P300
Battery & Voltage Drop Calculations

Project Name:
Installed By:
Designed By:
Date:

Standby
Alarm
Batt Effi
SL
NAC Source V

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 06/09/16

Model #: P300
Panel ID:
Location:

Max Panel Current (

User assumes all responsibilit current draw values in this wc 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	
	RA-6500	LCD Annunciator	0.020		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:**	**0.028**	**P-LINK Alarm:**	**0.067**

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

	SLC Devices		Standby		Alarm	
29	PSA	Analog Photo Smoke	0.000325	0.009425	0.000325	0.009425
2	PSHA	Analog Photo Smoke/Heat	0.000325	0.000650	0.000325	0.000650
1	RHA	Analog Rate of Rise Heat	0.000325	0.000325	0.000325	0.000325
	FHA	Analog Fixed Temp Heat	0.000325		0.000325	
12	APS-SA/APS-DA	Addressable Pull Station Single/Dual Action	0.000325	0.003900	0.000325	0.003900
11	MCM	Mini Contact Input Module	0.000325	0.003575	0.000325	0.003575
	SCM-4	Single Contact Input Module	0.000325		0.001000	
6	DCM-4	Dual Contact Input Module	0.000325	0.001950	0.001000	0.006000
6	TRM-4	Twin Relay Output Module	0.000325	0.001950	0.001000	0.006000
	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:**	**0.021775**	**SLC Alarm:**	**0.056875**

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

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

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

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Battery Calculation Summary

	Standby (amps)		Alarm (amps)
Panel Current:	0.13000		0.22000
P-Link Current:	0.02800		0.06700
SLC Device Current:	0.02178		0.05688
NAC Circuit Current:	0.00000		5.00000
I/O Circuit Current:	0.00000		0.00000
Total Standby:	**0.179775**	Total Alarm:	**5.34388**
Standby Hours:	24	Alarm Mins:	5
AH Required:	**4.32**	AH Required:	**0.45**

SLC Loop Type:	Class B
Point Capacity Needed:	73
Point Capacity Actual:	127

Total Combined Standby & Alarm AmpHours Required:	4.77
Efficiency Factor:	80%
Required Battery AmpHours:	**5.96**
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.

POTTER
The Symbol of Protection

NAC Circuit Configuration & Voltage Drop

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NAC 1

MAX Circuit Current (amps): 3 Source Voltage Used

Usage: Description:

Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps	Volts @
#14 Solid	2.5		0.000	3.000	20.4

Qty	Lookup Type	Circuit Devices Desc	Standby (amps) Each	Standby (amps) Total	Alarm (amps) Each	Alarm (amps) 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

Qty	Lookup Type	Circuit Devices Desc	Standby (amps) Each	Standby (amps) Total	Alarm (amps) Each	Alarm (amps) 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

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I/O 1

MAX Circuit Current (amps): 1 Source Voltage Used

Usage: Description:

Wire Type	Ohms/1000ft	Length 1-Way	Actual Ohms	Max Load (amps	Volts @
#14 Solid	2.5		0.000	0.000	20.4

Qty	Lookup Type	Circuit Devices Desc	Standby (amps) Each	Standby (amps) Total	Alarm (amps) Each	Alarm (amps) 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

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