Fire Alarm Symbol Legend

SYMBOL	DESCRIPTION	PART NUMBER	MODEL	QUANTITY
MICD 0.125W	SPEAKER/STROBE, M.C, WALL, WH	SPKSTR-24WLPW	SPKSTR-24WLPW	6
HICD	STROBE, M-C, RED, WALL	S-24WR	4890010	4
HICD	HORN/STROBE, 2 WIRE, M-C, RED, WALL	HS-24WR	4890030	6
HICD	HORN/STROBE, 2 WIRE, M-C, RED, WALL	HS-24WR	4890030	2
F	PULL, STATION, SINGLE ACTION, ADDRESSABLE	APS-SA	APS-SA	6
S	PHOTO SMOKE DETECTOR	PSA	PSA	1
M	MONITOR MODULE	MCM	MCM	1
M	DUAL INPUT CONTACT MODULE	DCM-4	DCM-4	1
FACP	FACP, ADDRESSABLE, 75 PT	PFC-6075	PFC-6075	1
EVAC	25 WATT 1 CIRCUIT VOICE EVAC PANEL	PVX-25	PVX-25	1
MICD 0.125W	SPEAKER/STROBE, M.C, WALL, RED	SPKSTR-24WLPR	SPKSTR-24WLPR	1

Battery Calculations for Panel: P1

Part No:PFC-6075 - FACP, ADDRESSABLE, 75 PT

Job number: 1 Job name: Elks Lodge
Address 1: 1945 Congress St
Address 2: Portland ME 04102
Phone: 207-865-9475 Fax:
Designing engineer: Bennett Engineering

Part No.	Qty.	Description	Standby	Total Standby	Alarm	Total Alarm
		Panel Equipment				
PFC-6075_MB	1	MOTHER BOARD 6075	130.0000mA	130.0000mA	220.0000mA	220.0000mA
UD-1000	1	DACT	16.0000mA	16.0000mA	23.0000mA	23.0000mA
			Total Panel Stby:	146.0000mA	Total Panel Alarm:	243.0000mA
		Peripheral Devices				
PVX-25	1	25 WATT 1 CIRCUIT VOICE EVAC PANEL, PVX-25_MB (Notification)	0.4000mA	0.4000mA	0.4000mA	0.4000mA
SPKSTR-24WLPW	6	SPEAKER/STROBE, M-C, WALL, WH (Notification)	0.0000mA	0.0000mA	96.0000mA	576.0000mA
HS-24WR	6	HORN/STROBE, 2 WIRE, M-C, RED, WALL (Notification)	0.0000mA	0.0000mA	70.0000mA	420.0000mA
HS-24WR	2	HORN/STROBE, 2 WIRE, M-C, RED, WALL (Notification)	0.0000mA	0.0000mA	86.0000mA	172.0000mA
SPKSTR-24WLPR	1	SPEAKER/STROBE, M-C, WALL, RED (Notification)	0.0000mA	0.0000mA	96.0000mA	96.0000mA
S-24WR	4	STROBE, M-C, RED, WALL (Notification)	0.0000mA	0.0000mA	42.0000mA	168.0000mA
APS-SA	6	PULL STATION, SINGLE ACTION, ADDRESSABLE (Signaling line)	0.3250mA	1.9500mA	0.3250mA	1.9500mA
PSA	1	PHOTO SMOKE DETECTOR (Signaling line)	0.3250mA	0.3250mA	1.2000mA	1.2000mA
MCM	1	MONITOR MODULE (Signaling line)	0.3250mA	0.3250mA	0.3250mA	0.3250mA
DCM-4	1	DUAL INPUT CONTACT MODULE (Signaling line)	0.3250mA	0.3250mA	1.0000mA	1.0000mA
			Total Peripheral Stby:	3.3250mA	Total Periph.Alarm:	1436.8750mA
			Total Standby Amps:	149.3250mA	Total Alarm Amps:	1679.8750mA

Standby time: 24 Hrs 3.584Ah
Alarm time: 5 Min 0.140Ah
Battery requirement: 3.724Ah
Compensation Factors - Standby: 1.2 Alarm: 1.2 Requirement with compensation: 4.469Ah

Battery Calculations for Panel: P2

Part No:PVX-25 - 25 WATT 1 CIRCUIT VOICE EVAC PANEL

Job number: 1 Job name: Elks Lodge
Address 1: 1945 Congress St
Address 2: Portland ME 04102
Phone: 207-865-9475 Fax:
Designing engineer: Bennett Engineering

Part No.	Qty.	Description	Standby	Total Standby	Alarm	Total Alarm
		Panel Equipment				
PVC-ZM	1	ZONE SPLITTER, 4 CLASS B OR 2 CLASS A	51.0000mA	51.0000mA	130.0000mA	130.0000mA
PVX-25_MB	1	25 WATT, 1 CIR, VOICE EVAC MOTHER BOARD	180.4000mA	180.4000mA	1100.4000mA	1100.4000mA
			Total Panel Stby:	231.4000mA	Total Panel Alarm:	1230.4000mA
		Peripheral Devices				
SPKSTR-24WLPW	6	SPEAKER/STROBE, M-C, WALL, WH (Notification)	0.0000mA	0.0000mA	0.0000mA	0.0000mA
SPKSTR-24WLPR	1	SPEAKER/STROBE, M-C, WALL, RED (Notification)	0.0000mA	0.0000mA	0.0000mA	0.0000mA
			Total Peripheral Stby:	0.0000mA	Total Periph.Alarm:	0.0000mA
			Total Standby Amps:	231.4000mA	Total Alarm Amps:	1230.4000mA

Standby time: 24 Hrs 5.554Ah
Alarm time: 5 Min 0.103Ah
Battery requirement: 5.656Ah
Compensation Factors - Standby: 1.2 Alarm: 1.2 Requirement with compensation: 6.787Ah

Part No:PVX-25 - 25 WATT 1 CIRCUIT VOICE EVAC PANEL

Job number: 1 Job name: Elks Lodge
Address 1: 1945 Congress St
Address 2: Portland ME 04102
Phone: 207-865-9475 Fax:
Designing engineer: Bennett Engineering

Standby time: 24 Hrs 5.554Ah
Alarm time: 5 Min 0.103Ah
Battery requirement: 5.656Ah
Compensation Factors - Standby: 1.2 Alarm: 1.2 Requirement with compensation: 6.787Ah

Circuit Calculations Panel: P1 Card: 00

Terminal Voltage: 20.4VDC Amperage: 3.0000A
Cable: 14/2 SOL JKT FPLR 1M RL RED #14
Calculations based on Lump Sum Length.
Design Criteria: Ambient temperature: 167°F Max. operating voltage drop: 10%

Circuit	Description	Type	Total Len	SPKSTR-24WLPR, 30CD, 96.000mA	HS-24WR, 30CD, 86.000mA	SPKSTR-24WLPW, 30CD, 96.000mA	HS-24WR, 15CD, 70.000mA	Total Amps	Gauge	V Drop %	V Drop	Resistance	Max Len
NAC 1		Notification	293'-0	1	2	3	2	696.0000mA	#14	5.14	1.2521V	1.8 Ohms	477'-0

Circuit Calculations Panel: P1 Card: 00

Terminal Voltage: 20.4VDC Amperage: 3.0000A
Cable: 14/2 SOL JKT FPLR 1M RL RED #14
Calculations based on Lump Sum Length.
Design Criteria: Ambient temperature: 167°F Max. operating voltage drop: 10%

Circuit	Description	Type	Total Len	S-24WR, 15CD, 42.000mA	HS-24WR, 15CD, 70.000mA	SPKSTR-24WLPW, 30CD, 96.000mA	Total Amps	Gauge	V Drop %	V Drop	Resistance	Max Len
NAC 2		Notification	330'-0	4	4	3	736.0000mA	#14	7.31	1.4913V	2.0 Ohms	451'-0

Circuit Calculations Panel: P1 Card: 00 Circuit:SLC1

CircuitName: SLC1
Circuit Type: Signaling line/Potter - SLC Terminal Voltage: 20.2VDC Amperage: 560.0000mA
Cable: 18/2 SOL JKT FPLR 1M RL RED #18
Catculations based on Running Total Length.
Design Criteria: Ambient temperature: 167°F Max. operating voltage drop: 10%

Device	Part No	Appliance Desc	Distance	Current	Voltage	Voltage Drop
	PFC-6075	Panel			20.2V	
01	PSA	PHOTO SMOKE DETECTOR	9'-0	0.3250mA	20.1996V	(0.0004V)
02	APS-SA	PULL STATION, SINGLE ACTION,ADDRESSABLE	20'-0	0.3250mA	20.1988V	(0.0008V)
03	APS-SA	PULL STATION, SINGLE ACTION,ADDRESSABLE	27'-0	0.3250mA	20.1978V	(0.0010V)
04	APS-SA	PULL STATION, SINGLE ACTION,ADDRESSABLE	109'-0	0.3250mA	20.1945V	(0.0033V)
05, 06	DCM-4	DUAL INPUT CONTACT MODULE	30'-0	0.3250mA	20.1938V	(0.0008V)
07	APS-SA	PULL STATION, SINGLE ACTION,ADDRESSABLE	12'-0	0.3250mA	20.1935V	(0.0002V)
08	APS-SA	PULL STATION, SINGLE ACTION,ADDRESSABLE	27'-0	0.3250mA	20.1931V	(0.0004V)
09	MCM	MONITOR MODULE	44'-0	0.3250mA	20.1927V	(0.0004V)
10	APS-SA	PULL STATION, SINGLE ACTION,ADDRESSABLE	69'-0	0.3250mA	20.1923V	(0.0002V)
			347'-0	2.9250mA		

Total Current: 2.9250mA
(Total VDrop Percent:0.04%) Total Voltage Drop: 0.0077V

Circuit Calculations Panel: P2 Card: 01 Circuit:SPK3

Design Criteria: Ambient temperature: 167°F Maximum dB Drop: 3 dB

Circuit	Description	Type	Total Len	SPKSTR-24WLPR	SPKSTR-24WLPW	Total Watts	Gauge	dB Loss	Max Allowable Len
SPK3		Notification/Audio 25v	165'-0	1	3	0.50 Watts	#18	-0.02 dB	35108'

Circuit Calculations Panel: P2 Card: 01 Circuit:SPK4

Design Criteria: Ambient temperature: 167°F Maximum dB Drop: 3 dB

Circuit	Description	Type	Total Len	SPKSTR-24WLPW	Total Watts	Gauge	dB Loss	Max Allowable Len
SPK4		Notification/Audio 25v	246'-0	3	0.38 Watts	#18	-0.02 dB	46811'

Circuit Legend

Abbreviation	Type	Name
V1	Notification	Notification
S	Notification	Audio 25v
S1	Audio	25V Channel 1 Audio
U	Signaling line	Potter - SLC

N

Approved for Code Compliance
Fire Prevention Officer
Date: 09/18/17

ALL Fire Protection & Security Systems
14 Maine St Box 70 Suite 216C
Brunswick ME 04011
207-406-4840
www.allfireprotectionme.com

REVISION 1:
7/19/2017 11:42:16 AM

REVISION 2:
7/19/2017 11:42:16 AM

REVISION 3:
7/19/2017 11:42:16 AM

Elks Lodge
1945 Congress St
Portland ME 04102

Calculation

DESIGNED BY:
Bennett Engineering

DATE:
7/31/16

JOB NUMBER:
1034

SHEET NUMBER:
FA-3 Calculation