Honeywell

System Current Draw - HPFF8

Total Current	
Standby	0.075 A
Alarm	1.328 A

	Secondary Non-Alarm Current				Secondary Alarm Current			
Device	**Qty**		**Draw**	**Non-Alarm**	**Qty**		**Draw**	**Alarm**
1. System Modules								
HPFF8 Main Circuit Board	1	x	0.07500	0.07500	1	x	0.20600	0.20600
2. NAC #1								
P2R95	2	x	0.00000	0.00000	2	x	0.20100	0.40200
SR95	2	x	0.00000	0.00000	2	x	0.18100	0.36200
P2R30	1	x	0.00000	0.00000	1	x	0.11600	0.11600
SR30	0	x	0.00000		0	x	0.09400	
SR15	1	x	0.00000	0.00000	1	x	0.06600	0.06600
P2R75	1	x	0.00000	0.00000	1	x	0.17600	0.17600
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
NAC #1 Totals (Max 3 Amps):				0.00000				1.12200
3. NAC #2								
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
NAC #2 Totals (Max 3 Amps):				0.00000				0.00000
4. NAC #3								
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
NAC #3 Totals (Max 3 Amps):				0.00000				0.00000
5. NAC #4								
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
	0	x	0.00000		0	x	0.00000	
NAC #4 Totals (Max 3 Amps):				0.00000				0.00000
6. Auxiliary Power								
Auxiliary Device	0	x	0.00000		0	x	0.00000	
Auxiliary Device	0	x	0.00000		0	x	0.00000	
Auxiliary Device	0	x	0.00000		0	x	0.00000	
Auxiliary Device	0	x	0.00000		0	x	0.00000	
Auxiliary Device	0	x	0.00000		0	x	0.00000	
TB4 Totals (Max 2 Amps):				0.00000				0.00000
7. Compatible Devices not listed								
Other compatible devices	0	x	0.00000		0	x	0.00000	
Other compatible devices	0	x	0.00000		0	x	0.00000	
Other compatible devices	0	x	0.00000		0	x	0.00000	
Total Non-Alarm Load:				**0.075**	**Total Alarm Load:**			**1.328**

FIRE-LITE ALARMS by Honeywell

Voltage Drop Analysis

HPFF8 Power Supply (3.0-amp circuit)

Notification Appliances - NAC #1

Source Voltage: 20.05 VDC Terminal Voltage

Protected Premises: GYM CONNECTIONS **Date:** 4/08/2015

Address: 11801 NE 116TH ST **City:** KIRKLAND

State: WA **Zip:** 98034 **Note:**

Prepared By: Seth Zehnder **Phone:** 425-478-9709

Address: 14690 Ne 95th St #101 **City:** Redmond

State: WA **Zip:** 98052

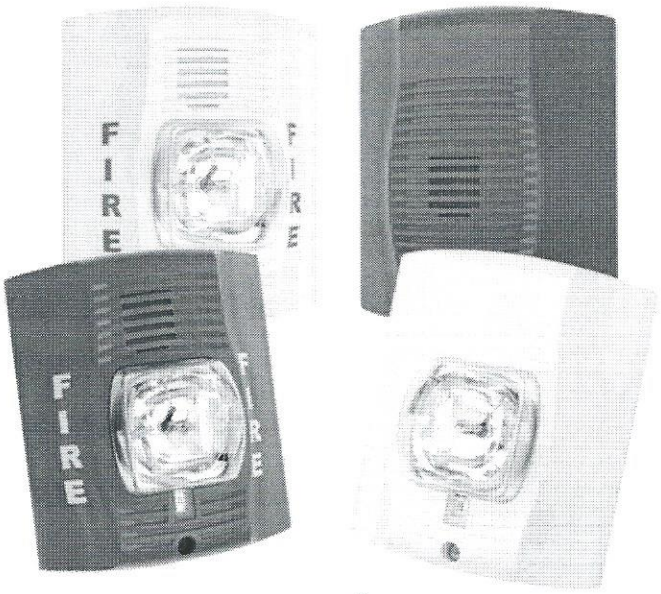
Device #	Part Number	Current (amps)	Distance (Feet)		Circuit Voltage @ Each Device				
			Between	Total			14 AWG		
1	PC2R75	0.1760	200	200			18.67		
2	PC2R30	0.1160	22	222			18.54		
3	SR15	0.0660	2	224			18.53		
4	P2R95	0.2010	34	258			18.37		
5	SR95	0.1810	51	309			18.20		
6	P2R95	0.2010	52	361			18.08		
7	SR95	0.1810	50	411			18.02		
	Total Current:	**1.1220**	**% Voltage Drop:**				**10.12**		
							Go		

~~Strikethrough~~ indicates a value below the device's minimum voltage at indicated location and wire gauge.

These calculations assume a worst-case source voltage as measured by UL with the batteries depleted to 20.4 volts. Under AC power and for most of the drain cycle of the batteries, the circuit voltages will be substantially higher and thus, would support a greater number of devices. A device's minimum operating voltage is derived from the UL-requirement that it operate within a Regulated Voltage Range (16VDC - 33VDC).

SYSTEM SENSOR®

Indoor Selectable-Output Horns, Strobes, and Horn Strobes for Wall Applications



SPECTRAlert ADVANCE from System Sensor

SpectrAlert® Advance audible visible notification products are rich with features guaranteed to cut installation times and maximize profits.

Features

- Plug-in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12- or 24-volt operation at 15 and 15/75 candela
- Field-selectable candela settings on wall units: 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185
- Horn rated at 88+ dBA at 16 volts
- Rotary switch for horn tone and three volume selections
- Universal mounting plate for wall units
- Mounting plate shorting spring checks wiring continuity before device installation
- Electrically Compatible with legacy SpectrAlert devices
- Compatible with MDL3 sync module
- Listed for ceiling or wall mounting

The SpectrAlert Advance series offers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry. With white and red plastic housings, wall and ceiling mounting options, and plain and FIRE-printed devices, SpectrAlert Advance can meet virtually any application requirement.

Like the entire SpectrAlert Advance product line, wall-mount horns, strobes, and horn strobes include a variety of features that increase their application versatility while simplifying installation. All devices feature plug-in designs with minimal intrusion into the back box, making installations fast and foolproof while virtually eliminating costly and time-consuming ground faults.

To further simplify installation and protect devices from construction damage, SpectrAlert Advance utilizes a universal mounting plate with an onboard shorting spring, so installers can test wiring continuity before the device is installed.

Installers can also easily adapt devices to a suit a wide range of application requirements using field-selectable candela settings, automatic selection of 12- or 24-volt operation, and a rotary switch for horn tones with three volume selections.

Agency Listings

SIGNALING UL LISTED
S4011 (chimes, horn strobes, horns)
S5512 (strobes)

FM APPROVED
3023572

MEA approved
MEA452-05-E

7125-1653:186 (indoor strobes)
7125-1653:188 (horn strobes, chime strobes)
7135-1653:189 (horns, chimes)

SpectrAlert Advance Specifications

Architect/Engineer Specifications

General

SpectrAlert Advance horns, strobes, and horn strobes shall mount to a standard 4 × 4 × 1½-inch back box, 4-inch octagon back box, or double-gang back box. Two-wire products shall also mount to a single-gang 2 × 4 × 17/8-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance products, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 8.5 and 17.5 volts; 24-volt-rated notification appliance circuit outputs shall operate between 16.5 and 33 volts. Indoor SpectrAlert Advance products shall operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Strobes and horn strobes shall have field-selectable candela settings including 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185.

Strobe

The strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and shall be approved for fire protective service. The strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system.

Horn Strobe Combination

The horn strobe shall be a System Sensor SpectrAlert Advance Model _____ listed to UL 1971 and UL 464 and shall be approved for fire protective service. The horn strobe shall be wired as a primary-signaling notification appliance and comply with the Americans with Disabilities Act requirements for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The horn shall have three audibility options and an option to switch between a temporal three pattern and a non-temporal (continuous) pattern. These options are set by a multiple position switch. On four-wire products, the strobe shall be powered independently of the sounder. The horn on horn strobe models shall operate on a coded or non-coded power supply.

Synchronization Module

The module shall be a System Sensor Sync•Circuit model MDL3 listed to UL 464 and shall be approved for fire protective service. The module shall synchronize SpectrAlert strobes at 1 Hz and horns at temporal three. Also, while operating the strobes, the module shall silence the horns on horn strobe models over a single pair of wires. The module shall mount to a 411/16 × 411/16 × 21/8-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

Physical/Electrical Specifications

Standard Operating Temperature	32°F to 120°F (0°C to 49°C)
Humidity Range	10 to 93% non-condensing
Strobe Flash Rate	1 flash per second
Nominal Voltage	Regulated 12 DC/FWR or regulated 24 DC/FWR[1]
Operating Voltage Range[2]	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Operating Voltage Range MDL3 Sync Module	8.5 to 17.5 V (12 V nominal) or 16.5 to 33 V (24 V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Wall-Mount Dimensions (including lens)	5.6″L × 4.7″W × 2.5″D (142 mm L × 119 mm W × 64 mm D)
Horn Dimensions	5.6″L × 4.7″W × 1.3″D (142 mm L × 119 mm W × 33 mm D)
Wall-Mount Trim Ring Dimensions (sold as a 5 pack) (TR-HS)	5.7″L × 4.8″W × 0.35″D (145 mm L × 122 mm W × 9 mm D)

Notes:

1. Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.
2. P, S, PC, and SC products will operate at 12 V nominal only for 15 and 15/75 cd.

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

		8–17.5 Volts		16–33 Volts	
	Candela	DC	FWR	DC	FWR
Standard Candela Range	15	123	128	66	71
	15/75	142	148	77	81
	30	NA	NA	94	96
	75	NA	NA	158	153
	95	NA	NA	181	176
	110	NA	NA	202	195
	115	NA	NA	210	205
High Candela Range	135	NA	NA	228	207
	150	NA	NA	246	220
	177	NA	NA	281	251
	185	NA	NA	286	258

UL Max. Horn Current Draw (mA RMS)

		8–17.5 Volts		16–33 Volts	
Sound Pattern	dB	DC	FWR	DC	FWR
Temporal	High	57	55	69	75
Temporal	Medium	44	49	58	69
Temporal	Low	38	44	44	48
Non-temporal	High	57	56	69	75
Non-temporal	Medium	42	50	60	69
Non-temporal	Low	41	44	50	50
Coded	High	57	55	69	75
Coded	Medium	44	51	56	69
Coded	Low	40	46	52	50

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, Standard Candela Range (15–115 cd)

	8–17.5 Volts		16–33 Volts						
DC Input	15	15/75	15	15/75	30	75	95	110	115
Temporal High	137	147	79	90	107	176	194	212	218
Temporal Medium	132	144	69	80	97	157	182	201	210
Temporal Low	132	143	66	77	93	154	179	198	207
Non-Temporal High	141	152	91	100	116	176	201	221	229
Non-Temporal Medium	133	145	75	85	102	163	187	207	216
Non-Temporal Low	131	144	68	79	96	156	182	201	210
FWR Input									
Temporal High	136	155	88	97	112	168	190	210	218
Temporal Medium	129	152	78	88	103	160	184	202	206
Temporal Low	129	151	76	86	101	160	184	194	201
Non-Temporal High	142	161	103	112	126	181	203	221	229
Non-Temporal Medium	134	155	85	95	110	166	189	208	216
Non-Temporal Low	132	154	80	90	105	161	184	202	211

UL Max. Current Draw (mA RMS), 2-Wire Horn Strobe, High Candela Range (135–185 cd)

	16–33 Volts					16–33 Volts			
DC Input	135	150	177	185	FWR Input	135	150	177	185
Temporal High	245	259	290	297	Temporal High	215	231	258	265
Temporal Medium	235	253	288	297	Temporal Medium	209	224	250	258
Temporal Low	232	251	282	292	Temporal Low	207	221	248	256
Non-Temporal High	255	270	303	309	Non-Temporal High	233	248	275	281
Non-Temporal Medium	242	259	293	299	Non-Temporal Medium	219	232	262	267
Non-Temporal Low	238	254	291	295	Non-Temporal Low	214	229	256	262

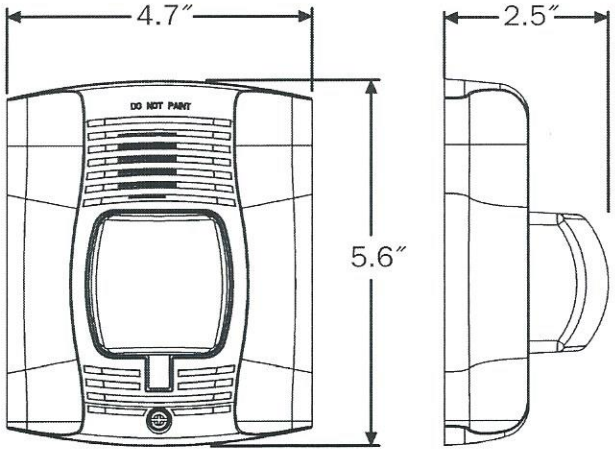
Horn Tones and Sound Output Data

Horn and Horn Strobe Output (dBA)

			8–17.5 Volts		16–33 Volts		24-Volt Nominal			
							Reverberant		Anechoic	
Switch Position	Sound Pattern	dB	DC	FWR	DC	FWR	DC	FWR	DC	FWR
1	Temporal	High	78	78	84	84	88	88	99	98
2	Temporal	Medium	75	75	80	80	86	86	96	96
3	Temporal	Low	71	71	76	76	83	80	94	89
4	Non-Temporal	High	82	82	88	88	93	92	100	100
5	Non-Temporal	Medium	78	78	85	85	90	90	98	98
6	Non-Temporal	Low	73	74	81	81	88	84	96	92
7†	Coded	High	82	82	88	88	93	92	101	101
8†	Coded	Medium	78	78	85	85	90	90	97	98
9†	Coded	Low	74	75	81	81	88	85	96	92

†Settings 7, 8, and 9 are not available on 2-wire horn strobes.

SpectrAlert Advance Dimensions



Wall-mount horn strobes

SpectrAlert Advance Ordering Information

Model	Description
Wall Horn Strobes	
P2R	2-Wire Horn Strobe, Standard cd, Red
P2R-P	2-Wire Horn Strobe, Standard cd, Red, Plain
P2R-SP	2-Wire Horn Strobe, Standard cd, Red, "FUEGO"
P2RH	2-Wire Horn Strobe, High cd, Red
P2RH-P	2-Wire Horn Strobe, High cd, Red, Plain
P2W	2-Wire Horn Strobe, Standard cd, White
P2W-P	2-Wire Horn Strobe, Standard cd, White, Plain
P2WH	2-Wire Horn Strobe, High cd, White
P2WH-P	2-Wire Horn Strobe, High cd, White, Plain
P4R	4-Wire Horn Strobe, Standard cd, Red
P4R-P	4-Wire Horn Strobe, Standard cd, Red, Plain
P4RH	4-Wire Horn Strobe, High cd, Red
P4W	4-Wire Horn Strobe, Standard cd, White
Wall Strobes	
SR	Strobe, Standard cd, Red
SR-P	Strobe, Standard cd, Red, Plain
SR-SP	Strobe, Standard cd, Red, "FUEGO"

Model	Description
Wall Strobes (cont.)	
SRH	Strobe, High cd, Red
SRH-P	Strobe, High cd, Red, Plain
SRH-SP	Strobe, High cd, Red, "FUEGO"
SW	Strobe, Standard cd, White
SW-P	Strobe, Standard cd, White, Plain
SWH	Strobe, High cd, White
SWH-P	Strobe, High cd, White, Plain
Horns	
HR	Horn, Red
HW	Horn, White
Accessories	
TR-HS	Trim Ring, Wall, Red
SBBR	Indoor Surface Mount Back Box, Red
SBBW	Indoor Surface Mount Back Box, White

Notes:
All -P models have a plain housing (no "FIRE" marking on cover)
All -SP models have "FUEGO" marking on cover
"Standard cd" refers to strobes that include 15, 15/75, 30, 75, 95, 110, and 115 candela settings.
"High cd" refers to strobes that include 135, 150, 177, and 185 candela settings.

SYSTEM SENSOR
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