

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND

BUILDING DEPARTMENT

PERMIT

Permit Number: 091298

PERMIT ISSUED

Please Read Application And Notes, If Any, Attached

This is to certify that 500 RIVERSIDE ASSOCIATES Norris,
has permission to Install a fire Alarm for "Envirolex"

AT 524 RIVERSIDE IND PKWY City of Portland 370A-A012001 FEB - 2 2010

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

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

Notification of inspection must be given and written permission procured before this building or part thereof is lath or other work is set-in. 24 HOUR NOTICE IS REQUIRED.

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

OTHER REQUIRED APPROVALS
Fire Dept. [Signature]
Health Dept. _____
Appeal Board _____
Other _____
Department Name

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

PENALTY FOR REMOVING THIS CARD

City of Portland, Maine - Building or Use Permit

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

Permit No: 09-1298	Date Applied For: 11/13/2009	CBL: 370A A012001
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Location of Construction: 524 RIVERSIDE IND PKWY	Owner Name: 500 RIVERSIDE ASSOCIATES	Owner Address: PO BOX 382	Phone:
Business Name:	Contractor Name: Norris, Inc.	Contractor Address: 2257 W Broadway, PO Box 2551 Sout	Phone (207) 883-3473
Lessee/Buyer's Name	Phone:	Permit Type: Fire Alarm System	

Proposed Use: Commercial "Envirologix" - Install a fire Alarm for "Envirologix"	Proposed Project Description: Install a fire Alarm for "Envirologix"
-------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------

Dept: Zoning **Status:** Approved with Conditions **Reviewer:** Ann Machado **Approval Date:** 02/02/2010

Note: Permit was never given to zoning. It must have gone right to fire. Ben Wallace had it on hold since November because he was waiting for documentation. **Ok to Issue:**

- 1) This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.

Dept: Building **Status:** Approved with Conditions **Reviewer:** Jeanine Bourke **Approval Date:** 02/02/2010

Note: **Ok to Issue:**

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

Dept: Fire **Status:** Approved with Conditions **Reviewer:** Ben Wallace Jr. **Approval Date:** 02/02/2010

Note: **Ok to Issue:**

- 1) The fire alarm system shall comply with the City of Portland Fire Alarm Rules, 2005 edition.
- 2) System acceptance and commissioning must be co-ordinated with alarm and suppression system contractors and the Fire Department. Call 874-8703 to schedule.
- 3) Installation of a Fire Alarm system requires a Knox Box to be installed per city crdinance
- 4) All fire alarm records required by NFPA 72 should be stored in an approved cabinet located at the FACP and keyed alike, labeled "FIRE ALARM RECORDS".

PERMIT ISSUED

FEB - 2

City of Portland

City of Portland, Maine - Building or Use Permit Application

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

Permit No: 09-1298	Issue Date:	CBL: 370A A012001
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Location of Construction: 524 RIVERSIDE IND PKWY	Owner Name: 500 RIVERSIDE ASSOCIATES	Owner Address: PO BOX 382	Phone:
Business Name:	Contractor Name: Norris, Inc.	Contractor Address: 2257 W Broadway, PO Box 2551 Sout	Phone 2078833473
Lessee/Buyer's Name	Phone:	Permit Type: Fire Alarm System	Zone: I11

Past Use: Commercial "Envirologix"	Proposed Use: Commercial "Envirologix" - Install a fire Alarm for "Envirologix"	Permit Fee: \$70.00	Cost of Work: \$4,508.00	CEO District: 5
		FIRE DEPT: w/conditions 2/2/2010	<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied INSPECTION: Use Group B-51/F-1 Type: Fire Alarm JBC-2003 Signature: JMB 2/2/10	

Proposed Project Description: Install a fire Alarm for "Envirologix"	Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i> 2/2/10
PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)		
Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied		
Signature: _____ Date: _____		

Permit Taken By: Ldobson	Date Applied For: 11/13/2009	Zoning Approval
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- This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
- Building permits do not include plumbing, septic or electrical work.
- Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

Special Zone or Reviews	Zoning Appeal	Historic Preservation
<input type="checkbox"/> Shoreland <input type="checkbox"/> Wetland <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/> Date: 2/2/10 <i>[Signature]</i>	<input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied Date: _____	<input checked="" type="checkbox"/> Not in District or Landmark <input type="checkbox"/> Does Not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Date: <i>[Signature]</i>

PERMIT ISSUED

FEB - 2

City of Portland

CERTIFICATION

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

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE		DATE	PHONE



Fire Alarm Permit

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

Installation address: 500 Riverside Industrial Parkway CBL: Envirologix

Exact location: (within structure) Entire building

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

Building owner: _____

System Designer: Norris Inc.

Designer phone: 883-3473 E-mail: N/A

Installing contractor: Seabee Electric License No: _____

Contractor phone: 883-5448 E-mail: N/A

This is a new application: YES NO

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

The following documents have been provided with this application:

- Floor plans: YES NO
- Wiring diagram: YES NO
- Annunciator details: YES NO
- Bid specifications: YES NO
- Equipment data sheets: YES NO
- Battery & voltage drop calculations: YES NO
- Sequence of operations: YES NO
- Designer/ personnel qualifications: YES NO

COST OF WORK: \$4508.90

PERMIT FEE: 70
(\$10 PER \$1,000 + \$30 FOR THE FIRST \$1,000)

RECEIVED

NOV 13 2009

Download a new copy of this document from Inspection Division on-line at www.portlandmaine.gov for e-file of Building Inspections Dept. of Building Inspections City of Portland Maine Submit all plans on 11X17 copies or electronic PDF's in addition to full sized plans to the Building Inspections Department, 389 Congress Street, Room 315, Portland, Maine 04101.

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

All installation(s) must comply with NFPA 70, NFPA 72, and Fire Department Technical Standard(s).

Applicant signature: [Signature] Date: 11/13/09



June 20, 2005

DN-4750 • B-330

SFP-400B 4-Zone Fire Alarm Control Panel

Section: Conventional Fire Alarm Control Panels

FEATURES

- Four Class B (Style B) Initiating Device Circuits.
- Two Class B (Style Y) Notification Appliance Circuits.
- Complies with NFPA 72 Local, Auxiliary, Remote Station, Central, and Proprietary Signaling Systems.
- 24-volt model.
- Microprocessor controlled.
- Power-limited on all circuits **except** Municipal Box output.
- Alarm and trouble resound.
- General Alarm operation.
- Supervisory input option.
- Waterflow input option.
- Alarm Verification option with discrimination between smoke detectors and contact devices.
- Timed silence inhibit option.
- Notification appliance circuit disable.
- Optional module for four zone relays (**4XZM**).
- Optional transmitter module (**4XTM**).
- Optional supervised remote annunciator (**RZA-4X**). Requires LED interface module (**4XLM**).
- Optional digital communicator (**911AC**).
- Disable/enable controls per initiating zone.
- Battery/earth-fault supervision.
- Last Event Recall feature traps unverified alarms or intermittent troubles.
- One-man Walk Test feature with zone change indication and zone trouble indication.
- PTC protection on all indicating circuits.
- 24 VDC output power, 2.25 amperes.
- 7.0 AH battery, up to 60 hours standby.
- 230 VAC, 50 Hz international option.
- Four-wire smoke detector power output.
- Non-resettable regulated 24 VDC power outputs.
- Extensive transient protection.
- Watchdog timer to supervise microprocessor.
- Slide-in labels for zone identification.
- Steel cabinet.
- Dead-front dress panel option (**DP-400B**).
- Trim ring (**TR-2-G**) for flush mount between 16" (40.64 cm) center studs.

CIRCUITS

Input Circuits (four):

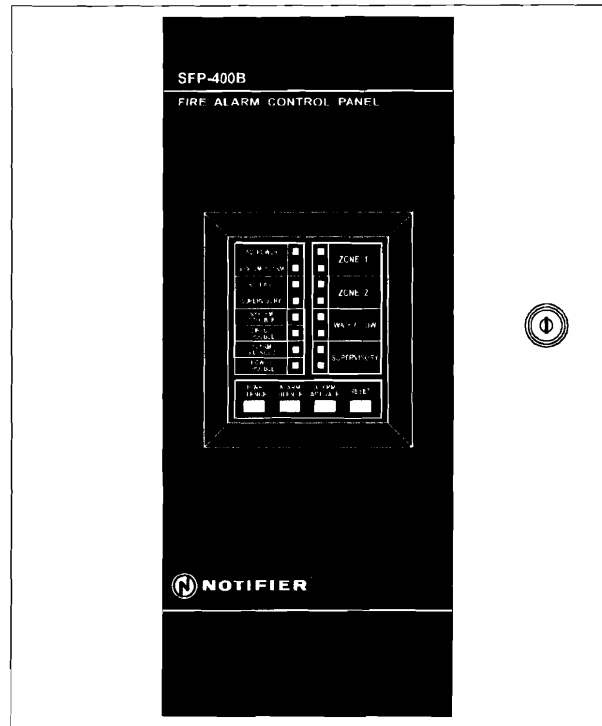
- Initiating Device Circuit 1 (Class B, Style B).
- Initiating Device Circuit 2 (Class B, Style B).
- Initiating Device Circuit 3 (Class B, Style B).
- Initiating Device Circuit 4 (Class B, Style B).



California State Fire Marshal
7165-0028:161

MEA

421-91-E
(with gray cabinet ONLY)



4750cov.wmf

Output Circuits (two):

(optional auxiliary relays track these circuits)

- Notification Appliance Circuit (Class B, Style Y).
- Notification Appliance Circuit (Class B, Style Y).

Front Panel Control Switches:

- Switch 1** Tone Silence
- Switch 2** Alarm Silence
- Switch 3** Alarm Activate (Drill)
- Switch 4** System Reset

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 NOTIFIER. Phone: (203) 484-7161 FAX: (203) 484-7118



12 Clintonville Road, Northford, Connecticut 06472



Made in the U.S.A.

OPTIONAL BOARDS

The SFP-400B has mounting slots for two optional boards. Any two of the three option modules may be installed.

4XTM Transmitter Module – The transmitter option provides a supervised output for local energy municipal box transmitter (for NFPA 72 Auxiliary Protective Signaling System) and alarm and trouble reverse polarity (for NFPA 72 Remote Station Protective Signaling System). Also included is a DISABLE switch and disable trouble LED. A jumper option allows the reverse polarity circuit to open with a System Trouble condition if no alarm condition exists.

RZA-4X Remote Annunciator – The Remote Annunciator mounts on a standard single-gang box and provides the following:

- a) System Trouble LED (YELLOW).
- b) Local Piezo Sounder.
- c) Silence Switch (for local sounder).
- d) Zone 1 LED (RED).
- e) Zone 2 LED (RED).
- f) Zone 3 LED (RED).
- g) Zone 4 LED (RED).

NOTE: The Remote Annunciator requires the use of an LED interface module (below).

4XLM LED Interface Module – The module supports the RZA-4X Remote Annunciator module. The module mounts to the main board occupying one of the two option connectors. Annunciator LED wiring is supervised for opens. A Fault will activate System Trouble condition.

4XZM Zone Relay Module – The Zone Relay module provides Form-C general alarm and trouble contacts and the following Form-C relays:

- a) Zone 1.
- b) Zone 2.
- c) Zone 3.
- d) Zone 4.

The 4XZM includes a switch that disconnects all the relays (supervised).

SPECIFICATIONS

AC power:

- 120 VAC, 60 Hz, 1.2 amps.
- Wire size: 14 AWG (2.0 mm²) with 600 V insulation.

Initiating circuits:

- Power-limited circuitry.
- Operation: Class B (Style B).
- Standby voltage: 24 VDC (ripple = 1V peak-to-peak).
- Alarm current: 15 mA minimum.
- Short circuit current: 40 mA maximum.
- Maximum detector current in standby: 2 milliamps (peak) per zone.
- Maximum loop resistance: 100 ohms.
- End-of-line resistor: 4.7 K ohms, 1/2 watt (P/N 71252).
- Detector loop current is sufficient to ensure operation of one alarmed detector per zone.
- Supervisory current: 5 mA.

Notification circuits:

- Power-limited circuitry.
- Maximum voltage drop due to wiring: 2 VDC
- Voltage: 24 VDC (nonfiltered).
- Total current to all external devices: 2.25 amps maximum.

- Maximum signaling current per circuit: up to 1.5 amps.
- End-of-line resistor = 4.7K ohms, 1/2 watt (P/N 71252).

Alarm and Trouble relays:

- Dry Form-C contacts rated for:
 - 2.0 amps @ 30 VDC (resistive).
 - 0.5 amps @ 30 VAC (resistive).

Digital Communicator 911AC or 411UDAC: For Central Station service: (NFPA 72 Central Station Protective Signaling System) or Remote Station Service (NFPA 72 Remote Station Protective Signaling System). Meets the requirements for delayed AC trouble reporting.

4XTM Transmitter Module:

4XTM for Local Energy Municipal Box service (NFPA 72 Auxiliary Protective Signaling System):

- Supervisory current: 5.0 mA.
- Trip current: 0.35 amps (subtracted from indicating appliance power).
- Coil voltage: 3.65 VDC.
- Coil resistance: 14.6 W.
- Total wire resistance between panel and trip coil = 3 ohm.

4XTM for Remote Station service (NFPA 72 Remote Station Protective Signaling System):

- Maximum current allowed for both circuits shall not exceed 10 mA per circuit.
- Reverse-polarity output voltage = 24 VDC.

4XZM Zone Relay Module: Dry, Form-C contacts rated for: 2.0 amps @ 30 VDC (resistive); 0.5 amps @ 30 VAC (resistive).

Four-wire smoke detector power output terminals: Up to 200 mA of current is available for four-wire smoke detectors.

RMS regulated 24 VDC power output terminals: Total DC current available for powering external devices is 0.5 amp (subtracted from indicating appliance power dedicated to all output circuits).

Non-resettable 24 VDC power output terminals: Total DC current available from this output is up to 200 mA (subtracted from four-wire smoke power).

Field-programming selections:

Six-position dipswitch to select:

- Alarm Verification.
- Waterflow Input.
- Supervisory Input.
- Silence Inhibit.
- Bell Disable.
- Walk Test.

Cabinet dimensions:

Door: 14.13" (35.89 cm) high x 14.63" (37.16 cm) wide.

Backbox: 14.0" (35.56 cm) high x 14.5" (36.83 cm) wide x 2.75" (6.985 cm) deep.

Cabinet: 3.39" (8.61 cm) deep.

PRODUCT LINE INFORMATION

SFP-400B Four-zone Style B (Class B) 24-volt Control Panel.

DP400B Dead-front dress panel option.

TR-2-G Trim ring for flush mount between 16" (40.64 cm) center studs.

SFP 400B Fire Alarm Control Panel

Basic System Operation:

Activation of a compatible smoke detector or any normally open fire alarm initiating device on the system:

- Activates audible and visible signaling devices
- Illuminates an indicating LED
- Sounds the piezo sounder at the FACP
- Activates the FACP alarm relay
- Operates an optional module used to notify a remote station or initiate an auxiliary control function

**Notifier RZA-4X
Remote Zone
Annunciator Module**


Product Installation Drawing
Document Number 15274 Rev B
ECN: 97-192 Print Date: 7/7/97

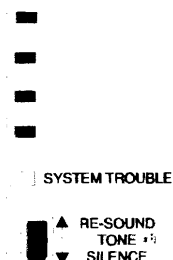
RZA-4X Remote Annunciator

The RZA-4X Remote Annunciator mounts on a standard single-gang box, and provides LED indication of the same functions as the 4XZM Zone Relay Module. For example, with DIP 1=ON and DIP 2=OFF:

- One Zone in Alarm (red)
- Two Zones in Alarm (red)
- Releasing Circuit 1 (red)
- Releasing Circuit 2 (red)
- System Trouble (yellow)

A Local Trouble Sounder and Silence Switch are also provided. All LED wiring is supervised for open conditions. Any open condition will cause the System Trouble LED to illuminate.

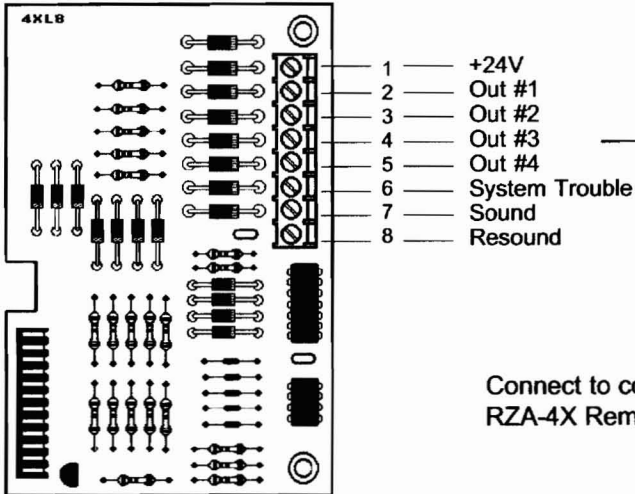
 **Note:** The RZA-4X Remote Annunciator requires the use of an LED Interface Module (see Figure 1, reverse side).



FIRE ALARM ANNUNCIATOR

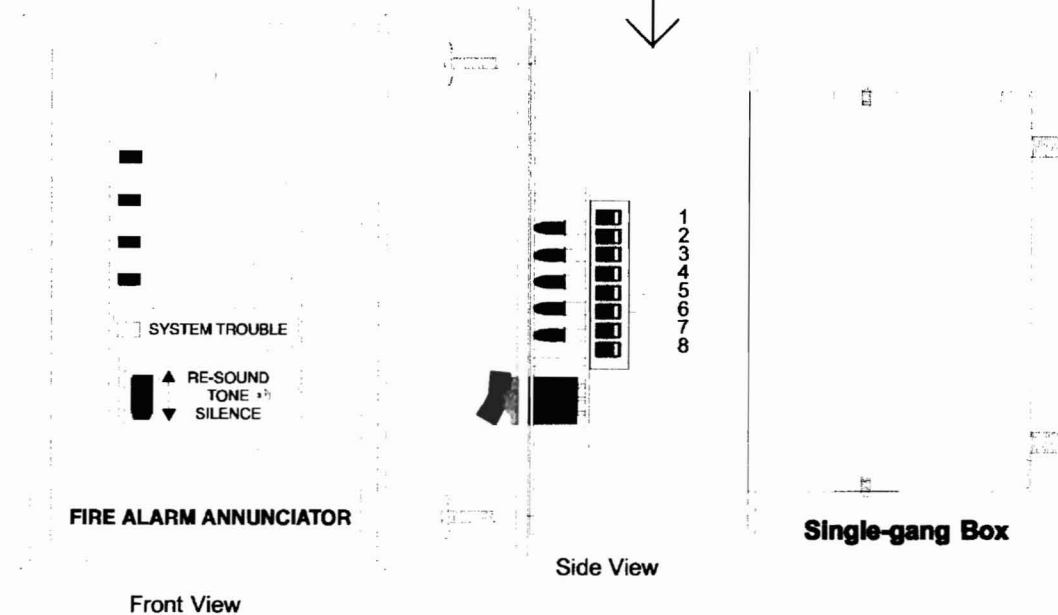
Figure 1 - Installation of the RZA-4X with 4XLM LED Module

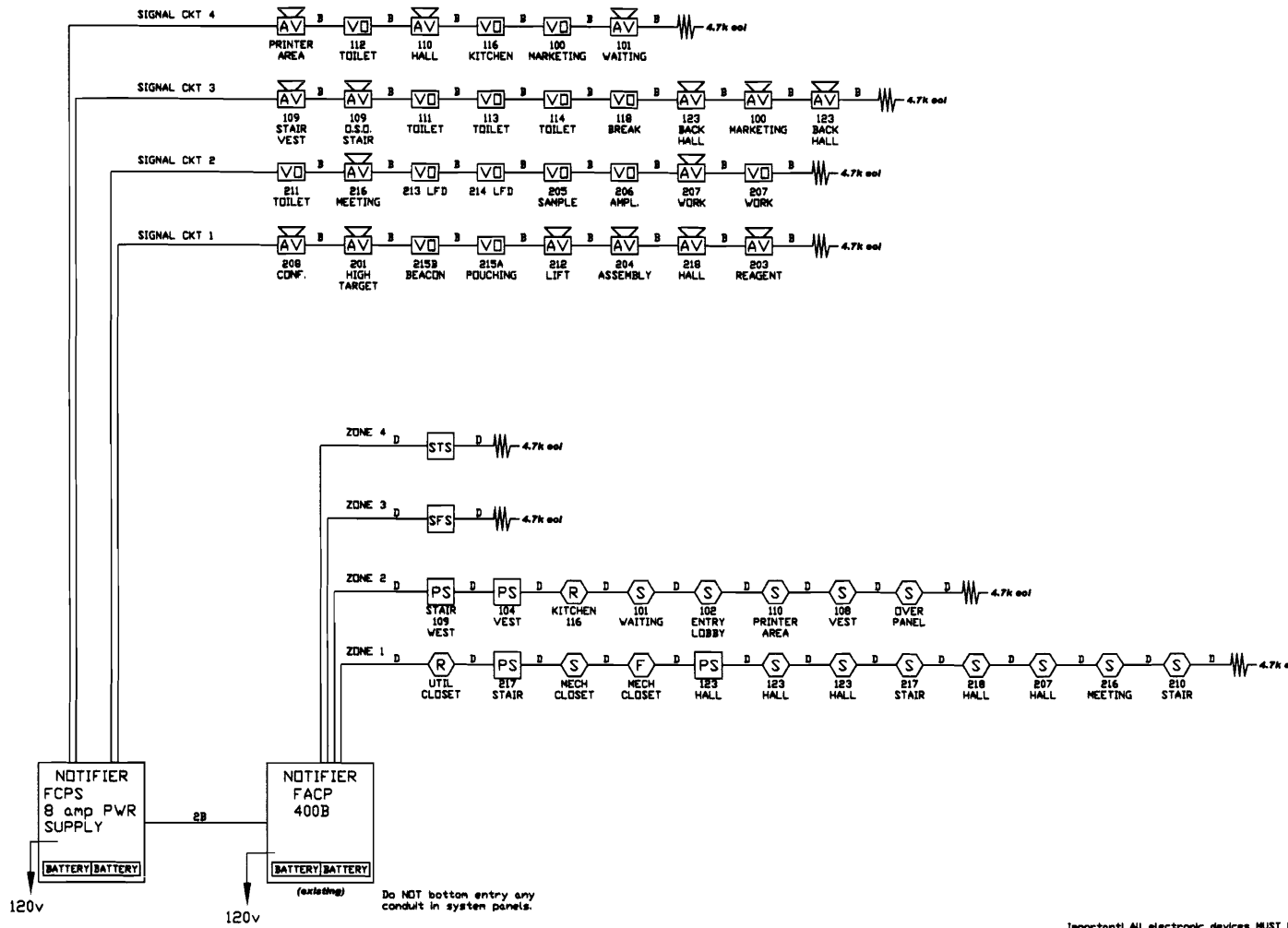
LED Interface Module - 4XLM



Connect to corresponding terminals of RZA-4X Remote Annunciator.

Remote Annunciator - RZA-4X





LEGEND

- MOUNTING HEIGHT
- 48 INCHES
- PULL STATION
 - SMOKE DETECTOR
 - SMOKE DETECTOR 4 Wire device
 - HEAT DETECTOR RATE OF RISE
 - HEAT DETECTOR Fixed Temp (158, 200)
 - HEAT DETECTOR DUAL CONTACTS
 - 120v REMOTE TEST/INDICATOR
 - DUCT SMOKE DETECTOR
- 80 INCHES
- VISUAL ONLY
- 60 INCHES
- AUDIO / VISUAL
 - DUAL SYNC MODULE
 - DOOR HOLDER 120V AC
 - KEY BOX W/ TAMPER SWITCH
 - SPRINKLER SWITCHES FLOW/TAMPER
 - END OF LINE RELAY

This drawing is a typical device layout, wiring is shown diagrammatically only. Riser does not necessarily indicate all devices and appliances. See floor plans and specification for location and quantities. The purchaser needs to accurately layout the initiating and notification devices in their proper zones/circuit. Note: Each signal circuit has a 2.75 amp load limitation. All remote power supply have 8.0 amps limitation equally divided 4 in circuits. (see chart below for current vs. candle rating)

Room Size	Candle Rating	Load (amps)
20' x 20'	15 cd	0.88 amps
30' x 30'	30 cd	0.18 amps
40' x 40'	75 cd	0.15 amps
50' x 50'	110 cd	0.28 amps

4.7k END OF LINE RESISTOR (Panel Circuits)

- A 1 PR #14 TWISTED PAIR (under 4800 feet)
- A 1 PR #12 TWISTED PAIR (over 4800 feet)
- B 1 PR #12 AVG FPL CABLE
- D 1 PR #16 AVG FPL CABLE
- E 1 PR #14 AVG TWISTED SHIELDED CABLE
- F 2c #12 AVG CABLE
- G 2c #14 AVG CABLE
- H 2c #16 AVG CABLE
- I 2c #18 AVG CABLE
- S 4c #18 AVG CABLE

REVISION 2	DATE:
REVISION 1 AS-BUILT	DATE: 12/10/2009
REVISION 0 SUBMITTAL	DATE: 08/2009

SYSTEM WIRING RISER	
PROJECT NAME	SCALE: NTS
EnviroLogix Portland, MAINE	BY: HEAD
	CK BY:
	SAVED AS:
 2257 W BROADWAY, SD PORTLAND, MAINE 04106	

Important! All electronic devices MUST be placed in a heated room with temperature above 32 deg F.

NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES®

HEREBY CERTIFIES THAT

David S. Gagnon

HAS ATTAINED THE GRADE OF
LEVEL IV

IN FIRE PROTECTION ENGINEERING TECHNOLOGY
FIRE ALARM SYSTEMS

AND RECOGNIZES THAT THROUGH EDUCATION,
EXPERIENCE, AND KNOWLEDGE THIS PERSON HAS
MET THE STANDARDS SET FORTH BY THIS INSTITUTE

Certification Valid through April 1, 2011

CERTIFICATION NUMBER 88203

Leonel Saenz Jr.

CHAIRMAN OF THE BOARD OF GOVERNORS, NICET



RECEIVED

DEC 18 2009

Dept. of Building Inspections
City of Portland Maine

SPONSORED BY THE NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS



Underwriters Laboratories Inc. ®

Northbrook, IL San Jose, CA
Melville, NY

A not-for-profit organization dedicated to public safety
and committed to quality service

Applicant ID No: 238321-001

Service Center No 0

Expires: 31-MAR-2010

CERTIFICATE OF COMPLIANCE

THIS IS TO CERTIFY that the Alarm Service Company indicated below is included by Underwriters Laboratories Inc. (UL) in its Product Directories as eligible to use the UL Listing Mark in connection with Certificated Alarm Systems. The only evidence of compliance with UL's requirements is the issuance of a UL Certificate for the Alarm System and the Certificate is current under UL's Certificate Verification Service. This Certificate does not apply in any way to the communication channel between the protected property and any facility that monitors signals from the protected property unless the use of a UL listed or Classified Alarm Transport Company is specified on the Certificate.

Listed Service From: **SCARBOROUGH, ME**

Alarm Service Company: (238321-001)

NORRIS INC
2257 W BROADWAY
SOUTH PORTLAND ME 04106

Service Center: (238321-001)

NORRIS INC
2257 W BROADWAY
SOUTH PORTLAND ME 04106

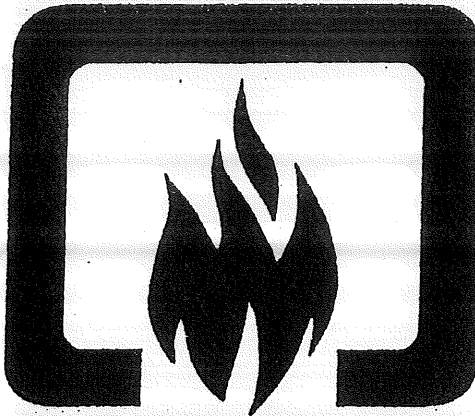
The Alarm Service Company is Listed in the following Certificate Service Categories:

File - Vol No.	CCN	Listing Category
S5129 - 1	UUJS	[Signal and Fire Alarm Equipment and Services] (Protective Signaling Services) Local, Auxiliary, Remote Station and Proprietary

***THIS CERTIFICATE EXPIRES ON 31-MAR-2010 ***

"LOOK FOR THE UL ALARM SYSTEM CERTIFICATE"

Engineering Manager
28-APR-2009



NFPA[®]
INTERNATIONAL

NFPA recognizes

NORRIS INC

*as a member in good standing, entitled
to all rights and privileges of membership.*

Jim Shannon
James M. Shannon, President

January 22, 2003
Date of Issue

NATIONAL SYSTEMS CONTRACTORS ASSOCIATION

NSCA Membership Certificate

This is to certify that

Norris Inc

is an official member of the
National Systems Contractors Association
on this the

First of December

Nancy Emerson

Nancy Emerson
President

Chuck R. Wilson

Chuck Wilson
Executive Director

NSCA
BUILDING CONNECTIONS


NBFAA

Electronic Life Safety, Security
& Systems Professionals

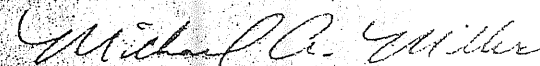
National Burglar & Fire Alarm Association

Norris Inc

*is a member in good standing entitled to all rights
& privileges of membership and subject to all conditions
& objectives as defined in the association bylaws.*



Merlin J. Guilbeau
Executive Director



Michael A. Miller
President



This is to certify that

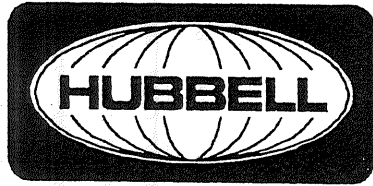
NORRIS, INC.

is an authorized Engineered Systems Distributor for NOTIFIER

During the Year of 2009

Signed for and on behalf of NOTIFIER

J. J. Tomleri
Vice President Domestic Sales



Hubbell Premise Wiring

A Division of
HUBBELL INCORPORATED (Delaware)

hereby certifies

Norris, Inc.
South Portland, Maine

as a Certified Installer of the
Hubbell Premise Wiring MISSION CRITICAL®

2009

Michael R. O'Connor, CSI, RCDD/ NTS
Director-Technical Marketing
Hubbell Premise Wiring



Certificate of Membership



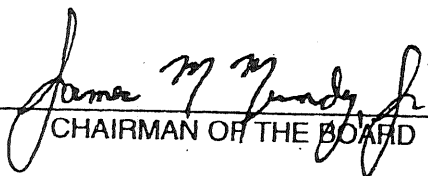
This is to Certify that

Norris, Inc.

Has been duly elected to membership in this organization through

May 31, 1999

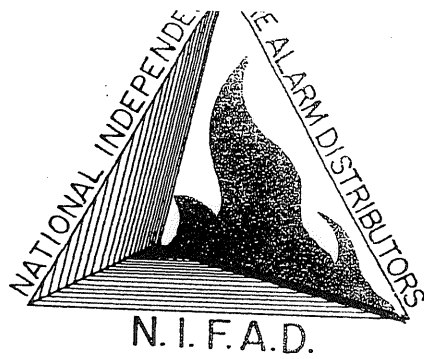
and pledged to improve LIFE SAFETY IN AMERICA by striving to ensure
fire protective signaling and automatic detection systems are properly designed, installed and maintained.


CHAIRMAN OF THE BOARD


SECRETARY

AUTOMATIC FIRE ALARM ASSOCIATION, INC.

a non-profit organization



National Independent Fire Alarm Distributors Association

This is to Certify that

Morris Inc.

is a

Member in Good Standing

and is entitled to all rights and privileges of such membership

Carol Deiner

Secretary

Bob Smith

President

Norris Inc

2257 West Broadway
South Portland, ME 04106

305433SP

8/5/2009 Page: 1
1-800-370-3473

**** SUBMITTAL ****

SEABEE ELECTRIC
84 PLEASANT HILL RD
SCARBOROUGH, ME 04074

SEABEE 207-883-5448 Fax: 883-1660
Purchase Order #: ENVIROLOGIX -- SEABEE

Enviroligix Fire Alarm Addition

Qty Description

- 0 4-Zone Class B 24 volt control panel, 120 VAC (existing)
- 4 Dual action lexan station, red, Notifier Key lock.
- 4 i# Photo Detector, 4-wire, 12/24 Vdc, Photo.
- 2 135 °F (57° C) fixed temperature, dual circuit.
- 3 135 °F (57° C) fixed and rate-of-rise. (Plain)
- 1 8.0 amps, 120 VAC remote charger power supply
- 2 Battery 7 ah
- 14 Strobe, adjustable candela
- 15 Horn Strobe, adjustable candela
- 1 Contractor Discount
Technical Services



June 13, 2005

DN-6726 • H-240

➔ NBG-12LX Addressable Manual Pull Station with FlashScan®

Section: Intelligent/Addressable Devices

GENERAL

The NOTIFIER NBG-12LX is a state-of-the-art, dual-action (i.e., requires two motions to activate the station) pull station that includes an addressable interface for any NOTIFIER intelligent control panel. Because the NBG-12LX is addressable, the control panel can display the exact location of the activated manual station. This leads fire personnel quickly to the location of the alarm.

FEATURES

- Maintenance personnel can open station without causing an alarm condition.
- Built-in bicolor LED, which is visible through the handle of the station, flashes in normal operation and latches steady red when in alarm.
- Handle latches in down position and the word "ACTIVATED" appears to clearly indicate the station has been operated.
- Captive screw terminals wire-ready for easy connection to SLC loop (accepts up to 12 AWG/3.1 mm² wire).
- Semi-flush, mounts to a standard single-gang (2.125" [5.3975 cm] minimum depth), double-gang, or 4" (10.16 cm) square electrical box.
- Smooth dual-action design.
- Within ADA 5 lb. pull force.
- Highly visible.
- Attractive shape and textured finish.
- Key reset.
- Includes Braille text on station handle.
- Optional trim ring (BG-TR).
- Meets UL 38, Standard for Manually Actuated Signaling Boxes.
- Up to 99 NBG-12LX stations per loop on classic protocol systems.
- Up to 159 NBG-12LX stations per loop on FlashScan® protocol systems.
- Dual-color LED blinks green to indicate normal on FlashScan® systems.

CONSTRUCTION

Shell, door, and handle are molded of durable LEXAN® (or polycarbonate equivalent) with a textured finish.

OPERATION

Pushing in, then pulling down on the handle causes it to latch in the down/activated position. Once latched, the word "ACTIVATED" (in bright yellow) appears at the top of the handle, while a portion of the handle protrudes from

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Patented, U.S. Patent No. D428,351; 6,380,846
U.S. Patent Pending: 09/686,286



California
State Fire
Marshal
7150-0028:199

MEA
67-02-E

U.S. Coast Guard
161.002/23/3
(AFP-200)



TYPE APPROVED
93/60141 (E3)
02/6007

BSMI
CI313066760047



The NBG-12LX
Addressable Manual Pull Station

the bottom of the station. To reset the station, simply unlock the station with the key and pull the door open. This action resets the handle; closing the door automatically resets the switch.

Each manual station, on command from the control panel, sends data to the panel representing the state of the manual switch. Two rotary decimal switches allow address settings (1 - 159 on FlashScan® systems, 1 - 99 on CLIP systems).

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 NOTIFIER. Phone: (203) 484-7161 FAX: (203) 484-7118



12 Clintonville Road, Northford, Connecticut 06472

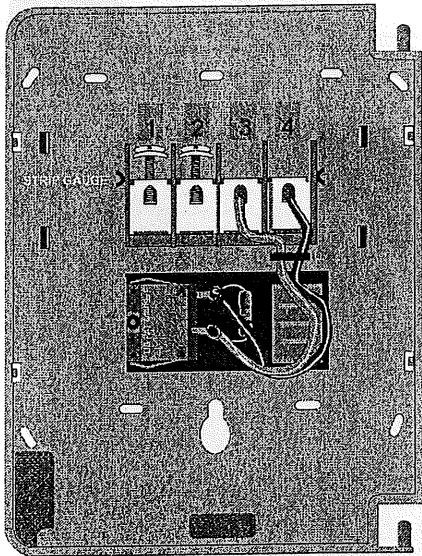


PRODUCT LINE INFORMATION

- NBG-12LX** Dual-action addressable pull station.
Includes key locking feature.
- SB-10** Surface backbox.
- SB-I/O** Indoor/outdoor surface backbox.
- BG-TR** Optional trim ring.

INSTALLATION

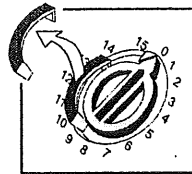
The NBG-12LX will mount semi-flush into a single-gang, double-gang, or standard 4" (10.16 cm) square electrical outlet box, or will surface mount to the model SB-10 or SB-I/O surface backbox. If the NBG-12LX is being semi-flush mounted, then the optional trim ring (BG-TR) may be used. The BG-TR is usually needed for semi-flush mounting with 4" (10.16 cm) or double-gang boxes (not with single-gang boxes).



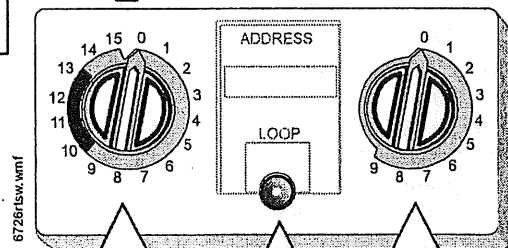
Terminal Connections

- 1 SLC (-)
- 2 SLC (+)

Back of station without door.



Detail of BREAKAWAY TAB*



ROTARY DECIMAL SWITCHES

*Remove tab to select addresses above 99 (FlashScan® systems only).

ELECTRICAL SPECIFICATIONS

Normal operating voltage: 24 VDC.

Maximum SLC loop voltage: 28.0 VDC.

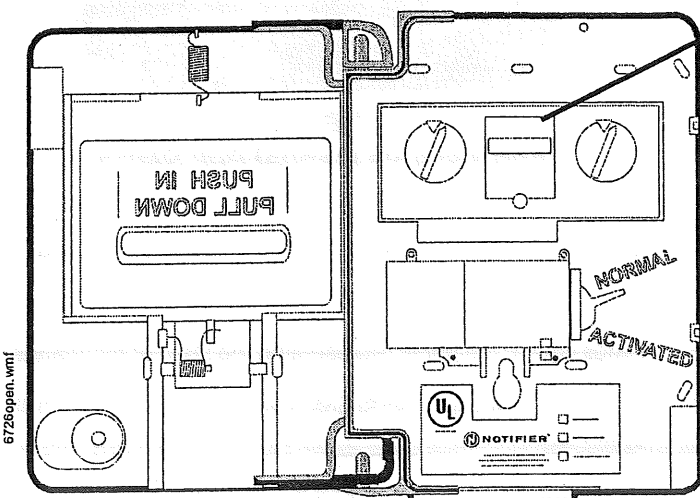
Maximum SLC loop current: 375 μ A.

ARCHITECTURAL/ENGINEERING SPECIFICATIONS

Manual Fire Alarm Stations shall be non-coded, with a key-operated reset lock in order that they may be tested, and so designed that after actual Emergency Operation, they cannot be restored to normal except by use of a key. An operated station shall automatically condition itself so as to be visually detected as activated. Manual stations shall be constructed of red-colored LEXAN® (or polycarbonate equivalent) with clearly visible operating instructions provided on the cover. The word **FIRE** shall appear on the front of the stations in white letters, 1.00 inches (2.54 cm) or larger. Stations shall be suitable for surface mounting on matching backbox SB-10; or semi-flush mounting on a standard single-gang, double-gang, or 4" (10.16 cm) square electrical box, and shall be installed within the limits defined by the Americans with Disabilities Act (ADA) or per national/local requirements. Manual Stations shall be Underwriters Laboratories listed.

Manual stations shall connect with two wires to one of the control panel SLC loops. The manual station shall, on command from the control panel, send data to the panel representing the state of the manual switch. Manual stations shall provide address setting by use of rotary decimal switches.

The loop poll LED shall be clearly visible through the front of the station. The LED shall flash while in the normal condition, and stay steadily illuminated when in alarm.



Cover open to show easy access to miniature monitor module, rotary switch, and UL label.

⇒ i³ Series

Photoelectric Smoke Detectors

DN-6885:A • I-80

 **NOTIFIER**[®]
by Honeywell

Conventional Initiating Devices

GENERAL

System Sensor's i³™ Series photoelectric and photoelectric/thermal smoke detectors represent a significant advancement in conventional detection, incorporating three key features: installation ease, intelligence, and instant inspection.

Installation ease. The i³ Series redefines installation ease with its plug-in design. This allows an installer to pre-wire the bases included with the heads. The large wire-entry port and in-line terminals provide ample room for neatly routing the wiring inside the base. The base accommodates a variety of backbox mounting methods, as well as direct mounting with drywall anchors. To complete the installation, i³ Series heads plug into the base with a simple Stop-Drop 'N Lock™ action.

Intelligence. i³ Series detectors offer a number of intelligent features to simplify testing and maintenance. Drift compensation and smoothing algorithms, to minimize nuisance alarms, are standard in the i³ Series. When connected to the 2W-MOD loop test/maintenance module, or an SFP-2402/-2404 panel, two-wire i³ detectors are capable of generating a remote maintenance signal when they need cleaning. This signal is indicated by LEDs located at the module and at the panel. To read the sensitivity of i³ detectors, the SENS-RDR is a wireless device that displays sensitivity in terms of percent-per-foot obscuration.

Instant inspection. The i³ Series provides wide-angle red and green LED indicators for instant inspection of detector condition. The LEDs indicate: normal standby, out-of-sensitivity, alarm, or freeze trouble conditions. The "EZ Walk" loop test feature is available on two-wire i³ Series detectors when connected to the 2W-MOD loop test/maintenance module or an SFP-2402/-2404 panel or MS-5UD/MS-10UD. The "EZ Walk" feature verifies the initiating loop wiring by providing LED status indication at each detector.

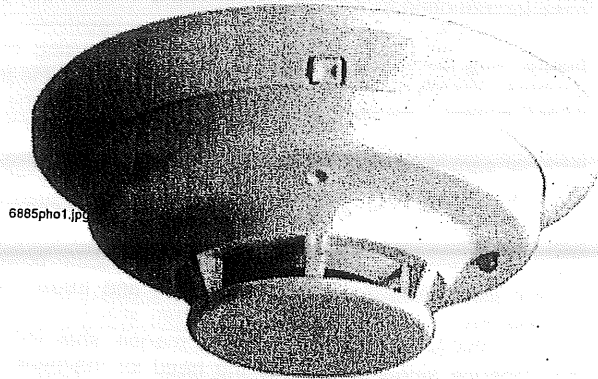
FEATURES

- Plug-in detector line — mounting base included.
- Large wire-entry port.
- In-line terminals with SEMS screws.
- Mounts to octagonal and single-gang backboxes, 4" (101.6 mm) square backboxes, or directly to ceiling.
- Stop-Drop 'N Lock attachment to base.
- Removable detector cover and chamber for easy cleaning.
- Built-in remote maintenance signaling.
- Drift compensation and smoothing algorithms.
- Simplified sensitivity measurement.
- Wide-angle, dual-color LED indication.
- Loop testing via "EZ Walk" feature.
- Built-in test switch.

SPECIFICATIONS

PHYSICAL SPECIFICATIONS

Operating Temperature Range: For models 2W-B and 4W-B: 32°F to 120°F (0°C to 49°C); for thermal models 2WT-B and 4WT-B: 32°F to 100°F (0°C to 37.8°C).



Storage Temperature Range: -4°F to +158°F (-20°C to +70°C).

Operating Humidity Range: 10% - 95% RH, non-condensing.

Thermal Sensor: 135°F (57.2°C) fixed (models 2WT-B, 4WT-B).

Freeze Trouble: 41°F (5°C) (models 2WT-B and 4WT-B).

Sensitivity: 2.5%/foot (0.762%/meter) nominal.

Input Terminals: Utilize 14 to 22 AWG wire.

Dimensions (including base): 5.3" (134.62 mm) diameter, 2.0" inches (50.8 mm) high.

Weight: 6.3 oz. (178.6 grams).

Mounting Options: 3.5" (88.9 mm) octagonal backbox; 4" (101.6 mm) octagonal backbox; single-gang backbox; 4" (101.6 mm) square backbox with a plaster ring; or direct mount to ceiling.

ELECTRICAL SPECIFICATIONS

Operating Voltage: 12/24 V non-polarized nominal; 8.5 V minimum; 35 V maximum.

Maximum Ripple Voltage: 30% of nominal (peak to peak).

Standby Current: 50 µA maximum average. Peak standby current: for two-wire models: 100 µA; not applicable for four-wire models.

Maximum Start-Up Capacitance: For two-wire models: 0.1 µF; not applicable for four-wire models.

Latching Alarm: Reset by momentary power interruption.

Maximum Initial Start-Up Time: For two-wire models: 45 seconds; for four-wire models: 15 seconds.

Maximum Alarm Current: For two-wire models: 130 mA limited by control panel; For four-wire models: 20 mA @ 12 V, 23 mA @ 24 V.

Alarm Contact Ratings: For four-wire models: 0.5 A @ 30 VAC/VDC; not applicable for two-wire models.

Alarm Reset Voltage: 2.5 V.

Alarm Reset Time: 0.3 seconds.

ARCHITECTURAL/ENGINEERING SPECIFICATIONS

Smoke detector shall be a System Sensor i³ Series model number _____, Listed to Underwriters Laboratories UL 268 Fire Protection Signaling Systems. The detector shall be a photoelectric type (models 2W-B, 4W-B) or a combination photoelectric/thermal (models 2WT-B, 4WT-B) with thermal sensor rated at 135°F (57.2°C). The detector shall include a mounting base for mounting to 3.5" (88.9 mm) and 4" (101.6 mm) octagonal, single-gang, and 4" (101.6 mm) square backboxes with a plaster ring, or directly mount to the ceiling using drywall anchors. Wiring connections shall be made by means of SEMS screws. The detector shall allow pre-wiring of the base and the head shall be a plug-in type. The detector shall have a nominal sensitivity of 2.5%/foot (0.762%/meter) as measured in the UL smoke box. The detector shall be capable of automatically adjusting its sensitivity by means of drift compensation and smoothing algorithms. The detector shall provide dual-color LED indication which blinks to indicate power-up, normal standby, out-of-sensitivity, alarm, and freeze trouble (models 2WT-B, 4WT-B) conditions. When used in conjunction with the 2W-MOD module, two-wire models shall include a maintenance signal to indicate the need for maintenance at the alarm control panel, and shall provide a loop testing capability to verify the circuit without testing each detector individually.

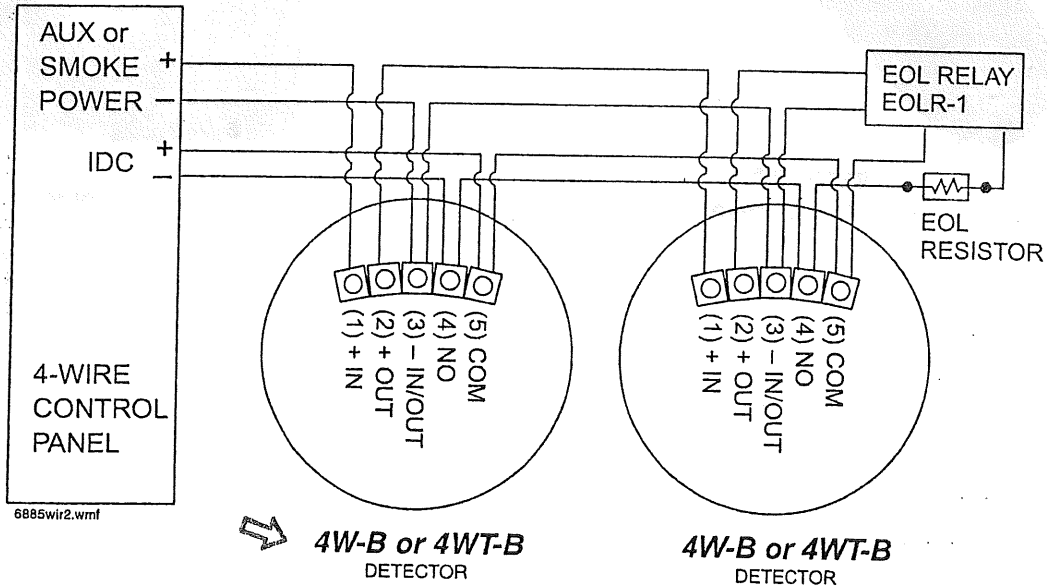
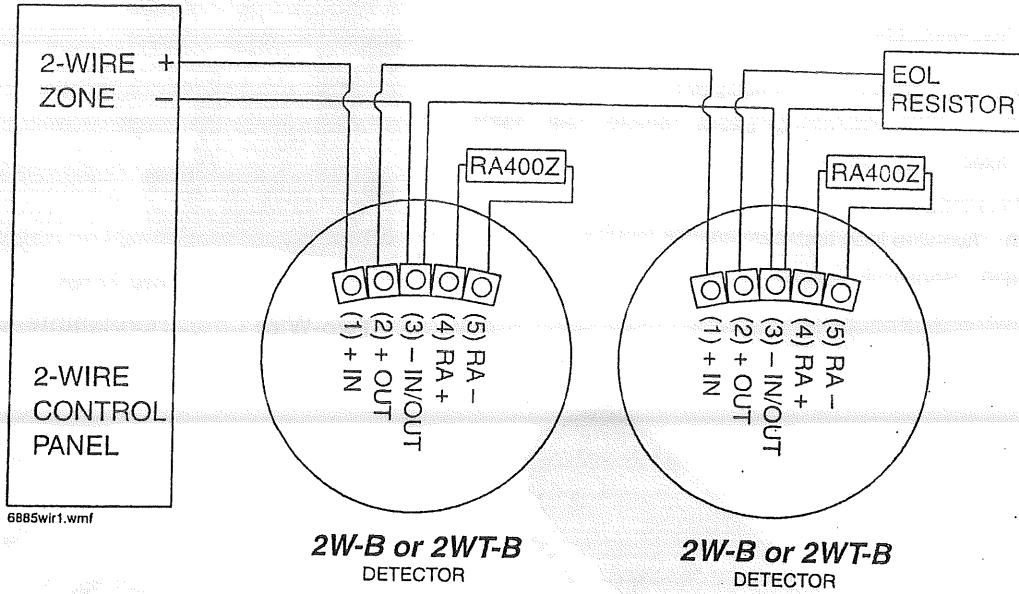
AGENCY LISTINGS AND APPROVALS

In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. *Consult factory for latest listing status.*

- **UL Listed:** S911
- **FM Approved**
- **CSFM:** 7272-1209:210
- **MEA:** 290-01-E
- **Maryland State Fire Marshall:** Permit # 2093

LED Modes	Green LED	Red LED
Power Up	Blink every 10 seconds	Blink every 10 seconds
Normal (Standby)	Blink every 5 seconds	OFF
Out of Sensitivity	OFF	Blink every 5 seconds
Freeze Trouble	OFF	Blink every 10 seconds
Alarm	OFF	Solid ON
Power Up Sequence for LED Indication		
Condition		Duration
Initial LED Status Indication		80 Seconds
Initial LED Status Indication (if excessive electrical noise is present)		4 Minutes

WIRING DIAGRAMS



PRODUCT LINE INFORMATION

2W-B: Two-wire photoelectric smoke detector.

2WT-B: Two-wire photoelectric smoke detector with 135°F (57.2°C) fixed thermal sensor.

4W-B: Four-wire photoelectric smoke detector.

4WT-B: Four-wire photoelectric smoke detector with 135°F (57.2°C) fixed thermal sensor.

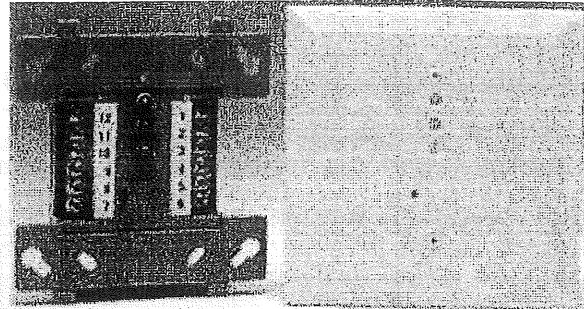
ACCESSORIES:

2W-MOD: Two-wire loop test/maintenance module.

SENS-RDR: Sensitivity reader.

RT: Removal/replacement tool.

A77-AB2: Retrofit adapter bracket.



2w-mod.jpg

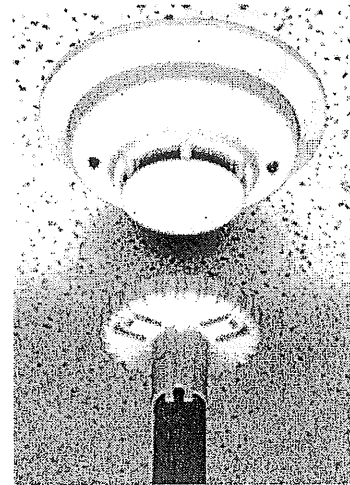
2W-MOD

Two-Wire Loop Test/Maintenance Module



sens-rdr.jpg

SENS-RDR
Sensitivity Reader



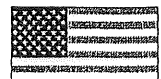
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RT
Removal/Replacement Tool

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ISO 9001
CERTIFIED
ENGINEERING & MANUFACTURING
QUALITY SYSTEMS

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Made in the U.S.A.

For more information, contact Notifier. Phone: (203) 484-7161, FAX: (203) 484-7118.
www.notifier.com



June 28, 1995

DN-1325 • I-309

A and AT Series Fixed-Temperature Heat Detectors

Section: Conventional Initiating Devices

GENERAL

The Chemtron A and AT Series fixed-temperature heat detectors are simple, reliable, and easy to maintain.

FEATURES

- Compact.
- Attractive.
- Excellent stability and reliability.
- Interchangeable parts.
- Positive indication of operation.
- Replaceable heat collector (fusible element) enables quick and easy restoration to service.
- Available in two standard temperatures (135°F and 200°F).
- Model A includes single normally-open contacts.
- Model AT includes dual normally-open contacts.

CONSTRUCTION

- **Base:** Contains contact assembly and wiring terminals with two different switch arrangements including single and dual contact types
- **Heat Collector:** Two sections soldered together by fusible eutectic alloy. Lower section drops away at fusing temperatures currently rated at 135° and 200°F.
- **Adapter Plate:** Provides a decorative mounting for 3- or 4-inch octagon junction boxes or standard plaster rings. It is supplied with two circuit detectors specified for junction box mounting only, or as an accessory for one-circuit models.

OPTIONAL ACCESSORIES

- **APC Protective Cover:** High-strength molded matched white polypropylene cover fits snugly over the detector body to secure against damage or unauthorized removal. Suitable for use at temperatures up to 105°C (221°F).
- **ATA Adapter Plate:** For mounting Model A on 3- or 4-inch octagon junction boxes or standard plaster rings. Mounting screws included.

APPLICATIONS

The A and AT series fixed-temperature heat detectors are used in small areas and in places subject to rapid changes in temperature, where a rate-of-rise detector would be inappropriate.

Heat detectors should be used for property protection. Reliance should not be placed solely on heat detectors for life safety. Where life safety is involved, smoke detectors must also be used.

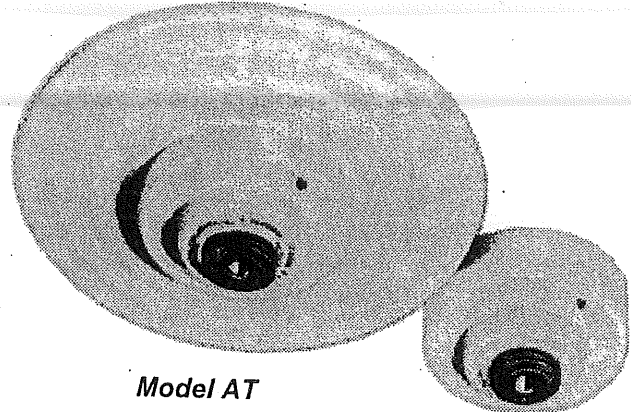


S1758



California
State Fire
Marshal

7270-061:001



Model AT

Model A

The heat collector is available with two standard temperature ratings. The 135°F collector is for areas where the ceiling temperature is not expected to exceed 100°F. The 200°F collector is for areas where the ceiling temperature may exceed 100°F, but not 150°F. For other temperature ratings, contact the factory.

Battery Backup: Heat detectors should be electrically supervised with battery backup at the panel.

OPERATION

When the alloy fuses, the bottom section of heat collector drops away. The plunger is released, and contacts move to the alarm position. When the bottom section of the heat collector drops away, the black tip of the plunger is clearly visible. The heat detector will remain in the alarm condition until a new heat collector is installed.

MAINTENANCE

The A and AT series heat detectors are **NOT** self-restoring.

A heat collector is inserted into base unit by applying an upward push and a slight twist to lock the heat collector into place. Insertion of the heat collector moves a spring-loaded plunger in the center of base unit, setting switch contacts to the normally open position.

The fusible alloy cannot be tested, but is considered so reliable that testing is not needed.

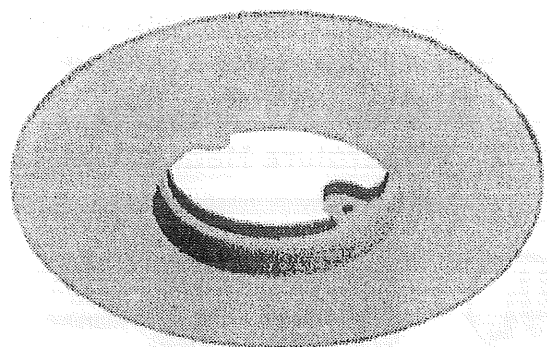
Circuit continuity and switch operability can be tested at any time by simply removing the heat collector momentarily.

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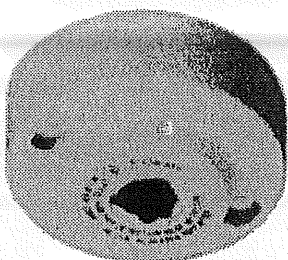


12 Clintonville Road, Northford, Connecticut 06472





ATA Adapter Plate



A & AT
Detector
Body



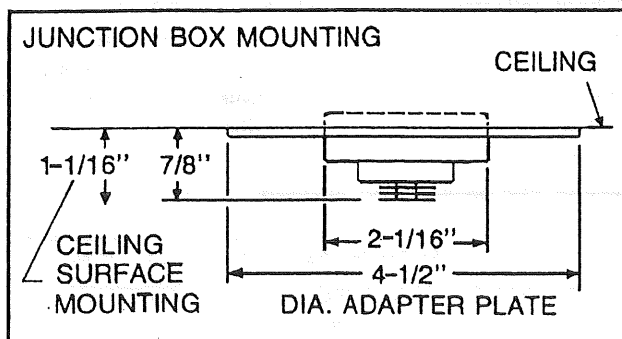
FTL Heat
Collector

INSTALLATION

Must be mounted on ceiling or other surface facing directly downward. The A series detector can be surface mounted with open or concealed wiring. When the ATA adapter plate is added, it can also be mounted to a 3- or 4-inch junction box or a standard plaster ring. The AT series detector comes with an ATA adapter plate and can be mounted only to a junction box or plaster ring.

A and AT series detectors are rated for a smooth ceiling coverage of 900 square feet. For maximum coverage, locate them no more than 30 feet apart.

Installation instructions are packaged with each heat detector. Consult NFPA Standard 72E for more information on the installation of heat detectors.



AVAILABLE TEMPERATURE RATINGS

Refer to NFPA Standard 72E for application requirements.

FOR 135°F (57°C):

Ambient temperature category: Ordinary.

Ceiling temperature limits: not more than 100°F (37.8°C).

Maximum spacing per UL: 30 x 30 feet (9.14 x 9.14 meters).

FOR 200°F (94°C):

Ambient temperature category: Intermediate.

Ceiling temperature limits: exceeding 100°F (37.8°C) but not greater than 150°F (65.6°C).

SPECIFICATIONS

Physical: when mounted, projects less than 1 inch from ceiling.

Electrical ratings:

Voltage	Current
6 – 125 VAC	6 A
6 – 28 VDC	3 A
125 VDC	1 A
250 VDC	0.3 A

Temperature range: *With 135°F element:* less than 100°F (less than 38°C) @ 10 – 90% relative humidity, noncondensing. *With 200°F element:* 100°F – 150°F (38°C – 66°C) @ 10 – 90% relative humidity, noncondensing.

PRODUCT LINE INFORMATION

A-135 Single circuit, normally open contacts, with 135°F heat collector. For surface mounting open or concealed wiring.

A-200 Single circuit, normally open contacts, with 200°F heat collector. For surface mounting open or concealed wiring.

AT-135 Dual independent circuits, normally open contacts, with 135°F heat collector. Junction box mounting only. Supplied complete with adapter plate and screws.

AT-200 Dual independent circuits, normally open contacts, with 200°F heat collector. Junction box mounting only. Supplied complete with adapter plate and screws.

ATA Adapter plate for mounting on 3- or 4-inch octagonal box or plaster ring. Complete with mounting screws. Included with AT series detectors.

ENGINEERING SPECIFICATIONS

Automatic heat detectors shall be of the fixed-temperature type, rated at _____ ° F (specify 135° or 200°). Detectors shall be fast-acting with a minimum rated coverage for smooth ceilings of 900 square feet. Detectors shall be designed with a replaceable fusible element and shall require manual resetting after alarm operation by replacement of said element. Fusible elements shall be replaceable without tools and without necessitating removal of the detector base. Detectors shall be UL listed and installed according to the current issue of NFPA 72 Standard on Automatic Fire Detectors.



February 24, 2004

DN-6931 • I-304

5600 Series Mechanical Heat Detectors

Section: Conventional Initiating Devices

GENERAL

System Sensor's 5600 Series mechanical heat detectors offer a low-cost option for property protection against fire and for non-life-safety installations, where smoke detectors are in-appropriate.

Multiple configurations. The 5600 Series offers a full line of configurations to accommodate a broad range of applications. Both single- and dual-circuit models are offered, each available for low- and high-temperature ratings with either fixed-temperature or combination fixed-temperature/rate-of-rise (ROR) activation. The ROR element of the fixed/ROR models is restorable, to accommodate field-testing the unit.

Installation flexibility. To satisfy a variety of installations, the 5600 Series easily mounts to single-gang and octagonal backboxes. These models also accommodate 4" (101.6 mm) square backboxes when used with a plaster ring. The mounting bracket is reversible to allow for flush- and surface-mount backbox installations.

Visual identification. The 5600 Series provides clear markings on the exterior of the unit to ensure that the proper detector is being used. Alphanumeric characters identify the activation method, as well as the temperature rating, in degrees Fahrenheit and Celsius. Fixed temperature models are identified "FX", while combination fixed/rate-of-rise units are marked "FX/ROR". The 5600 Series also provides a collector as a post-activation indicator. Once the detector has been activated, the collector drops from the unit to allow easy identification of the specific unit in alarm.

FEATURES

- Multiple configurations available:
 - Fixed-temperature (non-resettable) or combination fixed (non-resettable)/rate-of-rise (self-restoring).
 - Low-temperature and high-temperature ratings.
 - Single-circuit and dual-circuit.
- Easy-to-read alphanumeric identification of detector type and temperature rating.
- External collector provides visual indication of activation.
- Reversible mounting bracket for flush- and surface-mount installations.
- Flexible mounting capabilities: single-gang, 3.5" or 4" octagonal, 4" (101.6 mm) square with plaster ring.
- Easy-to-use terminal screws provide a more positive wiring connection.
- Low-profile design to coordinate with room aesthetics.

SPECIFICATIONS

Physical Specifications:

Maximum installation temperature:

For models 5601, 5603, 5621, 5623: 100°F (38°C).

For models 5602, 5604, 5622, 5624: 150°F (65.6°C).



LISTED
S2101

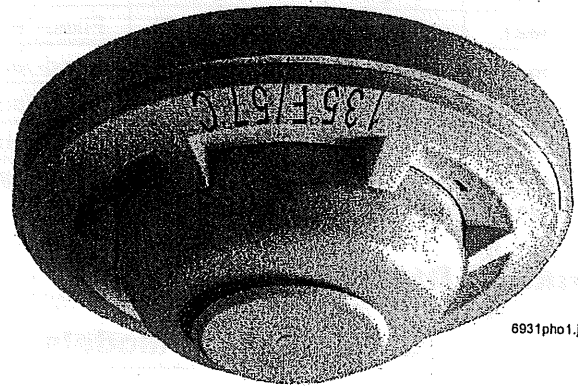


CS360
Vol. 4



California
State Fire
Marshal
7270-1209:227

MEA
199-03-E



6931photo1.jpg

Alarm temperature:

For models 5601, 5603, 5621, 5623: 135°F (57°C).

For models 5602, 5604, 5622, 5624: 194°F (90°C).

Rate-of-rise threshold: 15°F (8.3°C) per minute (models 5601, 5602, 5621, 5622 only).

Operating humidity range: 5% to 95% RH noncondensing.

Input terminals: non-polarized, accept 14 to 22 AWG (2.0 to 0.33 mm²).

Dimensions: diameter with mounting bracket: 4.57" (116 mm); height with mounting bracket: 1.69" (43 mm).

Weight: 6 oz. (170 grams).

Mounting options: 3.5" (88.9 mm) octagonal backbox; 4" (101.6 mm) octagonal backbox; single-gang backbox; 4" (101.6 mm) square backbox with a square-to-round plaster ring.

Electrical Specifications:

Operating Voltage	Contact Ratings (Resistive)
6 – 125 VAC	3.0 A
6 – 28 VDC	1.0 A
125 VDC	0.3 A
250 VDC	0.1 A

6931elec.tbl

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12 Clintonville Road, Northford, Connecticut 06472



ARCHITECTURAL AND ENGINEERING SPECIFICATIONS

Mechanical heat detector shall be a System Sensor 5600 Series model number _____, Listed to Underwriters Laboratories UL 521 for Heat Detectors for Fire Protective Signaling Systems. The detector shall be either a single-circuit or a dual-circuit type, normally open. The detector shall be rated for activation at either 135°F (57°C) or 194°F (90°C), and shall activate by means of a fixed-temperature thermal sensor, or a combination fixed-temperature/rate-of-rise thermal sensor. The rate-of-rise element shall be activated by a rapid rise in temperature, approximately 15°F (8.3°C) per minute. The detector shall include a reversible mounting bracket for

mounting to 3.5-inch (88.9 mm) octagonal, 4-inch (101.6 mm) octagonal, single gang, and 4-inch (101.6 mm) square backboxes with a square-to-round plaster ring. Wiring connections shall be made by means of SEMS screws that shall accommodate 14 – 22 AWG wire. The detector shall contain alphanumeric markings on the exterior of the housing to identify its temperature rating and activation method. The rate-of-rise element of combination fixed-temperature/rate-of-rise models shall be restorable, to allow for field-testing. The detectors shall include an external collector that shall drop upon activation to identify the unit in alarm.

ORDERING INFORMATION

Model	Circuit	Temperature Rating	Activation	UL Protected Spacing, 10' (3.048 m) Ceiling*
5601	Single	135°F (57°C)	Fixed-Temperature/Rate-of-Rise	50 ft. x 50 ft. (15.24 m x 15.24 m)
5602	Single	194°F (90°C)	Fixed-Temperature/Rate-of-Rise	50 ft. x 50 ft. (15.24 m x 15.24 m)
5603	Single	135°F (57°C)	Fixed-Temperature	25 ft. x 25 ft. (7.62 m x 7.62 m)
5604	Single	194°F (90°C)	Fixed-Temperature	25 ft. x 25 ft. (7.62 m x 7.62 m)
5621	Dual	135°F (57°C)	Fixed-Temperature/Rate-of-Rise	50 ft. x 50 ft. (15.24 m x 15.24 m)
5622	Dual	194°F (90°C)	Fixed-Temperature/Rate-of-Rise	50 ft. x 50 ft. (15.24 m x 15.24 m)
5623	Dual	135°F (57°C)	Fixed-Temperature	25 ft. x 25 ft. (7.62 m x 7.62 m)
5624	Dual	194°F (90°C)	Fixed-Temperature	25 ft. x 25 ft. (7.62 m x 7.62 m)

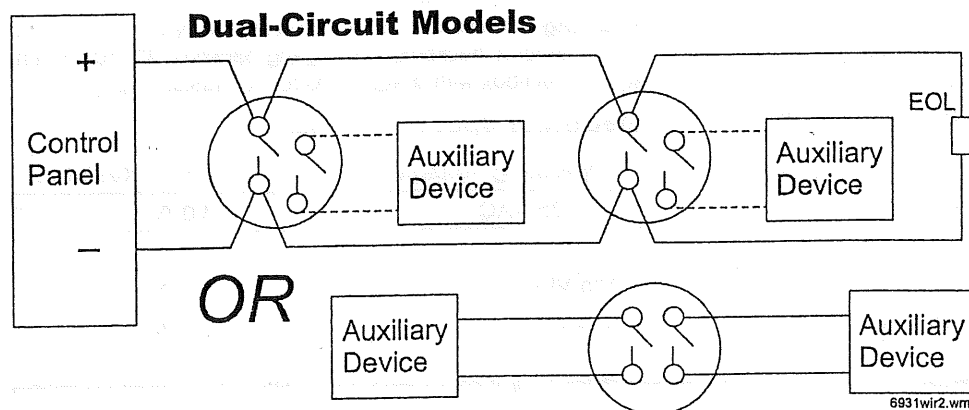
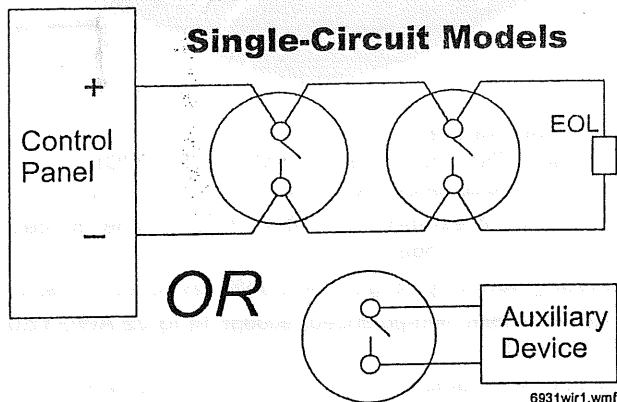
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*NOTE: Refer to NFPA 72 guidelines for spacing reductions when ceiling heights exceed 10 feet (3.048 m).

Previous	ORDER	Previous	ORDER
HD-601	5601	HD-621	5621
HD-602	5602	HD-622	5622
HD-603	5603	HD-623	5623
HD-604	5604	HD-624	5624

6931ref.tbl

WIRING DIAGRAMS





July 20, 2004

DN-6927 • E-30

FCPS-24S6 and FCPS-24S8 6-Amp and 8-Amp 24-Volt Remote Power Supplies

Section: Power Supplies

GENERAL

The **FCPS-24S6** (6-amp) and **FCPS-24S8** (8-amp) are compact, cost-effective remote power supplies with battery charger. The FCPS-24S6/-24S8 may be connected to any 12- or 24-volt Fire Alarm Control Panel (FACP) or may be used as a stand-alone supply. Primary applications include Notification Appliance (bell) Circuit (NAC) expansion (to support ADA requirements and NAC synchronization) or auxiliary power to support 24-volt system accessories. The FCPS-24S6/-24S8 provides **regulated** and **filtered** 24 VDC power to four notification appliance circuits configured as either four Class B (Style Y) or Class A (Style Z, with **ZNAC-4** option module). Alternately, the four outputs may be configured as all non-resettable, all resettable, or two non-resettable and two resettable. The FCPS-24S6/-24S8 also contains a battery charger capable of charging up to 18 AH batteries.

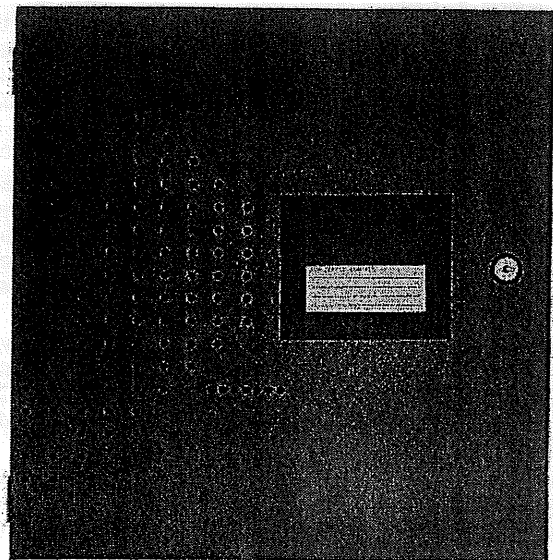
FEATURES

- UL-Listed NAC synchronization using System Sensor, Wheelock, or Gentex "Commander²" appliances.
- Cascadable for up to ten power supplies (four for Gentex) with strobe timing maintained.
- Operates as a "sync follower" or as a "sync generator" (default). See note on page 2.
- Contains two fully-isolated input/control circuits — triggered from FACP NAC (NAC expander mode) or jumpered permanently "ON" (stand-alone mode).
- Four Class B (Style Y) or four Class A (Style Z, with ZNAC-4 module) NACs.
- 6-amp (FCPS-24S6) or 8-amp (FCPS-24S8) full load output, with 3 amps maximum/circuit, in NAC expander mode (UL 864).
- 4-amp (FCPS-24S6) or 6-amp (FCPS-24S8) continuous output in stand-alone mode (UL 1481).
- Compatible with coded inputs; signals passed through.
- Optional power-supervision relay (**A77-716B**).
- In stand-alone mode, output power circuits may be configured as: resettable (reset line from FACP required), non-resettable, or a mix of two and two.
- Fully **regulated** and **filtered** power output — optimal for powering four-wire smoke detectors, annunciators, and other system peripherals requiring regulated/filtered power.
- Power-limiting technology meets UL power-limiting requirements.
- Form-C normally-closed trouble relay.
- Fully supervised power supply, battery, and NACs.
- Selectable earth fault detection.
- AC trouble report selectable for immediate or 8-hour delay.
- Works with virtually any UL 864 fire alarm control which utilizes an industry-standard reverse-polarity notification circuit (including unfiltered and unregulated bell power).
- Requires input trigger voltage of 9.0 – 32 VDC.
- Self-contained in compact, locking cabinet — 15" (38.1 cm) high x 14.5" (36.83 cm) wide x 2.75" (6.985 cm) deep.
- Includes integral battery charger capable of charging up to 18 AH batteries. Cabinet capable of housing 7.0 AH batteries.



California
State Fire
Marshal
7315-0028:225

MEA
299-02-E



6827photo1.jpg

- Battery charger may be disabled via DIP switch for applications requiring larger batteries.
- Fixed, clamp-type terminal blocks accommodate up to 12 AWG (3.1 mm²) wire.

STANDARDS and CODES

The FCPS-24S6/-24S8 complies with the following standards:

- **NFPA 72** National Fire Alarm Code.
- **UL 864** Standard for Control Units for Fire Alarm Systems (NAC expander mode).
- **UL 1481** Power Supplies for Fire Alarm Systems (stand-alone mode).

SPECIFICATIONS

Primary (AC) power:

- FCPS-24S6/-24S8: 120 VAC, 60 Hz, 3.2 A maximum.
- Wire size: minimum #14 AWG (2.0 mm²) with 600 V insulation.

Control input circuit:

- Trigger input voltage: 9 to 32 VDC.
- Trigger current: 2.0 mA (16 – 32 V). Per input: 1.0 mA (9 – 16 V).

Trouble contact rating: 5 amps at 24 VDC.

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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 NOTIFIER. Phone: (203) 484-7161 FAX: (203) 484-7118



12 Clintonville Road, Northford, Connecticut 06472

ISO 9001
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QUALITY SYSTEMS

Auxiliary power output: specific application power 500 mA maximum.

Output circuits:

- +24 VDC filtered, regulated.
- 3.0 amps maximum for any one circuit.
- Total continuous current for all outputs (stand-alone mode): **for FCPS-24S6:** 4.0 amps maximum; **for FCPS-24S8:** 6.0 amps maximum.
- Total short-term current for all outputs (NAC expander mode): **for FCPS-24S6:** 6.0 amps maximum; **for FCPS-24S8:** 8.0 amps maximum.

Secondary power (battery) charging circuit:

- Supports lead-acid batteries only.
- Float-charge voltage: 27.6 VDC.
- Maximum charge current: 1.5 amps
- Maximum battery capacity: 18 AH.

APPLICATIONS

Example 1: Expand notification appliance power an additional 6.0 amps (FCPS-24S6) or 8.0 amps (FCPS-24S8). Use up to four Class B (Style Y) outputs or four Class A (Style Z) outputs (using ZNAC-4). For example, the FACP notification appliance circuits will activate the FCPS when reverse-polarity activation occurs. Trouble conditions on the FCPS are sensed by the FACP through the notification appliance circuit.

Example 2: Use the FCPS to expand auxiliary regulated 24-volt system power up to 4.0 amps (FCPS-24S6) or up to 6.0 amps (FCPS-24S8). Both resettable and non-resettable power options are available. Resettable outputs are created by connecting the resettable output from the FACP to one or both of the FCPS inputs.

Example 3: Use addressable control modules to activate the FCPS instead of activating it through the FACP notification appliance circuits. This typically allows for mounting the FCPS at greater distances* away from the FACP while expanding system architecture in various applications.

For example, an addressable control module is used to activate the FCPS, and an addressable monitor module is used to sense FCPS trouble conditions. Local auxiliary power output from the FCPS provides power to the addressable control module.

*Addressable FACP's are capable of locating control and monitor modules at distances of up to 10,000 feet (3048 meters).

AGENCY LISTINGS AND APPROVALS

See the first page of this data sheet for listing agencies and file numbers. These listings and approvals apply to the FCPS-24S6 and the FCPS-24S8. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

SYNC FOLLOWER/GENERATOR NOTE

In some installations, it is necessary to synchronize the flash timing of all strobes in the system for ADA compliance. Strobes accomplish this by monitoring very short timing pulses on the NAC power which are created by the FACP. When installed at the end of a NAC wire run, the FCPS-24S6/-24S8 can track (i.e., "follow") the strobe synchronization timing pulses on the existing NAC wire run. This maintains the overall system flash timing of the additional strobes attached to the FCPS.

When the FCPS-24S6/-24S8 is configured (via DIP switch settings) as a "sync follower," the FCPS's NAC outputs track the strobe synchronization pulses present at the FCPS's sync input terminal. The pulses originate from an upstream FACP or other power supply.

When the FCPS-24S6/-24S8 is configured (via DIP switch settings) as a "sync generator," the FCPS's sync input terminals are not used. Rather, the FCPS is the originator of the strobe synchronization pulses on the FCPS's NAC outputs. In "sync generator" mode, the sync type (System Sensor, Wheelock, or Gentex) is selectable via DIP switch settings.

PRODUCT LINE INFORMATION

FCPS-24S6: 6.0 amp, 120 VAC remote charger power supply. Includes main printed circuit board, transformers, enclosure (15" [38.1 cm] high x 14.5" [36.83 cm] wide x 2.75" [6.985 cm] deep), and installation instructions.

FCPS-24S8: 8.0 amp, 120 VAC remote charger power supply. Includes main printed circuit board, transformers, enclosure (15" [38.1 cm] high x 14.5" [36.83 cm] wide x 2.75" [6.985 cm] deep), and installation instructions.

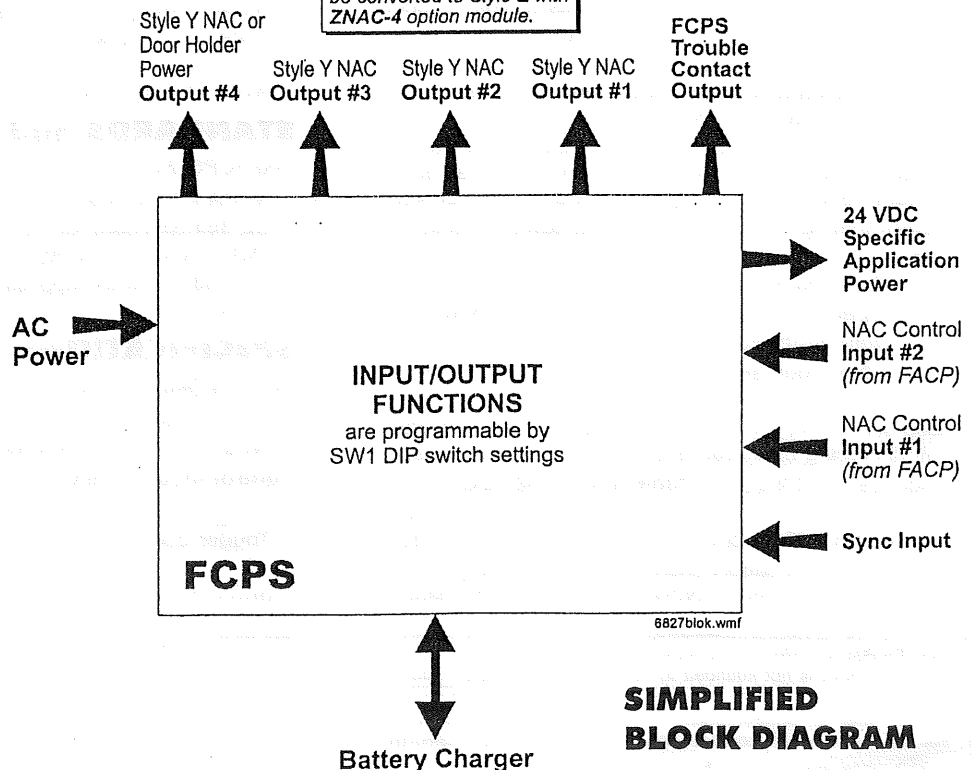
ZNAC-4: Class A (Style Z) NAC option module.

A77-716B: 12/24 VDC end-of-line relay for monitoring four-wire smoke detector power.

BAT-1270: Battery, 12 volt, 7.0 AH (two required, see BAT Series data sheet DN-6933).

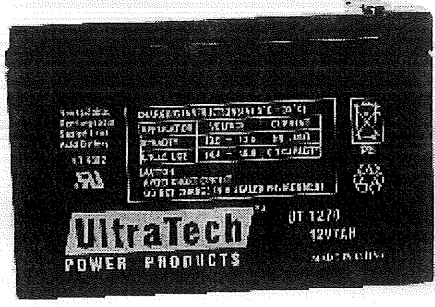
PS-1270: Battery, 12 volt, 7.0 AH (two required, see PS Series data sheet DN-1109).

NOTE: All NAC outputs can be converted to Style Z with ZNAC-4 option module.



SIMPLIFIED BLOCK DIAGRAM

↙ **IM-1270**
12V 7AMP BATTERY





March 30, 2004

DN-5765 • J-120

Wheelock RSS and RSSP Series Single- and Multi-Candela Strobes and Strobe Plates

Section: Audio/Visual Devices

GENERAL

Wheelock's patented Series RSS Strobe Appliances and Series RSSP Strobe Plates have lower current draw while maintaining outstanding performance, reliability and cost effectiveness. These versatile appliances will satisfy virtually all requirements for indoor, wall or ceiling mount applications.

Strobe options for wall mount models include 15/75 or Wheelock's Patented MCW multi-candela strobe with field selectable candela settings of 15/30/75/110cd, Ceiling mount models include the patented MCC multi-candela ceiling strobe with field selectable intensities of 15/30/75/95cd or the high intensity MCCH strobe with field selectable 115/177cd.

All models may be synchronized when used in conjunction with the Wheelock SM, DSM Sync Modules or a Power Supplies with Wheelock's Patented Sync Protocol. Synchronized strobes can eliminate possible restrictions on the number of strobes in the field of view. Wheelock's synchronized strobes offer an easy way to comply with ADA recommendations concerning photosensitive epilepsy as well as meeting the requirements of NFPA 72.

Wheelock's Series RSS Strobes employ a Patented Integral Strobe Mounting Plate that can be mounted to a single gang, double gang, 4" square, 100mm European backboxes or the SHBB surface backbox. If the flush backbox has side or top space between it and the finished wall, the NATP (Notification Appliance Trimplate) may be used. It provides an additional .65" of trim for the Appliance. An attractive cover plate is provided for a clean, finished appearance on all models.

The Series RSSP Multi-Candela Strobe Plates are a cost effective way to retrofit required wall strobe appliances to bells, horns, chimes, multitones or speakers and easily mounts to standard 4" backboxes or for surface mount use with Wheelock's SBL2 surface backbox.

FEATURES

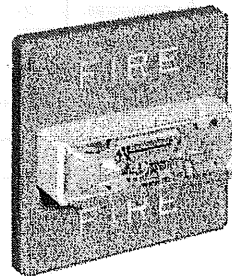
- Wall mount Multi-Candela models are available with Field Selectable Candela Settings of 15/30/ 75/110cd or 135/185cd. Single Candela models are available in 15/75cd
- Ceiling mount Multi-Candela models are available with field selectable candela settings of 15/30/75/95cd or 115/177cd.
- Strobes produce 1 flash per second over the regulated voltage range
- 12 and 24 VDC models with wide UL "Regulated Voltage" using filtered (DC) or unfiltered VRMS input voltage
- Synchronize with Wheelock SM, DSM or Power Supplies with built-in sync protocol



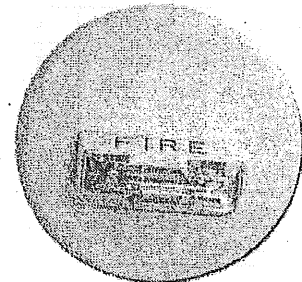
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151-92-E Vol. XIX, XX
Vol. XXIV (RSS-24MCW-FR, -FW)



Series RSS



RSS Round



Multi-Candela Indicator
(bottom of Strobe Lens)



Series RSSP

- ADA/NFPA/UFC/ANSI compliant. Meets OSHA 29 Part 1910.165

GENERAL NOTES

- RSS/RSSP Series strobe products are listed under UL 1971 for indoor use with a temperature range of 32°F to 120°F (0°C to 49°C) and maximum humidity of 93% (± 2%).
- "Regulated voltage range" is the newest terminology used by UL to identify the voltage range. Prior to this change, UL used the terminology "Listed voltage range."

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⚠ WARNING!

PLEASE READ THESE SPECIFICATIONS AND ASSOCIATED INSTALLATION INSTRUCTIONS CAREFULLY BEFORE USING, SPECIFYING OR APPLYING THIS PRODUCT. FAILURE TO COMPLY WITH ANY OF THE FOLLOWING INSTRUCTIONS, CAUTIONS AND WARNINGS COULD RESULT IN IMPROPER APPLICATION, INSTALLATION AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE, AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

NOTE: Due to continuous development of our products, specifications and offerings are subject to change without notice in accordance with Wheelock, Inc. standard terms and conditions.

MODEL NUMBERS OFFERED BY NOTIFIER

MODEL	WALL/CEILING MOUNT	NON-SYNC	SYNC W/ SM, DSM	STROBE CANDELA	12/24 VDC	# MODEL COLOR RED/WHITE	MOUNTING OPTIONS ***	SQUARE OR ROUND	AGENCY APPROVALS				
									UL	MEA	CSFM	FM	BFP
RSS-24MCW-FR	Wall	X	X	15/30/75/110	24	Red	B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	X	X
RSS-24MCW-FW	Wall	X	X	15/30/75/110	24	White	B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	X	X
RSS-241575W-FR	Wall	X	X	15 (75 on Axis)	24	Red	B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	X	X
RSS-121575W-FR	Wall	X	X	15 (75 on Axis)	12	Red	B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	X	X
RSS-24MCC-FR	Ceiling	X	X	15/30/75/95	24	Red	B,D,E,F,G,H,J,N,O,R,X	Square	X	*	X	*	*
RSS-24MCC-FW	Ceiling	X	X	15/30/75/95	24	White	B,D,E,F,G,H,J,N,O,R,X	Square	X	*	X	*	*
RSS-24MCCR-FW	Ceiling	X	X	15/30/75/95	24	White	B,D,E,F,G,H,J,N,O,R,X	Round	X	*	X	*	*
RSS-24MCCH-FW	Ceiling	X	X	115/177	24	White	B,D,E,F,G,H,J,N,O,R,X	Square	X	*	*	*	*
RSS-24MCCH-FR	Ceiling	X	X	115/177	24	Red	B,D,E,F,G,H,J,N,O,R,X	Square	X	*	*	*	*
RSS-24MCCHR-FW	Ceiling	X	X	115/177	24	White	B,D,E,F,G,H,J,N,O,R,X	Round	X	*	*	*	*
RSSWP-2475W-FR*	Wall	X	X	75 @ -31°F	24	Red	B,D,E,F,G,H,J,N,O,R,X	Square	X	X	X	X	*

***Refer to Notifier data sheet DN-6111 for mounting options.

Table 1: Average RMS Current*

RSS/RSSP 24VDC Models	RSS/RSS - Wall Mount					RSS - Ceiling Mount						
	241575W	24MCW				24MCC				24MCCH		
	1575cd	15cd	30cd	75cd	110cd	15cd	30cd	75cd	95cd	115cd	177cd	
16 vdc	0.101	0.062	0.102	0.192	0.265	0.068	0.112	0.211	0.292	0.300	0.420	
24 vdc	0.064	0.41	0.065	0.116	0.155	0.045	0.072	0.128	0.171	0.195	0.270	
33 vdc	0.047	0.032	0.047	0.081	0.107	0.035	0.052	0.089	0.118	0.145	0.190	
RSS/RSSP 24 VDC Models	RSS/RSSP Wall Mount 121575W	*Average RMS Current is per UL average RMS method and Average Mean Current is per UL average mean method. 12 volt models use average mean current.										
8 vdc	0.336	For rated In Rush and Peak current across the UL listed voltage range for both filtered DC and unfiltered VRMS (FWR), see installation instructions.										
12 vdc	0.179											
17.5 vdc	0.136											

SYNC MODULES/POWER SUPPLY				
MODEL NUMBER	ORDER CODE	INPUT VOLTAGE (VDC)	AVERAGE MEAN CURRENT @ 24 VDC	MOUNTING OPTIONS
SM-12/24-R	6369	24	.028	W
DSM-12/24-R	6374	24	.035	W

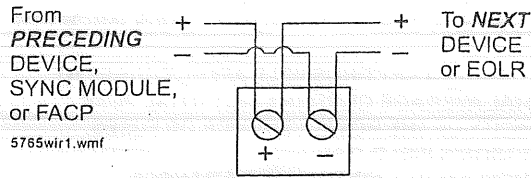
NOTES:

SM Sync Module is rated for 3.0 amperes @ 24 VDC.
DSM Sync Module is rated for 3.0 amperes per circuit. The maximum number of interconnected DSM modules is twenty (20).

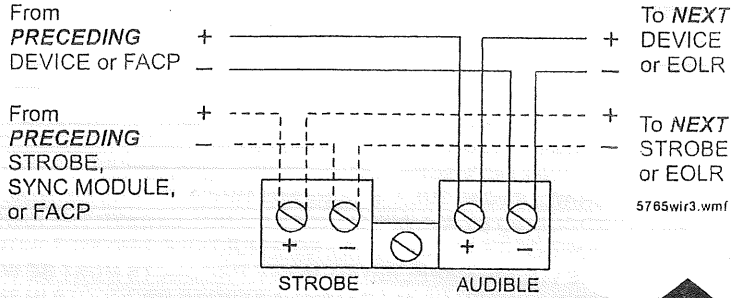
Table 2: Audibles/Speakers for RSSP Strobe Plate	
Product	Series
Multitone Appliances	AMT, MT
Horns	AH, NH, HS
Motor Bells	MB-G6/G10
Speakers	ET-1010/1080, E70, ET70
Chimes	CH70

WIRING DIAGRAMS

FIGURE 1: RSS/RSSP device.

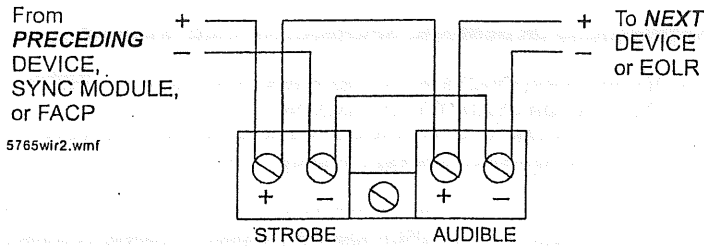


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5765wir3.wmf

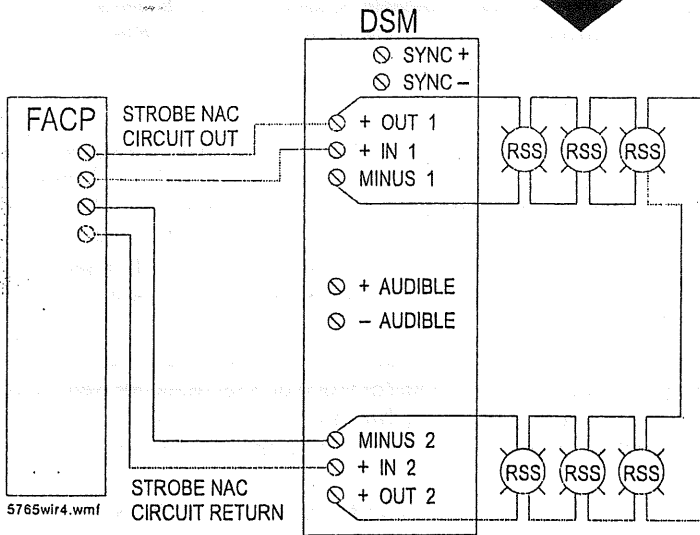
FIGURE 2: Strobe/plate assembly with audible and visible operating in unison.



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FIGURE 3: Strobe/plate assembly with audible and visible operating independently.

FIGURE 4: RSS/RSSP devices synchronized with DSM Module; single Class "A" NAC circuit.



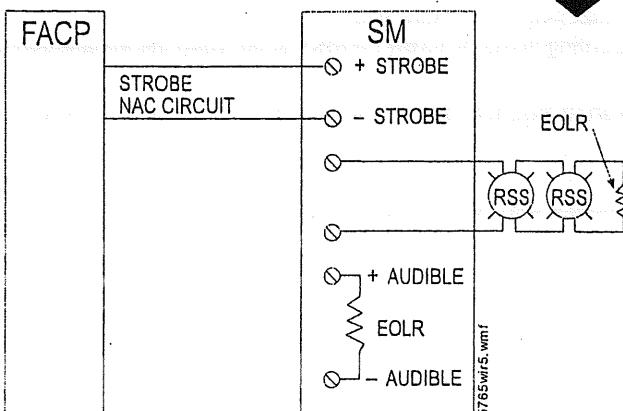
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For details on using SM or DSM Sync Modules Installation instructions #P83123 (for SM) or #P83177 (for DSM).

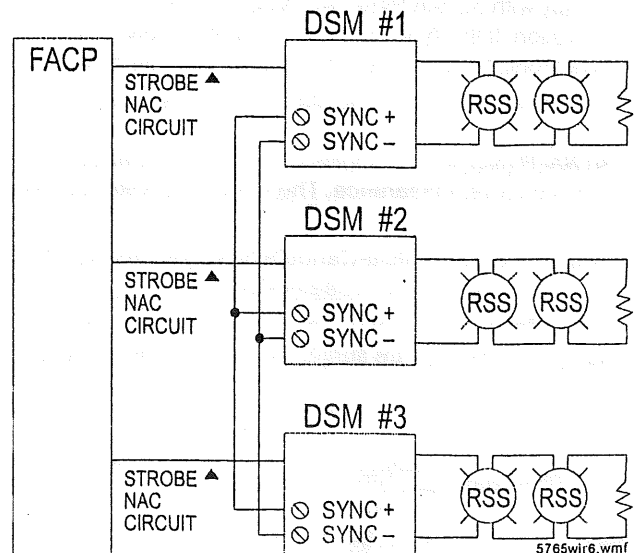
FIGURE 6: RSS/RSSP devices synchronized with multiple DSM Modules.

INTERCONNECTING WIRING SHOWN. MAXIMUM OF TWENTY (20) DSM MODULES.

FIGURE 5: RSS/RSSP devices synchronized with SM Module single Class "B" NAC circuit.



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5765wir6.wmf



WARNING! CONTACT WHEELOCK FOR THE CURRENT "INSTALLATION INSTRUCTIONS" AND "GENERAL INFORMATION" SHEET (P82380) ON THESE PRODUCTS. THESE DOCUMENTS UNDERGO PERIODIC CHANGES. IT IS IMPORTANT THAT YOU HAVE CURRENT INFORMATION ON THESE PRODUCTS. THESE MATERIALS CONTAIN IMPORTANT INFORMATION THAT SHOULD BE READ PRIOR TO SPECIFYING OR INSTALLING THESE PRODUCTS, INCLUDING:

- TOTAL CURRENT REQUIRED BY ALL APPLIANCES CONNECTED TO SYSTEM SECONDARY POWER SOURCES.
- FUSE RATINGS ON NOTIFICATION APPLIANCE CIRCUITS TO HANDLE PEAK CURRENTS FROM ALL APPLIANCES ON THOSE CIRCUITS.
- ADDING, REPLACING OR CHANGING APPLIANCES OR CHANGING CANDELA SETTINGS WILL AFFECT CURRENT DRAW. RECALCULATE CURRENT DRAW TO INSURE THAT THE TOTAL AVERAGE CURRENT AND TOTAL PEAK REQUIRED BY ALL APPLIANCES DO NOT EXCEED THE RATED CAPACITY OF THE POWER SOURCE OR FUSES.
- COMPOSITE FLASH RATE FROM MULTIPLE STROBES WITHIN A PERSON'S FIELD OF VIEW.
- THE VOLTAGE APPLIED TO THESE PRODUCTS MUST BE WITHIN THEIR "REGULATED VOLTAGE RANGE".
- INSTALLATION OF 110 CANDELA STROBE PRODUCTS IN SLEEPING AREAS.
- INSTALLATION IN OFFICE AREAS AND OTHER SPECIFICATION AND INSTALLATION ISSUES.
- USE STROBES ONLY ON CIRCUITS WITH CONTINUOUSLY APPLIED OPERATING VOLTAGE. DO NOT USE STROBES ON CODED OR INTERRUPTED CIRCUITS IN WHICH THE APPLIED VOLTAGE IS CYCLED ON AND OFF AS THE STROBES MAY NOT FLASH.
- FAILURE TO COMPLY WITH THE INSTALLATION INSTRUCTIONS OR GENERAL INFORMATION SHEETS COULD RESULT IN IMPROPER INSTALLATION, APPLICATION, AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.
- CONDUCTOR SIZE (AWG), LENGTH AND AMPACITY SHOULD BE TAKEN INTO CONSIDERATION PRIOR TO DESIGN AND INSTALLATION OF THESE PRODUCTS, PARTICULARLY IN RETROFIT INSTALLATIONS.

Wheelock products must be used within their published specifications and must be PROPERLY specified, applied, installed, operated, maintained and operationally tested in accordance with their installation instructions at the time of installation and at least twice a year or more often and in accordance with local, state and federal codes, regulations and laws. Specification, application, installation, operation, maintenance and testing must be performed by qualified personnel for proper operation in accordance with all of the latest National Fire Protection Association (NFPA), Underwriters' Laboratories (UL), National Electrical Code (NEC), Occupational Safety and Health Administration (OSHA), local, state, county, province, district, federal and other applicable building and fire standards, guidelines, regulations, laws and codes including, but not limited to, all appendices and amendments and the requirements of the local authority having jurisdiction (AHJ).

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The visual notification appliances shall be Wheelock Series RSS Strobe Appliances or approved equals. The Series RSS shall meet and be listed for UL Standard 1971 (Emergency Devices for the Hearing-Impaired) for Indoor Fire Protection Service. The strobe shall be listed for indoor use and shall meet the requirements of FCC Part 15 Class B. The strobe appliances shall produce a flash rate of one (1) flash per second over the Regulated Voltage Range and shall incorporate a Xenon flashtube enclosed in a rugged Lexan® lens. All inputs shall be compatible with standard reverse polarity supervision of circuit wiring by a Fire Alarm Control Panel (FACP). When Strobe Plates are to be installed, they shall be the Wheelock Series RSSP Strobe Plate and shall have the same electronic circuitry as the Wheelock Series RSS.

The Series RSS Strobe shall be of low current design. Where Multi-Candela appliances are specified, the strobe intensity shall have field selectable settings and shall be rated per UL Standard 1971 at 15/30/75/110cd or 135/185cd for wall mount and 15/30/75/95cd or 115/177cd for ceiling mount. The selector switch for selecting the candela shall be tamper resistant. The 1575 candela strobe shall be specified when 15 candela UL Standard 1971 Listing with 75 candela on axis is required (e.g. ADA compliance).

When synchronization is required, the appliance shall be compatible with Wheelock's SM, DSM Sync Modules or a Power Supply with built-in Patented Wheelock Sync Protocol. The strobes shall not drift out of synchronization at any time during operation. If the sync module or Power Supply fails to operate, (i.e., contacts remain closed), the strobe shall revert to a non-synchronized flash rate. The strobes shall be designed for indoor surface of flush mounting.

The Series RSS Strobe Appliances shall incorporate a Patented, Integral Strobe Mounting Plate that shall allow mounting to single-gang, double-gang, 4-inch square, 100mm European type backboxes, or the SHBB Surface Backbox. If required, an NATP (Notification Appliance Trimplate) shall be provided. An attaching cover plate shall be provided to give the Appliance and attractive appearance. The Appliance shall not have any mounting holes or screw heads visible when the installation is completed.

The Series RSSP Multi-Candela or single candela Strobe Plate shall mount to either a standard 4 inch square backbox for flush mounting, or the Wheelock SBL2 backbox for surface mounting.

All notification appliances shall be backward compatible. NOTE: Due to continuous development of our products, specifications and offerings are subject to change without notice in accordance with Wheelock, Inc. standard terms and conditions.



March 30, 2004

DN-6601 • J-134

Wheelock NS Series horn Strobes and NH Series Horns

Section: Audio/Visual Devices

GENERAL

The Wheelock Series NS Horn Strobe Appliances will satisfy virtually all requirements for indoor, wall mount applications.

The Series NH Horn and the horn portion of the Series NS include a selectable continuous horn tone or temporal pattern (Code 3) with selectable dBA settings of 90 or 95 dBA.

Strobe options include 1575cd or Wheelock's patented Multi-Candela strobe with field selectable candela settings of 15/30/75/110cd.

These versatile Horn Strobe Appliances may be synchronized when used in conjunction with the Wheelock SM or DSM Sync Modules or a Power Supply with the Wheelock patented Sync Protocol. Additionally, the audible may be silenced while maintaining strobe activation.

All models of the Series NS and NH are designed for maximum performance, reliability and cost-effectiveness while meeting or exceeding the latest requirements of NFPA 72/ANSI 117.1/UFC and UL Standards 1971 and 464 as well as meeting ADA requirements concerning photosensitive epilepsy.

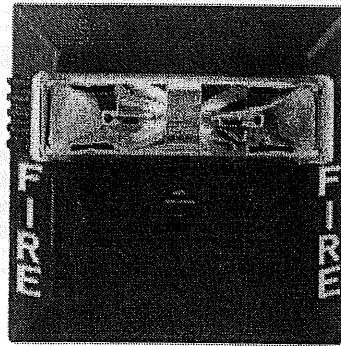
FEATURES

- Field Selectable Candela Settings 15/30/75/110cd (24 VDC Multi-Candela models) or 1575cd in 12 or 24 VDC
- Selectable Continuous Horn or Temporal (Code 3)
- 2 Selectable dBA settings of 90 and 95 dBA in both tones
- 12 and 24 VDC models with UL "Regulated Voltage" using filtered DC or unfiltered VRMS input voltage
- Patented Universal Mounting Plate
- Wall Mount
- ADA/NFPA/UFC/ANSI compliant
- Complies with OSHA 29, Part 1910.165
- NH horn is selectable 12 or 24 VDC in 1 unit
- Synchronize with Wheelock SM or DSM Sync Module or the Power Supply with built-in sync protocol
- Patent pending Universal Mounting Plate for single-gang, double-gang, 4" (10.16 cm) square, or 100 mm European backboxes, or Wheelock's SHBB shallow surface backbox.
- Fast installation with IN/OUT screw terminals using #12 to #18 AWG wires



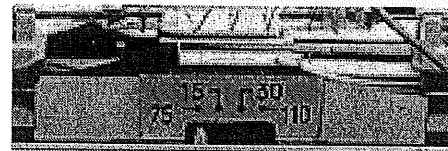
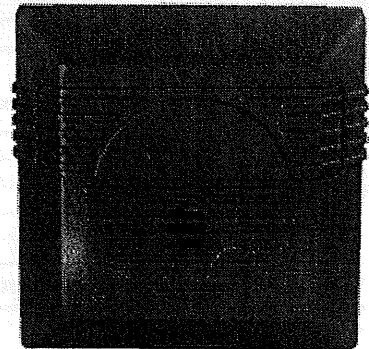
California
State Fire
Marshal
7125-0785:142

MEA
151-92-E



NS Horn Strobe

NH Horn



Multi-Candela Indicator
(bottom of Strobe Lens)

NOTIFIER® is a Honeywell company.

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 NOTIFIER. Phone: (203) 484-7161 FAX: (203) 484-7118



12 Clintonville Road, Northford, Connecticut 06472

ISO 9001
CERTIFIED
ENGINEERING & MANUFACTURING
QUALITY SYSTEMS

GENERAL NOTES

- Strobes are designed to flash at 1 flash per second minimum over their "Regulated Voltage Range". Note that NFPA-72 specifies a flash rate of 1 to 2 flashes per second and ADA Guidelines specify a flash rate of 1 to 3 flashes per second.
- All candela ratings represent minimum effective Strobe intensity based on UL Standard 1971.
- Series NS Strobe products are listed under UL Standard 1971 for indoor use with a temperature range of 32°F to 120°F (0°C to 49°C) and maximum humidity of 93% (± 2%).
- Series NH horns are listed under UL Standard 464 for audible signal appliances (Indoor use only).
- "Regulated Voltage Range" is the newest terminology used by UL to identify the voltage range. Prior to this change UL used the terminology "Listed Voltage Range".

Table 1: Ratings Per UL Standard 1971

Model	Input Voltage VDC	Regulated Voltage Range VDC/FWR	Strobe Candela (CD)
NS-24MCW	24	16.0 - 33.0	15/30/75/110
NS-241575W	24	16.0 - 33.0	15 (75 on Axis)
NS-121575W	12	8.0 - 17.5	15 (75 on Axi)

Table 2: *Average RMS Current Ratings

NS-24MCW with High (95 dBA) Setting				
Voltage	15cd	30cd	75cd	110cd
16.0 VDC	.077	.113	.195	.268
24.0 VDC	.065	.087	.134	.174
33.0 VDC	.069	.082	.117	.134
NS-24MCW with Low (90 dBA) Setting				
Voltage	15cd	30cd	75cd	110cd
16.0 VDC	.070	.106	.188	.261
24.0 VDC	.052	.072	.126	.158
33.0 VDC	.045	.060	.097	.114

Table 3: *Average RMS Current Ratings

NS-241575W		
Voltage	High (95) dBA	Low (90) dBA
16.0 VDC	.120	.116
24.0 VDC	.094	.093
33.0 VDC	.102	.078
NS-121575W		
Voltage	High (95) dBA	Low (90) dBA
8.0 VDC	.341	.324
12.0 VDC	.251	.265
17.5 VDC	.216	.188

NOTE: All CAUTIONS and WARNINGS are identified by the symbol **▲**. All warnings are printed in bold capital letters.

▲ WARNING! PLEASE READ THESE SPECIFICATIONS AND ASSOCIATED INSTALLATION INSTRUCTIONS CAREFULLY BEFORE USING, SPECIFYING OR APPLYING THIS PRODUCT. FAILURE TO COMPLY WITH ANY OF THESE INSTRUCTIONS, CAUTIONS OR WARNINGS COULD RESULT IN IMPROPER APPLICATION, INSTALLATION AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE, AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

Table 4: *Average Mean Current Ratings NH Horn 24 Volt Models

Voltage	High (95) dBA	Low (90) dBA
16.0 VDC	.019	.017
24.0 VDC	.028	.022
33.0 VDC	.039	.027

*Average RMS Current is per UL average RMS method and Average Mean Current is per UL average mean method. NH models use average mean current. For rated In Rush and Peak current across the UL listed voltage range for both filtered DC and unfiltered VRMS (FWR), see installation instructions.

Table 5: dBA Ratings for Series NS/NH Horn

Description	Volume	Reverberant dBA @ 10 ft. per UL 464		Anechoic dBA @ 10 ft.	
		12 VDC	24 VDC	12 VDC	24 VDC
Continuous Horn	High	83	87	89	95
	Low	76	81	84	90
Code 3 Horn	High	79	82	89	95
	Low	72	76	84	90

SYNC MODELS/POWER SUPPLY

MODEL NUMBER	INPUT VOLTAGE (VDC)	AVERAGE MEAN CURRENT @ 24 VDC	MOUNTING OPTIONS
SM-12/24-R	24	.028	W
DSM-12/24-R	24	.035	W

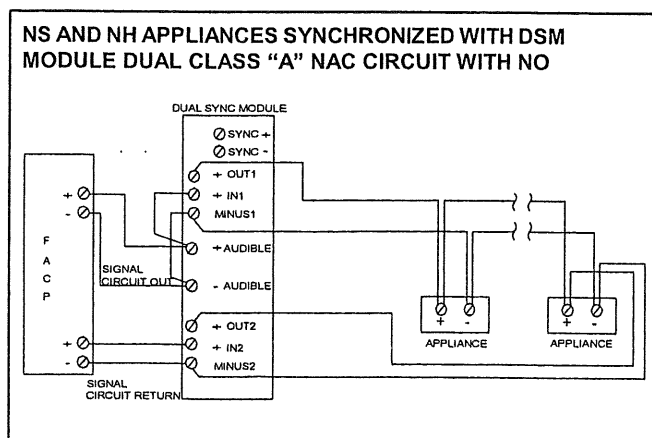
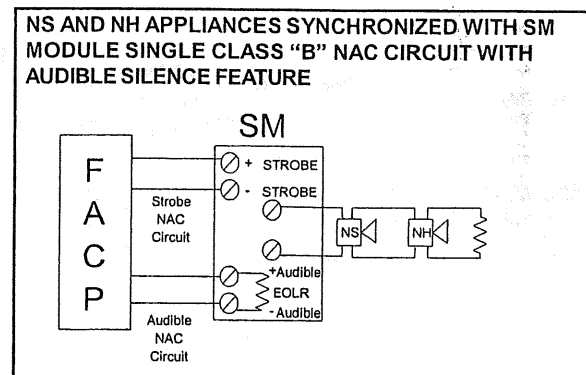
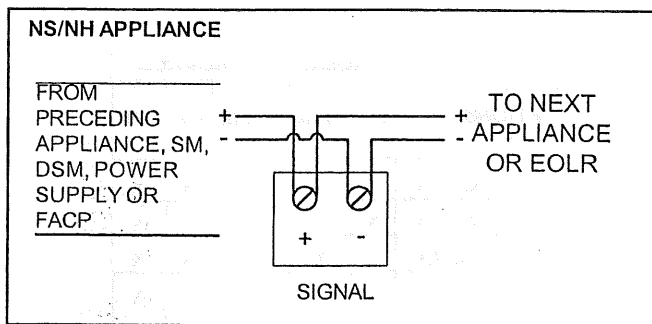
NOTES:

SM Sync Module is rated for 3.0 amperes @ 24 VDC; DSM Sync Module is rated for 3.0 amperes per circuit. The maximum number of interconnected DSM Modules is twenty (20).

⚠ WARNING: CONTACT WHEELOCK FOR THE CURRENT INSTALLATION INSTRUCTIONS (P83983) SERIES NS-24MCW, (P84234) SERIES NS-12 AND 24 VDC SINGLE CANDELA MODELS, (P83600) SERIES NH AND "GENERAL INFORMATION" SHEET (P82380) ON THESE PRODUCTS. THESE DOCUMENTS UNDERGO PERIODIC CHANGES. IT IS IMPORTANT THAT YOU HAVE CURRENT INFORMATION ON THESE PRODUCTS. THESE MATERIALS CONTAIN IMPORTANT INFORMATION THAT SHOULD BE READ PRIOR TO SPECIFYING OR INSTALLING THESE PRODUCTS, INCLUDING:

- TOTAL CURRENT REQUIRED BY ALL APPLIANCES CONNECTED TO SYSTEM SECONDARY POWER SOURCES.
 - FUSE RATINGS ON NOTIFICATION APPLIANCE CIRCUITS TO HANDLE PEAK CURRENTS FROM ALL APPLIANCES ON THOSE CIRCUITS.
 - COMPOSITE FLASH RATE FROM MULTIPLE STROBES WITHIN A PERSON'S FIELD OF VIEW.
 - ADDING, REPLACING OR CHANGING APPLIANCES OR CHANGING CANDELA SETTINGS WILL AFFECT CURRENT DRAW.
- RECALCULATE CURRENT DRAW TO INSURE THAT THE TOTAL AVERAGE CURRENT AND TOTAL PEAK REQUIRED BY ALL APPLIANCES DO NOT EXCEED THE RATED CAPACITY OF THE POWER SOURCES OR FUSES.
- THE VOLTAGE APPLIED TO THESE PRODUCTS MUST BE WITHIN THEIR "REGULATED VOLTAGE RANGE".
 - INSTALLATION OF 110 CANDELA STROBE PRODUCTS IN SLEEPING AREAS.
 - INSTALLATION IN OFFICE AREAS AND OTHER SPECIFICATION AND INSTALLATION ISSUES.
 - THESE APPLIANCES ARE NOT DESIGNED TO BE USED ON CODED SYSTEMS IN WHICH THE APPLIED VOLTAGE IS CYCLED ON AND OFF.
 - FAILURE TO COMPLY WITH THE INSTALLATION INSTRUCTIONS OR GENERAL INFORMATION SHEETS COULD RESULT IN IMPROPER INSTALLATION, APPLICATION, AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.
 - CONDUCTOR SIZE (AWG), LENGTH AND AMPACITY SHOULD BE TAKEN INTO CONSIDERATION PRIOR TO DESIGN AND INSTALLATION OF THESE PRODUCTS, PARTICULARLY IN RETROFIT INSTALLATIONS.

WIRING DIAGRAMS



NOTE: NS/NH must be set on Code 3 horn tone to achieve synchronized temporal (Code 3) tone. Refer to installation instruction (P83983, P83600 respectively).

For detail using SM or DSM Sync Module refer to Data Sheet S3000 or Installation Instructions P83123 for SM and P83177 for DSM.

ARCHITECTS AND ENGINEERS SPECIFICATIONS

The audible/visual notification appliances shall be Wheelock Series NS Horn Strobe appliances and Series NH Horn appliances or approved equals. The Series NS appliances shall meet and be listed for UL Standard 1971 (Emergency Devices for the Hearing-Impaired for Indoor Fire Protection Service). The Series NH Horn shall be UL Listed under Standard 464 (Fire Protective Signaling). The horn strobe shall be listed for indoor use and shall meet the requirements of FCC Part 15 Class B. All inputs shall be compatible with standard reverse polarity supervision of circuit wiring by the Fire Alarm Control Panel (FACP).

The audible portion of the appliance shall have a minimum of two (2) field selectable settings for dBA levels (90 and 95 dBA) and shall have a choice of continuous or temporal (Code 3) audible outputs.

The strobe portion of the appliance shall produce a flash rate of one (1) flash per second over the Regulated Voltage Range and shall incorporate a Xenon flashtube enclosed in a rugged Lexan lens. The Series NS shall be of low current design. Where wall mount, Multi-Candela appliances are specified, the strobe intensity shall have field selectable settings and shall be rated per UL Standard 1971 for 15/30/75/110 candela. The selector switch for selecting the candela setting shall be tamper resistant. The 1575 candela strobe shall be specified when 15 candela UL Standard 1971 Listing with 75 candela on-axis is required (e.g. ADA compliance).

When synchronization is required, the appliance shall be compatible with Wheelock's SM, DSM Sync Modules or a Power Supply with Wheelock's built-in Patented Sync Protocol. The strobes shall not drift out of synchronization at any time during operation. If the sync module or Power Supply fails to operate, (i.e., contacts remain closed), the strobes remain closed, the strobes shall revert to a non-synchronized flash-rate. The appliance shall also be designed so that the audible signal may be silenced while maintaining strobe activation.

The Series NS Horn Strobes and NH horn shall incorporate a Patented Universal Mounting Plate that shall allow mounting to a single-gang, double-gang, 4-inch square, 100mm European type backboxes, or the SHBB Surface Backbox. If required, an NATP (Notification Appliance Trimplate) shall be provided.

All notification appliances shall be backward compatible.

SPECIFICATION & ORDERING INFORMATION

MODEL	STROBE CANDELA	NON-SYNC	SYNC W/SM, DSM	24 VDC	12 VDC	2 WIRE	MOUNTING OPTIONS	AGENCY APPROVALS				
								UL	MEA	CSFM	FM	BFP
NS-24MCW-FR	15/30/75/110	X	X	X	-	X	B,D,E,F,G,H,J,N,O,R,X	X	X	X	X	X
NS-24MCW-FW	15/30/75/110	X	X	X	-	X	B,D,E,F,G,H,J,N,O,R,X	X	X	X	X	X
NS-24575W-FR	15 (75 on axis)	X	X	X	-	X	B,D,E,F,G,H,J,N,O,R,X	X	X	X	X	X
NS-24575W-FR	15 (75 on axis)	X	X	-	X	X	B,D,E,F,G,H,J,N,O,R,X	X	X	X	X	X
NH-12/24-R	12V 24V	X	X	X	X	X	B,D,E,F,G,H,J,N,O,R,X	X	X	X	X	X

* A power supply with the built-in patented Wheelock Sync Protocol



www.norrisinc.com

- 2257 Broadway, S. Portland, ME 04106 800-370-FIRE (3473)
- 54 Perry Rd., Bangor, ME 04401 888-312-FIRE (3473)
- 1 Bayside Rd, Greenland, NH 03840 877-577-FIRE (3473)
- PO Box 633, Middlebury, VT 05753 802-388-FIRE(3473)

INSPECTION AND TESTING FORM

DATE: _____

TIME: _____

IF APPLICABLE: State ID# _____ Sticker # _____ TQP# _____

BUILDING Mail report to this address
 Leave Report at Building

PROPERTY OWNER Mail report to this address

Building Name: Envirologic

Name of Property Owner: Peter Johnson

Address: 630 Riverside Ind. Pk

Address: 630 Riverside Industri. Pkwy

City: Portland State ME Zip _____

City: Portland State Me Zip _____

Building Contact: Peter Johnson

Owner Contact: _____

Telephone: _____

Telephone: _____

MONITORING ENTITY

Contact: Protection One
 Telephone: 874-8576
 Monitoring Account Ref. No.: PO97-1513

APPROVING AGENCY

Contact: _____
 Telephone: _____

TYPE TRANSMISSION

- Master Box Radio (Specify) _____
- Digital Com Reverse Priority _____
- IP Com Other (Specify) _____

SERVICE

- Monthly Quarterly
- Annually Semiannually
- Other (Specify) _____

Control Unit Manufacturer: Not Fier
 Initiating Circuit Styles: B Qty: 4

Model No.: SFP 400B
 NAC Styles: B Qty: 4

ALARM INITIATING DEVICES (see end for List of Alarm Initiating Devices)

Quantity of Devices Installed	Quantity of Devices Tested		All Tested OK	Deficiencies
<u>9</u>	<u>9</u>	Manual Fire Alarm Box	<input checked="" type="checkbox"/>	_____
<u>2</u>	<u>2</u>	Ion Detectors	<input type="checkbox"/>	_____
<u>3</u>	<u>3</u>	Photo Detectors	<input checked="" type="checkbox"/>	_____
<u>1</u>	<u>1</u>	Duct Detectors	<input type="checkbox"/>	_____
<u>1</u>	<u>1</u>	Heat Detectors	<input checked="" type="checkbox"/>	_____
		Waterflow Switches	<input checked="" type="checkbox"/>	_____
		Supervisory Switches	<input type="checkbox"/>	_____
		Other (Specify) <u>Tamper</u>	<input checked="" type="checkbox"/>	_____

Alarm verification feature is disabled _____ enabled _____

ALARM NOTIFICATION APPLIANCES

Quantity of Appliances Installed	Quantity of Appliances Tested		All Tested OK	Deficiencies
<u>16</u>	<u>16</u>	Bells/Chimes/Horns	<input checked="" type="checkbox"/>	_____
<u>31</u>	<u>31</u>	Strobes	<input checked="" type="checkbox"/>	_____
		Speakers	<input type="checkbox"/>	_____
		Other (Specify) _____	<input type="checkbox"/>	_____

Does not include sound volume or light intensity testing unless noted

SUPERVISORY SIGNAL-INITIATING DEVICES

Quantity of Devices Installed	Quantity of Devices Tested		All Tested OK	Deficiencies
_____	_____	Tamper switches	<input type="checkbox"/>	_____
_____	_____	Sprinkler pump	<input type="checkbox"/>	_____
_____	_____		<input type="checkbox"/>	_____

SYSTEM POWER SUPPLIES

(a) Primary (Main): Nominal Voltage 120VAC Amps 1.2 AMP
 Location (of Primary Supply Panelboard): 2ND FACP

(b) Secondary (Standby): Volatge 24 Ampere Hours 4.5 Qty of batteries 2
 Battery Condition PASSED FAILED
 Load Voltage PASSED FAILED
 On Stand-by generator Circuit YES NO

CONTROL PANEL / SYSTEM AND INSPECTION

TYPE	Visual	Functional	Deficiencies
Control Unit	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	_____
Lamps/LEDs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	_____
Fuses / switches / Accessories	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	_____
Remote Annunciators	<input type="checkbox"/>	<input type="checkbox"/>	<u>NA</u>

EMERGENCY COMMUNICATION EQUIPMENT

	Visual	Functional	Deficiencies
Phone Set Qty Tested _____	<input type="checkbox"/>	<input type="checkbox"/>	_____
Phone Jacks & call-in Qty Tested _____	<input type="checkbox"/>	<input type="checkbox"/>	_____
Off-Hook Indicator	<input type="checkbox"/>	<input type="checkbox"/>	_____
Operation Qty Tested _____	<input type="checkbox"/>	<input type="checkbox"/>	_____

COMBINATION SYSTEMS

	Visual	Device Oper.	Simulated Oper	Tested OK
Fire Extinguisher Monitoring Device/System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carbon Monoxide Detector/System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

INTERFACE EQUIPMENT

(Specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SPECIAL HAZARD SYSTEMS

(Specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Deficiencies _____

SUPERVISING

STATION MONITORING	Yes	No	Time	Deficiencies
Alarm, Trouble, Supervisory Signals	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
All Restorations	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____

NOTIFICATIONS MADE

	Prior	Completion	Who	Time
Building Management	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>All</u>	<u>/</u>
Monitoring Agency	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>All</u>	<u>/</u>
Building Occupants	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>All</u>	<u>/</u>
Other (Specify)	<input type="checkbox"/>	<input type="checkbox"/>	_____	<u>/</u>
AHJ Notified of deficiencies	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>Portland Fire</u>	<u>/</u>

System restored to normal operation: Date: _____ Time: _____

TESTING WAS PERFORMED IN ACCORDANCE WITH KNOWN APPLICABLE NFPA STANDARDS.

Name of Inspector: Robyn McCrack Signature: [Signature]

Date 11/2/09 Time: 1:08 Total number of pages including all List of Alarm Initiating Devices pages _____

Owner name or Rep: _____ Signature Andrew J. Pide

Date: 11/2/09 Time: 1:00

LIST OF ALARM INITIATING DEVICES

Use as many of this page as needed

FLOOR	LOCATION	DEVICE TYPE(a)	SENS(b)	PASS	FAIL
1	Maine Entry	Pull station	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1	Sec. Entrance	Pull station	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1	Kitchen	Heat Detector RR	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1	Above FACP	Smoke	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1	Utility Rm	Heat RR	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1	Mech. Room	Heat FT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1	"	Smoke Detector	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1	Rear Entry	Ball S.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Rear Stair	Pull S.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Front Stair	Pull S.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All	Horns + Strobes	Qty 31	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(a) Abbreviations: **SD** = Smoke Det / **PS** = Manual Pull Station / **HD** = Heat Det (enter # for **Temp** & **FT** fixed temp or **RR** Rate of Rise) / **WF** = Sprinkler Waterflow / **T** = Sprinkler Tamper / **DS** = Duct Smoke Det
 (b) Check here if a sensitivity smoke test was performed. Does not apply for intelligent smoke detectors.

OTHER NOTED DEFICIENCIES: _____

FIRE ALARM SYSTEM RECORD OF COMPLETION

To be completed by the system installation contractor at the time of system acceptance and approval.

1. PROTECTED PROPERTY INFORMATION

Name of property: Envirologic
Address: 630 Riverside Industrial Parkway
Description of property: Commercial
Occupancy type: Commercial
Name of property representative: Peter Johnson
Address: _____
Phone: _____ Fax: _____ E-mail: _____
Authority having jurisdiction over this property: Portland Fire Dept
Phone: _____ Fax: _____ E-mail: _____

2. FIRE ALARM SYSTEM INSTALLATION, SERVICE, AND TESTING INFORMATION

Installation contractor for this equipment: Seabee Electric
Address: 84 Pleasant Hill Rd. Scarborough Me.
Phone: 883 5448 Fax: _____ E-mail: _____
Service organization for this equipment: Norris Inc
Address: 2257 W. Broadway S. Portland Me.
Phone: 883-3473 Fax: _____ E-mail: _____
Location of as-built drawings: NA Location of historical test reports: _____
Location of system operation and maintenance manuals: Above Panel
A contract for test and inspection in accordance with NFPA standards is in effect as of _____
Contracted testing company: Norris Inc
Address: 2257 W. Broadway S. Port Me.
Phone: 883-3473 Fax: _____ E-mail: _____
Contract expires: _____ Contract number: _____ Frequency of routine inspections: _____

3. TYPE OF FIRE ALARM SYSTEM OR SERVICE

NFPA 72 Chapter Reference of System Type: _____
Name of organization receiving alarm signals with phone numbers (if applicable):
Alarm: Protection One Phone: 874-8576
Supervisory: NA Phone: _____
Trouble: Protection One Phone: 874 8576
Entity to which alarms are retransmitted: NA Phone: _____
Method of retransmission of alarms to that organization or location: NA

3. TYPE OF FIRE ALARM SYSTEM OR SERVICE (continued)

If Chapter 8, note the means of transmission from the protected premises to the central station:

- Digital alarm communicator McCulloh Multiplex 2-way radio 1-way radio N/A

If Chapter 9, note the type of connection: Local energy Shunt N/A

3.1 System Software

Operating system (executive) software revision level: NA

Site-specific software revision date: _____ Revision completed by: _____

4. SIGNALING LINE CIRCUITS

Characteristics of signaling line circuits connected to this system (see NFPA 72, Table 6.6.1):

Quantity: _____ Style: NA Class: _____

5. ALARM-INITIATING DEVICES AND CIRCUITS

Characteristics of initiating device circuits connected to this system (see NFPA 72, Table 6.5):

Quantity: 4 Style: 4 Class: B

5.1 Manual Initiating Devices

5.1.1 Manual Pull Stations Number of manual pull stations: 5

Type of devices: Addressable Conventional Coded Transmitter N/A

5.2 Automatic Initiating Devices

5.2.1 Area Smoke Detectors Number of smoke detectors: 2

Type of coverage: Complete area Partial area Nonrequired partial area N/A

Type of devices: Addressable Conventional Coded Transmitter N/A

Type of smoke detector sensing technology: Ionization Photoelectric

5.2.2 Duct Smoke Detectors Number of duct smoke detectors: NA

Type of coverage: _____

Type of devices: Addressable Conventional Coded Transmitter N/A

Type of smoke detector sensing technology: Ionization Photoelectric

5.2.3 Heat Detectors Number of heat detectors: 3

Type of coverage: Complete area Partial area Nonrequired partial area N/A

Type of devices: Addressable Conventional Coded Transmitter N/A

5.2.4 Sprinkler Waterflow Detectors Number of waterflow detectors: 1

Type of devices Addressable Conventional Coded Transmitter N/A

5.2.5 Alarm Verification Number of devices subject to alarm verification: All

Alarm verification on this system is: Enabled Disabled Set for _____ seconds

6. SUPERVISORY SIGNAL-INITIATING DEVICES AND CIRCUITS

6.1 Sprinkler System

Number of valve supervisory switches: NA

Type of devices: Addressable Conventional Coded Transmitter N/A

6.2 Fire Pump

Type of fire pump: Electric Diesel

Type of fire pump supervisory devices: Addressable Conventional Coded Transmitter N/A

Fire Pump Functions Supervised

Fire pump power Fire pump running Fire pump phase reversal Selector switch not in auto
 Engine or control panel trouble Low fuel

Other: _____

6.3 Engine-Driven Generator

Type of generator supervisory devices: Addressable Conventional Coded Transmitter N/A

Engine or control panel trouble Generator running Selector switch not in auto Low fuel

Other: _____

7. ANNUNCIATORS

7.1 Annunciator 1 Local Remote

Type: Addressable Directory Graphic N/A Location: _____

7.2 Annunciator 2 Local Remote

Type: Addressable Directory Graphic N/A Location: _____

7.3 Annunciator 3 Local Remote

Type: Addressable Directory Graphic N/A Location: _____

8. ALARM NOTIFICATION DEVICES AND CIRCUITS

8.1 Emergency Voice Alarm Service

Number of single voice alarm channels: _____ Number of multiple voice alarm channels: _____

Number of speakers: _____ Number of speaker zones: _____

8.2 Telephone Jacks

Number of telephone jacks installed: _____ Number of telephone handsets stored on site: _____

Type of telephone system installed: Electrically powered Sound powered N/A

8.3 Nonvoice Audible System

Characteristics of notification device circuits connected to this system (see NFPA 72, Table 6.5):

Quantity: 4 Style: Y Class: B

8. ALARM NOTIFICATION DEVICES AND CIRCUITS (continued)

8.4 Types and Quantities of Nonvoice Notification Appliances Installed

Bells: _____ With visual device: _____ Horns: 16 With visual device: 16
Chimes: _____ With visual device: 15 Bells: _____ With visual device: _____
Visual devices without audible devices: 15 Other (describe): _____

9. EMERGENCY CONTROL FUNCTIONS ACTIVATED

- Hold-open door releasing devices
- Smoke management or smoke control
- Door unlocking
- Elevator recall
- Other

10. SYSTEM POWER SUPPLY

10.1 Primary Power

Nominal voltage: 120 VAC Amps: 12 Amp
Overcurrent protection: Type Breaker Amps: 20
Location (of primary supply panelboard): In FACP
Disconnecting means location: LPI-22

10.2 Secondary Power

Location: In FACP Type: Batt Nominal voltage: 24 Current rating: 9
Number of standby batteries: 2 Amp hour rating: 4.5
Location of emergency generator: _____
Location of fuel storage: _____
Calculated capacity of secondary power to drive the system
In standby mode: _____ In alarm mode: _____

11. RECORD OF SYSTEM INSTALLATION

Fill out after all installation is complete and wiring has been checked for opens, shorts, ground faults, and improper branching, but before conducting operational acceptance tests.

The system has been installed in accordance with the following NFPA standards: (Note any or all that apply.)

- NFPA 72
- NFPA 70, National Electrical Code, Article 760
- Manufacturer's published instructions
- Other (please specify): _____

System deviations from referenced NFPA standards: _____

Signed: Andrew J. Pride Printed name: Andrew Pride Date: 11/2/09

Organization: Seabec Electric Title: Electrician Phone: 883-5448

12. RECORD OF SYSTEM OPERATION

All operational features and functions of this system were tested by or in the presence of the signer shown below, on the date shown below, and were found to be operating properly in accordance with the requirements of:

- NFPA 72
- NFPA 70, National Electrical Code, Article 760
- Manufacturer's published instructions
- Other (please specify): _____

Documentation in accordance with Inspection and Testing Form (Figure 10.6.2.3) is attached

Signed: Robyn McCoach Printed name: Robyn McCoach Date: 11/02/09

Organization: Norris Inc. Title: Tech Phone: 883-3473

13. CERTIFICATIONS AND APPROVALS

13.1 System Installation Contractor

This system as specified herein has been installed and tested according to all NFPA standards cited herein.

Signed: Andrew Pride Printed name: Andrew Pride Date: 11/2/09
Organization: Seabee Electric Title: Electrician Phone: ~~883-5448~~
883-5448

13.2 System Service Contractor

This system as specified herein has been installed and tested according to all NFPA standards cited herein.

Signed: RJ McCoach Printed name: Robyn McCoach Date: 11/02/09
Organization: Norris Inc Title: Tech Phone: 883-3473

13.3 Central Station

This system as specified herein will be monitored according to all NFPA standards cited herein.

Signed: _____ Printed name: _____ Date: _____
Organization: _____ Title: _____ Phone: _____

13.4 Property Representative

I accept this system as having been installed and tested to its specifications and all NFPA standards cited herein.

Signed: _____ Printed name: _____ Date: _____
Organization: _____ Title: _____ Phone: _____

13.5 Authority Having Jurisdiction

I have witnessed a satisfactory acceptance test of this system and find it to be installed and operating properly in accordance with its approved plans and specifications, its approved sequence of operations, and with all NFPA standards cited herein.

Signed: _____ Printed name: _____ Date: _____
Organization: _____ Title: _____ Phone: _____