

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK CITY OF PORTLAND

Please Read Application And Notes, If Any, Attached

BUILDING PERMIT

Permit Number: 100033

This is to certify that SCA SERVICES OF MAINE /Protection
has permission to Install a fire alarm
AT 2000 FOREST AVE 324 B012001

provided that the person or persons, firm or corporation accounting 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 lath or other work is put 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] (202)
Health Dept. _____
Appeal Board _____
Other _____
Department Name _____

PERMIT ISSUED
FEB - 9 2010
CITY OF PORTLAND

[Signature] 2/4/10
Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD

City of Portland, Maine - Building or Use Permit Application
 389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 10-0033	Issue Date:	CBL: 324 B012001
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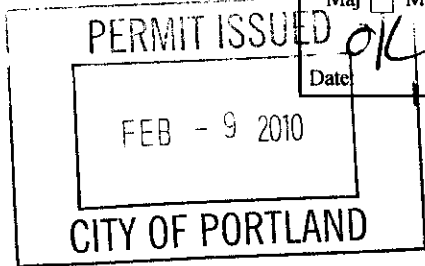
Location of Construction: 2000 FOREST AVE	Owner Name: SCA SERVICES OF MAINE INC	Owner Address: PO BOX 1450	Phone:
Business Name:	Contractor Name: Protection One	Contractor Address: 10 Manuel Drive Portland	Phone 2073475316
Lessee/Buyer's Name	Phone:	Permit Type: Fire Alarm System	Zone: I-M

Past Use: Commercial - "Waste Management"	Proposed Use: Commercial - "Waste Management" - Install a fire alarm	Permit Fee: \$90.00	Cost of Work: \$6,500.00	CEO District: 5
		FIRE DEPT: w/conditions 2/4/10 <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied	INSPECTION: Use Group: B/S-1 Type: N/A IBC-2003 Signature: JMB 2/4/10	

Proposed Project Description: Install a fire alarm	Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>
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: Ldobson	Date Applied For: 01/12/2010	Zoning Approval
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1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules. 2. Building permits do not include plumbing, septic or electrical work. 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..	Special Zone or Reviews <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetland <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/>	Zoning Appeal <input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied	Historic Preservation <input checked="" type="checkbox"/> Not in District or Landmark <input type="checkbox"/> Does Not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied
	Date: <i>01/12/10</i>	Date:	Date: <i>[Signature]</i>



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

City of Portland, Maine - Building or Use Permit

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

Permit No: 10-0033	Date Applied For: 01/12/2010	CBL: 324 B012001
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Location of Construction: 2000 FOREST AVE	Owner Name: SCA SERVICES OF MAINE INC	Owner Address: PO BOX 1450	Phone:
Business Name:	Contractor Name: Protection One	Contractor Address: 10 Manuel Drive Portland	Phone (207) 347-5316
Lessee/Buyer's Name	Phone:	Permit Type: Fire Alarm System	

Proposed Use: Commercial - "Waste Management" - Install a fire alarm	Proposed Project Description: Install a fire alarm
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Dept: Zoning **Status:** Approved **Reviewer:** Marge Schmuckal **Approval Date:** 01/12/2010
Note: **Ok to Issue:**

Dept: Building **Status:** Approved with Conditions **Reviewer:** Jeanine Bourke **Approval Date:** 02/04/2010
Note: **Ok to Issue:**

- 1) Separate permits are required for any electrical, plumbing, sprinkler, fire alarm or HVAC or exhaust systems. Separate plans may need to be submitted for approval as a part of this process.
- 2) Fire Alarm systems shall be installed per Sec. 907 of the IBC 2003

Dept: Fire **Status:** Approved with Conditions **Reviewer:** Ben Wallace Jr. **Approval Date:** 02/04/2010
Note: **Ok to Issue:**

- 1) As-built fire alarm documents shall be submitted in pdf to the Building Inspections Office upon completion of job.
- 2) 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.
- 3) Installation of a Fire Alarm system requires a Knox Box to be installed per city ordinance
- 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 and keyed alike, labeled "FIRE ALARM RECORDS".

BUILDING PERMIT INSPECTION PROCEDURES

Please call 874-8703 or 874-8693 (ONLY)

to schedule your inspections as agreed upon

Permits expire in 6 months, if the project is not started or ceases for 6 months.

The Owner or their designee is required to notify the inspections office for the following inspections and provide adequate notice. Notice must be called in 48-72 hours in advance in order to schedule an inspection:

By initializing at each inspection time, you are agreeing that you understand the inspection procedure and additional fees from a "Stop Work Order" and "Stop Work Order Release" will be incurred if the procedure is not followed as stated below.

A Pre-construction Meeting will take place upon receipt of your building permit.

 X **Final inspection required at completion of work.**

Certificate of Occupancy is not required for certain projects. Your inspector can advise you if your project requires a Certificate of Occupancy. All projects DO require a final inspection.

If any of the inspections do not occur, the project cannot go on to the next phase, REGARDLESS OF THE NOTICE OR CIRCUMSTANCES.

CERIFICATE OF OCCUPANICES MUST BE ISSUED AND PAID FOR, BEFORE THE SPACE MAY BE OCCUPIED.

Signature of Applicant/Designee

[Handwritten Signature]

Signature of Inspections Official

Date

2/4/18
Date



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.

Installation address: 2000 Forest Ave CBL: 324-B-12
 Exact location: (within structure) Inside Drivers door - front of building
 Type of occupancy(s) (NFPA & ICC): Business/Industrial
 Building owner: Waste Management
 System Designer (point of contact): Must be Kevin Inman
 Designer phone: 207-347-5318 E-mail: kevininman@protectionone.com
 Installing contractor: Protection One Certificate of Fitness No: applied for 1003
 Contractor phone: 207-347-5316 E-mail: johnkempton@protectionone.com

This is a new application: YES NO
 This is an amendment to an existing permit: YES NO Permit no: _____

The following documents shall be provided with this application:

- Floor plans
- Wiring diagram
- Annunciator details
- Equipment data sheets
- Battery & voltage drop calculations
- Input/ Output Matrix
- Designer qualifications
- Electrical Permit Pulled (check alarm/com)

RECEIVED
 JAN 12 2010
 Dept. of Building Inspections
 City of Portland Maine

COST OF WORK: \$6500.00
 PERMIT FEE: 90
 (\$10 PER \$1,000 + \$30 FOR THE FIRST \$1,000)

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 full sized plans 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: 1-12-10



SILENT KNIGHT

5700 Calculations
Version 08.19.09

Project Name: **Waste Management**
 Project ID: **[Blank]**
 Prepared By: **Kevin Inman**
 Date: **1/12/2010**

Standby Hours: **24**
 Alarm Hours: **5**
 Demand Hours: **1.2**
 Total Alarm Hours: **10**

Model No: **5700**
 Description: **driver entrance**

Model: **5700** (See Product Catalog Page)
 Voltage: **24 VDC**

Type: **Alarm Panel**
 Max. Power: **200 Watts**

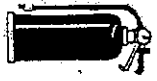
Model No.	Item Name	Standby	Alarm	Wire Gauge	Wire Length (ft)	Wire Amps	Wire Size	Wire Qty	Wire Amps	Wire Size	Wire Qty
5700	5700 CTRL Panel	0.200	0.325								
SK	Photo, Photo-T	0.001	0.001								
SK	Ion	0.000	0.000								
SK	Heat, Heat-HT	0.000	0.000								
SK	Heat ROR	0.003	0.003								
SK	Beam, Beam-T	0.000	0.000								
SK	Duct	0.000	0.000								
SK	Acclimate	0.000	0.000								
SK	Control	0.000	0.000								
SK	Control-6	0.000	0.000								
SK	Monitor, Minimon	0.000	0.000								
SK	Monitor-2	0.000	0.000								
SK	Monitor-10	0.000	0.000								
SK	Pull-SA, Pull-DA	0.003	0.003								
SK	Relay	0.000	0.000								
SK	Relay-6	0.000	0.000								
SK	Zone	0.000	0.000								
SK	Zone-6	0.000	0.000								
SK	Isolator Module	0.000	0.000								
55224B	Isolator Base	0.000	0.000								
55224B	Sounder Base	0.000	0.000								
55224B	Relay Base	0.000	0.000								
55251B	Magnetic Remote Test	0.000	0.000								
55251B	Key Activated Test	0.000	0.000								
55251B	Remote LED	0.000	0.000								
55251B	LCD Remote Annunc.	0.000	0.000								
55251B	LCD Remote Annunc.	0.000	0.000								
55251B	Power Expander	0.000	0.000								
55251B	Power Expander	0.000	0.000								
55251B	LED Annunciator (3G)	0.000	0.000								
55251B	LED Annunciator (4G)	0.000	0.000								
55251B	LED Driver Module	0.000	0.000								
55251B	Relay Module	0.000	0.000								
55251B	Notification Appl Circuit	0.000	0.430	#14 Solid	200	2.12%					
55251B	Notification Appl Circuit	0.000	1.650	#14 Solid	200	8.15%					
	Total Standby current (Amps)	0.207	2.412	Total Alarm Currents (Amps)							
	Standby Time (Hours)	24	100%	Alarm Time (Hours)							
	Total Standby Ah Required	4.968	1.200	Total Alarm Ah Required							
	Total Combined Ah Required	6.168									
	Minimum Battery Capacity (Ah)	1.20									
	Minimum Battery Amp-Hours Required	6.168									

Command Shortcuts

Configure Circuits

Print Page

EVACUATION ROUTE - WMME PORTLAND MAIN OFFICE AREA



Fire Extinguisher



Window



Exit



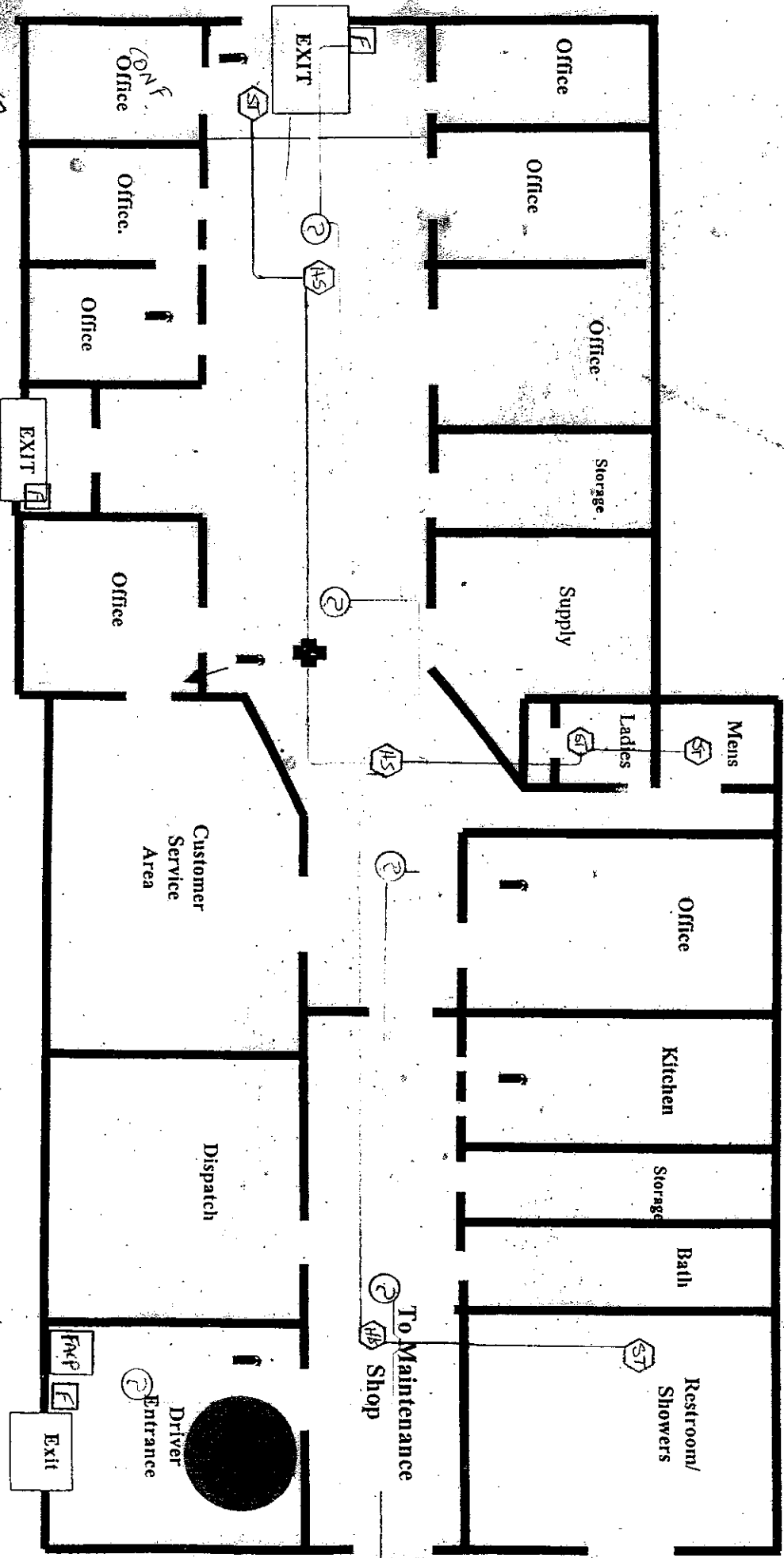
First Aid Box



Fire Pull Box

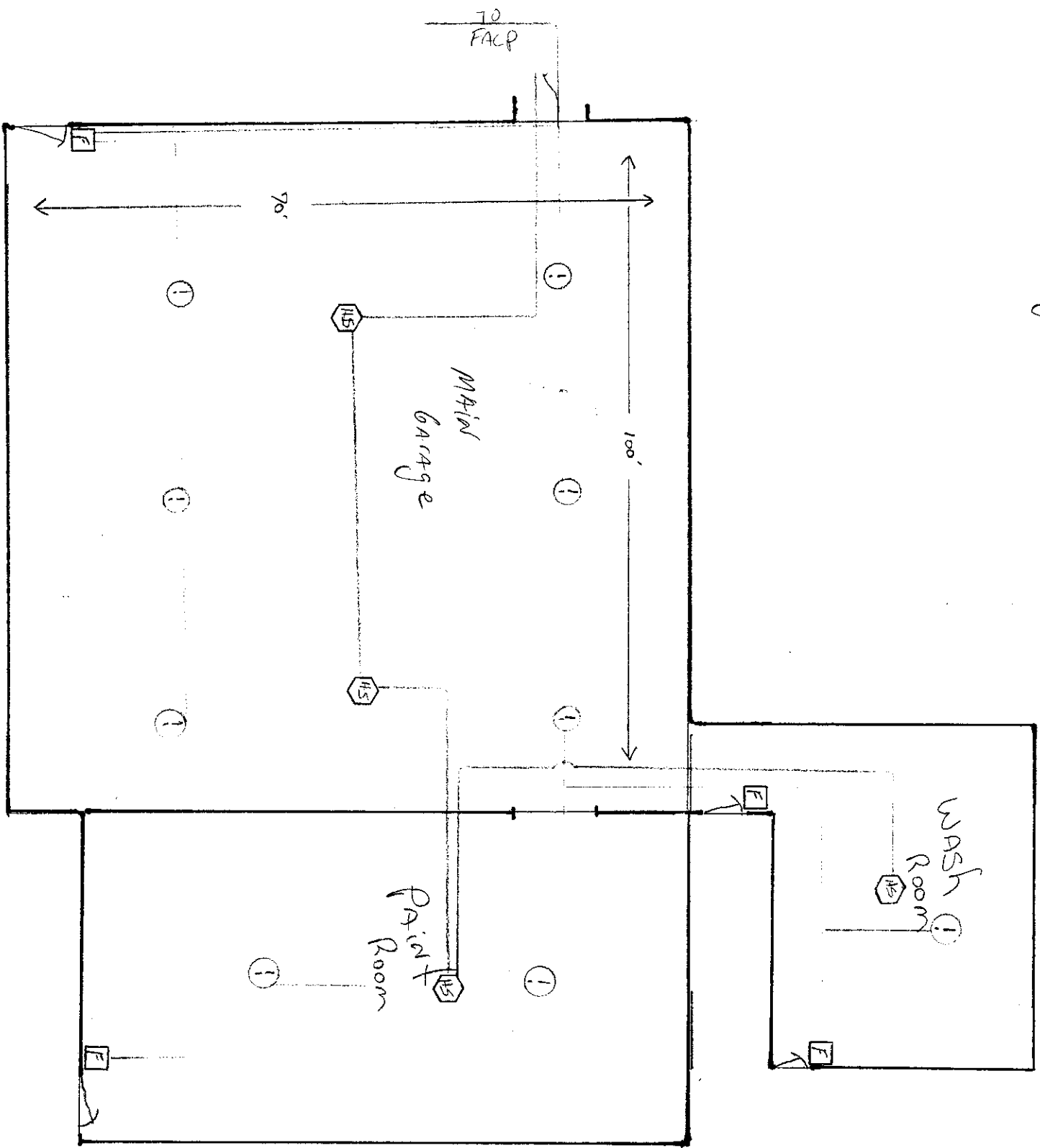


You Are Here

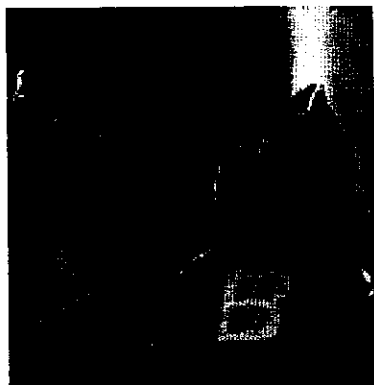


Proceed to the nearest exit and assemble in the employee parking area.

Waste Management



not to scale



IntelliKnight® Model 5700 Single Loop Addressable Fire Alarm Control System



The affordable addressable fire alarm control panel solution.

IntelliKnight Model 5700 is a 50 point class leading single loop addressable fire alarm control/communicator system. 5700 provides you with the revolutionary value and performance of addressable sensing technology combined with exclusive, built-in digital communication,

distributed intelligent power, that includes an easy to use interface. Powerful features such as drift compensation and maintenance alert are delivered in this powerful FACP from Silent Knight.

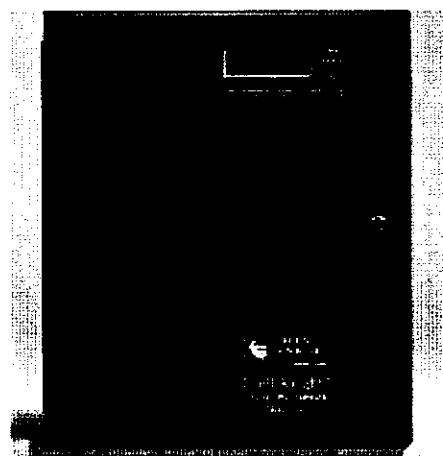
For more information about the IntelliKnight system, or to locate your nearest source, please call 800-328-0103 or in Connecticut, call 203-484-7161.

Description

The basic IntelliKnight 5700 system can be enhanced by adding modules such as 5860 remote annunciator, 5824 serial/parallel printer interface module (for printing system reports), and 5496 intelligent power module. 5700 supports Hochiki or SK devices. 5700 also features a powerful built-in dual line fire communicator that allows for reporting of all system activity to a remote monitoring location.

Features

- Built-in support for up to 50 Hochiki devices or 50 SK detectors and 50 SK modules.
- Up to 125 zones and 125 output groups
- Uses standard wire—no shielded or twisted pair required
- Built-in digital communicator.
- Central station reporting by point or by zone
- Supports Class B (Style 4) and Class A (Style 6 or 7) configuration for SLC
- Distributed, intelligent power
- Drift compensation
- 13 pre-programmed output cadences (including ANSI-3.41) and 4 programmable outputs
- Notification circuits configurable as 1 Class A (Style Z) or 2 Class B (Style Y), or auxiliary power for resettable, constant, or door holder power
- Built-in synchronization for AMSECO, Gentex®, Faraday, System Sensor® and Wheelock® appliances
- Built-in annunciator with 80-character LCD display
- RS-485 bus provides communication to system accessories
- Upload or download programming, event history, or detector status onsite or from a remote location using a PC and 5660 Silent Knight Software Suite (SKSS)
- Improvements in SKSS deliver five times faster upload/downloads
- Built-in RS-232 interface for programming via PC
- Built-in Form C trouble relay rated at 2.5A at 27.4 VDC
- Two built-in Form C programmable relays rated at 2.5A at 27.4 VDC
- Programmable date setting for Daylight Saving Time



Model 5700

Installation

The 5700 is a surface mount FACP.

Compatibility

The 5700 SLC supports multiple device types of the same protocol:

- Hochiki
- SK

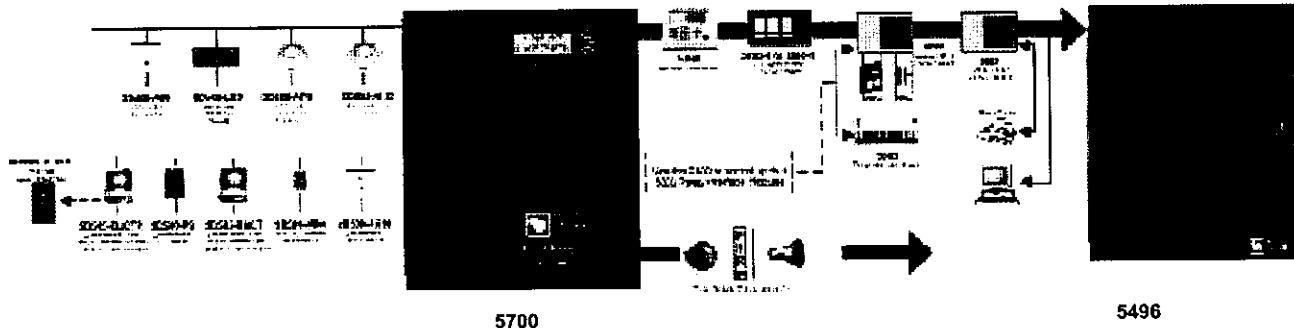
You cannot mix Hochiki and SK devices on a FACP. However, any combination of addressable devices of the same protocol can be used on the 5700.



**SILENT
KNIGHT**

by Honeywell

Model 5700 Fire Alarm Control Panel



Specifications

Electrical

Primary AC: 120 VAC, 60 Hz, 1.5A
 Total Accessory Load: 2.5A @ 27.4 VDC
 Notification Power: 2.5A @ 27.4 VDC, power-limited
 Standby Current: 200 mA
 Alarm Current: 325 mA
 Notification/Aux Power Circuits: 2.5A @ 27.4 VDC per circuit, power-limited
 Battery Charging Capacity: 7.0-35.0 AH
 Battery Size: 7 AH max. allowed in FACP cabinet. Larger capacity batteries can be housed in an RBB accessory cabinet.

Physical

Dimensions:
 12.75" W x 15.2" H x 3.4" D
 (32.39 W x 38.42 H x 8.57 D cm)
 Weight: 11.5 lbs. (5.2 kg)

Color: Red

Telephone Requirements:

FCC Part 15 and Part 68 approved
 Type of Jack: RJ31X (two required)

Approvals

NFPA 13, NFPA 15, NFPA 16, NFPA 70, & NFPA 72: Central Station; Remote Signalling; Local Protective Signalling Systems; Auxiliary Protected Premises Unit; & Water Deluge Releasing Service. Suitable for automatic, manual, waterflow, sprinkler supervisory (DACT non-coded) signalling services.

Other Approvals: UL Listed;
 CSFM 7170-0559: 144;
 MEA 429-92-E Vol. XVI.

S-BUS Accessories

5860/R Remote Fire Annunciator

Features the same 80 character backlit LCD display keypad and firefighter's key switch as the 5700. The system can be fully programmed and operated from any 5860. 5860 is gray and 5860R is red.

5496 Intelligent Power Module

A 6 amp notification power expander that provides four additional power-limited notification appliance circuit outputs.

5880 LED/IO Module

Features 40 LED outputs, 8 normally open dry contact inputs and one piezo output.

5865-3 and 5865-4 Remote LED Annunciator

Features 30 Programmable LED (15 red and 15 yellow) outputs and a piezo sounder. The 5865-4 adds a silence and reset switch to the package.

5883 Relay Board

Features 10 general purpose Form C relays. Used with 5880 module.

5824 Serial/Parallel Printer Interface Module

Provides one parallel and one RS-232 serial port for connecting a printer to 5808. Use to print a real-time log of system events, detector status reports, and event history. Interfaces with building control system.

Miscellaneous Accessories

5660 Silent Knight Software Suite

User-friendly Windows software for remote programming of 5700s using a PC. Upload and view panel account information, event history, and detector status.

5670 Silent Knight Software Suite

End-user facility management software allows viewing of detector status and event history via modem or direct connection.

RBB

Remote Battery Box Accessory Cabinet. Use if backup batteries are too large to fit into FACP cabinet. Dimensions:
 16" W x 10" H x 6" D
 (406 mm W x 254 mm H x 152 mm D)

SD505-DTS-K

Remote test switch that provides remote key operated test function and annunciation of detector alarm with SD505-DUCTR.

Hochiki and SK Devices

See the specification sheets listed below for a complete listing of the Hochiki and SK devices.

- | | |
|-------|---|
| 53624 | Hochiki Devices Specification Sheet |
| 53623 | SK Protocol Devices Specification Sheet |



This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information, contact Silent Knight 12 Clintonville Road, Northford, CT 06472-1610
 Phone: (800) 328-0103 or (203) 484-7161, Fax: (203) 484-7118. www.silentknight.com

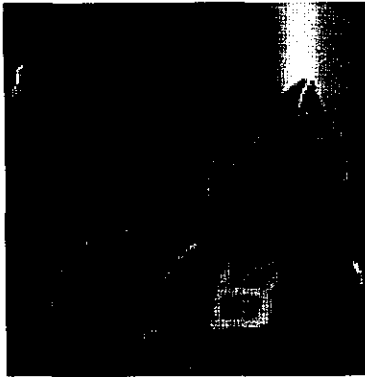
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 Flexput is a Trademark of Silent Knight

MADE IN AMERICA

P/N 350392 Rev. F

ECN 09-520 09/09

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SK-Pull-SA and SK-Pull-DA



Intelligent Pull Stations

The SK-Pull-SA and SK-Pull-DA are a single action or dual action addressable fire alarm pull station for use with Silent Knight's IntelliKnight fire control panel. Extremely easy to operate, the SK-Pull-DA/SA provides a fast and practical means of manually initiating a fire alarm signal. The IntelliKnight panel recognizes each manual pull station by its specific address saving precious seconds in determining the location of an alarm.

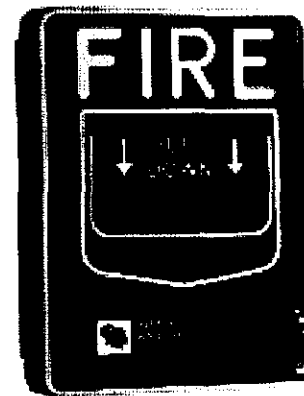
For more information about the IntelliKnight system, or to locate your nearest source, please call 1-800-328-0103 or in Connecticut, call (203) 484-7161.

Description

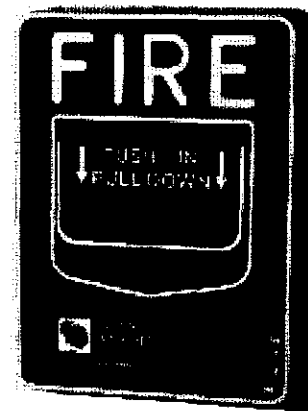
The SK-Pull-SA is a single action pull station requiring only one motion to activate the station. The SK-Pull-DA is a dual action pull station requiring two motions to activate the station. Both pull stations are designed to work with Silent Knight IntelliKnight series fire alarm control panels (FACPs).

Features

- Installer can open station without causing an alarm condition
- Dual-color LED is visible through handle of station blinks green to indicate normal operation and remains steady red in an alarm condition
- Key operated test and reset lock using lock plate actuator
- Key matches compatible FACP locks
- Meets the Americans with Disabilities Act Accessibility Guidelines (ADAAG) controls and operating mechanisms guidelines (Section 4.1.3[13])
- Meets ADA requirement for 5 lbs maximum pull force to activate
- Shell, door, and handle molded from durable LEXAN®
- Reliable analog communications for trouble-free operation
- Braille text on station handle
- Handle latches in down position and the word *Activated* appears, clearly indicating the station has been pulled
- Rotary address switches for fast installation
- UL Listed, including UL 38, Standard of Manually Actuated Signaling System



SK-Pull-SA



SK-Pull-DA

Compatibility

The SK-Beam and SK-Beam-T are compatible with the following IntelliKnight FACP's:

5700
5808
5820XL

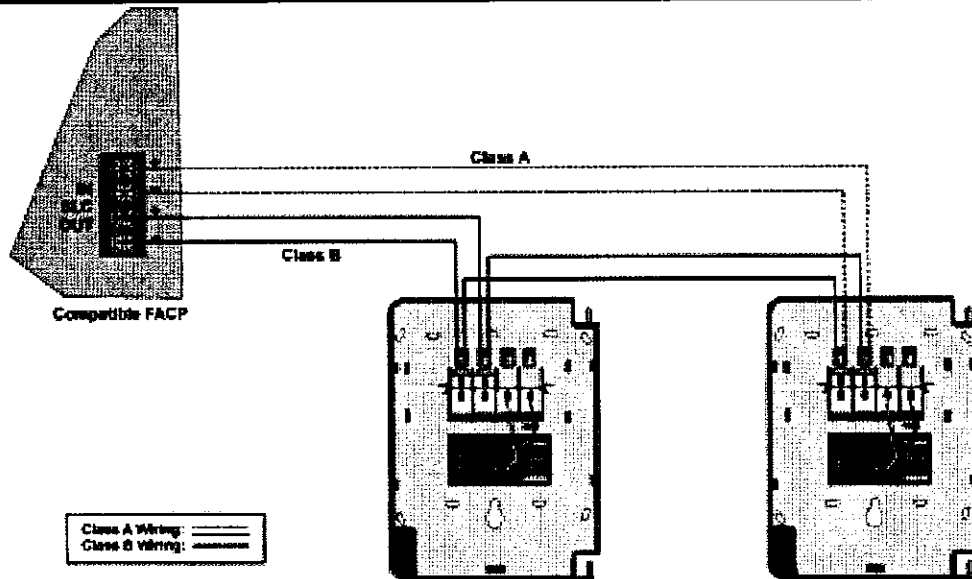
Model SK-Pull-Da and SK-Pull-SA



Engineering Specifications

The contractor shall furnish and install where indicated on the plans, Addressable Pull Stations, Silent Knight model SK-Pull-SA single action pull station or SK-Pull-DA, dual action pull station.

SK-Pull-DA or SK-Pull-SA meet the ADAAG controls and operating mechanisms guidelines, and the ADA requirements for a 5 lb. maximum pull force to activate the pull station.



Wiring SK-Pull-SA & SK-Pull-DA Pull Stations

Specifications

Physical

Height: 5.5" (14 cm)

Width: 4" (10.2 cm)

Depth: 5.4 oz. (3.7 cm)

Housing Material: LEXAN polycarbonate resin

Bi-Colored LED:

Blinking Green: Normal

Steady Red: Alarm

Switch: Single pole, single throw (SPST) normally open (N/O) switch which closes upon activation of the pull station

Electrical

Operating Voltage: 15–32 VDC

Average Operating Current (LED flashing): 300 μ A

Wire Gauge: Up to 12 AWG (3.1 mm²)

Environmental

Operating Temperature 32° – 120°F (0°C – 49°C)

Humidity: 10% – 93% non-condensing

Accessories

BG-TR Optional trim ring.

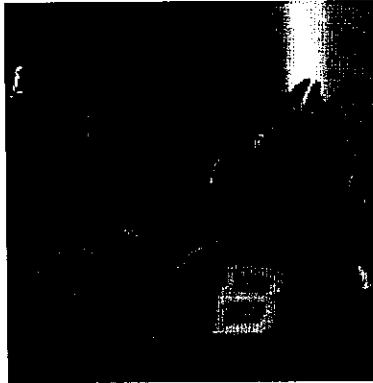
SB-I/O Surface backbox



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12 Clintonville Road, Northford, CT 06472-1610 Phone: (800) 328-0103,
Fax: (203) 484-7118. www.silentknight.com

MADE IN AMERICA

FORM# 350135 Rev A
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SK-Photo and SK-Photo-T



Intelligent Photoelectric Smoke Sensors

The SK-Photo is a photoelectric smoke detector and the SK-Photo-T is a photoelectric smoke detector with thermal. These plug-in smoke detectors, with integral communication, provide features that surpass conventional detectors and are for use with Silent Knight IntelliKnight Fire Alarm Control Panels (FACPs).

For more information about the IntelliKnight system, or to locate your nearest source, please call 800-328-0103 or in Connecticut, call (203) 484-7161.

Description

SK-Photo and SK-Photo-T are plug-in type smoke sensors that combine a photoelectric sensing chamber with addressable analog communications. Point ID capability allows each detector's address to be set with rotary address switches, providing exact detector locations for selective maintenance when chamber contamination reaches unacceptable levels.

SK-Photo and SK-Photo-T have a unique optical sensing chamber that is engineered to sense smoke produced by a wide range of combustion sources. In the SK-Photo-T, dual electronic thermistors add 135°F (57°C) thermal technology to maximize detection.

Features

- Sleek, low-profile design
- Base included
- Reliable analog communications for trouble-free operation
- Age resistant polymer housing
- Dual electronic thermistor design on the SK-Photo-T
- Superior EMI resistance for reliability
- Simple field cleaning for code compliance
- Variety of mounting options to meet any application
- Dual LED indicators for 360° visibility
- Detector transmits signal to indicate maintenance is required
- Optional remote LED annunciator (System Sensor® PN RA100Z)

- Plug-in mounting provides ease of installation
- Tamper-proof feature available on mounting bases
- Listed for use in duct applications
- Rotary address switches for fast installation
- UL Listed
- FM Approved

Specifications

Physical

Height: 2.0" (5.0 cm)
Diameter: 4.1" (10.4 cm)
Shipping Weight: 5.2 oz. (147 g)

Electrical

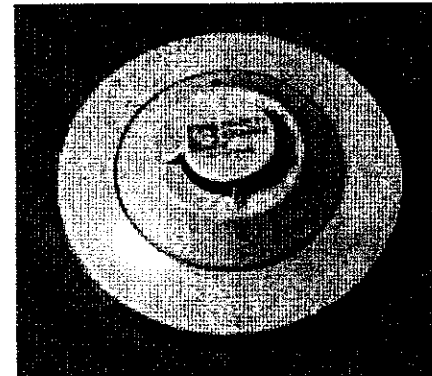
Operating Voltage: 15–32 VDC
Standby Current:
300 μ A @ 24 VDC Maximum
Alarm Current: 6.5 mA @ 24 VDC max (with LED on)

Environmental

Operating Temperature
SK-Photo: 32° – 120°F (0°C – 49°C)
SK-Photo-T: 32° – 100°F (0°C – 38°C)
Humidity: 10% – 93% non-condensing

Other Ratings

SK-Photo-T Thermal: Fixed temperature set point 135°F (57°C)
Velocity: 0 – 4000 fpm (0 – 20 m/sec)
SK-Photo Insect Screen Hole Size: 0.016" (0.41 mm) nominal



SK-Photo (Base included)

Compatibility

The SK-Photo and SK-Photo-T are compatible with the following IntelliKnight FACPs:

5700
5808
5820XL

SK-Photo and SK-Photo-T are compatible with the following detector bases:

B210LP	(included) 6" base
B501	2 wire base
B501BHT-2	Temporal base
B224RB	Relay base
B224BI	Isolator base
B501BH-2	Sounder base



**SILENT
KNIGHT**

by Honeywell

Model SK-Photo and SK-Photo-T Intelligent Photoelectric Smoke Sensors



Engineering Specifications

The contractor shall furnish and install where indicated on the plans, intelligent photoelectric smoke sensors Silent Knight SK-Photo or SK-Photo-T with thermal. The combination detector head, and twist-lock base, shall be UL listed and compatible with Silent Knight's IntelliKnight fire control panels.

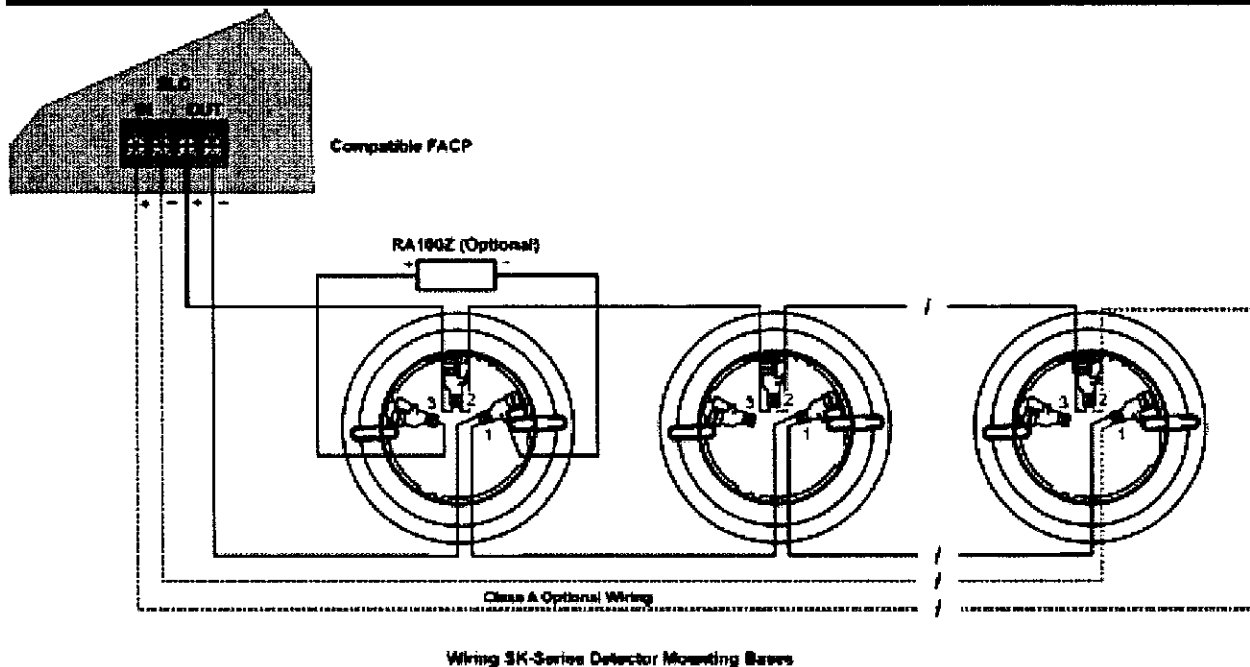
The base shall permit direct interchange with SK-Photo or SK-Photo-T. Base shall be the appropriate twist-lock base part number B210LP (included).

The smoke detector shall have a flashing status LED for visual supervision. When the detector is actuated, the flashing LED will latch on steady. The detector may be reset by actuating the control panel reset switch.

The calibration of the detector shall be capable of being selected and measured by the control panel without the need for external test apparatus.

The vandal-resistant, security locking feature shall be used in those areas as indicated on the drawing. The locking feature shall be field selectable as required.

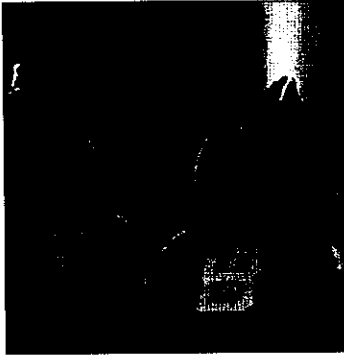
The SK-Photo shall automatically perform a functional test of the detector. The test method shall simulate effects of products of combustion in the chamber to ensure testing of detector circuits.



This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information, contact Silent Knight 12 Clintonville Road, Northford, CT 06472-1610 Phone: (800) 328-0103, Fax: (203) 484-7118. www.silentknight.com

MADE IN AMERICA

FORM# 350118 Rev A,
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SK-Heat, SK-Heat-HT and SK-Heat-ROR



Addressable thermal heat and rate-of-rise detectors

The SK-Heat, SK-Heat-HT, and SK-Heat-ROR are plug in thermal detectors, with integral communication, that provide features that surpass conventional detectors. These thermal detectors are for use with Silent Knight IntelliKnight series Fire Alarm Control Panels (FACPs).

IntelliKnight heat detectors are an essential component in virtually any IntelliKnight installation. The IntelliKnight panel recognizes each detector by its specific address, so precious seconds are not wasted in determining location of an alarm.

Description

SK-Heat, SK-Heat-HT and SK-Heat-ROR are intelligent sensors that utilize a state-of-the art thermistor sensing circuit for fast response. Sensitivity is continuously monitored and reported to the FACP. Point ID capability allows each detector's address to be set with rotary address switches, providing exact detector locations for selective maintenance when chamber contamination reaches unacceptable levels.

SK-Heat is a fixed temperature thermal detector that uses a thermistor sensing circuit to produce 135°F (57°C) fixed thermal detection.

SK-Heat-HT is a high temperature detector that provides fixed temperature alarm at 190°F.

SK-Heat-ROR is a fixed temperature and rate-of-rise thermal detector that uses a thermistor sensing circuit to produce 135°F (57°C) thermal protection.

Features

- Sleek, low-profile design
- Reliable analog communications for trouble-free operation
- Age resistant polymer housing
- Innovative thermistor sensing circuit
- Superior EMI resistance for reliability
- Variety of mounting options to meet any application

- Dual LED indicators for 360° visibility
- Detector transmits signal to indicate maintenance is required
- Plug-in mounting provides ease of installation
- Optional remote LED annunciator (System Sensor® PN RA100Z)
- Tamper-proof feature available on mounting bases
- Rotary address switches for fast installation
- UL Listed

Specifications

Physical

Height: 2.0" (51 mm)
Diameter: 6.1" (155 mm) installed in B210LP base
Shipping Weight: 4.8 oz (137 g)

Electrical

Operating Voltage: 15 to 32 Volts DC Peak
Standby Current: 300µA @ 24 VDC
LED Current: 6.5 mA @ 24 VDC

Environmental

Operating Temperature

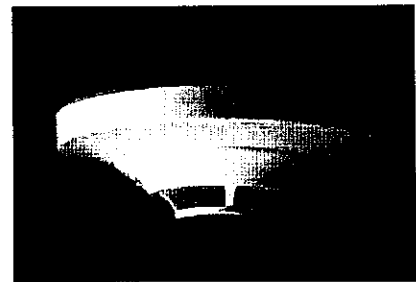
SK-Heat & SK-Heat-ROR: -4° – 100°F (20°C – 38°C)

SK-Heat-HT: -4° – 150°F (20°C – 66°C)

Humidity: 10% – 93% noncondensing

Thermal Ratings

SK-Heat: Fixed temperature setpoint 135°F (57°C)



SK-Heat (base included)

SK-Heat-HT: High temperature heat 190°F(88°C)

SK-Heat-ROR: Rate-of-rise detection 15°F/min (8.3°C/min)

Compatibility

The SK-Ion is compatible with the following IntelliKnight FACP's:

5700
5808
5820XL

The SK-Heat, SK-Heat-HT and SK-Heat-ROR are compatible with the following detector bases:

B210LP	(included) 6" base
B501	2 wire base
B224BI	Isolator base
B224RB	Relay base
B501BH-2	Sounder base
B501BHT-2	Temporal base



**SILENT
KNIGHT**

by Honeywell

Model SK-Heat, SK-Heat-HT, SK-Heat ROR Addressable Thermal and Rate-of-Rise Thermal Detectors

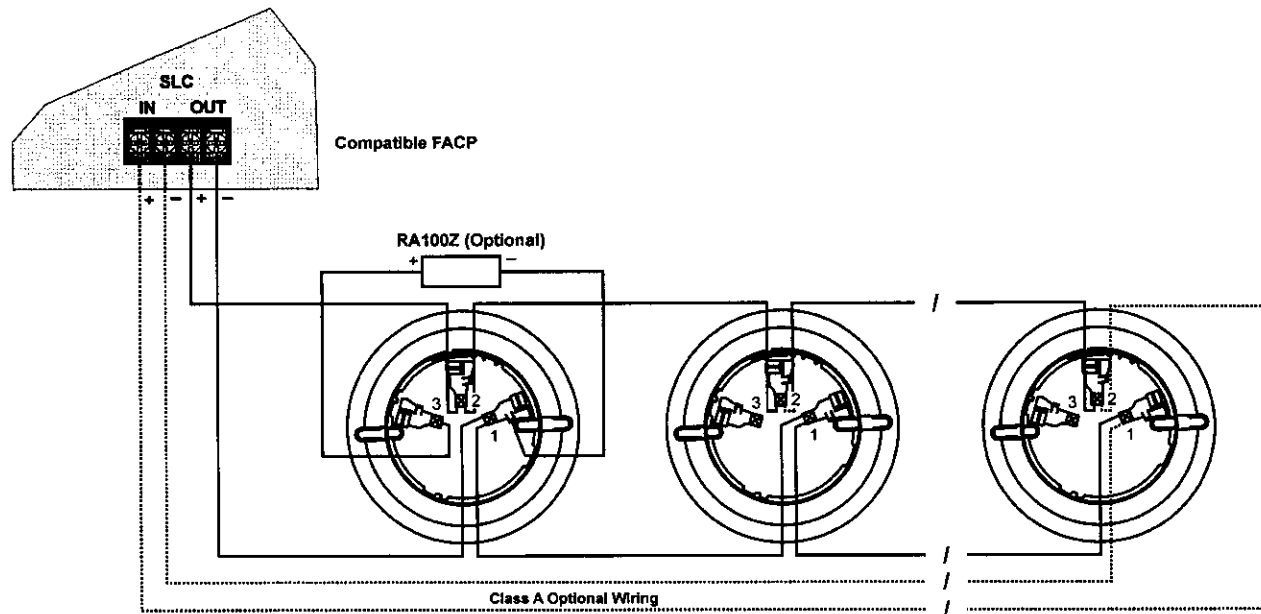


Engineering Specifications

The contractor shall furnish and install where indicated on the plans, Intelligent Thermal Sensor Silent Knight Model SK-Heat, SK-Heat-HT or SK-Heat-ROR. The base included shall be B210LP.

The smoke detector shall have a flashing status LED for visual supervision. When the detector is actuated, the flashing LED will latch on steady at full brilliance. The detector may be reset by actuating the control panel reset switch.

The vandal-resistant, security locking feature shall be used in those areas as indicated on the drawing. The locking feature shall be field removable when not required. Voltage and RF/transient suppression techniques shall be employed to minimize false alarm potential.



Wiring SK-Series Detector Mounting Bases

Accessories

RA100Z - Remote LED Annunciator.

RMK400 - Recessed Mounting Kit. Provides low profile for use with B501.

XR2B - Detector Removal Tool. A removal and re- placement tool for SK plug-in detectors. Includes the T55-127-000.

M02-04-01 - Replacement Test Magnet.

M02-09-00 - Test Magnet with Telescoping Handle.

XP-4 - Extension Pole for XR2B. Extends from 5 – 15 ft.

T55-127-000 - Detector Removal Head.

BCK-200B - Black Detector Kit. For SK-series detectors.

* Unless otherwise noted, specifications apply to all SK thermal detectors.



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MADE IN AMERICA

FORM# 350120 Rev. A
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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
from System Sensor

Features

- Electrically compatible with existing SpectrAlert products
- Automatic selection of 12- or 24-volt operation at 15 and 15/75 candela
- Plug-in design
- Field selectable candela settings on wall and ceiling units: 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, 185
- Same mounting plate for wall- and ceiling-mount units
- Shorting spring on mounting plate for continuity check before installation
- Tamper resistant construction
- Outdoor wall and ceiling products rated from -40°F to 151°F
- Design allows minimal intrusion into the back box
- Horn rated at 88+ dbA at 16 volts
- Rotary switch for horn tone and three volume selections
- Outdoor products UL listed to UL 1638 (strobe) and UL 464 (horn) outdoor requirements
- Outdoor products NEMA 4X rated
- Compatible with MDL sync module

Agency Listings

SIGNALING



S4011
S5512
S3593



3023572

MEA
approved

MEA452-05-E



7125-1653-186 (indoor strobes)
7300-1653-187 (outdoor strobes)
7125-1653-188 (horn/strobes,
chime/strobes)
7135-1653-189 (horns, chimes)

The SpectrAlert Advance series of notification appliances is designed to simplify installations, with features such as plug-in designs, instant feedback messages to ensure correct installation of individual devices, and 11 field-selectable candela settings for wall and ceiling strobes and horn/strobes.

When installing Advance products, first attach a universal mounting plate to a four-inch square, four-inch octagon or double-gang junction box. The two-wire mounting plate attaches to a single-gang junction box.

Next, connect the notification appliance circuit wiring to the SEMS terminals on the mounting plate.

Finally, attach the horn, strobe or horn/strobe to the mounting plate by inserting the product's tabs in the mounting plate's grooves. The device will rotate into position, locking the product's pins into the mounting plate's terminals. The device will temporarily hold in place with a catch until it is secured with a captured mounting screw.

The SpectrAlert Advance series includes outdoor notification appliances. Outdoor strobes and horn/strobes (two wire and four wire) are available for wall or ceiling. Outdoor horns are available for wall only. All System Sensor outdoor products are rated between minus 40 degrees Fahrenheit and 151 degrees Fahrenheit in wet or dry applications.

SpectrAlert Advance Specifications

Architect/Engineer 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 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 nine 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, 115, 135, 150, 177, 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 1Hz 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 1Hz 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.

Outdoor Products

SpectrAlert Advance outdoor horns, strobes and horn/strobes shall be listed for outdoor use by UL and shall operate between minus 40 degrees and 151 degrees Fahrenheit. The products shall be listed for use with a System Sensor outdoor/weatherproof back box with half inch and three-fourths inch conduit entries.

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 1Hz 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 4¹/₁₆ x 4¹/₁₆ x 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)
K Series Operating Temperature	-40°F to 151°F (-40°C to 66°C)
Humidity Range	10 to 93% non-condensing (indoor products)
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12DC/FWR or regulated 24DC/FWR ¹
Operating Voltage Range ²	8 to 17.5 V (12V nominal) or 16 to 33 V (24 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)	5.6L x 4.7"W x 2.5"D (142 mm L x 119 mm W x 64 mm D)
Horn dimensions	5.6L 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)	5.9L 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 2.25" high (180 mm diameter x 57 mm high)
Wall-mount weatherproof back box dimensions (SA-WBB)	5.7L x 5.1"W x 2.0"D (145 mm L x 130 mm W x 51 mm D)
Ceiling-mount weatherproof back box dimensions (SA-WBBC)	7.1" diameter x 2.0" high (180 mm diameter x 51 mm high)
Wall-mount trim ring dimensions (TR-HS, TRW-HS)	5.7L x 4.812"W x 0.35"D (146 mm L x 122 mm W x 9 mm D)
Ceiling-mount trim ring dimensions (TRC-HS, TRCW-HS)	6.9" diameter x 0.35 high (176 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. Strobe Current Draw (mA RMS)						UL Max. Horn Current Draw (mA RMS)					
	Candela	8-17.5 Volts		16-33 Volts		Sound Pattern	dB	8-17.5 Volts		16-33 Volts	
		DC	FWR	DC	FWR			DC	FWR	DC	FWR
Standard	15*	123	128	66	71	Temporal	High	57	55	69	75
Candela Range	15/75*	142	148	77	81	Temporal	Medium	44	49	58	69
	30*	NA	NA	94	96	Temporal	Low	38	44	44	48
	75*	NA	NA	158	153	Non-temporal	High	57	56	69	75
	95*	NA	NA	181	176	Non-temporal	Medium	42	50	60	69
	110	NA	NA	202	195	Non-temporal	Low	41	44	50	50
	115	NA	NA	210	205	Coded	High	57	55	69	75
High Candela Range	135	NA	NA	228	207	Coded	Medium	44	51	56	69
	150	NA	NA	246	220	Coded	Low	40	46	52	50
	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)										
DC Input	8-17.5 Volts				16-33 Volts					
	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)										
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	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.

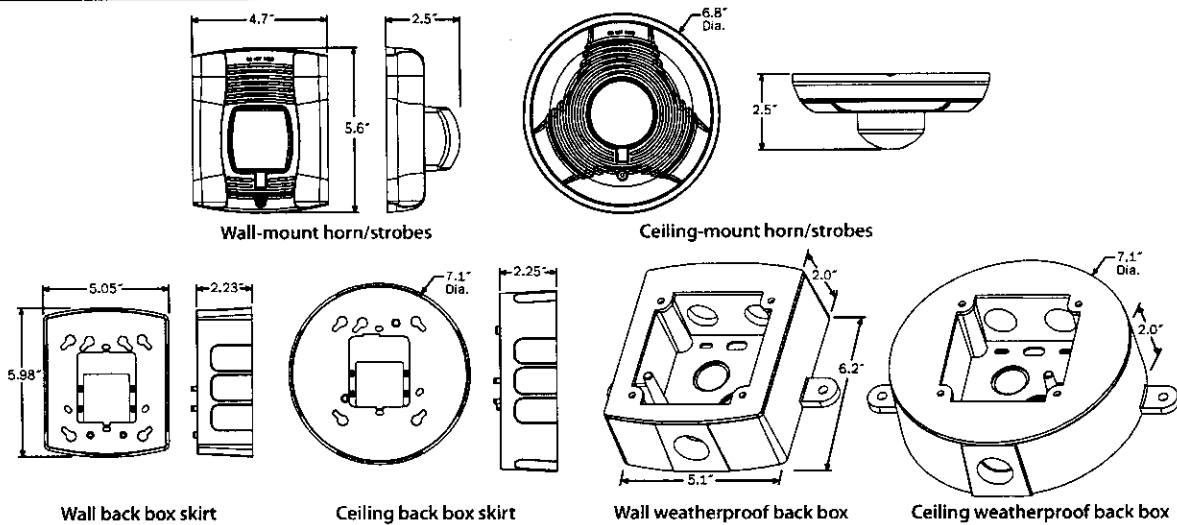
Strobe Output (cd)	
Listed Candela	Candela rating at -40°F
15	Do not use below 32°F
15/75	
30	
75	
95	44
110	70
115	110
135	115
150	135
177	177
185	185

Horn Tones and Sound Output Data

Horn and Horn/Strobe Output (dBA)											
Switch Position	Sound Pattern	dB	8-17.5 Volts		16-33 Volts		24 Volt Nominal				
			DC	FWR	DC	FWR	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	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 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
P2RK*±	2-wire Horn/Strobe, Standard cd, Red, Outdoor
P2RHK*±	2-wire Horn/Strobe, High cd, Red, Outdoor
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
P4RK*±	4-wire Horn/Strobe, Standard cd, Red, Outdoor
P4RHK*±	4-wire Horn/Strobe, High cd, Red, Outdoor
P4W*	4-wire Horn/Strobe, Standard cd, White
P4WH*	4-wire Horn/Strobe, High cd, White
Wall Strobes	
SR*	Strobe, Standard cd, Red
SRH*†	Strobe, High cd, Red
SRK*±	Strobe, Standard cd, Red, Outdoor
SRHK*±	Strobe, High cd, Red, Outdoor
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
PC2RK*±	2-wire Horn/Strobe, Standard cd, Red, Outdoor
PC2RHK*±	2-wire Horn/Strobe, High cd, Red, Outdoor
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
PC4RK	4-wire Horn/Strobe, Standard cd, Red, Outdoor
PC4RHK*±	4-wire Horn/Strobe, High cd, Red, Outdoor

Model	Description
Ceiling Horn/Strobes (cont'd.)	
PC4W	4-wire Horn/Strobe, Standard cd, White
PC4WH	4-wire Horn/Strobe, High cd, White
Ceiling Strobes	
SCR*	Strobe, Standard cd, Red
SCRH*	Strobe, High cd, Red
SCRK*±	Strobe, Standard cd, Red, Outdoor
SCRHK*±	Strobe, High cd, Red, Outdoor
SCW*†	Strobe, Standard cd, White
SCWH*†	Strobe, High cd, White
Horns	
HR	Horn, Red
HRK*±	Horn, Red, Outdoor
HW	Horn, White
Accessories	
BBS-2	Back Box Skirt, Wall, Red
BBSW-2	Back Box Skirt, Wall, White
BBS-2	Back Box Skirt, Ceiling, Red
BBSW-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 "FIRE" marking on cover), e.g., P2R-P.

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

± "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.

All outdoor units ending in "K" include a weatherproof back box.

± Add "-R" to model number for weatherproof replacement device (no back box included).



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

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