Gamewell FCI FIRE CONTROL INSTRUMENTS

by Honeywell

Cooper-Wheelock CH Series

Description

The Cooper-Wheelock CH Series Electronic Chimes minimize alarm system power supply and wiring costs with a low current draw of just 22 mA. These unique solid-state chime signals provide field-selectable single-stroke or vibrating operation with sound level adjustable up to 83 peak dBA and tone adjustable from 800 to 1200 Hz. They are available in two attractive package styles for flush mounting on standard electrical boxes or convenient surface mounting.

The chimes incorporate a new patent pending mounting plate for faster, easier, level installation with a new two (2) screw grill cover for an aesthetically pleasing appearance. Additionally, they incorporate the new lower current, reduced inrush ***Series RSS Non-Sync/Sync Strobes*** (synchronization of the strobe flash is achieved when used with the Cooper-Wheelock SM or DSM sync modules).

CH Chime Strobes are designed for maximum performance, reliability and cost-effectiveness while meeting or exceeding the latest visible signaling requirements of NFPA 72, ANSI 117.1 (the American National Standard of Accessible and Usable Buildings and Facilities) and UL Standard 1971. CH Chime Strobes, when properly specified and installed in accordance with NFPA/ANSI Standards, can provide the equivalent facilitation allowed under ADA Accessibility Guidelines (ADAAG General Section 2.2) by meeting or exceeding the illumination which results from the ADA specified strobe intensity of 75 candela at 50 feet (15.24 m). This is an illumination of 0.030 lumens per square foot (footcandles).

The CH Series Chime Strobes are UL Listed for indoor use, ceiling and wall mounted, under Standard UL 1971 for Emergency Devices for the Hearing Impaired and under Standard UL 464 for Private Mode Audible Signal Appliances. They incorpo rate a Xenon flashtube with solid state circuitry enclosed in a rugged LEXAN® lens to provide maximum reliability for effective visible signaling.

CH Series Chimes are offered in 24 VDC models and are designed to operate over a wide voltage range with filtered DC or unfiltered input voltage. All models include IN/OUT wiring terminations that accept two #12 AWG (3.25 mm²) to #18 AWG (0.75 mm²) wires at each terminal. Inputs are polarized for compatibility with standard reverse polarity type supervision.

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Electronic Chimes and Chime Strobes

Chime Strobe

Chime

Features

- Strobes meet or exceed latest NFPA/ANSI Standards and ADA Accessibility Guidelines. Meets OSHA 29 Part 1910.165.
- Unique electronic chime design provides superior quality, versatile performance and improved appearance with one-tenth the current draw of most electromechanical chimes.
- Field-selectable choice of single stroke or vibrating operation with volume and tone control.
- CH70 strobe models available with single 15/75 and multiple 15/30/75/110 and 135/185 candela (wall mounting) ratings for operation from a single NAC circuit (in vibrating mode) or separate NAC circuits.
- CH90 strobe models available with multiple 15/30/75/95 and 115/177 candela (ceiling mounting)
- Low current draw, reduced inrush, non-sync/sync strobe models are for wall-mounting only. Synchronization requires SM or DSM sync modules and PS-12/24-8CP or PS-12/24-8MP power supplies.
- 24 VDC chime and chime strobe models with wide listed voltage range, using filtered DC or unfiltered VRMS.
- Polarized inputs for compatibility with standard supervised circuit wiring.
- Low-cost installation on standard electrical boxes. Attractive flush- or surface-mounting options.
- The 15/75 candela wall-mounted strobes are listed at 15 candela under UL Standard 1971 and meet 75 candela intensity on-axis for ADA guidelines, with low current draw.

An ISO 9000-2000 Company

SIGNALING UL LISTED
E5946 (CH Chimes)
E5946/S5391
(CH Strobe-Chimes)

MEA Approved
151-92-E Vol XXI

7135-0785:109
(CH-70, CH-90)
7125-0785:143
(CH70-2415W,
CH70-2430W,
CH70-2475W)

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General Notes

- Strobes are designed to flash at 1 flash per second minimum from 20 to 31 VDC. Note that ADA guidelines specify a flash rate of 1 to 3 flashes per second and NFPA-72 (1996) specify a flash rate of 1 to 2 flashes per second.
- CH Series Strobes are UL 1971Listed for indoor use with a temperature range of 32°F to 120°F (0°C to 49°C) and maximum humidity of 85% RH.
- CH Series Chimes are Listed under UL 464 for audible signal appliances.
- All candela ratings represent minimum effective strobe intensity based on UL 1971.

Specifications and Ordering Information

	MODEL NUMBER	STROBE CANDELA	ANECHOIC PEAK dBA @ 10 FEET (3.048 m)	dBA @ 10 FT. (3.048 m) REVERBERANT		RATED AVG. CURRENT* (AMPS) @ 24 VDC	MOUNTING OPTIONS **
				MIN.	MAX.		
24 VDC STROBE CHIMES	CH70-24-R	—	83	52	58	0.022	L, O, P, Q, R, U, Y
	CH70-24-W	—	83	52	58	0.022	L, O, P, Q, R, U, Y
	CH70-24MCW-FR	15/30/75/110	83	52	58	.022/.060/.109/. 140	L, O, P, Q, R, U, Y
	CH70-24MCW-FW	15/30/75/110	83	52	58	.022/.060/.109/. 140	L, O, P, Q, R, U, Y
	CH70-24MCWH-FR	135/185	83	52	58	.195/. 270	L, O, P, Q, R, U, Y
	CH70-24MCW-FW	135/185	83	52	58	.195/. 270	L, O, P, Q, R, U, Y
	CH70-241575W-FR	15 (75 ON AXIS)	83	52	58	0.060	L, O, P, Q, R, U, Y
	CH90-24-W	—	83	52	58	0.022	Q, U, V
	CH90-24MCC-FR	15/30/75/95	83	52	58	.045/.070/.119/. 159	Q, U, V
	CH90-24MCC-FW	15/30/75/95	83	52	58	.045/.070/.119/. 159	Q, U, V
	CH90-24MCCH-FW	115/177	83	52	58	.195/.270	Q, U, V
SYNC MODULES***		INPUT VDC				AVG. CURRENT	
	SM-12/24-R	12 / 24				0.017 / 0.028	W
	DSM-12/24-R	12 / 24				0.020 / 0.035	W

NOTES: 1) **CH70** is offered in ***red only***. **CH90** is offered in ***white only***. ***2)*** **SUFFIXES USED ABOVE:** 70 = square; 90 = round; W = Wall mounting; F = Fire lettering; R at end = Red; W at end = White. *EXAMPLES:* CH70-2415W-FR (square, Wall-mounting, Fire lettering, Red); CH90-24-W (round, White). ***3)*** **CH-BF1-R** discontinued 12/30/97; replace with CH70-24-R and SBB-R backbox.

* ***Average current*** per actual Cooper-Wheelock Production testing 24 VDC nominal for Chime and Chime Strobe combined. For rated average, peak, and inrush currents across the listed voltage ranges for both filtered DC and unfiltered VRMS, see the installation instructions.

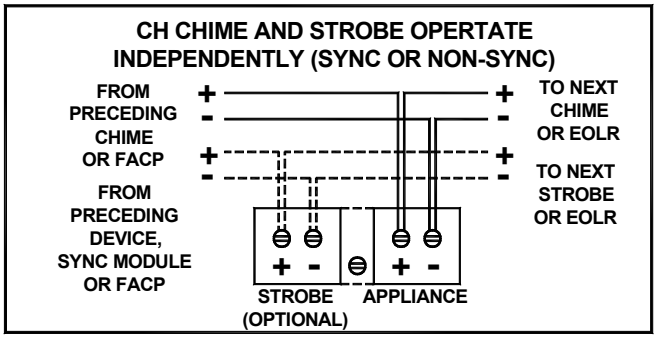
** For descriptions of mounting options, refer to Notifier Data Sheet DN-6111, derived from Cooper-Wheelock #S7000.

*** ***SM Sync Modules*** are rated for 3.0 amperes at 12/24 VDC; ***DSM Sync Modules*** are rated for 3.0 amperes per circuit. The maximum number of interconnected DSM modules is twenty (20). Refer to installation instructions for SM (Cooper-Wheelock P83123) and DSM (Cooper-Wheelock P83177).

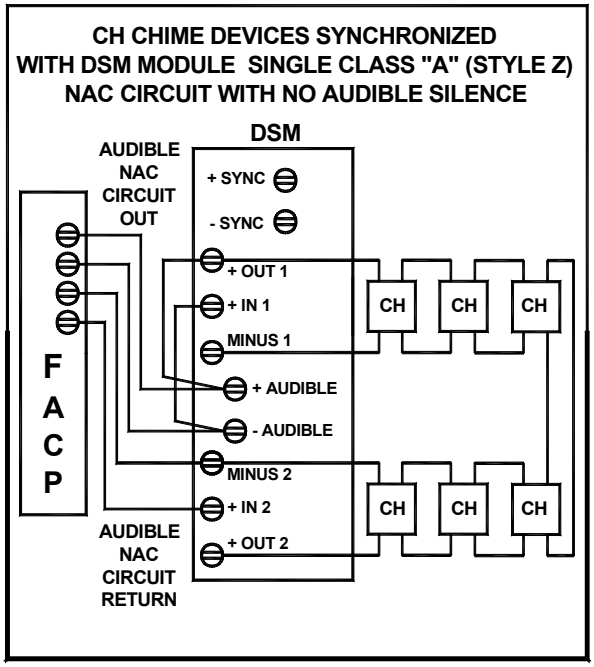
Applications Notes

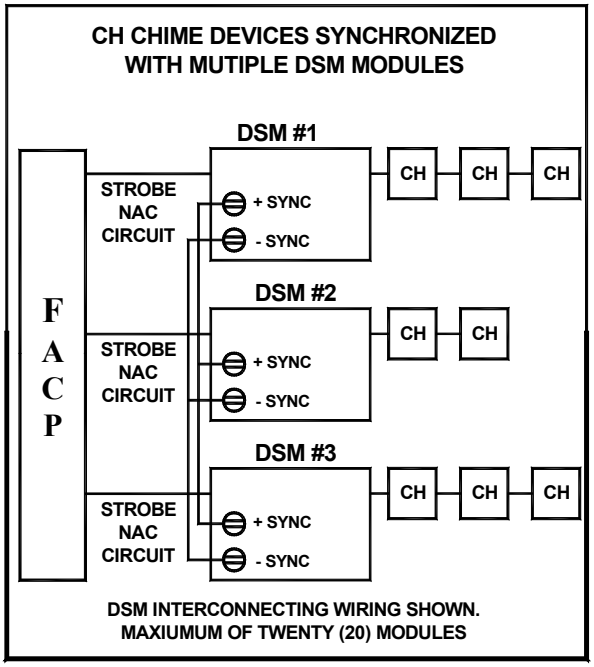
1) The chimes are factory-set in single-stroke (SS) mode. They can be changed to vibrating (VIB) mode with jumper on PC board. ***SINGLE-STROKE OPERATION:*** The minimum input pulse duration must be at least 160 ms "on" time and 160 ms "off" time. ***VIBRATING OPERATION:*** Continuous input voltage applied to the chime will activate the chime at one-second intervals.
2) The volume and tone controls have been adjusted at the factory to ensure maximum dBA output. However, once the mode is selected, the installer may want to fine-tune the signal to better suit the application.
3) *ANECHOIC dBA i*s measured in anechoic chamber with peak meter response. *REVERBERENT dBA* is rated per UL Standard 464.
4) ***CHIME INRUSH CURRENT*** is 0.100 amps maximum (0.140 amps with VRMS input voltage).

WIRING DIAGRAMS (ALL MODELS)



CH = CHIME-STROBES





For details on using SM or DSM Sync Modules, refer to Cooper-Wheelock Data Sheet S3000 or Cooper-Wheelock Installation Instructions P83123 (for SM) or P83177 (for DSM).

QUICK REFERENCE GUIDE					
Model Number	**Wall Mount**	**Ceiling Mount**	**Strobe Non-Sync**	**Strobe Syncs w/ SM or DSM**	**Strobe Candel**
CH70-24-R	X	X	X		
CH90-24-W	X	X	X		
CH70-2415W-FR	X		X	X	15
CH70-241575W-FR	X		X	X	15/75
CH70-2430W-FR	X		X	X	30
CH70-2475W-FR	X		X	X	75

Architects and Engineers Specifications

The chime appliances shall be Cooper-Wheelock CH Series audible or audible/visual appliance or approved equivalent. Notification appliance shall be electronic and use solid state components. Electromechanical alternatives are not approved. Each electronic chime appliance shall provide field-selectable single-stroke or vibrating operation with volume control and tone control. The chime and the strobe shall be able to operate from a single NAC circuit when set to the vibrating mode. The peak anechoic dBA measurement at 10 feet (3.048 m) shall be 83 dBA minimum at nominal voltage. Operating voltages shall be 24 VDC for chimes and chime strobes using filtered power or unfiltered (VRMS) power supply. All models shall have provisions for standard reverse-polarity type supervision and IN/OUT field wiring using terminals that accept #12 AWG (3.25 mm²) to #18 AWG (0.75 mm²).

Combination chime strobe appliances shall incorporate a Xenon flashtube enclosed in a rugged LEXAN® lens or equivalent with solid state circuitry that are Non-Sync or Sync in one (synchronization requires the SM or DSM Sync Module(s)). If the SM or DSM Sync Module(s) contacts fail in the passive state (i.e., contacts remain closed) the strobe shall revert to a non-synchronized flash rate of one (1) flash per second. Strobe shall meet UL 1971 and produce a flash rate of one (1) flash per second minimum over the listed input voltage (20 VDC to 31 VDC) range. The strobe intensity shall be rated per UL 1971 for 15, 15/75, 30, 75, or 110 candela for wall-mounting only. The 15/75 candela strobe shall be specified when 15 candela UL 1971 listing with 75 candela intensity on-axis is required.

All UL 1971 Listed strobe appliances shall be verified to meet FCC Part 15, Class B and incorporate low temperature compensation to ensure the lowest possible current consumption. Strobe activation shall be via independent input or from the same input circuit as the chime.

The combination chime-strobe appliances may be installed indoors and surface- or flush-mounted. The chime and chime strobes shall incorporate a chime mounting plate with a grille cover which is secured with two screws for a level, aesthetically pleasing finish. They shall mount on standard electrical hardware requiring no additional trimplate or adapter. The appliance shall be finished in a textured red or white color.