

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



# CITY OF PORTLAND BUILDING PERMIT



This is to certify that

HOBSON PIER INC /Protection One

Located at

390 COMMERCIAL ST

PERMIT ID: 2012-65617

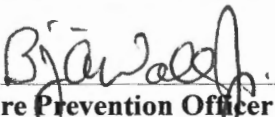
CBL: 042 D002001

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 cloed-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 procured prior to occupancy.

  
Fire Prevention Officer

58

Code Enforcement Officer / Plan Reviewer

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

**BUILDING PERMIT INSPECTION PROCEDURES**  
Please call 874-8703 (ONLY)  
or email: [buildinginspections@portlandmaine.gov](mailto: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.**

**REQUIRED INSPECTIONS:**

Final - Fire

Final - Electric

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 DESIGNEE BEFORE THE SPACE MAY BE OCCUPIED.

**City of Portland, Maine - Building or Use Permit**

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

|                                |  |                            |
|--------------------------------|--|----------------------------|
| <b>Permit No:</b><br>201265617 | <b>Date Applied For:</b><br>12/13/2012 | <b>CBL:</b><br>042 D002001 |
|--------------------------------|--|----------------------------|

|   |   |  |                                |
|---|---|--|--------------------------------|
| <b>Location of Construction:</b><br>390 COMMERCIAL ST | <b>Owner Name:</b><br>HOBSON PIER INC     | <b>Owner Address:</b><br>390 COMMERCIAL ST             | <b>Phone:</b>                  |
| <b>Business Name:</b>                                 | <b>Contractor Name:</b><br>Protection One | <b>Contractor Address:</b><br>10 Manuel Drive Portland | <b>Phone</b><br>(207) 347-5316 |
| <b>Lessee/Buyer's Name</b>                            | <b>Phone:</b>                             | <b>Permit Type:</b><br>Fire Alarm System               |                                |

|  |   |
|--|---|
| <b>Proposed Use:</b><br>Same: 1st floor Seafood Processing, 2nd floor vacant | <b>Proposed Project Description:</b><br>Fire Alarm Permit for whole building. |
|--|---|

|                     |   |                                  |                                  |
|---------------------|---|----------------------------------|----------------------------------|
| <b>Dept:</b> Zoning | <b>Status:</b> Approved                                 | <b>Reviewer:</b> Marge Schmuckal | <b>Approval Date:</b> 12/13/2012 |
| <b>Note:</b>        | <b>Ok to Issue:</b> <input checked="" type="checkbox"/> |                                  |                                  |

|  |   |                                 |                                  |
|--|---|---------------------------------|----------------------------------|
| <b>Dept:</b> Fire  | <b>Status:</b> Approved w/Conditions                    | <b>Reviewer:</b> Ben Wallace Jr | <b>Approval Date:</b> 12/21/2012 |
| <b>Note:</b>   | <b>Ok to Issue:</b> <input checked="" type="checkbox"/> |                                 |                                  |
| <ol style="list-style-type: none"> <li>1) All fire alarm records required by NFPA 72 should be stored in an approved cabinet located at the FACP labeled "FIRE ALARM RECORDS".</li> <li>2) 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.</li> <li>3) In field installation shall be installed per code as conditions dictate.</li> <li>4) A master box connection is not authorized for this building.</li> <li>5) The fire alarm system shall be certified by a master fire alarm company and have a new fire alarm inspection sticker.</li> <li>6) All smoke detectors shall be photoelectric.</li> <li>7) The FACP shall be installed in the corridor adjacent to and to the South of the North Stair. The door from the stair into the corridor shall be labeled FIRE ALARM. A Knox Box and exterior strobe shall be installed outside of the exterior door into the North stair on the opposite of the door's hinges.</li> <li>8) The installation shall comply with the following:<br/>City of Portland Chapter 10, Fire Prevention and Protection;<br/>NFPA 1, Fire Code (2009 edition), as amended by City Code;<br/>NFPA 101, Life Safety Code (2009 edition), as amended by City Code;<br/>City of Portland Fire Department Rules and Regulations;<br/>NFPA 72, National Fire Alarm and Signaling Code (2010 edition), as amended by Fire Department Rules and Regulations; and<br/>NFPA 70, National Electrical Code (2011 edition) as amended by the State of Maine.</li> <li>9) Records cabinet, FACP, annunciator(s), and pull stations shall be keyed alike.</li> <li>10) Central Station monitoring for addressable fire alarm systems shall be by point.</li> <li>11) System acceptance and commissioning must be coordinated with alarm and suppression system contractors and the Fire Department. Call 874-8703 to schedule.</li> </ol> |   |                                 |                                  |

**City of Portland, Maine - Building or Use Permit Application**

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

|                          |                            |                     |
|--------------------------|----------------------------|---------------------|
| Permit No:<br>2012-65617 | ISSUE DATE:<br>Issue Date: | CBL:<br>042 D002001 |
|--------------------------|----------------------------|---------------------|

|  |  |  |  |
|--|--|--|--|
| <b>Location of Construction:</b><br>390 COMMERCIAL ST  | <b>Owner Name:</b><br>HOBSON PIER INC  | <b>Owner Address:</b><br>390 COMMERCIAL ST   | <b>Phone:</b>                          |
| <b>Business Name:</b>  | <b>Contractor Name:</b><br>Protection One                                    | <b>Contractor Address:</b><br>10 Manuel Drive Portland   | <b>Phone</b><br>(207) 347-5316         |
| <b>Lessee/Buyer's Name</b>   | <b>Phone:</b>  | <b>Permit Type:</b><br>Fire Alarm System   | <b>Zone:</b><br>WCZ                    |
| <b>Past Use:</b><br>1st floor Seafood Processing, 2nd floor vacant   | <b>Proposed Use:</b><br>Same: 1st floor Seafood Processing, 2nd floor vacant | <b>Permit Fee:</b><br>\$250.00   | <b>Cost of Work:</b><br>\$23,000.00    |
| <b>Proposed Project Description:</b><br>Fire Alarm Permit for whole building.  |  | <b>FIRE DEPT:</b><br><input checked="" type="checkbox"/> Approved<br><input type="checkbox"/> Denied<br><input type="checkbox"/> N/A<br>12/21/12 | <b>INSPECTION:</b><br>Use Group: Type: |
|  |  | Signature: <i>[Signature]</i>  | Signature:                             |
| <b>PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)</b>   |  |  |  |
| Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied |  |  |  |
|  |  | Signature:   | Date:                                  |

|  |  |  |   |   |
|--|--|--|---|---|
| <b>Permit Taken By:</b><br>bjs   | <b>Date Applied For:</b><br>12/13/2012 | <b>Zoning Approval</b>   |   |   |
| <ol style="list-style-type: none"> <li>This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.</li> <li>Building permits do not include plumbing, septic or electrical work.</li> <li>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.</li> </ol> |  | <b>Special Zone or Reviews</b><br><input type="checkbox"/> Shoreland<br><input type="checkbox"/> Wetland<br><input type="checkbox"/> Flood Zone<br><input type="checkbox"/> Subdivision<br><input type="checkbox"/> Site Plan<br><br>Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/><br>Date: 12/13/12 | <b>Zoning Appeal</b><br><input type="checkbox"/> Variance<br><input type="checkbox"/> Miscellaneous<br><input type="checkbox"/> Conditional Use<br><input type="checkbox"/> Interpretation<br><input type="checkbox"/> Approved<br><input type="checkbox"/> Denied<br><br>Date: | <b>Historic Preservation</b><br><input checked="" type="checkbox"/> Not in District or Landmark<br><input type="checkbox"/> Does Not Require Review<br><input type="checkbox"/> Requires Review<br><input type="checkbox"/> Approved<br><input type="checkbox"/> Approved w/Conditions<br><input type="checkbox"/> Denied<br><br>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 |



# 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: 390 Commercial Street CBL: 042 D002

Exact location: (within structure) 1st Tenant Pier Side from Commercial Street

Type of occupancy(s) (NFPA & ICC): Business

Building owner: Hobson's Pier, Inc.

System Designer (point of contact): Robin Russell  
Must be

Designer phone: (207) 347-5327 E-mail: russell@protection1.com

Installing contractor: Protection 1 Certificate of Fitness No: M1003

Contractor phone: (207) 347-5316 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: \$23,000

PERMIT FEE: \$250.00  
(\$10 PER \$1,000 + \$30 FOR THE FIRST \$1,000)

**RECEIVED**

**DEC 12 2012**

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](http://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](http://www.portlandmaine.gov/fire).

Applicant signature: Robin Russell Date: 12-9-12

**Benjamin Wallace - RE: 390 Commercial Street - Hobson's Pier - permit 201265621**

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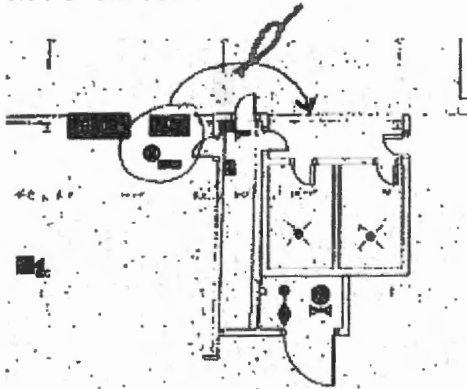
**From:** Benjamin Wallace  
**To:** Robin Russell  
**Date:** 12/21/2012 7:09 PM  
**Subject:** RE: 390 Commercial Street - Hobson's Pier - permit 201265621  
**CC:** Chris Pirone; Jason Gervais; Jeanie Bourke; Timothy C. Parent  
**Attachments:** Benjamin Wallace.vcf

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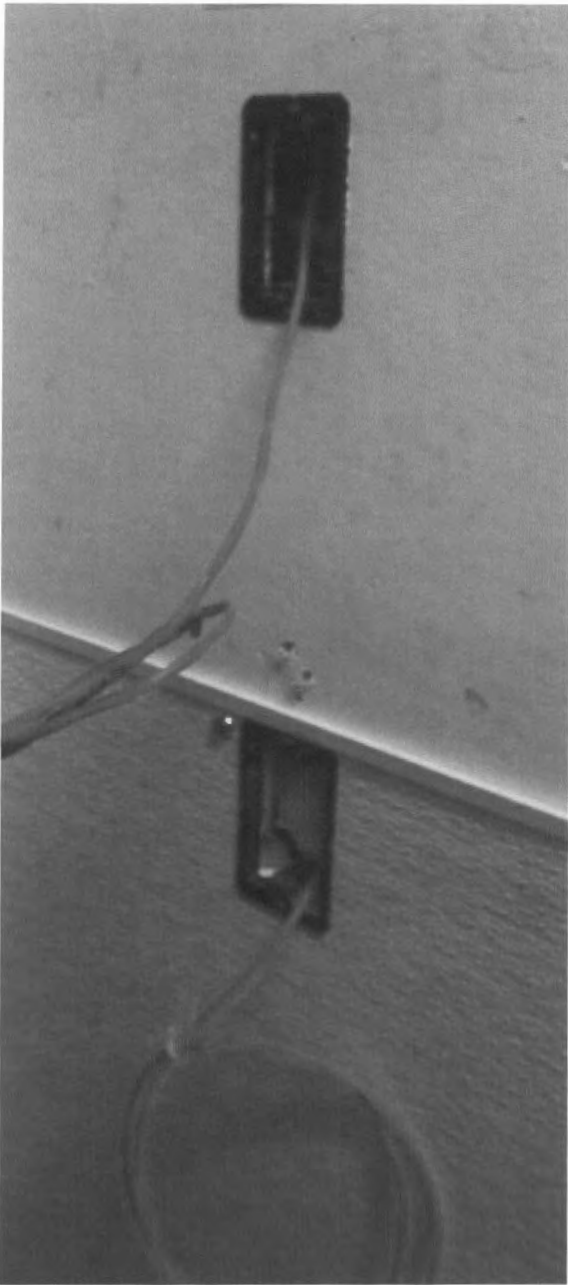
Robin,

I'm going to approve a conditional fire alarm permit but beware the floor layout isn't as your floor plan showed. The South end of the second floor and a number of the spaces off the corridor have partitioned rooms within them. Also the left end of the studio space as you enter is partitioned off and the wall the plan shows in the studio has been removed so it's wide open. The dimension of the open studio space is approximately 60 x 32. 60 candela strobes at each end should do the open space but you'll still need strobes in the adjacent partitioned space and adjust for the partitioned spaces in the rest of the floor.

I want to see the fire alarm control panel get installed in the in the cross corridor on the South side of the North stair by the bathrooms. It's about the only space suitable for it. Be careful with placement of the FACP smoke detector. If they put FIRE ALARM signage on the door from the stair into the corridor we'll allow them to do away with the annunciator given the panel's proximity. Install an exterior strobe over the Knox box on the latch side of the door.



The walls of the stairs are required to be 1-hour fire rated. They have a number of deficiencies in the fire rating they will have to fix but I think the openings that were cut into the wall at the bottom of those stairs to install the fire alarm devices appears to also violate the fire barrier as well. There weren't even back boxes.



Thanks,  
Ben

Lt. Benjamin Wallace Jr.  
Fire Prevention Officer  
Portland Fire Department  
380 Congress Street  
Portland, Maine 04101  
(207)874-8400  
wallaceb@portlandmaine.gov

>>> Benjamin Wallace 12/20/2012 2:51 PM >>>

Hi again,

The owner has submitted conflicting floor plans. As you can see from the attached plans that was submitted with the change of use permit the corridor appears to continue to the other end of the second floor with rooms

to each side and neither plan shows the correct configuration of the proposed Zumba space according to a discussion Jeanie and I had with the engineer the owner hired to provide a code analysis. I'm not sure which plan is correct but in any case neither are to scale so they'll need to have scalable architectural quality plans drawn up for the building and you can add you fire alarm design to those.

Thanks,  
Ben

Lt. Benjamin Wallace Jr.  
Fire Prevention Officer  
Portland Fire Department  
380 Congress Street  
Portland, Maine 04101  
(207)874-8400  
wallaceb@portlandmaine.gov

>>> Robin Russell <RobinRussell@ProtectionOne.com> 12/20/2012 10:09 AM >>>

Ben,

I've attached updated drawings with the candela ratings for the strobes and horn/strobes. All the 1<sup>st</sup> horn/strobes are ceiling mounted except in smaller rooms. The 1<sup>st</sup> ceilings are all suspended; the building owner verified that they do not wash down the ceiling. There is no manufacturer that produces a weatherproof ceiling mounted horn-strobe, I've researched this in the past. In similar applications we have found that ceiling mounted horn-strobes work better in this environment in lieu of wall mounted weatherproof horn-strobes.

Unfortunately the panel would be very difficult to install in the stairwell. Please notice the new location for of the FACP, smoke and document box. It's located next to an existing electrical panel; this area is dry according to the owner.

The spaces that don't have notification devices are unoccupied at this time; the intend would be to satisfy the notification requirements before occupancy.

The drawings are what was provided by the customer; I have inputted horizontal dimensions; if this does not suffice I will have to ask the owner to have scaled drawings produced.

Let me know if you have other concerns.

Thanks

[www.protection1.com](http://www.protection1.com)



**Robin Russell**  
Executive Commercial Security Consultant  
Portland ME Branch

**From:** Benjamin Wallace [mailto:wallaceb@portlandmaine.gov]

**Sent:** Thursday, December 20, 2012 9:01 AM

**To:** Robin Russell

**Cc:** Jason Gervais

**Subject:** 390 Commercial Street - Hobson's Pier - permit 201265621

**Importance:** High



Direct: 207-347-5327  
Fax: 207-772-7355  
[rrussell@protectionone.com](mailto:rrussell@protectionone.com)

Hi Robin,

A couple questions about this job.

1. Is the first floor fish processing suitable for interior horn/strobes or is it a damp location?
2. The first floor plan shows the FACP and smoke detector open to the rest of the space. Again I want to be sure the space is suitable for the panel and smoke detector installation or they're moved to a space that is suitable for them. One option would be to install them at the front door with the pull station in lieu of the annunciator.
3. There are no candella ratings indicated on any of the strobes so I have no way to verify the spacing. Please be sure to include the rating of the strobes on the floor plans and wiring diagrams. Also the plans need to be to scale for me to verify the spacing so that's required as well.
4. Are the spaces that don't have strobes private offices?

Thanks,  
Ben

Lt. Benjamin Wallace Jr.  
Fire Prevention Officer  
Portland Fire Department  
380 Congress Street  
Portland, Maine 04101  
(207)874-8400  
[wallaceb@portlandmaine.gov](mailto:wallaceb@portlandmaine.gov)

Notice: Under Maine law, documents - including e-mails - in the possession of public officials or city employees about government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.

## **Fire Alarm System 390 Commercial Street, Portland, Maine 04101**

**SCOPE of WORK:** The submittal for this permit is to install a fire alarm system to monitor the building sprinkler system. See scope below:

- Install Silent Knight addressable fire alarm control in 1<sup>st</sup> Floor space closest to Commercial Street near sprinkler riser
- Install smoke detector above panel
- Install monitor modules for wiring to sprinkler water flow and tamper switches
- Install fire annunciator at 390 Commercial Street entrance closest to Commercial Street
- Install fire alarm notification in all occupied spaces; notification will be installed in empty spaces as they become occupied
- Install document box at fire alarm panel



**SILENT KNIGHT**

5808 Calculations  
Version 12.30.10

Project Name: Hobson's Pier  
Project ID: 390 Commercial Streey Calculatic  
Prepared By: Robin Russell  
Date: 12/9/2012

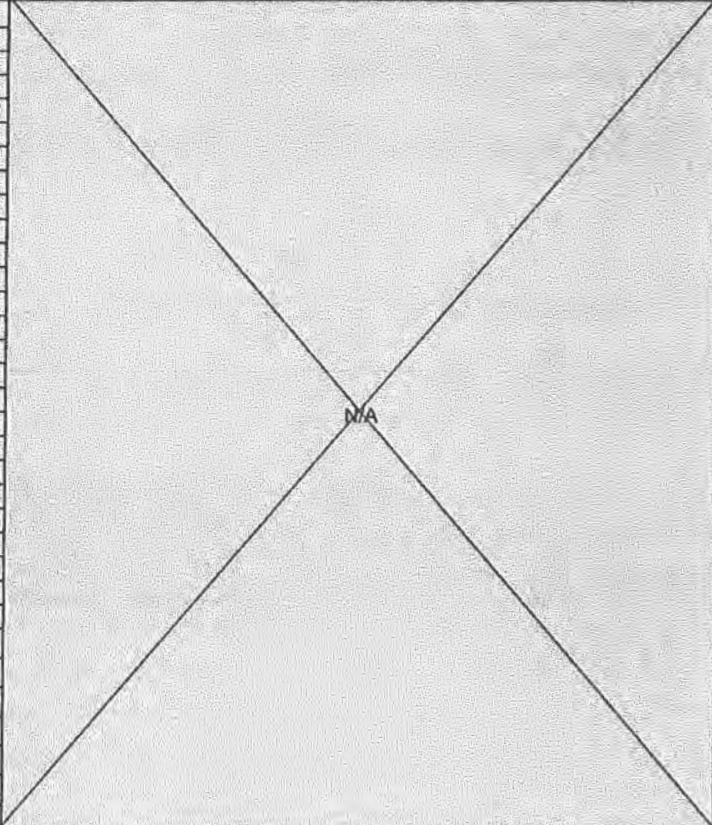
Standby Hours: 24  
Alarm Mins: 5  
Derating Factor: 1.2  
Voltage Drop Warning Threshold %: 10

Panel ID: 5808  
Location: 390 Commercial Street

Model: 5808 Add. Fire Alarm Control Panel  
Volts: 24 VDC

Max NAC Current: 3.0 Amps  
Max Panel Current: 6.0 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 |                                     |                   |                    |             |             |       |
| 5808                              | 5808 CTRL Panel           | 1   | 0.170        | 0.325 |                                     |                   |                    |             |             |       |
| SK                                | Photo, Photo-T            | 1   | 0.000        | 0.000 |                                     |                   |                    |             |             |       |
| SK                                | Ion                       |     | 0.000        | 0.000 |                                     |                   |                    |             |             |       |
| SK                                | Heat, Heat-HT             |     | 0.000        | 0.000 |                                     |                   |                    |             |             |       |
| SK                                | Heat ROR                  |     | 0.000        | 0.000 |                                     |                   |                    |             |             |       |
| 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                                | Relaymon                  |     | 0.000        | 0.000 |                                     |                   |                    |             |             |       |
| SK                                | Control-6                 |     | 0.000        | 0.000 |                                     |                   |                    |             |             |       |
| SK                                | Monitor, Mlnimon          | 1   | 0.000        | 0.000 |                                     |                   |                    |             |             |       |
| SK                                | Monitor-2                 | 1   | 0.001        | 0.001 |                                     |                   |                    |             |             |       |
| SK                                | Monitor-10                |     | 0.000        | 0.000 |                                     |                   |                    |             |             |       |
| SK                                | Pull-SA, Pull-DA          | 1   | 0.000        | 0.000 |                                     |                   |                    |             |             |       |
| 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 |                                     |                   |                    |             |             |       |
| SSB224BI                          | Isolator Base             |     | 0.000        | 0.000 |                                     |                   |                    |             |             |       |
| B200SR                            | Sounder Base              |     | 0.000        | 0.000 |                                     |                   |                    |             |             |       |
| SSB224RB                          | Relay Base                |     | 0.000        | 0.000 |                                     |                   |                    |             |             |       |
| SSRTS151                          | Magnetic Remote Test      |     | 0.000        | 0.000 |                                     |                   |                    |             |             |       |
| SSRTS151KEY                       | Key Activated Test        |     | 0.000        | 0.000 |                                     |                   |                    |             |             |       |
| SSRA100Z                          | Remote LED                |     | 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 | #14 Solid                           | 2.52              | 2                  | 0.01        | 20.39       | 0.06% |
| NAC #1                            | Notification Appl Circuit |     | 0.000        | 1.514 | #14 Solid                           | 2.52              | 1                  | 0.01        | 20.39       | 0.03% |
| NAC #2                            | Notification Appl Circuit |     | 0.000        | 1.156 | #14 Solid                           | 2.52              | 1                  | 0.00        | 20.40       | 0.02% |
| NAC #3                            | Notification Appl Circuit |     | 0.000        | 0.955 | #14 Solid                           | 2.52              | 1                  | 0.00        | 20.40       | 0.02% |
| NAC #4                            | Notification Appl Circuit |     | 0.000        | 0.787 | Total Alarm Current (Amps)          |                   |                    |             |             |       |
| Total Standby Current (Amps)      |                           |     | 0.192        | 4.764 | Alarm Time In Minutes / 60 (5 Mins) |                   |                    |             |             |       |
| Standby Time In Hours             |                           |     | 24           | 0.083 | Total Alarm AH Required             |                   |                    |             |             |       |
| Total Standby AH Required         |                           |     | 4.602        | 0.397 | <b>Command Shortcuts</b>            |                   |                    |             |             |       |
| Total Combined AH Required        |                           |     | 5.00         |       |                                     |                   |                    |             |             |       |
| Multiply By The Derating Factor   |                           |     | 1.20         |       |                                     |                   |                    |             |             |       |
| Minimum Battery AmpHours Required |                           |     | 6.00         |       |                                     |                   |                    |             |             |       |



Configure Circuits

Print Page





**Job Name: Hobson's Pier Fire Alarm S...**

Hobson's Pier, Inc.  
 390 Commercial Street  
 Portland, ME 04101  
 AHJ: City of Portland Fire Department

**Prepared By:**

Robln Russell                      110826  
 Protection 1  
 10 Manuel Drive  
 Portland, ME 04103  
 (207) 347-5327

**Circuit Information**

Panel Name: 5808 Silent Knight  
 Circuit Name: NAC#1  
 Starting Voltage: Starting Voltage = 20.4

(1.5) amp circuit  
 Class B @ 14 AWG  
 DC 24 - volt Supply

| Type and Model           | Candela        | Current (Amps) | Tone and Volume | Dist from last device | Dist from source (ft) | 12     | 14     | 16     | 18     |
|--------------------------|----------------|----------------|-----------------|-----------------------|-----------------------|--------|--------|--------|--------|
| Horn/Strobe PC2R         | 95             | 0.194          | Temporal, High  | 20                    | 20                    | 20.282 | 20.212 | 20.101 | 19.924 |
| Strobe SR                | 15             | 0.066          |                 | 30                    | 50                    | 20.128 | 19.968 | 19.711 | 19.305 |
| Strobe SR                | 15             | 0.066          |                 | 30                    | 80                    | 19.981 | 19.736 | 19.342 | 18.717 |
| Horn/Strobe PC2R         | 95             | 0.194          | Temporal, High  | 30                    | 110                   | 19.843 | 19.516 | 18.993 | 18.162 |
| Horn/Strobe PC2R         | 95             | 0.194          | Temporal, High  | 40                    | 150                   | 19.690 | 19.273 | 18.606 | 17.546 |
| Horn/Strobe PC2R         | 95             | 0.194          | Temporal, High  | 60                    | 210                   | 19.507 | 18.983 | 18.144 | 16.811 |
| Horn/Strobe PC2R         | 95             | 0.194          | Temporal, High  | 60                    | 270                   | 19.371 | 18.767 | 17.800 | 16.264 |
| Horn/Strobe P2R          | 75             | 0.176          | Temporal, High  | 50                    | 320                   | 19.297 | 18.649 | 17.612 | *      |
| Horn/Strobe PC2R         | 95             | 0.194          | Temporal, High  | 50                    | 370                   | 19.258 | 18.587 | 17.513 | *      |
| Total current/amps 1.472 | Total Dist:370 |                | voltage drop    |                       |                       | 1.142  | 1.813  | 2.887  | *      |



**Circuit Information**

Panel Name: 5808 Silent Knight  
 Circuit Name: NAC #2  
 Starting Voltage: Starting Voltage = 20.4

(1.5) amp circuit  
 Class B @ 14 AWG  
 DC 24 - volt Supply

| Type and Model           | Candela        | Current (Amps) | Tone and Volume | Dist from last device | Dist from source (ft) | 12     | 14     | 16     | 18 |
|--------------------------|----------------|----------------|-----------------|-----------------------|-----------------------|--------|--------|--------|----|
| Horn/Strobe PC2R         | 95             | 0.194          | Temporal, High  | 220                   | 220                   | 19.172 | 18.452 | 17.298 | *  |
| Strobe SR                | 15             | 0.066          |                 | 30                    | 250                   | 19.028 | 18.223 | 16.934 | *  |
| Horn/Strobe PC2R         | 95             | 0.194          | Temporal, High  | 50                    | 300                   | 18.802 | 17.863 | 16.361 | *  |
| Horn/Strobe P2R          | 75             | 0.176          | Temporal, High  | 40                    | 340                   | 18.652 | 17.625 | *      | *  |
| Horn/Strobe PC2R         | 95             | 0.194          | Temporal, High  | 40                    | 380                   | 18.530 | 17.432 | *      | *  |
| Horn/Strobe P2R          | 75             | 0.176          | Temporal, High  | 40                    | 420                   | 18.439 | 17.288 | *      | *  |
| Horn/Strobe P2R          | 95             | 0.194          | Temporal, High  | 25                    | 445                   | 18.400 | 17.226 | *      | *  |
| Horn/Strobe P2R          | 95             | 0.194          | Temporal, High  | 50                    | 495                   | 18.361 | 17.164 | *      | *  |
| Total current/amps 1.388 | Total Dist:495 |                | voltage drop    |                       |                       | 2.039  | 3.236  | *      | *  |



**Circuit Information**

Panel Name: 5808 Silent Knight  
 Circuit Name: NAC #3  
 Starting Voltage: Starting Voltage = 20.4

(1.5) amp circuit  
 Class B @ 14 AWG  
 DC 24 - volt Supply

| Type and Model           | Candela        | Current (Amps) | Tone and Volume | Dist from last device | Dist from source (ft) | 12     | 14     | 16     | 18     |
|--------------------------|----------------|----------------|-----------------|-----------------------|-----------------------|--------|--------|--------|--------|
| Horn/Strobe P2R          | 15             | 0.079          | Temporal, High  | 50                    | 50                    | 20.215 | 20.107 | 19.933 | 19.657 |
| Horn/Strobe P2R          | 75             | 0.176          | Temporal, High  | 30                    | 80                    | 20.114 | 19.946 | 19.677 | 19.250 |
| Strobe SR                | 15             | 0.066          |                 | 30                    | 110                   | 20.034 | 19.819 | 19.475 | 18.928 |
| Strobe SR                | 15             | 0.066          |                 | 10                    | 120                   | 20.010 | 19.781 | 19.414 | 18.832 |
| Horn/Strobe P2R          | 75             | 0.176          | Temporal, High  | 50                    | 170                   | 19.903 | 19.611 | 19.144 | 18.402 |
| Horn/Strobe P2R          | 15             | 0.079          | Temporal, High  | 40                    | 210                   | 19.846 | 19.520 | 18.999 | 18.172 |
| Strobe SR                | 15             | 0.066          |                 | 10                    | 220                   | 19.835 | 19.503 | 18.971 | 18.127 |
| Horn/Strobe P2R          | 15             | 0.079          | Temporal, High  | 90                    | 310                   | 19.758 | 19.381 | 18.778 | 17.820 |
| Strobe SR                | 15             | 0.066          |                 | 40                    | 350                   | 19.737 | 19.348 | 18.724 | 17.735 |
| Strobe SR                | 15             | 0.066          |                 | 10                    | 360                   | 19.734 | 19.344 | 18.718 | 17.724 |
| Total current/amps 0.919 | Total Dist:360 |                | voltage drop    |                       | 0.666                 | 1.056  | 1.682  | 2.676  |        |



**Circuit Information**

Panel Name: 5808 Silent Knight  
 Circuit Name: NAC #4  
 Starting Voltage: Starting Voltage = 20.4

(1.5) amp circuit  
 Class B @ 14 AWG  
 DC 24 - volt Supply

| Type and Model           | Candela        | Current (Amps) | Tone and Volume | Dist from last device | Dist from source (ft) | 12     | 14     | 16     | 18     |
|--------------------------|----------------|----------------|-----------------|-----------------------|-----------------------|--------|--------|--------|--------|
| Horn/Strobe P2R          | 75             | 0.176          | Temporal, High  | 260                   | 260                   | 19.513 | 18.992 | 18.157 | 16.833 |
| Horn/Strobe P2R          | 15             | 0.079          | Temporal, High  | 20                    | 280                   | 19.459 | 18.906 | 18.021 | 16.615 |
| Horn/Strobe P2R          | 75             | 0.176          | Temporal, High  | 40                    | 320                   | 19.363 | 18.754 | 17.779 | 16.231 |
| Strobe SR                | 15             | 0.066          |                 | 30                    | 350                   | 19.313 | 18.674 | 17.652 | 16.029 |
| Horn/Strobe P2R          | 75             | 0.176          | Temporal, High  | 80                    | 430                   | 19.199 | 18.495 | 17.366 | *      |
| Horn/Strobe P2R          | 75             | 0.176          | Temporal, High  | 90                    | 520                   | 19.136 | 18.393 | 17.205 | *      |
| Total current/amps 0.849 | Total Dist:520 |                | voltage drop    |                       |                       | 1.264  | 2.007  | 3.195  | *      |





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## IntelliKnight® 5808 Single Loop Addressable Fire Alarm Control System

**The convenience of an addressable fire alarm control panel in a cost-effective easy to use package.**

IntelliKnight Model 5808 is a 127 point class leading single loop addressable fire alarm control/communicator system. 5808 provides you with the revolutionary value and performance of addressable sensing technology combined with exclusive, built-in digital communication, distributed intelligent power, 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 1-800-328-0103.

### Description

The basic 5808 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. 5808 supports Hochiki or SK protocol devices. 5808 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 99 SK detectors *and* 99 SK modules.
- Built in support for 127 Hochiki SD devices.
- 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 can be configured as 2 Class A (Style Z) or 4 Class B (Style Y), or auxiliary power for resettable, constant, or door holder power.
- Built-in annunciator with 80-character LCD display.
- RS-485 bus provides communication to system accessories.
- Built-in RS-232 and USB interface for programming via a PC.
- Upload or download programming, event history, or detector status via remote or direct connection.
- Improvements in SKSS deliver five times faster upload/downloads.
- Built-in synchronization for appliances from AMSECO, Gentex®, Faraday, System Sensor®, and Wheelock®.
- One Form C trouble relay rated at 2.5A at 27.4 VDC and two Form C programmable relays rated at 2.5A at 27.4 VDC.



**Model 5808**

- Programmable date setting for Daylight Saving Time
  - Plex-2 door option combines a dead front cabinet door with a clear window, limiting access to the panel while providing single button operation of the reset and silence functions.
- Integrated dead front panel protects operator from exposure to electrical components.
- The FACP enclosure features a Plexiglass® viewing window to protect annunciator.
  - Acknowledge function allows operator to keep track of event status.

### Installation

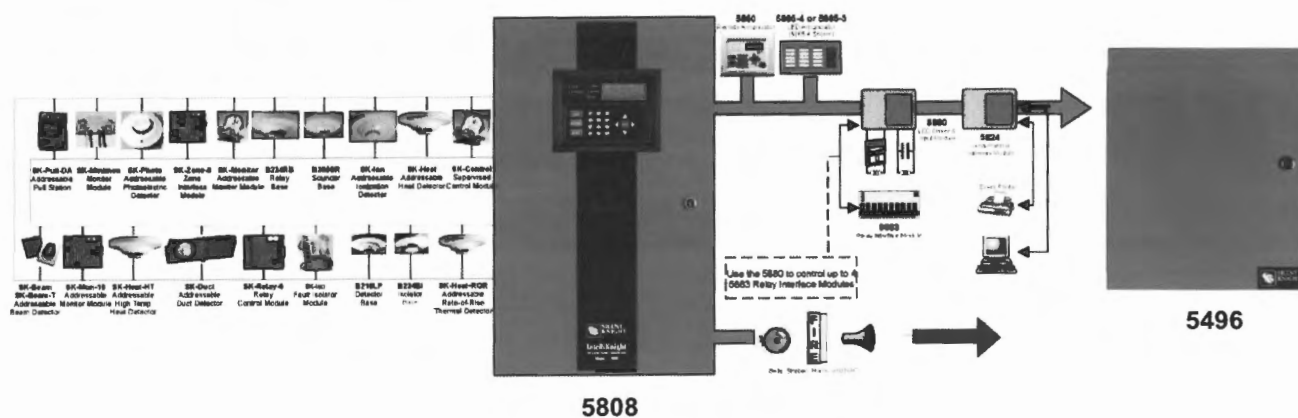
The 5800 can be surface or flush mounted.

### Compatibility

The 5808 SLC supports multiple device types of the *same* protocol:

- SK (System Sensor)
- Hochiki SD

You cannot mix SD and SK devices on a FACP.



**Specifications**

**Electrical**

Primary AC: 120 VRMS at 50/60 Hz, 2.75A

Total Accessory Load: 6A @ 27.4 VDC

Notification Power: 6A @ 27.4 VDC, power-limited

Standby Current: 170 mA

Alarm Current: 325 mA

Notification & Auxiliary Circuits: 3A @ 27.4 VDC per circuit, power-limited

Battery Charging Capacity: 7.0-35 AH

Battery Size: 18 AH max. allowed in FACP. Larger capacity batteries can be housed in an RBB accessory cabinet

**Physical**

Flush Mount Dimensions: 14.5" W x 24.75" H x 3.5" D (36.8 W x 62.9 H x 8.73 D cm)

Overall Dimensions: 16" W x 26.4" H x 4.65" D (40.6 W x 67 H x 11.8 D cm)

Weight: 28 lbs. (12.8 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.

UL Listed  
CSFM 7165-0559:0142;  
MEA 429-92-E Vol. XIV

**S-BUS Accessories**

**5860/R Remote Fire Annunciator**

Features the same 80 character backlit LCD display keypad and firefighter's key switch as the 5808. 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.

**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.

**5883 Relay Board**

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

**Miscellaneous Accessories**

**5660 Silent Knight Software Suite**

PC-base software for FACP programming. 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.

**Plex-2 Door**

Dead front cabinet door with clear window to limit access to the FACP.

**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)

**Hochiki and SK Devices**

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

53624 Hochiki SD Devices data sheet

53623 SK Device Protocol Devices data sheet

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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 1-800-328-0103.

### 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)

Color

5860R: Red

5860: Gray



**5860**

### Environmental

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

Humidity: 10% – 93% non-condensing

### Compatibility

The 5860 is compatible is the following FACP's:

- IntelliKnight 5820XL FACP
- IntelliKnight 5808 FACP
- IntelliKnight 5700 FACP

### Approvals/Listings

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

## 5860 Remote Annunciator

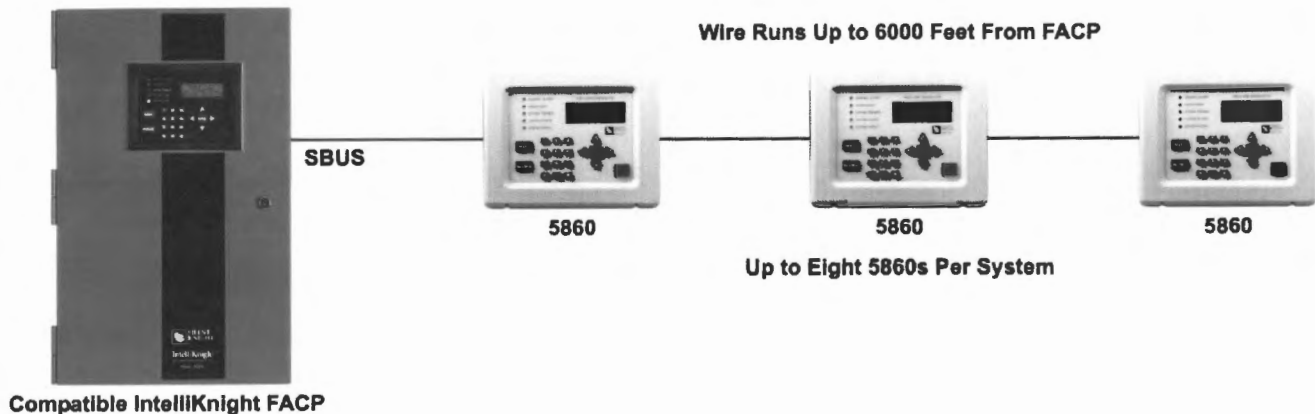
### Engineering Specifications

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.



### Ordering Information

- 5860R Remote Annunciator four line LCD annunciator with 20 characters per line. Red.  
 5860 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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**SK-Minimon**

## Intelligent Mini Monitor Module

The SK-Minimon addressable mini monitor modules for use with Silent Knight IntelliKnight fire alarm control panels (FACP). The SK-Minimon is designed to be used with pull stations, water flow switches, and other applications requiring dry contact alarm initiation devices.

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

### Description

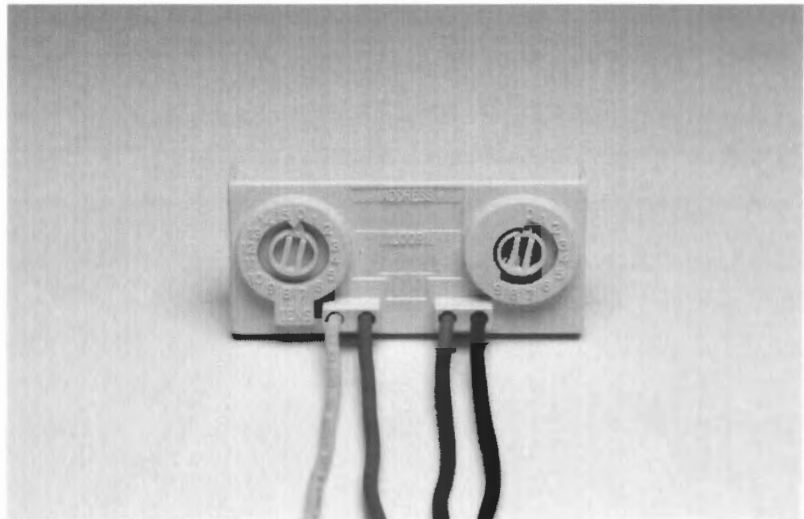
The SK-Minimon is an addressable monitor modules for use with the IntelliKnight fire alarm control panels (FACPs). The SK-Minimon acts as an interface to contact devices, such as waterflow switches and pull stations.

The SK-Minimon supports Class B supervised wiring to the load device. Conventional 4-wire smoke detectors can be monitored for alarm and trouble conditions

The SK-Minimon can be mounted in a single gang junction box directly behind the monitored device. Its small size and light weight allow it to be installed without rigid mounting requirements.

### Features

- Single contact monitor
- SK-Minimon support for Class B (Style B) contact monitor wiring
- Small and lightweight size allows for flexible mounting options
- Rotary address switches for fast installation
- UL listed



SK-Minimon

### Specifications

#### Electrical

Standby Current: 400 uA max @  
24 VDC with comm.  
Voltage Range: 15 - 32 VDC  
End of Line Resistance: 47 k Ohms

#### Physical

Dimensions:  
2.75" W x 1.3" H x 0.5" D  
Weight: 1.2 oz (37 g)

#### Environmental

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

Humidity:  
10% – 93% non-condensing

### Compatibility

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

5700  
5808  
5820XL

#### Approvals

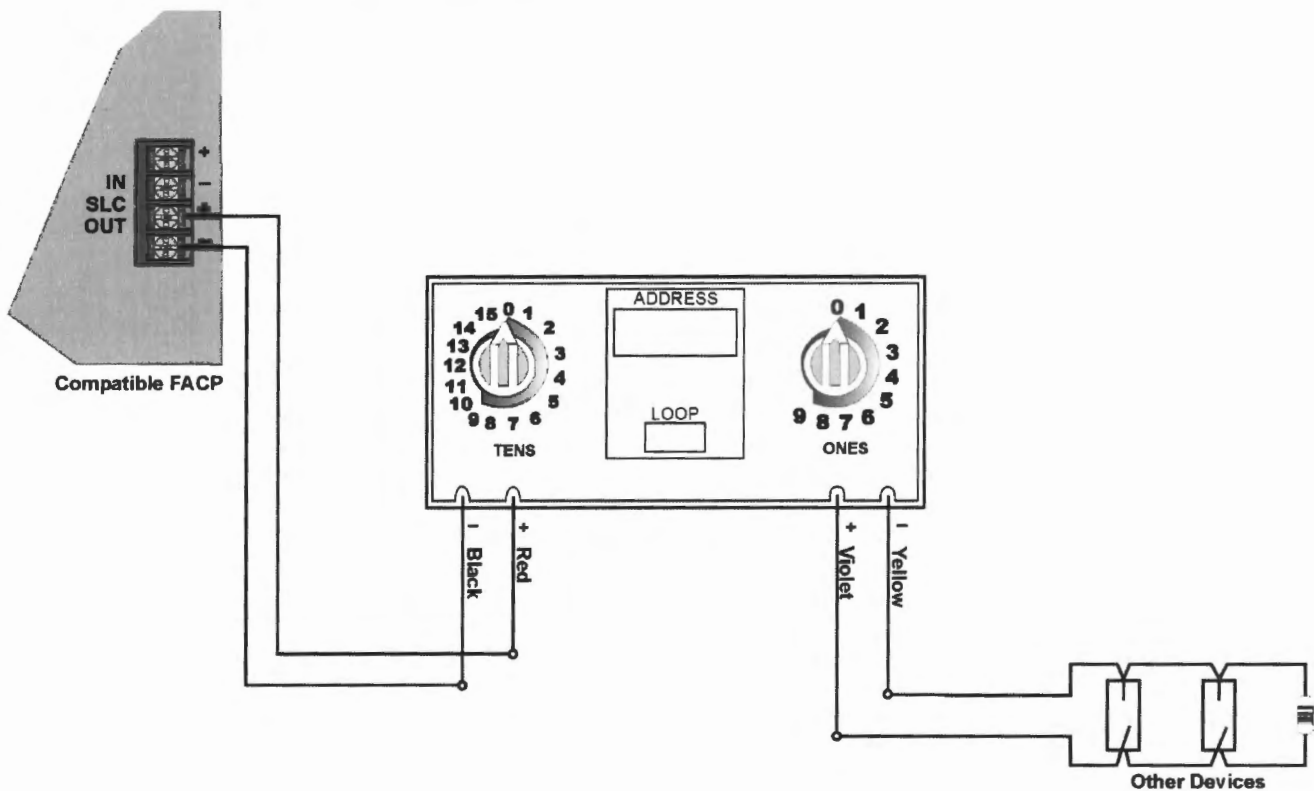
UL approved  
CSFM  
FM Approved

# SK-Minimon Intelligent Monitor Module

## Engineering Specifications

The contractor shall furnish and install where indicated on the plans, addressable monitor modules Silent Knight SK-Minimon. The modules shall be UL listed and compatible with Silent Knight's IntelliKnight FACPs. The device shall be capable of Styles A and B supervised wiring to the load device.

The SK-Minimon shall be installed inside a single gang junction box directly behind the monitored unit.



**Wiring the SK-Minimon**



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## SK-Monitor-2

### Intelligent Dual Monitor Module

The SK-Monitor-2 module is capable of monitoring two separate Class B circuits simultaneously, making it ideal for waterflow tamper switch and flow switch monitoring.

For more information about the IntelliKnight system, or to locate your nearest source, please call 1-800-328-0103.

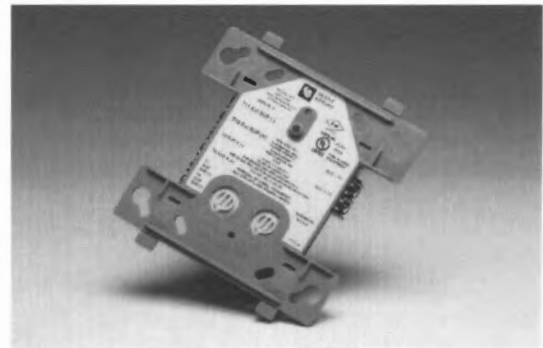
#### Description

The SK-Monitor-2 is an addressable monitor module with two initiating circuits for use with Silent Knight IntelliKnight series fire alarm control panels (FACPs). The SK-Monitor-2 acts as an interface to contact devices, such as waterflow switches and pull stations.

The SK-Monitor-2 supports Class B supervised wiring to the load device. Conventional 4-wire smoke detectors can be monitored for alarm and trouble conditions.

#### Features

- Monitor two circuits, with unique addresses, simultaneously
- Support for Class B wiring
- Fully supervised
- Panel controlled status LED that flashes green in normal state and is solid red in alarm
- Attractive ivory cover plate
- Rotary address switches for fast installation
- SEMS screws for easy wiring
- UL Listed



**SK-Monitor-2**

#### Installation

SK-Monitor-2 mounts directly into a 4" square electrical box. The box must have a minimum depth of 2-1/8". A surface mount electrical box (System Sensor® part number SMB500) is available from Silent Knight.

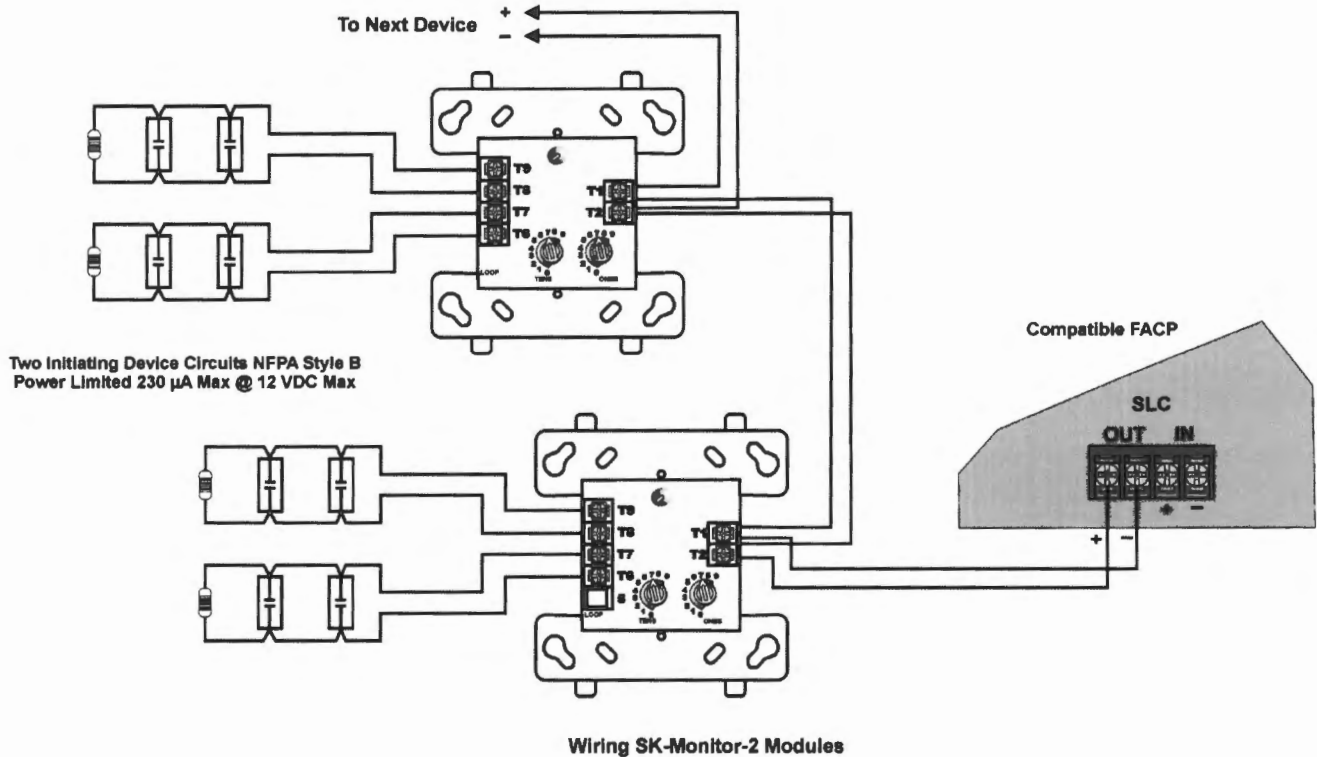
#### Compatibility

The SK-Monitor-2 is compatible with the following IntelliKnight FACP's:

5700  
5808  
5820XL

# Model SK-Monitor-2

## Intelligent Dual Monitor Module



### Specifications

#### Physical

Height: 4.5" H x 4" W x 1.25" D  
 Shipping Weight: 6.3 oz (196 g)

#### Electrical

Operating Voltage: 15 – 32 VDC  
 Current Draw (LED on): 6.4 mA max  
 Operating Current (LED flashing): 750  $\mu$ A

End-of-Line Resistance: 47K  $\Omega$   
 Max IDC wiring resistance: 1,500 $\Omega$   
 SLC Line Loop Resistance: 40 $\Omega$  max.

#### Environmental

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

#### Accessories

SMB500 4" Square Surface Mount Electrical Box



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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

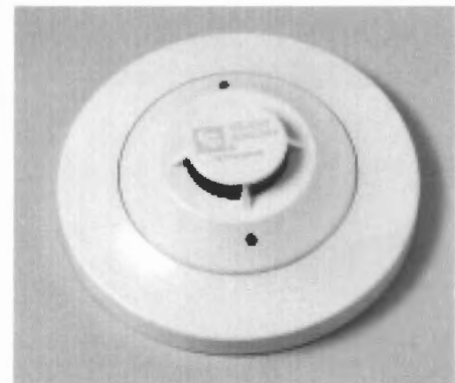
Operating Voltage: 15–32 VDC  
Standby Current:  
300  $\mu$ A @ 24 VDC Maximum  
Alarm Current: 6.5 mA @ 24 VDC max (with LED on)

##### 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       |



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# 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.

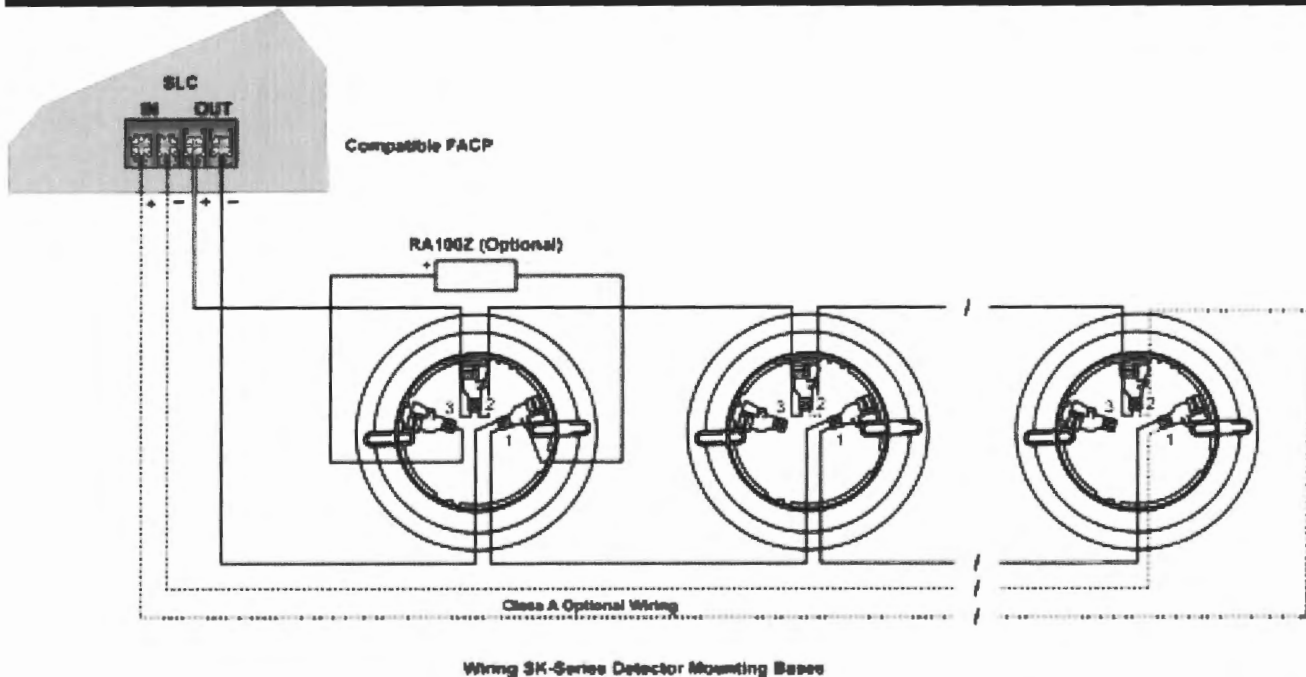
The base shall permit direct interchange with SK-Photo or SK-Photo-T. Base shall be the appropriate twist-lock base part number B210LP (included).

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](http://www.silentknight.com)

**MADE IN AMERICA**

FORM# 350118 Rev A,  
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# SILENT KNIGHT

by Honeywell

## 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 and SK-Pull-SA provide 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.

### 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 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-Pull-SA and SK-Pull-DA are compatible with the following IntelliKnight FACP's:

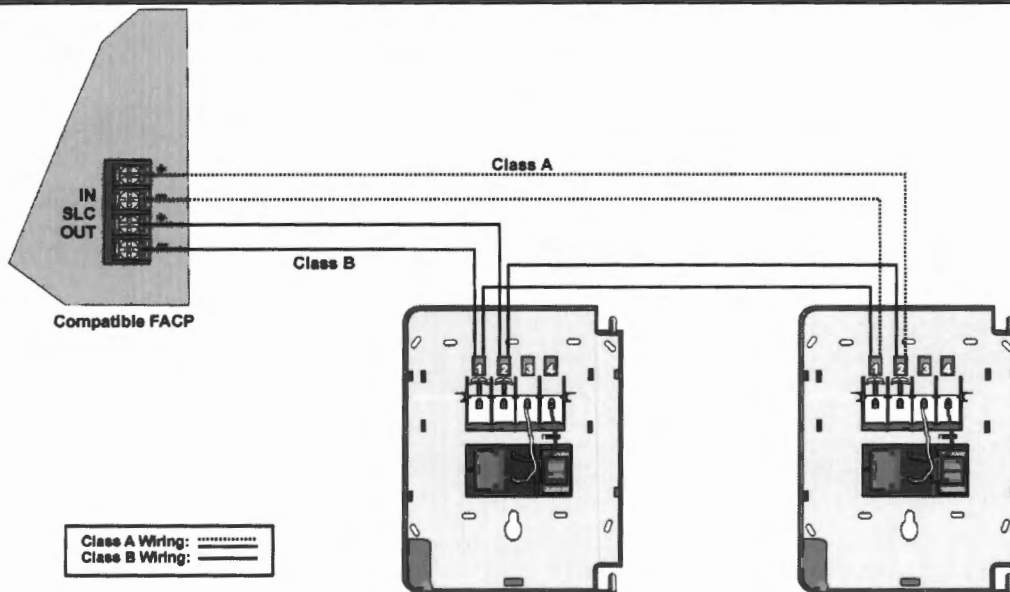
5600  
5700  
5808  
5820XL

# 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  $\mu$ A

Wire Gauge: Up to 12 AWG (3.1 mm<sup>2</sup>)

#### 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



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](http://www.silentknight.com)

**MADE IN AMERICA**

FORM# 350135 Rev A  
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## Indoor Selectable-Output Strobes and Horn Strobes for Ceiling Applications

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



**SPECTRAlert**  
**ADVANCE**  
from System Sensor

### Features

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

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

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

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

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

### Agency Listings



S4011 (chimes, horn strobes, horns)  
S5512 (strobes)



3023572



MEA452-05-E



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

# SpectrAlert Advance Specifications

## Architect/Engineer Specifications

### General

SpectrAlert Advance strobes and horn strobes shall mount to a standard 4 × 4 × 1½-inch back box, 4-inch octagon back box, or double-gang back box. Two-wire products shall also mount to a single-gang 2 × 4 × 17/8-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance products, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 9 and 17.5 volts; 24-volt-rated notification appliance circuit outputs shall operate between 17 and 33 volts. Indoor SpectrAlert Advance products shall operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Strobes and horn strobes shall have field-selectable candela settings including 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185.

### Strobe

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

### Horn Strobe Combination

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

### Synchronization Module

The module shall be a System Sensor Sync•Circuit model 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 411/16 × 411/16 × 21/8-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

## Physical/Electrical Specifications

|  |  |
|--|--|
| <b>Standard Operating Temperature</b>  | 32°F to 120°F (0°C to 49°C)                              |
| <b>Humidity Range</b>  | 10 to 93% non-condensing                                 |
| <b>Strobe Flash Rate</b>   | 1 flash per second                                       |
| <b>Nominal Voltage</b>   | Regulated 12 DC/FWR or regulated 24 DC/FWR <sup>1</sup>  |
| <b>Operating Voltage Range<sup>2</sup></b>                                     | 8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)  |
| <b>Input Terminal Wire Gauge</b>   | 12 to 18 AWG   |
| <b>Ceiling-Mount Dimensions (including lens)</b>                               | 6.8" diameter × 2.5" high (173 mm diameter × 64 mm high) |
| <b>Ceiling-Mount Back Box Skirt Dimensions (BBSC-2, BBSCW-2)</b>               | 7.1" diameter × 2.2" high (180 mm diameter × 57 mm high) |
| <b>Ceiling-Mount Trim Ring Dimensions (sold as a 5 pack) (TRC-HS, TRCW-HS)</b> | 6.9" diameter × 0.35" high (175 mm diameter × 9 mm high) |

### Notes:

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

## UL Current Draw Data

### UL Max. Strobe Current Draw (mA RMS)

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

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

| 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 |
| <b>FWR Input</b>    |              |       |             |       |     |     |     |     |     |
| 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 |

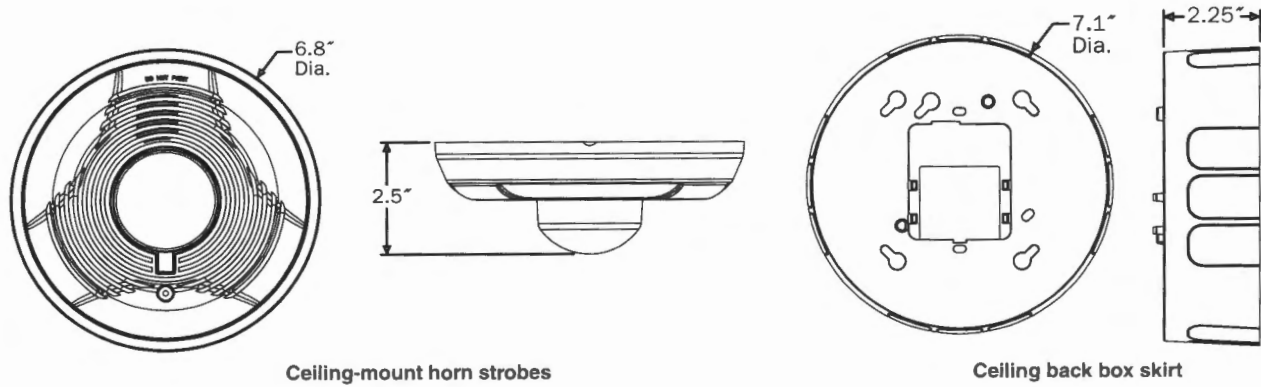
## Horn Strobe Tones and Sound Output Data

### 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 strobes.

## SpectrAlert Advance Dimensions



## SpectrAlert Advance Ordering Information

| Model                       | Description                            |
|-----------------------------|--|
| <b>Ceiling Horn Strobes</b> |  |
| PC2R*                       | 2-Wire Horn Strobe, Standard cd, Red   |
| PC2RH                       | 2-Wire Horn Strobe, High cd, Red       |
| PC2W*†                      | 2-Wire Horn Strobe, Standard cd, White |
| PC2WH*                      | 2-Wire Horn Strobe, High cd, White     |
| PC4R                        | 4-Wire Horn Strobe, Standard cd, Red   |
| PC4RH                       | 4-Wire Horn Strobe, High cd, Red       |
| PC4W                        | 4-Wire Horn Strobe, Standard cd, White |

| Model                  | Description                    |
|------------------------|--------------------------------|
| <b>Ceiling Strobes</b> |                                |
| SCR                    | Strobe, Standard cd, Red       |
| SCRH                   | Strobe, High cd, Red           |
| SCW*                   | Strobe, Standard cd, White     |
| SCWH                   | Strobe, High cd, White         |
| <b>Accessories</b>     |                                |
| BBSC-2                 | Back Box Skirt, Ceiling, Red   |
|                        | Back Box Skirt, Ceiling, 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.



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

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for current product information, including the latest version of this data sheet.  
AVDS00501 • 3/12





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

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



**SPECTRAlert**  
**ADVANCE**  
from System Sensor

### Features

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

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

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

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

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

### Agency Listings

SIGNALING



S4011 (chimes, horn strobes, horns)  
S5512 (strobes)



APPROVED

3023572

**MEA**  
approved

MEA452-05-E



7125-1653:186 (indoor strobes)

7125-1653:188 (horn strobes,  
chime strobes)

7135-1653:189 (horns, chimes)

# SpectrAlert Advance Specifications

## Architect/Engineer Specifications

### General

SpectrAlert Advance horns, strobes, and horn strobes shall mount to a standard 4 × 4 × 1½-inch back box, 4-inch octagon back box, or double-gang back box. Two-wire products shall also mount to a single-gang 2 × 4 × 17/8-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance products, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 8 and 17.5 volts; 24-volt-rated notification appliance circuit outputs shall operate between 16 and 33 volts. Indoor SpectrAlert Advance products shall operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Strobes and horn strobes shall have field-selectable candela settings including 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185.

### Strobe

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

### Horn Strobe Combination

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

### Synchronization Module

The module shall be a System Sensor Sync•Circuit model 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 411/16 × 411/16 × 21/8-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

## Physical/Electrical Specifications

|   |  |
|---|--|
| <b>Standard Operating Temperature</b>                                     | 32°F to 120°F (0°C to 49°C)                              |
| <b>Humidity Range</b>   | 10 to 93% non-condensing                                 |
| <b>Strobe Flash Rate</b>  | 1 flash per second                                       |
| <b>Nominal Voltage</b>  | Regulated 12 DC/FWR or regulated 24 DC/FWR <sup>1</sup>  |
| <b>Operating Voltage Range<sup>2</sup></b>                                | 8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)  |
| <b>Input Terminal Wire Gauge</b>  | 12 to 18 AWG   |
| <b>Wall-Mount Dimensions (including lens)</b>                             | 5.6" L × 4.7" W × 2.5" D (142 mm L × 119 mm W × 64 mm D) |
| <b>Horn Dimensions</b>  | 5.6" L × 4.7" W × 1.3" D (142 mm L × 119 mm W × 33 mm D) |
| <b>Wall-Mount Back Box Skirt Dimensions (BBS-2, BBSW-2)</b>               | 5.9" L × 5.0" W × 2.2" D (151 mm L × 128 mm W × 56 mm D) |
| <b>Wall-Mount Trim Ring Dimensions (sold as a 5 pack) (TR-HS, TRW-HS)</b> | 5.7" L × 4.8" W × 0.35" D (145 mm L × 122 mm W × 9 mm D) |

### Notes:

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

## UL Current Draw Data

### UL Max. Strobe Current Draw (mA RMS)

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

### UL Max. Horn Current Draw (mA RMS)

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

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

| DC Input            | 8–17.5 Volts |       | 16–33 Volts |       | 30  | 75  | 95  | 110 | 115 |
|---------------------|--------------|-------|-------------|-------|-----|-----|-----|-----|-----|
|                     | 15           | 15/75 | 15          | 15/75 |     |     |     |     |     |
| Temporal High       | 137          | 147   | 79          | 90    | 107 | 176 | 194 | 212 | 218 |
| Temporal Medium     | 132          | 144   | 69          | 80    | 97  | 157 | 182 | 201 | 210 |
| Temporal Low        | 132          | 143   | 66          | 77    | 93  | 154 | 179 | 198 | 207 |
| Non-Temporal High   | 141          | 152   | 91          | 100   | 116 | 176 | 201 | 221 | 229 |
| Non-Temporal Medium | 133          | 145   | 75          | 85    | 102 | 163 | 187 | 207 | 216 |
| Non-Temporal Low    | 131          | 144   | 68          | 79    | 96  | 156 | 182 | 201 | 210 |
| <b>FWR Input</b>    |              |       |             |       |     |     |     |     |     |
| 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 |

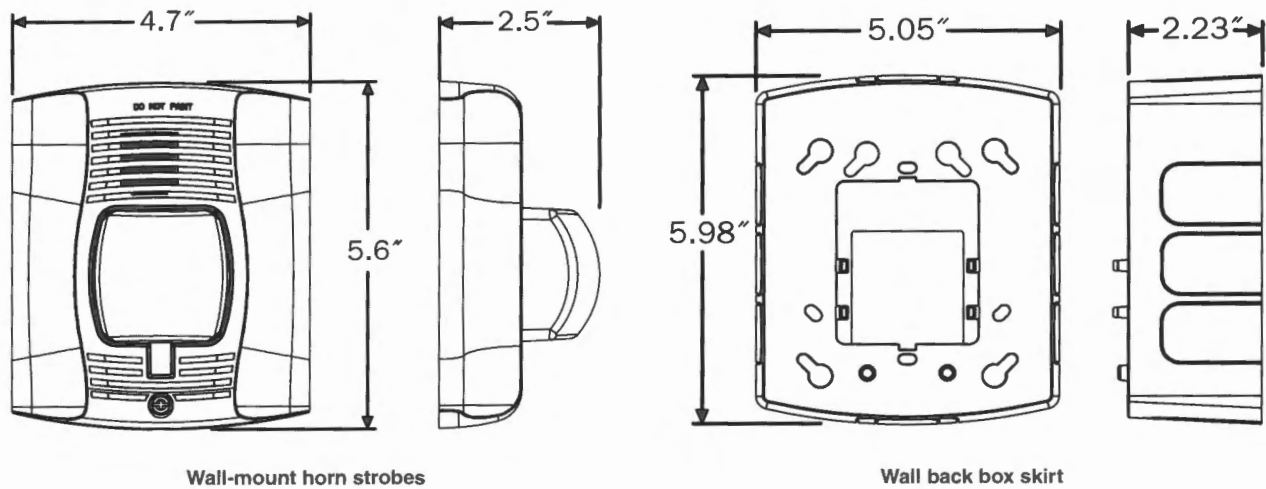
## Horn Tones and Sound Output Data

### Horn and Horn Strobe Output (dBA)

| Switch Position | Sound Pattern | dB     | 8–17.5 Volts |     | 16–33 Volts |     | 24-Volt Nominal |     |          |     |
|-----------------|---------------|--------|--------------|-----|-------------|-----|-----------------|-----|----------|-----|
|                 |               |        |              |     |             |     | 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 strobes.

## SpectrAlert Advance Dimensions



Wall-mount horn strobes

Wall back box skirt

## SpectrAlert Advance Ordering Information

| Model                    | Description                            |
|--------------------------|--|
| <b>Wall Horn Strobes</b> |  |
| P2R*†                    | 2-Wire Horn Strobe, Standard cd*, Red  |
| P2RH*                    | 2-Wire Horn Strobe, High cd, Red       |
| P2W*                     | 2-Wire Horn Strobe, Standard cd, White |
| P2WH*                    | 2-Wire Horn Strobe, High cd, White     |
| P4R*                     | 4-Wire Horn Strobe, Standard cd, Red   |
| P4RH                     | 4-Wire Horn Strobe, High cd, Red       |
| P4W                      | 4-Wire Horn Strobe, Standard cd, White |
| <b>Wall Strobes</b>      |  |
| SR*†                     | Strobe, Standard cd, Red               |
| SRH*†                    | Strobe, High cd, Red                   |
| SW*                      | Strobe, Standard cd, White             |
| SWH*                     | Strobe, High cd, White                 |

| Model              | Description                 |
|--------------------|-----------------------------|
| <b>Horns</b>       |                             |
| HR                 | Horn, Red                   |
| HW                 | Horn, White                 |
| <b>Accessories</b> |                             |
| BBS-2              | Back Box Skirt, Wall, Red   |
| BBSW-2             | Back Box Skirt, Wall, White |
| TR-HS              | Trim Ring, Wall, Red        |
| TRW-HS             | Trim Ring, Wall White       |

### Notes:

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

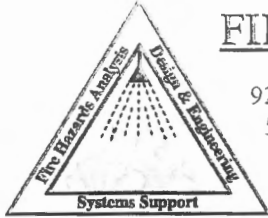
† Add "-SP" to model number for "FUEGO" marking on cover, e.g., P2R-SP.

‡ "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.



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

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for current product information, including the latest version of this data sheet.  
AVDS00601 • 3/12



## FIRE RISK MANAGEMENT, INC.

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929 Worcester Road • Framingham • MA • 01701  
508 / 405-4405 • 207 / 221-1295 fax)  
www.fireriskmgt.com

October 16, 2012

Mr. Atsusho Tamaki  
ISF Trading Co, Inc.  
Hobson's Wharf  
PO Box 772  
Portland, ME 04104

### **Fire Protection / Life Safety Compliance Review of the Proposed Zumba Studio at Hobson's Wharf in Portland, Maine**

Dear Mr. Tamaki:

As requested, Fire Risk Management, Inc. (FRM) has performed a fire protection / life safety compliance review of the proposed second floor Zumba Studio at Hobson's Wharf in Portland, ME (hereafter referred to as Studio). The review was based on the September 27, 2012 walk-through and a review of the fire protection / life safety codes applicable to the City of Portland. The following details the existing conditions, the applicable codes, and recommendations required for code compliance. This report will focus on the Second Floor area being proposed for the Studio.

#### **APPLICABLE CODES**

The following codes are applicable to the building:

- Maine Uniform Building and Energy Code (MUBEC), which is an amended version of the 2009 International Building Code.
- NFPA 101 – Life Safety Code (2009 Edition), as amended.
- NFPA 1 – Fire Code (2009 Edition), as amended.

#### **EXISTING / PROPOSED CONDITIONS**

The proposed second floor Studio is approximately 3,000 sq.ft. in area, with 750 sq.ft. being used for a storage / changing rooms / office space. The open area is currently vacant.

RECOMMENDATIONS / DISCUSSION

Based on the existing conditions and the proposed new use, we have the following recommendations:

- Provide sprinkler protection within the existing changing room and the storage room in the Studio. The ceiling could be removed from the storage closet to allow the ceiling sprinklers to provide protection. This should be completed regardless of the studio.
- Provide new exit signage for the Studio and the second floor exit corridor.
- Provide automatic monitoring of the sprinkler system to be able to automatically contact the fire department upon sprinkler waterflow.
- Provide fire alarm notification devices throughout the building.

The addition of the sprinkler monitoring as well as the fire alarm notification devices will provide an increased level of safety for the additional occupants on the second floor.

Sincerely,



Jeffrey L. DeMaine, P.E.



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

|  |   |                           |  |
|--|---|---------------------------|--|
| Location of Construction:<br>390 Commercial St   | Owner:<br>A S F Trading Inc   | Phone:<br>879-1575 - call | Permit No:<br>961063   |
| Owner Address:<br>PO Box 7725 Portland ME 04104  | Leasee/Buyer's Name:  | Business Name:<br>F Plus  | <b>PERMIT ISSUED</b><br>NOV 25<br>CITY OF PORTLAND   |
| Contract Name:<br>CONCRETE FLOORS  | Address:<br>Gray ME 0657-5101   | Phone:                    |  |
| Proposed Use:<br>seafood processing plant liquid nitrogen tank                           | COST OF WORKS:<br>\$15,000  | PERMIT FEE:<br>\$95       | Zoning Approval:<br><input type="checkbox"/> Special<br><input type="checkbox"/> Shoreland<br><input type="checkbox"/> Wetland<br><input type="checkbox"/> Flood Zone<br><input type="checkbox"/> Sub Invt<br><input type="checkbox"/> Site Plan<br><input type="checkbox"/> Varying<br><input type="checkbox"/> Misc<br><input type="checkbox"/> Conditional<br><input type="checkbox"/> Interpretation<br><input type="checkbox"/> Approved<br><input type="checkbox"/> Denied |
| FIRE DEPT: <input type="checkbox"/> Approved <input type="checkbox"/> Denied             | INSPECTION: <input type="checkbox"/> Approved <input type="checkbox"/> Denied | Use Group: 1 Typ          |  |
| Proposed Project Description:<br>build on site a 1st liquid nitrogen tank (for freezing) | Signature:  | Signature:                | Action:<br><input type="checkbox"/> Approved<br><input type="checkbox"/> Approved with Conditions<br><input type="checkbox"/> Denied   |
| PEDESTRIAN ACTIVITIES DISTRICT:  | Signature:  | Date:                     |  |
| Permit Taken By:   | Date Applied For:<br>11/12/96   | Date: 11/12/96            |  |

**PERMIT ISSUED WITH LETTER**

**CERTIFICATION**  
I hereby certify that I am the owner or 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 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 provisions of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT: *[Signature]* ADDRESS: DATE: 11.12.96 PHONE: 879-1575

RESPONSIBLE PERSON IN CHARGE OF WORK TITLE: PHONE:

Date: 11/12/96  
D. Andrews  
CEG DISTRICT **2**  
A. Rowe





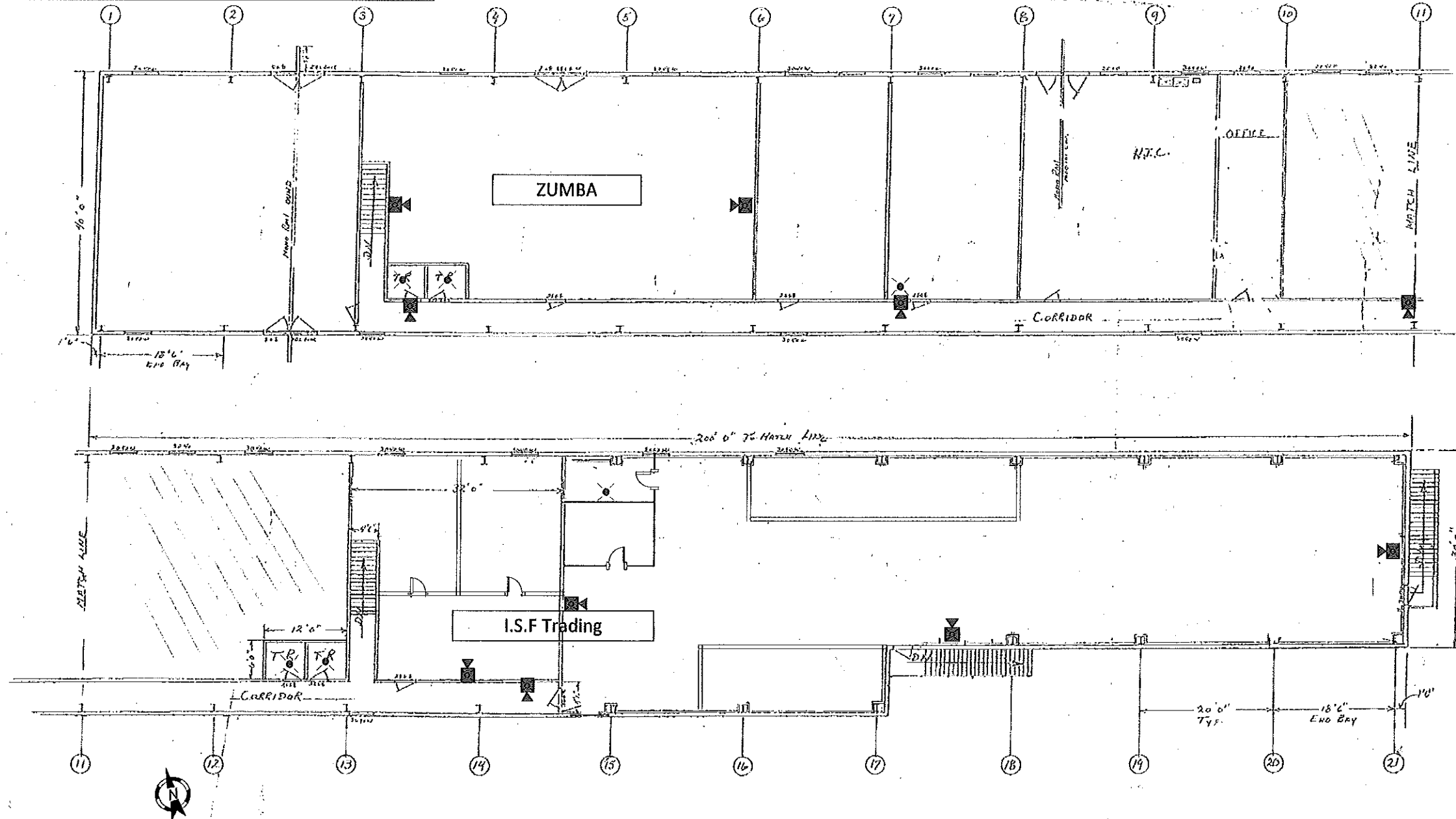




Hobson's Pier, Inc.  
390 Commercial Street, Portland, Maine 04103

2<sup>nd</sup> Floor Fire Alarm System Legend

| Symbol  | Description   |
|---|---------------|
|  | Horn w/ Light |
|  | Light         |

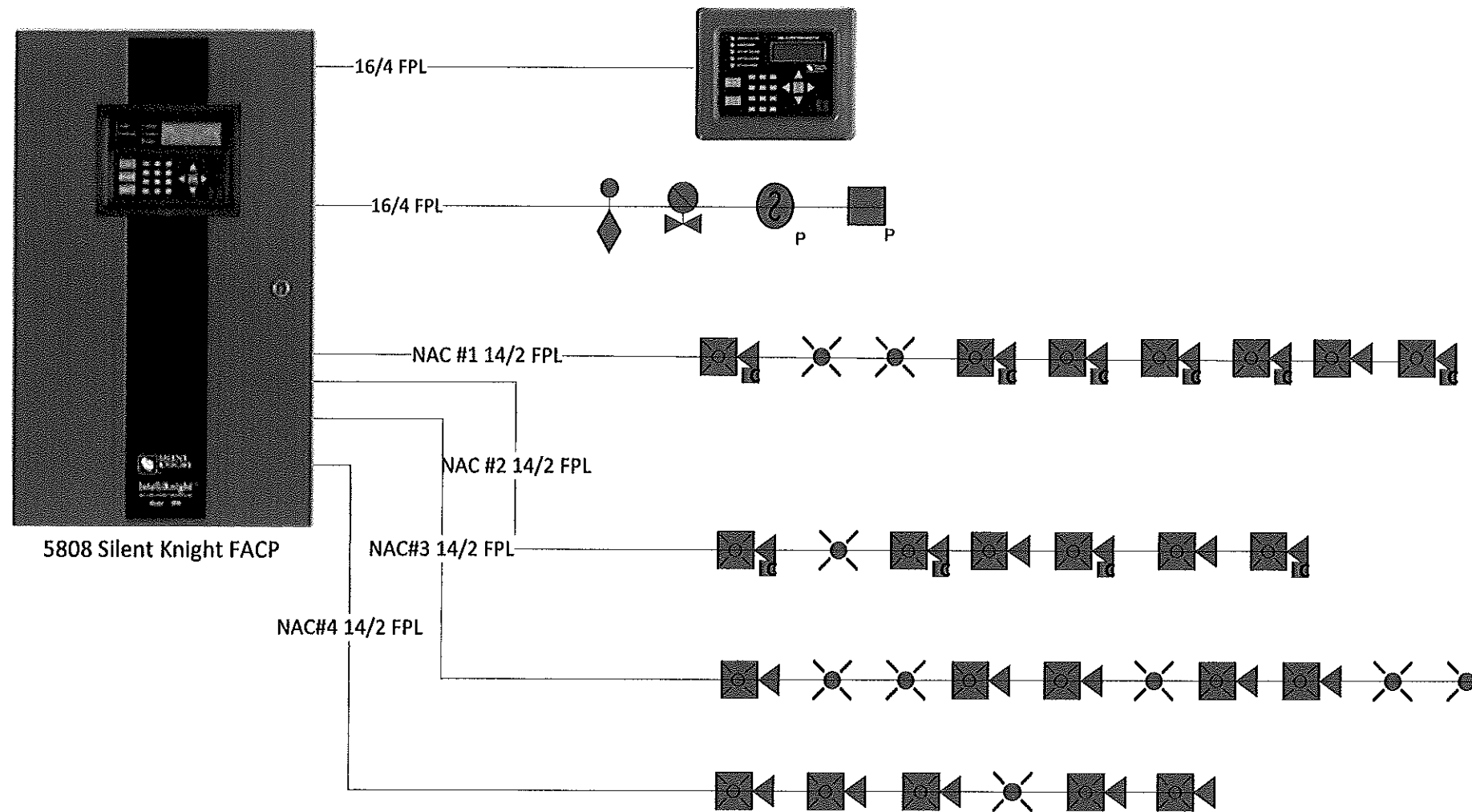


Robin Russell, Certified Engineering Technician, NICET Cert. # 110826

10 Manuel Drive, Portland, Maine 04103 (207) 347-5327

12/6/12

|                     |                   |
|---------------------|-------------------|
| HOBSON'S WHARF      |                   |
| Scale: 1/4" = 1'    | Drawn: DDB        |
| Date: 9-18-85       | Revised: 12-14-85 |
| YANKEE CONST. CORP. |                   |
| SECOND FLOOR        | R 2               |



|  |   |   |         |
|--|---|---|---------|
|  | Robin Russell, Certified Engineering Technician, NICET Cert. # 110826 |   |         |
|  | -   | 10 Manuel Drive, Portland, Maine 04103 (207) 347-5327 | 12/6/12 |