



PSN-64

Battery & Voltage Drop
Calculations

Project Name: Butler Supply Standby Hours: 24
Alarm Mins: 5
Installed By: Fire Alarm Solutions Efficiency Factor: 20%
Designed By: Fire Alarm Solutions
Date: 6/30/2025 NAC Source Voltage: 24

Model #: PSN-64

Max Panel Current (amps): 6

Panel ID:
Location: Sprinkler Room

User assumes all responsibility to ensure the quantities and current
draw values in this worksheet are accurate prior to submittal.

Qty	Panel Part #	Description	Standby (amps)		Alarm (amps)	
			Each	Total	Each	Total
1	PSN-64	NAC Power Expander	0.075	0.075	0.075	0.075
Panel Standby:			0.075		Panel Alarm: 0.075	

Ckt	NAC Circuits (See NAC Configuration below) Use	Description	Class	Standby (amps)		Alarm (amps)	
				Total		Total	
1	Notification		Class B	0.00000		0.28900	
2	Notification		Class B	0.00000		0.35800	
3	Notification		Class B	0.00000		0.31000	
4	Unused		Class B	0.00000		0.00000	
AUX				0.00000		0.00000	
NAC Standby:				0.00000		NAC Alarm: 0.95700	

Battery Calculation Summary

		Standby (amps)	Alarm (amps)
Panel Current:	0.07500	0.07500	
NAC Circuit Current:	0.00000		0.95700
Total Standby:	0.075000	Total Alarm:	1.03200
Standby Hours:	24	Alarm Mins:	5
AH Required:	1.80	AH Required:	0.09
Total Combined Standby & Alarm AmpHours Required:		1.89	
Safety Margin:		20%	
Required Battery AmpHours:		2.27	
Battery AmpHours Provided:		7ah	

NAC Circuit Configuration & Voltage Drop

Butler Supply

6/30/2025

07/02/2025

NAC 1		MAX Circuit Current (amps): 3	Source Voltage Used (VDC): 24
Class:	Class B	Usage: Notification	Description:

Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd
#14 Solid	3.19	100	0.638	0.289	23.82	16

Qty	Lookup Type	Circuit Devices Description	Standby (amps)		Alarm (amps)	
			Each	Total	Each	Total
4	User Defined	System Sensor SL (15cd)	0.000000	0.000000	0.018000	0.072000
1	User Defined	System Sensor P2L (30cd)	0.000000	0.000000	0.038000	0.038000
1	User Defined	System Sensor SL (30cd)	0.000000	0.000000	0.022000	0.022000
1	User Defined	System Sensor SL (75cd)	0.000000	0.000000	0.070000	0.070000
1	User Defined	System Sensor P2L (75cd)	0.000000	0.000000	0.087000	0.087000
Total Standby:			0.00000		Total Alarm: 0.28900	

NAC 2				MAX Circuit Current (amps): 3	Source Voltage Used (VDC): 24
Class:	Class B	Usage:	Notification	Description:	

Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd
#14 Solid	3.19	300	1.914	0.358	23.31	16

Qty	Lookup Type	Circuit Devices Description	Standby (amps)		Alarm (amps)	
			Each	Total	Each	Total
1	User Defined	System Sensor SL (30cd)	0.000000	0.000000	0.022000	0.022000
1	User Defined	System Sensor SL (75cd)	0.000000	0.000000	0.070000	0.070000
2	User Defined	System Sensor P2L (75cd)	0.000000	0.000000	0.087000	0.174000
1	User Defined	System Sensor P2L (110cd)	0.000000	0.000000	0.092000	0.092000

Total Standby:				0.00000	
Total Alarm:				0.35800	

NAC 3		MAX Circuit Current (amps): 3		Source Voltage Used (VDC): 24	
Class:	Class B	Usage:	Notification	Description:	

Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd
#14 Solid	3.19	320	2.042	0.310	23.37	16

Circuit Devices			Standby (amps)		Alarm (amps)	
Qty	Lookup Type	Description	Each	Total	Each	Total
3	User Defined	System Sensor SL (15cd)	0.000000	0.000000	0.018000	0.054000
2	User Defined	System Sensor SL (30cd)	0.000000	0.000000	0.022000	0.044000
1	User Defined	System Sensor P2L (30cd)	0.000000	0.000000	0.038000	0.038000
2	User Defined	System Sensor P2L (75cd)	0.000000	0.000000	0.087000	0.174000
Total Standby:			0.00000		Total Alarm:	
					0.31000	

NAC 4		MAX Circuit Current (amps): 3		Source Voltage Used (VDC): 24	
Class:	Class B	Usage:	Unused	Description:	

Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd
#12 Solid	2.01		0.000	0.000	24.00	16

Circuit Devices			Standby (amps)		Alarm (amps)	
Qty	Lookup Type	Description	Each	Total	Each	Total
Total Standby:			0.00000		Total Alarm:	
					0.00000	

AUX Power		MAX Circuit Current (amps): 3		Source Voltage Used (VDC): 24	
Usage:		Description:			

Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ Last Device	Min Volts Req'd
#12 Solid	2.01		0.000	0.000	24.00	16

Circuit Devices			Standby (amps)		Alarm (amps)	
Qty	Lookup Type	Description	Each	Total	Each	Total
Total Standby:			0.00000		Total Alarm:	
					0.00000	