

# N16 Fire Alarm Control Panel

## EFFICIENT, SCALABLE, CONNECTED

### General

The NOTIFIER INSPIRE™ Series Fire Alarm Control Panels (FACPs) bring the latest technology to life safety. Fire emergency detection and evacuation are extremely critical to life safety. With the N16e and N16x panels, NOTIFIER INSPIRE Series offers a scalable platform to meet virtually any size application.

NOTIFIER INSPIRE Series FACPs feature an intuitive 10" color touchscreen display. This display is color coded with system and status information. Users are presented with vital information that is easy to read and navigate.

Offered in a standard preconfigured enclosure, the N16e comes with one Signaling Line Module (SLM) to support 318 intelligent addressable devices and a power supply (PMB) to support four NACs and two auxiliary outputs. Panels can be configured with just a few devices for small building applications or expanded via two open module slots. Add up to two additional Signaling Line Modules (SLM-318) expanding capacity to 954 intelligent addressable devices on a total of three Signaling Line Circuit (SLC) loops, or network with many devices to protect a large campus or a high-rise office block. Simply add additional peripheral equipment to suit the application.

The N16x features a modular design. To meet project requirements, order CPU-N16LND, CPU-N16LD, or CPU-16-RTO. Panels can be configured for stand-alone or network systems. The N16x can support up to 10 SLM-318 modules, for a capacity of up to 3,180 intelligent addressable devices. Five enclosure sizes are available to support additional peripheral equipment. A host of other options are available, including single or multichannel integrated voice, and firefighter's telephone.

The NOTIFIER INSPIRE Series integrates 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 remote programming, testing, and diagnostic monitoring of the system, along with reduced manual data entry and reporting. Use CLSS to access licensable panel features, VeriFire® Tools, workstation licenses, and more.

### Features

- 10" high definition touchscreen display with customizable buttons
- 6.0 A power supply with customizable outputs (see *DN-62116*)
  - Two auxiliary outputs configurable for resettable or non-resettable operation (Class B and Class A/B)
  - Four Class A/B power outputs that can be configured as Class A/B Notification Appliance Circuits (NACs), power circuit, door holder circuit, or Universal Zone Coding circuit (UZC licensable option)
  - NACs support selectable System Sensor, Wheelock, and Gentex strobe synchronization
  - NACs support up to 3 patterns of output to allow dynamic signaling based on system events: Temp-3 (Fire), Temp-4 (CO), selective silence
- Easy expansion of isolated intelligent Signaling Line Circuit (SLC) capacity
  - One expandable to three on N16e (three cards in the cabinet)
  - One expandable to ten on N16x



N16e

- Easy expansion of N16x power capacity (one expandable to three PMB-AUX power supplies)
- 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 SWIFT Wireless Gateway (FWSG)
  - 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
- Self-Test detector technology (see *DN-62046*)
- Network options
  - High-speed network for up to 200 nodes (NFS2-3030, NFS2-640, NFS-320(C), NFS-320SYS, NCD, DVC-EM, Network Control Workstation)
  - Standard network for up to 103 nodes (NFS2-3030, NFS2-640, NFS-320(C), NFS-320SYS, NCD, DVC-EM, Network Control Workstation). Up to 54 nodes when DVC-EM is used in network paging
- Network Display Mode (licensable feature) allows the panel to act as a network display node, making the NCD optional
- Emergency voice options available (integrated digital voice or sidcar audio)
- Weekly Occupancy Schedules allow changing sensitivity by time of day and day of week
- History Buffer (10,000 events, 3000 displayed)
- Advanced history filters for custom sorting: all events, alarms only, troubles only, supervisory only, other/security events, time/date interval, and point range.
- Alarm Verification selection per point, with automatic counter
- Color coded icon-based event notification
- Event filtering to quickly view event groups
- On site or remote graphical monitoring via LAN or Internet connection with CLSS Horizon (see *HON-62125*)

- Monitor multiple buildings through one off-campus central station, and report through the CLSS Gateway
- With the CLIP license added to the panel, each loop may be programmed to have all detectors and modules on the SLC to be FLASHSCAN or all detectors and modules on the SLC to be CLIP or all detectors as FLASHSCAN and all modules as CLIP or all detectors as CLIP and modules as FLASHSCAN
- Supports dual telephone line communication to central receiving station using Ademco® Contact ID communication format with optional DS dialer
- Silence Inhibit and Auto Silence timer options
- Field programmable with VeriFire Tools
- Optional remote programming through CLSS
- Non-alarm points for lower priority functions
- Up to 2000 powerful Boolean logic equations
- Supplemental EIA-232 printer port
- Internal and external connectors for AIO Bus devices
- Certified for seismic applications when used with the appropriate seismic mounting kit
- Configurable Network Positive Alarm Sequence (PAS) or Local PAS
- Supports Presignal
- Signal Silence Inhibit and Automatic Signal Silence timer options
- Meets Canadian ULC display requirements
- Programmable DRILL (FIRE DRILL for ULC) participation and Alarm signal ON support (ULC Specific)
- Option to display events by zone with event count per zone (ULC Specific)
- Support for Display and Control Center (DCC) functionality (ULC Specific)
- Resound by primary zone assignment (ULC specific)

#### **LICENSABLE PANEL FEATURES**

- Expanded functionality from a N16e to N16x persona. (N16e persona supports up to 3 loops, 1 power supply, 100 general zones, 50 logic zones and up to 2 additional nodes without network display license). N16x persona supports up to 10 loops, up to 3 power supplies, 250 GZ and 250 LZ and up to 2 additional nodes without network display license)
- Expanded general zones (100 zones included in N16e persona, 250 zones included in N16x persona, both expandable up to 2000 zones in increments of 50 or 250)
- Expanded logic zones (50 zones included in N16e persona, 250 zones included in N16x persona, both expandable up to 2000 zones in increments of 50 or 250)
- Universal Zone Coding (UZY)
- Network display mode enables N16 to emulate the NCD's full network display capabilities
- Expanded custom action buttons (8 buttons included, expandable up to 32 buttons, in increments of 8)
- CLIP mode
- Agent releasing: N16E persona can expand to 10 zones in multiples of 10. N16X persona can expand to 50 zones in multiples of 10
- Water releasing: N16E persona can expand to 10 zones in multiples of 10. N16X persona can expand to 100 zones in multiples of 10

#### **SWIFT WIRELESS**

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

#### **AGENT AND WATER RELEASING FEATURES**

- Releasing using FCM-1-REL
- Up to 50 agent releasing zones (One time activation license in multiples of 10)
- Up to 100 water releasing zones (One time activation license in multiples of 10)
- Sophisticated cross-zone (4 options)
- Delay timer and Discharge timers (adjustable)
- Abort (five options)

#### **DISPLAY AND CONTROL CENTER (DCC)**

- Display and Control Center (DCC) UL and ULC require that when multiple command and control centers are installed, only one operator at any location can be in control at any given time for functions such as acknowledge, silence, and reset. This is called the DCC.
- DCC operation provides a mechanism to pass network control to alternate network control centers. This protocol allows for a "request for control" from another networked panel, which will be accepted or rejected from the current DCC. A 15-second time-out allowance provides for an automatic passing of control in the event there is no response from the original DCC. If the N16 or NCD associated with a RLD has been programmed to participate in DCC, all remote displays with Local Control ON will automatically participate.

#### **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

#### **INDUSTRY LEADING DETECTOR DESIGNS**

- Addressable detectors available for photo, heat, CO, IR, and combinations
- Color kits available for aesthetic use
- First UL-Listed self-testing detectors available in photo, heat, and photo/heat models
- Single-ended beam smoke detectors
- Wireless detectors for use with SWIFT Wireless Gateway

#### **FLASHSCAN® 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
- Fully digital, high-precision protocol (U.S. Patent 5,539,389)
- Manual sensitivity adjustment — up to nine levels
- Pre-alarm intelligent sensing — up to nine levels
- Sensitivity levels
  - **Photo:** 0.5 to 2.35%/foot obscuration
  - **High-Sensitivity Photoelectric (VIEW®):** 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)
  - **Acclimate® Plus:** 0.5 to 4.0%/foot 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

## FlashScan® Exclusive World-Leading Detector Protocol

At the heart of the NOTIFIER INSPIRE™ N16e/x panel series 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.

This protocol enables quick identification of an active input device, as well as activation of many output devices in a fraction of the time required by competitive protocols. The high speed also gives N16 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 detectors have bi-color LEDs that can be coded to provide diagnostic information.

## NOTIFIER INSPIRE Intelligent Sensing

N16e/x has a set of software algorithms that provide industry-leading smoke detection capability. These complex algorithms process many calculations on each reading of each detector, and are made possible by the high-speed microcomputer used by the N16e/x.

**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 NOTIFIER INSPIRE 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 time saving 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.

**VeriFire® 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® based and provides technologically advanced capabilities to aid the installer. The installer may create the entire program for the N16 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 (Version 11.2 and higher).

## Product Line Information

- “Configuration Guidelines” on page 3
- “Main System Components” on page 3
- “Networking Options” on page 4
- “Auxiliary Power Supplies And Batteries” on page 4
- “Optional Equipment” on page 4
- “LDM2-32. Lamp driver Module for use with remote custom graphics provides 32 LED driver outputs (lamp-driver transistors sink to power common on alarm) and 10 switch inputs (one pre-configured for lamp test input). Designed to support retrofits such that output connectors, power, security key switch and lamp test connectors are all pin for pin compatible with legacy LDM-32. Connects to the panel via the AIO bus and may be set up as a router or a peripheral. Integral piezo sounds for each new alarm or trouble and is silenced with the Local Acknowledge switch, or may permanently disabled with a dip switch selection. It also offers the option of an external piezo. See DN-0552.” on page 4
- “Intelligent Detector Bases” on page 5
- “Compatible Intelligent Modules” on page 5
- “Enclosures, Chassis, and Dress Plates” on page 6
- “Backboxes” on page 6
- “CLSS Gateway and Licensable Features” on page 6
- “Communicators” on page 6

## CONFIGURATION GUIDELINES

Stand-alone and network systems require a main display. The main display must be either NCD, Network Control Workstation or one panel in the network with Network Display mode enabled.

## MAIN SYSTEM COMPONENTS

**CPU-N16LD\*.** With display. Intelligent fire alarm with one SLC loop, 10" touchscreen display, 4 NACs, and power supply; chassis mounted for use in a CAB-5 Series cabinet. Requires DP-T2A to mount the display. Ships from the factory with an N16E persona, can be expanded to an N16x persona by adding a one time license N16-XUPG.

**CPU-N16LND\*.** Without display, for use as network node. Intelligent fire alarm with one SLC loop, 4 NACs, and power supply; chassis mounted for use in a CAB-5 Series cabinet. Ships from the factory with an N16E persona, can be expanded to an N16x persona by adding a one time license N16-XUPG.

**CPU-16-RTO\*.** With display for use in retrofit cabinets. Intelligent fire alarm with one SLC loop, 10" touchscreen display, 4 NACs, and power supply; chassis mounted for use in a CAB-4 Series cabinet. Requires DP-T2A-CB4 to mount the display. Ships from the factory with an N16E persona, can be expanded to an N16x persona by adding a one time license N16-XUPG.

**N16E\*.** Intelligent fire alarm panel with one SLC loop, 10" touchscreen display, 4 NACs, and power supply in a black enclosure. 26AH batteries can be accommodated inside the enclosure.

**N16E-R\*.** Intelligent fire alarm panel with one SLC loop, 10" touchscreen display, 4 NACs, and power supply in a red enclosure.

**CPU-N16-RB.** Replacement board with central processing unit. Ships from the factory with an N16E persona, can be expanded to an N16x persona by adding a one time license N16-XUPG.

**CPU-NCD-RB.** Replacement board for NCD with central processing unit.

**DIS-10-RD.** Replacement touchscreen.

**SLM-318.** Signaling Line Module provides a Signaling Line Circuit of 159 addressable points. Add SLM-318 units to expand SLC capability. See DN-62115.

\* For English ULC applications select Regional Setting as “CANADA” in the configuration tool and download to the panel. Panel language can be changed from English to Canadian French, Spanish or Portuguese by selecting the desired language in the configuration.

## NETWORKING OPTIONS

**NCD.** Network Control Display. On network systems (two or more networked fire panel nodes), one network display is required for every system (either NCD, Network Control Workstation, or N16 with Network Display mode enabled). On network systems, the NCD connects (and requires) a standard Network Communication module or High-Speed Network Communication Module. For English ULC applications select Regional Setting as "CANADA" in the configuration tool and download to the NCD. NCD language can be changed from English to Canadian French, Spanish or Portuguese at the NCD or by selecting the desired language in the configuration

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.

**Network Control Workstation.** UL-Listed graphics PC workstation, Network Control Workstation GUI software, and computer hardware. See DN-7048 for specific part numbers.

**VESDA-HLI-GW.** VESDAnet high-level interface gateway. See DN60753.

## AUXILIARY POWER SUPPLIES AND BATTERIES

**PMB-AUX.** Auxiliary power supply, 6 amps, universal AC input, 4 NACs and 2 Auxiliary outputs, chassis-mounted for use in a CAB-5 Series cabinet. Charges 7-210AH batteries. See DN-62116.

**PMB-AUX-RTO.** Auxiliary power supply, 6 amps, universal AC input, 4 NACs and 2 Auxiliary outputs, chassis-mounted for use in a CAB-4 Series cabinet. Charges 7-210AH batteries. See DN-62116.

**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.

**HPF-PS6/10(B/E).** PS Series Remote 6A/10A power supply with battery charger. See DN-61092

**BAT Series.** Sealed lead-acid batteries listed for fire-protective service. (Required.) See DN-6933.

## OPTIONAL EQUIPMENT

**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 for system specifications and mounting hardware.

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

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

**ACM-30.** Fully-customizable annunciator. Independently-configured buttons with up to 60 points of annunciation. LEDs can be programmed to activate in red, green, yellow, white, amber, blue, cyan or purple. Up to 80 annunciators per FACP. See DN-62114 for system specifications and mounting hardware.

**RLD.** Remote display provides the N16 with up to five remote, serially connected remote display. The region and language selections are determined by the N16/NCD setting. See DN-62122.

**LDM2-32.** Lamp driver Module for use with remote custom graphics provides 32 LED driver outputs (lamp-driver transistors sink to power common on alarm) and 10 switch inputs (one pre-configured for lamp test input). Designed to support retrofits such that output connectors,

power, security key switch and lamp test connectors are all pin for pin compatible with legacy LDM-32. Connects to the panel via the AIO bus and may be set up as a router or a peripheral. Integral piezo sounds for each new alarm or trouble and is silenced with the Local Acknowledge switch, or may permanently disabled with a dip switch selection. It also offers the option of an external piezo. See DN-0552.

**LDM2-60.** Lamp driver Module for use with remote custom graphics provides 60 LED driver outputs and 21 switch inputs (one pre-configured for lamp test input) Connects to the panel via the AIO bus and may be set up as a router or a peripheral. See DN-0552.

**TM-8.** Panel module offers 8 programmable Form-C relays (4 low current 2A, 4 higher current 10A) and also provides either a remote station service with three reverse polarity outputs that communicate alarm, trouble, supervisory messages from the FACP or a municipal box connection that would trip a local energy municipal box. Can be located up to 6000ft from panel on RS485 bus. See DN-6863.

**AIO-CBL.** Cable kit that includes 48" preconfigured cables that can be used to connect AIO bus devices (ACM-30, LDM2-32, LDM2-60, TM-8) set as peripherals from one row to an adjacent row. It also includes 4 interconnect cables for connecting AIO bus devices in a row.

**LDM-CBL24, LDM-CBL48.** Ribbon cable sets to provide either a 24" (60.96cm) or 48" (121.96cm) connection between LDM2-32/LDM2-60 and LEDs or lamps on a custom graphic panel. Includes all cables necessary for one LDM2-32. LDM2-60 will need two cable sets. Cables have connector on one end only (split, strip, and connect other end to graphic annunciator).

## COMPATIBLE INTELLIGENT DEVICES

**NOTE:** The suffix "A" indicates that the model is ULC-Listed.

**FSP-951-SELFT.** White, low-profile intelligent self-testing photoelectric sensor, FlashScan only. For ULC applications, order FSP-951A-SELFT. See DN-62046.

**FSP-951T-SELFT.** White, same as FSP-951 but includes a built-in 135°F (57°C) fixed-temperature thermal device, FlashScan only. For ULC applications, order FSP-951TA-SELFT. See DN-62046.

**FST-951-SELFT.** White, low-profile intelligent self-testing, configurable operation thermal sensor. Panel-programming can set the device to operate as either a 135°F fixed temperature sensor, a rate of rise and 135°F fixed temperature sensor, or a 190°F high temperature sensor. FlashScan only. For ULC applications, order FST-951A-SELFT. See DN-62046

**FCO-951-IV.** FlashScan, Addressable intelligent multi-criteria smoke sensors, photo, carbon monoxide, fixed temperature heat detector, and infra-red (IR). For ULC applications, order FCO-951A-IV. See DN-61097.

**FPC-951.** FlashScan, Combined photoelectric and carbon monoxide sensor. For ULC applications, order FPC-951A. See DN-62023.

**FWSG.** Addressable gateway supports wireless SLC devices. For ULC Applications, order FWSGA. See DN-60820.

**FSCO-951.** FlashScan, Addressable carbon monoxide sensor. For ULC applications, order FSCO-951A. See DN-62018.

**FPTI-951, FPTI-951-IV.** Addressable intelligent multi-criteria photoelectric, thermal, and IR sensors. ULC: FPTI-951A, FPTI-951A-IV. See DN-62004.

**FS-OSI-RI.** Addressable intelligent single-ended beam smoke detector. ULC: FS-OSI-RIA. See DN-61042.

**FSP-951.** White, low-profile intelligent photoelectric sensor, FlashScan only. ULC: FSP-951A. See DN-60977.

**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. See DN-60977.

**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: FSP951RA. See DN-60977.

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

**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. ULC: FSP-951RA-IV. FlashScan only.

**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, FlashScan only. ULC: FSV-951A, FSV-951RA. See *DN-61053*.

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

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

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

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

**VEA-040-A10-NTF-UL.** Intelligent aspiration with 3.5" LCD display, 40 point-addressable detection points. Covers 36,000 square feet. UL/ULC. See *DN-61036*. UL/ULC Listed.

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

**VEP-A00-P-NTF-VN.** 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-VN.** Intelligent aspiration smoke detector with 3.5" LCD display, 4 pipes, covers up to 21,520 square feet. UL/ULC. See *DN-61029*. UL/ULC Listed.

**VEU-A00-NTF-VN.** 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-VN.** Intelligent aspiration smoke detector with 3.5" LCD display, 4 pipes, covers up to 69,965 square feet. UL/ULC. See *DN-61034*. UL/ULC Listed.

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

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

**CK300 Series Color Kits.** Snap-on overlay to change color of an INSPiRE series detector. For basic detectors: CK300 white; CK-300-IV ivory; CK300-BL for black. For Fire/CO and PTIR detectors, with IR opening: CK300-IR white, CK300-IR-IV ivory, CK300-IR-BL black. For Photo/CO and CO only, with CO opening: CK300-CO-IV ivory. CK300-CO-BL black.

**NOTE:** Not Applicable for Self test detectors.

## INTELLIGENT DETECTOR BASES

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

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

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

**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. (For 10-pack order, B501-WHITE-BP.) UL/ULC Listed. See *DN-60054*.

**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. ULC: B200SA-WH. See *DN-60054*.

**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. ULC: B200SRA-WH. See *DN-60054*.

**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.

## COMPATIBLE INTELLIGENT MODULES

**NOTE:** The suffix "A" indicates that the model is ULC-Listed.

**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*.

**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-5 Series Enclosure:** CPU-N16LD and CPU-N16LND mount in a standard CAB-5 Series enclosure (available in 5 sizes, "A" through "E"). Backbox and door ordered separately; requires BP-5 battery plate. See DN-62113.

**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.

**C5A-M.** Chassis for FACP control panel when DVC-EM is used. Comes with microphone (accommodates separately ordered handset), mounting in the first, second, or third row of a CAB-5 series enclosure (takes one row). (Order dress panel DPA-C5 separately.)

**C5A-NW.** Audio chassis for mounting DVC, keypad, and two optional module cards in a CAB-5 series enclosure. Order dress panel DPA-2A5 to add 2 additional positions on the right.

**DP-T2A.** Dress panel for CAB-5 Series, mounts 10" display and two ACM-30 annunciators.

**DP-T2A-CB4.** Dress panel for CAB-4 Series, mounts 10" display and two ACM-30 annunciators.

**DP-GDIS1.** Graphic Annunciator Dress Plate, mounts the 10" graphic display and ONYX Series Annunciators in the top row of a CAB-4 Series cabinet.

**DP-GDIS2.** Graphic Annunciator Dress Plate, mounts the 10" graphic display and ONYX Series Annunciators in the second, third or fourth row of a CAB-4 Series cabinet.

**DP-BLN.** Blank dress panel. Provides dead-front panel for unused tiers in a CAB-5 Series enclosure.

**BP-5.** Battery plate, required.

**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.

**CHS-CGW.** Chassis for mounting the CLSS gateway board in a CAB-4 or CAB-5 Series enclosure.

**CGW-DACT-CH.** Chassis for mounting HON-DACT-DS board inside CAB4/5 enclosure.

**CHS-ADP.** Adapter plate for mounting a CAB-4 chassis in a CAB-5 Series enclosure.

**DP-ADP.** Adapter plate to mount the RLD in an ABS-2D or a CAB4 enclosure, replacing a LCD-160.

**ACM-1DB-RTO.** Adapter plate to mount an ACM-30 in ABF-1DB, replacing ACM-24AT or ACM48A.

**DP-NCD-2D.** Inner Dress Plate to mount the NCD in an ABS-2D, replacing the NCA-2.

**RLD-1DB-RTO.** Adapter Plate to mount the RLD in ABF-1DB, replacing LCD2-80.

### **BACKBOXES**

**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.

**SEISKIT-CAB.** Seismic mounting kit. Required for seismic-certified applications with CPU-N16LD/LND/RTO and other equipment in CAB-4/5 Series Enclosures. Includes battery bracket for two 26 AH batteries.

**SEISKIT-BB100.** Seismic kit for the BB-100 and BB-200. Includes battery bracket for two 100 AH Batteries. Two kits are required for the BB-200.

**SEISKIT-320/B26.** Seismic mounting kit. Required for seismic-certified applications with N16E/R and BB-26. Includes battery bracket for two 26 AH batteries.

**ABB-1.** Backbox for ACM-30 annunciator, 1 position. UL/ULC Listed.

**ABB-2.** Backbox for ACM-30 annunciator(2 position) OR RLD (Requires DP-ADP). UL/ULC Listed.

**NBB-2.** Annunciator backbox, 2 position. UL/ULC Listed.

**ABF-1DB(C).** Annunciator Flush Box with Door. Requires ACM-1DB-RTO to mount an ACM-30.

**ABS-2D(C).** Annunciator Surface Box. Requires DP-ADP to mount an RLD. Requires DP-NCD-2D to mount an NCD.

### **CLSS GATEWAY AND LICENSABLE FEATURES**

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

**Licensable features:** Individually purchased and downloaded to a specific panel.

- **N16-XUPG.** Upgrade license from N16e persona panel operation to N16x persona panel operation.
- **N16-GZ50.** General Zone expansion. Adds 50 general zones to an N16 panel (maximum 2000 zones).
- **N16-GZN.** General Zone expansion. Adds 250 general zones to an N16 panel (maximum 2000 zones).
- **N16-LGZ50.** Logic Zone expansion. Adds 50 logic zones to an N16 panel (maximum 2000 zones).
- **N16-LGZ.** Logic Zone expansion. Adds 250 logic zones to an N16 panel (maximum 2000 zones).
- **N16-AREL.** Adds first 10 Agent Releasing Zones (Only 1 Per Panel).
- **N16-WREL.** Adds first 10 Water Releasing Zones (Only 1 Per Panel).
- **N16-ADDAREL.** Adds next 10 Agent Releasing Zones For An N16x Persona (Max 4 Per Panel).
- **N16-ADDWREL.** Adds next 10 Water Releasing Zones For An N16x Persona (Max 9 Per Panel).
- **N16-NWD.** Enables Network Display Mode on an N16 panel to emulate NCD's network display capabilities.
- **N16-UZC.** Universal Zone Coding, enables UZC for an N16 panel.
- **N16-CAC.** Custom Action Button expansion. Adds 8 custom action buttons to an N16 panel (maximum 32 buttons).
- **N16-CLIP.** Enables CLIP mode on an N16 panel.

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

### **COMMUNICATORS**

**HON-DACT-DS.** Darksite Dialer, pre-installed in a cabinet. (See HON-62180.)

**32351718-001.** NUP Serial (RS232) Cable 10" Kit for Notifier

**50160636-001.** Kit with 30" NUP Cable and Notifier Lock and Key Set

**MCBL-7.** DACT phone cord, 7 ft (2.13 m) long (two required)

**CCM-ATT-HON.** AT&T Cellular module for CLSS gateway

**CCM-VZ-HON.** Verizon Cellular module for CLSS gateway

**HWF2A-COM.** LTE/IP Dialer Capture Alarm Communicator

**HWF2V-COM.** LTE/IP Dialer Capture Alarm Communicator

**HW-TG7LAF02.** LTE Dialer Capture Alarm Communicator

**HW-TG7LVF02.** LTE Dialer Capture Alarm Communicator

## AGENCY LISTINGS AND APPROVALS

The file number(s) below reference the specific listings for the modules 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 NOTIFIER for latest listing status.

- **UL/ULC Listed:** S635.
- **FM Approved.**
- **CSFM:** 7165-0028:0516
- **Fire Dept. of New York:** COA#001761.
- **City of Chicago.**
- **Certified for Seismic applications in accordance with IBC 2024.** VMA-45894-01C
- **OSHPD Approved.** OSP-0072

## STANDARDS

The N16 Series complies with the following UL Standards and must be installed per applicable NFPA 72, International Building Code (IBC), California Building Code (CBC), and National Building Code of Canada (NBC) Fire Alarm Systems requirements:

- **UL 864**, 10th edition (Control Units and Accessories for Fire Alarm Systems).
- **UL 2017** (General-Purpose Signaling Devices and Systems).
- **UL 2610** (Commercial Premises Security Alarm Units and Systems).
- **ULC-S527-19** (Control Units and Accessories for Fire Alarm Systems).

### UL Type Service

- **LOCAL** (Automatic, Manual, Waterflow, Sprinkler Supervisory)
- **RELEASING** (Automatic, Manual, Waterflow, Sprinkler Supervisory)
- **EVAC** (Automatic, Manual, Waterflow and Sprinkler Supervisory)
- **AUXILIARY** (Connection to M34 Series Master box) (Requires TM-8)
- **REMOTE STATION** (Automatic, Manual, Waterflow, Sprinkler Supervisory, CO) (requires TM-8)
- **PROPRIETARY** (Automatic, Manual, Waterflow, Sprinkler Supervisory, CO) (Requires HON-CGW-MB or HON-DACT-DS)
- **CENTRAL STATION** (Automatic, Manual, Waterflow, Sprinkler Supervisory, CO) (Requires HON-CGW-MB or HON-DACT-DS)
- **PROPRIETARY SECURITY** (Automatic, Manual)
- **EMERGENCY SIGNALING** (Automatic, Manual) (Requires HON-CGW-MB or HON-DACT-DS)
- **IBC 2024** (Seismic) CBC 2022 (Seismic)

**NOTE:** Install in accordance with the UL and NFPA standards specified in panel documentation.



### SYSTEM CAPACITY

- Intelligent Signaling Line Circuits
  - N16e ..... 1 expandable to 3
  - N16x ..... 1 expandable to 10
- Intelligent detectors ..... 159 per loop
- Addressable monitor/control modules ..... 159 per loop
- Programmable software zones ..... over 2000
- AIO Annunciators ..... 80 per N16
- Network nodes ..... up to 200 per network
- Remote Displays ..... up to 10 RLDs per N16

### ELECTRICAL SPECIFICATIONS

#### Primary Input Power

- **PMB-AUX(-RTO):** 120VAC 50/60 Hz 2.5A, 240VAC 50/60 Hz, 1.25A

#### DC Output

- **24VDC aux output 1:** 24VDC, 2.0 A
- **24VDC aux output 2:** 24VDC, 2.0 A

#### Current draw (Standby/Alarm)

- PMB-AUX: 0.96 A (standby), 0.110 A (alarm)
- CPU-N16: 0.116 A (standby), 0.116 A (alarm)
- Main Display: 0.153 A (standby), 0.163 A (alarm)
- NCD: 0.360 A (standby), 0.360 A (alarm)
- ACM-30: 0.087 A (standby), 0.087 A (alarm)
- SLM-318: 0.159 A (standby), 0.276 A (alarm)
- TM-8: 0.115 A (Standby), 0.278 A (Alarm)
- LDM2-32: 0.026 A (Standby), 0.050 A (Alarm)
- LDM2-60: 0.026 A (Standby), 0.059 A (Alarm)

**Battery charger range:** 7AH-210AH. Use separate cabinet for batteries over 26 AH.

**Charging current:** 1A, 2A, 4.25A, and 5.55A

**Float Rate:** 27.6 V.

### PHYSICAL SPECIFICATIONS

**N16e Shipping Weight:** 35 lb

**N16e Backbox dimensions:** 19.12" H x 18.12" W x 5.47" D  
(48.6 cm h x 46 cm W x 13.9 cm D)

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



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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