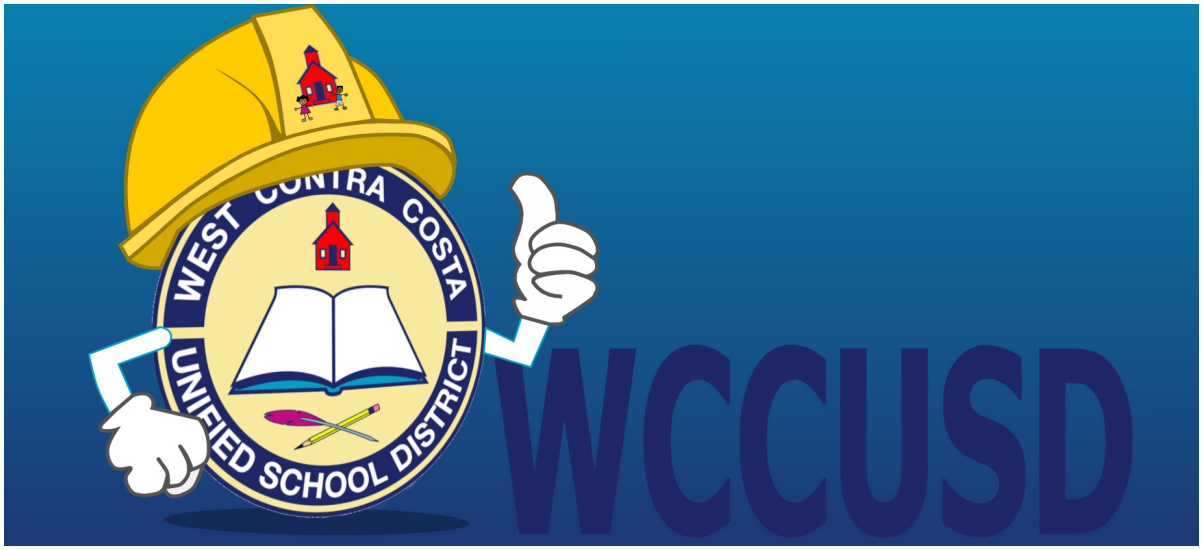

Fire Alarm System Standards

Specification
Material List
Material Data Sheets

Fire Alarm System Specification
For the
West Contra Costa Unified School District

SECTION (28 31 00)

NETWORKED FIRE ALARM SYSTEM & MASS NOTIFICATION SYSTEM

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Expandable emergency evacuation fire alarm system along with Focal Point Monitoring and control with Focal Point Mobile

B. District Standards and Requirements for GW-FCI Authorized Contractors

1.2 RELATED SECTIONS

A. Section 13800 – Building Automation and Control.

B. Section 13900 (21 00 00) – Fire Suppression.

1.3 REFERENCES

A. Electrical Industries Association (EIA):
   1. EIA-232-D – Interface between Data Terminal Equipment and Data Circuit-Terminating Equipment Employing Serial Binary Data Interchange
   2. EIA-485 –

B. National Fire Protection Association (NFPA):
   1. NFPA 12 – Standard on Carbon Dioxide Extinguishing Systems.
   2. NFPA 13 – Installation of Sprinkler Systems.
   3. NFPA 15 – Standard for Water Spray Fixed Systems for Fire Protection.
   4. NFPA 16 – Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems.
   5. NFPA 16A – Standard for the Installation of Closed Head Foam-Water Sprinkler Systems.
   6. NFPA 70 – National Electrical Code (NEC).
   7. NFPA 72 – National Fire Alarm Code.
   8. NFPA 90A – Standard for the Installation of Air Conditioning and Ventilating Systems.
   9. NFPA 101 – Life Safety Code.
   10. NFPA 750 – Standard on Water Mist Fire Protection Systems.
   11. NFPA 5000 – Building Construction and Safety Code.

C. Underwriters Laboratories (UL):
   1. UL 268 – Standard for Smoke Detectors for Fire Alarm Signaling Systems.
   2. UL 864 – Standard for Control Units and Accessories for Fire Alarm Systems.
   3. UL 1971 – Standard for Signaling Devices for the Hearing Impaired.

1.3 (A) District Standards and Requirements:

A. The West Contra Costa Unified School District has certain standards and requirements that are required of all GW-FCI contractors bidding work in the District. Below are their standards for Authorized Contractors.

1. Installation of fire alarm cables, devices, panels, remote signal boosters, annunciators, horn/strobes shall be done by the Factory Authorized GW-FCI Distributor
2. As the District is concerned with poor installation practices and nonconforming cables, it shall be required that ALL cable, panels and device installation be performed by the Authorized GW-FCI Distributor.
3. Installation of PIV's, OS&Y's, Tamper and Flow switches are noted in other sections, monitored by the GW-FCI panel.
4. It is not in the Districts best interest for "Parts and Smarts" systems, and as such, all providing and installation of fire alarm panels and system materials, cables, wire and devices shall be performed by the Authorized GW-FCI distributor.
5. Installation of the main fire alarm panel back box and signal booster back boxes shall be done by the electrical contractor. All power shall be provided by the electrical contractor.
6. Electrical contractor shall supply and install all conduits, standard electrical back boxes, pull strings, terminal cabinets and all associated rough in materials.
7. Installation of the complete fire alarm system shall be done by the Authorized GW-FCI Distributor with installers and technicians certified by the Department of Industrial Relations (DIR) with appropriate Fire/Life Safety Credentials.

8. The GW-FCI E-3 fire alarm system and associated components shall be the standard of the West Contra Costa Unified School District and as such, there shall be no substitution of panels, devices or systems.
9. The E-3 FACP shall be located in the MDF with the LOC located in the main office.

10. The LOC in the main office shall have a permanently mounted 11"X17" aluminum graphic display of the site indicating all current building, all PIV locations, water shut off valves, and gas shut off valves. The display shall be easily updated and shall have red reflective tape for ease viewing in low light conditions.

1.4 SYSTEM DESCRIPTION

A. A new intelligent reporting, Style 7 networked, fully peer-to-peer, microprocessor-controlled fire detection and emergency voice alarm communication system shall be installed in accordance with the specifications and as indicated on the Drawings.

B. Each Signaling Line Circuit (SLC) and Notification Appliance Circuit (NAC): Limited to only 80 percent of its total capacity during initial installation.

C. Basic Performance:
1. Network Communications Circuit (NetSOLO) Serving Network Nodes: Wired using single twisted non-shielded 2-conductor cable or connected using approved fiber optic cable between nodes in Class A configuration.
2. Signaling Line Circuits (SLC) Serving Addressable Devices: Wired Class B.
3. Initiation Device Circuits (IDC) Serving Non-addressable Devices Connected to Addressable Monitor Modules: Wired Class A.
4. Notification Appliance Circuits (NAC) Serving Strobes and Speakers: Wired Class B.
6. Alarm Signals Arriving at INCC COMMAND CENTER: Not be lost following primary power failure until alarm signal is processed and recorded.
7. Transponders:
    a. Operate in peer-to-peer fashion with other panels and transponders in system.
    b. Each transponder shall store copy of audio evacuation messages and tones.
    c. Systems that use centralized message storage and control at main fire alarm control panel shall not be acceptable.
8. Network Node Communications, Audio Evacuation Channels and Fire Phone Communications:
    a. Communicated between panels and transponders on single twisted pair of copper wires or fiber optic cables.
    b. To enhance system survivability, ability to operate on loss of INCC Command Center, short or open of entire riser at INCC Command Center shall be demonstrated at time of system acceptance testing.
9. Signaling Line Circuits (SLC):
    a. Reside in remote transponders with associated audio zones.
    b. SLC modules shall operate in peer-to-peer fashion with all other panels and transponders in system. SLC circuits will incorporate Isolator Modules.
    c. On loss of INCC Command Center, each transponder shall continue to communicate with remainder of system, including all SLC functions and audio messages located in all transponders.
    d. Systems that provide a “Degraded” mode of operation upon loss of INCC Command Center or short in riser shall not be acceptable.
10. Audio Amplifiers and Tone-Generating Equipment: Electrically supervised for normal and abnormal conditions.
11. Amplifiers: Located in transponder cabinets serving no more than 3 floors per transponder to enhance system survivability, reduce required riser wiring, simplify installation, and reduce power losses in length of speaker circuits.
12. Speaker NAC Circuits: Arranged such that there is a minimum of 1 speaker circuit per fire alarm zone.
13. Notification Appliance Circuits (NAC), Speaker Circuits, and Control Equipment: Arranged such that loss of any 1 speaker circuit will not cause loss of any other speaker circuit in system.
14. Speaker Circuits:
    a. Electrically supervised for open and short circuit conditions.
    b. If short circuit exists on speaker circuit, it shall not be possible to activate that circuit.
    c. Arranged for 25 VRMS and shall be power limited in accordance with NEC
    d. 20 percent spare capacity for future expansion or increased power output requirements.
15. Speaker Circuits and Control Equipment:

a. Arranged such that loss of any 1 speaker circuit will not cause loss of any other speaker circuit in system.
b. Systems utilizing “bulk” audio configurations shall not be acceptable.

D. Basic System Functional Operation: When fire alarm condition is detected and reported by 1 of the system alarm initiating devices, the following functions shall immediately occur:

1. System Alarm LEDs: Flash.
2. Local Piezo-Electric Signal in Control Panel: Sound at a pulse rate.
3. 80-Character LCD Display: Indicate all information associated with fire alarm condition, including type of alarm point and its location within protected premises.
4. Historical Log: Record information associated with fire alarm control panel condition, along with time and date of occurrence. History Log shall have capacity for recording up to 4,100 events.
5. System output programs assigned via control-by-event equations to be activated by particular point in alarm shall be executed, and the associated system outputs (alarm notification appliances and/or relays) shall be activated.
   a. Close Fire Doors
   b. Shut down air handlers as required by code
   c. Notify the Central Station or Municipal Tie.
6. Strobes flash synchronized continuously.
7. Audio Portion of System: Sound alert tone followed by pre-recorded message determined by event and this scenario repeating or other message as approved by local authority until system is reset.

E. Fire Alarm System Functionality:

1. Provide complete, electrically supervised distributed, Class A networked analog/addressable fire alarm and control system, with analog initiating devices, integral multiple-channel voice evacuation, and LOC.
2. Fire Alarm System:
   a. Consist of multiple-voice channels with no additional hardware required for total of 4 channels.

   b. Incorporate multiprocessor-based control panels, including model E3 Series modules includes Intelligent Network INCC Command Center(s) (INCC), Intelligent Loop Interface (ILI-MB-E3) Intelligent Network Transponders (INX), communicating over peer-to-peer token ring network with standard capacity of up to 64 nodes expandable to 122.
3. Each ILI-MB-E3 Node: Incorporate 2 Signaling Line Circuits (SLC), with capacity to support in Velociti ® mode up to 159 analog addressable detectors and 159 addressable modules per ILI-MB-E3 SLC.
4. Voice, Data, and Fire Fighter’s Phone Riser: Transmit over single pair of wires or fiber optic cable.
5. Each Intelligent Network Transponder: Capable of providing 16 distributed voice messages, fire fighter phones connections, SLC loop for audio control devices, and integral network interface.
6. Each Network Node: Incorporate Boolean control-by-event programming, including as a minimum AND, OR, NOT, and Timer functions.

7. Control Panels: Capability to accept firmware upgrades via connection with laptop computer, without requirement of replacing microchips.

8. Network:
   a. Based on peer-to-peer token ring technology operating at 625 K baud, using Class A configuration.
   b. Capability of using twisted-pair wiring, pair of fiber optic Multi-mode cable strands up to 200 microns or Single-mode optimized for 9/125 microns, or any combination, to maximize flexibility in system configuration.
9. Each Network Node:
   a. Capability of being programmed off-line using Windows-based software supplied by fire alarm system manufacturer. Capability of being downloaded by connecting laptop computer into any other node in system. Systems that require system software to be downloaded to each transponder at each transponder location shall not be acceptable.
   b. Capability of being grouped with any number of additional nodes to produce a "Region", allowing that group of nodes to act as 1, while retaining peer-to-peer functionality. Systems utilizing "Master/Slave" configurations shall not be acceptable.
   c. Capability of annunciating all events within its "Region" or annunciating all events from entire network, on front panel LCD or touchscreen display without additional equipment.
10. Each SLC Network Node: Capability of having integral DACT (Digital Alarm Communicator Transmitter) that can report events in either its region, or entire network to single central station monitoring account.
11. Each Control Panel: Capability of storing its entire program, and allow installer to activate only devices that are installed during construction, without further downloading of system.
12. Password Protection: Each system shall be provided with 4 levels of password protection with up to 16 passwords.
13. Have the capacity for multiple pre-recorded messages (at least sixteen (16), but more if required by local AHJ) and address a list of subjects.
    - Fire evacuation and relocation
    - Intruder or hostile person sighted within or around the building grounds
    - Directions to occupants to take cover within building
    - Emergency weather conditions appropriate for local area
    - All Clear

1.5 SUBMITTALS

A. Comply with Section 01330 (01 33 00) – Submittal Procedures.

B. Include sufficient information, clearly presented, to determine compliance with the specifications and the Drawings.

C. Equipment Submittals:
1. Cover Page: Indicate the following:
   a. Project name and address.
   b. Engineered systems distributor's name and other contact information.
   c. Date of equipment submittals. Indicate on revised submittals the original submittal date and revised submittal date.

2. Table of Contents: Lists each section of equipment submittal.
3. Scope of Work Narrative: Detail indented scope of work.
4. Sequence of Operations: Use matrix or written text format, detailing activation of each type of device and associated resulting activation of the following:
   a. Control panel.
   b. Annunciator panels.
   c. Notification appliances.
   d. Building fire safety functions, including elevator recall, elevator power shutdown, door lock release, door holder release, HVAC unit shutdown, smoke evacuation system activation, and stair pressurization fan activation.
5. Bill of Material: Indicate for each component of system the following:
   a. Quantity.
   b. Model number.
   c. Description.
6. SLC Circuit Schedule: Detail address and associated description of each addressable device. Clearly provide information that indicates number of both active and spare addresses.
7. Battery Calculations: Show load of each of, and total of, components of system along with standby and alarm times that calculations are based on. Show calculated spare capacity and size of intended battery.

D. Shop Drawings:
   1. Cover Page: Indicate the following:
      a. Project name and address.
      b. Engineered systems distributor's name and other contact information.
      c. Installing contractor's name and other contact information.
      d. Date of equipment submittals. Indicate on revised submittals the original submittal date and revised submittal date.
   2. Floor Plans:
      a. Provide separate floor plan for each floor.
      b. If a floor plan must be split using match lines to fit on the page, provide match lines and match line references that refer to sheet number that shows area on opposite side of match line.
      c. Prepare using AutoCAD.
      d. Prepare to scale 1/8 inch = 1'-0", unless otherwise required by the Architect or Engineer.
      e. Show equipment and device locations.
      f. Show wiring information in point-to-point format.
      g. Show conduit routing, if required by the AHJ.

   3. Title Block: Provide on each sheet and include, at a minimum, the following:
      a. Project name.
      b. Project address.
      c. Sheet name.
      d. Sheet number.
      e. Scale of drawing.
      f. Date of drawing.
      g. Revision dates, if applicable.

4. Control Panel: Provide sheet that details exterior and interior views of control panel and clearly shows associated wiring information.
5. Annunciator Panels: Provide sheet that details exterior and interior views of annunciator panels and clearly shows associated wiring information.

E. Certification: Submit with equipment submittals and shop drawings, letter of certification from major equipment manufacturer, indicating proposed engineered system distributor is an Authorized Representative of major equipment manufacturer.

F. Project Record Drawings:
1. Submit complete project record drawings within 14 calendar days after acceptance test.
2. Project record drawings shall be similar to shop drawings, but revised to reflect changes made during construction.

G. Operation and Maintenance Manuals:
1. Submit complete operation and maintenance manuals within 14 calendar days after acceptance test.
2. Operation and maintenance manuals shall be similar to equipment submittals, but revised to reflect changes made during construction.
3. Include factory's standard installation and operating instructions.

1.6 QUALITY ASSURANCE

A. Codes and Standards:
1. NFPA: System shall comply with the following NFPA codes and standards:

a. NFPA 12.
b. NFPA 13.
c. NFPA 15.
d. NFPA 16.
e. NFPA 16A.
f. NFPA 70.
g. NFPA 72.
h. NFPA 90A.
i. NFPA 101.
j. NFPA 750.
k. NFPA 5000.

2. ADA: System shall conform to American with Disabilities Act (ADA).

B. To ensure reliability and complete compatibility, all items of fire alarm system, including control panels, power supplies, initiating devices, and notification appliances, shall be listed by Underwriters Laboratories Inc. (UL) and shall bear "UL" label.

C. Fire Alarm Control Panel Equipment: UL-listed under UL 864 Ninth Edition.

D. Equipment, Programming, and Installation Supervision:

1. Provide services of approved Platinum Level engineered systems distributor of Honeywell Gamewell-FCI for equipment, programming, and installation supervision.

2. Provide proof of factory training within 14 calendar days of award of the Contract.

E. Software Modifications:

1. Provide services of Honeywell Gamewell-FCI factory-trained and authorized technician to perform system software modifications, upgrades, or changes.
2. Provide use of all hardware, software, programming tools, and documentation necessary to modify fire alarm system software on-site.
3. Modification includes addition and deletion of devices, circuits, zones, and changes to system operation and custom label changes for devices or zones.
4. System structure and software shall place no limit on type or extent of software modifications on-site.
5. Modification of software shall not require power-down of system or loss of system fire protection while modifications are being made.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Storage: Store materials in clean, dry area indoors in accordance with manufacturer's instructions.

B. Handling: Protect materials from damage during handling and installation.

1.8 COORDINATION

A. Coordinate the Work of this section with the Work of other sections, including sprinkler systems, elevators, HVAC systems and Bogen Quantum Intercom systems as specified in Section 27 76 00.

1.9 WARRANTY

A. Warranty Period for System Equipment: 2 years from date of final acceptance.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Gamewell-FCI, Honeywell Fire Systems, 12 Clintonville Road, Northford, Connecticut 06472. Phone (203) 484-7161. Fax (203) 484-7118. Website: www.gamewell-fci.com.

B. References to manufacturer's model numbers and other information are intended to establish minimum standards of performance, function, and quality. Equivalent equipment from Gamewell may be substituted for the specified equipment, as long as minimum standards are met. No other manufacturers, other than Gamewell-FCI, FCI, and Gamewell will be considered for use on this project.

2.2 DISTRIBUTED NETWORKED FIRE ALARM SYSTEM

A. Distributed Networked Fire Alarm System: Gamewell-FCI E3 Series Expandable Emergency Evacuation Fire Alarm System.

2.3 INTELLIGENT NETWORK INCC COMMAND CENTER HARDWARE

A. Intelligent Network INCC Command Center (INCC): Supply user interface, including LCD or touch-screen 1/4 VGA display Intelligent Loop Interface Modules (ILI-MB-E3), manual switching, phone, and microphone inputs to the network. INCC shall consist of the following units and components:
   1. System Cabinet (B-, C-, or D-Size Cabinet) with associated inner door.
   2. Power Supply Module (PM-9) with batteries.
   3. Intelligent Network Interface Voice Gateway (INI-VG).
   4. 4.3 inch color touch-screen display Touchscreen Display (LCD-SLP).
   5. Intelligent Loop Main Board Interface (ILI-MB-E3).
   6. Optional Intelligent Loop Supplemental Interface (ILI-S-E3).
   7. Optional DACT (DACT-E3).
   8. Optional ARCNET Repeater (RPT-E3) with fiber-optic modules (FSL-E3 or FML-E3).
   9. Optional 1/4 VGA touch-screen display (NGA).
   10. Optional Auxiliary Switch Module (ASM-16).
   11. Optional LED Driver Module (ANU-48)
   12. Optional Microphone Assembly (INCC-MIC).
   13. Optional Telephone Assembly (INCC-TEL).
   14. Optional AM-50 Series amplifiers (AM-50, AM-50-70).
   15. Optional Addressable Node Expander (ANX-SR, ANX-MR-FO, ANX-MR-UTP).
   16. Optional 80-character display (LCD-E3)

B. System Cabinet:
   1. Surface or semi-flush mounted with texture finish.
   2. Consist of back box, inner door, and door.
   3. Available in at least 3 sizes to best fit project configuration.
   4. Houses 1 or more PM-9 Power Supply Modules, INI-VG Intelligent Network Interface Voice Gateway, 1 or more ILI-MB-E3 assemblies, and other optional modules as specified.
   5. Construction: Steel construction with inner door to conceal internal circuitry and wiring.
   6. Wiring Gutter Space: A minimum of 1-inch wiring gutter space behind mounting plate.
   7. Wiring: Terminated on removable terminal blocks to allow field servicing of modules without disrupting system wiring.

C. Power Supply Module (PM-9): Use latest technologies to provide system power, incorporates the following features:
   1. Power-saving switching technology using no step-down transformers.
   2. 9-amp continuous-rated output to supply up to all power necessary under normal and emergency conditions for INCC Command Center Modules.
   3. Integral battery charger with capacity to charge up to 55 amp-hour batteries while under full load.

D. Batteries:
   1. Sufficient capacity to provide power for entire system upon loss of normal AC power for a period of 24 hours with 15 minutes of alarm signaling at end of this 24-hour period, as required by NFPA 72, Local Evac Systems.

E. Intelligent Network Interface Voice Gateway INCC Command Center (INI-VG): INI-VG shall be a multi-function board interchangeable in both INCC and INX. Functions of board shall have the following features as a minimum:
   1. Microprocessor shall monitor all system events and perform all system programs, for all control-by-event (CBE) functions. System program shall not be lost upon failure of both primary and secondary power. Programming shall supporting Boolean logic including AND, OR, NOT, TIMING functions for maximum flexibility.
   2. Network Interface: Operate at 625 K baud configurable with any combination of wire and/or fiber topologies. Interface shall communicate with up to122 nodes in peer-to-peer fashion.
   3. Fire Fighter Phone Riser: INI-VG shall generate local phone riser for use with AOM-TEL phone modules for connection to fire fighter phone stations and/or for connection of local phone when used as INCC Command Center, including phone circuits. INI-VG shall mix its local phone riser to network in true Class A fashion. Systems not capable of true Class A communications for fire fighter's phone risers shall not be acceptable.
   4. Advanced Processing: INI-VG shall incorporate latest in digital signaling processing technology with supporting Boolean logic including AND, OR, NOT, TIMING, COUNT, SCHEDULE functions.
   5. Microphone Input: On-board and allow for addition of local microphone when used as INCC Command Center, including speaker circuit control.
   6. Signal Processing: INCC shall use advanced Digital Signal Processing (DSP) technology to allow maximum flexibility of digital audio and control capabilities and operation. Signals to and from INCC shall be transmitted over single pair of twisted unshielded wire or fiber optic pair.
   7. Field Programmable: INCC shall be capable of being fully programmed or modified by Field Configuration Program (FCP), to be downloaded via portable computer from any node in system.
   8. Control-by-Event Programming (CBE): INCC shall be capable of programming using Boolean logic including AND, OR, NOT, COUNT, TIMING, and SCHEDULE functions to provide complete programming flexibility.
   9. Remote INCC Command Center Options: System shall have capability of adding remote INCC Command Centers or re-locating INCC Command Centers utilizing only single pair of twisted unshielded wire or fiber optic pair for all functions.
   10. RS-485 Serial Output: System shall incorporate RS-485 bus via ribbon harness for connection of modules inside same cabinet, and via 4-wire quick connector for connection of modules up to 3,000 feet from cabinet.
   11. Riser Wiring: All data, voice, and fire fighter phone riser shall transmit over single pair of twisted unshielded wire or fiber optic pair for all functions configured in Class A format. Any short or open in data, voice, or phone sections shall not affect transmission over remainder of network.
   12. Class A Network: All communication between control panels and transponders shall be through supervised Style 7 token passing network. In event of single short, open, or ground, all system communication shall operate as normal and report fault. This protection shall incorporate all data, voice, and fire fighter phone transmissions. Upon single short, open, or ground of system data, live voice, pre-recorded channels, or phone

risers, the function of each of these items shall continue to operate. “Degrade” functionality shall not be acceptable. This shall be demonstrated at system acceptance.

F. LCD Display Module (LCD-E3):
1. LCD Display: 80-character RS-485 based textual annunciator with capability of being mounted locally or remotely. Provides audible and visual annunciation of all alarms and trouble signals. Provide dedicated LEDs for:
   a. AC Power On: Green.
   b. Alarm: Red.
   c. Supervisory: Yellow.
   d. System Trouble: Yellow.
   e. Power Fault: Yellow.
   f. Ground Fault: Yellow.
   g. System Silenced: Yellow.
2. 80-Character Alphanumeric Display: Provide status of all analog/addressable sensors, monitor and control modules. Display shall be liquid crystal type (LCD), clearly visible in dark and under all light conditions.
3. Panel shall contain 4 functional keys:
   a. Alarm Acknowledge.
   b. Trouble Acknowledge.
   c. Signal Silence.
   d. System Reset/Lamp Test.
4. Panel shall contain 3 configuration buttons:
   a. Menu/Back.
   b. Back Space/Edit.
   c. OK/Enter.
5. Panel shall have 12-key telephone-style keypad to permit selection of functions.

G. 4.3 inch Color Touch Screen Display Module (LCD-SLP):
1. Color Touch Screen Display: RS-485 based textual annunciator with capability of being mounted locally or remotely. Provides audible and visual annunciation of all alarms and trouble signals. Provide dedicated LEDs for:
   a. AC: Green.
   b. Fire Alarm: Red.
   c. Hazard: Blue.
   d. Supervisory: Yellow.
   e. Trouble: Yellow.
   f. Silenced: Yellow.
2. 4.3 inch Color Touch Screen Display: Provide status of all analog/addressable sensors, monitor and control modules. Display shall be liquid crystal type (LCD), clearly visible in dark and under all light conditions.
3. Panel shall contain 3 functional keys:
   a. Menu.
   b. Fire Drill.
   c. System Reset.

4. Panel shall contain 5 custom programmable function buttons for:
   a. Alarm Acknowledge.
   b. Trouble Acknowledge.
   c. System Silence.

d. Fan Reset.
e. Lamp Test.
f. Other functions like output bypass, device enable/disable, device on/off.

5. Systems that do not have a minimum of 200 characters (4 lines of 40 characters) are not acceptable.

H. Intelligent Loop Interface (ILI-MB-E3): System shall be of multiprocessor design to allow maximum flexibility of capabilities and operation. Intelligent Loop Interface shall be capable of mounting in stand-alone enclosure as specified.

1. Field Programmable: System shall be capable of being programmed by Field Configuration Program (FCP), allowing programming to be downloaded via portable computer from any node on network.
2. RS-232C Serial Output: Supervised RS-232C serial port shall be provided to operate remote printers and/or video terminals, accept downloaded program from portable computer, or provide 80-column readout of all alarms, troubles, location descriptions, time, and date. Communication shall be standard ASCII code operating from 1,200 to 115,200 baud rate.
3. RS-485 Serial Output: Each ILI-MB-E3 shall incorporate RS-485 bus via ribbon harness for connection of modules inside same cabinet, and via 4-wire quick connector for connection of modules up to 3,000 feet from cabinet. Each ILI-MB-E3's RS-485 bus shall support up to 16 ASM-16 auxiliary switch modules, 6 LCD-E3 main annunciators, and 5 LCD-7100 annunciators.
4. Peer-to-Peer Panel Configuration: All Loop Interface Modules shall incorporate own programming, log functions, Central Processor Unit, and control-by-event (CBE) programming. If any loop driver becomes disabled, each remaining loop driver shall continue to communicate with remainder of network and maintain normal operation.
5. Control-by-Event (CBE) Program: ILI-MB-E3 shall be capable of programming using Boolean logic including AND, OR, NOT, and TIMING functions to provide complete programming flexibility.
6. Alarm Verification: Smoke detector alarm verification shall be standard option while allowing other devices such as manual stations and sprinkler flow to create immediate alarm. This feature shall be selectable for smoke sensors that are installed in environments prone to nuisance or unwanted alarms.
7. Alarm Signals: All alarm signals shall be automatically latched or "locked in" at control panel until operated device is returned to normal and control panel is manually reset. When used for sprinkler flow, "SIGNAL SILENCE" switch may be bypassed, if required by AHJ.

8. Electrically Supervised:
   a. Each SLC and NAC circuit shall be electrically supervised for opens, shorts, and ground faults. Occurrence of fault shall activate system trouble circuitry, but shall not interfere with proper operation of other circuits.

   b. Yellow "SYSTEM TROUBLE" LEDs shall light and system audible sounder shall steadily sound when trouble is detected in system. Failure of power, open or short circuits on SLC or NAC circuits, disarrangement in system wiring, failure of microprocessor or any identification module, or system ground faults shall activate this trouble circuit. Trouble signal shall be acknowledged by operating "TROUBLE

ACKNOWLEDGE" switch. This shall silence sounder. If subsequent trouble conditions occur, trouble circuitry shall resound. During alarm, all trouble signals shall be suppressed with exception of lighting yellow "SYSTEM TROUBLE" LEDs.

9. Drift Compensation – Analog Smoke Sensors: System software shall automatically adjust each analog smoke sensor approximately once each week for changes in sensitivity due to effects of component aging or environment, including dust. Each sensor shall maintain its actual sensitivity under adverse conditions to respond to alarm conditions while ignoring factors which generally contribute to nuisance alarms. System trouble circuitry shall activate, display units that requires maintenance.

10. Analog Smoke Sensor Test: System software shall automatically test each analog smoke sensor a minimum of 3 times daily. Test shall be recognized functional test of each photocell (analog photoelectric sensors) and ionization chamber (analog ionization sensors) as required annually by NFPA 72. Failure of sensor shall activate system trouble circuitry, display "Test Failed" indication, and identify individual device that failed.

11. Off-Premises Connection:

    a. Fire Alarm System: Connect via Digital Alarm Communicator Transmitter (DACT) and cellular lines to central station or remote station. Panel shall contain disconnect switch to allow testing of system without notifying fire department.

12. Central Station Option: Fire alarm control panel shall provide Digital Alarm Communicator Transmitter (DACT) for signaling to central station. DACT shall contain "Dialer-Runaway" feature preventing unnecessary transmissions as result of intermittent faults in system and shall be Carrier Access Code (CAC) compliant, accepting up to 20-digit central station telephone numbers. Fire department shall be consulted as to authorized central station companies serving municipality. Fire alarm system shall transmit both alarm and trouble signals, with alarm having priority over trouble signal. Contractor shall be responsible for all installation charges and Owner will be responsible for line lease charges.
13. Network Annunciator Option: Each ILI-MB-E3 and associated display shall provide option of being configured as network annunciator. Options for annunciation shall default as regional annunciator with capability of selecting global annunciation to provide system-wide protection and Acknowledge, Silence, and Reset capabilities.
14. Redundant History Log: Each ILI-MB-E3 shall contain full 4100 event history log supporting local and network functions. If a main processor or network node is lost the entire log shall be accessible at any other Loop Interface board. This shall be demonstrated by removing power from Command Center followed by extraction of history log from any loop driver location, including Command Center or Transponder.
15. LEDs Indicator and Outputs: Each ILI-MB-E3 Loop Interface shall incorporate as a minimum the following diagnostic LED indicators:
    a. Power: Green.
    b. Alarm: Red.
    c. Supervisory: Yellow.
    d. General Trouble: Yellow.
    e. Ground Fault: Yellow.
    f. Transmit: Green.
    g. Receive: Green.

16. Auxiliary Power Outputs: Each ILI-MB-E3 Loop Interface shall provide the following supply outputs:
    a. 24 VDC non-resettable, 1 amp. maximum, power limited.
    b. 24 VDC resettable, 1 amp. maximum, power limited.

17. Microprocessor: Loop interface shall incorporate 32-bit RISC processor. Isolated "watchdog" circuit shall monitor microprocessor and upon failure shall activate system trouble circuits on display. Microprocessor shall access system program for all control-by-event (CBE) functions. System program shall not be lost upon failure of both primary and secondary power. Programming shall support Boolean logic including AND, OR, NOT, TIME DELAY functions for maximum flexibility.
18. Auto Programming: System shall provide for all SLC devices on any SLC loop to be pre-programmed into system. Upon activation of auto programming, only devices that are present shall activate. This allows for system to be commissioned in phases without need of additional downloads.
19. Environmental Drift Compensation: System shall provide for setting Environmental Drift Compensation by device. When detector accumulates dust in chamber and reaches unacceptable level but yet still below allowed limit, control panel shall indicate maintenance alert warning. When detector accumulates dust in chamber above allowed limit, control panel shall indicate maintenance urgent warning.
20. NON-FIRE Alarm Module Reporting: Non-reporting type ID shall be available for use for energy management or other non-fire situations. NON-FIRE point operation shall not affect control panel operation nor shall it display message at panel LDC. Activation of NON-FIRE point shall activate control by event logic, but shall not cause indication on control panel.
21. 1-Man Walk Test:
    a. System shall provide both basic and advanced walk test for testing entire fire alarm system. Basic walk test shall allow single operator to run audible tests on panel. All logic equation automation shall be suspended during test and while annunciators can be enabled for test, all shall default to disabled state. During advanced walk test, field-supplied output point programming shall react to input stimuli, such as CBE and logic equations. When points are activated in advanced test mode, each initiating event shall latch input. Advanced test shall be audible and shall be used for pull station verification, magnet activated tests on input devices, input and output device, and wiring operation/verification.
    b. Test feature is intended to provide for certain random spot testing of system and is not intended to comply with requirements of testing fire alarm systems in accordance with NFPA 72, as it is impossible to test all functions and verify items such as annunciation with only 1 person.
22. Signaling Line Circuits: Each ILI-MB-E3 module shall provide communication with analog/addressable (initiation/control) devices via 2 signaling line circuits. Each signaling line circuit shall be capable of being wired Class B, Style 4 or Class A, Style 6. Circuits shall be capable of operating in NFPA Style 7 configuration when equipped with isolator modules between each module type device and isolator sensor bases. Each circuit shall communicate with a maximum of 159 analog sensors and 159 addressable monitor/control devices. Unique 40-character identifier shall be available for each device. Devices shall be of the Velocity series with capability to poll 10 devices at a time with a maximum polling time of 2 seconds when both SLCs are fully loaded.
23. Notification Appliance Circuits: 2 independent NAC circuits shall be provided on ILI-MB, polarized and rated at 2 amperes DC per circuit, individually over current protected and

supervised for opens, grounds, and short circuits. They shall be capable of being wired Class B, Style Y or Class A, Style Z.

24. Alarm Dry Contacts: Provide alarm dry contacts (Form C) rated 2 amps at 30 VDC (resistive) and transfer whenever system alarm occurs.
25. Supervisory Dry Contacts: Provide supervisory dry contacts (Form C) rated 2 amps at 30 VDC (resistive) and transfer whenever system supervisory condition occurs.
26. Trouble Dry Contacts: Provide trouble dry contacts (Form C) rated 2 amps at 30 VDC (resistive) and transfer whenever system trouble occurs.

I. Auxiliary Switch Module (ASM-16):

1. Each ASM-16 has 16 programmable push-button switches.
2. Each push-button switch has 3 associated status LEDs (red, yellow, and green), configurable to indicate any combination of functions.
3. Flexible switch configurations to allow auxiliary functions.
4. An insertable label to identify function of each switch and LEDs combination.
5. Provide capability to communicate with up to 16 ASM-16 modules locally, or up to 3,000 feet from the Control Panel

J. Network Repeater Module RPT-E3:

1. Intelligent Network Interface shall provide interconnection and protection of remote Control Panels. Repeater shall regenerate and condition token passing, 625 K baud signal between units. Repeater shall be available in wire, fiber, or wire/fiber configurations as determined by field conditions.
2. Fiber configurations shall use “ST”-type connectors and be able to operate with up to 200-micron multi-mode fiber, but optimize for 62.5/125. Interface shall have jumper to allow selection of ground detection of wiring when used in wire mode. Interface shall have integral LEDs to display current status of board.

K. Network Graphic Annunciator (NGA): Networked, 1/4 VGA, touch-screen annunciator with the following characteristics:

1. Custom Graphics: Panel shall permit uploading of custom bit-mapped graphic to display screen. Graphic shall display when all systems are normal.
2. Intuitive Functions: In alarm or trouble condition, annunciator shall display only information pertaining to event, including control switches.
   a. Trouble Condition: Display shall indicate cause of trouble. Only controls available to operator shall be Acknowledge and Reset functions.
   b. Alarm Condition: Display shall indicate cause of alarm. Only controls available to operator shall be Acknowledge, Silence, and Reset functions.

2.4 Local Operating Console (LOC)

A. The Local Operating Console communicates via the network to provide site annunciation, panel control capabilities and audio messaging with interfaced to the Bogen Quantum paging system.
B. The LOC shall be flush mounted in the main office in secure location to eliminate unauthorized use
C. LOC shall house the NGA annunciator, ASM-16 module assembly and INCC-Mic microphone

D. The LOC shall utilize digital messaging through the FA network to the site EVAC system for alert messages and tones.
E. The LOC shall be flush mounted and have appropriate trim ring.

2.5 SUPPLEMENTAL NOTIFICATION APPLIANCE CIRCUIT (HPF24).

A. Supplemental Notification Appliance Circuit (HPF24) shall be Model [HPF24S8] offering [8.0 amps (6.0 amps continuous)] of regulated 24-volt power. HPF24 shall include the following features:
   1. Integral Charger: Charge up to 18.0 amp-hour batteries and support 60-hour standby.
   2. 2 Input Triggers. Input trigger shall be Notification Appliance Circuit (from fire alarm control panel) or relay.
   3. Surface-mount back box.
   4. Ability to delay AC fail delay in accordance with applicable NFPA requirements.
   5. Power limited circuitry in accordance with applicable UL standards.
   6. Operates as sync follower or a sync generator

2.6 INTELLIGENT NETWORK TRANSPONDER (INX)

A. System shall be of multiprocessor design to allow maximum flexibility of capabilities and operation. INX shall receive, transmit, and regenerate voice, fire fighter phones, and data over single pair of wire or fiber optic cable.

B. INX shall provide full multi-channel distributed voice messaging, with integrated switching amplification, and SLC and extended phone riser. INX shall communicate with network system in true peer-to-peer fashion operating at 625 K baud over any combination of fiber or wire media. INX shall consist of the following units and components.

C. System Cabinet: System cabinet shall be surface or semi-flush mounted with texture finish and shall consist of 4 parts, back box, back plate, inner door, and outer door. System cabinet houses INI-VG, PM-9 power supply, up to 4 – AM-50, microphone, and related circuitry.

D. Intelligent Network Interface Voice Gateway (INI-VG): INI-VG shall be a multi-function board interchangeable in both INCC and INX. Functions of board shall include the following features as a minimum:
   1. Network interface operating at 625 K baud configurable with any combination of wire and/or fiber topologies. Interface shall communicate with up to 122 total INCC, INX, and E3 and S3 control panels in peer-to-peer fashion.
   2. Fire Fighter Phone Riser: INI-VG shall generate local phone riser for use with AOM-TEL phone modules for connection to fire fighter phone. INI-VG shall mix its local phone riser to network in true Style 7 fashion.
   3. Signaling Line Circuit (SLC): INI-VG shall generate local SLC to communicate with and control up to 16 AOM-TELF modules and 32 AOM-2SF circuits for fire phone interfacing and additional split-speaker circuits.
   4. RS-485: Provide capability to communicate with up to 16 ASM-16 modules, when used in INX mode up to 3,000 feet.
   5. Advanced Processing: INI-VG shall incorporate latest in digital signaling processing technology with supporting Boolean logic including AND, OR, NOT, TIME DELAY functions.

6. Voice Generation: INI-VG shall incorporate all processing to allow for 16 distinct pre-recorded messages used in priority fashion with message 1 as highest priority. Total length for 1 to 16 messages shall be up to 3 minutes.

E. Power Supply Module (PM-9): PM-9 power supply shall supply all power necessary under normal and emergency conditions. Power supply shall provide capacity to charge up to 55 amp-hour batteries while under full load. Technology used shall be of power-saving switching configuration, eliminating need of stepping transformer.

F. Audio Amplifier (AM-50): Include as a minimum, the following features:
1. 50-watt switching audio amplifier:
   a. AM-50 amplifier produces $25V_{RMS}$ at 50 watts digital audio output.
2. 2 individually addressable speaker circuits, each with capability of handling part or all of 50-watt supplied power.
3. Power shall be 24 VDC supplied via terminal block from local PM-9 power supply.
4. Ability to select from 1 of 16 pre-programmed messages in INI-VG, and paging from locally or from INCC Command Center.
5. Back-up amplification configurable so 1 AM-50 can perform back-up or 3, or perform 1-to-1 back-up if configured to do so in programming.
6. Status LEDs to indicate normal operation and trouble condition.

2.7 SYSTEM PERIPHERALS - Velociti

A. Addressable Devices – General:
1. Provide address-setting means using rotary-decimal switches.
2. Use simple to install and maintain decade-type (numbered 0 to 15) address switches by using standard screwdriver to rotate 2 dials on device to set address. Devices which use binary address set via dipswitch packages, handheld device programmer, or other special tools for setting device address shall not be acceptable.
3. Detectors: Analog and addressable. Connect to fire alarm control panel's Signaling Line Circuits.
4. Addressable Thermal and Smoke Detectors: Provide 2 status LEDs. Both LEDs shall flash under normal conditions, indicating detector is operational and in regular communication with control panel, and both LEDs shall be placed into steady illumination by control panel, indicating alarm condition has been detected. If required, flashing mode operation of detector LEDs can be programmed off via fire control panel program.
5. Fire Alarm Control Panel: Permit detector sensitivity adjustment through field programming of system. Sensitivity can be automatically adjusted by panel on time-of-day basis.
6. Using software, detectors shall automatically compensate for dust accumulation and other slow environmental changes that may affect their performance. Detectors shall be listed by UL as meeting calibrated sensitivity test requirements of NFPA 72, Chapter 7.
7. Detectors shall be ceiling-mounted and shall include separate twist-lock base with tamper-proof feature.
8. Following bases and auxiliary functions shall be available:
   a. Standard base with remote LED output.
   b. Sounder base rated at 85 dBA minimum.
   c. Form-C relay base rated 30 VDC, 2.0 A.
   d. Isolator base.

9. Detectors shall provide test means whereby they will simulate alarm condition and report that condition to control panel. Such test shall be initiated at detector itself by activating magnetic switch or initiated remotely on command from control panel.
10. Detectors shall store internal identifying type code that control panel shall use to identify type of device (ION, PHOTO, THERMAL).

B. Addressable Manual Stations (MS-7AF):
1. Manual Fire Alarm Stations: Non-code, non-break glass type, equipped with key lock so they may be tested without operating handle.
2. Operated Station: Visually apparent, as operated, at a minimum distance of 100 feet (30.5 m) from front or side.
3. Stations shall be designed so after actual activation, they cannot be restored to normal except by key reset.
4. Manual stations shall be constructed of Lexan with clearly visible operating instructions provided on cover. The word FIRE shall appear on front of stations in raised letters, 1.75 inches (44 mm) or larger.
5. Addressable manual stations shall, on command from control panel, send data to panel representing state of manual switch and addressable communication module status.

C. Intelligent Thermal Detectors (ATD-L3R/ATD-L3R-IV): Intelligent addressable devices rated at 135 degrees F (58 degrees C) and have rate-of-rise element rated at 15 degrees F (9.4 degrees C) per minute. Connect via 2 wires to fire alarm control panel signaling line circuit.

D. Intelligent Photoelectric Smoke Detectors (ASD-PL3/ASD-PL3-IV): Intelligent photoelectric smoke detector shall be a Honeywell Gamewell-FCI model number ASD-PL3 or ASD-PL3-IV. Smoke detector shall be an addressable intelligent photoelectric smoke detector and shall connect with two wires to the fire alarm control panel signaling line circuit (SLC). The detectors shall use the photoelectric (light-scattering) principal to measure smoke density and shall, on command from the control panel, send data to the panel representing the analog level of smoke density.

E. Intelligent Multi-Criteria Acclimating Detectors (MCS-PTIR/MCS-PTIR-IV):
1. Addressable device designed to monitor a minimum of photoelectric and thermal technologies in single-sensing device. Include ability to adapt to its environment by utilizing built-in microprocessor to determine its environment and choose appropriate sensing settings. Allow wide sensitivity window, with no less than 1 to 4 percent per foot obscuration. Utilize advanced electronics that react to slow smoldering fires and thermal properties within single sensing device.
2. Microprocessor: Capable of selecting appropriate sensitivity levels based on environment type it is in, such as office, manufacturing, or kitchen, and then have ability to automatically change setting as environment changes, as when walls are moved or as occupancy changes.
3. Intelligent multi-criteria detection device shall include ability to combine signal of thermal sensor with signal of photoelectric signal to react hastily in event of fire situation. Include inherent ability to distinguish between fire condition and false alarm condition by examining characteristics of thermal and smoke sensing chambers and comparing them to database of actual fire and deceptive phenomena.

F. Intelligent High Sensitivity Detectors (ASD-LS3): High sensitivity photoelectric smoke detector designed for Very Early Warning Fire Detection. The high-sensitivity detector features a smoke-

sensing chamber and patented optic block designed to amplify signals from smoke but diminish stray internal reflections that can cause false alarms. LED technology allows detector to achieve sensitivity levels from 0.02 percent-per-foot to 2 percent-per-foot obscuration. Software processing includes multi-alert drift compensation, internal self-diagnostics, and superior transient signal rejection algorithms to produce unprecedented stability at ultra-high sensitivities across the full temperature range.

G. Intelligent Fire/Carbon Monoxide Detectors (MCS-COF3/MCS-COF3-IV):
1. The detector shall be comprised of four sensing elements, including a photoelectric (light-scattering) particulate sensor, an electrochemical CO sensor, a daylight-filtered infrared (IR) sensor and solid state thermal sensor(s) rated at 135°F (57.2°C). The device shall be able to indicate distinct smoke and heat alarms.
2. The advanced multi-criteria detection device shall include the ability to combine the signal of the photoelectric signal with other sensing elements in order to react quickly in the event of a fire situation. It shall also include the inherent ability to distinguish between a fire condition and a nuisance alarm condition. The detector shall be capable of selecting the appropriate sensitivity levels based on the environment type (office, manufacturing, kitchen, etc.) in which it is installed, and then have the ability to automatically change the setting as the environment changes.
3. The CO detector component shall be capable of a functional gas test using a canned test agent to test the functionality of the CO sensing cell.
4. The detector shall indicate CO trouble conditions, including six months of sensor life remaining and sensor life has expired. The detector shall indicate a combined signal for any of the following: low chamber trouble, thermistor trouble, CO self test failure, IR self test failure, and freeze warning
5. The MCS-COF3 Fire/CO Detector shall be used with the B200S Intelligent Sounder Base.

H. Intelligent Sounder Base (B200S-WH/B200S-IV):

1. The B200S sounder base “listens in” to the SLC communication between the attached sensor head and the fire alarm control panel (FACP) to adopt the same address as the detector, but as a unique device type on the loop. The FACP can then be programmed to use that address to command an individual sounder or a group of sounders to activate. The command set from the panel can be programmed to the specific event, allowing selection of volume, tone, and group. In addition, the FACPs will enable custom tone patterns.

2. The sounder can be programmed to be silenced whenever a live page or active message is being played over the system.

I. Intelligent Low Frequency Sounder Base (B200S-LF-WH/B200S-LF-IV):

1. The B200S sounder base “listens in” to the SLC communication between the attached sensor head and the fire alarm control panel (FACP) to adopt the same address as the detector, but as a unique device type on the loop. The FACP can then be programmed to use that address to command an individual sounder or a group of sounders to activate. The command set from the panel can be programmed to the specific event, allowing selection of volume, tone, and group. In addition, the FACPs will enable custom tone patterns.

2. The sounder can be programmed to be silenced whenever a live page or active message is being played over the system.

J. Intelligent Duct Smoke Detector Base (DNR, DNRW):
1. In-Duct Smoke Detector Housing: Use ASD-PL3R/ASD-PL3R-IV intelligent photoelectric detector which provides continuous analog monitoring and alarm verification from panel.
2. When sufficient smoke is sensed, alarm signal is initiated, and appropriate action taken to shut down or change over air handling systems to help prevent rapid distribution of toxic smoke and fire gases throughout areas served by duct system.
3. Duct Smoke Detectors Mounted Above Ceiling or Otherwise Obstructed from Normal View: Provide an (RTS151KEY) Remote test station accessory, designed to test a remotely located Intelligent Duct Smoke detector with remote alarm indicator.
4. Each Detector: Install in either supply side or return side duct in accordance with local mechanical code.
5. DST Sampling Tube
   a. No tools needed for installation or removal
   b. Installs/removes from front or back of detector
   c. Available in 1 ft, 1.5ft, 3 ft, 5 ft, and 10 ft lengths

K. Addressable Dry Contact Monitor Modules (AMM-2F):

1. Provide to connect 1 supervised IDC zone of conventional alarm initiating devices (any N.O. dry contact device) to 1 of the fire alarm control panel SLCs.
2. Mount in standard deep electrical box.
3. IDC Zone: Suitable for Style B operation.

L. Addressable Dry Contact Monitor Modules (AMM-4F):

1. Provide to connect 1 supervised IDC zone of conventional alarm initiating devices (any N.O. dry contact device) to 1 of the fire alarm control panel SLCs.
2. Mount in 4-inch (102-mm) square, 2-1/8-inch (54-mm) deep electrical box.
3. IDC Zone: Suitable for Style D or Style B operation.
4. LEDs: Flash under normal conditions, indicating monitor module is operational and in regular communication with control panel.

M. Addressable Dry Contact Monitor Modules (AMM-2IF):

1. Provide to connect 2 supervised IDC zones of conventional alarm initiating devices (any N.O. dry contact device) to 1 of the fire alarm control panel SLCs.
2. Mount in 4-inch (101.6-mm) square, 2-1/8-inch (54-mm) deep electrical box.
3. IDC Zones: Suitable for Style B operation.
4. LEDs: Flash under normal conditions, indicating monitor module is operational and in regular communication with control panel.

N. Addressable Dry Contact Monitor Modules (MMI-10F):

1. Provide to connect 10 supervised Style B IDC zones or 5 supervised Style D IDC zones of conventional alarm initiating devices (any N.O. dry contact device) to 1 of the fire alarm control panel SLCs.
2. Mount in factory-supplied MBB-2 or MBB-6 enclosure.

3. LEDs: Flash under normal conditions, indicating monitor module is operational and in regular communication with control panel.

O. 2-Wire Detector Monitor Modules (AMM-4SF):

1. Provided to connect 1 supervised IDC zone of conventional 2-wire smoke detectors or alarm initiating devices (any N.O. dry contact device).
2. Mount in 4-inch (101.6-mm) square, 2-1/8-inch (54-mm) deep electrical box or to optional surface-mounted back box.
3. IDC Zone: Wired for Class A or B (Style D or Style B) operation.
4. LEDs: Flash under normal conditions, indicating monitor module is operational and in regular communication with control panel.

P. 2-Wire Detector Monitor Modules (MMI-6SF):

1. Provided to connect 6 supervised Class B IDC zones of conventional 2-wire smoke detectors or alarm initiating devices (any N.O. dry contact device).
2. Mount in factory-supplied MBB-2 or MBB-6 enclosure.
3. LEDs: Flash under normal conditions, indicating monitor module is operational and in regular communication with control panel.

Q. Addressable Control Modules (AOM-2SF):

1. Provide to supervise and control operation of 1 conventional NAC of compatible, 24-VDC powered, polarized audio/visual notification appliances or UL-listed polarized relays for fan shutdown and other auxiliary control functions.
2. Mount in standard 4-inch (101.6-mm) square, 2-1/8-inch (54-mm) deep electrical box or to surface-mounted back box.
3. Control Module NAC: Wire for Style Z or Style Y (Class A/B) with up to 1 amp of inductive signal or 2 amps of resistive signal operation. Relay coil shall be magnetically latched to reduce wiring connection requirements and to ensure 100 percent of all auxiliary relay or NACs shall be energized at same time on same pair of wires.
4. Audio/Visual Power: Provide by separate supervised power circuit from main fire alarm control panel or from supervised, UL-listed remote power supply.

R. Addressable Control Modules (MMO-6SF):

1. Provide to supervise and control operation of 1 conventional NAC of compatible, 24-VDC powered, polarized audio/visual notification appliances or UL-listed polarized relays for fan shutdown and other auxiliary control functions.
2. Mount in factory-supplied MBB-2 or MBB-6 enclosure.
3. LEDs: Flash under normal conditions, indicating monitor module is operational and in regular communication with control panel.
4. Control module NAC: Wire for Style Z or Style Y (Class A/B) with up to 1 amp of inductive signal or 2 amps of resistive signal operation. Relay coil shall be magnetically latched to reduce wiring connection requirements and to ensure 100 percent of all auxiliary relay or NACs shall be energized at same time on same pair of wires.
5. Audio/Visual Power: Provide by separate supervised power circuit from main fire alarm control panel or from supervised, UL-listed remote power supply.

S. Addressable Relay Modules (AOM-2RF):

1. Available for HVAC control and other building functions. Relay shall have 2 Form C sets of contacts that operate in tandem and are rated for a minimum of 2.0 amps resistive or 1.0 amps inductive. Relay coil shall be magnetically latched to reduce wiring connection requirements and to ensure 100 percent of all auxiliary relay or NACs shall be energized at same time on same pair of wires.
2. Mount in standard 4-inch (101.6-mm) square, 2-1/8-inch (54-mm) deep electrical box or to surface-mounted back box.

T. Addressable Relay Modules (MMO-6RF):

1. Available for HVAC control and other building functions. Relay shall be Form C and rated for a minimum of 2.0 amps resistive or 1.0 amps inductive. Relay coil shall be magnetically latched to reduce wiring connection requirements and to ensure 100 percent of all auxiliary relay or NACs shall be energized at same time on same pair of wires.
2. Mount in factory-supplied MBB-2 or MBB-6 enclosure.
3. LEDs: Flash under normal conditions, indicating monitor module is operational and in regular communication with control panel.

U. Isolator Modules (M500X):

1. Provide to automatically isolate wire-to-wire short circuits on SLC Class A or Class B branch. Isolator module shall limit number of modules or detectors that may be rendered inoperative by short-circuit fault on SLC loop segment or branch. At least 1 isolator module shall be provided for each floor or protected zone of building. No more than 25 devices shall be connected to 1 isolator module.
2. If wire-to-wire short occurs, isolator module shall automatically open-circuit (disconnect) SLC. When short-circuit condition is corrected, isolator module shall automatically reconnect isolated section.
3. Does not require address-setting, and its operations shall be totally automatic. Not necessary to replace or reset isolator module after normal operation.
4. Mount in standard 4-inch (101.6-mm) deep electrical box or in surface-mounted back box.
5. Single LED: Flash to indicate isolator is operational and illuminate steadily to indicate short-circuit condition has been detected and isolated.

V. Conventional Heat Detectors:

1. Combination rate-of-rise and fixed temperature rated at 135 degrees F (57.2 degrees C) for areas where ambient temperatures does not exceed 100 degrees F (37.7 degrees C), and 200 degrees F (93.3 degrees C) for areas where temperature does not exceed 150 degrees F (65.5 degrees C).
2. Low profile, ceiling-mount type with positive indication of activation.
3. Rate-of-Rise Element: Air chamber, flexible metal diaphragm, and factory-calibrated, moisture-proof, trouble-free vent, and operate when rate of temperature rise exceeds 15 degrees F (9.4 degrees C) per minute.
4. Fixed-Temperature Element: Fusible-alloy retainer and actuator shaft.
5. Smooth Ceiling Rating: 2,500 square feet (762 m^2).

W. Conventional Photoelectric Area Smoke Detectors:

1. 24-VDC, 2-wire, ceiling-mounted, light-scattering type using LEDs light source.
2. Each Detector: Remote LEDs output and built-in test switch.
3. Provide on twist-lock base.
4. Perform calibrated sensitivity and performance test on detector without need for generation of smoke. Test method shall test all detector circuits.
5. Visual Indication of Alarm: Provide by dual-latching LEDs on detector, seen from ground level over 360 degrees. LEDs shall flash every 10 seconds, indicating power is applied to detector.
6. Detector shall not go into alarm or trouble when exposed to air velocities of up to 3,000 feet (914.4 m) per minute.
7. Detector Screen and Cover Assembly: Easily removable for field cleaning of detector chamber.
8. Field-Wire Connections: Made to base through use of clamping plate and screw.

X. Conventional Ionization-Type Smoke Detectors:

1. 2-wire, 24-VDC type using dual uni-polar chamber.
2. Each Detector: Remote LEDs output and built-in test switch.
3. Provide on twist-lock base.
4. Perform calibration sensitivity and performance test on detector without need for generation of smoke.
5. Visual Indication of Alarm: Provide by dual-latching LEDs over 360 degrees, on detector, seen from ground level. LEDs shall flash every 10 seconds, indicating power is applied to detector.
6. Detector shall not alarm or trouble when exposed to air velocities of up to 1,200 feet (365.76 m) per minute.
7. Detector Screen and Cover Assembly: Easily removable for field cleaning of detector chamber.
8. Field-Wire Connections: Made to base through use of clamping plate and screw.

Y. Addressable Imaging Beam Detectors (OSI-RH-GW):

1. Single-ended reflecting design.
2. Six user-selectable sensitivity levels.
3. Operates in a range up to 492ft feet.
4. Temperature Range of Device: Minus 22 degrees F to 131 degrees F.
5. Beam Detector: Automatic gain control to compensate for gradual signal deterioration from dirt accumulation on lenses.
6. UL Listed.
7. Ability to be tested using calibrated test filters or magnet-activated remote test station.

Z. Sprinkler Waterflow Switches (provided and installed by the sprinkler contractor):
1. Integral, mechanical, non-coded, non-accumulative retard type.
2. Alarm transmission delay time conveniently adjustable from 0 to 60 seconds. Initial settings shall be 30 to 45 seconds.
3. Single manufacturer and series.
4. Where possible, locate waterflow switches a minimum of 1 foot from fitting which changes direction of flow and a minimum of 3 feet from valve.

5. Waterflow switches shall be provided and connected under this section but installed by the mechanical contractor.

AA. Sprinkler and Standpipe Valve Supervisory Switches (provided and installed by the sprinkler contractor):
1. Each sprinkler system water supply control valve riser, zone control valve, and standpipe system riser control valve shall be equipped with supervisory switch. Standpipe hose valves, test valves, and drain valves shall not be equipped with supervisory switches.
2. PIV (Post Indicator Valve) or Main Gate Valves: Equip with supervisory switch.
3. Mount not to interfere with normal operation of valve and adjust to operate within 2 revolutions toward closed position of valve control, or when stem has moved no more than one-fifth of distance from normal position.
4. Contain in weatherproof aluminum housing, which shall provide 3/4-inch (19-mm) conduit entrance and incorporate necessary facilities for attachment to valves.
5. Switch Housing Finish: Red baked enamel.
6. Entire Installed Assembly: Tamper proof and arranged to cause switch operation if housing cover is removed or if unit is removed from mounting.
7. Valve supervisory switches shall be provided and connected under this section and installed by mechanical contractor.

BB. Graphic Annunciator (Uses ANU-48 Serial Driver Board):
1. Communicate to fire alarm control panel via EIA-485 (multi-drop) 2-wire communications loop. Up to 16 annunciator drivers, each configured up to 48 points, shall be connected per ILI-MB-E3.
3. ANU-48: Provide interface to approved UL-listed graphic-style annunciator and provide each of the features specified.

CC. LCD Display Annunciator: **Not used in the WCCUSD**

DD. Exterior Speaker: System Sensor SP(x)K
1. Operate on 24 VDC or with field-selectable outputs.
2. Have two selectable tone options of temporal 3 and non-temporal continuous pattern.
3. Have at least 2 audibility options

EE. Strobes: System Sensor SC(x)L
1. Compliance: ADA and UL 1971.
2. Maximum Pulse Duration: 0.2 second.
3. Strobe Intensity: UL 1971.
4. Flash Rate: UL 1971.
5. Strobe Candela Rating: Determine by positioning selector switch on back of device.

FF. Speaker/Strobes: System Sensor SPS(x)L
1. Operate on 24 VDC
2. Have two selectable tone options of temporal 3 and non-temporal continuous pattern.
3. Have at least 2 audibility options
4. Maximum Pulse Duration: 0.2 second.
5. Strobe Intensity: UL 1971.

6. Flash Rate: UL 1971.
7. Strobe Candela Rating: Determine by positioning selector switch on back of device.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine areas and surfaces to receive fire alarm system.
   1. Notify Architect of conditions that would adversely affect installation or subsequent use.
   2. Do not begin installation until unacceptable conditions are corrected.

3.2 INSTALLATION

A. Install fire alarm system in accordance with NFPA 72, NFPA 70, state and local codes, manufacturer's instructions, and as indicated on the Drawings.

B. Conceal conduit, junction boxes, and conduit supports and hangers in finished areas. Conceal or expose conduit, junction boxes, and conduit supports and hangers in unfinished areas.

C. Do not install smoke detectors before system programming and test period. If construction is ongoing during this period, take measures to protect smoke detectors from contamination and physical damage.

D. Flush-mount fire detection and alarm system devices, control panels, and remote annunciators in finished areas. Flush-mount or surface-mount fire detection and alarm system devices, control panels, and remote annunciators in unfinished areas.

E. Ensure manual stations are suitable for surface mounting or semi-flush mounting as indicated on the Drawings. Install per code above finished floor measured to operating handle.

F. All manual fire alarm stations to have protective plastic cover to prevent unauthorized alarms Similar to the SDI-1000

G. All exterior speakers, interior speaker/strobes and strobes located in hazardous locations such as Locker rooms, weight rooms, exercise rooms, gyms, auxiliary gyms and multiuse rooms shall be protected by either low profile vandal resistant cages by Space Age Electronics or by weather resistant plastic covers by Safety Technology International, Inc.

H. It shall be the Authorized GW-FCI contractor's responsibility to identify and insure that Detectors are installed per manufacturer's requirements and meet or exceed environmental Conditions. Any deviation of detector type due to environment shall be brought to the attention Of the IOR for review and corrective action.

I. It shall be the Authorized GW-FCI distributors responsibility to remove, replace or exchange Devices for 2 years after initial start up that were not installed per the manufacturer's directions With regard to environment or conditions.

J. Harsh or adverse environments should be addressed with the IOR and if need, multi-criteria Detectors installed to eliminate false or nuisance alarms.

K. All duct detectors shall be housed in an AUL approved NEMA enclosure even if they are Rated for weather resistant operation.

L. Authorized GW-FCI distributor shall be responsible for insuring that all cable and wire used In the system are properly labeled and approved for the system and the environment. All cable Shall be identified and submitted with drawings and submittals and shall be rated for its proper Use.

M. Authorized GW-FCI distributor shall identify and label all cables entering and leaving terminal Cabinets. A complete list of all terminations shall be properly affixed to each terminal cabinet Door for ease of troubleshooting/repairs.

N. All underground cable shall be installed in accordance with manufacturer's recommendations And approvals. There shall be NO in ground splicing of cables in any in ground box or Christy box.

O. Labeling: all labeling of signals and initiation devices shall be in accordance with District Standards. All devices shall be labeled with P-Touch Labels. Authorized GW-FCI Distributor shall submit label schedule to District prior to beginning installation to insure Labels for devices and buildings meet with their emergency response plan and structure.

3.3 FIELD QUALITY CONTROL

A. Manufacturer's Field Services: Provide service of competent, factory-trained technician authorized by manufacturer to technically supervise and participate during pre-testing and acceptance testing of system.

B. Testing:
1. Conduct complete visual inspection of control panel connections and test wiring for short circuits, ground faults, continuity, and insulation before energizing cables and wires.
2. Close each sprinkler system control valve and verify proper supervisory alarm at Control Panel.
3. Verify activation of flow switches.
4. Open initiating device circuits and verify that trouble signal actuates.
5. Open signaling line circuits and verify that trouble signal actuates.
6. Open and short notification appliance circuits and verify that trouble signal actuates.
7. Ground initiating device circuits and verify response of trouble signals.
8. Ground signaling line circuits and verify response of trouble signals.
9. Ground notification appliance circuits and verify response of trouble signals.
10. Check installation, supervision, and operation of intelligent smoke detectors.
11. Introduce on system each of the alarm conditions that system is required to detect. Verify proper receipt and proper processing of signal at Control Panel and correct activation of control points.
13. Consult manufacturer's manual to determine proper testing procedures when system is equipped with optional features. This is intended to address such items as verifying controls performed by individually addressed or grouped devices, sensitivity monitoring, verification functionality, and similar.
14. Provide appropriate db level meter to insure not only proper db level over ambient noise But to insure sound pressure levels do not exceed State standards.

C. Acceptance Testing:
   1. Before installation shall be considered completed and acceptable by AHJ, a complete test using as a minimum, the following scenarios shall be performed and witnessed by representative approved by Engineer. Monitoring company and/or fire department shall be notified before final test in accordance with local requirements.
   2. Contractor's job foreman, in presence of representative of manufacturer, representative of Owner, and fire department shall operate every installed device to verify proper operation and correct annunciation at control panel.
   3. Open signaling line circuits and notification appliance circuits in at least 2 locations to verify presence of supervision.
   4. Completely disconnect INCC Command Center from rest of network, including Voice INCC Command Center. Activate initiating device from transponder. All speaker circuits activated from each transponder shall transmit the correct evacuation or alert message. These messages shall be same messages transmitted with INCC Command Center activated. Default tones or messages shall not be acceptable.
   5. Completely disconnect INCC Command Center from rest of network. Activate initiating device. All control outputs supported by transponder SLC circuits shall operate under project programming mode. Default or degrade mode programming shall not be acceptable.
   6. Fire fighter phone riser shall be directly shorted between INCC Command Center and first transponder, followed by test of fire phones between INCC Command Center and farthest transponder. Phones shall operate in normal fashion.
   7. All audio risers shall be directly shorted between INCC Command Center and first audio transponder, followed by activation of alarm initiating device. Correct pre-recorded messages shall transmit from all speakers, including evacuation and alert channels. Default or degrade messages shall not be acceptable.
   8. When testing has been completed to satisfaction of both Contractor's job foreman and representatives of manufacturer and Owner, a notarized letter co-signed by each attesting to satisfactory completion of said testing shall be forwarded to Owner and fire department.
   9. Leave fire alarm system in proper working order and, without additional expense to Owner, replace defective materials and equipment provided within 1 year (365 days) from date of final acceptance by the owner.

3.4 Turn Over Testing with the District Maintenance Staff:

A. Provide instruction as required for operating fire alarm system.
B. Provide hands-on demonstrations of operation of fire alarm system components and functions.
C. Turn Over Testing shall include updated as-built fire alarm drawings, system specific software as well as all maintenance and operations manuals with keys.
D. Turn Over Testing shall include 2 sessions not to exceed 6 hour per session
E. Turn Over Testing shall include 5% device testing with the District maintenance staff to familiarize them with operation of all panels, devices and maintenance procedures.
F. Turn Over Testing requires Authorized GW-FCI distributor to deliver 5% equal distribution of spare parts on speakers, speaker/strobes, strobes, heat detectors, smoke detectors, based and duct detectors. GW-FCI distributor MUST include these 5% spare parts in the bid.

END OF SECTION

WCCUSD Fire Alarm Systems – Material List

Main Fire Alarm Control Panel

GW-FCI E-3 configured with the following:

a.	Cabinet	E3BB-RD/INCC	Qty. 1	CSFM 7165-1703:0125
b.	Inner Plate	E3-INCC-DPLATE	Qty. 1	CSFM 7165-1703:0125
c.	Inner Door	E3-ID2D	Qty. 1	CSFM 7165-1703:0125
d.	Power Supply	PM-9	Qty. 1	CSFM 7165-1703:0125
e.	LCD Touchscreen	LCD-SLP	Qty. 1	CSFM 7165-1703:0176
f.	Main Board	ILI-MB-3	Qty. 1	CSFM 7165-1703:0125
g.	Expansion Board	ILI-S-E3	Qty. as req'd	CSFM 7165-1703:0125
h.	Double Space Blank	E3-BP	Qty. 1	n/a
i.	Single Space Blank	1100-0450	Qty. as req'd	n/a
j.	Switch Module	ASM-16	Qty. 1	CSFM 7165-1703:0125
k.	UDACT	DACT-E3	Qty. 1	CSFM 7165-1703:0125
l.	Cellular Communications	TG7FS-LTE (TG7LVF01)	Qty. 1	CSFM 7300-1402:0110
m.	Network Repeater	RPT-E3	Qty. 1	CSFM 7165-1703:0125
n.	MM Fiber Optic Module	FML-E3	Qty. 2	CSFM 7165-1703:0176
p.	Voice Gateway	INI-VGX	Qty. 1	CSFM 7165-1703:0125
q.	Microphone	INCC-MIC	Qty. 1	CSFM 7165-1703:0125
r.	Focal Point Gateway	FPT-Gate-3	Qty. 1	CSFM 7300-1703:0125
s.	Battery Cabinet	BC-1	Qty. 1	CSFM 7165-1703:0125
t.	Ethernet Interface	ANX-SR	Qty. 1	CSFM 7165-1703:0125
u.	Batteries	Size as required	Qty. 2	n/a
v.	Record Doc Cabinet	SRD ACE-11	Qty. 1	CSFM 7300-0553:0110

Focal Point:

a.	Focal Point Graphic Workstation	Qty. as req'd	CSFM 7300-1703:0168
b.	Focal Point Mobile Workstation	Qty. as req'd	CSFM 7300-1703:0168
c.	Graphic user interface: FPT-1	Qty. as req'd	CSFM 7300-1703:0168

LOC Local Operating Console:

a.	Cabinet	E3BB-BAA	Qty.1	CSFM 7165-1703:0125
b.	Inner Door	E31D3A	Qty.1	CSFM 7165-1703:0125
c.	Gateway	INI-VGX	Qty.1	CSFM 7165-1703:0125
d.	Microphone	INCC-MIC	Qty.1	CSFM 7165-1703:0125
e.	Switch Module	ASM-16	Qty.1	CSFM 7165-1703:0125
f.	Annunciator	NGA	Qty.1	CSFM 7165-1703:0125
h.	MM Fiber Optic Module	FML-E3	Qty. 2	CSFM 7165-1703:0125
i.	Trim Ring (flush)	E3-TRIMKITA	Qty. 1	n/a
j.	Graphic Display Frame:	GD8 11"x17"	Qty. 1	n/a

INX Audio Transponder Panel:

a.	Cabinet	E3BB-BC/INX	Qty.1	CSFM 7165-1703:0125
B	Power Supply	PM9	Qty.1	CSFM 7165-1703:0125
c.	Voice Gateway	INI-VGX	Qty.1	CSFM 7165-1703:0125
d.	Voice Amplifier	AM-50-25	Qty. as req'd	CSFM 7165-1703:0125
e.	Main Board	ILI-MB-E3	Qty.1	CSFM 7165-1703:0125
g.	Battery Cabinet	BC-1R	Qty. 1	n/a
h.	Batteries	Size as required	Qty. 2	n/a

Remote Power Supply:

a.	RPS	HPF-24S8	Qty. as req'd	CSFM 7315-1637:0102
b.	Batteries	12 v 7 ah	Qty. as req'd	n/a

Manual Pull Stations:

a.	Addressable Station	MS-7AF	Qty. as req'd	CSFM 7150-1703:0119
b.	Vandal Cover	STI-1200	Qty. as req'd	n/a

Heat Detectors:

a.	Rate of Rise 135°	ATD-L3R	Qty. as req'd	CSFM 7270-1703:0502
b.	Fixed Temp 135°	ATD-L3	Qty. as req'd	CSFM 7270-1703:0502
c.	Fixed Temp 190°	ATD-L3H	Qty. as req'd	CSFM 7270-1703:0502

Smoke & Carbon Monoxide Detectors:

a.	Photo Sensor	ASD-PL3	Qty. as req'd	CSFM 7272-1703:0501
b.	Photo/Thermal/IR	MCS-PTIR	Qty. as req'd	CSFM 7272-1703:0508
c.	Photo/CO2 Sensor	MCS-COF3	Qty. as req'd	CSFM 7272-1703:0508
d.	Conventional CO2	CO1224-TR	Qty. as req'd	CSFM 5278-1653:0219

Detector Bases:

a.	Intelligent 6" base	B300-06	Qty. as req'd	CSFM 7300-1653:0109
b.	Sounder base	B-200S-WH	Qty. as req'd	CSFM 7300-1653-0213

Smoke Duct Detector:

a.	Duct Housing	DNR	Qty. as req'd	CSFM 3242-1653:0209
b.	Weatherproof Box	DH400E-1	Qty. as req'd	CSFM n/a
c.	Photo Det head	ASD-PL3R	Qty. as req'd	CSFM 7272-1703:0501
d.	Sampling Tube	DST-5	Qty. as req'd	CSFM 3242-1653:0209

Beam Detector:

a.	Reflective Smoke Beam	OSI-RI-GW	Qty. as req'd	CSFM 7260-1703:0506
b.	Remote Test Switch	RTS-151-KEY	Qty. as req'd	CSFM 7300-1653:0212

Monitor Modules:

a.	Monitor Module	AMM-2F	Qty. as req'd	CSFM 7300-1703:0102
b.	Monitor Module	AMM-4F	Qty. as req'd	CSFM 7300-1703:0102
c.	Dual Monitor Mod	AMM-2IF	Qty. as req'd	CSFM 7300-1703:0107
d.	Multi-Mod 10 input	MMI-10F	Qty. as req'd	CSFM 7300-1703:0124
e.	Monitor Module	AMM-4SF	Qty. as req'd	CSFM 7300-1703:0102
f.	Multi-Mod 6 input	MMI-6SF	Qty. as req'd	CSFM 7300-1703:0124

Control Modules:

a.	Output Module	AOM-2SF	Qty. as req'd	CSFM 7300-1703:0102
b.	Multi-Mod 6 output	MMO-6SF	Qty. as req'd	CSFM 7300-1703:0124

Relay Modules:

a.	Multi-Relay 6 output	MMO-6RF	Qty. as req'd	CSFM 7300-1703:0124
b.	Output Relay Control	AOM-2RF	Qty. as req'd	CSFM 7300-1703:0102

Isolation Module:

a.	Fault Isolator module	M500X	Qty. as req'd	CSFM 7300-1653:0103

Exterior Voice EVAC Speaker/Strobes:

a.	WP Speaker only, White	SPWK	Qty. as req'd	CSFM 7320-1653:0201
b.	WP Speaker/Strobe, White	SPSWK	Qty. as req'd	CSFM 7320-1653:0201

Interior Strobes:

a.	Ceiling Strobe, White	SCWL	Qty. as req'd	CSFM 7125-1653:0504
b.	Ceiling Strobe wire guard	STI-9711	Qty. as req'd	n/a
c.	Wall Strobe, White	SCWL	Qty. as req'd	CSFM 7125-1653:0504
d.	Wall Strobe wire guard	STI-9705	Qty. as req'd	n/a

Interior Voice EVAC Speakers:

a.	Ceiling Speaker, White	SPCWL	Qty. as req'd	CSFM 7320-1653:0505
b.	Ceiling Speaker wire guard	STI-9711	Qty. as req'd	n/a
c.	Wall Speaker, White	SPWL	Qty. as req'd	CSFM 7320-1653:0505
d.	Wall Speaker wire guard	STI-9705	Qty. as req'd	n/a

Interior Voice EVAC Speaker/Strobes:

a.	Ceiling Speaker/strobe, White	SPSCWL	Qty. as req'd	CSFM 7320-1653:0505
b.	Ceiling Speaker/strobe guard	STI-9711	Qty. as req'd	n/a
c.	Wall Speaker/strobe, White	SPSWL	Qty. as req'd	CSFM 7320-1653:0505
d.	Wall Speaker/strobe guard	STI-9705	Qty. as req'd	n/a

Cable:

a.	SLC Circuit Indoor	West Penn 990D	CSFM 7161-0859:0101
b.	SLC Circuit Underground	West Penn AQC225	CSFM 7161-0859:0101
d.	Strobe Circuit Indoor	2 # 12g THWN Red/Black	n/a
e.	Strobe Circuit Underground	2 # 12g THWN Red/Black	n/a
f.	Evac Speaker Indoor	West Penn 991	CSFM 7161-0859:0101
g.	Evac Speaker Exterior	West Penn AQC294	CSFM 7161-0859:0101
h.	Remote Booster Sync (Circulating)	2 # 14g THWN Red/Black	n/a
i.	LOC to FACP	2 # 14g THWN power	n/a
	Copper pair and FA Network:		
	6-strand, OM1 MM tight buffer I/O	General Cable	
	Plenum rated Fiber	(1) CG00061ANU.BK	n/a
j.	FA Network Cable Between FACP		
	and INX Panels	General Cable	
	6-strand, OM1 MM tight buffer I/O	(1) CG00061ANU.BK	n/a
	Plenum rated Fiber		

Gamewell FCI FIRE CONTROL INSTRUMENTS
by Honeywell

E3 Series® Cabinets

FACP, Voice INX and LOC panels

Description

The E3 Series® Expandable Emergency Evacuation System by Gamewell-FCI offers several cabinet size options. These cabinet options allow for neat, sturdy, attractive installations. The E3 Series cabinet assembly is a compact, wall-mounted enclosure. A typical cabinet includes a backbox and an outer locking door. In addition, there are several inner door choices and mounting plates to accommodate a variety of E3 sub-assemblies.

Each cabinet backbox includes mounting patterns for plates to aid the installer in arranging and securing the sub-assemblies to the backbox. Backbox knockouts are also positioned at numerous points to allow a conduit access into the enclosure.

The following four Annunciator cabinet sizes provide the maximum flexibility that can meet any application.

- Cabinet AA offers 2 slot or 3 slot options to accommodate any of the following configurations:
  - Inner door, 2 slots allows space for one LCD-E3 or LCD-SLP and one ASM-16.
  - Inner door, 3 slots allows space for any combination of three modules: ASM-16, NGA or an ANU-48.
- Cabinet A1 houses one NGA or one ASM-16/ANU-48.
- Cabinet A2 accommodates a single LCD-E3.
- E3BB-FLUSH-LCD or E3BB-NGA-FLUSH.

E3BB-R-BSlim or B-Slim contains the 600 Series cabinet.

Cabinet B includes a mounting plate that contains a space for the ILI-MB-E3/ILI95-MB-E3, PM-9/PM-9G sub-assemblies and batteries set inside the backbox. Additional sub-assembly options mounted on the backbox include the DACT-E3 and RPT-E3. The 2 slot inner door houses the following options:

- one LCD-E3 module and
- either one ASM-16/ANU-48 or one NGA module

Both C and D size Command Center cabinets house a variety of E3 Broadband sub-assemblies in multiple configurations that provide a solution to a wide range of applications.

Two flexible inner door panel selections are available for C and D size Command Center cabinets that may contain a fire fighter's phone handset, a microphone, and optional modules to meet the facility operation requirements.
(*Note: See Inner Door and Backbox Mounting Capacities on page 3 and 4).

Cabinets for the E3 Series®

E3 Series® Cabinets

Features

- IBC Seismic Certified.
- 16-gauge steel backbox.
- Removable outer and inner doors.
- Inner door bonding strap used to provide electrical continuity for grounding.
- Backbox and door ground studs provide positive grounding. 180° opening door with full clearance.
- Available in either black or red.
- Lexan® windows appear on the doors of most cabinets, except the Cabinet "C" and "D" INX cabinets and the INX CAB-B cabinet which contain louvered doors.
- 90° opening door with zero clearance.
- Keylock with quarter turn latch.
- Trim Ring accessories available.

SIGNALING UL LISTED S1869 FM APPROVED 3025415 MEA Approved FDNY: COA#-6077 7165-1703:0125 City of Chicago Approved Class1 Class2 High Rise City of Denver Approved THE VMC GROUP Reference Certificate of Compliance VMA-45894-02C

Ordering Information

Part Number	Description
Cabinet "AA" Size	LOC (Local Operating Console) Annunciator
Dimensions:	19 1/4" W x 10" H x 4 1/4" D (49 W x 25 H x 11.4 D cm)
E3BB-BAA	Enclosure, Black, "AA" (LOC) Size
E3BB-RAA	Enclosure, Red, "AA" (LOC) Size
E31D2-TA	Inner Door, 2 Slots, (INCC-TEL & ASM-16)
E3ID2-A	Inner Door, 2 Slots, (LCD-E3 or LCD-SLP & ASM-16)
E3ID3-A	Inner Door, 3 Slots, (NGA, ASM-16 and MIC)
Cabinet "A1" Size:	
Dimensions:	8 3/4" W x 10" H x 4 1/2" D (22 W x 25 H x 11.4 D cm)
E3BB-BAA1	Remote Enclosure, Black, w/Inner Door, 1 Slot, (NGA)
E3BB-RAA1	Remote Enclosure, Red, w/Inner Door, 1 Slot, (NGA)
Cabinet "A2" Size:	
Dimensions:	13 1/4" W x 10" H x 3 1/2" D (40 W x 25 H x 9 D cm)
E3BB-BA2	Remote Enclosure, Black, w/Inner Door, 1 Slot, (LCD-E3 or LCD-SLP)
E3BB-RA2	Remote Enclosure, Red, w/Inner Door, 1 Slot, (LCD-E3 or LCD-SLP)
Flush Cabinet A1 Annunciators:	
E3BB-FLUSH-LCD	CAB A2 Remote Flush LCD ANN with Keyswitch operation
E3BB-NGA-FLUSH	CAB A2 Remote Flush NGA ANN with Password protected
Cabinet "B-Slim" Size: (Retrofit Kits)	
Dimensions:	14" W x 20" H x 4 1/2: D (35.5 W x 50.8 H x 11 D cm)
E3BB-RBSLIM	Assy, Enclosure, B-SLIM, Red with Backplate and LCD-E3 Keyswitch plate.
IF600-RETROFIT	Door and Cab mounting plates, disable key switch and door lock (PK-625) for E3 Series upgrade.
Cabinet "B" Size:	
Dimensions:	19 3/8" W x 19 3/8" H x 4 1/2" D (49 W x 49 H x 11 D cm)
E3BB-BB	Assy, Backbox Enclosure, Black,"B" Size
E3BB-RB	Assy, Backbox Enclosure, Red, "B" Size
E3ID2-B	Inner Door, 2 Slots, "B" Size
1100-0460	INX-Transponder 19" (cm) Backbox with Door, Black.
Dimensions:	19 3/8" W x 19 3/8" H x 4 1/2" D (49 W x 49 H x 11.43 D cm)
Cabinet "C" Size:	Voice Evac. Panel
Dimensions:	19 3/8" W x 30" H x 4 1/2" D (49 W x 76 H x 11 D cm)
E3BB-BC/INCC	Enclosure, Command Center, Black, "C" Size
E3BB-RC/INCC	Enclosure, Command Center, Red, "C" Size
E3ID2-C	Assy, Inner Door, Command Center, 2- Bay "C" Size
E3ID3-C	Assy, Inner Door, Command Center, 3-Bay "C" Size
E3BB-BC/INX	Assy, Transponder, Black, "C" Size
E3BB-RC/INX	Assy, Transponder, Red, "C" Size

Ordering Information (Continued)

Part Number	Description
Cabinet "C" Size (Continued)	
E3-INCC-CPLATE	Command Center module mounting plate, "C" Size
E3-INX-CPLATE	Transponder module mounting plate, "C" Size
E3-ILI-CPLATE	Intelligent loop module mounting plate "C" Size
Cabinet "D" Size:	FACP
Dimensions:	19 3/8" W x 41" H x 4 1/2" D (49 W x 104 H x 11 D cm)
E3BB-BD/INCC	Enclosure, Command Center, Black, "D" Size
E3BB-RD/INCC	Enclosure, Command Center, Red, "D" Size
E3ID2-D	Assy, Inner Door, 2-Bay, "D" Size
E3ID3-D	Assy, Inner Door, 3-Bay, "D" Size
E3BB-BD/INX	Enclosure, Transponder, Black "D" Size
E3BB-RD/INX	Enclosure, Transponder, Red, "D" Size
E3-INCC-D-PLATE	Command Center module mounting plate, "D" Size
E3-INX-D-PLATE	Transponder module mounting plate, "D" Size

Optional Extender Plates

AM-50 Plate	AM-50 Extender Plate
FPT-GATE-3-EXT	FPT-GATE-3 Extender Plate FACP

Optional Accessories

1100-0450	Command Center,blank plate,single size	FACP
E3-BP	Inner door panel, blank, double size	Door
90375	PM-9/PM-9G Adapter Plate Kit, Hardware	
E3-TRIMKIT-A	Trim kit for "A"/"AA" size enclosure, black	LOC
E3-TRIMKIT-A1	Trim kit for "A1" size enclosure, black	
E3-TRIMKIT-A2	Trim kit for "A2" size enclosure, black	
E3-TRIMKIT-B	Trim kit for "B" size enclosure, black	
E3-TRIMKIT-C	Trim kit for "C" size enclosure, black	
E3-TRIMKIT-D	Trim kit for "D" size enclosure, black	

Bulk Amplification

Part Number	Description
AA-100	100 W Audio Amplifier, @70.7 V_{RMS} with 120 VAC.
AA-120	120 W Audio Amplifier, @25 V_{RMS} with 120 VAC.
ACT-1	Audio coupling transformer, for audio systems w/multiple supplies.
FCI-CHG-120	Battery Charger, 25-120 A/H Gel cell.
FCI-LBB	Battery box, accommodates batteries up to 55 A/H, (Black).
Cabinet C:	
FCI-DR-C4B	Large Battery Backbox, Blank door, lock & keys, for backbox accepting 3 chassis, (Black).
FCI-DR-C4BR	Blank door, lock & keys, for backbox accepting 3 chassis, (Red).
SBB-C4	Backbox, 3 chassis, (Black)
Cabinet D:	
FCI-DR-D4B	Blank door, lock & keys, for backbox accepting 4 chassis, (Black)
FCI-DR-D4BR	Blank door, lock & keys, for backbox accepting 4 chassis, (Red)
SBB-D4	Backbox, 4 chassis, (Black)

E3 Series LOC

Description

The Gamewell-FCI, E3 Series®, Local Operating Console (LOC) is a paging component that provides emergency notification and can be remotely distributed in real-time via pre-recorded messages, live voice paging, or text messages. It is used in the following E3 Series Systems.

- E3 Series Expandable Emergency Evacuation System
- E3 Series Combined Fire and Mass Notification System to comply with the DOD, United Facilities Criteria (UFC) guidelines
- E3 Series Broadband Voice Evacuation Systems

The LOC's robust distributed messaging capabilities allow users to program the system to broadcast messages that automatically change as the situation changes. This versatile feature makes it possible for the system to simultaneously distribute different emergency communications to zones, floors, multiple buildings, large outdoor campuses or facility areas.

The Local Operating Console uses a state-of-the-art Digital Signal Processor (DSP) that produces reliable, high fidelity audio messaging and it allows live voice instructions. The Network Touchscreen Graphic Annunciator (NGA) provides the LOC with the capability to display text messaging over the network to all Local Operating Consoles within a protected area. The Addressable Switch Module (ASM-16) includes 16 programmable switches for message, control, and zone paging.

The E3 Series LOC communicates over the network, allowing full communication and control over a single pair of wires or fiber-optic cable. This E3 distributed architecture, including Style 7 wiring configuration, provides complete supervision and survivability if a fault condition occurs or the system is compromised. All LOCs on the network are supervised.

The Local Operating Console comprises the following:

- AA Cabinet with mounting patterns for the INI-VG Series
- 3-slot inner door for mounting the following:
  - One INCC-MIC paging microphone
  - One or two ASM-16s
  - One ASM-16 and one NGA

Note: Gamewell-FCI recommends you install the speakers at 4 ft. (1.2 m) or more from the microphone.

Ordering Information

Part Number	Description
E3BB-BAA	AA Cabinet
E3ID3-A	Inner Door, 3 Slots
1100-1321	INI-VGC, Voice Gateway
1100-0452	INCC-MIC, Paging Microphone
1100-0455	ASM-16, Addressable Switch Module
Optional Components	
1100-0505	NGA, Network Graphic Annunciator
Thumb lock	Thumb quarter turn latch
E3-TRIMKIT-A	Trim Ring

Local Operating Console

E3 Series LOC

Features

- Listed under UL® Standard UL2572 for Mass Notification.
- IBC Seismic Certified.
- Offers instantaneous audio or text messaging.
- Includes 16 message capacity with up to a 3 minute duration per each LOC.
- Supports up to 2 ASM-16 modules for a total of 32 switches for each LOC.
- Allows messages to be easily field-configured via a laptop computer.
- Built of 16-gauge steel backbox with a full Lexan® window and keylock on the door.
- Includes an optional thumb quarter turn latch and trim ring available.
- Provides all communication signals and control-by-event sequences connected over twisted, unshielded pair of wires or fiber-optic cable.
- Uses E3 Series distributed architecture, including Style 7 wiring configuration.
- Transmits at a network data transfer rate of 625K baud.

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Seismic Battery Bracket Kits

Part Number	Description
90516	7100-Slim 7 A/H Seismic Battery Bracket Kit E3 B-Slim 7 A/H Seismic Battery Bracket Kit
90517	7100-Slim 12 A/H Seismic Battery Bracket Kit E3 B-Slim 12 A/H Seismic Battery Bracket Kit
90518	E3 CAB-B 7 A/H Seismic Battery Bracket Kit E3 CAB-C 7 A/H Seismic Battery Bracket Kit E3 CAB-D 7 A/H Seismic Battery Bracket Kit NetSOLO NS-INX 7 A/H Seismic Battery Bracket Kit NetSOLO 7100 7 A/H Seismic Battery Bracket Kit
90519	E3 CAB-C (INX only) 12 A/H Seismic Battery Bracket Kit E3 CAB-D (INX only) 12 A/H Seismic Battery Bracket Kit NetSOLO NS-INX 12 A/H Seismic Battery Bracket Kit
90520	E3 CAB-B 18 A/H Seismic Battery Bracket Kit E3 CAB-C 18 A/H Seismic Battery Bracket Kit E3 CAB-D 18 A/H Seismic Battery Bracket Kit

Retrofit Kits

For information on the Gamewell and 7200 Retrofit Kits, refer to the following Data Sheets.

9021-60678 Gamewell Retrofit Kits Data Sheet
9021-60733 7200 Retrofit Kits Data Sheet

Specifications

Inner Door Mounting Capacity

Number Components

Cabinet A

E3ID2-A, Cabinet A, Inner Door, 2 Slots
- 1 LCD-E3 Display and
- 1 ASM-16/ANU-48

E3ID2-TA Assembly, Door, Inner, TEL-E3

E3ID3-A, Cabinet A, Inner Door, 3 Slots
- 1 NGA or ASM-16
- 2 ASM-16s/ANU-48

Cabinet AA
- 1 Microphone

Cabinet A1

E3ID-A1 Cabinet A1, Inner Door, (Included with Box)
- 1 NGA or ASM-16

Cabinet A2

E3ID-A2 Cabinet A2, Inner Door, (Included with Box)
- 1 LCD-E3

Cabinet B

E3ID2-B, Cabinet B, Inner Door, (Included with Box)
- 1 LCD-E3 Display and one ASM-16/ANU-48
- 1 NGA and one ASM-16/ANU-48

B-Slim Cabinet
- 1 LCD-E3 Display and one RPT-E3 or one DACT-E3
- 1 ILI-MB-E3 or one ILI95-MB-E3
- 1 PM-9 or one PM-9G

Inner Door Mounting Capacity (Cont'd)

Number Components

Cabinet C

E3ID2-C, Cabinet C, Inner Door, 2 Slots
- 1 LCD-E3 Display and
- 5 Any combination of ASM-16/ANU-48, NGA or Microphone Assemblies
- 1 Telephone Assembly

E3ID3-C, Cabinet C, Inner Door, 3 Slots
- 7 Any Combination of ASM-16/ANU-48, NGA, or Microphone Assemblies
- 1 Telephone Assembly

Cabinet D

E3ID2-D, Cabinet D, Inner Door, 2 Slots
- 1 LCD-E3 Display
- 11 Any Combination of ASM-16/ANU-48, or NGA or Microphone and
- 1 Telephone Assembly

E3ID3-D, Cabinet D, Inner Door, 3 Slots
- 13 Any Combination of ASM-16/ANU-48, NGA or Microphone Assemblies
- 1 Telephone Assembly

Backbox Mounting Capacity

Number Components

E3BB-BAA, Enclosure, "AA' (LOC) Size, Black
- 1 INI-VG Series Voice Gateway

E3BB-BA, A1 Size Box/Door, Black
- 1 RPT-E3 Network Repeater

E3BB-BB, B Size Box/Door, Black
- 1 PM-9/PM-9G Power Supply
- 1 ILI-MB-E3/ILI95-MB-E3 and
- 1 Additional ILI-MB-E3/ILI95-MB-E3 Loop Interface or ANX or
- 1 DACT-E3 Digital Communicator and
- 1 RPT-E3 Network Repeater

INX CAB-B Mounting Plate
- 1 PM-9 or PM-9G
- 1 INI-VGX
- 4 AM-50 Series amplifiers

E3-INCC-C Plate
- 1 PM-9/PM-9G Power Supply
- 1 INI-VG Series Voice Gateway
- 1 ILI-MB-E3/ILI95-MB-E3 Loop Interface and
- 1 Additional ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface or
- 1 DACT-E3 Digital Communicator and
- 1 RPT-E3 Network Repeater
- 1 Optional AM-50 or FPT-GATE-3 Extender Plate

Backbox Mounting Capacity

Number	Components
E3-ILI-C Plate	
1	PM-9/PM-9G Power Supply
1	ILI-MB-E3 or ILI95-MB-E3
2	Additional ILI-MB-E3/ILI95-MB-E3 or ILI-S-E3 /ILI95-S-E3 or ANX
1	DACT-E3
1	RPT-E3
1	Optional FPT-GATE-3 Extender Plate
E3-INX-C Plate	
1	PM-9/PM-9G Power Supply with one PM-9/ PM-9G Adapter Plate
1	INI-VGX Voice Gateway
1	ILI-MB-E3 Loop Interface and
1	Additional ILI-MB-E3/LI95-MB-E3/ANX
1	DACT-E3 Digital Communicator and
1	RPT-E3 Network Repeater
4	AM-50 Series Amplifier
1	Optional FPT-GATE-3 Extender Plate
E3-INCC-D Plate	
1	PM-9/PM-9G Power Supply
1	ILI-MB-E3 or ILI95-MB-E3
4	Additional ILI-E3 Series or ILI95-E3 Series or ANX
1	DACT-E3 Digital Communicator
1	RPT-E3 Network Repeater
1	INI-VG Series
1	Optional AM-50 or FPT-GATE-3 Extender Plate
E3-INX-D Plate	
1	PM-9/PM-9G Power Supply
1	ILI-MB-E3 or ILI95-MB-E3
1	DACT-E3 Digital Communicator
1	RPT-E3 Network Repeater
1	INI-VG Series
4	AM-50 Series Amplifier
1	Optional FPT-GATE-3 Plate

Backbox Mounting Capacity

Number	Components
E3BB-BD, D Size Box/Command Center (Voice), Black	
1	PM-9/PM-9G Power Supply
1	INI-VG Series Voice Gateway
4	ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface and
1	Additional ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface or
1	DACT-E3 Digital Communicator and
1	RPT-E3 Network Repeater
1	Optional FPT-GATE-3 Plate
E3BB-BD, D Size Box/Command Center, Black	
1	PM-9/PM-9G Power Supply
7	ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface and
1	Additional ILI-MB-E3/ILI95-MB-E3/ANX Loop Interface or
1	DACT-E3 Digital Communicator and
1	RPT-E3 Network Repeater
1	Optional FPT-GATE-3 Extender Plate

Optional Extender Plates

AM-50 Extender Plate	
1	AM-50-25 or AM-50-70
FPT-GATE-3 Extender Plate	
1	FocalPoint® Gateway
1	PNET-1

HPF24S6 and HPF24S8

Strobe Power Supply

Description

The HPF24S6 and HPF24S8 are compact, cost-effective, 6 amp. or 8 amp. remote power supplies with integral battery chargers. These adaptable power supplies may be connected to any 12 or 24 volt Fire Alarm Control Panel (FACP) or the power supplies may stand-alone. Primary applications include the following:

- Notification Appliance Circuits (NAC) expansion to support ADA requirements and NAC synchronization
- Auxiliary power to support 24 volt system accessories

These power supplies provide regulated and filtered 24 VDC power to four (4), notification appliance circuits, configured as either four (4), Class B (Style Y) or Class A (Style A, with ZNAC-4 Option Module). Alternately, the four outputs may be configured as follows:

- all non-resettable
- all resettable
- two non-resettable
- two resettable

The power supplies also contain a battery charger with a charging capacity of up to 18 Amp Hour batteries.

The HPF24S6 and HPF24S8 power supplies comply with the following Agency standards:

- NFPA 72 National Fire Alarm Code,
- UL Standard 864, 9th Edition for control units for Fire Alarm Systems (NAC expander mode).
- UL 1481 Power Supplies for Fire Alarm Systems (stand-alone mode).

Power Supplies with Battery Chargers

HFP24S6/8 dh1061.jpg

Features

- UL® Listed NAC synchronization using System Sensor, Cooper-Wheelock or Gentex (Commander Series) appliances
- Uses a cascade of up to ten (10), power supplies or (four (4), power supplies with Gentex) with strobe timing maintained
- Operates as a sync follower or a sync generator (default)
- Contains two (2), fully -isolated input/control circuits energized from FACP notification appliance circuit (NAC expander mode) or jumpered permanently on (stand-alone mode)
- Configured to internally house an addressable SLC control module for alarm activation
- Supports four (4), Class B (Style Y) or four (4), Class A (Style Z) (with ZNAC-4 Module) notification appliance circuits
- Provides 6.0A or 8.0A (depending on model) full load output (3.0A maximum per circuit) in NAC expander mode (UL Standard 864)
- Uses 4.0A or 6.0A continuous output in the stand-alone mode (UL Standard 1481)

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Features (Continued)

- In stand-alone mode, output power circuits are configured as resettable, (using the FACP reset switch), non-resettable, or a combination of both
- Fully regulated and filtered power output (optimal for powering four-wire smoke detectors, annunciators and other system peripherals requiring regulated/filtered power)
- Class 2 Power-Limited technology complies with UL Class 2 Power-Limited requirements
- Includes a normally-closed trouble relay
- Provides fully, supervised power supply, battery and notification appliance circuits
- Selectable earth fault detection
- AC trouble report selectable for immediate or up to an 8 hour delay
- Compatible with any UL Standard 864 fire alarm control panel which uses an industry standard, reverse polarity, and notification circuit (including unfiltered and unregulated bell power)
- Requires input trigger voltage of 9.0 -32 VDC
- Built with a self-contained compact, lockable cabinet 15” H x 14.5” W x 2.75” D (38.1 H x 36.8 W x 7.0 D cm)
- Includes an integral battery charger capable of charging up to 18 AH batteries. The cabinet has the capacity of housing 7.0 AH batteries
- Battery charger may be disabled via a DIP (Dual In-Line Package) switch for applications requiring larger batteries
- Offers fixed, clamp-type terminal blocks that accommodate up to 12 AWG (3.1 mm^2) wire

Specifications

Primary (AC) Power

- HPF24S6: 120 VAC 60 Hz, 3.2A maximum
- HPF24S8: 120 VAC 60 Hz, 3.2A maximum
- Wire size: minimum 14 AWG (2.0 mm²) with 600V insulation

Control Input Circuit

- Input Voltage: 9.0 to 32 VDC
- Input Current: 2.0 mA (16 - 32 V) per input 1.0 mA (9 - 16 V)

Trouble Contact Rating

- 5.0A at 24 VDC

Auxiliary Power Output

- Specific Application Power - 500 mA maximum

Output Circuits

- +24 VDC filtered, regulated
- 3.0A maximum for any one circuit

Specifications (Continued)

Output Circuits (Continued)

- 4.0A maximum total continuous current for all outputs (Stand-alone mode) for the HPF24S6 and 6A for the HPF24S8
- 6A or 8A, depending on the model, maximum total short-term current for all outputs (NAC Expander mode).

Secondary Power (Battery) Charging Circuit

- Supports lead-acid batteries only
- Float Charge Voltage: 27.6 VDC
- Maximum Charge Current: 1.5A
- Maximum Battery Capacity: 18 AH

Ordering Information

Part Number	Description
HPF24S6	Remote charger 6A power supply (120 VAC). Includes the main printed circuit board, transformers, red enclosure, and installation instructions
HPF24S8	Remote charger 8A power supply (120 VAC). Includes the main printed circuit board, transformers, red enclosure, and installation instructions
FCPS-24S6RB	Replacement mother board
ZNAC-4 -	Class A (Style Z) NAC option module
BAT-1270 -	Battery, 12 volt, 7.0 AH (two required)

Gamewell FCI FIRE CONTROL INSTRUMENTS
by Honeywell

PM-9

Description

PM-9 Power Supply

The Gamewell-FCI, PM-9 Power Supply is a switching power supply that provides 9 amperes of filtered and regulated 24 VDC (nominal). It provides the power to the INX Transponder assembly and all of the E3 Series components. It is a component of the following systems.

- E3 Series® Expandable Emergency Evacuation System
- E3 Series Combined Fire and Mass Notification System
- E3 Series Broadband Voice Evacuation System
- NetSOLO® System

The PM-9 has an internal battery charging circuit capable of maintaining up to 55 A/H batteries. This module is designed for use with the Gamewell-FCI distributed audio networks.

Installation

Typically, the PM-9 Module can be mounted in the following E3 Series cabinets:

- Cabinet B and D, backbox
- Cabinet C, INX-E3 sub-assembly plate
- Cabinet C, INCC-E3 sub-assembly plate
- Cabinet D, E3-INX-D Plate
- Cabinet D, E3-ILI-D Plate

For information on the installation of the PM-9, refer to the following documents:

- E3 Series Expandable Emergency Evacuation Installation/Operating Manual, P/N: 9000-0574
- PM-9 Installation Instructions, P/N: 9000-0548
- Mass Notification System Manual, P/N:LS10013-000GF-E

Specifications

Input Voltage:	120 VAC 60 Hz @ 3.5 A. max.
Output Voltage:	24 VDC (nominal) FWR
Output Current:	9 amperes
Output Current:	1 ampere battery charging current
Alarm Current:	0.050 amp
Operating Temperature:	32° to 120° F (0° to 49° C)
Relative Humidity:	0 to 93% (non-condensing) at 90° F (32° C)
Dimensions:	10 1/2” W x 5” H x 2” D (27 x 13 x 5 cm)

PM-9

Features

- Listed under UL® Standard 864, 9th Edition.
- Listed under UL Standard UL2572 for Mass Notification.
- Includes 9 ampere, filtered, regulated power supply.
- Provides 1 ampere battery charging current.
- Offers energy and space saving switching technology.
- Contains an integral battery charger capable of recharging up to 55 AH batteries. (Batteries not furnished).

Ordering Information

Part Number	Description
PM-9	Power supply
29229	AC Line Filter Kit

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LCD-SLP

Description

The Gamewell-FCI, Liquid Crystal Display, Smart Loop Panel (LCD-SLP) is a touchscreen annunciator display used with the S3 Series System. The LCD-SLP provides an easy-to-use, intuitive interface for the operator's control. The 4.3" (10.92 cm) color touchscreen display shows the following:

- System Status
- Event details
- Service modes

The following identify the LED Indicators that display on the panel.

- AC (green)
- Fire Alarm (red)
- Hazard (blue)
- Supervisory (yellow)
- Trouble (yellow)
- Silenced (yellow)

The five fully-programmable front panel switch/LED combinations provide a direct access to perform the following tasks:

- Device Bypass
- Enable/Disable Groups or Devices
- Lamp Test

The display features the following physical switches.

- Menu
- Five Programmable Switches
- System Reset
- Drift Walk Test

Installation

The LCD-SLP is adaptable for installation in either the S3 or E3® Series cabinets.

- S3 Series Cabinets
  - SLP-BB basic system enclosure
  - S3BB-BB/S3BB-RB system enclosure
- E3 Series® Cabinets
  - A2 size cabinet (E3BB-BA2, E3BB-RA2)
  - A size flush cabinet (E3BB-FLUSH-LCD)

Specifications

Operating Voltage:	24 VDC FWR
Operating Current:	0.030 amp
Alarm Current:	0.065 amp
Operating Temperature:	32° to 120° F (0° to 49° C)
Relative Humidity:	0 to 93%,non-condensing at 90° F (32° C)

LCD Touchscreen Annunciator Display

LCD-SLP

Features

- Listed per ANSI/UL® Standard 864 9th Edition.
- Provides 4.3" (10.92 cm) color touchscreen display of System Events.
- Includes five custom function buttons with LEDs for direct access to system controls.
- Offers the following installation options:
  - Locally mounted in the S3 Series panels.
  - Remotely mounted in the E3 Series, A2 cabinet or LCD Flush enclosure.
- Displays the following six LED indicators:
  - Alarm
  - Trouble
  - Supervisory
  - Hazard
  - NAC Silence
  - AC Power
- Shows the Hazard LED to indicate gas, carbon monoxide or other toxic gases.
- S3 Series (SLP) supports up to 15 LCD-SLP displays via the RS-485 serial interface.

Ordering Information

Part Number	Description
LCD-SLP	LCD Touchscreen display unit
E3BB-BA2	Remote enclosure with inner door, black, one LCD slot
E3BB-RA2	Remote enclosure with inner door, red, one LCD slot
E3BB-FLUSH-LCD	Remote flush mounting enclosure, black, LCD slot

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Gamewell FCI FIRE CONTROL INSTRUMENTS
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ILI-E3 Series

Description

ILI-MB-E3

The Intelligent Loop Interface-Main Board (ILI-MB-E3) is the main interface for the E3 Series® product line. With its state-of-the-art 32 bit RISC processor, this compact "panel on a board" provides a powerful addition to Gamewell-FCI's single pair conductor solutions. The ILI-E3 Series is used in the following systems.

- E3 Series Expandable Emergency Evacuation System
- E3 Series Combined Fire and Mass Notification System

This intuitive design provides the following features:

- 2 signaling line circuits
- local energy city box output
- 2 notification application circuits
- auxiliary power output
- auxiliary relay functions

These features, combined with the built-in network and the serial protocols, allow this module to support a host of new and existing products, resulting in a building block approach to the fire alarm panel design.

The ILI-MB-E3 is network ready and occupies 1 of 64 nodes operating at 625K baud. In addition, the Addressable Node Expander (ANX) board expands the network to 122 nodes. When this sub-assembly is integrated with proven Broadband components, the result is a flexible yet powerful integrated audio solution. When the system transmits to remote locations, the optional RPT-E3 provides the ILI-MB-E3 with valuable signal boosting and transient protection, as well as connectivity using both wire and fiber-optic cables.

The ILI-MB-E3 provides 2 signaling line circuits and terminals for the connections to up to 159 detectors, 159 modules and 159 addressable sounder bases per SLC in Velociti®. In CLIP™ mode, each SLC supports 99 detectors and 99 modules. The RS-485 interface can support a variety of peripheral devices.

The ILI-MB-E3 relay outputs include system alarm, supervisory, and system trouble contacts. The ILI-MB-E3 provides output for a local energy city master box or remote location which is non power-limited. All other wiring is Class 2 power-limited.

Intelligent Loop Interface-Main Board

ILI-MB-E3

Features

ILI-MB-E3 and ILI-S-E3:

- Listed under UL® Standard 864, 9th Edition.
- Listed under UL Standard UL2572 for Mass Notification.
- UL Listed and FM Approved for Pre-Action/Deluge and Agent Releasing.
- Network ready integral 625K baud ARCNET.
- Supports 115.2K baud RS-232.
- Provides signaling line circuits with the following:
  - Two Class A, Style 6, 7* or Class B, Style 4 circuits.
  - 40 Character user-defined text per device.
  - Capacity of 159 sensors, 159 addressable modules and 159 addressable sounder bases per circuit.
- Includes 8100 Event History Log.

*Style 7 wiring requires the use of the System Sensor M500X Isolator Modules.

ILI-MB-E3 Only:

- Automatically adjusts to any NAC End-of-Line Resistor (EOL) value (1k-55k ohm) for legacy audible/visual appliances.
- Two notification appliance circuits, Class "A", Style Z or Class B, Style Y rated at 2.0 amps. per circuit.
- RS-485 supporting 16 ASM-16 switch modules and/or ANU-48 LED driver modules.
- Alarm, trouble, and supervisory dry contacts Form "C", rated at 2 amp. @ 30 VDC (resistive).
- Supports 1 LCD-SLP display via on-board ribbon cable connector.
- RS-485 terminal supports an additional 14 LCD-SLP displays/annunciators, 6 LCD-E3 displays/annunciators, 5 LCD-7100/RAN-7100 remote LED annunciators.

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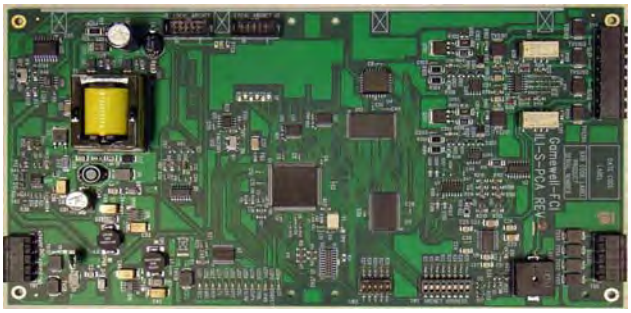

ILI-S-E3

ILI-S-E3

The Intelligent Loop Interface - Expansion Board (ILI-S-E3) provides the E3 Series control panel with 2 additional electrically isolated signaling line circuits. The layout is similar to the ILI-MB-E3 except a number of components are omitted. The ILI-S-E3 occupies one node on the Broadband network. The ILI-S-E3 provides 2 signaling line circuits and terminals for the connections to up to 159 detectors, 159 modules and 159 addressable sounder bases per SLC in Velociti mode. In CLIP mode, each SLC supports 99 detectors and 99 modules.

Installation

Typically, the ILI-MB-E3 or ILI-S-E3 can be mounted in the following E3 Series cabinets:

- Cabinet B and D, backbox
- Cabinet B, B-Slim-E3 sub-assembly plate
- Cabinet C, E3-ILI-C sub-assembly plate
- Cabinet C, E3-INCC-C sub-assembly plate
- Cabinet C, E3-INX-C sub-assembly plate
- Cabinet D, E3-INCC-D sub-assembly plate
- Cabinet D, E3-INX-D sub-assembly plate

For instructions on the installation of the ILI-MB-E3 or ILI-S-E3, refer to the following documents:

- E3 Series® Expandable Emergency Evacuation Manual, Part Number: LS10080-051GF-E
- ILI-MB-E3 Installation Instructions, Part Number: 9000-0579
- ILI-S-E3 Installation Instructions, Part Number: 9000-0569

For information on the ILI95-MB-E3 and ILI95-S-E3, refer to the ILI95-E3 Series Data Sheet, Part Number, 9021-60336.
For information on the ANX, refer to the ANX Data Sheet, Part Number, 9021-60497.

Specifications

ILI-MB-E3

Operating Current: 0.081 amp
Alarm Current: 0.150 amp max.

ILI-S-E3

Operating Current: 0.118 amp
Alarm Current: 0.119 amp

ILI-MB-E3 and ILI-S-E3

Operating Voltage: 24 VDC FWR (from the PM-9/ PM-9G Power Supply).
Operating Temperature: 32° to 120° F (0° to 49° C)
Relative Humidity: 0 to 93%, non-condensing at 90° F (32° C)

Supervised
Class 2 Power-Limited
SLC 40 Ohms maximum line impedance
0.5 µf maximum line capacitance

Ordering Information

Part Number	Description
ILI-MB-E3	Intelligent Loop Interface-Main Board
ILI-S-E3	Intelligent Loop Interface-Expansion Board

Gamewell FCI FIRE CONTROL INSTRUMENTS
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ASM-16

Description

The Gamewell-FCI, ASM-16 Addressable Switch Module serves as the point of interface between an operator and the system's audio evacuation, fire fighter intercom, and building control circuits. It is a component of the following systems:

- E3 Series® Expandable Emergency Evacuation System
- E3 Series Combined Fire and Mass Notification System
- E3 Series Broadband Voice Evacuation System
- S3 Series (Small Addressable Fire Alarm Control Panel)
- NetSOLO® System

The ASM-16 is a configurable switch input sub-assembly with 16 switches and 48 status LEDs. It may be remotely located via the RS-485 serial interface. Each ASM-16 addressable switch module has 16 push-button switches that can be programmed to serve any function the application demands.

An ASM-16 switch can be programmed to operate as any of the following functions:

- speaker circuit switch
- auxiliary control switch (using a bank of two switches, one switch each for the on-off-auto functions).
- fire fighter phone switch
- switches with custom-defined functions:
  - system reset
  - system silence
  - system acknowledge
  - all-call, phone patch
  - lamp test, alarm tone on
  - manual select, etc.

Each ASM-16 switch also has three fully programmable LEDs that appear in red, yellow, and green. These LEDs can be programmed to work in concert with their associated push-button switch or they can be programmed to work independently as status indicators (e.g. on, off, normal, etc.).

An INI-VGC, ILI-MB-E3/ILI95-MB-E3 or SLP (Smart Loop Panel) can accommodate up to 16 ASM-16 modules for a total of 256 switches and 768 LEDs.

Specifications

Operating Voltage:	24 VDC (nominal) (from the PM-9/PM-9G power supply)
Operating Current:	0.011 amp. (with no LEDs lit)
Operating Temperature:	32° to 120° F (0° to 49° C)
Relative Humidity:	0 to 93% (non-condensing) at 90° F (32° C)

ASM-16 Addressable Switch Module

Front View

Rear View

Features

- Listed under UL® Standard 864, 9th Edition.
- Listed under UL® Standard UL2572 for Mass Notification.
- Each INI-VGC supports up to 16 ASM-16 switch modules for a total of 256 switches.
- Each ILI-MB-E3/ILI95-MB-E3 supports up to 16 ASM-16 switch modules for a total of 256 switches.
- Each SLP supports up to 16 ASM-16 switch modules for a total of 256 switches.
- Each ASM-16 switch has 3 fully programmable status, indicating LEDS: red, yellow, and green.
- All switch functions are fully software programmable.
- Slip-in label inserts allow easily modified switch designations.

Ordering Information

Part Number	Description
1100-0455	Programmable Addressable Switch Module

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Gamewell FCI FIRE CONTROL INSTRUMENTS
by Honeywell

DACT-E3

Description

The Digital Alarm Communicator Transmitter (DACT-E3) is a digital communications circuit. It is an optional component of the following systems.

- E3 Series® Expandable Emergency Evacuation System
- S3 Series Small Addressable Fire Alarm Control Panel

The DACT-E3 sends digital signals over the telephone network to a central station. This module can be located in the main cabinet or remotely located via a local RS-485 serial interface.

The DACT-E3 is compatible with digital alarm communicator receivers (DACRs) that receive the following signaling formats:

- SIA DC8
- SIA DCS20
- Ademco Contact ID
- 3+1 1400 Hz
- 3+1 2300 Hz
- 4+2 1400 Hz
- 4+2 2300 Hz

In addition to the DACT-E3 being compatible with digital signaling formats, the DACT-E3 features numerous formats for communication to a central station. As a digital communicator, the DACT-E3 complies with FCC Part 8, Telecommunication Standards for DC and AC Ringer Equivalence.

Installation Instructions

The DACT-E3 is adaptable for installation in standard E3 Series and S3 Series System cabinets. Typically, the DACT-E3 module mounts on standoffs on top of the left side of the ILI-MB-E3/ILI95-MB-E3 or SLP (Smart Loop Panel) module. Either unit can be easily connected to the backbox or sub-assembly plate depending on the cabinet module.

Note: For instructions on installing the DACT-E3, refer to the following documents:

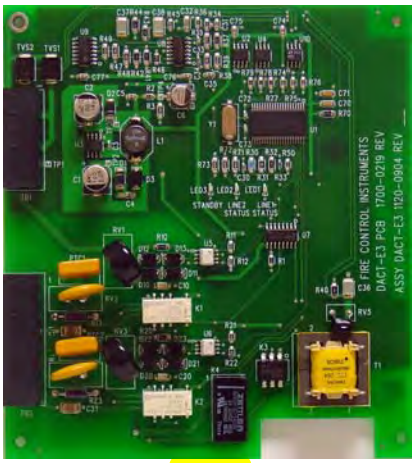
- E3 Series Expandable Emergency Evacuation Installation/Operation Manual, P/N:9020-0574
- DACT-E3 Installation Instructions, P/N:9000-0581
- S3 Series (Small Addressable Fire Alarm Control Panel) UL Listing Document, P/N:LS10005-051GF-E

Specifications

Operating Voltage:	24 VDC (from the PM-9/PM-9G power supply)
Operating Current:	0.018 amp
Alarm Current:	0.018 amp
Operating Temperature:	32° to 120° F (0 to 49° C)
Relative Humidity:	0 to 93%, non-condensing at 90° F (32° C)

E3 Series® and NetSOLO® are registered trademarks of Honeywell International Inc.
UL® is a registered trademark of Underwriters Laboratories Inc.

Digital Alarm Communicator Transmitter



DACT-E3

Features

- Listed under UL® Standard 864, 9th Edition.
- Communicates with the E3 Series, ILI-MB-E3/ILI95-MB-E3 or S3 Series SLP sub-assembly via RS-485.
- Transmits in a variety of formats (including full Contact ID).
- Transmits and verifies data to the central station.
- Offers pre-programmed dialing to the central station phone number.
- Performs on and off-hook status to the phone lines.
- Traces proper central station “ACK” and “Kiss-off” tone.
- Activates hang-up and release phone lines.
- Compatible with the IPDACT Internet Communicator.

Ordering Information

Part Number	Description
DACT-E3	Digital alarm communicator transmitter

SIGNALING
UL LISTED S1869
FM APPROVED 3025415
MEA Approved FDNY: COA #6077
7165-1703:0125
City of Chicago Approved Class1 Class2 High Rise
City of Denver Approved

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

TELGUARD

TG-7FS LTE-V

P/N: TG7LVF01

CELLULAR ALARM COMMUNICATOR FOR LTE NETWORKS

COMMERCIAL FIRE

PRODUCT FEATURES

- Certified for use on Verizon's LTE network for long, sunset-free installation.
- Meets UL 864 requirements for sole, primary or backup path communications.
- Minimizes false alarms by providing dual paths for self-tests.

The Telguard TG-7FS LTE-V is the ideal cellular alarm communications solution for commercial fire systems. The TG-7FS LTE-V transmits alarm signals from the fire panel over the digital cellular network to the designated monitoring station.

Compliant with the 2016 Edition of NFPA 72, the TG-7FS LTE-V can serve as the sole communications path for the fire alarm system. It replaces all of the landlines currently dedicated to the master control unit. On average, cellular monitoring costs the end user significantly less than a dedicated landline. For each landline replaced with a TG-7FS LTE-V, the monthly communications bill decreases.

By being able to signal failures to the central station within sixty minutes of an outage, the TG-7FS LTE-V can be installed as the sole path for commercial fire installations. For existing installations, all landlines can be swapped for a single TG-7FS LTE-V because of the new sixty minute supervision mode.

The TG-7FS LTE-V can also be installed as a backup path and upgraded to sole path at a later date.

Telguard Portal

Telguard makes adopting cellular easy with a secure Internet portal. The straightforward web interface allows security dealers and central stations to quickly and efficiently access Telguard based services 24/7. This advanced tool has multi-level user authorization and provides total account management of UL Listed Telguard cellular alarm communicators.

Telguard Cellular Service

Telguard Cellular Service provides Verizon LTE network coverage for all Telguard units. Telguard's Communication Center is UL compliant and provides seamless connectivity between the alarm panel, the Telguard family of products and the central station. Telguard Technical Support provides a single point of contact for both cellular service and Telguard product questions.

Advanced Reliability

- Features the ability to utilize multiple cellular technologies to increase availability and reduce false alarms.
- Automatic self-tests with central station notification ensure the cellular system is operating.
- Available relay output for tripping the alarm control panel when a trouble condition occurs.

TELGUARD

TG-7FS LTE-V

P/N: TG7LVF01

CELLULAR ALARM COMMUNICATOR FOR LTE NETWORKS

Power

- **Transmit Power**: 200mW in all bands.
  Power Consumption: 60mA (Standby) 250mA (Transmission).
- **Transformer**: 12VAC, 800mA UL listed plug-in.

Radio Transceiver

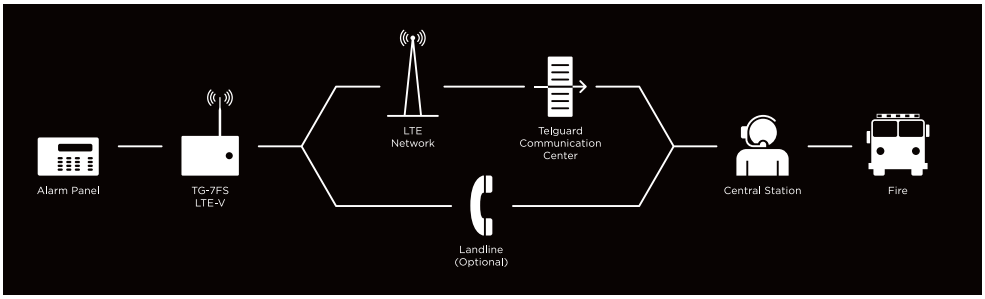
- **LTE Bands**: 4 & 13.
- **Antenna**: 9" dipole with 2dBi gain 12 ft of cable and universal mounting bracket.
- FCC part 15, 27 and 68 compliant.

Physical Details

- **TG-7FS LTE-V**: 7.5" H x 11.5" W x 3.5" D.
- **Shipping Weight**: 8lbs.
- **Operating Environment**: 0°C to +50°C; up to 95% humidity (non-condensing).

Standard Features

- Full data reporting.
- Automatic self-test (60 min. & daily).
- Power supply with battery harness.
- Locking, red metal enclosure.
- Two programmable supervisory trip outputs.
- Supports virtually all alarm formats (Contact ID, SIA2, and others) using dial capture for universal panel compatibility.
- Telephone line monitor built-in, with Standard Line Security.



Telguard technology allows full data reporting for unlimited point-to-point signal details and maximum transmitting power for superior in-building penetration.

Telguard products are easy to install, economical, and UL Listed.

Accessories

- ACD 12, ACD 35, ACD 50, ACD 100: 12/35/50/100 feet of low loss, high performance cable.
- HGDL-0: High gain directional antenna.
- EXDL-0: External antenna.

UL Listings

Commercial Fire 864
- Control units & accessories for fire alarm systems

Commercial Burglary
365 • Police Station connected burglar alarm units and systems
1610 • Central station burglar alarm units; Line security servcies

Residential
985 • Household fire warning systems
1023 • Household burglar alarm systems

* For the most current product specifications and UL Listings visit www.Telguard.com.

SECURITY SIGNALING UL LISTED

NFPA INTERNATIONAL

ESA ELECTRONIC SECURITY ASSOCIATION™ Executive Strategic Partner Gold

verizon NETWORK CERTIFIED

Honeywell | Analog and Networking Systems

RPT-E3

Network Repeater

General

The ARCNET Repeater Module (RPT-E3) is an optional component of the E3 Series® and S3 Series fire alarm control panels. It allows the following remote E3 Series and S3 Series sub-assemblies to connect to the Broadband network from remote locations:

- ILI-MB-E3/ILI95-E3 Series
- S3 Series, SLP (Smart Loop Panel-Main Board)
- ANX-SR/ANX-MR-UTP/ANX-MR-FO
- NGA

The RPT-E3 is a standard sub-assembly with network connections using unshielded, twisted-pair, copper wire. The following optional fiber-optic network connections using add-on modules are available.

- FML-E3 multi-mode fiber module (optional)
- FSL-E3 single-mode fiber module (optional)

In addition, you can use the RPT-E3 to connect remotely-mounted NGA modules to the network.

RPT-E3

Installation

The RPT-E3 is adaptable for an installation in the standard E3 Series and S3 Series cabinets. Typically, the RPT-E3 module is mounted on standoffs on the top of the right side of the ILI-MB-E3/ILI95-MB-E3/ANX modules and SLP motherboard.

For instructions on the installation of the RPT-E3, refer to the following documents:

- E3 Series® UL Listing Document, P/N: LS10080-051GF-E
- S3 Series UL Listing Document, P/N:LS10005-051GF-E
- RPT-E3-UTP Installation Instructions, P/N: 9000-0580
- FML-E3/FSL-E3 Installation Instructions, P/N:LS10046-000GF-E

Ordering Information

RPT-E3-UTP: Network Repeater, unshielded, twisted-pair

FML-E3: Multi-mode fiber-optic module for RPT-E3-UTP (one channel)

FSL-E3: Single-mode fiber-optic module for RPT-E3-UTP (one channel)

FEATURES & BENEFITS

- Listed under UL® Standard 864, 9th Edition
- Offers the 625K baud ARCNET Repeater
- Provides the capability for networked E3 Series and S3 Series sub-assemblies to connect in Styles 4 or 7 configurations
- Connects to the network via the standard unshielded, twisted-pair copper wire
- Includes add-on fiber-optic modules that allow the network connection through single or multi-mode fiber-optic cables
- Use the RPT-E3 to connect remotely-mounted NGA modules to the network

RPT-E3 Technical Specifications

SYSTEM

Operating Voltage: 24 VDC FWR
Operating Current: 0.016 amp
Alarm Current: 0.017 amp
Operating Temperature: 32° to 120° F (0° to 49° C)
Relative Humidity: 0 to 93%, non-condensing at 90° F (32° C)
Wiring Specifications:
Copper Wire: 16 to 18 AWG twisted-pair, unshielded. Up to 3,000 ft. (914.4 m) between each node.
Fiber-Optic Cable (FML-E3 only): Up to 200 microns optimized for 62.5/125 microns.
Up to 8 dB loss between nodes.
Fiber-Optic Cable (FSL-E3 only): Optimized for 9/125 micrometer cable @ 1310 nm.
Up to 30dB loss between nodes.

STANDARDS

The RPT-E3 is designed to comply with the following standard:
UL Standard: UL 864 9th Edition

AGENCY LISTINGS AND APPROVALS

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult the factory for the latest listing status.
UL Listed: S1869
FM Approved: 3025415
MEA Approved, Fire Dept. of New York: COA# 6077
CSFM: 7165-1703-0125
City of Chicago: Class 1, Class 2 and High Rise
City of Denver
ISO 9001 Certification

For a complete listing of all compliance approvals and certifications, please visit: http://www.gamewell-fci.com/en-US/documentation/Pages/Listings.aspx

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
Learn more about Gamewell-FCI's RPT-E3 and other products available by visiting www.Gamewell-FCI.com

Honeywell Gamewell-FCI
12 Clintonville Road
Northford, CT 06472-1610
203.484.7161
www.honeywell.com

9020-0609 | 0 | 09/17

Honeywell

Gamewell FCI FIRE CONTROL INSTRUMENTS

by Honeywell

FML-E3/ FSL-E3

Description

Fiber Loop Modules

The Gamewell-FCI, FML-E3 (Fiber-Optic Multi-Mode) and FSL-E3 (Fiber-Optic Single-Mode) are plug-in fiber loop modules. The two types of fiber option modules are used as one channel to transmit or receive communications with the Gamewell-FCI, RPT-E3-UTP (Network Repeater), ARCNET communication circuit.

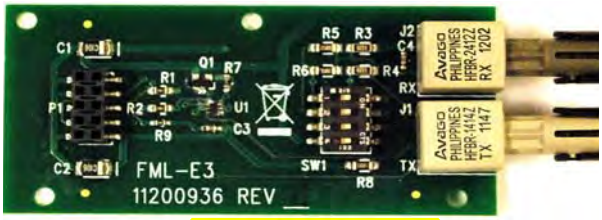
The following describe the two types of fiber option modules.

- The FML-E3 is a fiber module that allows the multi-mode fiber to network between nodes. It features ST-style connectors with a maximum attenuation of 8db with 62.5/125 micrometer cable.
- The FSL-E3 is a fiber module that allows the single-mode fiber to network between nodes. It features LC-style connectors with a maximum attenuation of 30db with 9/125 micrometer cable.

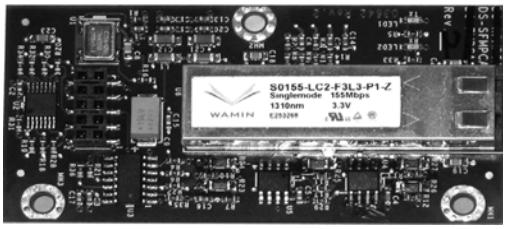
Each fiber loop module can Transmit (TX) or Receive (RX) fiber-optic cable connecting to the RPT-E3-UTP. Up to two fiber loop cards can be added to the RPT-E3-UTP, and both cards may be combined in the same configuration.

Installation

The FML-E3/FSL-E3 modules are designed to be plugged-into their designated spots on the RPT-E3-UTP.



FML-E3 (Multi-Mode Fiber)



FSL-E3 (Single-Mode Fiber)

Specifications

	FML-E3	FSL-E3
Connections:	ST style	LC style
Cable type:	62.5/125 micrometers	9/125 micrometers
Operating Current:	0.053 amp	0.079 amp
Alarm Current:	0.053 amp	0.079 amp
Operating Temperature:	32° to 120° F (0° to 49° C)	
Relative Humidity:	0 to 93%,non-condensing at 90° F (32° C)	

Features

- Listed per ANSI/UL® Standard 864 9th edition.
- FML-E3 features ST-style connectors with a maximum attenuation of 8 dB with 62.5/125 micrometer cable
- FSL-E3 features LC-style connectors with a maximum attenuation of 30db with 9/125 micrometer cable.
- Offers the option to combine single and multi-mode modules on the same network card.
- Provides a simple, plug-in card installation.

Ordering Information

Part Number	Description
FML-E3	Fiber Loop Module - Multi-mode fiber, single TX or RX channel for RPT-E3-UTP
FSL-E3	Fiber Loop Module - Single-mode fiber, single TX or RX channel for RPT-E3-UTP
RPT-E3-UTP	Network Repeater, unshielded twisted-pair for E3 or S3,optional FML-E3 or FSL-E3 fiber modules

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SIGNALING UL LISTED S1869 FM APPROVED MEA FDNY: COA-#6162 7165-1703:0176 Class 1 City of Chicago Approved THE VMC GROUP Reference Certificate of Compliance VMA-45894-02C

ISO 9001 CERTIFIED ENGINEERING & MANUFACTURING QUALITY SYSTEMS

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

Honeywell | Voice Evacuation

INI-VG Series

Intelligent Network Interface Voice Gateway

General

The INI-VG Series (Intelligent Network Interface-Voice Gateway) is a network interface with superior Audio and Command/Control that is used for E3 Series fire alarm and voice evacuation systems. The modular design allows the INI-VG Series to be used in any type of system configuration to function as a voice network interface for any of the following:

- Fire Command Center
- Digital Audio Voice Transponder
- Analog Audio Voice Transponder
- Autonomous Control Unit (ACU) for Mass Notification
- Local Operating Console (LOC) for Mass Notification

With a Class B signaling line circuit (SLC), the INI-VG can monitor and control up to sixteen AOM-TELF telephone modules to use with the fire fighter telephones or serve as value Local Operating Consoles (LOC). In addition, it can support up to 16 AOM-2SF, signal output modules that can be used for distributed audio control.

Networked through fiber-optics and/or twisted-pair wire, the INI-VG Series resides on the E3 Series and/or S3 Series network, represented as a node with fully independent control. Each INI-VG Series provides its own internal recorded message storage that operates as a redundant back-up in case another panel is no longer functional.

Each version of the INI-VG Series features a unique functionality that can operate as any of the following, depending on how each version is used with the application:

- Digital Audio Voice Transponder (INI-VGX) connects up to three main amplifiers and one back-up amplifier to control over 150 watts of audio per board.
- Analog Audio Voice Transponder (INI-VGE) connects to analog bulk amplifiers and distributes audio using 16 AOM-2SF modules.
- Fire Command Center (INI-VGC) connects hand-held microphones and main fire fighter telephones.

INI-VG Series

FEATURES & BENEFITS

- Listed under UL® Standard 864, 9th Edition
- Listed under UL Standard UL2572 for Mass Notification
- Supports a network data transfer rate at 625K baud
- Controls all communication signals and control-by-event sequences over twisted, unshielded pair of wires or fiber-optic cable
- All INI-VG Series Modules connect to a voice page microphone and fire fighter's handset
- Uses advanced Digital Signal Processor (DSP) technology that provides efficient audio compression and filtering
- Offers the following fiber-optic plug-in modules used for fiber-optic connectivity
  - FML-E3 (fiber-optic multi-mode)
  - FSL-E3 (fiber-optic single-mode)
- Supports Distributed Architecture, including Style 7 wiring configuration, that allows system components to continue normal operation with NO loss of function during single line fault conditions
- Provides Redundant Command Centers with a microphone and a fire fighter's handset which can easily be configured by adding INCCs

INI-VGC

The INI-VGC Voice Gateway Module is optimized to provide command and control functions for the INCC Command Center. The INCC serves as the point of interface between an operator and the system's audio evacuation, fire fighter intercom, and building control circuits.

A typical INCC assembly consists of the following:

- an Intelligent Network Interface-Voice Gateway (INI-VGC) Module
- one or more Addressable Switch Modules (ASM-16)
- a Voice Page Microphone (INCC-MIC)

Each INI-VGC can support up to 16 ANU-48 LED Driver Modules or ASM-16s for a total of 256 fully programmable switches and 768 LEDs that light in red, yellow, and green.

The INI-VGC occupies a single node on the E3 Broadband network and it is connected by a single, pair of twisted, unshielded wire, fiber-optic cable or any combination of the two. The INCC Command Center's INI-VGC module also provides connections for an optional fire fighter telephone handset.

The INI-VGC is a fully digital voice/tone generator using state-of-the-art Digital Signal Processing (DSP) technology to produce superior audio signals. The INI-VGC provides an output to a local speaker for message verification and testing.

INI-VGE

The INI-VGE Voice Gateway Module provides an audio interface to the bulk analog amplifiers and command and control functions for the INCC Command Center.

A typical INCC assembly consists of the following:

- an Intelligent Network Interface-Voice Gateway (INI-VGE) Module
- one or more Addressable Switch Modules (ASM-16)
- a Voice Page Microphone (INCC-MIC)

Each INI-VGE can support up to 16 ANU-48 LED Driver Modules or ASM-16s for a total of 256 fully programmable switches and 768 LEDs that light in red, yellow, and green.

The INI-VGE occupies a single node on the E3 Series Classic network and is connected by a single pair of twisted, unshielded wire, fiber-optic cable or any combination of the two. The INCC Command Center's INI-VGE module also provides connections for an optional fire fighter telephone handset. The INI-VGE's one Signaling Line Circuit (SLC) loop supports the following:

- 16 remote Fire Fighter Phones
- 32 Supervised Audio Control Relays

The INI-VGE is a fully digital voice/tone generator using state-of-the-art Digital Signal Processing (DSP) technology to produce superior audio signals. The INI-VGE provides an audio output capable of driving up twenty 100 watt (AA-100) or 120 watt (AA-120) amplifiers.

INI-VGX

The INI-VGX Transponder Voice Gateway is a component of the E3 Broadband Audio Evacuation System and an optional component of the E3 Series Expandable Emergency Evacuation System. It is a multi-function module that incorporates the following:

- Software-programmable multi-channel digital audio applications.
- One Class B, Style 4 Signaling Line Circuit (SLC) supporting up to 32 addressable speaker circuits (AOM-2SF) and 16 addressable phone circuits (AOM-TELF).
- Supports up to 150 watts of audio power (using the AM-50 Series amplifiers operating at 50 watts of power @ either $25V_{RMS}$ or $70.7V_{RMS}$ output) with backup amplifier support.
- Offers a sixteen message capacity with up to 3 minute total duration per INI-VGX. The messages are easily field-configured via a laptop computer.
- Network interface using twisted, unshielded wire or fiber-optic cable.
- Local fire fighter phone riser.

The INI-VGX provides command and control for up to four AM-50 Series amplifiers, operating at 50 watts of power @ either $25V_{RMS}$ or $70.7V_{RMS}$ audio output (up to 150 W of audio may be delivered at any given time). The amplifiers are installed in a single cabinet. The INI-VGX uses advanced Digital Signal Processing (DSP) technology for audio compression and filtering. This feature allows the E3 Series Broadband System to produce superior clarity for intelligible LIVE voice paging. The background noise is automatically filtered during voice paging and fire fighter communications which increases the audibility and eliminates the need for Push-to-Talk devices.

INI-VG Series Technical Specifications

SPECIFICATIONS

INI-VGC, INI-VGE and INI-VGX:
Operating Voltage: 24 VDC (nominal) from the PM-9/PM-9G Power Supply
Operating Current: 0.150 amp. supervisory and alarm
Operating Temperature: 32 - 120° F (0 - 49° C)
Relative Humidity: 0 to 93% (non-condensing)
Supervised
Class 2 Power-Limited
Protocol: Asynchronous with half-duplex data flow

Wiring Specifications:
INI-VG Series (Third Generation Voice Gateway and Legacy-UTP Models):
Copper Wire: 16 to 18 AWG twisted-pair, unshielded. Up to 3,000 ft. (914.4 m) between each node.
Fiber-Optic Cable: Up to 200 microns (optimized for 62.5/125 microns). Signal loss up to 8 dB loss between each node.

TEMPERATURE AND HUMIDITY RANGES

This system meets NFPA requirements for operation at 0 – 49°C/32 – 120°F and at a relative humidity 93% ± 2% RH (non-condensing) at 32°C ± 2°C (90°F ± 3°F). However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and its peripherals be installed in an environment with a normal room temperature of 15 – 27°C/60 – 80°F.

ORDERING INFORMATION

INI-VG Series (Third Generation-Voice Gateway Models):
INI-VGC: (Command Center Voice Gateway with unshielded twisted-pair wire networking, optional fiber-optic module connection
INI-VGE: Classic Built Voice Gateway with unshielded twisted-pair wire networking, optional fiber-optic module connection.
INI-VGX: Voice Transponder Gateway with unshielded twisted-pair wire networking, optional fiber-optic module connection.
FML-E3: Fiber-optic module, multi-mode fiber connector, single channel
FSL-E3: Fiber-optic module, single-mode fiber connector, single channel

INI-VG Series Legacy Models:
1100-1321: INI-VGC-FO (Command Center Voice Gateway-fiber-optic module)
1100-1322: INI-VGC-UTP (Command Center Voice Gateway-unshielded twisted-pair only)
1100-1325: INI-VGE-FO (Classic Bulk Voice Gateway-fiber-optic module)
1100-1326: INI-VGE-UTP (Classic Bulk Voice Gateway-unshielded twisted-pair only)
1100-1323: INI-VGX-FO (Voice Transponder Gateway-fiber-optic module)
1100-1324: INI-VGX-UTP (Voice Transponder Gateway-unshielded twisted-pair only)

STANDARDS

The INI-VG Series is designed to comply with the following standards:
UL Standards: UL 864 9th Edition
UL 2572 for Mass Notification

AGENCY LISTINGS AND APPROVALS

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult the factory for the latest listing status.
UL Listed: S1869
S1949
2572 for Mass Notification
FM Approved: 30006578
MEA Approved FDNY: COA #:-6077
CSFM: 7165-1703:125
City of Chicago Approved: Class 1 Class 2 High Rise
City of Denver Approved
ISO 9001 Certification

For a complete listing of all compliance approvals and certifications, please visit: http://www.gamewell-fci.com/en-US/documentation/Pages/Listings.aspx

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
Learn more about Gamewell-FCI's INI-VG Series and other products available by visiting www.Gamewell-FCI.com

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12 Clintonville Road
Northford, CT 06472-1610
203.484.7161
www.honeywell.com

9020-0648 | J | 10/18

Gamewell FCI FIRE CONTROL INSTRUMENTS

by Honeywell

AM-50 Series

Description

The Gamewell-FCI, AM-50 Series amplifiers are a 50 watt, digital, switching power amplifier. The following lists the 2 types of AM-50 Series amplifiers that may be ordered.

- The AM-50-25 amplifier produces 25 V_{RMS} audio output.
- The AM-50-70 amplifier produces 70.7V_{RMS} audio output.

The amplifiers are components of the following E3 Series® Systems.

- E3 Series Expandable Emergency Evacuation System
- E3 Series Combined Fire and Mass Notification System
- E3 Series Broadband Voice Evacuation System

WARNING: AM-50 Series Amplifiers Node Restriction:

The INI-VGX can support up to 4 AM-50 Series amplifiers with the same output voltage. However, you cannot wire an AM-50-25 amplifier and an AM-50-70 amplifier to the same INI-VGX Voice Gateway Node.

Each AM-50 Series amplifier provides 2 speaker circuits that can be wired Style Y (Class “B”) or Style Z (Class “A”). The terminal connections can accommodate up to 12 AWG, twisted-pair, shielded wire. Both speaker circuits produce a combined total of 50 watts of power. The 50 watts of power can be divided between the 2 integral Class A/B speaker circuits. The 2 speaker circuits may be individually activated and supervised by an INI-VGX Transponder Voice Gateway.

The AM-50 Series amplifier can be programmed to broadcast 16 messages generated from its local INI-VGX Voice Gateway. In addition, the AM-50 Series amplifiers produce superior clarity for intelligible LIVE voice paging.

Installation

As many as 4 AM-50 Series amplifiers can be installed in the following cabinets when supervised and controlled by an INI-VGX Voice Gateway.

- Cabinet B, INX CAB-B
- Cabinet C, INX-CAB-C
- Cabinet D, INX-CAB-D

The AM-50 Series amplifiers can be installed using the AM-50 Extender Plate whenever the E3 Series control panel is used in conjunction with the Autonomous Control Unit of the E3 Series Combined Fire and Mass Notification System.

- Cabinet C, E3 INCC-CAB-C

For additional information, refer to the E3 Series Combined Fire and Mass Notification Data Sheet, P/N:9021-60758

AM-50 Series Amplifiers

AM-50-25

AM-50-70

Features

- Listed under UL® Standard 864, 9th Edition.
- Listed under UL Standard UL2572 for Mass Notification.
- Provides digital, switching amplifier technology.
- Produces 50 watts of digital power.
- Includes 2 speaker circuits, wired Style Y (Class B) or Style Z (Class A).
- Up to 4 AM-50 Series amplifiers with the same output voltage can be controlled by the INI-VGX voice gateway.

SIGNALING UL LISTED S1869 FM APPROVED 3017416 MEA Approved FDNY: COA #6077 7165-1703:0125 City of Chicago Approved Class 1 Class 2 High Rise City of DENVER Approved

ISO 9001 CERTIFIED ENGINEERING & MANUFACTURING QUALITY SYSTEMS

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

INCC-MIC

Gamewell FCI FIRE CONTROL INSTRUMENTS by Honeywell

Description

Paging Microphone Module

The Gamewell-FCI, INCC-MIC Paging Microphone Module is a microphone interface used for paging. It is a component of the following Systems:

- NetSOLO® Broadband System
- E3 Series® Combined Fire and Mass Notification System
- E3 Series Broadband Voice Evacuation System

The INCC-MIC microphone provides a cost-effective microphone interface module for paging. Installed with the ASM-16 Addressable Switch Module, it provides easy paging to selected speaker zones with visual indications of paging and zone status.

Installation

The INCC-MIC Paging Microphone Module can be installed in any of the following types of E3 Series cabinets:

- Cabinet AA
- Cabinet B
- Cabinet C
- Cabinet D

Note: Gamewell-FCI recommends that you install the speakers at 4 ft. (1.2 m) or more from the microphone.

Specifications

INCC-MIC	Paging Microphone Module
Microphone Box	Durable gauge steel construction with microphone holder
Dimensions:	5.5” W x 6.5” H x 2.75” D (14 W x 16.5 H x 7 D cm)

INCC-MIC

Features

- Listed under UL® Standard UL2572 for Mass Notification.
- Delivers audio feedback cancellation.
- Contains a supervised microphone.
- Provides status bit activation when the microphone is in use.
- Offers an easy installation.
- Built with a pre-assembled microphone box and a microphone holder.
- Includes a terminal block with an easy-to-use plug-in cable.

Ordering Information

Part Number	Description
1100-0452	Paging Microphone Module

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UL LISTED S1869
MEA Approved FDNY: COA-#6077

Gamewell FCI FIRE CONTROL INSTRUMENTS

by Honeywell

NGA

Description

The Gamewell-FCI, NGA LCD Graphic Annunciator is a powerful, software programmable, touch-screen, remote annunciator. It is used with the following Gamewell-FCI systems.

- E3 Series® Expandable Emergency Evacuation System
- E3 Series Combined Fire and Mass Notification System
- E3 Series Broadband Voice Evacuation System

The bright, back-lit ¼" VGA display is supplemented with an intuitive, easy-to-use touch-screen interface that provides the following features.

- Up to 512 user-defined messages may be configured.
- Messages may be up to 77 characters in length.
- Display font and color may be selected for each message.

The NGA mounts in the following enclosures or it can be remotely located.

- E3 Series Fire Command Center
- E3 Series Broadband Voice Command Center
- ACU Main Command Center
- E3 LOC Remote Command Center

It occupies one standard slot in the cabinet and directly connects to the INI-VGC or RPT-E3 which eliminates the need for a separate ARCNET interface. The NGA occupies one node on the Broadband network.

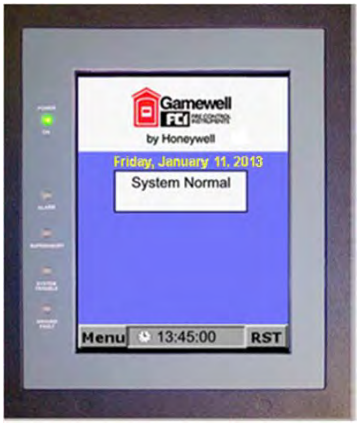
The back-lit LCD display indicates events stored in the System Event Log, the status of analog addressable monitor and control points and provides diagnostic fault codes/ messages.

NGA Touchscreen Tabs and Buttons

The attractive, state-of-the-art display is user-friendly, easy-to-read and affords the end-user with the means to perform numerous functions via the touch-screen feature which is software programmable. The following list the switch and system maintenance functions.

- MNS Alarm
- MNS Trouble
- MNS Supervisory
- Fire Reset
- MNS Reset
- Fire Alarm
- Fire Trouble
- Fire Supervisory
- Alarm Acknowlege
- Text Message
- Signal Silence
- Menu
- Scroll Up
- Scroll Down

NGA Network Graphic Annunciator



NGA

Features

- Listed under UL® Standard 864, 9th Edition.
- Listed under UL Standard UL2572 for Mass Notification.
- 1/4" VGA display multipurpose touchscreen provides the following options:
  - Up to 512 user-defined messages may be configured.
  - Messages can be up to 77 characters in length.
  - Display font and color may be selected for each message.
- Software programmable touch-screen interface.
- Mounts in the following command center mounting spaces or enclosures.
  - E3 Series Expandable Emergency Evacuation System
  - E3 Series Broadband Voice Evacuation Systems
  - E3 Series Combined Fire & Mass Notification System
- 625K baud ARCNET communications.
- User-friendly design.
- Includes an RS-232 interface.

SIGNALING UL LISTED S1869 FM APPROVED 3017416 MEA Approved FDNY: 7165-1703:0125 COA #6077 City of Chicago Approved Class1 Class2 High Rise City of Denver Approved

NGA LEDs

Additional LEDs located on the display panel perimeter indicate the following conditions.

- Power On
- System Trouble
- Ground Fault
- Alarm
- Supervisory

Figure 1 illustrates the NGA Screen with an MNS Alarm Event.

Figure 1 NGA Screen with MNS Alarm Event

Figure 2 illustrates the NGA System Reset screen for an Inactive Fire/MNS Event.

Figure 2 NGA Reset Screen for Inactive Fire/MNS Buttons

Specifications

Operating Voltage:	24 VDC from the PM-9/PM-9G power supply
Operating Current:	0.200 amp*
Alarm Current:	0.200 amp
Operating Temperature:	32° to 120° F (0° to 49° C)
Relative Humidity:	0-93% non-condensing at 90° F (32° C)

*Normal operating current. During power failure, current drops to 0.045 amp, since the back light is extinguished.

Ordering Information

Part Number	Description
1100-0505	Network graphic annunciator

Gamewell FCI FIRE CONTROL INSTRUMENTS
by Honeywell

Batteries - Battery Cabinet

Description

Battery Cabinet

The Model BC Battery Cabinet is UL Listed and finished in textured red or beige to match the various Gamewell-FCI control panels. The cabinet will house up to four (4) model B-31 or two (2) model B-55 batteries.

The heavy duty cabinet, constructed of 16 gauge steel, is phosphate treated and primed with zinc chromate prior to painting. Knockouts are located at each end of the cabinet. The cabinet features a hinged, locked cover which is keyed alike with Gamewell-FCI control panels.

Batteries

The rechargeable batteries are of sealed lead calcium maintenance-free construction with a fully gelled electrolyte in a polypropylene case. These batteries will not leak or spill even if left upside down for extended periods of time.

Electrical Specifications

Nominal voltage:	12 volts
Charging voltage	
Float	13.5 - 13.8 VDC
Cycle	14.4 - 14.8 VDC
Operating Temperature Range	
Discharge	-76° F to +122° F (-60° C to +50° C)
Charge	-4° F to +122° F (-20° C to +50° C)

12 Volt - Sealed Lead Acid Rechargeable

BC-1 Cabinet

B-1.9R

B-7R

B-17R

B-31, B-55

Features

- Long life
- Completely sealed
- Charge and discharge in any position
- Low self discharge
- Maintenance Free

Ordering Information

Part Number	Description
1100-0653	BC-1 Battery Cabinet, Beige
1100-0654	BC-1R Battery Cabinet, Red
100-2910A	B-1.9R Sealed lead calcium battery, 1.9AH
100-2311A	B-7R Sealed lead calcium battery, 7 AH
100-2010A	B-17R Sealed lead calcium battery, 17 AH
100-2610A	B-31 Sealed lead calcium battery, 31 AH
100-2710A	B-55 Sealed lead calcium battery, 55AH

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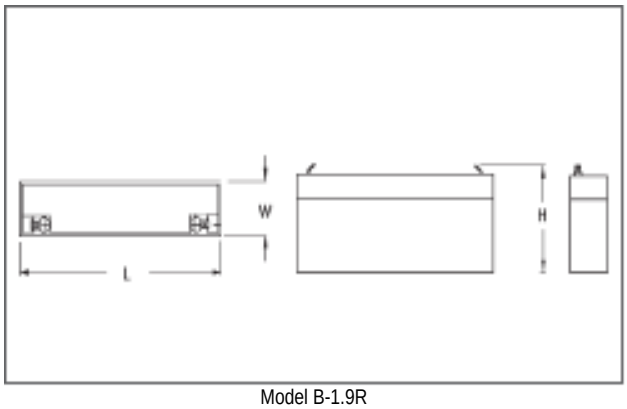
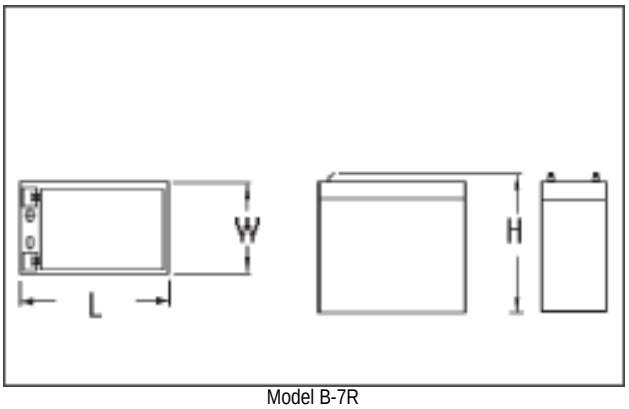
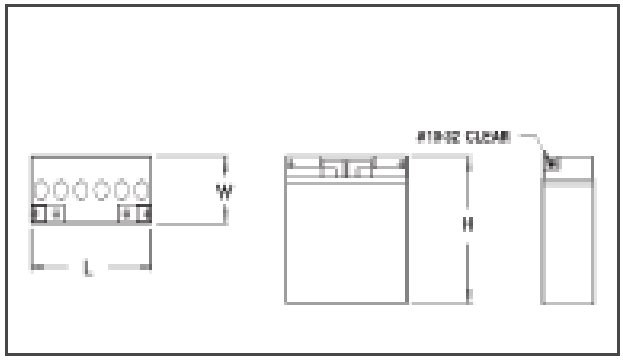


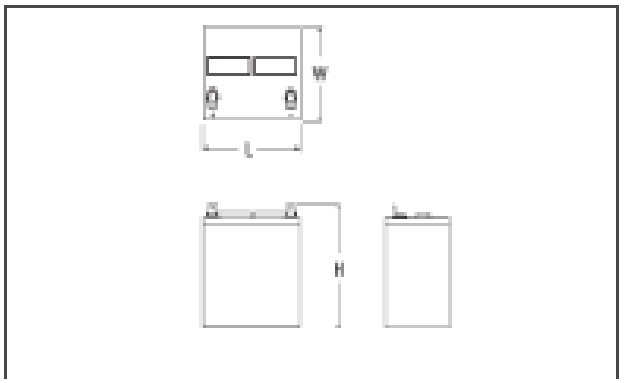
Model B-1.9R



Model B-7R



Model B-17R



Models B-31, B-55

Model	Capacity (20 hr. rate)	Terminal Type	Dimensions	Weight
B-1.9R	1.9 AH	Faston tab ".187" series	7" L x 2.6" H x 1.34" W (17.78 cm L x 6.6 cm H x 3.4 cm W)	1.9 lbs. (0.86 kg)
B-7R	7 AH	Faston tab ".187" series	5.95" L x 3.95" H x 2.6" W (15.11 cm L x 10.03 cm H x 6.6 cm W)	5.75 lbs. (2.61 kg)
B-17	17 AH	Terminal posts w/5 mm nut and bolt connectors	7.13" L x 6.57" H x 2.99" W (18.11 cm L x 16.69 cm H x 7.59 cm)	13.2 lbs. (5.99 kg)
B-31R	31 AH	"L" blade w/6.4 mm hole	7.75" L x 7.3" H x 5.1" W (19.69 cm L x 18.54 cm H x 12.95 cm)	24 lbs. (10.89) kg
B-55	55 AH	"L" blade w/6.4 mm hole at negative, 8.9 mm sq. cutout at positive	10.25" L x 8.75" H x 6.8" W (26.04 cm L x 22.23 cm H x 17.27 cm W)	39 lbs. (17.69 kg)
BC-1			22" L x 10" H x 8.81" W (55.88 cm L x 25.4 cm H x 23.38 cm W)	19 lbs. (8.62 kg)

Gamewell FCI FIRE CONTROL INSTRUMENTS
by Honeywell
12 Clintonville Road Northford, CT 06472-1610 USA
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FPT-GATE-3 Extender Plate Installation Guide

PN 53832:A 05/21/10 ECN 10-182

CAUTION: STATIC SENSITIVE EQUIPMENT
THIS EQUIPMENT IS SENSITIVE TO STATIC ELECTRICITY. IT MAY BE DAMAGED IF NOT PROPERLY HANDLED. TRANSPORT AND STORE THIS UNIT IN A STATIC-SHIELDING BAG.
FAILURE TO OBSERVE THIS REQUIREMENT COULD CAUSE LATENT DAMAGE TO THE EQUIPMENT WHICH MIGHT NOT MANIFEST ITSELF UNTIL AFTER THE EQUIPMENT IS PLACED IN SERVICE.

CAUTION: DISCONNECT ALL POWER
REMOVE ALL SOURCES OF POWER BEFORE SERVICING, REMOVING OR INSTALLING ANY UNITS.

Section 1: Description

The FPT-GATE-3 Extender Plate is an optional plate that can be used to mount the FPT-GATE-3 Gateway in the E3 Series® Modular System. The FPT-GATE-3 Extender Plate can be installed as an add-on plate to the following E3 Series Cabinet C and D plates.

- Cabinet C, E3-ILI-C plate
- Cabinet C, E3-INCC-C Plate
- Cabinet D, E3-INX-D plate
- Cabinet D, E3-INCC-D plate

Section 2: Installation

All components of the E3 Series® System should be installed per the following requirements:

- Installations are to be indoors only, in dry locations, protected from rain, water, and rapid changes in temperature that could cause condensation. Equipment must be securely mounted on rigid, permanent walls.
- Operating temperature shall not exceed the range of 32° to 120° F (0 to 49° C).
- Operating humidity not to exceed 93% non-condensing at 90° F (32° C).
- There should be adequate space around the installation to allow easy access for operation and servicing.
- All sub-assemblies and components are to be located in compliance with local and national codes.
- All installation field wiring shall be in compliance with local and national codes.

1. Remove the FPT-GATE-E3 Extender Plate from its shipping carton.
2. Visually inspect the unit for damage.

   If any components are damaged, notify the shipping carrier immediately. Report missing components to Gamewell-FCI Customer Service.
3. Use the Hardware Kit provided with the unit.
4. Refer to Sections 2.1 through 2.3 for the installation instructions.

NOTE 1: In the cabinet backbox, the FPT-GATE-3 Extender Plate can be installed in the space reserved for the batteries. If the batteries are installed in the same location, relocate the batteries to a separate battery box.

NOTE 2: For additional information on the FPT-GATE-E3 Extender Plate installation, refer to the *E3 Series® Expandable Emergency Evacuation System Installation/Operation Manual, P/N 9000-0574.*

2.1 Cabinet C, FPT-GATE-3 Extender Plate Installation

1. Mount the FocalPoint® Gateway (FPT-GATE-3) sub-assembly over the screws on the Cabinet C or Cabinet D, FPT-GATE-3 Extender Plate and secure with four (4), screws (#4-40 x 1/4" SEMS) in the four-hole mounting pattern as shown in Location 1 of Figure 2.1.1.
2. Mount the PNET-1 using the nut (#6 HEX KEPS) onto the FPT-GATE-3 Extender Plate as shown in Location 2 of Figure 2.1.1.
3. Mount the PNET-1 ground strap to the FPT-GATE-3 Extender Plate using the nut (#6 HEX KEPS) as shown in Location 3 of Figure 2.1.1.
4. Place any of the following plates over the FPT-GATE-3 Extender Plate. To secure the plate, use two (2),#10-32 nuts and insert the two nuts in the two-hole mounting pattern as shown in Location 4 of Figure 2.1.1.
    - Cabinet C, E3-ILI-C plate
    - Cabinet C, E3-INCC-C Plate
    - Cabinet D, E3-INX-D plate
    - Cabinet D, E3-INCC-D plate

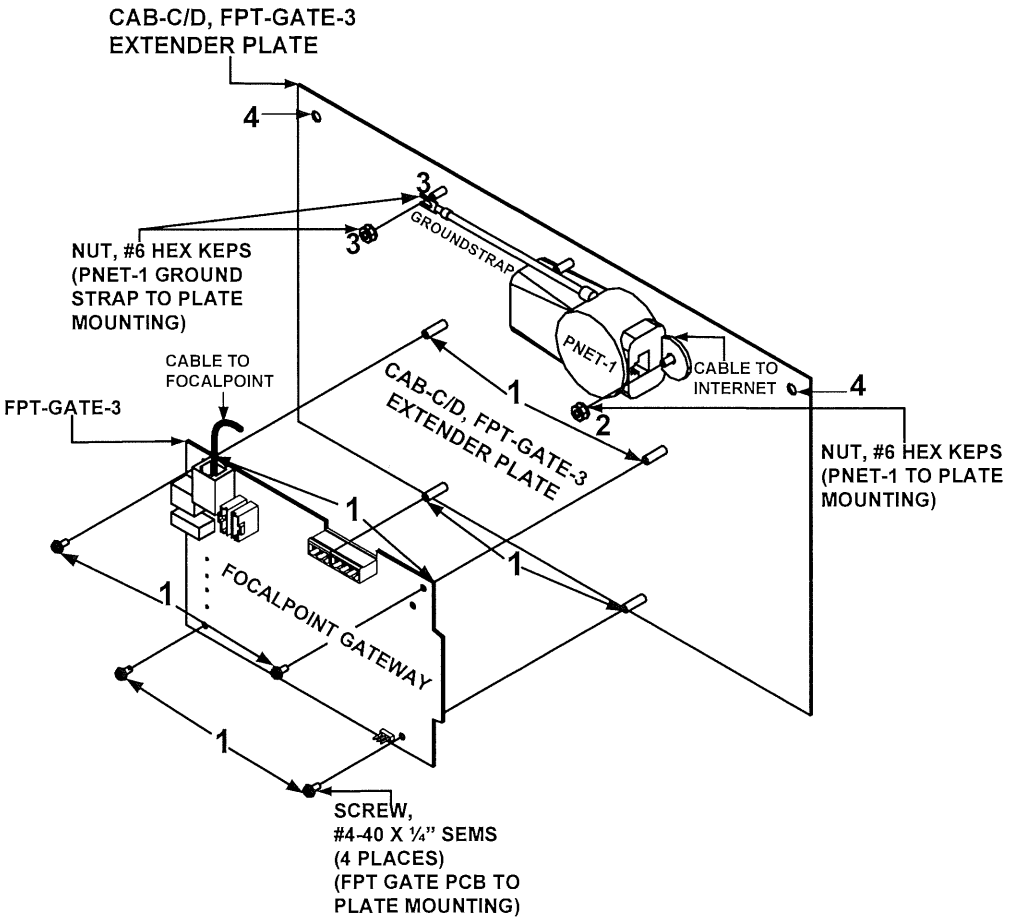


Figure 2.1.1 FPT-GATE-3 Extender Plate Installation

2.2 Cabinet C, FPT-GATE-3 Extender Plate to the Backbox Installation

1. If no batteries are required, install the FPT-GATE-3 Extender Plate to the Cabinet C backbox.
2. Mount the FPT-GATE-3 Extender Plate to any of the following sub-assembly plates and secure with two (2), #10-32 nuts as shown in Locations 5 and 6 of Figure 2.2.1.
   - Cabinet C, E3-ILI-C plate
   - Cabinet C, E3-INCC-C Plate
3. Install any of the above Cabinet C sub-assembly plates and the FPT-GATE-3 Extender Plate on the studs in the backbox and secure with six (6), #10-32 nuts as shown in Locations 1 through 6 of Figure 2.2.1.

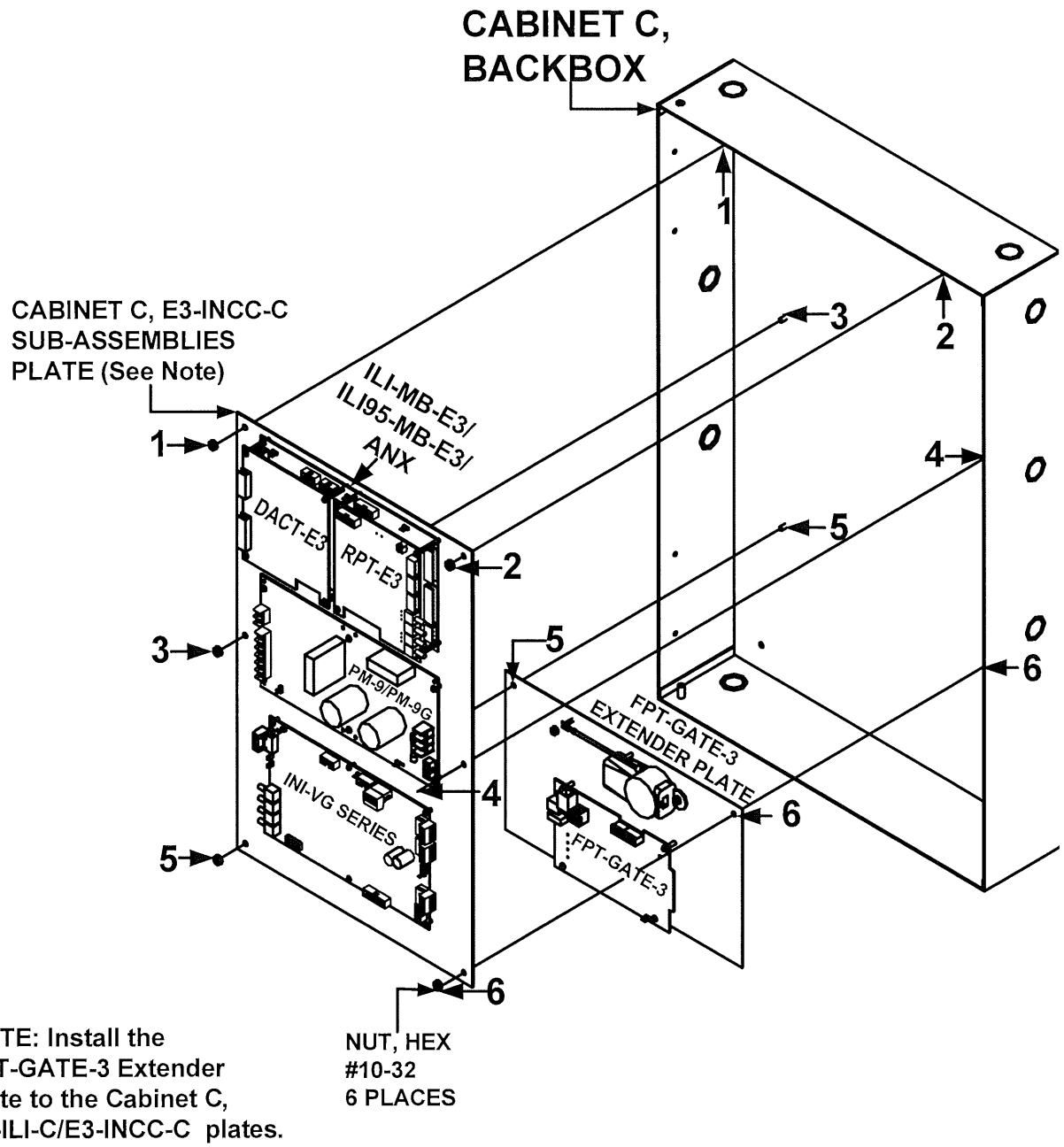


Figure 2.2.1 Cabinet C, FPT-GATE-3 Extender Plate to the Backbox Installation

2.3 Cabinet D, FPT-GATE-3 Extender Plate to the Backbox Installation

1. If no batteries are required, install the FPT-GATE-3 Extender Plate to the Cabinet D backbox.
2. Mount the FPT-GATE-3 Extender Plate to any of the following sub-assembly plates and secure with two (2), #10-32 nuts as shown in Locations 7 and 8 of Figure 2.3.1.
   - Cabinet D, E3-INX-D plate
   - Cabinet D, E3-INCC-D plate
3. Mount any of the above Cabinet D sub-assembly plates and the FPT-GATE-3 Extender Plate on the studs in the backbox and secure with eight (8), #10-32 nuts as shown in Locations 1 through 8 of Figure 2.3.1.

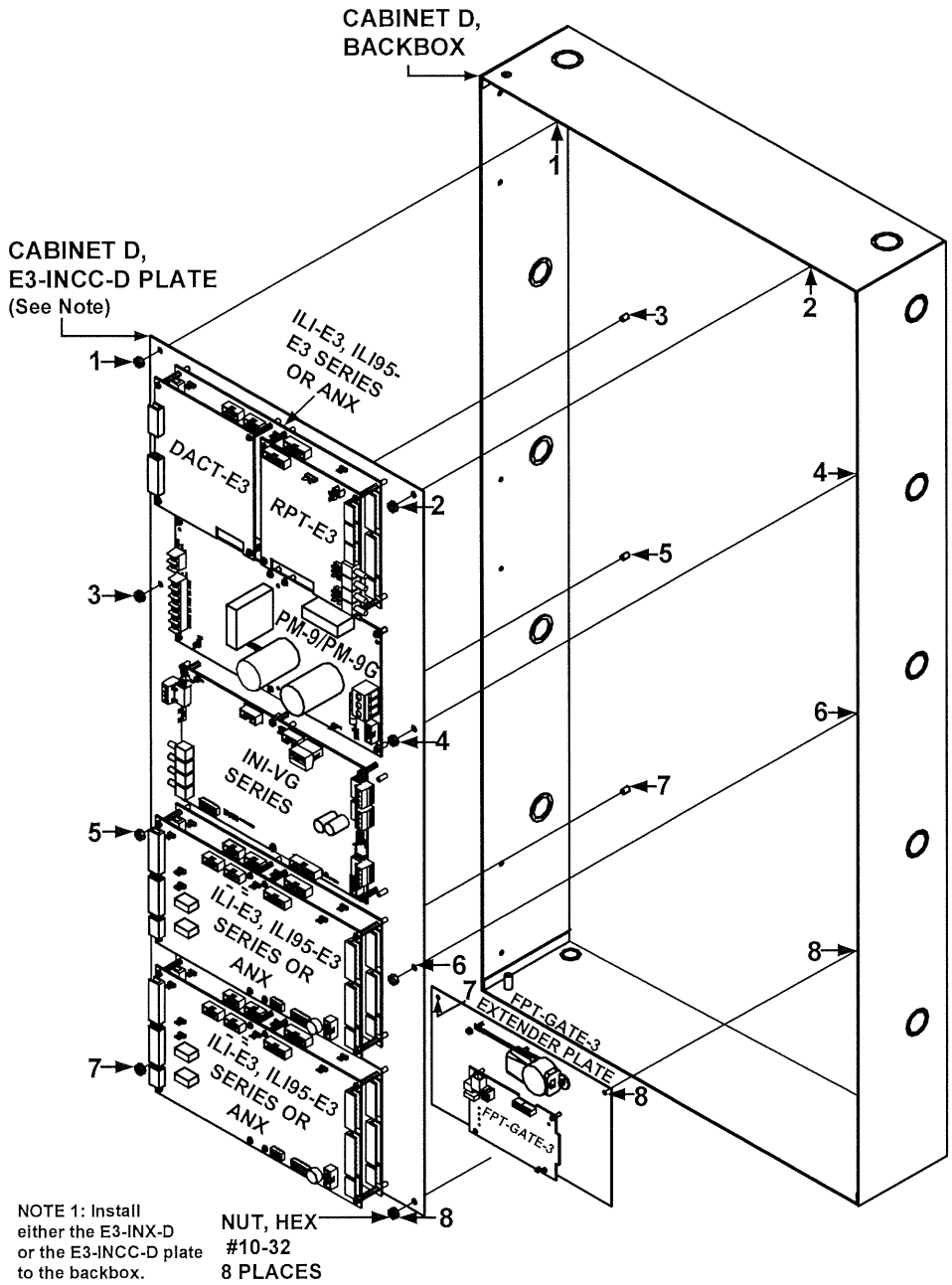


Figure 2.3.1 Cabinet D, FPT-GATE-3 Extender Plate to Backbox Installation

Gamewell FCI FIRE CONTROL INSTRUMENTS

by Honeywell

ANX

Description

The Gamewell-FCI, Addressable Node Expander (ANX) is a networking interface board that is used to expand the overall E3 Series® capabilities in the system node count, FocalPoint® integration and Ethernet connectivity. This powerful interface provides greater data exchange between the following units.

- E3 Series FACP
- S3 Series FACP
- FocalPoint Graphical Workstation
- Installer's PC

The ANX allows the E3 Series and S3 Series Networks to expand to two rings. Each ring contains up to 61 nodes, not including the ANX. By bridging the two networks together, each of the E3 and S3 network node counts are increased to 122 nodes. The multi-ring network expansion can activate outputs on any node on the bridged networks including the Control-by-Event functions originating from a connected network (See Figure 1-Shared Ring Capability). Audio paging and voice messages are also transferred over the two networks through the ANX.

The use of the ANX's Ethernet port allows the communication between the E3 Series System, the FocalPoint Gateways and Workstations through the TCP/IP. From the FocalPoint Workstation, you can activate "virtual switches" in the ANX for CAM control and status monitoring which might include bypass, control switching, voice evacuation notification or any auxiliary control function.

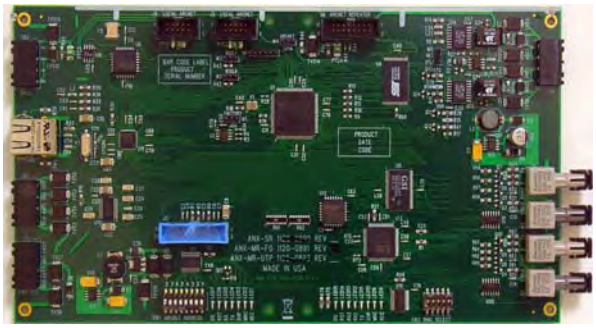
Installers can use the ANX's Ethernet port for high-speed configuration downloading into either of the E3 Series or S3 Series rings, saving time over using the typical RS-232 connections. The ANX can also be used as a downloading gateway for commissioning and is not required to be a part of the system.

The ANX expands the operation of the E3 network so that it can support both Mass Notification and Emergency Communication System applications used in campuses, large industrial or manufacturing facilities, hospitals, high-rise and multi-building complexes.

The following three types of ANX sub-assemblies provide Ethernet connectivity via an Ethernet port.

- Addressable Node Expander - Single Ring (ANX-SR).
  - contains a single E3 Series local network connection.
- Addressable Node Expander - Multi-Ring Twisted-Pair (ANX-MR-UTP) contains the following:
  - a primary and secondary network interface for multi-ring communication.
  - includes twisted-pair copper (UTP) on the secondary network connection.
- Addressable Node Expander - Multi-Ring Fiber Optic (ANX-MR-FO) contains the following:
  - primary network interface for multi-ring communication.
  - a fiber-optic (FO) connectivity on the secondary network connection.

Addressable Node Expander



ANX

Features

- Complies with UL® Standard 864 (9th Edition).
- Expands the E3 and S3 Networks to two rings, containing 122 nodes allowing a multi-ring network expansion.
- Provides expanded data exchanges between the E3 network and the FocalPoint Graphic Workstation.
- Includes high-speed configuration downloading through the ANX Ethernet port.
- Installed in the standard E3 Series cabinet enclosures.
- Bridges two of either the E3 Series or S3 Series Networks to activate outputs on any node on bridged networks.
- Offers shared ring capability.

FocalPoint Features

- Displays device descriptions for points on events only.
- Shows a single icon per SLC device.
- Provides up to 512 Virtual Points for programmable control and status monitoring within FocalPoint for:
  - System control switch (Enable/Disable, Bypass).
  - Voice evacuation speaker circuit control switch.
  - Auxiliary control circuit switch.
- Provides Ethernet connectivity to allow a high speed supervised connection to the FocalPoint Gateway.
- Includes additional point information to the end user.
- Allows the user to send the following commands over the E3 Network.
  - Acknowledge
  - Reset
  - Silence
  - Enable/Disable
- Shows the current status on the E3 and S3 networks.
- Sends the time to the E3 and S3 networks.

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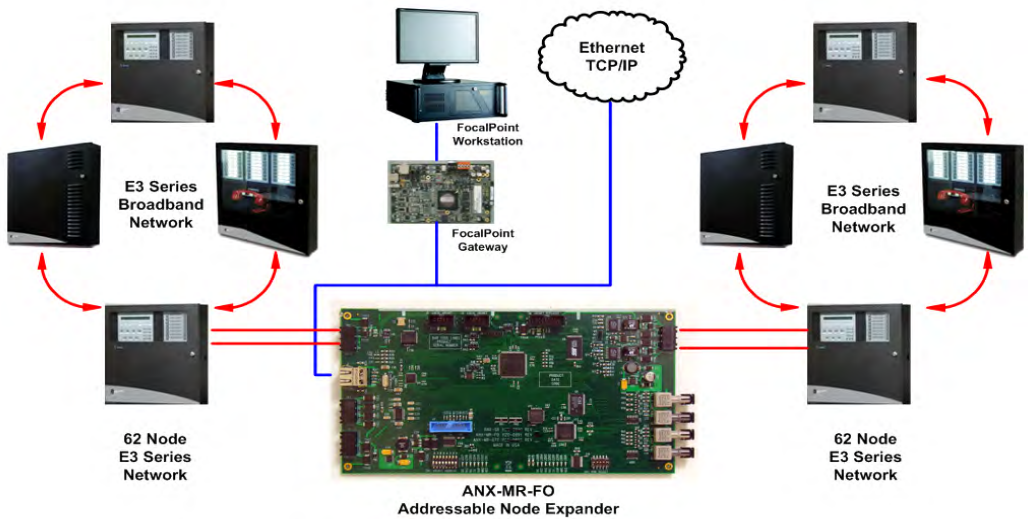


Figure 1: Addressable Node Expander Connection in a Multi-Ring Network Expansion Configuration

Ethernet

The Addressable Node Expander uses TCP/IP and incorporates heavy PPL/PSL/ re-use of the mainstream components. The three types of ANX sub-assemblies can provide Ethernet connectivity via an Ethernet port. This Ethernet port offers an enhanced network interface between the E3 Series and S3 Series fire alarm control panel and the FocalPoint Graphic Workstation. This feature improves the communication to monitor the alarm supervisory and trouble conditions of the FocalPoint Graphic Workstation. The E3 Series configuration data can be loaded into the network nodes via the ANX Ethernet port and CAMWorks™.

A Download program utility is provided to extract data (excluding the CAMs and voice files on the INI-VG Series) into a job file that allows the ANX to extract all point information in existing panels. The following list the information that can be retrieved from the ANX.

- Custom labels programmed to identify each point.
- System information that details the configuration of analog addressable monitor and control points
- Information stored in the CAMWorks job file
- Compare feature to display configuration differences
- Converts low level CAMs into corresponding high level CAMs during the download of the CAMWorks configuration data for the following node types:
  - ILI-MB-E3
  - ILI-S-E3
  - ILI95-MB-E3
  - ILI95-S-E3
  - NGA
  - ANX
  - SLP-E3

Specifications

Operating Voltage:	24 VDC (from the PM-9/PM-9G power supply)
Operating/Supervisory Current:	0.066 amp
Alarm Current:	0.066 amp
Operating Temperature:	32° to 120° F (0° to 49° C)
Relative Humidity:	0 to 93%, non-condensing at 90° F (32° C)
Supervised	

Wiring Specifications:
(ANX-MR-UTP & ANX-MR-FO only):

Copper Wire:	16 to 18 AWG twisted-pair, unshielded. Up to 3,000 feet (914.4 m) between each node.
Fiber-Optic Cable (ANX-MR-FO only):	Up to 200 microns (optimized for 62.5/125 microns). Up to 8 dB loss between each node.

Ordering Information

Part Number	Description
ANX-SR	Addressable Node Expander-Single Ring
ANX-MR-UTP	Addressable Node Expander-Multi-Ring Twisted-Pair
ANX-MR-FO	Addressable Node Expander-Multi-Ring Fiber Optic

NO EXCUSES!

SIGNALING
UL LISTED

SRD
ACE-11

SYSTEM RECORD DOCUMENTS

The SRD is the perfect item to help you meet demanding code requirements today. NFPA 72 2013 7.7.2.4 states that a cabinet must be “prominently labelled ‘SYSTEM RECORD DOCUMENTS’.”

The SRD is the perfect fit to meet todays demanding code requirements. SAE’s number one goal is to manufacture code compliant solutions and this product allows you to do just that. NFPA 72 2013 7.7.2.1 states, "With every new system, a documentation cabinet shall be installed at the system control unit or other approved location at the protected premises."

This durable 16 gauge steel enclosure with a solid piano hinge and key lock will keep all of your code required documents in one safe place. With a 4GB USB flash drive it stores your fire alarm software safe and secure eliminating the occurrences of the software not being on site when technicians arrive to service the system. Along with your fire alarm software you can store your test & inspection, service records, manuals & system records. Using a standard USB B connector you may also store you records electronically (See NFPA 72 2013 7.5.6.7).

The SRD has designated hooks to organize key rings and hold important business cards for easy access and reference. Inside the cover it has an organized record for identifying equipment information, required documentation locations (See NFPA 72 2013 7.2.1).

Standard Features:

- Installed with a 4 GB digital flash drive with USB B connector
- 2 key ring hooks to hold system keys
- Business card holder for key contacts
- Overall dimensions are 12" x 13" tall and 2 1/4” deep
- 18 gauge steel box and cover for security
- Durable powder coat baked on finish other colors available
- Standard 3/4" cat 30 key lock. Other lock assemblies available
- Solid stainless steel piano hinge
- Permanently screened white ink 1" high "SYSTEM RECORD DOCUMENTS"
- Legend sheet for documentation, passwords and system information

NFPA MEMBER

CAL FIRE SINCE 1885

NEMA

Made In U.S.A.

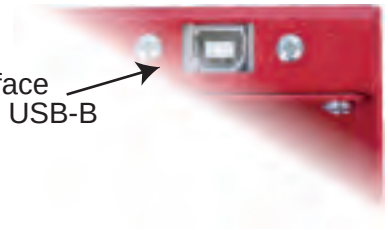
ISO 9001 REGISTERED COMPANY

ACEBOX
Space Age Electronics, Inc.
www.1sae.com
800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

Specifications:

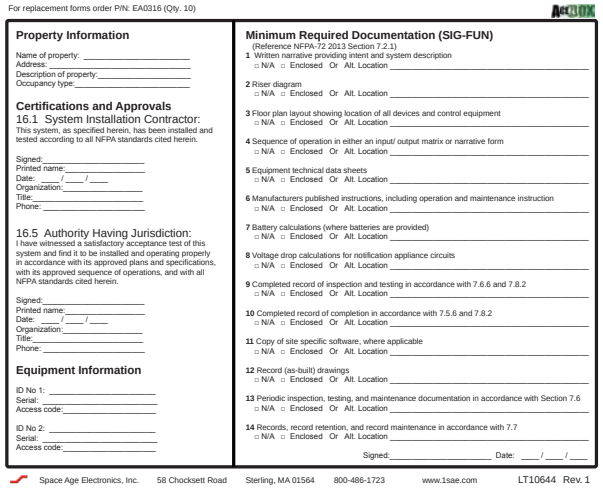
The system record documents box (SRD) shall be UL Listed, constructed of 18 gauge cold rolled steel. It shall have a red powder coat epoxy finish. The cover shall be permanently screened with 1" high lettering "SYSTEM RECORD DOCUMENTS " with white indelible ink. The access door shall be locked with a 3/4" barrel lock and the hinge shall be a solid width 12" stainless steel piano hinge. The enclosure will supply 4 mounting holes. Inside the enclosure will accommodate standard 8 1/2 x 11 manuals and loose document records that will be protected within the enclosure. A legend sheet will be permanently attached to the door for system required documentation, key contacts and system information. The SRD will have securely mounted inside a minimum of 4 Gigabyte digital flash memory drive with a standard USB B connector for uploading and downloading information. The drive shall not be accessible without tools to any person whom gains access to the records. The enclosure shall also provide 2 key ring holders with a location to mount standard business type cards for key contact personnel.

USB Storage Interface
Requires Standard USB-B
Connector



Key Ring
Hooks

Business
Card Holder



For replacement forms order P/N: EA0316 (Qty. 10)

Property Information

Name of property: _____
Address: _____
Description of property: _____
Occupancy type: _____

Certifications and Approvals

16.1 System Installation Contractor:
This system, as specified herein, has been installed and tested according to all NFPA standards cited herein.

Signed: _____
Printed name: _____
Date: ____ / ____ / ____
Organization: _____
Title: _____
Phone: _____

16.5 Authority Having Jurisdiction:
I have witnessed a satisfactory acceptance test of this system and find it to be installed and operating properly in accordance with its approved plans and specifications, with its approved sequence of operations, and with all NFPA standards cited herein.

Signed: _____
Printed name: _____
Date: ____ / ____ / ____
Organization: _____
Title: _____
Phone: _____

Equipment Information

ID No 1: _____
Serial: _____
Access code: _____

ID No 2: _____
Serial: _____
Access code: _____

Minimum Required Documentation (SIG-FUN)
(Reference NFPA-72 2013 Section 7.2.1)

1 Written narrative providing intent and system description
□ N/A □ Enclosed Or Alt. Location _____

2 Riser diagram
□ N/A □ Enclosed Or Alt. Location _____

3 Floor plan layout showing location of all devices and control equipment
□ N/A □ Enclosed Or Alt. Location _____

4 Sequence of operation in either an input/ output matrix or narrative form
□ N/A □ Enclosed Or Alt. Location _____

5 Equipment technical data sheets
□ N/A □ Enclosed Or Alt. Location _____

6 Manufacturers published instructions, including operation and maintenance instruction
□ N/A □ Enclosed Or Alt. Location _____

7 Battery calculations (where batteries are provided)
□ N/A □ Enclosed Or Alt. Location _____

8 Voltage drop calculations for notification appliance circuits
□ N/A □ Enclosed Or Alt. Location _____

9 Completed record of inspection and testing in accordance with 7.6.6 and 7.8.2
□ N/A □ Enclosed Or Alt. Location _____

10 Completed record of completion in accordance with 7.5.6 and 7.8.2
□ N/A □ Enclosed Or Alt. Location _____

11 Copy of site specific software, where applicable
□ N/A □ Enclosed Or Alt. Location _____

12 Record (as-built) drawings
□ N/A □ Enclosed Or Alt. Location _____

13 Periodic inspection, testing, and maintenance documentation in accordance with Section 7.6
□ N/A □ Enclosed Or Alt. Location _____

14 Records, record retention, and record maintenance in accordance with 7.7
□ N/A □ Enclosed Or Alt. Location _____

Signed: _____ Date: ____ / ____ / ____

Space Age Electronics, Inc. 58 Chocksett Road Sterling, MA 01564 800-486-1723 www.1sae.com LT10644 Rev. 1

Legend sheet for storing system information including contacts, sign-off , maintenance & test information, and alternate locations of additional records.

Ordering Information:

Part #	Description
SSU00689	System Record Documents Cabinet RED
SSU00690	Custom screening with your Logo
EA0315	10 pack door legend sheet

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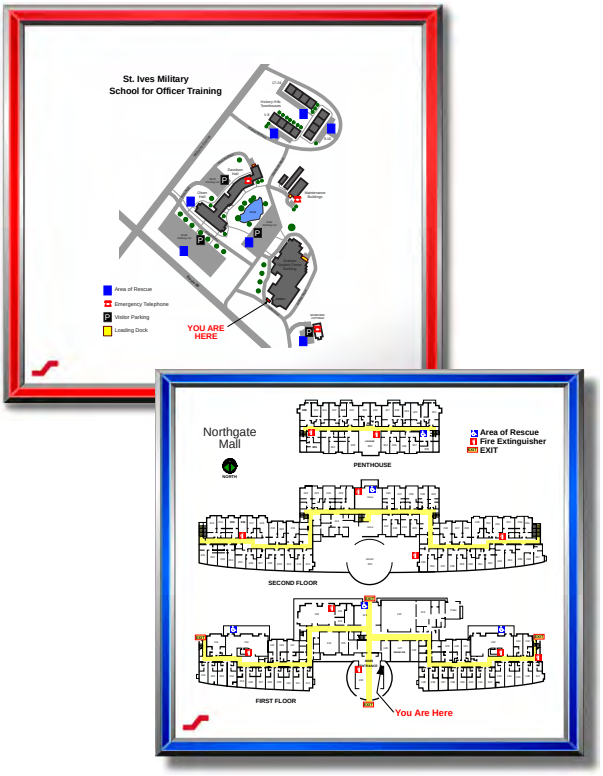
NO EXCUSES!

Prepared using fade resistant, UV-enduring inks, a durable glare-free finish and our quality aluminum display frame.

GD8

DI Graphic Display Frame

The GD8 DI Graphic Display Frame is designed to assist in the effective preparation of a proactive Emergency Operation Plan (EOP). With changing requirements from NFPA it provides the means and support as a year round training tool in the aid of fire drills and meeting emergency evacuation training requirements. The GD8 Graphic display provides a clear static layout of a building or campus and aids in requirements for public awareness of the building layout and evacuation egress routes.

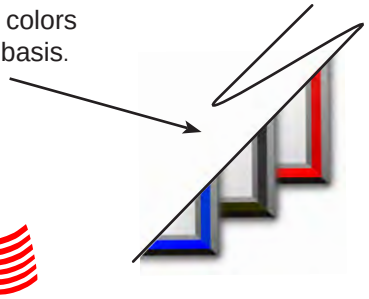


The GD8 DI graphic display frame is the state of the art method for displaying messages. Utilizing UV durable inks that resist fading and harmful effects from light exposure, the GD8 DI boasts long lasting vibrant images, and offers the broadest selection of colors available. The graphic image is computer generated and plotted directly onto the back side of a clear .012 thick polycarbonate film which is permanently laminated to a rigid back plate. The film's surface texture diffuses light and cuts glare to a minimum. The graphic is plotted onto the back side of the film, eliminating the concerns of damage to the image from cleaning and wear and also protecting from water or environmental effects.

Standard Features:

- Full color image printed on the reverse side of a .012 mil thick polycarbonate film, fire rated class A ASTM E84, matte finish
- Standard white background with colored image line work
- Graphic produced with UV rated inks and permanently laminated to resist environmental weather damage
- Rigid 1/8" ABS back plate
- Architecturally designed low profile aluminum frame with natural aluminum matte finish
- Continuous 1/2" inlay accent trim (reflective red, reflective blue, reflective black, beige or custom color)
- Assembly and mounting hardware supplied
- Concealed hardware, eliminating tampering
- Available in 3 standard sizes, custom sizes up to 34" x 44"

Special Reflective Inlay
Different colors offer easy identification of the purpose and meaning of the graphic in the frame (RED for FIRE, BLUE for SECURITY, etc...) Special colors available on special order basis.



NFPA

Made In U.S.A.

ADA

NFPA

ISO 9001 REGISTERED COMPANY

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800.486.1723 Toll Free
508.485.0966 Local
508.485.4740 Fax

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SPACE AGE ELECTRONICS, INC.

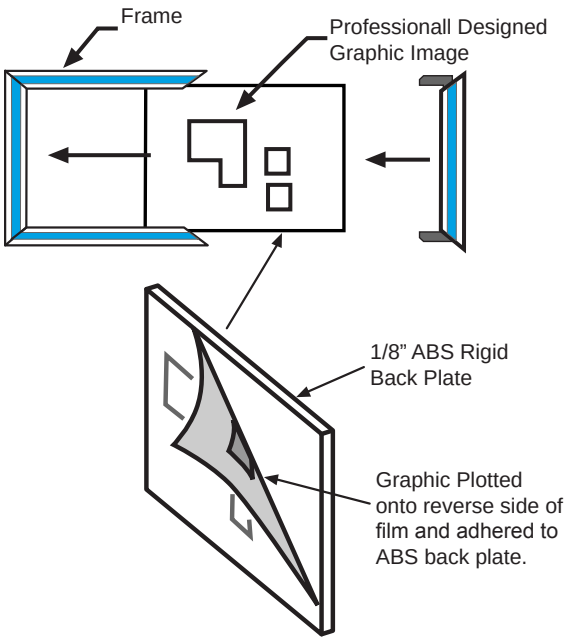
Specifications:

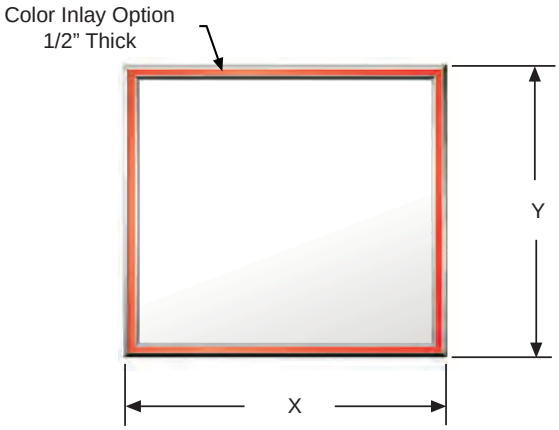
The GD8 DI Graphic Display Frame will be constructed of a 1/8" thick aluminum extruded frame. The finish will be an architectural soap matte finish all over, assembled with 45 degree mitered corners and concealed hardware for assembly. The GD8 frame will have a continuous 1/2" light reflective trim all around the graphic/text image, in specified color (red, blue or black). The GD8 will be securely mounted to a wall. The mounting hardware will be concealed for security to prevent any unauthorized removal or alteration.

With supplied graphic information established, a professionally designed and laminated building Emergency Operation Plan (EOP), map, instructions, and/or other pertinent information will be incorporated into the DI assembly. The final layout will be professionally prepared for proper identification of egress and exit routes, along with other specific and important information clearly displayed to initiate immediate action when required.

DI Assembly Graphic:

The GD8 DI assembly frame will incorporated a professionally designed graphic, plotted onto the back of .012 mil piece of (DMBPC12) polycarbonate backprint film. The film's surface texture diffuses light and cuts glare to a minimum. The film will be permanently adhered to a solid piece of 1/8" ABS rigid back plate for strength and durability. The polycarbonate film is rated class A according to ASTM E84 tunnel test for surface burning characteristics of building materials (fire test). UV-durable inks will be used to resist fading and harmful effects from light exposure producing long lasting images.





Size	X	Y	Viewable Graphic Area
1	8 1/2"	11"	1 1/8" x 10 5/8"
2	11"	17"	10 5/8" x 15 5/8"
3	11"	17"	10 5/8" x 16 5/8"

Custom Size Maximum Dimensions

4	(up to 34") x (up to 44")	up to 33 5/8" x 43 5/8" Subtract 3/8" vertically and horizontallly from overall size.

Ordering Information:

Part #	Description
SSU52000	Size 1 (8 1/2" x 11") Display Frame
SSU52001	Size 2 (11" x 17") Display Frame
SSU52002	Size 3 (17" x 17") Display Frame
SSU52003	Size 4 Custom Sized Display Frame up to 34" x 44"
SSU52004	GD8 DI Graphic Display custom artwork
SSU52006	Graphic design layout service CAD/ENG additional time/proc

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GD8 DI Preliminary Quote Ordering:

Follow these 3 steps for Space Age Electronics to generate a preliminary quote for your Graphic/Map or try our free on-line Product Quote Pages at www.1SAE.com

1 QUANTITY ☐ (total number of displays needed)

Determine the quantity of maps that are needed for your facility(s). This assumes all maps needed will be of the same size (see Step 2 for available sizes) and similar in level of difficulty (see Step 3 for examples of Level of difficulty). If you are in need of different size maps, you will need separate quotes for an accurate determination of your product needs.

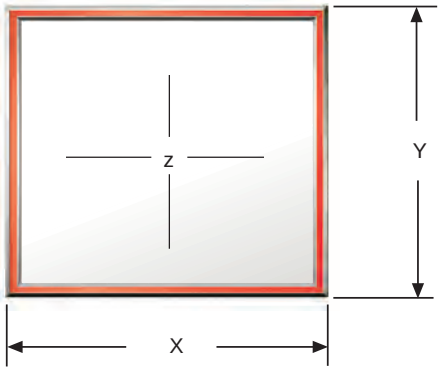
For same size and similar layout needs: count the number of floors per building, or if required, all entrances/exits for the building that are required to have a visual evacuation/map display.

2 Determine what **SIZE** GD8 Display Frame is needed for your display or would best fit your application. This assumes all maps are similar in information/level of difficulty (see Step 3 to determine level of difficulty)

Space Age offers 4 sizes (one size selectable per quote)

Check only one:

	Size	X	Y	z
☐	1	8 1/2”	11”	1 1/8” x 10 5/8”
☐	2	11”	17”	10 5/8” x 15 5/8”
☐	3	11”	17”	10 5/8” x 16 5/8”
	Custom Size Maximum Dimensions			
☐	4	_____ (up to 34”) x _____ (up to 44”)		up to 33 5/8” x 43 5/8” Subtract 3/8” vertically and horizontallly from overall size.



3 Determine Graphic/Map **LEVEL OF DIFFICULTY**. Compare your drawings to the following levels of complexity.

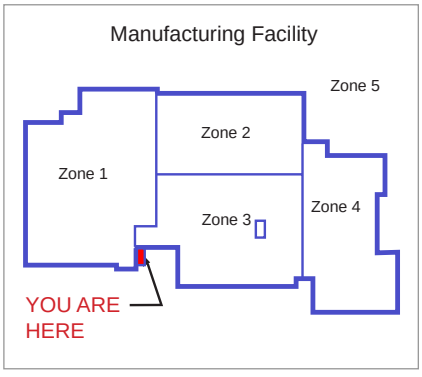
Check only one:

☐ Simple

Less than 20 rooms, with vertical and horizontal line work and basic building outlines. Standard artwork is black linework and lettering on a white backround.

(check additional that may apply)

__ Additional graphic colors required: #_____
__ Each room numbered or titled
__ Graphic display has a title
__ ‘You Are Here’
__ Title and north arrow



Additional pertinent details: _____

(Quoting details continued on next page...)

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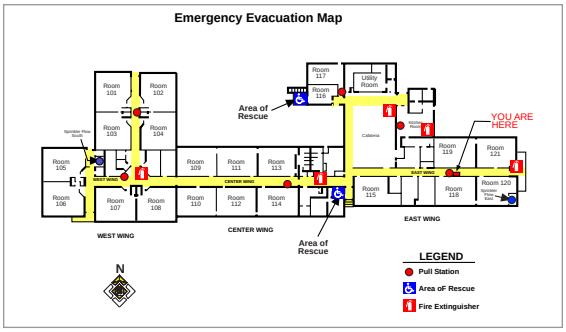
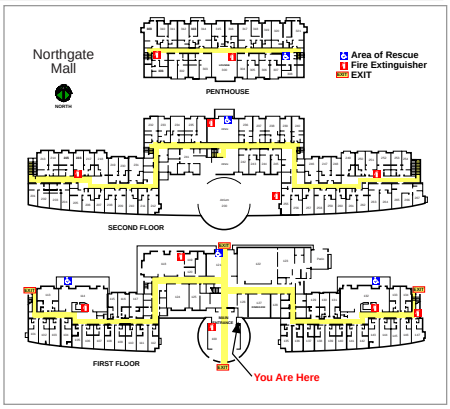
☐ **Medium** **20-50 rooms** with vertical and horizontal line work. Hallways, stairwells and elevators depicted. Standard artwork is black linework and lettering on a white backround.



(check all that may apply)
__ Additional graphic colors required: #_____
__ All rooms titled and/or numbered
__ Icons used for identification with legend
__ Labeled exits
__ Major egress escape routes
__ 'You Are Here'
__ Legend for icons
__ Device icons
__ Area of Rescue
Additional pertinent details:_____

☐ **Difficult** **50 rooms or more**, building outline may have curves and angles. Standard artwork is black linework and lettering on a white backround.



(check all that may apply)
__ Additional graphic colors required: #_____
__ Building outline has curves and angles
__ Hallways, stairwells and/or elevator details
__ Entrances labeled including loading docks, etc.
__ All rooms are titled and/or numbered
__ 'You Are Here'
__ Leader lines to depict details or special instructions
__ Multiple icons and details on display legend
__ Device icons
__ Address location for devices (ie: pull station, smoke detector, etc.)
__ Major Egress escape routes
Additional pertinent details:_____

☐ **Campus Type Complex** This is a **facility/site/campus complex** that shows multiple buildings, parking lots, roads, walkways etc. Standard artwork is black linework and lettering on a white backround.

(check all that may apply)
__ Additional graphic colors required: #_____
__ Graphic title
__ Building labels, road names and other similar details
__ Buildings and roads have curved lines or angles
__ Trees, shrubbery
__ 'You Are Here'
Additional pertinent details:_____

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Include your contact information and fax to Space Age for a quote.

Name:_____
Company:_____
Phone #:_____
e-mail:_____

Gamewell FCI FIRE CONTROL INSTRUMENTS
by Honeywell

MS-7 Series

Description

The Gamewell-FCI, MS-7 Series manual fire alarm stations are available in a wide variety of configurations. The Stations comply with the Americans with Disabilities Act (ADA) 5-lb. maximum pull force requirement. Operating instructions and Braille text are engraved in the handle. All stations have a key lock/reset which is keyed alike with Gamewell-FCI fire alarm control panels and other manual fire alarm stations.

MS-7AF Velociti Addressable Station

The MS-7AF Velociti® Series addressable station is a double action station designed for installation in the signaling line circuit of Gamewell-FCI analog addressable control panels. Activation of the station causes its assigned address to register at the control panel. The door contains an LED which flashes green in normal condition and lights steady red when the station has been activated.* The station features screw terminals.

MS-7ASF Velociti Addressable Station

The MS-7ASF Velociti® Series addressable station is a single action station designed for installation in the signaling line circuit of Gamewell-FCI analog addressable control panels. Activation of the station causes its assigned address to register at the control panel. The door contains an LED which flashes green in normal condition and lights steady red when the station has been activated.* The station features screw terminals.

The Velociti® Series stations use a communication protocol that substantially increases the speed of communication between the sensors and certain Gamewell-FCI analog addressable fire alarm controls. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel's microprocessor stops the group poll and focuses on the single device. The net effect is response speed up to five times greater than earlier designs.

MS-7 Double Action Station

The MS-7 double action station is used with conventional fire alarm control panels. It features a set of single pole contacts and screw terminals for connection to an initiating circuit.

Non-Coded, Manual Fire Alarm Stations

MS-7

Features

- Addressable stations compatible with all Gamewell-FCI analog addressable fire alarm controls
- Conventional stations suitable for use with any UL® Listed control panel
- Both single and double action stations available
- Tumbler lock for test and reset keyed alike with Gamewell-FCI controls
- Surface or semi-flush mounting
- Shock and vibration resistant
- Stations (MS-7LOB) Listed for outdoor applications
- Complies with ADA pull force requirements

*Only the red LED is operative in panels that do not operate in Velociti mode.

SIGNALING
UL LISTED S2465
FM APPROVED 3023594
MEA Approved 67-02-E Vol.VIII
7150-1703:0119
7150-1703:0170
7150-1703:0109

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

MS-7S Single Action Station

The MS-7S single action station is used with conventional fire alarm control panels. It features a set of single pole contacts and wire leads for connection to an initiating circuit.

MS-7SP Double Action Station

The MS-7SP is a double action station similar to the MS-7 station, with the additional feature of both English and Spanish instructions molded into the unit.

MS-7LR Dual-action Agent Release Station

The MS-7LR is designed for use with the Gamewell-FCI fire alarm control panels with releasing capabilities and Flex Series releasing systems. It features a set of single pole contacts and screw terminals for connection to an initiating circuit.

MS-7LRA Agent Release Station with Abort

The MS-7LRA is designed for use with the Gamewell-FCI fire alarm control panels with releasing capabilities and Flex Series releasing systems where system abort capabilities are required. It consists of an MS-7LR mounted on a plate with an abort switch and LED indicators for system normal, and system activated status.

MS-7LOB Double Action Station (Listed for Outdoor Applications)

The MS-7LOB station must be mounted on a Model SB-I/O backbox. In retrofit applications, the station is UL Listed for use with the WP-10 backbox. It is intended for use with conventional control panels and has a set of single pole contacts and screw terminals.

Mounting

The MS-7 interior stations may be surface mounted or semi-flush mounted on a standard double-gang, or 4-inch (10.2 cm) square electrical box. An optional trim ring (BG12TR) may also be used for semi-flush mounting.

NYC-Plate

The NYC-Plate provides the backplate for the manual pull station. (See Figure 1).

Figure 1 NYC-Plate

Specifications

Material:	Lexan®
Contact Ratings:	0.25 amps. @ 30 VAC/VDC (resistive)
Dimensions:	5 5/8" H x 4 1/4" W x 1 1/4" D (14 x 10.1 x 3.2 cm)
Operating Temperature	
(MS-7AF, MS-7ASF):	32° to 120° F (0° to 49° C)
(MS-7LOB):	-30° to 150° F (-35° to 66° C)
Relative Humidity	
(MS-7AF, MS-7ASF):	10 to 93% (non-condensing)
(MS-7LOB):	85% ± 5% @ 86° ± 3.6° (30° ± 2° C)
Alarm Current:	.0030 amp. 0.007 for LED
Supervisory Current	
(MS-7AF, MS-7ASF):	.00030 amps.

Ordering Information

Part Number	Description
MS-7	Double action station
MS-7AF**	Velociti addressable double action station
MS-7ASF**	Velociti addressable single action station
MS-7S	Single action station, wire leads
MS-7SP	Double action station, English and Spanish instructions
MS-7LR	Agent release station, dual-action
MS-7LRA	Agent release station with abort switch, LED indicators, dual- action
MS-7LOB	Double action station, outdoor use (Includes SB-I/O - Indoor/outdoor use backbox)
SB-I/O	Indoor/outdoor use backbackbox
SB-10	Surface backbox
BG12TR	Trim ring for semi-flush mount, plastic
NY-PLATE	NYC backplate for manual pull station

**For use with the Gamewell-FCI analog addressable control panels only.

STI Stopper® II

STI-1100

PRODUCT OVERVIEW

This protective cover has been helping to stop false fire alarms around the world for more than 30 years, without restricting legitimate alarms. All models offer excellent protection against physical damage (both accidental and intentional) and several against severe environments both inside and out. It is ideal for schools, colleges, hospitals, nursing homes, stores, hotels and public buildings of almost every kind where there is a threat of false alarms.

HOW IT WORKS

Stopper II consists of a clear, tamperproof, tough polycarbonate shield and frame, but the line includes models with the option of a piezo horn, spacer, Form “C” dry relay contact and gaskets. The cover accommodates most manual pull stations. When the Stopper II with horn is lifted to gain access to the protected alarm, a piercing self-contained 95 or 105 dB warning horn (at one foot) sounds. Immediate attention is drawn to the area and a prankster will either run or be caught. The cover is connected to the frame by a cable. When the cover is lifted, it drops off of the frame and a horn will sound (models with horn) until the cover is snapped back onto the frame or for the life of the battery.

FEATURES

- Proven effective for more than 30 years to help stop false fire alarms without restricting legitimate alarms.
- Can be used as a guard against physical damage to a manual pull station, with or without the optional warning horn.
- Optional horn has a choice of 95 or 105 dB at one foot.
- Standard red units have “In Case of Fire...” label unless specified with “no label” or “custom label” (extra charge for custom label).
- Horn housing is available in red, blue, green or yellow with optional custom labeling.
- When covering a pull station outside, UL requires stations to be listed for outdoor use.
- Larger sizes and surface mounted pull stations accommodated with STI-3100 conduit spacer.
- Weather models have closed cell gaskets.
- Power source is a 9V DC alkaline battery included on standard Stopper II (remote powered unit available).
- “RC” models include one Form “C” dry relay contact and are capable of operating from 9-24V DC remote power or 9V DC battery power.
- Protect devices such as EPOs, call boxes, telephones and emergency shutdowns by changing the color and messaging.
- Typical working properties of polycarbonate are -40° to 250°F (-40° to 121°C).
- UL Listed to U.S. and Canadian safety standards (also for custom labeling).
- Three year guarantee against breakage of polycarbonate in normal use (one year on electro mechanical and electronic components).

STI Stopper® II

Dimensions and Technical Information

MODELS AVAILABLE

Stopper® II Models Indoor Use

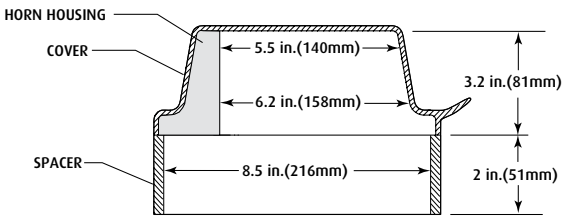
STI-1100	With horn for flush mount
STI-1100RC*	With horn and relay flush mount
STI-1130	With horn and spacer
STI-1130RC*	With horn and relay with spacer
STI-1200	Without horn flush mount
STI-1230	Without horn with spacer

Weather Stopper® with gaskets (Indoor/Outdoor rated)

STI-1150	Stopper II with horn flush mount
STI-1150RC*	Stopper II with horn and relay flush mount
STI-1155	Stopper II with horn and spacer
STI-1155RC*	Stopper II with horn, relay and spacer
STI-1250	STI-1200 flush mount and gasket
STI-3150	STI-1200 with spacer and gaskets

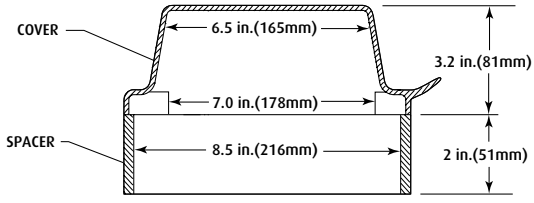
Accessories

STI-3100	2” conduit spacer with 1/2” conduit entry (no gaskets included)
STI-3104	2” conduit spacer with 3/4” conduit entry (includes one 3/4” conduit entry gasket)
STI-1102	Replacement horn for cover with alarm
CUSTOM-LBL	Custom text message for horn housing
STI-1280	Backplate for Stopper II and Weather Stopper series



SIDE VIEW

MODELS WITH HORN (STI-1100 Series)



SIDE VIEW

MODELS WITHOUT HORN (STI-1200 AND STI-3150 Series)

APPROVALS & WARRANTY

TESTING

It has been tested and approved or listed by:

- UL/cUL Listed No. S2466
- For fire alarm applications, UL38 requires outdoor listed stations for outdoor use
- Factory Mutual No. OG6A2.AY (STI-1100 and STI-1130 only)
- State of California (obtain local fire marshal approval)
- MEA 49-00-E (STI-1200)
- Flush models ADA Compliant. Surface models ADA Compliant for operation (UL Certified No. S2466)
- IP44
- The indoor/outdoor rated station covers, when mounted on a smooth surface, provide a rain tight seal similar to a 3R enclosure rating.

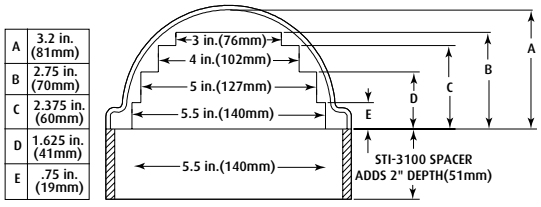
WARRANTY

Three year guarantee against breakage of polycarbonate in normal use (one year on electro mechanical and electronic components).

IMPORTANT NOTICE

Stopper II “FIRE” models are intended to be used in areas where the incidence of false fire alarms from manual pull stations is high or has proven to be a serious problem. Any disadvantage of this device is more than balanced when one considers the consequences of false fire alarms, especially if fire service personnel and equipment are responding to a false fire alarm when they are needed for a real fire somewhere else. Add to this the disruption to the facility when false alarms occur. If you have, or may have, a problem with false fire alarms or physical/weather damage to your fire alarm activation devices, the Stopper II could prove invaluable.

*WARNING: ⚠ For RC models: UL Listing does not permit relay contacts to connect to the fire alarm or a life safety function. The power supply for horns, according to UL Listing, cannot be connected to a UL Listed fire alarm system. For electrical specifications see install book. RC models contain one set of Form “C” dry contacts. Contacts rated 30 VAC/VDC 1 amp.



ALL MODELS END VIEW

EXTERNAL DIMENSIONS: • Flush 7.2 W x 10.2 H x 3.3 D in. (183x259x84mm) • Surface 7.2 W x 10.2 H x 5.5 D in. (183x259x140mm)

Safety Technology International, Inc.

2306 Airport Road
Waterford, Michigan
48327, USA

Tel: 248-673-9898
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Honeywell | Addressable Devices

Velociti® Series 3 Detectors

Thermal Detectors

Description

The Gamewell-FCI, Velociti® Series 3 intelligent thermal detectors with integral communication provide point location for alarm communication and selective maintenance. Designed in a modern bright white color, the Velociti Series 3 is aesthetically pleasing for today's contemporary buildings.

The Velociti Series 3 heat detectors are intelligent addressable detectors with point ID capability that enable each detector address to be set with rotary address switches providing exact device locations. Detector sensitivity is continually monitored and reported to the fire alarm control panel. The modern design and expanded color options support a variety of contemporary aesthetic demands. In addition, each detector is constructed for exceptional installation and maintenance efficiency. Velociti Series 3 thermal detectors provide cost-effective, intelligent property protection using the following single thermistor:

- ATD-L3 offers 135°F fixed thermal detection
- ATD-L3R offers 135°F fixed and rate-of-rise thermal detection
- ATD-L3H provides fixed high-temperature detection at 190°F

For legacy installations, service detectors are available in the classic ivory color that will operate in both Velociti and CLIP protocol for backwards compatibility. Service models are designated by the -IV part number that appears after the detector model.

Thermal Detector

FEATURES & BENEFITS

- Designed to meet UL268 7th Edition
- New modern profile for improved aesthetics
- Built-in functional test switch activated by external magnet
- Low standby current
- Rotary address switches (01-159)
- Optional relay, isolator, or sounder bases (standard or low frequency)
- Dual LEDs for 360° visibility
- Expanded color options

Ordering Information

ATD-L3: Thermal heat detector, 135°F fixed, bright white, Velociti

ATD-L3-IV: Thermal heat detector, 135°F fixed, ivory, Velociti/CLIP

ATD-L3R: Thermal heat detector, 135°F rate of rise, bright white, Velociti

ATD-L3R-IV: Thermal heat detector, 135°F rate of rise, ivory, Velociti/CLIP

ATD-L3H: Thermal heat detector, 190°F high temp, bright white, Velociti

ATD-L3H-IV: Thermal heat detector, 190°F high temp, ivory, Velociti/CLIP

Bases

B501: 4" Flangeless mounting base, bright white

B501BP: 4" Flangeless mounting base bulk pack, bright white

B501-IV: 4" Flangeless mounting base, ivory

B300-6: 6" Flanged mounting base, bright white

B300-6-IV: 6" Flanged mounting base, ivory

B300-6-BP: 6" Flanged mounting base bulk pack

B200SR: Standard sounder base, bright white

B200SR-IV: Standard sounder base, ivory

B200S: Intelligent addressable sounder base, bright white

B200S-IV: Intelligent addressable sounder base, ivory

B200SR-LF: Standard low frequency sounder base, bright white

B200SR-LF-IV: Standard low frequency sounder base, ivory

B200S-LF: Intelligent addressable low frequency sounder base, bright white

B200S-LF-IV: Intelligent addressable low frequency sounder base, ivory

B224RB: Relay base, bright white

B224RB-IV: Relay base, ivory

B224BI: Isolator base, bright white

B224BI-IV: Isolator base, ivory

Accessories

SMB600: Surface Mounting Kit (flanged)

TR300: Accessory Flange Ring for B300 6" Base, bright white

TR300-IV: Accessory Flange Ring for B300 6" Base, ivory

RA100Z: Remote LED annunciator

CK300-BL: Black detector kit (10 pack)

CK300: Bright White detector kit (10 pack)

Velociti® Series 3 Detectors Technical Specifications

SYSTEMS

Thermal Intelligent Detector

Physical Specifications

Height: 2.0 inches (51 mm) installed in B300-6 base

Diameter:

6.2 inches (156 mm) installed in B300-6 base

4.1 inches (104 mm) installed in B501 base

Weight: 3.4 oz (95 g)

Operating Temperature Range:

Thermal 135° F fixed: -4° F to 100° F (-20° C to 38° C)

Thermal 135° F rate-of-rise: -4° F to 100° F (-20° C to 38° C)

Thermal 190° F rate-of-rise: -4° F to 135° F (-20° C to 57° C)

Operating Humidity Range: 10% to 93% non-condensing

Rate-of-Rise Detection: Responds to greater than 15°F/minute or 135°F (8.3° C/minute or 57°C

Electrical Specifications

Voltage Range: 15 to 32 VDC

Standby Current (@ 24 VDC): 200 uA (one communication every 5 seconds with green LED enabled)

Max Alarm Current (max.): 2 mA @ 24 VDC (one communication every 5 seconds with red LED enabled)

Max Current (max.): 4.5 mA @ 24 VDC (one communication every 5 seconds with amber LED enabled)

Isolator Load Rating: 0.0063

STANDARDS

The Velociti® Series 3 Thermal Detectors are designed to comply with the following standard:

UL Standard: UL 268

AGENCY LISTINGS AND APPROVALS

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

UL: Pending

FM: Pending

CSFM: Pending

ISO 9001 Certification

For a complete listing of all compliance approvals and certifications, please visit: http://www.gamewell-fci.com/en-US/documentation/Pages/Listings.aspx

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

Learn more about Gamewell-FCI's Velociti® Series 3 Detectors and other products available by visiting www.Gamewell-FCI.com

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Velociti® Series 3 Detectors

Photoelectric Detectors

Description

The Gamewell-FCI, Velociti® Series 3 intelligent photoelectric detectors with integral communication provide point location for alarm communication and selective maintenance. Designed in a modern bright white color, the Velociti Series 3 is aesthetically pleasing for today's contemporary buildings.

The Velociti Series 3 smoke detectors are intelligent addressable detectors with point ID capability that enable each detector address to be set with rotary address switches providing exact device locations. The photoelectric detector continually monitors the detected temperature and reports it to the fire alarm control panel. The modern design and expanded color options support a variety of contemporary aesthetic demands. In addition, each detector is constructed for exceptional installation and maintenance efficiency.

The Gamewell-FCI, ASD-PL3 photoelectric detector's re-designed optical sensing chamber is engineered to sense smoke produced by a wide range of combustion sources in accordance with more stringent code standards. The sensitivity of Velociti series detectors can be programmed using the control panel software to suit the environment. The ASD-PL3R photoelectric detector is also remote test capable that may be used with a DNR (DNRW) duct smoke detector housing. The ASD-PTL3 multi-sensor detector offers either photoelectric detection or thermal detection through dual electronic thermistors at 135°F fixed temperature thermal sensing.

For legacy installations, service detectors are available in the classic ivory color that will operate in both Velociti and CLIP protocol for backwards compatibility. Service models are designated by the -IV part number after the detector model.

Note: Although the E3 Series® and S3 Series panels support both the Velociti® and CLIP™ protocols, the GWF-7075 panel does not support the CLIP protocol. To obtain a complete list of panels that are listed to Velociti Series 3 detectors, refer to the Compatibility Addendum for Gamewell-FCI Manuals, P/N:9000-0427-L8.

Photoelectric Detector

FEATURES & BENEFITS

- Complies with UL® Standard 268 7th Edition
- Designed with a new profile to offer modern and improved aesthetics
- Contains a built-in functional test switch activated by external magnet
- Supports a low standby current
- Provides rotary address switches (01-159)
- Supplies optional relay, isolator, or sounder bases (standard or low frequency)
- Includes dual LEDs for 360° visibility
- Offers expanded color options

Ordering Information

NOTE: "-IV" suffix indicates Ivory color model.
NOTE: "-BL" suffix indicates Black color model.
NOTE: "WH" suffix indicates Bright White color model.

ASD-PL3: Photoelectric smoke detector, bright white, Velociti

ASD-PL3R: Photoelectric smoke detector, remote test capable, for use with DNR(W) duct smoke detectors, bright white, Velociti

ASD-PTL3: Photoelectric smoke detector with thermal sensing, bright white, Velociti

ASD-PL3-IV : Photoelectric smoke detector, ivory, Velociti/CLIP

ASD-PL3R-IV: Photoelectric smoke detector, remote test capable, for use with DNR(W) duct smoke detectors, ivory, Velociti/CLIP

ASD-PTL3-IV : Photoelectric smoke detector with thermal sensing, ivory, Velociti/CLIP

Intelligent Bases

For details on intelligent bases, refer to Data Sheet P/N: 9021-60540.

Note: "IV" suffix indicates Flashscan and CLIP devices.

"WH" suffix indicates bright white

B501-WHITE: 4" Flangeless mounting base, bright white

B501-WHITE-BP: 4" Flangeless mounting base bulk pack, bright white

B501-IV: 4" Flangeless mounting base, ivory

B300-6: 6" Flanged mounting base, bright white

B300-6-IV: 6" Flanged mounting base, ivory

B300-6-BP: 6" Flanged mounting base bulk (Pack of 10)

B200SR-WH: Standard sounder base, bright white

B200SR-IV: Standard sounder base, ivory

B200S-WH: Intelligent addressable sounder base, bright white

B200S-IV: Intelligent addressable sounder base, ivory

B200SR-LF-WH: Standard low frequency sounder base, bright white

B200SR-LF-IV: Standard low frequency sounder base, ivory

B200S-LF-WH: Intelligent addressable low frequency sounder base, bright white

B200S-LF-IV: Intelligent addressable low frequency sounder base, ivory

B224RB-WH: Relay base, bright white

B224RB-IV: Relay base, ivory

B224BI-WH: Isolator base, bright white

B224BI-IV: Isolator base, ivory

DNR: Intelligent duct detector housing, non-relay

DNRW: Intelligent duct detector housing, non-relay, watertight

Ordering Information

Accessories

SMB600: Surface Mounting Kit (flanged)

TR300: Accessory Flange Ring for B300 6" Base, bright white

TR300-IV: Accessory Flange Ring for B300 6" Base, ivory

RA100Z: Remote LED annunciator, 3-32 VDC

The annunciator mounts to a U.S. single-gang electrical box. For use with B501 and B300-6.

CK300: Bright White detector kit (Pack of 10)

CK300-IR: White, detector color kit for use with MCS-COF Series Detectors. (Pack of 10)

CK300-IV: Ivory, detector color kit. (Pack of 10)

CK300-IR-IV: Ivory, detector color kit for use with MCSCOF Series detectors. (Pack of 10)

CK300-BL: Black detector kit. (Pack of 10)

CK300-IR-Bl: Black, detector color kit for use with MCSCOF Series detectors. (Pack of 10)

M02-04-01: Detector test magnet.

M02-09-00: Test magnet with telescoping handle.

XR2B: Detector removal tool. Allows the installation and/or removal of the detector heads from the bases in high ceiling applications.

XP-4: Extension pole for XR2B. Shipped with three, 5-foot (1.524,m) sections.

Velociti® Series 3 Detectors Technical Specifications

SYSTEMS

Photoelectric Intelligent Detector:

Physical Specifications

Height: 2.0 inches (51 mm) installed in B300-6 base

Diameter:

6.1 inches (15.49 cm) installed in B300-6 base

4 inches (10.16 cm) installed in B501 base

Shipping Weight: 3.4 oz (96.4 g)

Operating Temperature Range:

Photo: 32° F to 122° F (0° C to 50° C)

Photo in Duct Applications: -4° F to 158° F (-20° C to 70° C)

Photo with Thermal: 32° F to 100° F (0° C to 38° C)

Operating Humidity Range: 10% to 93% non-condensing

Rate-of-Rise Detection: Responds to greater than 15°F/minute or 135°F (8.3° C/minute or 57°C

Air Velocity Range: 0 to 4,000 ft/min (0 to 1219.2 m/min)

Electrical Specifications

Voltage Range: 15 to 32 VDC

Standby Current (@ 24 VDC): 200 UA (one communication every 5 seconds with green LED enabled)

Max Alarm Current (max.): 2 mA @ 24 VDC (one communication every 5 seconds with red LED enabled)

Max Current (max.): 4.5 mA @ 24 VDC (one communication every 5 seconds with amber LED enabled)

Isolator Load Rating: 0.0063

STANDARDS

The Velociti® Series 3 Photoelectric Detectors are designed to comply with the following standard:

UL Standard: UL 268

AGENCY LISTINGS AND APPROVALS

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

UL: S2332

FM: 3023594

MEA FDNY: COA-219-02-E Vol. VI

CSFM: 7272-1703:0501

ISO 9001 Certification

For a complete listing of all compliance approvals and certifications, please visit: http://www.gamewell-fci.com/en-US/documentation/Pages/Listings.aspx

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

Learn more about Gamewell-FCI's Velociti® Series 3 Detectors and other products available by visiting www.Gamewell-FCI.com

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Great solution for areas such as Theaters that use theatrical smoke which could activate standard photoelectric smoke detectors.

Honeywell | Addressable Devices

MCS-PTIR and MCS-PTIR-IV

Multi-Criteria Photo/Thermal/Infrared Detector

General Description

MCS-PTIR and MCS-PTIR-IV are intelligent, multi-criteria detectors that combine photoelectric, thermal, and infrared (PTIR) sensors in one unit to sense multiple components of a fire. This approach enables enhanced sensitivity to real fire with heightened immunity to nuisance particulates.

Multiple sensors and communication can greatly reduce nuisance alarms compared to single sensing methods. Sophisticated algorithms maximize the advantages of all four sensor types creating our best detection strategy offering heightened immunity to nuisance particulate and enhanced sensitivity to real fire.

- Photoelectric sensor detects airborne particles associated with smoke.
- Thermal sensor detects heat and rate-of-rise (135°F fixed temperature threshold).
- Infrared sensors discern light patterns in the environment as an additional data point for alarm determination.

This ability to reject certain nuisance alarm triggers, such as theater smoke, supports the use of the detector in applications where moderate to heavy nuisance conditions exist that might cause single sensing detectors to trigger a false alarm.

The PTIR detector meets both UL 268 7th edition and UL 521 listing requirements and can indicate distinct smoke and heat alarms. This dual nature supports a local alarm setting for photoelectric detection and a general evacuation setting based on thermal detection. This can minimize work interruptions in multi-level buildings.

MCS-PTIR in B200S-WH sounder base

RA100Z Remote LED Annunciator

CK300-IR-BL Color Kit

TR300 Trim Ring

FEATURES & BENEFITS

- Multi-criteria detection
- Analog communications
- Low standby current
- Rotary address switches
- Dual LEDs for 360° visibility
- New modern profile
- Expanded color options
- UL 268 7th Edition and UL 521 Listed

MCS-PTIR and MCS-PTIR-IV Technical Specifications

PHYSICAL/OPERATING

Dimensions:

Height: 2.0 inches (51 mm) installed in B300-6 base

Diameter: 6.2 inches (156 mm) installed in B300-6 base; 4.1 inches (104 mm) installed in B501-WHITE/-IV/-BL base

Weight: 3.4 oz. (95 g)

Operating Humidity Range: 15% to 90% Relative Humidity, Non-condensing

Operating Temperature Range: 32°F to 100°F (0°C to 38°C)

Air Velocity: 0 to 300 ft./min. (0 to 91.4 m/min.)

ELECTRICAL SPECIFICATIONS

Operating Voltage Range: 15 to 32 VDC

Operating Current @ 24 VDC: 200 uA (one communication every 5 seconds with green LED blink on communication)

Maximum Alarm Current: 2 mA @ 24 VDC (one communication every 5 seconds with red LED solid on)

Maximum Current: 4.5 mA @ 24 VDC (one communication every 5 seconds with amber LED solid on)

Isolator Load Rating: 0.0063

STANDARDS

The devices in this datasheet meet the standards of UL 268 7th Edition.

AGENCY LISTINGS AND APPROVALS

The listings and approvals below apply to the MCS-PTIR and MCS-PTIR-IV. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult the factory for the latest listing status.

UL: S1195

FM Approved

CSFM: 7272-1703:0508

ORDERING INFORMATION

MCS-PTIR: Multi-criteria photoelectric, thermal and infrared smoke detector, Velociti, bright white color

MCS-PTIR-IV: Multi-criteria photoelectric, thermal and infrared smoke detector, Velociti and CLIP, ivory color

Bases

B501-WHITE: 4" Mounting base, white

B501-WHITE-BP: 4" mounting base, white, 10-pack

B501-IV: 4" Mounting base, ivory

B501-BL: 4" Mounting base, black

B300-6: 6" Flanged mounting base, white

B300-6-BP: 6" Flanged mounting base, white, 10-pack

B300-6-IV: 6" Flanged mounting base, ivory

B200S-WH: Intelligent addressable sounder base, white

B200S-IV: Intelligent addressable sounder base, ivory

B200S-LF-WH: Intelligent addressable sounder base, low-frequency, white

B200S-LF-IV: Intelligent addressable sounder base, low-frequency, ivory

B224BI-WH: Isolator base, white

B224BI-IV: Isolator base, ivory

B224RB-WH: Relay base, white

B224RB-IV: Relay base, ivory

Accessories

SMB600: Surface mounting kit (flanged)

TR300: Trim ring, white

TR300-IV: Trim ring, ivory

CK300-IR: IR color kit (includes cover and trim ring), white, 10-pack

CK300-IR-IV: IR color kit (includes cover and trim ring), ivory, 10-pack

CK300-IR-BL: IR color kit (includes cover and trim ring), black, 10-pack

RA100Z: Remote LED annunciator

M02-04-00: Detector test magnet

M02-09-00: Telescoping test magnet

Country of origin: Mexico

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Addressable Devices

MCS-COF3 and MCS-COF3-IV

Multi-Criteria Fire/CO Detector

Required for student areas with Gas Fired Appliances for combined Smoke and CO Detction

General Description

Utilize the B200S Sounder Base for Local Alarm upon CO Detection

MCS-COF3 and MCS-COF3-IV are plug-in addressable devices that provide both fire and carbon monoxide (CO) detection. The detector combines four separate sensing elements to sense multiple components of a fire: smoke, CO, light/flame, and heat. This approach enables enhanced sensitivity to real fire with heightened immunity to nuisance particulates. For CO, the detector's electrochemical sensing cell creates a separate signal for life safety CO detection.

Multiple sensors and communication can greatly reduce nuisance alarms compared to single sensing methods. Sophisticated algorithms maximize the advantages of all four sensor types creating our best detection strategy offering heightened immunity to nuisance particulate and enhanced sensitivity to real fire.

- Photoelectric sensors detect airborne particles associated with smoke.
- Thermal sensors detect heat and rate-of-rise (135°F fixed temperature threshold).
- Infrared sensors discern light patterns in the environment as an additional data point for alarm determination.

This ability to reject certain nuisance alarm triggers, such as theater smoke, supports the use of the fire/CO detector in applications where moderate to heavy nuisance conditions exist that might cause single sensing detectors to false alarm.

UL models meet UL 268 7th edition and UL 521 listing requirements for fire detection and UL 2075 standard for system-connected life safety carbon monoxide detection.

Released through the incomplete burning of various fuels, CO is a colorless, odorless and deadly gas that is virtually impossible to detect with the human senses. Because the potential exists for dangerous levels of CO to accumulate in almost any building, legislation mandating the use of CO detection in commercial spaces continues to grow.

MCS-COF3 in B200S-WH sounder base

RA100Z Remote LED Annunciator

CK300-IR-BL Color Kit

TR300 Trim Ring

B200S series intelligent sounder bases are recommended for use with MCS-COF3 and MCS-COF3-IV. These bases can generate either a Temp 3 pattern for fire or a Temp 4 pattern for CO alarm indication. The B200S series bases recognize the System Sensor synchronization protocol for use as a component of the general evacuation signal — along with other System Sensor Audible/Visible devices — when connected to a power supply or Fire Alarm Control Panel (FACP) output capable of generating the System Sensor synchronization pulses.

FEATURES & BENEFITS

- Detects all four major elements of a fire
- Separate CO detection signal
- Operates in Velociti® SLC protocol
- Separate audible signal for fire or CO alarm when used with a B200S series base
- Highest nuisance alarm immunity
- Automatic drift compensation for smoke and CO sensors
- RealTest® CO testing capability
- New modern profile with expanded color options
- Uses only one address on the SLC loop
- UL 268 7th edition, UL 521, and UL 2075 listed
- 10-year CO cell with end-of-life warning

MCS-COF3 and MCS-COF3-IV Technical Specifications

PHYSICAL/OPERATING

Dimensions:

Height: 2.7" (69 mm) installed in B200S series sounder base

Diameter: 6.875" (175 mm) installed in B200S series sounder base

Weight: 3.4 oz. (95 g)

Operating Humidity Range: 15% to 90% Relative Humidity, Non-condensing

Operating Temperature Range: 32°F to 100°F (0°C to 38°C)

Air Velocity: 0 to 4000 ft./min. (0 to 1219.2 m/min.)

ELECTRICAL SPECIFICATIONS

Operating Voltage Range: 15 to 32 VDC

Operating Current @ 24 VDC: 200 uA (one communication every 5 seconds with green LED blink on communication)

Maximum Alarm Current: 2 mA @ 24 VDC (one communication every 5 seconds with red LED solid on)

Maximum Current: 4.5 mA @ 24 VDC (one communication every 5 seconds with amber LED solid on)

Isolator Load Rating: 0.0063

CO MONITORING UL STANDARD REFERENCE

Alarm thresholds (in parts per million) are as follows for:

70 ± 5ppm: Detector response time 60 – 240 min.

150 ± 5ppm: Detector response time 10 – 50 min.

400 ± 10ppm: Detector response time 4 – 15 min.

STANDARDS

Per UL standard 2075, the MCS-COF3 and MCS-COF3-IV have been tested to the sensitivity limits defined in UL Standard 2034.

UL Standard: UL 268 7th Edition

AGENCY LISTINGS AND APPROVALS

The listings and approvals below apply to the MCS-COF3 and MCS-COF3-IV. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult the factory for the latest listing status.

UL: S1195

CSFM: 7272-1703:0508

ORDERING INFORMATION

MCS-COF3: Advanced multi-criteria fire/CO detector, Velociti, bright white color

MCS-COF3-IV: Advanced multi-criteria fire/CO detector, Velociti, ivory color

Bases

B501-WHITE: 4" Mounting base, white

B501-WHITE-BP: 4" mounting base, white, 10-pack

B501-IV: 4" Mounting base, ivory

B501-BL: 4" Mounting base, black

B300-6: 6" Flanged mounting base, white

B300-6-BP: 6" Flanged mounting base, white, 10-pack

B300-6-IV: 6" Flanged mounting base, ivory

B200S-WH: Intelligent addressable sounder base, white

B200S-IV: Intelligent addressable sounder base, ivory

B200S-LF-WH: Intelligent addressable sounder base, low-frequency, white

B200S-LF-IV: Intelligent addressable sounder base, low-frequency, ivory

B224BI-WH: Isolator base, white

B224BI-IV: Isolator base, ivory

B224RB-WH: Relay base, white

B224RB-IV: Relay base, ivory

Accessories

SMB600: Surface mounting kit (flanged)

TR300: Trim ring, white

TR300-IV: Trim ring, ivory

CK300-IR: IR color kit (includes cover and trim ring), white, 10 pack

CK300-IR-IV: IR color kit (includes cover and trim ring), ivory, 10 pack

CK300-IR-BL: IR color kit (includes cover and trim ring), black, 10 pack

RA100Z: Remote LED annunciator

M02-04-00: Detector test magnet

M02-09-00: Telescoping test magnet

Country of origin: Mexico

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Intelligent Bases

B501, B210LP, B224BI, B224RB and Mounting Kits and Accessories

General

The Intelligent Velociti® and CLIP™ mounting bases and kits provide a variety of ways to install Gamewell-FCI detectors in any application. These mounting bases are non-addressable and are available in both the Velociti and CLIP protocols. The intelligent detectors can be mounted in any of the following devices, depending on the junction box selection (see Table 1 - Junction Box Selection Guide).

- flanged bases
- flangeless bases
- plastic rings

Note: The E3 Series® and S3 Series panels support both the Velociti® and CLIP™ protocols, and the GWF-7075 panel supports only the Velociti protocol.

Relay, isolator, and sounder bases can be used to meet local code requirements. Relay bases provide one Form-C contact relay for the control of auxiliary functions such as door closure and elevator recall. Isolator bases allow loops to continue to operate under fault conditions and automatically restore when the fault is removed. Sounder bases are available in a combination temporal 3 and continuous tone model.

The Intelligent Bases provide a variety of mounting options to meet your installation challenges. The bases are available in flanged or flangeless versions, so that you can mount the bases to a variety of junction boxes. See Table 1 for the Junction Box Selection Guide. You can use the SMB600 surface mounting box to mount the following bases:

- B210LP relay base
- B224BI isolator base
- B224RB relay base

Figure 1 B501 Mounting Base

Figure 2 B210LP Mounting Base

Figure 3 B224BI Mounting Base

Figure 4 B224RB Mounting Base

FEATURES & BENEFITS

All sounder bases offer the following features.

- Complies with UL® Standards 268 and 464
- Includes the following three types of bases that comply with local code requirements:
  - Relay
  - Isolator
  - Sounder

Relay Base Feature

- Relay bases provide one Form-C contact relay

Isolator Base Feature

- Isolator bases include data communications lines to operate under fault condition

Installation Features
The bases offer the following flexible installation characteristics:

- Offers multiple accessory options
- Includes an installation mounting kit and accessories for several types of model options
- Uses 12-24 AWG gauge wire ranges to provide the bases with flexible installation
- Contains bases that enable quick and secure detector plug-in
- Provides SEMS screws for easy wiring connections
- Available in temporal and non-temporal pattern versions

Ordering Information

NOTE: "WH" suffix indicates Bright White color model.
NOTE: "-IV" suffix indicates Ivory color model.
NOTE: "-BL" suffix indicates Black color model.

Intelligent Bases

B501-WHITE: Flangeless mounting base, bright white

Dimensions: 4" (10.2 cm) diameter x 0.74" (18.8 mm) height

B501-WHITE-BP: Flangeless mounting base bulk pack, bright white

B501-IV: Standard European flangeless mounting base, ivory

B501-BL: Standard European flangeless mounting base, black

B224BI-WH: Plug-in Isolator detector base, bright white

Dimensions: 6.85 (17.4 cm) diameter x 1.61" (4.1 cm) height

B224BI-IV: Plug-in Isolator detector base, ivory

B224RB-WH: Plug-in Relay detector base, bright white

Dimensions: 6.85" (17.4 cm) diameter x 1.61" (4.1 cm) height

B224RB-IV: Plug-in Relay detector base, ivory

B300-6 : Standard flanged low-profile mounting base, white

Dimensions: 6.1" (15.49 cm) diameter

For Standard ASD, ATD and PTIR Device Heads.

B300-6-BP: Bulk pack of B200-6 package contains 10

B300-6-IV: Standard flanged low-profile mounting base, ivory

Ordering Information

Mounting Kits and Accessories:

BCK-200B: Detector kit, black

CK300: Detector color kit, white Pack of 10

CK300-IR: Detector color kit for use with MCS-COF Series Detectors, white. Pack of 10

CK300-IV: Detector color kit, ivory. Pack of 10.

CK300-IR-IV: Detector color kit for use with MCS-COF Series detectors, ivory. Pack of 10.

CK300-BL: Detector color kit, black. Pack of 10.

CK300-IR-Bl: Detector color kit for use with MCS-COF Series detectors, black. Pack of 10.

TR300: Accessory flange ring for B300-6, bright white

TR300-IV: Accessory flange ring for B300-6m ivory

M02-04-01: Detector test magnet.

M02-09-00: Test magnet with telescoping handle.

RA100Z: Remote LED annunciator. 3-32 VDC. Mounts to a U.S. single-gang electrical box. For use with B401 and B300-6.

SMB600: Surface mounting kit, flanged.

TR300: Replacement flange for B210LP base, white

TR300-IV: Replacement flange for B210LP base, ivory

WCK-200B: Detector kit, white

Mounting Kits and Accessories

Table 1 lists the mounting kits and accessories assigned to each model.

	SINGLE-GANG	3.5" OCTAGONAL	4.0" OCTAGONAL	4.0" SQUARE	4.0" SQUARE WITH 3.0" MUD RING	50 MM	60 MM	70 MM	75MM
B501	No	Yes	No	No	Yes	Yes	Yes	Yes	No
B210LP	Yes	Yes	Yes	Yes	Yes	No	No	No	No
B224BI	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
B224RB	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
NOTE: The box depth is contingent on the base and the wire size. For information on applicable local codes for appropriate recommendation, refer to the National Electrical Code.									

Table 1: Intelligent Bases Mounting Kits

Intelligent Bases Technical Specifications

SYSTEM

Temperature Range:

For B224RB, B224BI, and B210LP: 32°F to 120°F (0°C to 49° C)

For B210LP, B300-6, B501: -4° F to 150°F (-20°C to 66°C)

Humidity Range: 10% to 93% RH, non-condensing

Wire Gauge:

For B224BI, B224RB: 14 to 24 AWG

For B210LP, B300-6, B501: 12 to 24 AWG

Electrical Ratings:

For B501, B224RB, B224BI:

Operating Voltage: 15 to 32 VDC (powered by SLC)

Standby Ratings:

B501: 150 uA

B224BI: 450 uA maximum

B224RB: 170 uA

Set Time (B224RB only):

Short delay: 55-90 m seconds

Long delay: 6 to 9 seconds

Reset Time (B224RB only): 20 m seconds maximum

Relay Characteristics (B224RB only): Two-coil Latching Relay One Form-C Contact

Ratings (UL/CSA):

0.9 A @ 125 VAC (resistive)

0.9 A @ 110 VDC (inductive)

3.0 A @ 30 VDC (resistive)

TEMPERATURE AND HUMIDITY RANGES

This system meets NFPA requirements for operation at 0 – 49°C/32 – 120°F and at a relative humidity 93% ± 2% RH (noncondensing) at 32°C ± 2°C (90°F ± 3°F). However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and its peripherals be installed in an environment with a normal room temperature of 15 – 27°C/60 – 80°F.

STANDARDS

The Intelligent Bases are designed to comply with the following standards:

UL Standards: UL 268
UL 464

AGENCY LISTINGS AND APPROVALS

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

UL: S911

FM: 3035027

CSFM: 7135-1653:0213
7300-1653:0109
7300-1653:0126
7300-1653:0238

ISO 9001 Certification

For a complete listing of all compliance approvals and certifications, please visit: http://www.gamewell-fci.com/en-US/documentation/Pages/Listings.aspx

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

Learn more about Gamewell-FCI's Intelligent Bases and other products available by visiting www.Gamewell-FCI.com

Honeywell Gamewell-FCI
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Northford, CT 06472-1610
203.484.7161
www.honeywell.com

9021-60540 | J | 07/2018

Honeywell

Gamewell FCI FIRE CONTROL INSTRUMENTS
by Honeywell

Velociti® Series B200S

Description

The B200S Velociti® sounder base sets a new standard for performance, installation, and aesthetics. It is an addressable sounder base that requires a unique, separate sounder base address. This sounder base is available in only Velociti protocol. The B200S is designed for new and existing dwelling unit applications. It offers maximum flexibility in installation, configuration, and operation to meet or exceed the UL® Standard 268 and UL® Standard 464 requirements.

One of the unique features of the B200S sounder base offers the functionality “to capture” the communications transmitted between the attached sensor head on the System Sensor signal line loop of the E3 Series® or S3 Series fire alarm control panel. This new feature allows the E3 Series and S3 Series fire alarm control panels to use the same address as the detector, but use a unique device type on the loop. Using the CAMWorks™ Tool, the E3 Series and S3 Series control panels can then use that same address to command and activate an individual sounder or a group of sounders.

In CAMWorks, you can program the command set from the E3 Series or S3 Series control panel to a specific event which allows you to select the volume, tone and group. In addition, the E3 Series and S3 Series control panels generate synchronization pulses through the loop and enable selectable tone patterns.

With its attractive aesthetics, the B200S is ideal to use for applications where the appearance is critical. For example, the design eliminates unsightly surface-mount boxes and the sounder base employs a separate mounting plate that can be installed on various junction box sizes (see Table 1). In addition, the mounting plate enables pre-wiring of all connections to simplify the installation. To install the housing, use the mounting plate, and secure two retaining screws to lock-it in position. The retaining screws are covered by the installed sensor head for added tamper resistance.

Intelligent Addressable Sensor Sounder Base

B200S

Features

- Built-in supervision (no EOL relays required).
- Complies with UL® Standard 268 and UL® Standard 464.
- Offers a programming option to control and activate the sounder base independently.
- Programs the addressability for maximum configuration flexibility.
- Broadcasts over two volume levels(75 or 85dBA).
- Has multiple event-driven tone outputs and uses custom tone capability.
- Supports Continuous, ANSI Temporal 3, ANSI Temporal 4, and March Time tones.
  - Employs coded patterns that may be optionally synchronized over the SLC and promptly changed.
- Synchronized with other System Sensor notification devices.
- Includes a pre-wire mounting plate that fits various junction box sizes.
- Uses a mechanical locking feature that prevents the removal of the attached sensor head.

SIGNALING
UL® LISTED S1911
FM APPROVED 3035027
7135-1653:0213

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

Specifications

Physical Specifications:

Base Diameter: 6.875” (17.46 cm)
Base Height: 2.0” (5.08 cm) less sensor
Shipping Weight: 0.50 lb. (227 gm)
Operating Temperature Range: 32° to 120° F (0° to 49° C)
Operating Humidity Range: 10% to 93% relative humidity (non-condensing)

Electrical Specifications:

External Supply Voltage: 16 to 33 VDC (VFWR)
External Standby Current: 500 µA maximum
Alarm Current: 35 mA maximum (high volume)
15 mA maximum (low volume)
SLC Operating Voltage: 15 to 32 VDC
SLC Standby Current: 300 µA maximum
Sound Output: Greater than 85 dBA minimum – measured in a UL reverberant room at 10 ft. 24 Volts (in continuous tone).

Installation Specifications:

Mounting: Mounts directly to 4” (10.16 cm) square, 4” (10.16 cm) octagon, 3 1/2” (8.9 cm) octagon, single-gang or double-gang junction boxes.
Wire: Wire sizes up to 12 AWG.

Table 1: B200S Junction Box Selection Guide

Single-Gange	3.5” Octagonal	4.0” Octagonal	4.0” Square	4.0” Square w/ 3.0” mud ring
Yes	Yes	Yes	Yes	Yes
50 mm	60 mm	70 mm	75 mm	
No	No	Yes	No	

Ordering Information

Part Number	Description
B200S	Intelligent Addressable Sensor Sounder Base

Note: The B200S sounder base is compatible with the E3 Series and S3 Series fire alarm control panels.

For use with the MCS-COF3, Photo/CO Detector Heads for local alarm upon CO detection Supervisory Alarm.

CO1224 Series
Carbon Monoxide Detectors with RealTest® Technology

Conventional CO Detector to be used in Science Classrooms that rely upon Thermal Detectors for FA protection due to potential Photo Detector false alarms.

Description

The Gamewell-FCI, CO1224 Series comprise the following Carbon Monoxide (CO) Detectors.

- CO1224T
- CO1224TR
- CO1224A (Canada) Carbon Monoxide

These detectors use a highly accurate and reliable electrochemical sensing cell to provide an early warning of dangerous carbon monoxide (CO) levels.

The CO1224 Series detectors are designed for system operation. These detectors are listed to the following standards:

- UL Standard 2075 (US models only)
- CSA 6.19-01 (Canada model only).

In addition, they offer a code-required trouble relay to send a sensor failure or end-of-life signal to the fire alarm control panel and the Central Station.

The CO1224 Series detectors use SEMS-type terminal Phillips head screws for quicker and more positive wiring connections and code-required wiring supervision. With a low current draw, these detectors allow more devices to be connected to the panel, limiting the need to purchase extra power supplies or more expensive panels. As 12/24 VDC detectors, the CO1224 Series detectors operate on most industry, security and fire alarm control panels.

When the detector identifies dangerous amounts of CO in the area, the CO1224 Series CO detectors alert the residents with signals that sound and flash a temp 4 signal alarm. The 24/7 Central Station Monitoring feature guarantees protective security to the property and the resident's life safety whether the residents' are sleeping or already suffering from the effects of carbon monoxide poisoning CO.

Using the RealTest® Technology, the CO gas sensing cell used in the CO1224 Series CO detectors can be tested using a CO gas agent, that complies with the requirements of NFPA 720: 2009 (US models only). (See the reverse page or the user manual for complete instructions.)

RealTest Mode Activation

To activate the RealTest mode, do the following:

1. Place the detector into the RealTest mode.
2. Spray a small amount of CO into the detector per the Installation Instructions.
3. Within seconds, the detector goes into alarm indicating a successful gas enter.

RealTest® is a registered trademark of Honeywell International Inc.
UL® is a registered trademark of Underwriters' Laboratories.

Carbon Monoxide Detectors with RealTest® Technology

CO1224 Series

Features

Device monitored by GW/FCI AMM2-F Module

- The CO1224T and CO1224TR detectors comply with UL Standard 2075.
- The CO1224A detector complies with ULC Standard CSA 6.19-01.
- Includes a 10-year end-of-life timer.
- Provides a RealTest® that enables a functional test using canned CO.
- Offers a code-required Trouble Relay.
- Uses SEMS terminals for wiring supervision.
- Wired for 12/24 VDC.
- Supports a low current draw of 20 mA in standby and 40 mA in alarm.
- Designed with a versatile mounting used for wall and ceiling installations.
- Employs a highly accurate and reliable electrochemical sensing technology.
- Contains an optional CO-PLATE CO Detector Replacement Plate to upgrade previously installed competitor detectors to the CO1224T or CO1224A.
- Tested CO1224T up to 12,000 feet above sea level.

SIGNALING UL LISTED E307195 E304075 ULC

ISO 9001 CERTIFIED ENGINEERING & MANUFACTURING QUALITY SYSTEMS

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

CO1224 Series Detectors Carbon Monoxide Detector Specifications (Continued)

Architectural/Engineering Specifications (Continued)

The Carbon monoxide (CO) detector shall be a system-connected Gamewell-FCI model part number CO1224T or CO1224TR listed to Underwriters Laboratories UL Standard 2075 for Gas and Vapor Detectors and Sensors. The Canadian model CO1224A, is ULC listed to CSA 6.19-01, for residential carbon monoxide alarm devices. The detector shall be equipped with a sounder and a trouble relay. The detector's base can be mounted to a single-gang electrical box or direct (surface) mount used for wall or ceiling installations. Wiring connections shall be made by means of SEMS screws.

The detector shall provide dual-color LED indication that blinks to indicate the following conditions:

• normal standby • alarm • end-of-life

When the sensor supervision is in a trouble condition, the detector shall send a trouble signal to the panel. When the detector gives a trouble or end-of-life signal, the detector shall be replaced. The detector shall provide a way to test CO gas entry into the CO sensing cell. The detector shall provide this with a test mode that accepts CO gas from a test agent and alarms immediately upon sensing CO entry.

For the CO1224T only, the detector shall perform in the detection of CO up to 12,000 feet above sea level and alarm within the time specified by ANSI/UL Standard 2034 for CO concentrations of 70, 150 and 400 parts per million (ppm), as verified by a Nationally Recognized Test Laboratory.

The Carbon monoxide (CO) detector shall be a system-connected Gamewell-FCI model part number CO1224T or CO1224TR listed to Underwriters Laboratories UL 2075 for Gas and Vapor Detectors and Sensors. The Canadian model CO1224A, is ULC listed to CSA 6.19-01, for residential carbon monoxide alarm devices. The detector shall be equipped with a sounder and a trouble relay. The detector's base can mount to a single-gang electrical box or direct (surface) mount to the wall or ceiling. Wiring connections shall be made by means of SEMS screws.

Electrical Specifications

Operating Voltage:	12/24 VDC
Audible Signal:	85 dB in alarm
Standby Current:	20 mA
Alarm Current:	40 mA (75 mA test)
Alarm Contact Ratings:	0.5 A @ 30 VDC
Trouble Contact Ratings:	0.5 A @ 30 VDC

Physical Specifications

Dimensions:

CO1224T & CO1224A	3.3"W x 1.3"H x 5.1"L (84 W x 33 H x 130Lmm)
CO1224TRL	1.3" H x 6.0" D (33 H x 152 D mm)

Approximate Weight:

CO1224T & CO1224A	7 oz (198 g)
CO1224TR	11 oz (312 g)
Operating Temperature Range:	32°F to 104° F (0°C to 40° C)
Operating Humidity Range:	22 to 90% RH
Input Terminals:	14 to 22 AWG
Mounting:	Single-gang back box; surface mount to wall or ceiling

Operation Modes

Operation Mode	Green LED	Red LED	Sounder
Normal (standby)	Blink 1 per minute		
Alarm		Blink in temp 4 pattern	Sound in temp 4 pattern

RealTest® Feature: The Gamewell-FCI, CO1224 Series, CO Detectors enable evaluation of the functionality of the CO sensing cell using a canned CO test agent.

NOTE: Check with local codes and the AHJ to determine if a functional gas test is desired for an installation.

Figure 1

1. To enter the RealTest mode, push and hold the Test/Hush button for two seconds.
2. The green LED flashes once every second to indicate the RealTest mode started.

Figure 2

1. Spray canned CO agent into the detector

Figure 3

1. Verify CO sensing at the control panel.
2. After 20-60 seconds, the detector automatically exits the RealTest alarm mode.

Hush Feature: To silence the sounder for five minutes (except in RealTest mode), push the Test/Hush button.

Trouble Feature: When the detector is in a trouble condition, the detector sends a Trouble Signal to the fire alarm control panel.

End-of-Life Timer: After the detector's internal sensor reaches the end-of-life, the system sends a Trouble Signal to the fire alarm control panel to indicate it is time to replace the detector.
Note: An electrochemical CO detector lifespan is approx. ten years. The detector must be replaced by the date marked on the inside of the product.

CO-PLATE: Gamewell-FCI also offers the CO-PLATE, CO Detector Replacement Plate to cover the footprint (when necessary) of previously installed competitive carbon monoxide detectors that require replacement.

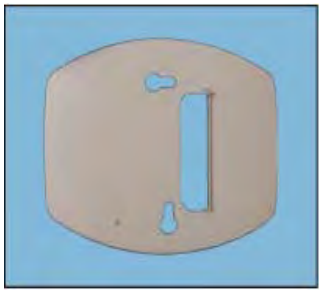

Figure 4

Ordering Information

Part Number	Description
CO1224T	12/24 volt, 6-wire system-monitored carbon monoxide detector with RealTest® Technology (US only)
CO1224TR	12/24 volt, 6-wire system-monitored round carbon monoxide detector with RealTest® Technology (US only)
CO1224A	12/24 volt, 6-wire system-monitored carbon monoxide detector with RealTest® Technology (Canada only)
CO-PLATE	CO detector replacement plate to cover the footprint of previously installed competitive detectors (US & Canada)

Gamewell FCI FIRE CONTROL INSTRUMENTS
by Honeywell

InnovairFlex™ Series
DNR/DNRW Duct Smoke Housing

Description

The InnovairFlex™ Series, DNR intelligent, non-relay photoelectric duct smoke detector, and the DNRW watertight, non-relay photoelectric duct smoke detector feature a pivoting housing that fits both square and rectangular footprints. These detectors are capable of mounting to a round or rectangular duct. The DNR/DNRW detectors can be used with the E3 Series® and 7100 Series Systems.

Note: The InnovairFlex™ Series, DNR requires the Velociti® Series, ASD-PL2FR Sensor and AOM-2RF, if relays are required for the fan control.

The DNRW duct smoke detector, with its NEMA 4 rating, is Listed as a watertight enclosure providing protection against falling dirt, rain, and windblown dust, splashing and hose directed water. These features allow operators to use the detector in the most extreme environments.

The units sense smoke in the most challenging conditions, operating in airflow speeds of 100 to 4,000 feet per minute, temperatures of -4°F to 158°F, and a humidity range of 0 to 95 percent (non-condensing).

An improved cover design isolates the sensor head from the low-flow feature for simple maintenance. A cover tamper feature was added to indicate a trouble signal for a removed or improperly installed sensor cover. The InnovairFlex housing provides a 3/4-inch conduit knockout and ample space to facilitate easy wiring and mounting of the relay module.

The InnovairFlex duct smoke detector can be customized to meet local codes and specifications without additional wiring. The new InnovairFlex product line is compatible with all previous Innovair models, including remote test accessories.

WARNING: Duct smoke detectors have specific limitations.
DUCT SMOKE DETECTORS ARE:
NOT a substitute for an open area smoke detector,
NOT a substitute for early warning detection, and NOT a replacement for a building's regular fire detection system.
Refer to NFPA 72 and 90A for additional duct smoke detector 2911 application information.

Intelligent Non-Relay
Photoelectric Duct Smoke Housing

InnovairFlex-DNR/DNRW

Features

- Photoelectric, integrated low-flow technology
- Air velocity rating from 100 ft/min to 4,000ft/min (0.5m/s to 20.32m/sec)
- Versatile mounting options: square or rectangular configuration
- Broad ranges for operating temperature (-4°F to 158°F) and humidity (0% to 95% non-condensing)
- Patented sampling tube installs from front or back of the detector with no tools required
- New Cover tamper signal
- Increased wiring space with a newly added 3/4-inch conduit knockout
- Available space within housing to accommodate the mounting of the relay module
- Easily accessible code wheels on sensor head (sold separately)
- Clear cover for convenient visual inspection
- UL® 268A Listed
- Remote testing capability
- Requires SLC line power only
- NEMA Type 4 UL Listed for non-hazardous indoor and outdoor applications (DNRW only)
- UV Resistant, UL® Listed housing and cover material (DNRW only)

An ISO 9000-2000 Company

SIGNALING
UL LISTED S911 | FM APPROVED 3029700 | MSFM 2202 2207 | 3242-2653:209 | ULC S911

GAMEWELL-FCI
12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

Architectural/Engineering Specifications

The air duct smoke detector shall be a System Sensor InnovairFlex™ DNR Intelligent Non-Relay Photoelectric Duct Smoke Detector and DNRW Watertight NEMA4 Duct Smoke Detector. The detector housing shall be UL Listed per UL 268A specifically for use in air handling systems. The flexible housing of the duct smoke detector fits both square and rectangular footprints. The detector shall operate at air velocities of 100 ft/min to 4,000 ft/min (0.5 m/sec to 20.32 m/sec). The unit shall be capable of providing a trouble signal in the event that the sensor cover is removed or improperly installed. It shall be capable of local testing via magnetic switch or remote testing using the RTS151KEY remote test station. Terminal connections shall be of the strip and clamp method suitable for 12–18 AWG wiring.

Physical Specifications

Size:	
Rectangular Dimensions:	14.38 in (37 cm) Length; 5 in (12.7 cm) Width; 2.5 in (6.6 cm) Depth
Square Dimensions:	7.75 in (19.7 cm) Length; 9 in (22.9 cm) Width; 2.5 in (6.35 cm) Depth
Weight:	1.6 lb (0.73 kg)
Environmental Rating:	NEMA4 (DNRW only)
Operating Temperature Range:	–4° to 158°F (–20° to 70°C)
Storage Temperature Range:	–22° to 158°F (–30° to 70°C)
Operating Humidity Range:	0% to 95% relative humidity non-condensing
Air Duct Velocity:	100 to 4000 ft/min (0.5 to 20.32 m/sec)
DCOIL - (if included)	17.5 - 26.4 VDC .95mA max.

Electrical Ratings

For information on the electrical specifications, refer to the InnovairFlex DNR Duct Smoke Detector Installation Instructions, P/N I56-3051-001R.

Accessory Current Loads at 24 VDC

Device	Standby	Trouble
RA100Z	0 mA	12 mA Max.
RTS151/RTS151KEY	0 mA	12 mA Max.

Installing the InnovairFlex Sampling Tube

The InnovairFlex sampling tube may be installed from the front or back of the detector. The tube locks securely into place and can be removed by releasing the front or rear locking tab. (Figure 3 illustrates the front locking tab).

Figure 1

Figure 2

Figure 3

Wiring for Intelligent Non-Relay Duct Smoke Detector

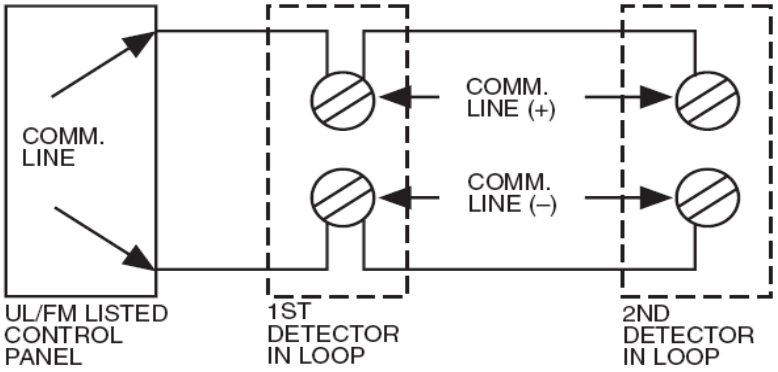

Figure 4 System Wiring Diagram for DNR

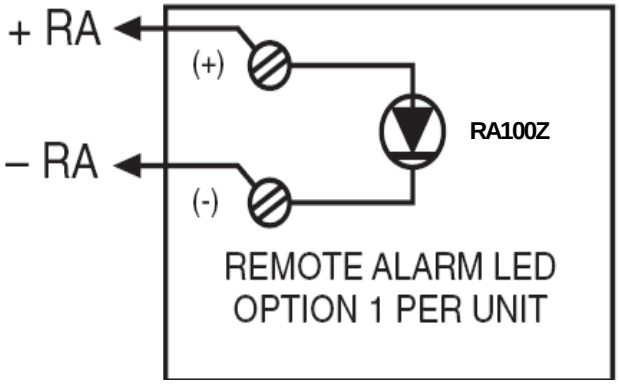

Figure 5 DNR to RA100Z

DNR TO RTS451/RTS451KEY/RTS151/ RTS151KEY WITH "R" REMOTE TEST CAPABLE DETECTOR HEAD OPTION:

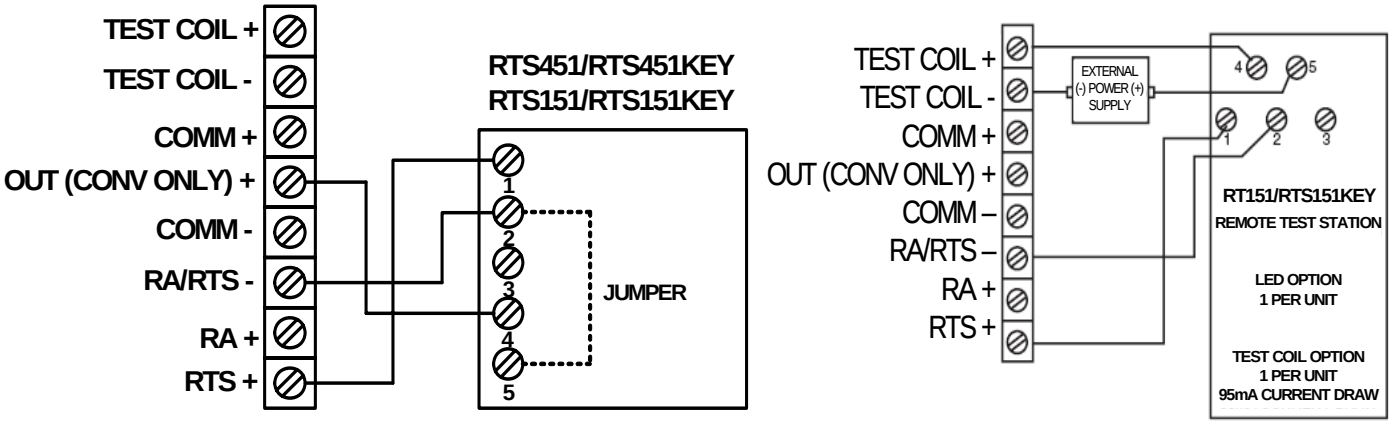

Figure 6 DNR to RTS151/RTS151 Key

Important Notes:

- The use of either RTS151 or RTS151KEY requires the installation of an accessory coil, DCOIL, sold separately. For additional information, refer to the DNR or DNRW Duct Smoke Detector Installation Instructions, P/N I56-3051-001R and the Duct Application Smoke Detectors Application Guide.
- The RTS151/RTS151KEY test coil circuit requires an external 24 VDC power supply which must be UL Listed.

Accessories

System Sensor provides system flexibility with a variety of accessories, including two remote test stations and different means of visible and audible system annunciation. As with our duct smoke detectors, all duct smoke detector accessories are UL Listed.

Figure 7 RTS151 UL S2522

Figure 8 RTS151KEY UL S2522

Figure 9 RA100Z UL S2522

Figure 10 ASD-PL2FR

Ordering Information

Part Number	Description
DNR	Intelligent non-relay photoelectric low-flow duct smoke detector
DNRW	Watertight intelligent non-relay photoelectric low-flow duct smoke detector
ASD-PL2FR	Intelligent photoelectric smoke sensor with remote test capability in duct applications

Accessories

Part Number	Description
DCOIL	Remove test coil required with RTS151/RTS151151KEY
DST1	Metal sampling tube duct width up to 1 ft (0.3m)
DST1.5	Metal sampling tube duct widths 1 ft to 2 ft (0.3 to 0.6 m)
DST1.5	Metal sampling tube duct widths 1 ft to 2 ft (0.3 to 0.6 m)
DST3	Metal sampling tube duct widths 2 ft to 4 ft (0.6 to 1.2 m)
DST5	Metal sampling tube duct widths 4 ft to 8 ft (1.2 to 2.4 m)
DST10	Metal sampling tube duct widths 8 ft to 12 ft (2.4 to 3.7 m)
DH400OE-1	Weatherproof enclosure
ETX	Metal exhaust tube duct width 1ft (0.3m)
M02-04-00	Test magnet
P48-21-00	End cap for metal sampling tubes
RA100Z/RA100ZA	Remote annunciator alarm LED
RTS151	Remote test station
RTS151KEY	Remote test station with key lock

Optional Remote LED Annunciator and Remote Test Station for concealed Duct Detectors.

Honeywell | Addressable Devices

Velociti® Series 3 Detectors

Photoelectric Detectors

Description

The Gamewell-FCI, Velociti® Series 3 intelligent photoelectric detectors with integral communication provide point location for alarm communication and selective maintenance. Designed in a modern bright white color, the Velociti Series 3 is aesthetically pleasing for today's contemporary buildings.

The Velociti Series 3 smoke detectors are intelligent addressable detectors with point ID capability that enable each detector address to be set with rotary address switches providing exact device locations. The photoelectric detector continually monitors the detected temperature and reports it to the fire alarm control panel. The modern design and expanded color options support a variety of contemporary aesthetic demands. In addition, each detector is constructed for exceptional installation and maintenance efficiency.

The Gamewell-FCI, ASD-PL3 photoelectric detector's re-designed optical sensing chamber is engineered to sense smoke produced by a wide range of combustion sources in accordance with more stringent code standards. The sensitivity of Velociti series detectors can be programmed using the control panel software to suit the environment. The ASD-PL3R photoelectric detector is also remote test capable that may be used with a DNR (DNRW) duct smoke detector housing. The ASD-PTL3 multi-sensor detector offers either photoelectric detection or thermal detection through dual electronic thermistors at 135°F fixed temperature thermal sensing.

For legacy installations, service detectors are available in the classic ivory color that will operate in both Velociti and CLIP protocol for backwards compatibility. Service models are designated by the -IV part number after the detector model.

Note: Although the E3 Series® and S3 Series panels support both the Velociti® and CLIP™ protocols, the GWF-7075 panel does not support the CLIP protocol. To obtain a complete list of panels that are listed to Velociti Series 3 detectors, refer to the Compatibility Addendum for Gamewell-FCI Manuals, P/N:9000-0427-L8.

Photoelectric Detector

FEATURES & BENEFITS

- Complies with UL® Standard 268 7th Edition
- Designed with a new profile to offer modern and improved aesthetics
- Contains a built-in functional test switch activated by external magnet
- Supports a low standby current
- Provides rotary address switches (01-159)
- Supplies optional relay, isolator, or sounder bases (standard or low frequency)
- Includes dual LEDs for 360° visibility
- Offers expanded color options

Remote test, smoke head for DNR(W) housing.

Ordering Information

NOTE: "-IV" suffix indicates Ivory color model.
NOTE: "-BL" suffix indicates Black color model.
NOTE: "WH" suffix indicates Bright White color model.
ASD-PL3: Photoelectric smoke detector, bright white, Velociti

ASD-PL3R: Photoelectric smoke detector, remote test capable, for use with DNR(W) duct smoke detectors, bright white, Velociti

ASD-PTL3: Photoelectric smoke detector with thermal sensing, bright white, Velociti

ASD-PL3-IV : Photoelectric smoke detector, ivory, Velociti/CLIP

ASD-PL3R-IV: Photoelectric smoke detector, remote test capable, for use with DNR(W) duct smoke detectors, ivory, Velociti/CLIP

ASD-PTL3-IV : Photoelectric smoke detector with thermal sensing, ivory, Velociti/CLIP

Intelligent Bases

For details on intelligent bases, refer to Data Sheet P/N: 9021-60540.

Note: "IV" suffix indicates Flashscan and CLIP devices.

"WH" suffix indicates bright white

B501-WHITE: 4" Flangeless mounting base, bright white

B501-WHITE-BP: 4" Flangeless mounting base bulk pack, bright white

B501-IV: 4" Flangeless mounting base, ivory

B300-6: 6" Flanged mounting base, bright white

B300-6-IV: 6" Flanged mounting base, ivory

B300-6-BP: 6" Flanged mounting base bulk (Pack of 10)

B200SR-WH: Standard sounder base, bright white

B200SR-IV: Standard sounder base, ivory

B200S-WH: Intelligent addressable sounder base, bright white

B200S-IV: Intelligent addressable sounder base, ivory

B200SR-LF-WH: Standard low frequency sounder base, bright white

B200SR-LF-IV: Standard low frequency sounder base, ivory

B200S-LF-WH: Intelligent addressable low frequency sounder base, bright white

B200S-LF-IV: Intelligent addressable low frequency sounder base, ivory

B224RB-WH: Relay base, bright white

B224RB-IV: Relay base, ivory

B224BI-WH: Isolator base, bright white

B224BI-IV: Isolator base, ivory

DNR: Intelligent duct detector housing, non-relay

DNRW: Intelligent duct detector housing, non-relay, watertight

Ordering Information

Accessories

SMB600: Surface Mounting Kit (flanged)

TR300: Accessory Flange Ring for B300 6" Base, bright white

TR300-IV: Accessory Flange Ring for B300 6" Base, ivory

RA100Z: Remote LED annunciator, 3-32 VDC

The annunciator mounts to a U.S. single-gang electrical box. For use with B501 and B300-6.

CK300: Bright White detector kit (Pack of 10)

CK300-IR: White, detector color kit for use with MCS-COF Series Detectors. (Pack of 10)

CK300-IV: Ivory, detector color kit. (Pack of 10)

CK300-IR-IV: Ivory, detector color kit for use with MCSCOF Series detectors. (Pack of 10)

CK300-BL: Black detector kit. (Pack of 10)

CK300-IR-Bl: Black, detector color kit for use with MCSCOF Series detectors. (Pack of 10)

M02-04-01: Detector test magnet.

M02-09-00: Test magnet with telescoping handle.

XR2B: Detector removal tool. Allows the installation and/or removal of the detector heads from the bases in high ceiling applications.

XP-4: Extension pole for XR2B. Shipped with three, 5-foot (1.524,m) sections.

Velociti® Series 3 Detectors Technical Specifications

SYSTEMS

Photoelectric Intelligent Detector:

Physical Specifications

Height: 2.0 inches (51 mm) installed in B300-6 base

Diameter:

6.1 inches (15.49 cm) installed in B300-6 base

4 inches (10.16 cm) installed in B501 base

Shipping Weight: 3.4 oz (96.4 g)

Operating Temperature Range:

Photo: 32° F to 122° F (0° C to 50° C)

Photo in Duct Applications: -4° F to 158° F (-20° C to 70° C)

Photo with Thermal: 32° F to 100° F (0° C to 38° C)

Operating Humidity Range: 10% to 93% non-condensing

Rate-of-Rise Detection: Responds to greater than 15°F/minute or 135°F (8.3° C/minute or 57°C

Air Velocity Range: 0 to 4,000 ft/min (0 to 1219.2 m/min)

Electrical Specifications

Voltage Range: 15 to 32 VDC

Standby Current (@ 24 VDC): 200 UA (one communication every 5 seconds with green LED enabled)

Max Alarm Current (max.): 2 mA @ 24 VDC (one communication every 5 seconds with red LED enabled)

Max Current (max.): 4.5 mA @ 24 VDC (one communication every 5 seconds with amber LED enabled)

Isolator Load Rating: 0.0063

STANDARDS

The Velociti® Series 3 Photoelectric Detectors are designed to comply with the following standard:

UL Standard: UL 268

AGENCY LISTINGS AND APPROVALS

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

UL: S2332

FM: 3023594

MEA FDNY: COA-219-02-E Vol. VI

CSFM: 7272-1703:0501

ISO 9001 Certification

For a complete listing of all compliance approvals and certifications, please visit: http://www.gamewell-fci.com/en-US/documentation/Pages/Listings.aspx

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

Learn more about Gamewell-FCI's Velociti® Series 3 Detectors and other products available by visiting www.Gamewell-FCI.com

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9020-0617 | K | 04/2018

Honeywell

DH400OE-1 Weatherproof Enclosure for Duct Smoke Detectors

The System Sensor DH400OE-1 is a steel enclosure for mounting a standard indoor rated duct smoke detector outdoors.

Note: Enclosure shown in proper mounting orientation. (D4120 duct smoke detector not included.)

Features

- Fits both current and legacy duct smoke detectors.
- Enclosure is an additional option other than using the D4120W or DNRW watertight duct smoke detectors.
- Drop top shield top with seamless front, side, and back construction
- Provision for a padlock to protect the entire unit against unauthorized tampering
- Special sampling tube gaskets are included as required by UL 268A listing.

The DH400OE-1 all-weather outdoor enclosure is specifically designed to protect the System Sensor duct smoke detector from harsh elements. This enclosure provides protection in outdoor installations against rain, sleet, and snow or indoors against dripping water.

This pre-drilled enclosure comes factory ready to fit any System Sensor duct smoke detector. Fabricated from durable 14-gauge galvanized steel, the enclosure has a durable gray, polyester, powder-coated finish for added protection against rust and corrosion.

The slip-on removable cover is secured with a pair of plated steel screws along the bottom edge.

Convenient knock-outs are located along the bottom to facilitate the connection of all types of electrical conduits and casings. Screws are included for mounting the detector into the enclosure.

All-Weather Outdoor Enclosure Specifications

Standard Specifications	
Dimensions	18 in × 12 in × 6 in (45.7 cm × 30.5 cm × 15.2 cm)
Shipping Weight	15 lbs. (6.8 kg)
Temperature	See detector specifications
Finish	ANSI 61 Gray polyester finish inside and over galvanized steel

Ordering Information

Part No.	Description
DH400OE-1	All-weather outdoor enclosure

SYSTEM SENSOR
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www.systemsensor.com

Addressable Devices

OSI-RI-GW

Intelligent Single-ended Reflective Imaging Beam Smoke Detector

General

The OSI-RI-GW intelligent addressable reflector-type linear optical beam smoke detector is uniquely suited for protecting large open areas with high ceilings, where spot-type smoke detectors are difficult to install and maintain. Ideal applications are warehouses, atriums, aircraft hangers, sporting arenas and concert halls. The beam operates primarily on the principle of light obscuration using infrared. The OSI-RI-GW detector is a combined transmitter/receiver and is compatible with 7075, 7100, 7200, S3 Series and E3 Series fire alarm control panels in Velociti® or CLIP mode.

Fast and Easy Alignment

Aligning the imager to the reflector is extremely intuitive, fast, and accurate. Both the infrared transmitter and the CMOS imager are contained in a movable "eyeball" – an adjustable lens assembly that can move +/- 20° in the vertical direction and 50° in the horizontal direction. Four LED arrows indicate the direction to move the lens, guiding the user to find the imager's perfect alignment with the reflector. Once the optimum alignment is found, indicated by all green arrows, the lens is locked with a slide lever. A paintable cover is then placed over the front to secure the lever in locked position.

Resistant to Building Movement, Sunlight, and Foreign Object Intrusion

The infrared transmitter and receiver imager generates a beam of light towards a high-efficiency reflector. The reflector returns the beam to the receiver where the received signal is analyzed. The change in the strength of the received signal when smoke enters the area between the unit and the reflector is used to determine the alarm condition. The receiver imager has a wide 12° field of view that automatically tracks the reflector in case of building movement or support structure movement. This allows the OSI-RI-GW to be highly resistant to movement, eliminating the number one cause of false alarms and/or faults with traditional beam detectors.

The OSI-RI-GW single-ended beam smoke detector is easy to install and adjust. Only the head unit needs to be wired, and the "eyeball" can be aimed without adjusting the detector mounting.

FEATURES & BENEFITS

- Combined transmitter/receiver unit
- Wide 12° field of view
- Fast, easy, and intuitive beam alignment indicated by LED directional arrows
- 50° horizontal and 20° vertical beam adjustment
- Long range coverage of 16-328 ft (5-100 m) is standard; no separate long-range kit required
- Automatic sensitivity threshold level setting
- Resistant to building movement; tolerates +/- 1° movement
- Resistant to strong light sources; does not alarm when saturated by sunlight
- Resistant to solid object intrusion
- Remote test station capable for electronic simulated smoke test from ground level
- Status LED indicators visible from the front and bottom
- Automatic drift compensation
- Paintable housing/cover
- Removable plug-in terminal blocks
- Built-in imager heater
- Optional reflector heater kit available

Optical filtering, high-speed image acquisition and intelligent software algorithms provide the system with higher levels of stability and with greater resistance to high level lighting variability. This provides better resistance to sunlight in its field of view, helping to prevent false alarms when saturated by sunlight, reflected sunlight or any other very bright light sources.

Advanced smoke imaging techniques allow the detector to avoid false alarms from partial and sudden blockage from foreign object intrusion.

Time-saving Automatic Sensitivity Setting

Unique in the market, the sensitivity of the detector is selected and set automatically at the optimum sensitivity based on the size of the reflector measured in the field of view.

Drift Compensation

The detector incorporates automatic drift compensation, whereby the detector will adjust its detection thresholds in line with any long-term signal reduction of the beam caused by dust or other contamination of the optical surfaces.

Equipped with Built-in Imager Heater

The imager ships standard with an internal heating option to prevent condensation on the optical surface. (External power supply required.)

OSI-RI-GW Technical Specifications

PHYSICAL/OPERATING SPECIFICATIONS

Dimensions (Detector): Height 6" (152.4 mm); Width 10" (254 mm); Depth 4.5" (114.3 mm)

Dimensions (Reflector): Height 9.06" (230 mm); Width 7.87" (200 mm)

Weight (Installed): 2.48 lbs (1.12 kg)

Weight (Shipping): 3.91 lbs (1.77 kg)

Wire Gauge for Terminals: 14 AWG (2.08 mm²)

ELECTRICAL SPECIFICATIONS:

OSI-RI-GW

Operating Voltage Range:
Nominal: 24 VDC
Minimum: 15 VDC
Maximum: 32.0 VDC

Maximum Standby Current:
13 mA @ 32 VDC
14 mA @ 24 VDC
20 mA @ 15 VDC

Maximum Alarm Current (LED on):
22 mA @ 32 VDC
15 mA @ 24 VDC
22 mA @ 15 VDC

BEAMHKR

Voltage Range: 15 to 32 V

Maximum Current: 450 mA Max at 32 V

Power Consumption:
7.7 W @ 24 V
15 W @ 32 V

RTS151KEY

Voltage Range: 10.2 to 32 VDC

Current Range: : 9 mA Min to 11 mA Max

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature: UL-Listed for use from 32°F to 100°F (0°C to 37.8°C).

Application Temperature Range: -4°F to 131°F (-20°C to +55°C)

Humidity Range: 0 to 95% relative humidity, non-condensing

OPERATIONAL SPECIFICATIONS

Protection Range: 16 ft to 328 ft (5 m to 100 m)

Adjustment Angle: 20 degrees vertical, 50 degrees horizontal

Sensitivity Levels: Level 1 25%, Level 2 30%, Level 3 40%, Level 4 50%

Test/Reset Features: Local alarm test switch, local alarm reset switch, Remote test and reset switch (Compatible with RTS151 and RTS151KEY test stations), OSID-R test filter.

Smoke Detector Spacing: On smooth ceilings, 30-60 feet between projected beams and not more than one-half that spacing between a projected beam and a sidewall. Other spacing may be used depending on the ceiling height, airflow characteristics, and response requirements. See NFPA 72 (S524 in Canadian applications).

AGENCY LISTINGS

UL : S911

FM: PR449231

CSFM: 7260-1703:0506

PRODUCT LINE INFORMATION

OSI-RI-GW: Intelligent imaging beam smoke detector including reflector

OSP-002: Laser alignment tool

OSP-004: Test filter, 10 pack

RTS151: Remote test station

RTS151KEY: Test and reset station with key lock, flush mount

BEAMHKR: Heater kit for the reflector

6500-MMK: Multi-mount accessory for ceiling or wall mounting with additional mounting adjustment

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Duct Smoke Detector Accessories

Expand the versatility of the InnovairFlex™ line of duct smoke detectors with System Sensor notification and test accessories.

Available Accessories

APA151	Piezo Annunciator
MHR	Mini-Horn, Red
MHW	Mini-Horn, White
RA100Z/RA100ZA	Remote Annunciator
RTS151	Remote Test Station
RTS151KEY	Remote Test Station with Key
RTS2	Multi-Signaling Accessory
AOS	Add-On Strobe
RTS2-AOS	Multi-Signaling Accessory

Agency Listings

UL LISTED FM APPROVED

Duct smoke detector accessories add functionality to the duct smoke detection system by allowing quick, convenient inspections at eye level and effective audible and visible notification options. All System Sensor duct smoke detectors and accessories are UL listed.

The **APA151** piezo annunciator, which replaces the APA451 with a new, improved look, provides an audible alarm signal, a red LED to indicate alarm status, and a green LED to indicate power status. It is intended for use with System Sensor 4-wire conventional duct smoke detector applications without a system control panel, to comply with NFPA 90A.

The **MHR and MHW** SpectrAlert® Advance mini-horns feature temporal or continuous tones at high and low volume settings. Their small footprint allows mounting to single-gang back boxes for applications where a small device is desired.

The **RA100Z and RA100ZA** remote annunciators are designed for both conventional and intelligent applications. Their red LED provides visual indication of an alarm condition.

The **RTS151 and RTS151KEY** remote test stations are automatic fire detector accessories designed to test duct smoke detectors from a convenient location. For 4-wire detectors, the RTS151KEY test station features a multi-colored LED that alternates between steady green and red. For 2-wire detectors, the LED illuminates red for alarm.

The **RTS2 and RTS2-AOS** multi-signaling accessories are designed to work with InnovairFlex 4-wire conventional duct smoke detectors. These accessories include a key switch that can be used to select one of two connected sensors to be tested, reset, or both by a push button switch. They also enable sensitivity measurements using the SENS-RDR sensitivity reader (sold separately). The AOS (Add-On Strobe) is an optional accessory included with the RTS2-AOS model.

Specifications, Duct Smoke Detector Accessories

APA151 Piezo Annunciator	
Voltage	Regulated 24 VDC
Operating Voltage	16 to 33 VDC
Maximum Alarm Current	30 mA
Temperature Range	0°C to 49°C (32°F to 120°F)
Relative Humidity	10 to 93% non-condensing
Wire Gauge	12 to 18 AWG
Dimensions	4.6˝ H × 2.9˝ W × .45˝ D

MHR/MHW SpectrAlert® Advance Mini-Horns	
Voltage	Regulated 12 DC or FWR (Full Wave Rectified) or Regulated 24 VDC or FWR
Operating Voltage	8 to 33 VDC (9 to 33 VDC with Sync•Circuit™ Module)
Sounder Current Draw	22 mA RMS max. at 8 to 17.5 Volts DC 17 mA RMS max. at 8 to 17.5 Volts FWR 29 mA RMS max. at 16 to 33 Volts DC 25 mA RMS max. at 16 to 33 Volts FWR
Temperature Range	0°C to 49°C (32°F to 120°F)
Humidity Range	10 to 93% non-condensing
Nominal Sounder Frequency	3 kHz
Wire Gauge	12 to 18 AWG
Dimensions	4.6˝ H × 2.9˝ W × 0.45˝ D

RA100Z/RA100ZA Remote Annunciator	
Voltage Range	Conventional System: 3.1 to 32 VDC Intelligent System: 18 to 32 VDC
Maximum Alarm Current	12 mA
Dimensions	4.6 ˝ H × 2.8˝ W × 1.3˝ D

RTS151 Remote Test Station	
Power Requirements	Alarm LED: 2.8 to 32 VDC, 12 mA max. Total Current: 105 mA max.
Test Switch	10 VA @ 32 VDC
Reset Switch	10 VA @ 32 VDC
Alarm Response Time	40 seconds max.
Temperature Range	–10°C to 60°C (14°F to 140°F)
Relative Humidity	95% non-condensing
Wire Gauge	14 to 18 AWG
Dimensions	4.8˝ H x 2.90˝ W x 1.4˝ D

RTS151KEY Remote Test Station with Key	
Power Requirements	Power LED (Green): 14 to 35 VDC, 12 mA max. Alarm LED (Red): 2.8 to 32 VDC, 12 mA max. Total Current: 105 mA max.
Alarm Response Time	40 seconds max.
Temperature Range	–10°C to 60°C (14°F to 140°F)
Relative Humidity	95% non-condensing
Wire Gauge	14 to 18 AWG
Dimensions	4.6˝ H × 2.75˝ W × 1.8˝ D

RTS2 and RTS2-AOS Multi-signaling Accessory	
Voltage	20 to 29 VDC
Power Requirements	Standby: 3.0 mA max. Trouble: 16.0 mA max. Alarm without strobe: 30 mA max. Alarm with strobe: 55 mA max.
Sounder	85 dBA at ten feet
Temperature Range	–10°C to 60°C (14°F to 140°F)
Relative Humidity	95% non-condensing
Wire Gauge	14 to 22 AWG
Dimensions	4.8˝ W x 5.3˝ H x 1.6˝ D

For the very latest product specifications and listing information, please visit the System Sensor Web site at www.systemsensor.com.

RTS151 UL S4011

RTS151KEY UL S2522

APA151 UL S4011

RTS2-AOS UL S2522

RA100Z UL S2522

MHW UL S4011

MHR UL S4011

AOS

SYSTEM SENSOR®
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Gamewell FCI FIRE CONTROL INSTRUMENTS
by Honeywell

Velociti® Series

AMM-2F

Description

The Gamewell-FCI Velociti® Series, addressable monitor module AMM-2F is a single Style B, Class B initiating device circuit (IDC) with a 47KW end-of-line resistor. This module provides an address for any device or group of devices connected to this circuit on the signaling line circuit (SLC) of the Gamewell-FCI addressable series fire alarm control panel. Any initiating device with normally open (N.O.) dry contacts may be made addressable when connected to the AMM-2F module.

The Velociti® Series use a communication protocol that substantially increases the speed of communication between the sensors and certain Gamewell-FCI analog addressable fire alarm controls. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel's microprocessor stops the group poll and concentrates on the single device. The net effect is response speed up to five times greater than earlier designs.

The AMM-2F module can be programmed to provide a wide variety of input functions to the Gamewell-FCI addressable series fire alarm control panels. It can be identified as a manual station, heat detector, plenum detector, waterflow switch, tamper switch, N.O. contact, smoke detector, projected beam smoke detector, sub loop, remote zone, etc. It can also serve as a remote system silence, system reset, system acknowledge or drill switch. It is even possible to customize its device type to meet specific job requirements.

The initiating device circuit of the AMM-2F can support a maximum line resistance of up to 40 ohms allowing the use of linear heat detection devices. The compact size facilitates the installation of the module inside manual stations, or mounting boxes of various types of alarm initiating devices.

Addressable Monitor Module

AMM-2F

Features

- Compact size allows easy installation
- Class B, Style B, initiating circuit
- 40 Ohm line resistance for each initiating device circuit
- Connects to any normally open dry contact device

Specifications

Supervisory Current:	.000375 amps
Alarm Current:	.00060 amps
Operating Temperature:	32° to 120° F (0° to 49° C)
Relative Humidity:	10 to 93% (non-condensing)
End-of-Line Resistance:	47K ohms
Dimensions:	1.3" L x 2.5" W x 0.5" D (3.3 x 6.4 x 1.3 cm)

Ordering Information

Part Number	Description
AMM-2F	Addressable monitor module, single circuit, Style B, Class B

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ISO 9001 CERTIFIED ENGINEERING & MANUFACTURING QUALITY SYSTEMS

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12 Clintonville Road, Northford, CT 06472-1610 USA • Tel: (203) 484-7161 • Fax: (203) 484-7118

Gamewell FCI FIRE CONTROL INSTRUMENTS
by Honeywell

Velociti® Series

AMM-4F

Description

The Gamewell-FCI Velociti® Series, addressable monitor module (AMM-4F) features a single Style D, Class A initiating device circuit. It may also be configured as a Style B, Class B initiating circuit with end-of-line resistor. This module provides an address for any device or group of devices connected to this circuit. Any alarm initiating devices with normally open (N.O.) dry contacts, such as heat detectors, linear heat detection devices, 4-wire projected beam smoke detectors, 4-wire smoke detectors, water flow switches, tamper switches, manual stations, etc. may be installed in this circuit.

The Velociti® Series use a communication protocol that substantially increases the speed of communication between the sensors and certain Gamewell-FCI analog addressable fire alarm controls. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel's microprocessor stops the group poll and concentrates on the single device. The net effect is response speed up to five times greater than earlier designs.

The AMM-4F module is designed for installation in the signaling line circuit of any Gamewell-FCI analog addressable control panel. The initiating circuit of the AMM-4F has a maximum line resistance of 40 ohms, allowing the module to accommodate a number of initiating devices at a distance from the module. The AMM-4F is designed to mount in a 4" square junction box 2 1/8" deep.

The initiating device circuit of the AMM-4F can support a maximum line resistance of up to 40 ohms allowing the use of linear heat detection devices.

Ordering Information

Model	Description
AMM-4F	Addressable monitor module, single circuit, Style D, Class A or Style BC/A and B

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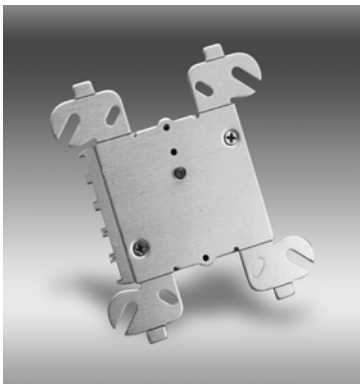
Addressable Monitor Module



AMM-4F

Features

- Compact size allows easy installation
- Class A, Style D, or Class B, Style B initiating circuit
- Visual rotary, decimel switch addressing (01-159)
- 40 ohm line resistance for each initiating device circuit
- Accommodates any N/O dry contact device
- Bicolor LEDs flash green whenever the module is addressed, and light steady red on alarm*

*Note: Only the red LED is operative in panels that do not operate in Velociti® mode.

Specifications

Supervisory current:	.000375 amps. (LED flashing)
Alarm current:	.005 amps. (LED lit)
Operating temperature:	32° to 120° F (0° to 49° C)
Relative humidity:	10 to 93% (non-condensing)
End-of-line resistor:	47K ohms
Dimensions:	4 1/2" H x 4" W x 1 1/4" D (11.4 x 10.2 x 3.2 cm)

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Gamewell FCI FIRE CONTROL INSTRUMENTS
by Honeywell

Velociti® Series

AMM-2IF

Description

The Gamewell-FCI Velociti® Series, addressable dual monitor module, AMM-2IF, features two (2), Style B, Class B initiating device circuits, each with an end-of-line resistor. This module provides addresses for any device or group of devices connected to each circuit. Any alarm initiating devices with normally open (N.O.) dry contacts, such as heat detectors, 4-wire projected beam smoke detectors, 4-wire smoke detectors, water flow switches, tamper switches, manual stations, etc. may be installed in these circuits.

The Velociti® Series use a communication protocol that substantially increases the speed of communication between the sensors and certain Gamewell-FCI analog addressable fire alarm controls. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel's microprocessor stops the group poll and concentrates on the single device. The net effect is response speed up to five times greater than earlier designs.

The first circuit address is set via a rotary switch. The second circuit is automatically assigned the next higher address. The module has a single panel-controlled red LED.

The AMM-2IF module is designed for installation in the signaling line circuit of any Gamewell-FCI addressable control panel. The AMM-2IF is designed to mount in a 4" square junction box, 2 1/8" deep. The initiating device circuit of the AMM-2IF can support a maximum line resistance of up to 40 ohms allowing the use of linear heat detection devices.

Ordering Information

Model	Description
AMM-2IF	Monitor module, two circuit, Style B, Class B

Addressable Dual Monitor Module

AMM-2IF

Features

- Compact size allows easy installation
- Class B, Style B, initiating device circuits
- Visual rotary, decimal switch addressing (01-159)
- 40 ohm line resistance for each initiating circuit
- Accommodates any normally open contact device
- Bicolor LEDs flash green whenever the module is addressed, and light steady red on alarm*

*Note: Only the red LED is operative in panels that do not operate in Velociti® mode.

Specifications

Supervisory current:	0.0075 amp.
Alarm current:	.0057 amp. (LED lit)
Operating temperature:	32° to 120° F (0° to 49° C)
Relative humidity:	10 to 93% (non-condensing)
Dimensions:	4 1/2" H x 4" W x 1 1/4" D (11 H x 10.2 W x 3 D cm) (Mounts in a 4" square by 2 1/8" deep box).
End-of-line resistor:	47 K ohms

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Gamewell FCI FIRE CONTROL INSTRUMENTS
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Velociti® Series

AMM-4SF

Description

The Gamewell-FCI Velociti® Series, addressable monitor module AMM-4SF features a single Style D, Class A initiating device circuit. It may also be configured as a Style B, Class B initiating circuit with end-of-line resistor. This module provides an address for a group of conventional 2-wire smoke detectors.

Any alarm initiating devices with normally open (N.O.) dry contacts, such as heat detectors, linear heat detection devices, projected beam smoke detectors, 4-wire smoke detectors, water flow switches, tamper switches, manual stations, etc. may also be installed in this circuit.

The Velociti® Series use a communication protocol that substantially increases the speed of communication between the sensors and certain Gamewell-FCI analog addressable fire alarm controls. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel's microprocessor stops the group poll and concentrates on the single device. The net effect is response speed up to five times greater than earlier designs.

The AMM-4SF module is designed for installation in the signaling line circuit of any Gamewell-FCI analog addressable control panel. The signaling line circuits of Gamewell-FCI analog addressable panels are designed to accommodate up to 159 monitor modules per circuit.

The initiating device circuit of the AMM-4SF can support a maximum line resistance of up to 25 ohms allowing the use of linear heat detection devices. This allows the module to stay in alarm with one smoke detector activated. The AMM-4SF is designed to mount in a 4" square box 2 1/8" deep.

Ordering Information

Model	Description
AMM-4SF	Addressable monitor module, single circuit, Style D, Class A

Addressable Monitor Module

AMM-4SF

Features

- Accommodates up to twenty (20), conventional 2-wire smoke detectors. (See the Gamewell-FCI Compatibility Addendum P/N 9000-0427 for supported detectors)
- Class A, Style D, or Class B, Style B initiating circuit
- 25 ohm line resistance for each initiating device circuit
- Visual rotary, decimal switch addressing (01-159)
- Accommodates any N/O dry contact device
- Compact size allows easy installation
- Bicolor LEDs flash green whenever the module is addressed, and light steady red on alarm*

*Note: Only the red LED is operative in panels that do not operate in Velociti® mode.

Specifications

Supervisory current:	.00027 amps. (LED flashing)
Alarm current:	.0051 amps. (LED lit)
Operating temperature:	32° to 120° F (0° to 49° C)
Relative humidity:	10 to 93% (non-condensing)
Dimensions:	4 1/2" L x 4" W x 1 1/4" D (11.4 x 10.2 x 3.2 cm)
End-of-line resistor:	3.9 K ohms

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FM APPROVED 3023594
MEA Approved 227-03-E Vol. IV
7300-1703:0122

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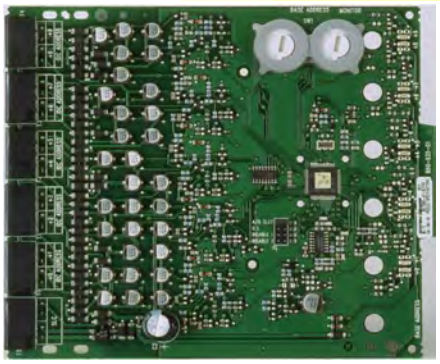
Gamewell FCI FIRE CONTROL INSTRUMENTS
by Honeywell

Velociti® Series MMI-10F

Multi-Mod Ten Input Monitor Module



MMI-10F

Description

The Gamewell-FCI Velociti® Series, multi-mod ten input monitor module (MMI-10F) provides ten (10), Style B (Class B) or five (5), Style D (Class A) supervised initiating device circuits (IDCs) suitable for a wide range of monitoring applications.

The Velociti® Series use a communication protocol that substantially increases the speed of communication between the sensors and certain Gamewell-FCI analog addressable fire alarm controls. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel's microprocessor stops the group poll and concentrates on the single device. The net effect is response speed up to five times greater than earlier designs.

Each supervised circuit may be connected to any normally open contact device such as manual stations, tamper and supervisory switches, waterflow switches, heat detectors, 4-wire smoke sensors, etc.

The MMI-10F connects to the signaling line circuits (SLC) of the Gamewell-FCI analog addressable series fire alarm control panels. Each of the MMI-10F circuits occupies its own address on the system's SLC allowing each to be fully programmable in its control-by-event sequence of operation.

The address of the first circuit is set with a pair of rotary dials. Each remaining circuit is automatically assigned to its own subsequent address. The MMI-10F module includes an address disable jumper matrix that allows a maximum of two unused addresses to be turned off to free these addresses for other purposes. An additional jumper setting selects either Style B or Style D circuit configurations.

Each circuit has its own status LED that flashes to indicate proper polling and lights steadily when the output has been activated.

Features

- Each MMI-10F monitor module provides ten (10), Style B (Class B) or five (5), Style D (Class A) individually addressable, individually programmable initiating device circuits.
- Ideal for applications requiring monitoring of normally open contact devices.
- Removable wiring terminal blocks allow ease of installation and servicing.
- Terminal blocks can accommodate 12 to 18 AWG wire.
- Flexible jumper configuration feature allowing one or two monitoring circuit addresses to be disabled.
- Individual LED indicators.*
- Ideal for retrofit applications.
- As many as sixty (60), initiating device circuits in one (1), 12" x 24" x 6.5" cabinet.
- Two (2), mounting cabinets available for two (2), (MBB-2 cabinet) to six (6), (MBB-6 cabinet) MMO-6RS.
- Bicolor LEDs flash green whenever the sensor is addressed, and light steady red on alarm.*

Note: *Only the red LED is operative in panels that do not operate in Velociti® mode.

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SIGNALING UL LISTED S1949 FM APPROVED 3023594 MEA Approved 227-03-E Vol.IV 07300-0694:266

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Description (continued)

Two Multi-Mod units can be mounted in one MBB-2 cabinet. Additional mounting options include the MCH-6 chassis that can accommodate six (6), Multi-Mod modules. The MCH-6 chassis can be installed in a custom cabinet or can be mounted in the MBB-6 cabinet allowing up to six (6), Multi-Mod modules in one cabinet.

The MMI-10F is ideal for applications where centralized location of circuits is required. As many as sixty (60), initiating device circuits may be located in a cabinet that is only 12.6” H x 24” W x 6.5” D in dimension saving valuable wall space in mechanical rooms and electrical closets and reducing cost of installation.

Specifications

Operating Voltage:	15-32 VDC
Stand-by Current:	3.5 mA
Alarm Current:	60 mA (with all ten LEDs lit)
Maximum IDC Wire Resistance:	40 Ohms
Maximum IDC Voltage:	12 VDC
Maximum IDC Current:	1 mA
Temperature Range:	32˚ F to 120˚ F (0˚ to 49˚ C)
Humidity	10 to 85% (non-condensing)
Dimensions:	6.8” H x 5.8” W x 1.25” D (17.3 x 14.7 x 3.2 cm)
MBB-2	12.25” H x 9.25” W x 3.32” D (31.2 x 23.5 x 8.4 cm)
MBB-6	12.63” H x 24” W x 6.5” D (32.1 x 60.1 x 16.5 cm)

Ordering Information

Model	Description
MMI-10F	Multi-mod 10 input module
MBB-2	Backbox, 2 unit
MBB-6	Backbox, 6 unit, requires MCH-6
MCH-6	6-unit mounting chassis

Gamewell FCI FIRE CONTROL INSTRUMENTS
by Honeywell

Velociti® Series

MMI-6SF

Description

The Velociti® Series, multi-mod six zone interface module (MMI-6SF) provides six (6), Style B (Class B) or three (3), Style D (Class A) supervised initiating device circuits (IDC) suitable for use with UL® Listed conventional 2-wire smoke detectors as well as any normally open contact device.

The Velociti® Series use a communication protocol that substantially increases the speed of communication between the sensors and certain Gamewell-FCI analog addressable fire alarm controls. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel's microprocessor stops the group poll and concentrates on the single device. The net effect is response speed up to five times greater than earlier designs.

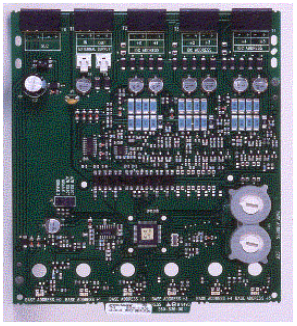
The MMI-6SF connects to the signaling line circuits (SLC) of the Gamewell-FCI analog addressable series fire alarm control panels. Each of the MMI-6SF initiating device circuits occupies its own address on the system's SLC allowing each to be fully programmable in its control-by-event sequence of operation.

The address of the first initiating device circuit is set with a pair of rotary dials. Each remaining circuit is automatically assigned to its own subsequent address. The MMI-6SF module includes an address disable jumper matrix to allow a maximum of two unused addresses to be turned off to free these addresses for other purposes. An additional pair of jumpers selects either Style B or Style D circuit configurations.

Each circuit has its own status LED that flashes to indicate proper polling and lights steadily when the output has been activated.

Two (2), multi-mod series units can be mounted in one MBB-2 cabinet. Additional mounting options include the MCH-6 chassis that can accommodate six (6), multi-mod series modules. The MCH-6 chassis can be installed in a custom cabinet or can be mounted in the MBB-6 cabinet allowing up to six (6), multi-mod series modules in one cabinet.

Multi-Mod Six Zone Interface Module



MMI-6SF

Features

- Each MMI-6SF module provides six (6), Style B (Class B) or three (3), Style D (Class A) individually addressable individually programmable initiating Device circuits
- Suitable for use with UL® Listed, compatible 2-wire conventional smoke sensors and normally open contact devices
- Removable wiring terminal blocks allow ease of installation and servicing terminal
- Blocks can accommodate 12 to 18 AWG wire
- Flexible jumper configuration feature allowing one or two monitoring circuit addresses to be disabled
- Individual LED indicators*
- Ideal for retrofit applications
- As many as thirty-six (36), initiating device circuits in one 12" x 24" x 6.5" cabinet
- Two (2), mounting cabinets available for two (2), (MBB-2 cabinet) to six (6), (MBB-6 cabinet) units
- Bicolor LEDs flash green whenever the sensor is addressed, and light steady red on alarm*

Note: *Only the red LED is operative in panels that do not operate in Velociti® mode.

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SIGNALING UL LISTED FM APPROVED MEA Approved

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Description (continued)

The initiating device circuit of the MMI-6SF can support a maximum line resistance of up to 40 ohms allowing the use of linear heat detection devices.

The MMI-6SF is ideal for applications where centralized location of circuits is required. As many as sixty (60), initiating device circuits may be located in a cabinet that is only 12.63” H x 24” W x 6.5” D in dimension, saving valuable wall space in mechanical rooms and electrical closets and reducing cost of installation.

Specifications

Operating Voltage:	5-32 VDC
Stand-by Current:	2 mA
Alarm Current:	40 mA (with all six LEDs lit)
Maximum IDC Wire Resistance:	25 Ohms
Temperature Range:	32° F to 120° F (0° to 49° C)
Humidity:	10 to 85% (non-condensing)
Dimensions:	6.8” H x 5.8” W x 1.25” D (17.3 x 14.7 x 3.2 cm)
MBB-2:	12.25” H x 9.25” W x 3.32” D (31.1 x 23.5 x 8.4 cm)
MBB-6:	12.63” H x 24” W x 6.5” D (32.1 x 70.0 x 16.5 cm)

External Supply Voltage External Supply Voltage

DC Voltage:	18-28 Volts, power-limited
Ripple Voltage:	0.1 Volts rms maximum
Current:	90 mA per circuit

Ordering Information

Model	Description
MMI-6SF	Multi-Mod 6 zone interface module
MBB-2	Backbox, 2 unit
MBB-6	Backbox, 6 unit, requires MCH-6
MCH-6	6-Unit mounting chassis

Gamewell FCI FIRE CONTROL INSTRUMENTS

by Honeywell

Velociti® Series

AOM-2SF

Addressable Output Relay Supervised Control Module

AOM-2SF

Description

The Gamewell-FCI Velociti® Series addressable output supervised control module (AOM-2SF) allows a Gamewell-FCI analog addressable fire alarm control panel to switch an external power supply, such as a DC supply or audio amplifier (up to 80 V_{RMS}) to notification appliances. The AOM-2SF notification appliance circuit can be wired either Class A (Style Z) or Class B (Style Y). It also supervises the wiring to the connected loads and reports their status to the panel as NORMAL, OPEN or SHORT CIRCUIT. The module contains a panel controlled LED.

The Velociti® Series use a communication protocol that substantially increases the speed of communication between the SLC devices and certain Gamewell-FCI analog addressable fire alarm control panels. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel's microprocessor stops the group poll and concentrates on the single device. The net result is a superior response speed up to five times greater than the earlier designs.

The AOM-2SF module is designed for installation in the signaling line circuit of any Gamewell-FCI analog addressable fire alarm control panel. The signaling line circuits of Gamewell-FCI analog addressable fire alarm control panels are designed to accommodate up to 159 modules per circuit. The AOM-2SF is designed to mount in a 4" (10.16 cm) square junction box 2 1/8" (5.5 cm) deep.

Table 1 lists the relay contact ratings.

Current Rating	Maximum Voltage	Load Description	Application
3A	30 VDC	Resistive	Non-Coded
2A	30 VDC	Resistive	Coded
0.9A	110 VDC	Resistive	Non-Coded
0.5A	125 VAC	Resistive	Non-Coded
0.5A	30 VDC	Inductive (L/R=5ms)	Coded
1A	30 VDC	Inductive (L/R=2ms)	Coded
0.5A	125 VAC	Inductive (PF=.35)	Non-Coded
0.7A	75 VAC	Inductive	Non-Coded

Table 1: Relay Contact Ratings

Features

- Listed under UL® Standard 864 and UL2572 for Mass Notification.
- Designed as a compact size to allow easy installation.
- Includes Class A, Style Z, or Class B, Style Y notification appliance circuit.
- Accommodates audio amplifiers up to 80 V_{RMS}.
- FM Listed as suitable for a releasing device service.
- Includes a bicolor LED that flashes green whenever the module is addressed, and lights steady red upon activation*.

*Note: Only the red LED is operative in panels that do not operate in Velociti® mode.

Specifications

Supervisory Current: .000375 amps
Alarm Current: .0065 amps
Operating Temperature: 32° to 120° F (0° to 49° C)
Relative Humidity: 10 to 93% relative humidity (non-condensing)
Dimensions: 4 1/2" H x 4" W x 1 1/4" D (11.4 H x 10.2 W x 3.2 D cm)

Ordering Information

Part Number	Description
AOM-2SF	Addressable output supervised control module

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Honeywell | Addressable Devices

Velociit® Series MMO-6SF

Multi-MOD Six Signal Output Module

General

The Gamewell-FCI Velociti® Series, multi-mod six signal output module (MMO-6SF) provides six, Style Y (Class B) or three Style Z (Class A) supervised control circuits suitable for a wide range of signaling applications. Each supervised circuit may be used as any of the following:

• Audio speaker circui • Notification appliance circuit • Supervised control output

The Velociti® Series use a communication protocol that substantially increases the speed of communication between the sensors and certain Gamewell-FCI analog addressable fire alarm controls. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel's microprocessor stops the group poll and concentrates on the single device. The net effect is response speed up to five times greater than earlier designs.

The MMO-6SF connects to the signaling line circuits (SLC) of the Gamewell-FCI analog addressable series fire alarm control panels. Each of the MMO-6SF supervised control circuits occupies its own address on the system's SLC that allows each to be fully programmable in its control-by-event sequence of operation.

The address of the first supervised output circuit is set with a pair of rotary dials. Each remaining circuit is automatically assigned to its own subsequent address. The MMO-6SF module includes an address disable jumper matrix that allows one, two, or three addresses to be turned off to free these addresses for other purposes. An additional jumper setting selects either Style Y or Style Z circuit configurations. A wide range of configurations are possible including 30 VDC, audio input at 25 or 70.7 V_{RMS}, 125 VAC, etc. More than one circuit can share a power supply if the current capacity does not exceed the power supply's output.

MMO-6SF

FEATURES & BENEFITS

- Each MMO-6SF module provides six Style Y (Class B) or three Style Z (Class A) individually addressable, individually programmable notification appliance or supervised output circuits
- Includes removable wiring terminal blocks allow ease of installation and servicing
- Terminal blocks can accommodate 12 to 18 AWG wire
- Contains external power monitoring
- Provides a flexible jumper configuration feature that allows up to three output circuit addresses to be disabled
- Accommodates multiple external power inputs
- Ideal for retrofit applications
- Short circuit protection of external power supplies
- Sources providing AC, DC, or audio inputs
- Designed for use with Gamewell-FCI analog addressable series fire alarm control panels
- Displays individual LED indicators*
- Offers two mounting cabinets available for two (MBB-2 cabinet) to six (MBB-6 cabinet) units

Note: *Only the red LED is operative in panels that do not operate in Velociti® mode.

Velociit® Series MMO-6SF Technical Specifications

SYSTEMS

Operating Voltage: 15-32 VDC
Stand-by Current: 2.25 mA
Alarm Current: 40 mA (with all six LEDs lit)
Maximum IDC Wire Resistance: 25 Ohms
Temperature Range: 32° F to 120° F (0° to 49° C)
Humidity: 10 to 85% (non-condensing)
Dimensions:
- **MCH-6:** 6-Unit mounting chassis 12.25" H x 9.25" W x 3.32" D (31.1 x 23.5 x 8.4 cm)
- **MBB-6:** 6.8" H x 5.8" W x 1.25" D (17.3 x 14.7 x 3.2 cm)
- **MBB-2:** 12.63" H x 24" W x 6.5" D (32 x 60.1 x 16.5 cm)

External Supply Voltage:
- **DC Voltage:** 18-28 Volts, Class 2 Power-Limited
- **Ripple Voltage:** 0.1 Volts rms maximum
- **Current:** 90 mA per module

TEMPERATURE AND HUMIDITY RANGES

This system meets NFPA requirements for operation at 0 – 49°C/32 – 120°F and at a relative humidity 93% ± 2% RH (noncondensing) at 32°C ± 2°C (90°F ± 3°F). However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and its peripherals be installed in an environment with a normal room temperature of 15 – 27°C/60 – 80°F.

STANDARDS

The Velociti® Series MMO-6SF is designed to comply with the following standard:
UL Standard: UL 864 9th Edition

AGENCY LISTINGS AND APPROVALS

These listings and approvals apply to the modules specified in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.
UL: S1913
FM: 3023594
MEA FDNY: 219-02-E Vol. IV
CSFM: 7300-1703:0124
ISO 9001 Certification

For a complete listing of all compliance approvals and certifications, please visit: http://www.gamewell-fci.com/en-US/documentation/Pages/Listings.aspx

For more information
Learn more about Gamewell-FCI's Velociit® Series MMO-6SF and other products available by visiting www.Gamewell-FCI.com

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Honeywell

Velociti® Series

AOM-2RF

Addressable Output Relay Control Module

AOM-2RF

Description

The Gamewell-FCI Velociti® Series, addressable output relay control module (AOM-2RF) allows a Gamewell-FCI analog addressable fire alarm control panel to switch discrete relay contacts by code command. The relay provides two isolated sets of Form-C contacts which transfer simultaneously. Circuit connections to the relay contacts are not supervised by the module.

The Velociti® Series use a communication protocol that substantially increases the speed of communication between the SLC devices and certain Gamewell-FCI analog addressable fire alarm control panels. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel's microprocessor stops the group poll and concentrates on the single device. The net result produces a superior response speed up to five times greater than earlier designs.

The AOM-2RF Module is designed for installation in the signaling line circuit of any Gamewell-FCI analog addressable fire alarm control panel. The module contains a panel controlled LED. The AOM-2RF is designed to mount in a 4" (10.16 cm) square junction box 2 1/8" (5.53 cm) deep.
Table 1 lists the relay contact ratings.

Current Rating	Maximum Voltage	Load Description	Application
3A	30 VDC	Resistive	Non-Coded
2A	30 VDC	Resistive	Coded
0.9A	110 VDC	Resistive	Non-Coded
0.5A	125 VAC	Resistive	Non-Coded
0.5A	30 VDC	Inductive (L/R=5ms)	Coded
1A	30 VDC	Inductive (L/R=2ms)	Coded
0.5A	125 VAC	Inductive (PF=.35)	Non-Coded
0.7A	75 VAC	Inductive	Non-Coded

Table 1: Relay Contact Ratings

Features

- Listed under UL® Standard 864.
- Offers two sets of Form "C" contacts.
- Provides visual rotary, decimal switch addressing (01-159).
- Includes a bicolor LED that flashes green whenever the module is addressed, and lights steady red upon activation.*
- Designed as a compact size to allow easy installation.

Note: Only the red LED is operative in panels that do not operate in Velociti® mode.

Specifications

Supervisory current: .000375 amps.
Alarm current: .0065 amps.
Operating temperature: 32° to 120° F (0° to 49° C)
Relative humidity: 10 to 93% relative humidity (non-condensing)
Dimensions: 4 1/2" H x 4" W x 1 1/4" (11.4 x 10.2 x 3.2 cm)

Ordering Information

Part Number	Description
AOM-2RF	Addressable output relay control module

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Velociti® Series MMO-6RF

Multi-Mod Relay Output Module

Description

The Gamewell-FCI Velociti® Series, multi-mod six relay output module (MMO-6RF) provides six (6), Form “C” control relay outputs on one board. Its compact design affords ease of installation while using a minimum of wall space.

The Velociti® Series use a communication protocol that substantially increases the speed of communication between the sensors and certain Gamewell-FCI analog addressable fire alarm controls. These devices operate in a grouped fashion. If one of the devices in the group has a status change, the panel’s microprocessor stops the group poll and concentrates on the single device. The net effect is response speed up to five times greater than earlier designs.

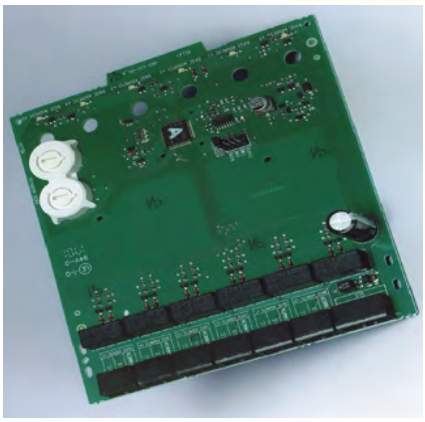
The MMO-6RF connects to the signaling line circuit (SLC) of the Gamewell-FCI analog addressable series fire alarm control panels. Each relay circuit on the MMO-6RF occupies its own address on the control panel’s SLC and can be programmed to respond to its own individual control-by-event sequence of operation. The address of the first relay is set by a pair of rotary code switches on the MMO-6RF. Each remaining relay circuit is automatically assigned to its own subsequent address.

The MMO-6RF module includes an address disable switch that allows one, two, or three addresses to be turned off to free these addresses for other purposes.

Each relay has its own status LED that flashes to indicate proper polling and lights steady when the circuit has been activated.

Two (2), multi-mod series units can be mounted in one MBB-2 cabinet. Additional mounting options include the MCH-6 chassis that can accommodate six (6), multi-mod series modules. The MCH-6 chassis can be installed in custom cabinets or mounted in the MBB-6 cabinet.

The multi-mod series is ideal for applications where centralized location of circuits is required. As many as thirty-six (36), Form “C” relays may be located in a cabinet that is only 12.63” H x 24” W x 6.5” D in dimension saving valuable wall space in mechanical rooms and electrical closets and reducing cost of installation.



MMO-6RF

Features

- Each module provides six (6), individually addressed, individually programmable form “C” relays
- Removable wiring terminal blocks allow ease of installation and servicing
- Terminal blocks can accommodate 12 to 18 AWG wire
- Flexible jumper configuration feature allowing up to three relay addresses to be disabled
- A wide range of contact ratings
- Designed for Gamewell-FCI analog addressable series fire alarm control panels
- Individual LED indicators*
- Suitable for retrofit applications
- Ideal for applications such as elevator control, AHU control, door holder release or similar functions requiring multiple relay outputs
- Two (2), mounting cabinets available for two (2), (MBB-2 cabinet) to six (6), (MBB-6 cabinet) units

Note: Only the red LED is operative in panels that do not operate in Velociti® mode.

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Specifications

Operating Voltage:	15-32 VDC
Stand-by Current:	1.45 mA
Alarm Current:	32 mA (with all six relays activated and all six LEDs lit)
Relay Current:	30 mA/ relay pulse
Relay Contact Ratings:	(see below)
Temperature Range:	32˚ F to 120˚ F (0˚ to 49˚ C)
Humidity	10 to 85% (non-condensing)
Dimensions:	6.8” H x 5.8” W x 1.0” D (17.3 x 14.7 x 2.5 cm)
MBB-2	12.25” H x 9.25” W x 3.32” D (31.1 x 23.5 x 8.4 cm)
MBB-6	12.63” H x 24” W x 6.5” D (32.1 x 60.1 x 16.5 cm)

Contact Ratings

Current Rating	Maximum Voltage	Load Description	Application
3A	30 VDC	Resistive	Non-coded
2A	30 VDC	Resistive	Coded
1A	30 VDC	Inductive (L/R= 2ms)	Coded
0.5A	30 VDC	Inductive (L/R= 5ms)	Coded
0.9A	110 VDC	Resistive	Non-coded
0.9A	125 VAC	Resistive	Non-coded
0.7A	70.7 & VAC	Inductive (PF= 0.35)	Non-coded
0.5A	125 VAC	Inductive (PF= 0.35)	Non-coded

Ordering Information

Model	Description
MMO-6RF	Multi-mod relay output
MBB-2	Backbox, 2 unit
MBB-6	Backbox, 6 unit, requires MCH-6
MCH-6	6-Unit mounting chassis

Gamewell FCI FIRE CONTROL INSTRUMENTS
by Honeywell

System Sensor M500X

Description

The System Sensor M500X Fault Isolator modules enable part of the communications signaling line circuit to continue operating when a short circuit occurs. The System Sensor M500X Isolator Module is an automatic switch that opens when the line voltage drops below four volts. This module is rigorously designed and tested for electromagnetic compatibility and environmental reliability, in many cases exceeding industry standards.

When installing Isolator Modules, the modules should be spaced between groups of sensors or modules in a signaling line circuit to protect the remainder of the signaling line circuit. If a short occurs between any two isolators, then both isolators immediately switch to an open circuit state and isolate the devices between them. The remaining units on the signaling line circuit continue to operate. It is recommended that you do not add more than 20 devices for each group.

An LED indicator flashes in the normal condition and lights during a short circuit condition. When the short circuit is removed, the module will automatically restore the entire signaling line circuit.

Specifications

Standby Current:	.00045 amps. max.
Operating Temperature Range:	32° F to 120° F (0° C to 49° C)
Humidity Range:	10% to 93% non-condensing
Voltage Range:	15 - 32 VDC
Communication Line Impedance:	40 Ohms
Isolation Current:	5 mA max.
Fault Detection Delay:	250 ms min.
Fault Detection Threshold:	4 volts
Line Restoration Threshold:	7 volts
Dimensions:	4.5” H x 4” W .25” D 11.4 H x 10.2 W x .6 D cm) Mounts to a 4” square by 2.8”D (10. 2 x 7.1 cm) deep box)

*Normal operating current. During power failure, current drops to 0.045 amp, since the back light is extinguished.

Style 7
Isolator Module

M500X

Features

- Up to 20 addressable devices may be grouped between isolator modules.
- Offers panel controlled status LED.
- Includes low standby current.
- Mounts in a standard 4” junction box.
- Wiring terminals are easily manageable for troubleshooting purposes.

Ordering Information

Part Number	Description
M500X	Isolator Module

SIGNALING
UL LISTED S1949
FM APPROVED
7300-1653:0103
c UL US LISTED

Outdoor, Selectable-Output Speaker Strobes and Dual-Voltage Evacuation Speakers for Wall Applications

SpectrAlert® Advance outdoor, selectable-output speaker strobes and dual-voltage evacuation speakers meet virtually any outdoor application requirement.

Features

- Weatherproof per NEMA 4X, IP56
- Rated from -40°F to 151°F
- Plug-in design reduces ground faults
- Universal mounting plate with onboard shorting spring that tests wiring continuity before devices are installed
- Field-selectable candela settings: 15, 15/75, 30, 75, 95, 110, 115, 135, 150, 177, and 185
- Automatic selection of 12- or 24-volt operation at 15 and 15/75 candela
- Rotary switch for speaker voltage (25 and 70.7 Vrms) and power settings (1/4, 1/2, 1 and 2 watts)
- Compatible with System Sensor synchronization protocol and legacy SpectrAlert products
- Tamper-resistant construction
- Listed for ceiling or wall mounting

Agency Listings

SIGNALING UL LISTED 75S0

7320-1653:201

MEA approved 10-08-E

SpectrAlert Advance offers the broadest line of outdoor speakers and speaker strobes in the industry. From metal and plastic outdoor back boxes, to white and red plastic housings, to wall and ceiling mounting options, SpectrAlert Advance can meet virtually any application requirement.

Wall-mount outdoor speakers and speaker strobes can be used indoors or outdoors in wet or dry applications, and can provide reliable operation from –40°F to 151°F. These speakers provide a broad frequency response range, low harmonic distortion and maintain a high sound pressure level at all tap settings to provide accurate and intelligible broadcast of evacuation messages.

Like the entire SpectrAlert Advance line, wall-mount outdoor speakers and speaker strobes include a variety of features that increase application flexibility and simplify installation. First, field-selectable settings, including candela, speaker voltage and power settings, and automatic selection of 12- or 24-volt operation enable installers to easily adapt devices to meet requirements.

Next, these devices use a universal mounting plate with an onboard shorting spring that ensures wiring continuity before devices are installed, so installers can verify proper wiring without mounting the devices and exposing them to potential construction damage. Once the plates are mounted, all SpectrAlert Advance devices utilize a plug-in design with a single captured screw to speed installation and virtually eliminate costly ground faults.

Outdoor devices ship with weatherproof plastic back boxes (metal back boxes are available separately) that accommodate in-and-out wiring for daisy chaining devices. Plastic back boxes feature removable side flanges and improved resistance to saltwater corrosion. Knock-outs located on the back eliminate the need to drill holes for screw-in mounting. Plastic and metal weatherproof back boxes come with ¾-inch top and bottom conduit entries and ¾-inch knock-outs at the back. A screw-in NPT plug with an O-ring gasket for a watertight seal is included with each back box.

SpectrAlert® Advance Outdoor Speaker and Speaker Strobe Specifications

Architectural/Engineering Specifications

General

SpectrAlert Advance outdoor speakers and speaker strobes shall mount to a weatherproof back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit and amplifier wiring shall terminate at the universal mounting plate. Also, SpectrAlert Advance speaker strobes, 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. Outdoor SpectrAlert Advance products shall operate between –40°F and 151°F from a regulated DC, or full-wave rectified, unfiltered power supply.

Speaker

Speaker shall be a System Sensor SpectrAlert Advance Model _____ dual-voltage transformer speaker capable of operating at 25.0 or 70.7 nominal Vrms. Speaker shall be listed to Underwriters Laboratories Standard S4048 for outdoor fire protective signaling systems. Speaker shall have a frequency range of 400 to 4,000 Hz and shall have an operating temperature from –40°F to 150.8°F. Speaker shall have power taps and wattage settings that are selected by rotary switches. The speaker must be installed with its weatherproof back box in order to remain outdoor approved per UL listing S4048. The speaker shall be suitable for use in air handling spaces and wet environments.

Speaker Strobe Combination

The speaker strobe shall be a System Sensor Model _____ listed to UL 1638 and UL 1480 and be approved for fire protective signaling systems. Speaker shall be capable of operating at 25.0 or 70.7 nominal Vrms and shall have a frequency range of 400 to 4,000 Hz. Speaker shall have power taps that are selected by rotary switch. The strobe shall consist of a xenon flash tube with associated lens/reflector system and operate on either 12 or 24 volts. The strobe shall also feature selectable candela output, providing options for 15 or 15/75 candela when operating on 12 volts and 15, 15/75, 30, 75, 110, 115, 135, 150, 177 or 185 candela when operating on 24 volts. The strobe shall comply with the Americans with Disabilities Act requirement for visible signaling appliances, flashing at 1 Hz over the strobe's entire operating voltage range. The speaker strobe must be installed with its weatherproof back box in order to remain outdoor approved per UL. The speaker strobe shall be suitable for use in wet environments.

Physical Specifications	
Operating Temperature	–40°F to 151°F (–40°C to 66°C)
Dimensions, Wall-Mount	
SPS Speaker Strobe	6.0″L × 5.0″W × 4.7″D (including lens and speaker)
SP Speaker	6.0″L × 5.0″W × 2.9″D
Dimensions, Wall-Mount Weatherproof Back Box	6.5″L × 5.5″H × 2.9″D
Electrical/Operating Specifications	
Nominal Voltage (speakers)	25 V or 70.7 V (nominal)
Maximum Supervisory Voltage (speakers)	50 VDC
Strobe Flash Rate	1 flash per second
Nominal Voltage (strobes)	Regulated 12 VDC/FWR or regulated 24 DC/FWR
Operating Voltage Range (includes fire alarm panels with built in sync)	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)
Operating Voltage with MDL3 Sync Module	8.5 to 17.5 V (12 V nominal) or 16.5 to 33 V (24 V nominal)
Frequency Range	400 to 4,000 Hz
Power	¼, ½, 1, 2 watts

UL Current Draw Data

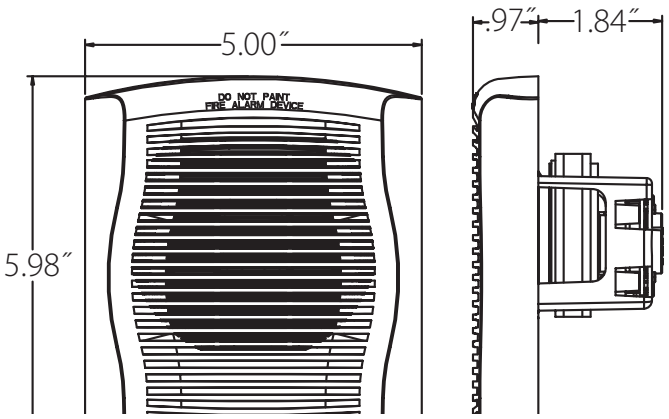
UL Max. Strobe Current Draw (mA RMS)					
		8 to 17.5 Volts		16 to 33 Volts	
	Candela	DC	FWR	DC	FWR
Standard Candela Range	15	123	128	66	71
	15/75	142	148	77	81
	30	NA	NA	94	96
	75	NA	NA	158	153
	95	NA	NA	181	176
	110	NA	NA	202	195
	115	NA	NA	210	205
High Candela Range	135	NA	NA	228	207
	150	NA	NA	246	220
	177	NA	NA	281	251
	185	NA	NA	286	258
Sound Output					
UL Reverberant (dBA @ 10 ft.)		2W	1W	½ W	¼ W
Outdoor Speaker		90	87	84	81
Outdoor Speaker/Strobe		89	86	83	80

Candela Derating

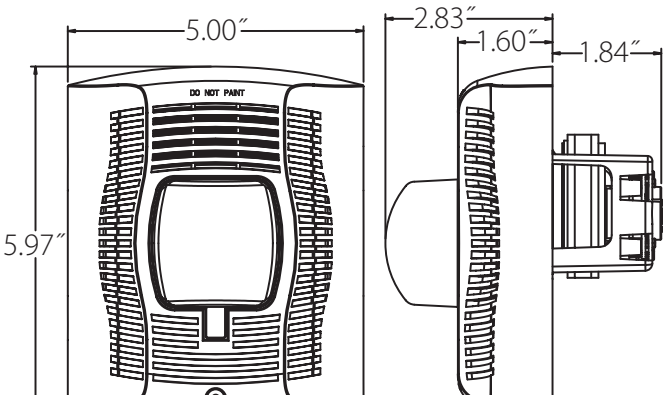
For K series products used at low temperatures, listed candela ratings must be reduced in accordance with this table.

Strobe Output (cd)	
Listed Candela	Candela rating at –40°F
15	Do not use below 32°F
15/75	
30	
75	44
95	70
110	110
115	115
135	135
150	150
177	177
185	185

Dimensions



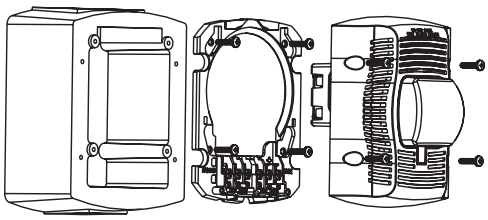
Wall-Mount Outdoor Speaker



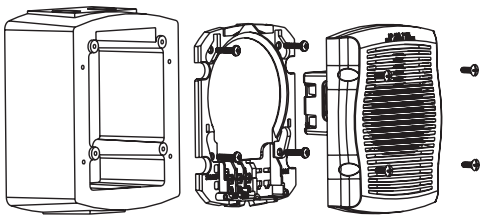
Wall-Mount Outdoor Speaker Strobe

AVDS11301

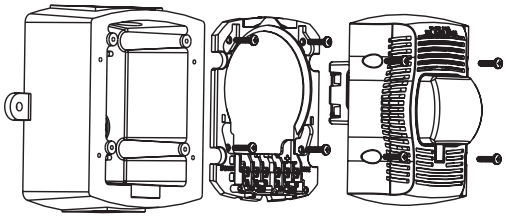
Surface Mounting



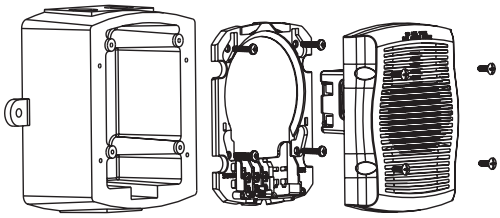
Wall-Mount Speaker Strobe with Plastic Weatherproof Back Box



Wall-Mount Speaker with Plastic Weatherproof Back Box



Wall-Mount Speaker Strobe with Metal Weatherproof Back Box



Wall-Mount Speaker with Metal Weatherproof Back Box

Ordering Information for SpectrAlert® Advance Outdoor Speakers and Speaker Strobes

Wall Mount		
White	**Red**	**Description**
SPWK	SPRK	Outdoor Speaker (includes plastic weatherproof back box)
SPWK-R	SPRK-R	Outdoor Speaker (does not include plastic weatherproof back box)
SPSWK	SPSRK	Outdoor Speaker Strobe, Standard cd (includes plastic weatherproof back box)
SPSWK-P	SPSRK-P	Plain Outdoor Speaker Strobe, Standard cd(includes plastic weatherproof back box)
SPSWK-R	SPSRK-R	Outdoor Speaker Strobe, Standard cd(does not include weatherproof back box)
SPSWK-CLR-ALERT	—	Outdoor Speaker Strobe, Standard cd, Clear Lens, ALERT Printed (includes plastic weatherproof back box)
—	SPSRHK	Outdoor Speaker Strobe, High cd (135,150,177,185) (includes plastic weatherproof back box)
Accessories		
White	**Red**	**Description**
MWBBW	MWBB	Wall, Metal Weatherproof Back Box

Notes:

All -P models have a plain housing (no “FIRE” 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. **When replacing standard outdoor units, both the device and back box must be replaced.**

SYSTEM SENSOR®

3825 Ohio Avenue • St. Charles, IL 60174
Phone: 800-SENSOR2 • Fax: 630-377-6495

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

System Sensor L-Series audible visible notification products are rich with features guaranteed to cut installation times and maximize profits with lower current draw and modern aesthetics.

Features

- Updated Modern Aesthetics
- Small profile devices for Horns and Horn Strobes
- Plug-in design with minimal intrusion into the back box
- Tamper-resistant construction
- Automatic selection of 12- or 24-volt operation at 15 and 30 candela
- Field-selectable candela settings on wall units: 15, 30, 75, 95, 110, 135, and 185
- Horn rated at 88+ dBA at 16 volts
- Rotary switch for horn tone and two volume selections
- Mounting plate for all standard and all compact wall units
- Mounting plate shorting spring checks wiring continuity before device installation
- Electrically Compatible with legacy SpectrAlert and SpectAlert Advance devices
- Compatible with MDL3 sync module
- Listed for wall mounting only

Agency Listings

SIGNALING UL LISTED
S5512
S4011

FM APPROVED
FM approved except for ALERT models 3057383, 3057072

7125-1653:0504
7135-1653:0503

The System Sensor L-Series offers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry with lower current draws and modern aesthetics. With white and red plastic housings, standard and compact devices, and plain, FIRE, and FUEGO-printed devices, System Sensor L-Series can meet virtually any application requirement.

The L-Series line of 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, the L-Series utilizes a universal mounting plate for all models 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 two volume selections.

L-Series Specifications

Architect/Engineer Specifications

General

L-Series standard horns, strobes, and horn strobes shall mount to a standard 2 x 4 x 1 7/8-inch back box, 4 × 4 × 1½-inch back box, 4-inch octagon back box, or double-gang back box. L-Series compact products shall mount to a single-gang 2 × 4 × 1⅞-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products for all standard models and a separate universal mounting plate shall be used for mounting wall compact models. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, L-Series 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 L-Series 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, 30, 75, 95, 110, 135, and 185.

Strobe

The strobe shall be a System Sensor L-Series 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 L-Series 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 two 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. 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 or regulated 24 DC/FWR[1,2]
Operating Voltage Range	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 × 1.91˝D (143 mm L × 119 mm W × 49 mm D)
Compact Wall-Mount Dimensions (including lens)	5.26" L x 3.46" W x 1.91" D (133 mm L x 88 mm W x 49 mm D)
Horn Dimensions	5.6˝L × 4.7˝W × 1.25˝D (143 mm L × 119 mm W × 32 mm D)
Compact Horn Dimensions	5.25" L x 3.45" W x 1.25" D (133mm L x 88mm W x 32mm D)

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. Strobe products will operate at 12 V nominal only for 15 cd and 30 cd.

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

		8–17.5 Volts	16–33 Volts	
	Candela	DC	DC	FWR
Candela Range	15	88	43	60
	30	143	63	83
	75	N/A	107	136
	95	N/A	121	155
	110	N/A	148	179
	135	N/A	172	209
	185	N/A	222	257

UL Max. Horn Current Draw (mA RMS)

		8–17.5 Volts	16–33 Volts	
Sound Pattern	dB	DC	DC	FWR
Temporal	High	39	44	54
Temporal	Low	28	32	54
Non-Temporal	High	43	47	54
Non-Temporal	Low	29	32	54
3.1 KHz Temporal	High	39	41	54
3.1 KHz Temporal	Low	29	32	54
3.1 KHz Non-Temporal	High	42	43	54
3.1 KHz Non-Temporal	Low	28	29	54
Coded	High	43	47	54
3.1 KHz Coded	High	42	43	54

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

	8-17.5 Volts		16-33 Volts						
DC Input	15cd	30cd	15cd	30cd	75cd	95cd	110cd	135cd	185cd
Temporal High	98	158	54	74	121	142	162	196	245
Temporal Low	93	154	44	65	111	133	157	184	235
Non-Temporal High	106	166	73	94	139	160	182	211	262
Non-Temportal Low	93	156	51	71	119	139	162	190	239
3.1K Temporal High	93	156	53	73	119	140	164	190	242
3.1K Temporal Low	91	154	45	66	112	133	160	185	235
3.1K Non-Temporal High	99	162	69	90	135	157	175	208	261
3.1K Non-Temporal Low	93	156	52	72	119	138	162	192	242
	16-33 Volts								
FWR Input	15cd	30cd	75cd	95cd	110cd	135cd	185cd		
Temporal High	83	107	156	177	198	234	287		
Temporal Low	68	91	145	165	185	223	271		
Non-Temporal High	111	135	185	207	230	264	316		
Non-Temportal Low	79	104	157	175	197	235	283		
3.1K Temporal High	81	105	155	177	196	234	284		
3.1K Temporal Low	68	90	145	166	186	222	276		
3.1K Non-Temporal High	104	131	177	204	230	264	326		
3.1K Non-Temporal Low	77	102	156	177	199	234	291		

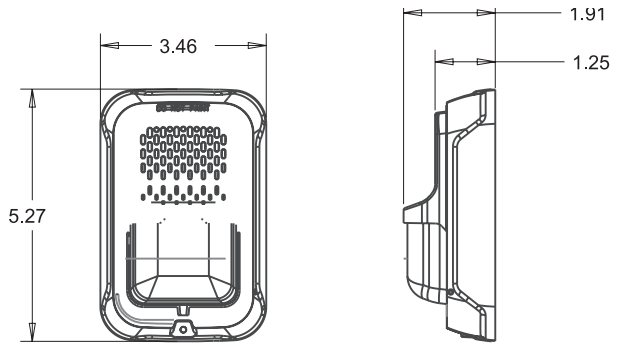
Horn Tones and Sound Output Data

Horn and Horn Strobe Output (dBA)

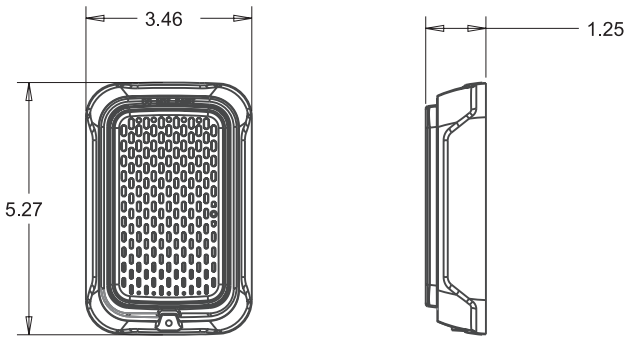
			8–17.5 Volts	16–33 Volts	
Switch Position	Sound Pattern	dB	DC	DC	FWR
1	Temporal	High	84	89	89
2	Temporal	Low	75	83	83
3	Non-Temporal	High	85	90	90
4	Non-Temporal	Low	76	84	84
5	3.1 KHz Temporal	High	83	88	88
6	3.1 KHz Temporal	Low	76	82	82
7	3.1 KHz Non-Temporal	High	84	89	89
8	3.1 KHz Non-Temporal	Low	77	83	83
9*	Coded	High	85	90	90
10*	3.1 KHz Coded	High	84	89	89

* Settings 9 and 10 are not available on the 2-wire horn strobes.

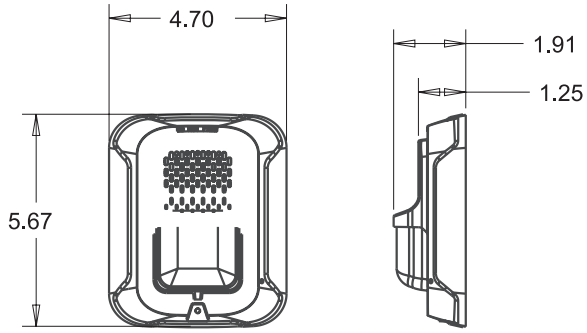
L-Series Dimensions



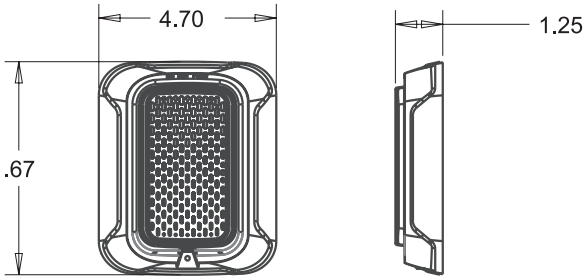
Compact Strobe / Horn Strobe



Compact Horn



Strobe / Horn Strobe



Horn

L-Series Ordering Information

Model	Description
Wall Horn Strobes	
P2RL	2-Wire, Horn Strobe, Red
P2WL	2-Wire, Horn Strobe, White
P2GRL	2-Wire, Compact Horn Strobe, Red
P2GWL	2-Wire, Compact Horn Strobe, White
P2RL-P	2-Wire, Horn Strobe, Red, Plain
P2WL-P	2-Wire, Horn Strobe, White, Plain
P2RL-SP	2-Wire, Horn Strobe, Red, FUEGO
P2WL-SP	2-Wire, Horn Strobe, White, FUEGO
Wall Strobes	
SRL	Strobe, Red
SWL	Strobe, White
SGRL	Compact Strobe, Red
SGWL	Compact Strobe, White
SRL-P	Strobe, Red, Plain
SWL-P	Strobe, White, Plain
SRL-SP	Strobe, Red, FUEGO
SWL-CLR-ALERT	Strobe, White, ALERT

Model	Description
Horns	
HRL	Horn, Red
HWL	Horn, White
HGRL	Compact Horn, Red
HGWL	Compact Horn, White
Accessories	
TR-2	Universal Wall Trim Ring Red
TR-2W	Universal Wall Trim Ring White
SBBRL	Wall Surface Mount Back Box, Red
SBBWL	Wall Surface Mount Back Box, White
SBBGRL	Compact Wall Surface Mount Back Box, Red
SBBGWL	Compact Wall 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
All -ALERT models have “ALERT” marking on cover

SYSTEM SENSOR
3825 Ohio Avenue • St. Charles, IL 60174
Phone: 800-SENSOR2 • Fax: 630-377-6495
www.systemsensor.com

Indoor Selectable-Output Strobes and Horn Strobes for Ceiling Applications

System Sensor L-Series audible visible notification products are rich with features guaranteed to cut installation times and maximize profits with lower current draw and modern aesthetics.

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 30 candela
- Field-selectable candela settings on ceiling units: 15, 30, 75, 95, 115, 150, and 177
- Horn rated at 88+ dBA at 16 volts
- Rotary switch for horn tone and two volume selections
- Universal mounting plate for ceiling units
- Mounting plate shorting spring feature checks wiring continuity before device installation
- Electrically Compatible with legacy SpectrAlert and SpectrAlert Advance devices
- Compatible with MDL3 sync module
- Listed for ceiling mounting only

The System Sensor L-Series offers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry with lower current draws and modern aesthetics. With white and red plastic housings, wall and ceiling mounting options, System Sensor L-Series can meet virtually any application requirement.

The entire L-Series product line of ceiling-mount strobes and horn strobes include a variety of features that increase their application versatility while simplifying installation. All devices feature a plug-in design 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, the L-Series utilizes a universal mounting plate so installers can mount them to a wide array of back boxes. With an onboard shorting spring, 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 two volume selections.

Agency Listings

SIGNALING UL LISTED
S5512
S4011

FM APPROVED
FM approved except for ALERT models
3057383

7125-1653:0504
7135-1653:0503

L-Series Specifications

Architect/Engineer Specifications

General

L-Series ceiling-mount 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, L-Series 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 L-Series products shall operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Ceiling strobes and horn strobes shall have field-selectable candela settings including 15, 30, 75, 95, 115, 150, and 177.

Strobe

The strobe shall be a System Sensor L-Series 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 L-Series 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 two 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. 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 L-Series 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 4 11⁄16 × 4 11⁄16 × 2 1⁄8-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 VDC 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)	8.5 to 17.5V (12 V nominal) or 16.5 to 33 V (24V nominal)
Input Terminal Wire Gauge	12 to 18 AWG
Ceiling-Mount Dimensions (including lens)	6.8" diameter × 2.5" high (173 mm diameter × 64 mm high)
Ceiling-Mount Surface Mount Back Box Skirt Dimensions (SBBCRL, SBBCWL)	6.9" diameter x 3.4" high (175 mm diameter x 86 mm high)

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 30 cd.

UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)

		8–17.5 Volts	16–33 Volts	
	Candela	DC	DC	FWR
Candela Range	15	87	41	60
	30	153	63	86
	75	N/A	111	142
	95	N/A	134	164
	115	N/A	158	191
	150	N/A	189	228
	177	N/A	226	264

UL Max. Horn Current Draw (mA RMS)

		8–17.5 Volts	16–33 Volts	
Sound Pattern	dB	DC	DC	FWR
Temporal	High	39	44	54
Temporal	Low	28	32	54
Non-Temporal	High	43	47	54
Non-Temporal	Low	29	32	54
3.1 KHz Temporal	High	39	41	54
3.1 KHz Temporal	Low	29	32	54
3.1 KHz Non-Temporal	High	42	43	54
3.1 KHz Non-Temporal	Low	28	29	54
Coded	High	43	47	54
3.1 KHz Coded	High	42	43	54

UL Max. Current Draw (mA RMS), Ceiling Horn Strobe, Candela Range (15–177 cd)

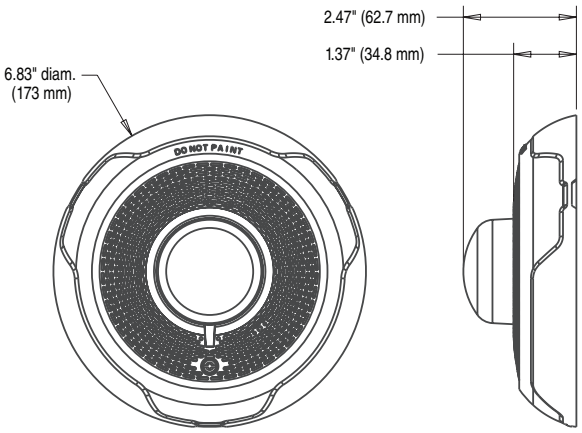
	8–17.5 Volts		16–33 Volts						
DC Input	15cd	30cd	15cd	30cd	75cd	95cd	115cd	150cd	177cd
Temporal High	103	167	71	90	143	165	187	217	254
Temporal Low	96	165	54	71	137	161	185	211	249
Non-Temporal High	106	173	71	90	141	165	187	230	273
Non-Temportal Low	95	166	54	71	124	161	170	216	258
3.1K Temporal High	111	164	69	94	147	163	184	229	257
3.1K Temporal Low	103	163	54	88	143	155	185	212	252
3.1K Non-Temporal High	111	172	69	94	144	164	202	229	271
3.1K Non-Temporal Low	103	169	54	88	131	155	187	217	259
	16–33 Volts								
FWR Input	15cd	30cd	75cd	95cd	115cd	150cd	177cd		
Temporal High	107	135	179	198	223	254	286		
Temporal Low	78	101	151	172	199	229	262		
Non-Temporal High	107	135	179	198	223	254	286		
Non-Temportal Low	78	101	151	172	199	229	262		
3.1K Temporal High	108	135	179	200	225	255	289		
3.1K Temporal Low	79	101	150	171	196	229	260		
3.1K Non-Temporal High	108	135	179	200	225	255	289		
3.1K Non-Temporal Low	79	101	150	171	196	229	260		

Horn Strobe Tones and Sound Output Data

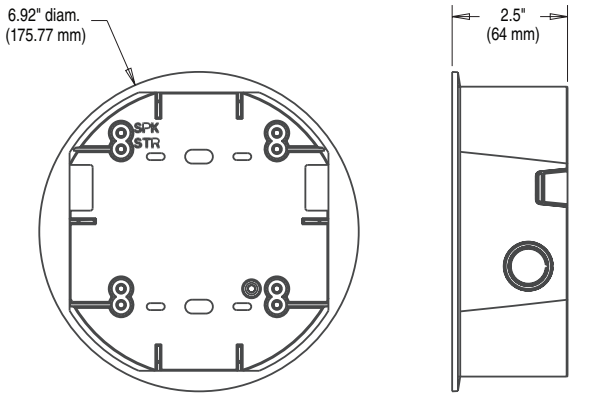
Horn Strobe Output (dBA)

			8–17.5 Volts	16–33 Volts	
Switch Position	Sound Pattern	dB	DC	DC	FWR
1	Temporal	High	84	89	89
2	Temporal	Low	75	83	83
3	Non-Temporal	High	85	90	90
4	Non-Temporal	Low	76	84	84
5	3.1 KHz Temporal	High	83	88	88
6	3.1 KHz Temporal	Low	76	82	82
7	3.1 KHz Non-Temporal	High	84	89	89
8	3.1 KHz Non-Temporal	Low	77	83	83

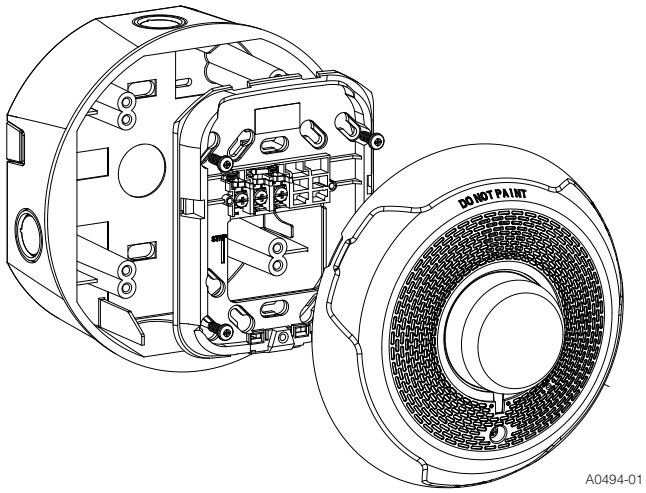
L-Series Dimensions



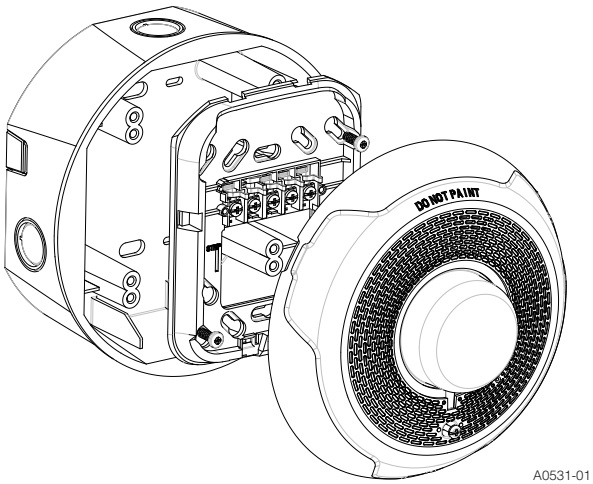
Ceiling-Mount Horn Strobes



Ceiling Surface Mount Back Box



2-Wire Ceiling Mount Horn Strobes
with Ceiling Surface Mount Back Box



4-Wire Ceiling Mount Horn Strobes
with Ceiling Surface Mount Back Box

L-Series Ordering Information

Model	Description
Ceiling Horn Strobes	
PC2RL	2-Wire, Horn Strobe, Red
PC2WL	2-Wire, Horn Strobe, White
PC4RL	4-Wire, Horn Strobe, Red
PC4WL	4-Wire, Horn Strobe, White

Model	Description
Ceiling Strobes	
SCRL	Strobe, Red
SCWL	Strobe, White
SCWL-CLR-ALERT	Strobe, White, ALERT
Accessories	
TRC-2	Universal Ceiling Trim Ring Red
TRC-2W	Universal Ceiling Trim Ring White
SBBCRL	Ceiling Surface Mount Back Box, Red
SBBCWL	Ceiling Surface Mount Back Box, White

For a ceiling-listed horn-only device, see AVDS865 “Indoor Selectable-Output Horns, Strobes, and Horn Strobes for Wall Applications”.

SYSTEM SENSOR®
3825 Ohio Avenue • St. Charles, IL 60174
Phone: 800-SENSOR2 • Fax: 630-377-6495

Indoor Selectable-Output Speaker Strobes and Dual Voltage Evacuation Speakers for Ceiling Applications

System Sensor L-Series selectable-output speaker strobes and dual-voltage evacuation speakers can reduce ground faults and enable faster installation with lower current draw and modern aesthetics.

Features

- Plug-in design and protective cover reduce ground faults
- Universal mounting plate with an onboard shorting spring tests wiring continuity before installation
- No extension ring required
- Field selectable candela settings on ceiling units: 15, 30, 75, 95, 115, 150, and 177
- Automatic selection of 12- or 24-volt operation at 15 and 30 candela
- Rotary switch simplifies field selection of speaker voltage (25 and 70.7 Vrms) and power settings (¼, ½, 1 and 2 watts)
- Speakers offer high fidelity and high volume sound output
- 520 Hz capable with compatible FACP
- Compatible with System Sensor synchronization protocol
- Electrical compatibility with existing SpectrAlert and SpectrAlert Advance products
- Tamper-resistant construction
- Updated modern aesthetics

Agency Listings

SIGNALING UL LISTED
S4048

FM APPROVED
FM approved except for ALERT models
3057493

7320-1653:0505

System Sensor L-Series of speakers and speaker strobes reduce costly ground faults using a plug-in design and universal mounting plate that allow the installer to pre-wire mounting plates, dress the wires, and confirm wiring continuity before plugging in the speakers. In addition, a protective plastic cover prevents nicked wires by covering exposed speaker components.

These devices also enable faster installations by providing instant feedback to ensure that wiring is properly connected, rotary switches to select voltage and power settings, and 7 field-selectable candela settings for both wall and ceiling speaker strobes.

The low total harmonic distortion of the SP speaker offers high fidelity sound output while still offering high volume sound output for use in high ambient noise applications.

L-Series makes installation easy

- Attach a universal mounting plate to a 4 × 4 × 21⁄8 inch back box . Flush-mount applications do not require an extension ring.
- Connect the notification appliance circuit or speaker wiring to the terminals on the mounting plate.
- Attach the speaker or speaker strobe to the mounting plate by inserting the product tabs into the mounting plate grooves. Hinge the device into position to lock the product pins into the mounting plate terminals. The device will temporarily hold in place with a catch until it is secured with a captured mounting screw.

L-Series Speaker and Speaker Strobe Specifications

Architectural/Engineering Specifications

General

L-Series speaker and speaker strobes shall mount to a 4 × 4 × 21⁄8-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit and amplifier wiring shall terminate at the universal mounting plate. Also, L-Series speaker strobes, 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 L-Series products shall operate between 32°F and 120°F from a regulated DC, or full-wave rectified, unfiltered power supply. Speaker strobes shall have field-selectable candela settings including 15, 30, 75, 95, 115, 150, 177.

Speaker

The speaker shall be a System Sensor L-Series model _____ dual-voltage transformer speaker capable of operating at 25.0 or 70.7 nominal Vrms. It should be listed to UL 1480 and shall be approved for fire protective service. The speaker shall have a frequency range of 400 to 4,000 Hz and shall have an operating temperature between 32°F and 120°F. The speaker shall have power taps and voltage that are selected by rotary switches.

Speaker Strobe combination

The speaker strobe shall be a System Sensor L-Series model _____ listed to UL1480 and UL 1971 and be approved for fire protective signaling systems. The speaker shall be capable of operating at 25.0 or 70.7 nominal Vrms selected via rotary switch, and shall have a frequency range of 400 to 4,000 Hz. The speaker shall have power taps that are selected by rotary switch. The strobe shall comply with the NFPA 72 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.

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. 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 Specifications		
Operating Temperature	32°F to 120°F (0°C to 49°C)	
Humidity Range	10 to 93% non-condensing	
Dimensions, Ceiling-Mount	**Diameter**	**Depth**
SPC Speaker	6.8 in, 173 mm	1.0 in, 25 mm
With Surface Mount Back Box	6.9 in, 176 mm	3.5 in, 89 mm
SPSC Speaker Strobe	6.8 in, 173 mm	2.8 in, 73 mm
With Surface Mount Back Box	6.9 in, 176 mm	5.37 in, 136 mm
Electrical/Operating Specifications		
Nominal Voltage (speakers)	25 Volts or 70.7 Volts (nominal)	
Maximum Supervisory Voltage (speakers)	50 VDC	
Strobe Flash Rate	1 flash per second	
Nominal Voltage (strobes)	Regulated 12 VDC or regulated 24 VDC/FWR [1,2]	
Operating Voltage Range (includes fire alarm panels with built in sync)	8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)	
Operating Voltage with MDL3 Sync Module	8.5 to 17.5 V (12 V nominal) or 16.5 to 33 V (24 V nominal)	
Frequency Range	400 to 4,000 Hz[3]	
Power	¼, ½, 1, 2 watts	

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. Strobe products will operate at 12 V nominal only for 15 and 30 cd.
3. 520Hz capable with compatible FACP.

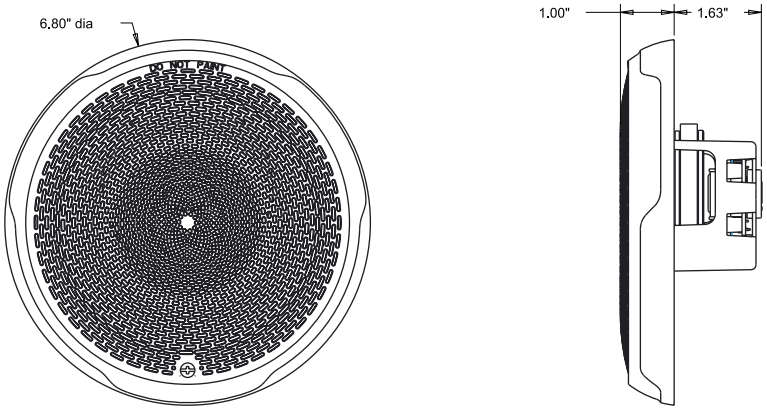
UL Current Draw Data

UL Max. Strobe Current Draw (mA RMS)			
	8 to 17.5 Volts	16 to 33 Volts	
Candela	DC	DC	FWR
15	87	41	60
30	153	63	86
75	NA	111	142
95	NA	134	164
115	NA	158	191
150	NA	189	228
177	NA	226	264

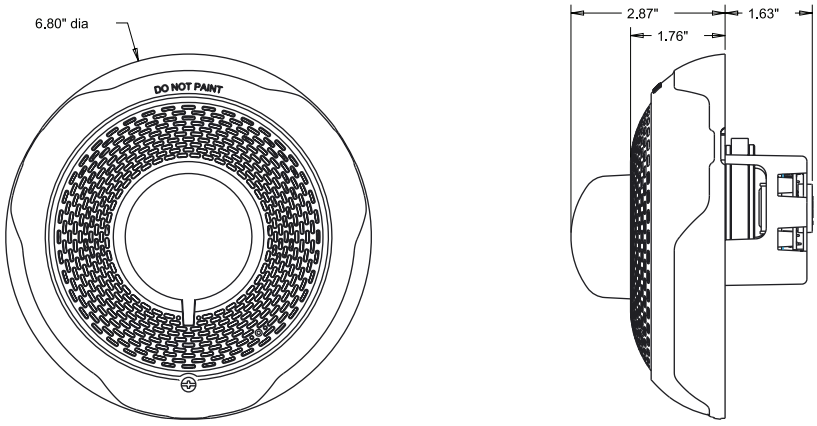
Ceiling-Mount Speaker Sound Output		
Setting	UL Reverberant (dBA @10 ft)	UL Anechoic (dBA @10 ft)
1/4 W	79	79
1/2 W	82	82
1 W	85	85
2 W	88	88

Ceiling-Mount Speaker Strobe Sound Output		
Setting	UL Reverberant (dBA @10 ft)	UL Anechoic (dBA @10 ft)
1/4 W	77	77
1/2 W	80	80
1 W	83	83
2 W	86	86

L-Series Dimensions

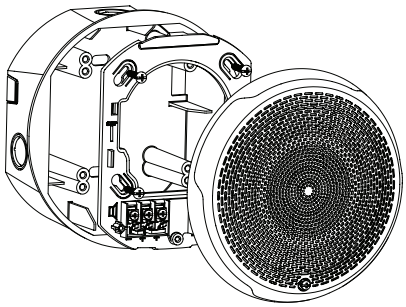


Ceiling Speaker

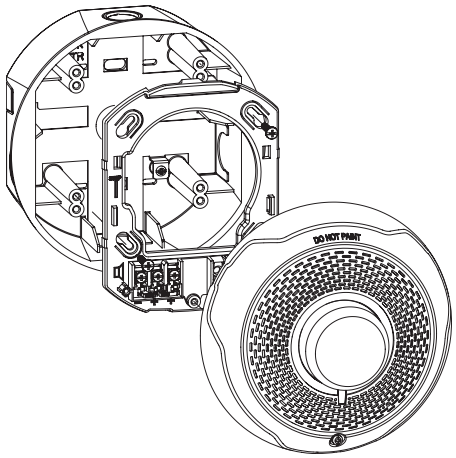


Ceiling Speaker Strobe

Surface Mounting



Ceiling Speaker with Surface Mount Back Box



Ceiling Speaker Strobe with Surface Mount Back Box

L-Series Ordering Information

Ceiling Mount		
White	**Red**	**Description**
SPCWL	SPCRL	Speaker only
SPSCWL	SPSCRL	Speaker Strobe
SPSCWL-P	—	Plain, Speaker Strobe
SPSCWL-SP	—	Fuego, Speaker Strobe
SPSCWL-CLR-ALERT	—	Alert, Speaker Strobe, Clear Lens
Accessories		
White	**Red**	**Description**
SBBCWL	SBBCRL	Universal Ceiling Surface Mount Back Box
TRC-2W	TRC-2	Universal Ceiling Trim Ring

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Indoor Selectable-Output Speaker Strobes and Dual Voltage Evacuation Speakers for Wall Applications

System Sensor L-Series selectable output speaker strobes and dual-voltage evacuation speakers can reduce ground faults and enable faster installation with lower current draw and modern aesthetics.

Features

- Plug-in design and protective cover reduce ground faults
- Universal mounting plate with an onboard shorting spring tests wiring continuity before installation
- No extension ring required
- Field selectable candela settings on wall units: 15, 30, 75, 95, 110, 135, 185
- Automatic selection of 12- or 24-volt operation at 15 and 30 candela
- Rotary switch simplifies field selection of speaker voltage (25 and 70.7 Vrms) and power settings (¼, ½, 1 and 2 watts)
- Seakers offer high fidelity and high volume sound output
- Compatible with System Sensor synchronization protocol
- Electrical compatibility with existing SpectrAlert and SpectrAlert Advance products
- Tamper-resistant construction
- Updated modern aesthetics

Agency Listings

SIGNALING UL LISTED
S4048

FM APPROVED
FM approved except for ALERT models
3057493

7320-1653:0505

The System Sensor L-Series of speakers and speaker strobes reduce costly ground faults using a plug-in design and universal mounting plate that allow the installer to pre-wire mounting plates, dress the wires, and confirm wiring continuity before plugging in the speakers. In addition, a protective plastic cover prevents nicked wires by covering exposed speaker components.

These devices also enable faster installations by providing instant feedback to ensure that wiring is properly connected, rotary switches to select voltage and power settings, and 7 field-selectable candela settings for wall speaker strobes.

The low total harmonic distortion of the speaker offers high fidelity sound output while still offering high volume sound output for use in high ambient noise applications.

System Sensor L-Series makes installation easy

- Attach a universal mounting plate to a 4 × 4 × 21⁄8 inch back box. Flush-mount applications do not require an extension ring.
- Connect the notification appliance circuit or speaker wiring to the terminals on the mounting plate.
- Attach the speaker or speaker strobe to the mounting plate by inserting the product tabs into the mounting plate grooves. Hinge the device into position to lock the product pins into the mounting plate terminals. The device will temporarily hold in place with a catch until it is secured with a captured mounting screw.

L-Series Speaker and Speaker Strobe Specifications

Architectural/Engineering Specifications

General

L-Series speaker and speaker strobes shall mount to a 4 × 4 × 21⁄8-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products. The notification appliance circuit and amplifier wiring shall terminate at the universal mounting plate. Also, L-Series speaker strobes, 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 L-Series products shall operate between 32°F and 120°F from a regulated DC, or full-wave rectified, unfiltered power supply. Wall-mount speaker strobes shall have field-selectable candela settings including 15, 30, 75, 95, 110, 135, 185.

Speaker

The speaker shall be a System Sensor L-Series model _____ dual-voltage transformer speaker capable of operating at 25.0 or 70.7 nominal Vrms. It should be listed to UL 1480 and shall be approved for fire protective service. The speaker shall have a frequency range of 400 to 4,000 Hz and shall have an operating temperature between 32°F and 120°F. The speaker shall have power taps and voltage that are selected by rotary switches.

Speaker Strobe combination

The speaker strobe shall be a System Sensor L-Series model _____ listed to UL1480 and UL 1971 and be approved for fire protective signaling systems. The speaker shall be capable of operating at 25.0 or 70.7 nominal Vrms selected via rotary switch, and shall have a frequency range of 400 to 4,000 Hz. The speaker shall have power taps that are selected by rotary switch. The strobe shall comply with the NFPA 72 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.

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. 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 Specifications			
Operating Temperature	32°F to 120°F (0°C to 49°C)		
Humidity Range	10 to 93% non-condensing		
Dimensions, Wall-Mount	**Length**	**Width**	**Depth**
SPL Speaker	6.5 in, 165 mm	5 in, 127 mm	.97 in,23 mm
With Surface Mount Back Box	6.6 in, 168 mm	5.1 in, 130 mm	3.2 in, 82 mm
SPSL Speaker/Strobe (including lens and speaker)	6.5 in, 165 mm	5.0 in, 127 mm	2.3 in, 58 mm
With Surface Mount Back Box	6.6 in, 168 mm	5.1 in, 130 mm	4.5 in, 116 mm
Electrical/Operating Specifications			
Nominal Voltage (speakers)	25 Volts or 70.7 Volts(nominal)		
Maximum Supervisory Voltage (speakers)	50 VDC		
Strobe Flash Rate	1 flash per second		
Nominal Voltage (strobes)	Regulated 12 VDC or regulated 24 DC/FWR[1,2]		
Operating Voltage Range (includes fire alarm panels with built in sync)	8 to 17.5 V (12 V nominal) or 16 to 33V (24 V nominal)		
Operating Voltage with MDL3 Sync Module	8.5 to 17.5 V (12 V nominal) or 16.5 to 33V (24 V nominal)		
Frequency Range	400 to 4000 Hz		
Power	¼, ½, 1, 2 watts		

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. Strobe products will operate at 12 V nominal only for 15 and 30 cd

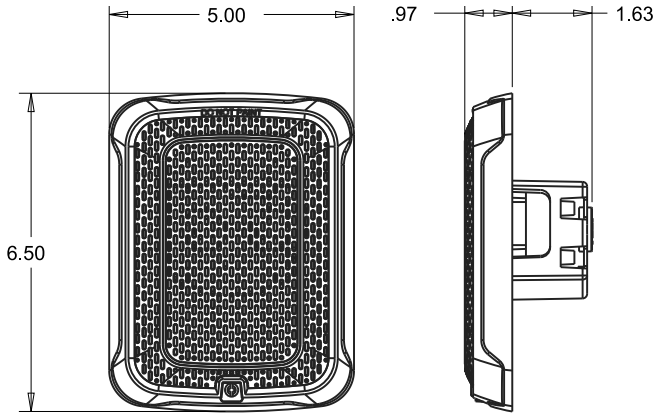
UL Current Draw Data

UL Max Strobe Current Draw (mA RMS)			
	8 to 17.5 Volts	16 to 33 Volts	
Candela	DC	DC	FWR
15	88	43	60
30	143	63	83
75	N/A	107	136
95	N/A	121	155
110	N/A	148	179
135	N/A	172	209
185	N/A	222	257

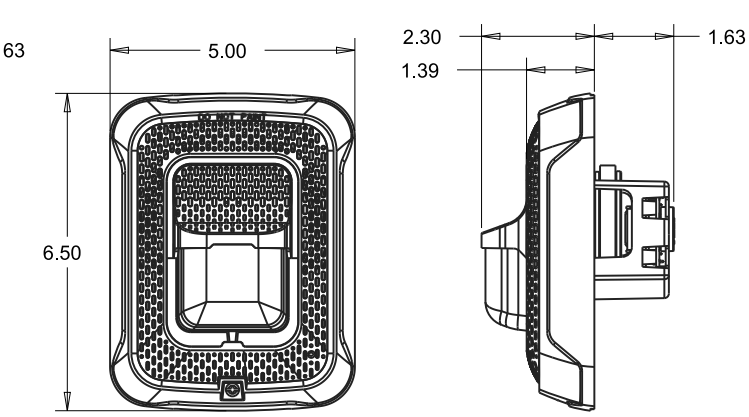
Sound Output Speaker Strobe				
	¼ W	½ W	1 W	2 W
UL Reverberant (dBA @10 ft)	77	80	83	86
UL Anechoic (dBA @10 ft)	77	80	83	86

Sound Output Speaker				
	¼ W	½ W	1 W	2 W
UL Reverberant (dBA @10 ft)	79	82	85	88
UL Anechoic (dBA @10 ft)	79	82	85	88

L-Series Dimensions

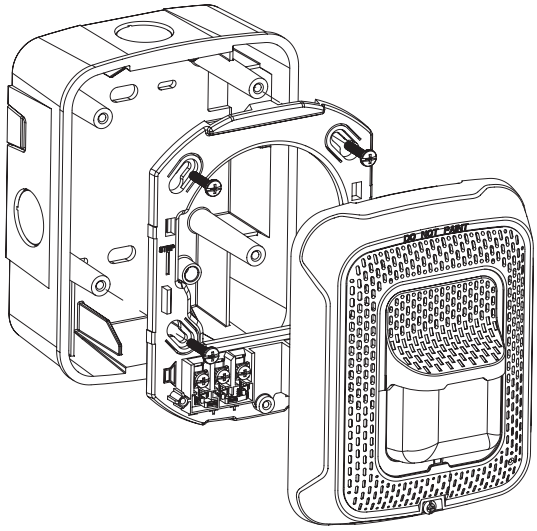


Wall-Mount Speaker



Wall-Mount Speaker Strobe

Surface Mounting



Wall-Mount Speaker Strobe with SBBSPL Surface Mount Back Box

L-Series Ordering Information

Wall Mount		
White	**Red**	**Description**
SPWL	SPRL	Speaker only
SPSWL	SPSRL	Speaker Strobe
SPSWL-P	SPSRL-P	Plain Speaker Strobe
SPSWL-ALERT	—	Speaker Strobe, Amber Lens
SPSWL-CLR-ALERT	—	Speaker Strobe Clear Lens
—	SPSRL-SP	Speaker Strobe, Fuego
Accessories		
White	**Red**	**Description**
RFPW	RFP	7 in × 9.5 in Retrofit Plate
SBBSPWL	SBBSPRL	Surface Mount Back Box for Speakers and Speaker Strobes
TR-2W	TR-2	Wall Mount Trim Ring

Notes:
All -P models have a plain housing (no “FIRE” marking on the cover)

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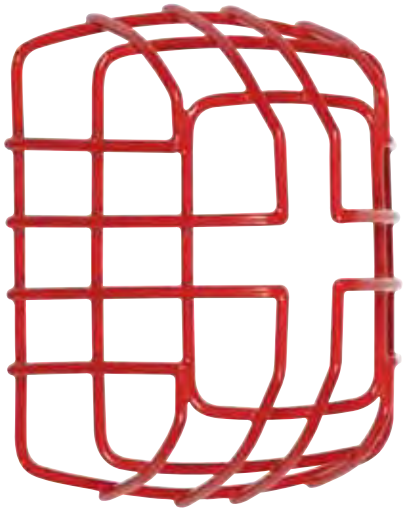
HORN/STROBE/SPEAKER DAMAGE STOPPERS®



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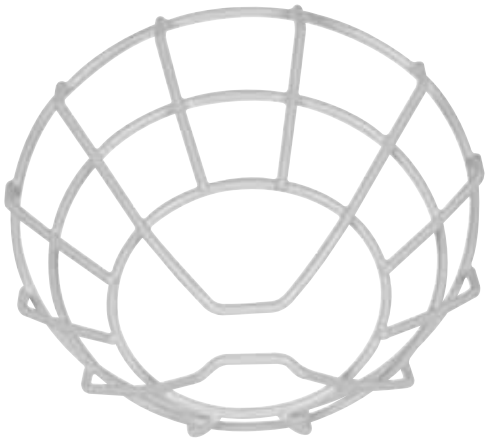


STI-9711

STI-9720

PRODUCT OVERVIEW

Here are excellent ways to protect strobe units against both vandalism and accidental damage. Constructed of tough, 9-gauge steel wire coated with corrosion resistant red or white polyester, these guards can take hard knocks in stride. STI-9705, STI-9708, STI-9711 and STI-9714 wire guards provide maximum protection for System Sensor SpectrAlert® Advance series strobe notification appliances.

BACKED BY A THREE YEAR GUARANTEE

As all STI protective covers, these guards are backed by a three year guarantee against breakage in normal use. Installation and servicing is easy with all screws and anchors provided. This Stopper is highly recommended for areas where abuse is severe or it is imperative that strobe units continue to operate. STI-9717 and STI-9720 fit over System Sensor notification appliances SP2R1224MC and SP2W1224MC.

KEY FEATURES

General Information

- Offers protection against vandalism and accidental damage.
- Simple removal for maintenance.
- Three year guarantee against breakage in normal use.

Construction

- Constructed of tough 9-gauge steel wire.
- Coated with corrosion resistant polyester.

Installation

- Installation is fast and simple with screws and anchors provided.

Options

- STI-9705, STI-9708, STI-9711 and STI-9714 protect SpectrAlert® strobe units.
- STI-9717 and STI-9720 fit over System Sensor notification appliances P2R1224MC and SP2W1224MC.

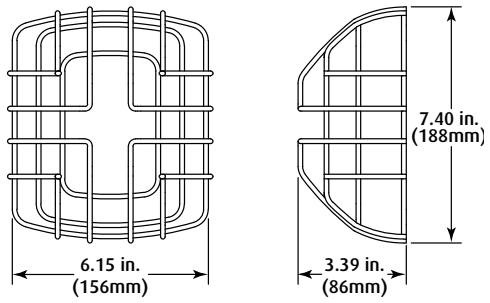
Horn/Strobe/Speaker Damage Stoppers®

Dimensions and Technical Information

MODELS AVAILABLE

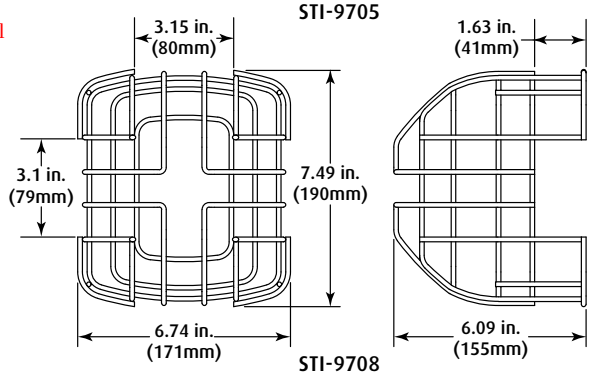
STI-9705	Damage Stopper, Flush Mount - White
STI-9705-R	Damage Stopper, Flush Mount - Red
STI-9708	Damage Stopper, Surface Mount - White
STI-9708-R	Damage Stopper, Surface Mount - Red
STI-9711	Damage Stopper, Flush Mount - White
STI-9714	Damage Stopper, Surface Mount - White
STI-9717	Speaker/Strobe Damage Stopper - Flush Mount (not UL Listed)
STI-9720	Speaker/Strobe Damage Stopper - Surface Mount (not UL Listed)

MODEL	HEIGHT	WIDTH	DEPTH
STI-9705			
STI-9705-R	7.40 in. (188mm)	6.15 in. (156mm)	3.39 in. (84mm)
STI-9708			
STI-9708-R	7.49 in. (190mm)	6.74 in. (171mm)	6.09 in. (155mm)
STI-9711	8.26 in. (210mm)	8.26 in. (210mm)	3.54 in. (90mm)
STI-9714	8.55 in. (271mm)	8.55 in. (271mm)	6.23 in. (158mm)
STI-9717	6.1 in. (155mm)	9.3 in. (238mm)	2.4 in. (61mm)
STI-9720	6.1 in. (155mm)	9.3 in. (238mm)	4.9 in. (125mm)



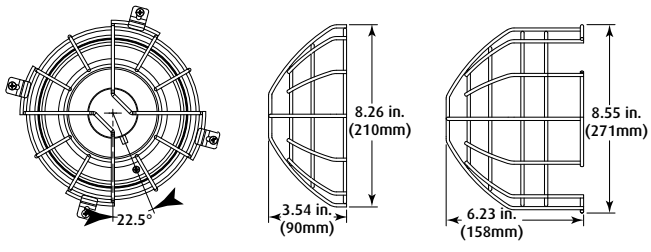
STI-9705

Wall



STI-9708

Ceiling



STI-9711 9714

APPROVALS & WARRANTY

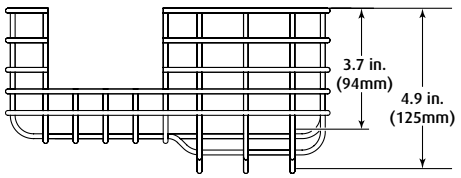
TESTING

STI-9705, STI-9708, STI-9711 and STI-9714 have been tested and approved or listed by:
· Underwriter Laboratories and Canadian UL File S7025

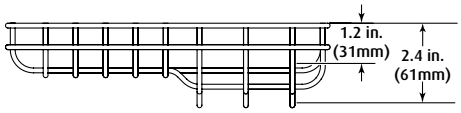
WARRANTY

Three year guarantee against breakage in normal use.

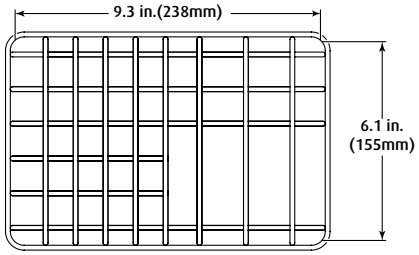
Light De-Rating Factor	Light Loss %
STI-9705 and STI-9708	
System Sensor (SR,SW, SW-ALERT, SW-CLR-ALERT, SRK, SWK, P2R, P2W, P4R, P4W, CHSR, CHSW, P2RK, P2WK, P4RK, P4WK, SPSR, SPSR-SP, SPSR-PG, SPSW, SPSW-CLR-ALERT, SPSW-SP, SPSW-PG, SPSRV, SPSRV-SP, SPSRV-PG, SPSWV, SPSWV-SP and SPSWV-PG, SPSWK, SPSRK, SPSW-ALERT)	13%
System Sensor (SRH, SWH, SRHK, SWH-ALERT, SWHK, P2RH, P2WH, P4RH, P2RHK, P2WHK, P2RHK-120, SPSRH, SPSRH-SP, SPSRH-PG, SPSWH, SPSWH-SP and SPSWH-PG, SPSRHK)	0%
STI-9711 and STI-9714	
System Sensor (SCR, SCW, SCRK, SCWK, SCW-CLR-ALERT, PC2R, PC2W, PC4R, PC4W, PC2RK, PC2WK, PC4WK, SPSCWV, SPSCR, SPSCR-SP, SPSCR-PG, SPSCW, SPSCW-SP, SPSCW-PG, SPSCRV, SPSCRV-PG, SPSCWV, SPSCWV-SP and SPSCWV-PG, SPSCWK, SPSCW-CLR-ALERT)	0%
System Sensor (SCRH, SCWH, SCRHK, SCWHK, PC2RH, PC2WH, PC4RH, PC2RHK, PC2WHK, PC4WHK, SPSCWHV, SPSCRH, SPSCRH-SP, SPSCRH-PG, SPSCWH, SPSCWH-SP, SPSCWH-PG, SPSCRVH, SPSCRVH-SP, SPSCRVH-PG, SPSCWHV-SP SPSCWHV-PG, SPSCWHK)	0%



STI-9720
TOP VIEW



STI-9717
TOP VIEW



STI-9717 and STI-9720
FRONT VIEW

Safety Technology International, Inc.

2306 Airport Road
Waterford, Michigan
48327, USA

Tel: 248-673-9898
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Redditch, Worcestershire
B98 0HU England

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Fax: 44 (0) 1527 501 999
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www.sti-europe.com

Technical Data Sheet
Fire Alarm Cables

2833 West Chestnut Street
Washington, PA 15301
Toll Free: (800) 245-4964
Fax: (724) 222-6420
www.westpenn-wpw.com

PART NUMBER: **990**

DESCRIPTION: 16/2 Solid bare copper conductors, unshielded with an overall jacket.

NEC RATING: FPLR, NEC Article 760

APPROVALS: (UL) or (ETL)us Listed

APPLICATION: Indoor for (Audio Circuits, Control Circuits, Initiating Circuits, Notification Circuits)

Construction Parameters:

Conductor	16 AWG Bare Copper
Stranding	Solid
Insulation Material	PVC
Insulation Thickness	0.010" Nom.
Number of Conductors	2
Shield	None
Drain	None
Jacket Material	PVC
Jacket Thickness	0.015" Nom.
Overall Cable Diameter	0.155" Nom.
Approximate Cable Weight	25 Lbs/1M' Nom.
Flame Rating	UL 1666 Riser Flame Test

Electrical & Environmental Properties:

Temperature Rating	-20deg C to 60deg C
Operating Voltage	300 V RMS
Max.Capacitance Between Conductors @ 1 KHz	32 pf/ft Nom.
DC Resistance per Conductor @ 20deg C	3.85 Ohms/1M' Nom.
Insulation Colors	Black, Red
Jacket Color	Red
RoHS Compliant	Yes

Mechanical Properties:

Max. Recommended Pull Tension	62.4 lbs.
Min. Bend Radius (Install)	1.75”

Specification Issue Date: 7/06

Standard Lengths are 1000ft.
The Jacket is sequentially footmarked.
The information presented here is, to the best of our knowledge, is true and accurate. However, since conditions of use are beyond our control, all recommendations or suggestions are presented without guarantee or responsibility on our part. We disclaim all liability in connection with the use of information contained herein or otherwise.

Technical Data Sheet
Aquaseal® Communication Cables

WEST PENN WIRE
2833 West Chestnut Street
Washington, PA 15301
Toll Free: (800) 245-4964
Fax: (724) 222-6420
www.westpenn-wpw.com

PART NUMBER: **AQC225**

DESCRIPTION: 16/2 Stranded bare copper conductors, unshielded with an Aquaseal tape and overall jacket.

NEC RATING: CM or CL3, NEC Article 800 and 725

APPROVALS: (UL) C(UL) Listed, (ETL)us Listed

APPLICATION: Materials suitable for outdoor use, and indoor trays, allows a variety of uses for (Intercom, Security, Sound, Audio, Background music)

Construction Parameters:

Conductor	16 AWG Bare Copper
Stranding	19x29
Insulation Material	PVC
Insulation Thickness	0.010" Nom.
Number of Conductors	2
Shield	None
Drain	None
Water-Blocking Tape	2 ply water swellable tape
Jacket Material	Sunlight/Moisture Resistance PVC
Jacket Thickness	0.025" Nom.
Overall Cable Diameter	0.228" Nom.
Approximate Cable Weight	48 Lbs/1M' Nom.
Flame Rating	UL 1685 Vertical Tray

Electrical & Environmental Properties:

Temperature Rating	-20deg C to 60deg C
Operating Voltage	300 V RMS
Max.Capacitance Between Conductors @ 1 KHz	33 pf/ft Nom.
DC Resistance per Conductor @ 20deg C	4.2 Ohms/1M' Nom.
Insulation Colors	Black, Red
Jacket Color	Gray
RoHS Compliant	--
TIA455-82B Water Infiltration Test Compliant	Yes
UL 444 & 13 Compliant	Yes

Mechanical Properties:

Max. Recommended Pull Tension	54 lbs.
Min. Bend Radius (Install)	2.2”

Specification Issue Date: 7/06

Standard Lengths are 1000ft.
The Jacket is sequentially footmarked.
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Strobe, SYNC & 24vdc power

THHN, MTW, THWN, AWM

Thermoplastic Insulated, Nylon Sheathed Heat, Moisture, Oil & Gasoline Resistant 600 Volt Copper

Product Description:
Alan Wire Type THHN or THWN conductors are primarily used in conduit as branch circuits in commercial or industrial applications, as specified by the National Electrical Code. Type AWM or MTW conductors are primarily used as appliance or machine tool wiring, as specified by the National Electrical Code.

Type THHN or THWN are available as stranded in sizes 14-4/0 AWG, and as solid in sizes 14-10 AWG. Stranded sizes 14-10 AWG are also rated as AWM or MTW. The conductors are soft-annealed, stranded or solid copper and are insulated with a tough, heat and moisture resistant polyvinyl chloride (PVC), over which a nylon (polymide) jacket is applied.

Specifications:
Alan Wire Type THHN or THWN or AWM or MTW meets applicable ASTM specifications, UL Standard 83, UL Standard 758, and UL Standard 1063. The conductors are Gasoline and Oil Resistant II, and have a voltage rating to 600 volts.

Conductor		PVC Insulation Thickness (Mils)	Nylon Jacket Thickness (Mils)	Nominal O.D. (Mils)	Ampacity		Approx. Net Weight per MFT	Color Code	Standard Package
Size AWG	No. Strands				75° C THWN	90° C THHN			
**14	Solid	15	4	102	15	15	16	1	AE
**12	Solid	15	4	119	20	20	24	1	AE
**10	Solid	20	4	150	30	30	37	1	BE
14	19	15	4	112	15	15	16	1	AE
12	19	15	4	131	20	20	24	1	AE
10	19	20	4	165	30	30	37	1	BE
8	19	30	5	218	45	50	64	2	B
6	19	30	5	256	65	70	96	2	CD
4	19	40	6	325	85	90	155	2	CD
3	19	40	6	345	100	105	190	3	CD
2	19	40	6	388	115	120	235	3	CD
1	19	50	7	437	130	140	300	3	CD

Sync/AUX

Strobe

A - 2000' Carton, Four 500' Spools Per Carton
B - 1000' Carton, Two 500' Spools Per Carton
C - 500' Reel D - 1000' Reel E - 2500' Reel

** Not Suitable for MTW Applications

Other lengths available upon request.

Colors Available:
Color Code #1) Black, White, Red, Blue, Green, Orange, Yellow, Brown, Purple, Gray, Pink, Tan
Color Code #2) Black, White, Red, Blue, Green, Orange, Yellow, Brown, Gray
Color Code #3) Black, White, Red, Green
Color Code #4) Black, Green

Technical Data Sheet
Fire Alarm Cables

2833 West Chestnut Street
Washington, PA 15301
Toll Free: (800) 245-4964
Fax: (724) 222-6420
www.westpenn-wpw.com

PART NUMBER: **991**

DESCRIPTION: 16/2 Solid bare copper conductors, shielded with an overall jacket.

NEC RATING: FPLR, NEC Article 760

APPROVALS: (UL) or (ETL)us Listed

APPLICATION: Indoor for (Audio Circuits, Control Circuits, Initiating Circuits, Notification Circuits)

Construction Parameters:

Conductor	16 AWG Bare Copper
Stranding	Solid
Insulation Material	PVC
Insulation Thickness	0.010" Nom.
Number of Conductors	2
Shield	100% Aluminum Polyester Foil
Drain	Stranded Tinned Copper
Jacket Material	PVC
Jacket Thickness	0.015" Nom.
Overall Cable Diameter	0.160" Nom.
Approximate Cable Weight	29 Lbs/1M' Nom.
Flame Rating	UL 1666 Riser Flame Test

Electrical & Environmental Properties:

Temperature Rating	-20deg C to 60deg C
Operating Voltage	300 V RMS
Max.Capacitance Between Conductors @ 1 KHz	82 pf/ft Nom.
Capacitance Between Conductors to Shield @ 1 KHz	148 pf/ft Nom.
DC Resistance per Conductor @ 20deg C	3.9 Ohms/1M' Nom.
Insulation Colors	Black, Red
Jacket Color	Red-Black-White-Yellow
RoHS Compliant	Yes

Mechanical Properties:

Max. Recommended Pull Tension	75 lbs.
Min. Bend Radius (Install)	2”

Specification Issue Date: 7/06

Standard Lengths are 1000ft.
The Jacket is sequentially footmarked.
The information presented here is, to the best of our knowledge, is true and accurate. However, since conditions of use are beyond our control, all recommendations or suggestions are presented without guarantee or responsibility on our part. We disclaim all liability in connection with the use of information contained herein or otherwise.

AQ rated- Evac Speaker

Technical Data Sheet
Aquaseal® Audio and Alarm

WEST PENN WIRE

2833 West Chestnut Street
Washington, PA 15301
Toll Free: (800) 245-4964
Fax: (724) 222-6420
www.westpenn-wpw.com

PART NUMBER: **AQC294**

DESCRIPTION: 16/2 Stranded bare copper conductors, shielded with an Aquaseal tape and overall jacket.

NEC RATING: CM / CL3 / FPL, NEC Article 800, 725, and 760

APPROVALS: (UL) Listed

APPLICATION: Materials suitable for outdoor use, and indoor trays, allows a variety of uses for (Intercom, Security, Sound, Audio, Background music, and Fire Alarm Circuits)

Construction Parameters:

Conductor	16 AWG Bare Copper
Stranding	19x29
Insulation Material	PVC
Insulation Thickness	0.010" Nom.
Number of Conductors	2 (1 Pair)
Shield	100% Aluminum Polyester Foil
Drain	24AWG Stranded Tinned Copper
Water-Blocking Tape	2 ply water swellable tape
Jacket Material	Sunlight/Moisture Resistance PVC
Jacket Thickness	0.025" Nom.
Overall Cable Diameter	0.281" Nom.
Approximate Cable Weight	55 Lbs/1M' Nom.
Flame Rating	UL 1685 Vertical Tray

Electrical & Environmental Properties:

Temperature Rating	-20deg C to 60deg C
Operating Voltage	300 V RMS
Max.Capacitance Between Conductors @ 1 KHz	46 pf/ft Nom.
Capacitance Between Conductors to Shield @ 1 KHz	83 pf/ft Nom.
DC Resistance per Conductor @ 20deg C	4.2 Ohms/1M' Nom.
Insulation Colors	Black, Red
Jacket Color	Gray
RoHS Compliant	--
TIA455-82B Water Infiltration Test Compliant	Yes
UL 444 & 13 Compliant	Yes

Mechanical Properties:

Max. Recommended Pull Tension	67 lbs.
Min. Bend Radius (Install)	2.8”

Specification Issue Date: 4/12

Standard Lengths are 1000ft.
The Jacket is sequentially footmarked.
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Tight Buffer Distribution Plenum Cable

Indoor/Outdoor Dry Water Block, Type OFNP, CSA FT6

Product Construction:

Fiber:
- 2–144 fibers
- 900 µm tight buffer
- Color-coding per TIA/IEIA 598 B

Central Strength Member:
- Epoxy/glass rod (above 12 fibers)

Overall Strength Member:
- Aramid yarn

Jacket:
- UV-resistant black jacket
- Flame-retardant polymer
- Sequential footage markings*

Features:
- Dry Water Block cable core for fiber protection. Improved temperature performance
- Direct termination of connectors on tight buffer. Sub-units are numbered for identification

Performance:
- Temperature:
  Storage -40°C (-40°F) to +70°C (+158°F)
  Installation 0°C (+32°F) to +50°C (+122°F)
  Operating -40°C (-40°F) to +70°C (+158°F)
- Minimum Bend Radius:
  20 X OD—Installation
  10 X OD—In-Service
- Maximum Crush Resistance:
  850 lbs/in (1485 N/cm)
- Maximum Vertical Rise—1,640 ft (500 m)

Applications:
- Intrabuilding and interbuilding voice or data communication backbones
- Outdoor use in ducts and underground conduits
- ETL Listed Type OFNP for installation in vertical riser and general horizontal applications when installed in accordance with NEC article 770-51 (a) and 770-53 (a)

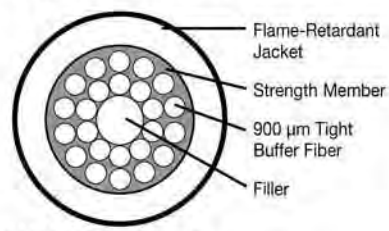
Compliances:
- ETL Listed Type OFNP
- CSA FT6
- ICEA S-104-696
- RoHS Compliant Directive 2002/95/EC

*Sequential meter markings available upon request

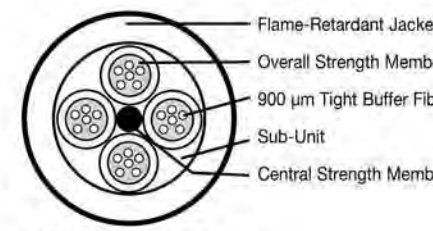
CATALOG NUMBER	FIBER COUNT	NO. OF SUB-UNITS	NOMINAL CABLE DIAMETER		NOMINAL CABLE WEIGHT		MAXIMUM TENSILE LOAD			
							INSTALLATION		IN-SERVICE	
			IN	mm	LBS/1000'	kg/km	LBS	N	LBS	N
XX0021ANU.BK	2	—	0.171	4.3	11.7	17.4	300	1334	90	400
XX0041ANU.BK	4	—	0.181	4.6	13.7	20.4	320	1423	96	427
XX0061ANU.BK	6	—	0.195	4.9	16.0	23.8	320	1423	96	427
XX0081ANU.BK	8	—	0.205	5.2	18.0	26.8	320	1423	96	427
XX0101ANU.BK	10	—	0.221	5.6	20.7	30.8	400	1780	120	534
XX0121ANU.BK	12	—	0.227	5.8	22.7	33.8	400	1780	120	534
XX0181ANU.BK	18	—	0.310	8.0	42.0	63	320	1423	112	500
XX0241ANU.BK	24	—	0.320	8.0	45.0	67	320	1423	112	500
XX0361A1D.BK	36	6	0.610	15.5	151	225	1300	5783	390	1735
XX0481A1D.BK	48	4	0.582	14.8	135	200	1300	5783	390	1735
XX0601A1D.BK	60	5	0.670	17.0	186	277	1500	6672	450	2002
XX0721A1D.BK	72	6	0.730	18.5	217	323	1900	8452	570	2535
XX0961A1D.BK	96	8	0.860	21.8	312	464	2000	8896	670	2980
XX1201A1D.BK	120	10	0.958	24.3	374	556	2000	8896	670	2535
XX1441A1D.BK	144	12	0.958	24.3	394	586	2000	8896	670	2980

XX denotes glass type.
A complete listing of NextGen® Brand glass types is specified on page 3 of this catalog.
* Double jacket design

Typical Cross-Sections



ANU.BK ≤ 24 Fiber



A1D.BK ≥ 36 Fiber

Hybrid designs (containing singlemode and multimode fiber) and composite designs (containing copper conductors) are also available.

Ordering Part Number Example

CG0241ANU.BK or CG0361A1D.BK

62.5 mm multimode, 24 or 36 fibers, tight buffer distribution plenum

General Cable

RoHS Compliant Directive 2002/95/EC

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM

LISTING SERVICE

LISTING No. 7165-1703:0125

CATEGORY: 7165 -- FIRE ALARM CONTROL UNIT (COMMERCIAL)

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Megan Sisson (203) 484-6544 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: Model E3 Series® BROADBAND and E3 Series® CLASSIC Voice Evacuation System. The E3 Systems may also work in conjunction with all the sub-assemblies of listee's 7100 Series Control Panel and NetSOLO systems (CSFM Listing No. 7165-1703:105 and 6911-1703:116, and 6911-1703:118).

Unit conveys all fire alarm, audio evacuation, voice paging, and fire fighter communications. Power-limited; non-coded, automatic, manual, smoke control, water flow, sprinkler supervisory, local auxiliary, central station, remote station, and proprietary service. Refer to listee's data sheet for additional detailed product description and operational considerations.

System components:

ILI-MB-E3; Intelligent Loop Interface Master Board
PM-9, PM-9G*; Power Supply
ILI-95-MB-E3, ILI-95-S-E3; Loop Interface Subassemblies
E3BB-FLUSH-LCD; Enclosure for ICD-E3
E3BB-BA/-RA/-BAA/-RAA/-BB/-RB/-BC/-RC/-BD; Cabinets*
RPT-E3-FO or; Repeater Sub-assembly, Fiber Optic or
RPT-E3-UTP; Repeater Sub-assembly, Unshielded twisted pair wire
LCD-E3; LCD Keypad Display
DACT-E3 sub-assembly; Digital alarm communicator transmitter
ILI-S-E3; Intelligent Loop Unit, Expansion Board
ANX-SR, ANX-MR-FO, ANX-MR-UTR; Addressable Node Expanders Sub Assembly*
INCC-E; Intelligent Network Enclosure*
INCC; Intelligent Network Central Command*
INI-VG, INI-VGC-UTP, INI-VGC-FO, INI-VGX-UTP; Intelligent Network Interface Sub Assembly*
INI-VGX-FO, INI-VGE-UTP, INI-VGE-FO; Intelligent Network Interface Sub Assembly*
ASM-16; Annunciator Switch Sub Assembly*
INX; Network Audio Transponder Enclosure*
ANU-48; Annunciator Sub Assembly*
NGA; Touch Screen LCD Display Sub Assembly*
LCD-7100; Remote LCD Display*
SBB-C4, SBB-D4; Backbox*

*Rev. 03-18-11bh

Date Issued: **July 01, 2020** *Listing Expires* **June 30, 2021**

Authorized By: ***DAVID CASTILLO,**, M.E., F.P.E.*
Fire Engineering Division

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM

LISTING SERVICE

LISTING No. 7165-1703:0176 Page 1 of 1

CATEGORY: 7165 -- FIRE ALARM CONTROL UNIT (COMMERCIAL)

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Megan Sisson (203) 484-6544 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: Model S3 fire alarm control unit. Automatic, manual, waterflow, sprinkler supervisory, local, remote station (PPU), and central station (PPU) services. System components:

SLP-E3; Smart Loop Panel Main Board Subassembly
LCD-SLP; Liquid Crystal Display- Smart Loop Panel Subassembly
FML-E3; Fiber Optic Multi Mode Board
FSL-E3; Fiber Optic Single Model Board
SLC-PM; Signaling Line Circuit for System Sensor Devices
SLC95-PM; Signaling Line Circuit for Apollo Devices
SLP-BB; Basic System Enclosure - Backbox, Door, Mounting Plate
*DACT-E3; Digital Alarm Communication Transmitter
*LCD-E3; LCD Display
*FLPS-7-RB; Power Supply
*RPT-E3-UPT; Network Repeater
*ASM-16 P/N1100-0455; Annunciator Switch
*ANU-48; P/N 1100-0503; Annunciator
*LCD-7100; Remote LCD Display.

Refer to the listee's data sheet for additional detailed product description and operational considerations

RATING: 120 V, 60 Hz, 2.75 A
240 V, 50/60 Hz, 1.4 A

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical rating and UL label.

APPROVAL: Listed as fire alarm control units for use with separately listed compatible initiating and indicating devices. Refer to manufacturer's installation manual for details.

NOTE: For Fire Alarm Verification feature (delay of fire alarm), the retard/reset/restart period shall not exceed 30 seconds.

*Rev 08-30-17 gt

Date Issued: **July 01, 2020** *Listing Expires* **June 30, 2021**

Authorized By: ***DAVID CASTILLO,**, M.E., F.P.E.*
Fire Engineering Division

FCI-VDR-D4B, FCI-DR-C4B, FCI-CR-D4B; Doors with locks*
AA-100, AA-120; Amplifiers*
AM-50-25, AM-50-70; Amplifier Sub Assembly*
CHG120; Battery Charger with Cabinet*
BC-1/FCI-LBB; Backbox*
IPDACT-2; IP Digital Alarm Communicator*
FPJ; Firefighters's Telephone Jack Receptacle*
FHS; Portable Firefighters's Telephone Handset*
7100 Series#; Fire Alarm Control Panel or
INI-7100 UTP#; Intelligent Network Interface Sub-assembly, [Twisted, unshielded wire] or
INI-7100 FO#; Intelligent Network Interface

RATING: 120 V, 60 Hz, 3.5 A Primary; 24 V dc, 9A Secondary

INSTALLATION: In accordance with listee's printed installation instructions, NFPA 72, applicable codes & ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model designation, electrical rating and UL label.

APPROVAL: Listed as fire alarm control unit for use with separately listed electrically and functionally compatible initiating and indicating devices. Suitable for high-rise applications when used with the above voice evacuation systems.

This control unit can generate a distinctive three-pulse Temporal Pattern Fire Alarm Evacuation Signal (for total evacuation) in accordance with NPFA 72, 2002 Edition.

This control unit meets the requirements of UL Standard 864, 9th Edition.

NOTE: For Fire Alarm Verification Feature (delay of alarm signaling), the Retard/Reset/Restart period shall be 30 seconds or less.

*Rev. 03-18-11bh

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Fire Engineering Division

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
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LISTING SERVICE

LISTING No. 7300-1402:0110 Page 1 of 1

CATEGORY: 7300 -- FIRE ALARM CONTROL UNIT ACCESSORIES/MISC. DEVICES

LISTEE: TELULAR CORP.3225 Cumberland Blvd, Suite 300, Atlanta, GA 30339
Contact: Tim Masters (678) 264-2012 Fax (678) 264-2062
Email: Tim.Masters@ametek.com

DESIGN: Models *TG7LV001, *TG7LVA01, *TG7LVF01 and TG-KIT digital cellular communicator system. Models are digital cellular radio alarm transmission devices used to provide a primary (sole or with a back-up) or back-up transmission path using cellular for control communicators. Refer to listee's printed data sheet for additional detailed product description and operational considerations

RATING: 120 Vac

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical rating and UL label.

APPROVAL: Listed as digital cellular radio alarm transmission devices. Refer to listee's Installation Instruction Manual for details.

NOTE: Burglary and other non-fire functions were not examined.

*04-07-2017 dcc

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LISTING SERVICE

LISTING No. 7300-0553:0110 Page 1 of 1

CATEGORY: 7300 -- FIRE ALARM CONTROL UNIT ACCESSORIES/MISC. DEVICES

LISTEE: SPACE AGE ELECTRONICS58 Chockett Road, Sterling, MA 01564
Contact: Robert Scholl (508) 485-0966 Fax (508) 485-4740
Email: bobs@1sae.com

DESIGN: Models TC2-32, TC1-18, TCX/A 64, TCX/D 128, ACE/A, AC2, ACE/D, IF-2, IF1, IFX/A and IFX/D enclosures. Models ACE-11, ACE-12 and ACE-13, *ACE2424, *ACE 3036, *ACE 2436, *ACE 3048 document cabinets. Refer to listee's data sheet for detailed product description and operational considerations.

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number and UL label.

APPROVAL: Listed as fire alarm equipment enclosures and document cabinets for use with listee's fire alarm equipment. Refer to listee's Installation Instruction Manual for details.

02-09-16 dc

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Fire Engineering Division

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LISTING SERVICE

LISTING No. 7300-1703:0168 Page 1 of 1

CATEGORY: 7300 -- FIRE ALARM CONTROL UNIT ACCESSORIES/MISC. DEVICES

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Megan Sisson (203) 484-6544 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: Model FPT-WKS work stations. The FPT-WKS is intended for fire alarm proprietary and central station applications. The FPT-WKS system is designed to provide annunciation of fire safety and other building system events. Refer to listee's data sheet for detailed product description and operational considerations. System Components:

FPT-GATE	FocalPoint Gateway

RATING: Primary Operating: 120V, 60 Hz, 50 Hz, 3A
240V, 50 Hz, 60 Hz, 2A

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes & ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical rating, and UL label.

APPROVAL: Listed as a fire alarm control unit accessories. Refer to listee's Installation Instruction Manual for details.

NOTE: Burglary and other non-fire functions were not examined.

XLF: 7300-1525:0103

04-28-08BH

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LISTING SERVICE

LISTING No. 7315-1637:0102 Page 1 of 1

CATEGORY: 7315 -- POWER UNITS

LISTEE: Honeywell International Inc.One Fire-Lite Place, Northford, CT 06472
Contact: Megan Sisson (203) 484-6544 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: Models HPF24S6, HPF24S8, HPFF8, HPFF8E, HPFF8CM, HPFF8CME, HPFF12, HPFF12E, *HPFF12CM and *HPFF12CME power limited power supply/battery chargers used for supervision and expanded power driving capability of up to four Notification Appliance Circuits (FACP Fire Circuits, Signaling Devices) or resettable/non resettable outputs. Model ZNAC-4 Class A converter. Refer to listee's data sheet for additional detailed product description and operational considerations.

RATING: 120 VAC, 24 VDC

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, product designation, electrical rating and UL label.

APPROVAL: Listed as power supply/battery chargers for use with separately listed compatible fire alarm control units.

XLF: 7315-0075:0206

*Rev. 10-20-10 bh

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LISTING SERVICE

LISTING No. 7150-1703:0119

CATEGORY: 7150 -- FIRE ALARM PULL BOXES

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Megan Sisson (203) 484-6544 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: Model MS-7AF dual action fire alarm pull box. Refer to listee's data sheet for detailed product description and operational considerations.

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, rating, and UL label.

APPROVAL: Listed as fire alarm pull boxes for use with separately listed compatible fire alarm control units. Refer to listee's Installation Instruction Manual for details.

* These manual pull boxes meet the requirements of UL Standard 38, 1999 Edition and California amendments.

NOTE: Formerly: 7150-0694:261

XLF: 7150-0028:0199

*Updated 09-08-2009 fm

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LISTING SERVICE

LISTING No. 7270-1703:0502 Page 1 of 1

CATEGORY: 7270 -- HEAT DETECTOR

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Megan Sisson (203) 484-6544 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: Models ATD-L3, ATD-L3H (fixed temperature) and ATD-L3R (fixed temperature with Rate-of-Rise) electronic heat detectors. Suffix -IV for ivory color and -BL for black color. Refer to listee's data sheet for additional detailed product description and operational considerations.

RATING: Model ATD-L3 (fixed temperature): 135°F.
Model ATD-L3H (fixed temperature): 190°F.
Model ATD-L3R (fixed temperature with rate of rise):135°F.

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical ratings, and UL label.

APPROVAL: Listed as heat detectors for use with Notifier base B710LP (CSFM#7300-0028:173); System Sensor bases B501, B210LP, B300-6, B300-6-IS (CSFM#7300-1653:0109); B224BI, B224RB (CSFM#7300-1653:0126); B200S, B200SR (CSFM#7300-1653:0213); B200S-LF, B200SR-LF (CSFM#7300-1653:238); and separately listed compatible fire alarm control units. Refer to listee's Installation Instructions Manual for details.

XLF: 7270-0028:0502

02-01-18 gt

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LISTING SERVICE

LISTING No. 7272-1703:0501 Page 1 of 1

CATEGORY: 7272 -- SMOKE DETECTOR-SYSTEM TYPE-PHOTOELECTRIC

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Megan Sisson (203) 484-6544 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: Models ASD-PL3, ASD-PL3R, and ASD-PTL3 analog addressable, photoelectric smoke detectors for open area and duct installations. Model ASD-PTL3 has a complementary heat detector. All models are similarl except for population/depopulation of components on the Printed Wiring Board for the intended features. All above models may be followed by two digit Suffix indicating the color of the detector enclosure: no suffix for white, -IV for ivory, -BL for black. Refer to listee's Installation and Maintenance Instruction for additional detailed product description and operational considerations

RATING: 24 VDC.

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical rating, and UL label.

APPROVAL: Listed as photoelectric smoke detectors. Detectors are for use with separately listed System Sensor base Models *B501, *B210LP (CSFM Listing 7300-1653:0109), B200S and B200SR (CSFM Listing 7300-1653:0213), B200S-LF and B200SR-LF (CSFM Listing 7300-1653:0238), B300-6 and B300-6-IS bases (CSFM Listing 7300-1653:0109), *B224BI and *B224RB (CSFM Listing 7300-1653:0126), System Sensor duct detector housings Models DNR and DNRW (CSFM listing 3240-1653:0209) and separately listed compatible fire alarm control units. Refer to manufacturer's Installation Manual for details. *All models comply with the applicable requirements in ANSI/UL 268, Smoke Detectors for Fire Alarm Systems, 7th Edition, January 11, 2016.

XLF: 7272-0028:0503

*Revision 12/17/19 DCC

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LISTING SERVICE

LISTING No. 7272-1703:0508 Page 1 of 1

CATEGORY: 7272 -- SMOKE DETECTOR-SYSTEM TYPE-PHOTOELECTRIC

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Megan Sisson (203) 484-6544 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: Models MCS-COF3, MCS-COF3-IV, photoelectric smoke detector with complementary heat detector, complementary electrochemical carbon monoxide (CO) detector, and supplemental infrared flame sensor, analog addressable.

Models MCS-PTIR, MSC-PTIR-IV, photoelectric smoke detector with complementary heat detector, and supplemental infrared flame sensor, analog addressable.

Refer to listee's printed data sheet for additional detailed product description and operational considerations.

RATING: 24 VDC

INSTALLATION: In accordance with the listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical rating, and UL label

APPROVAL: Listed as automatic smoke detector with complementary heat detection for use with:
System Sensor (S911) - Models B200S, B200S-WH, B200S-IV, B200SR, B200SR-WH, B200SR-IV, (CSFM Listing 7300-1653:0213) *B200S-LF, *B200S-LF-IV, *B200S-LF-WH, B200SR-LF, B200SR-LF-WH, B200SR-LF-IV, (CSFM Listing 7300-1653:0238), B210LP, B300-6, B300-6-IV, B300-6-IS, B300-6-IS-W, B300-6-IS-IV, B501, B501-WHITE, B501-IV, B501-BL, (CSFM Listing 7300-1653:0109) B224BI, B224BI-WH, B224BI-IV, B224RB, B224RB-WH, B224RB-IV, (CSFM Listing 7300-1653:0126).

Silent Knight (S6173) - Model IDP-6AB (CSFM Listing 7300-0559:0159).

Fire-Lite (S1059) - Model B350LP (CSFM Listing 7300-0075:0192).

*Rev 08-02-19 gt

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LISTING SERVICE

LISTING No. 5278-1653:0219 Page 1 of 1

CATEGORY: 5278 -- CARBON MONOXIDE DETECTORS

LISTEE: System Sensor, Unincorporated Div of Honeywell Int'l Inc.3825 Ohio Ave, St. Charles, IL 60174
Contact: Megan Sisson (630) 762-5362 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: Models CO1224, CO1224T, and CO1224TR Carbon Monoxide detectors. Refer to listee's data sheet for detailed product description and operational considerations.

RATING: 10-33 VDC

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes, NFPA 720, and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee;s name, Model number, electrical rating and UL label.

APPROVAL: Listed as Carbon Monoxide detectors for use with separately listed fire alarm control units.

NOTE: Carbon Monoxide detectors are not intended/suitable for fire and smoke detection.

12-06-10 bh

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LISTING SERVICE

LISTING No. 7300-1653:0109 Page 1 of 1

CATEGORY: 7300 -- FIRE ALARM CONTROL UNIT ACCESSORIES/MISC. DEVICES

LISTEE: System Sensor, Unincorporated Div of Honeywell Int'l Inc.3825 Ohio Ave, St. Charles, IL 60174
Contact: Megan Sisson (203) 484-6544 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: Models B401, B401B, B401R, B401BR, B401BR-750, B401R-750, B402B, B404B, B404BT, B406B, B501, B501B, 14506587-002, B501BH, B501BHT, B401BH, B110LP, B110RLP, B110RLP750, B112LP, B114LP, B114LPBT, B116LP, B210LP, B501-BL, B501-IV, *B501-WHITE, B300-6, B300-6-IV, B300-6-IS detector bases. Refer to listee's data sheet for detailed product description and operational considerations.

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, *model number, *electrical rating and UL label.

APPROVAL: Listed as detector bases for use with separately listed compatible detectors. *Refer to Manufacturers Installation Instruction Manual for details.

NOTE: Formerly 7300-1209:128

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LISTING SERVICE

LISTING No. 7300-1653:0213 Page 1 of 1

CATEGORY: 7300 -- FIRE ALARM CONTROL UNIT ACCESSORIES/MISC. DEVICES

LISTEE: System Sensor, Unincorporated Div of Honeywell Int'l Inc.3825 Ohio Ave, St. Charles, IL 60174
Contact: Megan Sisson (203) 484-6544 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: Models B200S and B200SR detector audible sounder bases. Model B200S is capable of producing sound output in High and Low output with T3, T4, continuous tone, marching tone, and custom tone. Model B200SR can only be configured for T3 and continuous tone depending on the jumper setting. *Models B200S and B200SR may be followed by a two digit suffix, indicating the color of the detector's enclosure: -WH for white, -IV for ivory, -BL for black etc.
Refer to listee's data sheet for additional detailed product description and operational considerations.

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical rating and UL label.

APPROVAL: Listed as audible devices/detector bases for use with listes's separately listed compatible detectors. Units can generate the distinctive three-pulse Temporal Pattern Fire Alarm Evacuation Signal (for total evacuation) in accordance with NFPA 72, 2007 Edition. Refer to listee's Installation Instruction Manual for details.

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Fire Engineering Division

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LISTING SERVICE

LISTING No. 3240-1653:0209 Page 1 of 1

CATEGORY: 3240 -- DUCT SMOKE DETECTOR HOUSING/BASE

LISTEE: System Sensor, Unincorporated Div of Honeywell Int'l Inc.3825 Ohio Ave, St. Charles, IL 60174
Contact: Megan Sisson (630) 762-5362 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: Models DNR, DNRW, DNRHS and DNRECL* analog photoelectric duct smoke detector housings. The units consist of a duct detector housing, exhaust tubes, and separately listed compatible detector head. Model DNRW is a Type 4(NEMA4) watertight enclosure. Refer to listee's data sheet for additional detailed product description and operational considerations.

RATING: 24 VDC

INSTALLATION: In accordance with listee's printed installation instruction, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, rating, air velocity and UL label.

APPROVAL: Listed as conventional photoelectric duct smoke detector housing for use with separately listed fire alarm control units. Refer to listee's Installation Instruction Manual for details.

01-02-18 gt

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LISTING SERVICE

LISTING No. 7260-1703:0506

CATEGORY: 7260 -- SMOKE DETECTION SYSTEM-BEAM TYPE

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Megan Sisson (630) 762-6544 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: Model OSI-RI-GW reflected type projected beam detector. Refer to listee's data sheet for additional detailed system description and operational considerations.

RATING: 15.0 to 32.0 Vdc

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes & ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical rating and UL label.

APPROVAL: Listed as a reflected type projected beam detector for use with separately listed compatible fire alarm control unit. Authority having jurisdiction should be consulted prior to installation. Refer to listee's Installation Instruction Manual for details.

12-12-18 gt

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LISTING SERVICE

LISTING No. 7300-1653:0212 Page 1 of 1

CATEGORY: 7300 -- FIRE ALARM CONTROL UNIT ACCESSORIES/MISC. DEVICES

LISTEE: System Sensor, Unincorporated Div of Honeywell Int'l Inc.3825 Ohio Ave, St. Charles, IL 60174
Contact: Megan Sisson (203) 484-6544 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: Models RTS151, RTS151KEY and RA100Z Duct Smoke Detector accessories. Refer to listee's data sheet for detailed product description and operational considerations.

RATING: Refer to the installation manuals.

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical rating, and UL label.

APPROVAL: Listed as control unit accessories for use with separately listed compatible fire alarm control units. Refer to listee's Installation Instruction Manual for details.

04-03-09 bh

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LISTING SERVICE

LISTING No. 7300-1703:0102 Page 1 of 1

CATEGORY: 7300 -- FIRE ALARM CONTROL UNIT ACCESSORIES/MISC. DEVICES

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Megan Sisson (203) 484-6544 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: Models AMM-4, *AMM-4F, AMM-2 and *AMM-2F monitor modules and Models AOM, AOM-2, AOM-2R, *AOM-2RF, AOM-2S and *AOM-2SF control modules. Refer to listee's data sheet for detailed product description and operational considerations.

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model designation, electrical rating and UL label.

APPROVAL: Listed as accessories for use with separately listed compatible control units. System Sensor Model SMB500 surface mount box (CSFM Listing No. 7300-1653:103) may be used as an enclosure for these modules

NOTE: FORMERLY: 7300-0694:178

XLF: 7300-1653:0103

12-4-07

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LISTING SERVICE

LISTING No. 7300-1703:0124

CATEGORY: 7300 -- FIRE ALARM CONTROL UNIT ACCESSORIES/MISC. DEVICES

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Megan Sisson (203) 484-6544 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: Models MMO-6RF relay module, MMO-6SF supervised control module, MMI-10F input monitor module, and MMI-6SFsix zone interface module. Refer to listee's data sheet for detailed product description and operational considerations.

RATING: Modules = 15-32 VDC

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical rating, and UL label.

APPROVAL: Listed as control unit accessories for use with separately listed compatible fire alarm control units. Refer to listee's Installation Instruction Manual for details.

NOTE: Formerly: 7300-0694:266

XLF: 7300-1653:0160

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Authorized By: ***DAVID CASTILLO,**, M.E., F.P.E.*
Fire Engineering Division

CALIFORNIA DEPARTMENT OF FORESTRY & FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL
FIRE ENGINEERING - BUILDING MATERIALS LISTING PROGRAM

LISTING SERVICE

LISTING No. 7300-1703:0107

CATEGORY: 7300 -- FIRE ALARM CONTROL UNIT ACCESSORIES/MISC. DEVICES

LISTEE: GAMEWELL-FCI12 Clintonville Road, Northford, CT 06472
Contact: Megan Sisson (203) 484-6544 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: Models AOM-MUX, *AOM-MUXF, AOM-TEL, *AOM-TELF control modules and Model AMM-2I, AMM-21F dual monitor module. Unit is intended to be installed in a standard 4" square junction box. Refer to listee's data sheet for additional detailed product description and operational considerations.

RATING: 16-32 VDC

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical rating and UL label.

APPROVAL: Listed as control unit accessories for use with separately listed compatible fire alarm control units.

NOTE: FORMERLY: 7300-0694:232

12-4-07

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LISTING SERVICE

LISTING No. 7300-1653:0103 Page 1 of 1

CATEGORY: 7300 -- FIRE ALARM CONTROL UNIT ACCESSORIES/MISC. DEVICES

LISTEE: System Sensor, Unincorporated Div of Honeywell Int'l Inc.3825 Ohio Ave, St. Charles, IL 60174
Contact: Megan Sisson (203) 484-6544 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: Models listed below:

M500M, M501M;Monitor Modules
M500R, M500S, M500MB; Control Modules
M500C, M500CH, M502M; Control Modules
M500X; Fault Isolator Module
*M500DMR1; Input/Output Relay Module
A2143-00; End-of-line Resistor
SMB500; Surface Mount Box
RMK400; Recessed Mounting Kit
MB500; Module Panel
CB500; Barrier Module
EOLR-1; End-of-Line Supervision Relay
Refer to listee's data sheet for detailed product description and operational considerations.

INSTALLATION: In accordance with listee's printed installation instructions, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical rating, and UL label.

APPROVAL: Listed as control unit accessories for use with separately listed compatible fire alarm control units. Model SMB500 surface mount box may be used as an enclosure for the Model M500M monitor module, Models M500C or M500CH control module or Module M500X fault isolator module. Model A2143-00 end-of-line resistor is intended for use in the initiating circuit of the M500M and the indicating circuit of the M500C. Model RMK400 mounting kit is intended for use with separately listed compatible smoke detectors. Refer to listee's Installation Instruction Manual for details.

NOTE: Formerly 7300-1209:104

Rev. 10-31-11 mt

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LISTING SERVICE

LISTING No. 7320-1653:0201 Page 1 of 1

CATEGORY: 7320 -- SPEAKERS

LISTEE: System Sensor, Unincorporated Div of Honeywell Int'l Inc.3825 Ohio Ave, St. Charles, IL 60174
Contact: Megan Sisson (203) 484-6544 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: Models SPR,SPW,SPRV, and SPWV SpectrAlert Speakers - Rectangular enclosure. Models SPCW, SPCR, SPCWV, and SPCRV SpectrAlert Speakers with round enclosure. Models SPSR, SPSRH, SPSW, SPSW-ALERT, SPSW-CLR-ALERT, *SPSWK-CLR-ALERT, SPSWH, SPSRV, and SPSWV SpectrAlert Speaker/Strobe with rectangular enclosure. Models SPSCR, SPSCRH, SPSCW, *SPSCWK-CLR-ALERT, SPSCWH, SPSCRV, SPSCRVH, SPSCWV, and SPSCWVH SpectrAlert Speaker/Strobe with round enclosure. Model SPSCW-CLR-ALERT Speaker/Strobe. Model SPSW-ALERT has amber lens and is intended for non-fire use.
All models identified are intended for indoor use mounted on the wall or ceiling. Models with a “K” in the suffix are suitable for indoor or outdoor use with an operating temperature rating of -40°C to +66°C (-40°F to +151°F) and have a NEMA 4X enclosure rating when used with models PWBB, PWBBW (wall) or the model PWBBCW (ceiling) plastic weatherproof back boxes or with Model MWBBW (Wall), MWBB (Wall) or MWBBCW (Ceiling) metal weatherproof back boxes. Models with a “- P” in the suffix have plain housings with no lettering on the enclosure. Models not containing “- P”, in the suffix have English lettering reading “FIRE” on the housing. Refer to listee's data sheet for additional detailed product description and operational considerations.

RATING: Nominal Voltage: 25 Vrms or 70 Vrms
Power Settings: ¼, ½, 1, 2 Watts
Frequency Range: 400 - 4000 Hz

INSTALLATION: In accordance with listee's printed installation instructions, NFPA 72, applicable codes & ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical rating and UL label.

APPROVAL: Listed as speaker/strobes when used with separately listed compatible fire alarm control units. Suitable for wall or ceiling mount.
These speaker/strobes do not generate a distinctive three-pulse temporal code pattern (for total evacuation) as required per NFPA 72, 2010 edition. If required, the appliances must be used with a fire alarm control unit that can generate the temporal pattern signal.

*Corrected 02-06-12 bh

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LISTING SERVICE

LISTING No. 7125-1653:0504

CATEGORY: 7125 -- FIRE ALARM DEVICES FOR THE HEARING IMPAIRED

LISTEE: System Sensor, Unincorporated Div of Honeywell Int'l Inc.3825 Ohio Ave, St. Charles, IL 60174
Contact: Megan Sisson (203) 484-6544 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: System Sensor Indoor 2-wire Models:
SRL, SWL, SGRL, SGWL, SRL-P SWL-P, SRL-SP, SWL-CLR-ALERT and SWL-ALERT Wall Strobes;
SCRL, SCWL and SCWL-CLR-ALERT Ceiling Strobes.

Wall Bezel Parts:
BZR-F, BZR-AL, BZR-AG, BZR-EV, BZR-P, BZR-SP, BZR-PG,
BZW-F, BZW-AL, BZW-AG, BZW-EV, BZW-P, BZW-SP, BZW-PG,
BZGR-F, BZGR-AL, BZGR-AG, BZGR-EV, BZGR-P, BZGR-SP, BZGR-PG,
BZGW-F, BZGW-AL, BZGW-AG, BZGW-EV, BZGW-P, BZGW-SP and BZGW-PG,

Ceiling Bezel Parts:
BZRC-F, BZRC-AL, BZRC-AG, BZRC-EV, BZRC-P, BZRC-SP, BZRC-PG,
BZWC-F, BZWC-AL, BZWC-AG, BZWC-EV, BZWC-P, BZWC-SP and BZWC-PG.

Color Lens:
LENS-A2, LENS-B2, LENS-G2, LENS-R2, LENS-AC2, LENS-BC2, LENS-GC2 and LENS-RC2.

WallTrim Rings:
TR2 and TR2W

CeilingTrim Rings:
TRC2 and TRC2W.

Wall Surface Mounted Back Boxes:
SBBRL, SBBGRL, SBBWL and SBBGWL,

Ceiling Surface Mounted Back Boxes:
SBBCRL and SBBCWL

Refer to listee's data sheet for detailed product description and operational considerations.

*Rev 04-04-19 gt

Date Issued: **July 01, 2020** *Listing Expires* **June 30, 2021**

Authorized By: ***DAVID CASTILLO,**, M.E., F.P.E.*
Fire Engineering Division

RATING: Regulated 12 VDC setting: 8-17.5 VDC
Regulated 24 VDC/fwr setting: 16-33 VDC

INSTALLATION: In accordance with listee's printed installation instructions, NFPA 72, applicable codes & ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical rating, and UL label.

APPROVAL: Listed as two wire strobe units used for synchronous application when used with separately listed compatible fire alarm control units. Suitable for indoor use, vertical wall or horizontal ceiling mounted. *Listed with software code, S05-0048-001 for low temperature compensation. Authority having jurisdiction should be consulted prior to installation. Refer to listee's Installation Instruction Manual for details.

*Rev 04-04-19 gt

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LISTING SERVICE

LISTING No. 7320-1653:0505

CATEGORY: 7320 -- SPEAKERS

LISTEE: System Sensor, Unincorporated Div of Honeywell Int'l Inc.3825 Ohio Ave, St. Charles, IL 60174
Contact: Megan Sisson (203) 484-6544 Fax (203) 484-7309
Email: megan.sisson@honeywell.com

DESIGN: System Sensor Indoor Models:
SPRL and SPWL Wall Speakers;
SPCRL and SPCWL Ceiling Speakers;
SPSRL, SPSWL, SPSRL-P, SPSRL-SP, SPSWL-P, SPSWL-ALERT and SPSWL-CLR-ALERT Wall Speaker Stobes;
SPSCRL, SPSCWL, SPSCWL-P, SPSCWL-SP and SPSCWL-CLR-ALERT Ceiling Speaker Strobes.

Wall Bezel Parts:
BZSPR-P, BZSPR-AL, BZSPR-EV, BZSPR-AG, BZSPR-PG, BZSPR-F and BZSPR-SP, BZSPW-P, BZSPW-AL, BZSPW-EV, BZSPW-AG, BZSPW-PG, BZSPW-F and BZSPW-SP,

Ceiling Bezel Parts:
BZSPRC-P, BZSPRC-AL, BZSPRC-EV, BZSPRC-AG, BZSPRC-PG, BZSPRC-F and BZSPRC-SP,
BZSPWC-P, BZSPWC-AL, BZSPWC-EV, BZSPWC-AG, BZSPWC-PG, BZSPWC-F and BZSPWC-SP,

WallTrim Rings for Speaker Strobes:
TR2 and TR2W

CeilingTrim Rings for Speaker Strobes:
TRC2 and TRC2W.

Wall Surface Mounted Back Boxes:
SBBSPRL and SBBSPWL,

Ceiling Surface Mounted Back Boxes:
SBBCRL and SBBCWL

Refer to listee's data sheet for detailed product description and operational considerations.

02-27-17 gt

Date Issued: **July 01, 2020** *Listing Expires* **June 30, 2021**

Authorized By: ***DAVID CASTILLO,**, M.E., F.P.E.*
Fire Engineering Division

RATING: 25 or 70.7 VAC, 1/4, 1/2, 1, 2 Watt outputs.
Regulated 12 VDC and 24 VDC/FWR is for 2-wire strobe portion.

INSTALLATION: In accordance with listee's printed installation instructions, NFPA 72, applicable codes & ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, model number, electrical rating, and UL label.

APPROVAL: Listed as speakers and speaker-strobes when used with separately listed compatible fire alarm control units. Suitable for indoor use, dry and damp environments. *Listed with software code, S05-0048-001 for low temperature compensation. Authority having jurisdiction should be consulted prior to installation. Refer to listee's Installation Instruction Manual for details.

02-27-17 gt

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LISTING SERVICE

LISTING No. 7161-0859:0101 Page 1 of 1

CATEGORY: 7161 -- CABLES-FIRE PROTECTIVE SIGNALING

LISTEE: West Penn Wire2833 W Chestnut St, Washington, PA 15301
Contact: Steve Courtwright (724) 222-7060 Fax (724) 229-1151
Email: Steve.courtwright@westpenn-wpw.com

DESIGN: Types FPL and FPLP power limited fire protective signaling cable. Refer to listee's data sheet for detailed product description and operational considerations.

INSTALLATION: In accordance with listee's printed installation instructions, NEC Article 760, applicable codes and ordinances and in a manner acceptable to the authority having jurisdiction.

MARKING: Listee's name, type, NEC rating and UL label.

APPROVAL: Listed as power-limited fire protective signaling cable.

*Rev. 05-23-2005

Date Issued: **July 25, 2019** *Listing Expires* **August 29, 2020**

Authorized By: ***DAVID CASTILLO**, Program Coordinator*

Fire Engineering Division