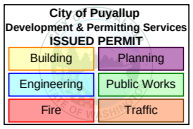
Cerberus® PRO
Detectors and Peripherals

Photoelectric Smoke Detector
Model OP921



Architect & Engineer Specifications

- ☐ Compatible with Siemens Model `H'-series devices on the same loop (with Cerberus PRO Modular | FireFinder XLS/V | FC/FV9–series fire-alarm control panels
- ☐ Compatible with Model 8720 | DPU (device programmer / loop tester)
- ☐ Each detector is self-testing:
  - self monitored for sensitivity with UL Listed limits
  - complete diagnostics performed every 10 seconds
- ☐ Polarity insensitive via *SureWire™* technology
- ☐ Functions with Model DB-11–series mounting bases
- ☐ Tri-color detector-status light-emitting diode (LED) with 360 ° view
- ☐ Field-selectable application-sensitivity profiles
- ☐ Remote sensitivity-measurement capability
- ☐ Utilizes advanced, microprocessor-based signal processing
- ☐ Extended temperature-and-humidity operating range
- ☐ Automatic environment compensation
- ☐ Superior electromagnetic interference (EMI) and radio-frequency interference (RFI) immunity
- ☐ Restriction of Hazardous Substances (RoHS compliant)
- ☐ UL 268A Listed [for direct air-duct use], ULC Listed; FM (#3230, #3210), CSFM (#7272-0067:0258) Approved

Product Overview

The Photoelectric Smoke Detector (Model OP921) uses state-of-the-art microcontroller circuitry and surface-mount technology for maximum reliability. Model OP921 incorporates an optical sensor using a light-scattering detection principle. The device utilizes advanced software algorithms to analyze the signals, and provides highly stable and accurate smoke detection.

Model OP921 also uses state-of-the-art microprocessor circuitry with error check; detector self-diagnostics, and supervision programs.

Field-Device Programmer / Test Unit

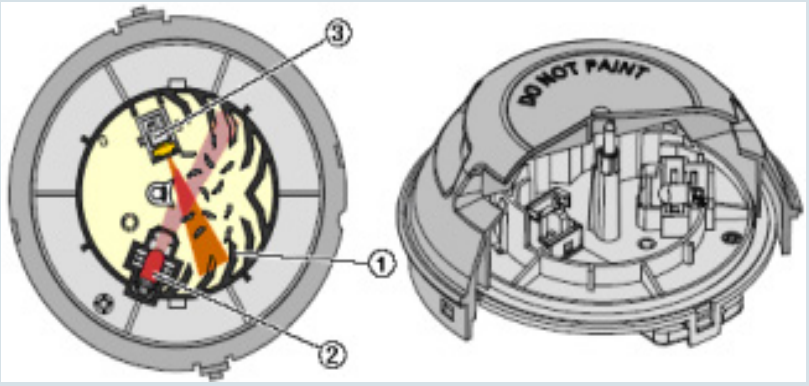
Model OP921 is compatible with the Siemens field-device programmer / test unit (Model 8720 | DPU), which is a compact, portable and menu-driven accessory for electronically programming and testing these addressable detectors promptly and reliably. For instance, the field technician selects the accessory's program mode, and enters the desired address.

Model DPU eliminates the need for cumbersome, unreliable mechanical programming methods (e.g. – dials and rotary switches), and reduces installation and service costs by electronically programming and testing the detector prior to installation. When set in `test' mode, Model DPU will perform a series of diagnostic tests without altering the address or other stored data, allowing technicians to determine if the detector is operating properly.

Each field-device programmer / test unit operates on AC power or rechargeable batteries, providing flexibility and convenience in the programming / testing of fire-safety equipment from practically any location. Additionally, with the use of a Model DPU unit, there is no longer a cause for concern with any vibration, corrosion and other deteriorating conditions that can accompany the vitality of a mechanical-addressing mechanism.

Model OP921
Photoelectric Smoke Detector

1. **Labyrinth**
2. **Optical transmitter**
3. **Optical receiver**



Model OP921

Product Overview – (continued)

Each detector fits into one (1) wall-or-ceiling footprint, and only occupies one (1) address on the signal-line circuit (SLC).

Model OP921 is a plug-in, two-wire and addressable photoelectric smoke detector.
Model OH921 is Underwriters' Laboratories Listed [UL268A Listed for direct in-air duct usage].

Each detector consists of a dust-resistant photoelectric chamber and microprocessor-based electronics with a low-profile plastic housing. Every Model OP921 fire detector is shipped with a protective dust cover:

Operation

Model OP921 is a wide-spectrum, photoelectric smoke detector that incorporates an infrared light-emitting diode (IRLED), as well as a light-sensing photodiode. Under normal conditions, light transmitted by the LED is directed away from the photodiode and scattered through the smoke chamber in a controlled pattern.

The smoke chamber is designed to manage light dissipation and extraneous reflections from dust particles or other non-smoke, airborne contaminants in such a way as to maintain stable, consistent detector operation. When smoke enters the detector chamber, light emitted from the IRLED is scattered by the smoke particles, and is received by the photodiode (**see**: the computer-graphic images at the top of this page).

1. **Dust cover**
2. **Photoelectric smoke detector**

Sensitivity Settings

Application Parameter Sets

Model OP921 provides four (4) pre-programmed sensitivity parameter sets that can be selected by the Siemens fire-alarm control panel in order to match the expected application or environmental conditions:

- Sensitive
- Standard
- Robust
- Air-duct

***Sensitive*:** This application parameter set is practically suitable for areas where few misleading sources of false alarm are present, and is appropriate where priority is given to detecting open fires as soon as possible (e.g. – typically a clean application with controlled environmental conditions).

Standard: This application parameter set, which is ideal for normal office | hotel-lobby-type applications, is the default setting.

Robust: This application parameter set offers improved resistance to false alarms in areas where misleading sources, such as cigarette smoke or exhaust fumes, may cause a nuisance alarm.

Air-Duct: This application parameter set is used when the detector is used a UL268A (DI) compliant, direct in-air duct application without a duct housing.

Model OP921 does not require a field sensitivity test. Model OP921 is UL Listed as a self-testing device and complies with NFPA 72 as a self-monitoring detector and control-panel arrangement. This parameter set is also used when Model OP921 is used in air-duct housings (Models FDBZ492 and FDBZ492-HR).

Sensitivity Settings

Application Parameter Sets – (continued)

Air-Duct: A quick visual inspection is sufficient to indicate the condition of Model OP921 at any time. If more detailed information is required, a printed report can be provided from the compatible FACP, indicating the status and settings assigned to each individual detector. When Model OP921 moves to `Alarm' mode, the detector will flash RED and continue flashing until the system is reset at the FACP. At that same time, any user-defined, system-alarm functions programmed into the system are activated.

Model OP921 contains a tri-color LED indicator, capable of flashing any one (1) of three (3) distinct colors: GREEN | YELLOW | RED. During each flash interval, the microprocessor-based detector monitors the following scenarios:

- Smoke sensitivity is within the range indicated on the nameplate label
- Smoke in its sensing chamber
- Internal sensors and electronics are functional

Based on the results of the monitoring, the LED indicator flashes the following:

FLASH COLOR	CONDITION	FLASH INTERVAL [in seconds]
GREEN*:	Normal supervisory operation. Smoke sensitivity is within rated limits.	10
YELLOW:	Detector is in trouble and needs replacement.	4
RED:	`Alarm' condition	1
NO FLASH:	Detector is not powered.	–

* denotes LED can be turned OFF
Please follow the corresponding description of the panel used.

A quick visual inspection is sufficient to indicate the condition of the detector at any time.
If more detailed information is required, a printed report can be provided from the respective Cerberus PRO Modular | FireFinder XLS/V | FC/FV9–series FACP that indicates the status and settings assigned to each individual detector.

Installation

All Model OP921 intelligent, addressable detectors use a surface-mounting base (Model DB-11 or DB-11E), which mounts on a 4-inch (10.2 cm.) octagonal, square or single-gang electrical back box. The base utilizes screw-clamp contacts for electrical connections and self-wiping contacts for increased reliability.

The Model DB-11 detector base can be used with the optional Siemens Model LK-11 detector locking kit, which contains 50 detector locks and an installation tool to prevent unauthorized removal of the detector head. Model DB-11 has aesthetically conducive plugs to cover the outer mounting-screw holes.

Model OP921 may be installed on the same initiating circuit with the Siemens Model `H'-series detectors [when used with Cerberus PRO Modular | FireFinder XLS/V | FC/FV9–series FACPs] –

- HFP-11, HFPT-11
- Model `XTRI'-series manual stations
- Model `HTRI'-series interfaces
- Model `HMS'-series manual stations
- Model HCP output-control detection devices
- Model `HZM'-series of addressable, conventional zone modules

Each detector, which is shipped with a protective dust cover, consists of the following:

- Dust-resistant photoelectric chamber
- Solid-state, non-mechanical thermal sensor
- Microprocessor-based electronics with a low-profile plastic housing

All Model OP921 intelligent, addressable detectors are approved for operation with the Underwriters' Laboratories-specified temperature range of 32° to 120° (0° to 49°C).

(See: installation manual **P/N – A6V10323928** for further details)

Application Data

Installation of Model OP921 smoke detectors requires a two-wire circuit. In many retrofit cases, existing wiring may be used. `T-tapping' is permitted only for Style 4 (Class B) wiring. Model OP921 is polarity insensitive, which can greatly reduce installation and debugging times.

Model OP921 detectors can be applied within the maximum 30-feet center spacing (900 sq. ft. areas,) as referenced in NFPA 72. This application guideline is based on ideal conditions – specifically, smooth ceiling surfaces; minimal air movement, and no physical obstructions between potential fire sources and the actual detector. Do not mount detectors in close proximity to ventilation or heating and air conditioning outlets. Exposed joists or beamed ceilings may also affect safe spacing limitations for detectors.

Should questions arise regarding detector placement, observe NFPA 72 guidelines. Good fire-protection-system engineering and common sense dictate how and when fire detectors are installed and used. Contact your local Siemens – Fire Safety distributor or sales office whenever you need assistance applying Model OP921 in unusual applications. Be sure to follow NFPA guidelines and UL Listed / ULC Listed installation instructions – included with every Siemens – Fire Safety detector – and local codes as for all fire protection equipment.

Technical Data

OPERATING TEMPERATURE:	+32° – +120°F (0° – +49°C)
RELATIVE HUMIDITY:	0 – 95% (non-condensing)
AIR PRESSURE:	No effect
AIR VELOCITY:	0 – 4,000 feet-per-minute (fpm) (0 – 20 meters-per-second)
INPUT VOLTAGE RANGE:	16VDC – 30VDC
`ALARM' CURRENT, MAX.:	280µA
`STANDBY' CURRENT, MAX.:	280µA, max. (average)
MAXIMUM SPACING:	30–ft. centers (900 sq. ft.), per NFPA 72
DETECTOR WEIGHT:	0.317 Lbs. (0.144 kg.)
MECHANICAL PROTECTION GUARD:	UL and ULC Listed (with STI Guard Model STI-9604)

Panel Compatibilities

MODEL OR TYPE	DATA SHEET	PANEL
XLS	6300	FireFinder® (fire)
XLSV	6340	FireFinder (fire w/ voice)
CERBERUS PRO MODULAR	8300	System Overview
FC901	9813	Cerberus PRO 50-point addressable
FC922	9815	Cerberus PRO 252-pt. addressable (fire)
FC924		Cerberus PRO 504-pt. addressable (fire)
FV922	9821	Cerberus PRO 252-point addressable (fire w/ Intelligent Voice Communication [IVC])
FV924		504-pt. addressable (fire w/ Intelligent Voice Communication [IVC])

Details for Ordering

MODEL OR TYPE	PART NUMBER	PRODUCT
OP921	S54320-F4-A2	Photoelectric Smoke Detector

Compatible Devices:

MODEL OR TYPE	PART NUMBER	PRODUCT
DB-11	500-094151	Detector Mounting Base
DB-11E	500-094151E	Detector Base, small
DB2-HR	S54370-F12-A1	Detector Mounting Base with Relay
RL-HC	500-033230	Remote Alarm Indicator: 4" (10.2 cm) octag.-box mount, red
RL-HW	500-033310	Remote Alarm Indicator: single-gang box mount, red
FDBZ492	S54319-B22-A1	Addressable Air-Duct Housing
FDBZ492-HR	S54319-B23-A1	Addressable Air-Duct Detector with Relay
LK-11	500-695350	Base Locking Kit

See: www.STI-USA.com for further details on ordering Model STI-9604

In Canada order:

MODEL OR TYPE	PART NUMBER	PRODUCT
DB-11C	500-095687	Detector Mounting Base, ULC Listed

NOTICE – The information contained in this data-sheet document is intended only as a summary, and is subject to change without notice.
The product(s) described here has/have a specific instruction sheet(s) that cover various technical, limitation and liability information.

Copies of install-type, instruction sheets – as well as the *General Product Warning and Limitations* document, which also contains important data, are provided with the product, and are available from the Manufacturer.

Data contained in the aforesaid type of documentation should be consulted with a fire-safety professional before specifying or using the product.

Any further questions or assistance concerning particular problems that might arise, relative to the proper functioning of the equipment, please contact the Manufacturer.

SIEMENS

Cerberus® PRO

Siemens Industry, Inc.
Building Technologies Division
8 Fernwood Road • Florham Park, NJ 07932
Tel: (973) 593-2600

October 2017 – Supersedes sheet dated 3/2015
(Rev. 6)

Data Sheet

Specialized Detection Devices

'DB' Series Detector Bases

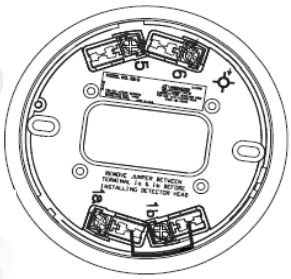
Models DB2-HR, DB-11 and DB-11E

ARCHITECT AND ENGINEER SPECIFICATIONS

- **Each detector base is compatible with Model 'H', "11" and "121" series of conventional detectors**
  - All bases compatible with optional Model LK-11 detector-locking kit
- **Each detector base also functions with the addressable Model 'H' series, as well as Models OH921, OP921, OOH941, OOHC941 and HI921 intelligent detectors**
  - Model DB2-HR is also compatible with ASA*technology*™ detectors
  - Model DB2-HR has backwards compatibility with Siemens Model 'H'-series intelligent detectors
- **Models DB-11 and DB-11E mount on a 4-inch octagon, square or single-gang electrical box**
  - Model DB-11 has plugs to cover the outer-mounting screw holes
- **Model DB2-HR mounts on a 4"-square, double-gang electrical box**

Model DB-11

Model DB2-HR



Model DB-11E

- ®UL268 Listed, ULC-S529 Listed; FM, CSFM and NYC Fire Department Approved

Product Overview

The detector bases are low-profile, surface mounting bases used on various Siemens — Fire Safety conventional and addressable detectors.

Model DB2-HR, which is a redesign of Model DB-HR, is compatible with the standard, addressable type of intelligent detectors, as well as those detection devices that operate with ASA*technology*™.

Additionally, Model DB2-HR is backward compatible with the Siemens Model 'H'-series intelligent detectors and detector-assigned FACPs. Model DB2-HR can also operate with Siemens' 50-point addressable; 252-point addressable; 504-point addressable, and FireFinder® XLS fire systems. A relay output from the fire detector base for signaling other devices is provided by Model DB2-HR.

The detector bases use screw-clamp contacts for electrical connections and self-wiping contacts for better reliability. Further, the bases can be used with the optional Model LK-11 detector locking kit, which contains 50 detector locks and an installation tool, to prevent unauthorized removal of the detector head.

Specifications

Models DB-11 and DB-11E are standard bases for Model 'H'-series "11" and Model "121"-series conventional detectors, as well as the Model 'H'-series addressable detectors. Model DB-11 has a 6" (15.2 cm) diameter, and the diameter for Model DB-11E is 4.5 inches (11.4 cm).

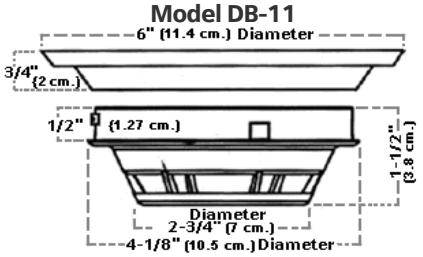
Specifications — (continued)

Moreover, Models DB-11 and DB-11E mount on a 4"-square, (10.2 cm) octagon or single-gang box. Model DB-11 has integral, decorative plugs to cover the outer screw holes.

However, Model DB2-HR mounts on a double-gang, 4-inch (10.2 cm.) square electrical box.

Dimensions

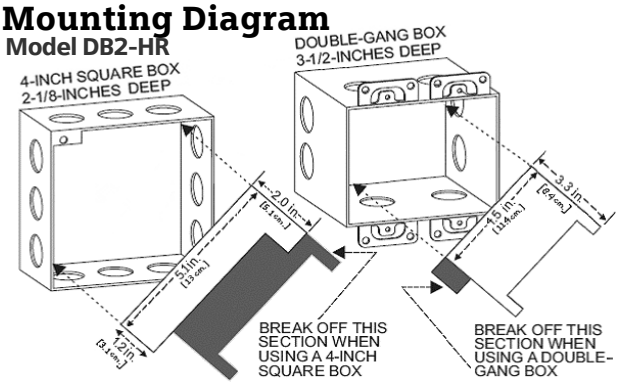
Model DB-11



Note: The Model DB-11E base detector has a diameter dimension of 4.5" (11.4 cm).

Mounting Diagram

Model DB2-HR



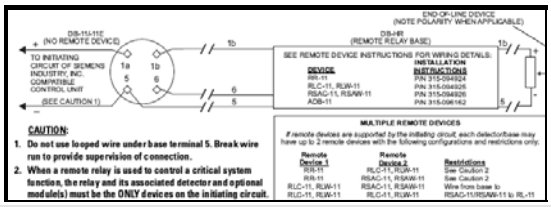
Cerberus™ PRO

Fire Safety & Security Products

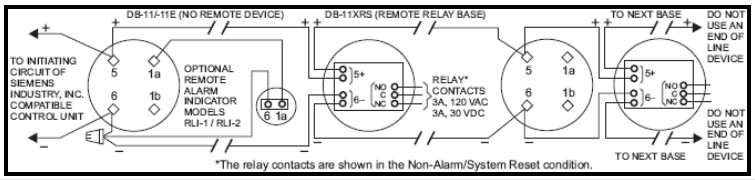
9907

Model 'DB' Series of Detector Bases

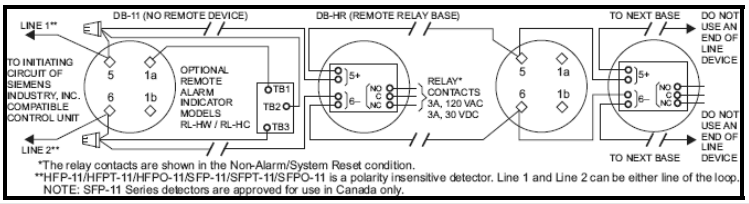
Wiring Diagrams



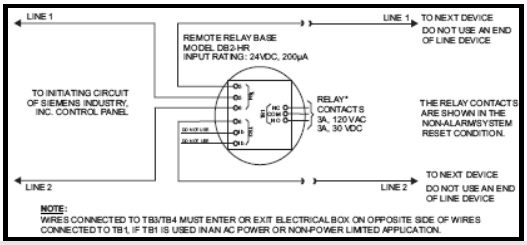
Note: The illustration above is typical wiring for Models DB-11 and DB-11E (using Models PE-11, PE-11T, DT-11, OH121, OP121, and HI121 detectors.)



Note: The illustration above is typical wiring for Models DB-11 and DB-11E (using Models FP-11, FPT-11, FS-DP, FS-DPT, and FS-DT detectors.)



Note: The illustration above is typical wiring for Models DB-11 and DB-11E (using Models HFP-11 Series and SFP-11 Series detectors.)



Note: The illustration above is typical wiring for Model DB2-HR for polarity-insensitive detectors.)

Details for Ordering

Model Number	Part Number	Description
AD2-P	500-649706	Air-Duct Housing
AD2-PR	500-649707	Air-Duct Housing with Relay
DB-11	500-094151	Low-Profile Surface-Mount Base
DB-11C	500-095687	Low-Profile Surface-Mount Base [Canada]
DB-11E	500-094151E	Smaller-Diameter Detector Base
DB-HR	500-033220	Relay Base for 'H'-Series Intelligent Detector
DB2-HR	S54370-F12-A1	Relay base compatible with standard and advanced detectors; backwards compatible with Model 'H'-series intelligent detectors
DT-11	500-095430	135°F {57.2°C}Low-Profile Thermal Detector
DT-11C	500-095983	Low-Profile Thermal Detector [Canada]
HI921	S54320-F5-A2	Thermal (Heat) Detector
OH921	S54320-F6-A2	Addressable Multi-Criteria Fire Detector
OP921	S54320-F4-A2	Photoelectric Smoke Detector
OOH941	S54320-F7-A2	Multi-Criteria Fire Detector with ASA*technology*™
OOHC941	S54320-F8-A2	Multi-Criteria Fire / CO Detector with ASA*technology*™
LK-11	500-695350	Base Locking Kit for Model '11'-series detectors

Model Number	Part Number	Description
FP-11	500-095112	*FirePrint*™ Intelligent Detector
FP-11C	500-095112C	*FirePrint*™ Intelligent Detector [Canada]
FPT-11	500-095918	Thermal Detector
FPT-11C	500-095918C	Thermal Detector [Canada]
HFPO-11	500-034800	FS-250 Addressable Detector
HFP-11	500-033290	*FirePrint*™ Detector
HFPT-11	500-033380	Thermal Detector
HI121	S54372-F3-A1	Heat Detector
OH121	S54372-F2-A1	Multi-Sensor Smoke Detector
OP121	S54372-F1-A1	Photoelectric Smoke Detector
PE-11	500-094150	Conventional Photoelectric Smoke Detector
PE-11T	500-095150	Photoelectric Smoke Detector with 135°F {57.2°C} Thermal Sensor
SFP-11	500-33290C	Photo / Thermal Detector [Canada]
SFPO-11	500-34800C	Photo Detector [Canada]
SFPT-11	500-033380C	Detector Package [Canada]

SIEMENS Cerberus™ PRO

Siemens Industry, Inc. – Building Technologies Div.
8 Fernwood Road • Florham Park, NJ 07932
Tel: (973) 593-2600 • Fax: (908) 547-6877
Web: www.USA.Siemens.com/Cerberus-PRO

NOTICE — The information contained in this data-sheet document is intended only as a summary, and is subject to change without notice. The devices described here have specific instruction sheets that cover various technical, limitation and liability information.

Copies of these instruction sheets and the *General Product Warning and Limitations* document, which also contains important information, are provided with the product and, are available from the Manufacturer.

Information contained in these documents should be consulted before specifying or using the product. For further information or assistance concerning particular problems contact the Manufacturer.

COOPER Wheelock

Series NS Horn Strobes and Series NH Horns

Series NS

Series NH

Description:

The Series NS Horn Strobe Appliances are designed for indoor, wall and ceiling mount applications.

The Series NH Horn and the horn portion of the Series NS include a selectable continuous horn tone or temporal pattern (Code 3) with selectable dBA settings of 90 or 95 dBA.

Strobe options include 1575cd or the Wheelock patented Multi-Candela strobe with field selectable candela settings of 15/30/75/110cd for wall mount and 15/30/75/95cd and 115/177cd for ceiling mount.

These versatile Horn Strobe Appliances can be synchronized using the Wheelock SM, DSM Sync Modules or the PS-24-8MC Power Supply with the Wheelock patented Sync Protocol. Additionally, the audible may be silenced while maintaining strobe activation.

All models of the Series NS and NH are designed for maximum performance, reliability and cost-effectiveness while meeting or exceeding the latest requirements of NFPA 72/ANSI 117.1/UFC and UL Standards 1971 and 464 as well as meeting ADA requirements concerning photosensitive epilepsy.

The Wheelock patented 2-Wire Series NS Horn Strobes and Series NH Horns offer more features with lower current draw than competitors.

Features:

- Approvals include: UL Standard 1971, UL Standard 464, New York City (MEA), California State Fire Marshal (CSFM), Factory Mutual (FM) and Chicago (BFP). See approvals by model number in Specifications and Ordering Information
- ADA/NFPA/UFC/ANSI compliant
- Complies with OSHA 29, Part 1910.165
- Wall mount model Field Selectable Candela Setting 15/30/75/110cd (24 VDC Multi-Candela models) or 1575cd in 12 or 24 VDC
- Ceiling mount model Field Selectable Candela Setting 15/30/75/95cd and 115/177cd (24 VDC Multi-Candela models)
- Selectable Continuous Horn or Temporal (Code 3)
- 2 Selectable dBA settings of 90 and 95 dBA in both tones
- Patented Universal Mounting Plate
- 12 and 24 VDC models with UL “Regulated Voltage” using filtered DC or unfiltered VRMS input voltage
- Wall and Ceiling Mount
- Ceiling models with same look as Wheelock round ceiling strobes and speakers
- NH horn is selectable 12 or 24 VDC in 1 appliance
- The strobes can be synchronized using the Wheelock sync modules or power supplies with built in Sync Protocol
- Fast installation with IN/OUT screw terminals using #12 to #18 AWG wires

NS and NH Ceiling Mount Appliances will be available July 2006.

E5946
S5391

151-92-E

7125-0785:142

FM APPROVED

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. VISIT WWW.COOPERWHEELOCK.COM OR CONTACT COOPER WHEELOCK FOR THE CURRENT INSTALLATION INSTRUCTIONS. FAILURE TO COMPLY WITH ANY OF THESE INSTRUCTIONS, 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:

- 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 Standard 1971.
- Series NS Strobe products are listed under UL Standard 1971 for indoor use with a temperature range of 32°F to 120°F (0°C to 49°C) and maximum humidity of 93% (± 2%).
- Series NH horns are listed under UL Standard 464 for audible signal appliances (Indoor use only).
- **"Regulated Voltage Range" is the newest terminology used by UL to identify the voltage range. Prior to this change UL used the terminology "Listed Voltage Range".**

Table 1: Ratings Per UL Standard 1971

Model	Input Voltage VDC	Regulated Voltage Range VDC/FWR	Strobe Candela (CD)
NS-24MCW	24	16.0 - 33.0	15/30/75/110
NS-241575W	24	16.0 - 33.0	15 (75 on Axis)
NS-121575W	12	8.0 - 17.5	15 (75 on Axis)
NS-24MCC	24	16.0 - 33.0	15/30/75/95
NS-24MCCH	24	16.0 - 33.0	115/177

Table 2: dBA Ratings for Series NS/NH Horn

Description	Volume	Reverberant dBA @ 10ft per UL 464		Anechoic dBA @ 10 ft	
		12 VDC	24 VDC	12 VDC	24 VDC
Continuous Horn	High	83	87	89	95
	Low	76	81	84	90
Code 3 Horn	High	79	82	89	95
	Low	72	76	84	90

Table 3: UL Max Current*

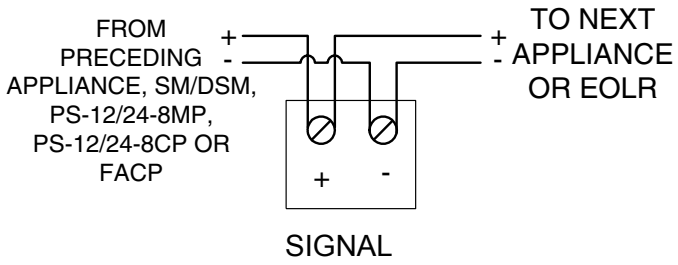
Series NS/NH 24 VDC		Audible	Wall Mount Strobe Models					Ceiling Mount Strobe Models					
		NH-12/24	NS-241575W	NS-24MCW				NS-24MCC				NS-24MCCH	
		@24VDC	15/75cd	15cd	30cd	75cd	110cd	15cd	30cd	75cd	95cd	115cd	177cd
High (95) dBA	**24VDC**	0.044	0.104	0.074	0.107	0.184	0.244	0.082	0.124	0.209	0.275	0.350	0.477
Low (90) dBA	**24VDC**	0.018	0.096	0.066	0.101	0.177	0.232	0.071	0.114	0.201	0.261	0.306	0.429

Series NS/NH 12VDC		Audible	Wall Mount
		NH-12/24	Aud/Strobe
		@12V	NS-121575W
High (89) dBA	**12 VDC**	0.021	0.220
Low (84) dBA	**12VDC**	0.012	0.210

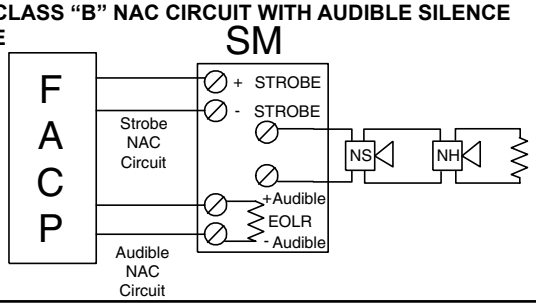
* RMS current ratings are per UL average RMS method. UL max current rating is the maximum RMS current within the listed voltage range (16-33v for 24v units). For strobes the UL max current is usually at the minimum listed voltage (16v for 24v units). For audibles the max current is usually at the maximum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

Wiring Diagrams#

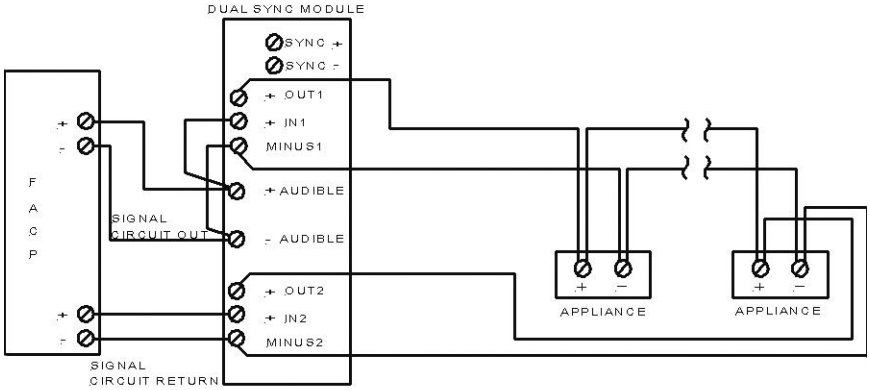
NS/NH APPLIANCE



NS AND NH APPLIANCES SYNCHRONIZED WITH SM MODULE SINGLE CLASS "B" NAC CIRCUIT WITH AUDIBLE SILENCE FEATURE



NS AND NH APPLIANCES SYNCHRONIZED WITH DSM MODULE DUAL CLASS "A" NAC CIRCUIT WITH NO AUDIBLE SILENCE FEATURE



NOTE: NS/NH must be set on Code 3 horn tone to achieve synchronized temporal (Code 3) tone. Refer to installation instruction (P83983, P83600 respectively).

For detail using SM or DSM Sync Module refer to Data Sheet S3000 or Installation Instructions P83123 for SM and P83177 for DSM. For wiring information on the power supplies refer to Installation Instructions P84515 for PS-12/24-8CP and P84333 for PS-12/24-8MP.

SPECIFICATION & ORDERING INFORMATION

Model Number	Order Code	Strobe Candela	Sync w/ SM, DSM or PS-24-8MC	24 VDC	12 VDC	Mounting Options#	Agency Approvals				
							UL	MEA	CSFM	FM	BFP
NS-24MCW-FR	9404	15/30/75/110	X	X	-	B,D,E,F,G,H,J,N,O,R,X	X	X	X	X	X
NS-24MCW-FW	9405	15/30/75/110	X	X	-	B,D,E,F,G,H,J,N,O,R,X	X	X	X	X	X
NS-241575W-FR	7806	15 (75 on Axis)	X	X	-	B,D,E,F,G,H,J,N,O,R,X	X	X	X	X	X
NS-241575W-FW	7811	15 (75 on Axis)	X	X	-	B,D,E,F,G,H,J,N,O,R,X	X	X	X	X	X
NS-121575W-FR	7816	15 (75 on Axis)	X	--	X	B,D,E,F,G,H,J,N,O,R,X	X	X	X	X	X
NS-121575W-FW	7818	15 (75 on Axis)	X	-	X	B,D,E,F,G,H,J,N,O,R,X	X	X	X	X	X
NH-12/24-R	7449	-	X	X	X	B,D,E,F,G,H,J,N,O,R,X	X	X	X	X	X
NH-12/24-W	7500	-	X	X	X	B,D,E,F,G,H,J,N,O,R,X	X	X	X	X	X
NS-24MCC-FR	3754	15/30/75/95	X	X	-	E	X	*	*	X	*
NS-24MCC-FW	3753	15/30/75/95	X	X	-	E	X	*	*	X	*
NS-24MCCH-FR	3756	115/177	X	X	-	E	X	*	*	X	*
NS-24MCCH-FW	3755	115/177	X	X	-	E	X	*	*	X	*
NH-12/24R-R	3752	-	X	-	X	B,D,E,F,G,H,J,N,O,R,X	X	*	*	X	*
NH-12/24R-W	3751	-	X	-	X	B,D,E,F,G,H,J,N,O,R,X	X	*	*	X	*

NS and NH Ceiling Mount Appliances will be available July 2006. *Pending

Note: Models are available in Red or White. Contact Customer Service for Order Code and Delivery.
#Refer to Data Sheet S7000 for Mounting Options

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

ARCHITECTS AND ENGINEERS SPECIFICATIONS

The audible/visual notification appliances shall be Wheelock Series NS Horn Strobe appliances and Series NH Horn appliances or approved equals. The Series NS appliances shall meet and be listed for UL Standard 1971(Emergency Devices for the Hearing-Impaired for Indoor Fire Protection Service). The Series NH Horn shall be UL Listed under Standard 464 (Fire Protective Signaling). The horn strobe shall be listed for indoor use and shall meet the requirements of FCC Part 15 Class B. All inputs shall be compatible with standard reverse polarity supervision of circuit wiring by the Fire Alarm Control Panel (FACP).

The audible portion of the appliance shall have a minimum of two (2) field selectable settings for dBA levels (90 and 95 dBA) and shall have a choice of continuous or temporal (Code 3) audible outputs.

The strobe portion of the appliance shall produce a flash rate of one (1) flash per second over the Regulated Voltage Range and shall incorporate a Xenon flashtube enclosed in a rugged Lexan lens. The Series NS shall be of low current design. Where wall mount, Multi-Candela appliances are specified, the strobe intensity shall have field selectable settings and shall be rated per UL Standard 1971 for 15/30/75/110 candela. Where ceiling mount, Multi-Candela appliances are specified, the strobe intensity shall have field selectable settings and shall be rated per UL Standard 1971 for 15/30/75/95 candela or 115/177 candela. The selector switch for selecting the candela setting shall be tamper resistant. The 1575 candela strobe shall be specified when 15 candela UL Standard 1971 Listing with 75 candela on-axis is required (e.g. ADA compliance).

When synchronization is required, the appliance shall be compatible with the Wheelock SM, DSM Sync Modules or the Wheelock PS-24-8MC Power Supplies with built-in Patented Sync Protocol. The strobes shall not drift out of synchronization at any time during operation. If the sync module or Power Supply fails to operate, (i.e., contacts remain closed), the strobes shall revert to a non-synchronized flash-rate. The appliance shall also be designed so that the audible signal may be silenced while maintaining strobe activation.

The Series NS Horn Strobes and NH horn shall incorporate a Patented Universal Mounting Plate that shall allow mounting to a single-gang, double-gang, 4-inch square, 100mm European type backboxes, or the SHBB Surface Backbox. If required, an NATP (Notification Appliance Trimplate) shall be provided.

All notification appliances shall be backward compatible.

273 Branchport Avenue
Long Branch, NJ 07740
Phone: (800) 631-2148
Fax: (732) 222-2588
www.cooperwheelock.com

NEMA Member

WE ENCOURAGE AND SUPPORT NICET CERTIFICATION
3 YEAR WARRANTY
Made in USA