



March 30, 2004

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# Wheelock HS4/HS Series Single & Multi-Candela Horn Strobe & Horn Appliance

Section: Audio/Visual Devices

## GENERAL

The Wheelock Series HS4 Horn Strobe and HS Horn Appliances are an ideal choice for retrofit applications as well as new installations. They satisfy virtually all requirements for indoor, wall mount applications.

The Series HS Horn and the horn portion of the Series HS4 include a selectable continuous horn tone or temporal pattern (Code 3) with three selectable dBA settings for each tone.

Strobe options include 1575cd or Wheelock's patented MCW Multi-Candela strobe with field selectable candela settings of 15/30/75/110cd or the high intensity MCWH strobe with field selectable 135/185cd.

The Series HS4 horn and strobe inputs are electrically isolated to allow for independent operation of the strobe circuit and the horn circuit. The horn and strobe may also be wired in parallel to operate on a single circuit.

These versatile Horn and Horn Strobe Appliances may be synchronized when used in conjunction with the Wheelock SM or DSM Sync Modules or with a power supply with the patented Wheelock Sync Protocol.

All models 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.

## FEATURES

- Field Selectable Candela Settings: 15/30/75/110cd or 135/185cd (Multi-Candela models) or 1575cd (single candela model)
- Selectable Continuous Horn or Temporal (Code 3)
- 3 Selectable dBA settings of 90/95/99 dBA in both tones
- 4-Wire Horn Strobe Appliance allows for separate operation of the horn and strobe circuits
- ADA/NFPA/UFC/ANSI compliant
- Complies with OSHA 29, Part 1910.165
- 24 VDC models with 16 to 33 VDC UL "Regulated Voltage" using filtered DC or unfiltered VRMS input voltage
- Wall mount flush to standard 4-inch square or double-gang boxes or surface mount to IOB backbox
- Synchronize with Wheelock SM, DSM Sync Module or a Power Supply with the built-in Wheelock sync protocol
- Fast installation with IN/OUT screw terminals using #12 to #18 AWG wires



MEA

151-92-E



California State  
Fire Marshal  
7125-0785:161



SERIES HS4



SERIES HS



Multi-Candela Indicator  
(Bottom of Strobe Lens)

## 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 HS4 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 HS 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".

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This document is not intended to be used for installation purposes. We try to keep our product information up-to-date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice. For more information, contact NOTIFIER. Phone: (203) 484-7161 FAX: (203) 484-7118



12 Clintonville Road, Northford, Connecticut 06472



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 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.

Model	Input Voltage VDC	Regulated Voltage Range VDC/FWR	Strobe Candela (CD)
HS4-24MCW	24	16.0 - 33.0	15/30/75/110
HS4-241575W	24	16.0 - 33.0	15 (75 on Axis)
HS4-24MCWH	24	16.0 - 33.0	135/185
HS-24	24	16.0 - 33.0	-

Description	Volume	Reverberant dBA @ 10ft per UL 464	Anechoic dBA @ 10 ft
		24VDC	24VDC
Continuous Horn	High	91	99
	Med	88	95
	Low	83	90
Code 3 Horn	High	87	99
	Med	84	95
	Low	79	90

\* Average RMS Current is per UL average RMS method and Average Mean Current is per UL average mean method. HS/HS4 audible rating is average mean current. For rate In Rush and Peak current across the UL listed voltage range for both filtered DC and unfiltered VRMS (FWR), see installation instructions.

Note: For Total Current Draw of Series HS4 Multi-Candela or 15/75cd, add the audible and strobe Current Draws from Table 3.

HS/HS4 Series	Audible Current			Strobe Current						
	HS and HS4			HS4-241575W	HS4-24MCW			HS4-24MCWH		
	High (99) dBA	Med (95) dBA	Low (90) dBA	1575cd	15cd	30cd	75cd	110cd	135cd	185cd
16 vdc	0.035	0.020	0.014	0.101	0.062	0.102	0.192	0.265	0.300	0.420
24 vdc	<b>0.055</b>	<b>0.026</b>	<b>0.017</b>	<b>0.064</b>	<b>0.041</b>	<b>0.065</b>	<b>0.116</b>	<b>0.155</b>	<b>0.195</b>	<b>0.270</b>
33 vdc	0.069	0.035	0.021	0.047	0.032	0.047	0.081	0.107	0.145	0.190

MODEL NUMBER	INPUT VOLTAGE (VDC)	AVERAGE MEAN CURRENT @ 24 VDC	MOUNTING OPTIONS
SM-12/24-R	24	.028	W
DSM-12/24-R	24	.035	W

NOTES:

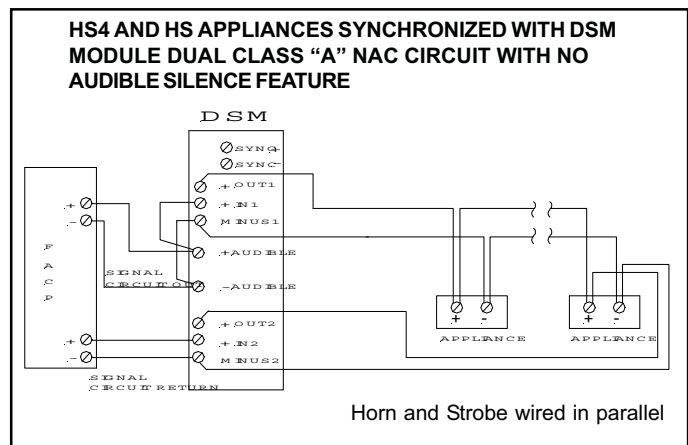
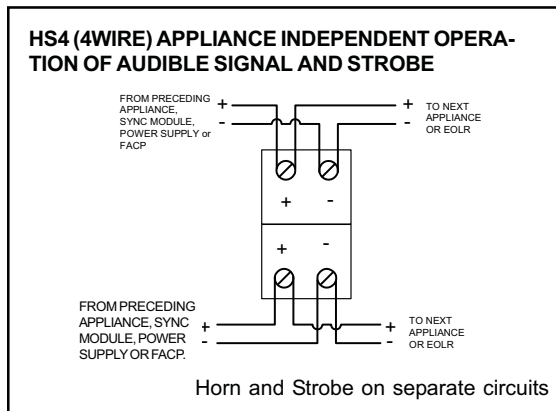
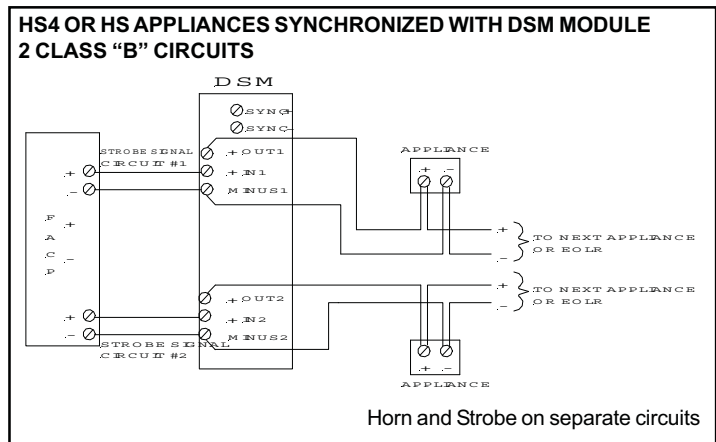
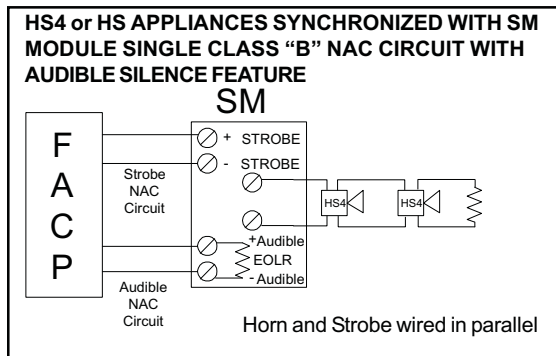
SM Sync Module is rated for 3.0 amperes @ 24 VDC.

DSM Sync Module is rated for 3.0 amperes per circuit. The maximum number of interconnected DSM modules is twenty (20). Refer to Data Sheet S3000 or Installation Instructions P83123 for SM and P83177 for DSM.

**WARNING: CONTACT WHELOCK FOR THE CURRENT “INSTALLATION INSTRUCTIONS” and “GENERAL INFORMATION” SHEET (P82380) ON THESE PRODUCTS. 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.
- COMPOSITE FLASH RATE FROM MULTIPLE STROBES WITHIN A PERSON’S FIELD OF VIEW.
- ADDING, REPLACING OR CHANGING APPLIANCES OR CHANGING CANDELA SETTINGS WILL AFFECT 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 SOURCES OR FUSES.
- THE VOLTAGE APPLIED TO THESE PRODUCTS MUST BE WITHIN THEIR “REGULATED VOLTAGE RANGE”.
- INSTALLATION OF 110 CANDELA STROBE PRODUCTS IN SLEEPING AREAS.
- INSTALLATION IN OFFICE AREAS AND OTHER SPECIFICATION AND INSTALLATION ISSUES.
- THESE APPLIANCES ARE NOT DESIGNED TO BE USED ON CODED SYSTEMS IN WHICH THE APPLIED VOLTAGE IS CYCLED ON AND OFF.
- 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.

## WIRING DIAGRAMS



**NOTE: HS4 or HS must be set on Code 3 horn tone to achieve synchronized temporal (Code 3) tone. Refer to installation instruction.**

## ARCHITECTS AND ENGINEERS SPECIFICATIONS

The audible/visual notification appliance shall be Wheelock Series HS4 Horn Strobe and HS Horn Appliances or approved equals. The Series HS4 and HS appliance shall meet and be listed for UL Standard 1971 (Emergency Devices for the Hearing-Impaired for Indoor Fire Protection Service) and Standard 464 (Fire Protective Signaling). The horn strobe shall be listed for indoor use and shall meet the requirement 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 HS Horn and the audible portion of the HS4 appliance shall have a minimum of three (3) field selectable setting for dBA levels 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 HS4 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: 15/30/75/110cd or 135/185cd. 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.

When synchronization is required, the appliance shall be compatible with Wheelock's SM, DSM Sync Modules or Wheelock's PS-12/24-8MP Power Supply 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.

All notification appliances shall be backward compatible.

## SPECIFICATIONS AND ORDERING INFORMATION

MODEL	STROBE CANDELA	NON-SYNC	SYNC * W/SM, DSM or POWER SUPPLY	24 VDC	2 WIRE	4 WIRE	MOUNTING OPTIONS	AGENCY APPROVALS				
								UL	MEA	CSFM	FM	BFP
HS4-24MCW-FR	15/30/75/110	X	X	X	X	X	D,E,F,L,M,O,P,R	X	*	X	X	*
HS4-24MCW-FW	15/30/75/110	X	X	X	X	X	D,E,F,L,M,O,P,R	X	*	X	X	*
HS4-241575W-FR	15 (75 on axis)	X	X	X	X	X	D,E,F,L,M,O,P,R	X	*	X	X	*
HS4-121575W-FR	15 (75 on axis)	X	X	X	X	X	D,E,F,L,M,O,P,R	X	*	*	*	*
HS4-24MCWH-FR	135/185	X	X	X	X	X	D,E,F,L,M,O,P,R	X	*	*	*	*
HS4-24MCWH-FW	135/185	X	X	X	X	X	D,E,F,L,M,O,P,R	X	*	*	*	*
HS-24-R	-	X	X	X	X		D,E,F,L,M,O,P,R	X	*	X	*	*
HS-24-W	-	X	X	X	X		D,E,F,L,M,O,P,R	X	*	X	*	*

\*A power supply with the built-in patented Wheelock Sync Protocol

\*PENDING

**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.**