

Power Calculations

FACP - MIRCUM FX-2000MNS										
DEVICE	DESCRIPTION	QNTy	STANDBY	STANDBY	ALARM	ALARM	CIRCUIT			
			CURRENT	TOTAL	CURRENT	TOTAL	TOTAL			
FX2000MNS	Main Board	1	0.31000	0.31000	0.73300	0.733				
MIX-2251B	Smoke Det	176	0.00030	0.05280	0.00650	1.144				
MIX-5251B	Heat Det	15	0.00030	0.00450	0.00065	0.010				
MS-710ADU	Dual Action Pull	39	0.00040	0.01560	0.00550	0.215				
MIX M500M	Monitor Mod	54	0.00040	0.02160	0.00550	0.297				
MIX M500R	Relay	25	0.00030	0.00750	0.00550	0.138				
RAXN-LCD	Annunciator	1	0.10000	0.10000	0.15000	0.150				
FDX - 008	Fan Damper	1	0.01500	0.01500	0.03500	0.035				
QMP-5101NV	Mic Control	1	0.00400	0.00400	0.01200	0.012				
AMP-5101N	Master Paging Module	1	0.00400	0.00400	0.01200	0.012				
QAA-5415-70	15W Amplifier	2	0.05500	0.11000	0.35000	0.700				
ALCN-792M/D	Quad Loop	1	0.14500	0.14500	0.14500	0.145				
QAZT-5302DS	Paging/Tele Zone Mod	1	0.01000	0.01000	0.01500	0.015				
UDACT-300A	Dialer	1	0.04500	0.04500	0.12000	0.120				
	Panel Total			0.8450		3.725				
P2/PC2 H/S (75cd)	Horn/Strobe	1	0.000	0.00000	0.176	0.176				
	NAC CIRCUIT 1 TOTAL CURRENT						0.176	A		
Unused	Unused	0	0.000	0.00000	0.000	0.000				
	NAC CIRCUIT 2 CURRENT DRAW						0.000	A		
NAC Trigger	PS TRIGGER WIRE	1	0.000	0.00000	0.000	0.000				
	NAC CIRCUIT 3 CURRENT DRAW						0.000	A		
NAC Trigger	PS TRIGGER WIRE	1	0.000	0.00000	0.000	0.000				
	NAC CIRCUIT 4 CURRENT DRAW						0.000	A		
Unused	Unused		0.000	0.00000	0.000	0.000				
	AUX CURRENT DRAW						0.000	A		
Overall	TOTALS			0.8450		3.901				

NAC Voltage Drop Calculations

NAC	Total Load	Length & Gauge of Wire run				Starting Voltage	MAX Volt Drop	Volt Drop	VOLTS AT EOL
		18	16	14	12				
1	0.176			50		20.40	3.06	0.06	20.34
2	0.000					20.40	3.06	0.00	20.40
3	0.000					20.40	3.06	0.00	20.40
4	0.000					20.40	3.06	0.00	20.40

Note: Resistance of conductor value from National Electrical Code (NFPA 70) Chapter 9 , Table Conductor Property

Length of wire run is an estimate of wire to be installed

Visual device operating voltage range UL tested from 20 to 31 VDC nominal voltage

BATTERY POWER CALCULATIONS			
Total Standby Current (Amps)	0.8450	X	Required Standby Time in Hrs
			60 Hrs
			60
			50.7
Total Alarm Current (Amps)	3.901	X	Required Alarm Time in Min
			5 Min
			0.083
			0.325
Standby and Alarm Load Subtotal			51.025
20% Derating Factor			1.2
Total Ampere Hours Required			61.23

Power Calculations

PS1 STORAGE 180							
DEVICE	DESCRIPTION	QNTy	STANDBY CURRENT	STANDBY TOTAL	ALARM CURRENT	ALARM TOTAL	CIRCUIT TOTAL
INX10A	10Amp PS	1	0.20000	0.20000	0.35000	0.350	
	Panel Total			0.2000		0.350	
H-LF Low Frequency	Horn Low Freq	6	0.000	0.00000	0.138	0.828	
	NAC CIRCUIT 1 TOTAL CURRENT DRAW						0.828 A
P2/PC2 H/S(15cd)	Horn/Strobe	2	0.000	0.00000	0.091	0.182	
P2/PC2 H/S (30cd)	Horn/Strobe	1	0.000	0.00000	0.116	0.116	
P2/PC2 H/S (75cd)	Horn/Strobe	1	0.000	0.00000	0.176	0.176	
S/SC Strobe (15cd)	Strobe	2	0.000	0.00000	0.066	0.132	
H-LF Low Frequency	Horn Low Freq	7	0.000	0.00000	0.138	0.966	
	NAC CIRCUIT 2 CURRENT DRAW						1.572 A
P2/PC2 H/S(15cd)	Horn/Strobe	1	0.000	0.00000	0.091	0.091	
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066	
H-LF Low Frequency	Horn Low Freq	5	0.000	0.00000	0.138	0.690	
	NAC CIRCUIT 3 CURRENT DRAW						0.847 A
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066	
P2RH-LF Frequency	Horn/Strobe	1	0.000	0.00000	0.325	0.325	
	NAC CIRCUIT 4 CURRENT DRAW						0.391 A
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066	
P2/PC2 H/S (75cd)	Horn/Strobe	1	0.000	0.00000	0.176	0.176	
P2RH-LF Frequency	Horn/Strobe	1	0.000	0.00000	0.325	0.325	
	NAC CIRCUIT 5 CURRENT DRAW						0.567 A
Unused	Unused	0	0.000	0.00000	0.000	0.000	
	AUX CIRCUIT CURRENT DRAW						0.000 A
Overall	TOTALS			0.2000		4.555	

NAC Voltage Drop Calculations

NAC	Total Load	Length & Gauge of Wire run				Starting Voltage	MAX Volt Drop	Volt Drop	VOLTS AT EOL
		18	16	14	12				
1	0.828			151		20.40	3.06	0.79	19.61
2	1.572			284		20.40	3.06	2.80	17.60
3	0.847			228		20.40	3.06	1.21	19.19
4	0.391			45		20.40	3.06	0.11	20.29
5	0.567			65		20.40	3.06	0.23	20.17
6	0.000					20.40	3.06	0.00	20.40

Note: Resistance of conductor value from National Electrical Code (NFPA 70) Chapter 9, Table Conductor Property

Length of wire run is an estimate of wire to be installed

Visual device operating voltage range UL tested from 20 to 31 VDC nominal voltage

BATTERY POWER CALCULATIONS			
		Required Standby Time in Hrs	
Total Standby Current (Amps)	0.2000	X	60 Hrs
			60
			12
		Required Alarm Time in Min	
Total Alarm Current (Amps)	4.555	X	5 Min
			0.083
			0.380
Standby and Alarm Load Subtotal			12.380
20% Derating Factor			1.2
Total Ampere Hours Required			14.86

Power Calculations

PS2 STORAGE 261							
DEVICE	DESCRIPTION	QNTy	STANDBY CURRENT	STANDBY TOTAL	ALARM CURRENT	ALARM TOTAL	CIRCUIT TOTAL
INX10A	10Amp PS	1	0.20000	0.20000	0.35000	0.350	
	Panel Total			0.2000		0.350	
H-LF Low Frequency	Horn Low Freq	7	0.000	0.00000	0.138	0.966	
	NAC CIRCUIT 1 TOTAL CURRENT DRAW						0.966 A
P2/PC2 H/S(15cd)	Horn/Strobe	1	0.000	0.00000	0.091	0.091	
P2/PC2 H/S (75cd)	Horn/Strobe	1	0.000	0.00000	0.176	0.176	
S/SC Strobe (15cd)	Strobe	2	0.000	0.00000	0.066	0.132	
H-LF Low Frequency	Horn Low Freq	8	0.000	0.00000	0.138	1.104	
	NAC CIRCUIT 2 CURRENT DRAW						1.503 A
P2/PC2 H/S(15cd)	Horn/Strobe	1	0.000	0.00000	0.091	0.091	
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066	
H-LF Low Frequency	Horn Low Freq	5	0.000	0.00000	0.138	0.690	
	NAC CIRCUIT 3 CURRENT DRAW						0.847 A
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066	
P2RH-LF Frequency	Horn/Strobe	1	0.000	0.00000	0.325	0.325	
	NAC CIRCUIT 4 CURRENT DRAW						0.391 A
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066	
P2/PC2 H/S (75cd)	Horn/Strobe	1	0.000	0.00000	0.176	0.176	
P2RH-LF Frequency	Horn/Strobe	1	0.000	0.00000	0.325	0.325	
	NAC CIRCUIT 5 CURRENT DRAW						0.567 A
Unused	Unused	0	0.000	0.00000	0.000	0.000	
	AUX CIRCUIT CURRENT DRAW						0.000 A
Overall	TOTALS			0.2000		4.624	

NAC Voltage Drop Calculations

NAC	Total Load	Length & Gauge of Wire run				Starting Voltage	MAX Volt Drop	Volt Drop	VOLTS AT EOL
		18	16	14	12				
1	0.966			160		20.40	3.06	0.97	19.43
2	1.503			262		20.40	3.06	2.47	17.93
3	0.847			228		20.40	3.06	1.21	19.19
4	0.391			45		20.40	3.06	0.11	20.29
5	0.567			65		20.40	3.06	0.23	20.17
6	0.000					20.40	3.06	0.00	20.40

Note: Resistance of conductor value from National Electrical Code (NFPA 70) Chapter 9, Table Conductor Property

Length of wire run is an estimate of wire to be installed

Visual device operating voltage range UL tested from 20 to 31 VDC nominal voltage

BATTERY POWER CALCULATIONS			
Total Standby Current (Amps)	0.2000	X	Required Standby Time in Hrs
			60 Hrs
			60
			12
Total Alarm Current (Amps)	4.624	X	Required Alarm Time in Min
			5 Min
			0.083
			0.385
Standby and Alarm Load Subtotal			12.385
20% Derating Factor			1.2
Total Ampere Hours Required			14.86

Power Calculations

PS3 STORAGE 360								
DEVICE	DESCRIPTION	QNTy	STANDBY CURRENT	STANDBY TOTAL	ALARM CURRENT	ALARM TOTAL	CIRCUIT TOTAL	
INX10A	10Amp PS	1	0.20000	0.20000	0.35000	0.350		
Panel Total				0.2000		0.350		
H-LF Low Frequency	Horn Low Freq	7	0.000	0.00000	0.138	0.966		
NAC CIRCUIT 1 TOTAL CURRENT DRAW							0.966	A
P2/PC2 H/S(15cd)	Horn/Strobe	1	0.000	0.00000	0.091	0.091		
P2/PC2 H/S (75cd)	Horn/Strobe	1	0.000	0.00000	0.176	0.176		
S/SC Strobe (15cd)	Strobe	2	0.000	0.00000	0.066	0.132		
H-LF Low Frequency	Horn Low Freq	8	0.000	0.00000	0.138	1.104		
NAC CIRCUIT 2 CURRENT DRAW							1.503	A
P2/PC2 H/S(15cd)	Horn/Strobe	1	0.000	0.00000	0.091	0.091		
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066		
H-LF Low Frequency	Horn Low Freq	5	0.000	0.00000	0.138	0.690		
NAC CIRCUIT 3 CURRENT DRAW							0.847	A
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066		
P2RH-LF Frequency	Horn/Strobe	1	0.000	0.00000	0.325	0.325		
NAC CIRCUIT 4 CURRENT DRAW							0.391	A
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066		
P2/PC2 H/S (75cd)	Horn/Strobe	1	0.000	0.00000	0.176	0.176		
P2RH-LF Frequency	Horn/Strobe	1	0.000	0.00000	0.325	0.325		
NAC CIRCUIT 5 CURRENT DRAW							0.567	A
Unused	Unused	0	0.000	0.00000	0.000	0.000		
AUX CIRCUIT CURRENT DRAW							0.000	A
Overall	TOTALS			0.2000		4.624		

NAC Voltage Drop Calculations

NAC	Total Load	Length & Gauge of Wire run				Starting Voltage	MAX Volt Drop	Volt Drop	VOLTS AT EOL
		18	16	14	12				
1	0.966			160		20.40	3.06	0.97	19.43
2	1.503			262		20.40	3.06	2.47	17.93
3	0.847			228		20.40	3.06	1.21	19.19
4	0.391			45		20.40	3.06	0.11	20.29
5	0.567			65		20.40	3.06	0.23	20.17
6	0.000					20.40	3.06	0.00	20.40

Note: Resistance of conductor value from National Electrical Code (NFPA 70) Chapter 9, Table Conductor Property

Length of wire run is an estimate of wire to be installed

Visual device operating voltage range UL tested from 20 to 31 VDC nominal voltage

BATTERY POWER CALCULATIONS			
		Required Standby Time in Hrs	
Total Standby Current (Amps)	0.2000	X	60 Hrs
			60
			12
		Required Alarm Time in Min	
Total Alarm Current (Amps)	4.624	X	5 Min
			0.083
			0.385
Standby and Alarm Load Subtotal			12.385
20% Derating Factor			1.2
Total Ampere Hours Required			14.86

Power Calculations

PS4 STORAGE 458							
DEVICE	DESCRIPTION	QNTy	STANDBY CURRENT	STANDBY TOTAL	ALARM CURRENT	ALARM TOTAL	CIRCUIT TOTAL
INX10A	10Amp PS	1	0.20000	0.20000	0.35000	0.350	
	Panel Total			0.2000		0.350	
H-LF Low Frequency	Horn Low Freq	6	0.000	0.00000	0.138	0.828	
	NAC CIRCUIT 1 TOTAL CURRENT DRAW						0.828 A
P2/PC2 H/S(15cd)	Horn/Strobe	1	0.000	0.00000	0.091	0.091	
P2/PC2 H/S (75cd)	Horn/Strobe	1	0.000	0.00000	0.176	0.176	
S/SC Strobe (15cd)	Strobe	2	0.000	0.00000	0.066	0.132	
H-LF Low Frequency	Horn Low Freq	6	0.000	0.00000	0.138	0.828	
	NAC CIRCUIT 2 CURRENT DRAW						1.227 A
P2/PC2 H/S(15cd)	Horn/Strobe	1	0.000	0.00000	0.091	0.091	
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066	
H-LF Low Frequency	Horn Low Freq	5	0.000	0.00000	0.138	0.690	
	NAC CIRCUIT 3 CURRENT DRAW						0.847 A
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066	
P2RH-LF Frequency	Horn/Strobe	1	0.000	0.00000	0.325	0.325	
	NAC CIRCUIT 4 CURRENT DRAW						0.391 A
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066	
P2/PC2 H/S (75cd)	Horn/Strobe	1	0.000	0.00000	0.176	0.176	
P2RH-LF Frequency	Horn/Strobe	1	0.000	0.00000	0.325	0.325	
	NAC CIRCUIT 5 CURRENT DRAW						0.567 A
Unused	Unused	0	0.000	0.00000	0.000	0.000	
	AUX CIRCUIT CURRENT DRAW						0.000 A
Overall	TOTALS			0.2000		4.210	

NAC Voltage Drop Calculations

NAC	Total Load	Length & Gauge of Wire run				Starting Voltage	MAX Volt Drop	Volt Drop	VOLTS AT EOL
		18	16	14	12				
1	0.828			160		20.40	3.06	0.83	19.57
2	1.227			262		20.40	3.06	2.02	18.38
3	0.847			228		20.40	3.06	1.21	19.19
4	0.391			45		20.40	3.06	0.11	20.29
5	0.567			65		20.40	3.06	0.23	20.17
6	0.000					20.40	3.06	0.00	20.40

Note: Resistance of conductor value from National Electrical Code (NFPA 70) Chapter 9, Table Conductor Property

Length of wire run is an estimate of wire to be installed

Visual device operating voltage range UL tested from 20 to 31 VDC nominal voltage

BATTERY POWER CALCULATIONS			
		Required Standby Time in Hrs	
Total Standby Current (Amps)	0.2000	X	60 Hrs
			60
			12
		Required Alarm Time in Min	
Total Alarm Current (Amps)	4.210	X	5 Min
			0.083
			0.351
Standby and Alarm Load Subtotal			12.351
20% Derating Factor			1.2
Total Ampere Hours Required			14.82

Power Calculations

PS5 STORAGE 180									
DEVICE	DESCRIPTION	QNTy	STANDBY CURRENT	STANDBY TOTAL	ALARM CURRENT	ALARM TOTAL	CIRCUIT TOTAL		
INX10A	10Amp PS	1	0.20000	0.20000	0.35000	0.350			
	Panel Total			0.2000		0.350			
SPSC/SPS (15cd)	Speker Strobe	3	0.000	0.00000	0.066	0.198			
S/SC Strobe (75cd)	Strobe	4	0.000	0.00000	0.158	0.632			
S/SC Strobe (110cd)	Strobe	1	0.000	0.00000	0.202	0.202			
S/SC Strobe (15cd)	Strobe	2	0.000	0.00000	0.066	0.132			
	NAC CIRCUIT 1 TOTAL CURRENT DRAW						1.164	A	
H-LF Low Frequency	Horn Low Freq	1	0.000	0.00000	0.138	0.138			
SPSC/SPS (15cd)	Speker Strobe	2	0.000	0.00000	0.066	0.132			
SPSC/SPS (30cd)	Speker Strobe	2	0.000	0.00000	0.094	0.188			
SPSC/SPS (75cd)	Speker Strobe	4	0.000	0.00000	0.158	0.632			
S/SC Strobe (110cd)	Strobe	1	0.000	0.00000	0.202	0.202			
	NAC CIRCUIT 2 CURRENT DRAW						1.292	A	
SPSC/SPS (15cd)	Speker Strobe	6	0.000	0.00000	0.066	0.396			
P2RH-LF Frequency	Horn/Strobe	1	0.000	0.00000	0.325	0.325			
	NAC CIRCUIT 3 CURRENT DRAW						0.721	A	
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066			
P2RH-LF Frequency	Horn/Strobe	1	0.000	0.00000	0.325	0.325			
	NAC CIRCUIT 4 CURRENT DRAW						0.391	A	
S/SC Strobe (15cd)	Strobe	2	0.000	0.00000	0.066	0.132			
P2/PC2 H/S (75cd)	Horn/Strobe	1	0.000	0.00000	0.176	0.176			
P2RH-LF Frequency	Horn/Strobe	2	0.000	0.00000	0.325	0.650			
	NAC CIRCUIT 5 CURRENT DRAW						0.958	A	
Unused	Unused	0	0.000	0.00000	0.000	0.000			
	AUX CIRCUIT CURRENT DRAW						0.000	A	
Overall	TOTALS			0.2000		4.876			

NAC Voltage Drop Calculations

NAC	Total Load	Length & Gauge of Wire run				Starting Voltage	MAX Volt Drop	Volt Drop	VOLTS AT EOL
		18	16	14	12				
1	1.164			394		20.40	3.06	2.88	17.52
2	1.292			312		20.40	3.06	2.53	17.87
3	0.721			233		20.40	3.06	1.05	19.35
4	0.391			34		20.40	3.06	0.08	20.32
5	0.958			100		20.40	3.06	0.60	19.80
6	0.000					20.40	3.06	0.00	20.40

Note: Resistance of conductor value from National Electrical Code (NFPA 70) Chapter 9, Table Conductor Property

Length of wire run is an estimate of wire to be installed

Visual device operating voltage range UL tested from 20 to 31 VDC nominal voltage

BATTERY POWER CALCULATIONS		Required Standby Time in Hrs	
Total Standby Current (Amps)	0.2000 X	60 Hrs	12
		Required Alarm Time in Min	
Total Alarm Current (Amps)	4.876 X	5 Min	0.406
Standby and Alarm Load Subtotal			12.406
20% Derating Factor			1.2
Total Ampere Hours Required			14.89

Power Calculations

PS6 STORAGE 261							
DEVICE	DESCRIPTION	QNTy	STANDBY CURRENT	STANDBY TOTAL	ALARM CURRENT	ALARM TOTAL	CIRCUIT TOTAL
INX10A	10Amp PS	1	0.20000	0.20000	0.35000	0.350	
	Panel Total			0.2000		0.350	
H-LF Low Frequency	Horn Low Freq	5	0.000	0.00000	0.138	0.690	
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066	
SPSC/SPS (15cd)	Speker Strobe	4	0.000	0.00000	0.066	0.264	
SPSC/SPS (30cd)	Speker Strobe	2	0.000	0.00000	0.094	0.188	
	NAC CIRCUIT 1 TOTAL CURRENT DRAW						1.208 A
H-LF Low Frequency	Horn Low Freq	4	0.000	0.00000	0.138	0.552	
SPSC/SPS (30cd)	Speker Strobe	1	0.000	0.00000	0.094	0.094	
SPSC/SPS (75cd)	Speker Strobe	1	0.000	0.00000	0.158	0.158	
P2/PC2 H/S (75cd)	Horn/Strobe	1	0.000	0.00000	0.176	0.176	
P2/PC2 H/S (110cd)	Horn/Strobe	1	0.000	0.00000	0.221	0.221	
	NAC CIRCUIT 2 CURRENT DRAW						1.201 A
P2/PC2 H/S(15cd)	Horn/Strobe	2	0.000	0.00000	0.091	0.182	
H-LF Low Frequency	Horn Low Freq	5	0.000	0.00000	0.138	0.690	
	NAC CIRCUIT 3 CURRENT DRAW						0.872 A
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066	
P2/PC2 H/S(15cd)	Horn/Strobe	1	0.000	0.00000	0.091	0.091	
H-LF Low Frequency	Horn Low Freq	6	0.000	0.00000	0.138	0.828	
	NAC CIRCUIT 4 CURRENT DRAW						0.985 A
DHF 1224	DOOR HOLDER	10	0.000	0.00000	0.000	0.000	
	NAC CIRCUIT 5 CURRENT DRAW						0.000 A
Unused	Unused	0	0.000	0.00000	0.000	0.000	
	AUX CIRCUIT CURRENT DRAW						0.000 A
Overall	TOTALS			0.2000		4.616	

NAC Voltage Drop Calculations

NAC	Total Load	Length & Gauge of Wire run				Starting Voltage	MAX Volt Drop	Volt Drop	VOLTS AT EOL
		18	16	14	12				
1	1.208			322		20.40	3.06	2.44	17.96
2	1.201			308		20.40	3.06	2.32	18.08
3	0.872			395		20.40	3.06	2.16	18.24
4	0.985			433		20.40	3.06	2.68	17.72
5	0.000					20.40	3.06	0.00	20.40
6	0.000					20.40	3.06	0.00	20.40

Note: Resistance of conductor value from National Electrical Code (NFPA 70) Chapter 9, Table Conductor Property

Length of wire run is an estimate of wire to be installed

Visual device operating voltage range UL tested from 20 to 31 VDC nominal voltage

BATTERY POWER CALCULATIONS		Required Standby Time in Hrs	
Total Standby Current (Amps)	0.2000 X	60 Hrs	12
		Required Alarm Time in Min	
Total Alarm Current (Amps)	4.616 X	5 Min	0.385
Standby and Alarm Load Subtotal			12.385
20% Derating Factor			1.2
Total Ampere Hours Required			14.86

Power Calculations

PS7 STORAGE 360							
DEVICE	DESCRIPTION	QNTy	STANDBY CURRENT	STANDBY TOTAL	ALARM CURRENT	ALARM TOTAL	CIRCUIT TOTAL
INX10A	10Amp PS	1	0.20000	0.20000	0.35000	0.350	
	Panel Total			0.2000		0.350	
P2/PC2 H/S(15cd)	Horn/Strobe	2	0.000	0.00000	0.091	0.182	
P2/PC2 H/S (75cd)	Horn/Strobe	1	0.000	0.00000	0.176	0.176	
SPSC/SPS (75cd)	Speker Strobe	1	0.000	0.00000	0.158	0.158	
H-LF Low Frequency	Horn Low Freq	7	0.000	0.00000	0.138	0.966	
	NAC CIRCUIT 1 TOTAL CURRENT DRAW						1.482 A
SPSC/SPS (75cd)	Speker Strobe	2	0.000	0.00000	0.158	0.316	
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066	
H-LF Low Frequency	Horn Low Freq	6	0.000	0.00000	0.138	0.828	
	NAC CIRCUIT 2 CURRENT DRAW						1.210 A
P2/PC2 H/S(15cd)	Horn/Strobe	2	0.000	0.00000	0.091	0.182	
H-LF Low Frequency	Horn Low Freq	5	0.000	0.00000	0.138	0.690	
	NAC CIRCUIT 3 CURRENT DRAW						0.872 A
P2/PC2 H/S(15cd)	Horn/Strobe	1	0.000	0.00000	0.091	0.091	
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066	
H-LF Low Frequency	Horn Low Freq	6	0.000	0.00000	0.138	0.828	
	NAC CIRCUIT 4 CURRENT DRAW						0.985 A
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066	
P2RH-LF Frequency	Horn/Strobe	1	0.000	0.00000	0.325	0.325	
	NAC CIRCUIT 5 CURRENT DRAW						0.391 A
Door Holder	Door Holder	10	0.000	0.00000	0.000	0.000	
	Aux CIRCUIT CURRENT DRAW						0.000 A
Overall	TOTALS			0.2000		5.290	

NAC Voltage Drop Calculations

NAC	Total Load	Length & Gauge of Wire run				Starting Voltage	MAX Volt Drop	Volt Drop	VOLTS AT EOL
		18	16	14	12				
1	1.482			304		20.40	3.06	2.83	17.57
2	1.210			308		20.40	3.06	2.34	18.06
3	0.872			395		20.40	3.06	2.16	18.24
4	0.985			433		20.40	3.06	2.68	17.72
5	0.391			100		20.40	3.06	0.25	20.15
6	0.000					20.40	3.06	0.00	20.40

Note: Resistance of conductor value from National Electrical Code (NFPA 70) Chapter 9, Table Conductor Property

Length of wire run is an estimate of wire to be installed

Visual device operating voltage range UL tested from 20 to 31 VDC nominal voltage

BATTERY POWER CALCULATIONS			
		Required Standby Time in Hrs	
Total Standby Current (Amps)	0.2000	X	60 Hrs
			60
			12
		Required Alarm Time in Min	
Total Alarm Current (Amps)	5.290	X	5 Min
			0.083
			0.441
Standby and Alarm Load Subtotal			12.441
20% Derating Factor			1.2
Total Ampere Hours Required			14.93

Power Calculations

PS8 STORAGE 458							
DEVICE	DESCRIPTION	QNTy	STANDBY CURRENT	STANDBY TOTAL	ALARM CURRENT	ALARM TOTAL	CIRCUIT TOTAL
INX10A	10Amp PS	1	0.20000	0.20000	0.35000	0.350	
	Panel Total			0.2000		0.350	
P2/PC2 H/S(15cd)	Horn/Strobe	1	0.000	0.00000	0.091	0.091	
P2/PC2 H/S (75cd)	Horn/Strobe	1	0.000	0.00000	0.176	0.176	
SPSC/SPS (75cd)	Speker Strobe	1	0.000	0.00000	0.158	0.158	
H-LF Low Frequency	Horn Low Freq	8	0.000	0.00000	0.138	1.104	
	NAC CIRCUIT 1 TOTAL CURRENT DRAW						1.529 A
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066	
SPSC/SPS (15cd)	Speker Strobe	1	0.000	0.00000	0.066	0.066	
SPSC/SPS (75cd)	Speker Strobe	1	0.000	0.00000	0.158	0.158	
H-LF Low Frequency	Horn Low Freq	6	0.000	0.00000	0.138	0.828	
P2/PC2 H/S(15cd)	Horn/Strobe	1	0.000	0.00000	0.091	0.091	
	NAC CIRCUIT 2 CURRENT DRAW						1.209 A
P2/PC2 H/S(15cd)	Horn/Strobe	2	0.000	0.00000	0.091	0.182	
H-LF Low Frequency	Horn Low Freq	4	0.000	0.00000	0.138	0.552	
	NAC CIRCUIT 3 CURRENT DRAW						0.734 A
P2/PC2 H/S(15cd)	Horn/Strobe	1	0.000	0.00000	0.091	0.091	
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066	
H-LF Low Frequency	Horn Low Freq	4	0.000	0.00000	0.138	0.552	
	NAC CIRCUIT 4 CURRENT DRAW						0.709 A
Door Holders	Door Holders	10	0.000	0.00000	0.000	0.000	
	NAC CIRCUIT 5 CURRENT DRAW						0.000 A
Unused	Unused	0	0.000	0.00000	0.000	0.000	
	AUX CIRCUIT CURRENT DRAW						0.000 A
Overall	TOTALS			0.2000		4.531	

NAC Voltage Drop Calculations

NAC	Total Load	Length & Gauge of Wire run				Starting Voltage	MAX Volt Drop	Volt Drop	VOLTS AT EOL
		18	16	14	12				
1	1.529			298		20.40	3.06	2.86	17.54
2	1.209			285		20.40	3.06	2.16	18.24
3	0.734			345		20.40	3.06	1.59	18.81
4	0.709			355		20.40	3.06	1.58	18.82
5	0.000					20.40	3.06	0.00	20.40
6	0.000					20.40	3.06	0.00	20.40

Note: Resistance of conductor value from National Electrical Code (NFPA 70) Chapter 9, Table Conductor Property

Length of wire run is an estimate of wire to be installed

Visual device operating voltage range UL tested from 20 to 31 VDC nominal voltage

BATTERY POWER CALCULATIONS			
		Required Standby Time in Hrs	
Total Standby Current (Amps)	0.2000	X	60 Hrs
			60
			12
		Required Alarm Time in Min	
Total Alarm Current (Amps)	4.531	X	5 Min
			0.083
			0.378
Standby and Alarm Load Subtotal			12.378
20% Derating Factor			1.2
Total Ampere Hours Required			14.85

Power Calculations

PS9 STORAGE 185									
DEVICE	DESCRIPTION	QNTy	STANDBY	STANDBY	ALARM	ALARM	CIRCUIT		
			CURRENT	TOTAL	CURRENT	TOTAL	TOTAL		
INX10A	10Amp PS	1	0.20000	0.20000	0.35000	0.350			
	Panel Total			0.2000		0.350			
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066			
P2/PC2 H/S (75cd)	Horn/Strobe	1	0.000	0.00000	0.176	0.176			
P2RH-LF Frequency	Horn/Strobe	1	0.000	0.00000	0.325	0.325			
	NAC CIRCUIT 1 TOTAL CURRENT DRAW						0.567	A	
P2RH-LF Frequency	Horn/Strobe	1	0.000	0.00000	0.325	0.325			
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066			
	NAC CIRCUIT 2 CURRENT DRAW						0.391	A	
S/SC Strobe (15cd)	Strobe	2	0.000	0.00000	0.066	0.132			
P2/PC2 H/S (75cd)	Horn/Strobe	1	0.000	0.00000	0.176	0.176			
P2RH-LF Frequency	Horn/Strobe	2	0.000	0.00000	0.325	0.650			
	NAC CIRCUIT 3 CURRENT DRAW						0.958	A	
S/SC Strobe (15cd)	Strobe	1	0.000	0.00000	0.066	0.066			
P2/PC2 H/S(15cd)	Horn/Strobe	3	0.000	0.00000	0.091	0.273			
H-LF Low Frequency	Horn Low Freq	7	0.000	0.00000	0.138	0.966			
	NAC CIRCUIT 4 CURRENT DRAW						1.305	A	
Door Holders	Door Holders	16	0.000	0.00000	0.000	0.000			
	NAC CIRCUIT 5 CURRENT DRAW						0.000	A	
Unused	Unused	0	0.000	0.00000	0.000	0.000			
	AUX CIRCUIT CURRENT DRAW						0.000	A	
Overall	TOTALS			0.2000		3.571			

NAC Voltage Drop Calculations

NAC	Total Load	Length & Gauge of Wire run				Starting Voltage	MAX Volt Drop	Volt Drop	VOLTS AT EOL
		18	16	14	12				
1	0.567			50		20.40	3.06	0.18	20.22
2	0.391			59		20.40	3.06	0.14	20.26
3	0.958			122		20.40	3.06	0.73	19.67
4	1.305			329		20.40	3.06	2.70	17.70
5	0.000					20.40	3.06	0.00	20.40
6	0.000					20.40	3.06	0.00	20.40

Note: Resistance of conductor value from National Electrical Code (NFPA 70) Chapter 9, Table Conductor Property

Length of wire run is an estimate of wire to be installed

Visual device operating voltage range UL tested from 20 to 31 VDC nominal voltage

BATTERY POWER CALCULATIONS			
Total Standby Current (Amps)	0.2000	X	Required Standby Time in Hrs
			60 Hrs
			60
			12
Total Alarm Current (Amps)	3.571	X	Required Alarm Time in Min
			5 Min
			0.083
			0.298
Standby and Alarm Load Subtotal			12.298
20% Derating Factor			1.2
Total Ampere Hours Required			14.76