



**PSN-64**  
**Battery & Voltage Drop**  
**Calculations**

Project Name: Johnson TI-3 Standby Hours: 24  
 Alarm Mins: 5  
 Installed By: Fire Alarm Solutions Efficiency Factor: 20%  
 Designed By: Fire Alarm Solutions  
 Date: 7/9/2024 NAC Source Voltage: 24

Model #: PSN-64 Max Panel Current (amps): 6  
 Panel ID:   
 Location: Outside Office Wall

*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
<b>Panel Standby:</b>			<b>0.075</b>	<b>0.075</b>	<b>Panel Alarm:</b>	<b>0.075</b>

Ckt	NAC Circuits (See NAC Configuration below) Use	Description	Class	Standby (amps)		Alarm (amps)	
				Each	Total	Each	Total
1	Notification		Class B	0.00000		0.37200	
2	Unused		Class B	0.00000		0.36800	
3	Notification		Class B	0.00000		0.27600	
4	Unused		Class B	0.00000		0.00000	
AUX				0.00000		0.00000	
<b>NAC Standby:</b>				<b>0.00000</b>		<b>NAC Alarm:</b>	<b>1.01600</b>

Battery Calculation Summary				Standby (amps)		Alarm (amps)	
Panel Current:				0.07500		0.07500	
NAC Circuit Current:				0.00000		1.01600	
<b>Total Standby:</b>				<b>0.075000</b>		<b>Total Alarm:</b>	<b>1.09100</b>
Standby Hours:				24		Alarm Mins:	5
AH Required:				1.80		AH Required:	0.10
Total Combined Standby & Alarm AmpHours Required:							1.90
Safety Margin:							20%
Required Battery AmpHours:							2.28
Battery AmpHours Provided:							7ah

**NAC Circuit Configuration & Voltage Drop** Johnson TI-3 7/9/2024

**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	150	0.957	0.372	23.64	16

Qty	Lookup Type	Circuit Devices Description	Standby (amps)		Alarm (amps)	
			Each	Total	Each	Total
2	User Defined	System Sensor SCL (15cd)	0.000000	0.000000	0.018000	0.036000
1	User Defined	System Sensor SCL (30cd)	0.000000	0.000000	0.022000	0.022000
1	User Defined	System Sensor PC2L (30cd)	0.000000	0.000000	0.038000	0.038000
3	User Defined	System Sensor P2L (110cd)	0.000000	0.000000	0.092000	0.276000
<b>Total Standby:</b>			<b>0.00000</b>		<b>Total Alarm:</b>	<b>0.37200</b>

**NAC 2** 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
#14 Solid	3.19	480	3.062	0.368	22.87	16

Qty	Lookup Type	Circuit Devices Description	Standby (amps)		Alarm (amps)	
			Each	Total	Each	Total
4	User Defined	System Sensor P2L (110cd)	0.000000	0.000000	0.092000	0.368000
<b>Total Standby:</b>			<b>0.00000</b>		<b>Total Alarm:</b>	<b>0.36800</b>

<b>NAC 3</b>		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	400	2.552	0.276	23.30	16

Qty	Lookup Type	Circuit Devices Description	Standby (amps)		Alarm (amps)	
			Each	Total	Each	Total
3	User Defined	System Sensor P2L (110cd)	0.000000	0.000000	0.092000	0.276000
<b>Total Standby:</b>			<b>0.00000</b>		<b>Total Alarm:</b>	<b>0.27600</b>

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

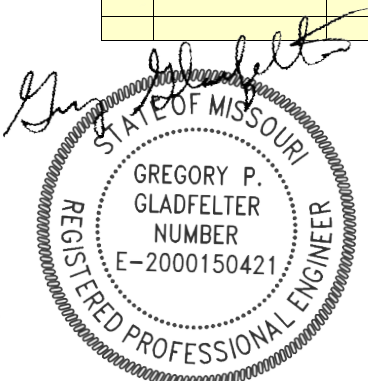
Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps)	Volts @ EOL	Min Volts Req'd
#14 Solid	3.19		0.000	0.000	24.00	16

Qty	Lookup Type	Circuit Devices Description	Standby (amps)		Alarm (amps)	
			Each	Total	Each	Total
		User can add devices on the fly to these bottom 5 rows (No lookup function)				
<b>Total Standby:</b>			<b>0.00000</b>		<b>Total Alarm:</b>	<b>0.00000</b>

<b>AUX Power</b>		MAX Circuit Current (amps): 3	Source Voltage Used (VDC): 24
Usage:	Unused	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

Qty	Lookup Type	Circuit Devices Description	Standby (amps)		Alarm (amps)	
			Each	Total	Each	Total
		User can add devices on the fly to these bottom 5 rows (No lookup function)				
<b>Total Standby:</b>			<b>0.00000</b>		<b>Total Alarm:</b>	<b>0.00000</b>



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