



PO Box 2551
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South Portland, ME 04106

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SUBMITTAL PACKAGE

Project: 400 Congress Street, 3rd Floor Fit Up

System: Fire Alarm System

**Submitted
By:** Norris Inc.
2257 West Broadway
South Portland, Maine 04106
Telephone: (800) 370-3473

**Project
Manager:** Zach Davis

**Electrical
Contractor:** A & M Partners Inc
120 Exchange Street
Portland, ME. 04101

Date: March 30, 2011

Company Profile

"We are extremely proud to represent the highest quality manufacturers integrating life safety, alarm and communication systems throughout northern New England."

-- Bradford Norris, President --

Mission Statement

Provide quality engineered systems, exceptional service.

Goal

Learn...Continually Improve...Exceed Expectations

Founded in 1979 Norris Inc. has grown to become Northern New England's leading integrated system contracting and supply company. Norris Inc. is an innovated proactive organization with extensive experience in integration interdisciplinary building management systems. Our local and national affiliations assure that your project will be done properly regardless of size representing leading manufacturers our comprehensive products provide outstanding quality reliability and performance... surpassing customer application requirements and exceeding the stringent requirements of Underwriters Laboratories, National Fire Protection Association and other codes. We maintain an exceptional level of quality and provide the highest levels of customer service. Our knowledgeable technical support will insure the great service you deserve. Whether your needs involve industrial, commercial, institutional, or educational applications, you can trust that Norris Inc. has the complete resources it takes to provide the right solution right away.

This
Certificate of Fitness

**MASTER
Fire Alarm Installation and Servicing Company**

is awarded to

NORRIS INC.

PO Box 2551 – 2257 West Broadway
S. Portland, ME 04106
(207)883-3473

CF # **M1008**



Bjawa

Authority Having Jurisdiction

12/31/2011

Expiration Date

**THIS CERTIFICATE IS NOT AN ENDORSEMENT OF THIS COMPANY BY THE
AUTHORITY HAVING JURISDICTION.**

**TERMS AND CONDITIONS OF THIS CERTIFICATE OF FITNESS SHALL BE AS
FOLLOWS:**

**THIS CERTIFICATE REMAINS THE PROPERTY OF THE PORTLAND FIRE
DEPARTMENT AND SHALL BE RETURNED UPON DEMAND;**

THIS CERTIFICATE OF FITNESS IS NON-TRANSFERABLE;

**THIS CERTIFICATE OF FITNESS SHALL REMAIN IN EFFECT IN SO FAR AS THE
BEARER OF SAID INSTRUMENT SHALL COMPLY WITH RULES AND
REGULATIONS ESTABLISHED BY THE AUTHORITY HAVING JURISDICTION.**

**FAILURE TO COMPLY WITH ALL RULES AND REGULATIONS OF THE
AUTHORITY HAVING JURISDICTION WILL RESULT IN THE FOLLOWING:**

FIRST OFFENCE: PLAN OF ACTION TO ADDRESS DEFICIENCIES

SECOND OFFENCE: PROBATION OF SERVICE COMPANY

THIRD OFFENCE: TERMINATION OF CERTIFICATE OF FITNESS



NOTIFIER®
by Honeywell

This is to certify that

NORRIS, INC.

is an authorized Engineered Systems Distributor for NOTIFIER

During the year of 2010

H. Jankovics

Vice President Domestic Sales

Signed for and on behalf of NOTIFIER



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: **762075-001**
Service Center No **0**
Expires: **31-MAR-2011**

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: **STOWE, VT**

Alarm Service Company: (762075-001)

HOME SECURITY & MANAGEMENT CO INC
57 CENTRAL DR
PO BOX 695
STOWE VT 05672

Service Center: (762075-001)

HOME SECURITY & MANAGEMENT CO INC
57 CENTRAL DR
PO BOX 695
STOWE VT 05672

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

File - Vol No. CCN Listing Category

S6427 - 1 UUFX [Signal and Fire Alarm Equipment and Services] (Protective Signaling Services) Central Station

***THIS CERTIFICATE EXPIRES ON 31-MAR-2011 ***

"LOOK FOR THE UL ALARM SYSTEM CERTIFICATE"

Engineering Manager
08-MAR-2010



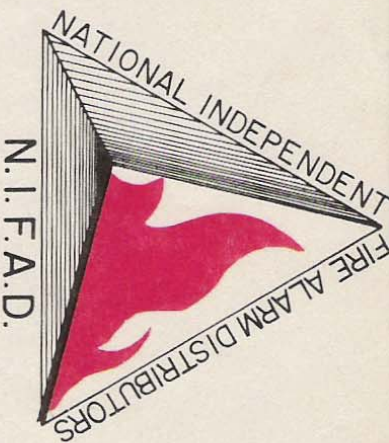
National Burglar & Fire Alarm Association

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



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

David Pomeroy

Secretary

Bob Smith

President

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.

James W. Joubert
CHAIRMAN OF THE BOARD

David B. Baker
SECRETARY

AUTOMATIC FIRE ALARM ASSOCIATION, INC.
a non-profit organization



DSX Access Systems, Inc.



**AUTHORIZED & FACTORY
TRAINED DEALER**

Norris, Inc.
of
South Portland, ME.

Is an Authorized and Factory Trained Dealer
of DSX Access Control Systems.

President: Bart Holzer

Quality. Reliability. Integrity. The Security Professional's First Choice.

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

Andrew M. Musci

Andrew M. Musci
President

Chuck R. Wilson

Chuck Wilson
Executive Director

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

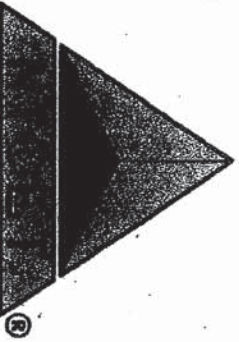
Certification Valid through April 1, 2011

CERTIFICATION NUMBER 38203



CHAIRMAN OF THE BOARD OF GOVERNORS, NICET

SPONSORED BY THE NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS



Norris Inc

2257 West Broadway
South Portland, ME 04106
1-800-370-3473

A & M PARTNERS INC
ATTN: ACCOUNTS PAYABLE
120 EXCHANGE ST
PORTLAND, ME 04101

AMPART 207-879-1358 Fax:874-6988

309357SP

Equipment List :

Page: 1

400 Congress St
Portland, ME 04101

400 Congress St. 3rd Floor Fit Up

Description

- 1 NOTIFIER-SD355, Addressable Smoke Detector with base
- 1 NOTIFIER-FCPS-24S8, 8.0 amps, 120 VAC remote charger power supply
- 2 ADI-IM-1270, 12V 7AH Battery
- 4 NOTIFIER-HSRC, Horn Strobe Red Ceiling 24 vdc15-185 cd
- 1 NOTIFIER-HSR, Horn Strobe, Wall, Red
- 6 NOTIFIER-STRC, Strobe Red Ceiling 24 vdc 15-185 cd
- 2 NOTIFIER-STR, Strobe, Wall, Red

→ SD355(A), SD355T(A), SD355R(A)

Addressable Photoelectric Smoke Detectors



Addressable Devices

General

The **SD355(A)** and **SD355T(A)** 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 Fire•Lite's Addressable Fire Alarm Control Panels (FACPs). The **SD355T(A)** 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 **SD355R** is a remote test capable detector for use with **D355PL** or **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 MS-9200 series, and 01 – 159 with MS-9600 series.

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).



SD355 with B350LP base



SD355T with B350LP 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®. SD355(T) plug-in, low-profile smoke detectors are designed to commercial standards and offer an attractive appearance.

Installation

SD355(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. SD355R mounts in a D355PL or DNR(W) duct detector housing.

Operation

Each SD355/T/R uses one of 99 possible addresses on the MS-9200 series and up to 318 (159 on each loop) on the MS-9600 series Signaling Line Circuit (SLC). It responds to regular polls from the system and reports its type and status.

The SD355/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 SD355/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 MS-9200 series or MS-9600 series addressable fire alarm control panel. The results of the sensitivity test can be printed off the MS-9200 series or MS-9600 series for record keeping.

Specification

Voltage range: 15 – 32 VDC (peak).

Standby current: 300 μ A @ 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 B350LP base.

Height: 2.1" (5.33 cm) installed in B350LP base.

Weight: 3.6 oz. (102 g).

Operating temperature range: for **SD355(A):** 0°C to 49°C (32°F to 120°F); for **SD355T(A):** 0°C to 38°C (32°F to 100°F). **SD355R(A):** 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 SD355(A) and SD355T(A) 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 S1059.
- ULC Listed, file S1059.
- CSFM approved: file 7272-0075:194.
- MEA approved: file 243-02-E.
- FM approved.

Product Line Information

NOTE: "A" suffix indicates ULC-Listed model.

SD355: Addressable photoelectric detector; B350LP base included.

SD355A: Same as SD355 with ULC Listing (B350LPA base included).

SD355T: Same as SD355 but with **thermal** element; B350LP base included.

SD355TA: Same as SD355T with ULC Listing (B350LPA base included).

SD355R: Remote test capable addressable photoelectric detector for use with a D355PL or DNR(W) duct detector housing.

B350LP(A): 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(A): 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(A): Plug-in System Sensor **isolator** detector base. Maximum 25 devices between isolator bases (see *DF-52389*). **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(A)* and *B350LP(A)* bases only.

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

RMK400: Recessed mounting kit. For use with *B501(A)* 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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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 Fire•Lite Alarms. Phone: (800) 627-3473, FAX: (877) 699-4105.
www.firelite.com

FCPS-24S6(C/E) & FCPS-24S8(C/E)

6- & 8-Amp 24-Volt Remote Power Supplies



Power Supplies

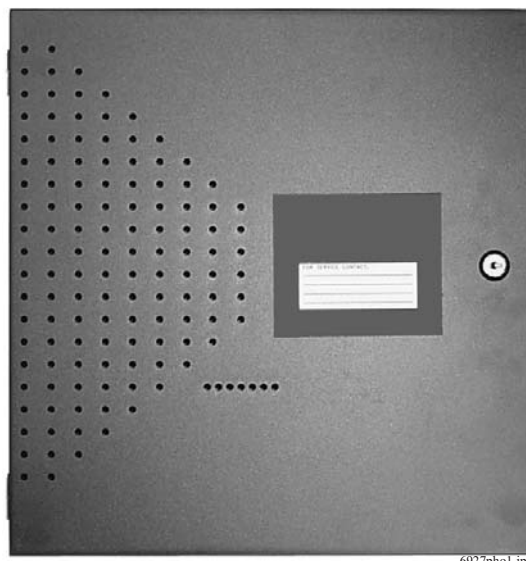
General

The FCPS-24S6E (6-amp) and FCPS-24S8E (8-amp) are 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 stand-alone supplies. 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. FCPS-24S6C & FCPS-24S8C are ULC-listed.

NOTE: Unless otherwise specified, the terms FCPS-24S6 and FCPS-24S8 used in this document refers to the standard FCPS-24S6 and FCPS-24S8, FCPS-24S6C and FCPS-24S8C, the FCPS-24S6E and FCPS-24S8E

Features

- UL-Listed NAC synchronization using System Sensor, Wheelock, or Gentex "Commander²" appliances.
- 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 jumped 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 (EOLR-1).
- 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 2-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 - 32 VDC.
- Self-contained in compact, locking cabinet - 15"H x 14.5"W x 2.75"D (cm: 38.1H x 36.83W x 6.985D).



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- Includes integral battery charger capable of charging up to 18 AH batteries. Cabinet capable of housing 7.0 AH batteries.
- Battery charger may be disabled via DIP switch for applications requiring larger batteries.
- Fixed, clamp-type terminal blocks accommodate up to 12 AWG (3.1mm²) wire.

Specifications

Primary (AC) Power:

- FCPS-24S6C/-24S8C: 120 VAC, 60 Hz, 3.2A maximum.
- FCPS-24S6E/-24S8E: 240 VAC, 50 Hz, 1.6A maximum.
- Wire Size: minimum #14 AWG (2.0mm²) 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 A at 24 VDC.

Auxiliary Power Output: Specific application power 500 mA maximum.

Output Circuits:

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

Secondary Power (Battery) Charging Circuit:

- Supports lead-acid batteries only.
- Float-charge voltage: 27.6 VDC.

- Maximum current charge: 1.5 A.
- Maximum battery capacity: 18 AH.

Applications

Example 1: Expand notification appliance power an additional 6.0 A (FCPS-24S6) or 8.0 A (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 A (FCPS-24S6) or up to 6.0 A (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.

**NOTE: Addressable FACP's are capable of locating control and monitor modules at distances of up to 12,500 feet (3,810 meters).*

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 attaches 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 are 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.

Standards and Codes

The FCPS-24S6 and FCPS-24S8 comply 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.

Agency Listings and Approvals

These listings and approvals apply to the modules specified in this document. 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.

- **UL Listed:** S635, S674
- **ULC Listed:** S635 (FCPS-24S6C & FCPS-24S8C)
- **CSFM Approved:** 7315-0028:225
- **MEA:** 299-02-E
- **FM Approved**

Ordering Information

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

FCPS-24S6C: Same as above, ULC-listed.

FCPS-24S6R: Same as FCPS-24S6 with red enclosure.

FCPS-24S6E: 6.0 A, 240 VAC remote charger power supply. Includes main printed circuit board, transformers, enclosure (15"H x 14.5"W x 2.75"D [cm: 38.1H x 36.83W x 6.985D]), and installation instructions.

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

FCPS-24S8C Same as above, ULC-listed.

FCPS-24S8R: Same as FCPS-24S8 with red enclosure.

FCPS-24S8E: 8.0 A, 240 VAC remote charger power supply. Includes main printed circuit board, transformers, enclosure (15"H x 14.5"W x 2.75"D [cm: 38.1H x 36.83W x 6.985D]), and installation instructions.

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

EOLR-1: 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)

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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

→ BAT Series Batteries

Sealed Lead-Acid or Gell Cell



Power Supplies

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*), MH20567 (*UPG, previously Jolt*), MH20845 (*Power-Sonic*).

Part Number Reference

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

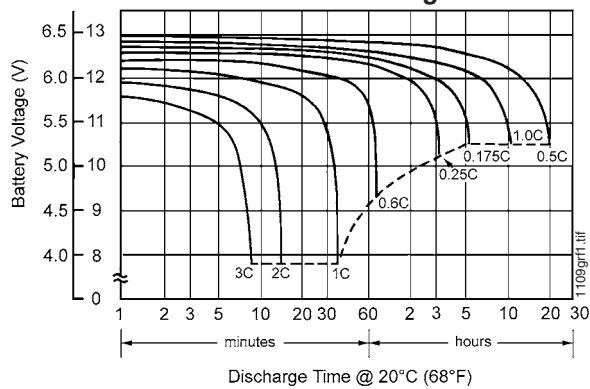
POWER-SONIC

Part Number Reference

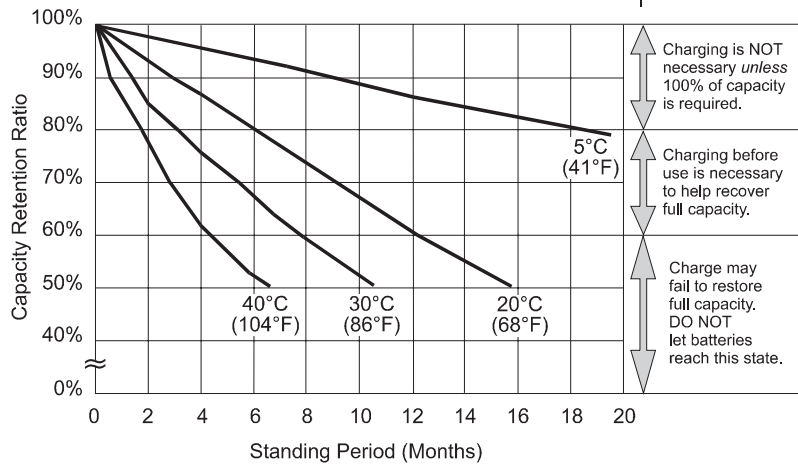
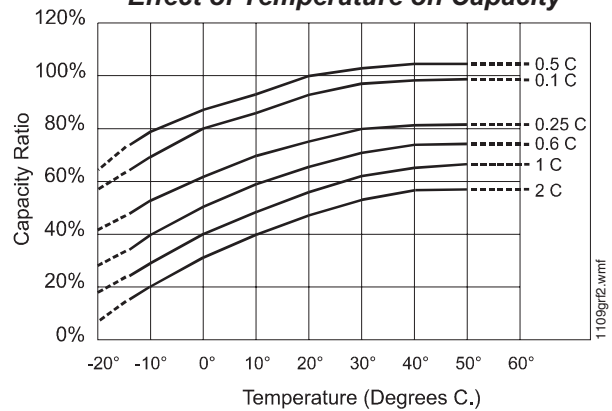
1109t1.tbl

MODEL	Nominal Voltage V	Nominal Capacity @ 20 hr. rate A.H.	Discharge Current @20 hr. rate mA	DIMENSIONS									
				Width		Depth		Height		Height over terminal		Weight	
				in.	mm	in.	mm	in.	mm	in.	mm	lb.	kg.
PS-1250	12	5	250	3.54	90	2.76	70	4.02	102	4.21	107	4.1	1.9
PS-1270	12	7	325	5.94	151	2.56	65	3.7	94	3.86	98	5.7	2.6
PS-12120	12	12	600	5.94	151	3.86	98	3.7	94	3.86	98	8.8	4
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	6.6	168	8.2	208	9.45	240	39.7	18
PS-121000	12	100	5000	12	305	6.6	168	8.2	208	9.45	240	65.7	29.8

Characteristic Discharge Curves



Effect of Temperature on Capacity

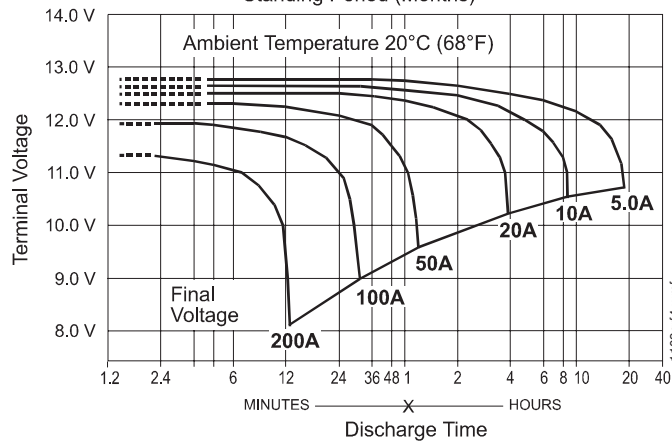


**at left:
PS-121000
Shelf-Life
and Storage**

Charging is NOT necessary unless 100% of capacity is required.

Charging before use is necessary to help recover full capacity.

Charge may fail to restore full capacity. DO NOT let batteries reach this state.



**at left:
PS-121000
Discharge
Characteristics**

B & B BATTERY

Model	V	Nominal Capacity (AH)				Weight		Terminal				Dimensions							
								Standard		Optional		L		W		H		TH	
		20 hr	10 hr	5 hr	1 hr	kg	lbs	Type	Pos.	Type	Pos.	mm	in	mm	in	mm	in	mm	in
BP5-12	12	5.00	4.75	4.25	3.00	1.86	4.10	T1	3	T2		90	3.54	70	2.76	102	4.02	106	4.17
BP7-12	12	7.00	6.65	5.95	4.20	2.60	5.73	T2	5	T1		151	5.94	65	2.56	93	3.66	98	3.86
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	T2.11	9	175	6.89	166	6.54	125	4.92	125	4.92

Charging Procedure

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	39.0	15.20	10.32	5.75	3.02

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

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

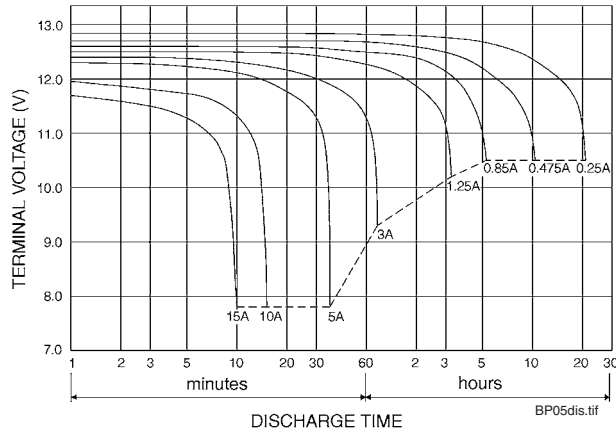
Constant Power Discharge Characteristics at 25°C/77°F for BP12-12

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

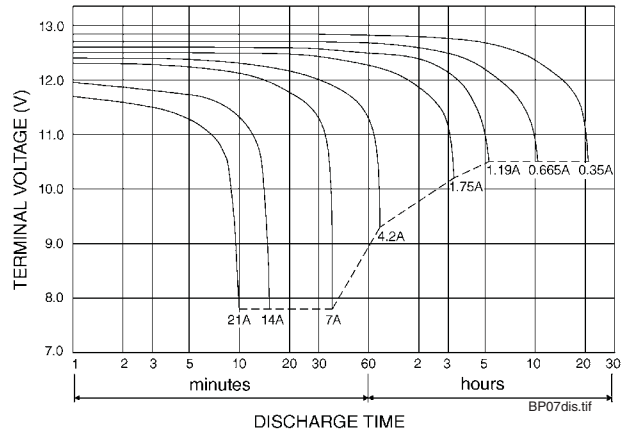
Constant Power Discharge Characteristics at 25°C/77°F for BP26-12

B & B BATTERY

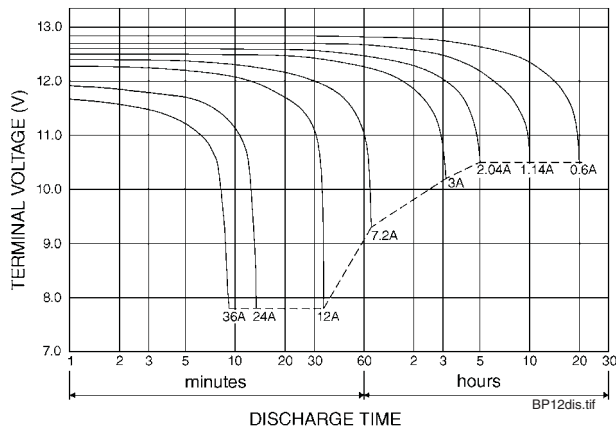
BP5-12 Battery Discharge Characteristics (25°C/77°F)



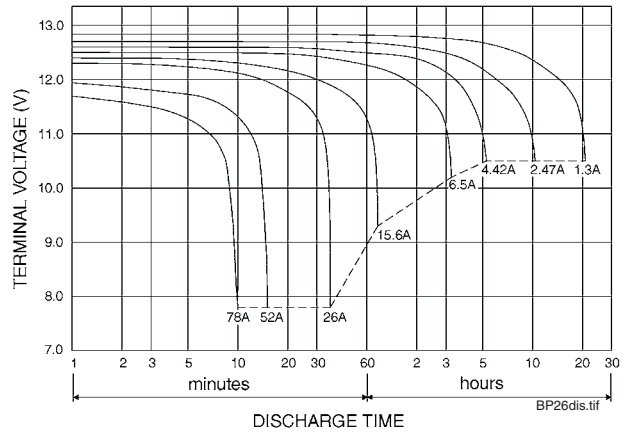
BP7-12 Battery Discharge Characteristics (25°C/77°F)



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



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



BP05-12



BP12-12



BP26-12

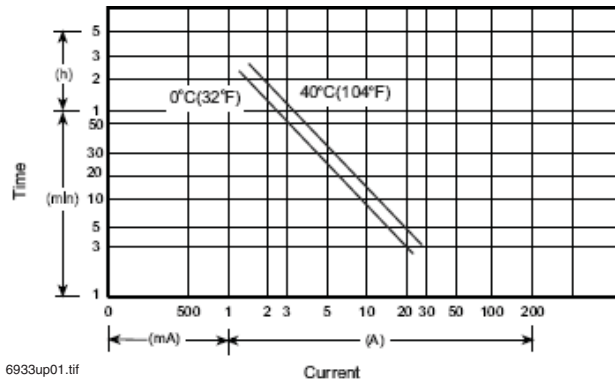


UPG BATTERY

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

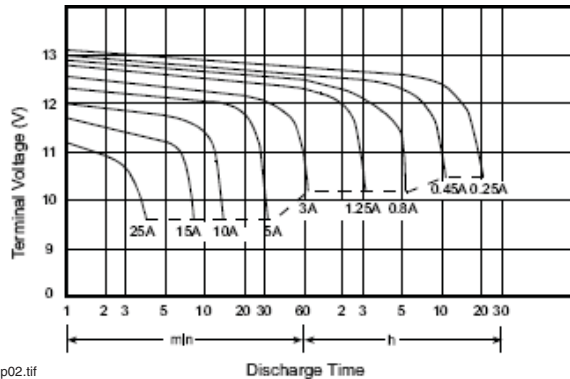
UB1250 (previously SA1250) Diagrams

UB1250/SA1250 discharge current vs. time



6933up01.tif

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



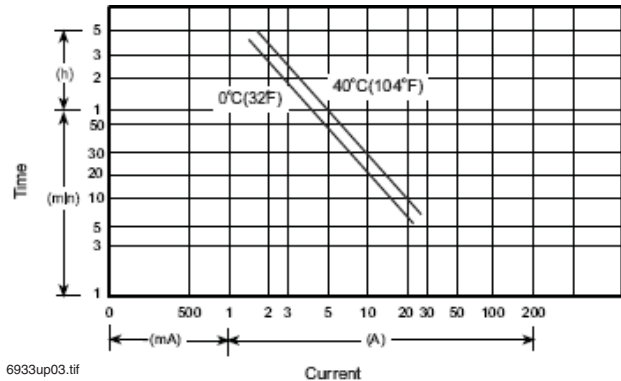
6933up02.tif

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%.

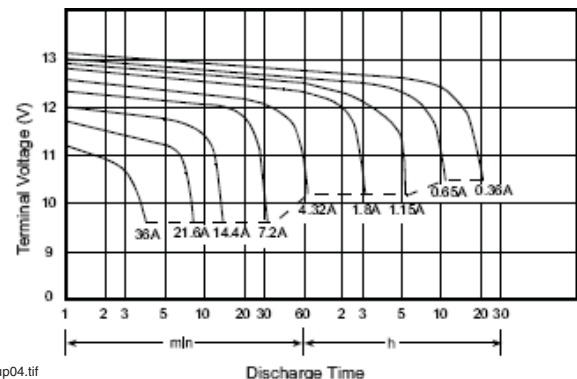
SA1272 Diagrams

SA1272 discharge current vs. time



6933up03.tif

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



6933up04.tif

SA1272 Specifications

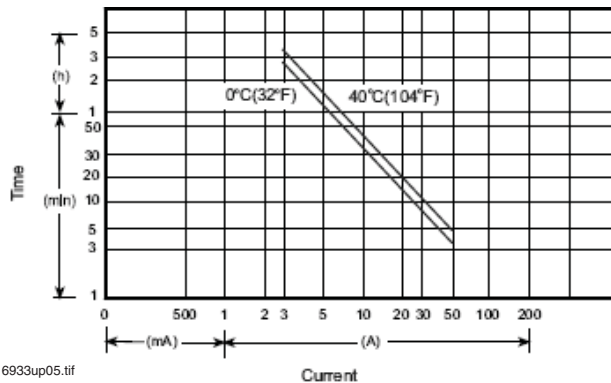
- Nominal voltage: 12 V.
- Nominal capacity (20 hr): 7.2 AH.
- Dimensions: total height 100 mm (3.94"); container height 94 mm (3.70"); length 151 mm (5.95"); width 65 mm (2.56").
- Weight: approximately 2.66 kg (5.85 lbs).
- Container material: UL94HB ABS, UL94V-0 ABS.
- Internal resistance (25°C, 77°F): ~ 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.

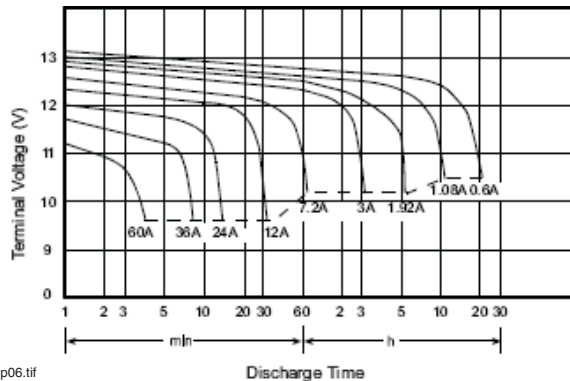
UB12120 (was SA12120) Diagrams

UB12120/SA12120 discharge current vs. time



6933up05.tif

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



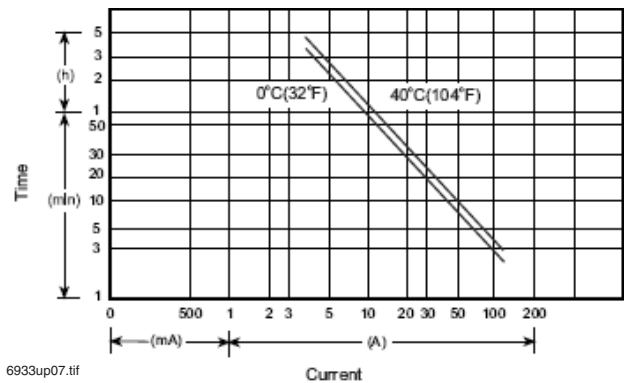
6933up06.tif

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%.

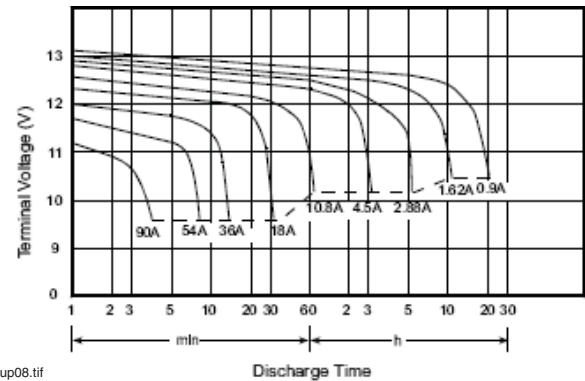
UB12180 (was SA12180) Diagrams

UB12180/SA12180 discharge current vs. time



6933up07.tif

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



6933up08.tif

UB12180, SA12180 Specifications

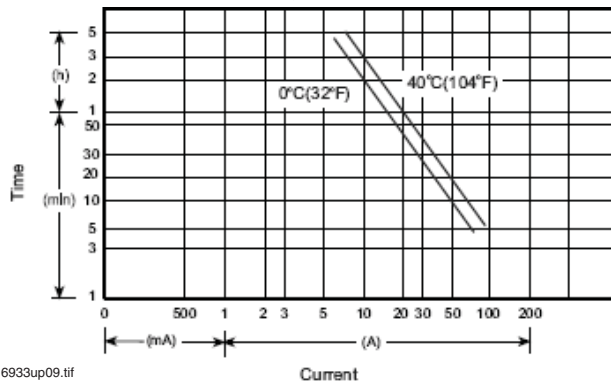
- Nominal voltage: 12 V.
 - Nominal capacity (20 hr): 18.0 AH.
 - Dimensions: total height 167 mm (6.58"); container height 167 mm (6.58"); length 181 mm (7.13"); width 76 mm (2.99").
 - Weight: approximately 6.06 kg (13.36 lbs).
 - Container material: UL94HB ABS, UL94V-0 ABS.
 - Internal resistance (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.

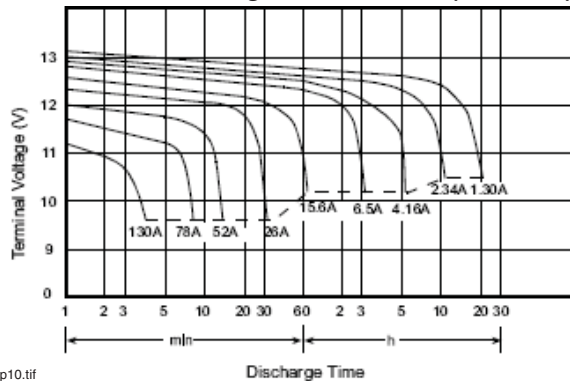
UB12260 (was SA12260) Diagrams

UB12260/SA12260 discharge current vs. time



6933up09.tif

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



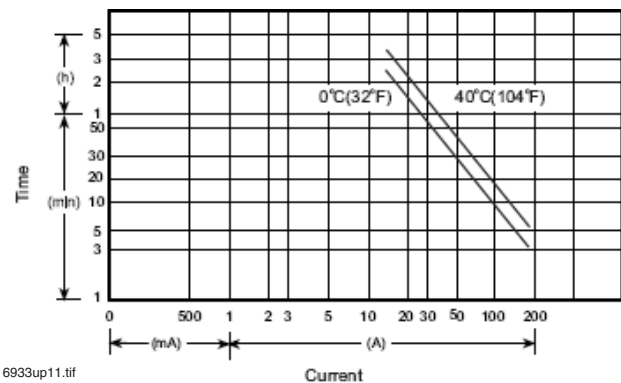
6933up10.tif

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%.

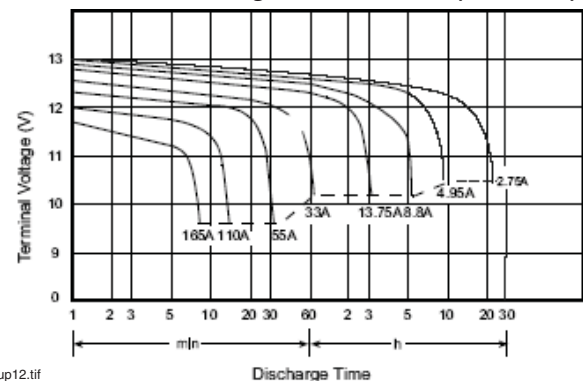
UB12550 (was SA12550) Diagrams

UB12550/SA12550 discharge current vs. time



6933up11.tif

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



6933up12.tif

UB12550, SA12550 Specifications

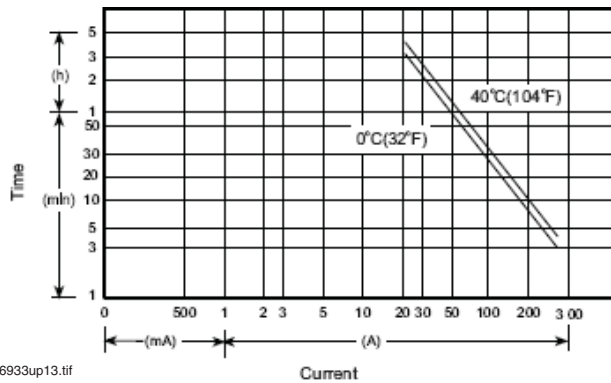
- Nominal voltage: 12 V.
- Nominal capacity (20 hr): 55.0 AH.
- Dimensions: total height 234.5 mm (9.23"); container height 216.5 mm (8.52"); length 229 mm (9.02"); width 138 mm (5.43").
- Weight: approximately 19.0 kg (41.8 lbs).
- Container material: UL94HB ABS, UL94V-0 ABS.
- Internal resistance (25°C, 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

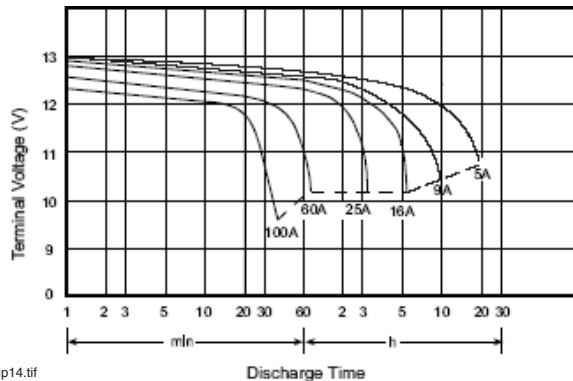
Same specifications as previous Jolt models; packaging and part numbers are the only changes.

UB121000 (XSA121000A) Diagrams

UB121000/XSA121000A discharge current vs. time



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

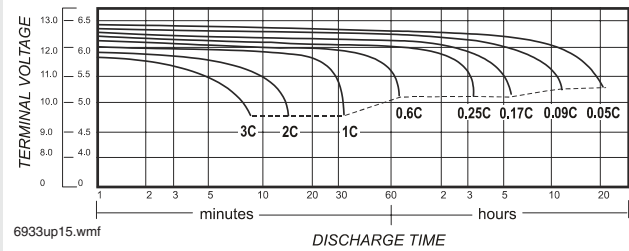


UB121000 (XSA121000A) Diagrams

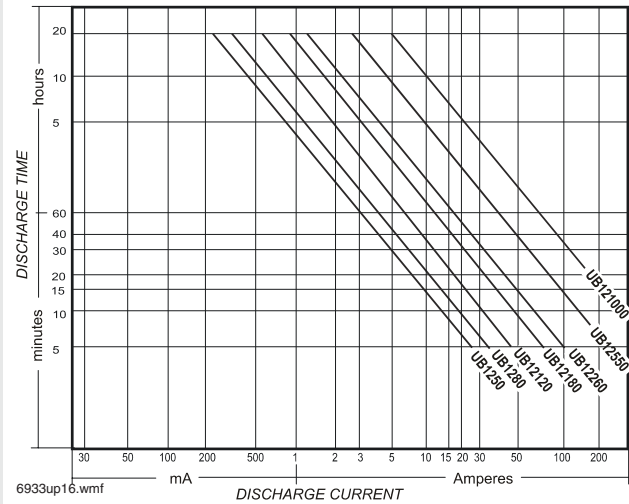
- Nominal voltage: 12 V.
- Nominal capacity (20 hr): 100.0 AH.
- Dimensions: total height 221 mm (8.70"); container height 214 mm (8.43"); length 329 mm (12.95"); width 172 mm (6.77").
- Weight: approximately 34.00 kg (74.8 lbs).
- Container material: UL94HB ABS, UL94V-0 ABS.
- Internal resistance (25°C, 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



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



UPG BATTERY

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

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 CA, 25°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	- 3.3 (-1.8 mV/°F/cell)	0.3	T ³ 24	T ³ 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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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.
www.notifier.com

Wheelock® Exceder™

→ Horns and Strobes



Audio/Visual Devices

General

The Wheelock® Exceder™ Series of notification appliances feature a sleek modern design and numerous features including eight candela options in one appliance, low current draw, no tools needed for setting changes, 12/24 VDC operation, universal mounting base and multiple mounting options.

Models with an audible feature 3 sound settings (90, 95, 99 dB). All switches to change settings can be set without the use of a tool and are located behind the appliance to prevent tampering. Wall models feature voltage test points to take readings with a voltage meter for troubleshooting and AHJ inspection.

The Wheelock® Exceder™ Series of wall and ceiling notification appliances feature a Universal Mounting Base (UMB) designed to simplify the installation and testing of horns, strobes, and combination horn strobes. The separate universal mounting base can be pre-wired to allow full testing of circuit wiring before the appliance is installed and the surface is finished. It comes complete with a contact cover for protection against dirt, dust, paint and damage to the contacts. The contact cover also acts as a shunting device to allow pre-wire testing for common wiring issues.

The contact cover is polarized to prevent it from being installed incorrectly and prevents the appliance from being installed while it is on the UMB. When the contact cover is removed the circuit will show an open until the appliance is installed. The UMB allows for consistent installation and easy replacement of appliances if required. Wall models provide an optional locking screw for extra secure installation, while the ceiling models provide a captive screw to prevent the screw from falling during installation.

Features

- Multiple voltages
- Voltage test points for quick troubleshooting and easy spot-checking (wall models only)
- 3 audible settings (90, 95, 99 dB)
- 8 Candela settings
 - Wall - 15/1575/30/75/95/110/135/185
 - Ceiling - 15, 30, 60, 75, 95, 115, 150, 177
- Finger-slide switches
- Sleek modern aesthetics
- Common base for wall and ceiling with 5 mounting options:
 - 1-gang
 - 2-gang
 - 4 inch square
 - 3.5 inch octagonal
 - 4 inch octagonal

Compatibility and Requirements

- Synchronize using Wheelock Sync Modules, or panels with built-in Wheelock patented sync protocol.
- Compatible with UL “Regulated Voltage” using filtered VDC or unfiltered VRMS input voltage
- Strobes produce one flash per second over the Regulated Voltage range.



Wall



Ceiling



General Notes

- All candela ratings represent minimum effective strobe intensity based on UL Standard 1971.
- Series Exceder Strobe products are Listed under UL Standards 1971 and 464 for indoor use with a temperature range of 32°F to 120°F (0°C to 49°C) and maximum humidity of 93% (± 2%) UL 464 (85% UL 1971).
- Series Exceder horns are under UL Standard 464 for audible signal appliances (Indoor use only).
- Product naming conventions: The Exceder line's model codes break down into easy-to-remember codes. HN = Horn, ST = Strobe, HS = Horn-strobe, C = Ceiling Mount, W = White, and R = Red. So “STRC” can be read as “Strobe, Red, Ceiling-mount.”, and “HSW” is “Horn-strobe, white, wall-mount.”
- Refer to your fire alarm panel or power supply manual when calculating the number of devices allowed per circuit.

Architects/Engineers Specifications

The notification appliances shall be Wheelock Exceder Series HS Audible Strobe appliances, Series ST Visual Strobe appliances and Series HN Audible appliances or approved equals. The Series HS and ST Strobes shall be listed for UL Standard 1971 (Emergency Devices for the Hearing-Impaired) for Indoor Fire Protection Service. The Series HS and HN Audibles shall be UL Listed under Standard 464 (Fire Protective Signaling). All Series shall meet the requirements of FCC Part 15 Class B. All inputs shall be compatible with standard reverse polarity supervision of circuit wiring by a Fire Alarm Control Panel (FACP) with the ability to operate from 8 to 33 VDC. Indoor wall models shall incorporate voltage test points for easy voltage inspection.

The Series HS Audible Strobe and ST Strobe appliances shall produce a flash rate of one flash per second over the Regulated Voltage Range and shall incorporate a Xenon flashtube enclosed in a rugged Lexan® lens. The Series shall be of low current design. Where Multi-Candela appliances are specified, the strobe intensity shall have 8 field selectable settings at 15,

15/75, 30, 75, 95, 110, 135, 185 candela for wall mount and 15, 30, 60, 75, 95, 115, 150, 177 candela for ceiling mount. The selector switch for selecting the candela shall be tamper resistant. The 15/75 candela strobe shall be specified when 15 candela UL Standard 1971 Listing with 75 candela on-axis is required (e.g. ADA compliance). Appliances with candela settings shall show the candela selection in a visible location at all times when installed.

The audible shall have a minimum of three field selectable settings for dBA levels and shall have a choice of continuous or temporal (Code 3) audible outputs.

MOUNTING OPTIONS

The Series HS Audible Strobe, ST Strobe and Series HN Audible shall incorporate a patented Universal Mounting Base that shall allow mounting to a single-gang, double-gang, 4" square, 3.5" octagonal, 4" octagonal or 100mm European type back boxes. Two wire appliance wiring shall be capable of directly connecting to the mounting base. Continuity checking of the entire NAC circuit prior to attaching any notification appliances shall be allowed. Product shall come with contact cover to protect contact springs. Removal of an appliance shall result in a supervision fault condition by the Fire Alarm Control Panel (FACP). The mounting base shall be the same base among all horn, strobe, horn strobe, wall and ceiling models. All notification appliances shall be backwards compatible.

PHYSICAL SPECIFICATIONS

The Series HS and ST wall models shall have a low profile measuring 5.24" H x 4.58" W x 2.19" D. Series HN wall shall measure 5.24" H x 4.58" W x 1.6" D. The Series HSC and STC

shall be round and have a low profile with a diameter of 6.68" x 2.63" D. Series HNC ceiling shall have a diameter of 6.68" x 1.50" D.

SYNCHRONIZATION

When synchronization is required, the appliance shall be compatible with Wheelock® SM, DSM Sync Modules, Wheelock® Power Supplies or other manufacturer's panels with built-in Wheelock® Patented Sync Protocol. The strobes shall not drift out of synchronization at any time during operation. If the sync protocol fails to operate, the strobe shall revert to a non-synchronized flash-rate and still maintain one flash per second over its Regulated Voltage Range. The appliance shall also be designed so that the audible signal may be silenced while maintaining strobe activation when used with Wheelock® synchronization protocol.

Standards and Codes

Modules in this series comply with UL Standard 1971, UL Standard 464, California State Fire Marshal (CSFM), and ULC.

Agency Listings

These listings and approvals apply to the modules specified in this document. 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.

- **UL Listed:** S5391 (Strobes); E5946 (Horns, Horn/strobes).
- **ULC Listed**
- **CSFM Listed:** 7125-0785:168.

Specification & Ordering Information

Model	Strobe Candela	12/24 VDC	Mounting Options
Horn Strobes			
HSR	15, 15/75, 30, 75, 95, 110, 135, 185	X	Universal Mounting Base
HSW	15, 15/75, 30, 75, 95, 110, 135, 185	X	Universal Mounting Base
HSRC	15, 30, 60, 75, 95, 115, 150, 177	X	Universal Mounting Base
HSWC	15, 30, 60, 75, 95, 115, 150, 177	X	Universal Mounting Base
Strobes			
STR	15, 15/75, 30, 75, 95, 110, 135, 185	X	Universal Mounting Base
STW	15, 15/75, 30, 75, 95, 110, 135, 185	X	Universal Mounting Base
STRC	15, 30, 60, 75, 95, 115, 150, 177	X	Universal Mounting Base
STWC	15, 30, 60, 75, 95, 115, 150, 177	X	Universal Mounting Base
Horns			
HNR	—	X	Universal Mounting Base
HNW	—	X	Universal Mounting Base
HNRC	—	X	Universal Mounting Base
HNWC	—	X	Universal Mounting Base
*12 VDC models feature 15 and 15/75 settings			
NOTE: Due to continuous development of Cooper Wheelock products, specifications and offerings are subject to change without notice in accordance with Cooper Wheelock Inc., dba Cooper Notification standard terms and conditions.			

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Made in the U.S. A.

For more information, contact Notifier. Phone: (203) 484-7161, FAX: (203) 484-7118.
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System Current Draw - FCPS-24s8

Total Current	
C1	0.091 A
C2	1.055 A
C3	0.065 A

Select devices using the "Qty" column.

Use yellow cells to enter quantities and current values.

To show only selected devices, select "Show Selected Devices".

To clear selected devices, select "Clear Selections".

Device	C1 - Non-Alarm Current				C2 - Alarm Current				C3 - Standby Current					
	Qty		Draw	Non-Alarm	Qty		Draw	Alarm	Qty		Draw	Standby		
FCPS-24S8 Main Circuit Board	1	x	0.09100	0.09100	1	x	0.14500	0.14500	1	x	0.06500	0.06500		
HSRC30	1	x	0.00000	0.00000	1	x	0.10200	0.10200	1	x	0.00000	0.00000		
HSR15	1	x	0.00000	0.00000	1	x	0.08200	0.08200	1	x	0.00000	0.00000		
STR15	2	x	0.00000	0.00000	2	x	0.05700	0.11400	2	x	0.00000	0.00000		
STRC15	6	x	0.00000	0.00000	6	x	0.06100	0.36600	6	x	0.00000	0.00000		
HSRC15	3	x	0.00000	0.00000	3	x	0.08200	0.24600	3	x	0.00000	0.00000		
Total Non-Alarm Load:				0.091	Total Alarm Load:				1.055	Total Standby Load:				0.065



System Power Requirements

FCPS-24s8 Power Supply

Protected Premises: <u>400 Congress St. 3rd Floor Fit Up</u>	Date: <u>4/5/2011</u>
Address: <u>400 Congress St.</u>	
City: <u>Portland</u> State: <u>ME.</u>	Zip: <u>04106</u>
Prepared By: <u>Norris Inc</u>	Phone: <u>(800) 370-3473</u>
Address: <u>2257 West Broadway</u>	Email: _____
City: <u>South Portland</u> State: <u>ME.</u>	Zip: <u>04106</u>

AC Branch Current Requirements 3.20 AMPS @ 120 VAC

Current required by source to power the fire alarm system.

Primary Standby Load 0.09 Amps

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

Primary Alarm Load 1.06 Amps

Current load on the primary power supply during **alarm** conditions.

Secondary Load Requirements 2.19 Amp Hours

Total Secondary Load from the calculation table below.

Current Draw		Time (hours)	Total (AH)
Secondary Standby Load 0.065 A	x	Required Standby Time	
		24 hours	1.56
Secondary Alarm Load 1.055 A	x	Required Alarm Time (hours)	
		15 Minutes	
		0.250 hours	0.26
Auxiliary Power Supply Load 0.000 A	x	Required Alarm Time (hours)	
		0.250 hours	0.00
Total Secondary Load			1.82
Derating factor			x 1.2
Secondary Load Requirements			2.19

AH

Battery Selection 7 Amp Hours

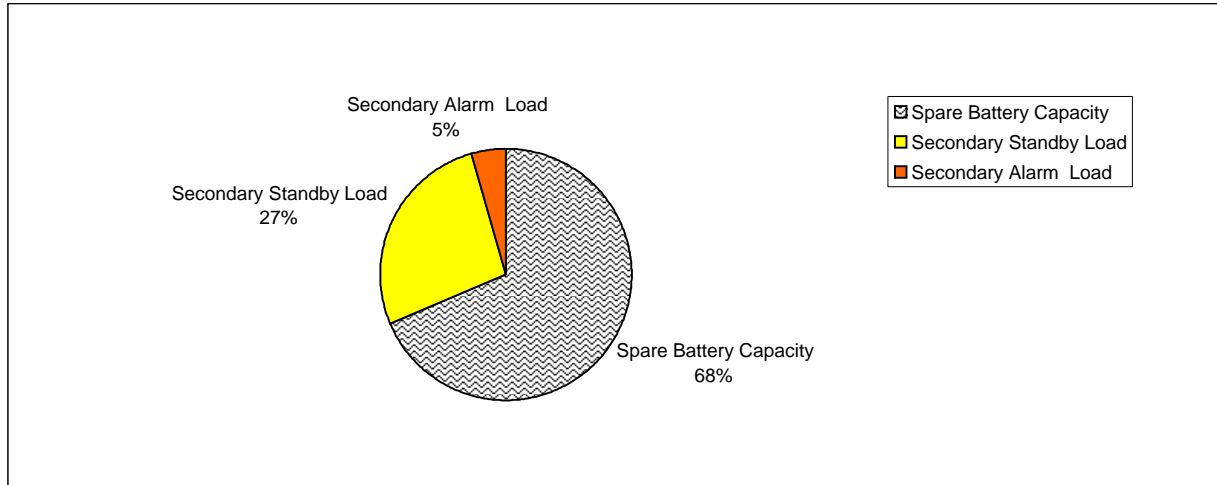
Select batteries from the list below.

7.0 AH BAT-1270 Battery (12 volt)

- Two Four (two 12VDC sets in parallel)

Battery Distribution Chart

Shows amp-hour distribution of your selections.

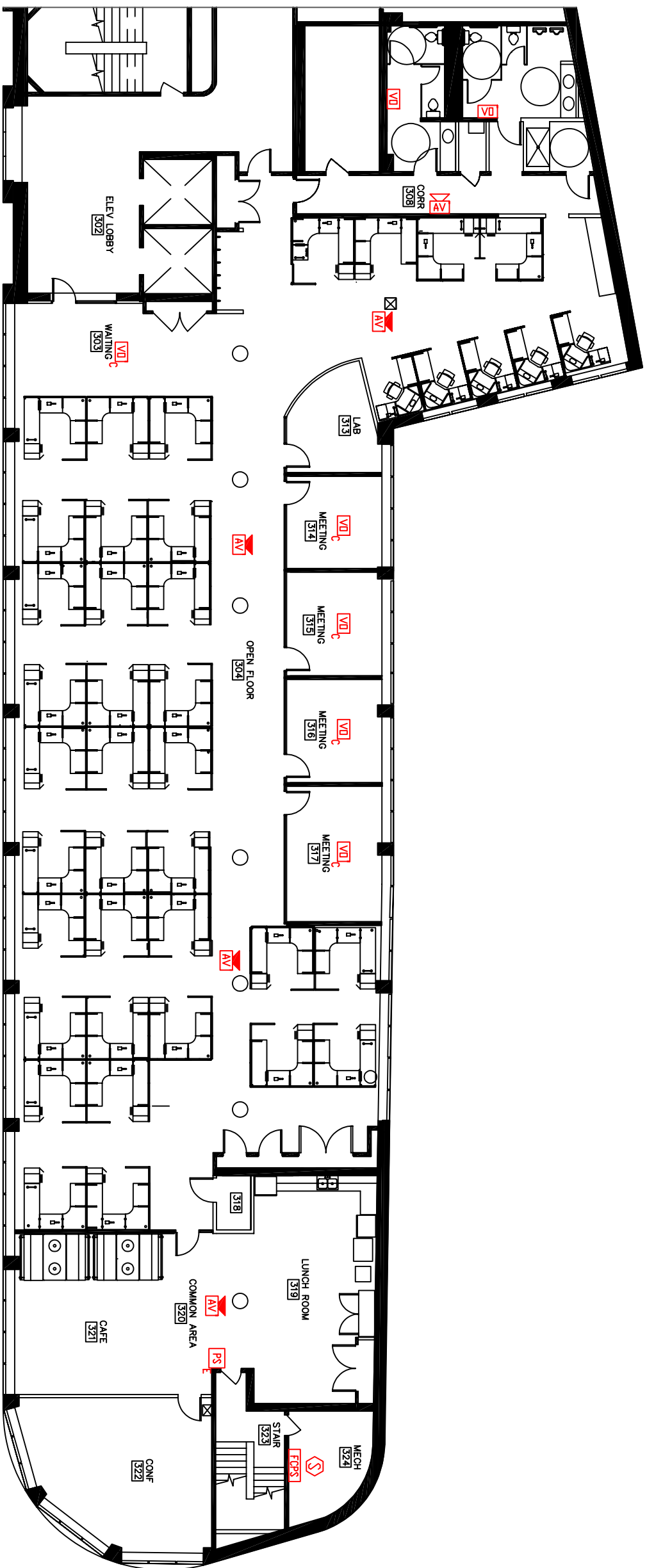


Comments

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 (7-18AH).

Spare Battery Capacity	4.81	Battery Selection (AH) - Secondary Load Requirements (AH)
Secondary Standby Load	1.87	Secondary Standby Load (AH) * Derating Factor
Secondary Alarm Load	0.32	Secondary Alarm Load (AH) * Derating Factor

FLOOR PLAN



VO
VISUAL ONLY

VO
VISUAL ONLY
CEILING MOUNT

AV
AUDIO/VISUAL

AV
AUDIO/VISUAL
CEILING MOUNT

PS
PULL STATION
EXISTING

S
SMOKE DETECTOR

FCPS
REMOTE POWER SUPPLY

REVISION 2	DATE:
REVISION 1	DATE:
REVISION 0	DATE: 4/4/11

SYSTEM WIRING RISER

PROJECT NAME
400 Congress St. 3RD Floor
Portland, MAINE

SCALE NTS
BY: **GWG**
CK BY:



SAVED AS:

LEGEND

80 INCHES		VISUAL ONLY
80 INCHES		VISUAL ONLY CEILING MOUNT
80 INCHES		AUDIO/VISUAL
		AUDIO/VISUAL CEILING MOUNT
		PULL STATION EXISTING
		SMOKE DETECTOR

This drawing is a typical device layout; wiring is shown diagrammatically only. This drawing has been provided as an example ONLY. Riser does not necessarily indicate all devices and appliances. See floor plans and specification for location and quantities. The purchaser must accurately layout the initiating and notification devices in their proper zones/circuit. Note all signal circuits have a 2.5 amp load limitation and a combined load limitation of 3.0 amps or 6.0 amps if XRM-24 is added to the panel. There can be 4 class B nmc circuits or 2 class A nmc circuits. REMOTE power supply has a 3.0 amp limitation per circuit and an 8.0 amp combined limitation for all 4 circuits. (see chart below for current vs. candlela rating)

Room Size	Candlela Rating	Load (amps)
20' x 20'	15 cd	0.08 amps
28' x 28'	30 cd	0.10 amps
45' x 45'	75 cd	0.15 amps
54' x 54'	110 cd	0.20 amps

- A 1 PR #12 AVG TWISTED-PAIR UNSHIELDED CABLE FPL GENESIS 4913, BELDEN 6020UL (Up to 10,000 ft)
- A 1 PR #14 AVG TWISTED-PAIR UNSHIELDED CABLE FPL GENESIS 4913, BELDEN 6120UL (Up to 8,000 ft)
- A 1 PR #16 AVG TWISTED-PAIR UNSHIELDED CABLE FPL GENESIS 4911, BELDEN 6220UL (Up to 4,500 ft)
- B 1 PR #12 AVG FPL CABLE
- D 1 PR #14 AVG FPL CABLE
- E 1 PR #16 AVG FPL CABLE
- F 2c #12 AVG CABLE
- G 2c #14 AVG CABLE
- H 1 PR #16 AVG TWISTED-PAIR SHIELDED CABLE FPL
- J 1 CAT5 CABLE

REVISION	DATE
REVISION	DATE
REVISION	DATE

SYSTEM WIRING RISER

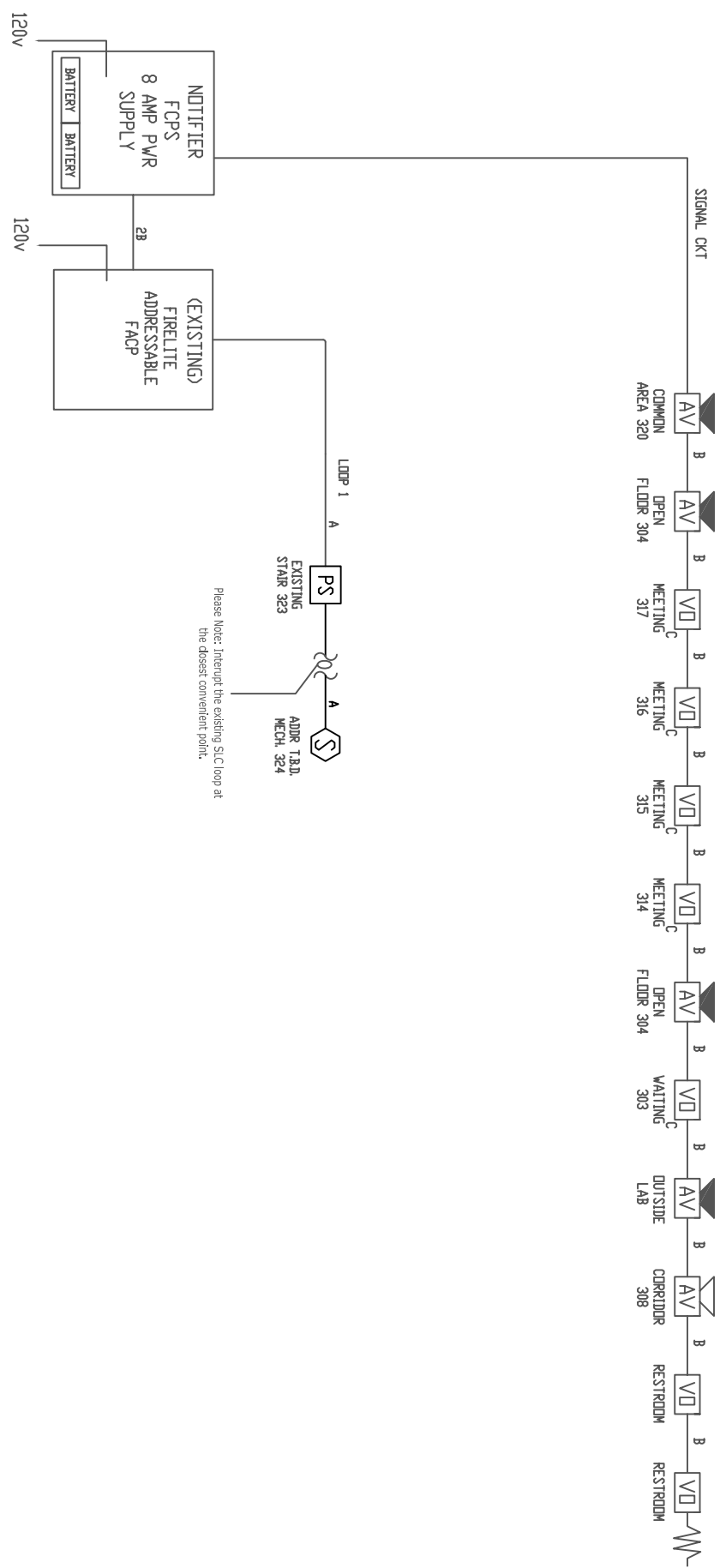
REVISION	DATE
REVISION	DATE
REVISION	DATE

PROJECT NAME
400 CONGRESS ST. 3RD FLOOR
PORTLAND, MAINE

SCALE NTS
BY: **QJG**
CK BY:

SAVED AS:

Important! Duplicate addresses on devices of different style is NOT an error in design or printing. All electronic devices MUST be placed in a heated room with temperature above 32 degrees. Never run wires parallel to any other wiring. Make sure to always run cables in separate raceways. Fire alarm wiring can enter noise that may affect other devices. Shielded cable can be used if cable is run near sensitive equipment.



Prepared For Tomorrow. Delivered Today

SYSTEM MATRIX

SYSTEM INPUTS		SYSTEM OUTPUTS													
		CONTROL UNIT ACTIVATION							NOTIFICATION						
		A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	MANUAL FIRE ALARM PULL STATION	●	●					●	●	●	●				
2	AREA SMOKE DETECTOR	●	●					●	●	●	●				
3	FIRE ALARM AC POWER FAILURE					●	●	●	●						
4	FIRE ALARM SYSTEM LOW BATTERY					●	●	●	●						
5	OPEN CIRCUIT					●	●	●	●						
6	GROUND FAULT					●	●	●	●						
7	NOTIFICATION APPLIANCE CIRCUIT SHORT					●	●	●	●						
8															
9															
10															

SYSTEM OUTPUTS

CONTROL UNIT ACTIVATION

NOTIFICATION

- ACTUATE COMMON ALARM SIGNAL INDICATOR
- ACTUATE AUDIBLE ALARM SIGNAL
- ACTUATE COMMON SUPERVISORY SIGNAL
- ACTUATE AUDIBLE SUPERVISORY SIGNAL INDICATOR
- ACTUATE COMMON TROUBLE SIGNAL
- ACTUATE AUDIBLE TROUBLE SIGNAL INDICATOR
- DISPLAY ALPHA-NUMERIC SYSTEM STATUS MESSAGE
- RECORD EVENTS IN THE SYSTEM MEMORY
- ACTUATE GENERAL EVACUATION SIGNALS

REVISION 2	DATE:
REVISION 1	DATE:
REVISION 0	DATE: 4/4/11

SYSTEM WIRING RISER

PROJECT NAME	SCALE NTS
400 Congress St. 3rd Floor	BY: gwg
Portland, MAINE	CK BY:



SAVED AS: