Equipment Submittal

Douglas Corner Lot 1B

150 Northeast Tudor Road

Lee's Summit, MO 64086

FIRE ALARM SYSTEM

System Installed By:

Alliance Fire Protection, LLC

130 W. 9th Ave, Suite 101

North Kansas City, MO 64116

Office: 913.888.0647

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Compas

Analog Addressable Fire Alarm Control Panels

Standard Features

- UL Listed (Tenth Edition) and FM Approved
- Supports Hochiki and Apollo Protocols
- 2 to 8 loop or 2 to 16 loop versions
- 400mA loop current
- 4 programmable NACs; Class B or 2 Class A with internal synchronization
- 5.25 A or 10.25 A power supply options
- 3 programmable inputs and 5 programmable relay outputs
- 7 inch, full-color resistive touch screen with intuitive user interface
- Up to 24 programmable soft “function keys”
- Up to 64 user login accounts
- Hard-wired fire and trouble routing inputs and outputs
- Modular and expandable electronics
- 400 subaddress points per loop (800 per loop module)
- Option to “invert” inputs and outputs
- 5000 programmable cause and effects; over 50,000 inputs and outputs
- Can be networked with programmable functionality
- Programming via USB port to PC or memory stick

VES Fire Detection Systems | 620 Allendale Road | King of Prussia, PA 19406 | 800.270.3066 | www.ves-network.com

Revised November 2020

Product Overview

The all new Compas product range of fire alarm control equipment combines the very latest hardware and software to produce a control and indication system, which is powerful and sophisticated, yet simple to use and understand. The flexibility of the Compas platform is such that it can be re-configured to realize many other control and indication applications, with direct integration into intelligent buildings.

Moving away from the simple, price driven competitive model used by most manufacturers today, the Compas concept is designed to add value to System Designers, Integrators, Service Providers, and end users. Developed from the "ground up" and using some of the most advanced technology available, Compas is designed as one of the most powerful, intelligent, and technically robust fire alarm products available.

Not only do the products and services offered under the Compas brand provide solutions to the most technically challenging applications in life safety, Compas will deliver added value, market advantage, and a competitive edge to your business.

Optional Panel Peripherals

- **LatiView Graphics**
  L@tiView enables the creation of a 2D map of any site or building to monitor fire safety and detection, and automatically switches to an area where a fire device has been activated to allow immediate viewing and investigation of an event.
- **Dual Loop Panel Module (S758)**
  The Dual Loop Panel Module monitors loop device status and provides status to the panel processor. It holds device configurations and operates in a standalone manner when catastrophic failures occur.
- **16 Channel I/O Interface Card (S560)**
  The 16 Channel I/O Interface enhances the versatility of the alarm system by providing additional input and output capabilities to the Compas Fire Alarm Control Panel. Inputs or outputs can be selected for up to 16 individual channels, and are configured in the same way as devices connected to addressable loops of the panel. The 16 Channel I/O Interface can be configured to contribute or act upon cause and effect logic.
- **Media Gateway™ Panel Module (S788)**
  The Media Gateway Panel Module provides connectivity to monitoring centers using IP (Sur-Gard), or dial-up connectivity. The Media Gateway may also be used to meet integration application requirements.
- **8 Channel Relay Panel Module (S791)**
  The 8 Channel Relay Panel Module has 8 voltage-free changeover relay contacts, each of which can be individually programmed. All outputs are configurable in the same way as devices connected to the loops and all may be acted upon by cause and effect logic. These boards are typically used in applications which require more than the five standard relay outputs, such as signaling to other systems or plant control.
- **Network Module (S723)**
  The Network Module provides enhanced high-speed communication for networking fire control panels. The network provided by this module can support combinations of Fire Alarm Control Panels and Vision units. Fire Alarm Control Panels can receive events from other panels in the network. The Class X networking used in conjunction with the Network Module provides tolerance against open and short circuit trouble conditions.
- **Printer (S768)**
  The Printer is an optional feature for printing fire system events as they occur. The printer is located on the fascia, below the Zone LEDs (if present). It is a thermal printer and never requires replacement ink. Printing is performed on heat-sensitive paper rolls. A trouble message is reported when the paper runs out. The printer includes a front-loading feature for replacing paper rolls.
- **Zone LED Module (S771)**
  The Zone LED module contains 48 LEDs and is connected to the LCD Main Processor Board of the Compas Fire Alarm Control Panel. A maximum of three Zone LED modules can be connected to provide the fascia with 144 Zone LED indicators.
- **4 Channel NAC Panel Module (S793)**
  Additional NAC output capability can be added to by using 4 Channel NAC Modules. These boards have 4 supervised NAC outputs, each of which can be individually programmed. The circuits can be configured for class A or B operation. These circuits can be configured to act upon cause and effect logic.
- **8 Channel Conventional Zone Panel Module (S792)**
  The 8 Channel Conventional Zone Panel Module has 8 supervised detection circuits (Class B). Each circuit can support up to 20 conventional detectors and approved devices. Individual circuits may be configured for trigger resistor or short circuit activation. These circuits may be used for any of the standard input actions and can be configured to contribute to cause and effect logic. Each pair of circuits (e.g., 1 and 2, 3 and 4, etc.) can be joined to form a single Class A configuration.
- **16 Channel I/O Interface Panel Module (S772)**
  The 16 Channel I/O Interface Panel Module will provide the same functionality as the 16 Channel I/O Interface Card, with the convenience of a plug-in module.

Technical Specifications

2 to 8 LOOP (4 SLOT) ENCLOSURE

Size	**Standard Cabinet** - 420mm (W) x 590mm (H) x 153mm (D), or 16.5in (W) x 23.2in (H) x 6in (D) **Deep Cabinet** - 420mm (W) x 590mm (H) x 203mm (D), or 16.5in (W) x 23.2in (H) x 8in (D)
Construction	Mild sheet steel enclosure, 16 SWG
Cable Entry	**Standard Cabinet** - 28 knockouts top, 19 knockouts back, 1 knockout each side, 2 knockouts bottom **Deep** - 38 knockouts top, 19 knockouts back, 1 knockout each side, 2 knockouts bottom
Optional Semi-Flush Mounting Kit	Semi-Flush Mounting Collar Kit KM5FCRD - Red KM5FCGY - Gray KM5FCBS - Black
Battery Capacity	**Standard Cabinet** - Up to 28 Ah (Power Sonic PS-12280) **Deep Cabinet** - Up to 40 Ah (Power Sonic PS-12400)

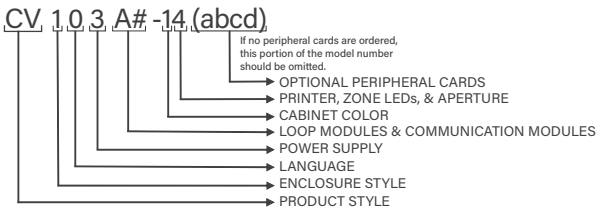
2 to 16 LOOP (8 SLOT) ENCLOSURE

Size	**Standard Cabinet** - 540mm (W) x 720mm (H) x 160mm (D), or 21.3in (W) x 28.3in (H) x 6.3in (D) **Deep Cabinet** - 540mm (W) x 720mm (H) x 212mm (D), or 21.3in (W) x 28.3in (H) x 8.3in (D)
Construction	Mild sheet steel enclosure, 16 SWG
Cable Entry	**Standard Cabinet** - 38 knockouts top, 25 knockouts back, 2 knockouts each side, 2 knockouts bottom **Deep Cabinet** - 50 knockouts top, 25 knockouts back, 2 knockouts each side, 2 knockouts bottom
Battery Capacity	**Standard Cabinet** - Up to 28 Ah (Power Sonic PS-12280) **Deep Cabinet** - Up to 40 Ah (Power Sonic PS-12400)

ALL MODELS

Finish	Epoxy powder coated
Color	Enclosure Red (RAL3002) Gray (BS 00 A 05) Black (RAL9005) Fascia Pantone 532 C
Power supply voltage	115 V AC or 230 V AC
Power supply rating at 24V DC	5.25 A (charges up to 60 Ah) 10.25 A (charges up to 100 Ah)
Display	Full-color 800 x 480 LCD with resistive touch screen and automatic backlight dimming
Software zones	2000
Software groups	5000
Cause and Effects	5000
Event log	10,000 events, 1 second resolution. Filterable and printable.
Detection loops	2 to 16 added 2 at a time (S758 dual loop cards)
Detection loop current	400 mA each
AUX 24V Output	2; each rated at 900 mA
NACs	4; each rated at 2.5 A. Class B or 2 Class A.
Programmable Relay Outputs	5; 30 V DC 1 Amp
Programmable Inputs	3; designed to be activated by voltage-free contacts
Network Connection	Optional network card provides communication for networking 127 fire control panels
NAC Synchronization	Internal Support of System Sensor, Wheelock, Gentex, and Amseco protocols
Printer (OPTIONAL)	40 column, front-loading thermal
Zone LED Indicators (OPTIONAL)	Up to 3 banks of 48 (144) as standard
Operating Temperature	23° F to 120° F (-5° C to 49° C)
Operating Humidity	to 95% (non condensing)

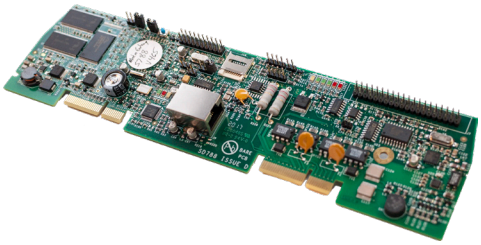
Panel Model Numbers



Panel Options	Valid Entries	Description
Product Style	CV	Compas Fire Alarm Control Panel
	CR	Compas Network Vision Annunciator
Enclosure Style	1	4 Slot Standard Enclosure
	2	4 Slot Standard Plex-Door Enclosure
	3	4 Slot Deep Enclosure
	4	4 Slot Deep Plex-Door Enclosure
	5	4 Slot Extra Deep Guard Station Enclosure - FUTURE ENHANCEMENT
	6	4 Slot 19" Rack Mount Enclosure
	7	8 Slot Standard Enclosure - 16 Loop
	8	8 Slot Standard Plex-Door Enclosure - 16 Loop
	9	8 Slot Deep Enclosure - 16 Loop
	A	8 Slot Deep Plex-Door Enclosure - 16 Loop
	C	Annunciator
Language	0	English
	1	Portuguese
	2	Spanish
	3	Taiwanese
Power Supply	0	None
	1	5.25 A 115V
	2	5.25 A 230V
	3	10.25 A (auto-voltage sensing)
Loop Modules & Communication Modules	00	Not Fitted
	NC	Network Module only (Network Vision Annunciator)
	A#	2-Loop Panel Module, Apollo and/or Hochiki Protocol
	L#	2-Loop Panel Module, Apollo and/or Hochiki Protocol, and Media Gateway
	M#	2-Loop Panel Module, Apollo and/or Hochiki Protocol, and Network Module
	N#	2-Loop Panel Module, Apollo and/or Hochiki Protocol, Network Module, and Media Gateway
Cabinet Color	1	Red (RAL3002)
	4	Gray (BS 00 A 05)
	6	Black (RAL9005)
Printer, Zone LEDs & Aperture	0	No Printer / No Zone LEDs
	1	No Printer / No Zone LEDs, Blank 2nd Aperture
	3	Printer / No Zone LEDs
	4	Printer / 48 Zone LEDs
	5	No Printer / 48 Zone LEDs
	6	No Printer / 96 Zone LEDs
	7	No Printer / 144 Zone LEDs
Optional Peripheral Cards	a	16 Channel I/O Panel Module (S772)
	b	8 Channel Relay Panel Module (S791)
	c	8 Channel Conventional Zone Module (S792)
	d	4 Channel NAC Module (S793)

Media Gateway Panel Module

S788



Standard Features

- Simple 'plug-in' connection to the L@titude Fire Alarm Control Panel
- Dual Line Dialer Capability (SIA or Contact ID)
- IP Capable (Sur-Gard Fibro)
- Programmable to report via point or zone
- Programmable for back-up reporting
- Reporting codes can be customized by user

Product Overview

The Media Gateway is a communication panel module for the L@titude Fire Alarm Control Panel.

The Media Gateway Panel Module provides connectivity to a remote monitoring center via Sur-Gard Fibro or dial-up. SIA is the recommended format for usage, but Contact ID is also supported. Transmission can be made through one or two telephone lines, and/or IP through Ethernet. Standard reporting codes have been pre-defined, although the user may customize these codes through the Loop Explorer 2 programming application.

The Media Gateway can provide connectivity to third-party networks (please consult a VES applications engineer for further information), and our new graphics system L@ti-view.

Technical Specifications

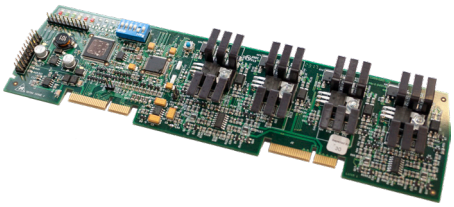
Supply Voltage Range	21 to 30V DC
Quiescent Current Consumption	114mA
Maximum Current Consumption	114mA
Dimensions	234.6mm x 62.8mm or 9¼" x 2½"
Operating Temperature	23° F to 104° F (-5° C to 40° C)
Operating Humidity	to 95% (non condensing)

FM APPROVED
Manufactured by Kentec Electronics Ltd. Dartford, DA11JQ, United Kingdom
PENDING

UL

4 Channel NAC Panel Module

S793



Standard Features

- Simple 'plug-in' connection to the L@titude Fire Alarm Control Panel
- 4 NAC outputs
- Fault and operated LED on-board indicators
- Decals provided to redesignate terminals

Product Overview

Additional NAC output capability can be added to by using 4 Channel NAC Modules. These boards have 4 supervised NAC outputs, each of which can be individually programmed. The circuits can be configured for class A or B operation. These circuits can be configured to act upon cause and effect logic.

Technical Specifications

Supply Voltage Range	21 to 30V DC
Quiescent Current Consumption	30mA
Maximum Current Consumption	50mA
Current per Output	2.5 A per channel
Maximum Line Impedance	4V loss (load-dependent)
Output Contact Rating	30 VDC 1 Amp
Dimensions	234.6mm x 62.8mm or 9¼" x 2½"
Cable Capacity	2.5mm per terminal
Operating Temperature	23° F to 104° F (-5° C to 40° C)
Operating Humidity	to 95% (non condensing)

FM APPROVED
Manufactured by Kentec Electronics Ltd. Dartford, DA11JQ, United Kingdom
PENDING

VF2011-00

Photoelectric Smoke Sensor

Standard Features

- Low Profile - Only 2.0" 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
- Removable smoke labyrinth for cleaning or replacement

Note:

Bases are not included with detectors, please order separately.

Application

- The VF2011 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. VES'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 photodiode. 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.

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Engineering Specification

The contractor shall furnish and install where indicated on the plans, photoelectric sensors VF2011 The combination sensor head and twist lock base shall be UL listed compatible with a UL listed fire alarm control panel.

The Sensor and Base shall be UL listed as compatible with the fire alarm control panel (FACP). The base shall permit direct interchange with the VES, VF2002, VF2005 & VF2011 photoelectric smoke sensor, VF2001 ionization type smoke sensor, VF2003 & VF2010 heat sensor, and the VF2008 & VF2012 Multi-Criteria sensor.

The sensitivity of the sensor shall be 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 shall be optional and can be implemented when required.

Bases

The VF7001 and the VF7002 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 screw driver.

Technical Specifications

Operating Voltage: 17-41 VDC
Standby Current: 450µA
Alarm Current: 540µA
Transmission Method: DCP—Digital Communication Protocol
Maximum Humidity: 95% RH Non-Condensing
UL Temperature Range: 32º F to 115º F
Operating Temperature Range: 14º F to 122º F
Sensitivity Range: 0.7 - 4.0%/ FT @ 300 FPM 0.7 - 3.86%/ FT @ 2000 FPM 0.7 - 2.65%/ FT @ 4000 FPM
Air Velocity Range: 0-4000 fpm
Color & Case Material: Bone/ White - ABS Blend
Weight: 3.4 oz, (5.1 oz with 4" base)

Ordering Codes

Part number	Description
VF2011-00	Photoelectric Smoke Detector
VF7001-00	4" Mounting Base
VF7002-00	6" Mounting Base
VF7008-00	6" Sounder Base

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Web: www.ves-network.com

VF7001
4" Sensor Base

VF7002
6" Sensor Base

Sensor Bases

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.

Application

The **VF7001** 4" base and **VF7002** 6" base are designed for use with VES analog style sensors models **VF2001**, **VF2002** and **VF2003**.

Each base is connected to an eLAN Signaling Line Circuit (SLC) and provides easy replacement of sensors, without disturbing the wiring.

The 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 **VF7001** 4" base and **VF7002** 6" base are designed specifically for use with the VES Analog sensors, models **VF2001** Ionization Smoke Sensor, **VF2002** Photoelectric Smoke Sensor and VF2003 Heat Sensor.

The **VF7001** and **VF7002** common mounting bases allows for complete compatibility for all of the VES 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.

Engineering Specifications

The Dealer shall furnish and install where indicated on the plans, VES **VF2002** photoelectric sensors, **VF2001** Ionization Smoke Sensor or **VF2003** Heat part number.

The selected sensor shall be attached to the **VF7001** or **VF7002** base and permit direct interchange between the listed sensors.

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.

It shall be possible to perform a functional test of the sensor without the need of generating smoke. The test method shall simulate the effects of products of combustion in the chamber to ensure testing of internal circuitry.

NOTE: SLC maximum resistance is 50 ohms.

Technical Specifications

VF7001: 4" Sensor Base
VF7002: 6" Sensor Base
Security feature: Plastic Tamper-Lock
Color & Case Material: Bone PC / ABS Blend
Compatible Sensors: VF2001, VF2002, VF2003

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AMS Manual Pull Stations

VF3031-10 Single Action w/ Hex Screw (H)
VF3032-10 Single Action w/ Key Lock (H)
VF3029-10 Dual Action w/ Key Lock (H)

VF3031-10

VF3032-10

VF3029-10

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

Product Overview

- The AMS series of addressable manual pull stations 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 VF3031-10 and VF3032-10 single action models. On the dual action model VF3029-10 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 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.

Engineering Specification

Manual pull stations shall be VES addressable AMS series single or dual action models, VF3031-10, VF3032-10 or VF3029-10. 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 and be installed within the limits defined in the Americans With Disabilities Act.

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Ordering Codes

Part number	Description
VF3031-10	Single action with Hex Screw Lock
VF3032-10	Single action with Hex Key Lock
VF3029-10	Dual action with Key Lock

Technical Specifications

Operating Voltage: 17-41 VDC

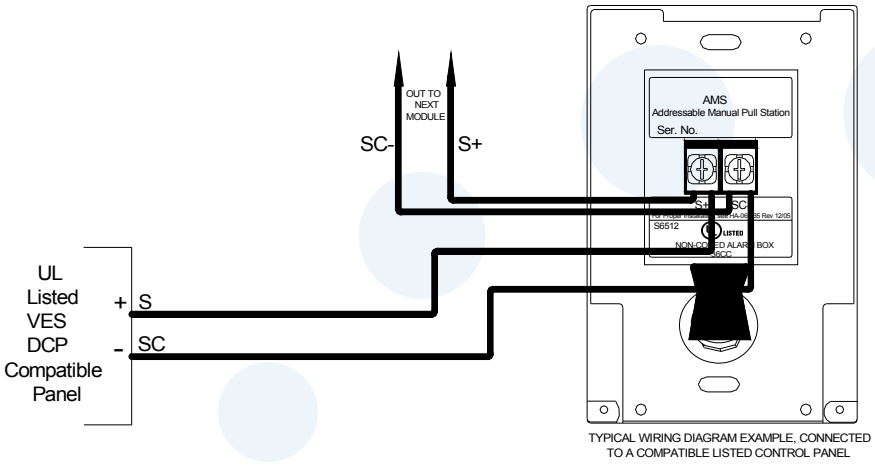
Average current consumption: 550µA (typical)
660µA (standard)

Ambient Temperature: 32°F to 120°F

Maximum humidity: 90% RH non-condensing

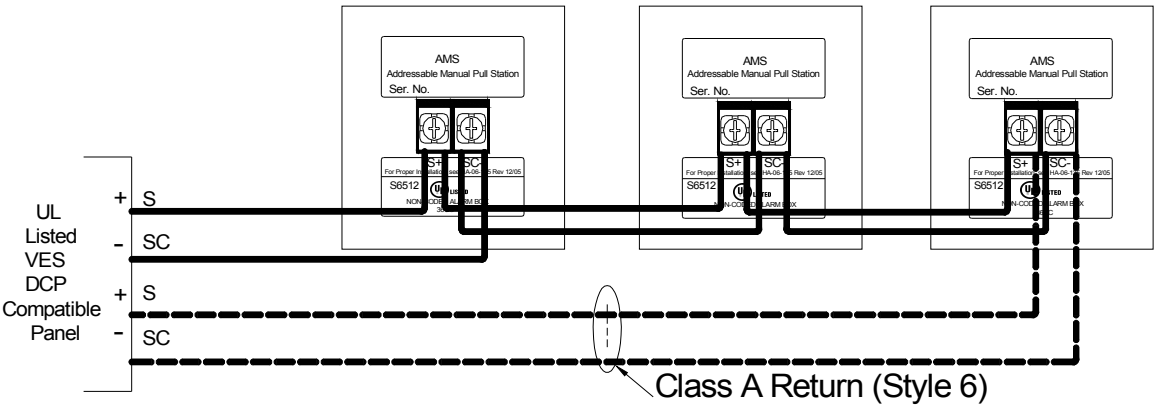
Dimensions: 3.4"W x 4.8"H x 2.0"D

Mounting: Single gang or 4" square electrical box

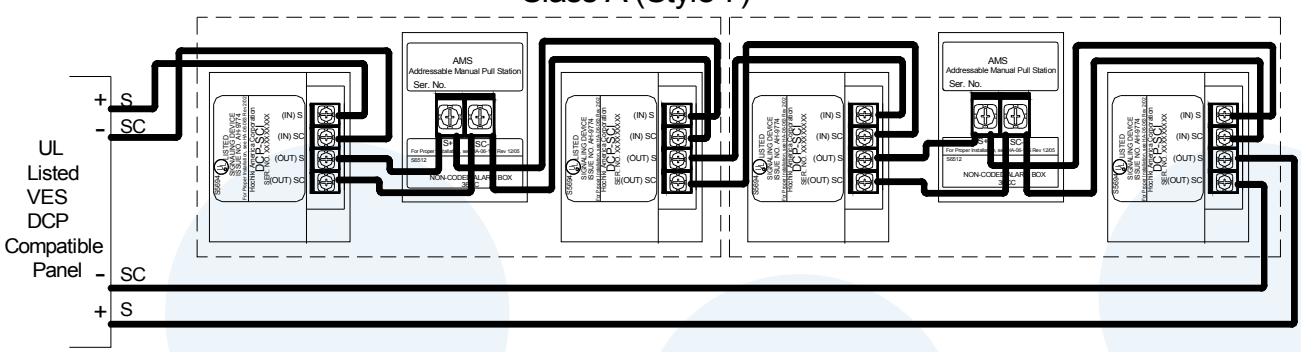


TYPICAL WIRING DIAGRAM EXAMPLE, CONNECTED TO A COMPATIBLE LISTED CONTROL PANEL

Class B (Style 4)



Class A (Style 7)



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VF6007-00

Dual Input Monitor Module

Back side of a VF6007

Standard Features

- Fast, reliable contact monitoring utilizing the VES 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
- Mounts to 4" square gang box

Application

- The VES VF6007 provides installing dealers an economical approach to monitor devices in the same proximity, such as water flow and valve supervision on the same interface device.
- This capability when coupled with VES's SIA DACT transmission provides sub-point reporting for complete annunciation and accurate reporting to responders and users.
- VES's reporting approach is superior in that the capability to accurately report dissimilar inputs, such as alarm and supervisory are pesent.

Operation

The VES Dual Monitor Module (VF6007) is designed for use on the Elite analog addressable system. 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.

Technical Specifications

Operating Voltage: 17-41 VDC
Average Current Consumption: 600µA (typical)
Alarm Current: 30mA
Operating Temperature Range: 32º F to 120º F
Maximum Humidity: 90% RH Non-Condensing
Dimensions: 4.2"W x 4.7"H x 1.4"D
Mounting: 4" square electrical box

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VF071X-X0

Fire Document Enclosure

Standard Features

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

Product Overview

- Another addition to the VES range, the document box is designed to complement the design & color of the Elite 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.

Available in Gray

Technical Specifications

Construction: 18AWG sheet steel
Dimensions:
VF0711 / VF0713: 14.5"W x 12.2"H x 3.4" D
VF0710 / VF0712: 14.5"W x 12.2"H x 2.5" D
Weight: 6.6lb
Finish (lid & box): RAL3002 (Red) or BS 00 A 05 (Gray)
Finish (product labels): BS 00 A 05 (Gray)

Panel Options

VF0710-xx: Standard
VF0711-xx: Deep
VF0712-xx: Standard w/ Tamper
VF0713-xx: Deep w/ Tamper
xx = 10 (Red) or 40 (Gray)

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Web: www.ves-network.com

Eluxa horns, horn strobes, & strobes

Description

The Wheelock Eluxa horns, horn strobes, and strobes by Eaton feature an advanced power saving LED technology with a full range of low and high candela settings for indoor wall and ceiling-mount applications. Designed in sleek, modern enclosures, Eluxa's aesthetically pleasing low profile will blend with the building's interior décor.

High efficiency, LED technology

Eaton's high energy efficient technology leads the industry in lowest current draw for a combined high and low candela device, which reduces overall power consumption. As the first notification appliances in the industry to utilize LED as the light source, this breakthrough optical design, resulting in best-in-class efficiency, enables material and system cost savings, allowing for a greater number of appliances on the notification appliance circuit and fewer power supplies. This reduces installation and operating costs. All strobe models feature six candela settings: 15, 30, 75, 110, 135, 185 cd on wall models and 15, 30, 75, 110, 150, 177 cd on ceiling models.

Low profile design and rich feature set

With the industry's smallest footprint, the Eluxa horns, horn strobes, and strobes are aesthetically pleasing to building owners as the low profile design does not detract from the interior decor. Eluxa is feature rich with 6 candela settings and 3 horn patterns (Continuous, T3, T3/T4) in 1 device, pre-wire/pre-test via mounting plate with hinged feature for ease-of-installation, single-gang design (wall models), and no tools needed for setting changes. The ELST strobe, ELHS horn strobe, and the ELHN horn are for 24V operation. ELHN is suitable for 12V applications.

Approvals and synchronization

Eaton's Eluxa strobes meet the 20 millisecond light pulse duration requirements of the 2016 edition of NFPA 72. By meeting this latest requirement, xenon and LED devices can now be in the same field of view.

The Eluxa notification appliances are listed under UL Standards 1971, 1638, and 464 and under CAN/ULC-S525 and CAN/ULC-S526. The appliances are Restriction of Hazardous Substances (RoHS) compliant and contain no mercury or other hazardous substances.

In addition, the Eluxa product line has been UL/ULC listed as compatible with all Fire Alarm Control Panels (FACP) and accessories that have been determined to be compatible with Exceder LED3 and Wheelock RSS strobe-based products including the RSS, CH, E, EH, ET, ST, HS, MT, S8, SA, STH and Z Series. The listing also includes the ability to install the Eluxa strobes in the same notification zone and field of view with any Wheelock RSS and Exceder LED3 strobe models.

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Features

- Energy efficient
  - LED technology provides industry's lowest current draw
  - Fewer power supplies required, smaller wire gage, reduced wire runs
- Low-profile design
  - One of the smallest, most compact single-gang designs
  - Sleek, modern aesthetics with no visible mounting screws
- Special lettering available
- 6 Field selectable settings in 1 device
  - Wall: 15, 30, 75, 110, 135, 185 cd
  - Ceiling: 15, 30, 75, 110, 150, 177 cd
- 3 horn patterns
  - Continuous, T3, and T3/T4; Fire and CO signaling in 1 device
- Sound pressure (Anechoic) dBA
  - Low 86, High 91 (for Continuous, T3, and T4)
- Easy-to-install
  - Mounting plate included with all models: Convenient capture hinge allows installers to easily hold the device while fastening the single-mount screw in place.
  - Pre-wire/pre-test capability to check for wiring and ground faults prior to appliance installation
  - Finger slide switches–No tools needed for setting changes
  - IN/OUT screw terminals using #12 to #18 AWG wires
  - Mounting options include ELSBB, any single-gang backbox and to 4" square with adapter kit for wall models and LSPKBB-C backboxes and 4" square, 1 1/2" or 2 1/8"deep for ceiling
- Strobe synchronization
  - Meet synchronizing standards with Wheelock's DSM Sync Modules, PS Power Supplies or SAFEPATH products
  - Ability to mix xenon and LED strobes in the same field of view
- Compliance
  - NFPA 72 2016 - 20 ms flash duration requirements
  - UL 1971, UL 1638, UL 464, ULC-S525, ULC-S526
  - California State Fire Marshal (CSFM)
  - Factory Mutual (FM)
  - RoHS
  - FCC Part 15, ICES

Note: Please read these specifications and associated installation instructions, before using, specifying, or installing this product. Visit Eaton.com/Lifesafetynotification for current installation instructions.

General Notes

- Strobes are designed to flash at 1 flash per second minimum over their "Regulated Voltage Range." Note that NFPA-72 specifies a flash rate of 1 to 2 flashes per second and ADA Guidelines specify a flash rate of 1 to 3 flashes per second.
- All candela ratings represent minimum effective strobe intensity based on UL 1971.

Drawings

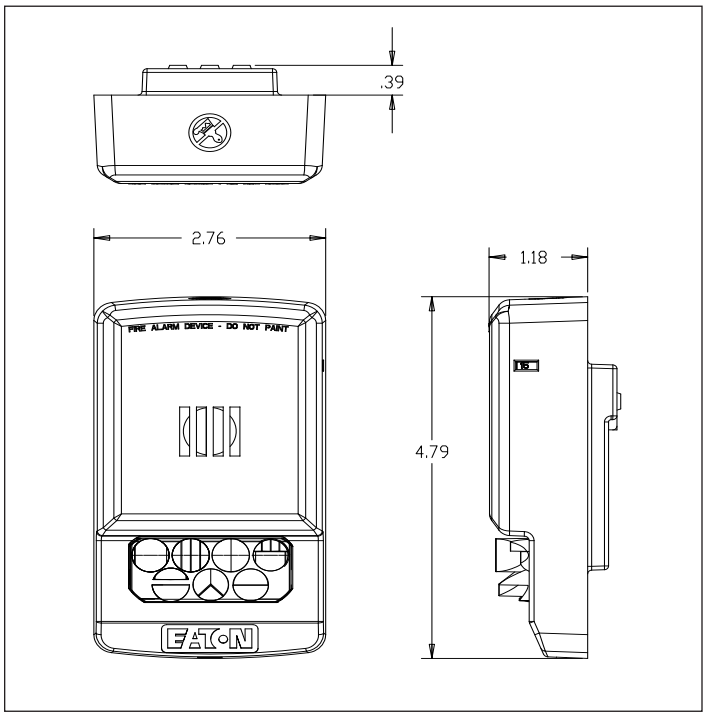

Figure 1. Wall, horn strobe

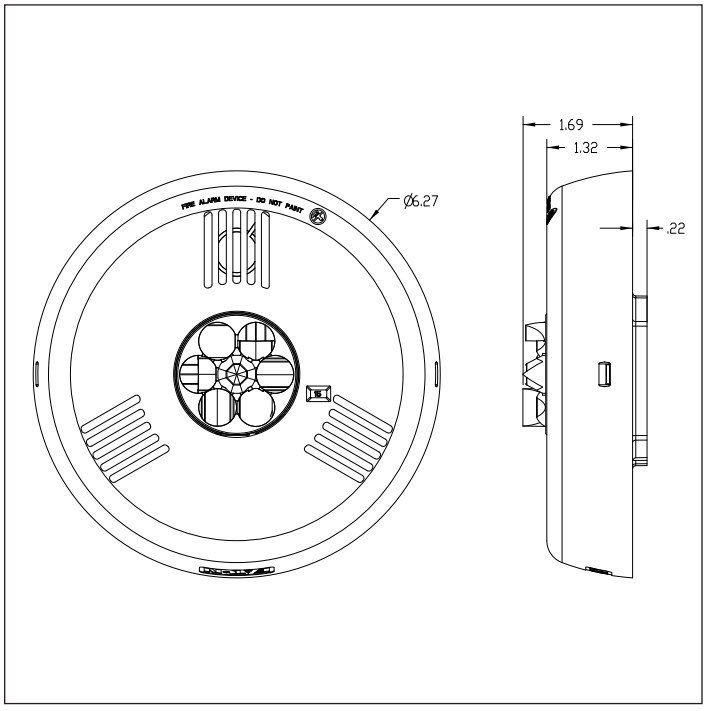

Figure 2. Ceiling, horn strobe

Table 1. Horn ratings per UL/ULC Anechoic

Eluxa Horns			
Model	**Regulated Voltage Range VDC**	**High dB**	**Low dB**
ELHN/ELHNC	8.0 - 17.5	0.025	0.020
ELHN/ELHNC	16.0 - 33.0	0.028	0.021

Table 2. Strobe ratings

		UL/ULC Max Current ①							
		24VDC							
Model	Regulated Voltage Range VDC	15	30	75	110	135	150	177	185
ELST	16.0-33.0	0.022	0.030	0.060	0.086	0.125			0.185
ELSTC	16.0-33.0	0.022	0.030	0.060	0.086		0.125	0.185	

Table 3. Code 3 horn strobe ratings

		UL/ULC Max Current ① at Anechoic High continuous							
Eluxa Horn Strobes		24VDC							
Model	Regulated Voltage Range VDC	15	30	75	110	135	150	177	185
ELHS	16.0-33.0	0.037	0.046	0.077	0.109	0.146			0.208
ELHSC	16.0-33.0	0.037	0.046	0.077	0.109		0.146	0.208	

		UL/ULC Max Current ① at Anechoic Low continuous							
Eluxa Horn Strobes		24VDC							
Model	Regulated Voltage Range VDC	15	30	75	110	135	150	177	185
ELHS	16.0-33.0	0.030	0.039	0.070	0.102	0.139			0.201
ELHSC	16.0-33.0	0.030	0.039	0.070	0.102		0.139	0.201	

Table 4. Specification & Ordering Information

Model	Mounting	Strobe Candela	Red	White	Lettering	Sync w/ DSM or Wheelock Power Supplies
Horn strobes						
ELHSR	Wall	15/30/75/110/135/185	X		FIRE	X
ELHSW	Wall	15/30/75/110/135/185		X	FIRE	X
ELHSR-A	Wall	15/30/75/110/135/185	X		AGENT	X
ELHSR-N	Wall	15/30/75/110/135/185	X		No Lettering	X
ELHSW-A	Wall	15/30/75/110/135/185		X	AGENT	X
ELHSW-AL	Wall	15/30/75/110/135/185		X	ALERT	X
ELHSW-N	Wall	15/30/75/110/135/185		X	No Lettering	X
ELHSW-EV	Wall	15/30/75/110/135/185		X	EVACUATE	X
ELHSRC	Ceiling	15/30/75/110/150/177	X		FIRE	X
ELHSWC	Ceiling	15/30/75/110/150/177		X	FIRE	X
ELHSWC-N	Ceiling	15/30/75/110/150/177		X	No lettering	X
Strobes						
ELSTR	Wall	15/30/75/110/135/185	X		FIRE	X
ELSTW	Wall	15/30/75/110/135/185		X	FIRE	X
ELSTR-A	Wall	15/30/75/110/135/185	X		AGENT	X
ELSTR-AL	Wall	15/30/75/110/135/185	X		ALERT	X
ELSTW-A	Wall	15/30/75/110/135/185		X	AGENT	X
ELSTW-AL	Wall	15/30/75/110/135/185		X	ALERT	X
ELSTW-N	Wall	15/30/75/110/135/185		X	No Lettering	X
ELSTR-N	Wall	15/30/75/110/135/185	X		No Lettering	X
ELSTW-EV	Wall	15/30/75/110/135/185		X	EVACUATE	X
ELSTRC	Ceiling	15/30/75/110/150/177	X		FIRE	X
ELSTWC	Ceiling	15/30/75/110/150/177		X	FIRE	X
ELSTRC-AL	Ceiling	15/30/75/110/150/177	X		ALERT	X
ELSTWC-AL	Ceiling	15/30/75/110/150/177		X	ALERT	X
ELSTWC-EV	Ceiling	15/30/75/110/150/177		X	EVACUATE	X
Horns						
ELHNR	Wall		X		No Lettering	X
ELHNW	Wall			X	No Lettering	X
ELHNRC	Ceiling		X		No Lettering	X
ELHNWC	Ceiling			X	No Lettering	X
Accessories						
ELSBB-R	LED Backbox, wall		X			
ELSBB-W	LED Backbox, wall			X		
ESB-KIT-R	Trim Plate, wall		X			
ESB-KIT-W	Trim Plate, wall			X		
LSPKBB-CR	Backbox, ceiling		X			
LSPKBB-CW	Backbox, ceiling			X		

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

② Regulated Voltage Range- VDC

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

Table 5. Specifications

Physical	
Material	Red or white textured UV stabilized, colored impregnated engineered plastic. Exceeds 94V-0 UL flammability rating
Weight	Wall: 0.35 lbs; Ceiling: 0.55 lbs
Lens	Light Emitting Diode (LED) in a rugged Lexan lens
Dimensions	Wall: 4.79"H x 2.76" W x 1.18" D, Trimplate: 5.25" H x 4.58" W x 0.32" D; Ceiling: 6.27" Diameter x 1.69" D
Operating Temperature	Indoor: 32°F to 122°F (0°C to 50°C) and maximum humidity of 93%
Mounting & Wire Connections	
Mounting (indoor only)	Mounting plate included with all models. ELHS and ELST are for wall-mount applications only. ELHN can be used for wall and ceiling-mount applications. Wall mounting: Single-gang, ELSBB backboxes or to 4" square with adapter kit. ELHN can be used for wall and ceiling-mount applications. ELHSC and ELSTC are for ceiling mount applications only. The ELHNC can also be used for wall-mount applications. Ceiling mounting: LSPKBB-C backboxes or to 4" square, 1 1/2" or 2 1/8"
Wire Connections	#12 through #18 AWG
Power & General	
Operating voltage	12 VDC/VFWR: 8 - 17.5 VDC/VFWR; 24 VDC/VFWR: 16 - 33 VDC/VFWR (12 VDC ELHN/ELHNC models only)
Strobe Output Rating	UL 1971, UL 1638, ULC S526: Selectable 15, 30, 75, 110, 135, 185 candela output for wall models; Selectable 15, 30, 75, 110, 150, 177 candela output for ceiling models
Synchronization Models	Strobes can be synchronized with Wheelock's DSM Sync Modules, PS Power Supplies or SAFEPATH products, using Wheelock patented sync protocol

Architects and Engineers Specifications

The LED notification appliances shall be Wheelock® ELHS audible visual strobe appliances, ELST visual strobe appliances and ELHN audible appliances for wall and ceiling-mount applications with a low-profile design or approved equals. Special lettering, including AGENT, ALERT, EVACUATE, and no lettering, shall be available. The ELHS and ELST strobes shall be listed for UL Standard 1971 (Emergency Devices for the Hearing-Impaired) for Indoor Fire Protection Service and UL 1638 (Visible Signaling Devices. The ELHS and ELHN Audibles shall be UL Listed under Standard 464 (Fire Protective Signaling). All models shall meet the requirements of FCC Part 15 and ICES-003. All inputs shall be compatible with standard reverse polarity supervision of circuit wiring by a Fire Alarm Control Panel (FACP) with the ability to operate from 16 to 33 VDC/VFWR.

The ELHS audible strobe and ELST strobe appliances shall produce a flash rate of one (1) flash per second over the Regulated Voltage Range and shall incorporate a Light Emitting Diode (LED) as the light source with a rugged Lexan® lens. The appliances shall be of low current design. The LED strobe flash duration shall be 20 ms. Where Multi-Candela appliances are specified, the strobe intensity shall have 6 field selectable settings at 15, 30, 75, 110, 135 and 185 candela for wall mount applications and 15, 30, 75, 110, 150 and 177 for ceiling applications. The selector switch for selecting the candela shall be tamper resistant. Appliances with candela settings shall show the candela selection in a visible location at all times when installed.

The audible shall have a choice of three (3) horn patterns (high & low output): Continuous, T3, and T3/T4 for fire (T3) and CO (T4) signaling.

The ELHS audible strobe, ELST strobe, and ELHN audible shall include a hinged mounting plate. Mounting options shall include LED backboxes, single-gang backbox and to 4" square with adapter kit for wall-mount models and LED Ceiling backboxes and 4" square, 1 1/2" or 2 1/8"deep for ceiling models. Two wire appliance wiring shall be capable of directly connecting to the mounting base. Removal of an appliance shall result in a supervision fault condition by the Fire Alarm Control Panel (FACP). All notification appliances shall be backwards compatible.

The ELHS, ELHN and ELST wall models shall have a low profile measuring 4.79"H x 2.76"W x 1.18"D. The ELHSC, ELHNC and ELSTC ceiling models shall have a low profile measuring 6.27" Diameter with 1.69"D.

When synchronization is required, the appliance shall be compatible with Wheelock®'s DSM Sync Modules, PS Power Supplies, SAFEPATH products or other manufacturer's panels with built-in Wheelock® Patented Sync Protocol. The strobes shall not drift out of synchronization at any time during operation. If the sync protocol fails to operate, the strobe shall revert to a non-synchronized flash-rate and still maintain (1) flash per second over its Regulated Voltage Range. The appliance shall also be designed so that the audible signal may be silenced while maintaining strobe activation when used with Wheelock® patented sync protocol.

NFPA 72 2016, UL 1971, UL, 1638, UL 464 ULC-S525-16, ULC-S526-16, CSFM, FM, FCC, RoHS, ICES

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SERIES RSSWP, ASWP, AHWP, and MTWP WEATHERPROOF STROBE, WEATHERPROOF AUDIBLE STROBE, WEATHERPROOF AUDIBLE HORN

SERIES RSSWP
Mounted to WPSBB

SERIES ASWP
Mounted to WPBB

SERIES AHWP

SERIES MTWP
Mounted to IOB

Description:

Wheelock's Weatherproof Strobe, Audible Strobe, Multitone Strobe and Audible appliances all have an **extended temperature range of -35˚C to 66˚C (-31˚F to 150˚F)** and will satisfy virtually all outdoor and severe environment applications. All strobes are Indoor/Outdoor UL Listed and rated for 75 candela @ -35˚C (-31°F).

Series RSSWP Strobes, Series ASWP Audible Strobes Series AHWP Audibles and Series MTWP Strobe may be synchronized when used in conjunction with the Wheelock DSM Sync Module(s).

Weatherproof Strobes - Series RSSWP

ULC Listed under Standard CAN/ULC-S526-02 for **Indoor/Outdoor** use. The strobes use a Xenon flashtube with solid state circuitry enclosed in a rugged Lexan® lens to provide maximum visibility and reliability for effective visual signaling. The Series RSSWP has a 75 cd intensity on axis at -35°C and Low Current Draw (180 cd @ 25°C). For outdoor application the RSSWP must be wall mounted to a Weatherproof backbox (WPSBB).

Weatherproof Audible Strobes and Audibles- Series ASWP and AHWP

ULC Listed under Standard CAN/ULC-S526-02 for Visual Signaling Appliances and Standard CAN/ULC-S525-99 for Audible Signaling Appliances. Indoor/Outdoor use and offer a field selectable choice of continuous horn or temporal pattern (Code 3) when constant voltage from the Fire Alarm Control Panel (FACP) is applied. Additionally, the audible has three (3) selectable dBA settings of 99, 95, and 90 dBA in both tones and, when used with Wheelock sync modules, DM the audible may be silenced while maintaining strobe activation on the Series ASWP. For outdoor applications the ASWP must be Wall Mounted to the Weatherproof Backbox (WPBB).

Weatherproof Multitone Strobe and Multitone Horn - Series MTWP and MT-12/24

Is ULC Listed for indoor and outdoor applications under Standard CAN/ULC-S526-02 for Visual Signaling and under Standard CAN/ULC-S5255-99 for Audible Signal Devices for Fire Alarm Systems. The Multitone Strobe Appliances use a Xenon flash tube with solid state circuitry enclosed in a rugged Lexan® lens to provide maximum visibility and reliability for effective visible signaling. The Multitone electronic appliance offers a choice of eight (8) internationally recognized alerting sounds: Horn, Bell, March Time Horn, Code 3 Tone, Code 3 Horn, Slow Whoop, Siren or Hi/Lo Tone. Additionally, the audible has two installer selectable sound output levels; Standard and High covering a range (depending on selected signal) or 85-100 dBA anechoic. The series MTWP is a true 4-wire appliance. The strobe portion can by synchronized and non synchronized. The Multitone (audible) portion can be synchronized, but it can be connected to a coded fire alarm system. The series MTWP and the MT-12/24 mount to a series IOB out door backbox.

Features

- Approvals include: ULC, UL 1638, UL 464
- Meets OSHA 29 Part 1910.165.
- ULC Listed with an extended temperature range of -35°C to 66°C (-31°F to 150°F).
- 24 VDC with wide UCL Listed Voltage Range using filtered (DC) or unfiltered VRMS voltage.
- Synchronize with Wheelock Series DSM, Sync Module(s).

NOTE: All CAUTIONS and WARNINGS are identified by the symbol ⚠All WARNINGS are printed in bold capital letters. ⚠WARNING: PLEASE READ THESE SPECIFICATIONS AND ASSOCIATED INSTALLATION INSTRUCTIONS CAREFULLY BEFORE USING, SPECIFYING OR APPLYING THIS PRODUCT. FAILURE TO COMPLY WITH ANY OF THESE INSTUCTIONS, CAUTIONS, OR WARNINGS COULD RESULT IN IMPROPER APPLICATION, INSTALLATION, AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE, AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

General Notes:

- Wheelock CAN/ULC-S526-M87 Strobes are designed to produce 30-62 flashes per minute over the Voltage Range.
- Series RSSWP, AHWP, MTWP and MT12/24 are listed for indoor and outdoor use with a temperature range of -35°C to 66°C (-31°F to 150°F) and maximum humidity of 93% RH ±2%. Series AHWP temperature range -35°C to 66°C (-31°F to 150°F) and maximum humidity of 98% RH±2%.
- **All Canadian Installations should be in accordance with the Canadian Standard for the Installation of Fire Alarm Systems - CAN/ULC-S524-01 and Canadian Electrical Code, Part 1.**

Table 1: Average Current* for Series RSSWP and Strobe in MTWP

Model (75 cd)	Regulated Voltage Range	Avg. Current*		
		20.0 VDC	24.0 VDC	31.0 VDC
RSSWP-2475W-FR	20.0 - 31.0 VDC	.138	.094	.067

Table 2: Average Current* (AMPS) For Series ASWP-2475W-FR Audible Strobe

Voltage	High dBA Setting (99) dBA	Medium dBA Setting (95) dBA	Low dBA Setting (90) dBA
20.0 VDC	.168	.155	.150
24.0 VDC	.132	.109	.102
31.0 VDC	.123	.090	.080

Table 3: ULC Current* (AMPS) for Series AHWP

Voltage	AH-24WP
AH-24WP	**Hi / Med / Low**
20.0 VDC	.035 / .020 / .014
24.0 VDC	.050 / .025 / .017
31.0 VDC	.065 / .030 / .021

* Average current per actual Wheelock production testing.
For rated average, peak and in rush current across the UL listed voltage range for both filtered DC and unfiltered VRMS, see Installation Instructions.

Table 4: dBA Ratings for Series ASWP & AHWP

Description	Volume	Reverberant dBA Per UL 464 @ 10 ft.	Anechoic dBA@10 ft.
		24 VDC	24 VDC
Continuous Horn	High	91	99
	Med	88	95
	Low	82	90
Code 3 Horn	High	85	99
	Med	82	95
	Low	75	90

#Audible and Visual combined.

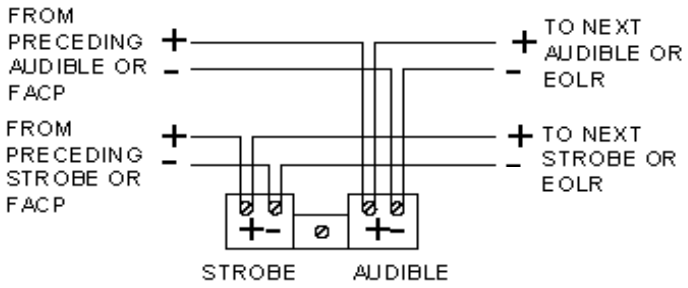
Table 5: ULC Current* Ratings (AMPS) for Series MT-12/24 and audible of MTWP				
Tone	12.0 VDC		24.0 VDC	
	Standard	High	Standard	High
Horn	0.020	0.100	0.023	0.040
Bell	0.010	0.031	0.012	0.014
March Time	0.020	0.100	0.023	0.040
Code 3 Horn	0.020	0.100	0.023	0.040
Code 3 Tone	0.015	0.060	0.017	0.028
Slow Whoop	0.025	0.100	0.026	0.048
Siren	0.020	0.082	0.023	0.036
Hi/Lo	0.012	0.044	0.014	0.020

Table 6: ULC 24 VDC dBA Anechoic Ratings Per CAN/ ULC S525-99 at 10 Feet		
Tone	24V	
	HI	STD
Horn	99	93
Bell	92	87
March Time	99	93
Code 3 Horn	99	93
Code 3 Tone	95	90
Slow Whoop	99	94
Siren	98	93
HI/LO	93	88

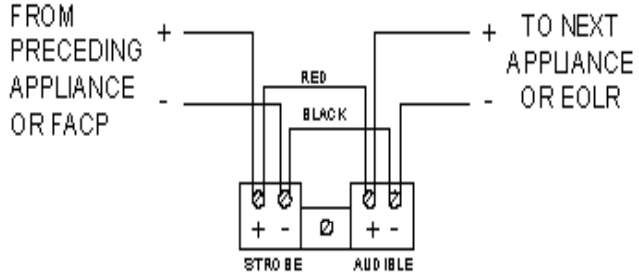
Table 7: ULC Ratings				
Model	Nominal Voltage (VDC/VRMS)	Regulated Input (24VDC)	Regulated Input (12 VDC)	Strobe Candela Per ULC
ASWP-2475W	24	20.0-31.0	-	75
AH-24WP-R	24	20.0-31.0	-	-
RSSWP-2475W	24	20.0-31.0	-	75
MTWP-2475W	24	20.0-31.0	-	75
MT-12/24	12/24	20.0-31.0	9.0-15.6	-

Wiring Diagrams

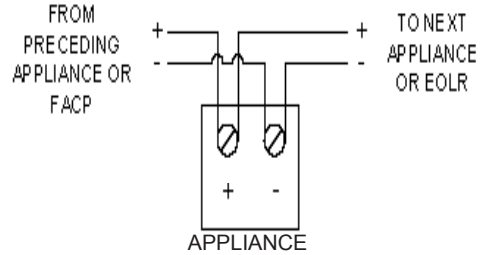
SERIES MTWP AUDIBLE APPLIANCE AND STROBE OPERATE INDEPENDENTLY



SERIES MTWP AUDIBLE APPLIANCE AND STROBE OPERATE IN UNISON. RED AND BLACK SHUNT-WIRES ARE SUPPLIED.

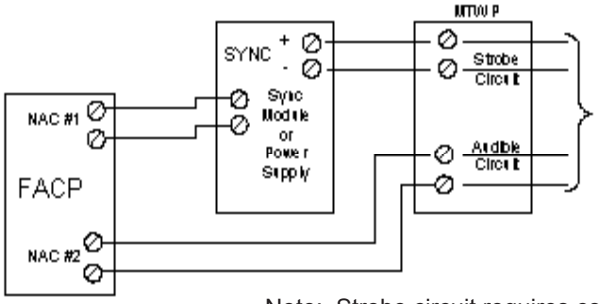


SERIES RSSWP, ASWP, AHWP, MTWP AND MT-12/24 APPLIANCES



Wiring Diagrams Cont.

SERIES MTWP APPLIANCES SYNCHRONIZED STROBE OPERATION WITH CODED AUDIBLE OPERATION



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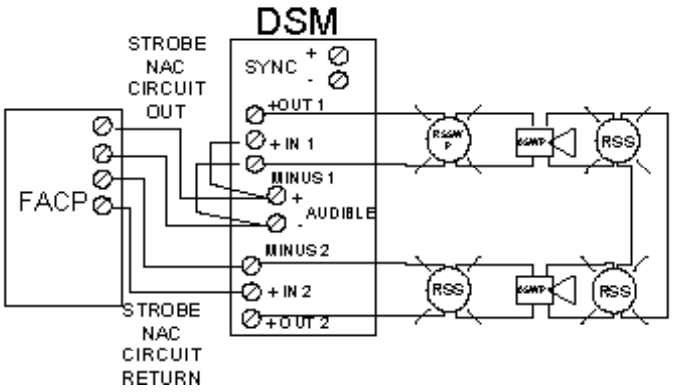
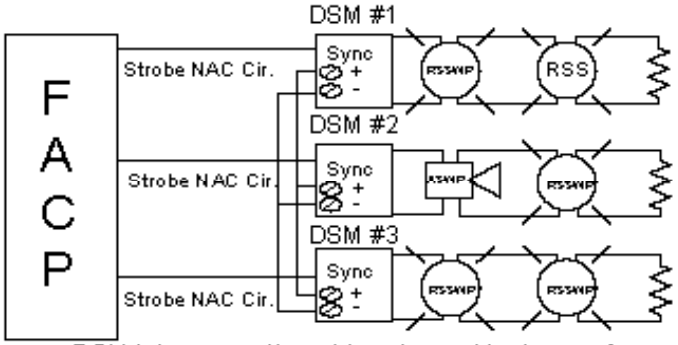
Note: Strobe circuit requires constant voltage

SERIES RSSWP/ASWP APPLIANCES SYNCHRONIZED W/ DSM MODULE SINGLE CLASS "A" NAC CIRCUIT



SERIES RSSWP/ASWP APPLIANCES SYNCHRONIZED W/MULTIPLE DSM MODULES CLASS "B" NAC CIRCUITS



DSM Interconnecting wiring shown. Maximum of twenty (20)

⚠WARNING: CONTACT WHEELOCK FOR THE CURRENT "INSTALLATION INSTRUCTIONS" AND "GENERAL INFORMATION" SHEET (P82380) ON THESE PRODUCTS. THE INSTALLATION INSTRUCTIONS ARE AS FOLLOWS: P84135 FOR SERIES RSSWP, P83957 FOR SERIES ASWP, P83641 FOR SERIES AH-WP, P84150 FOR SEREIS MTWP AND P824671 FOR SERIES MT-12/24-R. THESE DOCUMENTS UNDERGO PERIODIC CHANGES. IT IS IMPORTANT THAT YOU HAVE CURRENT INFORMATION ON THESE PRODUCTS. THESE MATERIALS CONTAIN IMPORTANT INFORMATION THAT SHOULD BE READ PRIOR TO SPECIFYING OR INSTALLING THESE PRODUCTS, INCLUDING:

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

SPECIFICATIONS AND ORDERING INFORMATION

Model	Order Code	Non-Sync	Sync w/ DSM	Strobe cd @ -35°C (-31°F)	dBA	Input Voltage	Outdoor Mounting Options*
Strobe							
RSSWP-2475W-FR	9013	Yes	Yes	75cd	-	24 VDC	T
RSSWP-2475W-FW	3034	Yes	Yes	75cd	-	24 VDC	T
RSSWP-2475W-NW	9778	Yes	Yes	75cd	-	24 VDC	T
Audible Strobe							
ASWP-2475W-FR	9012	Yes	Yes	75cd	90/95/99	24 VDC	I
Multitone Strobe							
MTWP-2475W-FR	8420	Yes	Yes, Strobe Only	75cd	75-94	24 VDC	M
MTWP-2475W-FW	3112	Yes	Yes, Strobe Only	75cd	75-94	24 VDC	M
MTWP-2475W-NW	9744	Yes	Yes, Strobe Only	75cd	75-94	24 VDC	M
Horns/Audibles							
AH-24WP-R	7416	Yes	Yes	N/A	90/95/99	24 VDC	K
MT-12/24-R	5023	Yes	No	N/A			M
Back Boxes		**Use With**	**Mounting Option**				
WPSBB-R	9751	RSSWP	T				
WPBB-R	9014	ASWP	I				
IOB-R	5046	MTWP & MT-12/24-R	M				
WBB-R	2959	AHWP	K				

*Refer to data sheet S7000 for mounting options

ARCHITECTS AND ENGINEERS SPECIFICATIONS

The Weatherproof Strobe appliances shall be Wheelock Series RSSWP-2475W strobes or approved equals. The Series RSSWP shall meet and be listed for ULC and S526-02 Standard 1638 (Standard for Visual Signaling Appliances) for Indoor/Outdoor use. The strobe appliances shall produce a flash rate of 30-62 flashes per minute over the Regulated Voltage Range of 20.0 to 31.0 VDC and shall incorporate a Xenon flashtube inclosed in a rugged Lexan® lens. The strobe shall be rated at 75cd and shall operate over an extended temperature range of -35°C to 66°C (-31°F to 150°F). All inputs shall be polarized for compatibility with standard reverse polarity supervision of circuit wiring by a Fire Alarm Control Panel. When synchronization is required, the appliances shall be compatible with the Wheelock Series DSM Sync Module(s). The strobes shall not drift out of synchronization at any time during operation. If the sync module fails to operate, (i.e., contacts remain closed), the strobe shall revert to a non-synchronized flash rate.

The Weatherproof Audible Strobe and Audible appliances shall be Wheelock Series ASWP-2475W Audible Strobes and Wheelock Series AHWP Audible Horns or approved equals. The Series ASWP and Series AHWP shall meet and be listed for ULC and S526-02 Standard 1638 (Standard for Visual Signaling Appliances) for Indoor/Outdoor use. The strobe appliances shall produce a flash rate of 30-62 flashes per minute over the Regulated Voltage Range of 20.0 to 31.0 VDC and shall incorporate a Xenon flashtube enclosed in a rugged Lexan® lens. The strobe shall be rated at 75cd and shall operate over an extended temperature range of -35°C to 66°C (-31°F to 150°F). All inputs shall be polarized for compatibility with standard reverse polarity supervision of circuit wiring by a Fire Alarm Control Panel (FACP).

The weatherproof audible strobe appliances shall be designed for two-wire operation and shall provide either a continuous or temporal (Code 3) tone when constant voltage from a Notification Appliance Circuit (NAC) of the Fire Alarm Control Panel (FACP) is applied. They shall be designed so that the audible signal may be silenced while maintaining strobe activation. When synchronization is required, the appliances shall be compatible with the WheelockSeries DSM Sync Module(s). The strobes shall not drift out of synchronization at any time during operation. If the sync fails to operate, (i.e., contacts remain closed), the strobe shall revert to a non-synchronized flash rate.

The Weatherproof Multitone Strobe and Multitone Audible appliances shall be a Wheelock Series MTWP and MT-12/24 or equivalent. The Series MTWP shall meet and be listed for ULC and S526-02 Standard 1638 (Standard for Visual Signaling Appliances) for indoor/outdoor use. The strobe portion of the appliance shall produce a flash rate of 30-62 flashes per minute over the listed voltage range of 20-31 VDC and shall incorporate a Xenon flash tube enclosed in a rugged Lexan® lens. The strobe shall be rated at 75cd. The series MTWP shall operate over an extended temperature range of -35°C to 66°C (-31°F to 150°F). All inputs shall be polarized for compatibility with industry standard reverse polarity of circuit wiring by a Fire Alarm Control Panel. The audible portion of the Series MTWP as well as the Series MT-12/24 shall provide eight field selectable alarm signals. The signals shall consists of: Horn, Bell, March Time, Code 3 Horn, Code 3 Tone, Slow Whoop, Siren and Hi/Lo. Tone selection shall be by a durable dip switch assembly. Clips or Jumpers are not acceptable. The appliance shall provide two output sound levels: Standard and High dBA. The range of dBA shall be 75 to 94 dBA. The Series MTWP shall have an operating voltage of 24 VDC (nominal) while the Series MT-12/24 shall operate at either 12 or 24 VDC (nominal) using filtered power or unfiltered power (full wave rectified). Both models shall have provisions for In/Out field wiring using terminals that accept #12 to #18 AWG wiring. When synchronization is required, the Series MTWP shall be compatible with the Series DSM Sync Modules. **Note: The Strobe portion of the Series MTWP may be synchronized. The audible portion of the appliance cannot. The audible portion of the appliance can be connected to a coded fire alarm system. The Series MTWP and the Series MT-12/24 shall be mounted only to the IOB-R Backbox.**

NEMA Member

WE ENCOURAGE AND SUPPORT NICET CERTIFICATION
3 YEAR WARRANTY

S9004C WP 06/11

NJ Location
273 Branchport Ave.
Long Branch, NJ 07740
P: 800-631-2148
F: 732-222-8707
www.coopernotification.com

Specification & Technical Data Sheet

Part Number: RWC-P162F-RD/BL

16-02 SOLID BC NS FPLP - RED JACKET W/ BLUE STRIPE

---

1. Conductor

- AWG Size: 16
- Type: Solid Bare Copper

2. Insulation

- Material: Plenum
- Wall Thickness: 0.010"
- Color Code: 1-Black; 2-Red

3. Assembly

- Cable Lay Length: 3.00” LHL (4.00 Tw/Ft)
- Shield: Non
- Drain: N/A
- Braid:

4. Jacket

- Material: Plenum
- Wall Thickness: 0.015"
- Diameter: 0.173"
- Color: Red w/ Blue Stripe
- Ripcord: Yes
- Weight: 25.0000 lbs/Mft.

5. Markings

- Type: Inkjet Printer
- Legend: Sequential Foot Markers; UL Standard Legend; Plenum Rated
- Footage Markers: Yes

6. Electricals

- Impedance: Ω/Mft.
- Capacitance: 31 pF/ft +/- 10%
- DC Resistance: 4.02 Ω/Mft. @ 20°C

7. Standards

- UL listed as type FPLP 75°C per UL standard 1424 or CL3P per UL Standard 13, CMP per UL 444
- All materials used in the manufacture of this cable are RoHS II & REACH compliant
- Maximum Operating Voltage: 300V RMS
- Made in the USA

Specification & Technical Data Sheet

Part Number: RWC-P182F-RD/YL

18-02 SOLID BC NS FPLP - RED W/ YELLOW STRIPE

---

1. Conductor

- AWG Size: 18
- Type: Solid Bare Copper

2. Insulation

- Material: Plenum
- Wall Thickness: 0.010"
- Color Code: 1-Black; 2-Red

3. Assembly

- Cable Lay Length: 3.00” LHL (4.00 Tw/Ft)
- Shield: Non
- Drain: N/A
- Braid:

4. Jacket

- Material: Plenum
- Wall Thickness: 0.015"
- Diameter: 0.152"
- Color: Red w/ Yellow Stripe
- Ripcord: Yes
- Weight: 18.0000 lbs/Mft.

5. Markings

- Type: Inkjet Printer
- Legend: Sequential Foot Markers; UL Standard Legend; Plenum Rated
- Footage Markers: Yes

6. Electricals

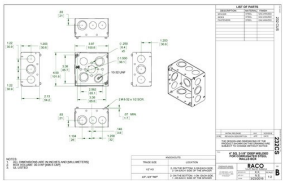
- Impedance: Ω/Mft.
- Capacitance: 28 pF/ft +/- 10%
- DC Resistance: 6.39 Ω/Mft. @ 20°C

7. Standards

- UL listed as type FPLP 75°C per UL standard 1424 or CL3P per UL Standard 13, CMP per UL 444
- All materials used in the manufacture of this cable are RoHS II & REACH compliant
- Maximum Operating Voltage: 300V RMS
- Made in the USA

4 IN. SQUARE WELDED BOXES - 2-1/8 IN. DEEP WITH CONDUIT KO'S

4 in. Square Boxes, 2-1/8 in. Deep - Welded with Elevated Conduit KO's
600V, Elevated Side Knockouts, Raised Ground **A13**



Catalog #: 232CS

APPLICATIONS

RACO® Boxes are installed in walls or ceilings for lighting fixtures, switches or receptacles
Square boxes are used where multiple conductor runs are split into two or more directions to bring power to a number of electrical devices

PRODUCT FEATURES

Elevated Knockouts on two sides help to elminate the need for bends or offsets by allowing the conduit runs to enter straight into the box
TKO® Knockouts offer greater flexibility with RACO patented combination 1/2" and 3/4" knockout
Combination screw heads provide for faster installation

UL LISTED

File E195978

COMPLIANCES

All RACO® single gang, two gang, 4 in. square, and single gang gangable UL listed steel boxes are acceptable for use in 2-hour fire rated walls. For additional information, consult UL "Fire Resistance Directory" or the UL website at www.ul.com
600V Per UL 514-A, suitable for use without a bonding jumper in circuits up to 600 volts
MSDS
www.hubbell-rtb.com/certifications/Hubbell-RACO MSDS for Steel Boxes & Covers.pdf

FIRE RESISTANCE

Acceptable for use in 2-hour rated walls

GENERAL PRODUCT INFORMATION

Wiring System:	Conduit
Country of Origin:	USA

CONFIGURATION

Bracket Type:	No Bracket
Drawn or Welded:	Welded
Raised Ground:	Yes
Side Knockout(s):	(8) 1/2 in. & (4) TKO®
Bottom Knockouts(s):	(2) 1/2 in. & (2) TKO®

DRAWING DIMENSIONS

Dimension A:	2-1/8 in.

PRODUCT MEASUREMENTS

Depth:	2-1/8 in.
Cubic Inches (cm3):	30.3 (496.5)
Wt. Ea. (Lbs.):	0.898
Product Length (in.):	2.19
Product Width (in.):	4.00
Product Height (in.):	4.00

PACKAGING

Minimum Pack Qty.:	25
Std. Pkg.:	25
Product UPC-A Labeled:	No
Weight (Lbs. Per/C):	89.80
Ship Carton Length (in.):	18.75
Ship Carton Width (in.):	8.88
Ship Carton Height (in.):	7.38
Ctn Weight (Lbs.):	22.45
Pallet Qty:	1750
UPC Number:	050169932322
I2of5:	50050169932327

POWER PS SONIC
TRUSTED BATTERY SOLUTIONS

PS SERIES

General Purpose | Emergency Lighting | Medical | Fire & Security

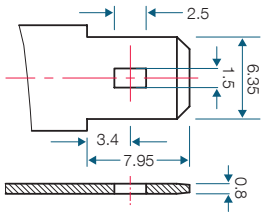
PS-12260

12V 26.0 AH @ 20-hr.
12V 24.7 AH @ 10-hr.

Rechargeable Sealed Lead Acid Battery
PS – General Purpose Series

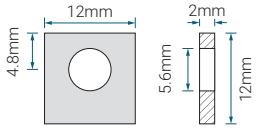
TERMINALS: (mm)

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



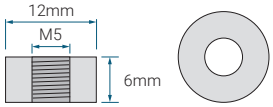
Torque – Not Applicable

NB1: Tin plated brass post with 'Nut & Bolt' fasteners



Torque: 2.0~3.0 Nxm

T12: Threaded insert with 5mm stud fastener



Torque: 2.0~3.0 Nxm

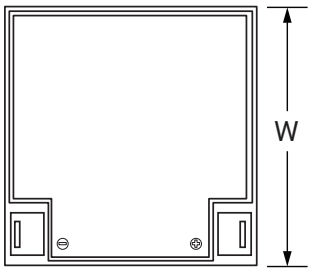
FEATURES

- 5 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

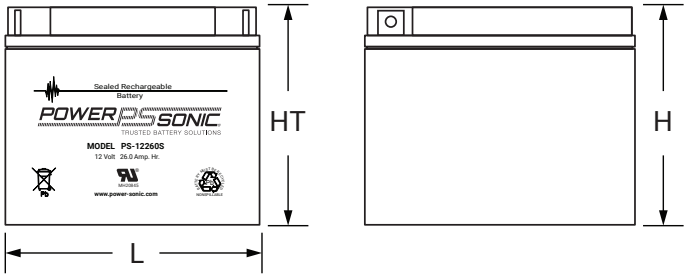
- Approved for transport by air. D.O.T., I.A.T.A., F.A.A. and C.A.B. certified
- U.L. recognized
- ISO9001:2015 – Quality management systems

DIMENSIONS: inch (mm)



L: 6.56 (167)
W: 6.97 (177)
H: 4.92 (125)
HT: 4.92 (125)

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



PERFORMANCE SPECIFICATIONS

Nominal Voltage	12 volts (6 cells)
Nominal Capacity	
20-hr. (1.3A to 10.50 volts)	26.0 AH
10-hr. (2.47A to 10.50 volts)	24.7 AH
5-hr. (4.42A to 10.20 volts)	22.1 AH
1-hr. (15.8A to 9.60 volts)	15.8AH
Approximate Weight	17.60 lbs. (8.0 kg)
Internal Resistance (approx.)	11.0 milliohms
Max Short-Duration Discharge Current (5 Sec.)	390.0 amperes
Shelf Life (% of nominal capacity at 68°F (20°C)	
1 Month	92%
3 Month	90%
6 Month	80%
Operating Temperature Range	
Charge	5°F (-15°C) to 104°F (40°C)
Discharge	5°F (-15°C) to 122°F (50°C)
Case	ABS Plastic
Power Sonic Chargers	PSC-124000-PC PSC-124000A-C

GLOBAL HEADQUARTERS
(USA AND INTERNATIONAL EXCLUDING EMEA)
Power-Sonic Corporation
365 Cabela Dr Suite 300,
Reno, Nevada 89523
USA
T: +1 619 661 2020
E: customer-service@power-sonic.com

POWER-SONIC EMEA
(EMEA – EUROPE, MIDDLE EAST AND AFRICA)
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T UK: + 44 1268 560 686
T FR: + 33 344 32 18 17
E: salesEMEA@power-sonic.com

POWER PS SONIC
TRUSTED BATTERY SOLUTIONS

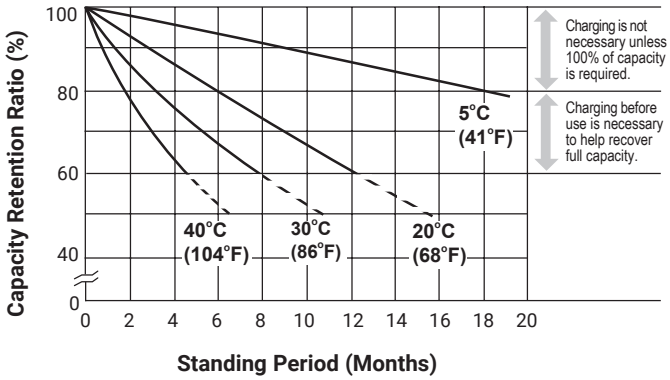
PS SERIES

PS-12260

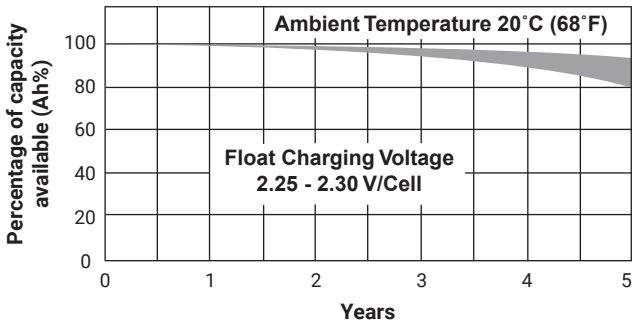
12V 26.0 AH @ 20-hr.
12V 24.7 AH @ 10-hr.

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.

APPLICATIONS

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

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

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.

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