POTTER Plus

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

| | | | |
|---|---|---|---|
| **Project Name:** | 134 Washington | **Standby** | |
| | | **Alarm** | |
| **Installed By:** | | **Batt Effi** | |
| **Designed By:** | | **SL** | |
| **Date:** | | **NAC Source V** | |

**Model #:** P300

**Panel ID:**

**Location:**

**Max Panel Current (**

*User assumes all responsibility current draw values in this wo submittal.*

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| 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 | |
|---|---|---|---|---|---|---|
| 28 | PSA | Analog Photo Smoke | 0.000325 | 0.009100 | 0.000325 | 0.009100 |
| | PSHA | Analog Photo Smoke/Heat | 0.000325 | | 0.000325 | |
| 5 | RHA | Analog Rate of Rise Heat | 0.000325 | 0.001625 | 0.000325 | 0.001625 |
| | FHA | Analog Fixed Temp Heat | 0.000325 | | 0.000325 | |
| 11 | APS-SA/APS-DA | Addressable Pull Station Single/Dual Action | 0.000325 | 0.003575 | 0.000325 | 0.003575 |
| 2 | MCM | Mini Contact Input Module | 0.000325 | 0.000650 | 0.000325 | 0.000650 |
| | SCM-4 | Single Contact Input Module | 0.000325 | | 0.001000 | |
| 3 | DCM-4 | Dual Contact Input Module | 0.000325 | 0.000975 | 0.001000 | 0.003000 |
| 4 | TRM-4 | Twin Relay Output Module | 0.000325 | 0.001300 | 0.001000 | 0.004000 |
| | 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:** | **0.017225** | **SLC Alarm:** | **0.048950** |

** 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/O |

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## Battery Calculation Summary

| | Standby (amps) | | Alarm (amps) |
|---|---|---|---|
| Panel Current: | 0.13000 | | 0.22000 |
| P-Link Current: | 0.04800 | | 0.11700 |
| SLC Device Current: | 0.01723 | | 0.04895 |
| NAC Circuit Current: | 0.00000 | | 5.00000 |
| I/O Circuit Current: | 0.00000 | | 0.00000 |
| Total Standby: | **0.195225** | Total Alarm: | **5.38595** |
| Standby Hours: | 24 | Alarm Mins: | 5 |
| AH Required: | **4.69** | AH Required: | **0.45** |

**SLC Loop Type:** Class B
**Point Capacity Needed:** 56
**Point Capacity Actual:** 127

**Total Combined Standby & Alarm AmpHours Required:** 5.14
**Efficiency Factor:** 80%

**Required Battery AmpHours:** **6.43**

**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*

*134 Washington*

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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*

*134 Washington*

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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** |