CEDAR CREEK ELEMENTARY

2600 SW 3RD STREET
LEE'S SUMMIT, MO 64081

Fire Alarm System Drawings

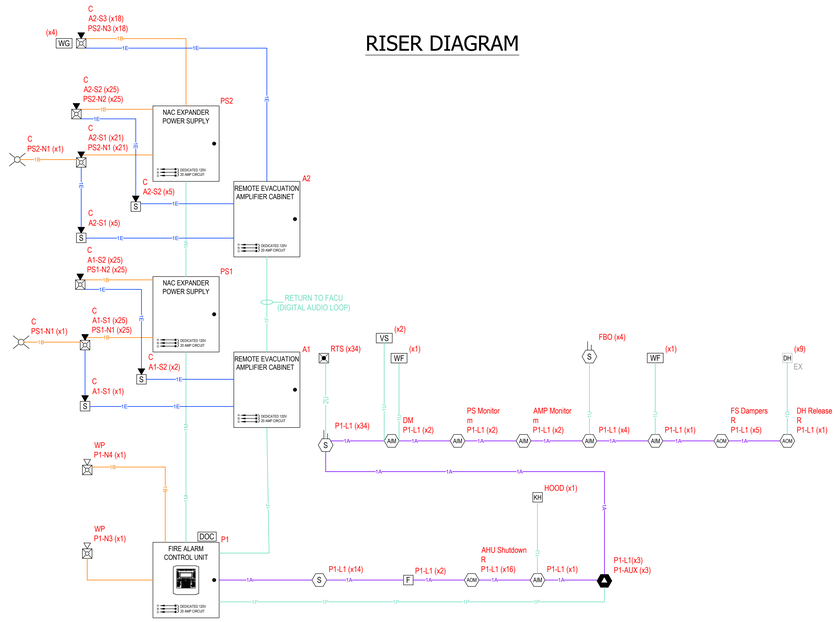
DEVICE LEGEND

SYMBOL	QUANTITY	MANUFACTURER	PART NO	DESCRIPTION	MOUNTING
FACU	1	NOTIFIER	N16X	INTELLIGENT FIRE ALARM PANEL WITH ONE SLC LOOP, 10" TOUCHSCREEN DISPLAY, 4 NAC'S, AND POWER SUPPLY IN A BLACK ENCLOSURE.	SURFACE MOUNT 20.31"H X 24"W X 5.5"D 120VAC DEDICATED 20 AMPERE CIRCUIT AND EARTH GROUND IS REQUIRED. USE EMERGENCY POWER IF AVAILABLE LOCATE AS SHOWN ON THE PLANS.
NAC	2	HONEYWELL	HPF-PS10	10.0 A, 120 VAC REMOTE CHARGER POWER SUPPLY IN A LOCKABLE, RED METAL ENCLOSURE	SELF-CONTAINED IN LOCKABLE CABINET (20.0"H X 14.5"W X 3.5"D) 120VAC CIRCUIT IS REQUIRED.
EVAC	2	NOTIFIER	AMPLIFIER CABINET (2X DAA2-5070)	AMPLIFIER ASSEMBLY WITH EQBB-B4, EQDR-B4, 2X DAA2-5070, 2X PS-12140, CHS-BH1	LOCATE AS SHOWN ON PLANS. CABINET IS 29"H X 24"W X 5-1/2"D. RESERVE BOTTOM 9" FOR BATTERIES. USE ONLY IDENTIFIED CONDUIT ENTRIES. ALLOW 4" ON EACH SIDE FOR DOOR TO OPEN.
DOC	1	SPACE AGE ELECTRONICS	VB000070	FIRE ALARM DOCUMENT BOX - BLACK	SURFACE MOUNT 12" X 13" X 3"
WG	4	STI	STI-9714	HORN/STROBE/SPEAKER DAMAGE STOPPER® - WHITE	INSTALL OVER FIELD DEVICES
S	34	NOTIFIER	DNR W/FSP-951R	INTELLIGENT NON-RELAY PHOTOELECTRIC DUCT DETECTOR/ FSP-951R. FLASHSCAN AND CLIP MODE.	MOUNTS ON AIR DUCT. SEE MFR'S RECOMMENDATIONS FOR MOUNTING DETAILS AND AIR VELOCITY REQUIREMENTS. ANY DEVIATIONS MUST BE APPROVED BY THE "AUTHORITY HAVING JURISDICTION".
	34	NOTIFIER	RTS151KEY	REMOTE TEST STATION W/ SWITCH, ALARM & POWER LEDS, KEY RESET	ONE GANG BOX 2-1/2" DEEP.
AM DM	2	NOTIFIER	FDM-1	ADDRESSABLE DUAL MONITOR MODULE W/ FLASHSCAN, 2 CLASS B	4" SQUARE BOX 2-1/8" DEEP WITH EXTENSION RING. OVERALL MINIMUM DEPTH 3 5/8". NO FRAME REQUIRED.
AM	6	NOTIFIER	FMM-1	ADDRESSABLE MONITOR MODULE W/ FLASHSCAN, SUPERVISES CLASS A OR CLASS B OF DRY CONTACT INPUT	4" SQUARE BOX 2-1/8" DEEP WITH EXTENSION RING. OVERALL MINIMUM DEPTH 3 5/8". NO FRAME REQUIRED.
AM m	4	NOTIFIER	FMM-101	ADDRESSABLE MINI MONITOR MODULE	MOUNT IN SAME BOX AS DEVICE BEING MONITORED. MODULE MEASURES 1-1/2"X3"X1-1/2. ENSURE AMPLE SPACE IS AVAILABLE OR INSTALL MODULE IN A SEPARATE BOX WITH A BLANK COVER.
AOM R	22	NOTIFIER	FRM-1	ADDRESSABLE RELAY MODULE W/ FLASHSCAN, 2 FORM-C DRY CONTACTS	4" SQUARE BOX 2-1/8" DEEP WITH EXTENSION RING. OVERALL MINIMUM DEPTH 3 5/8". NO FRAME REQUIRED.
S	3	NOTIFIER	FSCO-951 W/B200S-WH	INTELLIGENT ADDRESSABLE CARBON MONOXIDE DETECTOR, WHITE W/ INTELLIGENT SOUNDER BASE, WHITE, UL-LISTED	4" OCTAGON BOX 2-1/8" DEEP.
S	14	NOTIFIER	FSP-951-SELFT W/B300-6	WHITE, LOW-PROFILE INTELLIGENT SELF-TESTING PHOTOELECTRIC SENSOR, FLASHSCAN ONLY	4" OCTAGON BOX 2-1/8" DEEP.
F	2	NOTIFIER	NBG-12LX	DUAL-ACTION ADDRESSABLE PULL STATION. INCLUDES KEY LOCKING FEATURE.	4" SQUARE BOX WITH A TWO GANG FRAME. IF SURFACE MOUNTING IS REQUIRED, USE SB-10 BOX.
WP	2	SYSTEM SENSOR	P2GRKLED	2-WIRE, COMPACT WEATHERPROOF HORN STROBE, RED	4" SQUARE BOX 1-1/2" DEEP, OR SURFACE MOUNT TO SBBGRL
C	2	SYSTEM SENSOR	SCWLED	STROBE, CEILING, WHITE	4" SQUARE BOX 1-1/2" DEEP, OR SURFACE MOUNT TO SBBCRL OR SBBCWL.
S C	13	SYSTEM SENSOR	SPCWL	SPEAKER CEILING MOUNT, WHITE	4" SQUARE BOX 2-1/8" OR DEEPER. OR SURFACE MOUNT TO SBBCWL OR SBBCRL.
S C	114	SYSTEM SENSOR	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	4" SQUARE BOX 2-1/8" OR DEEPER. OR SURFACE MOUNT TO SBBCWL OR SBBCRL.
DH EX	9	EXISTING		DOOR HOLDER	
S FBO	4	GENERIC	DUCT DETECTOR		MOUNTED BY MECHANICAL CONTRACTOR
KH HOOD	1	GENERIC	HOOD SYSTEM MONITOR		
VS	2	GENERIC	VALVE TAMPER SUPERVISORY SWITCH		PROVIDED BY SPRINKLER CONTRACTOR
WF	2	GENERIC	WATERFLOW SWITCH		PROVIDED BY SPRINKLER CONTRACTOR

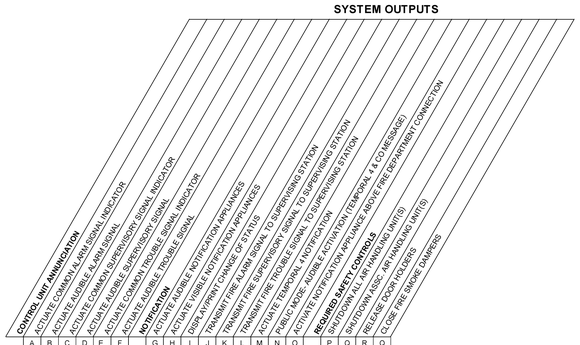
CABLE AND WIRE LEGEND

LABEL	RESISTANCE MFT	AWG	DESCRIPTION
A	7.77	18	18 AWG, 1 PAIR, SOLID, TWISTED, OVERALL JACKET (SLC - INITIATION)
B	3.07	14	14 AWG, 1 PAIR, SOLID, OVERALL JACKET (NAC - SIGNAL/STROBE)
D	3.07	14	14 AWG, 1 PAIR, SOLID, OVERALL JACKET (DOOR HOLDER)
E	4.89	16	16 AWG, 1 PAIR, SOLID, TWISTED, SHIELDED (SPEAKER CIRCUIT)
F	7.77	18	18 AWG, 1 PAIR, SOLID,TWISTED,DATA GRADE (DIGITAL AUDIO LOOP)
M	3.07	14	14 AWG, 1 PAIR, SOLID, OVERALL JACKET (NAC SYNCHRONIZATION)
P	3.07	14	14 AWG, 1 PAIR, SOLID, OVERALL JACKET (SMOKE/DUCT/BEAM/FLAME POWER)
U	7.77	18	18 AWG, 1 PAIR, SOLID, TWISTED, OVERALL JACKET (CONVENTIONAL INITIATING DEVICE)

RISER DIAGRAM



SYSTEM OUTPUTS



SYSTEM INPUTS

SYSTEM INPUTS

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	Q	
1	MANUAL PULL STATION	•	•					•	•	•	•						•		•	•	1
2	SMOKE DETECTOR	•	•					•	•	•	•						•		•	•	2
3	HEAT DETECTOR	•	•					•	•	•	•						•		•	•	3
4	KITCHEN HOOD	•	•					•	•	•	•						•		•	•	4
5	WATERFLOW SWITCH	•	•					•	•	•	•					•	•		•	•	5
6	DUCT DETECTOR (AT HVAC UNIT)			•	•					•		•						•			6
7	CARBON MONOXIDE DETECTOR	•	•					•	•	•	•			•	•		•		•	•	7
8	VALVE TAMPER SWITCH			•	•					•		•									8
9	FIRE ALARM CONTROL PANEL AC POWER FAILURE					•	•			•			•								9
10	FIRE ALARM CONTROL PANEL LOW BATTERY					•	•			•			•								10
11	OPEN CIRCUIT					•	•			•			•								11
12	GROUND FAULT					•	•			•			•								12
13	NOTIFICATION APPLIANCE CIRCUIT SHORTED					•	•			•			•								13
14	ALL OTHER TROUBLES					•	•			•			•								14
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	

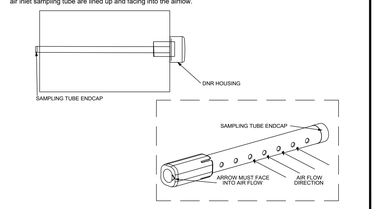
SHEET LEGEND

SHEET NUMBER	SHEET REFERENCE NUMBER	DESCRIPTION
1	FA001	COVER SHEET, LEGEND, SEQUENCE OF OPERATIONS & RISER DIAGRAM
2	FA101	FIRE ALARM PLANS
3	FA201	BATTERY CALCULATIONS AND DECIBEL LOSS REPORT
4	FA201	POINT TO POINT CALCULATIONS
5	FA301	ADDRESS LIST
6	FA401	DEVICE CONNECTION DETAILS AND PANEL DETAILS

INSTALLING CONTRACTOR WILL NEED TO PROVIDE ACCURATE AS-BUILT INFORMATION TO TECH ELECTRONICS. THIS SHALL INCLUDE ALL WIRING TYPE AND ROUTING INFORMATION FOR ALL ADDRESSABLE LOOP (SLC), HORN, SPEAKER AND STROBE (NAC) AND ZONE (IDC) CIRCUITS. THE AS-BUILT DRAWINGS SHALL SHOW THE EXACT QUANTITY AND PLACEMENT OF ALL DEVICES AND EACH EXACT DEVICE ADDRESS INSTALLED, IF APPLICABLE. ALL DELETED, ADDED AND CHANGES MUST BE SHOWN.

ALL 120VAC POWER SHALL BE NOTED WITH THE CIRCUIT BREAKER NUMBER, SIZE OF BREAKER AND THE LOCATION OF THE CIRCUIT BREAKER PANEL. THE CIRCUIT BREAKER MUST BE LOCKED. ALL ABOVE INFORMATION IS REQUIRED BY AND SHALL BE PROVIDED PER NFPA 72. SEE CURRENTLY ENFORCED ORDINANCE IF NECESSARY.

Per NFPA sampling tubes over 3 feet long should be supported at the end opposite of the duct detector. In ducts wider than 8 feet, work must be performed inside the duct to couple the other section of the sampling tube to the section already installed using the ½ inch conduit fitting supplied. Make sure that the holes on both sections of the air inlet sampling tube are lined up and facing into the airflow.

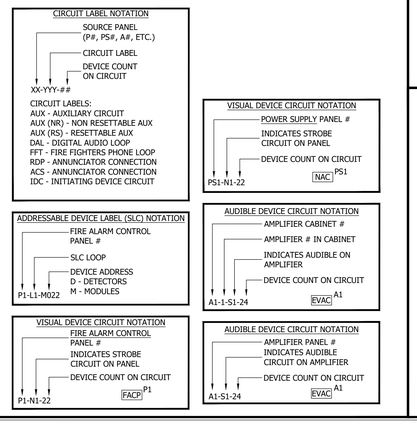


DUCT DETECTOR MOUNTING

ABBREVIATIONS

AHJ - AUTHORITY HAVING JURISDICTION
DD - DUCT DETECTOR
DH - DOOR HOLDER
DUA- DWELLING UNIT ALARM
E- PSD/HD W/ ELEV INTERFACE
ELEV1- PRIMARY ELEVATOR RECALL
ELEV2- ALTERNATE ELEVATOR RECALL
EST- ELEVATOR SHUNT TRIP
EXG - EXISTING
FH- ELEVATOR FIREHAT
FL - FIELD LOCATE
FM- FLUSH MOUNT
FGS- FIRE PLACE GAS SHUTOFF
FSD- FIRE/SMOKE DAMPER
KB- KNOX BOX
KH- KITCHEN HOOD
PIV- SPRINKLER POST INITIATOR VALVE
NT- NAC TRIGGER
RD- RETURN DUCT
RL- RELOCATE
RTU- ROOF TOP UNIT
SD- SUPPLY DUCT
TS - TAMPER SWITCH
VL - VERIFY LOCATION
WF - WATERFLOW
WP- WEATHER PROOF

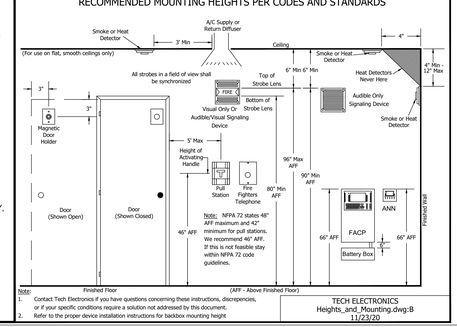
ADDRESS LABEL CLARIFICATION



GENERAL INSTALLATION NOTES:

1. INSTALLATION MUST COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR LOCAL LAWS, REGULATIONS, CODES, AND SPECIFICATIONS. THIS SYSTEM SHALL BE IN STRICT CONFORMANCE WITH THESE DRAWINGS; 2018 IBC ; NFPA 72 2016 EDITION; NFPA 70, 2017 EDITION; AND AHJ.
2. WHERE CONDUCTORS ARE RUN IN CONDUIT, USE ONLY APPROVED CABLE WITHIN RACEWAYS, PIPES OR CONDUITS. ALL SHIELDED WIRE MUST BE CONTINUOUS THROUGHOUT CIRCUIT, ALL SHIELDS SHALL BE ISOLATED FROM GROUND, ALL SHIELDS SHALL TERMINATE AT THE FIRE ALARM CONTROL PANEL (FACP) ONLY.
3. PER NFPA 72 2016, 17.7.1.11 - WHERE DETECTORS ARE INSTALLED FOR SIGNAL INITIATION DURING CONSTRUCTION, THEY SHALL BE CLEANED AND VERIFIED TO BE OPERATING IN ACCORDANCE WITH THE LISTED SENSITIVITY, OR THEY SHALL BE REPLACED PRIOR TO THE FINAL COMMISSIONING OF THE SYSTEM. WHERE DETECTORS ARE INSTALLED BUT NOT OPERATIONAL DURING CONSTRUCTION, THEY SHALL BE PROTECTED FROM CONSTRUCTION DEBRIS, DUST, DIRT, AND DAMAGE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND VERIFIED TO BE OPERATING IN ACCORDANCE WITH THE LISTED SENSITIVITY, OR THEY SHALL BE REPLACED PRIOR TO THE FINAL COMMISSIONING OF THE SYSTEM. WHERE DETECTION IS NOT REQUIRED DURING CONSTRUCTION, DETECTORS SHALL NOT BE INSTALLED UNTIL AFTER ALL OTHER CONSTRUCTION TRADES HAVE COMPLETED CLEANUP.
4. ALL FIRE ALARM SYSTEM WIRING SHALL BE CLEAR FROM SHORTS, OPENS AND GROUNDS.
5. NOTIFICATION CIRCUIT WIRE RUNS ARE CRITICAL. ANY INCREASE IN LENGTH OF WIRE MAY AFFECT CIRCUIT CONFIGURATIONS.

RECOMMENDED MOUNTING HEIGHTS PER CODES AND STANDARDS



Note:
1. Contact Tech Electronics if you have questions concerning these instructions, discrepencies, or if your specific conditions require a solution not addressed by this document.
2. Refer to the proper device installation instructions for backbox mounting height

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Heights_and_Mounting.dwg:B
11/23/20

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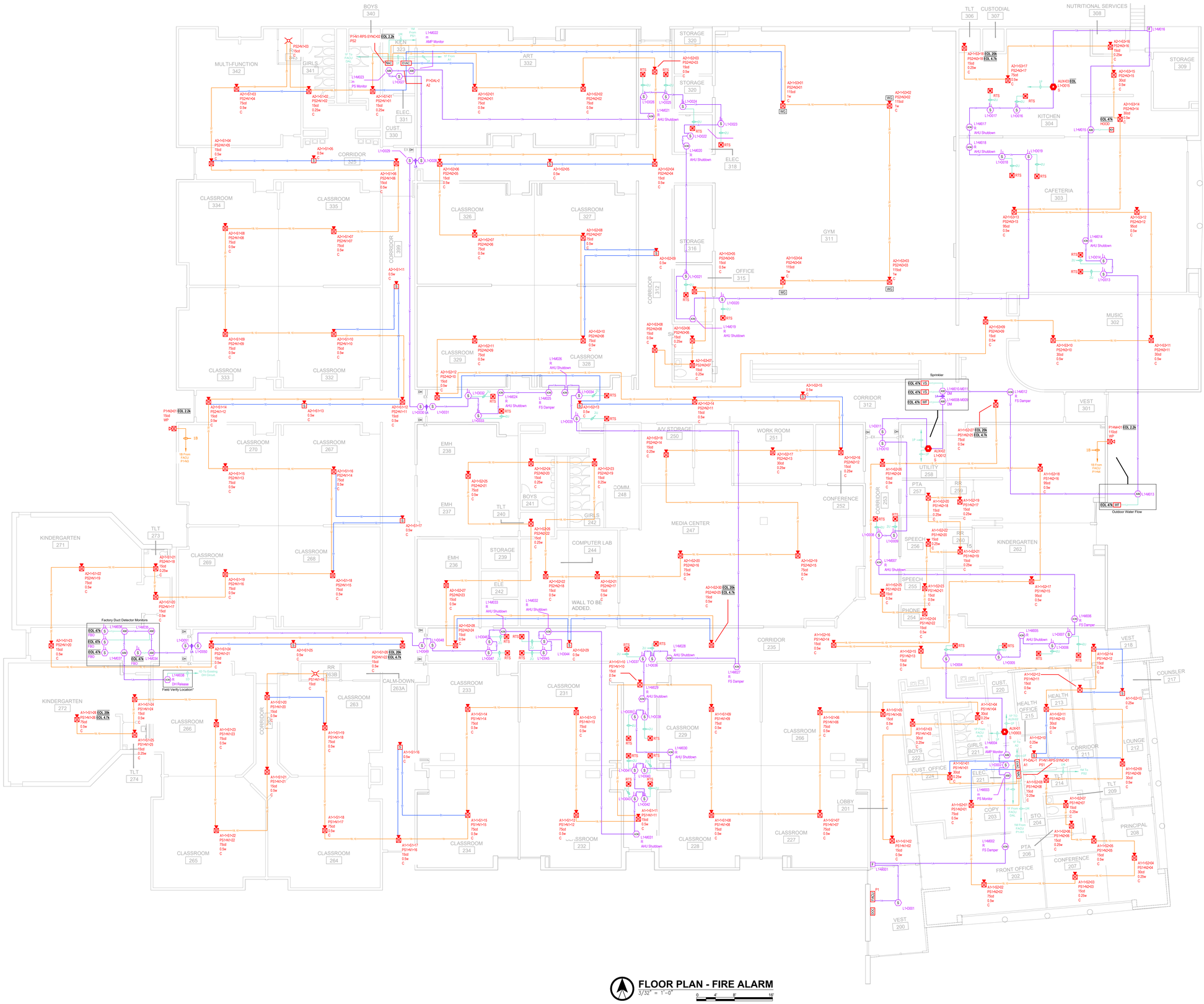
6/17/2025
STATE OF MISSOURI
DARIN T. SEIDEL
NUMBER PE-2009031006
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE:	REVISION DESCRIPTION:

PROJECT NAME / CUSTOMER / LOCATION:
Cedar Creek Elementary School
2600 SW 3rd St.
Lee's Summit, MO 64081

SYSTEM DESCRIPTION:
Fire Alarm System

PROJECT MANAGER: Benjamin McVay 314-705-0128
DESIGNER: RN
DRAFTER: JMJ
DRAWING #: FA001
PROJECT JOB#: PJ2503300003
DATE: 04/23/2025
ISSUED FOR: CONSTRUCTION



FLOOR PLAN - FIRE ALARM

3/32" = 1'-0"

0 4' 8' 16'

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5720 Reeder Shawnee, Ks. 66203 (913)262-1772

6/17/2025
STATE OF MISSOURI
DARIN T. SEIDEL
NUMBER PE-2009030
PROFESSIONAL ENGINEER

NO.	DATE:	REVISION DESCRIPTION:

PROJECT NAME / CUSTOMER / LOCATION:
Cedar Creek Elementary School
2600 SW 3rd St.
Lee's Summit, MO 64081

SYSTEM DESCRIPTION:
Fire Alarm System

PROJECT MANAGER: Benjamin McVay 314-705-0128
DESIGNER: RN
DRAFTER: JMJ
DRAWING #: FA101
PROJECT JOB#: PJ2503300003
DATE: 04/23/2025
ISSUED FOR: CONSTRUCTION

PANEL P1 (N16X) BATTERY CALCULATION
(SECONDARY POWER SOURCE REQUIREMENTS)

PANEL COMPONENTS	QTY	PART NO.	DESCRIPTION	STANDBY CURRENT: CURRENT DRAW (A)	STANDBY CURRENT: TOTAL (A)	SECONDARY ALARM CURRENT: CURRENT DRAW (A)	SECONDARY ALARM CURRENT: TOTAL (A)
	1	N16X	INTELLIGENT FIRE ALARM PANEL WITH ONE SLC LOOP, 10" TOUCHSCREEN DISPLAY, 4 NACS, AND POWER SUPPLY IN A BLACK ENCLOSURE	0	0	0	0
	1	CPU-N16LD	N16X WITH DISPLAY, INTELLIGENT FIRE ALARM WITH ONE SLC LOOP, 10" TOUCHSCREEN DISPLAY, 4 NACS, AND POWER SUPPLY; CHASSIS MOUNTED FOR USE IN A CAB-5 SERIES CABINET	0.269	0.269	0.279	0.279
	1	DR-B5	DOOR ASSEMBLY, WINDOW, TWO TIERS, BLACK, 21 LBS.	0	0	0	0
	1	DVC-EM	DIGITAL VOICE COMMAND, EXTENDED MEMORY	0.3	0.3	0.3	0.3
	1	DVC-KDB	DIGITAL VOICE COMMAND, KEYPAD	0.06	0.06	0.06	0.06
	1	PMB-AUX	ADDRESSABLE POWER SUPPLY/BATTERY CHARGER	0.096	0.096	0.11	0.11
	1	SB8-B5	BACKBOX ASSEMBLY, TWO TIERS, BLACK, 29 LBS.	0	0	0	0
	1	SLM-318	SIGNALING LINE MODULE PROVIDES A SIGNALING LINE CIRCUIT OF 159 ADDRESSABLE POINTS. ADD SLM-318 UNITS TO EXPAND SLC CAPABILITY. SEE DN-62115.	0.159	0.159	0.21	0.21

CIRCUIT	MAX CARD AMPS	USED CARD AMPS	SPARE CARD AMPS	SYMBOL	QTY	PART NO	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)
P1•N1-RPS-SYNC	6	0.157000	5.843000	NAC	2	HPF-PS10	10.0 A, 120 VAC REMOTE CHARGER POWER SUPPLY IN A LOCKABLE, RED METAL ENCLOSURE	0.014	0.028	0.014	0.028
P1•N3				WP	1	P2GRKLED	2-WIRE, COMPACT WEATHERPROOF HORN STROBE, RED 15CD	0	0	0.035	0.035
P1•N4				WP	1	P2GRKLED	2-WIRE, COMPACT WEATHERPROOF HORN STROBE, RED 110CD	0	0	0.094	0.094
P1•AUX	N/A	0.105000		S	3	FSCO-951 WIB200S-WH	INTELLIGENT ADDRESSABLE CARBON MONOXIDE DETECTOR, WHITE W/ INTELLIGENT SOUNDER BASE, WHITE. UL-LISTED	0.0005	0.0015	0.035	0.105
P1•CAL				EVAC	2	AMPLIFIER CABINET (2X DAA2-5070)	AMPLIFIER ASSEMBLY WITH EQBB-B4, EQDR-B4, 2X DAA2-5070, 2X PS-12140, CHS-BH1	0	0	0	0
P1•L1	N/A	0.427700		S	34	DNR W/FSP-951R	INTELLIGENT NON-RELAY PHOTOELECTRIC DUCT DETECTOR/ FSP-951R. FLASHSCAN AND CLIP MODE.	0.0002	0.0068	0.0045	0.153
				DM	2	FDM-1	ADDRESSABLE DUAL MONITOR MODULE W/ FLASHSCAN, 2 CLASS B	0.00075	0.0015	0.0064	0.0128
				AM	6	FMM-1	ADDRESSABLE MONITOR MODULE W/ FLASHSCAN, SUPERVISES CLASS A OR CLASS B OF DRY CONTACT INPUT	0.00035	0.0021	0.005	0.03
				AM m	4	FMM-101	ADDRESSABLE MINI MONITOR MODULE	0.00035	0.0014	0.0006	0.0024
				CM R	22	FRM-1	ADDRESSABLE RELAY MODULE W/ FLASHSCAN, 2 FORM-C DRY CONTACTS	0.000255	0.00561	0.0065	0.143
				S	3	FSCO-951 WIB200S-WH	INTELLIGENT ADDRESSABLE CARBON MONOXIDE DETECTOR, WHITE W/ INTELLIGENT SOUNDER BASE, WHITE. UL-LISTED	0.0002	0.0006	0.0045	0.0135
				S	14	FSP-951-SELFT WIB300-6	WHITE, LOW-PROFILE INTELLIGENT SELF-TESTING PHOTOELECTRIC SENSOR, FLASHSCAN ONLY	0.0002	0.0028	0.0045	0.063
				F	2	NBG-12LX	DUAL ACTION ADDRESSABLE PULL STATION. INCLUDES KEY LOCKING FEATURE	0.000375	0.00075	0.005	0.01

TOTAL STANDBY (A)	0.930060	TOTAL ALARM (A)	1.65
REQUIRED STANDBY TIME (HOURS)	24		5
REQUIRED ALARM TIME (MINUTES)	24		22.44
SECONDARY STANDBY LOAD (A)	0.930060	SPARE CIRCUIT AMPS (A)	0.137
SECONDARY ALARM LOAD (A)	1.65	0.083	
STANDBY AND ALARM SUBTOTAL (AMP HOURS)		22.58	
DERATING FACTOR		1.25	
SECONDARY LOAD REQUIREMENTS (AMP HOURS)		28.22	
PROVIDE (2) 12V 55AH BATTERIES			

*BATTERY BOX SIZE CAPACITY NOT SPECIFIED. REFER TO MANUFACTURER DOCUMENTATION.

PANEL P1•N1-RPS-SYNC
PS1 (HPF-PS10) BATTERY CALCULATION
(SECONDARY POWER SOURCE REQUIREMENTS)

PANEL COMPONENTS	QTY	PART NO.	DESCRIPTION	STANDBY CURRENT: CURRENT DRAW (A)	STANDBY CURRENT: TOTAL (A)	SECONDARY ALARM CURRENT: CURRENT DRAW (A)	SECONDARY ALARM CURRENT: TOTAL (A)
	1	HPF-PS10	10.0 A, 120 VAC REMOTE CHARGER POWER SUPPLY IN A LOCKABLE, RED METAL ENCLOSURE	0	0	0	0
	1	HPF-PS10 MAIN BOARD	FIRE ALARM POWER SUPPLY MAIN BOARD	0.156	0.156	0.185	0.185

CIRCUIT	MAX CARD AMPS	USED CARD AMPS	SPARE CARD AMPS	SYMBOL	QTY	PART NO	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)
PS1•N1	N/A	1.888000		C	1	SCWLED	STROBE, CEILING, WHITE 15CD	0	0	0.018	0.018
				C	9	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 15CD	0	0	0.018	0.162
				C	3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 30CD	0	0	0.022	0.066
				C	13	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 75CD	0	0	0.07	0.910
PS1•N2				C	17	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 15CD	0	0	0.018	0.306
				C	3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 30CD	0	0	0.022	0.066
				C	3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 75CD	0	0	0.07	0.21
				C	2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 95CD	0	0	0.075	0.15

TOTAL STANDBY (A)	0.156	TOTAL ALARM (A)	2.07
REQUIRED STANDBY TIME (HOURS)	24		
REQUIRED ALARM TIME (MINUTES)	24		3.74
SECONDARY STANDBY LOAD (A)	0.156	3.74	
SECONDARY ALARM LOAD (A)	2.07	0.083	0.17275
STANDBY AND ALARM SUBTOTAL (AMP HOURS)		3.92	
DERATING FACTOR		1.25	
SECONDARY LOAD REQUIREMENTS (AMP HOURS)		4.90	
PROVIDE (2) 12V 7AH BATTERIES			

*BATTERY BOX SIZE CAPACITY NOT SPECIFIED. REFER TO MANUFACTURER DOCUMENTATION.

PANEL P1•DAL
A1 (AMPLIFIER CABINET (2X DAA2-5070)) BATTERY CALCULATION
(SECONDARY POWER SOURCE REQUIREMENTS)

PANEL COMPONENTS	QTY	PART NO.	DESCRIPTION	STANDBY CURRENT: CURRENT DRAW (A)	STANDBY CURRENT: TOTAL (A)	SECONDARY ALARM CURRENT: CURRENT DRAW (A)	SECONDARY ALARM CURRENT: TOTAL (A)
	1	AMPLIFIER CABINET (2X DAA2-5070)	AMPLIFIER ASSEMBLY WITH EQBB-B4, EQDR-B4, 2X DAA2-5070, 2X PS-12140, CHS-BH1	0	0	0	0
	1	CHS-BH1	CHASSIS	0	0	0	0
	2	DAA2-5070	120 VAC DIGITAL AUDIO AMPLIFIER (50 W, 70VRMS), MAX ALARM CURRENT	0.4	0.80	3.75	7.50
	1	EQBB-D4	EQUIPMENT BACKBOX WITH VENTILATED LOCKING DOOR, FOUR TIERS, BLACK	0	0	0	0
	1	EQDR-B4	DOOR ASSEMBLY, VENTED DOOR, TWO TIERS, BLACK. (FOR RED, ORDER EQDR-BAR)	0	0	0	0
	1	EQDR-CAR	EQUIPMENT DOOR ASSEMBLY, VENTED, 3 TIERS, RED	0	0	0	0

CIRCUIT	MAX CARD AMPS	USED CARD AMPS	SPARE CARD AMPS	SYMBOL	QTY	PART NO	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)
A1•1•S1	N/A	0.000000		S C	1	SPCWL	SPEAKER CEILING MOUNT, WHITE 0.5W	0	0	0	0
				SM C	4	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 0.25W	0	0	0	0
				SM C	21	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 0.5W	0	0	0	0
A1•1•S2				S C	2	SPCWL	SPEAKER CEILING MOUNT, WHITE 0.25W	0	0	0	0
				SM C	9	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 0.25W	0	0	0	0
				SM C	16	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 0.5W	0	0	0	0

TOTAL STANDBY (A)	0.80	TOTAL ALARM (A)	7.50
REQUIRED STANDBY TIME (HOURS)	0.083		5
REQUIRED ALARM TIME (MINUTES)	24		0.6250
SECONDARY STANDBY LOAD (A)	0.80	19.20	
SECONDARY ALARM LOAD (A)	7.50		
STANDBY AND ALARM SUBTOTAL (AMP HOURS)		19.83	
DERATING FACTOR		1.25	
SECONDARY LOAD REQUIREMENTS (AMP HOURS)		24.78	
PROVIDE (2) 12V 26AH BATTERIES			

*BATTERY BOX SIZE CAPACITY NOT SPECIFIED. REFER TO MANUFACTURER DOCUMENTATION.

PANEL P1•N1-RPS-SYNC• EOL 2.2K
PS2 (HPF-PS10) BATTERY CALCULATION
(SECONDARY POWER SOURCE REQUIREMENTS)

PANEL COMPONENTS	QTY	PART NO.	DESCRIPTION	STANDBY CURRENT: CURRENT DRAW (A)	STANDBY CURRENT: TOTAL (A)	SECONDARY ALARM CURRENT: CURRENT DRAW (A)	SECONDARY ALARM CURRENT: TOTAL (A)
	1	HPF-PS10	10.0 A, 120 VAC REMOTE CHARGER POWER SUPPLY IN A LOCKABLE, RED METAL ENCLOSURE	0	0	0	0
	1	HPF-PS10 MAIN BOARD	FIRE ALARM POWER SUPPLY MAIN BOARD	0.156	0.156	0.185	0.185

CIRCUIT	MAX CARD AMPS	USED CARD AMPS	SPARE CARD AMPS	SYMBOL	QTY	PART NO	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)
PS2•N1	N/A	2.632000		C	1	SCWLED	STROBE, CEILING, WHITE 15CD	0	0	0.018	0.018
				C	11	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 15CD	0	0	0.018	0.198
PS2•N2				C	10	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 75CD	0	0	0.07	0.70
				C	15	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 15CD	0	0	0.018	0.27
				C	1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 30CD	0	0	0.022	0.022
				C	9	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 75CD	0	0	0.07	0.630
PS2•N3				C	7	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 15CD	0	0	0.018	0.126
				C	4	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 30CD	0	0	0.022	0.088
				C	1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 75CD	0	0	0.07	0.07
				C	2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 95CD	0	0	0.075	0.15
				C	4	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 115CD	0	0	0.09	0.36

TOTAL STANDBY (A)	0.156	TOTAL ALARM (A)	2.82
REQUIRED STANDBY TIME (HOURS)	24		
REQUIRED ALARM TIME (MINUTES)	24		5
SECONDARY STANDBY LOAD (A)	0.156	3.74	
SECONDARY ALARM LOAD (A)	2.82	0.083	0.23475
STANDBY AND ALARM SUBTOTAL (AMP HOURS)		3.98	
DERATING FACTOR		1.25	
SECONDARY LOAD REQUIREMENTS (AMP HOURS)		4.97	
PROVIDE (2) 12V 7AH BATTERIES			

*BATTERY BOX SIZE CAPACITY NOT SPECIFIED. REFER TO MANUFACTURER DOCUMENTATION.

PANEL P1•DAL
A2 (AMPLIFIER CABINET (2X DAA2-5070)) BATTERY CALCULATION
(SECONDARY POWER SOURCE REQUIREMENTS)

PANEL COMPONENTS	QTY	PART NO.	DESCRIPTION	STANDBY CURRENT: CURRENT DRAW (A)	STANDBY CURRENT: TOTAL (A)	SECONDARY ALARM CURRENT: CURRENT DRAW (A)	SECONDARY ALARM CURRENT: TOTAL (A)
	1	AMPLIFIER CABINET (2X DAA2-5070)	AMPLIFIER ASSEMBLY WITH EQBB-B4, EQDR-B4, 2X DAA2-5070, 2X PS-12140, CHS-BH1	0	0	0	0
	1	CHS-BH1	CHASSIS	0	0	0	0
	2	DAA2-5070	120 VAC DIGITAL AUDIO AMPLIFIER (50 W, 70VRMS), MAX ALARM CURRENT	0.4	0.80	3.75	7.50
	1	EQBB-D4	EQUIPMENT BACKBOX WITH VENTILATED LOCKING DOOR, FOUR TIERS, BLACK	0	0	0	0
	1	EQDR-B4	DOOR ASSEMBLY, VENTED DOOR, TWO TIERS, BLACK. (FOR RED, ORDER EQDR-BAR)	0	0	0	0
	1	EQDR-CAR	EQUIPMENT DOOR ASSEMBLY, VENTED, 3 TIERS, RED	0	0	0	0

CIRCUIT	MAX CARD AMPS	USED CARD AMPS	SPARE CARD AMPS	SYMBOL	QTY	PART NO	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)
A2•1•G1	N/A	0.000000		S C	5	SPCWL	SPEAKER CEILING MOUNT, WHITE 0.5W	0	0	0	0
				SM C	3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 0.25W	0	0	0	0
				SM C	18	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 0.5W	0	0	0	0
A2•1•G2				S C	5	SPCWL	SPEAKER CEILING MOUNT, WHITE 0.5W	0	0	0	0
				SM C	6	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 0.25W	0	0	0	0
				SM C	19	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 0.5W	0	0	0	0
A2•1•G3				SM C	4	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 0.25W	0	0	0	0
				SM C	10	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 0.5W	0	0	0	0
				SM C	4	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE 1W	0	0	0	0

TOTAL STANDBY (A)	0.80	TOTAL ALARM (A)	7.50
REQUIRED STANDBY TIME (HOURS)	24		
REQUIRED ALARM TIME (MINUTES)	24		5
SECONDARY STANDBY LOAD (A)	0.80	19.20	
SECONDARY ALARM LOAD (A)	7.50	0.083	0.6250
STANDBY AND ALARM SUBTOTAL (AMP HOURS)		19.83	
DERATING FACTOR		1.25	
SECONDARY LOAD REQUIREMENTS (AMP HOURS)		24.78	
PROVIDE (2) 12V 26AH BATTERIES			

*BATTERY BOX SIZE CAPACITY NOT SPECIFIED. REFER TO MANUFACTURER DOCUMENTATION.

BATTERY CALCULATIONS

A1 1 S1 DB LOSS REPORT

WATTAGE SUMMARY		POWER SUMMARY	
MAX. CIRCUIT WATTS:	50	STARTING CALC. VOLTAGE:	70.70
TOTAL CIRCUIT WATTS:	12	MAX. DB LOSS:	-0.158950
SPARE CIRCUIT WATTS:	38	VOLTAGE DROP %:	0.0182
SPARE CIRCUIT WATTS %:	0.760	MIN. OPERATIONAL VOLTAGE:	63
MAX. CARD WATTS:	n/a	END OF LINE VOLTAGE:	69.41
TOTAL CARD WATTS:	22.75	WIRE RESISTANCE (OHFT):	4.89
SPARE CARD WATTS:		TOTAL CIRCUIT LENGTH (FT):	777
SPARE CARD WATTS %:		TOTAL CIRCUIT RESISTANCE (Ω):	7.60

CIRCUIT WIRING PROPERTIES: 'E' TP315 16 AWG, 16 AWG, 1 PAIR, SOLID, TWISTED, SHIELDED (SPEAKER CIRCUIT)
DISTANCE MEASURED USING DRAWN SEGMENT LENGTHS WITH 10.00 % ADDITIONAL LENGTH CALCULATED

SYMBOL	QUANTITY	PART NO	DESCRIPTION	WATTS	TOTAL WATTS
S C	1	SPCWL	SPEAKER CEILING MOUNT, WHITE	0.5	0.5
SM C	4	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	0.25	1
SM C	21	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	0.5	10.50

CALCULATION METHODS:
WATTS TO AMPS CONVERSION = TOTAL CIRCUIT WATTS / STARTING CALCULATION VOLTAGE
TOTAL CIRCUIT RESISTANCE (Ω) = WIRE RESISTANCE (OHFT) X 2 X TOTAL CIRCUIT LENGTH (FT)
TOTAL VOLTAGE DROP = TOTAL CIRCUIT RESISTANCE (Ω) X WATTS TO AMPS CONVERSION
MAX. DB LOSS = 20 • LOG (END OF LINE VOLTAGE / STARTING CALCULATION VOLTAGE)

A1 1 S2 DB LOSS REPORT

WATTAGE SUMMARY		POWER SUMMARY	
MAX. CIRCUIT WATTS:	50	STARTING CALC. VOLTAGE:	70.70
TOTAL CIRCUIT WATTS:	10.75	MAX. DB LOSS:	-0.131
SPARE CIRCUIT WATTS:	39.25	VOLTAGE DROP %:	0.0148
SPARE CIRCUIT WATTS %:	0.7850	MIN. OPERATIONAL VOLTAGE:	63
MAX. CARD WATTS:	n/a	END OF LINE VOLTAGE:	69.64
TOTAL CARD WATTS:	22.75	WIRE RESISTANCE (OHFT):	4.89
SPARE CARD WATTS:		TOTAL CIRCUIT LENGTH (FT):	710
SPARE CARD WATTS %:		TOTAL CIRCUIT RESISTANCE (Ω):	6.95

CIRCUIT WIRING PROPERTIES: 'E' TP315 16 AWG, 16 AWG, 1 PAIR, SOLID, TWISTED, SHIELDED (SPEAKER CIRCUIT)
DISTANCE MEASURED USING DRAWN SEGMENT LENGTHS WITH 10.00 % ADDITIONAL LENGTH CALCULATED

SYMBOL	QUANTITY	PART NO	DESCRIPTION	WATTS	TOTAL WATTS
S C	2	SPCWL	SPEAKER CEILING MOUNT, WHITE	0.25	0.5
SM C	9	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	0.25	2.25
SM C	16	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	0.5	8

CALCULATION METHODS:
WATTS TO AMPS CONVERSION = TOTAL CIRCUIT WATTS / STARTING CALCULATION VOLTAGE
TOTAL CIRCUIT RESISTANCE (Ω) = WIRE RESISTANCE (OHFT) X 2 X TOTAL CIRCUIT LENGTH (FT)
TOTAL VOLTAGE DROP = TOTAL CIRCUIT RESISTANCE (Ω) X WATTS TO AMPS CONVERSION
MAX. DB LOSS = 20 • LOG (END OF LINE VOLTAGE / STARTING CALCULATION VOLTAGE)

A2 1 S1 DB LOSS REPORT

WATTAGE SUMMARY		POWER SUMMARY	
MAX. CIRCUIT WATTS:	50	STARTING CALC. VOLTAGE:	70.70
TOTAL CIRCUIT WATTS:	12.25	MAX. DB LOSS:	-0.167
SPARE CIRCUIT WATTS:	37.75	VOLTAGE DROP %:	0.0191
SPARE CIRCUIT WATTS %:	0.7550	MIN. OPERATIONAL VOLTAGE:	63
MAX. CARD WATTS:	n/a	END OF LINE VOLTAGE:	69.35
TOTAL CARD WATTS:	35.75	WIRE RESISTANCE (OHFT):	4.89
SPARE CARD WATTS:		TOTAL CIRCUIT LENGTH (FT):	796
SPARE CARD WATTS %:		TOTAL CIRCUIT RESISTANCE (Ω):	7.79

CIRCUIT WIRING PROPERTIES: 'E' TP315 16 AWG, 16 AWG, 1 PAIR, SOLID, TWISTED, SHIELDED (SPEAKER CIRCUIT)
DISTANCE MEASURED USING DRAWN SEGMENT LENGTHS WITH 10.00 % ADDITIONAL LENGTH CALCULATED

SYMBOL	QUANTITY	PART NO	DESCRIPTION	WATTS	TOTAL WATTS
S C	5	SPCWL	SPEAKER CEILING MOUNT, WHITE	0.5	2.50
SM C	3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	0.25	0.750
SM C	18	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	0.5	9

CALCULATION METHODS:
WATTS TO AMPS CONVERSION = TOTAL CIRCUIT WATTS / STARTING CALCULATION VOLTAGE
TOTAL CIRCUIT RESISTANCE (Ω) = WIRE RESISTANCE (OHFT) X 2 X TOTAL CIRCUIT LENGTH (FT)
TOTAL VOLTAGE DROP = TOTAL CIRCUIT RESISTANCE (Ω) X WATTS TO AMPS CONVERSION
MAX. DB LOSS = 20 • LOG (END OF LINE VOLTAGE / STARTING CALCULATION VOLTAGE)

A2 1 S2 DB LOSS REPORT

WATTAGE SUMMARY		POWER SUMMARY	
MAX. CIRCUIT WATTS:	50	STARTING CALC. VOLTAGE:	70.70
TOTAL CIRCUIT WATTS:	13.50	MAX. DB LOSS:	-0.237
SPARE CIRCUIT WATTS:	36.50	VOLTAGE DROP %:	0.0269
SPARE CIRCUIT WATTS %:	0.730	MIN. OPERATIONAL VOLTAGE:	63
MAX. CARD WATTS:	n/a	END OF LINE VOLTAGE:	68.80
TOTAL CARD WATTS:	35.75	WIRE RESISTANCE (OHFT):	4.89
SPARE CARD WATTS:		TOTAL CIRCUIT LENGTH (FT):	1018
SPARE CARD WATTS %:		TOTAL CIRCUIT RESISTANCE (Ω):	9.96

CIRCUIT WIRING PROPERTIES: 'E' TP315 16 AWG, 16 AWG, 1 PAIR, SOLID, TWISTED, SHIELDED (SPEAKER CIRCUIT)
DISTANCE MEASURED USING DRAWN SEGMENT LENGTHS WITH 10.00 % ADDITIONAL LENGTH CALCULATED

SYMBOL	QUANTITY	PART NO	DESCRIPTION	WATTS	TOTAL WATTS
S C	5	SPCWL	SPEAKER CEILING MOUNT, WHITE	0.5	2.50
SM C	6	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	0.25	1.50
SM C	19	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	0.5	9.50

CALCULATION METHODS:
WATTS TO AMPS CONVERSION = TOTAL CIRCUIT WATTS / STARTING CALCULATION VOLTAGE
TOTAL CIRCUIT RESISTANCE (Ω) = WIRE RESISTANCE (OHFT) X 2 X TOTAL CIRCUIT LENGTH (FT)
TOTAL VOLTAGE DROP = TOTAL CIRCUIT RESISTANCE (Ω) X WATTS TO AMPS CONVERSION
MAX. DB LOSS = 20 • LOG (END OF LINE VOLTAGE / STARTING CALCULATION VOLTAGE)

A2 1 S3 DB LOSS REPORT

WATTAGE SUMMARY		POWER SUMMARY	
MAX. CIRCUIT WATTS:	50	STARTING CALC. VOLTAGE:	70.70
TOTAL CIRCUIT WATTS:	10	MAX. DB LOSS:	-0.122
SPARE CIRCUIT WATTS:	40	VOLTAGE DROP %:	0.014
SPARE CIRCUIT WATTS %:	0.80	MIN. OPERATIONAL VOLTAGE:	63
MAX. CARD WATTS:	n/a	END OF LINE VOLTAGE:	69.71
TOTAL CARD WATTS:	35.75	WIRE RESISTANCE (OHFT):	4.89
SPARE CARD WATTS:		TOTAL CIRCUIT LENGTH (FT):	714
SPARE CARD WATTS %:		TOTAL CIRCUIT RESISTANCE (Ω):	6.98

CIRCUIT WIRING PROPERTIES: 'E' TP315 16 AWG, 16 AWG, 1 PAIR, SOLID, TWISTED, SHIELDED (SPEAKER CIRCUIT)
DISTANCE MEASURED USING DRAWN SEGMENT LENGTHS WITH 10.00 % ADDITIONAL LENGTH CALCULATED

SYMBOL	QUANTITY	PART NO	DESCRIPTION	WATTS	TOTAL WATTS
S C	4	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	0.25	1
SM C	10	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	0.5	5
SM C	4	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	1	4

CALCULATION METHODS:
WATTS TO AMPS CONVERSION = TOTAL CIRCUIT WATTS / STARTING CALCULATION VOLTAGE
TOTAL CIRCUIT RESISTANCE (Ω) = WIRE RESISTANCE (OHFT) X 2 X TOTAL CIRCUIT LENGTH (FT)
TOTAL VOLTAGE DROP = TOTAL CIRCUIT RESISTANCE (Ω) X WATTS TO AMPS CONVERSION
MAX. DB LOSS = 20 • LOG (END OF LINE VOLTAGE / STARTING CALCULATION VOLTAGE)

DECIBEL LOSS REPORT

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6/17/2025
STATE OF MISSOURI
DARIN T. SEIDEL
NUMBER PE-2009033006
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE:	REVISION DESCRIPTION:

PROJECT NAME / CUSTOMER / LOCATION: Cedar Creek Elementary School, 2600 SW 3rd St., Lee's Summit, MO 64081
SYSTEM DESCRIPTION: Fire Alarm System

PROJECT MANAGER: Benjamin McVay, 314-705-0128
DESIGNER: RN
DRAFTER: JMJ
DRAWING #: FA201
PROJECT JOB #: PJ2503300003
DATE: 04/23/2025
ISSUED FOR: CONSTRUCTION

P1 AUX POINT-TO-POINT REPORT

CIRCUIT WIRING PROPERTIES: 'P' TP1690 14 AWG, 14 AWG, 1 PAIR, SOLID, OVERALL JACKET (SMOKE/DUCT/BEAM/FLAME POWER)

DISTANCE MEASURED USING DRAWN SEGMENT LENGTHS WITH 10.00 % ADDITIONAL LENGTH CALCULATED

CURRENT SUMMARY				POWER SUMMARY			
MAX. CIRCUIT CURRENT (A):	n/a	TOTAL CIRCUIT CURRENT (A):	0.105	STARTING CALC. VOLTAGE:	20.40	MAX. VOLTAGE DROP:	0.14
		SPARE CIRCUIT CURRENT (A):				VOLTAGE DROP %:	0.0068
		SPARE CIRCUIT CURRENT %:		MIN. OPERATIONAL VOLTAGE:	n/a	END OF LINE VOLTAGE:	20.26
MAX. CARD CURRENT (A):	n/a	TOTAL CARD CURRENT (A):	0.105	WIRE RESISTANCE (Ω/KFT):	3.07	TOTAL CIRCUIT LENGTH (FT):	352
		SPARE CARD CURRENT (A):				TOTAL CIRCUIT RESISTANCE (Ω):	2.16
		SPARE CARD CURRENT %:					

SYMBOL	DEVICE LABEL	PART NO	DESCRIPTION	CANDELAS	ALARM CURRENT (A)	REMAINING ALARM CURRENT (A)	DISTANCE FROM PREVIOUS	RESISTANCE FROM PREVIOUS (Ω)	VOLTAGE DROP FROM PREVIOUS	VOLTAGE AT DEVICE	TOTAL VOLTAGE DROP	VOLTAGE DROP PERCENT
S	AUX	FSCO-951 W/B200S-WH	INTELLIGENT ADDRESSABLE CARBON MONOXIDE DETECTOR, WHITE W/ INTELLIGENT SOUNDER BASE, WHITE, UL-LISTED		0.035	0.105	91	0.558	0.06	20.34	0.06	0.0029
S	AUX	FSCO-951 W/B200S-WH	INTELLIGENT ADDRESSABLE CARBON MONOXIDE DETECTOR, WHITE W/ INTELLIGENT SOUNDER BASE, WHITE, UL-LISTED		0.035	0.07	111	0.682	0.05	20.29	0.11	0.0052
S	AUX• EOL	FSCO-951 W/B200S-WH	INTELLIGENT ADDRESSABLE CARBON MONOXIDE DETECTOR, WHITE W/ INTELLIGENT SOUNDER BASE, WHITE, UL-LISTED		0.035	0.035	150	0.923	0.03	20.26	0.14	0.0068

CALCULATION METHODS:
RESISTANCE FROM PREVIOUS (Ω) = WIRE RESISTANCE (Ω/FT) X 2 X DIST. FROM PREVIOUS (FT)
VOLTAGE DROP FROM PREVIOUS = RESISTANCE FROM PREVIOUS (Ω) X REMAINING CURRENT (A)

P1 N1-RPS-SYNC POINT-TO-POINT REPORT

CIRCUIT WIRING PROPERTIES: 'M' TP1690 14 AWG, 14 AWG, 1 PAIR, SOLID, OVERALL JACKET (NAC SYNCHRONIZATION)

DISTANCE MEASURED USING DRAWN SEGMENT LENGTHS WITH 10.00 % ADDITIONAL LENGTH CALCULATED

CURRENT SUMMARY				POWER SUMMARY			
MAX. CIRCUIT CURRENT (A):	1.50	TOTAL CIRCUIT CURRENT (A):	0.028	STARTING CALC. VOLTAGE:	20.40	MAX. VOLTAGE DROP:	0.05
		SPARE CIRCUIT CURRENT (A):	1.47			VOLTAGE DROP %:	0.0024
		SPARE CIRCUIT CURRENT %:	0.98130	MIN. OPERATIONAL VOLTAGE:	16	END OF LINE VOLTAGE:	20.35
MAX. CARD CURRENT (A):	6	TOTAL CARD CURRENT (A):	0.157	WIRE RESISTANCE (Ω/KFT):	3.07	TOTAL CIRCUIT LENGTH (FT):	494
		SPARE CARD CURRENT (A):	5.84			TOTAL CIRCUIT RESISTANCE (Ω):	3.03
		SPARE CARD CURRENT %:	0.97380				

SYMBOL	DEVICE LABEL	PART NO	DESCRIPTION	CANDELAS	ALARM CURRENT (A)	REMAINING ALARM CURRENT (A)	DISTANCE FROM PREVIOUS	RESISTANCE FROM PREVIOUS (Ω)	VOLTAGE DROP FROM PREVIOUS	VOLTAGE AT DEVICE	TOTAL VOLTAGE DROP	VOLTAGE DROP PERCENT
NAC	P1•N1-RPS-SYNC	HPF-PS10	10.0 A, 120 VAC REMOTE CHARGER POWER SUPPLY IN A LOCKABLE, RED METAL ENCLOSURE		0.014	0.028	81	0.499026	0.01	20.39	0.01	0.0007
NAC	P1•N1-RPS-SYNC• EOL 2.2K	HPF-PS10	10.0 A, 120 VAC REMOTE CHARGER POWER SUPPLY IN A LOCKABLE, RED METAL ENCLOSURE		0.014	0.014	413	2.53	0.04	20.35	0.05	0.0024

CALCULATION METHODS:
RESISTANCE FROM PREVIOUS (Ω) = WIRE RESISTANCE (Ω/FT) X 2 X DIST. FROM PREVIOUS (FT)
VOLTAGE DROP FROM PREVIOUS = RESISTANCE FROM PREVIOUS (Ω) X REMAINING CURRENT (A)

P1 N3 POINT-TO-POINT REPORT

CIRCUIT WIRING PROPERTIES: 'B' TP1690 14 AWG, 14 AWG, 1 PAIR, SOLID, OVERALL JACKET (NAC - SIGNAL/STROBE)

DISTANCE MEASURED USING DRAWN SEGMENT LENGTHS WITH 10.00 % ADDITIONAL LENGTH CALCULATED

CURRENT SUMMARY				POWER SUMMARY			
MAX. CIRCUIT CURRENT (A):	1.50	TOTAL CIRCUIT CURRENT (A):	0.035	STARTING CALC. VOLTAGE:	20.40	MAX. VOLTAGE DROP:	0.08
		SPARE CIRCUIT CURRENT (A):	1.47			VOLTAGE DROP %:	0.0038
		SPARE CIRCUIT CURRENT %:	0.97670	MIN. OPERATIONAL VOLTAGE:	16	END OF LINE VOLTAGE:	20.32
MAX. CARD CURRENT (A):	6	TOTAL CARD CURRENT (A):	0.157	WIRE RESISTANCE (Ω/KFT):	3.07	TOTAL CIRCUIT LENGTH (FT):	360
		SPARE CARD CURRENT (A):	5.84			TOTAL CIRCUIT RESISTANCE (Ω):	2.21
		SPARE CARD CURRENT %:	0.97380				

SYMBOL	DEVICE LABEL	PART NO	DESCRIPTION	CANDELAS	ALARM CURRENT (A)	REMAINING ALARM CURRENT (A)	DISTANCE FROM PREVIOUS	RESISTANCE FROM PREVIOUS (Ω)	VOLTAGE DROP FROM PREVIOUS	VOLTAGE AT DEVICE	TOTAL VOLTAGE DROP	VOLTAGE DROP PERCENT
WP	P1•N3• EOL 2.2K	P2GRKLED	2-WIRE, COMPACT WEATHERPROOF HORN STROBE, RED	15CD	0.035	0.035	360	2.21	0.08	20.32	0.08	0.0038

CALCULATION METHODS:
RESISTANCE FROM PREVIOUS (Ω) = WIRE RESISTANCE (Ω/FT) X 2 X DIST. FROM PREVIOUS (FT)
VOLTAGE DROP FROM PREVIOUS = RESISTANCE FROM PREVIOUS (Ω) X REMAINING CURRENT (A)

P1 N4 POINT-TO-POINT REPORT

CIRCUIT WIRING PROPERTIES: 'B' TP1690 14 AWG, 14 AWG, 1 PAIR, SOLID, OVERALL JACKET (NAC - SIGNAL/STROBE)

DISTANCE MEASURED USING DRAWN SEGMENT LENGTHS WITH 10.00 % ADDITIONAL LENGTH CALCULATED

CURRENT SUMMARY				POWER SUMMARY			
MAX. CIRCUIT CURRENT (A):	1.50	TOTAL CIRCUIT CURRENT (A):	0.094	STARTING CALC. VOLTAGE:	20.40	MAX. VOLTAGE DROP:	0.12
		SPARE CIRCUIT CURRENT (A):	1.41			VOLTAGE DROP %:	0.006
		SPARE CIRCUIT CURRENT %:	0.93730	MIN. OPERATIONAL VOLTAGE:	16	END OF LINE VOLTAGE:	20.28
MAX. CARD CURRENT (A):	6	TOTAL CARD CURRENT (A):	0.157	WIRE RESISTANCE (Ω/KFT):	3.07	TOTAL CIRCUIT LENGTH (FT):	212
		SPARE CARD CURRENT (A):	5.84			TOTAL CIRCUIT RESISTANCE (Ω):	1.30
		SPARE CARD CURRENT %:	0.97380				

SYMBOL	DEVICE LABEL	PART NO	DESCRIPTION	CANDELAS	ALARM CURRENT (A)	REMAINING ALARM CURRENT (A)	DISTANCE FROM PREVIOUS	RESISTANCE FROM PREVIOUS (Ω)	VOLTAGE DROP FROM PREVIOUS	VOLTAGE AT DEVICE	TOTAL VOLTAGE DROP	VOLTAGE DROP PERCENT
WP	P1•N4• EOL 2.2K	P2GRKLED	2-WIRE, COMPACT WEATHERPROOF HORN STROBE, RED	110CD	0.094	0.094	212	1.30	0.12	20.28	0.12	0.006

CALCULATION METHODS:
RESISTANCE FROM PREVIOUS (Ω) = WIRE RESISTANCE (Ω/FT) X 2 X DIST. FROM PREVIOUS (FT)
VOLTAGE DROP FROM PREVIOUS = RESISTANCE FROM PREVIOUS (Ω) X REMAINING CURRENT (A)

PS2 N1 POINT-TO-POINT REPORT

CIRCUIT WIRING PROPERTIES: 'B' TP1690 14 AWG, 14 AWG, 1 PAIR, SOLID, OVERALL JACKET (NAC - SIGNAL/STROBE)

DISTANCE MEASURED USING DRAWN SEGMENT LENGTHS WITH 10.00 % ADDITIONAL LENGTH CALCULATED

CURRENT SUMMARY				POWER SUMMARY			
MAX. CIRCUIT CURRENT (A):	3	TOTAL CIRCUIT CURRENT (A):	0.9160	STARTING CALC. VOLTAGE:	20.40	MAX. VOLTAGE DROP:	2.08
		SPARE CIRCUIT CURRENT (A):	2.08			VOLTAGE DROP %:	0.102
		SPARE CIRCUIT CURRENT %:	0.69470	MIN. OPERATIONAL VOLTAGE:	16	END OF LINE VOLTAGE:	18.32
MAX. CARD CURRENT (A):	n/a	TOTAL CARD CURRENT (A):	2.63	WIRE RESISTANCE (Ω/KFT):	3.07	TOTAL CIRCUIT LENGTH (FT):	744
		SPARE CARD CURRENT (A):				TOTAL CIRCUIT RESISTANCE (Ω):	4.57
		SPARE CARD CURRENT %:					

SYMBOL	DEVICE LABEL	PART NO	DESCRIPTION	CANDELAS	ALARM CURRENT (A)	REMAINING ALARM CURRENT (A)	DISTANCE FROM PREVIOUS	RESISTANCE FROM PREVIOUS (Ω)	VOLTAGE DROP FROM PREVIOUS	VOLTAGE AT DEVICE	TOTAL VOLTAGE DROP	VOLTAGE DROP PERCENT
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.9160	13	0.080398	0.07	20.33	0.07	0.0036
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.8980	20	0.121092	0.11	20.22	0.18	0.0089
C	PS2•N1	SCWLED	STROBE, CEILING, WHITE	15CD	0.018	0.880	22	0.134575	0.12	20.10	0.3	0.0147
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.8620	31	0.190206	0.16	19.94	0.46	0.0228
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.7920	31	0.18897	0.15	19.79	0.610	0.0301
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.7740	57	0.350681	0.27	19.51	0.890	0.0434
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.7560	40	0.247336	0.19	19.33	1.07	0.0526
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.6860	34	0.211756	0.15	19.18	1.22	0.0597
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.6160	33	0.20078	0.12	19.06	1.34	0.0658
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.5460	33	0.205684	0.11	18.95	1.45	0.0713
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.476	42	0.258706	0.12	18.82	1.58	0.0773
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.458	60	0.367581	0.17	18.65	1.75	0.0856
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.44	26	0.15764	0.07	18.59	1.81	0.089
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.37	34	0.211715	0.08	18.51	1.89	0.0928
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.3	32	0.19879	0.06	18.45	1.95	0.0957
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.23	33	0.2056	0.05	18.40	2	0.098
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.16	28	0.174911	0.03	18.37	2.03	0.0994
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.142	9	0.053952	0.01	18.36	2.04	0.0998
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.124	23	0.140395	0.02	18.35	2.05	0.1007
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.054	33	0.203713	0.01	18.34	2.06	0.1012
C	PS2•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.036	49	0.303464	0.01	18.32	2.08	0.1017
C	PS2•N1• EOL 4.7K	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.018	59	0.362318	0.01	18.32	2.08	0.102

CALCULATION METHODS:
RESISTANCE FROM PREVIOUS (Ω) = WIRE RESISTANCE (Ω/FT) X 2 X DIST. FROM PREVIOUS (FT)
VOLTAGE DROP FROM PREVIOUS = RESISTANCE FROM PREVIOUS (Ω) X REMAINING CURRENT (A)

PS2 N2 POINT-TO-POINT REPORT

CIRCUIT WIRING PROPERTIES: 'B' TP1690 14 AWG, 14 AWG, 1 PAIR, SOLID, OVERALL JACKET (NAC - SIGNAL/STROBE)

DISTANCE MEASURED USING DRAWN SEGMENT LENGTHS WITH 10.00 % ADDITIONAL LENGTH CALCULATED

CURRENT SUMMARY				POWER SUMMARY			
MAX. CIRCUIT CURRENT (A):	3	TOTAL CIRCUIT CURRENT (A):	0.9220	STARTING CALC. VOLTAGE:	20.40	MAX. VOLTAGE DROP:	2.43
		SPARE CIRCUIT CURRENT (A):	2.08			VOLTAGE DROP %:	0.1193
		SPARE CIRCUIT CURRENT %:	0.69270	MIN. OPERATIONAL VOLTAGE:	16	END OF LINE VOLTAGE:	17.97
MAX. CARD CURRENT (A):	n/a	TOTAL CARD CURRENT (A):	2.63	WIRE RESISTANCE (Ω/KFT):	3.07	TOTAL CIRCUIT LENGTH (FT):	976
		SPARE CARD CURRENT (A):				TOTAL CIRCUIT RESISTANCE (Ω):	5.99
		SPARE CARD CURRENT %:					

SYMBOL	DEVICE LABEL	PART NO	DESCRIPTION	CANDELAS	ALARM CURRENT (A)	REMAINING ALARM CURRENT (A)	DISTANCE FROM PREVIOUS	RESISTANCE FROM PREVIOUS (Ω)	VOLTAGE DROP FROM PREVIOUS	VOLTAGE AT DEVICE	TOTAL VOLTAGE DROP	VOLTAGE DROP PERCENT
C	PS2•N2•01	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.9220	34	0.207197	0.19	20.21	0.19	0.0094
	PS2•N2•02	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.8520	33	0.205685	0.18	20.03	0.37	0.018
	PS2•N2•03	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.7820	27	0.16821	0.13	19.90	0.5	0.0244
C	PS2•N2•04	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.7640	28	0.174685	0.13	19.77	0.630	0.0309
C	PS2•N2•05	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.7460	66	0.407555	0.3	19.46	0.940	0.0458
C	PS2•N2•06	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.7280	33	0.200541	0.15	19.32	1.08	0.053
C	PS2•N2•07	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.6580	34	0.211653	0.14	19.18	1.22	0.0598
C	PS2•N2•08	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.5880	32	0.19481	0.11	19.06	1.34	0.0654
C	PS2•N2•09	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.5180	34	0.20572	0.11	18.96	1.44	0.0707
C	PS2•N2•10	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.448	29	0.178761	0.08	18.88	1.52	0.0746
C	PS2•N2•11	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.43	81	0.496198	0.21	18.66	1.74	0.0851
C	PS2•N2•12	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.412	61	0.37323	0.15	18.51	1.89	0.0926
C	PS2•N2•13	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	30CD	0.022	0.394	21	0.129321	0.05	18.46	1.94	0.0951
C	PS2•N2•14	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.372	34	0.205967	0.08	18.38	2.02	0.0988
C	PS2•N2•15	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.354	72	0.440968	0.16	18.23	2.17	0.1065
C	PS2•N2•16	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.284	36	0.222522	0.06	18.16	2.24	0.1096
C	PS2•N2•17	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.214	32	0.196751	0.04	18.12	2.28	0.1117
C	PS2•N2•18	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.196	16	0.097833	0.02	18.10	2.30	0.1126
C	PS2•N2•19	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.178	50	0.30644	0.05	18.05	2.35	0.1153
C	PS2•N2•20	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.16	20	0.120489	0.02	18.03	2.37	0.1162
C	PS2•N2•21	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.142	23	0.142669	0.02	18.01	2.39	0.1172
C	PS2•N2•22	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.072	34	0.209684	0.02	17.99	2.41	0.118
C	PS2•N2•23	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.054	45	0.277194	0.01	17.98	2.42	0.1187
C	PS2•N2•24	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.036	21	0.131523	0	17.97	2.43	0.1189
C	PS2•N2•25 EOL 4.7K	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.018	79	0.486061	0.01	17.97	2.43	0.1193

CALCULATION METHODS:
RESISTANCE FROM PREVIOUS (Ω) = WIRE RESISTANCE (Ω/FT) X 2 X DIST. FROM PREVIOUS (FT)
VOLTAGE DROP FROM PREVIOUS = RESISTANCE FROM PREVIOUS (Ω) X REMAINING CURRENT (A)

PS2 N3 POINT-TO-POINT REPORT

CIRCUIT WIRING PROPERTIES: 'B' TP1690 14 AWG, 14 AWG, 1 PAIR, SOLID, OVERALL JACKET (NAC - SIGNAL/STROBE)

DISTANCE MEASURED USING DRAWN SEGMENT LENGTHS WITH 10.00 % ADDITIONAL LENGTH CALCULATED

CURRENT SUMMARY				POWER SUMMARY			
MAX. CIRCUIT CURRENT (A):	3	TOTAL CIRCUIT CURRENT (A):	0.7940	STARTING CALC. VOLTAGE:	20.40	MAX. VOLTAGE DROP:	1.85
		SPARE CIRCUIT CURRENT (A):	2.21			VOLTAGE DROP %:	0.0908
		SPARE CIRCUIT CURRENT %:	0.73530	MIN. OPERATIONAL VOLTAGE:	16	END OF LINE VOLTAGE:	18.55
MAX. CARD CURRENT (A):	n/a	TOTAL CARD CURRENT (A):	2.63	WIRE RESISTANCE (Ω/KFT):	3.07	TOTAL CIRCUIT LENGTH (FT):	711
		SPARE CARD CURRENT (A):				TOTAL CIRCUIT RESISTANCE (Ω):	4.37
		SPARE CARD CURRENT %:					

SYMBOL	DEVICE LABEL	PART NO	DESCRIPTION	CANDELAS	ALARM CURRENT (A)	REMAINING ALARM CURRENT (A)	DISTANCE FROM PREVIOUS	RESISTANCE FROM PREVIOUS (Ω)	VOLTAGE DROP FROM PREVIOUS	VOLTAGE AT DEVICE	TOTAL VOLTAGE DROP	VOLTAGE DROP PERCENT
C	PS2•N3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	115CD	0.09	0.7940	134	0.823210	0.650	19.75	0.650	0.032
C	PS2•N3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	115CD	0.09	0.7040	32	0.193849	0.14	19.61	0.790	0.0387
C	PS2•N3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	115CD	0.09	0.6140	52	0.320221	0.2	19.41	0.990	0.0484
C	PS2•N3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	115CD	0.09	0.5240	33	0.202328	0.11	19.31	1.09	0.0536
C	PS2•N3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.434	30	0.185595	0.08	19.23	1.17	0.0575
C	PS2•N3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.416	16	0.097483	0.04	19.19	1.21	0.0595
C	PS2•N3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.398	8	0.046754	0.02	19.17	1.23	0.0604
C	PS2•N3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.38	15	0.089219	0.03	19.13	1.27	0.0621
C	PS2•N3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.362	111	0.681	0.25	18.89	1.51	0.0742
C	PS2•N3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	30CD	0.022	0.344	27	0.163292	0.06	18.83	1.57	0.0769
C	PS2•N3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	30CD	0.022	0.322	29	0.177534	0.06	18.77	1.63	0.0797
C	PS2•N3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	95CD	0.075	0.3	42	0.25644	0.08	18.70	1.70	0.0835
C	PS2•N3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	95CD	0.075	0.225	38	0.232872	0.05	18.64	1.76	0.0861
C	PS2•N3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	30CD	0.022	0.15	60	0.36607	0.05	18.59	1.81	0.0887
C	PS2•N3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	30CD	0.022	0.128	16	0.095473	0.01	18.58	1.82	0.0893
C	PS2•N3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.106	7	0.044609	0	18.57	1.83	0.0896
C	PS2•N3	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.088	40	0.246179	0.02	18.55	1.85	0.0906
C	PS2•N3• EOL 4.7K	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.018	23	0.143847	0	18.55	1.85	0.0908

CALCULATION METHODS:
RESISTANCE FROM PREVIOUS (Ω) = WIRE RESISTANCE (Ω/FT) X 2 X DIST. FROM PREVIOUS (FT)
VOLTAGE DROP FROM PREVIOUS = RESISTANCE FROM PREVIOUS (Ω) X REMAINING CURRENT (A)

PS1 N1 POINT-TO-POINT REPORT

CIRCUIT WIRING PROPERTIES: 'B' TP1690 14 AWG, 14 AWG, 1 PAIR, SOLID, OVERALL JACKET (NAC - SIGNAL/STROBE)

DISTANCE MEASURED USING DRAWN SEGMENT LENGTHS WITH 10.00 % ADDITIONAL LENGTH CALCULATED

CURRENT SUMMARY				POWER SUMMARY			
MAX. CIRCUIT CURRENT (A):	3	TOTAL CIRCUIT CURRENT (A):	1.16	STARTING CALC. VOLTAGE:	20.40	MAX. VOLTAGE DROP:	2.98
		SPARE CIRCUIT CURRENT (A):	1.84			VOLTAGE DROP %:	0.146
		SPARE CIRCUIT CURRENT %:	0.61470	MIN. OPERATIONAL VOLTAGE:	16	END OF LINE VOLTAGE:	17.42
MAX. CARD CURRENT (A):	n/a	TOTAL CARD CURRENT (A):	1.89	WIRE RESISTANCE (Ω/KFT):	3.07	TOTAL CIRCUIT LENGTH (FT):	747
		SPARE CARD CURRENT (A):				TOTAL CIRCUIT RESISTANCE (Ω):	4.58
		SPARE CARD CURRENT %:					

SYMBOL	DEVICE LABEL	PART NO	DESCRIPTION	CANDELAS	ALARM CURRENT (A)	REMAINING ALARM CURRENT (A)	DISTANCE FROM PREVIOUS	RESISTANCE FROM PREVIOUS (Ω)	VOLTAGE DROP FROM PREVIOUS	VOLTAGE AT DEVICE	TOTAL VOLTAGE DROP	VOLTAGE DROP PERCENT
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	30CD	0.022	1.16	21	0.131134	0.15	20.25	0.15	0.0074
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	1.13	37	0.229494	0.26	19.99	0.41	0.0202
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	30CD	0.022	1.12	42	0.260164	0.29	19.70	0.70	0.0344
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	30CD	0.022	1.09	22	0.135534	0.15	19.55	0.850	0.0417
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	1.07	30	0.185686	0.2	19.35	1.05	0.0514
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	1.05	20	0.12285	0.13	19.22	1.18	0.0578
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.9840	32	0.194693	0.19	19.03	1.37	0.0672
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.9140	34	0.205725	0.19	18.84	1.56	0.0764
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.8440	33	0.200816	0.17	18.67	1.73	0.0847
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.7740	30	0.181939	0.14	18.53	1.87	0.0916
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.7560	42	0.257539	0.19	18.34	2.06	0.1012
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.7380	20	0.12509	0.09	18.24	2.16	0.1057
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.6680	32	0.194707	0.13	18.11	2.29	0.1121
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.5980	34	0.211708	0.13	17.99	2.41	0.1183
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.5280	33	0.200817	0.11	17.88	2.52	0.1235
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.458	29	0.178509	0.08	17.80	2.60	0.1275
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.44	26	0.158356	0.07	17.73	2.67	0.1309
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.37	32	0.194748	0.07	17.66	2.74	0.1344
C	PS1•N1	SCWLED	STROBE, CEILING, WHITE	15CD	0.018	0.3	20	0.120606	0.04	17.62	2.78	0.1362
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.282	22	0.136031	0.04	17.58	2.82	0.1381
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.264	23	0.141594	0.04	17.55	2.85	0.1399
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.246	34	0.207181	0.05	17.49	2.91	0.1424
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.176	33	0.200822	0.04	17.46	2.94	0.1441
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.106	33	0.202407	0.02	17.44	2.96	0.1452
C	PS1•N1	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.088	11	0.06748	0.01	17.43	2.97	0.1455
C	PS1•N1• EOL 4.7K	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.07	23	0.138471	0.01	17.42	2.98	0.146

CALCULATION METHODS:
RESISTANCE FROM PREVIOUS (Ω) = WIRE RESISTANCE (Ω/FT) X 2 X DIST. FROM PREVIOUS (FT)
VOLTAGE DROP FROM PREVIOUS = RESISTANCE FROM PREVIOUS (Ω) X REMAINING CURRENT (A)

PS1 N2 POINT-TO-POINT REPORT

CIRCUIT WIRING PROPERTIES: 'B' TP1690 14 AWG, 14 AWG, 1 PAIR, SOLID, OVERALL JACKET (NAC - SIGNAL/STROBE)

DISTANCE MEASURED USING DRAWN SEGMENT LENGTHS WITH 10.00 % ADDITIONAL LENGTH CALCULATED

CURRENT SUMMARY				POWER SUMMARY			
MAX. CIRCUIT CURRENT (A):	3	TOTAL CIRCUIT CURRENT (A):	0.7320	STARTING CALC. VOLTAGE:	20.40	MAX. VOLTAGE DROP:	1.49
		SPARE CIRCUIT CURRENT (A):	2.27			VOLTAGE DROP %:	0.073
		SPARE CIRCUIT CURRENT %:	0.7560	MIN. OPERATIONAL VOLTAGE:	16	END OF LINE VOLTAGE:	18.91
MAX. CARD CURRENT (A):	n/a	TOTAL CARD CURRENT (A):	1.89	WIRE RESISTANCE (Ω/KFT):	3.07	TOTAL CIRCUIT LENGTH (FT):	680
		SPARE CARD CURRENT (A):				TOTAL CIRCUIT RESISTANCE (Ω):	4.18
		SPARE CARD CURRENT %:					

SYMBOL	DEVICE LABEL	PART NO	DESCRIPTION	CANDELAS	ALARM CURRENT (A)	REMAINING ALARM CURRENT (A)	DISTANCE FROM PREVIOUS	RESISTANCE FROM PREVIOUS (Ω)	VOLTAGE DROP FROM PREVIOUS	VOLTAGE AT DEVICE	TOTAL VOLTAGE DROP	VOLTAGE DROP PERCENT
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.7320	23	0.143118	0.1	20.30	0.1	0.0051
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.6620	28	0.174888	0.12	20.18	0.22	0.0108
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.5920	30	0.187135	0.11	20.07	0.33	0.0162
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	30CD	0.022	0.5740	24	0.148648	0.09	19.98	0.42	0.0204
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.5520	18	0.10926	0.06	19.92	0.48	0.0234
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.5340	12	0.070725	0.04	19.89	0.510	0.0252
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.5160	8	0.049722	0.03	19.86	0.540	0.0265
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.498	14	0.084852	0.04	19.82	0.580	0.0286
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	30CD	0.022	0.48	29	0.17536	0.08	19.73	0.670	0.0327
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	30CD	0.022	0.458	40	0.24779	0.11	19.62	0.780	0.0382
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.436	16	0.100138	0.04	19.58	0.820	0.0404
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.418	17	0.103655	0.04	19.53	0.870	0.0425
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.4	54	0.331098	0.13	19.40	1	0.049
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.382	29	0.17664	0.07	19.33	1.07	0.0523
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	95CD	0.075	0.364	81	0.495638	0.18	19.15	1.25	0.0612
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	95CD	0.075	0.289	37	0.22979	0.07	19.09	1.31	0.0644
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.214	35	0.214731	0.05	19.04	1.36	0.0667
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.196	11	0.06747	0.01	19.03	1.37	0.0673
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.178	26	0.162441	0.03	19	1.40	0.0687
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.16	12	0.075278	0.01	18.99	1.41	0.0693
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.142	15	0.091125	0.01	18.97	1.43	0.07
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.124	8	0.047726	0.01	18.97	1.43	0.0702
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.106	19	0.117219	0.01	18.95	1.45	0.0709
C	PS1•N2	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	15CD	0.018	0.088	40	0.246141	0.02	18.93	1.47	0.0719
C	PS1•N2• EOL 4.7K	SPSCWLED	SPEAKER/STROBE CEILING MOUNT, WHITE	75CD	0.07	0.07	53	0.326893	0.02	18.91	1.49	0.073

CALCULATION METHODS:
RESISTANCE FROM PREVIOUS (Ω) = WIRE RESISTANCE (Ω/FT) X 2 X DIST. FROM PREVIOUS (FT)
VOLTAGE DROP FROM PREVIOUS = RESISTANCE FROM PREVIOUS (Ω) X REMAINING CURRENT (A)

POINT TO POINT CALCULATIONS

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5720 Reeder Shawnee, Ks. 66203 (913)262-1772

6/17/2025
STATE OF MISSOURI
DARIN T. SEIDEL
NUMBER PE-2009030047
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE:	REVISION DESCRIPTION:

PROJECT NAME / CUSTOMER / LOCATION:
Cedar Creek Elementary School
2600 SW 3rd St.
Lee's Summit, MO 64081

SYSTEM DESCRIPTION: Fire Alarm System

PROJECT MANAGER: Benjamin McVay 314-705-0128
DESIGNER: RN
DRAFTER: JMJ
DRAWING #: FA202
PROJECT JOB#: PJ2503300003
DATE: 04/23/2025
ISSUED FOR: CONSTRUCTION

ADDRESS LIST

DETECTORS

LOOP	Device ADDR	Type Code Label	FlashScan Type	Custom Label
1	1	Smoke (Photo)	PHOTO	
1	2	Smoke (Photo)	PHOTO	
1	3	Photo/CO	PHOTO/CO	
1	4	Sup L (Duct P)	PHOTO	
1	5	Sup L (Duct P)	PHOTO	
1	6	Sup L (Duct P)	PHOTO	
1	7	Sup L (Duct P)	PHOTO	
1	8	Sup L (Duct P)	PHOTO	
1	9	Sup L (Duct P)	PHOTO	
1	10	Sup L (Duct P)	PHOTO	
1	11	Sup L (Duct P)	PHOTO	
1	12	Photo/CO	PHOTO/CO	
1	13	Sup L (Duct P)	PHOTO	
1	14	Sup L (Duct P)	PHOTO	
1	15	Photo/CO	PHOTO/CO	
1	16	Sup L (Duct P)	PHOTO	
1	17	Sup L (Duct P)	PHOTO	
1	18	Sup L (Duct P)	PHOTO	
1	19	Sup L (Duct P)	PHOTO	
1	20	Sup L (Duct P)	PHOTO	
1	21	Sup L (Duct P)	PHOTO	
1	22	Smoke (Photo)	PHOTO	
1	23	Sup L (Duct P)	PHOTO	
1	24	Sup L (Duct P)	PHOTO	
1	25	Sup L (Duct P)	PHOTO	

LOOP	Device ADDR	Type Code Label	FlashScan Type	Custom Label
1	26	Sup L (Duct P)	PHOTO	
1	27	Smoke (Photo)	PHOTO	
1	28	Smoke (Photo)	PHOTO	
1	29	Smoke (Photo)	PHOTO	
1	30	Smoke (Photo)	PHOTO	
1	31	Smoke (Photo)	PHOTO	
1	32	Sup L (Duct P)	PHOTO	
1	33	Sup L (Duct P)	PHOTO	
1	34	Sup L (Duct P)	PHOTO	
1	35	Sup L (Duct P)	PHOTO	
1	36	Sup L (Duct P)	PHOTO	
1	37	Sup L (Duct P)	PHOTO	
1	38	Sup L (Duct P)	PHOTO	
1	39	Sup L (Duct P)	PHOTO	
1	40	Sup L (Duct P)	PHOTO	
1	41	Sup L (Duct P)	PHOTO	
1	42	Sup L (Duct P)	PHOTO	
1	43	Sup L (Duct P)	PHOTO	
1	44	Smoke (Photo)	PHOTO	
1	45	Sup L (Duct P)	PHOTO	
1	46	Sup L (Duct P)	PHOTO	
1	47	Sup L (Duct P)	PHOTO	
1	48	Smoke (Photo)	PHOTO	
1	49	Smoke (Photo)	PHOTO	
1	50	Smoke (Photo)	PHOTO	
1	51	Smoke (Photo)	PHOTO	

MODULES

LOOP	Device ADDR	Module Type	Type Code Label	FlashScan Type	Custom Label
1	1	Monitor	Pull Station	MANUAL STATION	
1	2	Control	Relay	RELAY	
1	3	Monitor	Monitor	MONITOR	
1	4	Monitor	Monitor	MONITOR	
1	5	Control	Relea. Form C	RELEASE	
1	6	Control	Relay	RELAY	
1	7	Control	Relay	RELAY	
1	8	Monitor	Waterflow	MONITOR	
1	9	Monitor	Monitor	MONITOR	
1	10	Monitor	Tamper	MONITOR	
1	11	Monitor	Tamper	MONITOR	
1	12	Control	Relay	RELAY	
1	13	Monitor	Water Second Shot	MONITOR	
1	14	Control	Relay	RELAY	
1	15	Monitor	Monitor	MONITOR	
1	16	Monitor	Pull Station	MANUAL STATION	
1	17	Control	Relay	RELAY	
1	18	Control	Relay	RELAY	
1	19	Control	Relay	RELAY	
1	20	Control	Relay	RELAY	

LOOP	Device ADDR	Module Type	Type Code Label	FlashScan Type	Custom Label
1	21	Control	Relay	RELAY	
1	22	Monitor	Monitor	MONITOR	
1	23	Monitor	Monitor	MONITOR	
1	24	Control	Relay	RELAY	
1	25	Control	Relay	RELAY	
1	26	Control	Relay	RELAY	
1	27	Control	Relay	RELAY	
1	28	Control	Relay	RELAY	
1	29	Control	Relay	RELAY	
1	30	Control	Relay	RELAY	
1	31	Control	Relay	RELAY	
1	32	Control	Relay	RELAY	
1	33	Control	Relay	RELAY	
1	34	Monitor	Monitor	MONITOR	
1	35	Monitor	Monitor	MONITOR	
1	36	Monitor	Monitor	MONITOR	
1	37	Monitor	Monitor	MONITOR	
1	38	Control	Rel Audible	RELEASE	

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6/17/2025
STATE OF MISSOURI
DARIN T. SEIDEL
NUMBER PE-2009031
REGISTERED PROFESSIONAL ENGINEER

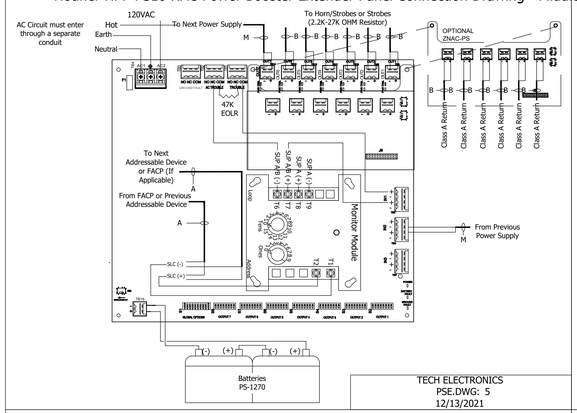
NO.	DATE:	REVISION DESCRIPTION:

PROJECT NAME / CUSTOMER / LOCATION:
Cedar Creek Elementary School
2600 SW 3rd St.
Lee's Summit, MO 64081

SYSTEM DESCRIPTION:
Fire Alarm System

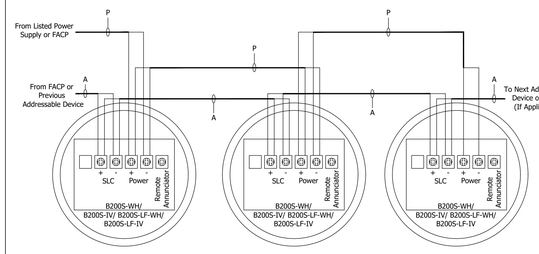
PROJECT MANAGER: Benjamin McVay 314-705-0128
DESIGNER: RN
DRAFTER: JMJ
DRAWING #: FA301
PROJECT JOB#: PJ2503300003
DATE: 04/23/2025
ISSUED FOR: CONSTRUCTION

Notifier HPF-PS10 NAC Power Booster Extender Panel Connection Drawing - Middle



TECH ELECTRONICS
PSE.DWG: 5
12/13/2021

B200S Series Sounder Base Wiring Diagram



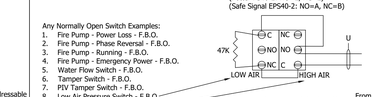
Note: Supervision of both power and communications is integral to each device and opens, shorts, loss of power and loss of communications are communicated via faults at the fire alarm control panel, without the need for additional end of line devices.

● - Connection F.B.O. - Furnished by Other
✕ - No Connection E.O.L. - End of Line

TECH ELECTRONICS
B200S-WH/B200S-IV.DWG:A
11/28/18

Device Connection Drawing with FDM-1 Dual Monitor Module

(Potter PS40-2: NO=1, NC=2)
(Safe Signal EPS40-2: NO=A, NC=B)

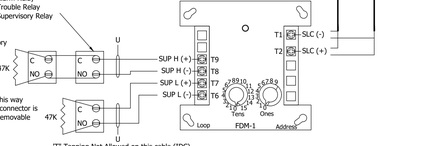


Any Normally Open Switch Examples:
1. Fire Pump - Power Loss - F.B.O.
2. Fire Pump - Phase Reversal - F.B.O.
3. Fire Pump - Running - F.B.O.
4. Fire Pump - Emergency Power - F.B.O.
5. Water Flow Switch - F.B.O.
6. Tamper Switch - F.B.O.
7. PIV Tamper Switch - F.B.O.
8. Low Air Pressure Switch - F.B.O.
9. High Air Pressure Switch - F.B.O.
10. Kitchen Hood Alarm Contact - F.B.O.
11. Crosstie to existing FACP - Alarm Relay
12. Crosstie to existing FACP - Trouble Relay
13. Crosstie to existing FACP - Supervisory Relay
14. Fire Suppression - Alarm
15. Fire Suppression - Trouble
16. Fire Suppression - Supervisory
17. Generator Running - F.B.O.
18. Generator Alarm - F.B.O.

Do Not Mix Fire Alarm Initiating, Supervisory or Security devices on the Same Initiating Device Circuit (IDC)

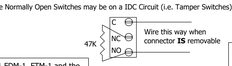
Monitor L (Terminals 6 &7) respond at address Set on Code Switches (this address must be an Even number). Monitor H (Terminals 8 & 9) respond at next higher address.

Possible wiring configuration, if the Sprinkler Contractor installed a pressure switch that is capable of monitoring High Air and Low Air.



"T" Tapping Not Allowed on this cable (IDC)

Multiple Normally Open Switches may be on a IDC Circuit (i.e. Tamper Switches)



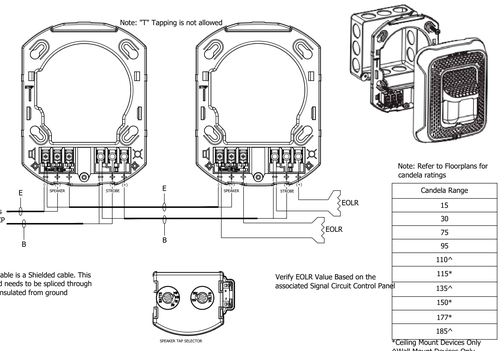
Style 4 (Class B):
"T" Tapping is permissible for the SLC

Note: The FMM-1, FZM-1, FCM-1 FDM-1, FTM-1 and the FRM-1 are similar in physical appearance but different in application. Verify the correct module that is being installed. Failure to do so could cause damage to the device or the Fire Alarm Control Panel.

● - Connection F.B.O. - Furnished by Other
✕ - No Connection E.O.L. - End of Line

TECH ELECTRONICS
TE_DC_FDM-1.dwg:A
10/15/2024

Connection Drawing for System Sensor "L" Series Speaker, Speaker/Strobes



"E" Cable is a Shielded cable. This shield needs to be spliced through and insulated from ground

Verify EOLR Value Based on the associated Signal Circuit Control Panel

Note: Refer to Floorplans for candela ratings

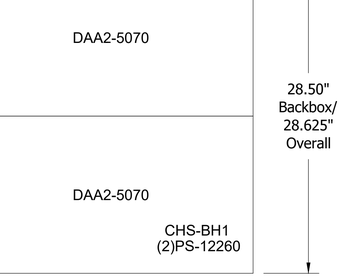
Candela Range
15
30
75
95
110^
115*
135^
150*
177*
185^

*Ceiling Mount Devices Only
^Wall Mount Devices Only

For use with the following models: SPSRL, SPSWL, SPSRL-P, SPSWL-P, SPSRL-SP, SPSWL-CLR-ALERT, SPSCRL, SPSCWL, SPSCWL-P, SPSCWL-SP, SPSCWL-CLR-ALERT, SPRL, SPWL, SPCRL, SPCWL,SPSCWLED

TECH ELECTRONONICS
TE_DC_SS_NAC_L_SERIES.dwg:A
03/28/17

Notifier B300-6 or B300-6-IV Low Profile Detector Base for use with: FSP-951, FSP-951-IV, FSP-951T, FSP-951T-IV, FST-951, FSP-951-IV Series Detectors



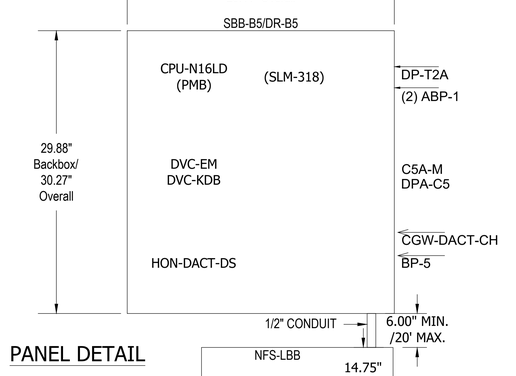
Style 6 (Class A):
Style 6 wiring requires that all devices be looped in and out. "T" Tapping is NOT permissible for the SLC

Style 4 (Class B):
"T" Tapping is permissible for the SLC

● - Connection F.B.O. - Furnished by Other
✕ - No Connection E.O.L. - End of Line

TECH ELECTRONONICS
B300-6.dwg:A
11/28/18

System Sensor DNR Duct Detector with a RTS451KEY or RTS151KEY Remote Test Station



Style 6 (Class A):
Style 6 wiring requires that all devices be looped in and out. "T" Tapping is NOT permissible for the SLC

Style 4 (Class B):
"T" Tapping is permissible for the SLC

TECH ELECTRONONICS
TE_DC_DNR.dwg:E
11/28/18

Notifier NBG-12LX Manual Pull Station Wiring Connections

Style 6 (Class A):
Style 6 wiring requires that all devices be looped in and out. "T" Tapping is NOT permissible for the SLC

Style 4 (Class B):
"T" Tapping is permissible for the SLC

● - Connection F.B.O. - Furnished by Other
✕ - No Connection E.O.L. - End of Line

TECH ELECTRONONICS
TE_DC_NBG-12LX.dwg:A
04/28/14

Connection Drawing for System Sensor Weatherproof Horn, Horn/Strobe or Strobe.

Note: Actual device Audio Select and Candela Select location may differ.

Audio Select	
1	High Temporal Horn
2	Medium Temporal Horn
3	Low Temporal Horn
4	High Normal Horn
5	Medium Normal Horn
6	Low Normal Horn
The Horns Have to be Set to a Temporal Horn Only Use Setting 1, 2 and 3	

Note: The default setting for the Audio Select is 1. **Change this to 3**. Unless otherwise noted.

Note: Refer to Floorplans for candela ratings

Standard Candela Range
15
15/75
30
75
95
110
115
High Candela Range (H Series)
135
150
177
185

For use with the following models: P2RK, P2RHK, P2WK, P2WHK, P2GRKELD, PC2RK, PC2RHK, PC2WK, PC2WHK, SRK, SRHK, SWK, SWHK, SCRK, SCRHK, SCWK, SCWHK, HRK

TECH ELECTRONICS
TE_DC_SS_NAC.dwg:C
08/14/12

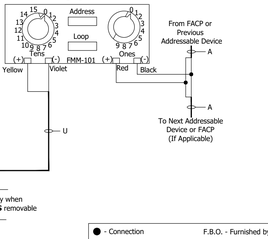
FMM-101 Device Connection Drawing for a Single Normally Open Switch

(Potter PS40-2: NO=1, NC=2)
(Safe Signal EPS40-2: NO=A, NC=B)



Any Normally Open Switch Examples:
1. Fire Pump - Power Loss - F.B.O.
2. Fire Pump - Phase Reversal - F.B.O.
3. Fire Pump - Running - F.B.O.
4. Fire Pump - Emergency Power - F.B.O.
5. Water Flow Switch - F.B.O.
6. Tamper Switch - F.B.O.
7. PIV Tamper Switch - F.B.O.
8. Low Air Pressure Switch - F.B.O.
9. High Air Pressure Switch - F.B.O.
10. Kitchen Hood Alarm Contact - F.B.O.
11. Crosstie to existing FACP - Alarm Relay
12. Crosstie to existing FACP - Trouble Relay
13. Crosstie to existing FACP - Supervisory Relay
14. Fire Suppression - Alarm
15. Fire Suppression - Trouble
16. Fire Suppression - Supervisory
17. Generator Running - F.B.O.
18. Generator Alarm - F.B.O.

Possible wiring configuration, if the Sprinkler Contractor installed a pressure switch that is capable of monitoring High Air and Low Air.



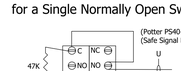
Note: The FMM-1, FZM-1, FCM-1 FDM-1, FTM-1 and the FRM-1 are similar in physical appearance but different in application. Verify the correct module that is being installed. Failure to do so could cause damage to the device or the Fire Alarm Control Panel.

● - Connection F.B.O. - Furnished by Other
✕ - No Connection E.O.L. - End of Line

TECH ELECTRONICS
TE_DC_FMM-101.dwg:A
10/15/2024

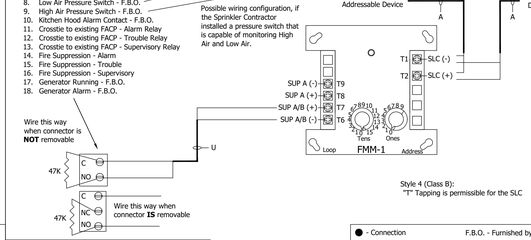
FMM-1 Device Connection Drawing for a Single Normally Open Switch

(Potter PS40-2: NO=1, NC=2)
(Safe Signal EPS40-2: NO=A, NC=B)



Any Normally Open Switch Examples:
1. Fire Pump - Power Loss - F.B.O.
2. Fire Pump - Phase Reversal - F.B.O.
3. Fire Pump - Running - F.B.O.
4. Fire Pump - Emergency Power - F.B.O.
5. Water Flow Switch - F.B.O.
6. Tamper Switch - F.B.O.
7. PIV Tamper Switch - F.B.O.
8. Low Air Pressure Switch - F.B.O.
9. High Air Pressure Switch - F.B.O.
10. Kitchen Hood Alarm Contact - F.B.O.
11. Crosstie to existing FACP - Alarm Relay
12. Crosstie to existing FACP - Trouble Relay
13. Crosstie to existing FACP - Supervisory Relay
14. Fire Suppression - Alarm
15. Fire Suppression - Trouble
16. Fire Suppression - Supervisory
17. Generator Running - F.B.O.
18. Generator Alarm - F.B.O.

Possible wiring configuration, if the Sprinkler Contractor installed a pressure switch that is capable of monitoring High Air and Low Air.



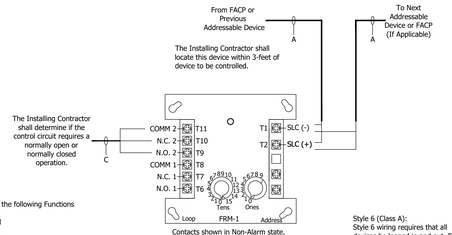
Style 4 (Class B):
"T" Tapping is permissible for the SLC

Note: The FMM-1, FZM-1, FCM-1 FDM-1, FTM-1 and the FRM-1 are similar in physical appearance but different in application. Verify the correct module that is being installed. Failure to do so could cause damage to the device or the Fire Alarm Control Panel.

● - Connection F.B.O. - Furnished by Other
✕ - No Connection E.O.L. - End of Line

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TE_DC_FMM-1.dwg:A
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Notifier FRM-1 Device Connection Drawing



Use this drawing for the following Functions
1. AHU Shutdown
2. Damper Control
3. Exhaust Fan
4. Stair Pressurization
5. Kitchen Hood
6. Lock Control Device
7. Door Holders

* Use a "C" Cable if the controller is Low Voltage. If the Controller is 120VAC use THHN (F.B.O.)

Contacts shown in Non-Alarm state.

If the load exceeds the Relay Contact rating, Install an interposing Relay

Style 6 (Class A):
Style 6 wiring requires that all devices be looped in and out. "T" Tapping is NOT permissible for the SLC

Style 4 (Class B):
"T" Tapping is permissible for the SLC

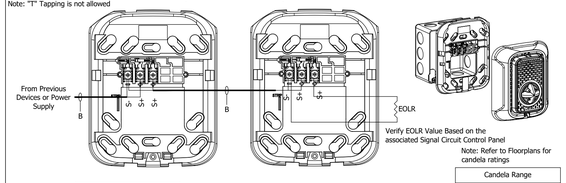
FRM-1 Table			
Load Type	Max. Voltage	Current Rating
Resistive	30VDC	3.0A
Resistive	125VAC	0.9A
Inductive	125VAC	0.3A

Note: The FRM-1, FZM-1, FCM-1 FDM-1, FTM-1 and the FRM-1 are similar in physical appearance but different in application. Verify the correct module that is being installed. Failure to do so could cause damage to the device or the Fire Alarm Control Panel.

● - Connection F.B.O. - Furnished by Other
✕ - No Connection E.O.L. - End of Line

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TE_DC_FRM_1_New.dwg:A
09/05/08

Connection Drawing for System Sensor "L" Series Horn, Chime, Horn/Strobe with LED, Chime/Strobe with LED, and Strobe with LED



Verify EOLR Value Based on the associated Signal Circuit Control Panel

Note: Refer to Floorplans for candela ratings

Candela Range
15
30
75
95
110^
115*
135^
150*
177*
185^

*Ceiling Mount Devices Only
^Wall Mount Devices Only

Horn Tone Audio Select	
1	High Temporal Horn
2	Low Temporal Horn
3	High Non-Temporal Horn
4	Low Non-Temporal Horn
5	High 3.1KHz Temporal Horn
6	Low 3.1KHz Temporal Horn
7	High 3.1KHz Non-Temporal Horn
8	Low 3.1KHz Non-Temporal Horn
The Horns Have to be Set to a Temporal Horn Only Use Setting 1, 2, 5, or 6	

Audio Selector

Note: The default setting for the Audio Select is 1. **Change this to 2**. Unless otherwise noted.

Candela Selector

Chime Tone Audio Select	
1	High 1 Second
2	Low 1 Second
3	High ¼ Second
4	Low ¼ Second
5	High Temporal
6	Low Temporal
7	High 5 Second Whoop
8	Low 5 Second Whoop
The Chimes Have to be Set to a Temporal Chime Only Use Setting 5 or 6	

For use with the following models: P2RLD, P2RLED-B, P2WLED, P2WLED-B, P2RLED-P, P2WLED-P, P2RLED-SP, P2WLED-SP, P2GRLED, P2RGLED-B, P2GWLED, P2GWLED-B, SRLED, SRLED-B, SWLED, SWLED-B, SRLED-P, SWLED-P, SRLED-P, SRLED-SP, SWLED-CLR-ALERT, SWLED-ALERT, SGRLED, SGRLED-B, SGRLED-P, SGWLED, SGWLED-P, SGWLED-B, PC2RLED, PC2RLED-B, PC2WLED, PC2WLED-B, SCRLED, SCWLED, SCWLED-CLR-ALERT, SCRLED-P, SCWLED-P, SCRLED-B, SCWLED-B

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PANEL DETAIL

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BC ENGINEERS INCORPORATED
5720 Reeder Shawnee, Ks. 66203 (913)262-1772

6/17/2025
STATE OF MISSOURI
DARIN T. SEIDEL
NUMBER PE-2009013004
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE:	REVISION DESCRIPTION:

PROJECT NAME / CUSTOMER / LOCATION:
Cedar Creek Elementary School
2600 SW 3rd St.
Lee's Summit, MO 64081

SYSTEM DESCRIPTION:
Fire Alarm System

PROJECT MANAGER:
Benjamin McVay
314-705-0128

DESIGNER: RN
DRAFTER: JMJ

DRAWING #:
FA401

PROJECT JOB#: PJ2503300003

DATE: 04/23/2025

ISSUED FOR: CONSTRUCTION