

NOV 24 2010

PERMIT ISSUED

Form # P 04

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK
CITY OF PORTLAND

BUILDING INSPECTION

PERMIT

Permit Number: 101425

Please Read Application And Notes, if Any, Attached

This is to certify that 410 RIVERSIDE ST LLC /Cunningham Security Systems

has permission to "AirGas"- install a Fire Alarm System

AT 410 RIVERSIDE ST/57 Ingersol Dr CBL 320 A002001

provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statutes of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of buildings and structures, and of the application on file in this department.

Apply to Public Works for street line and grade if nature of work requires such information.

Notification of inspection must be given and written permission procured before this building or part thereof is lathed or otherwise closed-in. 24 HOUR NOTICE IS REQUIRED.

A certificate of occupancy must be procured by owner before this building or part thereof is occupied.

OTHER REQUIRED APPROVALS

Fire Dept. [Signature] (58)

Health Dept. _____

Appeal Board _____

Other _____

Department Name

[Signature] 11/24/10
Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD



CITY OF PORTLAND, MAINE

Department of Building Inspections

Original Receipt

11.13 2010

Received from Cunningham

Location of Work 303 37th Street 410 Riverside
4033 32642

Cost of Construction \$ _____ Building Fee: _____

Permit Fee \$ _____ Site Fee: _____

Certificate of Occupancy Fee: _____

Total: 110

Building (1L) _____ Plumbing (1S) _____ Electrical (1Z) _____ Site Plan (U2) _____

Other _____

CBL: _____

Check #: _____ Total Collected \$ 110

**No work is to be started until permit issued.
Please keep original receipt for your records.**

Taken by: [Signature]

WHITE - Applicant's Copy
YELLOW - Office Copy
PINK - Permit Copy

City of Portland, Maine - Building or Use Permit

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 10-1425	Date Applied For: 11/15/2010	CBL: 320 A002001
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Location of Construction: 410 RIVERSIDE ST/57 Ingersol Dr	Owner Name: 410 RIVERSIDE ST LLC	Owner Address: 70 INGERSOLL DR	Phone:
Business Name:	Contractor Name: Cunningham Security Systems	Contractor Address: 10 Prince Point Road Yarmouth	Phone: (207) 846-3350
Lessee/Buyer's Name	Phone:	Permit Type: Fire Alarm System	

Proposed Use: Commercial "AirGas"- install a Fire Alarm System	Proposed Project Description: "AirGas"- install a Fire Alarm System
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Dept: Zoning **Status:** Approved **Reviewer:** Marge Schmuckal **Approval Date:** 11/16/2010
Note: **Ok to Issue:**

Dept: Building **Status:** Approved with Conditions **Reviewer:** Jeanine Bourke **Approval Date:** 11/24/2010
Note: **Ok to Issue:**

- 1) Fire Alarm systems shall be installed per Sec. 907 of the IBC 2003
- 2) Separate permits are required for any electrical, plumbing, sprinkler, fire alarm HVAC systems, heating appliances, including pellet/wood stoves, commercial kitchen exhaust hood systems and fuel tanks. Separate plans may need to be submitted for approval as a part of this process.

Dept: Fire **Status:** Approved with Conditions **Reviewer:** Ben Wallace Jr. **Approval Date:** 11/17/2010
Note: renovating an existing system. **Ok to Issue:**

- 1) The fire alarm system shall comply with the City of Portland Standard for Signaling Systems for the Protection of Life and Property. All fire alarm installation and servicing companies shall have a Certificate of Fitness from the Fire Department.
- 2) Installation of a Fire Alarm system requires a Knox Box to be installed per city ordinance
- 3) As-built documents shall be submitted in pdf to the Building Inspections Office upon completion of job.
- 4) System acceptance and commissioning must be co-ordinated with alarm and suppression system contractors and the Fire Department. Call 874-8703 to schedule.
- 5) All fire alarm records required by NFPA 72 should be stored in an approved cabinet located at the FACP labeled "FIRE ALARM RECORDS". Records cabinet, FACP, annunciator(s), and pull stations shall be keyed alike.
- 6) Be sure there is only one fire alarm system in the building;
 - Supervise the sprinkler system,
 - Add the pull station at door 4,
 - Install the occupant notification using NFPA 72 spacing requirements,
 - Install a locking cover over the annunciator you are reusing.
 - Supervisory and trouble points shall not activate evacuation signal.

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City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 10-1425	Issue Date:	CBL: 320 A002001
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Location of Construction: 410 RIVERSIDE ST/57 Ingersol Dr	Owner Name: 410 RIVERSIDE ST LLC	Owner Address: 70 INGERSOLL DR	Phone:
Business Name:	Contractor Name: Cunningham Security Systems	Contractor Address: 10 Prince Point Road Yarmouth	Phone: 2078463350
Lessee/Buyer's Name	Phone:	Permit Type: Fire Alarm System	Zone: I-M

Past Use: Commercial "AirGas"	Proposed Use: Commercial "AirGas" - install a Fire Alarm System	Permit Fee: \$50.00	Cost of Work: \$2,700.00	CEO District: 5	Prime
		FIRE DEPT: w/conditions 11/17/10	<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied	INSPECTION: Use Group: H-3/B Type: Fire Alarm IBC-2003	

Proposed Project Description: "AirGas" - install a Fire Alarm System	Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i> 11/24/10
PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)		
Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied		
Signature: _____ Date: _____		

Permit Taken By: Idobson	Date Applied For: 11/15/2010	Zoning Approval		
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<p>1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.</p> <p>2. Building permits do not include plumbing, septic or electrical work.</p> <p>3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..</p>	<p>Special Zone or Reviews</p> <p><input type="checkbox"/> Shoreland</p> <p><input type="checkbox"/> Wetland</p> <p><input type="checkbox"/> Flood Zone</p> <p><input type="checkbox"/> Subdivision</p> <p><input type="checkbox"/> Site Plan</p> <p>Major <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/></p> <p>Date: <i>[Signature]</i> 11/16/10</p>	<p>Zoning Appeal</p> <p><input type="checkbox"/> Variance</p> <p><input type="checkbox"/> Miscellaneous</p> <p><input type="checkbox"/> Conditional Use</p> <p><input type="checkbox"/> Interpretation</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Denied</p> <p>Date: _____</p>	<p>Historic Preservation</p> <p><input checked="" type="checkbox"/> Not in District or Landmark</p> <p><input type="checkbox"/> Does Not Require Review</p> <p><input type="checkbox"/> Requires Review</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Approved w/Conditions</p> <p><input type="checkbox"/> Denied</p> <p>Date: <i>[Signature]</i></p>
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PERMIT ISSUED

NOV 24 2010

City of Portland

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT _____ ADDRESS _____ DATE _____ PHONE _____

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE _____ DATE _____ PHONE _____



Fire Alarm Permit

If you or the property owner owes real estate or property taxes or user charges on any property within the city, payment arrangements must be made before permits of any kind are accepted.

410 Riverside

Installation address: 57 Ingersol Drive CBL: 320 A 2

Exact location: (within structure) Airgas Space on wall just inside door (where Knox Box is)

Type of occupancy(s) (NFPA & ICC): Mixed Use Office And Warehouse

Building owner: 410 RIVERSIDE LLC

System Designer (point of contact): Michael Major/Cunningham Security

Designer phone: 207-846-3350 E-mail: mmajor@cunninghamsecurity.com

Installing contractor: Cunningham Security Certificate of Fitness No: 1004

Contractor phone: 207-846-3350 E-mail: mmajor@cunninghamsecurity.com

This is a new application: YES NO New AES Master Box: YES NO
(Include Master Box approval form)

Amendment to an existing permit: YES NO Permit no: \$2700.00

The following documents **shall** be provided with this application:

- Floor plans
- Scope of Work
- Wiring diagram
- 11 1/2 x 17s
- Annunciator details
- pdf copy (may be e-mailed)
- Input/ Output Matrix
- Designer qualifications
- Equipment data sheets
- Battery/ voltage drop calcs
- Electrical Permit Pulled (check alarm/com)

COST OF WORK: _____
 PERMIT FEE: 50
 (\$10 PER \$1,000 + \$30 FOR THE FIRST \$1,000)

Master box approval only: YES NO
(If yes check *New AES Master Box* above)

The **designer** shall be the responsible party for this application. Download a new copy of this application at www.portlandmaine.gov/fire for every submittal. Submit all plans in electronic PDF in addition to readable 11 1/2 x 17s to the Building Inspections Department, 389 Congress Street, Room 315, Portland, Maine 04101.

Prior to acceptance of any fire alarm system, a complete commissioning and acceptance test must be coordinated with all fire system contractors and the Fire Department, and proper documentation of such test(s) provided.

All installation(s) must comply with the City of Portland Technical Standard for Signaling Systems for the Protection of Life and Property, available at www.portlandmaine.gov/fire.

Applicant signature: [Signature] Date: 11-15-10

Security Systems

10 Princes Point Road Yarmouth Maine 04096

207-846-3350

November 14, 2010

Benjamin Wallace
Fire Prevention Officer
City of Portland Fire Department
380 Congress Street
Portland Maine 04101

Scope of Work

Please find attached fire alarm permit documents for 57 Ingersol Drive. This is an existing building with a partially existing system. We are proposing to utilize the existing Honeywell Vista 128FB panel to accommodate the additional initiation and notification appliances. There is no requirement for this user to have a fire alarm system but they have a corporate standard of having fire alarm systems in their spaces. They are a tenant in a multi tenanted building and this writer does not know the status of any building fire alarm systems.

The space is fully sprinkled and the only smoke detector in the space is above the FACP

Michael Major

ELECTRICAL PERMIT

City of Portland, Me.



To the Chief Electrical Inspector, Portland Maine:
 The undersigned hereby applies for a permit to make electrical installations
 in accordance with the laws of Maine, the City of Portland Electrical Ordinance,
 National Electrical Code and the following specifications:

Date 11-15-10
 Permit # 210-4802
 CBL# 320 A 2

LOCATION: 410 RIVERSIDE ST METER MAKE & # _____
 CMP ACCOUNT # _____ OWNER 410 RIVERSIDE LLC
 TENANT _____ PHONE # _____

					TOTAL EACH FEE		
OUTLETS	Receptacles	Switches	Smoke Detector			.20	
FIXTURES	Incandescent	Fluorescent	Strips			.20	
SERVICES	Overhead	Underground	TTL AMPS <800			15.00	
	Overhead	Underground	>800			25.00	
Temporary Service	Overhead	Underground	TTL AMPS			25.00	
						25.00	
METERS	(number of)					1.00	
MOTORS	(number of)					2.00	
RESID/COM	Electric units					1.00	
HEATING	oil/gas units	Interior	Exterior			5.00	
APPLIANCES	Ranges	Cook Tops	Wall Ovens			2.00	
	Insta-Hot	Water heaters	Fans			2.00	
	Dryers	Disposals	Dishwasher			2.00	
	Compactors	Spa	Washing Machine			2.00	
	Others (denote)					2.00	
	MISC. (number of)	Air Cond/win					3.00
		Air Cond/cent		Pools			10.00
	HVAC	EMS	Thermostat			5.00	
	Signs					10.00	
	Alarms/res					5.00	
	Alarms/com					15.00	
	Heavy Duty(CRKT)					2.00	
	Circus/Carnv					25.00	
	Alterations					5.00	
	Fire Repairs					15.00	
	E Lights					1.00	
	E Generators					20.00	
PANELS	Service	Remote	Main			4.00	
TRANSFORMER	0-25 Kva					5.00	
	25-200 Kva					8.00	
	Over 200 Kva					10.00	
					TOTAL AMOUNT DUE		
					MINIMUM FEE/COMMERCIAL	55.00	
					MINIMUM FEE	45.00	

CONTRACTORS NAME CUMMINGS SECURITY MASTER LIC. # MS60008944
 ADDRESS 10 PENCE POINT RD YARBOUTH LIMITED LIC. # _____
 TELEPHONE 846-3350

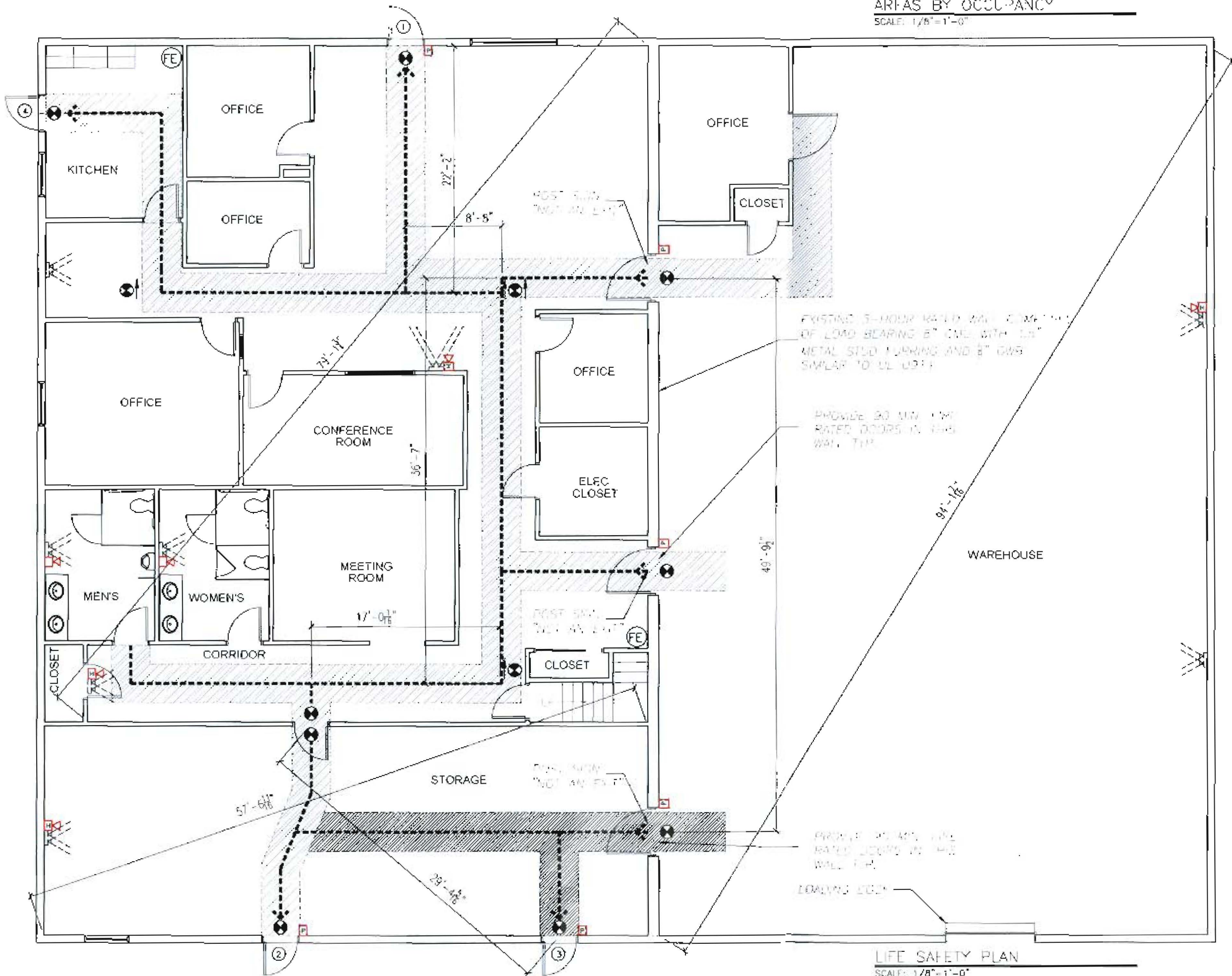
SIGNATURE OF CONTRACTOR

**Airgas Building Ingersol Drive
Portland**

	Activate Audible Alarm Indicator & Signals	Activate Supervisory Signal Indicator & Signals	Activate Common Trouble Indicator & Signals	Activates Graphic Panel Light for Smoke Control Mode	Activates Graphic Trouble Indicator for associated if fan not running when required	Activate Graphic light for associated devices	Activate Communication Between FACP and Central Monitoring Station				
	A	B	C	D	E	F	G	H	I	J	K
Area Smoke Detectors											
Office Area Smoke #1	●						●				
Heat Detectors											
Duct Smoke Detectors											
Water Flows											
Kitchen Ansul System											
Supervisory Switches											
Primary Dialer	●	●					●				
Secondary Dialer	●	●					●				
FACP A/C Power Loss	●	●					●				
Backup Battery Power	●	●					●				
Trouble Points											
Open Circuit	●		●				●				
Ground Fault	●		●				●				
Notification Appliance Circuit Short	●		●				●				
Signal Line Circuit Short	●		●				●				

AREAS BY OCCUPANCY

SCALE: 1/8"=1'-0"



- EGRESS PATH - KEEP CLEAR
- FIRE EXTINGUISHER
- EXIT SIGN
- EMERGENCY LIGHT
- PULL STATION
- HORN STROBE
- STROBE
- EXIT DOOR TAG

LIFE SAFETY PLAN

SCALE: 1/8"=1'-0"

AIRCATS

Honeywell Security

Primary & Power Budget Calculator

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- Apply UL Power Limits? (Required to maintain UL Listing including UL864)
- Commercial Fire Installation
- Commercial Burg Installation

Facility Information	
Location:	
Account #:	
Model:	
Engineer:	
Date:	

Enter Standby and Alarm Times

Battery Standby (hours):	24
Alarm Duration (minutes):	5

Battery Contingency Factor	10% ▼
----------------------------	-------

Recommended Battery (AH) **14.7**

SELECTED PANEL MAXIMUM OUTPUT RATINGS

Select Panel from pulldown list:	Polling Loop (mA)	Standby Auxiliary Power (mA)	Alarm Auxiliary Power (mA)	Panel Standby (mA)	Panel Alarm (mA)	Bell #1 Output (mA)	Bell #2 Output (if used; mA)	Maximum Panel Standby Output	Maximum Panel Alarm Output	Max Battery Supported by Panel
Vista-128FBP	128	1000	1700	300	470	1700	1700	1300	2800	34.4
Calculated Current Draw	0.6	228	175	Calculated Bell Draw		875	0	Total Standby	Total Alarm	
Power Budget	127.4	772.0	1525.0	Bell Power Budget		825.0	1700.0	Standby Budget	Alarm Budget	
<input type="checkbox"/> Remove Unused Devices From List			External Bell Power Req'd (mA):		0.0		Ext. UL Power Req'd (mA):		0.0	

Grayed-out device(s) are not supported by selected panel

KEYPADS/INTERFACES	Enter Quantity	How many powered externally?	Standby (aux pow)	Alarm Current (Aux)	Polling Loop	Total Polling Loop	Total Standby Current	Total Alarm Current	Total External Current Required
6128	0	0	30	45			0	0	0
6128RF <input type="checkbox"/> Using Relay?	0	0	50	120			0	0	0
6137	0	0	40	85			0	0	0
6139/6139R	0	0	40	100			0	0	0
6149	0	0	30	55			0	0	0
6149EX	0	0	40	90			0	0	0
6150	0	0	40	70			0	0	0
6150RF	0	0	80	105			0	0	0
6150V	0	0	80	160			0	0	0
6150RF	0	0	80	105			0	0	0
6160CR	0	0	45	150			0	0	0
6160CR-2	1	0	45	160			45	160	0
6160PX	0	0	40	185			0	0	0
6160RF	0	0	50	150			0	0	0
6160V	0	0	60	190			0	0	0
6164LUS <input type="checkbox"/> Using Relay	0	0	55	210			0	0	0
6165EX	0	0	40	70			0	0	0
6270	0	0	180	260			0	0	0
6271C	0	0	159	230			0	0	0
6271CV	0	0	159	230			0	0	0
6271V	0	0	137	210			0	0	0
6272CV	0	0	120	305			0	0	0
6272CSV	0	0	180	305			0	0	0
6272CBV	0	0	160	305			0	0	0
6480S	0	0	40	190			0	0	0
6480W	0	0	40	190			0	0	0
6132PK (Symphony)	0	0	190	400			0	0	0
FSA-8 Fire Zone Annunciator	0	0	35	65			0	0	0
FSA-24 Fire Zone Annunciator	0	0	35	130			0	0	0
Add'l Keypd (Enter # and Currents)	0	0	0	0			0	0	0
Add'l Keypd (Enter # and Currents)	0	0	0	0			0	0	0

2 WIRE & 4 WIRE SMOKE DETECTORS (except Vplex Polling Loop detectors)	Enter Quantity	How many powered externally?	Standby (aux pow)	Alarm Current (Aux)	Polling Loop	Total Polling Loop	Total Standby Current	Total Alarm Current	Total External Current Required
2 wire smoke detector (zone powered)	1		Two-wire smoke detector current is built into the panel budgets. These fields are included to help you create a complete equipment list. The line below indicates if number of detectors exceeds panel capacity or if the selected panel does not support 2-wire smoke detectors.						
2 wire smoke detector (zone powered)	0								
2 wire smoke detector (zone powered)	0								
2 wire smoke detector (zone powered)	0		Quantity of 2 Wire Smoke Detectors OK for selected panel!						
12V 4 Wire Smoke (Qty & Currents)	0	0	0	0			0	0	0
12V 4 Wire Smoke (Qty & Currents)	0	0	0	0			0	0	0
12V 4 Wire Smoke (Qty & Currents)	0	0	0	0			0	0	0
12V 4 Wire Smoke (Qty & Currents)	0	0	0	0			0	0	0

VISTA-128FBP/V128FBP-24

COMMERCIAL PARTITIONED FIRE AND BURGLARY ALARM CONTROL PANEL

Honeywell

ADDITIONAL FEATURES

- Notification Appliance Circuits (two):
 - Programmable
 - Temporal code compliant
 - Individually silenceable
- Programmable on-board auxiliary relay
- False alarm reduction features:
 - Exit error logic
 - Exit delay reset
 - Cross zoning
 - Call waiting defeat
 - Recent close report
- Supports commercial hardwired, addressable V-Plex polling loop and wireless zones
- Hardwired zones
 - Provides eight style B hardwired zones
 - EOLR supervised for Fire and UL burglary installations
 - Supports N.O. or N.C. sensors
 - Individually assignable to any eight partitions
 - Up to 32 two-wire smoke detectors each on zone one and two (64 total)
- Up to 50 two-wire glassbreak detectors on zone eight
- Patented addressable V-Plex polling loop technology
 - Supports 120 two-wire zones points
 - Global polling technology for faster processing
 - Supervised by panel
 - Zones individually assignable to partitions, notification circuit (bell) output or auxiliary relay
 - 4,000 ft. capability without the use of shielded cable
 - Extender/Isolation bus modules
 - Eight zone – Class A and B expander module
 - Eight zone – Class B expander module
 - One zone supervised contact monitor module
- UL Listed wireless expansion
 - Supports up to 128 wireless zones/points
- Supervised by control for check-in signals
- Tamper protection for transmitters
- Individually assignable up to eight partitions
- Supports commercial wireless smoke detectors
- Access Control integration
 - Full integration with PassPoint Access Control System
 - Complete Gateway interface of VISTA and access functions
- Up to eight doors using VistaKey V-Plex Access Control
- Event reporting
- Local printer of access or VISTA related events
- Communication
 - Phone mapping by zone response type
 - Panel operation during download

SPECIFICATIONS

Applications

The VISTA-128FBP control is well suited for a variety of applications as an integrated fire and burglary control. A diverse line of Honeywell initiating devices supports this extremely powerful control. Some of the applications supported are: medical and professional buildings, churches or synagogues, office buildings, schools, strip malls, larger residences and factory or warehouse environments.

Electrical

- Primary power: 18VAC @ 72VA
Honeywell No. 1451
- Control panel quiescent current draw: 300mA
- Backup battery:
 - 12VDC, 12AH min to 34.4AH max
 - Lead acid battery (gel type)
- Alarm power: 12VDC, 1.7A max for each notification (bell) circuit output
Total 2.3A @ 12V
- Aux. standby pwr: 12VDC, 1A max
- Total power: 2.3A at 12VDC, 3.4A at 24VDC from all sources
- Standby time: 24 hours with 1A standby load using 34.4AH battery
- Fusing: Battery input, aux. and notification (bell) circuit outputs are protected using PTC circuit protectors. All outputs are power limited.
- Optional 24-volt power supply, PS 24 supplies two 24 VFW, 1.7A full wave rectified, unfiltered outputs

Main Dialer

- Line seize: Double Pole
- Ringer equiv., 0.7B
- Formats: ADEMCO Low Speed, ADEMCO 4+2 Express, ADEMCO High Speed, ADEMCO Contact ID, Sescoa and Radionics
- Dual phone line capability (using 5140DLM module)

Cabinet dimensions

- 18" H x 14.5" W x 4.3" D

Environmental

- Storage temp: 14° F to 158° F
(-10° C to 70° C)
- Operating temp: 32° F to 122° F
(0° C to 50° C)
- Humidity: 85% RH

- EMI: Meets or exceeds the following requirements:
 - FCC Part 15, Class B Device
 - FCC Part 68
 - IEC EMC Directive

Agency Listings

- UL609 Grade A Local Mercantile Premises and Mercantile Safe and Vault
- UL611/1610 Grades A, AA, Central Station
- UL365 Grades A, AA Police Connect
- UL864/NFPA72 Local, Central Station and Remote Station
- UL985
- Factory Mutual
- California State Fire Marshal
- MEA
- CAN/ULC S304 – Central and Monitoring Station Burglar Alarm Unit
- CAN/ULC S527 – Central Unit for Fire Alarm Systems
- CAN/ULC S303 – Local Burglar Alarm Unit
- CAN/ULC S525 – Audible Signal Appliances

VISTA-128FBP/V128FBP-24

COMMERCIAL PARTITIONED FIRE AND BURGLARY ALARM CONTROL PANEL

COMPATIBLE DEVICES

Auxiliary Devices

- 6160CR-2 – Red Alpha Keypad
- 4204 – Relay Module, four form C contacts
- 4204CF – Two supervised output circuits
- 5881 Series RF receiver
- 5883H RF receiver
- 6220S – System printer used with 4100SM serial module
- 6160CR-2 – Red Fire Keypad
- 6160 – Burglary Keypad

Two-Wire Smoke Detectors

Conventional

- System Sensor
- ESL
- DSC

Horn/Strobes

- System Sensor
- Wheelock
- Gentex

Manual Pull Stations

- 5140MPS-1
- 5140MPS-2

V-Plex (Addressable) Devices

- 4208U Loop Expansion Module – eight zones
- 4101SN Single Relay/Zone Module

- 4208SNF Class A/B Expander Module
- 4190SN Remote Point Module – two zones
- 4193SN Two-Zone Serial Interface Module
- VSI Module
- 4293SN One-Zone Serial Interface Module

V-Plex Extender/Isolation Modules

- 4297 Extender/Isolator Module
- VSI Isolator Module

V-Plex Smoke Detectors:

- 5193SD
- 5193SDT

V-Plex Passive Infrared Detectors

- 998MX
- IS2500SN
- DT7500SN

V-Plex (Addressable) Contacts

- 4939SN-WH
- 4944SN-WH
- 4959SN

V-Plex Glassbreak Detectors

- FG1625SN

Optional 24V Power Supply

- PS24 – 24V power supply – 3.4A

Commercial Wireless Devices

- 5808W3 – Photoelectric Smoke/Heat Detector
- 5806W3 – Photoelectric Smoke Detector
- 5809 – Wireless Heat Detector
- 5817CB – Wireless Commercial Transmitter
- 5869 – Hold-Up Transmitter
- 5881ENHC – RF Receiver
- 5883H – RF Receiver

Access Control

- VistaKey V-Plex (addressable) Access Control
- VistaKey-SK Starter Kit
- VistaKey-EX Expansion Kit

Alarm Communications

- 7845i-ENT – Internet/Intranet Communicator
- 7845GSM – Digital Cellular Communicator
- 7845i-GSM – Internet and Digital Cellular Communicator
- GSMCF/GSMCF – Commercial Fire Communication Kits (when available)

Product specifications subject to change.

ORDERING

V128FBP-9

Commercial Fire and Partitioned Burglary Alarm Control Panel 12V Model

V128FBP9-24

Commercial Fire and Partitioned Burglary Alarm Control Panel 24V Model

For more information: www.honeywell.com/security/hsc

Automation and Control Solutions

Honeywell Security & Communications
2 Corporate Center Dr. Suite 100
Melville, NY 11747
1.800.467.5875
www.honeywell.com

LIVSTA128FBP0/D
September 2009
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Honeywell

SECURITY ACCESS AND SURVEILLANCE
SECTION 13850

VISTA-128FBP
ARCHITECT AND ENGINEER SPECIFICATION
FOR
SECURITY SYSTEM

ADEMCO Group
165 Eileen Way
Syosset, New York 11791

1-800-645-7568

**SECTION 13850
DETECTION AND ALARM**

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes
 - 1. Control Panel
 - 2. Associated Equipment
- B. Products Installed But Not Supplied Under This Section
 - 1. Section 16140 - Wiring Devices
 - 2. Section 16530 - Emergency Lighting
- C. Related Sections
 - 1. Section 13700 - Security Access and Surveillance
 - 2. Section 13800 - Building Automation and Control

1.02 REFERENCES

- A. Underwriters Laboratories (UL):
 - 1. UL 268 – Smoke Detectors for Fire Protective Signaling Systems
 - 2. UL 365 – Police Station Connected Burglar Alarm Units and Systems
 - 3. UL 609 – Local Burglar Alarm Units and Systems
 - 4. UL 611 – Central Station Burglar-Alarm Units
 - 5. UL 636 – Holdup Alarm Units and Systems
 - 6. UL 684 – Local, Central Station, and Remote Station
 - 7. UL 864 – Control Units for Fire Protective Signaling Systems
 - 8. UL 985 – Household Fire Warning System Units
 - 9. UL 1023 – Household Burglar-Alarm System Units
 - 10. UL 1076 – Proprietary Burglar-Alarm Units and Systems
 - 11. UL 1610 – Central-Station Burglar-Alarm Units
- B. Federal Communications Commission (FCC):
 - 1. Code of Federal Regulations Title 47 - Part 15 – Radio Frequency Devices
 - 2. Code of Federal Regulations Title 47 - Part 68 – Connection of Terminal Equipment to the Telephone Network
- C. National Fire Protection Association (NFPA):
 - 1. NFPA70 – National Electrical Code.

2. NFPA 72 – National Fire Protection Code

1.03 SYSTEM DESCRIPTION

- A. The system shall be a Fire/Burglary/Access Control/CCTV Switching System that includes the following capabilities:
 1. Listed for UL Commercial Fire and Burglary.
 2. Supports up to 128 zones.
 3. Supports up to eight (8) separate partitions.
 4. Supports up to 150 users.
 5. Supports commercial wireless devices.
 6. Provides integrated security, access control, and CCTV switching and commercial fire capability.
 7. Provides supervision of peripheral devices.
 8. Supports up to 96 optional relay outputs.
 9. Supports long-range radio (LRR) communication.
 10. Provides scheduling capability to allow for automated operations.
 11. Supports up to eight (8) alphanumeric paging devices.
 12. Supports panel linking.
 13. Supports alarm reporting via Internet.
 14. Interfaces with automation software.
 15. Monitors smoke detector maintenance signals.
 16. Capable of being installed using existing wiring.

1.04 SUBMITTALS

- A. Submittals shall include manufacturer data sheets for all major system components.

1.05 QUALITY ASSURANCE

- A. The alarm manufacturer shall be certified as being compliant with ISO9001.

PART 2 PRODUCTS

2.01 SYSTEM PERFORMANCE

- A. Control Panel - The control panel shall be an eight (8)-partition, UL commercial fire and burglary control panel that supports up to 128 zones using basic

hardwired, polling loop, and wireless zones. It shall also provide supervision of two (2) notification appliance output circuits (NAC), RF receivers, and relay modules. In addition, the control shall provide the ability to schedule time-driven events, and allow certain operations to be automated by pressing a single button. The system shall be capable of interfacing with an ECP long-range radio (LRR) unit that can send Contact ID messages, and alphanumeric paging devices. The control shall provide integrated access control and CCTV-switching capability with the use of a single downloader and database.

1. **Basic Hardwired Zones** - The control shall provide eight (8) style-B hardwire zones with the following characteristics:
 - a. EOLR supervision (optional for zones 3-8): Shall support N.O. or N.C. sensors (EOLR supervision required for UL installations).
 - b. Zones/Points shall be individually assignable to one of eight (8) partitions.
 - c. Support up to 32 two-wire smoke detectors on two selected zones (64 total).
 - d. Support four-wire smoke or heat detectors on any zone (power to four-wire smoke detectors must be supervised with an EOL device).
 - e. Support up to 50 two-wire latching glass break detectors on one selected zone.
 - f. Individually assignable to Notification Appliance (NAC) outputs and/or auxiliary relays.

2. **Optional Expansion Zones**
 - a. **Polling Loop Expansion** – The control shall support up to 120 additional hardwire zones using a built-in two-wire polling (multiplex) loop interface. The polling loop shall provide power and data to remote point modules, and constantly monitor the status of all zones on the loop. Maximum current draw shall not exceed 128 mA. The polling loop zones shall have the following characteristics:
 - (1) Interface with RPM (Remote Point Module) devices that provide Class B, Style Y (e.g., 4208U/4208SN) or a combination of Class B, Style Y, and Class A, Style Z (e.g., 4208SNF) zones.
 - (2) Individually assignable to one of eight (8) partitions.
 - (3) Individually assignable to NAC outputs or auxiliary relays.
 - (4) Supervised by the control panel.
 - (5) A 12,000 ft (3658 m) wire run capability without using shielded cable.

- (6) Each RPM (Remote Point Module) enclosure shall be tamper protected.
 - b. Wireless Expansion – The control shall support up to 128 wireless zones using a 5800 series RF receiver (fewer if using hardwire and/or polling loop zones). Wireless zones shall have the following characteristics:
 - (1) Supervised by control panel for check-in signals (except certain non-supervised transmitters).
 - (2) Tamper-protection for supervised zones.
 - (3) Individually assignable to one of the partitions.
 - (4) Individually assignable to bell outputs and or auxiliary relays.
 - (5) Support wireless devices listed for Commercial Burglary using the 5881ENHC RF Receiver.
 3. Partitions – The control shall provide the ability to operate eight (8) separate areas, each functioning as if it had its own control. Partitioning features shall include:
 - a. A Common Lobby partition (1-8), which can be programmed to perform the following functions:
 - (1) Arm automatically when the last partition that shares the common lobby is armed.
 - (2) Disarm when the first partition that shares the common lobby is disarmed.
 - b. A Master partition (9), used strictly to assign keypads for the purpose of viewing the status of all eight (8) partitions at the same time (master keypads).
 - c. Assignable by zone.
 - d. Assignable by keypad/annunciator.
 - e. Assignable by relay to one or all eight (8) partitions.
 - f. Ability to display fire and/or burglary and panic and/or trouble conditions at all other partitions' keypads (selectable option).
 - g. Certain system options selectable by partition, such as entry/exit delay and subscriber account number.
 4. User Codes – The control shall accommodate 150 user codes, all of which can operate any or all partitions. Certain characteristics must be assignable to each user code, as follows:
 - a. Authority level (Master, Manager, or several other Operator levels). Each User Code (other than the installer code) shall be

capable of being assigned the same or a different level of authority for each partition that it will operate.

- b. Opening/Closing central station reporting option.
 - c. Specific partitions that the code can operate.
 - d. Global arming capability (ability to arm all partitions the code has access to in one command).
 - e. Use of an RF (button) to arm and disarm the system (RF key must first be enrolled into the system).
5. **Peripheral Devices** – The control shall support up to 30 addressable ECP devices, which can be any combination of keypads, RF receivers, relay modules, annunciator modules, and interactive phone modules. Peripheral devices have the following characteristics:
- a. Each device set to an individual address according to the device's instructions.
 - b. Each device enabled in system programming.
 - c. Each device's address shall be supervisable (via a programming option).
6. **Keypad/Annunciator** – The control shall accommodate up to 16 keypads or six (6) touch-screen (i.e.; advanced user interface) keypads. The keypads shall be capable of the following:
- a. Performing all system arming functions.
 - b. Being assigned to any partition.
 - c. Providing four programmable single-button function keys, which can be used for:
 - (1) Panic Functions –activated by wired and wireless keypads; reported separately by partition.
 - (2) Keypad Macros –32 keypad macro commands per system (each macro is a series of keypad commands). Assignable to the A, B, C, and D keys by partition.
7. **Optional Output Relays** - A total of 96 relay outputs shall be accommodated using relay modules. Each relay module shall provide four (4) Form C (normally open and normally closed) relays for general-purpose use or two (2) Class-B, Style-Y supervised notification appliance circuit outputs, when using the 4204CF module. The relays shall be capable of being:
- a. Programmed to activate in response to system events.
 - b. Programmed to activate using time intervals.

- c. Activated manually using a relay command mode.
 - d. Assigned an alpha descriptor.
 - e. Used for Class B, Style-Y supervised bell outputs (4204CF module).
 - f. A combination of 4204 (ECP) and 4101SN (polling loop) relays.
8. Optional Vista Interactive Phone Module – The control shall support the ADEMCO 4285/4286 VIP Modules, which permit access to the security system in order to perform the following functions:
- a. Obtain system status information.
 - b. Arm and disarm the security system.
 - c. Control relays.
9. Optional LED Annunciator – The control shall support the ADEMCO FSA-8 and FSA-24 annunciators, which are capable of:
- a. Visually identifying a zone or point that is in alarm or trouble.
 - b. Programmable for system silence/reset.
 - c. Up to 96 LEDs may be used in one system.
 - d. A total of four (4) FSA-24 or 12 FSA-8 annunciators may be used in one system.
 - e. An optional keyswitch, FSAKSM module, shall be available for UL listed Silence and Reset capability.
10. Notification Appliance Circuits (NAC) – The Control Panel shall internally provide two supervised NAC outputs for operating fire and burglar alarm notification appliances. It shall also support additional supervised bell outputs when using 4204CF relay modules. Each NAC output shall be rated at 10-14 VDC, 1.7 amp max power limited. Total alarm current draw when using two NAC outputs shall not exceed 2.3 amps for battery independent operation.
11. Auxiliary Relay – A built-in Form C relay shall be provided. The relay contacts shall be rated at 28 VAC/VDC, 2.8 amps maximum. The relay shall support:
- a. Alarm activation.
 - b. Trouble/supervisory activation.
 - c. Reset of four-wire smoke detectors.
 - d. Battery saving feature.
12. Integrated Access Control – The control shall be capable of the following:

- a. Providing a command that activates relays to allow access doors to open (e.g., lobby door), lights to be turned on or off, etc.
 - b. Becoming a fully integrated access control system by using numerous VistaKey Single-Door Access Control Modules.
 - c. Supporting up to eight (8) VistaKey Access Control Modules. The VistaKey Access Control Modules shall use the same Compass Downloader as the Vista-128FBP and shall be programmable from the Compass Downloader or the Keypad/Annunciators.
 - d. Assigning any number of access control relays to each partition (up to 96 for the system).
 - e. Supporting up to 250 access card holders using VistaKey.
 - f. Connecting to the ADEMCO PassPoint Access Control System via the Vista Gateway Module (VGM).
13. CCTV Switching – The System shall be capable of supporting the VistaView 100 CCTV Switching System. The CCTV system shall be fully integrated and be event driven by Fire, Burglary or Access events. When cameras are not event driven, they shall be driven by an automatic preset dwell time. The system shall also be capable of:
- a. Activating the CCTV system via a Form-C relay output.
 - b. Operating up to 60 camera inputs and 30 video outputs.
14. Commercial Wireless Equipment – The Control shall be compatible with UL Listed Commercial Wireless Fire & Security equipment including:
- a. ADEMCO 5881ENHC Commercial Fire/Burg Receiver. - The receiver shall be capable of receiving as many points as the control panel is rated for. Up to two (2) receivers may be used on any system. Receivers may be remotely located anywhere on the system Keypad/Annunciator bus.
 - b. ADEMCO 5808LST Wireless Photoelectric Smoke and Heat Detector - The device shall be UL 268 listed and shall have Maintenance Alert capability and Automatic Drift Compensation.
 - c. ADEMCO 5809 Wireless 135D Fixed Temperature and Rate of Rise Heat Detector - The device shall be UL 521 listed for commercial applications.
 - d. ADEMCO 5817CB Wireless Universal Contact Monitoring Transmitter - This device shall be capable of making any conventional UL listed contact device a wireless device. The device shall be UL listed for commercial fire and burglary applications as follows: UL 864, 985 for fire and UL 365, 609, 1023, 1076 and 1610 for security and nurse call.

- e. **ADEMCO 5869 Wireless Hold Up Switch/Transmitter - This device shall be UL 636 listed for commercial burglary applications.**
15. **Optional Keyswitch – The control shall support the ADEMCO 4146 Keyswitch on any one of the system's eight (8) partitions. If used, zone 7 is no longer available as a protection zone.**
16. **Voltage Triggers – The system shall provide voltage triggers, which change state for different conditions. Used with long-range radio (LRR) equipment or other devices such as a remote keypad sounder, keyswitch ARMED and READY LEDs, or a printer to print the system's event log.**
17. **Event Log – The System shall maintain a log of different event types (enabled in programming). The event log shall provide the following characteristics:**
- u. **Stores up to 512 events.**
 - b. **Viewable at the keypad or through the use of Compass software.**
 - c. **Printable on a serial printer using a 4100SM Module including zone alpha descriptors.**
 - d. **Stores PassPoint access control events.**
 - e. **Sends printed events to up to eight (8) alphanumeric pagers.**
18. **Scheduling - Provides the following scheduling capabilities:**
- u. **Open/close schedules (for control of arming/disarming and reporting).**
 - b. **Holiday schedules (allows different time windows for open/close schedules).**
 - c. **Timed events (for activation of relays, auto-bypassing and un-bypassing, auto-arming and disarming, etc.).**
 - d. **Access schedules (for limiting system access to users by time)**
 - e. **End User Output Programming Mode (provides 20 timers for relay control).**
 - f. **The system shall automatically adjust for daylight savings time.**
19. **Communication Features - Supports the following formats and features for the primary and secondary central station receivers:**
- u. **Formats**
 - (1) **ADEMCO Low Speed (Standard or Expanded).**
 - (2) **Sescoa/Radionics.**
 - (3) **ADEMCO Express.**

- (4) ADEMCO High Speed.
 - (5) ADEMCO Contact ID.
 - b. Backup reporting - The system shall support backup reporting via the following:
 - (1) Secondary phone number.
 - (2) ECP long-range radio (LRR) interface.
 - (3) Option to select long range radio (LRR) or dialup as the primary reporting method (dynamic signaling feature).
 - c. Internet reporting - The system shall be capable of communicating with the central station via the internet using Alarmnet-i. It shall provide the user with the ability to control the system via a browser interface (i.e., AOL, Netscape, Internet Explorer). All packet data transmitted to the monitoring station shall be encrypted with a minimum of 1024 bits of encryption.
20. Audio Alarm Verification Option - Provides a programmable Audio Alarm Verification (AAV) option that can be used in conjunction with an output relay to permit voice dialog between an operator at the central station and a person at the premises.
21. Cross-Zoning Capability - Helps prevent false alarms by preventing a zone from going into alarm unless its cross-zone is also faulted within five (5) minutes.
22. Pager Interface - The Control Panel shall be capable of sending event information to an alphanumeric pager via a VA-8201 pager interface device.
23. 24-Volt Power Supply - The Control Panel shall be compatible with a 24-Volt power supply module. The module shall supply two (2) 24 vdc, 3.4 amps, rectified, unfiltered outputs, which power:
 - a. Alarm notification appliances, including but not limited to sirens horns, bells and strobes.
 - b. Auxiliary devices capable of operating using full-wave rectified unfiltered voltage.
24. Exit Error False Alarm Prevention Feature - The System shall be capable of differentiating between an actual alarm and an alarm caused by leaving an entry/exit door open. If not subsequently disarmed, the control panel shall:
 - a. Bypass the faulted E/E zone(s) and/or interior zones and arm the system.

- b. Generate an Exit Error report by user and by zone so the central station knows it was an exit alarm and who caused it.
25. Enhanced Fire Walk-Test Mode – The Control Panel shall provide the installer with the following features:
- a. Automatic test of all integrated remote point module (RPM) devices, equipped with an automatic test feature.
 - b. While automatic test is in progress all fire zones that remain untested shall be displayed.
 - c. An event log shall be capable of logging the results of tested and untested zones.
 - d. The ability to report the result of tested and untested zones to the central station.
26. Built-in User's Manual and Descriptor Review - For end-user convenience, the control panel shall contain a built-in User's Manual. It shall include the following capabilities:
- a. By depressing any of the function keys on the keypad for five (5) seconds, a brief explanation of that function shall scroll across the alphanumeric display.
 - b. By depressing the READY key for five (5) seconds, all programmed zone descriptors shall be displayed (one at a time). This feature shall provide a check for installers and ensure all descriptors have been entered properly.
27. Programming - The Control shall be capable of being programmed locally or remotely using the ADEMCO Compass Downloader and shall be capable of:
- a. Uploading and downloading all programming information at 300 baud.
 - b. Uploading and displaying firmware revision levels from the control.
28. Panel Linking - The Control shall be capable of being networked together with up to eight other controls and being operated by any keypad within the system. It shall provide the ability for users to:
- a. Control multiple zones, partitions, and/or buildings from a central location.
 - b. Check status, arm and disarm any partition from any keypad in the system.
 - c. Globally arm or disarm partitions based upon user authority.
29. Automation Software - The Control shall be capable of interfacing with automation software via an RS232 input on a single partition.

The control panel shall be the ADEMCO VISTA-128FBP Commercial Fire/Burglary Partitioned Security System or equivalent.

2.02 ENCLOSURE

- A. The Control Panel shall be enclosed in a metal cabinet, suitable for wall mounting. The dimensions shall not exceed 18 inches (45.7 cm) in height, 14.5 inches (36.8 cm) in width or 4.3 inches (10.9 cm) in depth.

2.03 ELECTRICAL POWER REQUIREMENTS

- A. System Power – The Fire and Burglary Alarm System shall operate using standard 120 volts AC, 50/60 Hz power.
1. Control Primary Power – Transformer power shall be 18 VAC, 72 VA.
 2. Backup Battery – A rechargeable 12 VDC, gel type, lead acid backup battery shall be provided. The battery shall be rated between 12 and 34-ampere hours (AH).
 3. Alarm Power – Alarm power shall be 12 VDC, 1.7 amps for each bell output
 4. Auxiliary Standby Power – Standby power shall be 12 VDC, 1 amp maximum.
 5. Total Power - Combined auxiliary standby and alarm currents shall be 2.3 amps.
 6. Fusing – The battery input, auxiliary, and bell outputs shall be protected using PTC circuit breakers. All outputs shall be power limited.
 7. Power Supply - A 24-volt power supply shall provide 24 vdc, 3.4 amps full-wave rectified, unfiltered outputs.

2.04. ENVIRONMENTAL CONDITIONS

- A. Environmental Conditions – The Fire and Burglary Alarm System shall be designed to meet the following environmental conditions.
1. Storage Temperature – The system shall be designed for a storage temperature of -10° C to 70°C.
 2. Operating Temperature - The system shall be designed for an operating temperature of 0° C to 50°C (32° F to 120°F).

3. Humidity - The system shall be designed for normal operation in an 85% relative humidity environment.
4. Electromagnetic Interference - The system shall meet or exceed the requirements of FCC Part 15, Class B devices, FCC Part 68, IEC EMC directive.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Submission of a proposal confirms that the Contract Documents and site conditions are accepted without qualifications unless exceptions are specifically noted.
- B. The site shall be visited on a regular basis to appraise ongoing progress of other trades and contracts, make allowances for all ongoing work, and coordinate the requirements of this contract in a timely manner.

3.02 INSTALLATION

- A. The System shall be installed and tested in accordance with the Manufacturer's Installation instructions. The following conditions are applicable:
 1. In order to ensure a complete, functional System, for bidding purposes, where information is not available from the Owner upon request, the worst case condition shall be assumed.
 2. Interfaces shall be coordinated with the Owner's representative, where appropriate.
 3. All necessary backboxes, pullboxes, connectors, supports, conduit, cable, and wire shall be furnished and installed to provide a complete and reliable System installation. Exact location of all boxes, conduit, and wiring runs shall be presented to the Owner for approval in advance of any installation.
 4. All conduit, cable, and wire shall be installed parallel and square with building lines, including raised floor areas. Conduit fill shall not exceed forty percent (40%). All wires shall be gathered and tied up to create an orderly installation.

3.03 TESTING AND CERTIFICATION

- A. The Contractor shall demonstrate the functionality of the System upon completion of installation, documenting the result of all tests and providing those results to the Owner. The System shall be tested in accordance with the following:

1. The Contractor shall conduct a complete inspection and test of all installed equipment. This includes testing and verifying connection to equipment of other Divisions.
2. The Contractor shall provide staff to test all devices and all operational features of the System for witness by the Owner's representative and the Authority having jurisdiction. The Contractor shall provide two-way radio communications to assist in the testing. All testing must be witnessed by the owner's representative, prior to acceptance.
3. The testing and certification shall take place as follows:
 - a. System shall be tested in conjunction with the manufacturer's representative.
 - b. All deficiencies noted in the above test shall be corrected.
 - c. Test results shall be submitted to the consultant or owner's representative.
 - d. System test witnessed by owner's representative and correction of any deficiencies noted.
 - e. The owner's representative shall accept the System.
 - f. System test shall be witnessed by the Authority having Jurisdiction, and any deficiencies that are noted shall be corrected.
4. A letter of certification shall be provided to indicate that the tests have been performed and all devices are operational.

END OF SECTION

6160CR Commercial Alpha Keypad

INSTALLATION GUIDE

Keypad Features

- Programmable function keys (* see note 1)
- Built-in sounder
- Ready, Armed, Supervisory and Trouble LEDs (* see note 2)
- RED keypad for Commercial Fire applications

Supported Control Panels

- VISTA-32FB (* see note 3)
- VISTA-128FB (* see note 3)

Notes:

1. Function key applications are control-dependent and may differ from one control to another (see control's instructions for details).
2. Trouble and Supervisory LED operation is an option on some controls (see control's instructions for details).
3. Keypad address may be set to address 00 through 30 to operate with these controls (see control's instructions for details).

GENERAL INFORMATION

The 6160CR is an addressable remote keypad that is intended for use in commercial applications with ADEMCO Group control panels, as listed above. The 6160CR's address is set locally, via the keypad's keys, depending on the control being used (see note 3, above). The keys are continuously backlit for convenience. The LCD display is backlit only when a key is depressed, or when the system is in alarm or trouble condition.

Note: On some controls, the LCD may be programmed to remain on at all times (see control's instructions for details).

KEYPAD LED INDICATIONS

The keypad's LEDs will light under the following conditions:

READY	Lights when the system is "READY" to arm; all zones are intact
ARMED	Lights when the system is armed in any mode (AWAY, STAY, etc.)
SUPERVISORY*	Lights when a supervisory condition exists (see control's instructions for details)
TROUBLE*	Lights when a trouble condition exists (see control's instructions for details)

* The LEDs will temporarily extinguish while the display shows other status conditions. For example, if a trouble condition is displayed, the LED is ON. When the display indicates a different condition (FAULT of a burglary zone for instance), the LED will extinguish, but will turn back ON when the display again indicates the trouble condition.

SPECIAL FUNCTION KEYS

The keypad also features programmable function keys labeled A, B, C, and D. These keys may be programmed to initiate panic, fire, or emergency alarms as well as other special functions such as macros, paging, and single-button operation. (Not all controls support these special functions. Refer to the individual control panel's instructions for details.)

These keys must be held down for at least 2 seconds to initiate the assigned function.

WIRING AND INSTALLATION

The keypad may be surface-mounted directly to a dry wall or to a single- or double-gang electrical box.

1. Remove the case back by inserting a thin-bladed screwdriver, in turn, against each of the two snap-open tabs (see Figure 1 below). Pry apart the case back as each tab is depressed.
2. Route wiring going to the keypad through the large rectangular opening in the case back.
3. Mount the case back to the wall or electrical box.
4. Wire directly from the keypad's terminal block (see Figure 2) to the terminal block on the control panel (see control's Summary of Connections label for correct terminal connections).

Wiring Table (All Keypads)

Keypad	Control Panel	Wire Color
DO	Data Out	Yellow
+	+ AUX Pwr	Red
-	- AUX Pwr (GND)	Black
DI	Data In	Green

5. Reattach the keypad to its case back.
Hint: Insert top end first and then snap shut the lower end.

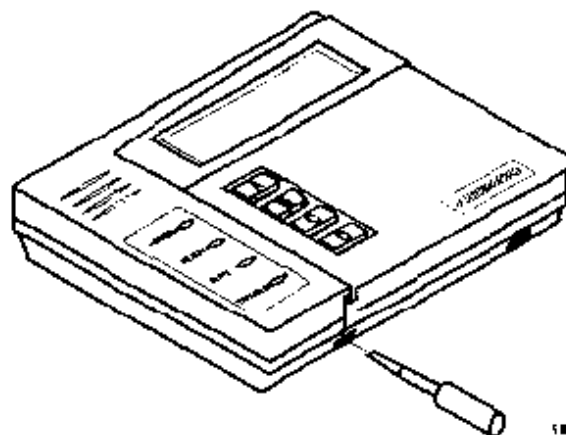


Figure 1

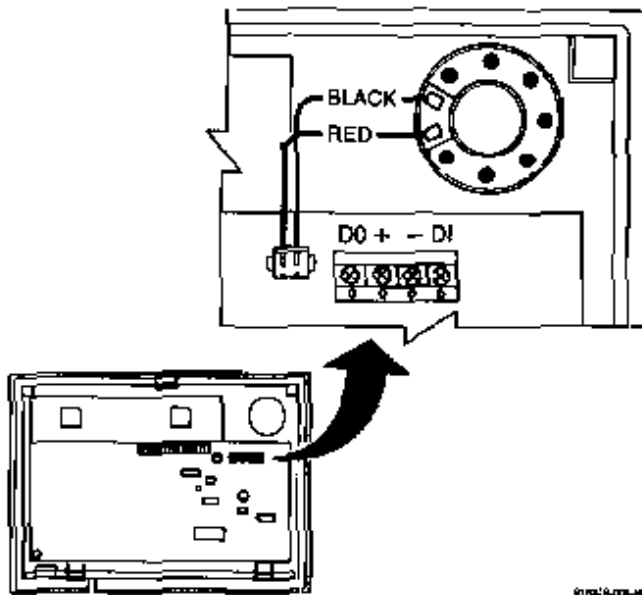


Figure 2

SETTING THE KEYPAD ADDRESS

The keypad address must be set according to the control panel being used (refer to the individual control panel's instructions for details). Available addresses are from 00 through 30. The keypad is shipped with a default address of 31 (non-addressable mode). To change the address, do the following:

1. **Enter keypad address mode:**
Power up the keypad. Within 60 seconds of power-up, press and hold down the [1] and [3] keys together for 3 seconds. The current address will be displayed and the cursor will be under the "tens" digit (31).

Notes:

If a keypad needs to be re-addressed to work with your control, there is no initial time limit to change the address. However, once a correct address is entered or successful communication is made with the control panel, the following notes apply.

- *If system has been powered up for more than 2 minutes, you must power the keypad down, then power it up again in order to change the keypad's address.*

- *The keypad will not enter the address mode if the system is in the program mode.*
- *If 10 seconds have passed with no key entry, the keypad automatically exits the address mode.*
- *The current address may be viewed at any time by pressing and holding [1] and [3] keys together.*

2. **Set the desired address:**

Enter the desired address. For example, for address 12, enter 1, then 2. Display shows (12).

3. **Exit the address mode:**

Press the "star" key (*) to save the displayed address and exit the address mode.

KEYPAD LABELS

Function key labels: A set of adhesive-backed labels with some typical function symbols (e.g., fire, police, emergency, etc.) is provided. These labels come in four colors (red, blue, green, and white) and may be placed on the appropriate function keys (A, B, C, or D) for ease of identifying the individual key's function (as determined by the control panel's capability and programming).

SPECIFICATIONS

- Physical:** 5.250" H x 7.437" W x 1.312" D
- Display:** Alphanumeric, 32-character (2 lines x 16 characters), LCD back-lit
- LEDs:** Armed (red), Ready (green), *Trouble (yellow) and *Supervisory (yellow)
* See control panel's instructions for specific applications regarding Trouble and Supervisory LEDs.
- Sounder:** High-quality speaker
- Electrical:** Voltage: +12VDC
Current: 45mA standby;
150mA in alarm (sounder, back light and LED on)

FOR WARRANTY INFORMATION AND LIMITATIONS OF THE ENTIRE SYSTEM, REFER TO THE INSTALLATION INSTRUCTIONS FOR THE CONTROL PANEL WITH WHICH THIS DEVICE IS USED.



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K3590-ADCEV1 M01



Selectable-Output Horns, Strobes, and Horn Strobes

SpectrAlert® Advance selectable-output horns, strobes, and horn strobes are rich with features guaranteed to cut installation times and maximize profits.



SPECTRAlert
ADVANCE

Features

- Plug-in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12- or 24-volt operation at 15 or 615/75 candela
- Field-selectable candela settings on wall and ceiling units: 15, 15/75, 33, 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 and ceiling units
- Mounting plate shorting spring checks wiring continuity before device installation
- Electrically compatible with existing SpectrAlert products
- Compatible with MDI sync module

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, 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, which make installations fast and foolproof while virtually eliminating costly and time-consuming ground faults. Furthermore, a universal mounting plate with an onboard shorting spring tests wiring continuity before the device is installed, protecting devices from damage.

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

Agency Listings



SpectrAlert Advance Specifications

Architect/Engineer Specification

General

SpectrAlert Advance horns, strobes, and horn strobes shall mount to a standard 4 x 4 x 1 1/2-inch back box, 4-inch octagon back box, or double-gang back box. Two-wire products shall also mount to a single-gang 2 x 4 x 1 1/2-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-loaded 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. 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, 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 audibly 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 MDL 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 1/4 x 4 1/4 x 1 1/2-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. Three 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 95% non-condensing
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 DC/PWR or regulated 24 DC/FWR
Operating Voltage Range*	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Ceiling-Mount Dimensions (including lens)	6.8" diameter x 2.5" high (173 mm diameter x 64 mm high)
Wall-Mount Dimensions (including lens)	5.6" L x 4.7" W x 2.5" D (142 mm L x 119 mm W x 64 mm D)
Horn Dimensions	5.6" L x 4.7" W x 1.3" D (142 mm L x 119 mm W x 33 mm D)
Wall-Mount Back Box Skirt Dimensions (BBS-2, BBSW-2)	5.9" L x 5.0" W x 2.2" D (151 mm L x 128 mm W x 56 mm D)
Ceiling-Mount Back Box Skirt Dimensions (BBS-C-2, BBSCW-2)	7.1" diameter x 2.2" high (180 mm diameter x 57 mm high)
Wall-Mount Trim Ring Dimensions (sold as a 5 pack) (TR-HS, TRW-HS)	5.7" L x 4.8" W x 0.35" D (145 mm L x 122 mm W x 9 mm D)
Ceiling-Mount Trim Ring Dimensions (sold as a 5 pack) (TRC-HS, TRCW-HS)	6.9" diameter x 0.35" high (175 mm diameter x 9 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. Probe Current Draw, mA RMS

	Candela	8-17.5 Volts		16-33 Volts	
		DC	FWR	DC	FWR
Standard	15	173	128	66	71
Candela Range	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	135	NA	NA	228	207
	150	NA	NA	246	235
	177	NA	NA	281	251
	185	NA	NA	286	258

UL Max. Horn Current Draw, mA RMS[†]

Sound Pattern	dB	8-17.5 Volts		16-33 Volts	
		DC	FWR	DC	FWR
Temporal	High	57	51	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)

DC Input	8-17.5 Volts		16-33 Volts		30	75	95	110	115
	15	15/75	15	15/75					
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	117	168	190	210	218
Temporal Medium	129	152	78	88	103	160	184	202	205
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)

DC Input	16-33 Volts				FWR Input	16-33 Volts			
	135	150	177	185		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	262	262	Temporal Low	207	221	246	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	239	254	281	285	Non-Temporal Low	214	229	256	262

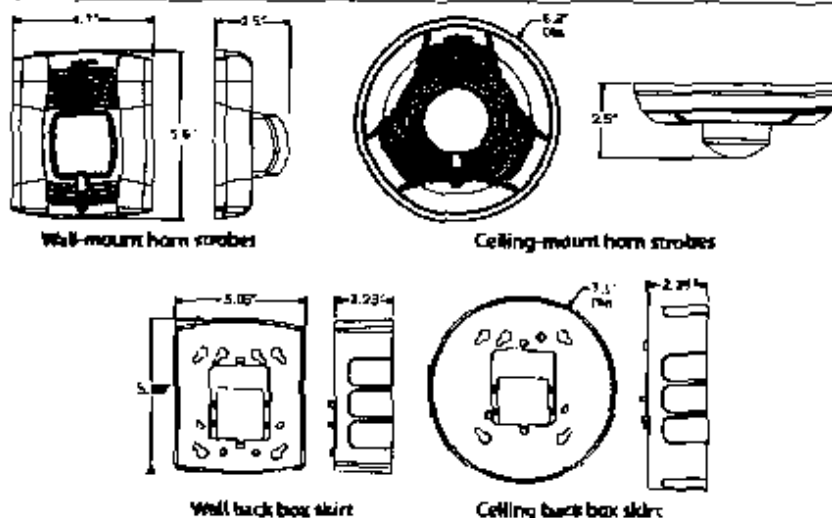
Horn Tones and Sound Output Data

Horn and Horn Strobe Output (dB)

Switch Position	Sound Pattern	dB	8-17.5 Volts		16-33 Volts		24-Volt Nominal			
			DC	FWR	DC	FWR	Reverberant		Anechoic	
1	Temporal	High	78	78	84	84	88	88	91	98
2	Temporal	Medium	74	74	80	80	86	86	90	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	79	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 Dimensions



SpectrAlert Advance Ordering Information

Model	Description
Wall Horn Strobes	
P2R*	2-Wire Horn Strobe, Standard cd, Red
P2RH*	2-Wire Horn Strobe, High cd, Red
P2W*	2-Wire Horn Strobe, Standard cd, White
P2WH*	2-Wire Horn Strobe, High cd, White
P4R*	4-Wire Horn Strobe, Standard cd, Red
P4RH*	4-Wire Horn Strobe, High cd, Red
P4W*	4-Wire Horn Strobe, Standard cd, White
Wall Strobes	
SR*	Strobe, Standard cd, Red
SRH*	Strobe, High cd, Red
SW*	Strobe, Standard cd, White
SWH*	Strobe, High cd, White
Ceiling Horn Strobes	
PC2R*	2-Wire Horn Strobe, Standard cd, Red
PC2RH*	2-Wire Horn Strobe, High cd, Red
PC2W*	2-Wire Horn Strobe, Standard cd, White
PC2WH*	2-Wire Horn Strobe, High cd, White
PC4R*	4-Wire Horn Strobe, Standard cd, Red
PC4RH*	4-Wire Horn Strobe, High cd, Red
PC4W*	4-Wire Horn Strobe, Standard cd, White

Notes:

* Add "P" to model number for plain housing, no "FIRE" marking on cover, e.g., P2R-P.

† Add "SP" to model number for "TUEGO" marking on cover, e.g., P2R-SP.

‡ Standard cd refers to strobes that include 15, 15/25, 30, 45, 95, 110, and 115 candela settings. High cd refers to strobes that include 135, 150, 175, and 185 candela settings.

Model	Description
Ceiling Strobes	
SCR	Strobe, Standard cd, Red
SCRH	Strobe, High cd, Red
SCW*	Strobe, Standard cd, White
SCWH	Strobe, High cd, White
Horns	
HR	Horn, Red
HW	Horn, White
Accessories	
PBS-2	Back Box Skirt, Wall, Red
BBSW-2	Back Box Skirt, Wall, White
BBSC-2	Back Box Skirt, Ceiling, Red
BBSCW-2	Back Box Skirt, Ceiling, White
HR-HS	Trim Ring, Wall, Red
TRW-HS	Trim Ring, Wall, White
TRC-HS	Trim Ring, Ceiling, Red
TRCW-HS	Trim Ring, Ceiling, White



Selectable-Output Horns, Strobes, and Horn Strobes

SpectrAlert® Advance selectable-output horns, strobes, and horn strobes are rich with features guaranteed to cut installation times and maximize profits.



SPECTRAlert
ADVANCE

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 and ceiling units: 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 195
- Horn rated at 88+ dBA at 16 volts
- Rotary switch for horn tone and three volume selections
- Universal mounting plate for wall and ceiling units
- Mounting plate shorting spring checks wiring continuity before device installation
- Electrically compatible with existing SpectrAlert products
- Compatible with MDL sync module

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-painted devices, SpectrAlert Advance can meet virtually any application requirement.

Like the entire SpectrAlert Advance product line, 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, which make installations fast and foolproof while virtually eliminating costly and time-consuming ground faults. Furthermore, a universal mounting plate with an onboard shorting spring tests wiring continuity before the device is installed, protecting devices from damage.

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

Agency Listings



54011 (Horn), 54012 (Horn), 54013 (Strobe)



02/15/72



MEAP03-054



7125-1653 (Horn), 7125-1654 (Horn), 7125-1655 (Strobe), 7125-1656 (Horn)

SpectrAlert Advance Specifications

Acoustic Engineering Specifications

General

SpectrAlert Advance horns, strobes, and horn strobes shall mount to a standard 4 x 4 x 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 x 4 x 1½-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 SyncCircuit™ 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 SyncCircuit 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. 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, 10, 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 multi-throw 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 SyncCircuit model MDL 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 4¼ x 4¾ x 2¼-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
Operating Voltage Range ¹	8 to 17.5 V (12 V nominal) or 15 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Ceiling-Mount Dimensions (including lens)	6.8" diameter x 2.5" high (173 mm diameter x 64 mm high)
Wall-Mount Dimensions (including lens)	5.6" L x 4.7" W x 2.5" D (142 mm L x 119 mm W x 64 mm D)
Horn Dimensions	5.6" L x 4.7" W x 1.3" D (142 mm L x 119 mm W x 33 mm D)
Wall-Mount Back Box Skirt Dimensions (BBS-2, BBSW-2)	5.9" L x 5.0" W x 2.2" D (151 mm L x 128 mm W x 56 mm D)
Ceiling-Mount Back Box Skirt Dimensions (BBSC-2, BBSCW-2)	7.1" diameter x 2.2" high (180 mm diameter x 57 mm high)
Wall-Mount Trim Ring Dimensions (sold as a 5 pack) (TR-HS, TRW-HS)	5.7" L x 4.8" W x 0.35" D (145 mm L x 122 mm W x 9 mm D)
Ceiling-Mount Trim Ring Dimensions (sold as a 5 pack) (TRC-HS, TRCW-HS)	6.9" diameter x 0.35" high (175 mm diameter x 9 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 12V nominal only for 15 and 15/75 cd.

UL Current Draw Data

UL Max. Single Current Draw (MFR #115)					
	Candela	8-17.5 Volts		16-33 Volts	
		DC	FWR	DC	FWR
Standard	15	123	128	66	71
Candela Range	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	135	NA	NA	228	207
Candela Range	150	NA	NA	246	220
	177	NA	NA	281	251
	185	NA	NA	286	258

UL Max. Horn Current Draw (MFR #115)					
Sound Pattern	dB	8-17.5 Volts		16-33 Volts	
		DC	FWR	DC	FWR
Temporal	High	57	55	69	75
Temporal	Medium	44	49	58	60
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 (MFR #115) - 2-Wire Horn Strobes, Max. Candela Range (1-115 cd)										
DC Input	8-17.5 Volts		16-33 Volts		30	75	95	110	115	
	15	15/75	15	15/75						
Temporal High	137	142	79	93	107	176	194	212	218	
Temporal Medium	132	141	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	215	
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	207	
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	

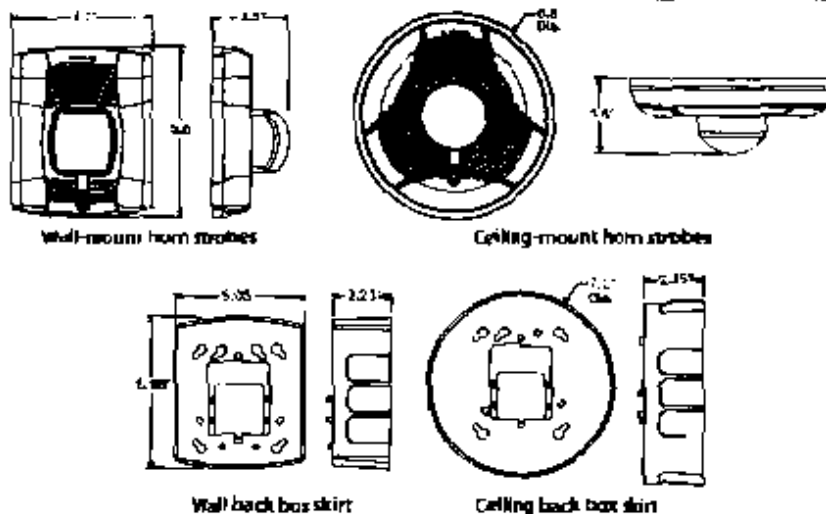
UL Max. Current Draw (MFR #115) - 2-Wire Horn Strobes, High Candela Range (135-185 cd)										
DC Input	16-33 Volts				FWR Input	16-33 Volts				
	135	150	177	185		135	150	177	185	
Temporal High	245	259	290	297	Temporal High	215	231	258	255	
Temporal Medium	235	253	288	297	Temporal Medium	209	224	250	258	
Temporal Low	232	251	282	292	Temporal Low	207	221	248	256	
Non-Temporal High	255	270	303	309	Non-Temporal High	238	248	275	287	
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 Strobes Output (dB)										
Switch Position	Sound Pattern	dB	8-17.5 Volts		16-33 Volts		24-Volt Nominal			
							Reverberant		Anechoic	
			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	81	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	73	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



SpectrAlert Advance Ordering Information

Model	Description
Wall Horn Strobes	
F2R*	2-Wire Horn Strobe, Standard cd, Red
F2RH*	2-Wire Horn Strobe, High cd, Red
F2W*	2-Wire Horn Strobe, Standard cd, White
F2WH*	2-Wire Horn Strobe, High cd, White
F4R*	4-Wire Horn Strobe, Standard cd, Red
F4RH*	4-Wire Horn Strobe, High cd, Red
F4W*	4-Wire Horn Strobe, Standard cd, White
F4WH*	4-Wire Horn Strobe, High cd, White
Wall Strobes	
SR*	Strobe, Standard cd, Red
SRH*	Strobe, High cd, Red
SW*	Strobe, Standard cd, White
SWH*	Strobe, High cd, White
Ceiling Horn Strobes	
PC2R*	2-Wire Horn Strobe, Standard cd, Red
PC2RH*	2-Wire Horn Strobe, High cd, Red
PC2W*	2-Wire Horn Strobe, Standard cd, White
PC2WH*	2-Wire Horn Strobe, High cd, White
PC4R*	4-Wire Horn Strobe, Standard cd, Red
PC4RH*	4-Wire Horn Strobe, High cd, Red
PC4W*	4-Wire Horn Strobe, Standard cd, White
PC4WH*	4-Wire Horn Strobe, High cd, White

Model	Description
Ceiling Strobes	
SCR	Strobe, Standard cd, Red
SCRH	Strobe, High cd, Red
SCW*	Strobe, Standard cd, White
SCWH*	Strobe, High cd, White
Horns	
HR	Horn, Red
HW	Horn, White
Accessories	
BBS-2	Back Box Skirt, Wall, Red
BBSW-2	Back Box Skirt, Wall, White
BBS-C-2	Back Box Skirt, Ceiling, Red
BBSW-C-2	Back Box Skirt, Ceiling, White
TR-HS	Trim Ring, Wall, Red
TRW-HS	Trim Ring, Wall, White
TRC-HS	Trim Ring, Ceiling, Red
TRCW-HS	Trim Ring, Ceiling, White

Notes:

* Add "P" to model number for plain housing (no TIRE tracking on cover), P2HP.

* Add "S" to model number for "SUGGESTED" mounting only, e.g., P2RH-S.

† Standard cd refers to strobes that include 15, 45, 75, 95, 135, and 175 candela settings. High cd refers to strobes that include 175, 150, 177, and 185 candela settings.



3825 Ohio Avenue - St. Charles, IL 60174
Phone: 800-5ENSOR2 • Fax: 630-377-9195

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