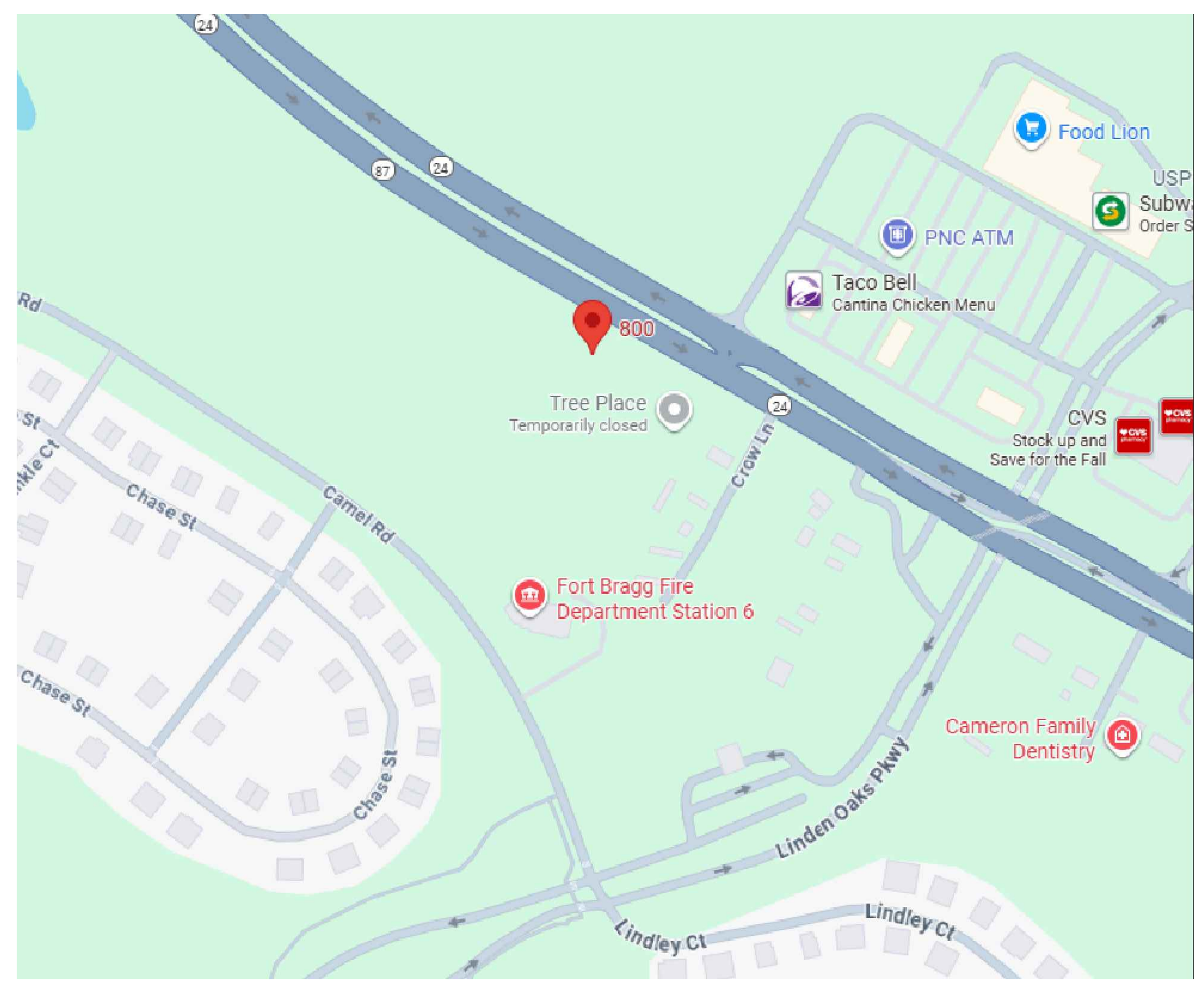
Reviewed for Fire Code Compliance
Harnett County North Carolina
Roger Sullivan
10/28/2025 11:12:43 AM

Walmart

FACILITY #6958

FIRE ALARM PLANS

LIMITED REMODEL/NAC- UPGRADE



SITE MAP

FACILITY ADDRESS

800 NC 24–87
CAMERON, NC 28326

APPLICABLE CODES

NFPA STANDARDS :	EDITION:
NFPA 72	2022
OTHER STANDARDS :	
INTERNATIONAL BUILDING CODE WITH LOCAL AMENDMENTS	2024
INTERNATIONAL FIRE CODE WITH LOCAL AMENDMENTS	2024

LOCAL CONTACTS

HARNETT COUNTY
DONNA JOHNSON
PROJECT COORDINATOR/CUSTOMER SERVICE REP.
DEVELOPMENT SERVICES
420 MCKINNEY PARKWAY
LILLINGTON, NC 27546
(910)814–6431

SHEET INDEX

ENGINEER CONSULTANT

PROJECT ENGINEER	RICKERT HENRIKSEN
PROJECT DESIGNER	HIMANSHU BHARTIYA
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PROJECT DESIGNER EMAIL ADDRESS	HIMANSHU@SACENG.COM

WALMART SECURITY ENGINEER

ASSIGNED WALMART SECURITY ENGINEER	RICARDO ALVEREZ
SECURITY ENGINEER PHONE NUMBER	479–371–3256
SECURITY ENGINEER EMAIL ADDRESS	RICARDO.ALVAREZ@WALMART.COM

SECURITY TECHNOLOGY SECURITY MANAGER

ASSIGNED WALMART SECURITY MANAGER	JOHN GRIFFIN
SECURITY MANAGER PHONE NUMBER	479–866–4515
SECURITY MANAGER EMAIL ADDRESS	JOHN.R.GRIFFIN@WALMART.COM

SECURITY TECHNOLOGY COORDINATOR

ASSIGNED WALMART ALARM COORDINATOR	DANIEL VANHECKE
ALARM COORDINATOR PHONE NUMBER	479–374–2731
ALARM COORDINATOR EMAIL ADDRESS	DANIEL.VANHECKE@WALMART.COM

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REGISTERED IN ALL 50 STATES
Job No. 256958

Walmart
CAMERON, NC
STORE NO. 6958
JOB NUMBER:
GENERAL REMODEL

ISSUE BLOCK

CHECKED BY:	HB
DRAWN BY:	PP
PROTO:	–
PROTO CYCLE:	–
DOCUMENT DATE:	09/18/25

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NORTH CAROLINA PROFESSIONAL ENGINEER RICKERT E. HENRIKSEN
Date Signed: October 20, 2025

ELECTRONIC FIRE PROTECTION COVER SHEET

SHEET: EFP0

PRINTED: 10/20/2025 3:36 PM BY: Himanshu LAST SAVED: 9/22/2025 11:13 AM BY: Johnathon
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SCOPE OF WORK

THE FIRE ALARM SCOPE OF WORK CONSISTS OF THE FOLLOWING:

1) INSTALL (3) NEW POWER SUPPLY AS SHOWN.
2) INSTALL (82) NEW STROBES AND (73) NEW HORN STROBES AS SHOWN AND CONNECT TO NEW POWER SUPPLY.
3) INSTALL (7) NEW WALL MOUNT HORN STROBES AS SHOWN AND CONNECT TO NEW POWER SUPPLY.
4) DEMOLISH EXISTING VOICE EVACUATION SYSTEM INCLUDING SPEAKER STROBES AND AMPLIFIERS.
5) RUN NEW SLC LOOP FROM EXISTING FACP TO EXISTING INITIATING DEVICES.
6) RE-DIP ALL POPITS FOR NEW B299 POPEX.

FIRE ALARM CONTRACTOR TO MAKE FINAL CX CONNECTIONS TO THE FIRE ALARM.

ALL OTHER FIRE ALARM DEVICES SHALL REMAIN.

REMODEL/EXPANSIONS FIRE ALARM PROJECTS ONLY

REMOVAL NOTES TO ALARM INSTALLER: ALARM INSTALLER TO MAINTAIN THE EXISTING FACP SYSTEM OPERATIONAL THROUGH THE REMODEL/EXPANSION PROCESS. UPON BRINGING UP NEW FACP SYSTEM, THE ALARM INSTALLER WILL REMOVE THE OLD SYSTEM DEVICES INCLUDING OLD FACP, SYSTEM CABLING, ALL SPEAKER STROBES, STROBE, POWER SUPPLIES, KEYPADS AND AUDIO BOOSTERS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE CORRECT QUANTITIES FOR ALL EXISTING DEVICES TO BE REMOVED AND NO EXTRA WILL BE ISSUED FOR HIS FAILURE TO DO SO. CONTRACTOR WILL PROVIDE A BLANK PLATE COVER FOR ANY J-BOXES LEFT UNUSED.

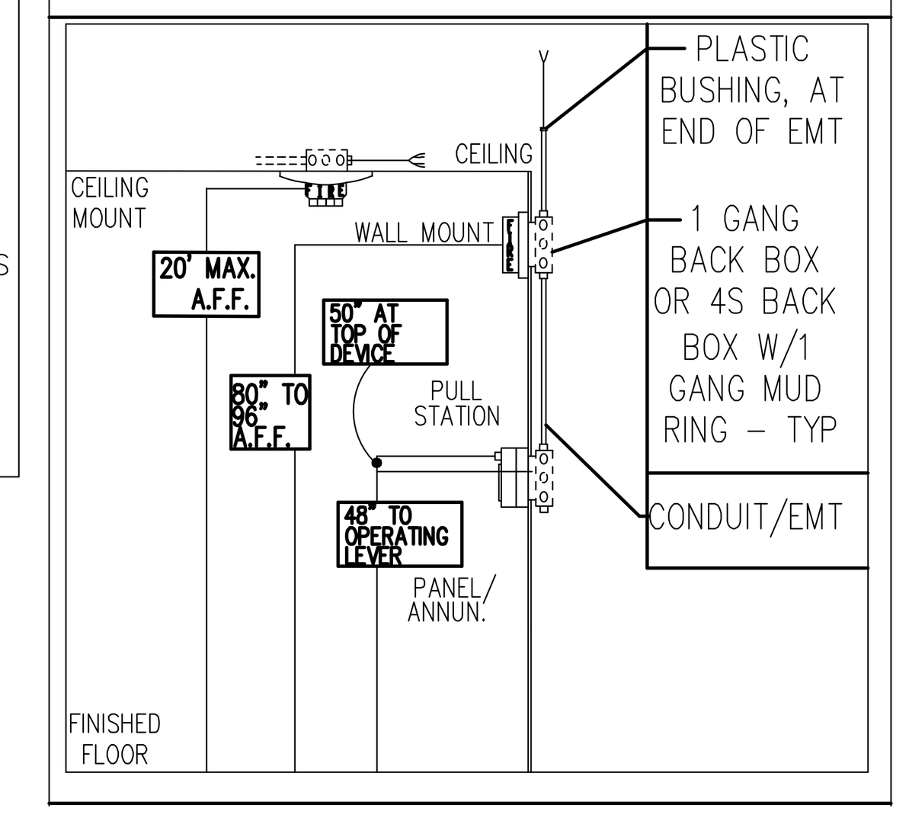
EXISTING FIRE ALARM INITIATION

THE BUILDING IS PROTECTED BY AN EXISTING AUTOMATIC FIRE SPRINKLER SYSTEM.
THE EXISTING FIRE ALARM CONSISTS OF THE FOLLOWING:

1) SUPERVISE ALL VALVES CONTROLLING THE SPRINKLER SYSTEM.
2) MONITOR EXISTING SMOKE DETECTORS TO PROTECT THE ("FACP") & POWER SUPPLIES. ADDITIONAL EXISTING SMOKE DETECTION IS LOCATED ON SALES FLOOR, ENTRY/EXIT VESTIBULES AND STOCKROOMS
3) MONITOR EXISTING AUTOMATIC EXTINGUISHING SYSTEMS (ANSUL, ETC.) TO INITIATE AN "ALARM" CONDITION.
4) MONITOR EXISTING DUCT SMOKE DETECTORS FOR ALL AC UNITS

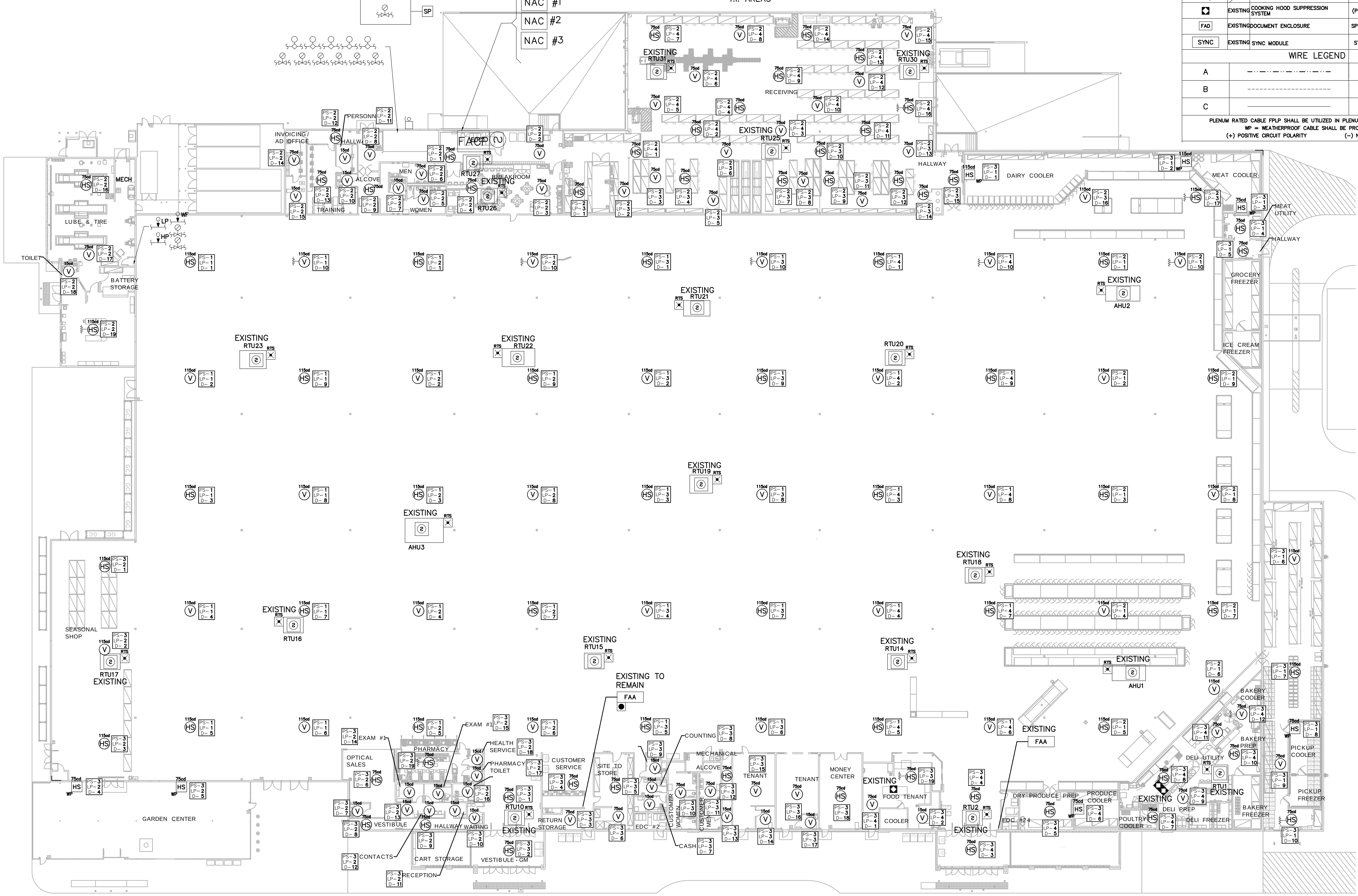
IT WILL BE THE RESPONSIBILITY OF THE ALARM INSTALLER TO MAINTAIN THE EXISTING SYSTEM DURING THE DURATION OF THE PROJECT AS REQUIRED BY CODE.

MOUNTING HEIGHT



CEILING HEIGHT NOTE

CEILING HEIGHT IS 20'-0" IN SALES AND RECEIVING AREAS, AND 10'-0" IN OFFICE AND T.I. AREAS



ELECTRONIC FIRE PROTECTION PLAN

SCALE: 1" = 20'-0"

1 / EFP1

FIRE ALARM SYMBOLS LEGEND

SYMBOL	QTY.	DESCRIPTION	MAKE/MODEL
FACP	EXISTING	FIRE ALARM CONTROL PANEL	BOSCH B9512G
FAA	EXISTING	FIRE ALARM KEYPAD	BOSCH B926F
CELL	EXISTING	PLUG IN CELL MODULE	BOSCH B444
NAC	3 NEW	NOTIFICATION POWER SUPPLY	ALTRONIX AL1002ULADA
(S)	EXISTING	SMOKE DETECTOR W/ END OF LINE RELAY	BOSCH D273THE
(•)	EXISTING	MANUAL PULL STATION	BOSCH FMM-100SATK
(S)	EXISTING	DUCT SMOKE DETECTOR	SYSTEM SENSOR D4120
75cd (V) LED	82 NEW	CEILING MOUNT STROBE MULTI CANDELA, L SERIES	SYSTEM SENSOR SCRLED
75cd (HS) LED	73 NEW	CEILING MOUNT HORN/STROBE MULTI CANDELA. L SERIES	SYSTEM SENSOR PC2RLED
75cd HS WP	7 NEW	WEATHERPROOF WALL MOUNT HORN/STROBE, MULTI CANDELA	SYSTEM SENSOR P2GRKLED, 75cd UNLESS OTHERWISE NOTED.
PT	6 NEW	POPIT MODULE	BOSCH D9127U
	EXISTING	WATERFLOW INDICATOR SWITCH	EXISTING
	EXISTING	SPRINKLER SYSTEM CONTROL VALVE SUPERVISORY TAMPER SWITCH	EXISTING
RTS	EXISTING	REMOTE TEST SWITCH	EXISTING
D192G	EXISTING	NAC MODULE	BOSCH D192G
		END OF LINE RESISTOR/DEVICE	PER MANUFACTURER
	EXISTING	COOKING HOOD SUPPRESSION SYSTEM	(POINT OF CONNECTION ONLY)
FAD	EXISTING	DOCUMENT ENCLOSURE	SPACE AGE SSU00685
SYNC	EXISTING	SYNC MODULE	SYSTEM SENSOR MDL3

WIRE LEGEND

A	— ·· — ·· —	FIRE ALARM SYSTEM 3pr #18 AWG FPL TWISTED
B	- - - - - - -	NOTIFICATION CIRCUIT 1pr #12 AWG FPL ZIP
C	————	MULTIPLE CABLES

PLENUM RATED CABLE FPLP SHALL BE UTILIZED IN PLENUM RATED CEILING AREAS ONLY
WP = WEATHERPROOF CABLE SHALL BE PROVIDED AS REQUIRED
(+) POSITIVE CIRCUIT POLARITY (–) NEGATIVE CIRCUIT POLARITY

DEMO RECOMMENDATIONS

	QUANTITY
EXISTING NOTIFICATION APPLIANCES	ALL
NAC/VOICE EVAC WIRING	ALL
ANSUL(S)	0
FIRE/BURG WIRING	0
EXISTING DUCT DETECTORS	0
EXISTING KEYPADS	0
EXISTING SYSTEM POPIT(S)	0
EXISTING PANEL	0
EXISTING CONDUIT	ALL
EXISTING POWER SUPPLIES	7
EXISTING CANS IN EDC ROOMS	0
REMOTE KEY SWITCHES	0
EXISTING DOOR CONTACTS	0
EXISTING MOTIONS	0
EXISTING GLASS BREAKS	0
SIREN(S)	0
SPEAKER STROBES	165

NOTE: THE ABOVE DEMO NOTES ARE FROM THE PM SITE SURVEY, AND HAVE NOT BEEN VERIFIED BY SACRAMENTO ENGINEERING CONSULTANTS. CONTRACTOR TO DETERMINE ACTUAL DEMOLITION REQUIREMENTS FROM FIELD BEFORE START OF CONSTRUCTION.

THE ALARM INSTALLER IS RESPONSIBLE FOR ANY ASSOCIATED CONDUIT TO COMPLETE THE INSTALLATION. THIS WILL INCLUDE BUT NOT LIMITED TO WALL PENETRATION SLEEVES, BACK BOXES FOR AUDIO VISUALS, KEYPAD BOXES AND STUBS, WATER FLOW AND TAMPER DETECTOR BOXES AND STUBS, RTU TEST SWITCHES BOXES AND STUBS.

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NORTH CAROLINA PROFESSIONAL ENGINEER No. 24607 RICKERT C. HENRIKSEN
Date Signed: October 20, 2025

ELECTRONIC FIRE PROTECTION PLAN

SHEET: EFP1

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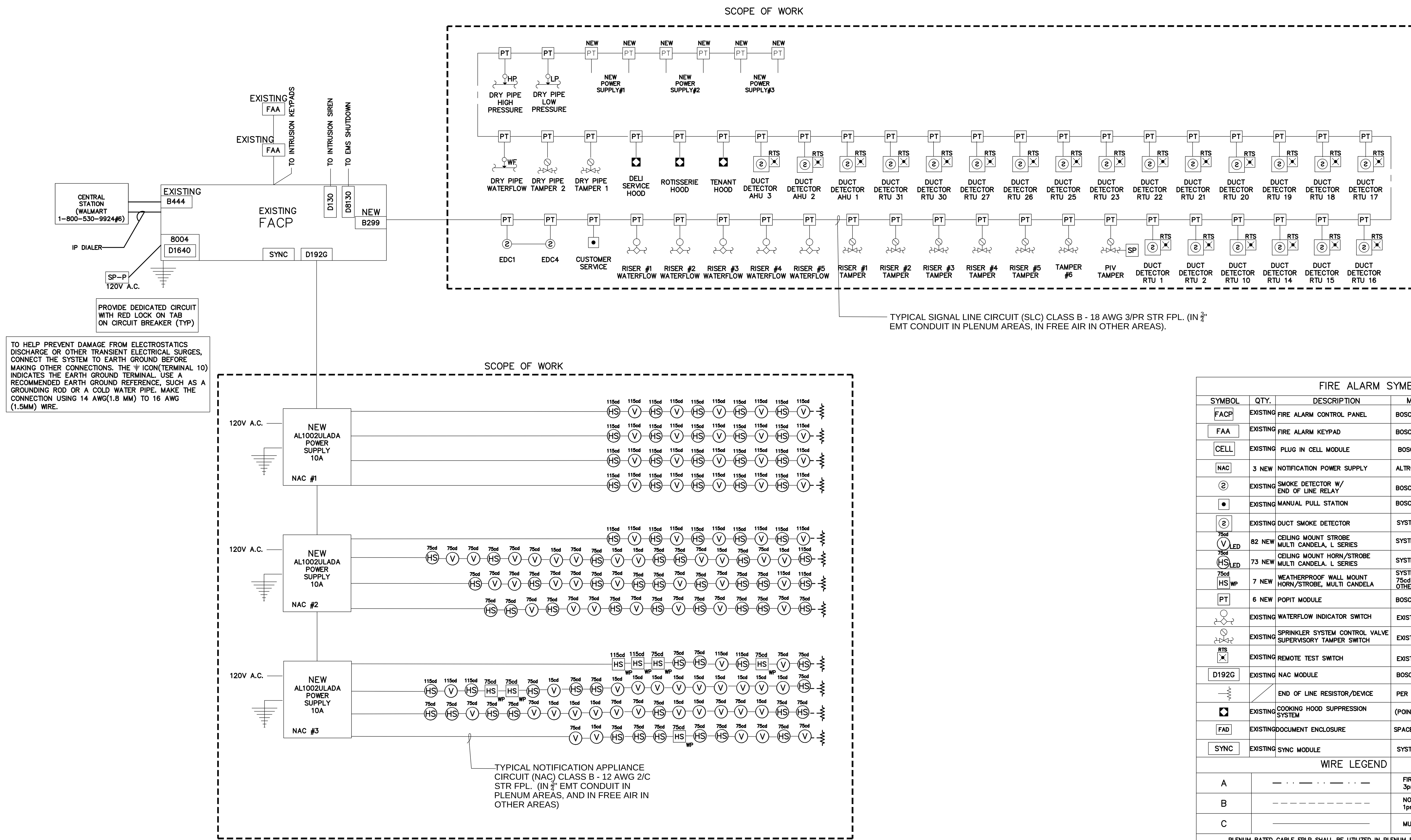

FIRE PROTECTION RISER

SEQUENCE OF OPERATIONS											
ACTIVATION PUMP CONTACTS	ACTIVATION OF COOKING HOOD SUPRESSION SYSTEM	ACTIVATION OF DUCT SMOKE DETECTOR	ACTIVATION OF WATER FLOW SWITCH	ACTIVATION OF SPRINKLER TAMPER SWITCH/ SUPERVISORY DEVICE	ACTIVATION OF AREA SMOKE/HEAT DETECTORS	ACTIVATION OF MANUAL PULL STATION	FIRE ALARM AC POWER FAILURE	FIRE ALARM LOW BATTERY	OPEN CIRCUIT	GROUND FAULT	NOTES: CENTRAL STATION TO RECEIVE SEPARATE & DISTINCT SIGNALS.
	X		X		X	X					ACTIVATES HORN/STROBE LIGHTS
	X		X		X	X					TRANSMIT ALARM SIGNAL TO APPROVED CENTRAL STATION ALARM MONITORING SERVICE
X		X		X							TRANSMIT SUPERVISORY SIGNAL TO APPROVED CENTRAL STATION ALARM MONITORING SERVICE
							X	X	X	X	TRANSMIT TROUBLE SIGNAL TO APPROVED CENTRAL STATION ALARM MONITORING SERVICE
		X									ACTIVATES AHU/RTU UNIT TO SHUTDOWN
			X								ACTIVATES WP NOTIFICATION ABOVE FDC

FIRE ALARM SYMBOLS LEGEND

SYMBOL	QTY.	DESCRIPTION	MAKE/MODEL
FACP	EXISTING	FIRE ALARM CONTROL PANEL	BOSCH B9512G
FAA	EXISTING	FIRE ALARM KEYPAD	BOSCH B926F
CELL	EXISTING	PLUG IN CELL MODULE	BOSCH B444
NAC	3 NEW	NOTIFICATION POWER SUPPLY	ALTRONIX AL1002ULADA
(S)	EXISTING	SMOKE DETECTOR W/ END OF LINE RELAY	BOSCH D273THE
●	EXISTING	MANUAL PULL STATION	BOSCH FMM-100SATK
(S)	EXISTING	DUCT SMOKE DETECTOR	SYSTEM SENSOR D4120
75cd V LED	82 NEW	CEILING MOUNT STROBE MULTI CANDELA, L SERIES	SYSTEM SENSOR SCRLED
75cd HS LED	73 NEW	CEILING MOUNT HORN/STROBE MULTI CANDELA. L SERIES	SYSTEM SENSOR PC2RLED
75cd HS WP	7 NEW	WEATHERPROOF WALL MOUNT HORN/STROBE, MULTI CANDELA	SYSTEM SENSOR P2GRKLED, 75cd UNLESS OTHERWISE NOTED.
PT	6 NEW	POPIT MODULE	BOSCH D9127U
	EXISTING	WATERFLOW INDICATOR SWITCH	EXISTING
	EXISTING	SPRINKLER SYSTEM CONTROL VALVE SUPERVISORY TAMPER SWITCH	EXISTING
RTS	EXISTING	REMOTE TEST SWITCH	EXISTING
D192G	EXISTING	NAC MODULE	BOSCH D192G
		END OF LINE RESISTOR/DEVICE	PER MANUFACTURER
	EXISTING	COOKING HOOD SUPPRESSION SYSTEM	(POINT OF CONNECTION ONLY)
FAD	EXISTING	DOCUMENT ENCLOSURE	SPACE AGE SSU00685
SYNC	EXISTING	SYNC MODULE	SYSTEM SENSOR MDL3

WIRE LEGEND

A	— · · — · · — · · —	FIRE ALARM SYSTEM 3pr #18 AWG FPL TWISTED
B	- - - - - - - - - - - -	NOTIFICATION CIRCUIT 1pr #12 AWG FPL ZIP
C	————————	MULTIPLE CABLES

PLENUM RATED CABLE FPLP SHALL BE UTILIZED IN PLENUM RATED CEILING AREAS ONLY
WP = WEATHERPROOF CABLE SHALL BE PROVIDED AS REQUIRED
(+) POSITIVE CIRCUIT POLARITY (–) NEGATIVE CIRCUIT POLARITY

POINT TO BE ANNUNCIATED AS :	POINT TYPE	
	FIRE ALARM	SUPERVISORY ALARM
RISER #1 WATERFLOW	X	
RISER #2 WATERFLOW	X	
RISER #3 WATERFLOW	X	
RISER #4 WATERFLOW	X	
RISER #5 WATERFLOW	X	
RISER #1 TAMPER		X
RISER #2 TAMPER		X
RISER #3 TAMPER		X
RISER #4 TAMPER		X
RISER #5 TAMPER		X
#6 TAMPER		X
PIV TAMPER		X
MANUAL PULL STATION	X	
SMOKE / HEAT DETECTORS	X	
DUCT SMOKE DETECTORS		X
COOKING HOOD SUPPRESSION SYSTEM	X	

ALL FIRE ALARM SYSTEM CIRCUIT WIRING MUST ANNUNCIATE A TROUBLE SIGNAL DURING OPEN AND GROUND FAULT CONDITIONS. ADDITIONALLY ALL OUTPUT CIRCUITS (HORNS/STROBES) ARE REQUIRED TO ANNUNCIATE A TROUBLE SIGNAL DURING A WIRE TO WIRE SHORT CONDITION. THE FIRE ALARM SYSTEM WILL BE TESTED BY THE OWNER'S REPRESENTATIVES TO THE CRITERIA OF NFPA 72.

AHJ / COMPLIANCE NOTES
"PROPRIETARY SYSTEM"

1. THIS SYSTEM DESIGN IS BASED UPON COMPLIANCE WITH THE NATIONAL, STATE AND LOCAL CODES. THE OCCUPANCY CLASS IS MERCANTILE.
2. REMOTE ANNUNCIATOR(S) WILL FEATURE POINT I.D. OF ALL DEVICES/ZONES IN PLAIN ENGLISH DISPLAY. THE FACP CABINET HAS NO ANNUNCIATOR OR USER INTERFACE CONTROLS, AND IS A CABINET HOUSING (NON-ANALOG ADDRESSABLE) CIRCUITRY ONLY.
3. AT LEAST ONE MANUAL STATION WILL BE INSTALLED AND LOCATED WHERE REQUIRED BY THE AHJ, PER NFPA 72. UNLESS OTHERWISE SPECIFIED BY THE AHJ, IT WILL BE LOCATED PER THE DRAWING.
4. ONE SMOKE DETECTOR WILL BE INSTALLED ABOVE THE FACP IN ACCORDANCE WITH NFPA 72.
5. AIR HANDLING UNITS IN EXCESS OF 2000 CFM WHICH INCLUDE DUCT SMOKE DETECTORS SHALL SHUT DOWN THEIR RESPECTIVE FANS AND CAUSE A "SUPERVISORY" SIGNAL ON THE CPU PER NFPA 90A. SEE SCOPE OF MECHANICAL CONTRACTORS SHOP DRAWINGS FOR DETAILS.
6. ALL NON-REQUIRED DEVICES INDICATED IN THE SUBMITTAL (IF ANY), ARE VOLUNTARILY PROVIDED AND ARE DESIGNATED AS "SUPPLEMENTARY" IN NATURE, AS DEFINED IN NFPA 72.
7. AUDIBLE AND VISUAL NOTIFICATION APPLIANCES ARE PROVIDED AS INDICATED ON THE PLAN.
8. WALMART SECURITY TECHNOLOGY WILL INSTALL THE FIRE ALARM WHERE LEGALLY ENTITLED BY LICENSING, PERMITTING, CERTIFICATION OR EXEMPTION. LOCAL CONTRACTOR TO BE USED ELSEWHERE.
9. OFF PREMISES, AUTOMATIC EMERGENCY NOTIFICATION WILL BE VIA IP COMMUNICATOR AND/OR 2-LINE DACT TO WAL-MART'S UL LISTED (UUFX) CENTER. SEE UL FILE #S3152-1 FOR CERTIFICATE INFORMATION.
10. WIRING WILL BE INSTALLED PER (THE NEC) NFPA 70 AND ALL OTHER APPLICABLE SECTIONS. ALL EQUIPMENT SHALL BE PROPERLY LISTED PER NFPA 72.
11. THIS SYSTEM IS DESIGNATED AS A "PROPRIETARY SUPERVISING STATION SYSTEM" IN ACCORDANCE WITH NFPA 72 WITH 24 HOURS OF STAND-BY POWER THEN 5 MINUTES IN "ALARM" PER NFPA 72. STORE MANAGEMENT PERSONNEL ARE DESIGNATED FOR 1 HOUR RUNNER SERVICE.
12. THESE NOTES DO NOT SUPERCEDE REQUIREMENTS OF OTHER TRADES, SPECIFICALLY INCLUDING MECHANICAL.
13. APPLICABLE STATE AND LOCAL MODIFICATIONS ADOPTED THROUGH DUE PROCESS OF LAW AND WHICH CONFLICT WITH THESE NOTES SHALL SUPERCEDE AND COPIES SHOULD BE CONVEYED TO THE CONTACT PERSON INDICATED BELOW.

DIRECT FIRE ALARM RELATED (ONLY) COMPLIANCE ISSUES TO:

SACRAMENTO ENGINEERING CONSULTANTS
10555 OLD PLACERVILLE RD
SACRAMENTO, CA 95827
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FAX: 916-368-4490
EMAIL: rh@saceng.com

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NORTH CAROLINA PROFESSIONAL ENGINEER
Date Signed: October 20, 2025

ELECTRONIC FIRE PROTECTION RISER

SHEET: EFP2

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POWER SUPPLY #1 BATTERY CALCULATIONS

Device	Quantity	Standby Current	Total Standby Current	Alarm Current	Total Alarm Current
AL1002ULADA	1	0.129	0.129	0.129	0.129
Notification Appliances LOOP 1					
CEILING STROBE SCRLED@115 CD	5	0.000	0.000	0.090	0.450
CEILING HORN STROBE PC2RLED@115 CD	5	0.000	0.000	0.120	0.600
Notification Appliances LOOP 2					
CEILING STROBE SCRLED@115 CD	5	0.000	0.000	0.090	0.450
CEILING HORN STROBE PC2RLED@115 CD	5	0.000	0.000	0.120	0.600
Notification Appliances LOOP 3					
CEILING STROBE SCRLED@115 CD	5	0.000	0.000	0.090	0.450
CEILING HORN STROBE PC2RLED@115 CD	5	0.000	0.000	0.120	0.600
Notification Appliances LOOP 4					
CEILING STROBE SCRLED@115 CD	5	0.000	0.000	0.090	0.450
CEILING HORN STROBE PC2RLED@115 CD	5	0.000	0.000	0.120	0.600
TOTALS		**TOTAL STANDBY**	0.129	**TOTAL ALARM**	4.329
COMPUTATIONS					
TOTAL AMPS USED IN STANDBY=	0.129	X	24 HOURS=	3.096	AH
TOTAL AMPS USED IN ALARM=	4.329	X	5 MINUTES=	0.359	AH
		+25% CONTINGENCY=		0.864	AH
TOTAL BACKUP BATTERY REQUIREMENTS=				4.319	AH
TOTAL BACKUP BATTERY PROVIDED=				7.000	AH
TOTAL BACKUP BATTERY REQUIRED=				4.319	AH
TOTAL BACKUP BATTERY RESERVED=				2.681	AH

PROVIDE (2)12VDC, 7.0 ah batteries for 7.0 amp hours at 24VDC.

POWER SUPPLY #2 BATTERY CALCULATIONS

Device	Quantity	Standby Current	Total Standby Current	Alarm Current	Total Alarm Current
AL1002ULADA	1	0.129	0.129	0.129	0.129
Notification Appliances LOOP 1					
CEILING STROBE SCRLED@115 CD	5	0.000	0.000	0.090	0.450
CEILING HORN STROBE PC2RLED@115 CD	5	0.000	0.000	0.120	0.600
Notification Appliances LOOP 2					
CEILING STROBE SCRLED@15 CD	5	0.000	0.000	0.018	0.090
CEILING STROBE SCRLED@75 CD	7	0.000	0.000	0.070	0.490
CEILING HORN STROBE PC2RLED@75 CD	6	0.000	0.000	0.087	0.522
CEILING HORN STROBE PC2RLED@115 CD	1	0.000	0.000	0.120	0.120
Notification Appliances LOOP 3					
CEILING STROBE SCRLED@75 CD	8	0.000	0.000	0.070	0.560
CEILING STROBE SCRLED@115 CD	1	0.000	0.000	0.090	0.090
CEILING HORN STROBE PC2RLED@75 CD	7	0.000	0.000	0.087	0.609
CEILING HORN STROBE PC2RLED@115 CD	1	0.000	0.000	0.120	0.120
Notification Appliances LOOP 4					
CEILING STROBE SCRLED@75 CD	7	0.000	0.000	0.070	0.490
CEILING HORN STROBE PC2RLED@75 CD	9	0.000	0.000	0.087	0.783
TOTALS		**TOTAL STANDBY**	0.129	**TOTAL ALARM**	5.053
COMPUTATIONS					
TOTAL AMPS USED IN STANDBY=	0.129	X	24 HOURS=	3.096	AH
TOTAL AMPS USED IN ALARM=	5.053	X	5 MINUTES=	0.419	AH
		+25% CONTINGENCY=		0.879	AH
TOTAL BACKUP BATTERY REQUIREMENTS=				4.394	AH
TOTAL BACKUP BATTERY PROVIDED=				7.000	AH
TOTAL BACKUP BATTERY REQUIRED=				4.394	AH
TOTAL BACKUP BATTERY RESERVED=				2.606	AH

PROVIDE (2)12VDC, 7.0 ah batteries for 7.0 amp hours at 24VDC.

POWER SUPPLY #3 BATTERY CALCULATIONS

Device	Quantity	Standby Current	Total Standby Current	Alarm Current	Total Alarm Current
AL1002ULADA	1	0.129	0.129	0.129	0.129
Notification Appliances LOOP 1					
CEILING STROBE SCRLED@75 CD	1	0.000	0.000	0.070	0.070
CEILING STROBE SCRLED@115 CD	1	0.000	0.000	0.090	0.090
CEILING HORN STROBE PC2RLED@75 CD	3	0.000	0.000	0.087	0.261
CEILING HORN STROBE PC2RLED@115 CD	1	0.000	0.000	0.120	0.120
(WEATHER PROOF) WALL HORN STROBE P2RLED/PC2RKLED@75 CD	2	0.000	0.000	0.087	0.174
(WEATHER PROOF) WALL HORN STROBE P2RLED/PC2RKLED@110 CD	2	0.000	0.000	0.094	0.188
Notification Appliances LOOP 2					
CEILING STROBE SCRLED@15 CD	10	0.000	0.000	0.018	0.180
CEILING STROBE SCRLED@115 CD	1	0.000	0.000	0.090	0.090
CEILING HORN STROBE PC2RLED@75 CD	4	0.000	0.000	0.087	0.348
CEILING HORN STROBE PC2RLED@115 CD	2	0.000	0.000	0.120	0.240
(WEATHER PROOF) WALL HORN STROBE P2RLED/PC2RKLED@75 CD	2	0.000	0.000	0.087	0.174
Notification Appliances LOOP 3					
CEILING STROBE SCRLED@15 CD	6	0.000	0.000	0.018	0.108
CEILING STROBE SCRLED@75 CD	6	0.000	0.000	0.070	0.420
CEILING HORN STROBE PC2RLED@75 CD	7	0.000	0.000	0.087	0.609
Notification Appliances LOOP 4					
CEILING STROBE SCRLED@15 CD	1	0.000	0.000	0.018	0.018
CEILING STROBE SCRLED@75 CD	4	0.000	0.000	0.070	0.280
CEILING HORN STROBE PC2RLED@75 CD	6	0.000	0.000	0.087	0.522
WEATHER PROOF WALL HORN STROBE P2RK@75 CD	1	0.000	0.000	0.176	0.176
TOTALS		**TOTAL STANDBY**	0.129	**TOTAL ALARM**	4.197
COMPUTATIONS					
TOTAL AMPS USED IN STANDBY=	0.129	X	24 HOURS=	3.096	AH
TOTAL AMPS USED IN ALARM=	4.197	X	5 MINUTES=	0.348	AH
		+25% CONTINGENCY=		0.861	AH
TOTAL BACKUP BATTERY REQUIREMENTS=				4.305	AH
TOTAL BACKUP BATTERY PROVIDED=				7.000	AH
TOTAL BACKUP BATTERY REQUIRED=				4.305	AH
TOTAL BACKUP BATTERY RESERVED=				2.695	AH

PROVIDE (2)12VDC, 7.0 ah batteries for 7.0 amp hours at 24VDC.

B9512G BATTERY CALCULATIONS

Description	Device	Quantity	Standby Current	Total Standby Current	Alarm Current	Total Alarm Current
Control Panel	B9512G	1	0.1800	0.1800	0.2600	0.2600
Dual Class A/B NAC Module	D192G	1	0.0350	0.0350	0.1000	0.1000
Cellular Communicator	B444V	1	0.0350	0.0350	0.1000	0.1000
Annunciator / Keypad (FAA)	B926F	2	0.0350	0.0700	0.0700	0.1400
Eathernet Module	B426	1	0.1000	0.1000	0.1000	0.1000
POPITS	D9127U	87	0.0008	0.0696	0.0008	0.0696
POPITS(NEW)	D9127U	6	0.0008	0.0048	0.0008	0.0048
POPEX Module	B299	1	0.0350	0.0350	0.0350	0.0350
Sync Module	MDL3	1	0.0000	0.0000	0.0035	0.0035
12v-4w Smoke Detector EOLR	D273	1	0.0150	0.0150	0.0360	0.0360
TOTALS			**TOTAL STANDBY**	0.544	**TOTAL ALARM**	0.849
		COMPUTATIONS				
TOTAL AMPS USED IN STANDBY =			**0.544**	X 24 HOURS =	**13.066**	AH
TOTAL AMPS USED IN ALARM =			**0.849**	X 5 MIN =	**0.071**	AH
			+25% CONTINGENCY=		**3.284**	AH
TOTAL STANDBY BATTERY REQUIREMENTS=					**16.420**	AH
TOTAL BACKUP BATTERY PROVIDED=					**18.000**	AH
TOTAL BACKUP BATTERY REQUIRED=					**16.420**	AH
TOTAL BACKUP BATTERY RESERVED=					**1.580**	AH

EXISTING (1) 18ah battery to provide 18 amp hours at 12 volts

VOLTAGE DROP CALCULATION

WIRE GAUGE (# 12) R=0.00171 ohm/FT

	A	B	C	D		
NAC CIRCUIT	SOURCE VOLTAGE	TOTAL AMP	WIRE LENGTH (FEET)	VOLT DROP (2xRxBxC)	% DROP (D/A)	VOLTAGE AT LAST DEVICE (A-D)
#1-1	20.4	1.05	775	2.78	13.64	17.62
#1-2	20.4	1.05	675	2.42	11.88	17.98
#1-3	20.4	1.05	800	2.87	14.08	17.53
#1-4	20.4	1.05	900	3.23	15.84	17.17
#2-1	20.4	1.05	950	3.41	16.72	16.99
#2-2	20.4	1.222	700	2.93	14.34	17.47
#2-3	20.4	1.379	700	3.30	16.18	17.10
#2-4	20.4	1.273	750	3.27	16.01	17.13
#3-1	20.4	0.903	875	2.70	13.25	17.70
#3-2	20.4	1.032	950	3.35	16.44	17.05
#3-3	20.4	1.137	825	3.21	15.73	17.19
#3-4	20.4	0.996	900	3.07	15.03	17.33

SACRAMENTO ENGINEERING CONSULTANTS
10555 Old Placerville Road
Sacramento, CA 95827-2503
Phone: (916) 368-4468
www.saceng.com
REGISTERED IN ALL 50 STATES
Job No. 256958

Walmart
CAMERON, NC
STORE NO. 6958
GENERAL REMODEL
JOB NUMBER:

ISSUE BLOCK

CHECKED BY:	HB
DRAWN BY:	PP
PROTO:	–
PROTO CYCLE:	–
DOCUMENT DATE:	09/18/25

STORE ADDRESS:

2800 NC 24–87
CAMERON, NC 28326

CONTRACTOR:
I.C.E
CONTRACTORS
101 W.BURGESS RD
PENSACOLA FL 32503
CHAD HENSON CHENSON@
ICECONTRACTORS.NET
405–698–7963
www.icecontractors.net
PERMITS@
ICECONTRACTORS.NET

NORTH CAROLINA PROFESSIONAL ENGINEER No. 24607 RICKERT C. HENRIKSEN

Date Signed: October 20, 2025

ELECTRONIC FIRE PROTECTION RISER

SHEET: EFP3

Harnett COUNTY NORTH CAROLINA

Emergency Services Department
www.harnett.org

Application for Plan Review

Application # _____-_____

Date Received: _____ **Received By:** _____

Name of Project: WALMART STORE # 6958 FIRE ALARM

Physical Address of Project: 2800 NC 24-87

CAMERON, NC 28326

Plans Submitted By: SACRAMENTO ENGINEERING CONSULTANTS

Project Phone: (405)-698-7963

Contact Person/Address: CHAD HENSON

101 W.BURGESS RD

PENSACOLA FL 32503

Contact Email: CHENSON@ICECONTRACTORS.NET

Contact Phone: (916)-368-4468 (_____)-_____-_____

Contractor's Name/Info: I.C.E CONTRACTORS

101 W.BURGESS RD

PENSACOLA FL 32503

Contractor's Phone: (405)-698-7963

- Plans that are submitted will be reviewed as quickly as possible with an average time of review between 7-10 working days.
- Status checks may be conducted on plan reviews by visiting the website http://hteweb.harnett.org/Click2GovBP/Index.jsp or by calling the Harnett County Central Permitting Office (910-893-7525, Option #2), or the Harnett County Fire Marshal's Office (910-893-7580).
- Approved plans must be picked up from the Central Permitting Office and all fees paid before any required inspections can be conducted.

B9512G Control Panels

www.boschsecurity.com

BOSCH
Invented for life

- Fully integrated intrusion, fire, and access control allows users to interface with one system instead of three
- Provides up to 599 points using a combination of hardwired or wireless devices for installation flexibility, and up to 32 areas and 32 doors for up to 2,000 users
- On-board Ethernet port for Conettix IP alarm communication and remote programming, compatible with modern IP networks including IPv6/IPv4, AutoIP, and Universal Plug and Play
- Installer-friendly features including on-board USB for easy on-site RPS programming, plus support for Remote Connect Service and plug-in PSTN and cellular communication modules for simple installation and communications
- Remote Security Control (RSC) app which allows users to control their security systems – and view system cameras - remotely from mobile devices such as phones and tablets

The B9512G Control Panel and the B8512G Control Panel are the new premier commercial control panels from Bosch. B9512G control panels integrate intrusion, fire, and access control providing one simple user interface for all systems.
With the ability to adapt to large and small applications, the B9512G provides up to 599 individually identified points that can be split into 32 areas.
The control panel can communicate through it's built-in Ethernet port (not applicable to "E" control panels), or through compatible plug-in modules that can send events over the public switched telephone network (PSTN) or over cellular network communications.

For users, programmable keypad shortcuts, situation sensitive on-screen help, and a bilingual user interface make system operation simple and easy.
With the B9512G Control Panel, you can:

- Monitor alarm points for intruder, gas, or fire alarms.
- Program all system functions local or remote using Remote Programming Software (RPS) or by using basic programming through the keypad.
- Add up to 32 doors of access control using the optional B901 Access Control Module. (Optionally use the D9210C Access Control Interface Module for up to eight of the 32 doors.)

The B9512G is a direct replacement for previous control panel models D9412GV4, D9412GV3, D9412GV2, and D9412G.

Functions

Programmable outputs
- Four alarm-output patterns
- Programmable bell test

Point response
- Selectable point response time
- Selectable EOL values and configuration
- Cross point capability
- Fire alarm verification
- Dangerous gas indicator includes carbon monoxide (NFPA 720)
- Watch mode
- 63 point indexes

User interface
- Supervision of up to 32 keypads
- Custom keypad text is fully programmable through RPS
- Full function menu including customizable shortcuts
- Authority by area and 32 character name for each user
- 14 custom authority levels to restrict system features that each user can access
- Programmable primary and secondary language by user and keypad; select from English, Spanish, French, and Portuguese

Area configurations
Link multiple areas to a shared area such as a lobby or common entryway. The shared area then automatically turns On (arms) when all associate areas are armed and turns Off (disarms) when any one associate area is disarmed. For higher security applications, the Area Re-Arm feature guarantees that areas are always rearmed, and are disarmed for no longer than a specific, configurable, amount of time (for example, service time).

Custom functions
For added convenience, the installer can program custom functions that allow customers to complete complex tasks with one simple action. For example, a custom function can bypass a group of points and arm the system, allowing the user to perform these functions with one easy command. Users can activate custom functions with a keypad, keyfob, token, or card, or the control panel can activate a function in reaction to a faulted point, or automatically through a scheduled event (SKED).

Passcode security
- Two-man rule. Requires two people with two unique passcodes to be present at the time of opening.
- Early ambush. Allows users to verify that the facility is safe by requiring two passcodes. The control panel sends a duress event if the user does not enter the passcode a second time after inspecting the premises.
- Dual authentication. Requires two forms of identification before processing certain system commands, including turning off the system and opening doors. A standard system user must have a passcode, a credential (token or card), and appropriate command authority permissions.

Door control
Using the B901 Access Control Module or D9210C Access Control Interface Module, the control panel provides a fully supervised access control solution. The solution offers 14 programmable levels of access authority. Authority for door access is controlled by the user level, the group of the user, the time of day, the door state, and the area armed (On/Off) state.

Easy exit control
The control panel changes from one On (armed) state to another without turning off (disarming) the system. For example, if you change the state from Part On (Perimeter Arm) to All On (Master Arm), the control panel complies and reports the change. Easy Exit Control reduces the number of keystrokes, simplifying system operation.

Programmable passcode-controlled menu list
Passcode-controlled shortcuts provide users only with the options and information pertinent to them, simplifying system operation.

Flexible control
The system provides the flexibility to choose added convenience or high security. For example, you can restrict to a keypad's immediate local area turning on (arming) and turning off (disarming) the system with a passcode, even if the user has access to other areas. This is particularly useful for high security areas, where a user may have access to the area, but would prefer to only turn off (disarm) the area individually rather than with the rest of the system.

Monitor Delay/Delayed Response
Create a special point index that delays the reaction of a point for a specified time (up to 1 hour in minutes and seconds). This delay provides time for the specified condition to reset before activating any annunciation. The system can annunciate locally and send a report, if desired. When the system is armed, the point can respond like a normal point – providing dual functionality. Use this feature to ensure that perimeter doors have not been propped open, or to monitor critical areas such as computer rooms and safes, for example.

System users
The system supports up to 2,000 users. Each user can have a personalized passcode, a wireless keyfob, and a credential to control the system. You can assign passcodes to one of 14 customized authority levels in each area that can be restricted to operate only during certain times. You can program a primary and secondary language for each user and by keypad (select from English, Spanish, French, and Portuguese). The keypad changes to the user's programmed language when the user enters his passcode or holds the Help key.

Communication formats
The control panel prioritizes and sends reports to four route groups. Network and phone communications can use either the Modem4 or the Contact ID communications formats. Each group has a programmable primary and backup destination.
The control panel provides flexible communications for most central stations with reporting capabilities such as:
- Individual point numbers
- Opening or closing reports by user and area number
- Remote programming attempts
- Diagnostic reports

Notice
For premises equipment used in the communication path, such as routers, use only UL listed equipment.

IP communication
The control panel can use on-board Ethernet (IP) connection (the on-board Ethernet port is excluded on “E” versions) to communicate with a Conettix D6600 or a Conettix D6100IPv6 Communications Receiver/ Gateway.
The control panel can optionally use a Conettix Plug-in Cellular Communicator (B440/B441/B442/B443).
Using Conettix IP communication offers a secure path that includes anti-replay/anti-substitution features and provides enhanced security with up to AES 256-bit encryption (using Cipher Block Chaining (CBC)).
The control panel supports Domain Name System (DNS) for both remote programming and central station communication. DNS provides ease of use, eliminating the need to use static IP addresses as your reporting destination, and accommodates a simple solution for central station disaster recovery. The control panel supports both IPv6 and IPv4 networks.

Communication paths
The control panel accommodates up to four separate phone and four separate network paths to the central station receiver. When resetting alarms or turning a system on and off, the user is identified by name and number.

Personal notification
The control panel can send text messages and emails for personal notification over Ethernet or using a cellular communicator. You can configure up to 32 destinations using a combination of cellular phone numbers and email addresses. The control panel sends notifications in the user’s programmed primary language.

Bosch Remote Connect (Cloud)
Remote Connect simplifies connections from RPS, and the Remote Security Control app, using Bosch Cloud services. This service creates a secure connection to the control panel without specific router settings or the need for a static IP address or DNS.

Firmware updates
The system allows remote firmware updates through Remote Programming Software (RPS) using the RPS Firmware Update Wizard. The Firmware Update Wizard uses the on-board USB connection or the on-board Ethernet (IP) connection (the on-board Ethernet port is excluded on “E” versions) to transfer firmware updates.
The control panel can optionally receive firmware updates from RPS using a B426 Conettix Ethernet Communication Module or a Conettix Plug-in Cellular Communicator (B440/B441/B442/B443). **Notice!** Cellular firmware updates require more time than Ethernet updates and carrier data rates apply.
- Control panel updates. Remotely update the control panel firmware for easy feature enhancements without replacing ROM chips.
- Module update support. Remotely update the firmware on connected SDI2 modules for easy feature enhancements without visiting each individual module.

A wide variety of input options
Each point:
- Single 1 kΩ, single 2 kΩ, dual 1 kΩ (1 kΩ + 1 kΩ), and No EOL (end-of-line) (EOL) resistor options (for on-board and B208 inputs)
- Programmable for Fire, Intrusion, Access, Gas, and Supervisory devices
- Supports hardwired and wireless devices
- Supports IP cameras by Bosch as point and output devices

IP camera support
The control panel can integrate directly with Bosch IP cameras, using them as fully supervised points and outputs.
Integration of cameras allows the camera’s video motion detection to activate points on the control panel. The control panel’s virtual outputs can be configured to trigger camera actions, including sending video snapshots via email.

Security and fire detection
The control panel provides eight on-board points, and up to 591 additional off-board points (depending on model and expansion interfaces). You can program individual points to monitor some types of burglar alarms, fire alarms, and supervision devices.

Event log
The event log stores up to 10192 local and reported events. The event log includes time, date, event, area, point, and user. View the event log from a keypad or use RPS to remotely retrieve event information. When the event log reaches a programmed threshold of stored events, it can send an optional report to a receiver.

Scheduled events (SKEDs)
The internal clock and calendar start individually scheduled events (SKEDs). SKEDs perform several functions such as turn on or off, relay control, or point bypassing.
The control panel offers:
- 80 scheduled events with up to 31 different functions
- 32 opening windows and 32 closing windows
- 32 user group windows
- Day-of-week, date-of-month, or holiday only schedules
- 8 holiday schedules of 366 days (leap year)

Dual bus and SDI keypad retrofits
The dual SDI2 device bus design provides greater installation flexibility, such as bus isolation for Intrusion and Fire. To use popular SDI keypads (for example D1255 and D1260), program one of the two SDI2 buses for SDI operation.

ZONEX and POPEX retrofits
To retrofit legacy Bosch control panels that use ZONEX and POPEX devices, the control panel is compatible with the B600 Retrofit (ZONEX) Module. The B600 adds two ZONEX buses to the control panel which can connect to existing legacy point bus (POPEX) devices (for example, the D8125).

Programming
Installers can perform limited programming on-site with a keypad (critical parameters; such as account IDs, central station and RPS IP addresses and phone numbers, reporting formats, and more). They can also do full programming on-site or remotely (attended or unattended) with RPS. A programmable system passcode prevents unauthorized remote programming.

Diagnostics
Keypads and RPS offer diagnostic help for monitoring and troubleshooting. The diagnostics features allow you to view the status of the wired and wireless devices. The features provide the status of the control panel and its connected devices, such as firmware version, power, and missing conditions. View the status of each area.

Remote Security Control app
The Remote Security Control (RSC) app allows users to control their security systems remotely from their devices. Users can:
- Turn their security system On or Off
- Turn specific areas On or Off
- Control outputs for applications such as lighting control
- View live video from Bosch IP cameras
- Grant access remotely by unlocking and locking doors

The app requires the installing dealer to create a Remote Access Profile for users, and to install the profile on their devices.

Bosch Video Management System integration
With Bosch Video Management System (Bosch VMS) and an intrusion system, the VMS operator has a single user interface to monitor and control the intrusion system combined with video surveillance. With Bosch VMS and a control panel, the operator can, for example:
- View videos triggered by intrusion events, including all relevant information such as areas, point, and user show in the display with the event
- View areas, points, outputs, and doors – with their statuses – on the Bosch VMS map, providing the exact location in the system.
- Turn on (arm) and turn off (disarm) areas.
- Bypass and unbypass points.
- Lock and unlock doors (Bosch VMS 6.0 and higher).

Requirements to integrate Bosch VMS with a control panel:
- A licensed Bosch VMS system using Professional Editions v5.5 or higher or Bosch VMS Enterprise
- Edition v5.5 or higher.
- Expansion license to integrate the intrusion control panel. One license needed per control panel. Order number MBX-XINT-xx for the expansion license added to a Bosch VMS base license. Refer to the Bosch Video Management Software product page on the Bosch website, www.boschsecurity.com.
- Access to Remote Programming Software (RPS).

Certifications and approvals

Region	Certification	
USA	ANSI-SIA	CP-01-2010-Control Panel Standard - Features for False Alarm Reduction
Europe	CE	EMC, LVD, RoHS
USA	UL	
	UL	UL 294 - Standard for Access Control Units and Systems
	UL	UL 365 - Police Station Connected Burglar Alarm Units
	UL	UL 609 - Standard for Local Burglar Alarm Units and Systems
	UL	UL 636 - Holdup Alarm Units and Systems
	UL	UL 864 - Standard for Control Units and Accessories for Fire Alarm Systems
	UL	UL 985 - Household Fire Warning System Units
	UL	UL 1023 - Household Burglar Alarm System Units
	UL	UL 1076 - Proprietary Burglar Alarm Units and Systems
	UL	UL 1610 - Central Station Burglar Alarm Units
	UL	UL 1635 - Standard for Digital Alarm Communicator System Units
	CSFM	California State Fire Marshal (see our website)
	FCC	Part 15 Class B

Region	Certification	
	FDNY-CoA	Fire Department of New York City
Canada	ULC	
	ULC	CAN/ULC S303 - Local Burglar Alarm Units and Systems
	ULC	CAN/ULC S304 - Standard for Signal Receiving Center and Premise Burglar Alarm
	ULC	CAN/ULC S545 - Residential Fire Warning System Control Units
	ULC	CAN/ULC S559 - Fire Signal Receiving Centres and Systems
	ULC	ULC-ORD C1023 - Household Burglar Alarm System Units
	ULC	ULC-ORD C1076 - Proprietary Burglar Alarm Units and Systems
	IC	ICES-003 - Information Technology Equipment (ITE)

Installation/configuration notes

Compatible products

Keypads

B942/B942W Touch Screen Keypad (SDI2)

B930 ATM Style Alphanumeric Keypad (SDI2) (SDI2)

B926F Fire Keypad (SDI2)

B925F Fire Keypad (SDI2)

B921C Two-line Capacitive Keypad (SDI2)

B920 Two-line Alphanumeric Keypad (SDI2)

B915/B915I Basic Keypad (SDI2)

D1255 Series Keypads

D1260 Series Keypads

D1256RB Fire Keypad

D1257RB Remote Fire Alarm Annunciator

Transformers

D1640 16.5 VAC 40 VA Transformer

D1640-CA 16.5 VAC 40 VA Transformer for Cananda

Enclosures

B8103 Universal Enclosure (White)

D8103 Universal Enclosure (Gray)

D8108A Attack Resistant Enclosure

D8109 Fire Enclosure

Accessories

B56 Keypad Surface Mount Box

B96 Keypad Trim Bezel

B99 USB Direct Connect Cable

B501-10 Interconnect wiring cables (pack of 10)

D122 Dual Battery Harness

D122L Dual Battery Harness with Long Leads

D161 Dual Modular Telephone Cord (7 f)

D162 Modular Telephone Cord (2 ft)

D166 Telephone Jack (RJ31X)

Detectors

D7050 Series Addressable Photoelectric Smoke and Smoke Heat Detector Heads

F220-B6PM/S 12/24 VDC Addressable Detector Bases with POPITs

F220-B6 12/24 VDC Two-wire Base

F220-B6R Standard 12/24 VDC Four-wire Base)

F220-P Photoelectric Smoke Detector

F220-PTH Photoelectric Smoke Detector with +135°F (+57°C) Heat Sensor

F220-PTH Photoelectric Smoke Detector with +135°F (+57°C) Heat Sensor and Carbon Monoxide Sensors

F220-B6C 12/24 VDC Four-wire Base with Auxiliary Form C Relay

FCC-380 Carbon Monoxide Detector

MX775i Addressable PIR Detector

MX794i Long Range Multiplex PIR Detector

MX934i Addressable PIR Detector

MX938i Addressable PIR Detector

ZX776Z PIR Detector

ZX794Z Long Range PIR Detector

ZX835 TriTech Microwave/PIR Detector

ZX935Z PIR Detector

ZX938Z PIR Detector

ZX970 PIR/Microwave Detector

Bosch conventional detectors, including Professional Series, Blue Line Gen2, Blue Line, Classic Line, Commercial Line, and Ceiling Mount motion detectors, as well as glass break, seismic, request-to-exit, photoelectric, heat, and smoke detectors.

Modules

B208 Octo-input Module

B299 POPEX Module

B308 Octo-output Module

B426 Conettix Ethernet Communication Module

B430 Plug-in Telephone Communicator

B440 Conettix Plug-in Cellular Communicator (using 3G)

B441 Conettix Plug-in Cellular Communicator (using CDMA)

B442 Conettix Plug-in Cellular Communicator (using GPRS)*

B443 Conettix Plug-in Cellular Communicator (using HSPA+)*

B450 Conettix Plug-in Communicator Interface

B520 Auxiliary Power Supply Module

B600 Retrofit (ZONEX) Module

B810 wireless receiver (RADION)

B820 SDI2 Inovonics Interface Module

B901 Access Control Module

D113 Battery Lead Supervision Module

D125B Dual Class B Initiating Module

D126 Standby Battery (12 V, 7 Ah)

D129 Class A Initiating Module

D130 Auxiliary Relay Module

D132A Smoke Detector Reversing Relay Module

D133 Single Relay Module

D134 Dual Relay Module

D185 Reverse Polarity Signaling Module

D192G Class “B”, Style Y Bell Circuit Supervision

D1218 Battery (12 V, 18 Ah)

D8125 Addressable Expansion Module

D8125MUX Multiplex Bus Interface

D8128D OctoPOPIT Eight-point Expander

D8129 Octo-relay Module

D8130 Door Release Module

D9127U/T POPIT Module

DS7461i Single-zone Input Module

DS7465i Input-output Module

D9210C Access Control Interface Module

ICP-EZTS Cover and Wall Tamper Switch

ICP-SDI-9114 SDI Splitter

Applications

Remote Programming Software (RPS or RPS-LITE) v6.00 and higher

Bosch Video Management System v5.5 and higher

Conettix receivers

(Managed and configured with Conettix D6200 Programming/ Administration Software v2.10)

Conettix D6600 Communications Receiver/Gateway (with only D6641 line cards installed) with CPU version 01.10.00

Conettix D6100IPv6 Communications Receiver/Gateway with CPU version 61.10.00

Conettix D6100i Communications Receiver/Gateway with CPU version 61.10.00

RADION wireless from Bosch

B810 wireless receiver (RADION)

RFBT-A bill trap

RFDL-11-A TriTech motion detector

RFDW-RM-A recessed mount door/window contact

RFDW-SM-A surface mount door/window contact

RFGB-A glass break detector

RFIN-A inertia detector

RFKF-A two-button keyfob

RFKF-FB-A four-button keyfob

RFKF-TB-A two-button keyfob

RFPB-SB-A single-button panic

RFPB-TB-A two-button panic

RFRP-A repeater

RFSM-A smoke detector

RFPR-12-A PIR motion detector

RFPR-C12-A PIR curtain motion detector

RFUN-A universal transmitter

Inovonics Wireless

B820 SDI2 Inovonics Interface Module

ENKIT-SDI2 SDI2 Inovonics Interface and Receiver Kit. Includes B820 and EN4200

EN1210 Universal Transmitter (Single-input)

EN1210EOL Universal Transmitter with EOL Resistor

EN1210W Door-Window Transmitter with Reed Switch

EN1215EOL Universal Transmitter with Wall Tamper, Reed Switch, and EOL Resistor

EN1223D Water-resistant Pendant Transmitter (Double-button)

EN1223S Water-resistant Pendant Transmitter (Single-button)

EN1224-ON Multiple-Condition Pendant Transmitter

EN1233D Necklace Pendant Transmitter (Double-button)

EN1233S Necklace Pendant Transmitter (Single-button)

EN1235D Beltclip Pendant Transmitter (Double-button)

EN1235DF Fixed-location Transmitter (Double-button)

EN1235S Beltclip Pendant Transmitter (Single-button)

EN1235SF Fixed-location Transmitter (Single-button)

EN1247 Glass-break Detector Transmitter

EN1249 Bill Trap Transmitter

EN1242 Smoke Detector Transmitter

EN1260 Wall Mount Motion Detector

EN1261HT High Traffic Motion Detector

EN1262 Motion Detector with Pet Immunity

EN1265 360° Ceiling Mount Motion Detector

EN4200 Serial Receiver

EN5040-T High Power Repeater with Transformer

*For these cellular modules, check for availability in your region.

Parts included

The B9512G includes the following:

Quant.	Component
1	B9512G
1	Literature pack • UL Installation Guide • ULC Installation Guide • Owner's Manual • Release Notes • SIA Quick Reference Guide
1	Literature CD containing product literature

Each B9512G-E control panel kit includes the following:

Quant.	Component
1	B9512G-E (without on-board Ethernet port)
1	Plug-in communicator (telephone or cellular, depending on the kit)
1	Plug-in Transformer (16.5 VAC 40 VA)
1	Control panel enclosure
1	Literature pack • UL Installation Guide • ULC Installation Guide • Owner's Manual • Release Notes • SIA Quick Reference Guide
1	Literature CD containing product literature

Technical specifications

Properties

Dimensions	10.625 in x 7.75in x 1.875 in (26.99 x 19.69 x 4.76 cm)
Weight	1.95 lbs (0.88kg)

Communications

Ethernet	10/100 full duplex (N/A for "E" control panels)

Environmental considerations

Relative humidity	5% to 93% at +32°C (+90°F)
Temperature (operating)	0°C to +49°C (+32°F to +120°F)

Power requirements

Current (maximum)	Standby: 180 mA Alarm: 260 mA
Output (alarm)	2 A at 12 VDC
Output (auxiliary, continuous power, and switched auxiliary combined)	1.4 A at 12 VDC nominal
Voltage (operating)	12 VDC nominal
Voltage (AC)	16.5 VAC 40 VA plug-in transformer (D1640/D1640-CA)

Wiring

Terminal wire size	12 AWG to 22 AWG (2.0 mm to 0.65 mm)
SDI2 wiring	Maximum distance – Wire size (unshielded wire only): 7,500 ft (2,286 m) – 22 AWG (0.65 mm)

Number of...

Areas	32
Custom functions	32
Keypads	32 keypads, including 16 SDI keypads
Events	Up to 10,192
Passcode users	2000, plus 1 Installer passcode
Points	599 (8 on-board, up to 591 off-board and virtual)
Programmable outputs	599 (3 on-board, up to 596 off-board and virtual)
RF points	591
IP cameras	16
SKEDs	80

Ordering information

B9512G Control Panel
The B9512G is available individually or in kits.
For kits, refer to *Quick Selection Guide (B9512G/ B8512G Kits)* on the Documents tab of the control panel's Product Page at us.boschsecurity.com.
Order number **B9512G**

B9512G-E Control Panel
The B9512G-E is available only in kits.
For kits, refer to *Quick Selection Guide (B9512G/ B8512G Kits)* on the Documents tab of the control panel's Product Page at us.boschsecurity.com.
Order number **B9512G-E**

D1640-CA Transformer
For use in Canada. System transformer rated at 16.5 VAC, 40 VA.
Order number **D1640-CA**

Accessories

B520 Auxiliary Power Supply Module
Provides auxiliary power to 12 VDC devices or to SDI2 modules.
Order number **B520**

B208 Octo-input Module
Provides 8 programmable inputs.
Order number **B208**

B308 Octo-output Module
Provides 8 programmable relays.
Order number **B308**

RADION receiver SD
Receives RF signals from RADION transmitters, repeaters, and glassbreaks. Operates at 433.42 MHz. For use with compatible SDI2 bus control panels.
Order number **B810**

D122 Dual Battery Harness
Harness with circuit breaker. Connects two batteries to a compatible control panel.
Order number **D122**

D122L Dual Battery Harness with Long Leads
Color-coded harness with circuit breaker and leads measuring 89 cm (35 in.). Connects 12 V batteries to compatible control panels.
Order number **D122L**

D126 Standby Battery (12 V, 7 Ah)
A rechargeable sealed lead-acid power supply used as a secondary power supply or in auxiliary or ancillary functions.
Order number **D126**

D1218 Battery (12 V, 18 Ah)
A 12 V sealed lead-acid battery for standby and auxiliary power with two bolt-fastened terminals. Includes hardware for attaching battery leads or spade connectors
Order number **D1218**

D1238 Battery (12 V, 38 Ah)
A 12 V sealed lead-acid battery for standby and auxiliary power with two bolt-fastened terminals. Includes hardware for attaching battery leads or spade connectors.
Order number **D1238**

D137 Mounting Bracket
Used to mount accessory modules in D8103, D8108A, and D8109 enclosures.
Order number **D137**

D138 Mounting Bracket, Right Angle
Used to mount accessory modules in D8103, D8108A, and D8109 enclosures.
Order number **D138**

D1640 Transformer
System transformer rated at 16.5 VAC, 40 VA.
Order number **D1640**

D9002-5 Mounting Skirt
5 pack of mounting skirts for B8103, D8103, D8108A, and D8109 enclosures. Each skirt can hold up to six standard 3-hole mounting modules.
Order number **D9002-5**

D101 Lock and Key Set
Short-body lock set with one key supplied. Uses the D102 (#1358) replacement key.
Order number **D101**

D110 Tamper Switch
Screw-on tamper switch that fits all enclosures. Shipped in packages of two.
Order number **D110**

ICP-EZTS Dual Tamper Switch
Combination tamper switch with a wire loop for additional tamper outputs.
Order number **ICP-EZTS**

B8103 Enclosure
White steel enclosure measuring 41 cm x 41 cm x 9 cm (16 in. x 16 in. x 3.5 in.).
Order number **B8103**

D8103 Enclosure
Grey steel enclosure measuring 41 cm x 41 cm x 9 cm (16 in. x 16 in. x 3.5 in.).
Order number **D8103**

D8108A Attack Resistant Enclosure
Grey steel enclosure measuring 41 cm x 41 cm x 9 cm (16 in. x 16 in. x 3.5 in.). UL Listed. Includes a lock and key set.
Order number **D8108A**

D8109 Fire Enclosure
Red steel enclosure measuring 40.6 cm x 40.6 cm x 8.9 cm (16 in. x 16 in. x 3.5 in). UL Listed. Includes a lock and key set.
Order number **D8109**

D8004 Transformer Enclosure
For applications such as fire alarm that might require a transformer enclosure.
Order number **D8004**

BATB-40 Battery Box\Enclosure
The BATB-40 Battery Box holds two dry or wet cell batteries. The box can be used with fire alarm systems or intrusion systems.
Order number **BATB-40**

BATB-80 Battery Box\Enclosure with Shelf
The BATB-80 Battery Box holds up to four dry or wet cell batteries. The box can be used with fire alarm systems or with intrusion systems.
Order number **BATB-80**

B99 USB Direct Connect Cable
Male A to Male A USB cable for local programming of control panels with on-board USB ports.
Order number **B99**

B915 Basic Keypad
Two-line alphanumeric basic keypad with English function keys.
Order number **B915**

B915I Basic Keypad
Two-line alphanumeric basic keypad with icon function keys.
Order number **B915I**

B920 Two-line Alphanumeric Keypad (SDI2)
Two-line alphanumeric keypad
Order number **B920**

B921C Two-line Capacitive Keypad with Inputs (SDI2)
Two-line alphanumeric keypad with inputs and capacitive touch keys in black.
Order number **B921C**

B930 ATM Style Alphanumeric Keypad (SDI2)
Five-line ATM style alphanumeric keypad
Order number **B930**

B942 Touch Screen Keypad
Black SDI2 touch screen keypad with inputs and one output.
Order number **B942**

B942W Touch Screen Keypad
White SDI2 touch screen keypad with inputs and one output.
Order number **B942W**

B925F Fire Keypad
Two-line alphanumeric fire and intrusion keypad.
Order number **B925F**

B926F Fire Keypad
Two-line alphanumeric fire keypad
Order number **B926F**

Software Options

RPS Kit (DVD-ROM and USB Security Block)
Account management and control panel programming software with USB security key (dongle).
Order number **D5500C-USB**

Bosch VMS Enterprise Edition
Base license for Enterprise System. 2 Management Server subsystems (1 required for Enterprise Management); 8 cameras; 2 workstations (1 with Forensic Search); 1 CCTV keyboard; 1 DVR. All MBV-X* and MBV-F* options are only available with Base license.
Order number **MBV-BENT-65**

Bosch VMS Professional Edition
Base license for Professional Edition. 8 cameras; 2 workstations (1 with Forensic Search); 1 CCTV keyboard; 1 DVR. All MBV-X* and MBV-F* options are only available with Base license.
Order number **MBV-BPRO-65**

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B444 Conettix Plug-in 4G LTE Cellular Communicator

www.boschsecurity.com

BOSCH
Invented for life

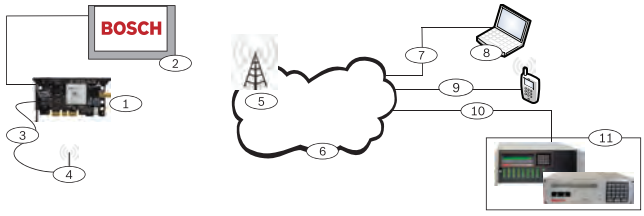
- Secure Conettix IP communication from compatible Bosch panels to Bosch receivers using Verizon 4G LTE cellular network
- Remote programming and monitoring of compatible Bosch panels
- Personal SMS message and e-mail notification options
- Direct configuration from Bosch Remote Programming Software (RPS) eliminating the need for separate configuration
- Simple LED status information and advanced keypad diagnostics available with easy 2 step plug-in installation, troubleshooting, and maintenance

The cellular communicator enables secure two-way IP communication over the Verizon 4G LTE cellular network by plugging into a compatible control panel or communicator interface.
Typical applications are:

- Alarm reporting to a central station
- Remote control panel programming through Remote Programming Software with supported control panels
- Remote monitoring and control through a mobile application with supported control panels
- Personal notification using SMS for compatible control panels

Notice
Cellular capability requires an Installer Services account and appropriate data plan.

System overview



Callout — Description	Callout — Description
1 — Cellular communicator	7 — Remote PC's network connection
2 — Compatible control panel	8 — Remote PC running RPS
3 — Antenna cable	9 — Personal SMS notification
4 — Magnetic base antenna	10 — Ethernet connection

5 — Base station on wireless carrier's network	11 — Central monitoring station
6 — IP network cloud	

Functions

Activation

The B444 module is shipped pre-activated.
The B444-C module needs to be activated. Activate the module by emailing: installer.services@us.bosch.com, or by call Bosch Installer Services at: 800-289-0096, option 6.

Conettix IP communication via Cellular

In addition to the security provided by the network operator, the cellular communicator uses our Conettix IP protocol that supports:

- Flexible polling intervals
- Resistance to Denial of Service attacks
- 128-bit to 256-bit AES encryption with Cypher Block Chaining
- Anti-replay/anti-substitution keys

Easy Installation, troubleshooting, and maintenance

- No networking expertise required at field site (no firewall or router settings)
- No PC or special tools required for installation and troubleshooting
- Service plans and settings managed through RPS
- Diagnostic LEDs for on-site troubleshooting

LED	Function
Blue (heartbeat)	System status indicator
Red	Unacceptable signal strength
Yellow	Marginal signal strength
1 Green	Good signal strength
2 Green	Very good signal strength

Remote programming of Bosch control panels

The cellular communicator supports secure RPS programming of compatible Bosch control panels.

Personal notification and control

The cellular communicator supports the Bosch Remote Security Control mobile application and can be configured for SMS personal notification reports to mobile phones or e-mail addresses.

Remote Connect Service Support

Remote Connect Service enables a secure control panel connection to remote programming software (RPS) using Bosch Cloud services. The service allows a secure TLS connection to a control panel without specific port and router settings and without a static IP or DNS.

Certifications and approvals

Region	Certification	
USA	Verizon	Open Development Certified

Region	Regulatory compliance/quality marks	
USA	UL	UL 864 - Standard for Control Units and Accessories for Fire Alarm Systems
	UL	UL 1076 - Proprietary Burglar Alarm Units and Systems
	UL	UL 1610 - Central Station Burglar Alarm Units
	UL	UL 365 - Police Station Connected Burglar Alarm Units
	UL	UL 609 - Standard for Local Burglar Alarm Units and Systems
	UL	UL 636 - Holdup Alarm Units and Systems
	UL	UL 985 - Household Fire Warning System Units
	UL	UL 1023 - Household Burglar Alarm System Units
	CSFM	see www.boschsecurity.com (the Bosch website)
	FCC	Part 15 Class B
Canada	ULC	S1871-20121210

Installation/configuration notes

Mounting considerations

The module plugs into any compatible control panel, available in a variety of enclosures.

Wiring considerations

The module connects to any compatible control panel without tools or physical wiring for power. When used with the B450, the B450 is wired to the control panel data bus. The cellular module has a screw on SMA antenna connection.

Compatibilities

Devices	B9512G/B9512G-E, B8512G/B8512G-E B6512 B6512/B5512/B4512/B3512, B5512E/B4512E/B3512E control panel with firmware v3.05 or higher (direct insertion) The module is compatible with most Bosch control panels when used with a B450 Conettix Plug-in Communicator Interface with firmware v3.05 or higher. Refer to the B450 datasheet for complete control panel compatibility listings. B465 Conettix Universal Dual Path Communicator with firmware v2.0 or higher. B40 antennas
Cellular	4G LTE - Cat 1

Commercial Fire and Burglary applications
Approved for Commercial Fire/Burglary applications as sole, primary, or secondary communications path when the system is installed to the NFPA-72 specification

Technical specifications

Electrical

Current (operating)	Standby: 35 mA Alarm: 100 mA
Voltage (operating)	12 VDC nominal
Radio	Verizon LTE CAT 1 Band 4 and 13

Environmental

Environment	Environmental Class III - Indoor
Relative humidity	5 - 93% at +32°C (+90°F) non-condensing
Operating temperature	0°C to +49°C (+32°F to +120°F)

Mechanical

Board dimensions	2 in x 3.68 in x 0.60 in (50 mm x 93.5 mm x 15.25 mm)
Antenna (included)	• Magnetic base omni-directional • 8.2 ft (2.5 m) cable with SMA connector

Ordering information

B444 Conettix Plug-in 4G LTE Cellular Communicator
Pre-activated 4G LTE cellular communicator for secure two-way IP communication on the Verizon Wireless LTE network.
Order number **B444**

B40-P Outdoor puck antenna, cell, 6.5ft
Omnidirectional, low profile antenna for metallic indoor/outdoor surface mounting. Supports LTE, and 2G/3G/4G data communication. Operates over 698-960 MHz and 1710-2170 MHz bands.
Order number **B40-P**

B40-MB50 Outdoor multiband antenna, cell, 50ft
Provides wide bandwidth and low angle radiation pattern for indoor/outdoor applications. Supports 2G/3G/4G data communication, Domestic (US) LTE 700 band, Global LTE 2600 band, Domestic (US) Cellular, Global GSM, and WiMAX 2300/2500/2600 bands. Includes a 50 ft (15.2 m) cable, and a mounting bracket.
Order number **B40-MB50**

B40-MB25 Outdoor multiband antenna, cell, 25ft
Provides wide bandwidth and low angle radiation pattern for indoor/outdoor applications. Supports 2G/3G/4G data communication, Domestic (US) LTE 700 band, Global LTE 2600 band, Domestic (US) Cellular, Global GSM, and WiMAX 2300/2500/2600 bands. Includes a 25 ft (7.6 m) cable, and a mounting bracket.
Order number **B40-MB25**

B444-C Plug-in cell module, VZW LTE, cold
Non-activated 4G LTE cellular communicator for secure two-way IP communication on the Verizon Wireless LTE network.
Order number **B444-C**

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D9127 Series POPIT Modules

www.boschsecurity.com

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- Provides point identification of initiating devices
- Supervises wiring to devices for circuit integrity
- Expands the number of points in the system
- Compact size
- Terminal connections for reliability

The D9127 Series POPIT Modules includes the D9127T (with magnetic tamper switch) and the D9127U (without tamper). They are used with a D8125 Addressable Expansion Module when there is a need to expand a compatible control panel beyond its standard number of on-board initiating zones or points. Future system expansion is very economical as D9127 Series POPITs can be added anywhere along the two-wire data expansion loop from the D8125 module.
Both modules include proven technology that combines zone and point supervision with individual device addressing on one pair of wires. Screw terminals provide reliable connections for the data expansion loop and supervised sensor loop wiring. Install a 33 kΩ end-of-line resistor at the farthest point on the loop for proper supervision. The units are small and easily installed in standard outlet boxes, above false ceilings, closets, or other accessible locations.

Certifications and approvals

Region	Certification	
USA	UL	
	UL	UL 365 - Police Station Connected Burglar Alarm Units
	UL	UL 464 - Standard for Audible Signal Appliances
	UL	UL 609 - Standard for Local Burglar Alarm Units and Systems
	UL	UL 864 - Standard for Control Units and Accessories for Fire Alarm Systems
	UL	UL 985 - Household Fire Warning System Units
	UL	UL 1023 - Household Burglar Alarm System Units
	UL	UL 1076 - Proprietary Burglar Alarm Units and Systems
	UL	UL 1610 - Central Station Burglar Alarm Units
	UL	UL 1635 - Standard for Digital Alarm Communicator System Units
	FM	

Region	Certification	
	CSFM	see our website
	FDNY-CoA	6059 [D9412GV3 & D7412GV3]
	FDNY-CoA	6174
	FDNY-CoA	6196
Australia	CTICK	C-Tick
Canada	ULC	AMCX7.S1871 - Central Station Alarm Units Certified for Canada
	ULC	AOTX7.S1871 Local Alarm Units Certified for Canada
	ULC	APAW7.S1871 Police-station-connected Alarm Units Certified for Canada
	ULC	APOU7.S1871 Proprietary Alarm Units Certified for Canada
	ULC	NBSX7.S1871 Household Burglar Alarm System Units Certified for Canada

Installation/configuration notes

Compatibility Information

Control Panels	All G Series control panels, D9412, D7412, D7212, D7212B1, D9112, D9112B1, D8112G1, D8112G2, and D9124
Module	D8125

The D8125 Multiplex Zone Expander is required. The D9127 modules are wired in parallel on the D8125 data loop.

Number of POPIT Modules per Control Panel

D7212G, D7212GV2, D7212GV3	32 D9127 POPITs
D7212B1	40 D9127 POPITs
D7212, D7412, D7412G, D7412GV2, D7412GV3	67 D9127 POPITs
D9124	119 D9127 POPITs
D9112B1	126 D9127 POPITs
D9112, D9412, D9412G, D9412GV2, D9412GV3	238 D9127 POPITs

Wiring Considerations

Wire Size	Maximum Length of all Data Expansion Loops Combined
0.8 mm (22 AWG)	549 m (1800 ft)
1.0 mm (20 AWG)	881 m (2890 ft)
1.2 mm (18 AWG)	1402 m (4600 ft)
1.5 mm (16 AWG)	2231 m (7320 ft)
1.8 mm (14 AWG)	3551 m (11650 ft)

D8125 to POPIT Loops

Use one two-wire data expansion loop, or distribute the POPITs on up to three loops. The maximum lengths shown in the following table are for all data expansion loops combined connected to the same D8125 module. Setting DIP switches on the POPIT modules assigns them to point numbers. The switch setting on each POPIT assigns it a point number, regardless of its physical location.

POPIT to Sensor Loops

The number of detection devices each sensor loop can supervise is limited only by the resistance on the loop. Resistance on each sensor loop must be less than 100 Ω not including the end-of-line (EOL) resistor. Certain UL and National Fire Protection Association (NFPA) applications can limit the number of detection devices. Consult the appropriate UL or NFPA standards.

Terminate each POPIT sensor loop with the 33 kΩ EOL resistor included with each POPIT.

Use a twisted-pair wire (six twists per foot) in all POPIT installations for both the data expansion loop wiring and the POPIT sensor loops. Run wires away from AC sources to prevent AC induction.

Parts included

Quantity	Component
1	POPIT module
1	33 kΩ EOL resistor
1	Magnet (D9127T only)
1	Hardware pack
1	Literature pack

Technical specifications

Environmental Considerations

Relative humidity	Up to 93% non-condensing
Temperature (operating)	0°C to +50°C (+32°F to +122°F)

Properties

Color	Off white
Dimensions	8.1 cm x 3.8 cm x 2.4 cm (3.2 in. x 1.5 in. x 0.9 in.)
Material	UL Listed fire-resistant

Power Requirements

Current draw	0.8 mA maximum
Resistance	Maximum increase in resistance on the POPIT loop is 1000 Ω. Maximum resistance between the D8125 module and each POPIT is 90 Ω.
Voltage (operating)	12 VDC nominal

Sensor Loop

Resistance	Maximum resistance on the sensor loop is 100 Ω.
Response time	1 sec approximately

Ordering information

D9127T POPIT Module
Includes a magnetic tamper switch.
Order number **D9127T**

D9127U POPIT Module
No tamper switch.
Order number **D9127U**

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2538178443 | en, V10, 22. Jan 2016

B299 POPEX Module

www.boschsecurity.com

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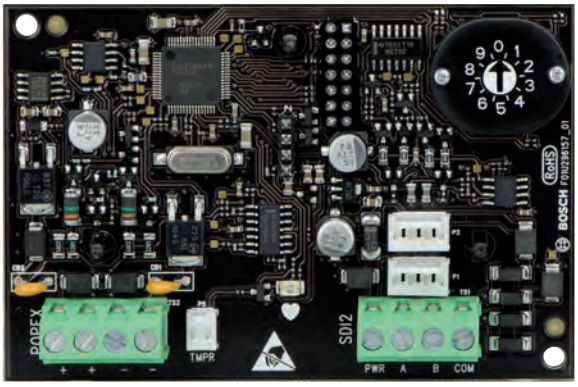

- Provides point identification for up to 100 connected addressable initiating devices using POPITs
- Supervises wiring to devices for circuit integrity
- Expands the number of points in the system
- Compact size
- Interconnect wiring connectors for easy installation

The B299 POPEX Module is an SDI2 compatible device. The module communicates to the control panel over the SDI2 bus, and provides support for up to 100 POPIT (Point Of Protection Input Transponder) devices. This occurs over a single expansion loop using two pairs of terminals.

System overview

Each module installs in the control panel enclosure or in an adjacent approved enclosure. Future system expansion is very economical as the module supports zone expansion through supporting D9127U/T POPIT modules and POPIT'ed detectors. The POPIT modules can be placed anywhere along the two-wire data expansion loop from the module.

Certifications and approvals

Region	Certification	
USA	ANSI-SIA	CP-01-2010-Control Panel Standard - Features for False Alarm Reduction
	UL	
	UL	UL 1023 - Household Burglar Alarm System Units
	UL	UL 1076 - Proprietary Burglar Alarm Units and Systems
	UL	UL 1610 - Central Station Burglar Alarm Units
	UL	UL 1635 - Standard for Digital Alarm Communicator System Units
	UL	UL 294 - Standard for Access Control Units and Systems
	UL	UL 365 - Police Station Connected Burglar Alarm Units
	UL	UL 609 - Standard for Local Burglar Alarm Units and Systems
	UL	UL 636 - Holdup Alarm Units and Systems
	UL	UL 864 - Standard for Control Units and Accessories for Fire Alarm Systems
	UL	UL 985 - Household Fire Warning System Units
	CSFM	California Office of The State Fire Marshall
	FCC	Part 15 Class B
Canada	ULC	
	ULC	CAN/ULC S303 - Local Burglar Alarm Units and Systems

Region	Certification	
	ULC	CAN/ULC S304 - Standard for Signal Receiving Center and Premise Burglar Alarm
	ULC	CAN/ULC S545 - Residential Fire Warning System Control Units
	ULC	ULC-ORD C1023 - Household Burglar Alarm System Units
	ULC	ULC-ORD C1076 - Proprietary Burglar Alarm Units and Systems
	IC	ICES-003 - Information Technology Equipment (ITE)

Installation/configuration notes

Mounting

Mount the module into the enclosure's 3-hole mounting pattern using the mounting screws and mounting bracket.

Wiring

Use the control panel SDI2 terminals labeled R, Y, G, B (PWR, A, B, COM) when wiring to the module. Connect the control panel terminals to the module terminals labeled R, Y, G, B (PWR, A, B, COM). You can also use the SDI2 interconnect cable.

Compatibility

Control panels	B9512G/B9512G-E (6 total B299 modules) B8512G/B8512G-E (1 B299 module)
POPIT devices	D9127U/T POPIT module ZX776Z/ZX794Z PIR motion detector ZX835 TriTech motion detector ZX935Z/ZX938Z PIR motion detector ZX970 TriTech motion detector D278S 12V smoke base D298S 24V smoke base F220-B6PM POPIT smoke (master) F220-B6PS POPIT smoke base

Parts included

Quantity	Component
1	POPEX module
1	Hardware pack
1	Literature pack
1	Interconnect cable

Technical specifications

Properties

Dimensions	2.9 in x 5.0 in x 0.6 in (73.5 mm x 127 mm x 15.25 mm)
Weight	11.2 oz (0.30 kg)

Environmental considerations

Relative humidity	5% to 93% at +32°C (+90°F)
Temperature (operating)	0°C to +49°C (+32°F to +120°F)

Power requirements

Current	Standby: 35 mA + total device current Alarm: 35 mA + total device current
Voltage (input)	12 VDC

Wiring

Terminal wire size	12 AWG to 22 AWG (2.0 mm to 0.65 mm)
SDI2 wiring	Maximum distance – Wire size (unshielded wire only): 200 ft (60 m) – 22 AWG (0.65 mm), 500 ft (152 m) – 18 AWG (1.02 mm)
POPIT loop wiring	Maximum wire length: 1800 ft (548 m) – 22 AWG (0.65 mm), 4497 ft (2682 m) – 18 AWG (1.02 mm)

Ordering information

B299 POPEX Module

Provides system expansion support for up to 100 POPIT devices

Order number **B299**

Represented by:

Europe, Middle East, Africa:
Bosch Security Systems B.V.
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B926F Fire Keypad

www.boschsecurity.com

BOSCH
Invented for life

- Fire keypad with fire function keys: ACK, SILENCE, RESET, and DRILL
- 2-line LCD display with up to 32 character point, user, and area names
- Simple menu-style user interface with dedicated function buttons for common commands, including status indication
- Quickly identifiable, visual indicators for critical system statuses
- Simple installation with self-locking base and chassis design, plus built-in bubble level

The B926F Fire Keypad is a fully supervised SDI2 device for fire applications.
Each keypad has user-adjustable backlit keys, a display that shows system messages, and a sounder. The sounder emits distinct condition tones to alert you to a fire alarm, a fire trouble, or fire supervisory events as they occur. The keypad includes fire status indicators and fire function keys.

Functions

LCD display

The keypad uses words, numbers, and symbols to show the status of the security system. When several events occur, the keypad shows each event in order of priority.

Keys

Each keypad has 10 number keys and 5 navigation keys.
When pressed, keys turn on keypad backlighting and emit the keypress tone (short beep). The keypad has 4 Fire function keys:

- ACK. Press to acknowledge the system alarm or trouble condition.
- SILENCE. Press to silence fire alarms or troubles.
- RESET. Press to reset devices such as smoke detectors, and clear restored points.
- DRILL. Press and hold to initiate a fire drill.

Audible tones

The keypad has a built-in sounder that produces several distinct warning tones. The tones are differentiated so that the user can recognize an event simply by hearing its associated tone.

Status indicators

The status indicators on the keypad provide a quick visual reference for system status.

✓	The indicator lights when the system is ready to turn on (arm).
🔒	The indicator lights when the system is on (armed).
GAS	The indicator lights when dangerous gases are present including carbon monoxide (NFPA 720).
🔌	The indicator lights when the system has power.

Fire status indicators

In conjunction with the display and status indicators, the fire keypad includes Fire status indicators.

	The indicator lights when a fire alarm condition exists.
	The indicator lights when a user silenced a fire alarm condition.
	The indicator lights when a supervisory point is not normal.
	The indicator lights when there is a trouble condition

Certifications and approvals

Region	Certification	
USA	ANSI-SIA	CP-01-2010-Control Panel Standard - Features for False Alarm Reduction
	UL	UL 365 - Police Station Connected Burglar Alarm Units
	UL	UL 609 - Standard for Local Burglar Alarm Units and Systems
	UL	UL 636 - Holdup Alarm Units and Systems
	UL	UL 864 - Standard for Control Units and Accessories for Fire Alarm Systems
	UL	UL 985 - Household Fire Warning System Units
	UL	UL 1023 - Household Burglar Alarm System Units
	UL	UL 1076 - Proprietary Burglar Alarm Units and Systems
	UL	UL 1610 - Central Station Burglar Alarm Units
	UL	
	UL	UL 294 - Standard for Access Control Units and Systems
	UL	UL 1635 - Standard for Digital Alarm Communicator System Units
	CSFM	California Office of The State Fire Marshall
Canada	ULC	CAN/ULC S303 - Local Burglar Alarm Units and Systems
	ULC	CAN/ULC S304 - Standard for Signal Receiving Center and Premise Burglar Alarm
	ULC	CAN/ULC S545 - Residential Fire Warning System Control Units
	ULC	ULC-ORD C1023 - Household Burglar Alarm System Units
	ULC	ULC-ORD C1076 - Proprietary Burglar Alarm Units and Systems
	ULC	
	IC	ICES-003 - Information Technology Equipment (ITE)

Installation/configuration notes

Mounting considerations

Mount in indoor, dry locations.

Power supply

A compatible control panel supplies the power and data requirements to the keypad through a four-wire connection.

Enclosure and wiring

The sliding self-locking enclosure has an integrated bubble level and custom gap-free, lift-gate style terminal blocks to make installation easier.

Compatible control panels

B9512G/B9512G-E
B8512G/B8512G-E

Parts included

Qty.	Component
1	Keypad
1	Hardware pack
1	Installation Guide
1	User's Quick Reference Guide

Technical specifications

Materials and hardware features

Dimensions	158 mm x 120 mm x 26 mm (6.2 in x 4.7 in x 1 in)
Weight	11.3 oz (0.32 kg)
Material	Acrylonitrile butadiene styrene (ABS) Poly(methyl methacrylate) (PMMA)
Display window	2 line display 18 characters per line
Indicators	Illuminated keys Status indicators Warning and indicating tones

Power requirements

Current	Standby: 35 mA Alarm: 70 mA
Voltage (input)	12 VDC nominal

Environmental considerations

Relative humidity	5% to 93% at +32°C (+90°F)
Temperature (operating)	0°C to +49°C (+32°F to +120°F)

Wiring

Terminal wire size	1.02 mm (18 AWG) to 0.65 mm (22 AWG)
SDI2 wiring	Maximum distance – wire size: 260 m (850 ft) - 0.65 mm (22 AWG) 305 m (1000 ft) - 1.02 mm (18 AWG)

Ordering information

B926F Fire Keypad
Two-line alphanumeric fire keypad
Order number **B926F**

Accessories

B56 Keypad Surface Mount Box
Surface mount box for mounting a keypad to concrete or block.
Order number **B56**

B96 Keypad Trim Bezel
Cover the wall footprint of previous keypads when replacing them with the new, slim design of B Series keypads. The white trim bezel is 8.6 in x 6.3 in x 0.12 in (22 mm x 16 mm x 3 mm).
Order number **B96**

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AL602ULADA, AL802ULADA, AL1002ULADA
NAC Power Extenders

Rev. AL602/802/1002ULADA- L20E

Overview

- The AL602ULADA, AL802ULADA and AL1002ULADA are extremely cost effective voltage regulated remote NAC Power Extenders. They may be connected to any 12 or 24 volt Fire Alarm Control Panel (FACP). Primary applications include Notification Appliance Circuit (NAC) expansion (supports ADA requirements) and will provide auxiliary power to support system accessories.

AL602ULADA
- 24VDC or 12VDC rated @ 6.5 amp max.
- Two (2) Class A or four (4) Class B outputs.

AL602ULADAJ
- Larger enclosure.

AL802ULADA
- 24VDC or 12VDC rated @ 8 amp max.
- Two (2) Class A or four (4) Class B outputs.

AL802ULADAJ
- Larger enclosure.

AL1002ULADA
- 24VDC rated @ 10 amp max.
- Two (2) Class A or four (4) Class B outputs.

AL1002ULADAJ
- Larger enclosure.

Specifications

- Two (2) Class A or two (2) Class B FACP inputs.
- Two (2) NC dry contact trigger inputs (AL802ULADA and AL1002ULADA only)
- Two (2) Class A or four (4) Class B indicating circuits.
- Two (2) Class B outputs may be paralleled for more power on an indicating circuit.
- One (1) Aux. Power Output @ 1 amp supply current (w/battery back up).
- Signal Circuit Trouble Memory - facilitates quickly locating intermittent system trouble and eliminates costly and unnecessary service calls. LED's indicate a prior fault (short, open, ground) has occurred on one or more signaling circuit outputs.
- 2-wire Horn/Strobe Sync mode allows audible notification appliances (Horns) to be silenced while visual notification appliances (Strobes) continue to operate.
- Horn/Strobe sync protocols include: Gentex®, System Sensor®, Faraday, Amseco.
- Temporal Code 3 Mode.
- Steady Mode.
- Input to Output Follower Mode (maintains synchronization of notification appliance circuits).
- March Time.
- Compatible with 24VDC or 12VDC fire panels.
- Common trouble inputs and outputs.
- Ground fault detection.
- Input 115VAC.
- AC fail supervision (form "C" contacts).
- Low battery supervision (form "C" contacts).
- Battery presence supervision (form "C" contacts).
- Power supply, logic board, red enclosure, cam lock, transformer & battery leads.
- Enclosure:
  - Combination knockouts re 1/2" and 3/4"
  - Accommodates up to two (2) 12VDC/12AH batteries.

Agency Approvals

UL Listed Control Units and Accessories for Fire Alarm Systems (UL 864), UL Listed Standard for Safety for Fire Protective Signaling Systems (UL 1481).

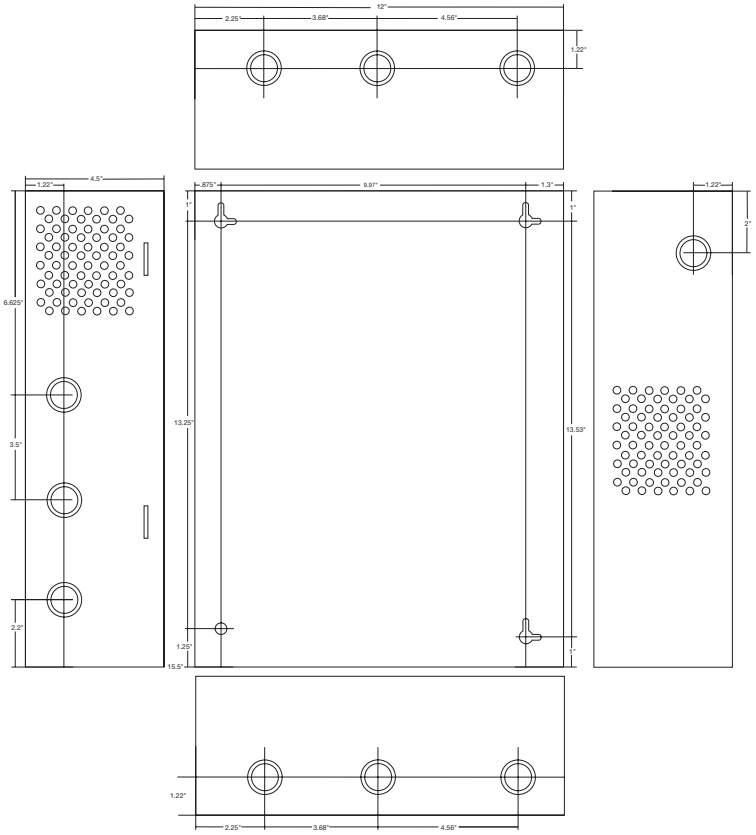
MEA Approved — NYC Department of Buildings Approved.

California State Fire Marshal Approved.

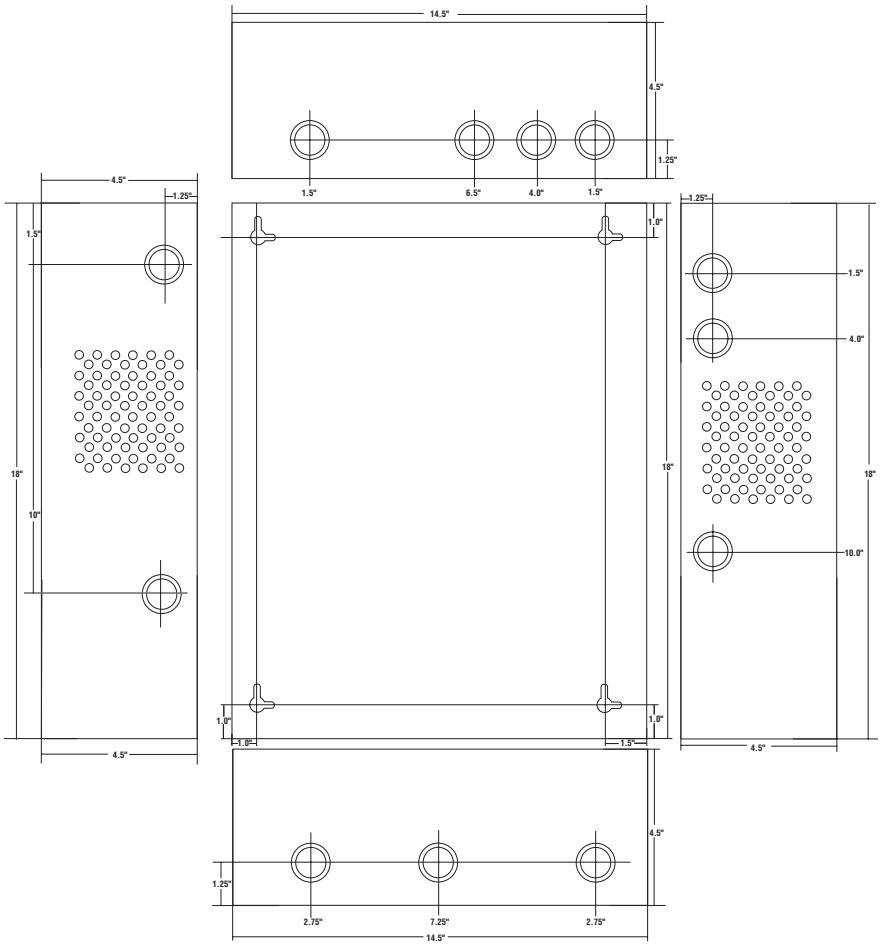
FM APPROVED — Factory Mutual Approved.

Enclosure Dimensions

AL602ULADA, AL802ULADA and AL1002ULADA: 15.5"H x 12"W x 4.5"D



AL602ULADAJ, AL802ULADAJ and AL1002ULADAJ: 18"H x 14.5"W x 4.625"D



D273 Photoelectric Smoke and Smoke and Heat Detectors

www.boschsecurity.com

BOSCH
Invented for life

- 12 VDC or 24 VDC input
- Designed for commercial or residential use
- Four-wire application
- Light-emitting diodes (LEDs) indicate the status of the chamber, power, and alarm
- Removable terminal block to simplify wiring connections

The D273 Family includes the following detector models:

Model	Description
D273	Four-wire
D273IS[1]	Four-wire with an isolated 135°F (57°C) heat sensor and sounder
D273TH	Four-wire with 135°F (57°C) heat sensor
D273THC	Four-wire with 135°F (57°C) heat sensor and auxiliary relay
D273THCS[1]	Four-wire with 135°F (57°C) heat sensor, auxiliary relay, and sounder
D273THE	Four-wire with 135°F (57°C) heat sensor and EOL relay
D273THR[2]	Four-wire with 135°F (57°C) heat sensor and trouble relay
D273THS[1]	Four-wire with 135°F (57°C) heat sensor and sounder
D273THES[1]	Four-wire with 135°F (57°C) heat sensor, sounder, and EOL relay

1 Sounders produce 85 dB at 10 ft (3 m).

2 The trouble relay indicates both Dirty Smoke Chamber and/or Power Loss conditions.

Each of the detector models is UL Listed and works with commercial fire protective signaling and household fire warning systems. Each model detects smoke particles produced during wood, paper, and fabric combustion.

System overview

These detector models use an infrared (IR) LED light source and a silicon photodiode to measure light in a chamber. A fine screen covers the chamber to deter insects and reduce dust accumulation and nuisance alarms.
During a fire, smoke particles reflect light onto the photodiode. When the photodiode measurements exceed the alarm threshold, the detector signals an alarm condition. After the alarm condition clears, interrupt power at the control panel to reset the detector.

When a D132B Reversing Relay Module is used, the LED does not latch on alarm.

Functions

Chamber Calibration Tests

Check the sensitivity and calibration of any of these detectors using a visual check, a magnet test, or a voltage measurement test. Refer to the *D263/D273 Families Installation Guide* for specific instructions to perform these sensitivity tests.

Certifications and approvals

Region	Certification	
USA	UL	UROX: Smoke - Automatic Fire Detectors (UL268 and A), UROX7: Smoke - Automatic Fire Detectors Certified for Canada (cULus)
	CSFM	see our website
	NYC-MEA	274-93-E, Vol. VII
	MSFM	
Hong Kong	HKFSD	J-005/C/023

Installation/configuration notes

Use smoke detectors for detection circuits that protect people. Use heat detectors for circuits that protect property.

Compatible Products

The following products are compatible with the D273 Family detectors:

Category	Product ID	Product Description
Control Panels	These detector models are compatible with UL Listed four-wire control panels. Refer to the manufacturer's installation instructions to select the correct EOL resistor.	
Modules	D132B	Reversing relay module

Loop Supervision

For loop supervision, install a Bosch Security Systems D275 Power Supervision Module and an EOL resistor after the last device on the loop.

Mounting

The detector has a mounting plate that attaches to a standard four-inch back box.
For commercial and industrial installations in accordance with NFPA 72, space each detector 30 ft (9.2 m) apart.

Wiring

The terminal block accepts up to 12 AWG (ISO 2.5 mm^2) wire. You can remove the terminal block from the detector for easier wiring. The terminal block snaps in and out of the detector.

Parts included

Quant.	Component
1	Detector
1	Literature pack – Installation Manual, Technical Service Note on installation

Technical specifications

Environmental Considerations

Relative Humidity:	Up to 93%, non-condensing
Operating and Storage Temperature:	+32°F to +120°F (0°C to +40°C)
Radio Frequency Interference (RFI) Immunity	No alarm or setup on critical frequencies in the range of 26 MHz to 950 MHz.

Mechanical Properties

Dimensions (Diameter x H):	5 in. x 2 in. (12.7 cm x 5.1 cm)
Material:	High impact, fire retardant ABS plastic

Power Requirements

Power-up Time:	22 sec maximum
RMS Ripple:	25% of DC input maximum
Voltage (stand-by):	10 VDC to 30 VDC
Current Draw (alarm) at 30 VDC	
D273, D273TH:	18 mA maximum
D273THC:	33 mA maximum
D273THE, D273THR:	36 mA maximum
D273THS:	78 mA maximum
D273THCS:	90 mA maximum
D273THES:	96 mA maximum
D273IS:	100 mA maximum
Current Draw (standby)	
D273, D273TH, D27THC, D273THCS, D273THS:	0.1 mA maximum
D273IS:	15 mA
D273THE, D273THES:	15 mA
D273THR:	18 mA maximum

Ordering information

D273 Four-Wire Smoke Detector
Four-wire smoke detector.
Order number **D273**

D273IS Four-Wire Smoke Detector with Isolated Heat Sensor and Sounder
Four-wire smoke detector with an isolated 135°F (57°C) heat sensor and a sounder.
Order number **D273IS**

D273TH Four-Wire Smoke/Heat Detector
Four-wire smoke detector with a 135°F (57°C) heat sensor.
Order number **D273TH**

D273THC Four-Wire Smoke/Heat Detector with Auxiliary Relay
Four-wire smoke detector with an isolated 135°F (57°C) heat sensor and an auxiliary relay.
Order number **D273THC**

D273THCS Four-Wire Smoke/Heat Detector with Auxiliary Relay and Sounder
Four-wire smoke detector with a 135°F (57°C) heat sensor, an auxiliary relay, and a sounder.
Order number **D273THCS**

D273THE Four-Wire Smoke/Heat Detector with EOL Relay
Four-wire smoke detector with a 135°F (57°C) heat detector and an EOL relay.
Order number **D273THE**

D273THES Four-Wire Smoke/Heat Detector with EOL Relay and Sounder
Four-wire smoke detector with a 135°F (57°C) heat sensor, a sounder, and an EOL relay.
Order number **D273THES**

D273THR Four-Wire Smoke/Heat Detector with Trouble Relay
Four-wire smoke detector with a 135°F (57°C) heat sensor and a trouble relay.
Order number **D273THR**

D273THS Four-Wire Smoke/Heat Detector with Sounder
Four-wire smoke detector with a 135°F (57°C) heat sensor and a sounder.
Order number **D273THS**

Accessories

D275 Power Supervision Module
Line supervision device for four-wire fire detection circuits
Order number **D275**

D1005 Test Cable
Connects a digital voltmeter to the detector's calibration pin for verifying that the detector is within its calibration range
Order number **D1005**

DT-2 Detector Removal Tool
Use the DT-2 to remove, replace, or test the detector head
Order number **DT-2**

TP280 Trim Plate
For retrofit and remodeling purposes; 16.2 cm (6 in.) diameter
Order number **TP280**

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2700558987 | en, V5, 31. Oct 2014

FMM-100 Die-cast Metal Fire Alarm Manual Stations

www.boschsecurity.com

BOSCH
Invented for life

- Single or dual action
- Terminal connections
- Gold-plated alarm contacts for corrosion resistance
- Surface or weatherproof back boxes

The FMM-100 family are versatile, high-quality, metal fire alarm manual stations. Single-action or dual-action models are available. All models come with a key lock and contain gold-plated contacts to resist corrosion.

Functions

Operation

Single-action

When the bar on the front of the manual station is pulled, it latches open and is easily visible from 50 ft (15 m). Reset the activation bar by opening the manual station with the key and placing the activation bar in its normal upright position. An optional scored acrylic break rod is available.

Dual-action

With the dual-action configuration the upper bar on the front of the manual station rotates inward allowing the activation bar to be grasped and operated by a single hand.

Certifications and approvals

Region	Certification	
USA	UL	UNIU: Boxes, Non-Coded (UL38), UNIU7: Boxes, Non-Coded Certified for Canada (cULus)
	CSFM	see our website
	NYC-MEA	382-94-E, Vol. VI

Installation/configuration notes

Compatibility Information

These manual stations are compatible with all Bosch Security Systems, Inc. Fire Alarm Control Panels.

Mounting Considerations

These manual stations can be surface mounted on either the FMM-100BB-R Surface-mount Back Box or the FMM-100WPBB-R Weatherproof Back Box. They can also be flush mounted on a standard single-gang back box.

Notice
When properly mounted on the FMM-100WPBB-R Weatherproof Back Box, these manual stations meet UL requirements for outdoor use.

To comply with ADA standards, the manual station must be less than 48 in. (1.2 m) above the floor for front wheelchair access and less than 54 in. (1.3 m) above the floor for side wheelchair access.

Parts included

Quant.	Component
1	Manual station
1	D102 Key (1358 key)
1	FMM-100GR Acrylic Break Rod
1	Hardware pack
1	Literature pack

Technical specifications

Environmental

Relative Humidity:	90% at +100°F (+38°C)
Temperature (operating):	-40°F to +150°F (-40°C to +66°C)

Mechanical

Color:	Red
Dimensions (H x W x D):	4.75 in. x 3.25 in. x 1.1 in. (12 cm x 8.3 cm x 2.8 cm)
Material:	die-cast metal

Inputs

Switch Rating:	1 A at 30 VDC or 125 VAC

Ordering information

FMM-100SATK Single-action Manual Station (red)
Versatile, high-quality, metal single-action fire alarm manual station with key lock and gold-plated contacts
Order number **FMM-100SATK**

FMM-100SATK-NYC Single-action Manual Station for New York City
Versatile, high-quality, metal single-action fire alarm manual station for New York City with key lock and gold-plated contacts
Order number **FMM-100SATK-NYC**

FMM-100DATK Dual-action Manual Station (red)
Versatile, high-quality, metal dual-action fire alarm manual station with key lock and gold-plated contacts
Order number **FMM-100DATK**

Accessories

D102 Replacement Key
Replacement key (#1358) for LOCK-1358 and the D101 lock.
Order number **D102**

FMM-100BB-R Surface-mount Back Box (red)
Red cast-metal back box
Order number **FMM-100BB-R**

FMM-100WPBB-R Weatherproof Back Box (red)
Red cast-metal weatherproof back box
Order number **FMM-100WPBB-R**

FMM-100GR Scored Acrylic Break Rods
Scored acrylic rods (12 per package)
Order number **FMM-100GR**

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2708627339 | en, V2, 11. Aug 2014

Indoor Selectable-Output Strobes and Horn Strobes for Ceiling Applications

System Sensor L-Series audible visible notification products are rich with features guaranteed to cut installation times and maximize profits with lower current draw and modern aesthetics.

Features

- Plug-in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12- or 24-volt operation at 15 and 30 candela
- Field-selectable candela settings on ceiling units: 15, 30, 75, 95, 115, 150, and 177
- Horn rated at 88+ dBA at 16 volts
- Rotary switch for horn tone and two volume selections
- Universal mounting plate for ceiling units
- Mounting plate shorting spring feature checks wiring continuity before device installation
- Electrically Compatible with legacy SpectrAlert and SpectrAlert Advance devices
- Compatible with MDL3 sync module
- Listed for ceiling mounting only

The System Sensor L-Series offers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry with lower current draws and modern aesthetics. With white and red plastic housings, wall and ceiling mounting options, System Sensor L-Series can meet virtually any application requirement.

The entire L-Series product line of ceiling-mount strobes and horn strobes include a variety of features that increase their application versatility while simplifying installation. All devices feature a plug-in design with minimal intrusion into the back box, making installations fast and foolproof while virtually eliminating costly and time-consuming ground faults.

To further simplify installation, the L-Series utilizes a universal mounting plate so installers can mount them to a wide array of back boxes. With an onboard shorting spring, installers can test wiring continuity before the device is installed.

Installers can also easily adapt devices to a suit a wide range of application requirements using field-selectable candela settings, automatic selection of 12- or 24-volt operation, and a rotary switch for horn tones with two volume selections.

Agency Listings

SIGNALING UL LISTED
S5512
S4011

FM APPROVED
FM approved except for ALERT models
3057383

7125-1653:0504
7135-1653:0503

L-Series Specifications

Architect/Engineer Specifications

General

L-Series ceiling-mount strobes and horn strobes shall mount to a standard 4 × 4 × 1½-inch back box, 4-inch octagon back box, or double-gang back box. Two-wire products shall also mount to a single-gang 2 × 4 × 17⁄8-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, L-Series products, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 8.5 and 17.5 volts; 24-volt-rated notification appliance circuit outputs shall operate between 16.5 and 33 volts. Indoor L-Series products shall operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Ceiling strobes and horn strobes shall have field-selectable candela settings including 15, 30, 75, 95, 115, 150, and 177.

Strobe

The strobe shall be a System Sensor L-Series Model _____ listed to UL 1971 and shall be approved for fire protective service. The strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

Horn Strobe Combination

The horn strobe shall be a System Sensor L-Series Model _____ listed to UL 1971 and UL 464 and shall be approved for fire protective service. The horn strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The horn shall have two audibility options and an option to switch between a temporal three pattern and a non-temporal (continuous) pattern. These options are set by a multiple position switch. The horn on horn strobe models shall operate on a coded or non-coded power supply.

Synchronization Module

The module shall be a System Sensor Sync•Circuit model MDL3 listed to UL 464 and shall be approved for fire protective service. The module shall synchronize L-Series strobes at 1 Hz and horns at temporal three. Also, while operating the strobes, the module shall silence the horns on horn strobe models over a single pair of wires. The module shall mount to a 4 11⁄16 × 4 11⁄16 × 2 1⁄8-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

Physical/Electrical Specifications	
Standard Operating Temperature	32°F to 120°F (0°C to 49°C)
Humidity Range	10 to 93% non-condensing
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 VDC or regulated 24 DC/FWR[1]
Operating Voltage Range[2]	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Operating Voltage Range (MDL3)	8.5 to 17.5V (12 V nominal) or 16.5 to 33 V (24V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Ceiling-Mount Dimensions (including lens)	6.8" diameter × 2.5" high (173 mm diameter × 64 mm high)
Ceiling-Mount Surface Mount Back Box Skirt Dimensions (SBBCRL, SBBCWL)	6.9" diameter x 3.4" high (175 mm diameter x 86 mm high)

Notes:

1. Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.
2. P, S, PC, and SC products will operate at 12 V nominal only for 15 and 30 cd.

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

		8–17.5 Volts	16–33 Volts	
	Candela	DC	DC	FWR
Candela Range	15	87	41	60
	30	153	63	86
	75	N/A	111	142
	95	N/A	134	164
	115	N/A	158	191
	150	N/A	189	228
	177	N/A	226	264

UL Max. Horn Current Draw (mA RMS)

		8–17.5 Volts	16–33 Volts	
Sound Pattern	dB	DC	DC	FWR
Temporal	High	39	44	54
Temporal	Low	28	32	54
Non-Temporal	High	43	47	54
Non-Temporal	Low	29	32	54
3.1 KHz Temporal	High	39	41	54
3.1 KHz Temporal	Low	29	32	54
3.1 KHz Non-Temporal	High	42	43	54
3.1 KHz Non-Temporal	Low	28	29	54
Coded	High	43	47	54
3.1 KHz Coded	High	42	43	54

UL Max. Current Draw (mA RMS), Ceiling Horn Strobe, Candela Range (15–177 cd)

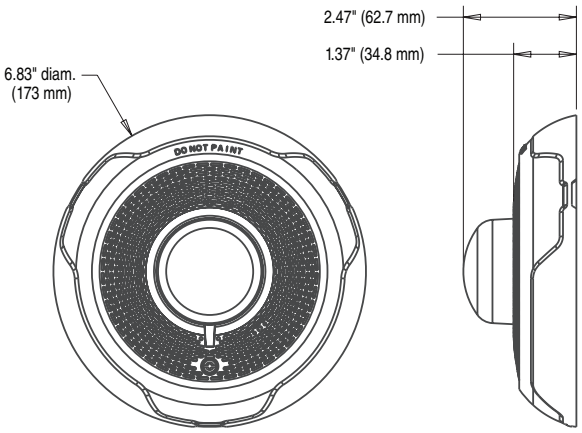
	8–17.5 Volts		16–33 Volts						
DC Input	15cd	30cd	15cd	30cd	75cd	95cd	115cd	150cd	177cd
Temporal High	103	167	71	90	143	165	187	217	254
Temporal Low	96	165	54	71	137	161	185	211	249
Non-Temporal High	106	173	71	90	141	165	187	230	273
Non-Temportal Low	95	166	54	71	124	161	170	216	258
3.1K Temporal High	111	164	69	94	147	163	184	229	257
3.1K Temporal Low	103	163	54	88	143	155	185	212	252
3.1K Non-Temporal High	111	172	69	94	144	164	202	229	271
3.1K Non-Temporal Low	103	169	54	88	131	155	187	217	259
	16–33 Volts								
FWR Input	15cd	30cd	75cd	95cd	115cd	150cd	177cd		
Temporal High	107	135	179	198	223	254	286		
Temporal Low	78	101	151	172	199	229	262		
Non-Temporal High	107	135	179	198	223	254	286		
Non-Temportal Low	78	101	151	172	199	229	262		
3.1K Temporal High	108	135	179	200	225	255	289		
3.1K Temporal Low	79	101	150	171	196	229	260		
3.1K Non-Temporal High	108	135	179	200	225	255	289		
3.1K Non-Temporal Low	79	101	150	171	196	229	260		

Horn Strobe Tones and Sound Output Data

Horn Strobe Output (dBA)

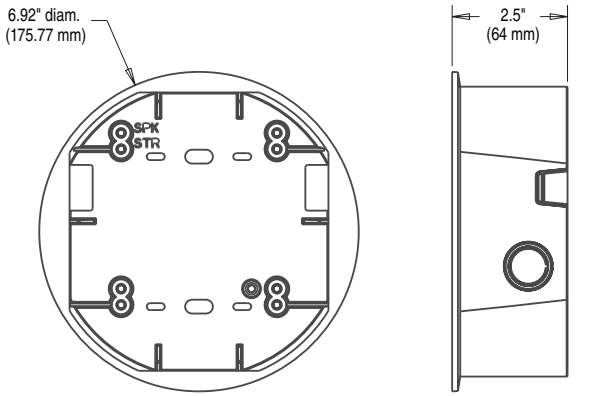
			8–17.5 Volts	16–33 Volts	
Switch Position	Sound Pattern	dB	DC	DC	FWR
1	Temporal	High	84	89	89
2	Temporal	Low	75	83	83
3	Non-Temporal	High	85	90	90
4	Non-Temporal	Low	76	84	84
5	3.1 KHz Temporal	High	83	88	88
6	3.1 KHz Temporal	Low	76	82	82
7	3.1 KHz Non-Temporal	High	84	89	89
8	3.1 KHz Non-Temporal	Low	77	83	83

L-Series Dimensions



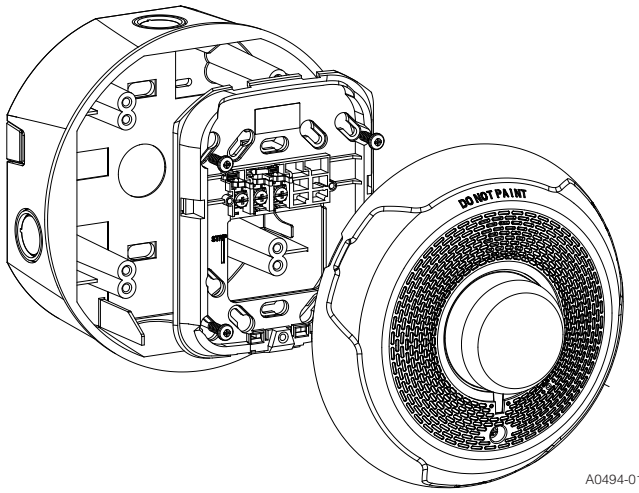
A0545-00

Ceiling-Mount Horn Strobes



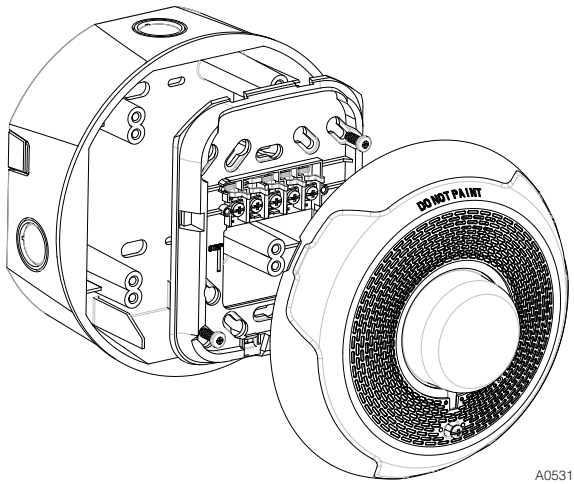
A0546-00

Ceiling Surface Mount Back Box



A0494-01

2-Wire Ceiling Mount Horn Strobes with Ceiling Surface Mount Back Box



A0531-01

4-Wire Ceiling Mount Horn Strobes with Ceiling Surface Mount Back Box

L-Series Ordering Information

Model	Description
Ceiling Horn Strobes	
PC2RL	2-Wire, Horn Strobe, Red
PC2WL	2-Wire, Horn Strobe, White
PC4RL	4-Wire, Horn Strobe, Red
PC4WL	4-Wire, Horn Strobe, White

Model	Description
Ceiling Strobes	
SCRL	Strobe, Red
SCWL	Strobe, White
SCWL-CLR-ALERT	Strobe, White, ALERT
Accessories	
TRC-2	Universal Ceiling Trim Ring Red
TRC-2W	Universal Ceiling Trim Ring White
SBBCRL	Ceiling Surface Mount Back Box, Red
SBBCWL	Ceiling Surface Mount Back Box, White

For a ceiling-listed horn-only device, see AVDS865 “Indoor Selectable-Output Horns, Strobes, and Horn Strobes for Wall Applications”.

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AVDS868-02 • 12/01/2017

Indoor Selectable-Output Strobes and Horn Strobes for Ceiling Applications

SpectrAlert® Advance audible visible notification products are rich with features guaranteed to cut installation times and maximize profits.

SPECTRAlert ADVANCE from System Sensor

Features

- Plug-in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12- or 24-volt operation at 15 and 15/75 candela
- Field-selectable candela settings on ceiling units: 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185
- Horn rated at 88+ dBA at 16 volts
- Rotary switch for horn tone and three volume selections
- Universal mounting plate for ceiling units
- Mounting plate shorting spring feature checks wiring continuity before device installation
- Electrically Compatible with legacy SpectrAlert devices
- Compatible with MDL3 sync module
- Listed for ceiling or wall mounting

The SpectrAlert Advance series offers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry. With white and red plastic housings, wall and ceiling mounting options, and plain and FIRE-printed devices, SpectrAlert Advance can meet virtually any application requirement.

Like the entire SpectrAlert Advance product line, ceiling-mount strobes and horn strobes include a variety of features that increase their application versatility while simplifying installation. All devices feature a plug-in design with minimal intrusion into the back box, making installations fast and foolproof while virtually eliminating costly and time-consuming ground faults.

To further simplify installation, SpectrAlert Advance utilizes a universal mounting plate so you can mount them to a wide array of back boxes. With an onboard shorting spring, installers can test wiring continuity before the device is installed.

Installers can also easily adapt devices to a suit a wide range of application requirements using field-selectable candela settings, automatic selection of 12- or 24-volt operation, and a rotary switch for horn tones with three volume selections.

Agency Listings

SIGNALING UL LISTED
S4011 (chimes, horn strobes, horns)
S5512 (strobes)

FM APPROVED
3023572

MEA approved
MEA452-05-E

7125-1653:0186 (indoor strobes)
7125-1653:0188 (horn strobes, chime strobes)
7135-1653:0189 (horns, chimes)

SpectrAlert Advance Specifications

Architect/Engineer Specifications

General

SpectrAlert Advance strobes and horn strobes shall mount to a standard 4 × 4 × 1½-inch back box, 4-inch octagon back box, or double-gang back box. Two-wire products shall also mount to a single-gang 2 × 4 × 17⁄8-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance products, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 8.5 and 17.5 volts; 24-volt-rated notification appliance circuit outputs shall operate between 16.5 and 33 volts. Indoor SpectrAlert Advance products shall operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Strobes and horn strobes shall have field-selectable candela settings including 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185.

Strobe

The strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and shall be approved for fire protective service. The strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

Horn Strobe Combination

The horn strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and UL 464 and shall be approved for fire protective service. The horn strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The horn shall have three audibility options and an option to switch between a temporal three pattern and a non-temporal (continuous) pattern. These options are set by a multiple position switch. On four-wire products, the strobe shall be powered independently of the sounder. The horn on horn strobe models shall operate on a coded or non-coded power supply.

Synchronization Module

The module shall be a System Sensor Sync•Circuit model MDL3 listed to UL 464 and shall be approved for fire protective service. The module shall synchronize SpectrAlert strobes at 1 Hz and horns at temporal three. Also, while operating the strobes, the module shall silence the horns on horn strobe models over a single pair of wires. The module shall mount to a 4 11⁄16 × 4 11⁄16 × 2 1⁄8-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

Physical/Electrical Specifications	
Standard Operating Temperature	32°F to 120°F (0°C to 49°C)
Humidity Range	10 to 93% non-condensing
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 DC/FWR or regulated 24 DC/FWR[1]
Operating Voltage Range[2]	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Operating Voltage Range (MDL3)	8.5 to 17.5V (12 V nominal) or 16.5 to 33 V (24V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Ceiling-Mount Dimensions (including lens)	6.8" diameter × 2.5" high (173 mm diameter × 64 mm high)
Ceiling-Mount Surface Mount Back Box Skirt Dimensions (SBBCR, SBBCW)	6.9" diameter x 3.4" high (175 mm diameter x 86 mm high)

Notes:

1. Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.
2. P, S, PC, and SC products will operate at 12 V nominal only for 15 and 15/75 cd.

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

		8–17.5 Volts		16–33 Volts	
	Candela	DC	FWR	DC	FWR
Standard Candela Range	15	123	128	66	71
	15/75	142	148	77	81
	30	NA	NA	94	96
	75	NA	NA	158	153
	95	NA	NA	181	176
	110	NA	NA	202	195
	115	NA	NA	210	205
High Candela Range	135	NA	NA	228	207
	150	NA	NA	246	220
	177	NA	NA	281	251
	185	NA	NA	286	258

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, Standard Candela Range (15–115 cd)

	8–17.5 Volts		16–33 Volts						
DC Input	15	15/75	15	15/75	30	75	95	110	115
Temporal High	137	147	79	90	107	176	194	212	218
Temporal Medium	132	144	69	80	97	157	182	201	210
Temporal Low	132	143	66	77	93	154	179	198	207
Non-Temporal High	141	152	91	100	116	176	201	221	229
Non-Temporal Medium	133	145	75	85	102	163	187	207	216
Non-Temporal Low	131	144	68	79	96	156	182	201	210
FWR Input									
Temporal High	136	155	88	97	112	168	190	210	218
Temporal Medium	129	152	78	88	103	160	184	202	206
Temporal Low	129	151	76	86	101	160	184	194	201
Non-Temporal High	142	161	103	112	126	181	203	221	229
Non-Temporal Medium	134	155	85	95	110	166	189	208	216
Non-Temporal Low	132	154	80	90	105	161	184	202	211

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, High Candela Range (135–185 cd)

	16–33 Volts					16–33 Volts			
DC Input	135	150	177	185	FWR Input	135	150	177	185
Temporal High	245	259	290	297	Temporal High	215	231	258	265
Temporal Medium	235	253	288	297	Temporal Medium	209	224	250	258
Temporal Low	232	251	282	292	Temporal Low	207	221	248	256
Non-Temporal High	255	270	303	309	Non-Temporal High	233	248	275	281
Non-Temporal Medium	242	259	293	299	Non-Temporal Medium	219	232	262	267
Non-Temporal Low	238	254	291	295	Non-Temporal Low	214	229	256	262

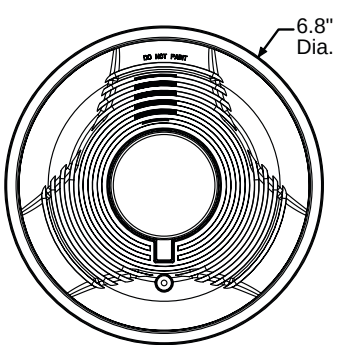
Horn Strobe Tones and Sound Output Data

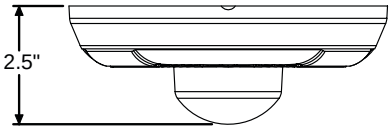
Horn Strobe Output (dBA)

			8–17.5 Volts		16–33 Volts		24-Volt Nominal			
							Reverberant		Anechoic	
Switch Position	Sound Pattern	dB	DC	FWR	DC	FWR	DC	FWR	DC	FWR
1	Temporal	High	78	78	84	84	88	88	99	98
2	Temporal	Medium	74	74	80	80	86	86	96	96
3	Temporal	Low	71	73	76	76	83	80	94	89
4	Non-Temporal	High	82	82	88	88	93	92	100	100
5	Non-Temporal	Medium	78	78	85	85	90	90	98	98
6	Non-Temporal	Low	75	75	81	81	88	84	96	92
7†	Coded	High	82	82	88	88	93	92	101	101
8†	Coded	Medium	78	78	85	85	90	90	97	98
9†	Coded	Low	75	75	81	81	88	85	96	92

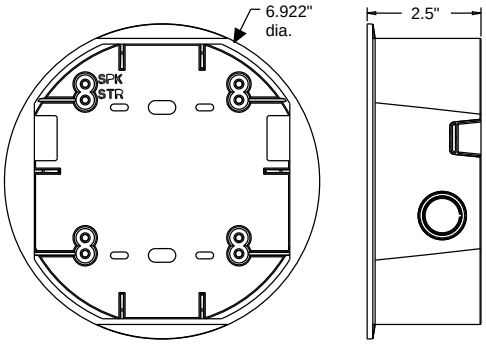
†Settings 7, 8, and 9 are not available on 2-wire horn strobes.

SpectrAlert Advance Dimensions





Ceiling-mount horn strobes



Ceiling back box surface mount back box

SpectrAlert Advance Ordering Information

Model	Description
Ceiling Horn Strobes	
PC2R	2-Wire Horn Strobe, Standard cd, Red
PC2R-P	2-Wire Horn Strobe, Standard cd, Red, Plain (no “FIRE”) marking
PC2RH	2-Wire Horn Strobe, High cd, Red
PC2W	2-Wire Horn Strobe, Standard cd, White
PC2W-P	2-Wire Horn Strobe, Standard cd, White, Plain (no “FIRE”) marking
PC2W-SP	2-Wire Horn Strobe, Standard cd, White, “Fuego” marking
PC2WH	2-Wire Horn Strobe, High cd, White
PC2WH-P	2-Wire Horn Strobe, High cd, White, Plain (no “FIRE”) marking
PC2WH-SP	2-Wire Horn Strobe, High cd, White, “Fuego”
PC4R	4-Wire Horn Strobe, Standard cd, Red
PC4RH	4-Wire Horn Strobe, High cd, Red
PC4W	4-Wire Horn Strobe, Standard cd, White

Model	Description
Ceiling Strobes	
SCR	Strobe, Standard cd, Red
SCRH	Strobe, High cd, Red
SCW	Strobe, Standard cd, White
SCW-P	Strobe, Standard cd, White, Plain (no “Fire”) marking
SCWH	Strobe, High cd, White
Accessories	
SBBCR	Surface Mount Back Box, Ceiling, Red
SBBCW	Surface Mount Back Box, Ceiling, White

Notes:

All -P models have a plain housing (no “FIRE” marking on cover)

All -SP models have “FUEGO” marking on cover

“Standard cd” refers to strobes that include 15, 15/75, 30, 75, 95, 110, and 115 candela settings. “High cd” refers to strobes that include 135, 150, 177, and 185 candela settings.

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AVDS10102 • 03/15

Indoor Selectable-Output Horns, Strobes, and Horn Strobes for Wall Applications

SPECTRAlert ADVANCE from System Sensor

SpectrAlert® Advance audible visible notification products are rich with features guaranteed to cut installation times and maximize profits.

Features

- Plug-in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12- or 24-volt operation at 15 and 15/75 candela
- Field-selectable candela settings on wall units: 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185
- Horn rated at 88+ dBA at 16 volts
- Rotary switch for horn tone and three volume selections
- Universal mounting plate for wall units
- Mounting plate shorting spring checks wiring continuity before device installation
- Electrically Compatible with legacy SpectrAlert devices
- Compatible with MDL3 sync module
- Listed for ceiling or wall mounting

The SpectrAlert Advance series offers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry. With white and red plastic housings, wall and ceiling mounting options, and plain and FIRE-printed devices, SpectrAlert Advance can meet virtually any application requirement.

Like the entire SpectrAlert Advance product line, wall-mount horns, strobes, and horn strobes include a variety of features that increase their application versatility while simplifying installation. All devices feature plug-in designs with minimal intrusion into the back box, making installations fast and foolproof while virtually eliminating costly and time-consuming ground faults.

To further simplify installation and protect devices from construction damage, SpectrAlert Advance utilizes a universal mounting plate with an onboard shorting spring, so installers can test wiring continuity before the device is installed.

Installers can also easily adapt devices to a suit a wide range of application requirements using field-selectable candela settings, automatic selection of 12- or 24-volt operation, and a rotary switch for horn tones with three volume selections.

Agency Listings

SIGNALING UL LISTED
S4011 (chimes, horn strobes, horns)
S5512 (strobes)

FM APPROVED
3023572

MEA approved
MEA452-05-E

7125-1653:186 (indoor strobes)
7125-1653:188 (horn strobes, chime strobes)
7135-1653:189 (horns, chimes)

SpectrAlert Advance Specifications

Architect/Engineer Specifications

General

SpectrAlert Advance horns, strobes, and horn strobes shall mount to a standard 4 × 4 × 1½-inch back box, 4-inch octagon back box, or double-gang back box. Two-wire products shall also mount to a single-gang 2 × 4 × 17/8-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance products, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 8.5 and 17.5 volts; 24-volt-rated notification appliance circuit outputs shall operate between 16.5 and 33 volts. Indoor SpectrAlert Advance products shall operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Strobes and horn strobes shall have field-selectable candela settings including 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185.

Strobe

The strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and shall be approved for fire protective service. The strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

Horn Strobe Combination

The horn strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and UL 464 and shall be approved for fire protective service. The horn strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The horn shall have three audibility options and an option to switch between a temporal three pattern and a non-temporal (continuous) pattern. These options are set by a multiple position switch. On four-wire products, the strobe shall be powered independently of the sounder. The horn on horn strobe models shall operate on a coded or non-coded power supply.

Synchronization Module

The module shall be a System Sensor Sync•Circuit model MDL3 listed to UL 464 and shall be approved for fire protective service. The module shall synchronize SpectrAlert strobes at 1 Hz and horns at temporal three. Also, while operating the strobes, the module shall silence the horns on horn strobe models over a single pair of wires. The module shall mount to a 411/16 × 411/16 × 21/8-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

Physical/Electrical Specifications	
Standard Operating Temperature	32°F to 120°F (0°C to 49°C)
Humidity Range	10 to 93% non-condensing
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 DC/FWR or regulated 24 DC/FWR[1]
Operating Voltage Range[2]	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Operating Voltage Range MDL3 Sync Module	8.5 to 17.5 V (12 V nominal) or 16.5 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Wall-Mount Dimensions (including lens)	5.6″L × 4.7″W × 2.5″D (142 mm L × 119 mm W × 64 mm D)
Horn Dimensions	5.6″L × 4.7″W × 1.3″D (142 mm L × 119 mm W × 33 mm D)
Wall-Mount Trim Ring Dimensions (sold as a 5 pack) (TR-HS)	5.7″L × 4.8″W × 0.35″D (145 mm L × 122 mm W × 9 mm D)

Notes:

1. Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.
2. P, S, PC, and SC products will operate at 12 V nominal only for 15 and 15/75 cd.

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

		8–17.5 Volts		16–33 Volts	
	Candela	DC	FWR	DC	FWR
Standard Candela Range	15	123	128	66	71
	15/75	142	148	77	81
	30	NA	NA	94	96
	75	NA	NA	158	153
	95	NA	NA	181	176
	110	NA	NA	202	195
	115	NA	NA	210	205
High Candela Range	135	NA	NA	228	207
	150	NA	NA	246	220
	177	NA	NA	281	251
	185	NA	NA	286	258

UL Max. Horn Current Draw (mA RMS)

		8–17.5 Volts		16–33 Volts	
Sound Pattern	dB	DC	FWR	DC	FWR
Temporal	High	57	55	69	75
Temporal	Medium	44	49	58	69
Temporal	Low	38	44	44	48
Non-temporal	High	57	56	69	75
Non-temporal	Medium	42	50	60	69
Non-temporal	Low	41	44	50	50
Coded	High	57	55	69	75
Coded	Medium	44	51	56	69
Coded	Low	40	46	52	50

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, Standard Candela Range (15–115 cd)

	8–17.5 Volts		16–33 Volts						
DC Input	15	15/75	15	15/75	30	75	95	110	115
Temporal High	137	147	79	90	107	176	194	212	218
Temporal Medium	132	144	69	80	97	157	182	201	210
Temporal Low	132	143	66	77	93	154	179	198	207
Non-Temporal High	141	152	91	100	116	176	201	221	229
Non-Temporal Medium	133	145	75	85	102	163	187	207	216
Non-Temporal Low	131	144	68	79	96	156	182	201	210
FWR Input									
Temporal High	136	155	88	97	112	168	190	210	218
Temporal Medium	129	152	78	88	103	160	184	202	206
Temporal Low	129	151	76	86	101	160	184	194	201
Non-Temporal High	142	161	103	112	126	181	203	221	229
Non-Temporal Medium	134	155	85	95	110	166	189	208	216
Non-Temporal Low	132	154	80	90	105	161	184	202	211

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, High Candela Range (135–185 cd)

	16–33 Volts					16–33 Volts			
DC Input	135	150	177	185	FWR Input	135	150	177	185
Temporal High	245	259	290	297	Temporal High	215	231	258	265
Temporal Medium	235	253	288	297	Temporal Medium	209	224	250	258
Temporal Low	232	251	282	292	Temporal Low	207	221	248	256
Non-Temporal High	255	270	303	309	Non-Temporal High	233	248	275	281
Non-Temporal Medium	242	259	293	299	Non-Temporal Medium	219	232	262	267
Non-Temporal Low	238	254	291	295	Non-Temporal Low	214	229	256	262

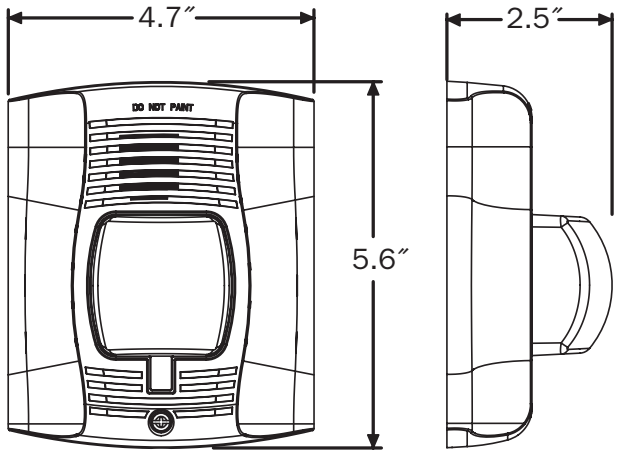
Horn Tones and Sound Output Data

Horn and Horn Strobe Output (dBA)

			8–17.5 Volts		16–33 Volts		24-Volt Nominal			
							Reverberant		Anechoic	
Switch Position	Sound Pattern	dB	DC	FWR	DC	FWR	DC	FWR	DC	FWR
1	Temporal	High	78	78	84	84	88	88	99	98
2	Temporal	Medium	75	75	80	80	86	86	96	96
3	Temporal	Low	71	71	76	76	83	80	94	89
4	Non-Temporal	High	82	82	88	88	93	92	100	100
5	Non-Temporal	Medium	78	78	85	85	90	90	98	98
6	Non-Temporal	Low	73	74	81	81	88	84	96	92
7†	Coded	High	82	82	88	88	93	92	101	101
8†	Coded	Medium	78	78	85	85	90	90	97	98
9†	Coded	Low	74	75	81	81	88	85	96	92

†Settings 7, 8, and 9 are not available on 2-wire horn strobes.

SpectrAlert Advance Dimensions



Wall-mount horn strobes

SpectrAlert Advance Ordering Information

Model	Description
Wall Horn Strobes	
P2R	2-Wire Horn Strobe, Standard cd, Red
P2R-P	2-Wire Horn Strobe, Standard cd, Red, Plain
P2R-SP	2-Wire Horn Strobe, Standard cd, Red, “FUEGO”
P2RH	2-Wire Horn Strobe, High cd, Red
P2RH-P	2-Wire Horn Strobe, High cd, Red, Plain
P2W	2-Wire Horn Strobe, Standard cd, White
P2W-P	2-Wire Horn Strobe, Standard cd, White, Plain
P2WH	2-Wire Horn Strobe, High cd, White
P2WH-P	2-Wire Horn Strobe, High cd, White, Plain
P4R	4-Wire Horn Strobe, Standard cd, Red
P4R-P	4-Wire Horn Strobe, Standard cd, Red, Plain
P4RH	4-Wire Horn Strobe, High cd, Red
P4W	4-Wire Horn Strobe, Standard cd, White
Wall Strobes	
SR	Strobe, Standard cd, Red
SR-P	Strobe, Standard cd, Red, Plain
SR-SP	Strobe, Standard cd, Red, “FUEGO”

Model	Description
Wall Strobes (cont.)	
SRH	Strobe, High cd, Red
SRH-P	Strobe, High cd, Red, Plain
SRH-SP	Strobe, High cd, Red, “FUEGO”
SW	Strobe, Standard cd, White
SW-P	Strobe, Standard cd, White, Plain
SWH	Strobe, High cd, White
SWH-P	Strobe, High cd, White, Plain
Horns	
HR	Horn, Red
HW	Horn, White
Accessories	
TR-HS	Trim Ring, Wall, Red
SBBR	Indoor Surface Mount Back Box, Red
SBBW	Indoor Surface Mount Back Box, White

Notes:
All -P models have a plain housing (no “FIRE” marking on cover)
All -SP models have “FUEGO” marking on cover
“Standard cd” refers to strobes that include 15, 15/75, 30, 75, 95, 110, and 115 candela settings.
“High cd” refers to strobes that include 135, 150, 177, and 185 candela settings.

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AVDS10201 • 1/14

Outdoor Selectable-Output Horns, Strobes, and Horn Strobes for Wall Applications

SpectrAlert® Advance outdoor audible visible products are rich with features that cut installation times and maximize profits.

Features

- Weatherproof per NEMA 4X, IP56
- Listed to UL 1638 (strobe) and UL 464 (horn)
- Compatible with System Sensor synchronization protocol and legacy SpectrAlert products
- Field-selectable candela settings: 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185
- Automatic selection of 12- or 24-volt operation at 15 and 15/75 candela
- Rotary switch for horn tone and three volume selections
- Horn rated at 88+ dBA at 16 volts
- Rated from –40°F to 151°F
- Universal mounting plate with an onboard shorting spring that tests wiring continuity before devices are installed
- Plug-in design with minimal intrusion into the back box
- Tamper-resistant construction
- Listed for ceiling or wall mounting

Agency Listings

SIGNALING UL LISTED
S4011 (chimes, horn strobes, horns)
S3593 (outdoor and alert strobes)

FM APPROVED
3023572

MEA approved
MEA452-05-E

7300-1653:187 (outdoor strobes)
7125-1653:188 (horn strobes, chime strobes)
7135-1653:189 (horns, chimes)

SpectrAlert Advance offers the broadest line of outdoor horns, strobes, and horn strobes in the industry. With white or red plastic housings, wall or ceiling mounting options, and plain or FIRE-printed devices, SpectrAlert Advance can meet virtually any application requirement, including indoor, outdoor, wet, and dry applications in temperatures from –40°F to 151°F.

Like the entire SpectrAlert Advance line, outdoor horns, strobes, and horn strobes for wall applications include a variety of features that increase application flexibility and simplify installation. First, field-selectable settings, including candela, automatic selection of 12- or 24-volt operation, horn tones, and three volume options enable installers to easily adapt devices to meet requirements.

Next, SpectrAlert Advance devices use a universal mounting plate for both wall and ceiling applications. This mounting plate includes an onboard shorting spring that ensures wiring continuity before devices are installed, so installers can verify proper wiring without mounting the devices and exposing them to potential construction damage. Once the plates are mounted, all SpectrAlert Advance devices utilize a plug-in design with a single captured screw to speed installation and virtually eliminate costly ground faults.

Outdoor devices ship with weatherproof plastic back boxes (metal back boxes are available separately) that accommodate in-and-out wiring for daisy chaining devices. Plastic back boxes feature removable side flanges and improved resistance to saltwater corrosion. Knock-outs located on the back eliminate the need to drill holes for screw-in mounting. Plastic and metal weatherproof back boxes come with ¾-inch top and bottom conduit entries and ¾-inch knock-outs at the back. A screw-in NPT plug with an O-ring gasket for a watertight seal is included with each back box.

SpectrAlert Advance Outdoor Horn, Strobe, and Horn Strobe Specifications

Architect/Engineer Specifications

General

SpectrAlert Advance outdoor horns, strobes, and horn strobes shall mount to a weatherproof back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance products, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 9 and 17.5 volts; 24-volt-rated notification appliance circuit outputs shall operate between 17 and 33 volts. Outdoor SpectrAlert Advance products shall operate between –40 and 151 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Strobes and horn strobes shall have field-selectable candela settings including 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185.

Strobe

The strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and shall be approved for fire protective service. The strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The strobe must be installed with its weatherproof back box in order to remain outdoor approved per UL. The strobe shall be suitable for use in wet environments.

Horn Strobe Combination

The horn strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and UL 464 and shall be approved for fire protective service. The horn strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The horn shall have three audibility options and an option to switch between a temporal three pattern and a non-temporal (continuous) pattern. These options shall be set by a multiple position switch. On four-wire products, the strobe shall be powered independently of the sounder. The horn or horn strobe models shall operate on a coded or non-coded power supply. The horn strobe must be installed with its weatherproof back box in order to remain outdoor approved per UL. The horn strobe shall be suitable for use in wet environments.

Physical/Electrical Specifications

Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 DC/FWR or regulated 24 DC/FWR[1]
Operating Voltage Range[2]	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Wall-Mount Dimensions (including lens)	5.6″L × 4.7″W × 2.5″D (142 mm L × 119 mm W × 64 mm D)
Horn Dimensions	5.6″L × 4.7″W × 1.3″D (142 mm L × 119 mm W × 33 mm D)
Wall-Mount Weatherproof Back Box Dimensions (SA-WBB)	5.7″L × 5.1″W × 2.0″D (145 mm L × 130 mm W × 51 mm D)

Notes:

1. Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.
2. P, S, PC, and SC products will operate at 12 V nominal only for 15 and 15/75 cd.

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

		8–17.5 Volts		16–33 Volts	
	Candela	DC	FWR	DC	FWR
Standard Candela Range	15	123	128	66	71
	15/75	142	148	77	81
	30	NA	NA	94	96
	75	NA	NA	158	153
	95	NA	NA	181	176
	110	NA	NA	202	195
	115	NA	NA	210	205
High Candela Range	135	NA	NA	228	207
	150	NA	NA	246	220
	177	NA	NA	281	251
	185	NA	NA	286	258

UL Max. Horn Current Draw (mA RMS)

		8–17.5 Volts		16–33 Volts	
Sound Pattern	dB	DC	FWR	DC	FWR
Temporal	High	57	55	69	75
Temporal	Medium	44	49	58	69
Temporal	Low	38	44	44	48
Non-Temporal	High	57	56	69	75
Non-Temporal	Medium	42	50	60	69
Non-Temporal	Low	41	44	50	50
Coded	High	57	55	69	75
Coded	Medium	44	51	56	69
Coded	Low	40	46	52	50

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, Standard Candela Range (15–115 cd)

	8–17.5 Volts		16–33 Volts						
DC Input	15	15/75	15	15/75	30	75	95	110	115
Temporal High	137	147	79	90	107	176	194	212	218
Temporal Medium	132	144	69	80	97	157	182	201	210
Temporal Low	132	143	66	77	93	154	179	198	207
Non-Temporal High	141	152	91	100	116	176	201	221	229
Non-Temporal Medium	133	145	75	85	102	163	187	207	216
Non-Temporal Low	131	144	68	79	96	156	182	201	210
FWR Input									
Temporal High	136	155	88	97	112	168	190	210	218
Temporal Medium	129	152	78	88	103	160	184	202	206
Temporal Low	129	151	76	86	101	160	184	194	201
Non-Temporal High	142	161	103	112	126	181	203	221	229
Non-Temporal Medium	134	155	85	95	110	166	189	208	216
Non-Temporal Low	132	154	80	90	105	161	184	202	211

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, High Candela Range (135–185 cd)

	16–33 Volts					16–33 Volts			
DC Input	135	150	177	185	FWR Input	135	150	177	185
Temporal High	245	259	290	297	Temporal High	215	231	258	265
Temporal Medium	235	253	288	297	Temporal Medium	209	224	250	258
Temporal Low	232	251	282	292	Temporal Low	207	221	248	256
Non-Temporal High	255	270	303	309	Non-Temporal High	233	248	275	281
Non-Temporal Medium	242	259	293	299	Non-Temporal Medium	219	232	262	267
Non-Temporal Low	238	254	291	295	Non-Temporal Low	214	229	256	262

Candela Derating

For K series products used at low temperatures, listed candela ratings must be reduced in accordance with this table.

Strobe Output (cd)	
Listed Candela	Candela rating at –40°F
15	Do not use below 32°F
15/75	
30	
75	44
95	70
110	110
115	115
135	135
150	150
177	177
185	185

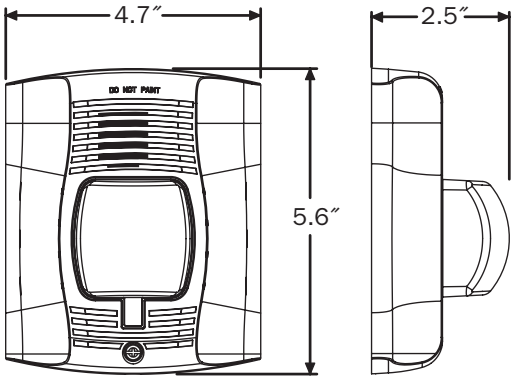
Horn Tones and Sound Output Data

Horn and Horn Strobe Output (dBA)

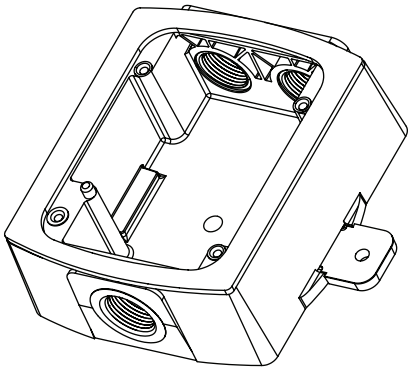
			8–17.5 Volts		16–33 Volts		24-Volt Nominal			
							Reverberant		Anechoic	
Switch Position	Sound Pattern	dB	DC	FWR	DC	FWR	DC	FWR	DC	FWR
1	Temporal	High	78	78	84	84	88	88	99	98
2	Temporal	Medium	74	74	80	80	86	86	96	96
3	Temporal	Low	71	73	76	76	83	80	94	89
4	Non-Temporal	High	82	82	88	88	93	92	100	100
5	Non-Temporal	Medium	78	78	85	85	90	90	98	98
6	Non-Temporal	Low	75	75	81	81	88	84	96	92
7†	Coded	High	82	82	88	88	93	92	101	101
8†	Coded	Medium	78	78	85	85	90	90	97	98
9†	Coded	Low	75	75	81	81	88	85	96	92

†Settings 7, 8, and 9 are not available on 2-wire horn strobe.

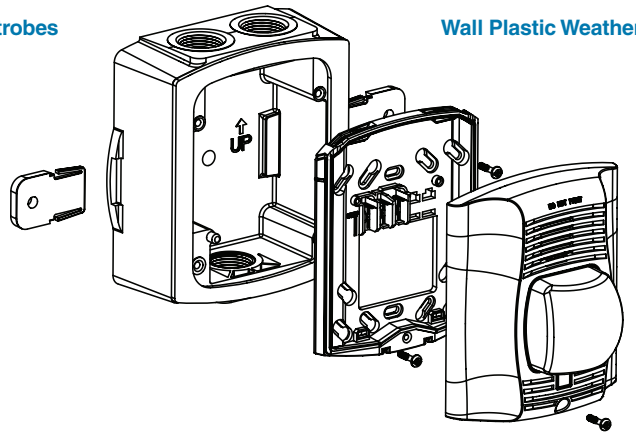
SpectrAlert Advance Diagrams



Wall-Mount Horn Strobes



Wall Plastic Weatherproof Back Box



Wall-Mount Horn Strobe with Plastic Weatherproof Back Box

SpectrAlert Advance Ordering Information

Model	Description
Wall Horn Strobes	
P2RK*†	2-Wire Horn Strobe, Standard cd, Red, Outdoor (includes plastic weatherproof back box)
P2RHK*†	2-Wire Horn Strobe, High cd, Red, Outdoor (includes plastic weatherproof back box)
P2WK*†	2-Wire Horn Strobe, Standard cd, White, Outdoor (includes plastic weatherproof back box)
P2WHK*†	2-Wire Horn Strobe, High cd, White, Outdoor (includes plastic weatherproof back box)
P4RK†	4-Wire Horn Strobe, Standard cd, Red, Outdoor (includes plastic weatherproof back box)
P4WK	4-Wire Horn Strobe, Standard cd, White, Outdoor (includes plastic weatherproof back box)
P2RHK-120	2-Wire Horn Strobe, High cd, Red, Outdoor, 120 V (includes plastic weatherproof back box)
Wall Strobes	
SRK*†	Strobe, Standard cd, Red, Outdoor (includes plastic weatherproof back box)
SRHK*†	Strobe, High cd, Red, Outdoor (includes plastic weatherproof back box)
SWK*†	Strobe, Standard cd, White, Outdoor (includes plastic weatherproof back box)
SWHK*†	Strobe, High cd, White, Outdoor (includes plastic weatherproof back box)
Horns	
HRK†	Horn, Red, Outdoor (includes plastic weatherproof back box)
Accessories	
SA-WBB	Red, Metal Weatherproof Back Box
SA-WBBW	White, Metal Weatherproof Back Box

Notes:

* Add "-P" to model number for plain housing (no "FIRE" marking on cover), e.g., P2RK-P.

† Add "-R" to model number for weatherproof replacement device (no back box included), only for use with weatherproof outdoor flush mounting plate, WTP and WTPW. "Standard cd" refers to strobes that include 15, 15/75, 30, 75, 95, 110, and 115 candela settings. "High cd" refers to strobes that include 135, 150, 177, and 185 candela settings. **When replacing standard outdoor units both the device and back box must be replaced.**

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AVDS01201 • 3/12

L-Series and L-Series with LED Indoor Selectable Horns, Strobes and Horn Strobes

System Sensor L-Series and L-Series with LED audible visible notification products are rich with features guaranteed to cut installation times and maximize profits with lower current draw and modern aesthetics.

Features

- LED technology provides lower current draw
- Digital Voltage Meter (DVM) diagnostic test points for Horn Strobes and Strobes
- Common aesthetics across the L-Series platform
- Standard and compact sizes
- Tamper-resistant construction
- Field-selectable candela settings on wall units: 15, 30, 75, 95, 110, 135, and 185
- Field-selectable candela settings on ceiling units: 15, 30, 75, 95, 115, 150, and 177
- Rotary switches for candela, tone and volume selections
- Mounting plate provides plug-in design for easier installation and shorting springs to check wiring continuity
- Electrically compatible with legacy SpectrAlert, SpectrAlert Advance and L-series devices
- Synchronization through use of UL approved power supplies that support System Sensor Sync protocol or System Sensor MDL3 Sync Module
- Horns, Strobes and Horn Strobes listed for wall or ceiling use

Agency Listings

SIGNALING c UL us LISTED	SIGNALING UL LISTED	ULC LISTED	FM APPROVED	
Horn Strobes and Strobes: S5512, S4011	Horns: S4011	Horns: S4011	3057072 FM23FPUS0195	7300-1653:0525 7135-1653:0503 7135-1653:0526

The System Sensor L-Series and L-Series with LED platform offers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry with lower current draw and modern aesthetics. LED lighting technology offers significantly lower current draw compared to older Xenon bulbs across a full candela range. This improves design flexibility for notification appliance circuits (NACs) while also reducing power supply requirements allowing for simpler and lower cost installations.

Flexible design options meet virtually any application requirement: wall or ceiling mount, standard or compact sizes, red or white color choices, bezel kits for alternate markings and languages, and LED color lenses for distinctive visual signaling. In addition, installers can easily adapt devices using field selectable candela, tone and volume settings using rotary switches.

The L-Series and L-Series with LED line is developed to simplify installation. All devices feature plug-in designs with minimal intrusion into the back box, making installations fast and foolproof while virtually eliminating costly and time-consuming ground faults. The universal mounting plate includes an onboard shorting spring, so installers can test wiring continuity before the device is installed.

In addition, the System Sensor L-Series with LED notification appliances offer a new diagnostic test point feature that allows you to measure device voltage with a digital voltage meter (DVM) without removing the appliance from the wall or ceiling. The DVM test points are discreetly located on the face of the notification appliance which enable faster troubleshooting and end of line (EOL) voltage checks while greatly reducing the risk of misplacing or damaging appliances during troubleshooting.

L-Series and L-Series with LED Specifications

Physical/Electrical Specifications	
Standard Operating Temperature	32°F to 120°F (0°C to 49°C)
Humidity Range	10 to 93% non-condensing
Strobe Flash Rate	1 flash per second
Nominal Voltage, LED Strobes and Horn Strobes	Regulated 24 VDC
Nominal Voltage, Horns	Regulated 12 VDC or regulated 24 DC/FWR
Operating Voltage Range, LED Strobes and Horn Strobes	16 to 33 V (24 V nominal)
Operating Voltage Range, Horns	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG

UL/ULC Current Draw Data, Horn Tones, and Sound Output Data

UL/ULC Maxmimum Strobe Current Draw (mA)

	Candela Rating	16–33 Volts	
		Wall	Ceiling
Candela Range	15	18	18
	30	22	22
	75	70	70
	95	75	75
	110	85	—
	115	—	90
	135	105	—
	150	—	110
	177	—	115
	185	120	—

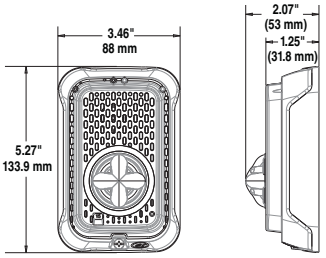
UL/ULC Maxmimum Horn Current Draw (mA RMS)

		8–17.5 Volts	16–33 Volts	
Sound Pattern	dB	DC	DC	FWR
Temporal	High	39	44	54
Temporal	Low	28	32	54
Non-Temporal	High	43	47	54
Non-Temporal	Low	29	32	54
3.1 KHz Temporal	High	39	41	54
3.1 KHz Temporal	Low	29	32	54
3.1 KHz Non-Temporal	High	42	43	54
3.1 KHz Non-Temporal	Low	28	29	54
Coded	High	43	47	54
3.1 KHz Coded	High	42	43	54

UL/ULC Maximum Horn Strobe Current Draw (mA) and Sound Output (dBA)

			Current Draw (mA RMS), Horn Strobe, Candela Range (15-185 cd)										Sound Output (dBA)
			16-33 Volts										16-33V
Switch Pos.	Sound Pattern	Volume Setting	15cd	30cd	75cd	95cd	110cd WALL	115cd CEILING	135cd WALL	150cd CEILING	177cd CEILING	185cd WALL	DC
1	Temporal 3	High	35	38	87	92	94	120	189	189	190	190	87
2	Temporal 3	Low	35	38	87	92	94	120	135	135	145	145	79
3	Non-Temporal	High	50	52	87	92	94	120	127	127	135	135	87
4	Non-Temporal	Low	35	38	87	92	94	120	125	125	130	130	79
5	3.1KHz Temporal 3	High	35	38	87	89	91	115	155	155	165	165	86
6	3.1KHz Temporal 3	Low	35	38	87	89	91	115	128	130	135	135	80
7	3.1KHz Non-Temporal	High	40	42	87	89	91	115	125	125	135	135	86
8	3.1KHz Non-Temporal	Low	35	38	87	89	91	115	120	120	130	130	80

L-Series with LED Dimensions: Wall-Mounted Equipment



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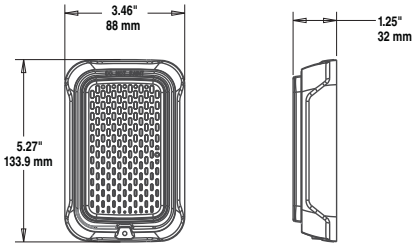
Compact Strobe, Horn Strobe for Wall



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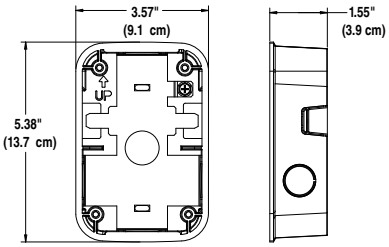
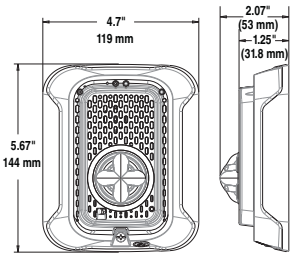
Compact Horn



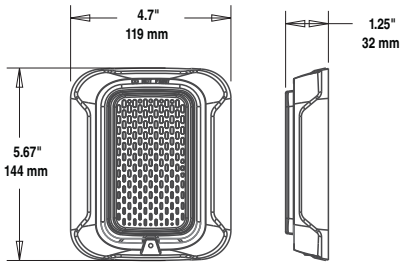
A0557-00

Compact Surface Mount Back Box for Walls (SBBGRL, SBBGWL)



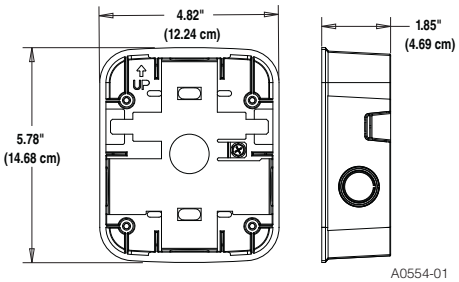
A0613-00

Strobes, Horn Strobes for Walls



A0549-00

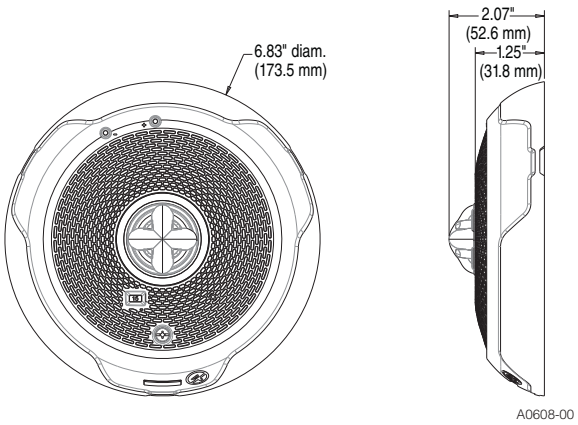
Horn



A0554-01

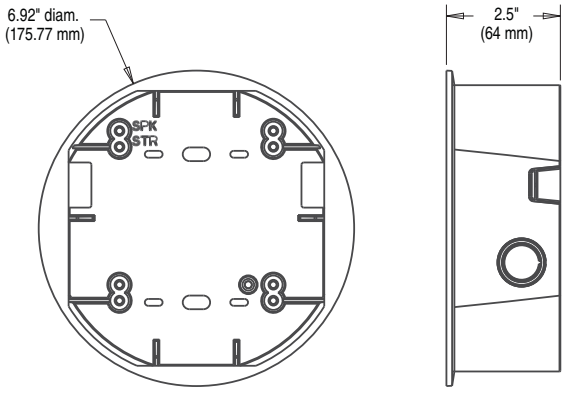
Surface Mount Back Box for Walls (SBBRL/SBBWL)

L-Series with LED Dimensions: Ceiling-Mounted Equipment



A0608-00

Strobes and Horn Strobes for Ceilings



A0546-00

Surface Mount Back Box for Ceilings (SBBCRL, SBCWL)

L-Series with LED: Ordering Information

Model	Description
L-Series with LED Horn Strobes	
P2RLED	2-Wire, Horn Strobe, Wall, Red
P2RLED-B	2-Wire, Horn Strobe, Wall, Red, Bilingual
P2WLED	2-Wire, Horn Strobe, Wall, White
P2WLED-B	2-Wire, Horn Strobe, Wall, White, Bilingual
P2GRLED	2-Wire, Compact Horn Strobe, Wall, Red
P2GRLED-B	2-Wire, Compact Horn Strobe, Wall, Red, Bilingual
P2GWLED	2-Wire, Compact Horn Strobe, Wall, White
P2GWLED-B	2-Wire, Compact Horn Strobe, Wall, White, Bilingual
P2RLED-P	2-Wire, Horn Strobe, Wall, Red, Plain
P2WLED-P	2-Wire, Horn Strobe, Wall, White, Plain
P2RLED-SP	2-Wire, Horn Strobe, Wall, Red, FUEGO
P2WLED-SP	2-Wire, Horn Strobe, Wall, White, FUEGO
PC2RLED	2-Wire, Horn Strobe, Ceiling, Red
PC2RLED-B	2-Wire, Horn Strobe, Ceiling, Red, Bilingual
PC2WLED	2-Wire, Horn Strobe, Ceiling, White
PC2WLED-B	2-Wire, Horn Strobe, Ceiling, White, Bilingual
L-Series with LED Strobes	
SRLED	Strobe, Wall, Red
SRLED-B	Strobe, Wall, Red, Bilingual
SWLED	Strobe, Wall, White
SWLED-B	Strobe, Wall, White, Bilingual
SGRLED	Strobe, Compact, Wall, Red
SGRLED-B	Strobe, Compact, Wall, Red, Bilingual
SGWLED	Strobe, Compact, Wall, White
SGWLED-B	Strobe, Compact, Wall, White, Bilingual
SRLED-P	Strobe, Wall, Red, Plain
SWLED-P	Strobe, Wall, White, Plain
SRLED-SP	Strobe, Wall, Red, FUEGO
SWLED-CLR-ALERT	Strobe, Wall, White, ALERT
SWLED-ALERT	Strobe, Wall, White, ALERT, Amber Lens
SCRLED	Strobe, Ceiling, Red
SCRLED-B	Strobe, Ceiling, Red, Bilingual
SCRLED-P	Strobe, Ceiling, White, Plain
SCWLED	Strobe, Ceiling, White
SCWLED-B	Strobe, Ceiling, White, Bilingual
SCWLED-P	Strobe, Ceiling, White, Plain
SCWLED-CLR-ALERT	Strobe, Ceiling, White, ALERT
L-Series Horns	
HRL*	Horn, Red
HRLA*	Horn, Red, Plain, ULC
HWL*	Horn, White
HWLA*	Horn, White, Plain, ULC
HGRL*	Compact Horn, Red
HGRLA*	Compact Horn, Red, Plain, ULC
HGWL*	Compact Horn, White
HGWLA*	Compact Horn, White, Plain, ULC

Model	Description
LED Lenses	
LENS-A3	Lens LED Amber Wall/Ceiling
LENS-B3	Lens LED Blue Wall/Ceiling
LENS-G3	Lens LED Green Wall/Ceiling
LENS-R3	Lens LED Red Wall/Ceiling
Accessories	
TR-2	Universal Wall Trim Ring Red
TR-2W	Universal Wall Trim Ring White
SBBRL	Wall Surface Mount Back Box, Red
SBBWL	Wall Surface Mount Back Box, White
SBBGRL	Compact Wall Surface Mount Back Box, Red
SBBGWL	Compact Wall Surface Mount Back Box, White
TRC-2	Universal Ceiling Trim Ring, Red
TRC-2W	Universal Ceiling Trim Ring, White
SBBCRL	Ceiling Surface Mount Back Box, Red
SBBCWL	Ceiling Surface Mount Back Box, White
Bezels†	
BZR	Wall Red Bezel Kit
BZW	Wall White Bezel Kit
BZGR	Compact Wall Red Bezel Kit
BZGW	Compact Wall White Bezel Kit
BZRC	Horn Strobe Ceiling Red Bezel Kit
BZWC	Horn Strobe Ceiling White Bezel Kit

Notes for L-Series With LED Horn Strobes and Strobes:

All -P models have a plain housing (no “FIRE” marking on cover).
All -SP models have “FUEGO” marking on cover.
All -ALERT models have “ALERT” marking on cover.
All -B models have “FIRE/FEU” marking on cover for use in Canadian applications.
Amber lenses are not for use in Canadian applications

Notes for L-Series Horns:

*Horn-only models are listed for wall or ceiling use.

Notes for Bezels:

†Each bezel pack ships in a package of 5.
Add one of the following extensions for print/language options: -F (FIRE), -AL (ALERT), -EV (EVAC), -AG (AGENT), -P (Plain), -FR (FEU), -PG (FOGO), -SP (FUEGO), -SPE (FUEGO/FIRE).

3825 Ohio Avenue • St. Charles, IL 60174 USA
Phone: 800-SENSOR2 • Fax: 630-377-6495
www.systemsensor.com

3333 Unity Drive, Mississauga, ON L5L 3S6 Canada
Phone: 800-SENSOR2 • Fax: 905-812-0771
www.systemsensor.ca

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908-687-7810, 800-327-2443, Fax: 908-687-8860 www.paigeelectric.com

Paige® spec 454687AGR

2 CONDUCTOR 12 AWG STRANDED OVERALL SHIELDED TYPE CL3R/FPLR

1.0 SCOPE:

1.1 This cable consists of 2 conductors 12 AWG stranded bare copper; color coded PVC insulation; overall aluminum polyester shield with drain wire; overall gray PVC Jacket.
Type CL3R/FPLR
UL Standards 13 & 1424
NEC Articles 725 & 760
UL 1666 Riser

2.0 CONSTRUCTION:

2.1 CONDUCTOR:
- 2.1.1 Material: Bare Copper
- 2.1.2 Size: 12 AWG
- 2.1.3 Construction: 19 x 25

2.2 INSULATION:
- 2.2.1 Material: PVC
- 2.2.2 Wall Thickness: .014" nom.
- 2.2.3 Color code:
  1-Black
  2-Red

2.3 SHIELD:
- 2.3.1 Material: Aluminum Polyester
- 2.3.2 Coverage: 100%

2.4 DRAIN:
- 2.4.1 Material: Tinned Copper
- 2.4.2 Size: 24 AWG
- 2.4.3 Construction: 7 x 32

2.5 JACKET:
- 2.5.1 Material: PVC
- 2.5.2 Wall Thickness: .025" nom.
- 2.5.3 OD: .236" nom.
- 2.5.4 Color: Gray
- 2.5.5 Ripcord under jacket
- 2.5.6 Markings: PAIGE LoVo #454687AGR
  12 AWG 2/C OAS (UL) TYPE CL3R/FPLR
  E191597

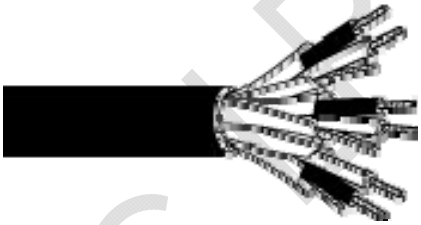
2.6 ELECTRICAL PROPERTIES
- 2.6.1 Temperature: -20˚C to 75˚C
- 2.6.2 Voltage: 300 Volt
- 2.6.3 Capacitance: 56.9 pF/ft nom @ 1 MHz
- 2.6.4 Impedance: 32 Ohms
- 2.6.5 Velocity of Propagation: 55%
- 2.6.6 DC Resistance: 1.71 Ohms/M' @ 20˚C

2.7 PUT-UPS:
- 2.7.1 1000' Reel
- 2.7.2 Weight: 63 lbs / 1000'

908-687-7810, 800-327-2443, Fax: 908-687-8860 www.paigeelectric.com

Paige® spec 454910AGR

3 PAIRS 18 AWG STRANDED INDIVIDUALLY SHIELDED TYPE CMR/FPLR



1.0 SCOPE:

1.1 This cable consists of 3 pairs 18 AWG stranded bare copper; color coded PVC insulation; each pair with aluminum polyester shield and drain wire; overall gray PVC jacket.
Type CMR/FPLR
UL Standards 444 & 1424
NEC Articles 760 & 800
UL 1666 Riser

2.0 CONSTRUCTION:

2.1 CONDUCTOR:
- 2.1.1 Material: Bare Copper
- 2.1.2 Size: 18 AWG
- 2.1.3 Construction: 7 x 26

2.2 INSULATION:
- 2.2.1 Material: PVC
- 2.2.2 Wall Thickness: .010" nom.
- 2.2.3 Color code:
  - Pair 1:
    - 1-Black
    - 2-Red
  - Pair 2:
    - 1-Black
    - 2-White
  - Pair 3:
    - 1-Black
    - 2-Green

2.3 INDIVIDUALLY SHIELDS:
- 2.3.1 Material: Aluminum Polyester
- 2.3.2 Coverage: 100%

2.4 DRAIN:
- 2.4.1 Material: Tinned Copper
- 2.4.2 Size: 24 AWG
- 2.4.3 Construction: 7 x 32

2.5 JACKET:
- 2.5.1 Material: PVC
- 2.5.2 Wall Thickness: .025"
- 2.5.3 OD: .307" nom.
- 2.5.4 Color: Gray
- 2.5.5 Ripcord under jacket
- 2.5.6 Markings: PAIGE LoVo #454910AGR 18 AWG 3/PR ISP (UL) TYPE CMR/FPLR E191596

2.6 ELECTRICAL PROPERTIES
- 2.6.1 Temperature: -20˚C to 75˚C
- 2.6.2 Voltage: 300 Volt
- 2.6.3 Capacitance: 45 pF/ft nom
- 2.6.4 Impedance: 41 Ohms
- 2.6.5 Velocity of Propagation: 55%
- 2.6.6 DC Resistance: 6.92 Ohms/M' @ 20˚C

2.7 PUT-UPS:
- 2.7.1 500' or 1000' Box
- 2.7.2 Weight: 79 lbs / 1000'

Party Site No.: **643290**
Expires: **31-Dec-2025**

CERTIFICATE OF COMPLIANCE

THIS IS TO CERTIFY that the Alarm / Service Company identified below is included by - UL Solutions (UL) in its UL Product iQ directories as eligible to use the UL Listing Mark in connection with Certificated Systems. The only evidence of compliance with UL's requirements is the issuance of a UL Certificate for the System and the Certificate is active under UL's Certificate Verification Service. This Certificate does not apply in any way to the communication channel between the protected property and any facility that monitors signals from the protected property.

Listed Service From: BENTONVILLE , ARKANSAS

Alarm / Service Company: (643290)

WAL-MART STORES INC (SUPPLIER DIRECT)
702 SW 8TH ST
BENTONVILLE , Arkansas 72716 UNITED STATES

The Alarm / Service Company is Listed in the following Certificate Service Categories:

File	Vol No.	CCN	Listing Category
S3152	7	UUFX	Central-station Protective Signaling Services
S25115	1	UUKA	Monitoring Stations, Proprietary Fire Alarm

*****THIS CERTIFICATE EXPIRES ON 31-DEC-25*****

"LOOK FOR THE UL ALARM / SYSTEM CERTIFICATE"