Gamewell FCI FIRE CONTROL INSTRUMENTS

by Honeywell

Cooper-Wheelock AS/AH Series

Description

The 2-wire Cooper-Wheelock AS Series audible/visual and AH Series audible notification appliances offer many features with low current draws.

Strobe options for wall-mounted models include 15/75 cd or field-selectable Multi-Candela strobes that may be set to 15, 30, 75, or 110 cd.

Ceiling mounted models incorporate field-selected strobe settings of 15, 30, 75 or 95 cd.

The audible notification appliances provide a field-selectable choice of either a continuous horn tone or temporal pattern (per ANSI S3.41) when constant voltage is supplied by the notification appliance circuit. Each tone has three dBA settings to choose from. Additionally, the audible tone may be silenced while maintaining strobe activation.

All models may be synchronized when the models are used in conjunction with the Cooper-Wheelock SM and DSM Sync Modules.

The synchronization of the continuous horn tone provides the temporal pattern mandated by NFPA 72 for fire evacuation signaling. This ensures a clearly distinguishable temporal pattern when two or more audible devices are within hearing distance. If the horn tones are not synchronized, the temporal patterns may overlap. At the same time, the strobes will also be synchronized. This process is in compliance with ADA recommendations regarding photosensitive epilepsy and NFPA and UFC standards required when installing two or more visual appliances within a common field of view.

Only two wires are required to achieve these sequences of operation. Separate circuits for audible and visual devices are not necessary.

Single & Multi-Candela
AS Series Audible Strobe &
AH Series Audible Appliances



Series AS



Series AH

Features

- Approvals include:
  - UL Standard 1971
  - UL Standard 464
  - New York City (MEA)
  - California State Fire Marshall (CSFM)
- ADA/NFPA/UFC/ANSI compliant
- Wall-mounted models are available with field multi-candela settings of 15, 30, 75, or 110 cd
- Ceiling mounted models are available with field selectable multi-candela settings of 15, 30, 75, or 95 cd
- Single candela models are available in 15/75 cd
- Weatherproof models are available for outdoor use (ASWP)
- Selected continuous horn or temporal pattern (ANSI 3.41)
- Three (3) field dBA settings adjusted to 90, 95, or 99 dBA for both tones
- Silenceable horns and non-silenceable strobes installed over the same wires
- Strobes flash once per second over the regulated voltage range
- 12 & 24 VDC models with wide UL “regulated voltage range” using filtered DC or unfiltered FWR input voltage
- Synchronize with SM or DSM synchronization modules
- Fast installation with In/Out screw terminals using 12 to 18 AWG wires

An ISO 9000-2000 Company

SIGNALING UL LISTED 1971, 1638, 50 | FM APPROVED (Indoor Models) | MEA Approved 254-97-M Vol. III | PENDING

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472 - Tel: (203) 484-7161 - Fax: (203) 484-7118
Specifications are for information only, are not intended for installation purposes, and are subject to change without notice. No responsibility is assumed by Gamewell-FCI for their use.
©2008 Gamewell-FCI. All rights reserved.

Description (Continued)

General Notes:

- Strobes are designed to flash at one flash per second minimum over the Regulated Voltage Range. Note that NFPA-72 (1999) specifies a flash rate of one to two flashes per second and ADA guidelines specify a flash rate of one to three flashes per second.
- All candela ratings represent minimum effective strobe intensity based on UL Standard 1971.
- Series AS 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 a maximum humidity of 93% (+/- 2%).
- Series AH horns are Listed under UL Standard 464 for audible signal appliances (indoor use only).
- Series AH-24WP audible appliances are Listed under UL Standard 464 for indoor/outdoor use with a temperature range of –31° F to 150° F (-35° C to 66° C) and a maximum humidity of 95%.
- "Regulated Voltage Range" is the state-of-the-art technology used by UL to identify the voltage range. Prior to this technology, UL used the term, "Listed Voltage Range."

Table 1: Ratings per UL 1971

Model	Input Voltage VDC	Regulated Voltage Range VDC/FW R	Strobe Candela (cd)
AS-24MCW-FA	24	160-330	15/30/75/110
AS-241575W-FR	24	160-330	15 (75 or Axis)
AS-121575W-FR	12	80-175	15 (75 or Axis)
AS-24M C C –FW	24	160-330	15/30 /75 /95
AS WP-2475W-FR	24	160-330	75 @ -31° F

Table 2: Average RMS Current* fir AS-24 MCW Wall-Models @ each Candela Setting

Voltage	15 cd	30 cd	75 cd	110 cd
Average Current with High dBA Setting (99 dBA)				
16.0 VDC	0.099	0.135	0.219	0.308
24.0 VDC	0.093	0.114	0.157	0.197
33.0 VDC	0.098	0.108	0.138	0.166
Average Current with Medium dBA Setting (95 dBA)				
16.0 VDC	0.078	0.116	0.203	0.282
24.0 VDC	0.065	0.088	0.133	0.179
33.0 VDC	0.065	0.078	0.106	0.134
Average Current with Low dBA Setting (90dBA)				
16.0 VDC	0.070	0.111	0.201	0.279
24.0 VDC	0.052	0.077	0.126	0.169
33.0 VDC	0.046	0.063	0.063	0.121

Table 3: Average Mean Current * Series AH-24R/W & AH-12-R/W * W P (Horn only)

Voltage	High	Medium	Low
16.0 VDC	0.035	0.020	0.14
24.0 VDC	0.050	0.026	0.017
33.0 VDC	0.089	0.035	0.021
8.0 VDC	0.093	0.037	0.080
12.0 VDC	0.108	0.049	0.085
17.5 VDC	0.128	0.069	0.042

Table 4: Avereage RM* Current Series AS0241575

Voltage	High	Medium	Low
16.0 VDC	0.130	0.114	0.108
24.0 VDC	0.107	0.085	0.075
33.0 VDC	0.105	0.075	0.060

Table 5:dBA Ratings for 12 VDC & 24 VDC Series AS/AH 12 & 24 VDC Horns

Description	Volumn	Reverberant dBA per UL 464 @ 10 pt.	Anchoic dBA @ 10 pt.
Continuous Horn	High	91	99
	Medium	88	95
	Low	83	90
Temporal Pattern	High	87	99
	Medium	84	95
	Low	79	90

Table 6: Average RM S Current* for AS-24 M CC Ceiling Models @ each Candela Setting

Voltage	15 cd	30 cd	75 cd	95 cd
Average Current with High dBA Setting (99 dBA)				
16.0 VDC	0.105	0.145	0.226	0.314
24.0 VDC	0.097	0.120	0.161	0.202
33.0 VDC	0.101	0.113	0.139	0.168
Average Current with Medium dBA Setting (95 dBA)				
16.0 VDC	0.084	0.126	0.222	0.309
24.0 VDC	0.069	0.094	0.145	0.195
33.0 VDC	0.068	0.083	0.114	0.145
Average Current with Low dBA Setting (90 dBA)				
16.0 VDC	0.076	0.121	0.220	0.306
24.0 VDC	0.069	0.084	0.138	0.185
33.0 VDC	0.049	0.068	0.102	0.132

Table 7: Average Mean Current* Series AS-241575

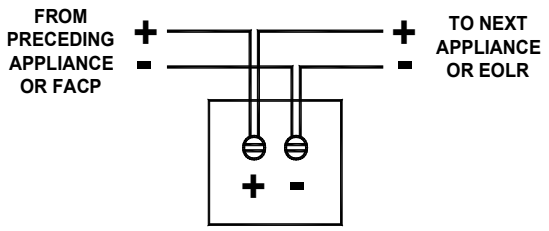
Voltage	High	Medium	Low
8.0 VDC	0.320	0.276	0.286
12.0 VDC	0.250	0.195	0.175
17.5 VDC	0.205	0.105	0.130

SYNC MODULES			
MODEL	ORDER CODE	INPUT VOLTAGE (VDC)	AVERAGE MEAN CURRENT@ 24VDC
SM-12/24-R #	6369	24VDC	0.028A
SM-12/24-R ##	6374	24VDC	0.035A

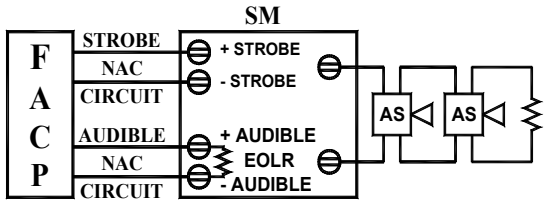
SM Sync Module is rated for 3.0 amps @ 24 VDC
DSM Sync Module is rated for 3.0 amps per circuit. The maximum number of interconnected DSM Modules is 20.

WIRING DIAGRAMS

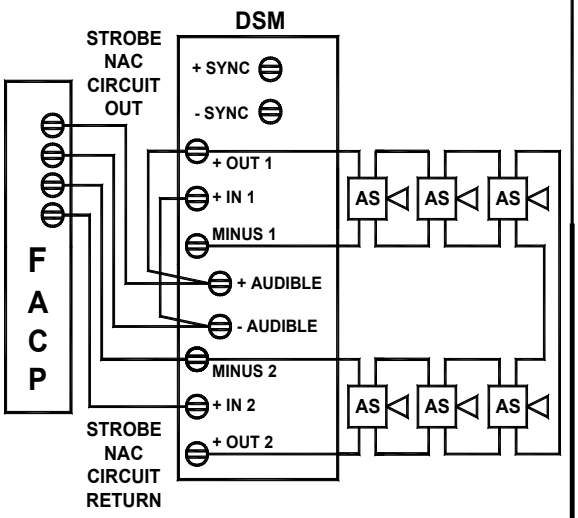
SERIES AS APPLIANCES NON-SYNCHRONIZED



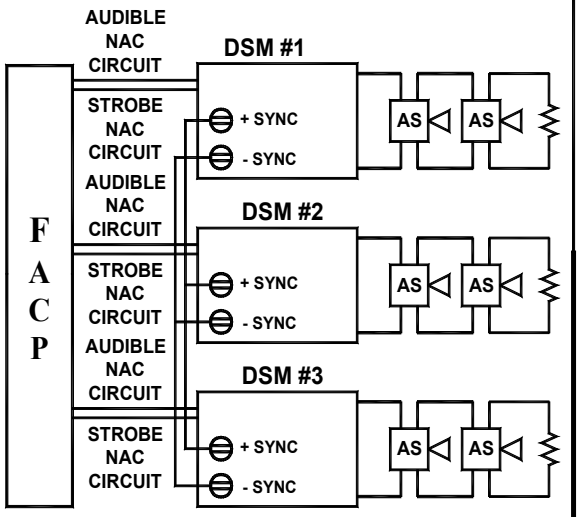
SERIES AS APPLIANCES SYNCHRONIZED WITH SM MODULE SINGLE CLASS "B" NAC CIRCUIT WITH AUDIBLE SILENCE FEATURE



SERIES AS APPLIANCES SYNCHRONIZED WITH DSM MODULE SINGLE CLASS "A" NAC CIRCUIT WITH NO AUDIBLE SILENCE FEATURE



SERIES AS APPLIANCES SYNCHRONIZED WITH MUTIPLE DSM MODULES



DSM INTERCONNECTING WIRING SHOWN.
MAXIUMUM OF TWENTY (20) MODULES

Architects and Engineers Specifications

The notification appliances shall be Cooper-Wheelock Series AS audible/strobe appliances and Series AH audible appliances or approved equals. The Series AS appliance shall be listed under UL Standard 1971 (Emergency Devices for the Hearing Impaired) for indoor Fire Protection Service. The Series AH Audible shall be UL Listed under Standard 464 (Fire Protective Signaling). Both shall meet the requirements of FCC Part 15 Class B. All inputs shall be compatible with standard reverse polarity supervision of circuit wiring by a fire alarm control panel (FACP).

The audible portion of the appliance shall have a minimum of three (3) field selectable settings for dBA levels and shall have a choice of continuous or temporal pattern audible output.

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 AS shall be of low current design. Where Multi-Candela appliances are specified, the strobe intensity shall have a minimum of four (4) field selectable settings and shall be rated per UL Standard 1971 at: 15, 30, 75, and 110 candela for wall mount, or 15, 30, 75, and 95 candela for ceiling mount. The selector switch for selecting the candela shall be tamper resistant and not accessible from the front of the appliance. The 15/75 candela strobe shall be specified when 15 cd UL Standard 1971 Listing with 75 cd on-axis is required (e.g. ADA compliance).

When synchronization is required, the appliance shall be compatible with Cooper-Wheelock's SM and DSM Sync Modules. 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 appliance shall also be designed so that the audible signal may be silenced while maintaining strobe activation.

The Series AS audible/strobe and Series AH audible shall incorporate a patented universal mounting plate that shall allow mounting on a single-gang, double-gang, 4-inch square, 100 mm European type backbox, or the SHBB surface backbox. If required, an NATP (Notification Appliance Trimplate) shall be provided.

All notification appliances shall be backward compatible.

Specifications

Model	Strobe Candela	Non-Sync	Sync w SM/ or DSM	24 VDC	12 VDC	Wall Mount	Ceiling Mount	UL	MEA	CSFM	FM	BFP
AS-24MCW-FR	15/30/75/110	X	X	X	-	X	-	X	X	X	X	X
AS-24M CW –FW	15/30/75/110	X	X	X	-	X	-	X	X	X	X	X
AS-241575W - FR	15 (75 on Axis)	X	X	X	-	X	-	X	X	X	X	X
AS-121575W –FR	15 (75 on Axis)	X	X	X	-	X	-	X	X	X	X	X
AS-24MCC –FW	15/30/75/95	X	X	X	-	-	X	X	*	*	*	*
ASW-P-2475W –FR	75 @ -31° F	X	X	X	-	X	-	X	X	X	X	*
AH –24-R	-	X	X	X	-	X	X	X	X	X	X	X
AH –24W P-R	-	X	X	X	-	X	X	X		X		
AH –12W P-R	-	X	X	-	X	X	X	X		X		

Ordering Information

Part Number	Description
9024	AS-24MCW-FR
9025	AS-24M CW –FW
7405	AS-241575W - FR
7410	AS-121575W –FR
3162	AS-24MCC –FW
9012	ASW-P-2475W –FR
7892	AH –24-R
7891	AH –12-R
7416	AH –24W P-R
7415	AH –12W P-R