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Inspections Division
Approved with Conditions

Date: 02/19/15

Allagash Brewing Company Addition Fire Alarm System Portland, ME

Prepared For:

TRT Electric
65 Washington Street
Augusta, ME 04101

Presented By:

BK Systems, Inc.
4 Cote Avenue
Goffstown, NH 03045
Telephone: (603) 647-8775
Fax: (603) 647-4806
Nik Webster

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FIRE ALARM SYSTEM
BILL OF MATERIALS

QTY.	MODEL #	DESCRIPTION	MOUNTING
EX	RPQ	Modifications to the Existing Fire Alarm Control Panel To Include:	Existing
1	HPFF8	8 Amp Booster Panel w/Class A Module	In Cabinet by Electrical Contractor
3	NOT-BG12LX	Addressable Dual Action Pull Station	Semi-Flush on Single Gang Box by Electrical Contractor
4	NP-100	Addressable Smoke Detector w/ B210LP Base	Semi Flush on 4" Octagonal Box by Electrical Contractor
4	DNR	Addressable Duct Smoke Detector Kit w/NP-100R and ST-3 Sampling Tube	Surface Mount to Duct by Electrical Contractor
10	P2R	Selectable Candela Sync. Horn/Strobe	Semi-Flush on Single Gang Box by Electrical Contractor
10	SR	Selectable Candela Sync. Strobe	Semi-Flush on Single Gang Box by Electrical Contractor

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FireWarden-100-2(E) Rev 3

Intelligent Addressable FACP

NOTIF by Honey

Addressable Fire Al

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General

The Notifier FireWarden-100-2 Rev 3 (NFW2-100) with Version 5.0 firmware is a combination FACP (Fire Alarm Control Panel) and DACT (Digital Alarm Communicator/Transmitter) all on one circuit board. This compact intelligent addressable control panel has an extensive list of powerful features.

The SLC (Signaling Line Circuit) of the FireWarden-100-2 Rev 3 operates using a Rapid Group Polling communication protocol technology that polls multiple devices simultaneously for a quicker device response time.This patented technology allows a fully-loaded panel with up to 198 devices to report an incident and activate the notification circuits in under 10 seconds. With this improved polling, devices can be wired on standard twisted, unshielded wire up to a distance of 10,000 feet.

The 's quick-remove chassis protects the electronics during construction. The backbox can be installed allowing field wiring to be pulled. When construction is completed, the electronics can be quickly installed with just two bolts.

New features for Rev 3 with Version 5.0 firmware include removable terminal blocks, improved transient protection, additional secondary ANN-BUS, and increased power for the resettable and remote sync outputs.

Available accessories include ANN-BUS devices as well as ACS LED, graphic and LCD annunciators, and reverse polarity/city box transmitter.

The integral DACT transmits system status (alarms, supervisories, troubles, AC loss, etc.) to a Central Station via the public switched telephone network. It also allows remote and local programming of the control panel using the PS-Tools Upload/Download utility. In addition, the control panel may be programmed or interrogated off-site via the public switched telephone network. Any personal computer with Windows® XP or greater, a compatible modem, and PS-Tools—the Upload/Download software kit—may serve as a Service Terminal. This allows download of the entire program or upload of the entire program, history file, walktest data, current status and system voltages. The panel can also be programmed through the FACP's keypad or via a standard PS-2 computer keyboard, which can be plugged directly into the printed circuit board. This permits easy typing of address labels and other programming information.

Version 5.0 firmware supports the following: Primary and Secondary ANN-bus devices, NP-A100, USB port, NAC circuit diagnostics, a new report has been added to the walk-test that lists untested devices, new device types added: audio telephone type code for NFV-25/50ZST, Photo Supervisory and auto-resettable Drill (non-latching).

The FireWatch Series internet monitoring modules IPDACT-2 and IPDACT-2UD permit monitoring of alarm signals over the Internet saving the monthly cost of two dedicated business telephone lines. Although not required, the secondary telephone line may be retained providing backup communication over the public switched telephone line.

NOTE: *Unless otherwise specified, the term "FireWarden-100-2" is used in this document to refer to both the FireWarden-100-2 and the FireWarden-100-2E FACPs (Fire Alarm Control Panels). Likewise, "NFW2-100" refers to NFW2-100E as well.*

Features

- Listed to UL standard 864, 9th edition.
- On-board DACT.

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- Remote site or local USB port upload/download, using PS-Tools.
- Four (4) Style Y (Class B) NAC circuits, which can be converted to four (4) Style Z (Class A) circuits with optional ZNAC-92 converter module. (Up to 6.0 amps total NAC power when using optional XRM-24B.)
- Selectable strobe synchronization for System Sensor, Wheelock, and Gentex devices.
- Remote Acknowledge, Silence, Reset and Drill via addressable monitor modules or FDU-80, N-ANN-80 or Legacy ACS Annunciators.
- ANN-BUS for connection to following optional modules (cannot be used if ACS annunciators are used):
  - N-ANN-80(-W) Remote LCD Annunciator
  - N-ANN-I/O LED Driver
  - N-ANN-S/PG Printer Module
  - N-ANN-RLY Relay Module
  - N-ANN-LED Annunciator Module
  - N-ANN-RLED Annunciator Module alarms only
  - ROME Relay Option Module Enclosure
- ACS & Terminal-mode Annunciators:
  - ACS Annunciators: Up to 32 Legacy ACM Series annunciators (ACM-16AT or ACM-32 series). Cannot be used if ANN-BUS devices are used.
  - Terminal-mode Annunciators: Up to 32 Legacy FDU-80 annunciators.
- EIA-232 printer/PC interface (variable baud rate) on main circuit board, for use with optional UL-listed printer PRN-6.
- Integral 80-character LCD display with backlighting.
- Real-time clock/calendar with automatic daylight savings control.
- Detector sensitivity test capability (NFPA 72 compliant).

- History file with 1,000-event capacity.
- Maintenance alert warns when smoke detector dust accumulation is excessive.
- Automatic device type-code verification.
- One person audible or silent walk test with walk-test log and printout.
- Point trouble identification.
- Waterflow (nonsilenceable) selection per monitor point.
- System alarm verification selection per detector point.
- PAS (Positive Alarm Sequence) and presignal delay per point (NFPA 72 compliant).

NOTE: *Only detectors may participate in PAS.*

SLC LOOP:

- SLC can be configured for NFPA Style 4, 6, or 7 operation.
- SLC supports up to 198 addressable devices per loop (99 detectors and 99 monitor, control, or relay modules).
- SLC loop maximum length 10,000 ft. (3,000 m.). *See installation manual for wire tables.*

NOTIFICATION APPLIANCE CIRCUITS (NACS):

- Four onboard NACs with additional NAC capability using output control modules (NC-100). The four Class B NACs can be converted to four Class A NACs with optional ZNAC-92 converter module.
- Silence Inhibit and Auto Silence timer options.
- Continuous, March Time, Temporal or California code for main circuit board NACs with two-stage capability.
- Selectable strobe synchronization per NAC.
- 2.5 amps maximum per each NAC circuit.

NOTE: *Maximum 24VDC system power output is shared among all NAC circuits and 24VDC special-application auxiliary power outputs. Total available output is 3.0 amps. Using the optional XRM-24B transformer increases 24VDC output to 6.0 amps.*

PROGRAMMING AND SOFTWARE:

- Autoprogram (learn mode) reduces installation time.
- Custom English labels (per point) may be manually entered or selected from an internal library file.
- Three Form-C relay outputs (two programmable).
- 99 software zones.
- Continuous fire protection during online programming at the front panel.
- Program Check automatically catches common errors not linked to any zone or input point.
- **OFFLINE PROGRAMMING:** Create the entire program in your office using a Windows®-based software package (NFW2-100 requires PS-Tools Programming software, available on www.magni-fire.com). Upload/download system programming locally to the NFW2-100 Rev 3 in less than one minute.
- USB upload/download programming with standard Male-A to Male-B cable.

User Interface

LED INDICATORS

- AC Power (green)
- Fire Alarm (red)
- Supervisory (yellow)
- Alarm Silenced (yellow)
- System Trouble (yellow)
- Maintenance/Presignal (yellow)
- Disabled (yellow)
- Battery Fault (yellow)
- Ground Fault (yellow)

KEYPAD CONTROLS

- Acknowledge/Step
- Alarm Silence
- Drill
- System Reset (lamp test)
- 16-key alpha-numeric pad (similar
- 4 cursor keys
- Enter

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Product Line Information

NFW2-100: FireWarden-100-2 Rev 3 198-point addressable Fire Alarm Control Panel, one SLC loop. Includes 80-character LCD display, single printed circuit board mounted on chassis, and cabinet. 120 VAC operation.

NFW2-100R: Same as **NFW2-100**, except in a red backbox.

NFW2-100E: Same as **NFW2-100**, except with 240 VAC operation.

4XTM Reverse Polarity Transmitter Module: Provides supervised output for local energy municipal box transmitter, alarm, and trouble.

ZNAC-92: Optional converter module which converts four (4) Style Y (Class B) NAC circuits to four (4) Style Z (Class A) circuits.

PS Tools: Programming software for Windows®-based PC computer (cable not included), available on www.firelite.com.

DP-9692B: Optional dress panel for FireWarden-100-2 Rev 3.

TR-CE-B: Optional trim Ring for semi-flush mounting.

BB-26: Battery backbox, holds up to two 26 AH batteries and CHG-75.

NFS-LBB: Battery box, houses two 55 AH batteries.

CHG-75: Battery charger for lead-acid batteries with a rating of 25 to 75 AH.

CHG-120: Remote battery charging system for lead-acid batteries with a rating of 55 to 120 AH. Requires additional NFS-LBB for mounting.

NOTE: *CHG-120 or CHG-75 required for batteries larger than 18AH.*

BAT Series: Batteries, see data sheet DN-6933.

XRM-24B(E): Optional transformer. Increases system power output to 6.0 amps. Use XRM-24BE with FireWarden-100-2E Rev 3.

PRT/PK-CABLE: Cable printer/personal computer interface cable; required for printer or for local upload/download programming and updating panel firmware.

PRN-6: UL listed compatible event printer. Uses tractor-fed paper.

IPDACT-2/2UD, IPDACT Internet Monitoring Module: Mounts in bottom of enclosure with optional mounting kit (PN IPBRKT). Connects to primary and secondary DACT telephone output ports for internet communications over customer provided ethernet internet connection. Requires compatible Teldat VisorALARM Central Station Receiver. Can use DHCP or static IP. *(See data sheet DN-60408 for more information.)*

IPBRKT: Mounting kit for IPDACT-2/2UD in common enclosure.

IPSPLT: Y-adaptor option allows connection of both panel dialer outputs to one IPDACT-2/2UD cable input.

COMPATIBLE ANNUNCIATORS

N-ANN-80(-W): LCD Annunciator is a remote LCD annunciator that mimics the information displayed on the FACP LCD display. Recommended wire type is un-shielded. (Basic model is black; order -W version for white; s*ee DN-7114.)*

N-ANN-LED: Annunciator Module provides three LEDs for each zone: Alarm, Trouble and Supervisory. Ships with red or black enclosure (see DN-60242).

N-ANN-RLED: Provides alarm (red) indicators for up to 30 input zones or addressable points. (See DN-60242).

N-ANN-RLY: Relay Module, which can be mounted inside the cabinet, provides 10 programmable Form-C relays. *(See DN-7107.)*

ROME-B: Relay Option Module Enclosure (order ROME-B for black or ROME for red). Provides one **N-ANN-RLY** Relay Module already installed. The ROME Series provides mounting space for one additional Relay Module or one addressable Multi-module. *(See Installation Sheet PN 53530.)*

N-ANN-S/PG: Serial/Parallel Printer Gateway module provides a connection for a serial or parallel printer. *(See DN-7103.)*

N-ANN-I/O: LED Driver Module provides connections to a user supplied graphic annunciator. *(See DN-7105.)*

ACM-8R: Relay module provides 8 Form-C 5.0 amp relays.

ACM Annunciator Series: LED-type fire annunciators capable of providing up to 99 software zones of annunciation. Available in increments of 16 or 32 points to meet a variety of applications.

LDM Graphic Series: Lamp Driver Module series for use with custom graphic annunciators.

FDU-80 (Liquid Crystal Display) point annunciator: 80-character, backlit LCD-type fire annunciators capable of displaying English-language text.

NOTE: *For more information on Compatible Annunciators for use with the FireWarden-100-2 Rev 3, see the following data sheets (document numbers) ACM-8R (DN-3558), ACS/ACM Series (DN-0524), LDM Series (DN-0551), FDU-80 (DN-6820).*

COMPATIBLE ADDRESSABLE DEVICES

All feature a polling LED and rotary switches for addressing.

NI-100: Addressable low-profile ionization smoke detector.

NP-100: Addressable low-profile photoelectric smoke detector.

NP-100T: Addressable low-profile photoelectric smoke detector with thermal sensor.

NP-100R: Addressable remote test capable detector for use with DNR(W) duct smoke detector housings.

NH-100: Fast-response, low-profile heat detector.

NH-100R: Fast-response, low-profile heat detector with rate-of-rise option.

NH-100H: Fixed high-temperature detector that activates at 190F/88C.

NP-A100: Addressable low-profile multi-sensor detector.

DNR: Innovair Flex low-flow non-relay duct-detector housing. Order NP-100R separately.

DNRW: Innovair Flex low-flow non-relay duct-detector housing, with NEMA-4 rating. Watertight. (Order NP-100R separately.)

NMM-100: Addressable Monitor Module for one zone of normally-open dry-contact initiating devices. Mounts in standard 4.0" (10.16 cm.) box. Includes plastic cover plate and end-of-line resistor. Module may be configured for either a Style B (Class B) or Style D (Class A) IDC.

NDM-100: Dual Monitor Module. Same as NMM-100 except it provides two Style B (Class B) only IDCs.

NMM-100P: Miniature version of NMM-100. Excludes LED and Style D option. Connects with wire pigtails. May mount in device backbox.

NZM-100: Similar to NMM-100, but may monitor up to 20 conventional two-wire detectors. Requires resettable 24 VDC power. Consult factory for compatible smoke detectors.

NC-100: Addressable Control Module for one Style Y/Z (Class B/A) zone of supervised polarized Notification Appliances. Mounts directly to a 4.0" (10.16 cm.) electrical box. Notification Appliance Circuit option requires extern fication appliances.

NC-100R: Addressable relay module sets of Form-C contacts, which oper Mounts directly to a 4.0" (10.16 cm.) b the SMB500.

NOT-BG12LX: Addressable manual p module mounted inside.

N100-ISO: Fault Isolator Module. This loop from short circuit conditions (requi ation).

SMB500: Used to mount all modules except the NMM-100P.

NMM-100-10: Ten-input monitor module. Mount one or two modules in a BB-XP cabinet (optional). Mount up to six modules on a CHS-6 chassis in a BB-25.

NZM-100-6: Six-zone interface module for compatible conventional two-wire detectors. Mount one or two modules in a BB-XP cabinet (optional). Mount up to six modules on a CHS-6 chassis in a BB-25.

NOTE: *For more information on Compatible Addressable Devices for use with the FireWarden-100-2 Rev 3, see the following data sheets (document numbers): N100-ISO (DN-6994), NP-100 series (DN-6995), NI-100 (DN-6996), NH-100 series (DN-6997), ND-100 series (DN-7006), NP-A100 (DN-6998), NMM-100/NMM-100P/ NDM-100/NZM-100 (DN-6999), NC-100/NC-100R (DN-7000), NOT-BG12LX (DN-7001), NMM-100-10 (DN-6990), and NZM-100-6 (DN-60150).*

Wiring Requirements

While shielded wire is not required, it is recommended that all SLC wiring be twisted-pair to minimize the effects of electrical interference. Wire size should be no smaller than 18 AWG (0.78 mm²) and no larger than 12 AWG (3.1 mm²). The wire size depends on the length of the SLC circuit. Refer to the panel manual for wiring details.

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SYSTEM SPECIFICATIONS

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System Capacity

- Intelligent Signalling Line Circuits 1
- Addressable device capacity 198
- Programmable software zones 99
- ACS Annunciators 32
- ANN-bus devices 16

Electrical Specifications

AC Power: FireWarden-100-2 Rev 3: 120 VAC, 60 Hz, 3.0 amps. FireWarden-100-2 Rev 3(E): 240 VAC, 5 0 Hz, 1.5 amps. Wire size: minimum 14 AWG (2.00 mm²) with 600 V insulation.

Battery charger capacity: 7 AH - 18 AH batteries. Up to two 18 Ah batteries can be housed in the FACP cabinet. Larger batteries require an external battery charger such as the CHG-75 or CHG-120, and a separate battery cabinet such as the BB-26 or NFS-LBB.

Communication Loop: Supervised and power-limited.

Notification Appliance Circuits: Each terminal block provides connections for two Style Y (Class B) for a total of four Style Y (Class B) or with an optional ZNAC-92 module converts to four Style Z (Class A) NACs. Maximum signaling current per circuit: 2.5 amps. End-of-Line Resistor: 4.7K ohm, 1/2 watt (P/N 71252 UL listed) for Style Y (Class B) NAC. Refer to panel documentation and *Notifier Device Compatibility Document* for listed compatible devices.

Two Programmable Relays and One Fixed Trouble Relay: Contact rating: 2.0 amps @ 30 VDC (resistive), 0.5 amps @ 30 VAC (resistive). Form-C relays.

Special Application Non-resettable Power (24 VDC Nominal): Jumper selectable (JP4) for conversion to resettable power output. Up to 1.0 amp total DC current available from each output. Power-limited.

Special Application Resettable Power (24 VDC nominal): Jumper selectable (JP6) for conversion to non-resettable power. Up to 1.0 amp total DC current available. Refer to the *Notifier Device Compatibility Document* for listed compatible devices.

Remote Sync Output: Remote power supply synchronization output. Nominal special application power: 24 VDC. Maximum current: 300 mA. End-of-Line Resistor: 4.7K ohm. Output linked to NAC 1 control. Supervised and power-limited.

Telephone Interface: Unless used with Teldat VISORALARM, requires dedicated business telephone number with a minimum of 5 volts DC (off-hook voltage). Obtain dedicated phone line directly from your local phone company. Do not use shared phone lines or PBX (digital) type phone line extensions.

Cabinet Specifications

Door: 19.26" (48.92 cm.) high x 16.82" (42.73 cm.) wide x 0.12" (.30 cm.) deep. **Backbox:** 19.00" (48.26 cm.) high x 16.65" (42.29 cm.) wide x 5.20" (13.34 cm.) d
B): 22.00" (55.88 cm.) high x 19.65" (49

Shipping Specifications

Weight: 26.9 lbs. (12.20 kg.) **Dimensi**
high x 22.5" (57.15 cm.) wide x 8.5" (21.

Temperature and Humidity Ranges

This system meets NFPA requirements for operation at 0 – 49°C/32 – 120°F and at a relative humidity 93% ± 2% RH (non-condensing) at 32°C ± 2°C (90°F ± 3°F). However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and its peripherals be installed in an environment with a normal room temperature of 15 – 27°C/60 – 80°F.

NFPA Standards

The FireWarden-100-2 Rev 3 complies with the following NFPA 72 Fire Alarm Systems requirements:

- **LOCAL** (Automatic, Manual, Waterflow and Sprinkler Supervisory).
- **AUXILIARY** (Automatic, Manual and Waterflow) (requires 4XTM).
- **REMOTE STATION** (Automatic, Manual, Waterflow and Sprinkler Supervisory) (Where a DACT is not accepted, the alarm, trouble and supervisory relays may be connected to UL 864 listed transmitters. For reverse polarity signaling of alarm and trouble, 4XTM is required.)
- **PROPRIETARY** (Automatic, Manual, Waterflow and Sprinkler Supervisory).
- **CENTRAL STATION** (Automatic, Manual, Waterflow and Sprinkler Supervisory).
- **OT, PSDN** (Other Technologies, Packet-switched Data Network)

Agency Listings and Approvals

The listings and approvals below apply to the basic FireWarden-100-2 Rev 3 control panel. 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:** S635
- **FM approved**
- **CSFM:** 7165-0028:0235
- **MEA:** 120-06-E, Volume 2

For ULC-listed version, see DN-60600.

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ISO 9001 CERTIFIED
ENGINEERING & MANUFACTURING QUALITY SYSTEMS

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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.

Made in the U.S. A.

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

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System Power Requirements

NFW2-100 Fire Alarm Control Panel

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Protected Premises: Allagash Brewing Company Addition Date:
Address:
City: Portland State: ME Zip:

Prepared By: BK Systems, Inc Phone: 603-647-8775
Address: 4 Cote Ave Email:
City: Goffstown State: NH Zip: 03045

AC Branch Current Requirements

3.00 AMPS @ 120 VAC

Current required by source to power the fire alarm system.

Primary Standby Load

0.00 Amps

Current load on the primary power supply during non-alarm conditions.

Primary Alarm Load

1.80 Amps

Current load on the primary power supply during alarm conditions.

Secondary Load Requirements

11.08 Amp Hours

Total Secondary Load from the calculation table below.

Current Draw		Time (hours)	Total (AH)
Secondary Standby Load 0.148 A	x	Required Standby Time 60 hours	8.89
Secondary Alarm Load 2.075 A	x	Required Alarm Time (hours) 0.167 hours	0.35
		Total Secondary Load	9.23
		Derating factor	x 1.2
		Secondary Load Requirements	**11.08** AH

Battery Selection

12 Amp Hours

Select batteries from the list below.

12 AH BAT-12120 Battery (12 volt)

● Two ● Four (two 12VDC sets in parallel)

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Battery Distribution Chart

Shows amp-hour distribution of your selections.

Comments

1. Batteries will fit in the FACP cabinet.
2. Selected battery size meets secondary load requirements.
3. The selected batteries (12AH) are within the charger range of this power supply (7-18AH).

Spare Battery Capacity	0.92	Battery Selection (AH) - Secondary Load Requirements (AH)
Secondary Standby Load	10.66	Secondary Standby Load (AH) * Derating Factor
Secondary Alarm Load	0.42	Secondary Alarm Load (AH) * Derating Factor

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Device Current Draw

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NFW2-100 Fire Alarm Control Panel

Quantity x [device current draw] = total current draw per device (in amps)

Part Number	Qty	Primary Non-Alarm	Primary Alarm	
Main Circuit Board	1	x [0.00000] = 0.00000	x [0.00000] = 0.00000	x [0.14500] = 0.14500
HPFF8 Power Supplies	1	x [0.00000] = 0.00000	x [0.00000] = 0.00000	x [0.00000] = 0.00000
NP-100	4	x [0.00030] = 0.00120	x [0.00000] = 0.00000	x [0.00030] = 0.00120
NP-100R	4	x [0.00030] = 0.00120	x [] =	x [0.00030] = 0.00120
NOT-BG12LX	3	x [0.00023] = 0.00069	x [0.00000] = 0.00000	x [0.00023] = 0.00069
Max Alarm Draw - All Addressable Devic	1	x [0.00000] = 0.00000	x [0.40000] = 0.40000	x [0.00000] = 0.00000
Total (Amperes):		**0.0031 A**	**1.8000 A**	**0.1481 A**

Part Number	Qty	Secondary Alarm
Total Primary Alarm Load - C2	1	x [1.80000] = 1.80000
Main Circuit Board	1	x [0.27500] = 0.27500
Total (Amperes):		**2.0750 A**

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VOLTAGE DROP CALCULATIONS

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Portland, Maine

Circuit 1

Amperage	X
Length of Run	X
Voltage Drop	**X**
VDC Applied	**X**

Circuit 2

Amperage	0.873
Length of Run	54
Voltage Drop	**1.03%**
VDC Applied	**20.15**

Circuit 3

Amperage	0.54
Length of Run	377
Voltage Drop	**4.46%**
VDC Applied	**19.33**

Circuit 4

Amperage	0.794
Length of Run	208
Voltage Drop	**3.62%**
VDC Applied	**19.53**

Voltage Drop Parameters:
16 VDC = Minimum Power to any Appliance
4.4 VDC = Maximum Permissible Voltage Drop in Wiring System
20.4 VDC = Reduced Battery Potential at End of Life

BAT Series Batteries

Sealed Lead-Acid or Gell Cell

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General

BAT Series Batteries feature a new part-numbering/listing system — providing an improved method of delivery for NOTIFIER-approved sealed lead-acid batteries for all your fire alarm system needs. Multiple brands of batteries are now offered under generic part numbers, reducing backorder situations and permitting us to deliver these products in a more timely fashion. NOTIFIER has approved the multiple brands listed below as possible product shipped for a given part number. Please note that any incoming orders for "PS Series" batteries will be converted to the equivalent BAT Series part numbers.

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Features

- Provide secondary power for control panels.
- Sealed and maintenance-free.
- Overcharge protected.
- Easy handling with leakproof construction.
- Ruggedly constructed, high-impact case (ABS, polystyrene, or polypropylene, depending on models).
- Long service life.
- Compact design.

Agency Listings and Approvals

The listings and approvals below apply to BAT Series Batteries. 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 Recognized Components**: files MH19884 *(B & B Battery),* MH20727 *(UPG, previously Jolt),* MH20845 *(Power-Sonic)*.

Part Number Reference

6933key1.tbl

PREVIOUS Part Number	CURRENT Part Number	BATTERY DESCRIPTION	ALTERNATES APPROVED: manufacturers and P/Ns shipped under BAT P/Ns
PS-612	*Discontinued*	N/A	N/A
PS-695	*Discontinued*	N/A.	N/A
PS-1242	**BAT-1250**	12 V, 5 AH, sealed.	BP5-12 (B&B Battery); PS-1250 (Power-Sonic); SA1250 (Jolt) to be replaced with UB1250 (UPG).
PS-1250	**BAT-1250**	12 V, 5 AH, sealed.	BP5-12 (B&B Battery); PS-1250 (Power-Sonic); SA1250 (Jolt) to be replaced with UB1250 (UPG).
PS-1270	**BAT-1270**	12 V, 7 AH, sealed.	BP7-12 (B&B Battery); PS-1270 (Power-Sonic); SA1272 (Jolt) to be replaced with UB1270 (UPG).
PS-12120	**BAT-12120**	12 V, 12 AH, sealed.	BP12-12 (B&B Battery); PS-12120 (Power-Sonic); SA12120 (Jolt) to be replaced with UB12120 (UPG).
PS-12170	**BAT-12180**	12 V, 18 AH, sealed.	PS-12180 (Power-Sonic); SA12180 (Jolt) to be replaced with UB12180 (UPG).
PS-12180	**BAT-12180**	12 V, 18 AH, sealed.	PS-12180 (Power-Sonic); SA12180 (Jolt) to be replaced with UB12180 (UPG).
PS-12250	**BAT-12260**	12 V, 26 AH, sealed.	BP26-12 (B&B Battery); PS-12260 (Power-Sonic); SA12260 (Jolt) to be replaced with UB12260 (UPG).
PS-12550	**BAT-12550**	12 V, 55 AH, sealed.	PS-12550 (Power-Sonic); XSA12550 (Jolt) to be replaced with UB12550 (UPG).
PS-12600	**BAT-12550**	12 V, 55 AH, sealed.	PS-12550 (Power-Sonic); XSA12550 (Jolt) to be replaced with UB12550 (UPG).
PS-12750	*Discontinued*	N/A	N/A
PS-121000	**BAT-121000**	12 V, 100 AH, gell cell.	PS-121000 (Power-Sonic); XSA121000A (Jolt) to be replaced with UB121000 (UPG).

POWER-SONIC

MODEL	Nominal Voltage V	Nominal Capacity @ 20 hr. rate A.H.	Discharge Current @ 20 hr. rate mA	DIMENSIONS									
				Width		Depth		Height		Height over terminal			
				in.	mm.	in.	mm.	in.	mm.	in.	mm.		
PS-1250	12	5.0	250	3.54	90	2.76	70	4.02	102	4.21	107		
PS-1270	12	7.0	325	5.94	151	2.56	65	3.70	94	3.86	98	[illegible]	[illegible]
PS-12120	12	12	600	5.94	151	3.86	98	3.70	94	3.86	98	8.8	4.0
PS-12180	12	18	875	7.13	181	2.99	76	6.57	167	6.57	167	12.8	5.8
PS-12250	12	25	1300	6.89	175	6.54	166	4.92	125	4.92	125	18.7	8.5
PS-12550	12	55	3000	10.25	260	6.60	168	8.20	208	9.45	240	39.7	18.0
PS-121000	12	100	5000	12.00	305	6.60	168	8.20	208	9.45	240	65.7	29.8

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Characteristic Discharge Curves

Effect of Temperature on Capacity

at left:
PS-121000
Shelf-Life
and Storage

at left:
PS-1210000
Discharge
Characteristics

B & B BATTERY

Model	V	Nominal Capacity (AH)				Weight		Terminal				Dimensi							
								Standard		Optional		L		W					
		20 hr	10 hr	5 hr	1 hr	kg	lbs	Type	Pos.	Type	Pos.	mm	in	mm	in	r			
BP5-12	12	5.00	4.75	4.25	3.00	1.86	4.10	T1	3	T2		90	3.54	70	2.76				
BP7-12	12	7.00	6.65	5.95	4.20	2.60	5.73	T2	5	T1		151	5.94	65	2.56				
BP12-12	12	12.00	11.40	10.20	7.20	4.03	8.89	B1	5	T1		151	5.94	98	3.86	94	3.70	98	3.86
BP26-12	12	26.00	24.70	22.10	15.60	9.40	20.73	B1	7	T2.I1	9	175	6.89	166	6.54	125	4.92	125	4.92

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Charging Procedure

6933bbch.tbl

Application	Charging method	Charging voltage at 20°C (V/cell)	Temperature compensation coefficient of charging voltage (mV/°C/cell)	Maximum charging current (CA)	Charging time 0.1 CA, 20°C (h)		Temp (°C)
					100% discharge	50% discharge	
For standby power source	Constant voltage and constant current charging (with current restriction)	2.25 ~ 2.30	– 3	0.3	24	20	0 ~ 40°C (32~ 104°F)
For cycle service		2.40 ~ 2.50	– 4	0.3	16	10	
Temperature compensation of charging voltage is not needed when using the batteries within 5°C to 35°C range.							

Final Voltage	Discharge Time: for Model BP5-12								
	5 min	10 min	15 min	30 min	1 hr	3 hr	5 hr	10 hr	20 hr
	Battery Output Power (W): for Model BP5-12								
10.80 V	180.8	133.1	106.6	63.5	36.39	14.57	10.05	5.62	2.94
10.50 V	209.2	144.2	111.5	65.9	37.48	14.87	10.20	5.70	3.00
10.20 V	222.3	149.4	115.0	67.4	38.16	15.00	10.26	5.73	3.01
9.90 V	232.3	152.9	117.6	68.3	38.61	15.10	10.29	5.75	3.02
9.60 V	240.0	156.0	120.0	69.0	39.00	15.20	10.32	5.75	3.02

6933bb05.tbl

Constant Power Discharge Characteristics at 25°C/77°F
for BP5-12

Final Voltage	Discharge Time: for Model BP7-12								
	5 min	10 min	15 min	30 min	1 hr	3 hr	5 hr	10 hr	20 hr
	Battery Output Power (W): for Model BP7-12								
10.80 V	253.1	186.3	149.3	88.8	50.95	20.40	14.07	7.86	4.11
10.50 V	292.9	201.8	156.2	92.2	52.47	20.81	14.28	7.98	4.20
10.20 V	311.2	209.1	161.0	94.3	53.42	21.00	14.36	8.02	4.22
9.90 V	325.2	214.1	164.7	95.6	54.06	21.15	14.41	8.04	4.23
9.60 V	336.0	218.4	168.0	96.6	54.60	21.27	14.45	8.04	4.23

6933bb07.tbl

Constant Power Discharge Characteristics at 25°C/77°F
for BP7-12

Final Voltage	Discharge Time: for Model BP12-12								
	5 min	10 min	15 min	30 min	1 hr	3 hr	5 hr	10 hr	20 hr
	Battery Output Power (W): for Model BP12-12								
10.80 V	433.9	319.4	256.0	152.3	87.34	34.98	24.12	13.48	7.05
10.50 V	502.2	346.0	267.7	158.1	89.96	35.68	24.48	13.68	7.20
10.20 V	533.6	358.5	276.0	161.7	91.57	36.00	24.61	13.75	7.23
9.90 V	557.5	367.1	282.4	164.0	92.67	36.25	24.70	13.79	7.25
9.60 V	576.0	374.4	288.0	165.6	93.60	36.47	24.77	13.79	7.25

6933bb12.tbl

Constant Power Discharge Characteristics at 25°C/77°F
for BP12-12

Final Voltage	Discharge Time: for Model BP26-12								
	5 min	10 min	15 min	30 min	1 hr	3 hr	5 hr	10 hr	20 hr
	Battery Output Power (W): for Model BP26-12								
10.80 V	940.0	692.0	554.6	330.0	189.23	75.79	52.25	29.20	15.26
10.50 V	1088.0	749.7	580.0	342.5	194.91	77.30	53.04	29.64	15.60
10.20 V	1156.0	776.7	598.0	350.3	198.41	78.00	53.33	29.79	15.67
9.90 V	1208.0	795.3	611.8	355.2	200.79	78.54	53.52	29.88	15.71
9.60 V	1248.0	811.2	624.0	358.8	202.80	79.01	53.68	29.88	15.71

6933bb26.tbl

Constant Power Discharge Characteristics at 25°C/77°F
for BP26-12

B & B BATTERY

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BP5-12 Battery Discharge Characteristics (25°C/77°F)

BP7-12 Battery Discharge Characteristics (25°C/77°F)

BP12-12 Battery Discharge Characteristics (25°C/77°F)

BP26-12 Battery Discharge Characteristics (25°C/77°F)

BP05-12

6933bp05.jpg

BP12-12

6933bp12.jpg

BP26-12

6933bp26.jpg

UPG BATTERY

UB1250 has the same specifications as previous Jolt SA1250; SA1272 to be replaced with UB1270 (specs/diagrams pending).

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UB1250 (previously SA1250) Diagrams

UB1250/SA1250 discharge current vs. time

6933up01.tif

UB1250/SA1250 discharge characteristics (25°C/77°F)

6933up02.tif

SA1272 Diagrams

SA1272 discharge current vs. time

6933up03.tif

SA1272 discharge characteristics (25°C/77°F)

6933up04.tif

UB1250, SA1250 Specifications

- Nominal voltage: 12 V.
- Nominal capacity (20 hr): 5.0 AH.
- Dimensions: total height 107 mm (4.21"); container height 101 mm (3.98"); length 90 mm (3.54"); width 70 mm (2.76").
- Weight: approximately 1.83 kg (4.03 lbs).
- Container material: UL94HB ABS, UL94V-0 ABS.
- Internal resistance (25°C, 77°F): ~ 32 m.
- Discharge capacity under different temperatures:
  - 40°C: ~ 102%
  - 25°C: ~ 100%
  - 0°C: ~ 85%
- Capacity 25°C/77°F:
  - 20 hr @ 0.25 A: 5.0 AH.
  - 5 hr @ 0.8 A: 4.0 AH.
  - 1 hr @ 3.0 A: 3.0 AH.
  - 1 C @ 5.0 A: 2.5 AH.
- Charging voltage (25°C, 77°F):
  - Standby use: 13.65 V ± 0.15 V.
  - Cycle use: 14.7 V ± 0.3 V.
- Maximum discharge current: 60 A (5 sec).
- Maximum charging current: 1.5 A.
- Self-discharge residual capacity (25°C, 77°F):
  - After 3 months: ~ 90%.
  - After 6 months: ~ 82%.
  - After 12 months: ~ 70%.

SA1272 Specifications

- Nominal voltage: 12 V.
- Nominal capacity (20 hr): 7.2 AH.
- Dimensions: total height 100 mm (3.94"); container height 94 mm (3.70"); length 151 mm (5.95"); width 65 mm (2.56").
- Weight: approximately 2.66 kg (5.85 lbs).
- Container material: UL94HB ABS, UL94V-0 ABS.
- Internal resistance (25°C, 77°F): ~ 22 m.
- Discharge capacity under different temperatures:
  - 40°C: ~ 102%
  - 25°C: ~ 100%
  - 0°C: ~ 85%
- Capacity 25°C/77°F:
  - 20 hr @ 0.36 A: 7.2 AH.
  - 5 hr @ 1.15 A: 5.76 AH.
  - 1 hr @ 4.32 A: 4.32 AH.
  - 1 C @ 7.2 A: 3.6 AH.
- Charging voltage (25°C, 77°F):
  - Standby use: 13.65 V ± 0.15 V.
  - Cycle use: 14.7 V ± 0.3 V.
- Maximum discharge current: 90 A (5 sec).
- Maximum charging current: 2.16 A.
- Self-discharge residual capacity (25°C, 77°F):
  - After 3 months: ~ 90%.
  - After 6 months: ~ 82%.
  - After 12 months: ~ 70%.

UPG BATTERY

Same specifications as previous Jolt models;
packaging and part numbers are the only changes.

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Date: 02/19/15

UB12120 (was SA12120) Diagrams

UB12120/SA12120 discharge current vs. time

6933up05.tif

UB12120/SA12120 discharge characteristics (25°C/77°F)

6933up06.tif

UB12120, SA12120 Specifications

- Nominal voltage: 12 V.
- Nominal capacity (20 hr): 12.0 AH.
- Dimensions: total height 100 mm (3.94"); container height 94 mm (3.70"); length 151 mm (5.95"); width 98 mm (3.86").
- Weight: approximately 4.10 kg (9.04 lbs).
- Container material: UL94HB ABS, UL94V-0 ABS.
- Internal resistance (25°C, 77°F): ~ 14 m.
- Discharge capacity under different temperatures:
  - 40°C: ~ 102%
  - 25°C: ~ 100%
  - 0°C: ~ 85%
- Capacity 25°C/77°F:
  - 20 hr @ 0.6 A: 12.0 AH.
  - 5 hr @ 1.92 A: 9.6 AH.
  - 1 hr @ 7.2 A: 7.2 AH.
  - 1 C @ 12.0 A: 6.0 AH.
- Charging voltage (25°C, 77°F):
  - Standby use: 13.65 V ± 0.15 V.
  - Cycle use: 14.7 V ± 0.3 V.

Maximum discharge current: 120 A (5 sec).

Maximum charging current: 3.6 A.

Self-discharge residual capacity (25°C, 77°F):

After 3 months: ~ 90%.
After 6 months: ~ 82%.
After 12 months: ~ 70%.

UB12180 (was SA12180)

UB12180/SA12180 discharge curre

6933up07.tif

UB12180/SA12180 discharge characteristics (25°C/77°F)

6933up08.tif

UB12180, SA12180 Specifications

- Nominal voltage: 12 V.
- Nominal capacity (20 hr): 18.0 AH.
- Dimensions: total height 167 mm (6.58"); container height 167 mm (6.58"); length 181 mm (7.13"); width 76 mm (2.29").
- Weight: approximately 6.06 kg (13.36 lbs).
- Container material: UL94HB ABS, UL94V-0 ABS.
- Internal resistance (25°C, 77°F): ~ 13 m.
- Discharge capacity under different temperatures:
  - 40°C: ~ 102%
  - 25°C: ~ 100%
  - 0°C: ~ 85%
- Capacity 25°C/77°F:
  - 20 hr @ 0.9 A: 18.0 AH.
  - 5 hr @ 2.88 A: 14.4 AH.
  - 1 hr @ 10.8 A: 10.8 AH.
  - 1 C @ 18.0 A: 9.0 AH.
- Charging voltage (25°C, 77°F):
  - Standby use: 13.65 V ± 0.15 V.
  - Cycle use: 14.7 V ± 0.3 V.
- Maximum discharge current: 300 A (5 sec).
- Maximum charging current: 5.4 A.
- Self-discharge residual capacity (25°C, 77°F):
  - After 3 months: ~ 90%.
  - After 6 months: ~ 82%.
  - After 12 months: ~ 70%.

UPG BATTERY

Same specifications as previous Jolt models;
packaging and part numbers are the only changes.

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UB12260 (was SA12260) Diagrams

UB12260/SA12260 discharge current vs. time

6933up09.tif

UB12260/SA12260 discharge characteristics (25°C/77°F)

6933up10.tif

UB12550 (was SA12550)

UB12550/SA12550 discharge curre

6933up11.tif

UB12550/SA12550 discharge characteristics (25°C/77°F)

6933up12.tif

UB12260, SA12260 Specifications

- Nominal voltage: 12 V.
- Nominal capacity (20 hr): 26.0 AH.
- Dimensions: total height 125 mm (4.92"); container height 125 mm (4.92"); length 166 mm (6.54"); width 175 mm (6.89").
- Weight: approximately 8.80 kg (19.40 lbs).
- Container material: UL94HB ABS, UL94V-0 ABS.
- Internal resistance (25°C, 77°F): ~ 10 m.
- Discharge capacity under different temperatures:
  40°C: ~ 102%
  25°C: ~ 100%
  0°C: ~ 85%
- Capacity 25°C/77°F:
  20 hr @ 1.3 A: 26.0 AH.
  5 hr @ 4.16 A: 20.8 AH.
  1 hr @ 15.6 A: 15.6 AH.
  1 C @ 26.0 A: 13.0 AH.
- Charging voltage (25°C, 77°F):
  Standby use: 13.65 V ± 0.15 V.
  Cycle use: 14.7 V ± 0.3 V.
- Maximum discharge current: 300 A (5 sec).
- Maximum charging current: 7.8 A.
- Self-discharge residual capacity (25°C, 77°F):
  After 3 months: ~ 90%.
  After 6 months: ~ 82%.
  After 12 months: ~ 70%.

UB12550, SA12550 Specifications

- Nominal voltage: 12 V.
- Nominal capacity (20 hr): 55.0 AH.
- Dimensions: total height 234.5 mm (9.23"); container height 216.5 mm (8.52"); length 229 mm (9.02"); width 138 mm (5.43").
- Weight: approximately 19.0 kg (41.8 lbs).
- Container material: UL94HB ABS, UL94V-0 ABS.
- Internal resistance (25°C, 77°F): ~ 8 m.
- Discharge capacity under different temperatures:
  40°C: ~ 102%
  25°C: ~ 100%
  0°C: ~ 85%
- Capacity 25°C/77°F:
  20 hr @ 2.75 A: 55.0 AH.
  5 hr @ 8.8 A: 44.0 AH.
  1 hr @ 33.0 A: 33.0 AH.
  1 C @ 55.0 A: 27.5 AH.
- Charging voltage (25°C, 77°F):
  Standby use: 13.65 V ± 0.15 V.
  Cycle use: 14.7 V ± 0.3 V.
- Maximum discharge current: 600 A (5 sec).
- Maximum charging current: 16.5 A.
- Self-discharge residual capacity (25°C, 77°F):
  After 3 months: ~ 90%.
  After 6 months: ~ 82%.
  After 12 months: ~ 70%.

UPG BATTERY

Same specifications as previous Jolt models;
packaging and part numbers are the only changes.

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UB121000 (XSA121000A) Diagrams

UB121000/XSA121000A discharge current vs. time

6933up13.tif

UB121000/XSA121000A discharge characteristics (25°C/77°F)

6933up14.tif

UB121000 (XSA121000A) Diagrams

- Nominal voltage: 12 V.
- Nominal capacity (20 hr): 100.0 AH.
- Dimensions: total height 221 mm (8.70"); container height 214 mm (8.43"); length 329 mm (12.95"); width 172 mm (6.77").
- Weight: approximately 34.00 kg (74.8 lbs).
- Container material: UL94HB ABS, UL94V-0 ABS.
- Internal resistance (25°C, 77°F): ~ 6.5 m.
- Discharge capacity under different temperatures:
  - 40°C: ~ 102%
  - 25°C: ~ 100%
  - 0°C: ~ 85%
- Capacity 25°C/77°F:
  - 20 hr @ 5.0 A: 100.0 AH.
  - 5 hr @ 16.0 A: 80.0 AH.
  - 1 hr @ 60.0 A: 60.0 AH.
  - 1 C @ 100.0 A: 50.0 AH.
- Charging voltage (25°C, 77°F):
  - Standby use: 13.65 V ± 0.15 V.
  - Cycle use: 14.7 V ± 0.3 V.
- Maximum discharge current: 600 A (5 sec).
- Maximum charging current: 30 A.
- Self-discharge residual capacity (25°C, 77°F):
  - After 3 months: ~ 90%.
  - After 6 months: ~ 82%.
  - After 12 months: ~ 70%.

UPG Summary Diagrams

Summary discharge characteristics

6933up15.wmf

Summary discharge current vs. time curve (25°C/77°F)

6933up16.wmf

6933ub1280.jpg

6933ub12260.jpg

UPG BATTERY

Same specifications as previous Jolt models;
packaging and part numbers are the only changes.

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Charging Procedure: UPG Battery

Application	Charging method	Charging voltage at 25°C (V/cell)	Temperature compensation coefficient of charging voltage (mV/°C/cell)	Maximum charging current (CA)	Charging time 0.1 25°C (h)		
					100% discharge	50% discharge	
For standby power source	Constant voltage and constant current charging (with current restriction)	2.25 – 2.30	– 3.3 (–1.8 mV/°F/cell)	0.3	T ≥ 24	T ≥ 20	0 – 40°C (32 – 104°F)
For cycle service		2.40 – 2.50	– 5 (–2.8 mV/°F/cell)	0.3	16 < T < 24	10 < T < 24	
Temperature compensation of charging voltage is not needed when using the batteries within 5°C to 35°C range.							

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HPFF8, HPFF8CM, HPFF8E, HPFF8CME

NAC Expander/Power Supply

HPFF8

HPFF8CM

Description

The Honeywell HPFF8(E) and HPFF8CM(E) are Notification Appliance Circuit (NAC) Expander Power Supplies designed to extend the power capabilities of existing NACs and provide power for auxiliary devices. The HPFF8 and HPFF8CM connects to any 12 or 24V Fire Alarm Control Panel (FACP) or operates stand-alone.

They provide regulated and filtered 24VDC power to four NAC's and an auxiliary output. The NAC outputs are rated at 3.0 amps each and the auxiliary output is rated at 2.0 amps (this output is continuously supplied, even in alarm, and therefore must be taken into account for power supply loading and battery size calculations). The combined output cannot exceed 8.0 amps.

The HPFF8 and HPFF8CM provide independent output circuit supervision so in the event of a NAC fault they can notify the attached FACP. In addition they have a trouble memory feature that displays past troubles (by NAC) for rapid diagnostics. Synchronization is built in for five appliance brands.

The HPFF8 and HPFF8CM have two fully independent supervised initiating circuits that can be used for synchronized strobes and coded horns. Their NAC outputs may be configured as any of the following:

- four Class B (Style Y)
- two Class A (Style Z)
- two Class B and one Class A
- four Class A with the optional HPP31076 Class A adapter

These power supplies contain an internal Battery charger capable of charging up to 26.0 amp-hour (AH) batteries.

The HPFF8 is mounted in a lockable wall cabinet that can accommodate up to two 18AH batteries. The HPFF8CM is designed to mount in Honeywell's large equipment enclosure (EQBB-D4; order separately). Up to four HPFF8CM supplies can be mounted in a D-sized EQ cabinet. Each HPFF8CM can accommodate two 12AH batteries.

One of the most challenging aspects of a retrofit application is locating the existing End-of-Line (EOL) resistor. In these applications that have EOL values other than the 3.9k normally used with the HPFF8, a single resistor matching the existing EOL can be used as a reference for all the outputs. This feature speeds installation and system checkout because the actual EOL does not need to be located and changed in the circuit. The reference resistor must be within the range of 1.9k to 25k.

NOTE: *4 separate programming resistors for the HPFF8 are provided in the hardware kit shipped with each HPFF8(E) and HPFF8CM(E). They are 3.9K (5 of these are provided, need only 1 for programming), 2.2K (1 each), 4.7K (1 each) and 10K (1 each)*

Features

- **Listed to UL Standard 864, 9th edition.**
- Four (4) power limited supervised notification application circuits (NAC's) capable of supplying +24VDC at 3.0 amp maximum each.
- NAC output circuits may be configured as any of the following:
  - Four Class B (Style Y).
  - Two Class B & one Class A.
  - Two Class A (Style Z).
  - Four Class A (requires the HPP31076 Class A adapter).
- Four field-programmable operational modes:
  - Pass-through.
  - Temporal generator.
  - Sync generator.
  - Pass-through Filtered.
- Temporal coding and sync protocols compatible with the following notification appliance brands:
  - System Sensor.
  - Faraday.
  - Amseco.
  - Cooper-Wheelock.
  - Gentex.
- Protocol pass-through for synchronizing large systems.
- Two fully independent supervised input/output control circuits.
- Redundant activation operation for survivability.
- Supports FACP's Selectable Silence ability.
- 2.0 amp auxiliary continuously supplied output.
- Eight status LEDs.
- Supervised AC input, battery voltage, auxiliary output, charger, and earth ground faults.
- Trouble indication for supervision of the following:
  - NAC circuits.
  - Auxiliary output.
  - AC input.
  - Battery charger voltage.
  - Earth ground faults.
- Optional two-hour delay for AC loss.

- Separate Trouble and AC Fail Form-C relay contacts.
- The Trouble Form-C relay contacts selectable for immediate or a 2 hour delay with AC failure.
- 26 AH battery charger capability:
  - HPFF8(E) supports two 12V 18AH batteries
  - HPFF8CM(E) supports two 12V 12AH batteries per unit.
- NAC Overload protection and indication.
- Provision for mounting single or 6 circuit addressable control or relay modules inside the enclosure. (Use mounting kit PN 90475.)

Specifications

Primary Input Power: 120VAC, 60Hz, 3.6A standard; 240VAC, 50Hz, 1.5A on units with E suffix.

Secondary Power: 24 volt operation: two 7-26 AH batteries.

Battery Charging Capacity: Up to 26 AH batteries.

HPFF8 Cabinet: Holds up to two 18AH batteries.

HPFF8CM: Holds up to two 12AH batteries.

Total Output Current: 8.0A max.

Standby Current: 0.075 A.

Auxiliary Power Output: 2.0A under all conditions.

NAC Output Ratings: 24VDC fully regulated, 3.0A max per circuit (8.0A total).

End-of-Line Resistor Range: 1.9K to 25k ohm, ½ watt. Product ships with 4 separate programming resistors. They are 3.9K (5 each - only need one for programming), 2.2K (1 each), 4.7K (1 each) and 10K (1 each)

Common Trouble: 2.0A at 30VDC.

Relay Fail Relay: 2.0A at 30VDC.

Input Control Circuits: compatible with 12 and 24 VDC control panel NACs.

Input Control Current (alarm): 5.68 mA @ 12 VDC, 12.28 mA @ 24 VDC.

Temperature Rating: 32°F to 120°F (0°C to 49°C).

Relative Humidity: 10% to 93% non-condensing.

Cabinet Dimensions:

- **HPFF8 Cabinet:** 16.65" W x 19.0" H x 5.2" D (42.29 W x 48.26 H 13.23 D cm)
- **Large equipment enclosure (EQBB-D4):** 24" W x 45.9" H x 5.15" D (60.96 W x 116.52 H x 13.1D cm)

Product Line Information

HPFF8: 8.0A fire rated power supply. Unit includes red enclosure, battery cable and installation instructions. 120VAC/60Hz.

HPFF8E: 240VAC/50Hz version of HP

HPFF8CM: 8.0A fire rated power sup Unit includes mounting hardware, bat tions for installation in large equipme 60Hz.

HPFF8CME: 240VAC/50Hz version of

HPP31076: Class A (Style Z) NAC Ad circuits from 2 to 4.

Large Equipment Enclosure: EQ ser HPFF8CM power supplies consists of a backbox (EQBB-D4) and a locking door (EQDR-D4 or FCI-VDR-D4B). Order separately.

CMF-300-6: Six-circuit supervised addressable control module activated through FACP programming on a select basis to control power supply activation or output.

CMF-300: Supervised addressable control module activated through FACP programming to activate power supply.

BAT-12120: Battery, 12 volt, 12.0 AH (two required).

BAT-1270: Battery, 12 volt, 7.0 AH (two required).

90474: Mounting kit; required to attach an addressable module onto the control circuit board (included with supply).

Listings and Approvals

Listings and approvals below apply to all. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Listed under UL 864 9th Edition.

- **UL Listed:** S24562
- **FM Approved**
- **CSFM:** 7315-1637:0102
- **NYFD:** COA#6032

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Approved with Conditions
Date: 02/19/15

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Honeywell

Secondary Power Requirement

HPFF8 Power Supply

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Inspections Division
Approved with Conditions

Date: 02/19/15

Protected Premises: Allagash Brewing Company Addition Date:
Address:
City: Portland State: ME Zip:

Prepared By: BK Systems, Inc Phone: 603-647-8775
Address: 4 Cote Ave Email:
City: Goffstown State: NH Zip: 03045

Secondary Load Requirements

6.72 Amp Hours

Total Secondary Load from the calculation table below.

Current Draw		Time (hours)	Total (AH)
Secondary Standby Load 0.075 A	x	Required Standby Time 60 hours	4.50
Secondary Alarm Load 6.606 A	x	Required Alarm Time (hours) 0.167 hours	1.10
		Total Secondary Load	5.60
		Derating factor	x 1.2
		Secondary Load Requirements	6.72 AH

Battery Selection

7 Amp Hours

Select batteries from the list below.

7.0 AH BAT-1270 Battery (12 volt)

● Two ● Four (two 12VDC sets in parallel)

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Battery Distribution Chart

Shows amp-hour distribution of your selections.

Comments

1. Batteries will fit in the FACP cabinet.
2. Selected battery size meets secondary load requirements.
3. The selected batteries (7AH) are within the charger range of this power supply (7-26AH).

Spare Battery Capacity	0.28	Battery Selection (AH) - Secondary Load Requirements (AH)
Secondary Standby Load	5.40	Secondary Standby Load (AH) * Derating Factor
Secondary Alarm Load	1.32	Secondary Alarm Load (AH) * Derating Factor

BAT Series Batteries

Sealed Lead-Acid or Gell Cell

NOTIFIER by Honeywell

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Date: 02/19/15

General

BAT Series Batteries feature a new part-numbering/listing system — providing an improved method of delivery for NOTIFIER-approved sealed lead-acid batteries for all your fire alarm system needs. Multiple brands of batteries are now offered under generic part numbers, reducing backorder situations and permitting us to deliver these products in a more timely fashion. NOTIFIER has approved the multiple brands listed below as possible product shipped for a given part number. Please note that any incoming orders for "PS Series" batteries will be converted to the equivalent BAT Series part numbers.

6933cov.jpg

Features

- Provide secondary power for control panels.
- Sealed and maintenance-free.
- Overcharge protected.
- Easy handling with leakproof construction.
- Ruggedly constructed, high-impact case (ABS, polystyrene, or polypropylene, depending on models).
- Long service life.
- Compact design.

Agency Listings and Approvals

The listings and approvals below apply to BAT Series Batteries. 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 Recognized Components**: files MH19884 *(B & B Battery),* MH20727 *(UPG, previously Jolt),* MH20845 *(Power-Sonic)*.

Part Number Reference

6933key1.tbl

PREVIOUS Part Number	CURRENT Part Number	BATTERY DESCRIPTION	ALTERNATES APPROVED: manufacturers and P/Ns shipped under BAT P/Ns
PS-612	*Discontinued*	N/A	N/A
PS-695	*Discontinued*	N/A.	N/A
PS-1242	**BAT-1250**	12 V, 5 AH, sealed.	BP5-12 (B&B Battery); PS-1250 (Power-Sonic); SA1250 (Jolt) to be replaced with UB1250 (UPG).
PS-1250	**BAT-1250**	12 V, 5 AH, sealed.	BP5-12 (B&B Battery); PS-1250 (Power-Sonic); SA1250 (Jolt) to be replaced with UB1250 (UPG).
PS-1270	**BAT-1270**	12 V, 7 AH, sealed.	BP7-12 (B&B Battery); PS-1270 (Power-Sonic); SA1272 (Jolt) to be replaced with UB1270 (UPG).
PS-12120	**BAT-12120**	12 V, 12 AH, sealed.	BP12-12 (B&B Battery); PS-12120 (Power-Sonic); SA12120 (Jolt) to be replaced with UB12120 (UPG).
PS-12170	**BAT-12180**	12 V, 18 AH, sealed.	PS-12180 (Power-Sonic); SA12180 (Jolt) to be replaced with UB12180 (UPG).
PS-12180	**BAT-12180**	12 V, 18 AH, sealed.	PS-12180 (Power-Sonic); SA12180 (Jolt) to be replaced with UB12180 (UPG).
PS-12250	**BAT-12260**	12 V, 26 AH, sealed.	BP26-12 (B&B Battery); PS-12260 (Power-Sonic); SA12260 (Jolt) to be replaced with UB12260 (UPG).
PS-12550	**BAT-12550**	12 V, 55 AH, sealed.	PS-12550 (Power-Sonic); XSA12550 (Jolt) to be replaced with UB12550 (UPG).
PS-12600	**BAT-12550**	12 V, 55 AH, sealed.	PS-12550 (Power-Sonic); XSA12550 (Jolt) to be replaced with UB12550 (UPG).
PS-12750	*Discontinued*	N/A	N/A
PS-121000	**BAT-121000**	12 V, 100 AH, gell cell.	PS-121000 (Power-Sonic); XSA121000A (Jolt) to be replaced with UB121000 (UPG).

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www.notifier.com

NOT-BG12LX

Addressable Manual Pull Station For FireWarden Series Panels

NOTIF by Honeyw

Intelligent/Ad

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 02/19/15

General

The Notifier NOT-BG12LX 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 FireWarden series intelligent control panels, and the NSP-25 panel. Because the NOT-BG12LX 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 for inspection and address setting 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/3.25 mm² wire).
- Can be surface mounted (with SB-10 or SB-I/O) or semi-flush mounted. Semi-flush mount to a standard single-gang, double-gang, or 4" (10.16 cm) square electrical box.
- Smooth dual-action design.
- Meets ADAAG controls and operating mechanisms guidelines (Section 4.1.3[13]); meets ADA requirement for 5 lb. maximum activation force.
- Highly visible.
- Attractive shape and textured finish.
- Key reset.
- Includes Braille text on station handle.
- Optional trim ring (BG12TR).
- Meets UL 38, Standard for Manually Actuated Signaling Boxes.

Construction

Shell, door, and handle are molded of durable polycarbonate material with a textured finish.

Specifications

- **Shipping Weight:** 9.6 oz. (272.15 g)
- **Normal operating voltage:** 24 VDC.
- **Maximum SLC loop voltage:** 28.0 VDC.
- **Maximum SLC loop current:** µA.
- **Temperature Range:** 32°F to 120°F (0°C to 49°C)
- **Relative Humidity:** 10% to 93% (noncondensing)
- **For use indoors in a dry location**

Installation

The NOT-BG12LX 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 NOT-BG12LX is being semi-flush mounted, then the optional trim ring (BG12TR) may be used.

The NOT-BG12LX Addressable Manual Pull Station

The BG12TR is usually needed for semi-flush mounting with 4" (10.16 cm) or double-gang boxes (not with single-gang boxes).

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 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 – 99 on NFW2-100/NFW2-100C, 1 – 50 for NFW-50/NFW-50C).

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 polycarbonate material 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 SB-I/O; 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.

Product Line Information

NOT-BG12LX: Dual-action addressable pull station. Includes key locking feature.

NOT-BG12LXA: *Canadian* Dual-action addressable pull station. Includes key locking feature.

SB-10: Surface backbox; metal.

SB-I/O: Surface backbox; plastic.

BG12TR: Optional trim ring.

17021: Keys, set of two.

Agency Listings and App

In some cases, certain modules or app
listed by certain approval agencies, or
cess. Consult factory for latest listing s

- **UL Listed:** S692 (listed for Canadia applications)
- **MEA:** 67-02-E Vol. IV
- **CSFM:** 7150-0028:0199
- **FDNY:**
- **FM** Approved

Patented: U.S. Patent No. D428,351; 6,380,846; 6,314,772; 6,632,108.

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 02/19/15

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www.notifier.com

NP-100(A), NP-100T(A), NP-100R(A)

Addressable Photoelectric Detectors for the FireWarden Series

NOTIFIER by Honey

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 02/19/15

General

The **NP-100** and **NP-100T** addressable, low-profile plug-in photoelectric detectors use a state-of-the-art photoelectric sensing chamber with communications to provide open area protection and are used exclusively with NOTIFIER's **FireWarden Series** (FireWarden-100-2 and FireWarden-50) Addressable Fire Alarm Control Panels (FACPs). The NP-100T adds thermal sensors that will alarm at a fixed temperature of 135°F (57°C). Since these detectors are addressable, they will help emergency personnel quickly locate a fire during its early stages, potentially saving precious rescue time while also reducing property damage. Two LEDs on each sensor light to provide a local, visible sensor indication. Remote LED annunciator capability is available as an optional accessory (P/N **RA100Z(A)**). The **NP-100R** is a remote test capable detector for use with DNR(W) duct smoke detector housings.

Features

SLC loop:

- Two-wire loop connection.
- Unit uses base for wiring.

Addressing:

- Addressable by device.
- Direct Decade entry of address: 01 – 99 with FireWarden-100-2, and 01 – 50 with FireWarden-50.

Architecture:

- Unique single-source, dual-chamber design to respond quickly and dependably to a broad range of fires.
- Sleek, low-profile design.
- Integral communications and built-in type identification.
- Built-in tamper-resistant feature.
- Removable cover and insect-resistant screen for simple field cleaning.

Operation:

- Withstands air velocities up to 4,000 feet-per-minute (20 m/sec.) without triggering a false alarm.
- Factory preset at 1.5% nominal sensitivity for panel alarm threshold level.
- Visible LED "blinks" when the unit is addressed (communicating with the fire panel) and latches on in alarm.

Mechanicals:

- Sealed against back pressure.
- Direct surface mounting or electrical box mounting.
- Mounts to: single-gang box, 3.5" (8.89 cm) or 4.0" (10.16 cm) octagonal box, or 4.0" (10.16 cm) square electrical box *(using a plaster ring — included).*

Other system features:

- Fully coated circuit boards and superior RF/transient protection.
- 94-V0 plastic flammability rating.
- Low standby current.

Options:

- Remote LED output connection (P/N RA100Z).

NP-100 with B710LP base

NP-100T with B710LP base

Applications

Use photoelectric detectors in life-safety applications to provide a broad range of fire-sensing capability, especially where smoldering fires are anticipated. Ionization detectors are often better than photoelectric detectors at sensing fast, flaming fires.

Construction

These detectors are constructed of off-white LEXAN®. NP-100(T) plug-in, low-profile smoke detectors are designed to commercial standards and offer an attractive appearance.

Installation

NP-100(T) plug-in detectors use a detachable mounting base to simplify installation, service and maintenance. Mount base on box which is at least 1.5 inches (3.81 cm) deep. Suitable boxes include:

- 4.0" (10.16 cm) square box with plaster ring.
- 4.0" (10.16 cm) octagonal box.
- 3.5" (8.89 cm) octagonal box.
- Single-gang box.

NOTE: *Because of the inherent supervision provided by the SLC loop,* ***end-of-line resistors*** *are not required. Wiring "T-taps" or branches are permitted for Style 4 (Class B) wiring. NP-100R mounts in a DNR(W) duct detector housing.*

Operation

Each NP-100/T/R uses one of 99 possible addresses on the FireWarden-100-2 and one of 50 possible addresses on the FireWarden-50 Signaling Line Circuit (SLC). It responds to regular polls from the system and reports its type and status.

The NP-100/T/R addressable photoelectric sensor's unique unipolar chamber responds quickly and uniformly to a broad range of smoke conditions and can withstand wind gusts up to 4,000 feet-per-minute (20 m/sec.) without sending an alarm level signal. Because of its unipolar chamber, the NP-100/T/R is approximately two times more responsive than most photoelectric sensors. This makes it a more stable detector.

Detector Sensitivity Test

Each detector can have its sensitivity tested (required per NFPA 72, Chapter 14 on *Inspection, Testing and Maintenance*) when installed/connected to a FireWarden-100-2 or FireWarden-50 addressable fire alarm control panel. The results of the sensitivity test can be printed off the FireWarden-100-2 or FireWarden-50 for record keeping.

Specification

Voltage range: 15 – 32 VDC (peak).

Standby current: 300 µA @ 24 VDC.

LED current: 6.5 mA @ 24 VDC (latched "ON").

Air velocity: 4,000 ft./min. (20 m/sec.) maximum.

Diameter: 6.1" (15.5 cm) installed in B710LP base.

Height: 2.1" (5.33 cm) installed in B710LP base.

Weight: 3.6 oz. (102 g).

Operating temperature range: ***for NP-100:*** 0°C to 49°C (32°F to 120°F); ***for NP-100T:*** 0°C to 38°C (32°F to 100°F). ***NP-100R:*** installed in a DNR(W) -20°C to 70°C (-4°F to 158°F).

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

Relative humidity: 10% – 93%, non-condensing.

Listings

Listings and approvals below apply to the NP-100 and NP-100T detectors. 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, file S1115.
- CSFM approved: file 7272-0028:231.
- MEA approved: file 243-02-E Vol. 2.
- Maryland State Fire Marshal: permit 2173.
- FM approved.

Product Line Informatio

NP-100: Adressable photoelectric d included.

NP-100A: Sames as NP-100 with ULC included).

NP-100T: Same as NP-100 but v B710LP base included.

NP-100TA: Same as NP-100T (B710LPAbase included).

NP-100R: Remote test capable addressable photoelectric detector for use with a DNR(W) duct detector housing.

B710LP: Plug-in detector base. Dimensions: 6.1" (15.5 cm). Mounting: 4.0" (10.16 cm) square box with or without plaster ring, 4.0" (10.16 cm) octagonal box, 3.5" (8.89 cm) octagonal box, or single-gang box. All mounting boxes have a minimum depth of 1.5" (3.81 cm).

B224RB: Plug-in System Sensor ***relay*** detector base. ***Diameter:*** 6.2" (15.75 cm). ***Mounting:*** 4.0" (10.16 cm) square box with or without plaster ring, 4.0" (10.16 cm) octagonal box, or 3.5" (8.89 cm) octagonal box. All mounting boxes have a minimum depth of 1.5" (3.81 cm).

B224BI: Plug-in System Sensor ***isolator*** detector base. Maximum 25 devices between isolator bases *(see DN-6994)*. ***Diameter:*** 6.2" (15.75 cm). ***Mounting:*** 4.0" (10.16 cm) square box with or without plaster ring, 4.0" (10.16 cm) octagonal box, or 3.5" (8.89 cm) octagonal box. All mounting boxes have a minimum depth of 1.5" (3.81 cm).

B200SR: Sounder base capable of producing temporal-3 or steady sound output.

ACCESSORIES:

RA100Z(A): Remote LED annunciator. 3 – 32 VDC. Mounts to a U.S. single-gang electrical box. *For use with B501 and B710LP bases only.*

SMK400E: Surface mounting kit provides for entry of surface wiring conduit. *For use with B501 base only.*

RMK400: Recessed mounting kit. *For use with B501 base only.*

M02-04-00: Test magnet.

M02-09-00: Test magnet with telescoping handle.

XR2B: Detector removal tool. Allows installation and/or removal of detector heads from bases in high ceiling applications.

XP-4: Extension pole for XR2B. Comes in three 5-foot (1.524 m) sections.

T55-127-010: Detector removal tool without pole.

BCK-200B: Black detector covers, box of 10 .

WCK-200B: White detector covers, box of 10 .

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www.notifier.com

InnovairFlex

Intelligent Non-Relay Photoelectric Duct Smoke Detector

NOTIF by Honeywell

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 02/19/15

General

The Notifier InnovairFlex DNR intelligent non-relay photoelectric duct smoke detector and DNRW watertight non-relay photoelectric duct smoke detector feature a pivoting housing that fits both square and rectangular footprints capable of mounting to a round or rectangular duct.

DNRW duct smoke detector, with its NEMA-4 rating, is listed as a watertight, UV resistant enclosure providing protection against falling dirt, rain, and windblown dust, splashing and hose directed water, allowing operators to use the detector in the most extreme environments.

These units sense smoke in the most challenging conditions, operating in airflow speeds of 100 to 4,000 feet per minute, temperatures of -4 degrees F to 158 degrees F, and a humidity range of 0 to 95 percent (non-condensing.)

An improved cover design isolates the sensor head, which allows for ease of maintenance. A cover tamper feature indicates a trouble signal for a removed or improperly installed sensor cover. The Notifier InnovairFlex housing provides a 3/4-inch conduit knockout and ample space to facilitate easy wiring and mounting of a relay module.

The Notifier InnovairFlex duct smoke detector can be customized to meet local codes and specifications without additional wiring. The new InnovairFlex product line is compatible with all previous Innovair models, including remote test accessories.

Features

- Photoelectric, integrated low-flow technology
- Air velocity rating from 100 ft/min to 4,000 ft/min (0.5 m/s to 20.32 m/s)
- Versatile mounting options: square or rectangular configuration
- Broad ranges for operating temperature (-4F to 158F) and humidity (0% to 95% non-condensing)
- Patented sampling tube installs from front or back of the detector with no tools required
- Cover tamper signal
- Increased wiring space with a newly added 3/4" conduit knockout
- Available space within housing to accommodate mounting of a relay module
- Easily accessible code wheels on sensor head (sold separately)
- Clear cover for convenient visual inspection
- Remote testing capability
- Requires com line power only
- Accommodates the installation of an addressable relay module, sold separately, (FRM-1 or NC-100R) for applications requiring a Form-C relay

Specifications

Size: (Rectangle) 14.38 in (37 cm) Length; 5 in (12.7 cm) Width, 2.5 in (6.6 cm) Depth

Size: (Square) 7.75 in (19.7 cm) Length; 9 in (22.9 cm) Width; 2.5 in (6.35 cm) Depth

Weight: 1.6 lb (0.73 kg)

Operating Temperature Range: -4 degrees F to 158 degrees F (-20 degrees C to 70 degrees C)

Storage Temperature Range: -22 degrees F to 158 degrees F (-30 degrees C to 70 degrees C)

Operating Humidity Range: 0% to 95% relative humidity (non-condensing)

Air Duct Velocity: 100 to 4,000 ft/min (0.5 to 20.32 m/s)

Accessories

Notifier provides system flexibility with a variety of accessories, including two remote test stations and different means of visible and audible system annunciation. As with our duct smoke detectors, all duct smoke detectors accessories are UL listed.

DNR(W)s with a date code of 0013 or higher do not require external 24VDC for remote test applications when used with a remote-test-capable detector.

ACCESSORY CURRENT LOADS AT 24 VDC

Device	Standby	Alarm
RA100Z	0mA	12 mA Max
RTS151/ RTS151KEY	0mA	12mA Max

Agency Listings and Approvals

Consult product manual for lists of compatible UL-Listed devices. 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
- ULC Listed: S911
- CFSM Listed: 3242-1653:209

Product Line Information

NOTE: *"A or "CDN" suffix indicates ULC listed model.*

DNR(A): Intelligent non-relay photoelectric low flow smoke detector housing. Requires photoelectric smoke detector (sold separately).

DNRW: Watertight intelligent non-relay photoelectric low flow duct smoke detector housing. Requires photoelectric smoke detector (sold separately). NEMA-4.

FSP-851: Addressable low-profile photoelectric smoke detector.

FSP-851R: Remote test capable addressable low-profile photoelectric smoke detector.

NP-100: Addressable low-profile photoelectric smoke detector for FireWarden series panels.

NP-100R: Remote test capable addressable low-profile photoelectric smoke detector for FireWarden series panels.

DCOIL: Remote test coil. Required for older DNR(W) duct detector housing.

DST1(A): Metal sampling tube duct width up to 1 ft (0.3m)

DST1.5(A): Metal sampling tube duct widths up to 1 ft to 2 ft (0.3 to 0.6 m)

DST3(A): Metal sampling tube duct widths up to 2 ft to 4 ft (0.6 to 1.2 m)

DST5(A): Metal sampling tube duct widths up to 4 ft to 8 ft (1.2 to 2.4 m)

DST10(A): Metal sampling tube duct widths up to 8 ft to 12 ft (2.4 to 3.7 m)

DH400OE-1: Weatherproof enclosure

ETX: Metal exhaust tube duct, width 1 ft (0.3 m)

M02-04-00: Test magnet

P48-21-00: End cap for metal sampling tubes

RA100Z(A): Remote annunciator alarm LED

RTS151(A): Remote test station

RTS151KEY(A): Remote test station with key lock

Important Note

- DNRW duct detector housings with a date code of 0013 or higher do not require a DCOIL or auxiliary 24 VDC for remote test applications when used with a remote test capable detector.
- DNRW duct detector housings with a date code of 0012 or earlier require a DCOIL and auxiliary 24 VDC power for remote test applications.

RESURGAM CITY OF PORTLAND, MAINE

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 02/19/15

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ISO 9001 CERTIFIED
ENGINEERING & MANUFACTURING QUALITY 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.

Made in the U.S. A.

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

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Selectable Output Horns, Strobes, and Horn/Strobes

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

Features

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

Agency Listings

SIGNALING UL LISTED
S4011
S5512
S3593

FM APPROVED
3023572

MEA approved
MEA452-05-E

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

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

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

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

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

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

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SpectrAlert Advance Specifications

Architect/Engineer Specifications

General

SpectrAlert Advance horns, strobes and horn/strobes shall mount to a standard 4 × 4 × 1½-inch back box, 4-inch octagon back box box. Two-wire products shall also mount to a single-gang 2 × 4 × 1⅞-inch back box. A universal mounting plate shall be used for m products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance produc Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nor used with the Sync•Circuit Module, 12-volt rated notification appliance circuit outputs shall operate between nine and 17.5 volts; 24 appliance circuit outputs shall operate between 17 and 33 volts. Indoor SpectrAlert Advance products shall operate between 32 and 120 degrees Fahrenheit from a regulated DC, or full-wave rectified, unfiltered power supply. Strobes and horn/strobes shall have field-selectable candela settings including 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, 185.

Strobe

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

Horn/Strobe Combination

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

Outdoor Products

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

Synchronization Module

The module shall be a System Sensor Sync•Circuit model MDL listed to UL 464 and shall be approved for fire protective service. The module shall synchronize SpectrAlert strobes at 1Hz and horns at temporal three. Also, while operating the strobes, the module shall silence the horns on horn/strobe models over a single pair of wires. The module shall mount to a 4 11/16 × 4 11/16 × 2⅛-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

Physical/Electrical Specifications

Standard Operating Temperature	32°F to 120°F (0°C to 49°C)
K Series Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Humidity Range	10 to 93% non-condensing (indoor products)
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12DC/FWR or regulated 24DC/FWR[1]
Operating Voltage Range[2]	8 to 17.5 V (12V nominal) or 16 to 33 V (24 nominal)
Input terminal wire gauge	12 to 18 AWG
Ceiling mount dimensions (including lens)	6.8″ diameter × 2.5″ high (173 mm diameter × 64 mm high)
Wall mount dimensions (including lens)	5.6″L × 4.7″W × 2.5″D (142 mm L × 119 mm W × 64 mm D)
Horn dimensions	5.6″L × 4.7″W × 1.3″D (142 mm L × 119 mm W × 33 mm D)
Wall-mount back box skirt dimensions (BBS-2, BBSW-2)	5.9″L × 5.0″W × 2.2″D (151 mm L × 128 mm W × 56 mm D)
Ceiling-mount back box skirt dimensions (BBSC-2, BBSCW-2)	7.1″ diameter × 2.25″ high (180 mm diameter × 57 mm high)
Wall-mount weatherproof back box dimensions (SA-WBB)	5.7″L × 5.1″W × 2.0″D (145 mm L × 130 mm W × 51 mm D)
Ceiling-mount weatherproof back box dimensions (SA-WBBC)	7.1″ diameter × 2.0″ high (180 mm diameter × 51 mm high)
Wall-mount trim ring dimensions (TR-HS, TRW-HS)	5.7″L × 4.812″W × 0.35″D (146 mm L × 122 W mm × 9 D mm)
Ceiling-mount trim ring dimensions (TRC-HS, TRCW-HS)	6.9″ diameter × 0.35 high (176 mm diameter × 9 mm high)

Notes:

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

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Inspections Division
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Date: 02/19/15

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

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

UL Max. Horn Current Draw (mA RMS)

		8–17.5 Volt			
Sound Pattern	dB	DC	F		
Temporal	High	57	5		
Temporal	Medium	44	4		
Temporal	Low	38	4		
Non-temporal	High	57	56	69	75
Non-temporal	Medium	42	50	60	69
Non-temporal	Low	41	44	50	50
Coded	High	57	55	69	75
Coded	Medium	44	51	56	69
Coded	Low	40	46	52	50

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

	8–17.5 Volts		16–33 Volts						
DC Input	15	15/75	15	15/75	30	75	95	110	115
Temporal High	137	147	79	90	107	176	194	212	218
Temporal Medium	132	144	69	80	97	157	182	201	210
Temporal Low	132	143	66	77	93	154	179	198	207
Non-temporal High	141	152	91	100	116	176	201	221	229
Non-temporal Medium	133	145	75	85	102	163	187	207	216
Non-temporal Low	131	144	68	79	96	156	182	201	210
FWR Input									
Temporal High	136	155	88	97	112	168	190	210	218
Temporal Medium	129	152	78	88	103	160	184	202	206
Temporal Low	129	151	76	86	101	160	184	194	201
Non-temporal High	142	161	103	112	126	181	203	221	229
Non-temporal Medium	134	155	85	95	110	166	189	208	216
Non-temporal Low	132	154	80	90	105	161	184	202	211

UL Max. Current Draw (mA RMS), 2-wire Horn/Strobe, High Candela Range (135–185 cd)

	16–33 Volts					16–33 Volts			
DC Input	135	150	177	185	FWR Input	135	150	177	185
Temporal High	245	259	290	297	Temporal High	215	231	258	265
Temporal Medium	235	253	288	297	Temporal Medium	209	224	250	258
Temporal Low	232	251	282	292	Temporal Low	207	221	248	256
Non-temporal High	255	270	303	309	Non-temporal High	233	248	275	281
Non-temporal Medium	242	259	293	299	Non-temporal Medium	219	232	262	267
Non-temporal Low	238	254	291	295	Non-temporal Low	214	229	256	262

Candela Derating

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

Strobe Output (cd)

Listed Candela	Candela rating at –40°F
15	Do not use below 32°F
15/75	
30	
75	44
95	70
110	110
115	115
135	135
150	150
177	177
185	185

Horn Tones and Sound Output Data

Horn and Horn/Strobe Output (dBA)

			8–17.5 Volts		16–33 Volts		24 Volt Nominal			
							Reverberant		Anechoic	
Switch Position	Sound Pattern	dB	DC	FWR	DC	FWR	DC	FWR	DC	FWR
1	Temporal	High	78	78	84	84	88	88	99	98
2	Temporal	Medium	74	74	80	80	86	86	96	96
3	Temporal	Low	71	73	76	76	83	80	94	89
4	Non-temporal	High	82	82	88	88	93	92	100	100
5	Non-temporal	Medium	78	78	85	85	90	90	98	98
6	Non-temporal	Low	75	75	81	81	88	84	96	92
7†	Coded	High	82	82	88	88	93	92	101	101
8†	Coded	Medium	78	78	85	85	90	90	97	98
9†	Coded	Low	75	75	81	81	88	85	96	92

†Settings 7, 8, and 9 are not available on 2-wire horn/strobe.

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SpectrAlert Advance Dimensions

Wall-mount horn/strobes

Ceiling-mount horn/strobes

Wall back box skirt

Ceiling back box skirt

Wall weatherproof back box

Ceiling weatherproof back box

SpectrAlert Advance Ordering Information

Model	Description
Wall Horn/Strobes	
P2R*†	2-wire Horn/Strobe, Standard cd‡, Red
P2RH*	2-wire Horn/Strobe, High cd, Red
P2RK*¤	2-wire Horn/Strobe, Standard cd, Red, Outdoor
P2RHK¤	2-wire Horn/Strobe, High cd, Red, Outdoor
P2W*	2-wire Horn/Strobe, Standard cd, White
P2WH*	2-wire Horn/Strobe, High cd, White
P4R*	4-wire Horn/Strobe, Standard cd, Red
P4RH*	4-wire Horn/Strobe, High cd, Red
P4RK¤	4-wire Horn/Strobe, Standard cd, Red, Outdoor
P4RHK¤	4-wire Horn/Strobe, High cd, Red, Outdoor
P4W*	4-wire Horn/Strobe, Standard cd, White
P4WH*	4-wire Horn/Strobe, High cd, White
Wall Strobes	
SR*†	Strobe, Standard cd, Red
SRH*†	Strobe, High cd, Red
SRK¤	Strobe, Standard cd, Red, Outdoor
SRHK	Strobe, High cd, Red, Outdoor
SW*	Strobe, Standard cd, White
SWH*	Strobe, High cd, White
Ceiling Horn/Strobes	
PC2R*	2-wire Horn/Strobe, Standard cd, Red
PC2RH*	2-wire Horn/Strobe, High cd, Red
PC2RK¤	2-wire Horn/Strobe, Standard cd, Red, Outdoor
PC2RHK¤	2-wire Horn/Strobe, High cd, Red, Outdoor
PC2W*†	2-wire Horn/Strobe, Standard cd, White
PC2WH*†	2-wire Horn/Strobe, High cd, White
PC4R	4-wire Horn/Strobe, Standard cd, Red
PC4RH	4-wire Horn/Strobe, High cd, Red
PC4RK	4-wire Horn/Strobe, Standard cd, Red, Outdoor
PC4RHK¤	4-wire Horn/Strobe, High cd, Red, Outdoor

Model	Description
Ceiling Horn/Strobes (cont'd.)	
PC4W	4-wire Horn/Strobe, Standard cd, White
PC4WH	4-wire Horn/Strobe, High cd, White
Ceiling Strobes	
SCR*	Strobe, Standard cd, Red
SCRH*	Strobe, High cd, Red
SCRK¤	Strobe, Standard cd, Red, Outdoor
SCRHK¤	Strobe, High cd, Red, Outdoor
SCW*†	Strobe, Standard cd, White
SCWH*†	Strobe, High cd, White
Horns	
HR	Horn, Red
HRK¤	Horn, Red, Outdoor
HW	Horn, White
Accessories	
BBS-2	Back Box Skirt, Wall, Red
BBSW-2	Back Box Skirt, Wall, White
BBSC-2	Back Box Skirt, Ceiling, Red
BBSCW-2	Back Box Skirt, Ceiling, White
TR-HS	Trim Ring, Wall, Red
TRW-HS	Trim Ring, Wall White
TRC-HS	Trim Ring, Ceiling, Red
TRCW-HS	Trim Ring, Ceiling, White

Notes:

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

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

‡ "Standard cd," refers to strobes that include 15, 15/75, 30, 75, 95, 110, and 115 candela settings. "High cd," refers to strobes that include 135, 150, 177, and 185 candela settings.

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

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

SYSTEM SENSOR®

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

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A05-0395-005 • 8/08 • #2018

FIRST FLOOR PLAN

SCALE: 3/32" = 1'-0"

SECOND FLOOR PLAN

SCALE: 3/32" = 1'-0"

ADDRESSABLE DUCT SMOKE DETECTOR
NOTIFIER #DNR

REMOTE TEST STATION
NOTIFIER #RTS-151/RTS-151KEY

INTERCONNECTION WIRING DIAGRAM FOR DNR ADDRESSABLE DUCT SMOKE DETECTOR WITH RTS-151/RTS-151KEY REMOTE TEST STATION

CLASS A WIRING PER NFPA 72 2010 EDITION:

23.4.2.2* ALL STYLES OF CLASS A AND CLASS X CIRCUITS USING PHYSICAL CONDUCTORS
(E.G., METALLIC, OPTICAL FIBER) SHALL BE INSTALLED SUCH THAT THE OUTGOING AND RETURN CONDUCTORS, EXITING FROM AND RETURNING TO THE CONTROL UNIT, RESPECTIVELY, ARE ROUTED SEPARATELY. THE OUTGOING AND RETURN (REDUNDANT) CIRCUIT CONDUCTORS SHALL NOT BE RUN IN THE SAME CABLE ASSEMBLY (I.E., MULTI-CONDUCTOR CABLE), ENCLOSURE, OR RACEWAY ONLY UNDER THE FOLLOWING CONDITIONS:
(1) FOR A DISTANCE NOT TO EXCEED 3 M (10 FT) WHERE THE OUTGOING AND RETURN CONDUCTORS ENTER OR EXIT THE INITIATING DEVICE, NOTIFICATION APPLIANCE, OR CONTROL UNIT ENCLOSURES
(2) SINGLE CONDUIT/RACEWAY DROPS TO INDIVIDUAL DEVICES OR APPLIANCES
(3) SINGLE CONDUIT/RACEWAY DROPS TO MULTIPLE DEVICES OR APPLIANCES
INSTALLED WITHIN A SINGLE ROOM NOT EXCEEDING 92.9 M^2 (1000 FT2) IN AREA.

A.23.4.2.2
A GOAL OF 23.4.2.2 IS TO PROVIDE ADEQUATE SEPARATION BETWEEN THE OUTGOING AND RETURN CABLES. THIS SEPARATION IS REQUIRED TO HELP ENSURE PROTECTION OF THE CABLES FROM PHYSICAL DAMAGE. THE RECOMMENDED MINIMUM SEPARATION TO PREVENT PHYSICAL DAMAGE IS 12 IN. (300MM) WHERE THE CABLE IS INSTALLED VERTICALLY AND 48 IN. (1.22M) WHERE THE CABLE IS INSTALLED HORIZONTALLY.

TYPICAL FIRE ALARM SYSTEM DEVICE MOUNTING HEIGHTS

FIRE ALARM SYSTEM RISER DIAGRAM

FIRE ALARM NOTES:

1. 24VDC STROBE AND HORN/STROBE CIRCUITS ARE INDICATED ON RISER DIAGRAM AND SYSTEM DESIGN DRAWINGS BY SUB-SCRIPT C-1, 2, 3, ETC.; PLEASE ENSURE THAT CIRCUITS ARE INSTALLED PER THESE DIRECTIONS. REFER TO RISER AND SYSTEM LAYOUT DRAWINGS FOR LOCATION OF DEVICES.
2. THE SIGNAL CIRCUITS ARE TO BE WIRED AND INSTALLED WITH NO DEVIATION TO THE FIRE ALARM SYSTEM RISER DIAGRAM AND LAYOUT DRAWINGS DUE TO CIRCUIT AMPERAGE RESTRICTIONS WITHOUT FIRST DISCUSSING WITH AND OBTAINING APPROVAL FROM BK SYSTEMS, INC.
3. THE LOCATIONS OF INTERIOR AND EXTERIOR AUDIO/VISUAL DEVICES SHOWN ON THE DRAWINGS HAVE BEEN LOCATED IN ACCORDANCE WITH NFPA 72. UNDER NO CIRCUMSTANCES SHALL THE ELECTRICAL CONTRACTOR CHANGE THE LOCATIONS OF ANY OF THESE DEVICES WITHOUT FIRST DISCUSSING WITH AND OBTAINING APPROVAL FROM BK SYSTEMS, INC. IF THE ELECTRICAL CONTRACTOR INSTALLS ANY OF THESE DEVICES IN LOCATIONS OTHER THAN AS SHOWN ON THE CONTRACT DOCUMENTS, THE ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH RELOCATING, PATCHING AND PAINTING WHERE DEVICES HAD BEEN IMPROPERLY INSTALLED.
4. THE END-OF-LINE DEVICES MUST BE LOCATED IN A COMMON AREA ONLY.
5. NO "T" TAPPING ALLOWED ON ANY CIRCUITS.
6. NO WIRING OR CONDUITS TO ENTER OR EXIT FROM TOP LEFT CORNER OF THE FIRE ALARM CONTROL PANEL DUE TO LOCATIONS OF POWER SUPPLIES. NO WIRING OR CONDUITS TO ENTER OR EXIT THROUGH THE BOTTOM OF THE FIRE ALARM CONTROL PANEL EXCEPT FOR BATTERY BOX CONNECTIONS. ALL CONDUITS THAT ENTER THE CONTROL PANEL SHALL BE NO LARGER THAN ONE (1) INCH.
7. ALL SMOKE AND HEAT DETECTORS SHALL BE LOCATED A MINIMUM OF 3'-0" AWAY FROM ALL SUPPLY AIR DIFFUSERS.

ANTICIPATED AMBIENT SOUND LEVELS	
BUISINESS OCCUPANCY	55DB
EDUCATIONAL OCCUPANCY	45DB
INSTITUTIONAL OCCUPANCY	50DB
MECHANICAL ROOMS	85DB
ASSEMBLY OCCUPANCY	55DB
RESIDENTIAL OCCUPANCY	35DB

FIRE

D

FACP EXISTIN (FIRE \ NEL

FCPS FIRE C BATTER H PFF8)

F ADDRES PULL S L T-BG12LX)

SD ADDRESSABLE SMOKE DETECTOR (FIRE WARDEN #NP-100 W/ #B210LP BASE)

SD D ADDRESSABLE DUCT SMOKE DETECTOR (NOTIFIER #DNR WITH NP-100R AND #ST-3 SAMPLING TUBE)

MM ADDRESSABLE MINI MONITOR MODULE (FIRE WARDEN #NMM-100P)

RM ADDRESSABLE RELAY MODULE (FIRE WARDEN #NC-100R)

RT REMOTE TEST STATION (NOTIFIER #RTS151)

F 24VDC SYNCHRONIZED MULTI-CANDELA HORN/STROBE (SYSTEM SENSOR #P2R)

24VDC SYNCHRONIZED MULTI-CANDELA STROBE (SYSTEM SENSOR #SR)

NOTE: SET CANDELA RATING OF ALL HORN/STROBES AND STROBES AS SHOWN ON SYSTEM DESIGN DRAWINGS.

TICKS DENOTES NUMBER OF #14 FPLR FIRE ALARM RATED CONDUCTORS

NOTE: THE SPECIFIED FIRE ALARM SYSTEM AND PERIPHERAL DEVICES SHALL BE NOTIFIER AS FURNISHED BY:

BK SYSTEMS, INC.
4 COTE AVENUE
GOFFSTOWN, NH 03045
TELEPHONE: 603-647-8775
FAX: 603-647-4806
EMAIL: DEREKS@BKSYSTEMSINC.COM

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 02/19/15

FD APPROVAL STAMP

ENGINEER STAMP

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BK SYSTEMS
"BUILDING SYSTEMS SPECIALISTS"
BK SYSTEMS, INC.
4 COTE AVENUE - GOFFSTOWN, NH 03045
TEL: (603) 647-8775 / FAX: (603) 647-4806
www.bksystemsinc.com

REVISIONS	DATE

Project No.: 14-103
Date: 10/14/14
Scale: AS NOTED
Drawn By: D.SMALL
Checked By: N. WEBSTER
Approved By: K.KLARDIE

ALLAGASH BREWING ADDITION
PORTLAND, ME
FIRE ALARM RISER DIAGRAM, FIRE ALARM FLOOR PLANS

PREPARED FOR:
TRT ELECTRIC
65 WASHINGTON STREET
AUGUSTA, ME 04101

SHEET:
F-1