

3.6 Calculating Current Draw and Standby Battery

This section is for helping you determine the current draw and standby battery needs for your installation.

3.6.1 Worksheet Requirements

The following steps must be taken when determining 5808 current draw and standby battery requirements.

Filling in the Current Draw Worksheet, Table 3-2 (Section 3.6.2)

1. For the 5808, the worst case current draw is listed for the panel, addressable devices, and all SBUS expanders. Fill in the number of addressable devices that will be used in the system and compute the current draw requirements for alarm and standby. Record this information in Table 3-2 at Line A.
2. Add up the current draw for all auxiliary devices and record in the table at Line B.
3. Add up all notification appliance loads and record in the table at Line C.
4. For notification appliance circuits and auxiliary devices not mentioned in the manual, refer to the device manual for the current ratings.
5. Make sure that the total alarm current you calculated, including current for the panel itself, does not exceed 6.0 A. This is the maximum alarm current for the 5808 control panel.

If the current is above 6.0 A you will need to use a notification power expander(s) such as the Silent Knight 5496 intelligent power module, to distribute the power loads so that the 5808 or the power expanders do not exceed their power rating. Refer to the current draw worksheets provided with the 5496 manual so you do not exceed their power requirements.

6. Complete the remaining instructions in Table 3-2 for determining battery size requirements.

3.6.2 Current Draw Worksheet

Use Table 3-2 to determine current requirements during alarm/battery standby operation. (Copy the page if additional space is required.)

Table 3-2: Current Draw Worksheet

Device	# of Devices	Current per Device	Standby Current	Alarm Current
For each device use this formula: This column X This column = Current per number of devices.				
5808 Fire Panel (Current draw from battery)	1	Standby: 206 mA	206 mA	
		Alarm: 356 mA		356 mA
Addressable SLC Devices				
SD500-AIM	(127 max.)	Standby/Alarm: 0.55 mA	mA	mA
SD500-MIM			mA	mA
SD500-PS				
SD500-ARM			mA	mA
SD505-AHS			mA	mA
SD505-AIS			mA	mA
SD505-APS			mA	mA
SD500-LED	(40 max.)	Aux. Pwr	Standby: 10 mA	mA
			Alarm: 220 mA	
			LED: 10 mA	mA
		SLC	Standby/Alarm: 0.55 mA	mA
SD505-ADHR	(127 max.)	Aux. Pwr	Standby: ***35 mA	mA
			Alarm: ***75 mA	
		SLC	Standby/Alarm: .082 mA	mA
SD505-DTS	(127 max.)		Alarm: ***75 mA	
SD505-ADH	(127 max.)		None, included with detector current.	
Accessories Modules				
5860 Remote Fire Alarm Annunciator	(8 max.)	Standby: 20 mA	mA	
		Alarm: 25 mA		mA
5824 Serial / Parallel Module	(2 max.)	Standby/Alarm: 45 mA	mA	mA
5496 Notification Power Expander	(8 max.)	Standby/Alarm: 10 mA	mA	mA
5865-4 LED Annunciator (with reset and silence switches)	(8 max.)	Standby: 35 mA	mA	
			Alarm: 145 mA	
5865-3 LED Annunciator		Standby: 35 mA	mA	
			Alarm: 145 mA	
5880 Generic LED Driver Module		Standby: 35 mA	mA	
			Alarm: 200 mA	
5883 Relay Interface		(32 max.)	Standby: 0 mA	mA
	Alarm: 220mA (22 mA per relay)			mA
Total System Current				

A

Table 3-2: Current Draw Worksheet

Device	# of Devices	Current per Device	Standby Current	Alarm Current
*Auxiliary Devices	Refer to devices manual for current rating.			
		Alarm/Standby: mA	mA	mA
		Alarm/Standby: mA	mA	mA
		Alarm/Standby: mA	mA	mA
		Alarm/Standby: mA	mA	mA
B	Auxiliary Devices Current			
Notification Appliance Circuits	Refer to devices manual for current rating.			
		Alarm: mA		mA
		Alarm: mA		mA
		Alarm: mA		mA
		Alarm: mA		mA
C	Notification Appliances Current			mA
D	Total current ratings of all devices in system (line A + line B + C)		mA	mA
E	Total current ratings converted to amperes (line D x .001):		A	A
F	Number of standby hours (24 or 60 for NFPA 72, chapter 1, 1-5.2.5):		H	
G	Multiply lines E and F. Total standby AH		AH	
H	Alarm sounding period in hours. (For example, 5 minutes = .0833 hours)			H
I	Multiply lines E and H. Total alarm AH			AH
J	**Add lines G and I. Total ampere hours required		AH	

* If you are using door holders, you do not need to consider door holder current for alarm/battery standby, because power is removed during that time. However, during normal operation, door holders draw current and must be included in the 6.0 A total current that can be drawn from the panel.

** Use next size battery with capacity greater than required.

*** If using Aux power only. No standby or alarm current for battery calculation if using 24 VAC, 120 VAC or 240 VAC.