P300
Battery & Voltage Drop Calculations

Project Name:		**Standby Hours:**	24
		Alarm Mins:	5
Installed By:		**Batt Efficiency:**	80%
Designed By:		**SLC Type:**	Class B
Date:		**NAC Source Voltage:**	20.4

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Model #: P300
Panel ID:
Location:

Max Panel Current (amps): 5

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

Qty	FACP Part #	Description	Standby (amps) Each	Standby (amps) Total	Alarm (amps) Each	Alarm (amps) Total
1	P300	Analog Addressable FACP	0.130	0.130	0.220	0.220
			Panel Standby:	**0.130**	**Panel Alarm:**	**0.220**

	P-LINK (RS-485)		Standby		Alarm	
1	UD-1000	DACT	0.016	0.016	0.023	0.023
	RA-6075	LCD Annunciator	0.020		0.025	
1	RA-6500	LCD Annunciator	0.020	0.020	0.050	0.050
	LED-16	LED Annunciator	0.025		0.025	
	LED-16	LED Annunciator LED Power*	0.015		0.210	
1	CA-6075	Class A Module	0.012	0.012	0.044	0.044
	PSN-1000(E)	Power Expander	0.015		0.015	
	SLCE-127	SLC Expander (2 Max)	0.060		0.060	
	RLY-5	Relay Expander	0.025		0.035	
	RLY-5	Relay Expander Power*	0.010		0.135	
	DRV-50	LED Driver Module	0.025		0.025	
	DRV-50	LED Driver Module LED Power*	0.010		0.215	
	FCB-1000	Fire Communications Bridge	0.025		0.025	
	FIB-1000	Fiber Interface Board	0.030		0.030	
	SPG-1000	Serial Parallel Gateway	0.040		0.040	
		(Maximum current draw on P-Link limited to 1 Amp)	**P-LINK Standby:**	**0.048**	**P-LINK Alarm:**	**0.117**

Only enter quantity if PLINK power is being used to power devices

	SLC Devices		Standby		Alarm	
30	PSA	Analog Photo Smoke	0.000325	0.009750	0.000325	0.009750
2	PSHA	Analog Photo Smoke/Heat	0.000325	0.000650	0.000325	0.000650
2	RHA	Analog Rate of Rise Heat	0.000325	0.000650	0.000325	0.000650
	FHA	Analog Fixed Temp Heat	0.000325		0.000325	
10	APS-SA/APS-DA	Addressable Pull Station Single/Dual Action	0.000325	0.003250	0.000325	0.003250
2	MCM	Mini Contact Input Module	0.000325	0.000650	0.000325	0.000650
	SCM-4	Single Contact Input Module	0.000325		0.001000	
4	DCM-4	Dual Contact Input Module	0.000325	0.001300	0.001000	0.004000
10	TRM-4	Twin Relay Output Module	0.000325	0.003250	0.001000	0.010000
	CIZM-4 *	Conventional Zone Input Mod	0.000325		0.001000	
	MOM-4 *	Monitored Output Module	0.000325		0.001000	
	ARB *	Detector Base w/Relay	0.000325		0.000325	
	ASB *	Detector Base w/Sounder	0.000325		0.000325	
	SCI **	Short Circuit Isolator (Class A)	0.000325		0.002340	
	AIB **	Detector Base w/Isolator (Class A)	0.000325		0.002340	
	SCI/AIB Class B **	Current Draw from Install Manual				
1		SLC Loop Alarm LED Current	0.000000	0.000000	0.027000	0.027000
*	Requires Aux Power (Configure Below)		**SLC Standby:**	**0.019500**	**SLC Alarm:**	**0.055950**

** See the installation manual for special considerations when installing AIB, SCI devices on Class B loops.

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NAC Circuits (See NAC Configuration below)			Standby (amps)		Alarm
Ckt	Use	Description	Total		T
1			0.00000		
2			0.00000		
		NAC Standby:	**0.00000**	NAC Alarm:	

I/O Circuits (See I/O Configuration below)			Standby (amps)		Alarm (amps)
Ckt	Use	Description	Total		Total
1			0.00000		0.00000
2			0.00000		0.00000
		I/O Standby:	**0.00000**	I/O Alarm:	**0.00000**

Battery Calculation Summary

	Standby (amps)		Alarm (amps)
Panel Current:	0.13000		0.22000
P-Link Current:	0.04800		0.11700
SLC Device Current:	0.01950		0.05595
NAC Circuit Current:	0.00000		5.00000
I/O Circuit Current:	0.00000		0.00000
Total Standby:	**0.197500**	**Total Alarm:**	**5.39295**
Standby Hours:	24	Alarm Mins:	5
AH Required:	**4.74**	AH Required:	**0.45**

SLC Loop Type: Class B
Point Capacity Needed: 64
Point Capacity Actual: 127

Total Combined Standby & Alarm AmpHours Required: 5.19
Efficiency Factor: 80%

Required Battery AmpHours: **6.49**

Battery AmpHours Provided:

Note: The cabinet will house two 8 AH or 18 AH batteries. The charging circuit is rated for up to two 55 AH batteries.

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NAC Circuit Configuration & Voltage Drop

NAC 1

MAX Circuit Current (amps): 3 Source Voltage Used (VDC): 20.4

Usage: Description:

Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps	Volts @ EOL	Min Volts Req'd
#14 Solid	2.5		0.000	3.000	20.40	16

		Circuit Devices	Standby (amps)		Alarm (amps)	
Qty	Lookup Type	Desc	Each	Total	Each	Total
		User can add devices on the fly				
		to these bottom 5 rows				
		(No lookup function)				
1	Horn/strobes	Total	0.000000	0.000000	3.000000	3.000000
			Total Standby:	0.00000	Total Alarm:	3.00000

NAC 2

MAX Circuit Current (amps): 3 Source Voltage Used (VDC): 20.4

Usage: Description:

Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps	Volts @ EOL	Min Volts Req'd
#14 Solid	2.5		0.000	2.000	20.40	16

		Circuit Devices	Standby (amps)		Alarm (amps)	
Qty	Lookup Type	Desc	Each	Total	Each	Total
		User can add devices on the fly				
		to these bottom 5 rows				
		(No lookup function)				
1	Horn/strobes	Total	0.000000	0.000000	2.000000	2.000000
			Total Standby:	0.00000	Total Alarm:	2.00000

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I/O Circuit Configuration & Voltage Drop

I/O 1

MAX Circuit Current (amps): 1 Source Voltage Used (VDC): 20.4

Usage: Description:

Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps	Volts @ EOL	Min Volts Req'd
#14 Solid	2.5		0.000	0.000	20.40	16

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

I/O 2

MAX Circuit Current (amps): 1 Source Voltage Used (VDC): 20.4

Usage: Description:

Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps	Volts @ EOL	Min Volts Req'd
#14 Solid	2.5		0.000	0.000	20.40	16

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