SUBMITTAL BOOKLET

Good Hope Hospital

410 Denim Drive
Erwin, NC 28339

Fire Alarm System

Submittals

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FireNET Plus® - ANALOG ADDRESSABLE FIRE ALARM CONTROL PANEL

DESCRIPTION

The FireNET Plus® 1127 series control panel is an analog addressable fire alarm panel with build options containing 1 or 2 SLC loops, a Digital Alarm Communicator/Transmitter (DACT), and an RS-485 bus for network communication. Each SLC loop supports 127 devices of any combination (sensors or modules), and 127 analog sounder bases, for a possible total of 254 points per loop. Communication between devices is accomplished by use of standard cable (shielded or twisted pair is not required). Each panel includes a 4-amp power supply and has 2 onboard NAC circuits. The RS-485 bus provides communication to the panel network while another RS-485 bus provides communication for peripheral devices. The RS-232 interface allows the convenience of programming via a PC.

The system will support a variety of Hochiki devices such as photo, ion and heat sensors, which contain a unique, patented sensor design incorporating automatic drift compensation and day/night sensitivity modes. Additional devices include contact monitors, relay controllers, supervised auxiliary output and short circuit isolator modules. In addition, interfaces to conventional detection systems can be established by using a conventional zone-monitoring module.

The Loop Explorer Windows® Software interface provides the installer with fingertip access to installation programming and diagnostic tools. An Auto Learn feature offers the convenience for quick start applications. Add to this Hochiki's reputation for high quality and dedicated service, and you have an exceptional product with performance and value.

Specifications subject to change without notice.

STANDARD FEATURES

- Analog design using Hochiki's advanced DCP protocol for fast and robust communication
- Up to 127 sensors & modules, plus 127 analog sounder bases, for a total of 254 points possible per loop
- Uses standard wire, no-shielded or twisted pair required on SLC loops
- Integrated digital alarm communicator (DACT) with Contact ID and SIA reporting formats (optional)
- Programmable sensitivity levels by device
- Alarm verification feature
- Automatic daily calibration & drift compensation routine
- Large 8-line x 40-character LCD (320 char.)
- 1 SLC (2nd SLC optional)
- RS-485 bus for panel networking (option)
- Built-in RS-232 interface for programming via a PC
- 3 on board programmable Form C relays rated at 1 amp at 30VDC
- 2 auxiliary power outputs, each rated 360mA at 24 VDC
- Loop Explorer Windows® configuration utility
- Auto-learn feature
- 500 network wide software zones
- Network capability of up to 64 panels (option)
- Built in help and alarm information screens
- 2 on-board Class B (style Y) NAC circuits rated at 2.3 amps each (special application) and 1.6 amps each (regulated continuous)
- Gentex, System Sensor, Wheelock, and Amseco NAC sync protocol built-in
- Automatic day/night sensitivity modes
- Fire Drill test function
- Walk test function
- Powerful & versatile Cause & Effect wizard including:
  - Cause & Effect action
  - Disable function configuration
  - Test mode configuration
- Seismic certified

PRODUCT LISTINGS

SIGNALING
UL LISTED S6468
UL 864, Local Signaling Unit.
Types: Automatic, manual, waterflow, sprinkler supervisory, Remote Station and Central Station Service (DACT)
Non-coded signaling.
NFPA 70, 72 &13 Compliant

FM APPROVED 3038713

California State Fire Marshal 7165-0410:180

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ISO 9001:2008 REGISTERED

Find latest revision at **www.hochiki.com**

FireNET Plus® - ANALOG ADDRESSABLE FIRE ALARM CONTROL PANEL

SPECIFICATIONS

Primary AC	120VAC @ 2.1 Amps 50/60hz or 220VAC @ 1.1Amps 50/60hz
Output DC	24VDC @ 5.25 Amps
Power Supply	4 Amp integrated
Charger Current	1.25 Amps max.
Dimensions	14.5" W x 19" H x 3.5" D
Weight	20 lbs. (without batteries)
Color	Red (optional gray)
Material	ABS/steel enclosure
Display	8 line x 40 character LCD (320 character total)
Network	Dual RS485 ports (64 panels max.)
Zones	500 network wide software zones per system
SLC loops	1 or 2 (class A, "style 6 or 7" or class B, "style 4")
Devices per loop	127 sensors & modules, plus 127 analog sounder bases, 254 total
Addresses per panel	800 addresses + sub-addresses max. per panel
NAC Outputs	(2) class B, 2.3 Amps (special application) 1.6 Amps Regulated (continuous)
Relay Outputs	(3) Form C 1 Amp @ 30VDC
Aux. Power	2 outputs, 360mA @ 24VDC each
PC Port / Printer	RS232
DACT Formats	Contact ID and SIA

SLC COMPATIBLE DEVICES & SYSTEM ACCESSORIES

MODEL	*DESCRIPTION*
	CONTROL PANEL EXPANDERS
FNP-1127-SLC	SLC One Loop Expansion Card
FN-4127-NIC	Network Interface Card
FN-4127-IO	16 Channel Input/Output Board
	ANNUNCIATOR
FN-LCD-S	Serial LCD Annunciator
FNP-LED	Graphix Display
	SLC LOOP DEVICES
ALG-V, ALK-V, ALN-V	Analog Addressable Photoelectric Sensor
AIE-EA	Analog Addressable Ionization Sensor
ATG-EA, ATJ-EA	Analog Addressable Heat Sensor
ACA-V, ACC-V, ACD-V	Multi-criteria Sensor
NSA-4 & NSA-6	Four Inch Sensor Base and Six Inch Sensor Base
SCI-B4 & SCI-B6	Four Inch Short Circuit Isolator Analog Sensor Base & Six Inch Circuit Isolator Analog Sensor Base
ASB	Analog Sounder Base
ASBL	Analog Low Frequency Sounder Base
DH-98A, DH-98AR DH-99A, DH-99AR	Analog Addressable Duct Detector Unit (DH-98AR and DH-99AR have relays built-in)
MS-RA, MS-RA/R, MS-KA/R	Remote Test Station for DH-98AR & DH-99AR
DCP-FRCME-M	Contact Monitoring Module (mini w/terminal blocks)
DCP-FRCME-P	Contact Monitoring Module (mini w/pigtail leads)
DCP-FRCME-4	Contact Monitoring Module (with faceplate/indicating LED)
DCP-FRCMA, DCP-FRCMA-I	Class A Contact Monitoring Module (FRCMA-I has built-in SCI)
DCP-DIMM	Dual Input Monitor Module (with faceplate/indicating LED)
DCP-CZM	Conventional Zone Module
DCP-R2M	Dual Relay Module
DCP-R2ML/H Series	Dual Relay Module (R2ML-I & R2MH-I has built-in SCI)
DCP-SOM	Supervised Output Module
DCP-SOM-A, DCP-SOM-AI	Class A Supervised Output Module (SOM-AI has built-in SCI)
DCP-SOM-R	Supervised Output Module for Releasing Pre-action System
DCP-SCI	Short Circuit Isolator Module
DCP-AMS Series	Addressable Manual Pull Station
	ACCESSORIES
TCH-B100	Hand Held Programmer (portable device addresser)
FN-ACC	Battery/Accessory Enclosure (houses up to 33AH size batteries)
FNP-ETR	Enclosure Trim Ring for panel flush mount

PE-6SN & PE-10SN - Power Extender

DESCRIPTION

The PE-6SN and PE-10SN are voltage regulated remote NAC Power Extenders. They may be connected to any 24VDC Fire Alarm Control Panel (FACP). Primary applications include Notification Appliance Circuit (NAC) expansion (supports ADA requirements) and will provide auxiliary power to support system accessories. The Power Extender offers an industry leading Quadrasync function that allows for multiple strobe circuits of different brands to be synchronized to flash at the same time. The panel can have four different brands each connected to its own circuit and all of the strobes flash together in addition to the horns.

PRODUCT LISTINGS

SIGNALING UL LISTED
S5694

California State Fire Marshal
7315-0410:197

SPECIFICATIONS

PE-6SN:

- 24VDC rated @ 6 amps max
- Two (2) Class A or Four (4) Class B outputs
- Enclosure size of 16 3/4"H x 16 1/8"W x 3 1/2"D

PE-10SN:

- 24VDC rated @ 10 amps max
- Three (3) Class A or Six (6) Class B outputs
- Enclosure size of 16 3/4"H x 16 1/8"W x 3 1/2"D

STANDARD FEATURES

- 120/240 VAC 50/60 Hz Input
- PE-6SN offers 6 amps, PE-10SN offers 10 amps
- Two (2) Trouble Relays
- Two (2) Class A or B trigger circuit
- One (1) Programmable AUX power rated @ 3 amps
- Quadrasync provides panel wide synchronization of the same or multiple brands
- Pass Thru mode allows the Outputs to match the Input Signal
- Signal Circuit Trouble Memory - Facilitates quickly locating intermittent system trouble and eliminates costly and unneccessary service calls. LED's indicate a prior fault (short, open, ground) has occured on one or more signaling circuit outputs.
- Horn/Strobe sync protocols include: Gentex, System Sensor, Wheelock and Amseco/Potter.
- Temporal Code 3 Mode
- Configurable output circuits (DIP switch sets options for each circuit)
- 15 mA at 8-33 VDC input trigger
- Reference EOL allows 2K-27K EOL value to be used
- AC fail, battery presence & low battery monitoring
- Supports 7 - 55AH batteries
- Accommodates up to two (2) 12VDC/18AH batteries
- Power supply, logic board, red enclosure, cam lock (CAT30), transformer & battery leads

Specifications subject to change without notice

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Made in the USA

ISO 9001:2008 REGISTERED

HA0710-10/-40 HA0711-10/-40 FIRE DOCUMENT ENCLOSURE

STANDARD FEATURES

- Matches design & color scheme for standard FireNET® control panel ranges
- Easy to install
- Key lockable
- Designed for versatility
- Choice of small or large capacity enclosure

DESCRIPTION

Another addition to the Hochiki range, the document box is designed to complement the design & color of the FireNET® range of control panels. The standard version Document Box will hold up to 50 A4 sheets of information on the Fire Detection or other security systems within a premises. The deep version will hold up to 100 sheets.

The “Doc Box” also doubles up as a Key Box providing 7 easily accessible formed key hooks inside the enclosure.

SPECIFICATIONS

Available Dimensions	**PN:** 0100-17750	HA0710-10: 14.5”W x 12.2”H x 2.5”D
	PN: 0100-17770	HA0711-10: 14.5”W x 12.2”H x 3.4”D
Weight		6.6lbs
Color		Red Only
Material		18AWG steel enclosure

Specifications subject to change without notice.

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ISO 9001:2008 REGISTERED

DCP-AMS SERIES ADDRESSABLE MANUAL PULL STATIONS

DCP-AMS

DCP-AMS-KL

DCP-AMS-LP

DCP-AMS-KL-LP

STANDARD FEATURES

- Addressable integrated design
- All metal construction
- Single and dual action models available
- Extremely easy to operate
- Bi-colored status LED indicates Standby and Alarm conditions
- Address is programmable in EEPROM
- Address can be programmed when installed
- Key lock or hex key lock models available
- Enclosed switch with glass rod (included)
- Terminals accept up to 14AWG wire
- Surface mount back box available
- ADA compliant (except LP models)

Specifications subject to change without notice.

SPECIFICATIONS	
Operating Voltage (SLC)	17~41 VDC
Average Current Consumption	550uA (Typical) 660uA (Alarm)
Ambient Temperature	32°F (0 °C) ~ 120°F (49°C)
Maximum Humidity	90% RH, non-condensing
Dimensions	3.4"W x 4.8"H x 2.0"D
Mounting	Single gang or 4" square electrical box

MODEL DESCRIPTION	
DCP-AMS	Single Action Hex Key Lock
DCP-AMS-LP	Dual Action Hex Key Lock
DCP-AMS-KL	Single Action Key Lock
DCP-AMS-KL-LP	Dual Action Key Lock

DESCRIPTION

The DCP-AMS are the Hochiki America series of addressable manual pull stations that provide a fast and practical means of manually initiating a fire alarm signal. Both single action and dual action manual pull stations are available. Resetting of the pull station requires either a Cat 30 key or a 1/8" hex key (depending upon the model used).

An alarm condition is actuated by pulling down on the handle of the DCP-AMS and DCP-AMS-KL single action models. On the dual action models DCP-AMS-LP and DCP-AMS-KL-LP the Lift and Pull cover must be lifted before pulling down on the pull station handle. Once the pull station is activated, the handle cannot be put back into a normal standby condition without using the key operated reset feature.

The DCP-AMS series is electronically addressable and includes a bi-colored status LED. The LED blinks green indicating normal communication with the DCP compatible SLC loop. When an alarm condition is actuated by pulling the handle, the LED will latch Red to indicate the alarm condition.

PRODUCT LISTINGS

SIGNALING
UL LISTED S6512
FM APPROVED 3033215
California State Fire Marshal 7150-0410:169

Continued on back.

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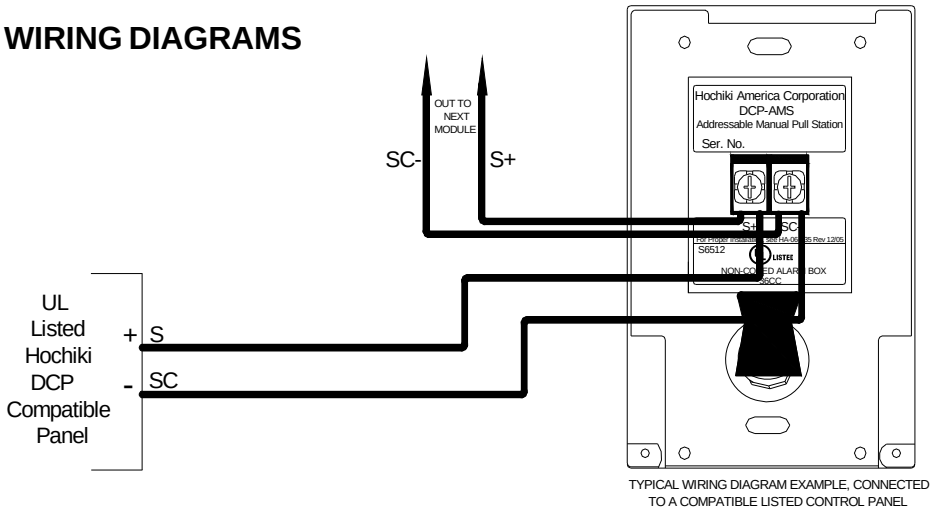
ENGINEERING SPECIFICATIONS

Manual pull stations shall be Hochiki addressable AMS-series single or dual action models, DCP-AMS, DCP-AMS-KL, DCP-AMS-LP, or DCP-AMS-KL-LP. Models shall be made of 14 AWG CRS and painted with Red enamel. The words Fire Alarm shall be in a contrasting color and be embossed text 1/2" tall. The electronics shall be fully integrated into the manual pull station requiring only connection to the SLC loop of the control panel. Programming of the manual pull station address must be possible with the manual pull station fully installed.

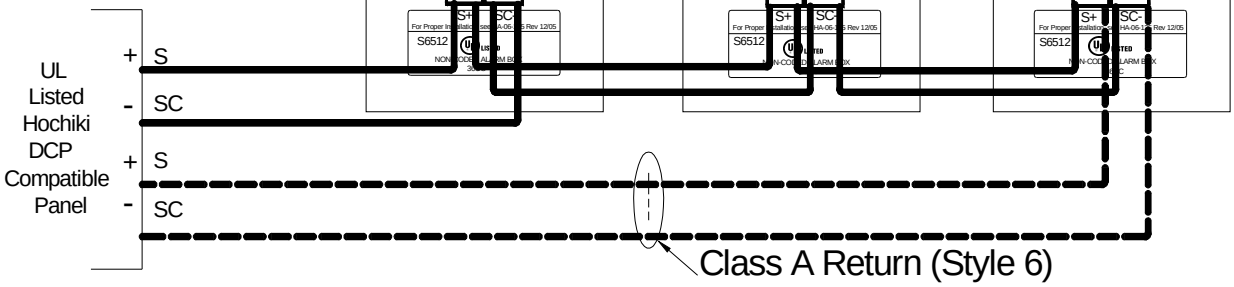
Manual pull stations shall be Underwriters Laboratories Inc. Listed, CSFM Approved, and be installed within the limits defined in the Americans With Disabilities Act.

WIRING DIAGRAMS

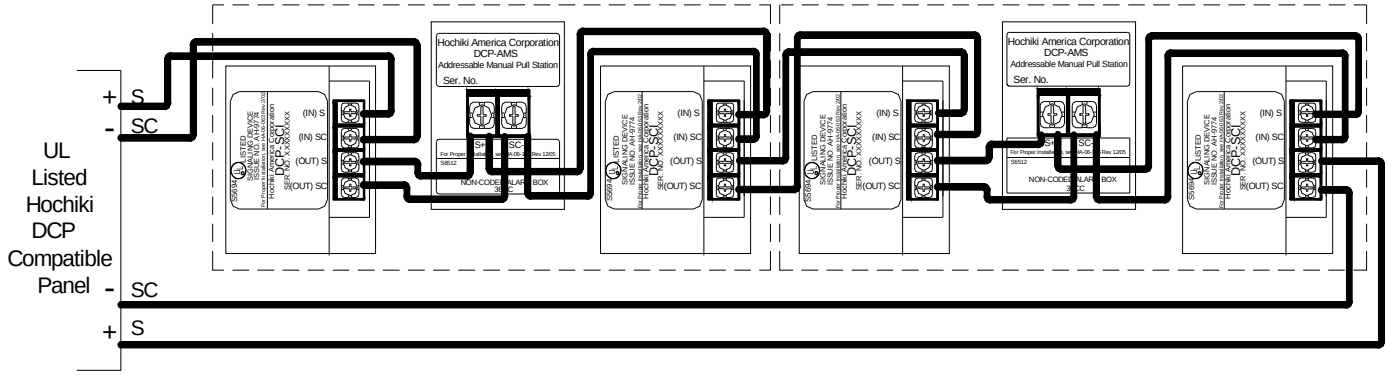


TYPICAL WIRING DIAGRAM EXAMPLE, CONNECTED TO A COMPATIBLE LISTED CONTROL PANEL

Class B (Style 4)



Class A (Style 7)



STI STOPPER II®

STI-1100

PRODUCT OVERVIEW

This protective cover has been helping to stop false fire alarms around the world for more than 35 years, without restricting legitimate alarms. All models offer excellent protection against physical damage (both accidental and intentional) and several against severe environments both inside and out. It is ideal for schools, colleges, hospitals, nursing homes, stores, hotels and public buildings of almost every kind where there is a threat of false alarms.

HOW IT WORKS

Stopper II consists of a clear, tamperproof, tough polycarbonate shield and frame, but the line includes models with the option of a piezo horn, spacer, Form “C” dry relay contact and gaskets. The cover accommodates most manual pull stations. When the Stopper II with horn is lifted to gain access to the protected alarm, a piercing self-contained 95 or 105 dB warning horn (at one foot) sounds. Immediate attention is drawn to the area and a prankster will either run or be caught. The cover is connected to the frame by a cable. When the cover is lifted, it drops off of the frame and a horn will sound (models with horn) until the cover is snapped back onto the frame or for the life of the battery.

KEY FEATURES

General Information

- Proven effective for more than 35 years in helping stop false fire alarms without restricting legitimate alarms.
- Can be used as a guard against physical damage to a manual pull station, with or without the optional warning horn.
- Three year guarantee against breakage of polycarbonate in normal use (one year on electro mechanical and electronic components).

Design

- Larger sizes and surface mounted pull stations accommodated with STI-3100 conduit spacer.
- Weather models have closed cell gaskets.
- The Stopper II design is a registered trademark of Safety Technology International, Inc.

Construction

- UL Listed to U.S. and Canadian safety standards (also for custom labeling).

Installation

- When covering a pull station outside, UL requires stations to be listed for outdoor use.
- Typical working properties of polycarbonate are -40° to 250°F (-40° to 121°C).

Electronics

- Power source is a 9V DC alkaline battery included on standard Stopper II (remote powered unit available).

Options

- Optional horn has a choice of 95 or 105 dB at one foot.
- Standard red units have “In Case of Fire...” label unless specified with “no label” or “custom label” (extra charge for custom label).

STI Stopper II®

Dimensions and Technical Information

MODELS AVAILABLE

Stopper II® Models Indoor Use

STI-1100*	With horn for flush mount
STI-1130*	With horn and spacer
STI-1200*	Without horn flush mount
STI-1230*	Without horn with spacer

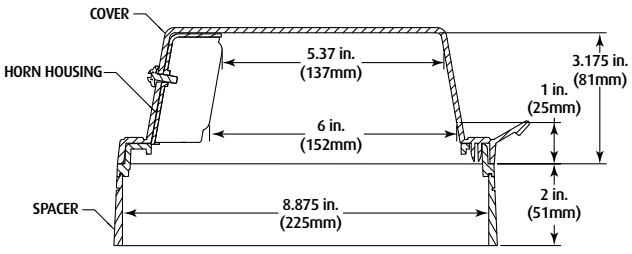
Weather Stopper® with gaskets (Indoor/Outdoor rated)

STI-1150*	Stopper II with horn flush mount
STI-1155*	Stopper II with horn and spacer
STI-1250*	STI-1200 flush mount and gasket
STI-3150*	STI-1200 with spacer and gaskets

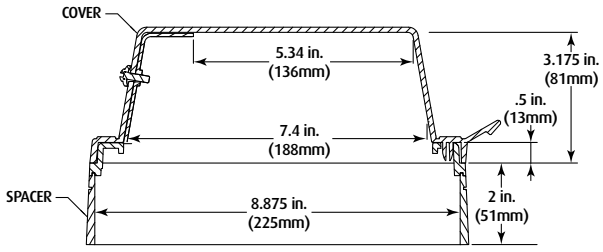
Accessories

KIT-316	Louvers for STI-3100
KIT-H19015	Two 3/16" Allen wrenches
STI-1102	Replacement horn for cover with alarm
STI-1280	Backplate
STI-3002	Weather gasket
STI-3003	Conduit gasket
STI-3004	Rigid conduit gasket
STI-3100	2" conduit spacer with ½" conduit entry
STI-3104	2" conduit spacer with ¾" conduit entry (includes one ¾" conduit entry gasket)

*** Add -NR for no label on horn housing**
Add -CR for custom label on horn housing
Add -FR for French labeling
Add -ES for Spanish labeling



SIDE VIEW
MODELS WITH HORN (STI-1100 Series)



SIDE VIEW
MODELS WITHOUT HORN (STI-3150 Series)

APPROVALS & WARRANTY

TESTING

It has been tested and approved or listed by:

- UL/cUL Listed No. S2466
- For fire alarm applications, UL38 requires outdoor listed stations for outdoor use
- State of California (obtain local fire marshal approval)
- MEA 49-00-E (STI-1200)
- Flush models ADA Compliant. Surface models ADA Compliant for operation (UL Certified No. S2466)
- Weather Stopper® versions designed to meet the requirements of IP54.
- The indoor/outdoor rated station covers, when mounted on a smooth surface, provide a rain tight seal similar to a 3R enclosure rating.

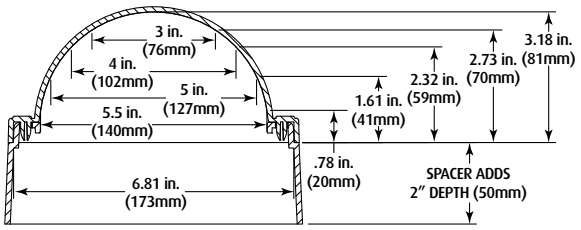
WARRANTY

Three year guarantee against breakage of polycarbonate in normal use (one year on electro mechanical and electronic components).

IMPORTANT NOTICE

Stopper II "FIRE" models are intended to be used in areas where the incidence of false fire alarms from manual pull stations is high or has proven to be a serious problem. Any disadvantage of this device is more than balanced when one considers the consequences of false fire alarms, especially if fire service personnel and equipment are responding to a false fire alarm when they are needed for a real fire somewhere else. Add to this the disruption to the facility when false alarms occur. If you have, or may have, a problem with false fire alarms or physical/weather damage to your fire alarm activation devices, the Stopper II could prove invaluable.

*WARNING: ⚠ For RC models: UL Listing does not permit relay contacts to connect to the fire alarm or a life safety function. The power supply for horns, according to UL Listing, cannot be connected to a UL Listed fire alarm system. For electrical specifications see install book. RC models contain one set of Form "C" dry contacts. Contacts rated 30 VAC/VDC 1 amp.



ALL MODELS END VIEW

EXTERNAL DIMENSIONS:

- Flush 7.2 W x 10.2 H x 3.3 D in. (183x259x84mm)
- Surface 7.2 W x 10.2 H x 5.5 D in. (183x259x140mm)

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Subject to change without notice. 10/17

ALN-V PHOTOELECTRIC SMOKE SENSOR

STANDARD FEATURES

- Low profile - only 2.00" high, including base
- Simple and reliable device addressing
- Automatic compensation for sensor contamination
- Built-in fire test feature
- Uses the noise-immune Digital Communication Protocol (DCP), which utilizes interrupts for fast response to fires
- Two built-in power/alarm LEDs
- Programmable non-polling LEDs
- Non-directional smoke chamber
- Vandal resistant security locking feature

SPECIFICATIONS

Operating Voltage	24 - 41 VDC
Standby Current	450µA
Alarm Current	540µA
Transmission Method	DCP - *Digital Communication Protocol*
Maximum Humidity	95% RH Non-Condensing
Ambient Operating Temperature	32°F to 120°F (0°C to 49°C)
Sensitivity Range	0.7-4.0%/FT@300FPM
Duct Application -	0.7-3.86%/FT@2000FPM
Duct Application -	0.7-2.65%/FT@4000FPM
Air Velocity Range	0-4000 fpm
Color & Case Material	Bone - ABS Blend
Weight	3.4oz
Bases	YBN-NSA-4, HSB-NSA-6, ASB, SCI-B4, SCI-B6, ASBL

APPLICATIONS

The Hochiki ALN-V Photoelectric Smoke Sensor is particularly suited to detecting optically dense smoke typical of fires involving materials such as soft furnishings, plastic, foam or other similar materials which tend to smolder and produce large visible smoke particles. Hochiki's unique design allows fast response to flaming fires as well as smoldering fires while preventing false alarms.

OPERATION

The detection chamber consists of a light-emitting diode (LED) and photodiode arrangement. The chamber is designed such that light emitted by the LED cannot normally reach the photo diode. In the event of fire, particles of smoke enter the chamber and scatter the light. As the smoke level increases, the scattering effect increases, causing more light to hit the photodiode. The chamber contains a unique baffle design which allows smoke to enter the chamber while preventing external light from affecting the photodiode. The photodiode input level is sampled to sense smoke density.

When the smoke density exceeds a preset threshold the sensor transmits an interrupt to the fire control panel indicating a fire condition. The fire alarm control panel can adjust the sensor threshold to compensate for contamination.

Up to 127 devices are permitted on each SLC loop. A sensor address is set by a hand-held programming unit. The sensor mounts to an electronics-free base and incorporates a locking mechanism for secure installation. The base provides mounting slots, terminals for field wiring and a third contact for a remote indicator/LED. The sensor incorporates dual LEDs for easy viewing of sensor status.

SENSOR SPACING

Smoke sensor spacing shall be in compliance with NFPA 72. For smooth ceilings and in the absence of specific performance-based design criteria, the distance between smoke sensors shall not exceed a nominal spacing of 30 ft. (9.1m) **or** all points on the ceiling shall have a sensor within a distance equal to or less than 0.7 times the nominal 30 ft. (9.1m) spacing. Sensors shall be located within a distance of one-half the nominal spacing, measured at right angles from all walls or partitions extending upward to within the top 15 percent of the ceiling height. For additional instructions see NFPA 72.

PRODUCT LISTINGS

SIGNALING UL LISTED S1383

FM APPROVED 3054858

California State Fire Marshal 7272-0410:0204

Specifications subject to change without notice.

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ISO 9001:2008 REGISTERED

Assembled in the USA

Find latest revision at **www.hochiki.com**

ALN-V PHOTOELECTRIC SMOKE SENSOR

ENGINEERING SPECIFICATIONS

The contractor shall furnish and install Hochiki's ALN-V (Photoelectric Sensor) as indicated on the plans. The photoelectric sensor head and twist lock base is UL Listed and it's compatible with an UL Listed fire alarm control panel.

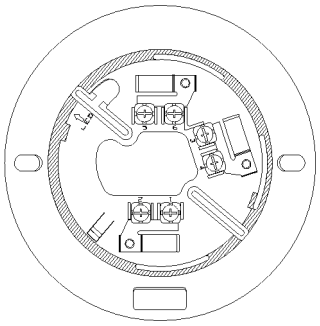
The base permits direct interchange with the Hochiki AIE-EA ionization type smoke sensor, ALG-V, ALK-V/ALK-V2 photoelectric type smoke sensors, ATG-EA, ATJ-EA heat sensors and the ACA-V, ACC-V multi-criteria sensors.

The sensitivity of the sensor is capable of being measured by the control panel.

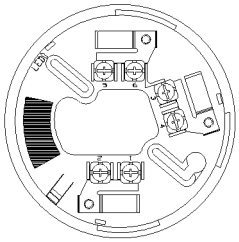
The vandal-resistant, security locking feature shall be used in those areas as indicated on the drawing. The locking feature is optional and can be implemented when required.

BASES

The Hochiki HSB-NSA-6 and the YBN-NSA-4 mounting bases are electronics free and are a simple rugged design with screw terminals for wiring connections. A common mounting base allows sensor interchange and maintains loop continuity when sensors are removed. A simple anti-tamper head locking system is provided which is enabled by removing a small plastic tab on the back of the sensor. Once locked, the head can be removed using a small diameter screwdriver.

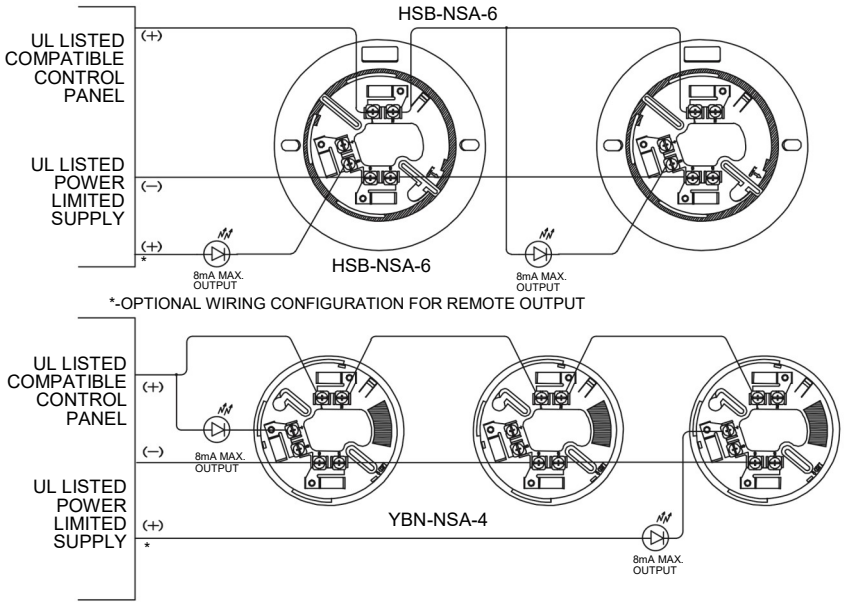


HSB-NSA-6 Base



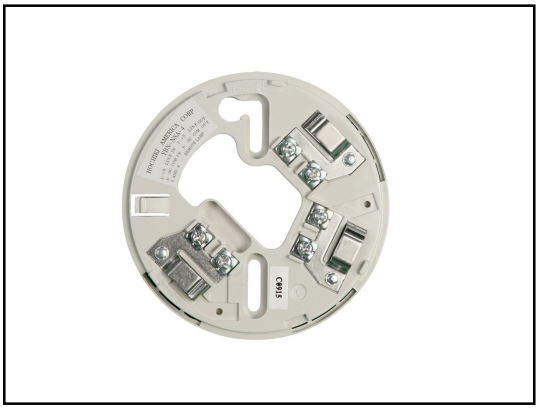
YBN-NSA-4 Base

TYPICAL WIRING DIAGRAMS



NOTE: Fire alarm control panel compatibility is required for DCP products. DCP communications protocol allows system components (DCP sensors AIE-EA, ALG-V, ACA-V, ACC-V, ALK-V, ALN-V, ATJ-EA and ATG-EA, bases and modules)

ANALOG SENSOR BASES



YBN-NSA-4

HSB-NSA-6

SPECIFICATIONS	
Security Feature	Plastic Tamper-lock
Color	Bone PC / ABS Blend
Dimensions	HSB-NSA-6: 6 inches YBN-NSA-4: 4 inches
Mounting Box	HSB-NSA-6: 3" & 4" Octagon & Square YBN-NSA-4: 3" Octagon
Compatible Detectors	ALG-V, ALK-V, ALK-D, AIE-EA, ATG-EA, ATJ-EA, ALN-V, ACA-V

STANDARD FEATURES

- UL & ULC Listed
- Designed for use with all NS analog sensors
- Available in 4 and 6 inch models
- Contains a security locking tab for tamper protection

PRODUCT LISTINGS

SIGNALING UL LISTED S1383

ULC CS463

California State Fire Marshal 7300-0410:132

MEA 284-91-E Vol. IV

FM APPROVED 3022559

APPLICATION

The HOCHIKI America YBN-NSA-4 and the HSB-NSA-6 mounting bases are electronics free and contain a simple rugged design with screw terminals for wiring connections. A common mounting base allows sensor interchange and maintains loop continuity when sensors are removed. A simple anti-tamper head locking system is provided which is enabled by removing a small plastic tab on the back of the sensor. Once locked, the head can only be removed using a small diameter screw driver.

OPERATION

The YBN-NSA-4 and HSB-NSA-6 are designed specifically for use with the Hochiki NS Analog models AIE-EA, ALG-V, ALK-V, ALK-D, ALN-V, ATG-EA, ATJ-EA and ACA-V.

The YBN-NSA-4 and HSB-NSA-6 common mounting bases allows for complete compatibility for all of the Hochiki NS Series Analog sensors. The bases are lightweight and very thin, providing a low profile once installed. The solder-less screw terminals enable quick and easy wiring connections.

Continued on back.

Specifications subject to change without notice.

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Technical Support: 800/845-6692 or technicalsupport@hochiki.com

Find latest revision at **www.hochiki.com**

Assembled in the USA

ISO 9001:2008 REGISTERED

F0013 10/2014

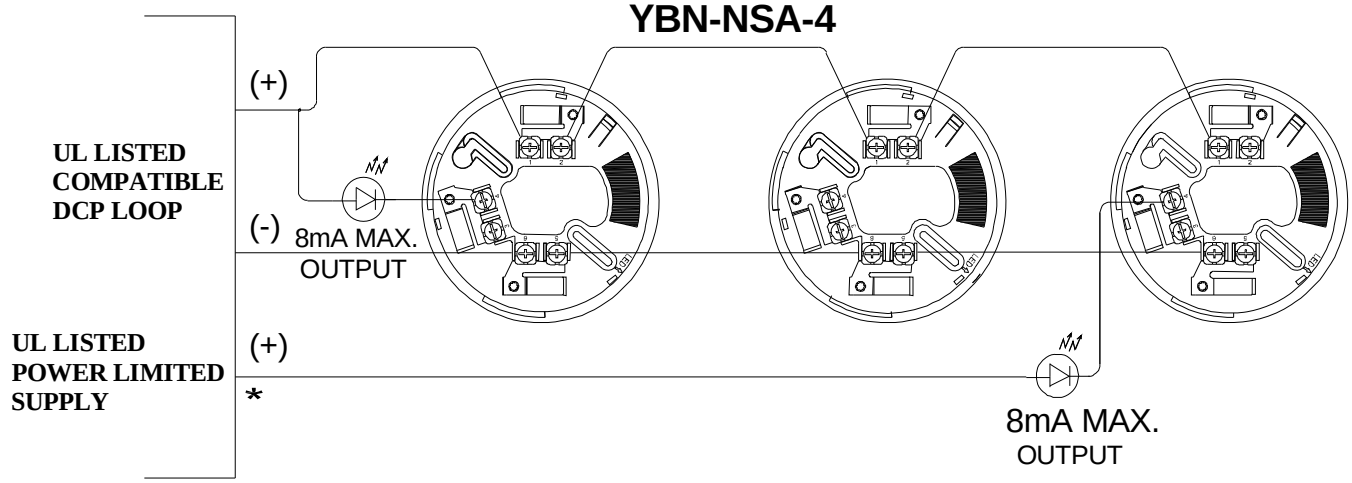
ENGINEERING SPECIFICATIONS

The base shall permit direct interchange with the HOCHIKI America AIE-EA Ionization type Smoke Sensor, ALG-V, ALK-V Photoelectric Smoke Sensor, ALK-D Photoelectric Smoke Sensor for in-duct use, ATG-EA Heat Sensor, and the ACA-V Multi-criteria Sensor.

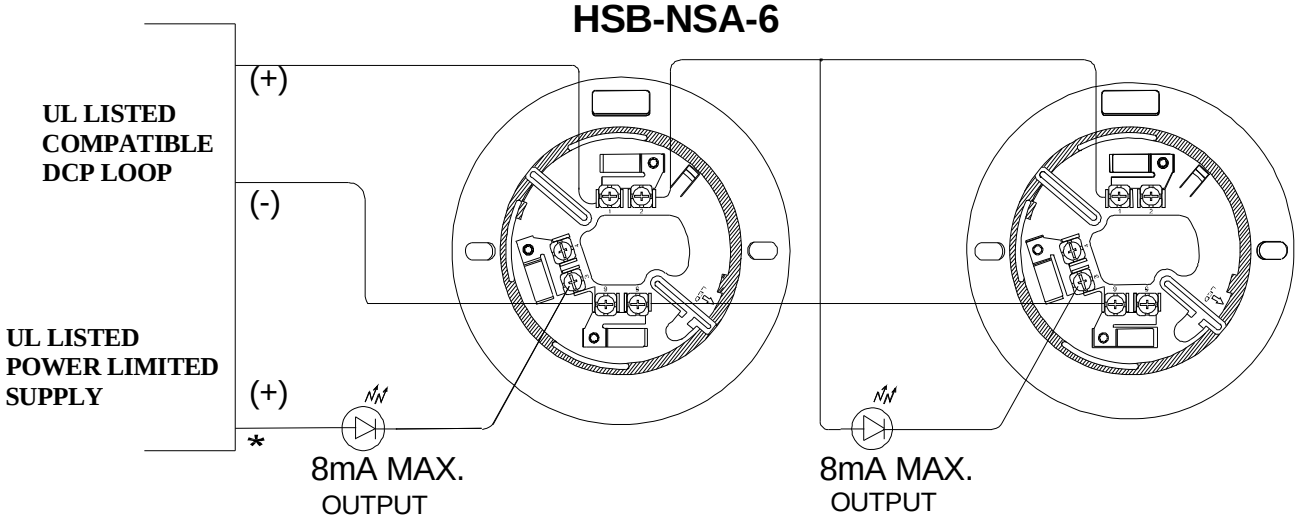
The vandal-resistant, security locking feature shall be used in those areas as indicated on the drawing. The locking feature shall be optional and can be implemented when required.

TYPICAL WIRING DIAGRAMS

YBN-NSA-4



HSB-NSA-6

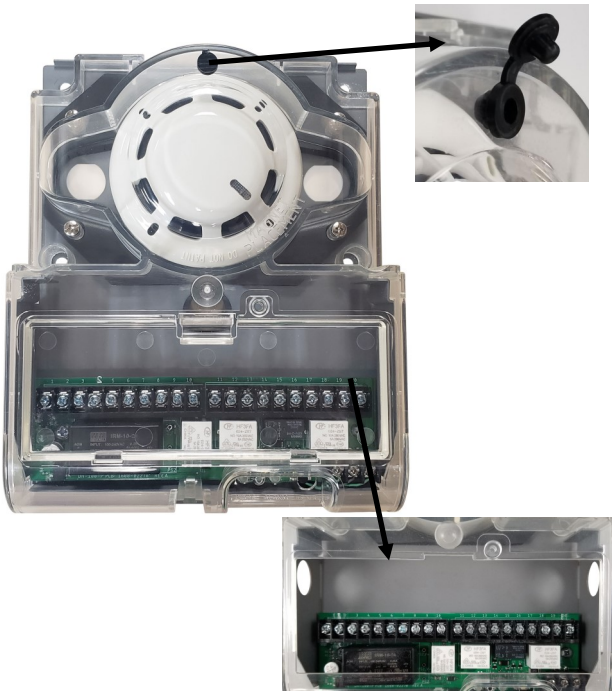


*** - OPTIONAL WIRING CONFIGURATIONS FOR REMOTE OUTPUT**

NOTE: Fire alarm control panel compatibility is required for DCP products.
State-of-the-art communications protocol, DCP, allows system components (DCP sensors AIE-EA, ALG-V, ALK-V, ALK-D, ALN-V, ACA-V, ATJ-EA and ATG-EA, bases and modules), to be used concurrently in a system's signaling line circuit.

DH-100-P - Conventional Duct Smoke Detector

Smoke port for testing without cover removal



Wiring Access hatch for wiring maintenance without cover removal

STANDARD FEATURES

- New Rugged Durable Housing
- Easy Smoke Testing Port
- Removable Terminal Cover
- Durable Steel Base, Silicone Gaskets, Polycarbonate Housing
- Multi-Voltage Compatibility
- Installs quickly and easily
- No screens or filters to clean
- UL 268A Listed

PRODUCT DECRIPTION

The DH-100-P is designed and built to meet all local requirements, as well as the NFPA regulations regarding duct smoke detectors. The DH-100-P is provided with a local test button, and output terminals for remote status indicators and test switches. Air sampling is accomplished by two tubes which protrude into the duct. The 7.5" exhaust tube is supplied with the duct smoke detector unit. Once the duct width has been determined the air intake sampling tubes must be ordered. Sampling tubes are supplied in three standard lengths 2.5ft., 5 ft. and 10ft. and cut to size to fit the duct.

ELECTRICAL INSTALLATION

Wiring must conform to applicable local codes, ordinances and regulations covering these types of devices. Wire the detectors according to the engineering drawings for the particular job requirements. These detectors are not intended for open area protection, nor should they be used for open air protection. Refer to NFPA 90A and NFPA 72 for general and additional information on Duct Smoke Detectors concerning operation and installation. Terminals are suitable for up to #14 gauge wire.

Specifications subject to change without notice.

APPLICATION

The HOCHIKI AMERICA DH-100-P 4-wire duct smoke detector provides early detection of smoke and products of combustion present in air moving through HVAC ducts in Commercial, Industrial and Residential applications. The DH-100-P is designed to prevent the recirculation of smoke in areas by the air handling systems, fans and blowers. Complete systems may be shut down in the event of smoke detection. The HOCHIKI AMERICA DH-100-P operates on 120VAC, 240VAC, 24VAC, or 24VDC and has no compatibility restrictions.

PRODUCT LISTINGS

SIGNALING UL LISTED S1383

California State Fire Marshal PENDING

Hochiki America Corporation
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Phone: 714-522-2246 Fax: 714-522-2268
Technical Support: 800-845-6692 or technicalsupport@hochiki.com

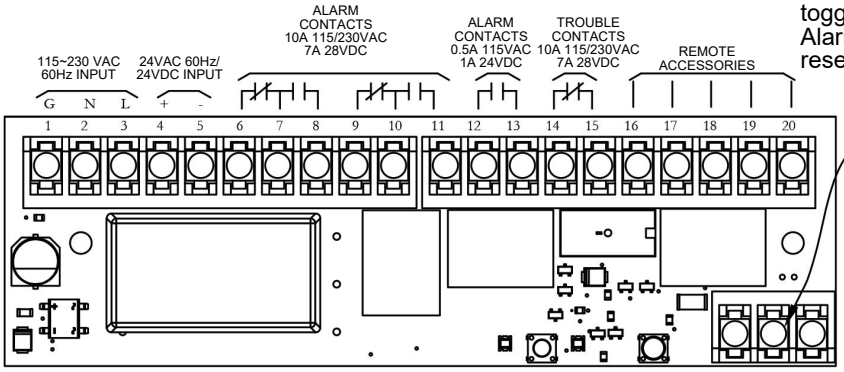
SPECIFICATIONS

Duct Detector Model #	**DH-100-P**
Detector Head Model	**SOC-24DH**
Input Voltage / Current (includes SOC-24DH, and Remote Accessories)	**Alarm** 24VDC 78mA | 24VAC 370mA | 115AC 48mA | 230VAC 31mA **Normal Standby** 24VDC 20mA | 24VAC 263mA | 115AC 15mA | 230VAC 10mA
Operating Temperature Range	**Inside Duct** 0°C (32°F) ~ 38°C (100°F) **Housing Ambient** 0°C (32°F) ~ 49°C (120°F)
Detector Head Type	**Conventional Photoelectric**
Standby Current	**20mA @ 24VDC**
Alarm Current	**78mA @ 24VDC**
Alarm Contacts	**2 form C rated 10A @ 115/230 VAC 7A @ 28VDC**
Test Method	**Test Switch or Smoke Port or Magnet**
Air Velocity	**1000 to 4000 ft/min.**
Sensitivity	**1.36-2.33%/FT @ 4000FPM**
Visual Indicator (Status LED)	**PILOT:** Green - Normal | Off - Shutoff/Detector Missing **ALARM:** Off - Normal | Yellow - Check Voltage / Detector Head | Red - Alarm
Storage Temperature Range	**-30°C (-22°F) ~ 70°C (158°F)**
Ambient Temperature	**0°C (32°F) to 38°C (100°F)**
Humidity	**10% to 93% Relative Humidity (non-condensing)**
Maximum Relative Humidity	**93% Relative Humidity (non-condensing)**
Environment	**Indoor dry use only, Mount to Duct Side or Top**
Housing Material	**18 G.A. steel backbox, clear plastic cover**
Finish	**Grey Paint**
Dimensions	**7.5"W x 9.5"H x 2.5"D**
Weight	**Approximately 3.0lb**
Sampling Tubes	**2.5ft., 5ft. or 10ft.**

Specifications subject to change without notice.

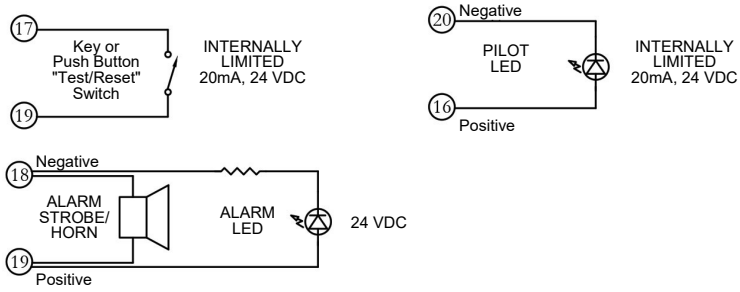
WIRING DIAGRAMS

All contacts are shown in normal supervisory condition. Alarm contacts will toggle during alarm or test switch activation. Trouble contacts will toggle to trouble condition if detector is removed. Alarm contacts must be reset by pressing the reset switch after activation.



FACTORY WIRED TERMINALS. DO NOT ADJUST.

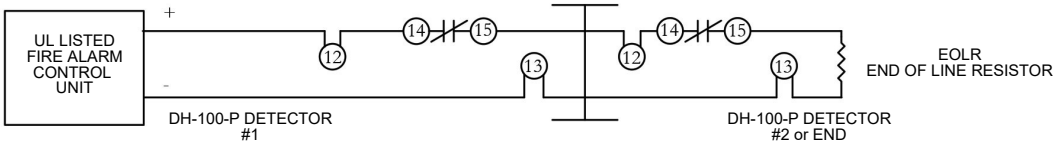
REMOTE ACCESSORY WIRING



COMPATIBLE REMOTE ACCESSORIES

Model Number	Product Description
MS-RA	Remote Alarm LED
MS-RA/P	Remote Alarm LED & Pilot LED
MS-RA/R	Remote Alarm LED & Push Button Test/Reset Switch
MS-RA/P/R	Remote Alarm LED, Pilot LED, & Push Button Test/Reset Switch
MS-KA/R	Remote Alarm LED & Key-Operated Test/Reset Switch
MS-KA/P/R	Remote Alarm LED, Pilot LED, & Key-Operated Test/Reset Switch

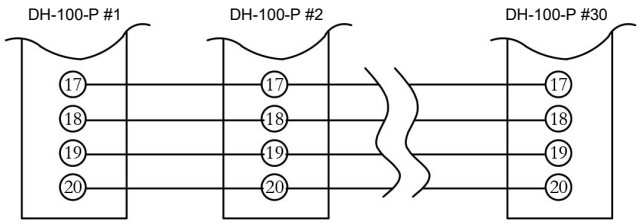
FIRE ALARM CONTROL PANEL WIRING



COMMON FUNCTION WIRING

Up to 30 units may be interconnected for all alarm relays to operate with a single alarm. Terminals 17 and 19 are optional

REMOTE COMMON TEST/RESET
REMOTE COMMON ALARM
REMOTE COMMON AUX POWER
COMMON AUX GROUND



* Individual Remote Pilot LED's must be installed to monitor detector head or power source removal for each unit.

DIMM - DUAL INPUT MONITOR MODULE

SPECIFICATIONS	
Supply Voltage (S-SC)	25.3 ~ 39 VDC
Average Current Consumption	600µA (Typical) 720µA (Alarm)
Programmable Inputs	2 Independent Monitoring Inputs
EOL Device	22K ohms Resistor
Max. Quantity Per Loop	127
Dimensions	4.2"W x 4.7"H x 1.4"D
Operating Temperature	32°F (0°C) ~ 120°F (49°C)
Mounting	4" square electrical box
Relative Humidity	90% RH Non-Condensing

STANDARD FEATURES

- UL 864 9th Edition Listed
- Fast, reliable contact monitoring utilizing the Hochiki **DCP** (Digital Communications Protocol)
- 127 devices can be used per **DCP** loop
- Bi-colored indicating LED provides module status
- Dual input contact monitor
- Can be programmed to monitor Normally Open (NO) or Normally Closed (NC) contacts
- Operates on Class A or Class B SLC loop
- Accepts up to 14 AWG wire

DESCRIPTION

The Hochiki Dual Input Monitor Module (DIMM) is designed for use on a UL listed Fire Alarm Control Panel. It provides two independent contact monitoring circuits while only utilizing one address on the SLC loop. Up to 127 devices can be placed on a single SLC loop. The device address is uniquely stored on an onboard EEPROM. The module can be programmed to monitor Normally Open (NO) or Normally Closed (NC) contact fire alarm and supervisory devices. The interrupt driven Digital Communication Protocol (DCP) combines maximum communication reliability and fast response to emergency conditions. The module has a single bi-colored LED to indicate device status. It fits into a standard 4" square or double gang electrical back box.

PRODUCT LISTINGS

SIGNALING UL LISTED S5694

California State Fire Marshal 7300-0410:150

FM APPROVED 3033215

Specifications subject to change without notice.

Continued on back.

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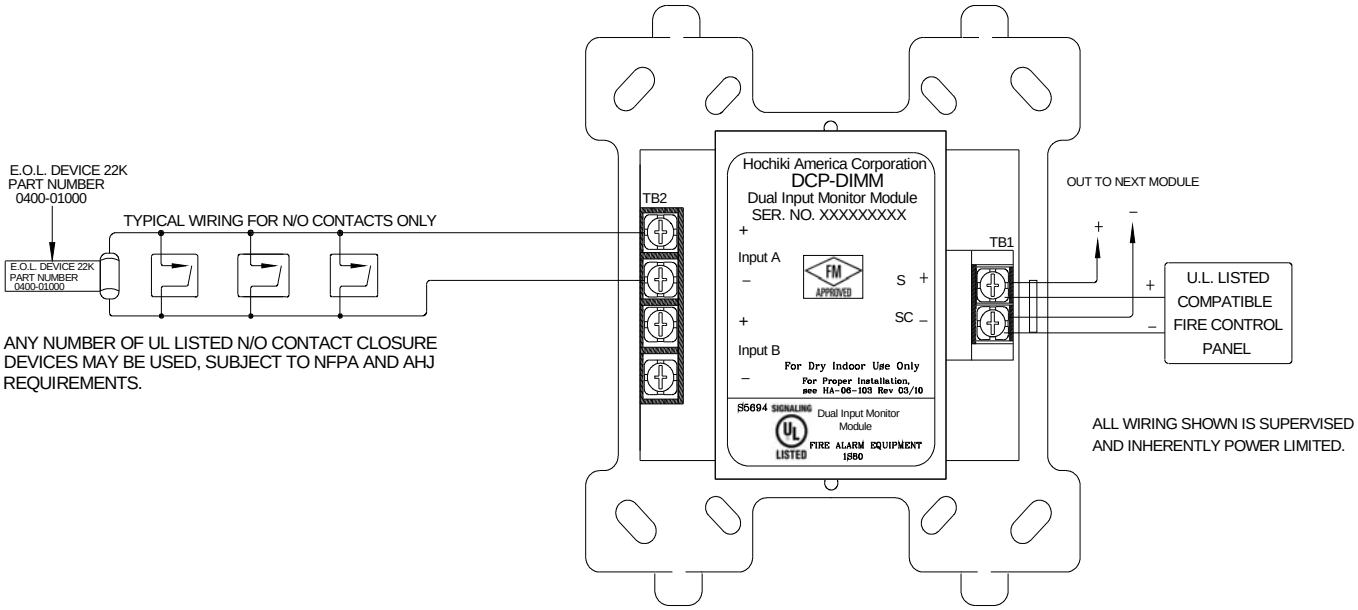
ENGINEERING SPECIFICATIONS

The contractor shall furnish and install where indicated on the plans, Hochiki DCP-DIMM addressable contact monitoring modules. The modules shall be UL listed and compatible with the Hochiki Digital Communications Protocol (DCP) supporting control panel loops. The device address shall be electrically programmable and stored in EEPROM. The contact module must be suitable for mounting in a standard 4" square electrical box or double gang. The contact module must provide a bi-colored LED to indicate device status.

Back Side of a DCP-DIMM

WIRING DIAGRAM



DCP-FRCMA/-I - FAST RESPONSE CONTACT MODULE

SPECIFICATIONS	
Supply Voltage (S-SC)	25.3 ~ 39 VDC
Average Current Consumption	630μA (Typical) 6.3mA (Alarm)
SCI On Resistance	40m ohm Max. (Normal Condition)
SCI Fault Detection Threshold	12 volts (Typical)
SCI Isolation Current (Short Circuit Condition)	10mA (Typical)
Maximum Quantity Per Loop	127
Dimensions	4.2"W x 4.7"H x 1.4"D
Ambient Temperature	32°F (0°C) ~ 120°F (49°C)
Mounting	4" square electrical box
Relative Humidity	90% RH Non-condensing

STANDARD FEATURES

- Single input contact monitor
- Fast, reliable contact monitoring utilizing the Hochiki DCP (Digital Communications Protocol)
- Two different mounting configurations
- 127 devices can be used per DCP loop
- Bi-colored indicating LED provides module status (Both Models)
- Yellow LED indicates a short circuit condition (FRCMA-I only)
- Can be programmed to monitor Normally Open (NO) or Normally Closed (NC) contacts in Class B
- Operates on Class A or Class B SLC loop
- Accepts up to 14 AWG wire
- UL 864 Listed

PRODUCT LISTINGS

SIGNALING UL LISTED S5694

California State Fire Marshal 7300-0410:150

FM APPROVED 3036830

Specifications subject to change without notice.

DESCRIPTION

The Hochiki FRCMA/-I Fast Response Contact Monitoring Modules are designed to be used with pull stations, water flow switches, and other applications requiring the monitoring of dry contact alarm initiating devices. The interrupt driven Digital Communications Protocol (DCP) combines maximum communication reliability and fast response to emergency conditions. Two different mounting configurations are provided to meet a wide range of applications. The FRCMA/-I contact monitoring module does not require a separate 24 VDC power source.

Each addressable contact monitoring module is programmed with its own unique Signaling Line Circuit (SLC) loop address. The device address is electrically programmable and stored on onboard EEPROM. Up to 127 devices can be placed on the Hochiki DCP SLC loop. The module supervises the wiring to the contact with an End Of Line (EOL) resistor in Class B mode. It can be programmed to monitor Normally Open (NO) or Normally Closed (NC) contacts. If a fault condition occurs in the wiring, the module sends a trouble status signal to the fire alarm control panel. When a change of status (contact changes state) is sensed by the FRCMA/-I, it sends an interrupt to the Fire Alarm Control Panel indicating that an alarm has occurred. FRCMA-I version has built-in integrated SCI circuitry. In the event of a short on the S-SC line, the SCI circuit will activate and its yellow LED indicator will be turned on steady and the module will report the short circuit condition to the Fire Control Panel.

Continued on back.

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ENGINEERING SPECIFICATIONS

The contractor shall furnish and install where indicated on the plans, addressable contact monitoring modules Hochiki DCP-FRCMA/-I. The modules shall be UL listed and compatible with the Fire alarm control panel. The device address shall be electrically programmable and stored in EEPROM.

The FRCMA/-I shall be supplied with a plastic face plate and shall be suitable for mounting to a 4" square or double gang electrical back box. The FRCMA/-I shall provide a monitor LED that is visible through the face plate. FRCMA-I shall provide a SCI LED that is visible through the face plate.

Back side of FRCMA

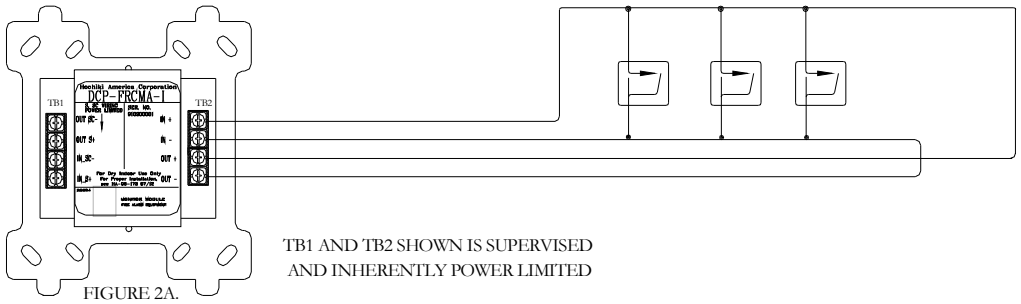
Back side of FRCMA-I

WIRING DIAGRAM

FRCMA/-I:

WIRING DIAGRAMS FOR CLASS A (STYLE D) WIRING

NOTE: CLASS A can only monitor N/O contacts

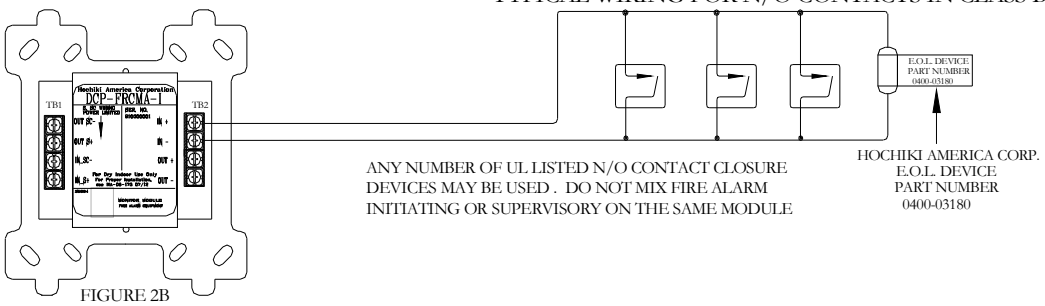


TB1 AND TB2 SHOWN IS SUPERVISED
AND INHERENTLY POWER LIMITED

FIGURE 2A.

WIRING DIAGRAMS FOR CLASS B (STYLE B) WIRING

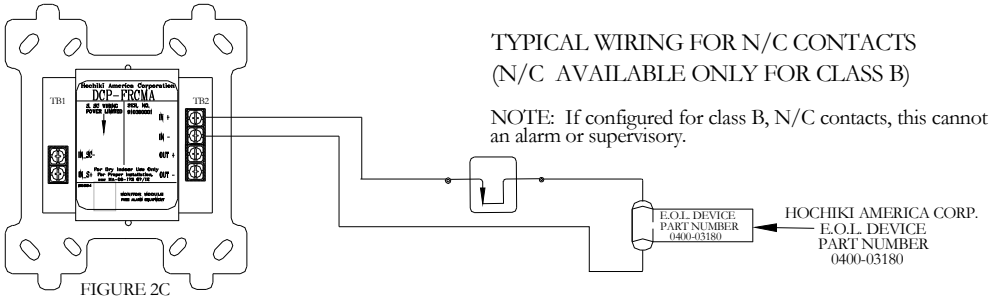
TYPICAL WIRING FOR N/O CONTACTS IN CLASS B



ANY NUMBER OF UL LISTED N/O CONTACT CLOSURE DEVICES MAY BE USED . DO NOT MIX FIRE ALARM INITIATING OR SUPERVISORY ON THE SAME MODULE

HOCHIKI AMERICA CORP.
E.O.L. DEVICE
PART NUMBER
0400-03180

FIGURE 2B



TYPICAL WIRING FOR N/C CONTACTS
(N/C AVAILABLE ONLY FOR CLASS B)

NOTE: If configured for class B, N/C contacts, this cannot be an alarm or supervisory.

FIGURE 2C

TB1 AND TB2 SHOWN IS SUPERVISED
AND INHERENTLY POWER LIMITED

DCP-SOM-A/-AI - CLASS A SUPERVISED OUTPUT MODULE

SPECIFICATIONS

Supply Voltage (S-SC)	25.3 ~ 39 VDC
Auxiliary Supply Voltage	24 VDC
Average Current Consumption SOM-AI - 420µA (Typical), SOM-A - 220µA (Typical) (on S-SC Line) Maximum 6mA: Red Alarm LED On	
Current Consumption on Auxiliary Power Lines	Typical 50µA
SCI On Resistance 40m ohm Max. (Normal Condition)	
SCI Fault Detection Threshold	12 volts (Typical)
SCI Isolation Current (Short Circuit Condition)	10mA (Typical)
Maximum Quantity Per Loop	127
Dimensions	4.2"W x 4.7"H x 1.4"D
Ambient Temperature	32°F (0°C) ~ 120°F (49°C)
Mounting	4" square electrical box
Maximum Output Current	2A@24VDC power limited
Relative Humidity	90% RH Non-condensing

STANDARD FEATURES

- Built-in SCI circuitry (SOM-AI only)
- Flexible application
- Quick response to emergency conditions
- Operation parameters are maintained by the module, and individual communication with the control system during emergency conditions is not required
- Contacts are rated 2.0 Amps @ 24VDC
- Programming is highly flexible providing 16 priority states plus zoning capability
- Programmed device output is turned off, silenced, or programmed to output the selected pattern
- UL 864 Listed

DESCRIPTION

The Class A Supervised Output Modules (DCP-SOM-A & SOM-AI) have been designed to provide application flexibility and quick response to emergency conditions. Flexibility is provided by a wide range of operating modes, including supporting multi-zone operations, and/or functions, up to 16 different modulation patterns and multi-state programming. The operating parameters for the DCP-SOM-A & -AI are maintained by the module and do not require individual communication with the control system during emergency conditions to operate. The control panel simply broadcasts system conditions on the Signaling Line Circuit (SLC) and the DCP-SOM-A & -AI modules do the rest based upon the custom configuration. Each DCP-SOM-A & -AI provides a single Class B or Class A circuit rated for 2.0 Amps @ 24 VDC. Each DCP-SOM-A & -AI also requires a 24 VDC power source in addition to the SLC.

PRODUCT LISTINGS

SIGNALING UL LISTED S5694

California State Fire Marshal 7300-0410:150

FM APPROVED 3036830

Specifications subject to change without notice.

Continued on back.

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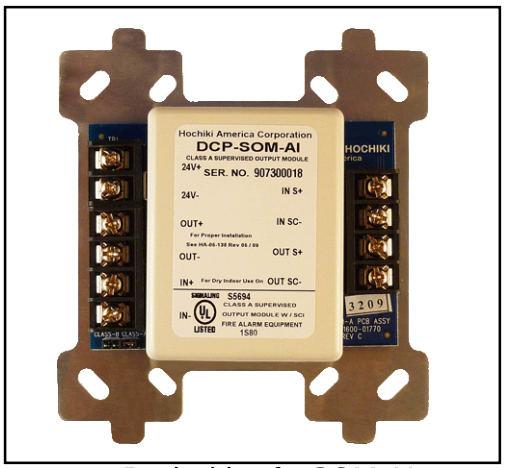
7051 Village Drive, Suite 100 Buena Park, CA 90621-2268
Phone: 714/522-2246 Fax: 714/522-2268
Technical Support: 800/845-6692 or technicalsupport@hochiki.com

ENGINEERING SPECIFICATIONS

The contractor shall furnish and install where indicated on the plans, addressable Class A Supervised Output Modules (DCP-SOM-A & -AI). The modules shall be UL listed and compatible with the fire alarm control panel. The device address shall be electrically programmable and stored in EEPROM. A bi-colored LED shall flash to indicate normal system communication .

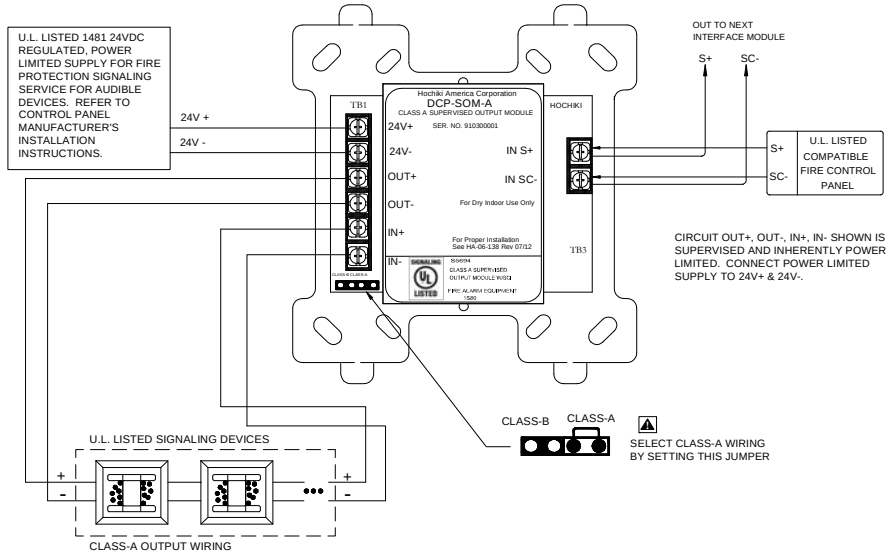
The DCP-SOM-A & -AI shall be supplied with a plastic cover and shall be suitable for mounting to a 4" square or double gang electrical back box. The DCP-SOM-A & -AI shall provide a monitor LED that is visible from outside the cover plate.

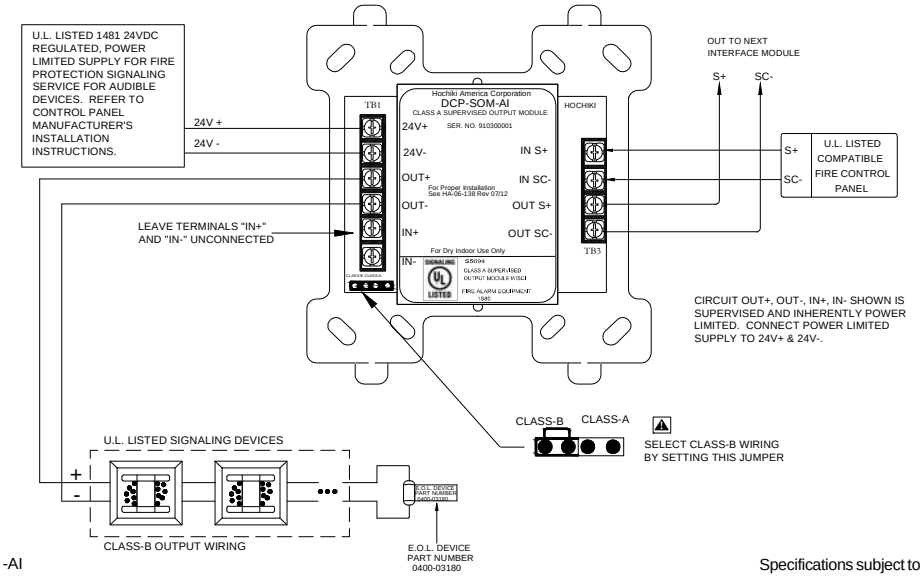


Back side of a SOM-AI

Back side of a SOM-A

WIRING DIAGRAM





DCP-R2ML/-I & DCP-R2MH/-I - DUAL RELAY MODULE

SPECIFICATIONS

Supply Voltage (S-SC)	25.3 ~ 39 VDC
Average Current Consumption	350µA (Typical) 405µA (Alarm)
Contacts R2ML R2MH	2 Independently Controlled Form C 2A @ 30VDC / 0.5A @ 120VAC 8A @ 30VDC / 4.8A @ 250VAC
SCI On Resistance	40m ohm Max. (Normal Condition)
SCI Fault Detection Threshold	12 volts (Typical)
SCI Isolation Current (Short Circuit Condition)	10mA (Typical)
Maximum Quantity Per Loop	127
Dimensions	4.2"W x 4.7"H x 1.4"D
Ambient Temperature	32°F (0°C) ~ 120°F (49°C)
Mounting	4" square electrical box
Relative Humidity	90% RH Non-condensing

STANDARD FEATURES

- Provides two independently configurable Form C contacts per address
- Contacts are rated as follow:
  R2ML: 2A @ 30 VDC / 0.5A @ 120 VAC
  R2MH: 8A @ 30VDC / 4.8A @ 250 VAC
- Up to127 devices can be used on each SLC loop
- Visible Bi-colored LED is software controlled. The LED can be latched on when activated. (For All Models)
- Yellow LED indicates a short circuit condition (R2ML-I & R2MH-I only)
- Operates on Class A or Class B SLC loop
- UL 864 Listed

DESCRIPTION

The Dual Relay Modules (R2ML/H Series) have been designed to provide flexible and quick response to emergency conditions. The R2ML/H Series allows independent control of two form C contacts for a variety of normally open and normally closed contact applications such as fan operation, elevator recall, door closure, and auxiliary notification.

Each R2ML/H Series module provides independent control of two Form C contacts while utilizing one SLC (Signaling Line Circuit) address. The R2ML/H Series modules have a highly configurable programming algorithm that allows the user to set up groups of devices (zoning) for simultaneous operation of multiple R2ML/H modules. The operating parameters are maintained by the module and do not require individual communication with the control panel during the emergency condition to operate. The control panel broadcasts the control command on the SLC loop and the R2ML/H Series modules do the rest based on their custom configuration. Since mechanically latching relays are used within the R2ML/H Series modules, a separate 24VDC power source is not required.

PRODUCT LISTINGS

SIGNALING UL LISTED S5694

FM APPROVED 3036830

California State Fire Marshal 7300-0410:150

Specifications subject to change without notice.

Continued on back.

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ISO 9001:2008 REGISTERED

Assembled in the USA

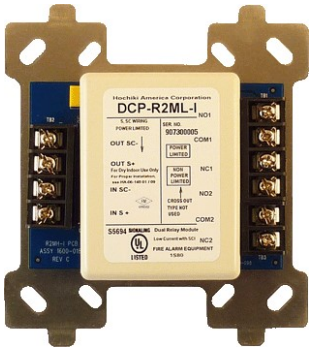
Find latest revision at **www.hochiki.com**

DCP-R2ML/-I & DCP-R2MH/-I - DUAL RELAY MODULE

ENGINEERING SPECIFICATIONS

The contractor shall furnish and install where indicated on the plans, the Hochiki DCP-R2ML/H Series addressable relay modules. The modules shall be UL listed compatible with Hochiki Digital Communications Protocol (DCP) supporting control panel loops. The relay module must provide two Form C dry contacts rated as follows: R2ML - 2A @ 30 VDC or 0.5A @ 120 VAC and R2MH - 8A @ 30VDC or 4.8A @ 250 VAC. The relay module must be suitable for mounting in a standard 4" square electrical box. The relay module must provide a bi-colored LED for indication of status. R2M-LI/-HI shall provide an SCI LED that is visible through the face plate.

Back side of DCP-R2ML



Back side of DCP-R2ML-I

WIRING DIAGRAM

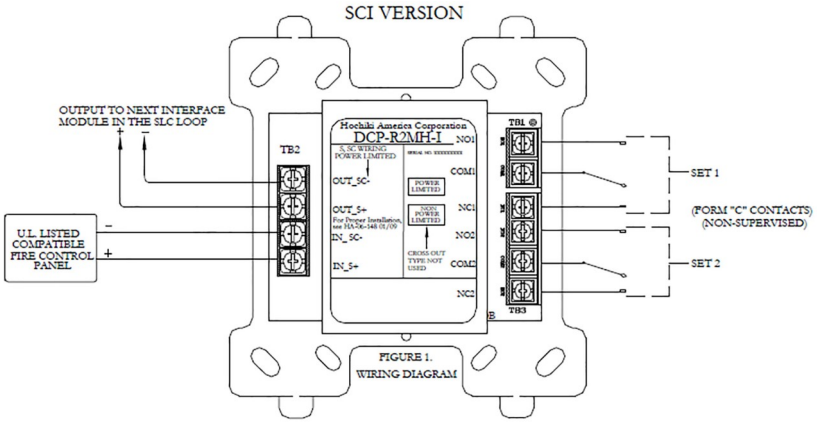


FIGURE 1.
WIRING DIAGRAM

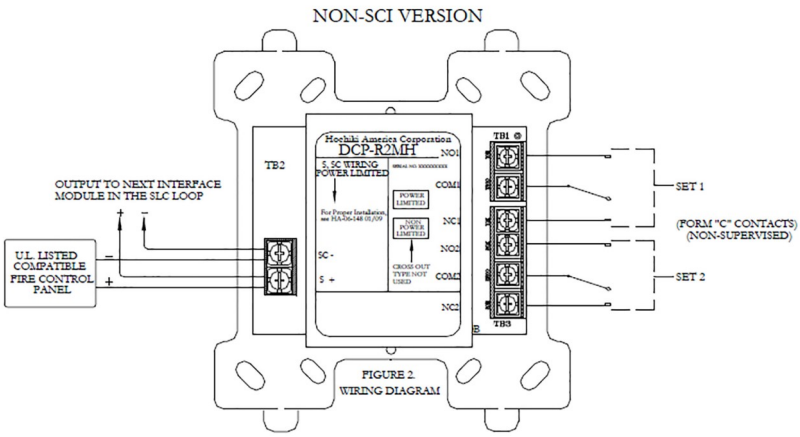


FIGURE 2.
WIRING DIAGRAM

RTS-O/RTS-C

Room Temperature Switch

Features

- Easily installed
- Completely sealed sensor, moisture and vapor resistant
- Highly resistant to vibration and corrosion
- Highly sensitive to temperature changes
- No sensitivity loss due to aging
- Repetitive operation without the need to replace sensing elements
- Small compact design
- Precision and quality at low cost

SIGNALING
c UL us
LISTED

Important: This document contains important information on the installation and operation of room temperature switches. Please read all instructions carefully before beginning installation. A copy of this document is required by NFPA 72 to be maintained on site.

Description

Each unit consists of a bi-metal operating mechanism, featuring hermetically sealed precious metal contacts, N.O. or N.C., which automatically reset for repetitive operation, eliminating the need for sensing element replacement.

Small compact design, highly resistant to vibration and corrosion. Easily installed using the enclosed hardware or adhesive mounting pad.

Screw terminals permit easy installation in single or multiple detector circuits.

Application

The RTS Series complies with the requirements of NFPA 13 and 72 for a room temperature switch to operate at 40°F to protect a dry pipe valve from freezing. The RTS can also be used for other temperature detection applications.

Operation

The normally open detector, RTS-O, will close the contact when the temperature drops below 40°F (4,5°C). The normally closed detector, RTS-C, will open the contact when the temperature drops below 40°F (4,5°C). The detector will automatically reset to the normal state when the temperature rises above 40°F (4,5°C).

The RTS Series Room Temperature Sensors are precision engineered, designed and manufactured for commercial or residential use.

Technical Specifications

Enclosure	White ABS
Dimensions	2 1/16”W x 3 7/16”L x 1 1/4”H (5,2cm W x 8,7cm L x 3,2cm H)
Sensor	Epoxy sealed stainless steel case, bi-metallic operating mechanism.
Contacts	Silver clad, available normally open or normally closed
Electrical Rating	1 Amp at 24VDC
Temperature Setting	40° ±5°F (4,5° ±3°C)
Terminals	Screw Terminals
Mounting	Wall Mount, Surface

Inspection, Testing, & Maintenance

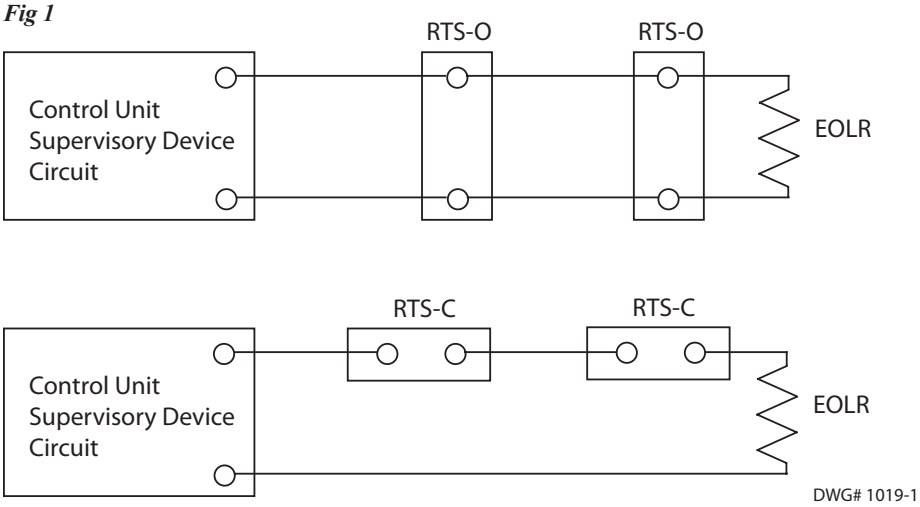
The frequency of inspection and testing of the RTS and its associated monitoring system shall be in accordance with applicable local and NFPA codes and standards. Manufacturer recommends quarterly or more frequently.

Functional test can be accomplished by spraying the RTS with circuit cooler or equivalent.

More accurate test requires exposing the RTS to 40°F ± 5°F.

The RTS requires no maintenance other than ensuring the vent holes are not obstructed.

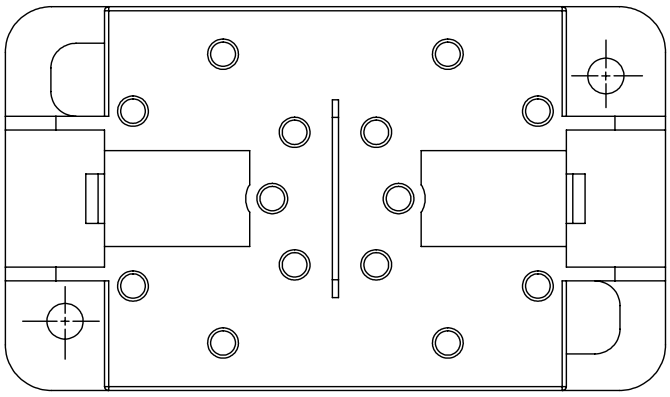
Fig 1



NOTE: This RTS does not have duplicate terminals. Do not use looped wire under terminals. Break wire run to provide supervision of connections.

RTS Mounting Template

Fig 2



Ordering Information

Model	Description	Stock No.
RTS-O	Normally Open Room Temperature Switch	1010108
RTS-C	Normally Closed Room Temperature Switch	1010109

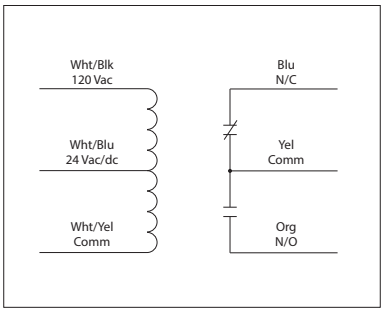
NOTICE

Supervisory switches have a normal service life of 10-15 years. However, the service life may be significantly reduced by local environmental conditions.

20 AMP POWER CONTROL RELAYS

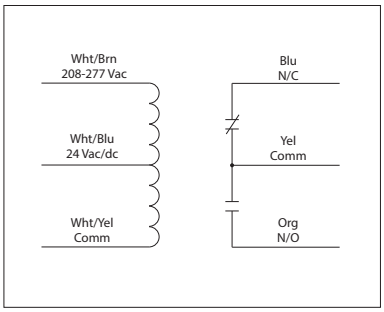
RIB2401B

Enclosed Relay 20 Amp SPDT with
24 Vac/dc/120 Vac Coil



RIB2402B

Enclosed Relay 20 Amp SPDT with
24 Vac/dc/208-277 Vac Coil



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Made in USA
Meets
"Buy American"
of ARRA 2009

SPECIFICATIONS

 # Relays & Contact Type: One (1) SPDT Continuous Duty Coil
Expected Relay Life: 10 million cycles minimum mechanical
Operating Temperature: -30 to 140° F
Humidity Range: 5 to 95% (noncondensing)
Operate Time: 18ms
Relay Status: LED On = Activated
Dimensions: 2.30″ x 3.20″ x 1.80″ with .50″ NPT Nipple
Wires: 16″, 600V Rated
Approvals: UL Listed, UL916, UL864, C-UL California State Fire Marshal
Housing Rating: UL Accepted for Use in Plenum, NEMA 1
Gold Flash: No
Override Switch: No

Contact Ratings:
20 Amp Resistive @ 277 Vac
5 Amp Resistive @ 480 Vac
20 Amp Ballast @ 277 Vac
16 Amp Electronic Ballast @ 277 Vac (N/O)
10 Amp Tungsten @ 120 Vac (N/O)
770 VA Pilot Duty @ 120 Vac
1,110 VA Pilot Duty @ 277 Vac
2 HP @ 277 Vac
1 HP @ 120 Vac

Coil Current:

50 mA @ 18 Vac	33 mA @ 22 Vdc
83 mA @ 24 Vac	35 mA @ 24 Vdc
47 mA @ 120 Vac (RIB2401B)	47 mA @ 30 Vdc
69 mA @ 208-277 Vac (RIB2402B)	

Coil Voltage Input:
24 Vac/dc ; 120 Vac ; 50-60 Hz (RIB2401B)
24 Vac/dc ; 208-277 Vac ; 50-60 Hz (RIB2402B)
Drop Out = 2.1 Vac / 3.8 Vdc
Pull In = 18 Vac / 22 Vdc

HE Series Selectable Candela Evacuation Signals

HEC/HES/HEH

APPLICATIONS

The HE Series is a low profile strobe and horn/strobe combination that offers dependable audible and visual alarms and the lowest current available.

The HE Series 24VDC offers tamperproof field selectable candela options of 15, 30, 60, 75, and 110 candela.

The 12VDC models offers tamperproof field selectable candela options of 15, 30, 60, and 75 candela. The HE Series horn offers a continuous or synchable temporal three in 2400Hz and mechanical tone, a chime and whoop tone. All tones are easy for the professional to change in the field by using switches.

The HE Series has a minimal operation current and has a minimum flash rate of 1Hz regardless of input voltage.

The HE Series is shipped with the standard 4" metal mounting plate which incorporates the popular Slide feature that allows the installer to easily test for supervision. The product also features a locking mechanism which secures the product to the bracket without any screws showing.

The HE Series appliances are UL 464 and UL 1971 listed for use with fire protective systems and are warranted for three years from date of purchase.

PRODUCT LISTINGS

SIGNALING UL LISTED S8369

California State Fire Marshal
- 7135-0410:0187
- 7135-0410:0188
- 7125-0410:0192
- 7135-0410:0193

STANDARD FEATURES

- Nominal voltage 12VDC and 24VDC
- 24VDC units have field selectable candela options of 15, 30, 60, 75, and 110 candela
- 12VDC units have field selectable candela options of 15, 30, 60, and 75 candela
- Unit Dimensions: 5" high x 4.5" wide x 2.5" deep
- Synchronize strobe and/or horn with Hochiki Series Control Module (12VDC product must use the HAVSM Module)
- Prewire entire system, then install signals
- Lower installation and operating costs
- Input terminals supports 12 to 18 gauge wire
- Switch selection for high or low dBA
- Switch for chime, whoop, mechanical and 2400Hz tone
- Switch for continuous or temporal 3 (not available on whoop tone)
- Surface mount with the HSB (Hochiki surface mount box)
- Silence horn while strobes remain flashing
- Wide voltage range 8-17.5VDC (12VDC units) 16-33VDC or FWR (24VDC units)
- Faceplate available in red or off-white

Product Compliance
- NFPA 72
- Americans with Disabilities Act (ADA)

Specifications subject to change without notice.

Continued on back.

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ISO 9001:2008 REGISTERED

Assembled in the USA

F0103 10/2018

HE Series Selectable Candela Evacuation Signals

HEH 12VDC or 24VDC Low Profile Evacuation Horn

Model Number	Part Number	Nominal Voltage	Reverberant dBA @ 10ft., per UL 464	In Anechoic Room dBA @ 10ft.
HEH24-WR	0500-05880	24VDC	62-82	100
HEH24-WW	0500-05890	24VDC	62-82	100

HES3 12VDC or 24VDC Selectable Candela Low Profile Evacuation Strobe

Model Number	Part Number	Nominal Voltage	Candela (UL 1971)
HES3-12WR	0500-05900	12 VDC	15, 30, 60, 75
HES3-12WW	0500-05910	12 VDC	15, 30, 60, 75
HES3-12PWR	0500-05920	12 VDC	15, 30, 60, 75
HES3-12PWW	0500-05930	12 VDC	15, 30, 60, 75
HES3-24WR	0500-05940	24VDC	15, 30, 60, 75, 110
HES3-24WW	0500-05950	24VDC	15, 30, 60, 75, 110
HES3-24PWR	0500-05960	24VDC	15, 30, 60, 75, 110
HES3-PWW	0500-05970	24VDC	15, 30, 60, 75, 110

Model Designations:

W = Wall mount R = Red faceplate
W = Off-White faceplate P= Plain (no lettering)

ALERT - bezel available

AGENT - bezel available

HEC3 12VDC or 24VDC Selectable Candela Low Profile Evacuation Horn/Strobe

Model Number	Part Number	Nominal Voltage	Candela (UL 1971)	Reverberant dba @ 10ft., per UL 464	In Anechoic Room dBA @ 10ft.
HEC3-12WR	0500-05980	12 VDC	15, 30, 60, 75	62-82	100
HEC3-12WW	0500-05990	12 VDC	15, 30, 60, 75	62-82	100
HEC3-12PWR	0500-06000	12 VDC	15, 30, 60, 75	62-82	100
HEC3-12PWW	0500-06010	12 VDC	15, 30, 60, 75	62-82	100
HEC3-24WR	0500-06020	24 VDC	15, 30, 60, 75, 110	62-82	100
HEC3-24WW	0500-06030	24 VDC	15, 30, 60, 75, 110	62-82	100
HEC3-24PWR	0500-06040	24 VDC	15, 30, 60, 75, 110	62-82	100
HEC3-24PWW	0500-06050	24 VDC	15, 30, 60, 75, 110	62-82	100

HE3-12 Product Strobe Current Ratings

Candela	15cd	30cd	60cd	75cd
12VDC	106mA	131mA	186mA	237mA
UL Max	92mA	141mA	260mA	312mA

HE3-24 Product Strobe Current Ratings

Candela	15cd	30cd	60cd	75cd	110cd
24VDC	30mA	35mA	66mA	80mA	103mA
UL Max	42mA	58mA	97mA	116mA	161mA

HE3-12 Product Horn Current Ratings

Horn Mode	Minimum dBA @ 10ft., per UL 464 (HIGH)	Minimum dBA @ 10ft., per UL 464 (LOW)	Regulated 12VDC Max. Operating @ High Setting (mA)
Temp 3 2400Hz	76	69*	29
Temp 3 Mechanical	75	68*	26
Temp 3 Chime	62*	60*	13
Continuous 2400Hz	79	74*	29
Continuous Mechanical	78	72*	26
Continuous Chime	63*	61*	13
Whoop	78	71*	55

HE3-24 Product Horn Current Rating

Horn Mode	Minimum dBA @ 10ft., per UL 464 (HIGH)	Minimum dBA @ 10ft., per UL 464 (LOW)	Regulated 24VDC Max. Operating @ High Setting (mA)
Temp 3 2400Hz	78	71*	28
Temp 3 Mechanical	76	70*	25
Temp 3 Chime	70*	66*	15
Continuous 2400Hz	81	74*	28
Continuous Mechanical	80	72*	25
Continuous Chime	70*	66*	15
Whoop	82	69*	56

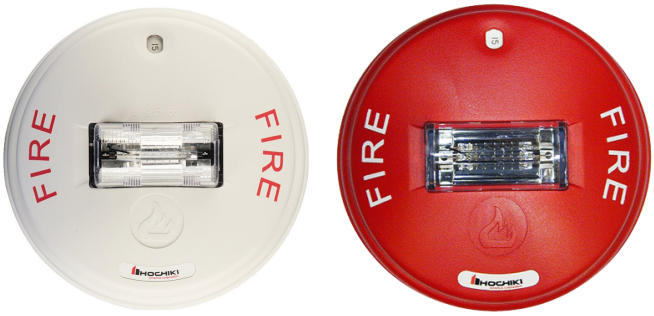
NOTES:

- Operating temperature: 32°F to 120°F (0°C to 49° C). The HE Series is not listed for outdoor use.
- The sound output for the temporal 3 tone is rated lower since the time the horn is off is averaged into the sound output rating. While the horn is producing a tone in the temporal 3 mode its sound pressure as the same as the continuous mode.
- For nominal and peak current across UL regulated voltaje range for filtered DC power and unfiltered (FWR [Full Wave Rectified]) power, see installation manual. 12VDC models are DC only.
- Hochiki does not recommend using a coded or pulsing signaling circuit with any of our strobe products (see Technical Bulletin 014).

* Operating the horn in this mode at this voltage will result in not meeting the minimum UL reverberant sound level required for public mode fire protection service. These settings are acceptable only for private mode fire alarm use. Use the high dBA setting for public mode application (not applicable when using the chime tone. The chime tone is always private mode).

[1] RMS current ratings are per UL average RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16-33VDC for 24VDC units) (8-17VDC for 12 VDC units). For strobes the UL max current is usually at the minimum listed voltage (16VDC for 24VDC units) (8VDC for 12VDC units). For audible the max current is usually at the maximum listed voltage. For Unfiltered FWR ratings, see installation manual.

HC Series Selectable Ceiling Mount Strobe and Horn Strobe



HCS/HCC 24VDC SERIES

APPLICATIONS

The HC Series is a ceiling mount strobe or horn/strobe combination that offers dependable audible and visual alarms and the lowest current available.

The HC Series offers tamperproof field selectable candela options of 15, 30, 75, 95, 115 and 150 candela.

The HC Series horn offers a pattern or synchable temporal 3 in 2400Hz or mechanical tone. These tones are easy for the technician to change in the field by using switches.

The HC Series has a minimal operating current and a minimum flash rate of 1Hz regardless of input voltage.

The HC Series comes standard with the 4" mounting plate which incorporates the popular Super-Slide® feature that allows the installer to easily test for supervision.

The HC Series appliances are UL 464 and UL 1971 listed for use with fire protective systems.

STANDARD FEATURES

- Nominal Voltage 24 VDC
- Tamperproof Field Selectable candela options of 15, 30, 75, 95,115 & 150
- Unit Dimensions: 6" x 2.6"
- Synchronize HC Series by using Hochiki America Series Control Module
- Input Terminals support 12 to 18 AWG
- Switch Selection for High or Low dBA
- Switch Selection for 2400Hz or Mechanical Tone
- Switch Selection for Continuous or Temporal 3
- Tamperproof Re-entrant Grill
- Surface Mount with the HCSB (Hochiki Ceiling Surface Mount Box)
- Silence Horn While Strobes Remain Flashing
- Wide Voltage Range 16-33 VDC or FWR
- Faceplate Available in Red or Off-White

PRODUCT LISTINGS

SIGNALING UL LISTED

California State Fire Marshal

- UL 464 & UL 1971 Listed - S8369, S3597, S1529
- CSFM Listed - 7125-0410:0187, 7125-0410:0188

Product Compliance

- NFPA 72
- Americans with Disabilities Act (ADA)

Specifications subject to change without notice.

Continued on back.

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Technical Support: 800/845-6692 or technicalsupport@hochiki.com

HCS Series 24 Volt Ceiling Mount Selectable Strobe

Model Number	Part Number	Nominal Voltage	Candela
HCS24CR	0500-05060	24VDC	15, 30, 75, 95, 115, 150
HCS24CW	0500-05070	24VDC	15, 30, 75, 95, 115, 150
HCS24PCR	0500-06080	24VDC	15, 30, 75, 95, 115, 150
HCS24PCW	0500-06090	24VDC	15, 30, 75, 95, 115, 150

HCC Series 24 Volt Ceiling Mount Selectable Horn/Strobe

Model Number	Part Number	Nominal Voltage	Candela	Reverberant dBA @ 10ft. Per UL 464	In Anechoic Room dBA @10ft.
HCC24CR	0500-06100	24 VDC	15, 30, 75, 95, 115, 150	81-86	90
HCC24CW	0500-06110	24 VDC	15, 30, 75, 95, 115, 150	81-86	90
HCC24PCR	0500-06120	24VDC	15, 30, 75, 95, 115, 150	81-86	90
HCC24PCW	0500-06130	24VDC	15, 30, 75, 95, 115, 150	81-86	90

Notes:

- The HC Series is not listed for outdoor use.
- Operating temperature: 32°to 120°F (0° to 49° C)
- For nominal and peak current across UL regulated voltage range for filtered DC power and unfiltered (FWR [Full Wave Rectified]) power, see installation manual.
- **Hochiki does not recommend using a coded or pulsing signaling circuit with any of our strobe products (see technical bulletin number 014 for more information).**

Model designations:

"P" = Plain (no lettering) "C" = Ceiling Mount, "R" = Red Faceplate/"W" = Off-White Faceplate

HC Series Product Strobe Current Ratings						
Candela	15cd	30cd	75cd	95cd	115cd	150cd
24 VDC	72mA	101mA	167mA	200mA	214mA	286mA
UL Max[2]	120mA	120mA	200mA	220mA	290mA	321mA

Horn Mode	Minimum dBA @ 10ft. per UL464 (HIGH)	Minimum dBA @ 10ft. per UL464 (LOW)	Regulated 24VDC Max. Operating @ High Setting (mA)
Temp 3 2400Hz	83	75	23
Temp 3 Mechanical	81	73*	22
Continuous 2400Hz	86	78	23
Continuous Mechanical	84	76	22

*Operating the horn in this mode at this voltage will result in not meeting the minimum UL reverberant sound level required for public mode fire protection service. These settings are acceptable only for private mode fire alarm use. Use the high dBA setting for public mode application.

Notes: The sound output for the temporal 3 tone is rated lower since the time the horn is off is averaged into the sound output rating. While the horn is producing a tone in the temporal 3 mode its sound pressure is the same as the continuous mode.

To obtain the horn/strobe current draw, add the strobe current draw and the horn current draw.

[2] RMS current ratings are per UL average RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16-33VDC for 24VDC units). For strobes the UL max current is usually at the minimum listed voltage (16VDC for 24VDC units). For audibles the max current is usually at the maximum listed voltage. For unfiltered FWR ratings, see installation manual.

WHE Series Weatherproof Evacuation Signals

WHE SERIES

APPLICATIONS

The WHE Series offers dependable visible and/or audible alarms for all outdoor needs.

Included with the WHE Series is the HGOE outdoor enclosure. The enclosure provides protection from weather related conditions and allows the necessary full candela output. This highly constructed enclosure meets various installation requirements including deterring moisture from entering the enclosure.

The WHE Series is equipped with a 4" mounting plate which incorporates the sliding feature that allows the installer to easily test for supervision. The product also features a locking mechanism which secures the product to the bracket without any screws showing.

The WHE Series has a minimal operation current and has a minimum flash rate of 1Hz and can vary up to 2Hz regardless of input voltage.

STANDARD FEATURES

- Nominal voltage 24VDC
- Unit is shipped with WHES24-75 Candela Strobe or WHEC24-75 Candela Horn/Strobe
- Unit Dimensions: HGOE 5.75" High x 4.75" Wide x 4.18" Deep
- Switch Selection for High dBA
- Switch for Mechanical and 2400hz Tone
- Switch for Continuous Tone
- Input terminals supports 12 to 18 gauge wire
- Tamperproof Re-entrant Grill
- Wide Voltage Range of 16-33 VDC or FWR
- Separate Horn and Strobe Functions
- Synchronize Strobe and/or Horn by using HAVSM Module
- Faceplate available in Red or Off-White

PRODUCT LISTINGS

SIGNALING UL LISTED

California State Fire Marshal

- UL 464 & UL 1638 Listed - S3597
- CSFM Listed - 7135-0410:0187

Product Compliance

- NFPA 72
- Americans with Disabilities Act (ADA)

Specifications subject to change without notice.

Continued on back.

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Technical Support: 800/845-6692 or technicalsupport@hochiki.com

WHES24 Weatherproof Low Profile Evacuation Strobe

Model Number	Part Number	Nominal Voltage	Candela (UL 1971)
WHES24-75WR	0500-05780	24 VDC	75
WHES24-75WW	0500-05790	24 VDC	75

Model Designations:
W = Wall mount R = Red faceplate W = Off-white

WHES24 and WHEC24 are shipped with HOE Enclosure

WHEC24 Weatherproof Low Profile Evacuation Horn/Strobe

Model Number	Part Number	Nominal Voltage	Candela (UL 1971)	Reverberant dba @ 10ft., per UL 464	In Anechoic Room dBA @ 10ft.
WHEC24-75WR	0500-05860	24VDC	75	70-82	100
WHEC24-5WW	0500-05870	24VDC	75	70-82	100

NOTES:

- The HES Series is listed for outdoor use.
  Indoor Operating temperature: 32°to 120°F (0° to 49° C)
  Outdoor Operating Temperature: -31°to 150°F (-35° to 66° C)

WHE Series Product Strobe Current Ratings	
Candela	75cd
12VDC	112mA
UL Max[1]	180mA

WHE Series Product Horn Current Ratings			
Horn Mode	Minimum dBA @ 10ft., per UL 464 (HIGH)	Minimum dBA @ 10ft., per UL 464 (LOW)	Regulated 12VDC Max. Operating @ High Setting (mA)
Temp 3 2400Hz	78	71*	28
Temp 3 Mechanical	76	70*	25
Temp 3 Chime	70*	66*	15
Continuous 2400Hz	81	74*	28
Continuous Mechanical	80	72*	25
Continuous Chime	70*	66*	15
Whoop	82	69*	56

*Operating the horn in this mode at this voltage will result in not meeting the minimum UL reverberant sound level required for public mode fire protection service. These settings are acceptable only for private mode fire alarm use.
Use the high dBA setting for public mode application (not applicable when using the chime tone. The chime tone is always private mode).

Notes: The sound output for the temporal 3 tone is rated lower since the time the horn is off is averaged into the sound output rating. While the horn is producing a tone in the temporal 3 mode its sound pressure is the same as the continuous mode.

[1] RMS current ratings are per UL average RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16-33VDC for 24VDC units). For strobes the UL max current is usually at the minimum listed voltage (16VDC for 24VDC units). For audibles the max current is usually at the maximum listed voltage. For unfiltered FWR ratings, see installation manual.

DH Series - Electromagnetic Fire Door Holders

DH24FB
(Brass Plated)

DH24FC
(Chrome Plated)

DH24FPC
(Powdercoated)

DH24GC1

DH24WC

DESCRIPTION

DH series fire door holders are constructed of the finest materials and workmanship available. The door holder is made of durable die-cast metal and offered in a high luster plated or powercoated finish.

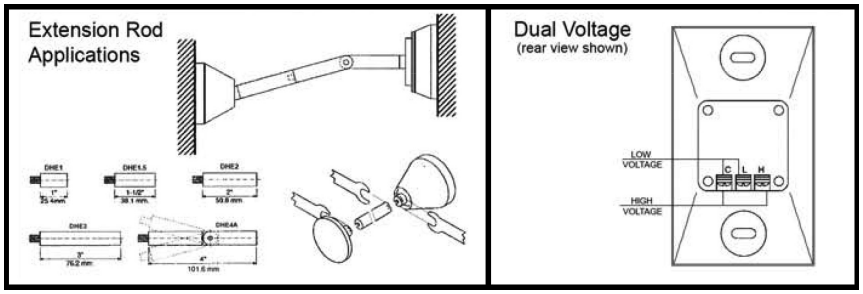
Other features include standard dual voltage ac or dc inputs of 24 & 120V models. While reducing stocking requirements, model 24120 draws a mere 20 mA @24VDC lowering overall job costs. (In large installations the cost savings can be substantial).

Other features: single or double coil floor mounting, surface mounting and direct wall mounting. No brackets are required. The DH series door holders offer a new installation technique using an adhesive template assuring alignment without secondary adjustments.

Accessories include extension and misalignment rods (various lengths) enabling parallelism between door and wall at distances greater than 12 inches and misalignment over 4 inches.

Aiding in installation is the aircraft quality DH drill that reduces installation time and provides a near perfect alignment of catch-plate and armature - again, lowering overall installations costs.

Basic units offer superior holding force and low residual magnetism. Model 24120 can operate at higher listed voltages producing holding forces in excess of 100lbs. (45.3kg.) For special applications.



STANDARD FEATURES

- Very low current draw
- Dual voltage inputs
- Terminal Block Connections
- High holding force
- Low residual magnetism
- Double chrome plating
- Mounting hardware & instructions

OPTIONAL FEATURES

- Plated or Powdercoated finish
- Double brass plating/powdercoated
- Extension and Misalignment Rods
- Surface mounting back box
- Time saving Drill Fixture
  (for mounting catch plate).

Specifications subject to change without notice.

Hochiki America Corporation
7051 Village Drive, Suite 100, Buena Park, CA 90621-2268
Phone: 714-522-2246 Fax: 714-522-2268
Technical Support: 800-845-6692 or technicalsupport@hochiki.com

Find latest revision at **www.hochiki.com**

ISO 9001:2008 REGISTERED

MADE IN AMERICA

DH Series - Electromagnetic Fire Door Holders

PERFORMANCE DATA

MODEL	VOLTAGE	DC/mA	AC/mA	TERMINALS	LB.	KG
24120	24V	20	19	C&L	40	18.1
	120V	-	20	C&H	35	15.8

NOTE: Holding forces listed in above table corresponds with shaded values, non shaded values are slightly less.

MODEL	VOLTAGE	DC/mA	AC/mA	TERMINALS	LB.	KG
24120	120V	-	100	C&L	110	49.8

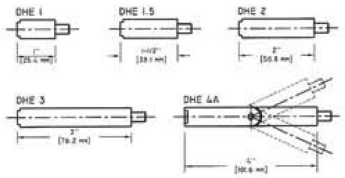
HIGH HOLDING FORCE/SPEACIAL APPLICATIONS:

To obtain performance values in table above apply high listed voltage to low voltage terminals (C & L).

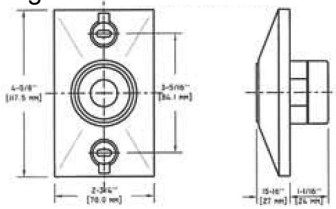
NOTE: This configuration can only be applied to model 24120.

ACCESSORIES

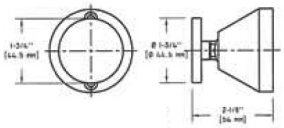
Extensions:
Extension rods



Magnetic Door Holder



Door Holder Swivel base



DOOR HOLDER PARTS LIST

PART NUMBER	*DESCRIPTION*	*MODEL*
Flush Mount		
0500-01890	RSG Door Holder, Flush Mount, Chrome Finish, 120V	DH24120FPC
0500-01900	RSG Door Holder, Flush Mount, Brass Finish, 120V	DH24120FB
Surface Mount		
0500-01910	RSG Door Holder, Surface Mount, Chrome Finish, 120V	DH24120SPC
0500-01895	RSG Door Holder, Surface Mount, Chrome Finish, 220V	DH24220SPC
0500-01920	RSG Door Holder, Surface Mount, Brass Finish, 120V	DH24120SB
Ground Mount		
0500-01930	RSG Door Holder, Ground Mount, Chrome Finish, *Single* Coil, 120V	DH24120GPC1
0500-01940	RSG Door Holder, Ground Mount, Brass Finish, *Single* Coil, 120V	DH24120GB1
0500-01950	RSG Door Holder, Ground Mount, Chrome Finish, *Double* Coil, 120V	DH24120GPC2
0500-01960	RSG Door Holder, Ground Mount, Brass Finish, *Double* Coil, 120V	DH24120GB2
1" Extension Rods		
0500-01970	RSG Door Holder Extension Rod, 1", Chrome Finish	DHE1PC
0500-01980	RSG Door Holder Extension Rod, 1", Brass Finish	DHE1B
1.5" Extension Rods		
0500-01990	RSG Door Holder Extension Rod, 1.5", Chrome Finish	DHE1.5PC
0500-02000	RSG Door Holder Extension Rod, 1.5", Brass Finish	DHE1.5B
2" Extension Rods		
0500-02010	RSG Door Holder Extension Rod, 2", Chrome Finish	DHE2PC
0500-02020	RSG Door Holder Extension Rod, 2", Brass Finish	DHE2B
3" Extension Rods		
0500-02030	RSG Door Holder Extension Rod, 3", Chrome Finish	DHE3PC
0500-02040	RSG Door Holder Extension Rod, 3", Brass Finish	DHE3B
4" Extension Rods		
0500-02050	RSG Door Holder Extension Rod, 4", Chrome Finish	DHE4PC
0500-02060	RSG Door Holder Adjustable Extension Rod, 4", Chrome Finish	DHE4APC
5" Extension Rods		
0500-02070	RSG Door Holder Extension Rod, 5", Chrome Finish	DHE5PC
0500-02080	RSG Door Holder Extension Rod, 5", Brass Finish	DHE5B
Catch Plates		
0500-02090	RSG Door Holder Catch Plate, Chrome Finish	DHCPPC
0500-02100	RSG Door Holder Catch Plate, Brass Finish	DHCPB
Swivel Base		
0500-02110	RSG Door Holder Swivel Base, Chrome Finish	DHSBPC
0500-02120	RSG Door Holder Swivel Base, Brass Finish	DHSBB

POWER PS SONIC
TRUSTED BATTERY SOLUTIONS

PS SERIES

General Purpose | Emergency Lighting | Medical | Fire & Security

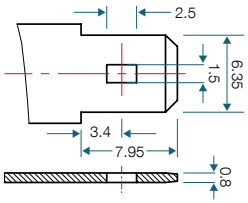
PS-12180S

12V 18.0 AH @ 20-hr.
12V 17.0 AH @ 10-hr.

Rechargeable Sealed Lead Acid Battery
PS – General Purpose Series

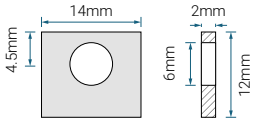
TERMINALS: (mm)

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



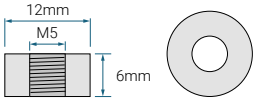
Torque – Not Applicable

NB2: Tin plated brass post with 'Nut & Bolt' fasteners



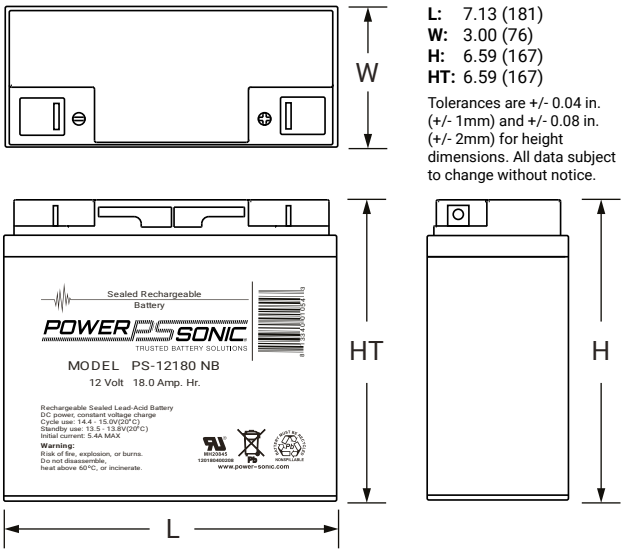
Torque: 3.9~5.4 Nxm

T12: Threaded insert with 5mm stud fastener



Torque: 2.0~3.0 Nxm

DIMENSIONS: inch (mm)



L: 7.13 (181)
W: 3.00 (76)
H: 6.59 (167)
HT: 6.59 (167)

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

FEATURES

- 10 – 12 year design life
- Absorbent Glass Mat (AGM) technology for superior performance
- Valve regulated, maintenance free spill proof construction
- Power/volume ratio yielding excellent energy density
- Rugged vibration and impact resistant ABS case and cover
- Gas recombination technology

APPROVALS

- Approved for transport by air. D.O.T., I.A.T.A., F.A.A. and C.A.B. certified
- U.L. recognized
- ISO9001:2015 – Quality management systems

PERFORMANCE SPECIFICATIONS

Nominal Voltage	12 volts (6 cells)
Nominal Capacity	
20-hr. (900mA to 10.50 volts)	18.00 AH
10-hr. (1.70A to 10.50 volts)	17.00 AH
5-hr. (3.20A to 10.20 volts)	16.00 AH
1-hr. (11.1A to 9.00 volts)	11.1 AH
Approximate Weight	12.60 lbs. (5.72 kg)
Internal Resistance (approx.)	14.0 milliohms
Max Short-Duration Discharge Current (10 Sec.)	180.0 amperes
Shelf Life (% of nominal capacity at 68°F (20°C)	
1 Month	97%
3 Month	91%
6 Month	83%
Operating Temperature Range	
Charge	5°F (-15°C) to 122°F (50°C)
Discharge	-4°F (-20°C) to 140°F (60°C)
Case	ABS Plastic
Power Sonic Chargers	PSC-122000A-C PSC-122000-PC PSC-124000-PC PSC-124000A-C

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POWER PS SONIC
TRUSTED BATTERY SOLUTIONS

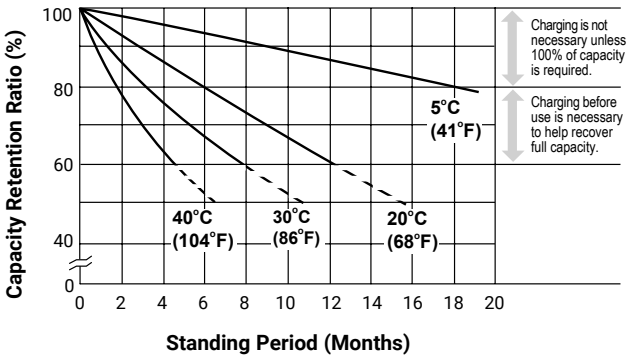
PS SERIES

PS-12180S

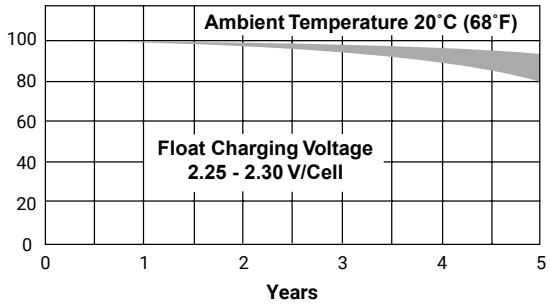
12V 18.0 AH @ 20-hr.
12V 17.0 AH @ 10-hr.

Rechargeable Sealed Lead Acid Battery
PS – General Purpose Series

SHELF LIFE & STORAGE



LIFE CHARACTERISTICS IN STAND-BY USE



CHARGING

Cycle Applications: Apply constant voltage charge at 2.35v/c – 2.45v/c (14.1 – 14.7v for 12v Monobloc) at 20°C. Initial charging current should be set at less than 0.25C Amps. Switch to float charge to avoid overcharging.

"Float" or "Stand-By" Service: Apply constant voltage charge of 2.25v/c – 2.30v/c (13.5 to 13.8 volts for 12v Monobloc at 20°C. When held at this voltage, the battery will seek its own current level and maintain itself in a fully charged condition.

Temperature Compensation: Charging Voltage for both Cyclic and Standby applications should be regulated in relation to ambient temperature. As temperature rises charging voltage should be reduced to prevent overcharge and increased as temperature falls to avoid undercharge.

For further charging information including temperature compensation factors, see Power Sonic Technical Manual/ Power Sonic Charger specifications.

CHARGERS

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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.

APPLICATIONS

- General purpose
- Emergency lighting
- Medical
- Fire and security

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POWER PS SONIC
TRUSTED BATTERY SOLUTIONS

PS SERIES

General Purpose | Emergency Lighting | Medical | Fire & Security

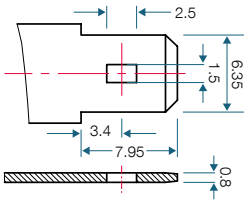
PS-12120

12V 12.0 AH @ 20-hr.
12V 11.0 AH @ 10-hr.

Rechargeable Sealed Lead Acid Battery
PS – General Purpose Series

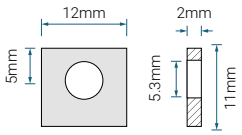
TERMINALS: (mm)

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



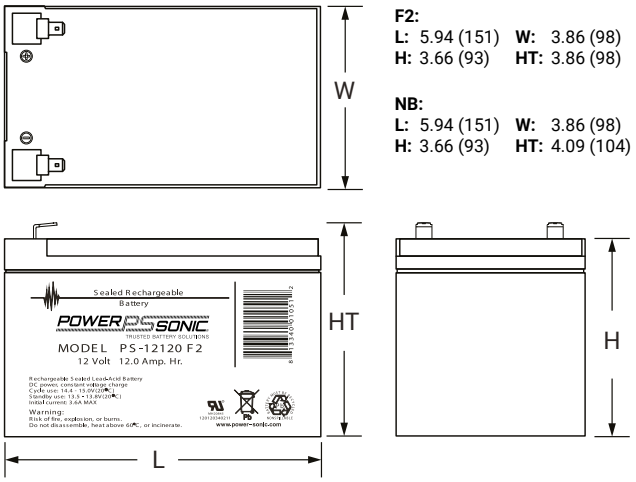
Torque – Not Applicable

NB: Tin plated brass post with 'Nut & Bolt' fasteners



Torque: 2.0~3.0 Nxm

DIMENSIONS: inch (mm)



F2:
L: 5.94 (151) **W:** 3.86 (98)
H: 3.66 (93) **HT:** 3.86 (98)

NB:
L: 5.94 (151) **W:** 3.86 (98)
H: 3.66 (93) **HT:** 4.09 (104)

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

FEATURES

- Absorbent Glass Mat (AGM) technology for superior performance
- Valve regulated, maintenance free spill proof construction
- Power/volume ratio yielding excellent energy density
- Rugged vibration and impact resistant ABS case and cover
- Gas recombination technology
- 5 year design life

APPROVALS

- Approved for transport by air. D.O.T., I.A.T.A., F.A.A. and C.A.B. certified
- U.L. recognized
- ISO9001:2015 – Quality management systems

PERFORMANCE SPECIFICATIONS

Nominal Voltage	12 volts (6 cells)
Nominal Capacity	
20-hr. (600mA to 10.50 volts)	12.00 AH
10-hr. (1.10A to 10.50 volts)	11.00 AH
5-hr. (2.10A to 10.20 volts)	10.50 AH
1-hr. (7.25A to 9.00 volts)	7.25 AH
Approximate Weight	7.92 lbs. (3.59 kg)
Internal Resistance (approx.)	20.0 milliohms
Max Short-Duration Discharge Current (10 Sec.)	120.0 amperes
Shelf Life (% of nominal capacity at 68°F (20°C)	
1 Month	97%
3 Month	91%
6 Month	83%
Operating Temperature Range	
Charge	5°F (-15°C) to 122°F (50°C)
Discharge	-4°F (-20°C) to 140°F (60°C)
Case	ABS Plastic
Power Sonic Chargers	PSC-122000A-C PSC-122000-PC

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POWER PS SONIC
TRUSTED BATTERY SOLUTIONS

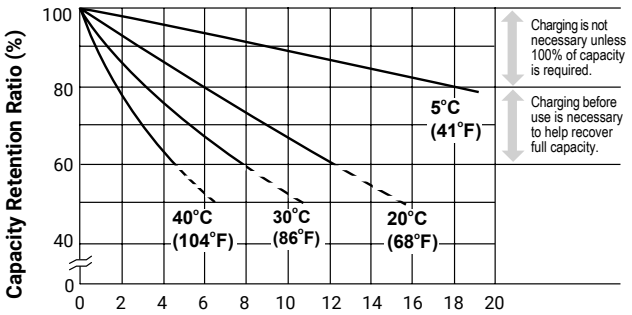
PS SERIES

PS-12120

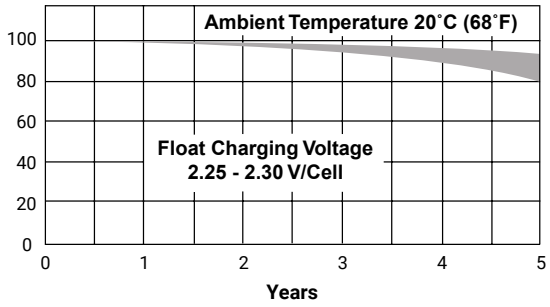
12V 12.0 AH @ 20-hr.
12V 11.0 AH @ 10-hr.

Rechargeable Sealed Lead Acid Battery
PS – General Purpose Series

SHELF LIFE & STORAGE



LIFE CHARACTERISTICS IN STAND-BY USE



CHARGING

Cycle Applications: Apply constant voltage charge at 2.35v/c – 2.45v/c (14.1 – 14.7v for 12v Monobloc) at 20°C. Initial charging current should be set at less than 0.25C Amps. Switch to float charge to avoid overcharging.

"Float" or "Stand-By" Service: Apply constant voltage charge of 2.25v/c – 2.30v/c (13.5 to 13.8 volts for 12v Monobloc at 20°C. When held at this voltage, the battery will seek its own current level and maintain itself in a fully charged condition.

Temperature Compensation: Charging Voltage for both Cyclic and Standby applications should be regulated in relation to ambient temperature. As temperature rises charging voltage should be reduced to prevent overcharge and increased as temperature falls to avoid undercharge.

For further charging information including temperature compensation factors, see Power Sonic Technical Manual/ Power Sonic Charger specifications.

CHARGERS

Power Sonic offers a wide range of chargers suitable for batteries with a variety of capacities.

Please refer to our website for more information on our switch mode and transformer type chargers.

Please contact our technical department for advice if you have difficulty in locating a suitable charger.

FURTHER INFORMATION

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APPLICATIONS

- General purpose
- Emergency lighting
- Medical
- Fire and security

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POWER PS SONIC
TRUSTED BATTERY SOLUTIONS

PS SERIES

General Purpose | Emergency Lighting | Medical | Fire & Security

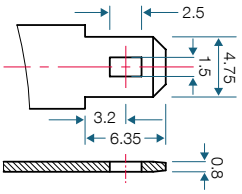
PS-1270

12V 7.0 AH @ 20-hr.
12V 6.5 AH @ 10-hr.

Rechargeable Sealed Lead Acid Battery
PS – General Purpose Series

TERMINALS: (mm)

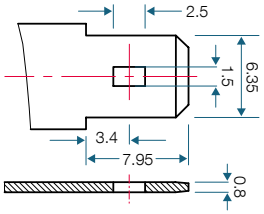
F1: Quick disconnect tabs, 0.187" x 0.032" – Mate with AMP. INC. FASTON "187" series



Torque – Not Applicable

OR

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

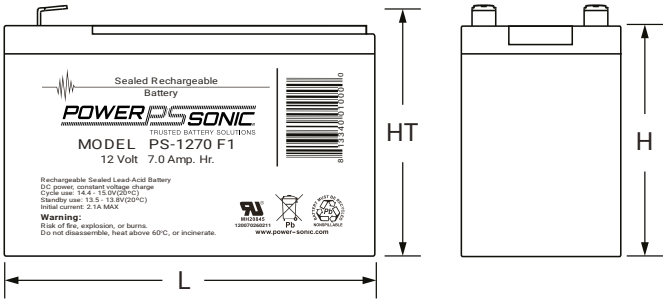


Torque – Not Applicable

DIMENSIONS: inch (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.



FEATURES

- Absorbent Glass Mat (AGM) technology for superior performance
- Valve regulated, maintenance free spill proof construction
- Power/volume ratio yielding excellent energy density
- Rugged vibration and impact resistant ABS case and cover
- Gas recombination technology
- 5 year design life

APPROVALS

- Approved for transport by air. D.O.T., I.A.T.A., F.A.A. and C.A.B. certified
- U.L. recognized
- ISO9001:2015 – Quality management systems

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
Approximate Weight	4.80 lbs. (2.18 kg)
Internal Resistance (approx.)	23.0 milliohms
Max Short-Duration Discharge Current (10 Sec.)	70.0 amperes
Shelf Life (% of nominal capacity at 68°F (20°C)	
1 Month	97%
3 Month	91%
6 Month	83%
Operating Temperature Range	
Charge	5°F (-15°C) to 122°F (50°C)
Discharge	-4°F (-20°C) to 140°F (60°C)
Case	ABS Plastic
Power Sonic Chargers	PSC-12800A-C PSC-121000-PC

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power-sonic.com

Rev1: 11/18

POWER PS SONIC
TRUSTED BATTERY SOLUTIONS

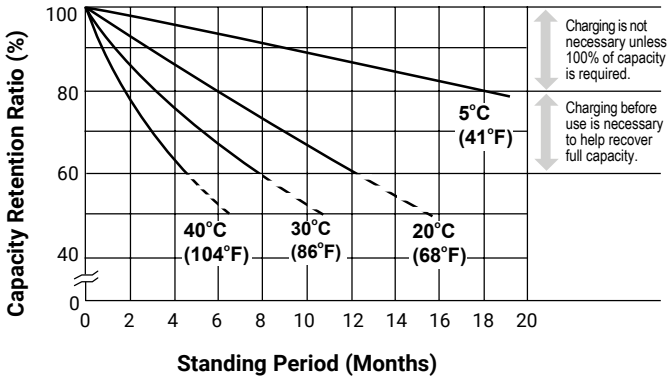
PS SERIES

PS-1270

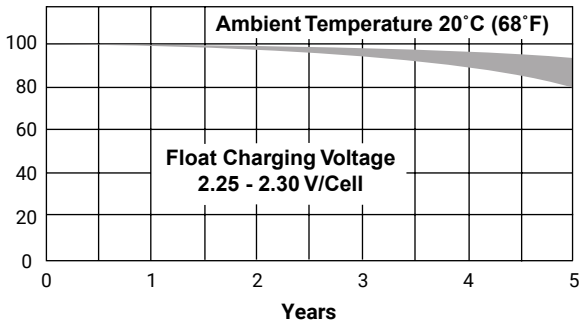
12V 7.0 AH @ 20-hr.
12V 6.5 AH @ 10-hr.

Rechargeable Sealed Lead Acid Battery
PS – General Purpose Series

SHELF LIFE & STORAGE



LIFE CHARACTERISTICS IN STAND-BY USE



CHARGING

Cycle Applications: Apply constant voltage charge at 2.35v/c – 2.45v/c (14.1 – 14.7v for 12v Monobloc) at 20°C. Initial charging current should be set at less than 0.25C Amps. Switch to float charge to avoid overcharging.

"Float" or "Stand-By" Service: Apply constant voltage charge of 2.25v/c – 2.30v/c (13.5 to 13.8 volts for 12v Monobloc at 20°C. When held at this voltage, the battery will seek its own current level and maintain itself in a fully charged condition.

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APPLICATIONS

- General purpose
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- Medical
- Fire and security

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-GENESIS-

Plenum Rated Power Limited Fire Alarm Cable
Part Number: 4507

18 AWG 4 Solid Conductors

Ratings	FPLP, CL3P, FT6
Approvals	UL Listed

Construction

Conductor	18 AWG Solid Bare Copper
Conductor Count	4
Insulation	Plenum PVC (0.007" nom.)
Insulation Colors	Black, Red, Green, Yellow
Lay Length	4.50" nom.
Shielding	N/A
Rip Cord	Yes
Jacket	Plenum PVC (0.015 " nom.)
Overall Diameter	0.157" nom.
Print Legend	GENESIS P/N 4507 4C 18AWG E175105 (UL) FPLP OR CL3P FT6 75C (RoHS) W/O# XXXXXX-XXXXXXX XXXXFT A B C D E F 1 2 3 4 5 6 7 8 9

Properties

Operating Voltage	300 Volts max.
DC Resistance	6.52 Ohms/1000' at 20°C
Capacitance	32.1 pF/ft. nom.
Impedance	58 Ohms nom.
Temperature	-20°C to 75°C
Flame Rating	NFPA 262 (Plenum); CSA C22.2 No. 2556 (FT6)
RoHS Compliant	Yes
Country of Origin	USA

Published: 2018-10-19

-GENESIS-

Plenum Rated Power Limited Fire Alarm Cable
Part Number: 4506

18 AWG 2 Solid Conductors

Ratings	FPLP, CL3P, FT6
Approvals	UL Listed

Construction

Conductor	18 AWG Solid Bare Copper
Conductor Count	2
Insulation	Plenum PVC (0.007" nom.)
Insulation Colors	Black, Red
Lay Length	2.25" nom.
Shielding	N/A
Rip Cord	Yes
Jacket	Plenum PVC (0.015 " nom.)
Overall Diameter	0.136" nom.
Print Legend	GENESIS P/N 4506 2C 18AWG E175105 (UL) FPLP OR CL3P FT6 75C (RoHS) W/O# XXXXXX-XXXXXXX XXXXFT A B C D E F 1 2 3 4 5 6 7 8 9

Properties

Operating Voltage	300 Volts max.
DC Resistance	6.52 Ohms/1000' at 20°C
Capacitance	32.1 pF/ft. nom.
Impedance	58 Ohms nom.
Temperature	-20°C to 75°C
Flame Rating	NFPA 262 (Plenum); CSA C22.2 No. 2556 (FT6)
RoHS Compliant	Yes
Country of Origin	USA

Published: 2018-10-19

-GENESIS-

Plenum Rated Power Limited Fire Alarm Cable
Part Number: 4513

14 AWG 2 Solid Conductors

Ratings	FPLP, CL3P, FT6
Approvals	UL Listed

Construction

Conductor	14 AWG Solid Bare Copper
Conductor Count	2
Insulation	Plenum PVC (0.008" nom.)
Insulation Colors	Black, Red
Lay Length	5.25" nom.
Shielding	N/A
Rip Cord	Yes
Jacket	Plenum PVC (0.015 " nom.)
Overall Diameter	0.206" nom.
Print Legend	GENESIS P/N 4513 2C 14AWG E175105 (UL) FPLP OR CL3P FT6 75C (RoHS) W/O# XXXXXX-XXXXXXX XXXXFT A B C D E F 1 2 3 4 5 6 7 8 9

Properties

Operating Voltage	300 Volts max.
DC Resistance	2.57 Ohms/1000' at 20°C
Capacitance	24.1 pF/ft. nom.
Impedance	63 Ohms nom.
Temperature	-20°C to 75°C
Flame Rating	NFPA 262 (Plenum); CSA C22.2 No. 2556 (FT6)
RoHS Compliant	Yes
Country of Origin	USA

Published: 2018-10-19