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**SIEMENS**

**Data Sheet**
Fire Safety & Security Products

# FACP Accessories

## PAD-4 Distributed Power Supply Unit

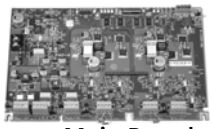
### Notification Appliance Circuit Extender

### Models PAD-4-ENCL, PAD-4-MB (with FP2011-U1, FP2012-U1 power supplies)

## ARCHITECT AND ENGINEER SPECIFICATIONS

- **Four (4) 'Class B', power-limited notification appliance circuits (NACs)**
- **'Class A', field-selectable wiring**
  - Each unit can support an optional module (Model PAD-4-CLSA) that converts two (2) built-in 'Class A' NACs into four (4) 'Class A' NACs
- **Up to 3 Amps of auxiliary-power output**
- **Optional built-in strobe synchronization**
  - Supports coded audible signals, including Temporal 3, Temporal 4 patterns
- **Battery supervision and control**
- **'Form C' general *Trouble* / *AC Fail* monitoring contact**
- **Power supplies support NAC power**
  - Up to 6A used with Model FP2011-U1
  - Up to 9A used with Model FP2012-U1
- **24VDC output voltage**
- **Ground-fault detection**
- **Advanced microprocessor control**
- **Uses Flash memory-based system firmware**
  - Optional system-diagnostic and firmware-upgrade tool

**'Class A' Adapter Card**
[Model PAD-4-CLSA]



**Main Board**
[Model PAD-4-MB]


**Unit Enclosure**
[Model PAD-4-ENCL]

- **Multi-module mounting in System 3™ enclosures**
  - Multiple modules share battery set
- **ADA Compliant**
- **UL 864 9th Edition Listed, CSFM Approved; UL 1481 Listed (for power supplies)**

## Product Overview

Used with Siemens – Fire Safety fire alarm control panels (FACPs), the Distributed Power Supply PAD-4 Unit is a NAC expander with a built-in, auxiliary-power output. Each PAD-4 unit distributes additional power in buildings for audible and visual indicators that conform to the Americans with Disabilities Act (ADA). PAD-4 also has the following features:

- NACs
- Signal-input circuits
- Battery-charging circuit
- *Trouble* relays for remote monitoring
- Diagnostic light-emitting diodes (LEDs)
- Alternating Current (AC) power connection

The Siemens NACs, which connect with alarm signaling devices, have been designed to provide the highest level of reliability and performance. Signal coding on the circuits is accomplished through integrated circuits (rather than relays), which eliminates mechanical wear on the output circuits.

The PAD-4 unit provides consistent 24VDC output voltage to each NAC – independent of voltage fluctuations on the primary or secondary power source. As a result, a larger voltage drop and a greater wire length for each NAC are supported by each PAD-4.

## Specifications

This version of the Siemens Distributed Power Supply Unit can be configured in the following manner that makes the outputs easily programmable:

- 'STEADY' outputs
- Synchronized strobe outputs
- American National Standards Institute (ANSI) Temporal 3
- ANSI Temporal 4 [for carbon monoxide (CO) alarm signal]

There are also two (2) inputs used to control the activation of the four (4) outputs. Programming can be set so one (1) input will silence the audible signal on Siemens Models 'AS'-series, 'NS'-series, or 'ZH'-series horn and horn-strobes while the strobes remain active.



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Building Technologies Division

## Specifications – (continued)

Operation of each PAD-4 unit is controlled by firmware stored in Flash memory on the main board, as well as the storage of a 10-event log, which can be viewed via Model PAD-4-FDT. In the event that an upgrade to the system firmware is required, the firmware can be transferred to the system without the replacement of firmware chips.

An optional firmware-download software tool, Model PAD-4-FDT, can be used for system diagnostic testing of the following:

- Primary-power voltage readouts
- Current draw for power charger
- Configuration switch settings
- Firmware version
- Battery voltage

When the tool is in communication with Model PAD-4-MB, the 'Test Mode' LED is illuminated. Model PAD-4-LUA is a USB serial port adapter that is required for tool-kit operation.

Each NAC extender supervises a variety of functions including:

- Low AC power
- Battery-voltage level
- Earth ground-fault conditions

All power can be directed to two (2) 'Class A' or four (4) 'Class B' power-limited NACs. Each NAC supports up to 3 Amps per circuit. Either one (1) or two (2) inputs can control four (4) outputs, which are compatible with all Siemens – Fire Safety 24VDC alarm signaling devices.

In cases where 'Class A' circuits are used, an optional Model PAD-4-CLSA module can be added, providing two (2) additional 'Class A' outputs to each PAD-4 unit.

Each NAC extender is also capable of operating other parts of a Siemens fire alarm system, such as door holders, via 3 Amps @ 24VDC max of power-limited auxiliary output. When the output activated, the total power available cannot exceed 6 Amps when used with Models FP2011-U1 or 9 Amps when used with FP2012-U1.

*Trouble* conditions are monitored through each unit's two (2) inputs. In addition, one (1) 'Form C' *Trouble* contact is provided for monitoring each unit that is connected through the input of a Siemens FACP. Therefore, the user has the option of connecting a PAD-4 NAC extender unit into a NAC of a Siemens FACP, or the unit may be monitored with a Model TRI-series monitoring module on a Siemens intelligent fire system.

A separate 'Form C' *Trouble* contact is used exclusively with each NAC extender to indicate *AC Fail Trouble* events on the NAC extender.

Each unit is packaged in its own sheet-metal enclosure with sufficient space to house up to 7AH battery sets. The enclosure (Model PAD-4-ENCL) is available in red.

The battery charger used in each unit can energize batteries of up to 18AH. Though, when battery sets greater than 7AH are required, the battery set must be housed in a System 3 enclosure or a separate UL Listed battery enclosure.

System 3 enclosures may also be used to house multiple Model PAD-4 units in a single enclosure, via the Model S3AP Adapter Plate. Two (2) units are capable of sharing the same battery set when mounted in the same enclosure. Model S3AP can also be used to mount the PAD-4 main board and 170-Watt power supply (Model FP2011-U1) into a PAD-3 enclosure.

Each Model PAD-4 unit complies with seismic certification, pursuant to the following:

- ASCE Standard 7, 2005 Edition
- International Building Code, 2006 Edition
- California Building Code, 2007 Edition
- ICC-ES AC 156, effective 2007
- OSHPD preapproved, under: OSP-0057-10
  - OSHPD CAN 2-1708A.5, Rev. 3

Each Model PAD-4-series unit also complies with seismic certification, pursuant to ASC / SEI 7-05, Section 13.2.2, when used with the PAD-4 battery bracket (Model PAD4-BATT-BRKT).

## Configuration Options

| Option | Input[s] | Output Controls | Circuit Types |
|---|---|---|---|
| 1 | Input 1 | All outputs | 'Class B' circuits |
| 2 | Input 1 | All outputs | 'Class B' circuits |
| | Input 2* | Silences horns on Output 1 | — |
| 3 | Input 1 | Outputs 1 and 2 | 'Class B' circuits |
| | Input 2 | Outputs 3 and 4 | 'Class B' circuits |
| 4 | Input 1 | Output 1 | 'Class B' circuits |
| | Input 2 | Outputs 2, 3 and 4 | 'Class B' circuits |
| 5 | Input 1 | Outputs 1 through 4 | 'Class A' circuit pairs |
| 6 | Input 1 | Outputs 1 through 4 | 'Class A' circuit pairs |
| | Input 2* | Silences horns on Output 1 | — |
| 7 | Input 1 | Outputs 1 and 2 | 'Class A' circuit pairs |
| | Input 2 | Outputs 3 and 4 | 'Class A' circuit pairs |

** denotes when used with Siemens Model 'AS',' NS' or 'ZH'--series horn / strobe devices*

## Indicator Lights

| | |
|---|---|
| **AC Power ON:** | **Green** |
| **AUX / PS:** | **Yellow** |
| **Ground Fault:** | **Yellow** |
| **Output 1 *Trouble*:** | **Yellow** |
| **Output 2 *Trouble*:** | **Yellow** |
| **Output 3 *Trouble*:** | **Yellow** |
| **Output 4 *Trouble*:** | **Yellow** |

| | |
|---|---|
| **Test Mode:** | **Yellow** |

## Technical Data

| | |
|---|---|
| ***AC Fail Trouble* Contact Rating:** **{ 'Form A' – Normally Closed (N.C) }** | 2.0A @ 30VDC, max. **[resistive]** |
| **Basic *Trouble* Contact Rating:** **{ 'Form C' }** | 2.0A @ 30VDC, max. **[resistive]** |
| ***Alarm* Current:** **{ for NACs and auxiliary power }** | 3.0A per circuit, max.<br>**6A, max. {via Model FP2011-U1}**<br>**9A, max. {via Model FP2012-U1}** |
| **Ambient Temperature:** | 32° – 120° F<br>(0° – 49° C) |
| **Relative Humidity:** | Up to 93% @ 86° F (30° C); non-condensing |
| **Auxiliary Power Circuit:** | One (1) circuit @ 3A max. |
| **Battery Charging Capacity:** | 18AH |
| **Input Circuits / Configurations:** | Two (2) 'Class B' supervised<br>or<br>Two (2) 'Class A' supervised |
| **Input Current:** | 7.0mA, max. |
| **Input Voltage Range:** | 16 – 33VDC / VFW |
| **Installation Environment:** | Indoor, dry |
| **NACs:** | ○ Supervised, power-limited<br>○ 1.0mA standby current, max.<br>○ Four (4) circuits<br>○ 2K ohms (+), 8K ohms (-) |
| **Total Output Power:** | 24VDC @ 6 Amps (with Model FP2011-U1);<br>24VDC @ 9 Amps (with Model FP2012-U1) |
| **Output Circuits / Configurations:** | ○ Two (2) 'Class A';<br>– Up to four (4) 'Class A' (via Model PAD-4-CLSA)<br>○ Four (4) 'Class B';<br>○ One (1) Class A, Two (2) Class B; |
| **Single-Unit Dimensions:** **{ W -x- H -x- D }** **Model PAD-4-ENCL** | 13.5" –x– 18.75" –x– 3.25" (34.3 cm. -x- 47.6 cm. -x- 8.3 cm.) |
| **Color:** **Model PAD-4-ENCL** | Red |

## Temperature and Humidity Range

Each PAD-4 Distributed Power Supply Unit is ®UL 864 9th Edition Listed for indoor dry locations within a temperature range of 120+/-3°F (49+/-2°C) to 32+/-3°F (0+/-2°C) and a relative humidity of 93+/-2% at a temperature of 90+/-3°F (32+/-2°C).

## Details for Ordering

| Model Number | Part Number | Description |
|---|---|---|
| PAD-4-ENCL | 500-050081 | PAD-unit enclosure |
| PAD-4-MB | 500-650217 | PAD-unit main board |
| FP2011-U1 | 500-450222 | 170-Watt power supply |
| FP2012-U1 | S54400-Z60-A1 | 300-Watt power supply |

### — System Kits —

| Model Number | Part Number | Description |
|---|---|---|
| PAD4-6A | S54339-A1-A1 | **Complete 6A PAD-4 kit *with*:**<br>– One (1) Unit Enclosure, PAD-4-ENCL<br>– One (1) Main Board, PAD-4-MB<br>– One (1) 170W power supply, FP2011-U1 |
| PAD4-6A-CLSA | S54339-A2-A1 | **Complete 6A PAD-4 kit *with*:**<br>– One (1) Unit Enclosure, PAD-4-ENCL<br>– One (1) Main Board, PAD-4-MB<br>– One (1) 170W power supply, FP2011-U1<br>– One (1) 'Class A' Adapter Card, PAD-4-CLSA |
| PAD4-9A | S54339-A3-A1 | **Complete 9A PAD-4 kit *with*:**<br>– One (1) Unit Enclosure, PAD-4-ENCL<br>– One (1) Main Board, PAD-4-MB<br>– One (1) 300W power supply, FP2012-U1 |
| PAD4-9A-CLSA | S54339-A4-A1 | **Complete 9A PAD-4 kit *with*:**<br>– One (1) Unit Enclosure, PAD-4-ENCL<br>– One (1) Main Board, PAD-4-MB<br>– One (1) 300W power supply, FP2012-U1<br>– One (1) 'Class A' Adapter Card, PAD-4-CLSA |

### — Optional Accessories —

| Model Number | Part Number | Description |
|---|---|---|
| PAD4-BATT-BRKT | S54430-B4-A1 | Battery bracket for NAC expander |
| PAD-4-LUA | S54389-C1-A1 | PAD-4 Laptop-Upload Adapter |
| PAD-4-CLSA | 500-850254 | 'Class A' Adapter Card |
| S3AP | 500-650257 | PAD-4 NAC expander adapter plate (for use with PAD-3 and System 3 enclosures) |

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**Notice:** This marketing data sheet is not intended to be used for system design or installation purposes. For the most up-to-date information, refer to each product's installation instructions.

**SIEMENS** Industry, Inc.
**Building Technologies Division**

Fire Safety
8 Fernwood Road
Florham Park, NJ 07932
Tel: (973) 593-2600
FAX: (908) 547-6877
URL: www.usa.Siemens.com/Fire

(SII-FS)
Printed in U.S.A.

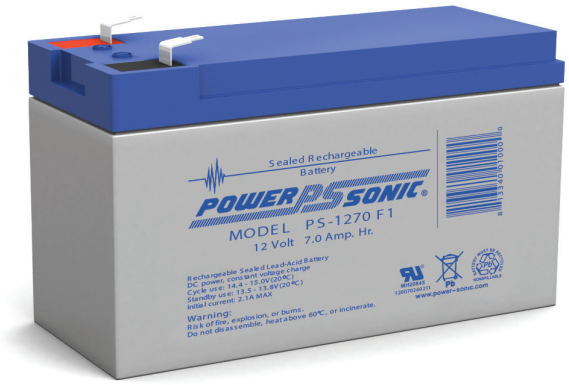
Fire Safety
2 Kenview Boulevard
Brampton, Ontario
L6T 5E4 / Canada
Tel: (905) 799-9937
FAX: (905) 799-9858

**October 2013**
Supersedes sheet dated 8/13
(Rev. 2)

# PS-1270 12 Volt 7.0 AH

**Rechargeable Sealed Lead Acid Battery**

*We've Got The Power.™*




## Features

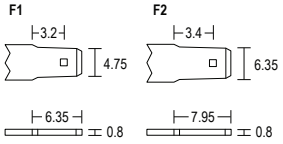
- Absorbent Glass Mat (AGM) technology for superior performance
- Valve regulated, spill proof construction allows safe operation in any position
- Power/volume ratio yielding unrivaled energy density
- Rugged impact resistant ABS case and cover (UL94-HB)
- Approved for transport by air. D.O.T., I.A.T.A., F.A.A. and C.A.B. certified
- U.L. recognized under file number MH 20845

## Terminals: (mm)

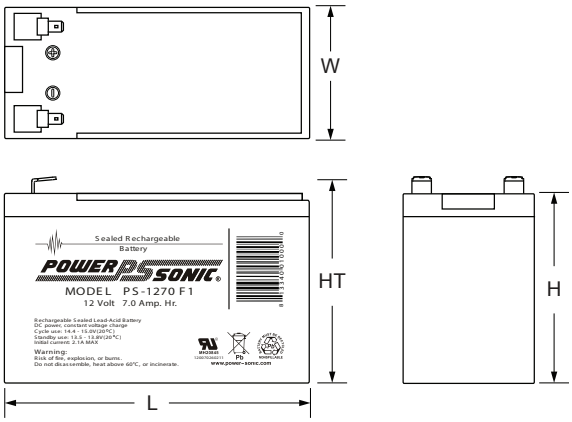
- F1 - Quick disconnect tabs, 0.187" x 0.032"- Mate with AMP. INC. FASTON "187" series

— OR —

- F2 - Quick disconnect tabs, 0.250" x 0.032" - Mate with AMP. INC FASTON "250" series




## Physical Dimensions: in (mm)




**L:** 5.95 (151) **W:** 2.56 (65) **H:** 3.70 (94) **HT:** 3.86 (98)

Tolerances are +/- 0.04 in. (+/- 1mm) and +/- 0.08 in. (+/- 2mm) for height dimensions. All data subject to change without notice.

## Performance Specifications

**Nominal Voltage** ..... 12 volts (6 cells)

**Nominal Capacity**

| | | |
|---|---|---|
| 20-hr. | (350mA to 10.50 volts) | 7.00 AH |
| 10-hr. | (650mA to 10.50 volts) | 6.50 AH |
| 5-hr. | (1.2A to 10.20 volts) | 6.00 AH |
| 1-hr. | (4.5A to 9.00 volts) | 4.50 AH |
| 15-min. | (14A to 9.00 volts) | 3.50 AH |

**Approximate Weight** ..... 4.80 lbs. (2.18 kg)

**Energy Density (20-hr. rate)** ..... 1.49 W-h/in3 (90.95 W-h/l)

**Specific Energy (20-hr. rate)** ..... 17.50 W-h/lb (38.58 W-h/kg)

**Internal Resistance (approx.)** ..... 23 milliohms

**Max Discharge Current (7 Min.)** ..... 21.0 amperes

**Max Short-Duration Discharge Current (10 Sec.)** .... 70.0 amperes

**Shelf Life (% of nominal capacity at 68°F (20°C)**

| | |
|---|---|
| 1 Month | 97% |
| 3 Months | 91% |
| 6 Months | 83% |

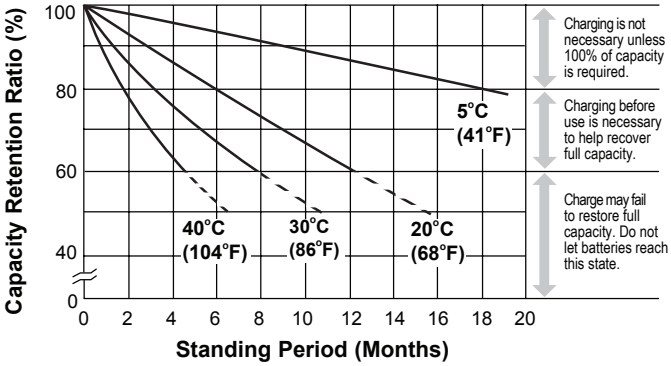
**Operating Temperature Range**

| | |
|---|---|
| Charge | -4°F (-20°C) to 122°F (50°C) |
| Discharge | -40°F (-40°C) to 140°F (60°C) |

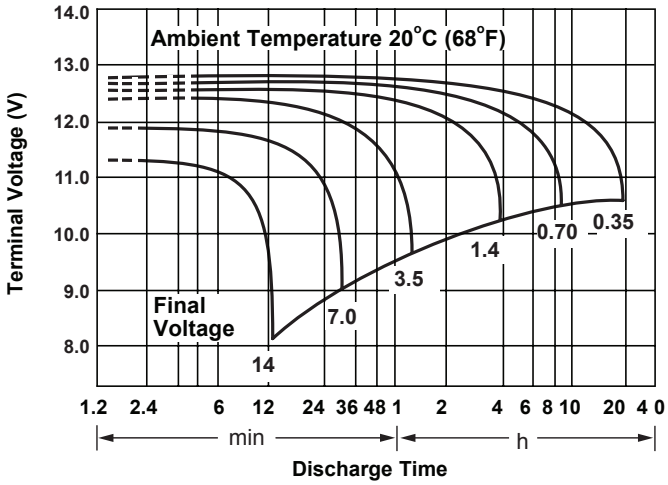
**Case** ..... ABS Plastic

**Power-Sonic Chargers** ..... PSC-12800A, 12800A-C

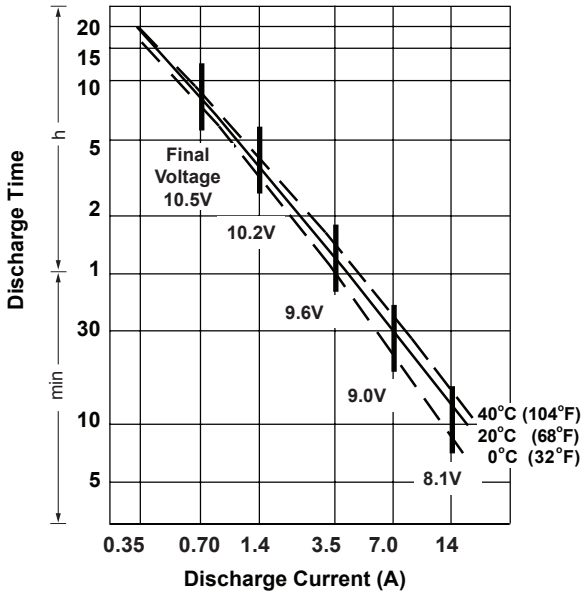
## Shelf Life & Storage



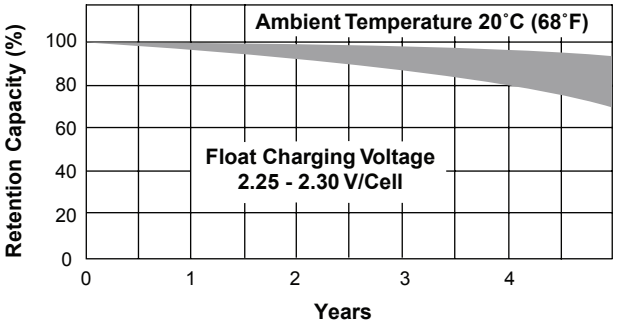

## Discharge Characteristics



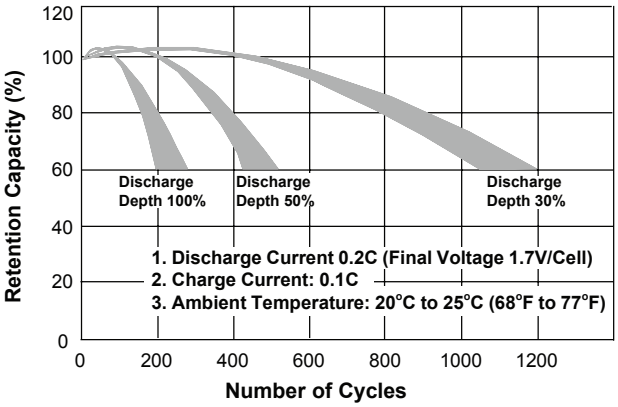

## Discharge Time vs. Discharge Current




## Life Characteristics in Stand-By Use




## Life Characteristics in Cyclic Use




## Charging

**Cycle Applications:** Limit initial current to 2.1A. Charge until battery voltage (under charge) reaches 14.4 to 14.7 volts at 68°F (20°C). Hold at 14.4 to 14.7 volts until current drops to under 70mA. Battery is fully charged under these conditions, and charger should be disconnected or switched to "float" voltage.

**"Float" or "Stand-By" Service:** Hold battery across constant voltage source of 13.5 to 13.8 volts continuously. When held at this voltage, the battery will seek its own current level and maintain itself in a fully charged condition.

**Note:** Due to the self-discharge characteristics of this type of battery, it is imperative that they be charged within 6 months of storage, otherwise permanent loss of capacity might occur as a result of sulfation.

## Chargers

Power-Sonic offers a wide range of chargers suitable for batteries up to 100AH. Please refer to the Charger Selection Guide in our specification sheets for "C-Series Switch Mode Chargers" and "Transformer Type A and F Series". Please contact our Technical department for advice if you have difficulty in locating suitable models.

## Further Information

Please refer to our website www.power-sonic.com for a complete range of useful downloads, such as product catalogs, material safety data sheets (MSDS), ISO certification, etc..

## Contact Information

www.power-sonic.com

| DOMESTIC SALES | CUSTOMER SERVICE | TECHNICAL SUPPORT | INTERNATIONAL SALES |
|---|---|---|---|
| Tel: +1-619-661-2020 | Tel: +1-619-661-2030 | Tel: +1-619-661-2020 | Tel: +1-650-364-5001 |
| Fax: +1-619-661-3650 | Fax: +1-619-661-3648 | Fax: +1-619-661-3648 | Fax: +1-650-366-3662 |
| national-sales@power-sonic.com | customer-service@power-sonic.com | support@power-sonic.com | international-sales@power-sonic.com |

**CORPORATE OFFICE** • 7550 Panasonic Way • San Diego, CA 92154 • USA • Tel: +1-619-661-2020 • Fax: +1-619-661-3650

0816 1M

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# SIEMENS

Fire Safety

# HTRI Series

## FireFinder XLS and FS-250 Intelligent Initiating Devices Interface Modules

## ENGINEER AND ARCHITECT SPECIFICATIONS

**Intelligent Interface Modules for FireFinder XLS and FS-250 Series Fire Alarm Control Panels HTRI-S, HTRI-D, HTRI-R**

- Interfaces and Supervises Normally Open or Normally Closed Contacts
- Integral SPDT Relay (up to 4 amps) on HTRI-R Model
- Dual Input on HTRI-D Model using a single address
- Polarity Insensitive with SureWire™ Technology
- Multi-color L.E.D. indicates status (green, amber, red)
- Easy front access to programming port and wiring terminals
- Mounts 4 inch square 2 ¼ deep box, or double gang box
- Dynamic Supervision
- Comes with 5x5 inch faceplate
- Two wire operation
- DPU Device Program/Test Unit programs and Verifies Device's Address and Tests Devices functionality
- Electronic Address Programming is Easy and Dependable
- ULC Listed
  CFSM, FM, NYMEA Approved


## Introduction

The HTRI Series Intelligent interface modules are designed to provide the means of interfacing direct shorting devices to the FireFinder XLS and FS-250 Fire Alarm Control Panel loop circuit.

The HTRI Series Intelligent interface modules provide the market's most advanced method of address programming and supervision, combined with sophisticated control panel communication. Each HTRI Series interface module incorporates a microcomputer chip. The HTRI Series microcomputer chip technology and its sophisticated bi-directional communication capabilities with the control panel, achieve the state of an "Intelligence Device."

## Description

The HTRI Series intelligent interface modules are available in three models. The HTRI-S and HTRI-R are designed to monitor a normally open or closed dry contact. The interface module reports the contact's status to the control panel. The HTRI-S model can only monitor and report the status of the contact, while the HTRI-R incorporates an addressable Form C relay. The HTRI-R relay and contact device input are controlled at the same address. For the control panel system, the relay and input contact can be controlled as a separate function. The relay is typically used where control or shunting of external equipment is required.

The HTRI-D is a dual input module and is designed to supervise and monitor two sets of dry contacts. The Dual Input Module only requires one address but responds independently to each input. The HTRI-D is ideal for monitoring a water flow switch and its respective valve tamper switch.

The HTRI has a multi-color Light Emitting Diode that flashes green when operating normally, amber if unit is in trouble condition, and red to indicate a change of state. The HTRI-D flashes twice, once for each address, the HTRI-R red L.E.D. indicates a change of state in the relay.

The device's microcomputer chip has the capacity of storing, in memory, identification information as well as important operating status information.

Siemens Building Technologies, Inc., Fire Safety Division innovative technology allows all HTRI Series intelligent interface modules to be programmed by using the DPU Device Programming/Test Unit. The DPU is a compact, portable, menu driven accessory that makes programming and testing an interface device faster, easier and more dependable than previous methods. The DPU eliminates the need for mechanical addressing mechanisms, such as program jumpers, DIP switches or rotary dials, because the DPU electronically sets the HTRI interface's address into the interface's microcomputer chip nonvolatile memory. Vibration, corrosion and other conditions that deteriorate mechanical addressing mechanisms are no longer a cause for concern.

The HTRI Series is fitted with screw terminals for connection to an addressable circuit.

The HTRI Series is fully compatible on the same FireFinder XLS and FS-250 circuits with all intelligent H Series detectors, HMS Series addressable manual stations or any other addressable intelligent modules, such as the HZM or HCP.

All HTRI Series intelligent interface modules are UL listed.

Environmental operating conditions for all HTRI Series modules are 32°F (°C) to 120°F (49°C) with a relative humidity of not greater than 93% non-condensating.

## Mounting Data

Addressable Interface Model HTRI-S, HTRI-D, HTRI-R mounts directly into a 4 inch square 2 ¼ deep box or a double gang box (user supplied). A 5 inch square off-white faceplate is included with each HTRI.

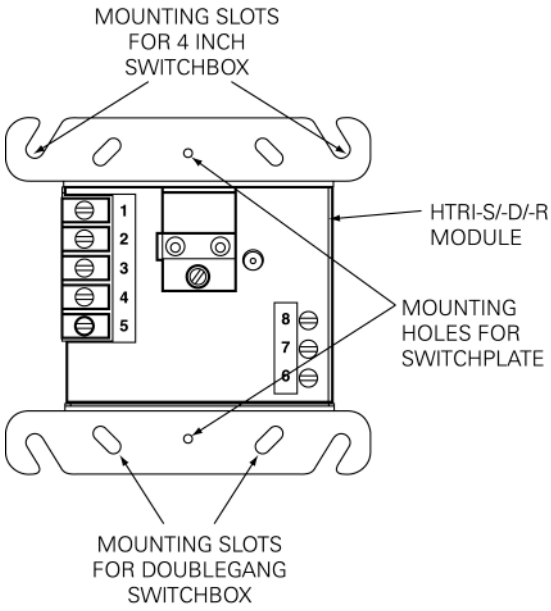


**Figure A**
**Mounting the HTRI-S/-D/-R**

## Ordering Information

| Model | Description | Shipping Wt. Lb. | Kg. | Part Number |
|---|---|---|---|---|
| HTRI-S | Single Input | 7 oz. | 2 | 500-033370 |
| HTRI-R | Single Input w/Relay | 7 oz. | 2 | 500-033300 |
| HTRI-D | Dual Input | 7 oz. | 2 | 500-033360 |

## Electrical Ratings

Current Draw (Active or Standby): 1mA

HTRI-R Relay Ratings
Resistive: 4A, 125 VAC
4A, 30 VDC

Inductive: 3.5A, 120 VAC (0.6P.F.)
3.0A, 30 VDC (0.6P.F.)
2.0A, 120 VAC (0.4P.F.)
2.0A, 120 VAC (0.35P.F.)
2.0A, 30 VDC (0.35P.F.)

NOTICE: The use of other than Fire Safety detectors and bases with Fire Safety equipment will be considered a misapplication of Fire Safety equipment and as such void all warranties either expressed or implied with regard to loss, damage, liabilities and/or service problems.

Siemens Building Technologies
**Fire Safety**

Fire Safety
8 Fernwood Road
Florham Park, NJ 07932
Tel: (973) 593-2600
FAX: (973) 593-6670
Website: www.sbt.siemens.com/fis

12/04
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Fire Safety
2 Kenview Boulevard
Brampton, Ontario
Canada L6T 5E4
Tel: (905) 799-9937
FAX: (905) 799-9858

**December 2004**
Supersedes sheet dated 1/03

# SIEMENS
# Z

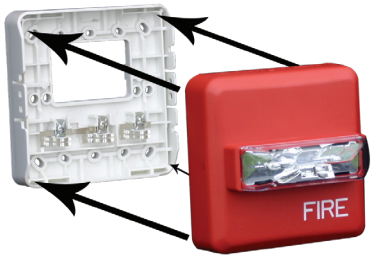
## Strobes, Horns, Horn/Strobes

### ENGINEER AND ARCHITECT SPECIFICATIONS

- UL listed. ULC, CSFM, and FM pending.
- ADA/NFPA compliant
- EZ Mount design, with separate base plate, provides ability to pre-wire the base and test the circuit wiring before the walls are covered
- The base plate is protected by a disposable cover and the appliances can quickly snap onto the base after the walls are painted.
- EZ Mount Universal Mounting Plate (ZBB) – uses single plate for ceiling and wall mount installations
- Wall Mount models feature field selectable candela settings of 15/30/75/110cd and 135/185cd
- Ceiling Mount models feature field selectable candela settings of 15/30/75/95cd and 115/177cd
- Strobes can be synchronized using the Siemens DSC sync modules, FS-250 panel, XLS panel, or PAD-3 power supply with built-in sync protocol
- "Special Applications" listed with Siemens panels
- Strobes produce 1 flash per second
- Selectable Continuous Horn or Temporal (Code-3) Tones with selectable 90 or 95 dBA setting (ZH model)


**Series ZH**


**Series ZR**




**ZR AND ZH Mounting**

## Description

The Siemens Series Z notification appliances feature an easy snap on base that is designed to simplify the installation and testing of horns, strobes, and horn/strobes. The separate Series Z snap on base can be pre-wired so circuit wiring can be fully tested before the appliance is installed and before the walls are covered. Once all surrounding work is complete, the appliance can be simply installed by snapping it on the base. Shorting contacts in the base, which provide continuity for circuit testing, are permanently opened when the appliance is installed so any subsequent removal of the appliance will indicate a trouble condition on that circuit at the control panel when circuit supervision is enabled. The same base is used for all Series Z horns, strobes and horn/strobes to provide consistent installation and easy replacement of appliances if required. A locking screw is also included for the appliance to provide extra secure installation.

The Siemens Series Z appliances incorporate the same dependable circuitry and high efficiency optics that are used in Siemens ST strobes, NS horn/strobes and NH horns and have the same high performance ratings. The Series Z appliances are "Special Applications" listed with Siemens panels.

## Engineering Specifications

### General

Audible/visual notification appliances shall be listed for indoor use and shall meet the requirements of FCC Part 15 Class B. These appliances shall be listed under UL Standard 1971, (Standard for Safety Signaling Devices for Hearing Impaired) and UL Standard 464 (Fire Protective Signaling). The appliances shall use a universal backplate that shall allow mounting to a single-gang, double-gang, 4-inch square, 4" octal, or a 3-1/2" octal backbox. Two wire appliance wiring shall be capable of directly connecting to the mounting back plate. Continuity checking of the entire NAC circuit prior to attaching any audible/visual notification appliances shall be allowed. A dust cover shall fit and protect the mounting plate. The dust cover shall be easily removed when the appliance is installed over the backplate. Removal of an appliance shall result in a trouble condition by the Fire Alarm Control Panel (FACP).

### Strobes

Strobe appliances shall produce a minimum flash rate of 60 flashes per minute (1 flash per second) over the Regulated Input Voltage Range and shall incorporate a

Xenon flashtube enclosed in a rugged Lexan® lens. The strobes shall be available with two or four field selectable settings in one unit and shall be rated, per UL 1971, for up to 185 cd for wall mounting and 177 cd for ceiling mounting. The strobes shall operate over an extended temperature range of 32°F to 120°F (0°C to 49°C) and be listed for maximum humidity of 95% RH. Strobe inputs shall be polarized for compatibility with standard reverse polarity supervision of circuit wiring by a Fire Alarm Control Panel (FACP).

**Audibles and Audible/Strobe Combinations**

Horns and horn/strobes shall be listed for Indoor use under UL Standard 464. The horns shall be able to produce a continuous output or a temporal code-3 output that can be synchronized. The horns shall have at least 2 sound level settings of 90 and 95 dBA.

**Synchronization Modules**

When synchronization of strobes or temporal Code-3 audibles is required, the appliances shall be synchronized using the Siemens DSC sync modules, FS-250 panels, XLS panels, or PAD-3 power suppies with built-in sync protocol. The strobes shall not drift out of synchronization at any time during operation. Audibles and strobes shall be able to be synchronized on a 2-wire circuit with the capability to silence the audible if required. If the sync module or power supply fails to operate (i.e., contacts remain closed), the strobes shall revert to a non-synchronized flash rate. All notification appliances shall be listed for “Special Applications”.

- Strobes are designed to flash at 1 flash per second minimum over their “Regulated Input Voltage Range”.
- All candela ratings represent minimum effective strobe intensity based on UL Standard 1971.
- Series ZH 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%).
- Series ZH horns are listed under UL Standard 464 for audible signal appliances (Indoor use only).

## Technical Information

For complete technical information, please consult the relevant installation sheets as well as the Siemens Compatibility Guide.

## Ordering Information / Mounting Requirements / Approvals

| Model Number | Order Code | Mounting Options# | Agency Approvals | | | |
|---|---|---|---|---|---|---|
| | | | UL | ULC | CSFM | FM |
| ZH-MC-R | 500-636161 | B, D, E, F | X | # | # | # |
| ZH-MC-W | 500-636162 | B, D, E, F | X | # | # | # |
| ZH-HMC-R | 500-636163 | B, D, E, F | X | # | # | # |
| ZH-HMC-W | 500-636164 | B, D, E, F | X | # | # | # |
| ZH-R | 500-636159 | B, D, E, F | X | # | # | # |
| ZH-W | 500-636160 | B, D, E, F | X | # | # | # |
| ZH-MC-CR | 500-636165 | B, D, E, F | X | # | # | # |
| ZH-MC-CW | 500-636166 | B, D, E, F | X | # | # | # |
| ZH-HMC-CR | 500-636167 | B, D, E, F | X | # | # | # |
| ZH-HMC-CW | 500-636168 | B, D, E, F | X | # | # | # |
| ZR-MC-R | 500-636169 | B, D, E, F | X | # | # | # |
| ZR-MC-W | 500-636170 | B, D, E, F | X | # | # | # |
| ZR-HMC-R | 500-636171 | B, D, E, F | X | # | # | # |
| ZR-HMC-W | 500-636172 | B, D, E, F | X | # | # | # |
| ZR-MC-CW | 500-636174 | B, D, E, F | X | # | # | # |
| ZR-MC-CR | 500-636173 | B, D, E, F | X | # | # | # |
| ZR-HMC-CR | 500-636175 | B, D, E, F | X | # | # | # |
| ZRS-HMC-CW | 500-636176 | B, D, E, F | X | # | # | # |
| ZBB-R | 500-636193 | Accessory - Includes base, dust cover, mounting screws and installation sheet | | | | |
| ZBB-W | 500-636194 | Accessory - Includes base, dust cover, mounting screws and installation sheet | | | | |

X = listed/approved # = pending * = Refer to Data Sheet #2585 for mounting options.

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

**Siemens Building Technologies**
**Fire Safety**

**Fire Safety**
**8 Fernwood Road**
**Florham Park, NJ 07932**
**Tel: (973) 593-2600**
**FAX: (973) 593-6670**
**Website: www.sbt.siemens.com/fis**

**7/07**
**5M**
**SFS-IG**
**Printed in U.S.A.**

**Fire Safety**
**2 Kenview Boulevard**
**Brampton, Ontario**
**Canada L6T 5E4**
**Tel: (905) 799-9937**
**FAX: (905) 799-9858**

**July 2007**
**New Issue**