Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/03/17

SINCE 1966

R.B. Allen Co., Inc.

Gamewell-FCI Fire Alarm System Addition
One Monument Square - 10th Floor
Portland, ME 04101

Prepared For:
Sullivan & McLaughlin
74 Lawley Street
Boston, MA 02122
ATTN: Jay Affanato
SM PO:

Click Here to View
Bill of Material/Index

Technology and Tradition
Gamewell
FCI FIRE CONTROL INSTRUMENTS
by Honeywell

Prepared By:
Tim Biron
R.B. Allen Co., Inc.
131 Lafayette Road
North Hampton, NH 02862
603.964.8140
RBA SO:

Reviewed By:
Tom DuBois
R.B. Allen Co., Inc.
131 Lafayette Road
North Hampton, NH 02862
603.964.8140
8/22/2017

Gamewell-FCI Addressable Fire Alarm System
One Monument Square 10th Floor Addition
Portland, ME 04101

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/03/17

Click on a Description to View Data Sheet

ITEM #	QTY.	CAT#	DESCRIPTION	DATA SHEET #
1			**Initiating Devices**	
	1	RCE-95	Addressable Relay Control Module (Door Access Controls)	CS-2045
2			**Indicating / Miscellaneous Devices**	
	5	E50H-24MCW-FR	Speaker Strobe Unit - Red Wall Mount (Adjustable Candela)	WHEELOCK
	1	HPFF8	NAC Expander/Power Supply	9021-60521
	1	DSM	Addressable Sync Module	COOPER
	2	BSL1075	Battery 12Vdc 8 A/h	INTERSTATE
3			**Supporting Documentation**	

System Descriptive Narrative
System Sequence of Operation Matrix
System Warranty
Strobe Booster Panel Calculations
Strobe Circuit Voltage Drop/Max Length Calculations
Fire Alarm System Riser Diagram

Click Here T o
Bill Of Mat

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/03/17

One Monument Square
10th Floor Addition
Portland, ME 04101

Booster Power Supply Standby Battery Calculations
Calculations representative of new devices only

	E50H-24MCW-FR				STR				Quiescent Current (Amp)	Alarm Current (Amp)	Spare Capacity (%)
	15cd	30cd	75cd	110cd	15cd	30cd	75cd	110cd			
	41	63	109	140	57	85	135	182			
BPS-1									0.0300		
Ckt 1-1	1	1	1						0.0000	0.1790	92.84
Ckt 1-2	1		1						0.0000	0.1160	95.36
Ckt 1-3									0.0000	0.0000	100.00
Ckt 1-4									0.0000	0.0000	100.00
									0.0300 Quiescent Current	**0.2950** Alarm	96.3125

All currents are expressed as mA.

Max current per ckt = 2 Amps. Max current per panel = 8 Amps.

Total Quiescent Amp x Time Required (24 Hours)	0.720	AmpHr
Total Alarm Amp x Time Required (5 Minutes)	0.025	AmpHr
Total Battery Required	0.745	AmpHr
Total Battery Required + 20%	**1.489**	AmpHr
Battery Supplied	**8**	AmpHr

NAC Circuit Voltage Drop/Maximum Length Calculations

Formulas Used:

R_t = (D) x (R_w) / 1000'
V_d = (R_t) x (I_t)
Substitute for (R_t) and solve for D
D = ((4.0) x (1000)) / ((R_w) x (I_t))

Rt= Total Circuit Resistance
D= Distance Total
Rw= Wire Resistance (Per 1,000' Pair)
Vd= Voltage Drop
It= Total Circuit Current

Notes:
1 **NAC Circuit terminal voltage 24Vdc.**
2 **A maximum allowable voltage drop of 4Vdc will provide a minimum of 20 Vdc per circuit.**

NAC CIRCUIT MAX WIRE LENGTH CALCULATION

	E50H-24MCW-FR				STR				Total Circuit Current	Ω per 1000' Pair
	15cd	30cd	75cd	110cd	15cd	30cd	75cd	110cd		
BPS-1	41	63	109	140	57	85	135	182		14AWG (5.2Ω)
Ckt 1-1	1	1	1	0	0	0	0	0	0.1790	4297.38 Ft
Ckt 1-2	1	0	1	0	0	0	0	0	0.1160	6631.30 Ft
Ckt 1-3	0	0	0	0	0	0	0	0	0.0000	#DIV/0! Ft
Ckt 1-4	0	0	0	0	0	0	0	0	0.0000	#DIV/0! Ft

Click Here To R
Bill Of Materia

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/03/17

Gamewell Addressable Fire Alarm System Addition
One Monument Square - 10th Floor
Portland, ME 04101

System Narrative

In the event of an alarm from an actuated device, the following shall occur:

Follow existing building evacuation sequence for all new devices.

In the event of a supervisory condition from an actuated device, the following shall occur:

Follow existing building supervisory sequence for all new devices.

In the event of a system trouble report, the following shall occur:

Follow existing building trouble sequence for all new devices.

Click Here To Re
Bill Of Material

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/03/17

Gamewell Addressable Fire Alarm System Addition
One Monument Square - 10th Floor
Portland, ME 04101

SEQUENCE OF OPERATION MATRIX

System Inputs	A	B	C		D	F	G	System Inputs
	Alarm Signal to Fire Department via Existing Means	Annunciate at FACP and Remote Annunciator	Activate All Strobe Circuits	Activate All Speaker Circuits	Activate all required exisitng buidling automation relays	Supervisory Signal to Fire Alarm Panel	Trouble Signal to Fire Alarm Panel	
Manual Pull Station	x	x	x	x	x			Manual Pull Station
Area Smoke Detector	x	x	x	x	x			Area Smoke Detector
Area Heat Detector	x	x	x	x	x			Area Heat Detector
Sprinkler Waterflow Switch	x	x	x	x	x			Sprinkler Waterflow Switch
Sprinkler Tamper Switch		x				x		Sprinkler Tamper Switch
Fire Alarm - AC Failure		x					x	Fire Alarm - AC Failure
Fire Alarm - Low Battery		x					x	Fire Alarm - Low Battery
Signal Line Open Circuit		x					x	Signal Line Open Circuit
Signal Line Ground Fault		x					x	Signal Line Ground Fault
Strobe Circuit Open		x					x	Strobe Circuit Open
Strobe Circuit Ground		x					x	Strobe Circuit Ground
System Ground Fault		x					x	System Ground Fault
	A	B	C		D	F	G	

Click Here To R
Bill Of Materia

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/03/17

SINCE 1966
R.B. Allen Co., Inc.
NE 1-800-258-7264
FAX (603) 964-8885
P.O. Box 770
131 Lafayette Rd.
No. Hampton, NH 03862
(603) 964-8140

Service and Warranty

The R.B. Allen Co., Inc., established in 1966, is a UL Certified and ISO 9001 registered Fire Alarm Distributor with offices located in North Hampton, NH and throughout New England. The service policy of the R.B. Allen Company is no charge to the customer for warranty work including parts and labor for a period of one (1) year from the time of final acceptance.

The R.B. Allen Company, Inc. warranty applies only to the equipment it provides and does not cover defective wiring or equipment provided by the Electrical Contractor or third party.

Service calls resulting from acts of nature, acts of vandalism, or acts which are beyond the control of the equipment manufacturer are excluded under the warranty and shall be considered a billable call.

R.B. Allen Company factory trained and certified technicians will provide job site supervision during installation of the system and perform final connections, testing, and adjusting of the Fire Alarm System. They also will instruct the owner's personnel on the proper operation and maintenance of the Fire Alarm System.

Click Here T o
Bill Of Ma

Reviewed for Code Compliance Inspections Division Approved with Conditions
Date: 10/03/17

LEGEND:

NFPA SYM*	DWG SYM	DESCRIPTION	CATALOG #
HPFF8		Remote Booster Supply	HPFF8
CM		Addressable Relay Control Module	RCE-95
DSM		Addressable Sync Module	DSM
#	F #	Speaker/Strobe Unit - Red Wall Mount (# Indicates Candela Setting)	E50H-24MCW-FR

* NFPA 170 (2009)
Tables: 6.5, 6.7.1, 6.7.2, & 6.7.3

GENERAL NOTES:

1. ALL WIRING IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE, APPROPRIATE STATE AND LOCAL CODES, AND MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.

WIRING NOTES:

1. All addressable devices must be installed in a heated location.
2. Addressable Loop consists of: (1) 2c #16 Twisted Non-shielded from Nearest Gamewell Addressable Device; (1) 2c #16 Twisted Non-shielded through remaining devices on circuit and return Nearest Gamewell Addressable Device. Maintain proper separation between feeds and returns.
3. Strobe circuits consist of a minimum: 2c #14 from Booster Panel to 1st device; 2c #14 through remaining devices on circuit and Return To Booster Panel. Maintain proper separation between feeds and returns.
4. Speaker circuits consist of a (1) TwPr #14 from Nearest Gamewell Speaker Device; (1) TwPr #14 through remaining devices on circuit and Return Nearest Gamewell Speaker Device. Maintain proper seperation between feeds and returns.
5. Call Tim Biron with any questions about this job (207) 939-2134

One Monument Square
10th Floor Addition
Portland, ME 04101

Booster Power Supply Standby Battery Calculations
Calculations representative of new devices only

	E50H-24MCW-FR				STR				Quiescent Current (Amp)	Alarm Current (Amp)	Spare Capacity (%)
	15cd	30cd	75cd	110cd	15cd	30cd	75cd	110cd			
	41	63	109	140	57	85	135	182			
BPS-1									0.0300		
Ckt 1-1	1	1	1						0.0000	0.1790	92.84
Ckt 1-2	1		1						0.0000	0.1160	95.36
Ckt 1-3									0.0000	0.0000	100.00
Ckt 1-4									0.0000	0.0000	100.00
									0.0300 Quiescent Current	0.2950 Alarm	96.3125

All currents are expressed as mA.
Max current per ckt = 2 Amps. Max current per panel = 8 Amps.

Total Quiescent Amp x Time Required (24 Hours)	0.720 AmpHr
Total Alarm Amp x Time Required (5 Minutes)	0.025 AmpHr
Total Battery Required	0.745 AmpHr
Total Battery Required + 20%	1.489 AmpHr
Battery Supplied	8 AmpHr

NAC Circuit Voltage Drop/Maximum Length Calculations

Formulas Used:

$R_t = (D) \times (R_w) / 1000'$
$V_d = (R_t) \times (I_t)$
Substitute for (R_t) and solve for D
$D = ((4.0) \times (1000)) / ((R_w) \times (I_t))$

R_t= Total Circuit Resistance
D= Distance Total
R_w= Wire Resistance (Per 1,000' Pair)
V_d= Voltage Drop
I_t= Total Circuit Current

Notes:
1 NAC Circuit terminal voltage 24Vdc.
2 A maximum allowable voltage drop of 4Vdc will provide a minimum of 20 Vdc per circuit.

NAC CIRCUIT MAX WIRE LENGTH CALCULATION

	E50H-24MCW-FR				STR				Total Circuit Current	Ω per 1000' Pair
	15cd	30cd	75cd	110cd	15cd	30cd	75cd	110cd		
BPS-1	41	63	109	140	57	85	135	182		14AWG (5.2Ω)
Ckt 1-1	1	1	1	0	0	0	0	0	0.1790	4297.38 Ft
Ckt 1-2	1	0	1	0	0	0	0	0	0.1160	6631.30 Ft
Ckt 1-3	0	0	0	0	0	0	0	0	0.0000	#DIV/0! Ft
Ckt 1-4	0	0	0	0	0	0	0	0	0.0000	#DIV/0! Ft

DWG NAME: One Monument Square 10th Floor Addition Portland, ME 04101 FIRE ALARM RISER DIAGRAM

R.B. Allen Co., Inc.
P.O. BOX 770
131 LAFAYETTE RD
NO. HAMPTON, NH 03862
(800)258-2264

JOB NAME: One Monument Square 10th Floor Addition Portland, ME 04101 FIRE ALARM RISER DIAGRAM

0	Original Issue	8/2017	ENH	TD			

SCALE: NTS

PO No. 00617
One Monument Square
10th Floor Addition
Portland, ME 04101
FIRE ALARM RISER
DWG NO. 00617_RSR

Gamewell FCI FIRE CONTROL INSTRUMENTS

by Honeywell

RCI

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/03/17

Click Here To Return To Bill Of Material/Index

Description

Relay Control Element

The Gamewell-FCI Relay Control Element (RCE-95) is the interface between the Gamewell-FCI, 600 Series and IL95-E3 Series® Fire Alarm Control Panel (FACP) analog circuits and building functions such as door holders, elevators, dampers, motors and disconnects. The RCE-95 offers feedback input points for positive confirmation of the controlled device's activity. For annunciation and feedback at the panel, Gamewell-FCI offers a Relay Control Display (RCD). The RCD is only available with the IdentiFlex 632 and IF650 FACPs.

The RCE-95 can be either surface or flush mounted and has an integral LED which annunciates upon device activation.

Operation

The devices connect to the SLC circuit of the FACP via a two-wire non- polarized circuit. In its quiescent mode, the RCE-95 monitors its internal circuitry for status of the device itself and supervises an external control circuit for status.

When a status change is detected, the event can be programmed to display on the optional RCD module (IF632 and IF650 only). When an event is reported to the control panel that requires the activation of the RCE-95, the control panel communicates via the analog circuit to the RCE-95 for activation. The integral LED is also lit for annunciation at the device.

Programming

The RCE-95 is programmed by setting a single DIP switch easily accessible on the RCE-95's printed circuit board. The DIP switch is used to set the address of the device. All other programming is accomplished at the Fire Alarm Control Panel, either through a laptop computer or the control panel operator's display. (600 Series only).

E3 Series® is a registered trademark of Honeywell International Inc.
Microsoft® Windows® is a registered trademark of Microsoft® Corporation.

RCE-95

Features

- Compatible with the Gamewell-FCI, 600 Series and ILI95-E3 Series analog addressable FACPs
- Form-C dry relay contacts
- Event or manual controllable relay functions
- Positive feedback of relay activation
- LED annunciates activation
- Fully supervised
- Surface or flush mounting
- Field programmable
- Style 4, 6, or 7 wiring
- Screw terminals for field wiring connections

An ISO 9000-2000 Company

SIGNALING UL LISTED S521 · FM APPROVED · MEA Approved 7300-1703:135

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472-1610 USA • 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 Honeywell International Inc. All rights reserved.

Click Here To R
Bill Of Materia

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/03/17

Mounting

The RCE-95 is designed to mount in a standard 4.688" (11.908 cm) electrical backbox. The RCE-95 should be mounted in an easily visible location so that the built-in LED indicators may be easily seen and display the proper connection and device activation.

Engineer's Specifications

A programmable interface device shall be provided for the control and status reporting of programmed relay control functions. The RCE-95 shall communicate with the Fire Alarm Control Panel via an analog circuit (SLC) over a single pair of wires.

The device shall provide dry contacts and positive feedback of the controlled equipment's status annunciating upon activation. It shall be Gamewell-FCI RCE-95.

Specifications

Input Power:	24 VDC from analog circuit
Standby Current:	0.0008A
Alarm Current:	0.0015A
Operating Temperature:	32°F to 120°F (0°C to 49°C)
Relative Humidity:	93% non-condensing
Fuse:	2 amp Slo Blow
Contact Rating:	2.0 amp at 30 VDC 0.2 amp at 120 VAC
Dimensions:	4.688" (11.908 cm) backbox

Ordering Information

Part Number	Description
RCE-95	Relay control element device. XP95 protocol compatible.
70839	Trim ring for flush mounting the RCE-95.
RCD	Optional relay control display; provides annunciation of the RCE-95 control element devices at the FACP. One needed for every eight RCEs.

Note: The Relay Control Display (RCD) is only compatible with the IF632 and IF650 FACPs.

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/03/17

Wheelock E50H & E60H High Fidelity Speakers & Speaker Strobes

Description

The Wheelock E50H Wall and E60H Ceiling Speakers and Speaker Strobes are designed for high fidelity sound output for indoor applications. With the widest frequency response range (300 to 8000 Hz) in the industry, the EH product line features leading intelligibility with crisp, clear voice messages and tone signaling, ideal for emergency communications, mass notification, and voice evacuation.

Providing a sleek aesthetic appearance, the wall and ceiling appliances feature dual voltage (25/70 VRMS) capability and field-selectable taps from 1/8 to 2 watts. For faster and easier installation, the low profile design incorporates a speaker mounting plate, and each model has a built-in level adjustment feature and snap-on cover with no visible mounting screws.

For visible signaling to meet the hearing impaired, the Series EH Speaker Strobe models incorporate the low current draw of the RSS Strobes.

Strobe options for wall mount models include Wheelock 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.

Ceiling mount models are available in Wheelock patented MCC multi-candela ceiling strobe with field selectable intensities of 15/30/75/95cd or the high intensity MCCH strobe with field selectable 115/177cd.

The strobe portion of all Series EH Speaker Strobes may be synchronized when used in conjunction with the Wheelock DSM Sync Modules, Wheelock Power Supplies or other manufacturers panels incorporating the Wheelock Patented Sync Protocol. Wheelock synchronized strobes offer an easy way to comply with ADA recommendations concerning photosensitive epilepsy.

Series EH Speaker Strobes are UL Listed for indoor use under Standard 1971 (Signaling Devices for the Hearing-Impaired) and Standard 1480 (Speaker Appliances), and ULC listed under CAN/ULC-S526 (Visual-audible Signal Appliances, Fire Alarm) and under CAN/ULC-S541 (Speakers, Fire Alarm). All inputs employ IN/OUT wiring terminals for fast installation using #12 to #18 AWG wiring.

Color options for the Series EH Speakers and Speaker Strobes are red and white.

EATON
Powering Business Worldwide

Click Here To Return To
Bill Of Material/Index

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/03/17

Features

- High Fidelity Sound Output
  - Efficient design for high intelligibility at minimum wattage across a frequency range of 300 to 8000 HZ
- 6 Field Selectable Settings in 1 Device
  - Wall mount models are available with Field Selectable Candela Settings of 15/30/75/110cd or 135/185cd (Multi-Candela models) or 1575cd (Single Candela model)
  - Ceiling mount models are available with field selectable candela settings of 15/30/75/95cd or 115/177cd (Multi-candela models)
- Field Selectable Taps
  - 1/8 watt up to 2 watts
  - 25 or 70 VRMS operation
- Easy-to-Install
  - Low profile design incorporates speaker mounting plate for faster and easier installation
  - Snap on grille cover with no visible mounting screws
  - Quick installation with IN/OUT screw terminals using #12 to #18 AWG wires
  - 4" square backbox prevents wire damage
  - Series E50H- No extension ring required
  - Series E60H- Optional Extender (E60 Ext) is available for mounting to 4" square backboxes
- Strobe Synchronization Components
  - Meet synchronizing standards with Wheelock's DSM Sync Modules, PS Power Supplies or SAFEPATH products
- Compliance
  - UL 1971, UL 1480, ULC-S526, ULC-S541
  - Low frequency requirements of UL 464 (520 Hz) to meet NFPA's 520 Hz tone requirements for sleeping areas
  - California State Fire Marshal (CSFM)
  - ADA/NFPA/ANSI/OSHA
  - FCC Part 15, ICES

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.EATON.COM/MASSNOTIFICATION OR CONTACT EATON 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.

Drawings

Figure 1. E50H (top) and E60H (bottom) Speakers - Front & Side Views

Figure 2. E60H (top) and E60H (bottom) Speaker Strobes - Front & Side Views

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.

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/03/17

Table 1. Maximum RMS Current

		UL/ULC Max Current [a]								
		24MCW/24MCC 241575W				24MCWH/24MCCH				
Model	**Regulated Voltage Range VDC**	**15**	**30**	**75**	**95**	**110**	**115**	**135**	**177**	**185**
E50H	16.0-33.0	0.060	0.092	0.165		0.220		0.300		0.420
E60H	16.0-33.0	0.060	0.105	0.189	0.249		0.300		0.420	

Table 2. UL Listed Models and Ratings

	UL Reverberant dBA at 10 Feet [b]				
Model	**1/8 watts [c]**	**1/4 watts**	**1/2 watts**	**1 watts**	**2 watts**
E50H Speaker Strobe	73	76	79	82	84
E60H Speaker	74	77	80	83	85
E60H Speaker Strobe	74	77	80	82	85

Table 3. Specification & Ordering Information

Model	**Order #**	**Strobe Candela**	**Red**	**White**	**Lettering**	**Wall**	**Ceiling**	**Mounting Options**	**Sync w/ DSM or Wheelock Power Supplies**
Speakers									
E50H-R	9863		X		No Lettering	X		E, AA	
E50H-W	9864			X	No Lettering	X		E, AA	
E50H-ALW	3577			X	ALERT	X		E, AA	
E60H-R	9867		X		No Lettering		X	E	
E60H-W	9874			X	No Lettering		X	E	
E60H-ALW	3554			X	ALERT		X	E	
Speaker Strobes									
E50H-24MCW-FR	0092	15/30/75/110	X		FIRE	X		E, BB	X
E50H-24MCW-FW	0093	15/30/75/110		X	FIRE	X		E, BB	X
E50H-24MCW-ALR	3559	15/30/75/110	X		ALERT	X		E, BB	X
E50H-24MCW-ALW	3560	15/30/75/110		X	ALERT	X		E, BB	X
E50H-24MCW-NW	3575	15/30/75/110		X	No Lettering	X		E, BB	X
E50H-24MCWH-FR	0094	135/185	X		FIRE	X		E, BB	X
E50H-24MCWH-FW	0097	135/185		X	FIRE	X		E, BB	X
E50H-24MCWH-ALW	3561	135/185		X	ALERT	X		E, BB	X
E60H-24MCC-FR	0187	15/30/75/95	X		FIRE		X	E	X
E60H-24MCC-FW	0188	15/30/75/95		X	FIRE		X	E	X
E60H-24MCC-NW	0950	15/30/75/95		X	No Lettering		X	E	X
E60H-24MCC-ALW	3555	15/30/75/95		X	ALERT		X	E	X
E60H-24MCCH-FR	0189	115/177	X		FIRE		X	E	X
E60H-24MCCH-FW	0190	115/177		X	FIRE		X	E	X
Extender Ring									
E60EXT-R [d]	3578		X						
E60EXT-W [d]	3757			X					

Table 4. Specifications

Physical	
Material / Lens (Material type)	Red or white textured UV stabilized, colored impregnated engineered plastic. Exceeds 94V-0 UL flammability rating. / GE LEXAN 943A
Weight	E50H Speaker:1.5 lbs (0.68 kg); E50H Speaker Strobe 1.6 lbs (0.73 kg); E60H Speaker: 1.6 lbs (0.73 kg); E60H Speaker Strobe 1.7 lbs (0.77 kg);
Dimensions	E50H Speaker: 5" W x 5" H x 1.47"D; E50H Speaker Strobe: 5" W x 6.74" H x 2.58"D; E60H Speaker: 7.38" Diameter x .83" D; E60H Speaker Strobe: 7.38" Diameter x 3.02" D
Operating Temperature	Indoor: 33.8°F to 120.2°F (0°C to 49°C) and maximum humidity of 93%
Mounting & Wire Connections	
Mounting (indoor only)	4" square backbox prevents wire damage; Series E50H - No extension ring required; Series E60H - Optional Extender (E60 Ext) is available for mounting to 4" square backboxes, E50 SSB, E50 SB for surface mount of E50H
Wire Connections	#12 through #18 AWG
Power & General	
Operating voltage	25/70 VRMS
Strobe Output Rating	UL 1971, ULC S526
Strobe Flash Rate	Strobes are designed to flash at 1 flash per second
Synchronization Models	Strobes can be synchronized with Wheelock's DSM Sync Modules, PS Power Supplies or SAFEPATH products, using Wheelock patented sync protocol
Frequency Range	300 Hz to 8000 Hz

a 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.

b dBA ratings are based on testing under UL Standard 1480.
c 1/8 watt tap is for private mode only.
d E60 EXT is an attractive extender ring that mounts behind the speaker to permit mounting to a 4" square x 2 1/8" deep electrical box without need for an extension ring on the box.

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/03/17

Architects and Engineers Specifications

Wheelock E50H- The speaker appliances shall be Wheelock E50H High Fidelity Speakers, and the High Fidelity Speaker Strobe appliances shall be Wheelock E50H Speaker Strobes or approved equals. The speakers shall be UL Listed under UL 1480 for Fire Protective Service and speakers equipped with strobes shall be listed under UL 1971 for Emergency Devices for the Hearing-Impaired. In addition, the strobes shall be certified to meet the requirements of FCC Part 15, Class A.

All speakers shall be designed for a field selectable input of either 25 or 70 VRMS, with selectable power taps from 1/8 watt to 2 watts. All models shall have listed sound output of up to 87 dBA at 10 feet and a listed frequency response of 300 to 8000 Hz. The speaker shall incorporate a sealed back construction. All inputs shall employ terminals that accept #12 to #18 AWG wire sizes. The strobe portion of the appliance shall produce a flash rate of one (1) flash per second over the Regulated Voltage Range and shall be of low current design. Where Multi-Candela Speaker Strobes are specified, the strobe intensity shall have field selectable settings and shall be rated per UL 1971 at 15/30/75/110cd or 135/185cd for wall mounting. The selector switch for selecting the candela shall be tamper resistant.

When synchronization is required, the strobe portion of the appliance shall be compatible with the Wheelock's DSM sync modules or Wheelock 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 strobe shall revert to a non-synchronized flash rate.

The speaker and speaker strobe appliances shall be designed for indoor flush mounting to 4" x 2-1/8" electrical boxes without need for an extension ring or surface mounting to Wheelock's E50SB or E50SSB surface boxes. The speaker and speaker strobe shall incorporate a speaker mounting plate with a snap-on grille cover. The finish of the Series E50H speakers and speakers strobes shall be white or red.

The speaker shall be listed to the low frequency requirements of UL 464 (520 Hz) to meet NFPA's 520 Hz tone requirements for sleeping areas.

UL 1971, UL 1480, ULC-S526, ULC-S541, CSFM, FCC.

Wheelock E60H - The speaker appliances shall be Wheelock E60H High Fidelity Speakers, and the High Fidelity Speaker Strobe appliances shall be Wheelock Series E60H Speaker Strobes or approved equals. The speakers shall be UL Listed under UL 1480 for Fire Protective Service and speakers equipped with strobes shall be listed under UL 1971 for Emergency Devices for the Hearing-Impaired. In addition, the strobes shall be certified to meet the requirements of FCC Part 15, Class A.

All speakers shall be designed for a field selectable input of either 25 or 70 VRMS, with selectable power taps from 1/8 watt to 2 watts. All models shall have listed sound output of up to 87 dB at 10 feet and a listed frequency response of 300 to 8000 Hz. The speaker shall also incorporate a sealed back construction. All inputs shall employ terminals that accept #12 to #18 AWG wire sizes. The strobe portion of the appliance shall produce a flash rate of one (1) flash per second over the Regulated Voltage Range. The strobe shall be of low current design. Where Multi-Candela Speaker Strobes are specified, the strobe intensity shall have field selectable settings and shall be rated per UL 1971 15/30/75/95cd or 115/177cd for ceiling mount. The selector switch for selecting the candela shall be tamper resistant. When synchronization is required, the strobe portion of the appliance shall be compatible with Wheelock DSM sync modules or the Wheelock 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 strobe shall revert to a non-synchronized flash rate.

The speaker and speaker strobe appliances shall be designed for indoor flush mounting. The speaker and speaker strobe shall incorporate a speaker mounting plate with a snap-on grille cover with no visible screws for a level, aesthetic finish and shall mount to standard electrical hardware. The finish of the Series E60H Speakers and Speaker Strobes shall be white or red. All speaker and speaker strobe appliances shall be backward compatible.

The speaker shall be listed to the low frequency requirements of UL 464 (520 Hz) to meet NFPA's 520 Hz tone requirements for sleeping areas.

UL 1971, UL 1480, ULC-S526, ULC-S541, CSFM, FCC.

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.

NEMA Member

WE ENCOURAGE AND SUPPORT NICET CERTIFICATION
3 YEAR WARRANTY

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com

Eaton
Life safety & mass notification solutions
273 Branchport Ave.
Long Branch, NJ 07740
www.eaton.com/massnotification

Click Here To Return To
Bill Of Material/Index

EATON
Powering Business Worldwide

© 2016 Eaton
All Rights Reserved
Printed in USA
Publication No. TD450017EN
January 2016

Eaton is a registered trademark.

All other trademarks are property
of their respective owners.

Gamewell FCI FIRE CONTROL INSTRUMENTS

by Honeywell

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/03/17

Click Here To Return To
Bill Of Material/Index

Description

NAC Expander/Power Supply

The Gamewell-FCI, HPFF8 is a Notification Appliance Circuit (NAC) expansion panel designed to extend the power capabilities of existing NACs and provide power for the auxiliary devices. The HPFF8 connects to any 12 or 24V Fire Alarm Control Panel (FACP) or stand alone.

The HPFF8 is available in 8.0 amps. It provides regulated and filtered 24VDC power to each of the four NACs and an auxiliary output. The NAC outputs are rated at 3.0 amps each (the total output cannot exceed 8.0 amps). The auxiliary output is rated at 2.0 amps. This output is continuously supplied, even in alarm, and therefore must be taken into account for power supply loading and battery size calculations.

The NAC outputs may be configured as any of the following:

- Four Class B (Style Y)
- Two Class A (Style Z)
- Two Class B and one Class A
- Four Class A with the optional HPP31076 Class A adapter installed

These power supplies contain an internal Battery charger capable of charging up to 26.0 amp-hour (AH) batteries.

The HPFF8 is mounted in lockable wall cabinet units that can accommodate up to two (2), 18AH batteries. A multi-pack option allows for up to four chassis mount units installed in a single lockable SBB-D4 enclosure. These chassis mount units have a "CM" suffix, HPFF8CM and can accommodate two 12AH batteries. Power supplies are available in either 120VAC/60 Hz or 240VAC/50 Hz.

One of the most challenging aspects of a retrofit application is locating the existing End-of-Line (EOL) resistor. In these applications that have EOL values, other than the 3.9k normally used with the HPFF8, a single resistor matching the existing EOL can be used as a reference for all the outputs. This feature speeds the installation and the system checkout, because the actual EOL does not need to be located and changed in the circuit. The reference resistor must be within the range of 1.9k to 25k.

HPFF8

Features

- Four (4) supervised notification application circuits (NACs) capable of supplying +24VDC at 3.0 amp maximum each
- NAC output circuits may be configured as any of the following:
  - Four Class B (Style Y)
  - Two Class A (Style Z)
  - Two Class B & one Class A
  - Four Class A with the optional HPP31076 Class A adapter installed
- Four field-programmable operational modes
- 2.0 amp auxiliary continuously supplied output
- Two (2) fully supervised input/output control circuits
- Temporal coding and sync protocols compatible with the following notification appliance brands:
  - System Sensor
  - Gamewell
  - Cooper-Wheelock
  - Faraday
  - Amseco
  - Gentex
- Supervised AC input, battery voltage, auxiliary output, charger, and earth ground faults
- Trouble indication for supervision of the following:
  - NAC circuits
  - AC input
  - Battery voltage
  - Earth ground faults by individual status LED's
  - Auxiliary output
  - Charger
  - Open contacts in the initiating device signal inputs (for FACP trouble notification)
- Separate Trouble and AC Fail Form-C relay Contacts

An ISO 9001-2000 Company

SIGNALING UL LISTED S24562 · FM APPROVED · 7315-1637:0102

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472-1610 USA · 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.
©2010 by Honeywell International Inc. All rights reserved.

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/03/17

Features (Continued)

- The Trouble Form-C relay contacts selectable for immediate or a 2 hour delay with AC failure
- 26 AH battery charger capability; the wall cabinet supports two 12V 18AH batteries, while the multi-pack equipment cabinets supports two 12V 12AH batteries.
- NAC Overload protection and indication
- Up to four chassis mount units (HPFF8CM) can be installed in the SBB-D4 backbox
- Wall mount units can be configured to internally house the following:
  - one AOM-2SF single control module
  - one AOM-2R single relay module

Specifications

Primary Input Power:	120VAC/60Hz, 3.6A or 220VAC/50Hz, 1.5A
Secondary Power:	24 volt operation: two (2), 7-24 AH batteries
Battery Charging Capacity:	Up to 26 AH batteries mounted
Battery Space:	
HPFF8 Cabinet:	Up to two 18AH batteries
SBB-D4 Cabinet:	Up to two 12AH batteries per supply
Total Output Power:	8.0A max
Standby Current:	0.030 A
Auxiliary Power Output:	0.15A under all conditions 2.0A if load is removed during operation (external relay or AC Fail Relay is required)

Specifications (Continued)

NAC Output Ratings:	24VDC fully regulated, 3.0A max per circuit (8.0A total)
End-of-Line Resistor Range:	2K to 25k ohm, ½ watt
Common Trouble Relay/AC Fail Relay:	2.0A at 28VDC or 120VAC
Input Control Circuit:	16-30VDC @ 5mA min.
Temperature Rating:	32°F to 120°F (0°C to 49°C
Relative Humidity:	10% to 93% non-condensing
Cabinet Dimensions:	
HPFF8 Cabinet:	16.65” W x 19.0” H x 5.2” D (42.29 W x 48.26 H 13.23 D cm)
SBB-D4 Cabinet:	24” W x 45.9” H x 5.15” D (60.96 W x 116.52 H x 13.1D cm)

Ordering Information

Part Number	Description
HPFF8	8A fire rated power supply operating at 120VAC/60 Hz. Unit includes red enclosure with HPP lock and key
HPFF8CM	8A fire rated power supply - chassis mounted operating at 120VAC/60 Hz. Unit includes mounting hardware for installation in the SBB-D4 enclosure
HPFF8E	8A fire rated power supply operating at 240VAC/50 Hz
HPFF8CME	8A fire rated power supply chassis mounted operating at 240VAC/50 Hz
HPP31076	Class A (Style Z) NAC module
FCI-VDR-D4	Vented door, PK-625 lock and key for SBB-D4 backbox, black
SBB-D4	Backbox, accepts up to 4 chassis, black

Click Here To Return To Bill Of Material/Index

COOPER

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/03/17

Click Here To Return To
Bill Of Material/Index

Series DSM Sync Modules

Series DSM

Description

The Wheelock Series DSM Sync Modules are utilized with the Series Exceder, Series AS/AH, Series RSS, Series RSSP, Series SLM and selected strobe applications with other Wheelock combination appliances.

When used with Series AS Audible Strobes and/or Series Exceder Horn Strobes, the DSM Sync Modules provide independent operation of synchronized temporal pattern (code 3) horn and synchronized strobe flash, as well as the ability to silence the horn while maintaining the strobe flash. while using only a single pair of wires. The DSM-12/24 Sync Modules control either a Class A or two (2) Class B NAC circuits.

Features

- Approvals include: UL Standard 1971, ULC, New York City (MEA), California State Fire Marshal (CSFM) and Chicago (BFP)
- Uniquely designed to accept an independent strobe and audible input from the FACP and convert to a single output that connects to Wheelock's Series AS or Series NS family of audible strobes
- Series DSM Sync Modules can also be used to synchronize Wheelock's Series Exceder, RSS, RSSP and SLM Sync Strobes
- 3 ampere per circuit current handling at 12 or 24 VDC
- Low operating current draw
- Compatible with all standard fire alarm control panels
- Meets the NFPA-72 requirement for Temporal Pattern when used with the Series AS/AH and/or Series Exceder
- 3 year warranty

DSM Connection Diagram with Power Booster

E5946 151-92-E 7300-0785:132

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/03/17

Table1: Sync Module (DSM) Current Requirements (AMPS)							
UL Voltage	ULC Voltage	Rated Average Current		Rated Peak Current		Rated Inrush Current	
		In1/In2	Audible	In1/In2	Audible	In1/In2	Audible
8.0 VDC	**10.5 VDC**	0.019	0.004	0.055	0.004	0.150	0.016
12.0 VDC	**12.0 VDC**	0.020	0.004	0.064	0.004	0.170	0.019
24.0 VDC	**24.0 VDC**	0.035	0.008	0.080	0.008	0.342	0.030
33.0 VDC	**33.0 VDC**	0.045	0.010	0.090	0.010	0.470	0.040
8.0 VRMS	**8.0 VRMS**	0.028	0.005	0.107	0.008	0.210	0.016
12.0 VRMS	**12.0 VRMS**	0.030	0.006	0.103	0.009	0.240	0.019
24.0 VRMS	**24.0 VRMS**	0.048	0.010	0.145	0.015	0.480	0.033
33.0 VRMS	**31.0 VRMS**	0.062	0.012	0.175	0.022	0.685	0.056

NOTE: All CAUTIONS and WARNINGS are identified by the symbol ⚠. All warnings are printed in bold capital letters.

⚠ WARNING: PLEASE READ THESE SPECIFICATIONS AND INSTALLATION INSTRUCTIONS CAREFULLY BEFORE USING, SPECIFYING OR APPLYING THIS PRODUCT. FAILURE TO COMPLY WITH ANY OF THESE INSTRUCTIONS, CAUTIONS AND 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.

⚠ WARNING: MAKE SURE THAT THE TOTAL CURRENT REQUIRED BY ALL APPLIANCES THAT ARE CONNECTED TO A SM OR DSM DOES NOT EXCEED 3.0A OR EXCEED THE RATING OF THE FIRE ALARM CONTROL PANEL'S PRIMARY AND SECONDARY POWER SOURCES AND NAC CIRCUITS. OVERLOADING THESE SOURCES COULD RESULT IN LOSS OF POWER AND FAILURE TO ALERT OCCUPANTS DURING AN EMERGENCY, WHICH COULD RESULT IN PROPERTY DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

When calculating the total current, use Tables 1& 2 to determine the highest value of "Rated Average Current" for the SM or DSM (across the listed voltage range), then add this value to the total current for any other appliances powered by the same source and include any required safety factors. Refer to Instruction Sheet for addtional information.

⚠ WARNING: MAKE SURE THAT ALL FUSES USED ON NAC CIRCUITS ARE RATED TO HANDLE THE MAXIMUM INRUSH OR PEAK CURRENT FROM ALL APPLIANCES ON THOSE CIRCUITS. FAILURE TO DO THIS MAY RESULT IN LOSS OF POWER TO THE NAC CIRCUIT AND THE FAILURE OF ALL APPLIANCES ON THAT CIRCUIT TO OPERATE, WHICH COULD RESULT IN PROPERTY DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

Table 3: Current Consumption DSM Modules				
Outpurt Circuit Description of SM/DSM Module		SM Module	DSM Module	Ref. Fig.
Class "B" with Audible Silence	(dual circuit)		Y	1
Class "B" with No Audible Silence	(dual circuit)		Y	2
Class "A" with Audible Silence	(single circuit)		Y	3
Class "A" with No Audible Silence	(single circuit)		Y	4

Note: DSM Dual Sync Modules are rated for 3.0 amperes per circuit. **The maximum number of interconnected DSM modules is twenty (20).**

⚠CAUTION: Use DSM Sync Modules only on NAC circuits with continuously applied voltage. Do not use DSM Sync Modules on coded or interrupted NAC circuits in which the applied voltage is cycled on and off.

⚠CAUTION: Power Boosters may be used in conjunction with the DSM Sync Modules only in the order shown below. Only one DSM Sync Module shall be allowed on a NAC circuit. Do not connect Power Booster to the NAC circuit after the one DSM Sync Module. **Exception:** The Wheelock Power Booster can be connected either before or after the DSM Sync Module. Refer to Power Booster instruction manual for proper application and installation.

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/03/17

FIG. 1 DUAL CLASS "B" CIRCUIT WITH AUDIBLE SILENCE FEATURE

FIG. 2 DUAL CLASS "B" CIRCUIT WITH NO AUDIBLE SILENCE FEATURE

FIG. 3 SINGLE CLASS "A" CIRCUIT WITH AUDIBLE SILENCE FEATURE

FIG. 4 SINGLE CLASS "A" CIRCUIT WITHOUT AUDIBLE SILENCE FEATURE

Notes

1. Non-Sync Appliances can be installed before or after a DSM. If the Non-Sync appliance requires audible silence, four wire connection is necessary with the strobe circuit connected before the DSM NAC circuit, and the audible leads connected to a silenceable NAC circuit from the FACP.
2. The audible appliance produces a momentary interruption (approximately 25ms) each time the strobes flash.
3. Circuit #2 may be omitted if only 1 circuit is required when using the DSM.
4. Non-Sync Audible Appliances can be installed on the audible NAC. Be aware of the current requirement for the SM or DSM module. See table 3.

Specifications and Ordering Information

Model	Order Code	Input Voltage VDC	Average Current @ 12 or 24 VDC	UL Max*	Mounting Options**
DSM-12/24-R***	6374	12	0.020	0.026	W
		24	0.035	0.055	W

R = Red

* 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.

** **Refer to Data sheet # S7000 for Mounting Options.**

*** The maximum number of interconnected DSM modules is twenty (20).
The total distance from the first to the last DSM shall not exceed 1,000 feet of #18 AWG wire. Use only #18 AWG wire.

⚠ WARNING: THESE APPLIANCES WERE TESTED TO THE OPERATING VOLTAGE LIMITS OF 8-33 VOLTS USING FILTERED DC OR UNFI FULL-WAVE RECTIFIED (FWR). DO NOT APPLY 80% AND 110% OF THESE VOLTAGE VALUES FOR SYSTEM OPERATION. THE APPLICA IMPROPER VOLTAGE MAY RESULT IN DEGRADED OPERATION OR DAMAGE TO THESE PRODUCTS, WHICH COULD RESULT IN PR DAMAGE AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

CITY OF PORTLAND, MAINE
RESURGAM
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/03/17

Wheelock products must be used within their published specifications and must be PROPERLY specified, applied, installed, o maintained and operationally tested in accordance with their installation instructions at the time of installation and at least twice a year or more often and in accordance with local, state and federal codes, regulations and laws. Specification, application, installation, operation, maintenance and testing must be performed by qualified personnel for proper operation in accordance with all of the latest National Fire Protection Association (NFPA), Underwriters' Laboratories (UL), National Electrical Code (NEC), Occupational Safety and Health Administration (OSHA), local, state, county, province, district, federal and other applicable building and fire standards, guidelines, regulations, laws and codes including, but not limited to, all appendices and amendments and the requirements of the local authority having jurisdiction (AHJ).

⚠ WARNING: CONTACT WHEELOCK FOR "INSTALLATION INSTRUCTIONS" (P83177-DSM) AND "GENERAL INFORMATION" SHEET ON THESE PRODUCTS. These documents do 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 NAC CIRCUITS TO HANDLE MAXIMUM INRUSH OR PEAK CURRENTS FROM ALLAPPLIANCES ON THOSE NAC CIRCUITS.**
- **COMPOSITE FLASH RATE FROM MULTIPLE STROBES WITHIN A PERSON'S FIELD OF VIEW.**
- **THE VOLTAGE APPLIED TO THESE PRODUCTS MUST BE WITHIN THEIR RATED IN PUT VOLTAGE RANGE.**
- **INSTALLATION IN OFFICE AREAS AND OTHER SPECIFICATION AND INSTALLATION ISSUES.**
- **USE STROBES ONLY ON NAC CIRCUITS WITH CONTINUOUSLY APPLIED OPERATING VOLTAGE. DO NOT USE STROBE ON CODED OR INTERRUPTED NAC CIRCUITS IN WHICH THE APPLIED VOLTAGE IS CYCLED ON AND OFF AS THE STROBE MAY NOT FLASH.**

Architects and Engineers Specifications

The sync modules shall be Wheelock Series DSM Sync Modules. Series DSM Sync Modules shall be the master controllers for Wheelock Series Exceder, AS/AH, RSS, RSSP and appliances where a synchronized audible/visual audible or visual only appliance is specified. All modules shall be UL listed under Standard 464. Series DSM modules shall be designed to interface with Series AS Audible Strobe Appliances and Horn Strobe Appliances to produce a synchronized temporal (Code 3) horn as well as synchronized strobe flash on a two-wire alarm circuit. Other synchronized products are the Wheelock Series Exceder, RSS, RSSP, SLM visual only appliances and Series AH and Exceder Horn Appliances.

DSM modules shall provide an additional strobe circuit input/output for control of either two Class "B" NAC circuits or a single Class "A" NAC circuit. Upon activation of the audible silence function at the Fire Alarm Control Panel, the audible signal component of Series AS Audible Strobe and/or the Series NS Horn Stobe may be silenced while maintaining strobe activation.

DSM module shall be DSM-12/24 for control of either Class A two (2) Class B NAC circuits. The DSM dual circuit version shall provide the additional capability of "daisy-chaining", that is, the ability to interconnect multiple DSM's for synchronous horn and strobe operation on multiple NAC circuits. Interconnection capability shall be for a maximum of 40 NAC circuits. All modules shall operate on either 12 or 24 VDC. The DSM 12/24 shall be .020 amperes @ 12 VDC and .035 amperes @ 24 VDC. The dual circuit DSM Sync Module shall be capable of handling a load of 3 amperes per NAC circuit at 12 or 24 VDC.

All versions shall be polarized for DC supervision and shall incorporate screw terminals for in/out field wiring of #18 to #12 AWG wire size. DSM Sync modules shall mount to a 4-11/16" x 2-1/8" deep backbox.

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.

NEMA Member

WE ENCOURAGE AND SUPPORT NICET CERTIFICATION
3 YEAR WARRANTY

Click Here To Return To Bill Of Material/Index

S3000 DSM 06/11

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

Cooper Notification is Wheelock® MEDC SAFEPATH® WAVES Roam Secure
COOPER Notification

Click Here To Re
Bill Of Material

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/03/17

Battery Specification Sheet

BSL1075

Technical Specifications

Nominal Voltage	12 V
Nominal Capacity	8.0 Ah (20 Hr Rate)
Chemistry	Lead Acid - AGM

Physical Specifications

Length:	150 mm	5.91 in.
Width:	64.5 mm	2.54 in.
Height:	93.6 mm	3.69 in.
Height w/ Terminal:	97.9 mm	3.85 in.
Weight	2.75 kg	6.06 lbs.
Terminal Type		.187" Faston
Case Material		Black ABS

Charging Specifications

Max. Charge Current	2.16 A
Approx Final Charge Current (2.25 volts/cell Float)	0.014 A
Approx Final Charge Current (2.45 volts/cell Cycle)	0.07 A

Capacity Specifications

Cut-off Voltage	20 Hr Rate	(.36A)	8 Ah
1.75 volts/cell @ 25ºC	10 Hr Rate	(.65A)	6.5 Ah
1.70 volts/cell @ 25ºC	5 Hr Rate	(1.14A)	5.7 Ah
1.55 volts/cell @ 25ºC	1 Hr Rate	(4.1A)	4.1 Ah

		Bloc	Per Cell
Charge Voltage *(constant)*	Float	13.5~13.8	2.25~2.30
	Cycle	14.4~14.7	2.40~2.45
Discharge Current *(5 seconds maximum)*			80 A
Discharge Current *(maximum continuous)*			50 A
Self Discharge *(to 80% capacity)*			9 months @ 21°C
Internal Resistance			25 mΩ

Due to changes in the manufacturing processes, specifications are subject to change without notice

© Interstate Battery System of America, Inc. 03/15

interstatebatteries.com