

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



CITY OF PORTLAND

BUILDING PERMIT

This is to certify that PROTECTION ONE
of 10 Manuel Dr, Portland, Maine

For installation at 195 RIVERSIDE ST

Job ID: 2011-06-1358-FAFS

CBL: 268 - - A - 007 - 002 - - - -

has permission to install a supervised fire alarm system
provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of
the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of
the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured
before this building or part thereof is lathed or otherwise
closed-in. 48 HOUR NOTICE IS REQUIRED.

A final inspection must be completed by owner
before this building or part thereof is occupied. If a
certificate of occupancy is required, it must be

[Handwritten signature] (58)

Fire Prevention Officer

Code Enforcement Officer / Plan Reviewer

**THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY
PENALTY FOR REMOVING THIS CARD**

BUILDING PERMIT INSPECTION PROCEDURES

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

or email: buildinginspections@portlandmaine.gov

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- **Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.**
- **Permits expire in 6 months. If the project is not started or ceases for 6 months.**
- **If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.**

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OF CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNÉE BEFORE THE SPACE MAY BE OCCU0PIED.



PORTLAND MAINE

Strengthening a Remarkable City, Building a Community for Life • www.portlandmaine.gov

Director of Planning and Urban Development
Penny St. Louis

Job ID: 2011-06-1358-FAFS
Installation of a supervised fire alarm system

For installation at:
195 RIVERSIDE ST

CBL: 268 - - A - 007 - 002 - - - -

Conditions of Approval:

Fire

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.

In field installation shall be installed per code as conditions dictate.

All wiring shall be inspected.

Records cabinet, FACP, annunciator(s), and pull stations shall be keyed alike.

Central Station monitoring for addressable fire alarm systems shall be by point.

All fire alarm records required by NFPA 72 should be stored in an approved cabinet located at the FACP labeled "FIRE ALARM RECORDS".

Installation of a Fire Alarm system requires a Knox Box to be installed per city ordinance.

System acceptance and commissioning must be coordinated with alarm and suppression system contractors and the Fire Department. Call 874-8703 to schedule.

Fire Alarm system shall be maintained. If system is to be off line over 4 hours a fire watch shall be in place. Dispatch notification required 874-8576.

B-4

X+5 ✓
6-9-11



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: 195 Riverside St CBL: 269-A-7
 Exact location: (within structure) back bay, annunciator front door
 Type of occupancy(s) (NFPA & ICC): Mercantile
 Building owner: Monro Muffler & Brake
 System Designer (point of contact): Must be Kevin Inman
 Designer phone: 207-332-1204 E-mail: kevininman@protection1.com
 Installing contractor: Protection One Certificate of Fitness No: 1003
 Contractor phone: 207-408-4849 E-mail: jasongervais@protection1.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: _____

The following documents shall be provided with this application:

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

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

COST OF WORK: \$5683.

PERMIT FEE: 80
 (\$10 PER \$1,000 + \$30 FOR THE FIRST \$1,000)

RECEIVED

JUN - 6 2011

Dept. of Building Inspections
City of Portland Maine

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: Will A. Burke Date: 6/6/11



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

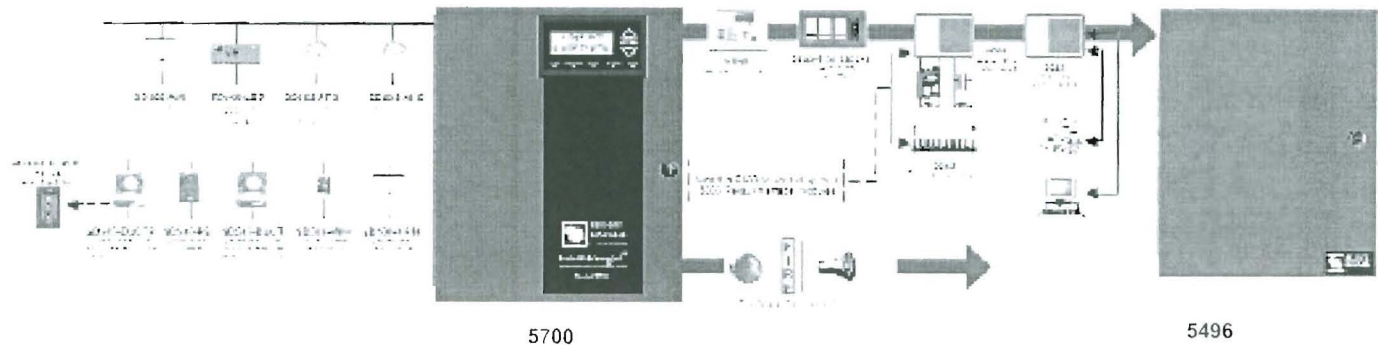
Compatibility

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.

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



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 Phone: (800) 328-0103 or (203) 484-7161, Fax: (203) 484-7118, www.silentknight.com

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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 you 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 active 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 active
- 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



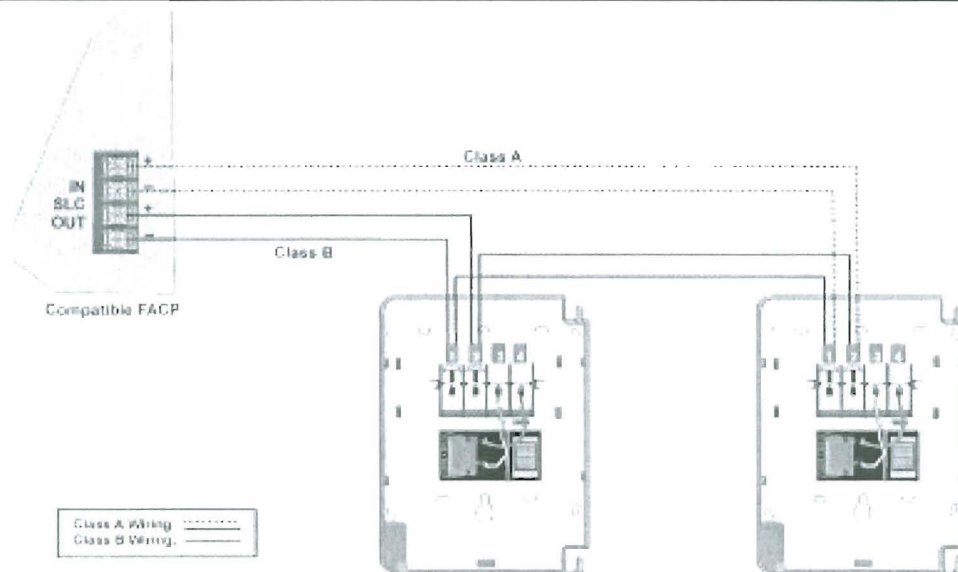
Model SK-Pull-Da and SK-Pull-SA



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-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

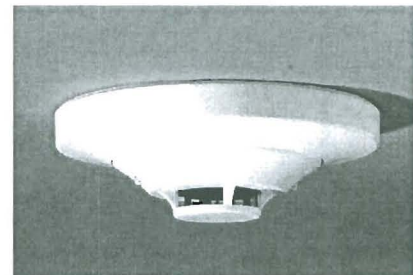
SK-Heat & SK-Heat-ROR: -4° – 100°F (20°C – 38°C)

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



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

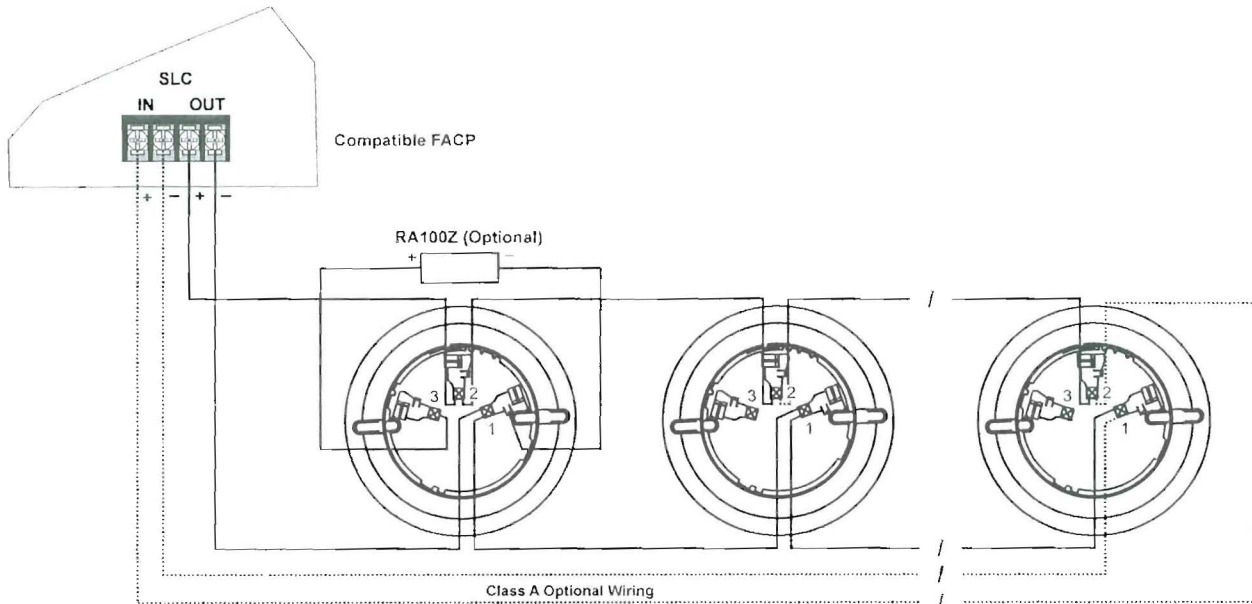


Engineering Specifications

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.



**SILENT
KNIGHT**

by Honeywell

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MADE IN AMERICA

FORM# 350120 Rev. A

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5860 Remote Annunciator



Bring the power to control an IntelliKnight fire alarm control panel to every area within your facility.

Now you can operate and program your IntelliKnight system from up to eight locations throughout your facility. The 5860 remote annunciator provides the same advanced, easy-to-use interface found on the IntelliKnight panel's built-in annunciator. The 80-character display and

ergonomically designed keypad allow for simple and error-free system operation. All operations—including reset, silence, detector status checking, fire drill, and programming—are identical.

Access to the system is through a firefighter's key or an access code. For security, a special installation code is needed for programming functions. The 5860 connects to the IntelliKnight panel via the RS-485 system bus. Wire runs can be up to 6000 feet from the panel.

For more information about the IntelliKnight system, or to locate your nearest source, please call 1-800-446-6444, or in Minnesota, call 763-493-6435.

Description

Features include an 80-character backlit LCD providing easy-to-understand system messages. The annunciator is ergonomically designed with over-sized buttons for the most frequently used features, like Reset and Silence. In addition to status messages displayed on the LCD, there are five LEDs for alarm, supervisory, trouble, silence, and AC power status.

The annunciator is available in gray to match virtually any decor and red for applications where the annunciator must stand out. The annunciator enclosure can be surface or flush mounted. A trim ring kit is available for surface mounting.

Features

- 80-character backlit LCD display (4 lines with 20 characters on each line)
- Tactile and audible feedback
- Accepts user codes or fire fighter's key
- Larger keypad buttons for system reset and silence
- Install up to eight 5860s per FACP

- Available in red or light gray
- Support for simultaneous use of multiple 5860s
- RS-485 interface to panel
- Operation and appearance is identical to 5860 built-in annunciator
- On-board piezo sounder audibly indicates alarms, troubles, and supervisories
- Five status LEDs for alarm, supervisory, trouble, silence and AC power conditions
- Wiring lengths up to 6000 ft. from the FACP (depending on wire gauge and number of devices on SBUS)
- UL listed, complies with NFPA 72
- CSFM approved

Electrical Specifications

Operating Voltage: 24 VDC

Standby Current: 20 mA max

Alarm Current: 25 mA

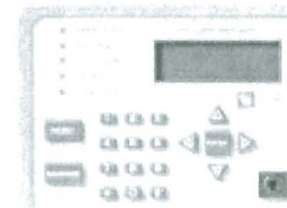
Wiring Distance: 6,000 max. from FACP (depending on wire gauge and number of devices on the SBUS)

Max Per System: 8

Mechanical Specifications

Physical 9.1" W x 7.4" H x 1.5" D (23.1 W x 18.8 H x 3.8 D cm)

Shipping Weight: 2.8 lbs (1.3 kg)



5860

Color

5860R: Red

5860: Gray

Environmental

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

Humidity: 10% – 93% non-condensing

Approvals

NFPA 72; UL Listed;
CSFM 7170-0559: 135;
MEA 429-92-E Vol. IX;
FM Approved



SILENT
KNIGHT

by Honeywell

5860 Remote Annunciator



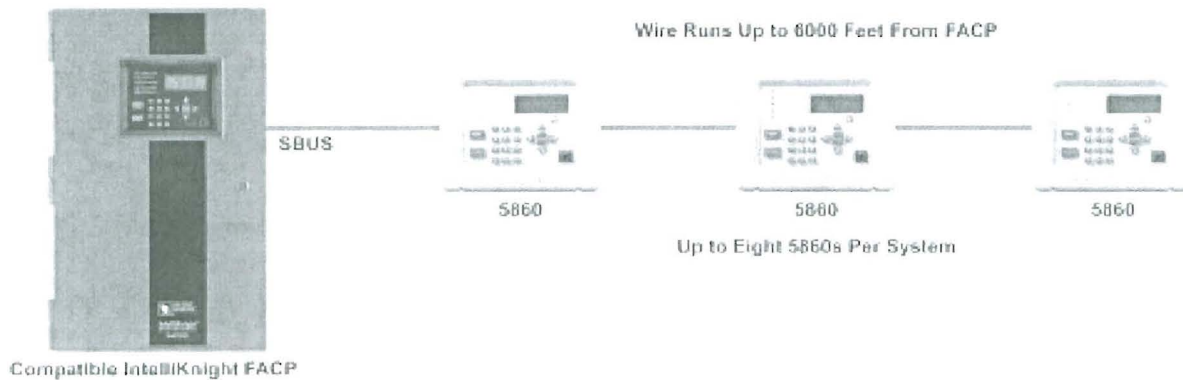
Engineering Specifications

The main control must have a built-in annunciator and must support up to eight remote annunciators. Remote annunciators shall have the same control and display layout so as to match the appearance of the built-in annunciator. Remote annunciators shall be available in two colors, red or light gray.

Remote annunciators shall have identical functionality and operation as the built-in annunciator. All annunciators must have an 80-character LCD display and must feature five LEDs for: General Alarm, Supervisory, System Trouble, System Silence, and System Power.

All controls and programming keys are silicone mechanical type with tactile and audible feedback. Keys have a travel of .040 inches. No membrane style buttons will be permissible.

The annunciator must be able to silence and reset alarms through the use of a code entered on the annunciator keypad or by using a firefighter's key. The annunciator must have two levels of user codes that will limit the operating system programming to authorized individuals. The control panel must allow all annunciators to accommodate multiple user input simultaneously.



Compatibility

IntelliKnight 5820XL FACP

IntelliKnight 5808 FACP

IntelliKnight 5700 FACP

Ordering Information

5680R Remote Annunciator

Four line LCD annunciator with 20 characters per line. Red.

5680 Remote Annunciator.

Four line LCD annunciator with 20 characters per line. Gray.

Accessories

5860TR Red Trim Ring

For surface mounting.

5860TG Gray Trim Ring

For surface mounting.



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Phone: (800) 328-0103, Fax: (763) 493-6475.

MADE IN AMERICA

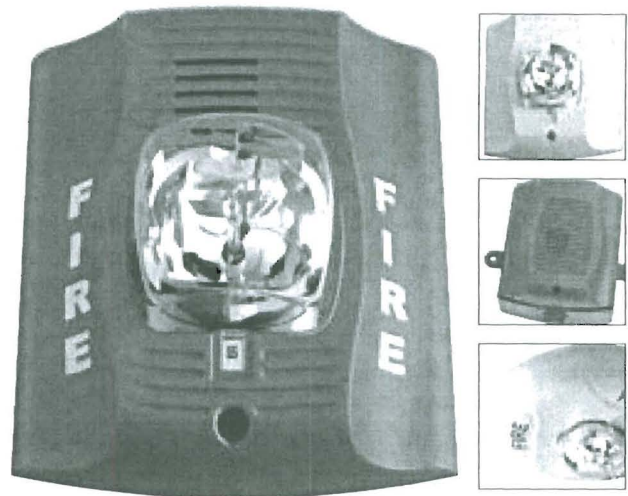
FORM# 350224 Rev C, 05/06

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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

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.

Agency Listings

SIGNALING



540-11
575-12
5357A



3023172

MEA
approved

ME A92405-L



7125-1653-186 (indoor strobes)
7300-1653-187 (outdoor strobes)
7125-1653-188 (horn/strobes,
clamper/strobes)
7135-1653-189 (duplex, clamper)

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 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

Horn/Strobe Combination

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

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 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 4½" x 4½" x 2½"-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)	5.6"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 2.25" high (180 mm diameter x 57 mm high)
Wall-mount weatherproof back box dimensions (SA-WBB)	5.71" 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)	5.7"L 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 Candela Range	15*	123	128	66	71	Temporal	High	57	55	69	75
	15/75*	142	148	77	81	Temporal	Medium	44	49	58	69
	30*	NA	NA	91	96	Temporal	Low	38	41	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
High Candela Range	115	NA	NA	210	205	Coded	High	57	55	69	75
	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)										
	8-17.5 Volts		16-33 Volts		30	75	95	110	115	
	DC	FWR	DC	FWR						
DC Input	15	15/75	15	15/75	30	75	95	110	115	
Temporal High	137	147	79	90	107	176	194	212	218	
Temporal Medium	132	144	69	80	97	157	182	201	210	
Temporal Low	132	143	66	77	93	154	179	198	207	
Non-temporal High	141	152	91	100	116	176	201	221	229	
Non-temporal Medium	133	145	75	85	102	163	187	207	216	
Non-temporal Low	131	144	68	79	96	156	182	201	210	
FWR Input										
Temporal High	136	155	88	97	112	168	190	210	218	
Temporal Medium	129	152	78	88	103	160	184	202	206	
Temporal Low	129	151	76	86	101	160	184	194	201	
Non-temporal High	142	161	103	112	126	181	203	221	229	
Non-temporal Medium	134	155	85	95	110	166	189	208	216	
Non-temporal Low	132	154	80	90	105	161	184	202	211	

UL Max. Current Draw (mA RMS), 2-wire Horn/Strobe, High Candela Range (135-185 cd)										
	16-33 Volts				FWR Input	16-33 Volts				
	DC	150	177	185		135	150	177	185	
DC Input	135	150	177	185	FWR Input	135	150	177	185	
Temporal High	245	259	290	297	Temporal High	215	231	258	265	
Temporal Medium	235	253	288	297	Temporal Medium	209	224	250	258	
Temporal Low	232	251	282	292	Temporal Low	207	221	248	256	
Non-temporal High	255	270	303	309	Non-temporal High	233	248	275	281	
Non-temporal Medium	242	259	293	299	Non-temporal Medium	219	232	262	267	
Non-temporal Low	238	254	291	295	Non-temporal Low	214	229	256	262	

Candela Derating

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

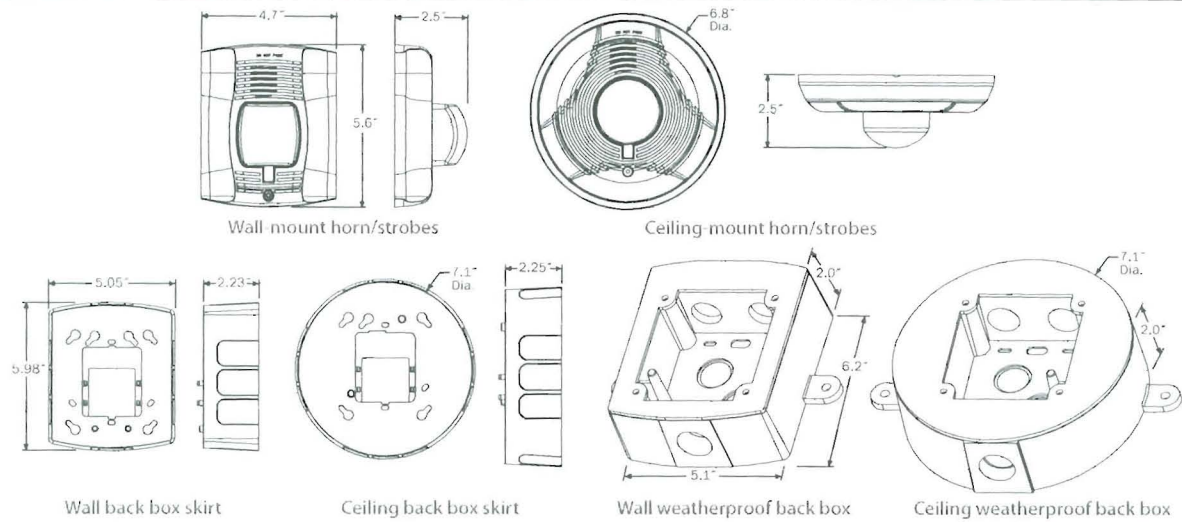
Strobe Output (cd)	
Listed Candela	Candela rating at -40°F
15	Do not use below 32°F
15/75	
30	
75	
95	
110	110
115	115
135	135
150	150
177	177
185	185

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	
1	Temporal	High	78	78	84	84	88	88	99	98	
2	Temporal	Medium	74	71	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 ¹	Coded	High	82	82	88	88	93	92	101	101	
8 ¹	Coded	Medium	78	78	85	85	90	90	97	98	
9 ¹	Coded	Low	75	75	81	81	88	85	96	92	

¹Settings 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* ¹	2-wire Horn/Strobe, Standard cd ¹ , Red
P2RI* ¹	2-wire Horn/Strobe, High cd, Red
P2RK* ²	2-wire Horn/Strobe, Standard cd, Red, Outdoor
P2RIK* ²	2-wire Horn/Strobe, High cd, Red, Outdoor
P2W*	2-wire Horn/Strobe, Standard cd, White
P2WI* ¹	2-wire Horn/Strobe, High cd, White
P4R*	4-wire Horn/Strobe, Standard cd, Red
P4RI* ¹	4-wire Horn/Strobe, High cd, Red
P4RK* ²	4-wire Horn/Strobe, Standard cd, Red, Outdoor
P4RIK* ²	4-wire Horn/Strobe, High cd, Red, Outdoor
P4W*	4-wire Horn/Strobe, Standard cd, White
P4WI* ¹	4-wire Horn/Strobe, High cd, White
Wall Strobes	
SR* ¹	Strobe, Standard cd, Red
SRH* ¹	Strobe, High cd, Red
SRK* ²	Strobe, Standard cd, Red, Outdoor
SRHK* ²	Strobe, High cd, Red, Outdoor
SW*	Strobe, Standard cd, White
SWH* ¹	Strobe, High cd, White
Ceiling Horn/Strobes	
PC2R* ¹	2-wire Horn/Strobe, Standard cd, Red
PC2RI* ¹	2-wire Horn/Strobe, High cd, Red
PC2RK* ²	2-wire Horn/Strobe, Standard cd, Red, Outdoor
PC2RIK* ²	2-wire Horn/Strobe, High cd, Red, Outdoor
PC2W* ¹	2-wire Horn/Strobe, Standard cd, White
PC2WI* ¹	2-wire Horn/Strobe, High cd, White
PC4R	4-wire Horn/Strobe, Standard cd, Red
PC4RI	4-wire Horn/Strobe, High cd, Red
PC4RK	4-wire Horn/Strobe, Standard cd, Red, Outdoor
PC4RIK	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* ¹	Strobe, Standard cd, Red
SCRH* ¹	Strobe, High cd, Red
SCRK* ²	Strobe, Standard cd, Red, Outdoor
SCRHK* ²	Strobe, High cd, Red, Outdoor
SCW* ¹	Strobe, Standard cd, White
SCWH* ¹	Strobe, High cd, White
Horns	
HR	Horn, Red
HRK* ²	Horn, Red, Outdoor
HW	Horn, White
Accessories	
BBS-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
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
- ¹ Add "-SP" to model number for "FUEGO" marking on cover, e.g., P2R-SP
- ¹ "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.
- ² 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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Product specifications subject to change without notice. Visit www.systemsensor.com for current product information, including the latest version of this data sheet.
#05-0395-005 • 8/05 • 4/2018



SILENT KNIGHT

5700 Calculations
Version 02.24.09

Global Project Values:

Project Name:

Standby Hours:

Project ID:

Alarm Mins:

Prepared By:

Derating Factor:

Date:

Voltage Drop Warning
Threshold %:

Panel ID:

Model: 5700 Add. Fire Alarm Control Panel

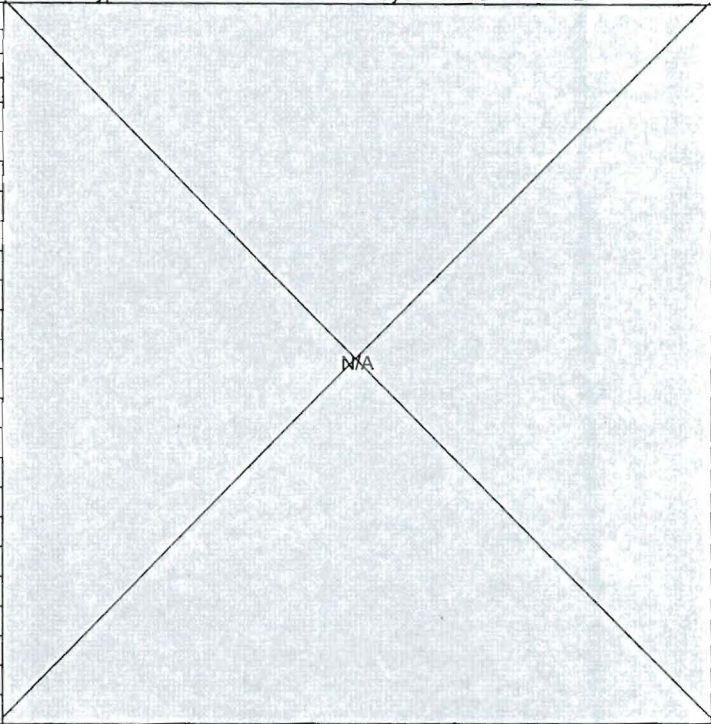
Max NAC Current: 2.5 Amps

Location:

Volts: 24 VDC

Max Panel Current: 2.5 Amps

Ckt.#	Circuit Name	Qty	Current Draw		Wire AWG & Type	Ohms Per 1000 Ft.	Length(ft) One-Way	Actual Ohms	Volts @ EOL	%Drop
			Standby	Alarm						
5700	5700 CTRL Panel	1	0.200	0.325						
SD500-AIM	Addr. Input Mod		0.000	0.000						
SD500-MIM	Mini-Input Module		0.000	0.000						
SD500-ARM	Addr. Relay Module		0.000	0.000						
SD500-PS	Addr. Pull Station	3	0.002	0.002						
SD505-AIS	Addr. Ion Smoke Det		0.000	0.000						
SD505-AHS	Addr. Heat Detector	6	0.003	0.003						
SD505-APS	Addr. Photo Smoke Det		0.000	0.000						
SD505-DUCTR	Addr. Duct w/Relay		0.000	0.000						
SD505-DUCT	Addr. Duct		0.000	0.000						
SD500-ANM	Addr. Notification Module		0.000	0.000						
SD500-LED	Addr. LED Module		0.000	0.000						
SD500-SDM	Addr. Smoke Det. Mod.		0.000	0.000						
SD505-6RB	Addr. Det. Relay Base		0.000	0.000						
SD505-6SB	Addr. Det. Sounder Base		0.000	0.000						
SD505-6IB	Addr. Det. Isolator Base		0.000	0.000						
SD500-LIM	Line Isolation Module		0.000	0.000						
5860	LCD Remote Annunc	1	0.020	0.025						
5824	Serial/Parallel Module		0.000	0.000						
5496	Power Expander		0.000	0.000						
5895XL	Power Expander		0.000	0.000						
5865-4	LED Annunciator (4G)		0.000	0.000						
5865-3	LED Annunciator (3G)		0.000	0.000						
5880	LED Driver Module		0.000	0.000						
5883	Relay Module		0.000	0.000						
NAC #1	Notification Appl Circuit		0.000	0.780	#12 Solid	1.59	100	0.32	20.15	1.22%
NAC #2	Notification Appl Circuit		0.000	0.810	#12 Solid	1.59	100	0.32	20.14	1.26%
Total Standby Current (Amps)			0.225	1.945	Total Alarm Current (Amps)					
Standby Time In Hours			24	0.083	Alarm Time In Minutes / 60 (5 Mins)					
Total Standby AH Required			5.399	0.162	Total Alarm AH Required					
Total Combined AH Required			5.56							
Multiply By The Derating Factor			1.20							
Minimum Battery AmpHours Required			6.67							



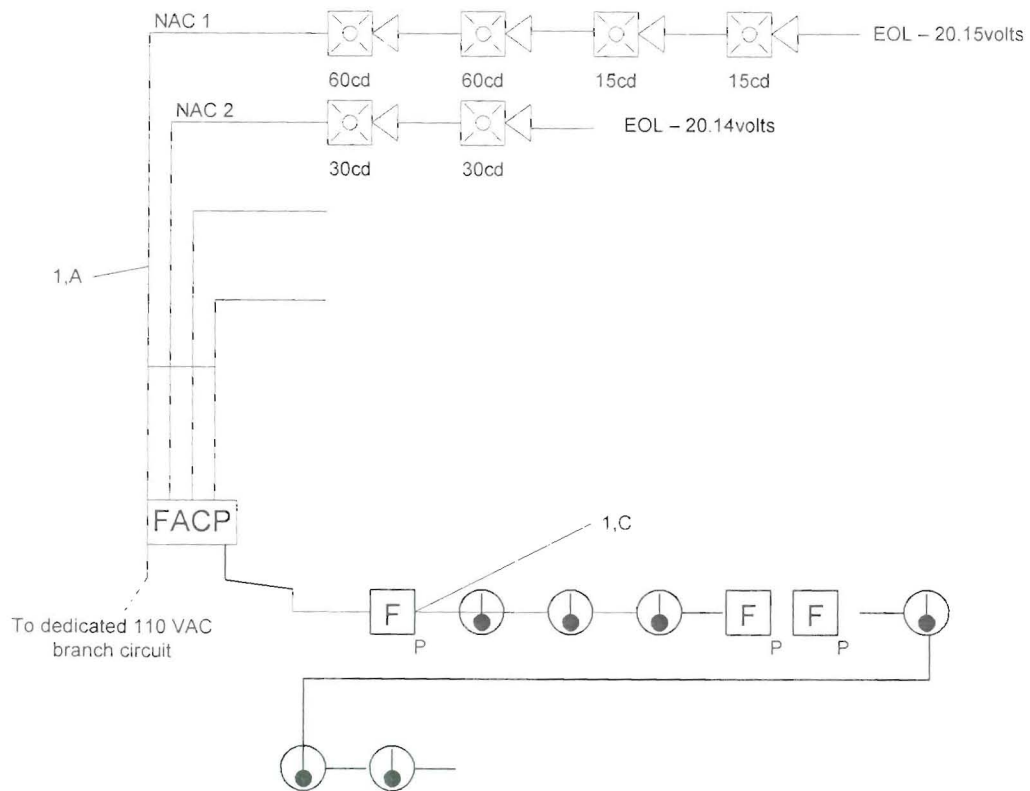
Command Shortcuts

Protection One

Tire Warehouse

6/1/11

Device Riser



Wire Legend

Description		
Letter	Gauge	Type
A	12/2	FPLR
B	14/2	FPLR
C	16/2	FPLR
D	18/2	FPLR
E	12/4	FPLR
F	14/4	FPLR
G	16/4	FPLR
H	18/4	FPLR
I	18/6	FPLR

Parts List

	H/S	4		Gentex Horn/Strobe
	H/S	2		Gentex Wall Strobe
	Heat	6		Addressable Heat Detector
	P/S	3		Addressable Pull Station



Your World Is Worth Protecting®

www.ProtectionOne.com

Monro Muffler & Brake
Dba Tire Warehouse
195 Riverside St.
Portland, Me

Scope of work for Fire Alarm upgrade:

Install a new fully Addressable Fire Alarm system.

All new Addressable Pull Stations at each egress door

All new Addressable Heat Detectors ROR throughout

All new Audio/Visual devices throughout

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 6/6/2011

Permit # _____

CBL# 268-A-7

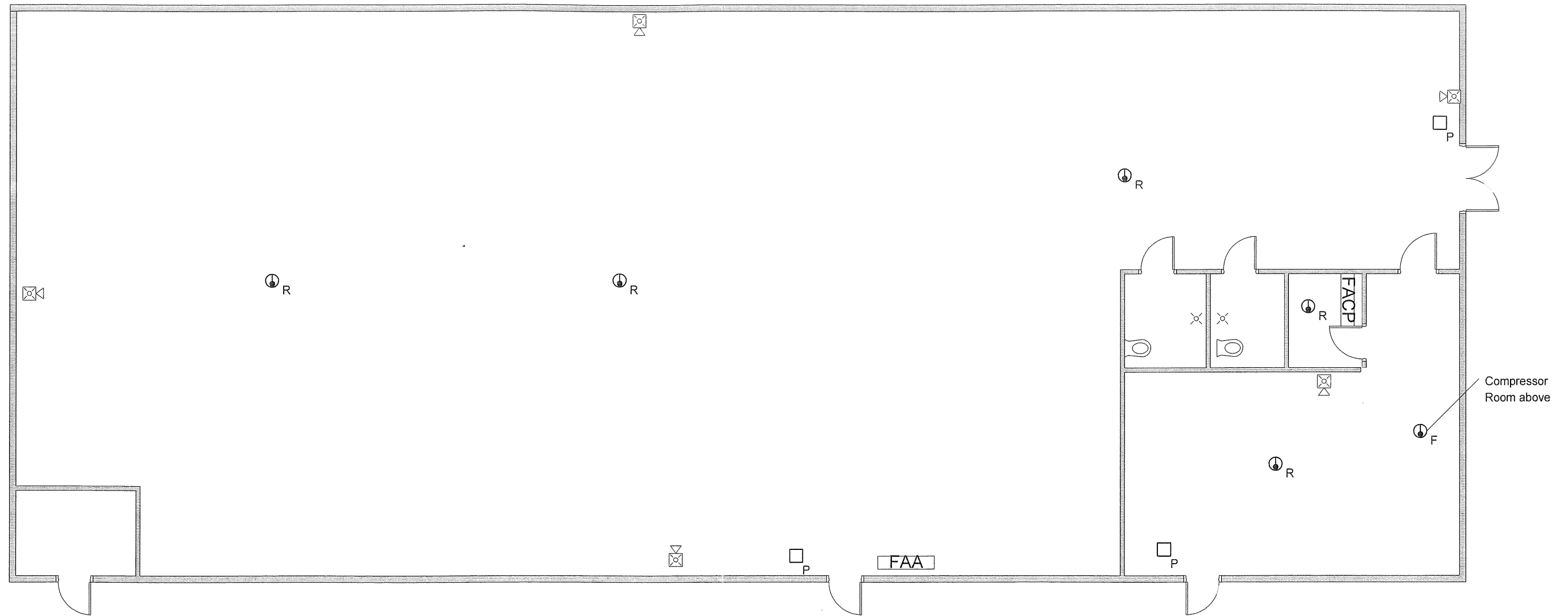
LOCATION: 195 RIVERSIDE ST METER MAKE & # _____
 CMP ACCOUNT # _____ OWNER MONRO MUFFLER & BRAKE
 TENANT TIRE WAREHOUSE PHONE # (207) 773-2045

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 LAWRENCE J. FOWEY, JR. PROTECTION ONE MASTER LIC. # MC60018702
 ADDRESS 10 MANUEL DRIVE PORTLAND, ME 04103 LIMITED LIC. # _____
 TELEPHONE (207) 347-5316

SIGNATURE OF CONTRACTOR [Signature]



Monro Muffler Shop		
195 Riverside St		
Symbol	Count	Description
	5	Horn w/ Light
	2	Light
	3	Manual Station
	6	Heat Detector

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

