470
NAC / Output # 3			0.0000	=	0.0000				0.7390	=	0.7390
NAC / Output # 4			0.0000	=	0.0000				0.7390	=	0.7390
NAC / Output # 5			0.0000	=	0.0000				0.8470	=	0.8470
NAC / Output # 6			0.0000	=	0.0000				0.8470	=	0.8470
NAC / Output # 7			0.0000	=	0.0000				0.0000	=	0.0000
				Total Standby Load	0.1560					Total Alarm Load	5.0510

DIAMOND ELECTRONICS	P4	SK-PS10 Battery Calculation			
	Note 1: You are fully responsible for verifying these calculations. Note 2: You only need to make entries in the yellow cells				
Calculation in Total Sheet					
			Required Standby Time in Hours		
			24 Hours		
Standby Load Current (Amps)	0.1560 Amps	X	24	=	3.744 AH
			Required Alarm Time in Hours		
			5 Minutes		
Alarm Load Current (Amps)	5.0510 Amps	X	0.084	=	0.424 AH
				Total Current Load	4.17 AH
	*Multiply by the Derating Factor		1.2	=	x 1.20
				Total Ampere Hours Required	5.00 AH

Recommended Batteries:	BAT-1270 - 7AH Batteries

* Derating Factor required to compensate for the non-linear discharge characteristic of a battery.

DIAMOND ELECTRONICS	P4	SK-PS10 Circuit Detail								
		NAC / Output # 1								
Device	Qty	Non-Alarm Draw			Total		Qty	Alarm Draw		Total
HWL-LF	7	x	0.000000	=	0.000000		7	x	0.108000	=	0.756000
P2WK @ 15 Candela	1	x	0.000000	=	0.000000		1	x	0.091000	=	0.091000
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
				Total Standby Load	0.000000					Total Alarm Load	0.847000

NAC / Output # 2											
Device	Qty	Non-Alarm Draw			Total		Qty	Alarm Draw		Total
HWL-LF	7	x	0.000000	=	0.000000		7	x	0.108000	=	0.756000
P2WK @ 15 Candela	1	x	0.000000	=	0.000000		1	x	0.091000	=	0.091000
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
				Total Standby Load	0.000000					Total Alarm Load	0.847000

NAC / Output # 3											
Device	Qty	Non-Alarm Draw			Total		Qty	Alarm Draw		Total
HWL-LF	6	x	0.000000	=	0.000000		6	x	0.108000	=	0.648000
P2WK @ 15 Candela	1	x	0.000000	=	0.000000		1	x	0.091000	=	0.091000
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	
		x	0.000000	=				x	0.000000	=	

		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
Total Standby Load					**0.000000**	**Total Alarm Load**				**0.739000**

NAC / Output # 4										
Device	**Qty**	**Non-Alarm Draw**			**Total**	**Qty**	**Alarm Draw**			**Total**
HWL-LF	6	x	0.000000	=	0.000000	6	x	0.108000	=	0.648000
P2WK @ 15 Candela	1	x	0.000000	=	0.000000	1	x	0.091000	=	0.091000
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
Total Standby Load					**0.000000**	**Total Alarm Load**				**0.739000**

NAC / Output # 5										
Device	**Qty**	**Non-Alarm Draw**			**Total**	**Qty**	**Alarm Draw**			**Total**
HWL-LF	7	x	0.000000	=	0.000000	7	x	0.108000	=	0.756000
P2WK @ 15 Candela	1	x	0.000000	=	0.000000	1	x	0.091000	=	0.091000
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
Total Standby Load					**0.000000**	**Total Alarm Load**				**0.847000**

NAC / Output # 6										
Device	**Qty**	**Non-Alarm Draw**			**Total**	**Qty**	**Alarm Draw**			**Total**
HWL-LF	7	x	0.000000	=	0.000000	7	x	0.108000	=	0.756000
P2WK @ 15 Candela	1	x	0.000000	=	0.000000	1	x	0.091000	=	0.091000
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
Total Standby Load					**0.000000**	**Total Alarm Load**				**0.847000**

NAC / Output # 7										
Device	**Qty**	**Non-Alarm Draw**			**Total**	**Qty**	**Alarm Draw**			**Total**
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
		x	0.000000	=			x	0.000000	=	
Total Standby Load					**0.000000**	**Total Alarm Load**				**0.000000**

DIAMOND ELECTRONICS

P4

SK-PS10 EOL Voltage Drop

Starting Voltage	20.4 Volts
Minimum Voltage @ EOL	16 Volts
Voltage Drop Warning %	10.00%

	Current Draw	Wire Type	Resistance	Length	ual Resista	ltage @ E	Percent Drop
Circuit Name	Amps	AWG	Ohms/1000 ft.	Feet (One Way)	Ohms	Volts	Percent
NAC / Output # 1	0.847	#14 Solid	3.07	150	0.92	19.62	3.82%
NAC / Output # 2	0.847	#14 Solid	3.07	150	0.92	19.62	3.82%
NAC / Output # 3	0.739	#14 Solid	3.07	175	1.07	19.61	3.89%
NAC / Output # 4	0.739	#14 Solid	3.07	175	1.07	19.61	3.89%
NAC / Output # 5	0.847	#14 Solid	3.07	200	1.23	19.36	5.10%
NAC / Output # 6	0.847	#14 Solid	3.07	200	1.23	19.36	5.10%
NAC / Output # 7	0.000	#14 Solid	3.07	0	0.00	20.40	0.00%