



**P300**  
**Battery & Voltage Drop**  
**Calculations**

Project Name:  Standby Hours:   
 Alarm Mins:   
 Installed By:  Batt Efficiency:   
 Designed By:  SLC Type:   
 Date:  NAC Source Voltage:

Model #: P300

Max Panel Current (amps): 5

Panel ID:

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

Location:

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

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	<input type="text"/>		<input type="text"/>	

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)	Alarm (amps)
Ckt	Use	Description	Total	Total
1			0.00000	3.00000
2			0.00000	2.00000
			<b>NAC Standby:</b>	<b>NAC Alarm:</b>
			<b>0.00000</b>	<b>5.00000</b>

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
			<b>I/O Standby:</b>	<b>I/O Alarm:</b>
			<b>0.00000</b>	<b>0.00000</b>

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
	<b>Total Standby:</b>	<b>0.179775</b>	<b>Total Alarm:</b>
	<b>Standby Hours:</b>	<b>24</b>	<b>Alarm Mins:</b>
	<b>AH Required:</b>	<b>4.32</b>	<b>AH Required:</b>
			<b>0.45</b>
	<b>Total Combined Standby &amp; Alarm AmpHours Required:</b>		<b>4.77</b>
		<b>Efficiency Factor:</b>	<b>80%</b>
	<b>Required Battery AmpHours:</b>		<b>5.96</b>
	<b>Battery AmpHours Provided:</b>		

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

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

### 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 (amp)	Volts @ EOL	Min Volts Req'd
#14 Solid	2.5		0.000	3.000	20.40	16

Qty	Lookup Type	Circuit Devices Desc	Standby (amps)		Alarm (amps)	
			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
<b>Total Standby:</b>			<b>0.00000</b>		<b>Total Alarm:</b>	<b>3.00000</b>

**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 (amp)	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)		Alarm (amps)	
			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
<b>Total Standby:</b>			<b>0.00000</b>		<b>Total Alarm:</b>	<b>2.00000</b>

### 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 (amp)	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)		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>

**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 (amp)	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)		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>