# studio kiro

# Addendum 3

# Building Envelope Repairs and Fire Alarm Replacement At Sylvanie Williams School

3127 Martin L. King Jr. Blvd. New Orleans, Louisiana 7012 OPSB Project No. ITB 23-FAC-0035 Studio Kiro Project No. 2228

### October 12, 2023

To: All Companies Invited for Bidding for this project

The provisions of this addendum are hereby incorporated into, supplement and become a part of: 1) the proposal, 2) each proposal submitted by each Proposer, and 3) any final contract executed by the parties. Changes made by Addenda shall take precedence over any conflicting provisions in the original documents. The Proposer shall be responsible for notifying the Owner of any changes caused by this Addendum, which may affect other items in the Proposal and, which are not addressed in this Addendum prior to the Submission of a Proposal. Any such condition, which is not addressed in advance and discovered after the Proposals have been received, shall be resolved in a manner acceptable to the Owner without additional cost.

### The proposers should acknowledge receipt of all addenda in their proposal.

Item 1: Fire Alarm System Prior Approval of Equivalent Component Products: Subject to the requirements of the Drawings and Project Manual, the following equipment components/equipment systems are pre-approved in accordance with the Contract Documents. Approval of equipment components/systems does not relieve the Contractor or supplier of the responsibility to fulfill the physical constraints and performance requirements of the project. The products/product systems proposed must comply with the contract documents and be compatible with the finished fire alarm system to ensure a fully functional alarm system. Per the requirements in the specification, detailed information assuring compliance must be provided in the submittal process after the bid award. The Contractor shall be responsible for any modifications to the fire alarm system's design necessitated by the substitution of the prior approved equipment/equipment systems for the basis-of-design product as a result.

Prior-Approved Equipment/Equipment System	Manufacturer
NFS2-3030 Intelligent Addressable Fire Alarm Control Panel	Honeywell
Cerberus PRO Intelligent Voice Communication System	Siemens



Item 2: Cut sheets for the prior approved substitution equipment components/ equipment systems are attached at the end of this addendum.

END OF ADDENDUM 3



# NFS2-3030 Intelligent Addressable Fire Alarm Control Panel

### General

The NFS2-3030 is an intelligent Fire Alarm Control Panel (FACP) designed for medium- to large-scale facilities. Fire emergency detection and evacuation are extremely critical to life safety, and the NFS2-3030 is ideally suited for these applications. The NFS2-3030 is part of the ONYX<sup>®</sup> Series of products from NOTIFIER. The NFS2-3030 is ideal for virtually any application because it features a modular design that is configured per project requirements. With one to ten Signaling Line Circuits (SLCs), the NFS2-3030 supports up to 3,180 intelligent addressable devices.

Information is critical to fire evacuation personnel, and the NFS2-3030's large 640-character Liquid Crystal Display (LCD) presents vital information to operators concerning a fire situation, fire progression, and evacuation details.

A host of other options are available, including single- or multi-channel voice; firefighter's telephone; LED, LCD, or PC-based graphic annunciators; networking; advanced detection products for challenging environments; wireless fire protection; and many additional options.

ONYX® Series panels integrate with the Connected Life Safety Services (CLSS) platform through the CLSS Gateway, providing connectivity to central station, cloud, and mobile applications. (*See HON-62034.*) This cloud-based functionality provides reliable protection and remote monitoring of the system, reduced manual data entry, and reporting.

### **Features**

- Certified for seismic applications when used with the appropriate seismic mounting kit.
- Approved for Marine applications when a marine-listed version is used with marine-listed compatible equipment. *See DN-60688.*
- Complies with UL 2572 Mass Notification Systems (NFS2-3030 version 20 or higher).
- One to ten isolated intelligent Signaling Line Circuits (SLC) Class A, B, or X.
- Wireless fire protection using SWIFT Smart Wireless Integrated Fire Technology. *See DN-60820.*
- Up to 159 detectors and 159 modules per SLC; 318 devices per loop/3,180 per FACP or network node.
  - Detectors can be any mix of photo, thermal, or multi-sensor; wireless detectors are available for use with the FWSG(A).
  - Modules include addressable pull stations, normally open contact devices, two-wire smoke detectors, notification, or relay; wireless modules are available for use with the FWSG(A).
- Large 16 line, 640 character LCD backlit display or use displayless as a network node.
- Network options:
  - High-speed network for up to 200 nodes (N16e/x, NFS2-3030, NFS2-640, NFS-320(C), NFS-320SYS, NCD, NCA-2, DVC-EM, ONYXWorks, NFS-3030, NFS-640, and NCA).
  - Standard network for up to 103 nodes (N16e/x, NFS2-3030, NFS2-640, NFS-320(C), NFS-320SYS, NCD, NCA-2, DVC-EM, ONYXWorks, NCS, NFS-3030, NFS-640, NCA, AFP-200, AFP-300/400, AFP-1010, and AM2020). Up to 54 nodes when DVC-EM is used in network paging.
- Built-in Alarm, Trouble, Security, and Supervisory relays.
- VeriFire<sup>®</sup> Tools online/offline program option.



NFS2-3030 (left) and NFS2-3030 with DVC audio option (right)

- With built-in Degraded Mode operation, the system is capable of general alarm if a fire alarm condition is present even if the central processing unit (CPU) fails.
- Weekly Occupancy Schedules allow changing sensitivity by time of day and day of week.
- EIA-485 annunciators, including custom graphics.
- History file with 4000-event capacity in nonvolatile memory, plus separate 1000-event alarm-only file.
- Advanced history filters allow sorting by event, time, date, or address.
- Alarm Verification selection per point, with automatic counter.
- Autoprogramming and Walk Test reports.
- Multiple central station communication options:
  - Standard UDACT
  - Internet
  - Internet/GSM
- Positive Alarm Sequence (PAS) Presignal.
- Silence Inhibit and Auto Silence timer options.
- Optional cloud connectivity for remote off site monitoring through CLSS (see HON-62034)
- Monitor multiple buildings through one off-campus central station, and report through the CLSS Gateway
- · Optional remote programing through CLSS
- Field-programmable on panel or on PC, with VeriFire Tools program, also check, compare.
- Non-alarm points for lower priority functions.
- Remote ACK/Signal Silence/System Reset/Drill via monitor modules.
- Up to 1000 powerful Boolean logic equations.
- Supports SCS Series smoke control system in both HVAC and FSCS modes.
- FM6320 approved Gas Detection System with FMM-4-20 module and any FM listed gas detector.
- EIA-232 printer port.
- EIA-485 annunciator port.

### 640-CHARACTER DISPLAY FEATURES

- Backlit, 640-character display.
- Program keypad: full QWERTY keypad.
- Up to nine users, each with a password and selectable access levels.
- 11 LED indicators: Power; Fire Alarm; Pre-Alarm; Security; Supervisory; System Trouble; Other Event; Signals Silenced; Point Disabled; CPU Failure; Controls Active.
- Membrane Switch Controls: Acknowledge; Signal Silence; Drill; System Reset; Lamp Test.
- LCD Display: 640 characters (16 lines x 40 characters) with long-life LED backlight.

### SWIFT WIRELESS

- Self-healing mesh wireless protocol.
- Each SWIFT Gateway supports up to 49 SWIFT devices.
- Up to 4 wireless gateways can be installed with overlapping network coverage.

### **R**ELEASING FEATURES

- Ten independent hazards.
- Sophisticated cross-zone (three options).
- Delay timer and Discharge timers (adjustable).
- Abort (four options).

### VOICE AND TELEPHONE FEATURES

- Up to eight channels of digital audio.
- 35 watt, 50 watt, 75 watt, and 100/125 watt digital amplifiers (DAA2/DAX series and DS series).
- Solid state message generation.

- Hard-wired voice control module options.
- Firefighter telephone option.
- 30- to 120-watt analog amplifiers (AA Series).
- Backup tone generator and amplifier option.

#### FLASHSCAN<sup>®</sup> INTELLIGENT FEATURES

- Polls up to 318 devices on each loop in less than two seconds.
- Activates up to 159 outputs in less than five seconds.
- Multicolor LEDs blink device address during Walk Test.
- Fully digital, high-precision protocol (U.S. Patent 5,539,389).
- Manual sensitivity adjustment up to nine levels.
- Pre-alarm ONYX intelligent sensing up to nine levels.
- · Sensitivity levels:
  - Photo 0.5 to 2.35%/foot obscuration.
  - High-Sensitivity Photoelectric (VIEW<sup>®</sup>) Open Air Protection (0.5% - 2.0%/ft. obscuration), Special Applications (0.02%-0.5%/ft. obscuration)
  - Multi-Criteria Detector Open Air Protection (2.52-3.89%/ft. obscuration), Special Applications (1.13-2.52%/ft. obscuration)
- Drift compensation (U.S. Patent 5,764,142).
- Multi-detector algorithm involves nearby detectors in alarm decision (U.S. Patent 5,627,515).
- Automatic detector sensitivity testing (NFPA-72 compliant).
- Maintenance alert (two levels).
- · Self-optimizing pre-alarm.
- Programmable activation of sounder/relay bases during alarm or pre-alarm.
- Read Status displays the level of detector cleanliness.



**NOTE:** CPU2-3030 firmware version 14.0 (and higher) can support LCD-160 on the RDP port, or LCD2-80 in terminal mode, but not both at the same time.

# **Sample System Options**

### FSV-951 SERIES VIEW<sup>®</sup> (VERY INTELLIGENT EARLY WARNING) HIGH-SENSITIVITY SMOKE DETECTOR

- Advanced ONYX intelligent sensing algorithms differentiate between smoke and non-smoke signals.
- Addressable operation pinpoints the fire location.
- Ivory models (-IV) support CLIP mode as well as FlashScan.
- ULC listed models available; "A" models are ULC Listed.
- -R is retrofit, backwards compatible for use with older panels.

### FCO-951(A)/-IV ADVANCED MULTI-CRITERIA FIRE/CO DETECTOR

- Detects all four major elements of a fire (smoke, heat, CO, and flame).
- 135°F (57.2°C) fixed-temperature heat detector.
- Transmits an alarm signal due to heat.
- Separate signal for life-safety CO detection.
- Optional addressable sounder base for Temp-3 (fire) or Temp-4 (CO) tone.
- Automatic drift compensation of smoke sensor and CO cell.
- High nuisance-alarm immunity.
- ULC listed models available; "A" models are ULC Listed.

### FPTI-951(A) INTELLIGENT MULTI-CRITERIA DETECTOR

Combined Photoelectric Thermal and Infrared Sensor

- UL 268 7th Edition and UL 521 Listed; Canadian models CAN/ ULC S529 and CAN/ULC S530
- Microprocessor-based technology; combination photo, thermal, and infrared technology.

### FPC-951(A) PHOTOELECTRIC/CO SENSOR

· Combined photoelectric and carbon monoxide sensor

# FSCO-951(A) INTELLIGENT CO SENSOR

Carbon monoxide sensor

# **FS-OSI-RI(A)** Addressable intelligent single-ended beam smoke detector

- Intelligent addressable reflector-type linear optical beam smoke detector
- Fast, easy, and intuitive beam alignment indicated by directional LED arrows
- Long range coverage of 16-328 ft (5-100 m) is standard; no separate long-range kit required

#### FMM-4-20 GAS DETECTION MODULE

- Interface to industry-standard linear scale 4-20 mA sensors.
- Five programmable thresholds.
- FM Approved, Class 6320 (Stationary Gas Sensors/Detectors).

### INTELLIGENT VESDA-E DETECTORS

- Intelligent aspiration smoke detectors connect directly to the SLC loop of compatible ONYX® Series panels:
  - VEA-040-A00-NTF, VEA-040-A10-NTF
  - VEP-A00-P-NTF, VEP-A10-P-NTF, VEP-A00-1P-NTF
  - VEU-A00-NTF, VEU-A10-NTF
- VES-A00-P-NTF-UL, VES-A10-P-NTF-UL
- Models offer LED display, LCD display, or both
- Coverage options for spaces up to 69,965 square feet

### FlashScan<sup>®</sup> Exclusive World-Leading Detector Protocol

At the heart of the NFS2-3030 is a set of detection devices and device protocol — FlashScan (U.S. Patent 5,539,389). FlashScan is an all-digital protocol that gives superior precision and high noise immunity.

As well as giving quick identification of an active input device, this protocol can also activate many output devices in a fraction of the

time required by competitive protocols. This high speed also allows the NFS2-3030 to have the largest device per loop capacity in the industry — 318 points — yet every input and output device is sampled in less than two seconds. The microprocessor-based FlashScan<sup>®</sup> detectors have bicolor LEDs that can be coded to provide diagnostic information, such as device address during Walk Test.

### **ONYX Intelligent Sensing**

ONYX Intelligent Sensing is a set of software algorithms that provide the NFS2-3030 with industry-leading smoke detection capability. These complex algorithms require many calculations on each reading of each detector, and are made possible by the very high-speed microcomputer used by the NFS2-3030.

**Drift Compensation and Smoothing.** Drift compensation allows the detector to retain its original ability to detect actual smoke, and resist false alarms, even as dirt accumulates. It reduces maintenance requirements by allowing the system to automatically perform the periodic sensitivity measurements required by NFPA 72. Smoothing filters are also provided by software to remove transient noise signals, usually caused by electrical interference.

**Maintenance Warnings.** When the drift compensation performed for a detector reaches a certain level, the performance of the detector may be compromised, and special warnings are given. There are three warning levels: (1) Low Chamber value; (2) Maintenance Alert, indicative of dust accumulation that is near but below the allowed limit; (3) Maintenance Urgent, indicative of dust accumulation above the allowed limit.

**Sensitivity Adjust.** Nine sensitivity levels are provided for alarm detection. These levels can be set manually, or can change automatically between day and night. Nine levels of pre-alarm sensitivity can also be selected, based on predetermined levels of alarm. Pre-alarm operation can be latching or self-restoring, and can be used to activate special control functions.

**Self-Optimizing Pre-Alarm.** Each detector may be set for "Self-Optimizing" pre-alarm. In this special mode, the detector "learns" its normal environment, measuring the peak analog readings over a long period of time, and setting the pre-alarm level just above these normal peaks.

**Cooperating Multi-Detector Sensing.** A patented feature of ONYX Intelligent Sensing is the ability of a smoke sensor to consider readings from nearby sensors in making alarm or pre-alarm decisions. Without statistical sacrifice in the ability to resist false alarms, it allows a sensor to increase its sensitivity to actual smoke by a factor of almost two to one.

## **Field Programming Options**

**Autoprogram** is a timesaving feature. The FACP "learns" what devices are physically connected and automatically loads them in the program with default values for all parameters. Requiring less than one minute to run, this routine allows the user to have almost immediate fire protection in a new installation, even if only a portion of the detectors are installed.

**Keypad Program Edit.** The NFS2-3030, like all NOTIFIER intelligent panels, has the exclusive feature of program creation and editing capability from the front panel keypad, while continuing to provide fire protection. The architecture of the NFS2-3030 software is such that each point entry carries its own program, including control-by-event links to other points. This allows the program to be entered with independent per-point segments, while the NFS2-3030 simultaneously monitors other (already installed) points for alarm conditions.

**VeriFire<sup>®</sup> Tools** is an offline programming and test utility that can greatly reduce installation programming time, and increase confidence in the site-specific software. It is Windows<sup>®</sup> based and provides technologically advanced capabilities to aid the installer. The installer may create the entire program for the NFS2-3030 in the

comfort of the office, test it, store a backup file, then bring it to the site and download from a laptop into the panel.

## **Product Line Information**

- "Configuration Guidelines" on page 4
- "Main System Components" on page 4
- "Networking Options" on page 4
- "Auxiliary Power Supplies and Batteries" on page 4
- "Audio Options" on page 4
- "Compatible Devices, EIA-232 Ports" on page 5
- "Compatible Devices, EIA-485 Ports" on page 5
- "Compatible Intelligent Devices" on page 5
- "Enclosures, Chassis, and Dress Plates" on page 6
- "Backboxes" on page 7
- "Other Options" on page 7

### **CONFIGURATION GUIDELINES**

Stand-alone and network systems require a main display. On single-FACP systems (one NFS2-3030D), the display option is the CPU2-3030D. On network systems (two or more networked fire panel nodes), at least one NCD, NCA-2/C, NCS, or ONYXWorks annunciation device is required. Options listed as follows.

#### MAIN SYSTEM COMPONENTS

**CPU2-3030D:** NFS2-3030 Primary Display. CPU2-3030D ships with keypad/display installed; includes 640-character backlit LCD display, QWERTY programming and control keypad. CPU2-3030 is a central processing unit and requires an AMPS-24(E) power supply. For English ULC applications, use CPU2-3030DC. Non-English versions are available: CPU2-3030D-FR, CPU2-3030D-HE, CPU2-3030D-KO, CPU2-3030D-PO, CPU2-3030D-SC, CPU2-3030D-SP, CPU2-3030D-TC, and CPU2-3030D-TH. For English Marine applications order CPU2-3030D-M; for non-English Marine applications order CPU2-3030D-M and the appropriate KP-KIT-XX. (See DN-60688.)

**CPU2-3030ND:** CPU2-3030 without display. Non-English versions are available: CPU2-3030ND-FR, CPU2-3030ND-HE, CPU2-3030ND-KO, CPU2-3030ND-FO, CPU2-3030ND-SC, CPU2-3030ND-SP, CPU2-3030ND-TC.

**AMPS-24(E):** One required for each NFS2-3030. Addressable power supply and battery charger with two 24 VDC outputs. Addressable by any FlashScan<sup>®</sup> or CLIP mode FACP. Charges 7 to 200 AH batteries. Occupies up to five addresses on an SLC, depending on configuration. Primary input power for panel. *See DN-6883.* 

**LCM-320:** Loop Control Module. Provides one SLC. NFS2-3030 supports up to five LCM-320s and five LEM-320 expanders for a total of ten SLCs. *See DN-6881*.

**LEM-320:** Loop Expander Module. Expands an LCM-320. *See DN-6881.* 

SAMPLE SYSTEM: Four-loop NFS2-3030 with display: CPU2-3030D, DP-DISP, two BMP-1s, CHS-M3, two LCM-320s, two LEM-320s, AMPS-24, SBB-A4, DR-A4, BP2-4, BB-100, batteries.

#### **NETWORKING OPTIONS**

**NCA-2/C:** Network Control Annunciator, 640 characters. An alternate primary display for CPU2-3030 can be provided by the NCA-2, NCS, or ONYXWorks. Using NCA-2 as primary display enables non-English languages. On network systems (two or more networked fire panel nodes), one network display (either NCA-2, NCS, or ONYX-Works) is required for every system. On network systems, the NCA-2 connects (and requires) a standard Network Communication Module or High-Speed Network Communication Module. Mounts in a row of FACP node or in two annunciator positions. Mounting options include the DP-DISP, ADP-4B, or in an annunciator box, such as the ABS-2D. In CAB-4 top-row applications, a DP-DISP and two BMP-1 blank modules are required for mounting. Order NCA-2C for ULC applications. Non-English versions are available: NCA-2-FR, NCA-2**NCD:** Network control display, with a high-definition 10" touch screen. As part of a standalone NFS2-3030 system, the NCD can serve as Primary Display for the panel, to provide control and status capabilities on displayless nodes. On network systems, the NCD connects to (and requires) a standard Network Communication Module or High-Speed Network Communication Module. Mounting options include the ABS-TD for standalone applications. In the CAB-4 series the NCD can be mounted in the top row with a DP-GDIS1 or lower rows using a DP-GDIS2. *See DN-60974.* 

**NCM-W, NCM-F:** Standard Network Communications Modules. Wire and multi-mode fiber versions available. *See DN-6861*.

HS-NCM-W(-2), HS-NCM-MF, HS-NCM-SF, HS-NCM-WMF(-2), HS-NCM-WSF(-2), HS-NCM-MFSF: High-speed Network Communications Modules that can connect to two nodes. Wire, single-mode fiber, multi-mode fiber, and media conversion models are available. *See DN-60454*.

**RPT-W, RPT-F, RPT-WF:** Standard-network repeater board with wire connection (RPT-W), multi-mode fiber connection (RPT-F), or allowing a change in media type between wire and fiber (RPT-WF). Not used with high-speed networks. *See DN-6971.* 

**ONYXWorks:** UL/ULC-listed graphics PC workstation, ONYXWorks GUI software, and computer hardware. *See DN-7048 for specific part numbers.* 

NFN-GW-EM-3: NFN Gateway, embedded. (Replaces NFN-GW-EM.) See DN-60499.

NWS-3: NOTI•FIRE•NET™ Web Server. See DN-6928.

CAP-GW: Common Alerting Protocol Gateway. See DN-60756.

VESDA-HLI-GW: VESDAnet high-level interface gateway. See DN-60753.

**LEDSIGN-GW:** UL-listed sign gateway. Interfaces with classic and high-speed NOTI•FIRE•NET networks through the NFN Gateway. *See DN-60679.* 

OAX2-24V: UL-listed LED sign, used with LEDSIGN-GW. See DN-60679.

#### **AUXILIARY POWER SUPPLIES AND BATTERIES**

**APS2-6R:** Auxiliary Power Supply. Provides up to 6.0 amperes of power for peripheral devices. Includes battery input and transfer relay, and overcurrent protection. Mounts on two of four positions on a CHS-4L or CHS-4 chassis. *See DN-5952*.

ACPS-610: 6.0 A or 10.0 A addressable charging power supply. *See DN-60244.* 

FCPS-24S6/-24S8: Remote 6 A and 8 A power supplies with battery charger. *See DN-6927.* 

**BAT Series:** Batteries. AMPS-24 uses two 12 volt, 7 to 200 AH batteries. *See DN-6933.* 

#### AUDIO OPTIONS

**NOTE:** See "Enclosures, Chassis, and Dress Plates" on page 6 for mounting hardware.

**DVC-EM:** Digital Voice Command, digital audio processor with message storage for up to 32 minutes of standard quality (4 minutes at high quality) digital audio. *See DN-7045.* 

**DVC-RPU:** Digital Voice Command Remote Paging Unit for use with DVC-EM. Includes the keypad/display. *See DN-60726.* 

**DS-DB**: Digital Series Distribution Board, provides bulk amplification capabilities to the DVC-EM while retaining digital audio distribution capabilities. Can be configured with up to four DS-AMPs, supplying high-level risers spread throughout an installation. *See DN-60565*.

**DVC-KD:** DVC-EM keypad for local annunciation and controls; status LEDs and 24 user-programmable buttons. *See DN-7045*.

**DS-AMP/E**: 125W, 25 VRMS, or 100W, 70VRMS. 70VRMS requires DS-XF70V step-up transformer. Digital Series Amplifier, part of the DS-DB system. *See DN-60663.* 

**DS-RFM, DS-FM, DS-SFM:** Fiber conversion modules for DVC-EM, DS-DB distribution board, and DAA2/DAX Series amplifiers. *See DN-60633.* 

**DAA2-5025(E):** 50W, 25 Vrms Digital Audio Amplifier assembly with power supply; includes chassis. *See DN-60556.* 

**DAA2-5070(E):** 50W, 70.7 Vrms Digital Audio Amplifier assembly with power supply; includes chassis. *See DN-60556.* 

**DAA2-7525(E):** 75W, 25 Vrms digital audio amplifier assembly with power supply; includes chassis. *See DN-60556.* 

**DAX-3525(E):** 35W, 25 Vrms Digital Audio Amplifier assembly with power supply, includes chassis. *See DN-60561*.

**DAX-3570(E):** 35W, 70.7 Vrms Digital Audio Amplifier assembly with power supply, includes chassis. *See DN-60561*.

**DAX-5025(E):** 50W, 25 Vrms Digital Audio Amplifier assembly with power supply, includes chassis. *See DN-60561.* 

**DAX-5070(E):** 50W, 70.7 Vrms Digital Audio Amplifier assembly with power supply, includes chassis. *See DN-60561.* 

**TELH-1:** Firefighter's Telephone Handset for use with the DVC-EM when mounted in the CA-2 chassis. *See DN-7045.* 

**CMIC-1:** Microphone used with DVC/DVC-EM. Included with CA-2 chassis assembly. *See DN-7045.* 

**RM-1/RM-1SA:** Remote microphone assemblies, mount on ADP-4 (RM-1) dress panel or CAB-RM/-RMR (RM-1SA) stand-alone cabinets. *See DN-6728.* 

**AA-30:** Audio Amplifier, 30 watts, 25 Vrms. Includes amplifier and audio input supervision, backup input, and automatic switchover, power supply, cables. *See DN-3224.* 

**AA-120/AA-100:** Audio Amplifier. AA-120 is 120 watts, 25 Vrms. AA-100 is 100 watts, 70.7 Vrms. The amplifier contains an integral chassis for mounting to a CAB-B4, -C4, or -D4 backbox (consumes one row). Includes audio input and amplified output supervision, backup input, and automatic switchover to backup tone. *See DN-3224*.

**DAA Series Digital Audio Amplifiers**: Legacy DAA Series amplifiers are compatible with DVC systems running SR4.0. For specific information on DAA-50 series amplifiers, refer to DN-7046. For information on DAA-7525 Series, refer to DN-60257.

#### COMPATIBLE DEVICES, EIA-232 PORTS

PRN-7: 80-column printer. See DN-60897

VS4095/5: Printer, 40-column, 24 V. Order from Keltron, Inc. See DN-3260.

**DPI-232:** Direct Panel Interface, specialized modem for extending serial data links to remotely located FACPs and/or peripherals. *See DN-6870.* 

#### **COMPATIBLE DEVICES, EIA-485 PORTS**

**ACM-24AT:** ONYX<sup>®</sup> Series ACS annunciator – up to 24 points, expandable to 96 of annunciation with Alarm or Active LED, Trouble LED, and switch per circuit. Active/Alarm LEDs can be programmed (by powered-up switch selection) by point to be red, green, or yellow; the Trouble LED is always yellow. *See DN-6862.* 

**AEM-24AT:** Same LED and switch capabilities as ACM-24AT; expands the ACM-24AT to 48, 72, or 96 points. *See DN-6862*.

**ACM-48A:** ONYX<sup>®</sup> Series ACS annunciator – 48 points, expandable to 96 of annunciation with Alarm or Active LED per circuit. Active/ Alarm LEDs can be programmed (by powered-up switch selection) in groups of 24 to be red, green, or yellow. Expandable to 96 points with one AEM-48A. *See DN-6862.* 

**AEM-48A:** Same LED capabilities as ACM-48A; expands the ACM-48A to 96 points. *See DN-6862*.

**ACM-8R:** Remote Relay Module with eight Form-C contacts. Can be located up to 6,000 ft. (1828.8 m) from panel on four wires. *See DN-3558.* 

**LCD-160:** Liquid Crystal Display annunciator, 160-character backlit. Can store character sets for multiple languages. Order LCD-160C for ULC applications. *See DN-6940.* 

LCD2-80: Terminal and ACS mode. 80-character, backlit LCD display. Mounts up to 6,000 ft. (1828.8 m) from panel. Up to 32 per FACP. *See LCD2-80 (DN-60548)*.

SCS Series: Smoke control station; eight (expandable to 16) circuits. See DN-4818.

**TM-4:** Transmitter Module. Includes three reverse-polarity circuits and one municipal box circuit. Mounts in panel module position (as in single-address mode applications) or in CHS-M3 position. *See DN-6860.* 

**UDACT-2:** Universal Digital Alarm Communicator Transmitter, 636 channel. *See DN-60686.* 

**UZC-256:** Programmable Universal Zone Coder provides positive non-interfering successive zone coding. Microprocessor-controlled, field-programmable from IBM<sup>®</sup>-compatible PCs (*requires optional programming kit*). Mounts on a CHS-4 series chassis within NFS2-3030.

#### **COMPATIBLE INTELLIGENT DEVICES**

NOTE: "A" suffix indicates ULC-Listed model.

**FWSG(A) Wireless SWIFT Gateway:** Addressable gateway supports wireless SLC devices. Order FWSGA for ULC applications. *See DN-60820.* 

**FCO-951/-IV** FlashScan, Addressable intelligent multi-criteria smoke sensors, photo, carbon monoxide, fixed temperature heat detector and infra-red (IR). ULC: FCO-951A/-IV

**FPC-951**. FlashScan, Combined photoelectric and carbon monoxide sensor. ULC: FPC-951A.

**FSCO-951**. FlashScan, Addressable carbon monoxide sensor. ULC: FSCO-951A.

**FPTI-951, FPTI-951-IV:** Addressable intelligent multi-criteria photoelectric, thermal and IR sensors. ULC: FPTI-951A, FPTI-951A-IV.

**FS-OSI-RI:** Addressable intelligent single-ended beam smoke detector. ULC: FS-OSI-RIA.

**FSP-951:** White, low-profile intelligent photoelectric sensor, FlashScan only. ULC: FSP-951A.

**FSP-951-IV:** Ivory, low-profile intelligent photoelectric sensor. ULC: FSP-951A-IV

**FSP-951T:** White, same as FSP-951 but includes a built-in 135°F (57°C) fixed-temperature thermal device. FlashScan only. ULC: FSP-951TA.

**FSP-951T-IV:** Ivory, same as FSP-951T but includes a built-in 135°F (57°C) fixed-temperature thermal device. ULC: FSP-951TA-IV.

**FSP-951R:** White, low-profile intelligent photoelectric sensor, remote test capable. For use with DNR/DNRW. FlashScan only. ULC: FSP-95RA

**FSP-951R-IV**: Ivory, low-profile intelligent photoelectric sensor, remote test capable. FlashScan only. ULC: FSP-95RA-IV, for use with DNRA.

**FST-951:** White, low-profile intelligent 135°F fixed thermal sensor, FlashScan only. Must be mounted to one of the bases listed below. ULC: FST-951A. *See DN-60975.* 

**FST-951-IV:** Ivory, low-profile intelligent 135°F fixed thermal sensor, FlashScan and CLIP. Must be mounted to one of the bases listed below. ULC: FST-951A-IV.

**FST-951R:** White, low-profile intelligent rate-of-rise thermal sensor, FlashScan only. Must be mounted to one of the bases listed below. ULC: FST-951A **FSP-951R-IV**: Ivory, low-profile intelligent photoelectric sensor, remote test capable. FlashScan only. ULC: FSP-95RA-IV, for use with DNRA.

**FST-951H:** White, low-profile intelligent 190°F fixed thermal sensor, FlashScan only. Must be mounted to one of the bases listed below. ULC: FST-951HA.

**FST-951H-IV:** Ivory, low-profile intelligent 190°F thermal sensor, FlashScan and CLIP. Must be mounted to one of the bases listed below. ULC: FST-951HA-IV.

**FSV-951, FSV-951R:**White, intelligent high-sensitivity photoelectric smoke detector. ULC: FSV-951A, FSV-951RA

**FSV-951-IV**, **FSV-951R-IV**Ivory, intelligent high-sensitivity photoelectric smoke detector. ULC: FSV-951A-IV, FSV-951RA-IV.

VEP-A00-P-NTF: Intelligent aspiration smoke detector with LED display, 4 pipes, covers up to 21,520 square feet. UL/ULC. See DN-61029. UL/ULC Listed.

VEP-A10-P-NTF: Intelligent aspiration smoke detector with LED and LCD display, 4 pipes, covers up to 21,520 square feet. UL/ULC. See DN-61029. UL/ULC Listed.

VEP-A00-1P-NTF: Intelligent aspiration smoke detector with LED display, single pipe, covers up to 10,760 square feet. UL/ULC. See DN-61029. UL/ULC Listed.

VEU-A00-NTF: Intelligent aspiration smoke detector with LED display, 4 pipes, covers up to 69,965 square feet. UL/ULC. See DN-61034. UL/ULC Listed.

VEU-A10-NTF: Intelligent aspiration smoke detector with LED and LCD display, 4 pipes, covers up to 69,965 square feet. UL/ULC. See DN-61034. UL/ULC Listed.

VEA-040-A00-NTF: Intelligent aspiration with LED display, 40 pointaddressable detection points. Covers 36,000 square feet. UL/ULC. See DN-61036. UL/ULC Listed.

VEA-040-A10-NTF: Intelligent aspiration with LED and LCD display, 40 point-addressable detection points. Covers 36,000 square feet. UL/ULC. See DN-61036. UL/ULC Listed.

**VES-A00-P-NTF-UL:** Intelligent scanning aspiration detector with LEDs. *See DN-62040.* UL 268 7th edition.

**VES-A10-P-NTF-UL:** Intelligent scanning aspiration detector with 3.5" display. *See DN-62040.* UL 268 7th edition.

**DNR:** InnovairFlex low-flow non-relay duct-detector housing. ULC: DNRA. (Order FSP-951R(A) separately.) See DN-60429.

**DNRW:** Same as above with NEMA-4 rating, watertight. *See* DN-60429.

**B224RB-WH:** White, low-profile relay base. *See DN-60054.* ULC: B224RBA-WH.

**B224RB-IV:** Ivory, plug-in System Sensor relay base. ULC: B224RBA-IV.

**B224BI-WH:** White, isolator base for low-profile detectors. *See DN-60054*. ULC: B224BIA-WH.

B224BI-IV: Ivory isolator detector base. ULC: B224BIA-IV.

**B300-6:** White, standard flanged low-profile mounting base. (For 10-pack order B300-6-BP.) ULC: B300A-6.

**B300-6-IV:** Ivory, standard flanged low-profile mounting base. ULC: B300A-6-IV.

**B501-WHITE:** European-style, 4" (10.16 cm) base. *See DN-60054.* (For 10-pack order B501-WHITE-BP.) UL/ULC listed.

**B501-BL:** Black, 4" standard European flangeless mounting base. UL/ULC listed.

**B501-IV:** Ivory color, 4" standard European flangeless mounting base. UL/ULC listed.

**B200S-WH:** White, intelligent programmable sounder base, capable of producing a variety of tone patterns including ANSI Temporal 3. Compatible with synchronization protocol. See DN-60054. ULC: B200SA-WH.

**B200S-IV:** Ivory intelligent, programmable sounder base. ULC: B200SA-IV.

**B200SCOA-WH:** White intelligent, programmable sounder base in English/French (required in Canada for ULC applications with CO detectors. Based on B200SA. ULC listed.

**B200SCOA-IV:** Ivory intelligent, programmable sounder base in English/French (required in Canada for ULC applications with CO detectors. Based on B200SA. ULC listed.

**B200S-LF-WH:** White, low-frequency version of B200S. See DN-60054.

B200S-LF-IV: Ivory, low-frequency version of B200S.

**B200SR-WH:** White intelligent programmable sounder base, Temporal 3 or Continuous tone. For retrofit installations replacing B501BH series bases. *See DN-60054*. ULC: B200SRA-WH.

**B200SR-IV:** Ivory intelligent programmable sounder base, Temporal 3 or Continuous tone. For retrofit installations replacing B501BH series bases. ULC: B200SRA-IV.

**B200SR-LF-WH**: White, low-frequency version of B200SR. *See DN-60054.* 

B200SR-LF-IV: Ivory, low-frequency version of B200SR.

FMM-1(A): FlashScan monitor module. See DN-6720.

FDM-1(A): FlashScan dual monitor module. See DN-6720.

FZM-1(A): FlashScan two-wire detector monitor module. See DN-6720.

FMM-101(A): FlashScan miniature monitor module. See DN-6720.

FMM-4-20: FlashScan 4-20 mA protocol monitor module. See DN-60411.

**FTM-1(A):** Firephone Telephone Module connects a remote firefighter telephone to a centralized telephone console. Reports status to panel. Wiring to jacks and handsets is supervised. *See DN-6989.* 

FCM-1(A): FlashScan control module. See DN-6724.

FCM-1-REL(A): FlashScan releasing control module. See DN-60390.

FRM-1(A): FlashScan relay module. See DN-6724.

FDRM-1(A): FlashScan dual monitor/dual relay module. See DN-60709.

NBG-12LX: Manual pull station, addressable. See DN-6726.

**N-MPS series:** Manual pull stations, addressable and conventional. ULC-listed; for use in Canada only. *See DN-5497 and DN-60629.* **ISO-X(A):** Isolator module. *See DN-2243.* 

ISO-6(A): Six fault isolator module. See DN-60844.

**XP6-C(A):** FlashScan six-circuit supervised control module. *See DN-6924.* 

**XP6-MA(A):** FlashScan six-zone interface module; connects intelligent alarm system to two-wire conventional detection zone. *See DN-6925.* 

**XP6-R(A):** FlashScan six-relay (Form-C) control module. *See DN-6926.* 

XP10-M(A): FlashScan ten-input monitor module. See DN-6923.

#### ENCLOSURES, CHASSIS, AND DRESS PLATES

**CAB-4 Series Enclosure:** NFS2-3030 mounts in a standard CAB-4 Series enclosure (available in four sizes, "A" through "D"). Backbox and door ordered separately; requires BP2-4 battery plate. A trim ring option is available for semi-flush mounting. *See DN-6857*.

**CAB-5 Series Enclosure:** NFS2-3030 can mount in CAB-5 Series enclosures designed for INSPIRE panels, using CHS-ADP adapter plate. See *DN-62113 for CAB-5 options.* 

**EQ Series Cabinets:** EQ series cabinets will house amplifiers, power supplies, battery chargers and control modules. EQ cabinets are available in three sizes, "B" through "D". *See DN-60229*.

**CAB-BM Marine System:** Protects equipment in shipboard and waterfront applications. Order CPU2-3030D-M; for non-English marine applications order CPU2-3030D and appropriate KP-KIT-XX. Also order **BB-MB** for systems using 100 AH batteries. For a full list of required and optional equipment, see DN-60688.

**CHS-M3:** Mounting chassis for CPU2-3030. One required for each CPU2-3030D/3030ND.

**DP-DISP:** Dress panel for top row in cabinet with CPU2-3030D installed.

**DP-1B:** Blank dress panel. Provides dead-front panel for unused tiers; covers DAA2/DAX series or AA-series amplifier. *See DN-7046.* 

**CHS-BH1:** Battery chassis; holds two 12.0 AH batteries. Mounts on the left side of DAA2 chassis. *See DN-7046.* 

**CA-1:** Chassis, occupies one tier of a CAB-4 Series enclosure. The left side accommodates one DVC-EM and a DVC-KD (optional); and the right side houses a CMIC-1 microphone and its well (optional). *See DN-7045.* 

**CA-2:** Chassis assembly, occupies two tiers of a CAB-4 Series enclosure. The left side accommodates one DVC-EM mounted on a half-chassis and one NFS2-3030 or NCA-2 mounted on a half-chassis. The right side houses a microphone/handset well. The CA-2 assembly includes CMIC-1 microphone. ADDR Series doors with two-tier visibility are available for use with the CA-2 configuration: ADDR-B4, ADDR-C4, ADDR-D4 (below).

**ADDR-B4\*:** Two-tier-sized door designed for use with the CA-2 chassis configuration. ADDR Series doors are similar to CAB-4 Series "DR" doors, but a clear window space exposes the top two tiers of the CAB-4 enclosure. Use an SBB-B4 backbox with the ADDR-B4. *See DN-7045, DN-6857.* 

**ADDR-C4\*:** Three-tier-sized door designed for use with the CA-2 chassis configuration. ADDR Series doors are similar to CAB-4 Series "DR" doors, but a clear window space exposes the top two tiers of the CAB-4 enclosure. Use an SBB-C4 backbox with the ADDR-C4. *See DN-7045, DN-6857.* 

**ADDR-D4\*:** Four-tier-sized door designed for use with the CA-2 chassis configuration. ADDR Series doors are similar to CAB-4 Series "DR" doors, but a clear window space exposes the top two tiers of the CAB-4 enclosure. Use an SBB-D4 backbox with the ADDR-D4. *See DN-7045, DN-6857.* 

\* Note: Use ADDR-B4/C4/D4 when CA-2 chassis is installed in top two rows with NCA-2 or BP-CA2. Use standard door when CA-2 is not installed in top two rows. For additional configuration information, see the DVC application guide on <u>http://esd.notifier.com</u>.

**DPA-1:** Dress panel, used with the CA-1 chassis when configured with a DVC-EM, DVC-KD, and CMIC-1. *See DN-7045.* 

**DPA-2:** Dress Panel used with the CA-2 chassis assembly.

**DPA-1A4:** Dress panel, used with the CA-1 chassis when the CMIC-1 is not used. Provides mounting options on right two bays for two ACS annunciators, or for blank plates. *See DN-7045.* 

**ADP-4B:** Annunciator dress plate. Mounts in rows 2, 3 or 4 of a CAB-4 series enclosure. Used with ACS series annunciators.

**BMP-1:** Blank module for unused module positions.

**DP-1B:** Blank dress panel. Provides dead-front panel for unused tiers; covers DAA2/DAX series or AA-series amplifier.

BP2-4: Battery plate, required.

**CHS-4L:** Low-profile four-position Chassis. Mounts two AA-30 amplifiers.

CHS-4N: Chassis for mounting up to four APS-6Rs.

**CHS-6:** Chassis used with the XP6 and XP10 Multi-Modules. Mounts up to six modules in any CAB-4 series row.

**NFS-LBB:** Battery Box. The NFS-LBB is used to mount up to two 55 AH batteries. Dimensions: Box: 24" (610 mm) wide x 14" (356 mm) high x 7.75" (197 mm) deep. Door: 24.125" (613 mm) wide x 14.25" (362 mm) high; door adds 0.0625" (approx. 1.6 mm) to depth.

#### BACKBOXES

NOTE: "C" suffix indicates ULC-Listed model.

ABF-1B(C) Annunciator Flush Box

ABF-1DB(C) Annunciator Flush Box with Door. UL/ULC Listed.

ABF-2B Annunciator Flush Box

ABF-2DB(C) Annunciator Flush Box with Door

**ABF-4B** Annunciator Flush Box

ABS-1TB(C) Annunciator Surface Box

ABS-1B(C) Annunciator Surface Box

ABS-2B Annunciator Surface Box

ABS-2D(C) Annunciator Surface Box

ABS-4D(C) Annunciator Surface Box

**BB-100:** Backbox for batteries and power supplies. The BB-100 mounts up to two 100 AH batteries and power supply, if needed.  $30^{"}$  (76.20 cm) wide x 25" (63.50 cm) high x 7.5" (19.05 cm) deep; depth includes door.

**BB-200:** Backbox for batteries and power supplies. Holds up to four 100 AH batteries (200 AH capacity) and power supply. 30" (76.20 cm) wide x 36" (91.44 cm) high x 7.5" (19.05 cm) deep; depth includes door.

**BB-UZC:** Backbox for housing the UZC-256 for applications where the UZC will not fit in panel enclosure. Black; for red, order BB-UZC-R. *See DN-3404*.

**SEISKIT-CAB:** Seismic mounting kit. Required for seismic-certified applications with NFS2-3030 and other equipment in CAB-4 Series Enclosures. Includes battery bracket for two 26 AH batteries.

**SEISKIT-LBB:** Seismic kit for the NFS-LBB. Includes battery bracket for two 55 AH batteries.

#### **OTHER OPTIONS**

**CGW-MB**: CLSS Gateway for Internet/cloud-based communication between the FACP and peripheral devices. *See HON-62034.* 

HON-CGW-MBB: CLSS Gateway, pre-installed in a cabinet. See HON-62034.

411: Slave digital alarm communicator. See DN-6619.

411UDAC: Digital alarm communicator. See DN-6746.

**IPDACT-2, IPDACT Internet Monitoring Module:** Connects to primary and secondary DACT telephone output ports for internet communications over customer-provided Ethernet connection. Requires compatible Teldat VisorALARM Central Station Receiver. Can use DHCP or static IP. *See DN-60408*.

**IPCHSKIT:** IP Communicator Chassis Mounting Kit. For mounting an IPDACT-2/2UD onto the panel chassis or CHS-4 series chassis. Use IPENC for external mounting applications.

**IPSPLT:** Y-adapter option allow connection of both panel dialer outputs to one IPDACT-2/2UD cable input.

**IPENC:** External enclosure for IPDACT, includes IPBRKT mounting bracket; Red; for black, order IPENC-B.

**HWF2V-COM:** LTE Digital Cellular Fire Alarm Communicator and Internet Panel, Verizon LTE / IP. Provides selectable configurable paths: cellular only, IP only, or IP primary with cellular backup. Connects to the primary and secondary ports of a DACT. *See DH-62010.* (For Canadian applications order IPGSM-4GC. *See DH-60771.*)

**HWF2A-COM:** LTE Digital Cellular Fire Alarm Communicator and Internet Panel, AT&T LTE / IP. Provides selectable configurable paths: cellular only, IP only, or IP primary with cellular backup. Connects to the primary and secondary ports of a DACT. (For Canadian applications order IPGSM-4GC. *See DH-60771*.)

**NOTE:** For other options including compatibility with retrofit equipment, refer to the panel's installation manual, the SLC manual, and the Device Compatibility Document.

### SYSTEM CAPACITY

- Intelligent Signaling Line Circuits...........1 expandable to 10
- Intelligent detectors ......159 per loop
- Addressable monitor/control modules ......159 per loop
- Programmable software zones.....over 2000

#### **ELECTRICAL SPECIFICATIONS** Primary Input Power:

- AMPS-24: 110-120 VAC, 50/60 Hz, 4.5 A maximum.
- AMPS-24E: 240 VAC, 50/60 Hz, 2.25 A maximum.

### DC Output:

- Main 24 VDC: Up to 5.0 A
- Aux 24 VDC: Up to 5.0 A
- 5 VDC: Up to 0.15 A.

### Current draw (Standby/Alarm):

- CPU2-3030D board: 0.340 A.
- CPU2-3030ND board: 0.120 A.
- LCM-320: 0.130 A.
- LEM-320: 0.100 A.
- AMPS-24(E)\*: 0.13 A.

(Draws power from secondary power source only.)

**NOTE:** See AMPS-24(E) Manual 51907 for a complete current draw calculation sheet and details of input and output values.

Battery charger range: 7 AH – 200 AH. Use separate cabinet for batteries over 26 AH.

#### Float Rate: 27.6 V.

#### SHIPPING WEIGHT

- CPU2-3030D: 5.95 lb (2.70 kg).
- CPU2-3030ND: 2.90 lb (1.32 kg).

#### TEMPERATURE AND HUMIDITY RANGES

This system meets NFPA requirements for operation at  $0 - 49^{\circ}C/32 - 120^{\circ}F$  and at a relative humidity  $93\% \pm 2\%$  RH (noncondensing) at  $32^{\circ}C \pm 2^{\circ}C$  ( $90^{\circ}F \pm 3^{\circ}F$ ). 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  $15 - 27^{\circ}C/60 - 80^{\circ}F$ .

### 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/ULC Listed: S635.
- Fire Dept. of New York: COA#6211.
- CSFM: 7165-0028:0224 (Commercial).
- FM Approved.
- FM6320 Approved. Class 6320 for Gas Detection.
- City of Chicago.
- City of Denver.
- Singapore Productivity and Standards Board (PSB).
- CCCF listed.
- Fire Services Department (Hong Kong).

**Marine Applications:** Marine approved systems must be configured using components itemized in this document. (See Main System Components, in "Product Line Information.) Specific connections and requirements for those components are described in the installation document, PN 54756. When these requirements are followed, systems are approved by the following agencies:

- US Coast Guard 161.002/55/0 (Standard 46 CFR and 161.002).
- Lloyd's Register 11/600013 (ENV 3 category).
- American Bureau of Shipping (ABS) Type Approval.

NOTE: For information on marine applications, see DN-60688.

#### **S**TANDARDS

The NFS2-3030 complies with the following UL Standards and NFPA 72, International Building Code (IBC), and California Building Code (CBC) Fire Alarm Systems requirements:

- UL 864, 10th edition (Control Units and Accessories for Fire Alarm Systems).
- UL 2610 (Commercial Premises Security Alarm Units and Systems).
- UL 2572 (Mass Notification Systems). (NFS2-3030 version 20 or higher)
- ULC-S527-11 Standard for the Installation of Fire Alarm Systems.
- LOCAL (Automatic, Manual, Waterflow and Sprinkler Supervisory).
- AUXILIARY (Automatic, Manual and Waterflow) (requires TM-4).
- **REMOTE STATION** (Automatic, Manual, Waterflow and Sprinkler Supervisory) (requires TM-4).
- **PROPRIETARY** (Automatic, Manual, Waterflow and Sprinkler Supervisory). *Not applicable for FM.*
- EMERGENCY VOICE/ALARM.
- OT, PSDN (Other Technologies, Packet-switched Data Network).
- IBC 2012, IBC 2009, IBC 2006, IBC 2003, IBC 2000 (Seismic).
- CBC 2007 (Seismic).



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.

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Country of Origin: USA



NOTIFIER

12 Clintonville Road Northford, CT 06472 203.484.7161 www.notifier.com

# **Cerberus PRO Intelligent Voice Communication**

- Powerful, intelligent and user-friendly fire and voice-communication panel
  - Model FV922 is the Cerberus PRO 252-point addressable intelligent voice communication system
  - Model FV924 is the Cerberus PRO 504-point addressable intelligent voice communication system
- Voice systems exceed intelligibility requirements
  - Three channel message player supporting 300 messages, max.
  - 150 Watts amplification per unit
  - Three (3) simultaneous audio signals for each panel
- Communication with Cerberus PRO detection devices
  - Full support of Advanced and Standard line of intelligent detectors
  - Models OOHC941, OOH941 OH921, OP921 and HI921
- Gas Alarm events for CO detection, per NFPA 72
- Networkable fire and voice systems over CAT5 or fiber-optic cables
  - Supports up to 32 fire and voice panels
  - Uses voice-over-IP (VoIP) technology
  - All fire and voice signals sent over the same conductors
- Support of multiple command stations
  - Cerberus DMS Danger Management Station can monitor and control up to 64 Model FV922 / FV924 systems
- ®UL Listed for fire [®UL864] and mass notification [®UL2572] in one (1) fire alarm control panel (FACP)
  - Separate event queues for MNS events
  - MNS events can have higher and lower priority (versus fire events
  - Supports MNS events from devices on the addressable loop
- Supports pre-action, deluge and Sinorix<sup>®</sup> agent release
   Releasing-valve monitoring
  - Sprinkler Supervision

# **Product Overview**

The Cerberus PRO Intelligent Voice Communication from Siemens – Fire Safety is a technologically advanced, addressable fire-with-voice system. Through the use of its unique multiprocessor `Network' design – along with its ability to utilize intelligent detection devices – Cerberus PRO epitomizes a flexible and highly configurable fire-protection system with integrated voice evacuation.

Cerberus PRO voice panels are ideally suited for small and midmarket applications via each panel's capability to provide up to 252 (Model FV922) and 504 (Model FV924) addressable, networkable points.

Each Cerberus PRO fire-protection system with voice capability is easily accessible for operation: push-button soft keys; a backlit LCD screen, and a (4) four-way navigation push button are all located in the upper portion on the panel's front end.

Cerberus PRO IVC panels are @UL 864 9<sup>th</sup> Edition, @UL1711, @UL2017 & @UL2572 Listed; @ULC-S527& @ULC-S559 Listed.



Fire Safety Products

Typical Cerberus® PRO FV922 / FV924 control panel in a 3HU enclosure

# ®UL and ®ULC Listed; FM, CSFM and NYCFD Approved

 Per ®UL464, Model FV922 / FV924 systems meet the requirements for low-frequency signal tone (520 Hz) – as described in the section for `Determination of Low Frequency Signal Format' in the Standard for Audible Signal Appliance – when used with an Amplifier Card or Booster Amplifier in conjunction with Siemens HiFi Speakers/Speaker-Strobes and 'S' Series (ceiling-only) appliances

Used in conjunction with Models FV922 / FV924 is a new, innovative series of audible (sounder) bases. For example, Model ABHW-4B is the first base of its kind to attain agencies' approval for its option to power directly from a signal line circuit (SLC) in a two-wire configuration — when used with Cerberus PRO intelligent detectors.

Designed for sleeping areas, Model ABHW-4S generates a 520 Hz, square-wave audio signal that complies with NFPA 72 Standard, as well as Underwriters' Laboratories applications.

Additionally, the Cerberus PRO Advanced and Standard line of intelligent detectors presents distinctive features and costefficient solutions that offer superior detection found in an array of Siemens system applications.

Characteristics related with the Advanced and Standard line include High Sensitivity with Very Early Warning Fire Detection (VEWFD); Carbon Monoxide (CO) Gas Detection, and seven (7) field-adjustable heat-detection temperature settings.

9821
Intelligent Voice System Overview

SIEMENS





### Typical Cerberus PRO 252 / 504-Point Addressable Intelligent Voice-Communication System

### 252 / 504-point Cerberus PRO fire / voice system

The Cerberus PRO Model FV922 (252-point) / Model FV924 (504-point) intelligent voice-communication system is an addressable control panel designed to meet the protection needs of mid-size buildings.

This advanced fire-protection system with integrated voice evacuation offers features typically required in midsize buildings in a package that is easy to install and competitively priced. Additionally, Models FV922 and FV924 are networkable panels.

A three-height-unit enclosure is used exclusively with Models FV922 and FV924. The following components comprise a complete three-height-unit (3HU) enclosure: •Operating unit (Standard-type or with light-emitting diodes [LEDs])

- Periphery board
- 300W power supply

# **Main System Components**





**Standard Operating Unit** 

**Operating Unit with LEDs** 

## **Operating Interface Unit**

The Operating Interface Unit functions as the operator interface and central microprocessor for the Fire Terminal (Model FT924) and Cerberus PRO FACPs (Models FV922 and FV924).

Model FCM2018-U3 — the Standard Operating Unit, or Model FCM2019-U3 – the Operating Interface Unit with LEDs — each provides multi-use capabilities:

- Easily 'Acknowledge' events
- Quickly control the notification-appliance circuits (NACs) of the corresponding FACP
- Permit a manual reset of the respective system

Detailed information about the nature and location of the events are displayed via a 2''-x-4-3/4'' (5.1 cm. -x-12.1 cm.), backlit liquid-crystal-display (LCD) screen.

Each Operating Interface Unit contains the site-specific program configuration created in the custom-configuration software tool, `Cerberus Works'.

The controller in each interface module provides all system logic and supervision. Additionally, the Operating Interface Units allow for connection to the Remote Peripheral Module (Model FCA2018-U1) and / or the Remote Terminal Displays (Models FT2014-U3 / R3; FT2015-U3 / R3).

Note: For applications in Canada that require the use of a Cerberus PRO operating unit <u>with LEDs</u>, Model FCM2035-U3 must be ordered.





FCI2016-U1 [Periphery board for 252-point Cerberus PRO voice system]

[Periphery board for 504-point Cerberus PRO voice system]

## **Periphery Boards**

The periphery boards (Models FCI2016-U1 and FCI2017-U1) are integral components for operating the Cerberus PRO panels (Models FV922 and FV924). Each module operates and monitors input-device identity; as well as controls the signaling-line circuits that communicate with smoke detectors and other field devices (i.e. – C-NET).

Each periphery board is equipped with two (2) programmable 'Class B' (Style Y) or 'one (1) Class A' (Style Z) NAC, providing 24VDC, nominal at a 5A per circuit maximum of audible / visual notification appliances.

## Periphery Boards – (continued)

The periphery boards mount directly on the enclosure back boxes of the Model FV922 and Model FV924 Cerberus PRO panels. Models FCI2016-U1/ FCI2017-U1 provide two (2) parallel auxiliary powered, short-circuit-protected connections (regulated 24VDC, 1.5A max) that supply power to external devices or modules.



**300-Watt Power Supply** [Model FP2012-U1]

### **Power Supply Module**

The 300-Watt power supply (Model FP2012-U1) provides primary, regulated (24VDC, nominal) power for normal operation to the Cerberus PRO 252 / 504-point addressable systems. Filtered and regulated, Model FP2012-U1 is rated 11.5 Amps at 24VDC, nominal.

Each 300-Watt power supply incorporates two (2) 6.3A replaceable, non-resettable slow-blow fuses on the primary input and includes a built-in AC-line filter for surge and noise suppression. Model FP2012-U1 mounts into the Model FHB2005-U1 / R1 backbox.

For applications requiring greater than 300W of power, the Model FP2013-U1 power supply can optionally power a Model FV922 or FV924 voice system.

Model FP2013-U1 consists of two (2) power supply units and one (1) interconnection cable, in order to balance the power from Model FP2013-U1. Consequently, this power-supply configuration can provide up to 600W at 24VDC. Mounting for Model FP2013-U1 is provided on the back surface inside each FACP's 3HU backbox, Model FHB2005-U1.

# **Voice System Components**



Voice System Card Cage [Model VCA2002-A1]

### Voice System Card Cage

The voice-system card cage (Model VCA2002-A1) is used to support the mounting and field wiring for the following cards used on a Model FV922 / FV924 panel:

- the Voice CPU Card, Model VCC2001-A1 [supports one (1) CPU card]
- the Voice I/O Card, Model VCC2002-A1 [supports one (1) I/O Card]
- 25V / 70V Voice Amplifier Card, Model VCI2001-U1 [supports one (1) to four (4) 50W amplifier cards]

Up to six (6) card-cage slots are configured for use.

# Voice System Components - (continued)



Voice System CPU Card [Model VCC2001-A1]

## Voice System CPU Card

Model VCC2001-A1 is a central-processing unit (CPU) card that controls and monitors all modules and functions for Cerberus PRO IVC FACPs. Model VCC2001-A1 mounts in a Model VCA2002-A1 card cage (positioned in the 2<sup>nd</sup> slot from the left), and works with the Voice I/O card (Model VCC2002-A1) to control the voice system.



In/ Out Voice System CPU Card [Model VCC2002-A1]

# In / Out Voice System Card

Model VCC2002-A1 is the Input / Output card for the Cerberus PRO IVC system. Model VCC2002-A1 mounts in the Voice Card Cage (Model VCA2002-A1) — 1 <sup>st</sup> slot on the left, and works with the Voice CPU Card (Model VCC2001-A1) to control a Cerberus PRO intelligent voice-communication system.

Two (2) local audio inputs (for microphones or external low-level audio signals), and one (1) low-level audio output (with all audio-signal wiring connected to the card cage) are supported by the In/Out Voice System CPU card.



Voice Amplifier Card, 25V / 70V [Model VCI2001-U1]

# Voice Amplifier (25 / 70 V) Card

Used in `real time', emergency communication, the 50W amplifier card (Model VCI2001-U1) provides AC power between a Model FV922 / FV924 panel and a site's speaker system. Each 50W amplifier card mounts inside the Model VCA2002-A1 card cage – with all speaker-zone wiring connected to Model VCA2002-A1 card cage.

Up to four (4) Model VCI2001-U1 amplifiers are supported in a 3to1 backup, or 1-to-1 backup schematic on a single Cerberus PRO intelligent voice-communication system: configured as one (1), two (2) or three (3) main amplifiers, and one (1) or two (2) optional backup amplifiers. Amplifiers are mounted in the Model VCA2002-A1 card cage. Up to four (4) Model VCI2001-U1 amplifiers are supported in a 3-to1 backup, or 1-to-1 backup schematic on a single Cerberus PRO intelligent voice-communication system: configured as one (1), two (2) or three (3) main amplifiers, and one (1) or two (2) optional backup amplifiers. Amplifiers are mounted in the Model VCA2002-A1 card cage.



MoNET Connection Module [Model FCA2031-A1]

## **MoNET Connection Module**

The MoNET connection module is used for communication between a Model FCM20-series operating unit and a Voice CPU card (Model VCC2001-A1) in each Cerberus PRO IVC panel. MoNET (Model FCA2031-A1) can additionally provide insystem integration between an operating unit and a Modular Ethernet Switch (Model FN2012-A1 in each Cerberus PRO (<u>non</u>-voice) FACP. Model FCA2031-A1 mounts in Position #1 on a Cerberus PRO Model FCM20-series operating unit.



[Model VR2005-U3 / R3]

## **Remote Microphone Kit**

The Remote Microphone Kit (Model VR2005-U3/R3) is a package of necessary components used for an optional remote voice station. Each kit includes one (1) 1HU back box with one (1) outer door; one (1) inner door; one (1) terminal board; one (1) microphone module; one (1) switch module, and two (2) blank plates. Kits are available in **black** or red. Up to four (4) remote voice stations are allowed per Cerberus PRO IVC panel. See: **Details for Ordering** section on Page 12 for the complete rundown of parts included in each Remote Microphone Kit.



Microphone Option Module [Model VTO2004-U3]

## **Microphone Option Module**

The Microphone Option Module (Model VTO2004-U3) is used to provide live, non-pre-recorded voice communication on a Cerberus PRO intelligent voice-communication panel.

Model VTO2004-U3 can serve either as a main microphone installed in the main-system enclosure, or as a remote microphone in a remote enclosure. Up to two (2) Model VTO2004-U3 microphones are supported for each Model FV922 / FV924 FACP.

# Voice System Components - (continued)



Switch Option Module, (24 switches) [Model VTO2001-U3]

### Switch Option Module

The Switch Option Module (Model VTO2001-U3) is a series of front-end, illuminated and programmable pushbuttons primarily mounted in the middle inner door of each Cerberus PRO intelligent voice-communication FACP.

Each Model VTO2001-U3 module has 24 group-switches, thus totaling 48 LEDs, and consists of up to 96 multi-color LED-status indicators:

- RED / GREEN / BLUE variant in the upper portion {for activation}
- one (1) YELLOW-only LED {for fault or disable}

Each LED switch-group is assigned specific functionality during the configuration process. Additionally, a pushbutton {for each affected zone} will illuminate to acknowledge the command has been received at the Voice System CPU Card, Model VCC2001-A1.

If no microphone is used, up to eight (8) Model VTO2001-U3 switch-option modules can be used in a given three-eight-unit (3HU) enclosure (Model FHD2007-U3/R3) –

- four (4) modules in the middle inner-door, Model FHD2004-U1
- four (4) additional Model VTO2001-U3 modules in the bottom inner-door, Model FHD2004-U1





Model FH2016-U1/R1 [Booster Amp Enclosure]

**100W Booster Amplifier** [Model EBA2004-A1]

## 100W Booster Amplifier (and Enclosure)

As an option, the Model EBA2004-A1 Booster Amplifier is a main board that allows for expansion of speaker zones for additional power to a Cerberus PRO intelligent voice-communication system.

Model EBA2004-A1 consists of a single board with two (2) 50W amplifiers, one (1) built-in battery charger, and removable terminal blocks for all field wiring. Model FH2016-U1/R1 is the enclosure used to house the 100W Booster Amplifier.

Approximate size: 23.6" (60 cm.) high; 18.1" (46 cm.) wide, and 5.1" (13 cm.) deep.



Battery Fixing Bracket [Model FHA2044-U1]

### **Battery Fixing Bracket**

The battery fixing bracket (Model FHA2044-U1) is specifically used in all Cerberus PRO IVC system configurations — housing and securing 33AH system battery sets, which provide auxiliary system power. Model FHA2044-U1 bracket complies with seismic certification.



### DIN rail kit

The optional DIN Rail Kit (Model FHA2031-U1), which also functions in intelligent voice- communication systems, mounts in the backbox of a 3HU enclosure, and provides connection between internal-system wiring and field wiring.



Model FV922 / FV924 [Typical Three-Height-Unit (3HU) enclosure]

## **Three-Height-Unit Enclosure**

The three-height-unit (3HU) enclosure is the largest housing available for Cerberus PRO panels, and is used exclusively for voice-system applications.

Orderable in either red or **black**, the following components comprise a complete three-height-unit enclosure:

- One (1) backbox  $\rightarrow$  (Model FHB2005-U1 / R1)
- Two (2) inner doors → (Model FHD2004-U1)
- Two (2) clear lenses → (Model FHD2006-U1)
- One (1) outer door  $\rightarrow$  (Model FHD2007-U3 / R3)
- One (1) blank plate  $\rightarrow$  (Model FHD2009-U1 / R1)

<u>Notes</u>: An enclosure cover (Model FHA2041-R1) is used to protect the ventilation holes found at the top of redonly, 3HU backboxes (Model FHB2005-R1).

> Model FHA2041-**R**1 prevents condensation from entering the FACP, and consequently meets New York City code for uncovered ventilation holes on firesystems enclosures.

Approximate size: 42" (106.7 cm.) high; 21" (53.3 cm.) wide,

and 7.75" (19.7 cm.) deep.



Model FHB2005-U1/R1 [Three-Height-Unit (3HU) Backbox]

# Voice System Components – (continued) Three-Height-Unit Backbox

The three-height-unit backbox is part of the Cerberus PRO intelligent voice-communication system hardware for use with 3HU system enclosures. Specifically, each backbox is used to fasten with a 3HU outer door.

Each 3HU backbox can be ordered in **black** (Model FHB2005-U1 or red (Model FHB2005-R1).



Approximate size: 42" (106.7 cm.) high; 21" (53.3 cm.) wide, and 7.75" (19.7 cm.) deep.

### S-Series License Keys

[S1, Model FCA2033-A1 S2, Model FCA2034-A1 S3, Model FCA2035-A1]

### S-Series License Keys

The S1 license key (Model FCA2033-A1) allows for virtual monitoring and control between a Cerberus PRO IVC panel and a personal computer. The S2 license key (Model FCA2034-A1) is a BACnet output, and is used for monitoring-only purposes by a 3<sup>rd</sup>-party system for life-safety objects. The S3 license key (Model FCA2035-A1) is a combination license key that allows for virtual monitoring and control, as well as for distribution of BACnet (monitoring-only) communications.



Model FHD2007-U3/R3 [Three-Height-Unit (3HU) Outer Door]

## **Three-Height-Unit Outer Door**

For each Model FV922 / FV924 FACP, one (1) red or **black** backbox supports one (1) equivalent red or **black** outer door. Each three-height-unit outer door contains three (3) horizontal openings in order for easy access to the system operating unit; voice system card cage, and battery brackets.

## **Clear Lens**

The window (Model FHD2006-U1) is a rugged Lexan<sup>®</sup> lens that can be mounted to any of the rectangular cut-outs found on each Model FHD2007-series outer door.

Approximate size:	10.25" (26.04 cm.)	
	high and 17"	Lexan Clear Lens
	(43.2 cm.) wide	[Model FHD2006-U1]

# **Three-Height-Unit Blank Plate**

Instead of using a Lexan clear lens, an installer has the option of using a 3HU blank plate, Model FHD2009-U1, which covers empty spaces in a given row of a 3HU enclosure, (in place of any redundant operator



interface switch and / or microphone option module).

# Three-Height-Unit Enclosure Trim Kit

This optional trim kit is used to provide a tidy appearance of a 3HU enclosure when used in flush-mount applications.

Each trim kit can be purchased in either red (Model FHA2043-R1) or **black** (Model FHA2043-U1), and comes unassembled in four (4) slats.



## **Inner Doors**

There are two (2) inner doors available for Cerberus PRO system enclosures. The inner door, which is available exclusively in **black**, specifically stores the Standard Operating Unit, or the Operating Unit with LEDs.

Additionally, the Model FHD2004-U1 inner door supports one (1) system operating unit, or one (1) to four (4) LED option modules. When less than four (4) LED option modules are used, the blank-option module (Model FCM2022-U3) covers unused module spaces in the inner door.

# Approximate size: 13.25" (33.7 cm.) high and 20" (50.8 cm.) wide

<u>Note</u>: Model FHD2005-U1 is a solid-**black**, inner-door blank plate used to provide dead-front protection.



Modular Ethernet Switch [Model FN2012-A1]

## **Modular Ethernet Switch**

The Modular Ethernet Switch (Model FN2012-A1) serves as a network connector between Models FC922, FC924 and FT924 fire-only Cerberus PRO FACPs and with Model FV922 / FV924 Cerberus PRO intelligent voice-communication systems.

Panel-to-panel communication is transmitted via CAT5, singlemode fiber or multi-mode fiber. One (1) or two (2) Ethernet modules are supported by each Modular Ethernet Switch, which serves as a connector to:

- Model VN2001-A1 for CAT5 connection (or better)
- Model VN2002-A1 for multi-mode fiber connection
  - Model VN2003-A1 for single-mode fiber connection

Model FN2012-A1 mounts in the backbox of one-height-unit or two-height-unit enclosures, in place of a standard fiber module.

# Voice System Components - (continued)



Electric Ethernet Module [Model VN2001-A1]

### **Electric Ethernet Module**

The Electric Ethernet Module (Model VN2001-A1) serves as a network connector between Siemens fire-only FACPs and with intelligent voice-communication systems.

Model VN2001-A1 mounts in either or both of:

- the Voice CPU Card, Model VCC2001-U1 [used in voice systems]
- the Modular Ethernet Switch, Model FN2012-A1 [for use in FACP-only connections]



Single-Mode Ethernet Module [Model VN2003-A1]

### Single-Mode Ethernet Module

The Single-Mode Ethernet Module (Model VN2003-A1) serves as a network connector between Siemens fire-only FACPs and with intelligent voice-communication panels, via single-mode fiber-optic cables.

Model VN2003-A1 mounts in either or both of:

- the Voice CPU Card, Model VCC2001 [used in voice systems]
- the Modular Ethernet Switch, Model FN2012-A1 [for use in FACP-only connections]



Multi-Mode Ethernet Module [Model VN2002-A1]

### Multi-Mode Ethernet Module

The Multi-Mode Ethernet Module (Model VN2002-A1) serves as a network connector between Siemens fire-only FACPs and with intelligent voice-communication panels, via multi-mode fiber-optic cables.

Model VN2002-A1 mounts in

either or both of the following:

- the Voice CPU Card, Model VCC2001-U1 [used in voice systems]
- the Modular Ethernet Switch, Model FN2012-A1 [for use in FACP-only connections]



[Model VCI2003-A1]

### Voice-over-IP Module

The VOIP module (Model VCI2003-A1) is used to convert audio signals between analog and digital Voice-over-IP signals. This module is mounted to a connection point on the voice CPU card (Model VCA2001), and is required for all network voice applications.

For system configurations, the Voice CPU card provides voice-network support to the following:

- a VoIP Module (Model VCI2003-A1) [for Voice-over-IP conversion of audio signals]
- up to four (4) CAT5 connections, via the Electric Ethernet Module, Model VN2001-A1a single-mode (Model VN2003-A1) or a multi-mode (Model VN2002-A1) Ethernet module



Remote ('Class B') Terminal Board (Model VTA2001-A1)

### Remote ('Class B') Terminal Board

The Remote ('Class B') Terminal Board (Model VTA2001-A1) provides system support to the 24-Switch Option Module (Model VTO2001-U3) and the Microphone Option Module (Model VTO2004-A1) when the aforementioned option modules function from a remote enclosure.

Model VTA2001-A1 terminal board, which mounts in a 1HU enclosure, serves as a central station for audio output, system communication and 24VDC power wiring from the Cerberus PRO intelligent voice-communication FACP on its network.

Plug-in connectors for the ribbon cables used on the 24-Switch Option Module (Model VTO2001-U3) and the Microphone Option Module (Model VTO2004-A1) are also included on each 'Class B' board.

### LED Driver and Tabular Annunciators

The LED Annunciator Driver, Model FT2007-U1, is the key component for custom graphic annunciators on all Cerberus PRO addressable fire panels. This optional system module provides outputs for system status as well as zone status. Model FT2007-U1 is supervised via a RS-485 interface. A maximum eight (8) modules are allowed on each RS-485.

The Tabular Annunciators allow system events sent from Cerberus PRO addressable panels to be displayed remotely in real-time. Tabular annunciators are available in either red or **black**. The Model FT2008 series of tabular annunciators has 16 zones, and the Model FT2009 series uses 32 zones.

Up to two (2) LEDs can be used per zone.

# **Cerberus PRO FIRE Components**



C-WEB Network Module [Model FN2001-U1]

### **C-WEB Network Module**

The C-WEB network module (Model FN2001-U1) is used to network up to 32 FACPs and the Fire Terminal (Model FT924), via the C-WEB system bus. The C-WEB network module is plugged into a Standard Operating Unit or an Operating Unit with LEDs. 'Peer-to-peer' networking is supported by the C-WEB module on 252 / 504-point addressable systems, as well as on a Fire Terminal Board (Model FT924).

Model FN2001-U1 connects to system-bus inputs and outputs. The network module has ground-fault monitoring, as well as an integrated degrade-mode function.

Redundant networking is accomplished with one (1) network module [simple loop trouble] per panel. There is electrical isolation between the system bus and the FACP.



Leased-Line / City-Tie Module [Model FCI2020-U1]

### Leased-Line / City-Tie Module

The leased-line / city-tie module (Model FCI2020-U1) is used as an optional module, providing a local-energy output for municipal call-box connection. Model FCI2020-U1 also gives a reverse-polarity output for leased-line connection. Model FCI2020-U1 is installed on the periphery board for Cerberus PRO FACPs, respectively.

When used for connection to a municipal call box, the city-tie function supports *Alarm*-event transmission. When used for leased-line connection, the module supports two (2) leased telephone lines for transmitting *Alarm*, *Trouble* and *Supervisory* events.



Releasing Module [Model XCI2001-U1]

### **Releasing Module**

The releasing module (Model XCI2001-U1) is an optional module that is connected to the peripheral boards (Models FCI2016-U1, FCI2017-U1), providing two (2) circuits of optional releasing, respectively.

### **Releasing Module**

Model XCI2001-U1 supports activation of releasing valves in pre-action / deluge systems (including double-interlock pre-action systems, or Sinorix Engineered Fire Suppression Systems). Model XCI2001-U1 supports only `Class B' releasing circuits.



**Remote Display Terminal** (with [3] three control buttons)

### Remote Display Terminal (with RS-485 interface)

The Remote Display Terminals (Models FT2014-U3 / R3 and FT2015-U3 / R3) are LED / LCD units that show the existing status of a Cerberus PRO 252 / 504-point system.

A LED will illuminate for any given *Alarm*, *Supervisory* and *Trouble* Cerberus PRO-system event. A LCD screen will give details of the event in alphanumeric form. The display screen can be scrolled to reveal additional events. Optional remote-system-control capabilities are also available.

When an event has been triggered to the Cerberus PRO panel, the LCD screen will show the following:

- Event type and zone
- Time of the event [only possible in a menu-driven function]
- Custom message for that zone
- Usage of the zone
- 'Unacknowledged' or 'Acknowledged' event

The display has a backlight feature that operates upon receiving any event information or when any operator buttons are pressed.

The Model FT2014-series display terminal has a button used to silence the local sounder. Meanwhile, the Model FT2015series display terminal has three (3) control buttons for 'acknowledging' events; silencing audible circuits and resetting the system. Additionally, there are three (3) userprogrammable buttons available. The Model FT2015-series has a key switch that enables the control buttons to operate.

The remote display terminals are remotely connected to the Cerberus PRO FACP, via the RS—485 interface. Cerberus PRO panels require the Model FCA2016-U1 RS—485 module to provide communication to the remote display terminals. Model FCA2016-U1 supports Style 4 or Style 6 wiring.

Up to eight (8) modules can be supported on a RS-485 bus.

Note: In compliance of Canadian fire code, the Model FHD2012-U1 Inner Door must be ordered and used for housing the Remote Display Terminal (Model FT201x-Series).

# Cerberus PRO FIRE Components - (cont.'d)



Single-Mode / Multi-Mode Fiber-Optic Module

### Single-Mode / Multi-Mode Fiber-Optic Module

The single-mode (Model FN2006-U1) / multi-mode (Model FN2007-U1) fiber-optic interface module can be used to transmit RS-485 communication for the Cerberus PRO FACP, as well as the Model FT924 Fire Terminal.

The single-mode / multi-mode fiber-optic module provides C-NET peer-to-peer network communication between the Cerberus PRO 252-point and 504-point addressable systems.

Models FN2006-U1 / FN2007-U1 require 24 Volts DC [nominal] power, and the networked Cerberus PRO panel serves as the main source in meeting this power requirement. Models FN2006-U1 / FN2007-U1 can also be powered from any ©UL Listed, regulated 24VDC power supply, such as the Siemens (Model PAD-series) Distributed Power Module & NAC Extender.

Models FN2006-U1 / FN2007-U1 can be mounted in a Cerberus PRO one-height-unit or two-height unit enclosure, and can operate in a daisy-chain configuration.

Two (2), high-quality duplex 9/125 fiber-optic cables and STstyle fiber connectors are used for connection between singlemode fiber-optic modules. The duplex fiber-optic cable has two (2) cables in a single shield that is similar to an electrical zip cord. When using single-mode fiber, each segment of the fiber network can be up to almost 10 miles (16.1 km).

For 'Class B' installations, each FACP or terminal at either end of the daisy chain use one (1) duplex cable for connection to the next networked panel or terminal. FACPs or terminals within the daisy chain require two (2) duplex cables: one (1) duplex cable for connection to the previous FACP, and one (1) duplex cable for connection to the next FACP.

For 'Class A' installations, each FACP or terminal requires two (2) duplex cables: one (1) duplex cable for connection to the previous FACP, and one (1) duplex cable for connection to the next FACP.



Digital Alarm Communicator Transmitter [Model FCA2015-U1]

### Digital Alarm Communicator Transmitter

The Digital Alarm Communicator Transmitter (DACT) is used to provide communication between a 252 / 504-point (FIRE or IVC) addressable FACP and an off-premises monitoring station.

Each DACT (Model FCA2015-U1) can also support additional third-party Internet Protocol (IP) and Global System Mobile (GSM) communication technologies, which include: Bosch, Telguard and DSC. Consequently, Model FCA2015-U1 is ©UL Listed as compatible with third-party IP and GSM dialers.

The Model FCA2015-U1 module mounts directly on the back enclosure and connects to the periphery boards. The DACT enables remote transmission of alarms and events via a public telephone line.

Model FCA2015-U1 supports two (2) lines and four (4) accounts, and can transmit serial information (including the address of the event) to the monitoring station.



Fire Terminal Board [Model FTI2001-U1]

### Fire Terminal Board (and equipment)

The Fire Terminal (Model FT924) consists of the Fire Terminal Board (Model FTI2001-U1); the stores the Standard Operating Unit (or the Operating Unit with LEDs), and a one-height-unit enclosure.

Each Model FT924 terminal contains one (1) backlit, 2'' -x - 4 - 3/4'' (5.1 cm. -x - 12.1 cm.) Video Graphics Array (VGA) monochrome LCD screen with LEDs for displaying system status. An audible will sound when there are 'unacknowledged' events on the system.

The display of each operating unit categorizes events by type, providing a separate event tab for *Alarm*, *Gas Alarm*, *Supervisory*, and *Trouble* events. The quantity of active events of each type is listed in each event tab. The display provides two (2) full lines of text message for each event.

Each event can have a 40-character custom message describing the location for a given event. In addition to the text message, the system displays the category of the active event: (e.g. – *Automatic Alarm, Water Flow, Manual*, etc.) – the category means more to responding officials than models.

The Fire Terminal Boards contain the site-specific program configuration which is created in the customconfiguration tool, 'Cerberus Works'.

# Cerberus PRO FIRE Components – (cont.'d)



NAC Expansion Module [Model FCI2011-U1]

### NAC Expansion Module

The NAC expansion module (Model FCI2011-U1) is an optional module that is connected to the peripheral boards (Models FCI2016-U1, FCI2017-U1), providing additional NACs to 252-point and 504-point systems, respectively.

One (1) 'Class A' or two (2) 'Class B' NACs are provided with the following Cerberus PRO systems:

- Model FV922 (252-point)
- Model FV924 (504-point)

Each NAC is rated at 3A. Each NAC expansion module is monitored for open-line and short-circuit conditions.

When installed on a Model FV922 or Model FV924 Cerberus PRO FACP, the releasing module contains an integral manualdisconnect switch for releasing circuits. This essential feature protects the releasing circuits from accidental discharge during maintenance.

Activation can be accomplished via cross zoning of automatic detectors or manual activation within one (1) FACP. A predischarge countdown timer is available for display at either the Standard Operating Interface Unit, or Operating Interface Unit with LEDs.



Remote Peripheral Module [Model FCA2018-U1]

### Remote Peripheral Module (with RS–485 interface)

The Remote Peripheral Module (FCA2018-U1) provides a means of connecting a Cerberus PRO panel to a parallel printer for creating a hard copy of system-status and configuration reports. This supervised, intelligent module contains built-in transient protection and plain-decimal addressing.

Model FCA2018-U1 is remotely connected to the Model FCA2016-U1 RS-485 communication bus from any Cerberus PRO system enclosure. Model FCA2018-U1 uses 'Class B' (Style 4) or 'Class A' (Style 6) wiring, and provides two (2) RS-232 (serial) ports and a single parallel port that allow connection to the parallel printer (Model PAL-1).

When Model PAL-1 is used with the remote peripheral module, Model FCA2018-U1 supervises the printer for *On / Off Line, Power On, Paper Out, Paper Jam*, and wiring-fault conditions, as required by **®UL** for NFPA 72 proprietary systems.

Event and report printing is generated either at the Standard Operating Interface Unit, or Operating Interface Unit with LEDs on the main Cerberus PRO system.



[Blank option]

# LED Option Module(s)

LED option modules provide LED annunciation of system activity. For instance, Model FCM2023-U3 can either be configured for up to 24 indicator zones, or for 48 individual LEDs. Each zone for Model FCM2023-U3 contains one (1) RED / GREEN bi-color LED and one (1) YELLOW LED.

Model FCM2034-U3 is the other version of the Cerberus PRO LED option module. Used exclusively in Canadian applications, Model FCM2034-U3 can also either be configured for up to 24 indicator zones, or for 48 individual LEDs. However, each zone contains one (1) RED / YELLOW bi-color LED and one (1) YELLOW LED.

Any event can be assigned to each LED, which may be configured as a 'static' or 'flashing' indicator using the Cerberus PRO custom-configurable software tool, 'Cerberus Works'. Normally, the LED indicator is used as a zone indicator.

The LED option module is connected to the peripheral data bus, and can be cascaded to up to a maximum of four (4) LED modules. A space is provided for labeling of LED functions. The label slides behind a clear, protective membrane.

## **Blank Option Module**

Model FCM2022-U3 is a blank-option module intended to cover any blank LED areas where LED modules are not being occupied.

The Blank and LED Option Modules are mounted on the inner door of a Cerberus PRO enclosure. Any combination of modules may be mounted on the inner door. Up to four (4) total modules can be supported.

# Temperature and Humidity Range

The Cerberus PRO Intelligent Voice Communication System is ©UL 864 9<sup>th</sup> Edition Listed for indoor dry locations within a temperature range of  $120^{+/-3}$ °F (49<sup>+/-2</sup>°C) to  $32^{+/-3}$ °F (0<sup>+/-2</sup>°C) and a relative humidity of  $93^{+/-2}$ % at a temperature of  $90^{+/-3}$ °F ( $32^{+/-2}$ °C).

Actated Documentation			
Model	Data Sheet Number	Description	
_	9300	Cerberus DMS Management Station	
OH921	9900	Multi-Criteria Fire Detector	
HI921	9901	Thermal (Heat) Detector	
OP921	9902	Photoelectric Smoke Detector	
OP921	9902 <mark>C</mark>	Photoelectric Smoke Detector (for <mark>Canada</mark> )	
OOHC941	9903	Multi-Criteria Fire / CO Detector [with <b>ASA</b> technology™]	
OOHC941	9903 <mark>C</mark>	Multi-Criteria Fire / CO Detector [with <b>ASA</b> technology <sup>MC</sup> ] (for <mark>Canada</mark> )	
OOH941	9904	Multi-Criteria Fire Detector [with <b>ASA</b> technology™]	
OOH941	9904 <mark>C</mark>	Multi-Criteria Fire Detector [with <b>ASA</b> technology <sup>MC</sup> ] (for <mark>Canada</mark> )	
FDCIO422	9905	4-Input / 4-Output Interface Module	
FDCIO422	9905 <mark>C</mark>	4-Input / 4-Output Interface Module (for <mark>Canada</mark> )	
<u>See</u> : data sheet	9906	'FDBZ' Series Air-Duct Housings	
<u>See</u> : data sheet	9906 <mark>C</mark>	'FDBZ' Series Air-Duct Housings (for <mark>Canada</mark> )	
<u>See</u> : data sheet	9907	'DB' Series Detector Base	
<u>See</u> : data sheet	9907 <mark>C</mark>	'DB' Series Detector Base (for <mark>Canada</mark> )	
ABHW-4B	9909	Intelligent Audible (Sounder) Base	
ABHW-4S	9910	Audible (Sounder) Base for Sleeping Areas	

**Related** Documentation

# **Details for Ordering** – Cerberus PRO Voice *Electronics* Kit –

Model	Part Number	Description
		Voice Electronics Kit
		Consists of the following:
		<ul> <li>one (1) Voice CPU Card (Model VCC2001-A1);</li> </ul>
FV920-EK	S54400-C167-A1	<ul> <li>one (1) Voice I/O Card (Model VCC2002-A1);</li> </ul>
		<ul> <li>one (1) 50W Voice Amplifier</li> <li>Card (Model VCI2001-U1);</li> </ul>
		<ul> <li>one (1) Voice Card Cage (Model VCA2002-A1);</li> </ul>
		<ul> <li>one (1) MoNET Connection Module (Model FCA2031-A1);</li> </ul>
		<ul> <li>one (1) Option Module</li> <li>{24 switches}</li> </ul>
		(Model V102001-03),
		<ul> <li>one (1) Microphone Option Module (Model VTO2004-U3)</li> </ul>

# **Details for Ordering** – (continued) – Cerberus PRO Voice *Enclosur*e Kits –

Model	Part Number	Description	
FHK2004- U3	S54400- C168-A1	Voice Enclosu <u>Consists of the</u> - two (2) Inner Doors (Model FHD2004-U1) - one (1) 3HU backbox, black (Model FHB2005-U1) - two (2) Clear Lens (Model FHD2006-U1)	rre Kit, Black e following: - one (1) Outer Door, black (Model FHD2007-U3) - one (1) 3HU Outer Door Blank Plate, black (Model FHD2009-U1)
FHK2004- <mark>R</mark> 3	S54400- C169-A1	Voice Enclos <u>Consists of th</u> - two (2) Inner Doors (Model FHD2004-U1) - one (1) 3HU backbox, red (Model FHB2005-R1) two (2) Char Long	ure Kit, Red te following: -one (1) Outer Door, red (Model FHD2007-R3) - one (1) 3HU Outer Door
		(Model FHD2006-U1)	Blank Plate, red (Model FHD2009- <mark>R</mark> 1)

# - Remote Microphone Kits -

Model	Part Number	Description		
		Remote Microphone Kit, Black Consists of the following:		
VR2005- U3	S54400- C90-A1	-One (1) 1HU back box (Model FHB2001-U1) -One (1) inner door (Model FHD2004-U1) -One (1) outer door (Model FHD2001-U3) -Two (2) blank plates (Model FCM2022-U3)	<ul> <li>One (1) Lexan clear lens (Model FHD2006-U1)</li> <li>One (1) microphone option module (Model VTO2004-U1)</li> <li>One (1) `Class B' voice terminal board (Model VTA2001-A1)</li> </ul>	
		Remote Microphon Consists of 1	<b>e Kit, <mark>Red</mark> the following:</b>	
VR2005- R3	S54400- C92-A1	<ul> <li>One (1) 1HU back box (Model FHB2001-R1)</li> <li>One (1) inner door (Model FHD2004-U1)</li> <li>One (1) outer door (Model FHD2001-R3)</li> <li>Two (2) blank plates (Model FCM2022-U3)</li> </ul>	-One (1) Lexan clear lens (Model FHD2006-U1) -One (1) microphone option module (Model VTO2004-U1) -One (1) `Class B' voice terminal board (Model VTA2001-A1)	

# - Booster Amp Kits -

Мо	del	Part Number	Description		
EBA2	001 1	S54400- B140-A1	100W Booster Amplifier Kit, Black         -       Consists of the following:         - one (1) main board       - one (1) 170W         (Model EBA2004-A1)       - one (1) 170W         - one (1) black enclosure       (Model FP2011-L)		
			100W Booster Ampli	fier Kit, Red	
EBA2 - <mark>R</mark> 2	001 1	S54400- B141-A1	-one (1) main board (Model EBA2004-A1) -one (1) red enclosure (Model FH2016-R1)	– one (1) 170W power supply (Model FP2011-U1)	

# **Details for Ordering**-(continued) – Parts –

Model	Part Number	Description
EBA2004-A1	\$54400-B137-A1	Main Board
	554400 B157 //1	(for the 100W Booster Amplifier)
FCA2015-U1	S54400-A63-A1	Digital Alarm
1 0, 2013 01	8311007103711	Communicator Transmitter
FCA2016-U1	S54400-A39-A1	RS–485 Interface
FCA2018-U1	S54400-A65-A1	Remote Peripheral Module
FCA2031-A1	S54400-A153-A1	<u>Mo</u> dule <u>Net</u> work (MoNet) Connection Card
FCA2032-U1	S54400-B145-A1	Battery Disconnect Module
	SE4400 D1E4 A1	License Key (S1) for remote access
FCA2055-AT	334400-r 134-A I	remote view   remote operation
ECA2034-A1	\$54400-P155-A1	License Key (S2) BACnet
1 CA2034-A1	3344001133-11	output (monitoring only)
		License Key (S3) for remote access
FCA2035-A1	S54400-P156-A1	remote view   remote operation
		BACnet output
FCI2011-U1	S54400-A54-A1	NAC Expansion Module
FCI2016-U1	S54400-A55-A1	Periphery Board (for 252-pt. panels)
FCI2017-U1	S54400-A56-A1	Periphery Board (for 504-pt. panels)
E (12020 111		Optional Leased-Line /
FCI2020-01	\$54400-A57-A1	City-Tie Module
FCM2018-U3	S54400-C40-A2	Operating Interface Unit
		Operating Interface Unit
FCM2019-U3	S54400-C41-A2	[with LED]
FCM2022-U3	S54400-C44-A2	Front-End Blank Option Module
		LED Option Module
FCM2023-U3	S54400-C45-A2	Red / Green bi-color LED
		(one {1} standalone Yellow LED)
		LED Option Module
FCM2034-U3	S54400-C138-A1	Red / Yellow bi-color LED
		(one {1} standalone Yellow LED)
	S54400 C140 A1	Operating Interface Unit [w/ LED]
1 CIVI2033-03	334400-0140-71	[used in Canadian-FACP installs]
EH2016-U1	\$54400-B138-A1	Housing, Black
1112010-01	334400-0130-AT	(for the 100W Booster Amplifier)
FH2016- <mark>R</mark> 1	\$54400-B136-A1	Housing, <mark>Red</mark>
1112010 111	051100 01507(1	(for the 100W Booster Amplifier)
FHA2031-U1	S54400-B44-A1	Optional DIN Rail Kit
FHA2041- <mark>R</mark> 1	\$54400-B93-A1	Three-Height-Unit (3HU)
111/2011	031100 033711	Enclosure Cover, <mark>Red</mark>
		33AH Battery Bracket
FHA2042-U1	S54400-B55-A1	(used with Cerberus intelligent
		voice-communication FACPs)
FHA2043-U1	S54400-B56-A1	Three-Height-Unit Trim Kit, Black
⊦HA2043- <mark>R</mark> 1	S54400-B57-A1	Three-Height-Unit Trim Kit, Red
FHA2044-U1	S54400-B167-A1	Battery Fixing Bracket
		(for the 100W Booster Amplifier)
FHA2054-U1	S54400-B58-A1	Audio Transformer Kit
FHB2005-U1	S54400-B110-A1	3HU Enclosure Backbox, <b>Black</b>

# **Details for Ordering**

- Parts (continued) -

Model	Part Number	Description
FHB2005-R1	S54400-B110-A2	3HU Enclosure Backbox, Red
EHD2004-111	\$54400-B52-A1	Inner Door, <b>Black</b>
11102004 01	334400 B32 //1	(open center space for module access)
FHD2005-U1	S54400-B53-A1	Inner Door, <b>Solid Black</b>
		(no open space / insert)
FHD2006-U1	S54400-C46-A1	Lexan <sup>®</sup> Clear-Lens Window
		3HU Outer Door, Black
FHD2007-U3	S54400-B113-A1	(contains three {3} window cutouts)
		3HU Outer Door, <mark>Red</mark>
FHD2007- <mark>R</mark> 3	S54400-B113-A2	(contains three {3}
		window cutouts)
FHD2009-U1	S54400-B114-A1	3HU Blank Plate, <b>Black</b>
FHD2009- <mark>R</mark> 1	S54400-B114-A2	3HU Blank Plate, <mark>Red</mark>
FHD2012-U1	S54400-C135-A1	Inner Door, Black
		[used in Canadian-RDT installs]
FN2001-U1	S54400-A60-A1	C-WEB Network Module
FN2012-A1	S54400-B152-A1	Modular Ethernet Switch
FP2012-U1	S54400-Z60-A1	300-Watt Power Supply
FP2013-U1	S54400-Z61-A1	600W Cascading Pwr. Supply
FT2007-U1	S54400-A142-A1	LED Annunciator Driver
FT2008-U1	S54400-A143-A1	16-Zone Tab Annunciator, <b>Black</b>
FT2008- <mark>R</mark> 1	S54400-A144-A1	16-Zone Tab Annunciator, Red
FT2009-U1	S54400-A145-A1	32-Zone Tab Annunciator, Black
FT2009- <mark>R</mark> 1	S54400-A146-A1	32-Zone Tab Annunciator, Red
FT2014-U3	S54400-B80-A1	Remote Display Terminal, <b>Black</b>
FT2014- <mark>R</mark> 3	S54400-B73-A1	Remote Display Terminal, Red
FT2015-U3	S54400-B88-A1	Remote Display Terminal, <b>Black</b> (contains three {3} buttons)
FT2015- <mark>R</mark> 3	S54400-B16-A1	Remote Display Terminal, Red
FTI2001-U1	\$54400-A58-A1	Fire Terminal Board
VCA2002-A1	S54400-A47-A1	Voice System (4A) Card Cage
VCC2001-A1	S54400-A40-A1	Voice CPU Card
VCC2002-A1	S54400-A41-A1	Voice Input / Output Card
VCI2001-U1	S54400-A45-A1	Voice Amplifier Card (25V or 70V)
VCI2003-A1	S54400-A141-A1	VoIP Module
VN2001-A1	S54400-A42-A1	Electric Ethernet Module
VN2002-A1	S54400-A43-A1	Multi-Mode Ethernet Module
VN2003-A1	S54400-A44-A1	Single-Mode Ethernet Module
VR2005-U3	S54400-C90-A1	Remote Microphone Kit, Black
VR2005- <mark>R</mark> 3	S54400-C92-A1	Remote Microphone Kit, Red
VTA2001-A1	S54400-F163-A1	Remote Terminal Board (`Class B')
VTO2001-U3	S54400-C60-A2	Option Module, 24 switches
VTO2004-U3	S54400-C61-A2	Option Module, Microphone
XCI2001-U1	S54400-A69-A1	Releasing Module

# SIEMENS Cerberus<sup>®</sup> PRO

Siemens Industry, Inc. – Building Technologies Div. 8 Fernwood Road • Florham Park, NJ 07932 Tel: (973) 593-2600 • Fax: (908) 547-6877 Web: www.USA.Siemens.com/CPIVC

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Data contained in these documents should be consulted before specifying or using the product. For further information or assistance concerning particular problems contact the Manufacturer.

# UL Product **iQ**<sup>™</sup>



# UOJZ.S522 - CONTROL UNITS, SYSTEM Control Units, System

See General Information for Control Units, System

### SIEMENS INDUSTRY INC

S522

8 Fernwood Rd Florham Park, NJ 07932-1906 USA

# UL 864 10th Edition Listed

Model	Control Unit System Type(s)	Initiating Device Type(s)	Signaling Type(s)
Fire Alarm Control Unit			
Desigo Fire Safety Modular, Cerberus Pro Modular	L	A, CO, M, SS, WF	MX, March, NC
	AUX	A, M, WF	-
	RS (RU)	A, CO, M, SS, WF	MX
	RS (PPU)	A, CO, M, SS, WF	MX

# UL 864 9th Edition Listed

Model	Control Unit System Type(s)	Initiating Device Type(s)	Signaling Type(s)
FC2005-R2, FC2005-U2, FC901-R3, FC901- U3	L	A, M, SS, WF	March, NC
	AUX	A, M, WF	-
	RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol
	CS (PPU), P (PPU)	A, M, SS, WF	DAC, OT
FC2025, FC2050, FT2050, FC922, FC924, FT9	924, FV2025, FV2050, <mark>FV92</mark>	<mark>2,</mark> FV924	
	L	A, M, SS, WF	C, March, NC
	AUX	A, M, WF	-
	CS (PPU), P (PPU), RS (PPU)	A, M, SS, WF	DAC, OT, Rev Pol
Fire Finder XLS*@, XLSV*, Desigo Fire Safet FC926*@	y Modular Model FC2075*	@, Cerberus Pro	Modular Model
	L	A, M, SS, WF	MX, March, NC

	AUX	A, M, WF	NC
	RS (PPU)	A, M, SS, WF	DAC, Rev Pol
	CS (PPU)	A, M, SS, WF	DAC
	P (RU)	A, M, SS, WF	MX
	P (PPU)	A, M, SS, WF	DAC, MX
FS-250, FS-250R	L	A, M, SS, WF	March, NC
	AUX	A, M, WF	-
	RS (PPU)	A, M, SS, WF	DAC, Rev Pol
	CS (PPU)	A, M, SS, WF	DAC
MXL, MXL-IQ	AUX	А, М	-
	LS	A, M, WF, WSS	C, NC
	RS (RU)	A, M, WF, WSS	DAC, Rev Pol
	P (RU)	A, M, WF, WSS	C, MX
	CS (RU)	A, M, WF, WSS	DAC, MX
SXL-EX, SXL-EX-INT	L	A, M, SS, WF	C, March, NC
	CS (PPU)	A, M, SS, WF	DAC
	AUX	A, M, WF	NC
	RS (PPU)	A, M, SS, WF	DAC, NC
System 3	L	A, M, SS, WF	C, NC
TXR-320, TXR-320D, TXR-320(SRX), TXR-320(SRX)-R, TXR-320(SRX)-D, TXR-320(SRX)-DR			
	L	A, M, SS, WF	NC
	AUX	A, M, WF	-
	RS (PPU)	A, M, SS, WF	Rev Pol
	CS (PPU), RS (PPU)	A, M, SS, WF	DAC

# UL 864 10th Edition Listed

MXL-IQ Mechanical Migration Kit, Black, Model(s) FHA-MIQKIT-04

MXL-IQ Mechanical Migration Kit, Red, Model(s) FHA-MIQKIT-05

Subassembly, "FC2025, FC2050, FT2050, FC922, FC924, FT924, FV2025, FV2050, FV922, FV924", Model(s) FCA2015-U1

Subassembly, "FC2075", Model(s) FCM2041-U2

Subassembly, "FC926", Model(s) FCM2041-U3

Subassembly, "FireFinder XLS, XLSV, FC2075, FC926", Model(s) CC-2, CC-5, CDC-4, CRC-6, DLC, GPMI-3, MLC, NIC-C, NRC, PMI-3, PSC-12, PSC-ISO-CBL, PSX-12, PTB, XDLC, ZIC-2C, ZIC-4A, ZIC-8B, ZIC-SPC

Subassembly, Model(s) BCM, CAB-COVER, CAB-MP, CAB1, CAB1-TK, CAB1R, CAB1R-TK, CAB2-BB, CAB2-BD, CAB2-RD, CAB2-RD, CAB2-TK, CAB2-XBD, CAB2-XRD, CAB2RTK, CAB3-BB, CAB3-BD, CAB3-RB, CAB3-RD, CAB3-TK, CAB3-XBD, CAB3-XRD, CAB3-TK, ID-FP, ID-MP, ID-SP, MOM2-XMP, OD-BP, OD-BP-R, OD-GP, OD-GP-R, OD-LP, XLS-MLE6-ADPT, XLS-MLE6R-ADPT, XLS-MME3-ADPT, XLS-MME3R-ADPT, XLS-MSE2-ADPT, XLS-MSE2R-ADPT, XLS-MSE3-ADPT, XLS-MSE3R-ADPT, XLS-RCC13F-ADPT, XLS-RCC13F-

# UL 864 9th Edition Listed

Subassembly, "FC2005-R2, FC2005-U2, FC901-R3, FC901-U3", Model(s) FCI2020-U1#, FCM901-U2, FCM901-U3, FH901-R2, FH901-R3, FH901-U2, FH901-U3

Subassembly, "FC2025, FC2050, FT2050, FC922, FC924, FT924, FV2025, FV2050, FV922, FV924", Model(s) FCA2016-U1, FCA2031-A1, FCA2032-U1, FCA2033-A1 (S1), FCA2034-A1 (S2), FCA2035-A1 (S3), FCC2006-A1, FCI2011-U1, FCI2016-U1, FCI2017-U1, FCM2018-U2, FCM2018-U3, FCM2019-U2, FCM2019-U3, FCM2022-U2, FCM2022-U3, FCM2023-U2, FCM2023-U3, FCM2034-U2, FCM2034-U3, FCM2035-U2, FCM2035-U3, FH-2071-UM, FHA2031-U1, FHA2032-U1, FHA2035-R1, FHA2035-U1, FHA2036-R1, FHA2036-U1, FHA2041-R1, FHA2042-U1, FHA2043-R1, FHA2043-U1, FHB2001-R1, FHB2001-U1, FHB2002-R1, FHB2002-U1, FHB2005-U1, FHD2001-R2, FHD2001-R3, FHD2001-U2, FHD2001-U3, FHD2002-R2, FHD2002-R3, FHD2002-U2, FHD2002-U3, FHD2003-R2, FHD2003-R3, FHD2003-U2, FHD2003-U3, FHD2004-U1, FHD2005-U1, FHD2006-U1, FHD2007-R2, FHD2007-R3, FHD2007-U2, FHD2007-U3, FHD2009-U1, FHD2012-U1, FN2001-U1, FN2006-U1, FN2007-U1, FN2012-A1, FT2003-U1, FT12001-A1, FT02008-A1, VCA2002-A1, VCC2001-A1, VCC2002-A1, VCI2001-U1, VCI2003-A1, VN2002-A1, VN2003-A1, VR2005, VTA2001-A1, VT02001-U2, VT02001-U3, VT02004-U2, VT02005, XCI2001-U1

### Subassembly, "FireFinder XLS, XLSV", Model(s) PMI-INTL

Subassembly, "FS-250, FS-250R", Model(s) CAB-BATT, FS-250-ENCL, FS-250-ENCL-R, FS-DACT, FS-DB2, FS-DLC, FS-MB2, FS-MT, FS-NPE, FS-REL, FS-RPT, FS-SFT, FS-SFT-R

Subassembly, "MXL, MXL-IQ", Model(s) ACM-RK, ALD-2i, BTC-1, CMI-300, CRM-4, CSM-4, CZM-4, IEC-1, LLM-1, MBR-2, MBR1, MDR-1, MDR-2, MDR-2R, MKB-1, MKB-2, MKB-2S, MKB-3, MKB-3S, MKB-4, MKB-4S, MKB-5, MKB-6, MKB-RK, MLE-6, MMB-2, MMB-3, MOM-2, MOM-4, MOM-RK, MPS-12, MPS-12-220, MPS-12-240, MPS-12-W, MPS-6, MPS-6-W, MPS-RK, MSE-3, MSE-3M, MSE-3MR, MXL-RK1, NCCNT, NCCNT-G, NCCNT-GL, NCCNT-T, OCC-1, PIM-1, PS-5A, PS-5N, PS-5N7, SMB-2, SMB-3, TSP-RK, TSW-2, VSM-RK

**Subassembly, "System 3"**, Model(s) AA-30U, AE-30U, BC-35, BE-35, BI-35, CP-35, CT-35, DC-35S, EL-31, MM-35, PLM-35, PM-32, PS-35, PS-35/220, RC-30U, RM-30, RM-30RU, RM-30U, SM-30, SR-30, SR-32, SR-35, TC-30U, TL-30U, ZN-31U, ZN-34UA, ZN-34US, ZU-35DS, ZU-35TS

Subassembly, "TXR-320, TXR-320D, TXR-320(SRX), TXR-320(SRX)-R, TXR-320(SRX)-D, TXR-320(SRX)-DR", Model(s) TICAC, TOCAC, TPR-300, TRAX-1048TZDS, TRM-306, TRM-312

Subassembly, Model(s) ALI-8, ALI-8B, BB-55, BB-55R, BK33, CP-35 Resound, EB-32, EB-33, EB-35, ED-32, ED-33, ED-35, ED-35R, EK-32, EK-33, EK-35, EN-SX, GPMI-2, IQ-BLANK, IQ-DFL, MBR-3MP, MBR-MP, MET-3L, MET-3LR, MHD-1, MHD-2, MHD-2W, MHD-3, MHD-4, MHD-5, MLE 6, MME-3, MME-3R, MPI-2, MSE-2R, MSE-3L, MSE-3LR, MSE-3M-D, MTE-2, PMI, PMI-2, PMI-REM, RCC-1, RCC-1F, SXL-AK, Taurus CPU Card, XEA-1, XEA-2, XED-1, XED-2

Subassembly, Mechanical Migration Kit, Black, "FC2025, FC2050, FT2050, FC922, FC924, FT924, FV2025, FV2050, FV922, FV924", Model(s) FHA2056-U1

### Subassembly, Mechanical Migration Kit, Red, Model(s) FHA2056-R1

- L Local System
- A Automatic Fire Alarm: thermostats, smoke detectors, etc.
- CO Carbon Monoxide Alarm: carbon monoxide detectors
- M Manual Fire Alarm: manually operated boxes

SS - Supervisory: gate valves, water-level switches, temperature switches, carbon monoxide alarm, residential fire alarm control units, etc.

- WF Waterflow Alarm: waterflow switches
- MX Multiplex

March - March Time

NC - Noncoded, Steady, Temporal 3 Pattern, etc.

AUX - Auxiliary System

RS (RU) - Remote Station System (Supervising Station Receiving Unit)

RS (PPU) - Remote Station System (Protected Premises Unit)

DAC - Digital Alarm Communicator

OT - Other Transmission Technologies

Rev Pol - Reverse Polarity

CS (PPU) - Central Station System (Protected Premises Unit)

P (PPU) - Proporiety System (Protected Premises Unit)

C - Coded

P (RU) - Proporiety System (Supervising Station Receiving Unit)

LS - Local System with Shunt-type Connection to Master Box

WSS - Watchman's Supervisory Service

CS (RU) - Central Station System (Supervising Station Receiving Unit)

\* - Also suitable for releasing device service.

@ - For Local System types: System Control Unit with Emergency Voice Communications, supplemental audio inputs, pre-recorded message and paging. Also suitable for releasing device service. Central Station System Types: Must be employed with additional specific Listed devices as indicated in installation instructions and wiring diagrams to provide indicate type service.

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