SHIELD®

TRUSTED WORLDWIDE

neo®

Integrated Fire Alarm & Voice Evacuation System
ANSI/UL 864 9th Edition

Introduction

Competence and innovation driven by consistent market development and customer requirements have shaped the successful development of the SHIELD Brand. The extensive product range of the market leader in the field of fire detection technology contains single, individually integrable system performances. In this way, a customized overall fire protection concept can be planned and realized for every need with optimally synchronized products.

Performance is in international demand, SHIELD is among the highly accredited fire alarm companies that meet rigorous British and American standards for all projects from small conventional system to multi site networks. Certifications such as UL and FM approvals have earned SHIELD a world-renowned reputation with quality products and powerful solutions.

A strong brand is generally known to be a secure basis for close and lasting customer relationships. In accordance with this, SHIELD uses available potential in order to keep on growing in a dynamic competitive environment. And at the same time, SHIELD stands for innovative and high quality fire alarm and evacuation systems.

We invite you to explore and visit our new website www.shieldglobal.com. You can also send us your feedback and inquiry through our user-friendly online forms.

In line with SHIELD policy for continuous product development, SHIELD has the right to change specifications without prior notice.

Images shown in this catalogue are for illustrations purposes only.

Contents

Integrated Fire Alarm & Voice Evacuation System

UL 864 based fire protection system.

NEO is built on years of leadership in the intelligent fire systems market. It is widely installed across the globe in some of the most challenging and prestigious locations.

It is a complete system of high performance fire panels, audio systems, command centers and high performance devices.

At its core are intelligent single and multi-loop networkable fire alarm control panels with a complete range of intelligent SLC loop devices, extensive peripherals, NAC and conventional devices.

NEO includes multi-channel audio with messages built into each node and synchronization of audio and NAC devices per panel across the network, with complete system redundancy.

It offers multiple command center performance, telephones, smoke and fan control, mass notification, graphical control and BMS interfacing.

NEO is designed to go anywhere you need high quality, reliable and easy to use fire detection and control, from mass transportation and industrial complexes to landmark developments, historic buildings and public services.

Note: Specifications are subject to change without notice.

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High Performance Panels

NEO control panels provide a unique scalable platform that can expand upwards or downwards to suit virtually any application.

NEO is the result of decades of fire alarm and detection experience gained from installations across the globe, involving architects, engineers, consultants, end users and fire authorities.

Our panels have been designed to offer more power and performance in a user friendly format. NEO packs in with more configuration, control and interface options than any comparable fire alarm panel. Multiple advanced features mean it will maintain its performance advantages for years to come.

All of the intelligent fire alarm control panels in this series consist of identical electronic modules and can be programed from a laptop PC configuration tool. Our features have been proven to sharply reduce installation time, help identify wiring and programing errors, provide local and remote system diagnostics as well as providing exceptional fire detection without nuisance alarms.

Every NEO panel features unbeatable networking capabilities making it easy to use, configure and maintain, from the smallest to the largest of sites and with complicated cause and effect.

Key features:

- 1, 2, or 4 SLC loop formats.
- Each 500mA digital signaling line circuit supports up to 126 intelligent devices.
- 1,000 Fire Zones when networked or 200 per panel.
- Easy, high performance networking (up to 200 nodes).
- Status monitoring from any panel or annunciator.
- True peer to peer networking Style 4 or 7, wire or fiber.
- Individual node configurable event reporting and control.
- Comprehensive network diagnostics.
- Compatible with all of the NEO series peripherals including annunciators, relay modules, I/O modules, power supplies, internal and portable printers, network modules, LED/switch modules, conventional zone module, modem, RS232, amplifiers, DACT and more.
- SLC wiring can be shielded or non shielded.
- Smoke detectors, sounder bases, open area sounders and beacons can be powered from SLC without need for a separate 24V supply.
- Superb noise immunity and emissions.
- Regulated loop voltage sustained during AC loss.

- Panel includes large 240x60 backlit LED with simple navigation and programing.
- Unique, built-in voltage and current meters for easy diagnostics can be viewed on panel or remotely.
- Unique auto-test of battery cell integrity.
- USB or RS232 interface for programming/panel monitoring.
- Remote access and control via ipGateway or Virtual Panel tools.
- 100% digital communications on the SLC to all intelligent smoke detectors and I/O modules .
- Fast response and superior rejection of unwanted RF noise.
- Multi-sensor programming options allow for supervisory pre-alarm upon programmable smoke obscuration and fire alarm upon programmable temperature fixed or rate of rise.
- Fully integrated 40/80 Watt digital audio options.
- Shield's simple select and click programming and configuration.
- Autolearn and SLC loop detection.
- Quick start and protect - a working system after an Autolearn is performed.

NEO

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NEO - 1 Loop

NX-FACP-1

- 1 SLC loop - Class A (Style 6,7) or Class B (Style 4).
- 126 addressable intelligent points.
- Available in compact and standard size enclosures.
- 2 x 2 Amp Class A (Style Z) or Class B (Style Y) programmable NAC circuits.
- 3 x on board relays. 1 Trouble, 2 programmable.
- System keys for Reset, ACK, Silence, Resound & Drill.
- 3 freely programmable system keys.
- 19 on board LED indicators, 5 of which are freely programmable.

NEO - 2 Loop

NX-FACP-2

- 2 SLC loops - Class A (Style 6,7) or Class B (Style 4).
- 252 Intelligent addressable points.
- 2 x 2 Amp Class A (Style Z) or Class B (Style Y) programmable NAC circuits as standard, expandable to a total of 4 NAC circuits, 2 Amp each.
- 3 x on board relays. 1 Trouble, 2 programmable.
- System keys for Reset, ACK, Silence, Resound & Drill.
- 3 freely programmable system keys.
- 19 on board LED indicators, 5 of which are freely programmable.
- 5 to 10 Amp system power.

NEO - 4 Loop

NX-FACP-4

- 4 SLC loops - Class A (Style 6,7) or Class B (Style 4).
- 504 intelligent addressable points.
- 2 x 2 Amp Class A (Style Z) or Class B (Style Y) programmable NAC circuits as standard, expandable to a total of 4 NAC circuits, 2 Amp each.
- 3 x on board relays. 1 Trouble, 2 programmable.
- System keys for Reset, ACK, Silence, Resound & Drill.
- 3 freely programmable system keys.
- 19 on board LED indicators, 5 of which are freely programmable.
- 5 to 10 Amp system power.

NEO - Remote Annunciators

NX-FAN-D

NX-FAN-C

- Style 4 or Style 7 network interface.
- C version has annunciation and programmable control.
- D version annunciation only.
- On board USB programming port.
- Peer to peer, cross node operation.
- Monitored external Trouble input.
- Info displayed fully configurable to any combination of Fires, Troubles, Supervisory or other alarms.
- Both models include programmable status LEDs.
- Model NX-FAN-C provides 3 freely programmable function keys.
- Optional tamper proof and weather proof enclosures.
- Surface or flush mount.
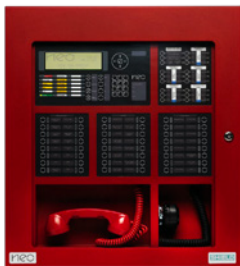
NEO - Compact Single Loop

NX-FACP-1C

- NX-FACP-1C is a small, compact single loop fire alarm control panel.
- Cost sensitive fire alarm installations.
- 126 addressable points, single Style 4 or Style 7/6 Signaling Line Circuit (SLC).
- Optional peer-to-peer networking capabilities.
- Two filtered, voltage regulated Notification Appliance Circuits NACs), Class A or B, each rated 2 Amp @ 24 VDC.
- Fully field programmable, via the onboard graphical LCD display and alphanumeric keypad.

Note: Specifications are subject to change without notice.

Command Centers

NEO Command Centers are built on the backbone of our intelligent fire panels to support a wide variety of configurations and applications.

Command Centers can be configured in the factory as all elements are individually approved, supplied in modular format for easy expansion and customization. All of our Command Centers are fully compatible with audio and telephone options. Command centers can be configured for master control or peer-to-peer. Master control mode allows only one command center to manually operate audio and main system control functions. Telephone Riser Module can be mounted inside the Command Center or remotely within a separate Telephone Node for added security.

NX-FACC-1

- Order fully factory configured or in modular format for configuration on installation
- 1, 2 or 4 Loops.
- 126, 252 or 504 addressable points.
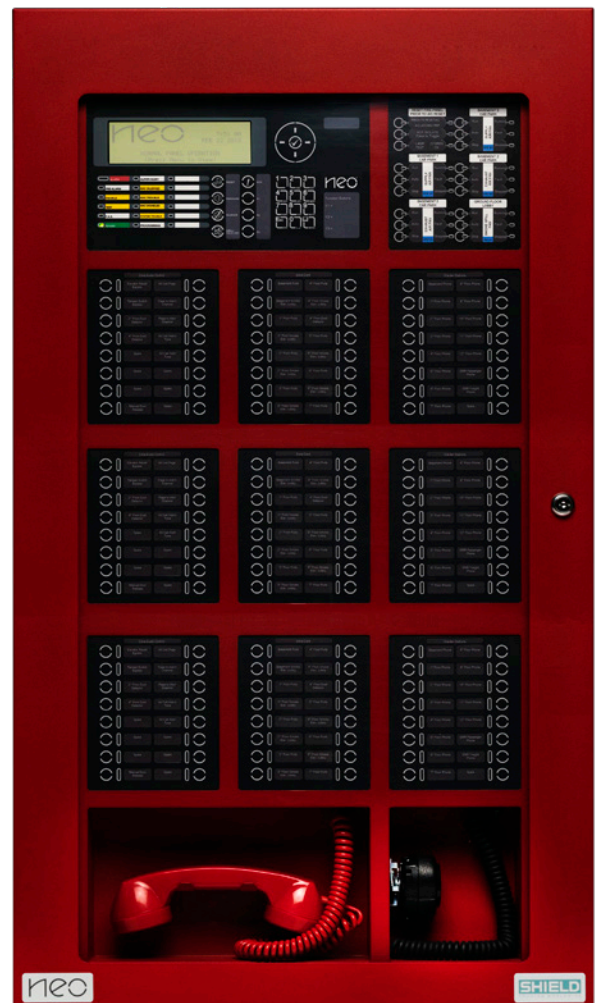
2 Cabinet sizes

- 2 cabinet sizes (3x3 matrix and 3x5 matrix).

Network Nodes and Accessories:

- Digital Communicator – only one required for 200 node network.
- IP Gateway – only one required for 200 node network.
- NX-FA-BMS Module – provides interface to Building Automation System.
- Long Range Radio.
- Graphic Annunciator(s).
- NX-VB Distributed Audio Panels.
- Telephone Node.
- Fiber Converters.

Key features:

- Synchronization of audio and strobes across entire 200 node network.
- 520Hz audio support.
- Failsafe operation if loss of master Command Center.
- Supports multiple "true peer to peer" Command Center operations.
- Intuitive and easy for fire fighters to operate.
- Audio confirmation LEDs indicate when speaker zones are active.
- All Call, Page Evacuate, Page Alert & Page Inactive and Selective Paging features.
- Manual activation of any message to any zone or group of zones.
- No performance degradation as the number of network nodes expands.
- Mass Notification and non fire "Warning" Options.
- Integrated telephone annunciation (LED or LCD) and controls.
- Powerful control-by-event programming with intelligent system test facilities provides superior system diagnostic and test functions.
- Built-in network, AC power, aux power, battery and field wiring diagnostics.
- Colour coded slide in labels with large text to identify system functions.
- Fire warden microphone.
- PAS, 2-Stage, Alarm Verification and Event Mode.
- Zone and Point Disable/Enable.
- 1,000 system zones.

NX-FACC-4

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Intelligent Loop Powered Detectors and Field Devices

The NEO range of Intelligent Fire Detectors and other field devices are advanced in design and performance, offering unique features that benefit both the installer and the end user.

Detectors & Bases

S-A4011E*

Photoelectric Smoke Detector Without Isolator

- Pure light optical technology provides enhanced smoke detection and false alarm management
- Internal drift compensation
- Base locking mechanism (grub screw)
- In-built self-test
- XPERT card addressing
- Approved to UL268 7th edition

S-A5011*

Photoelectric Smoke Detector With Isolator

- Pure light optical technology for enhanced smoke detection and false alarm management
- Built-in isolator
- Drift compensation.
- In-built self-test
- Base locking mechanism (grub screw)
- XPERT card addressing
- Approved to UL268 7th edition

S-A4013 * *

Heat Detector

- Electronic temperature sensing
- Alarm flag for fast alarm responding
- Automatic addressing
- Single thermistor which provides a voltage output proportional to the external air temperature
- Unaffected by wind or atmospheric pressure
- Ideal for environments that are dirty or smoky under normal circumstances
- Approved to UL 521

S-A5014*

Multisensor Detector With Isolator

- Pure light optical technology for enhanced smoke detection and false alarm management
- Built-in isolator
- Drift compensation
- In-built self-test
- Base locking mechanism (grub screw)
- XPERT card addressing
- Dual heat sensors
- Approved to UL 268 7th edition and UL 521

S-A4014E*

Multisensor Detector Without Isolator

- pure light optical technology provides enhanced smoke detection and false alarm management
- Internal drift compensation
- Base locking mechanism (grub screw)
- In-built self-test
- XPERT card addressing
- Dual heat sensors
- Approved to UL 268 7th edition and UL 521

S-A4023 / S-A4024

Sounder Beacon Base

- Loop powered sounder and beacon combined with a standard Intelligent mounting base.
- Two volume ranges 55-75 dB(A) and 75-91 dB(A).
- Beacon flash rate of once per second.
- Synchronization of 'alert' and 'evacuate' tones.
- Synchronization of beacon flash.
- Individual or group addressing.
- Unique acoustic and beacon self test.

S-A4001/ S-A5001

Mounting Base

- Mounting Base which is a low insertion force base with stainless steel contacts for the detector terminals.
- Fast and Easy to install.
- XPERT Addressing Cards are supplied with all bases.
- One way fit.
- Locking feature to prevent unauthorized removal.

Note :

* Order base S-A5001
** Order base S-A4001

Pull Stations

S-A4061

Dual Action Polycarbonate Pull Station

- Control Panel Compatibility.
- Key lock.
- Easily resettable.
- LED visible even when Pull Station is closed.
- Redundancy to false alarm.
- Loop powered.

Note: Specifications are subject to change without notice.

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Intelligent Modules

S-A4041

Mini Monitor Module

- Designed to monitor the state of one or more single pole, voltage free contacts connected on a single pair of cables and to report the status to compatible analog control equipment.
- DIN-Rail mountable.
- Designed for use where space is limited.
- Interrupt/non-interrupt in one unit.
- 'Pre-alarm' status available.

S-A4043

Switch Monitor Module

- Switch Monitor Module is designed to monitor the state of one or more single pole, voltage free contacts connected and to report the status to SHIELD compatible analog control equipment.
- Three input states - 'normal', 'trouble', and 'alarm'.
- Visible LED.
- Loop-powered.

S-A4046

Sounder Control Module

- Sounder Control Module monitors and controls the operation of a zone of conventional sounders and reports their status to the control panel.
- Allows sounders to be operated continuously or be pulsed, 1 second on, 1 second off.
- May be synchronized when in pulsed operation.
- Can also be used for public address speakers.
- Loop-powered.

S-A4042

Dual Priority Switch Monitor

- Contains two Priority Switch Monitor Modules on a single plate.
- Loop-powered.
- Fast response time.
- Interrupt facility.

S-A4045

Switch Monitor Input/Output Module

- Switch Monitor Input/Output Module provides a voltage free, single pole, change-over relay output, a single monitored switch input and unmonitored, non-polarized opto-coupled input.
- Reports 'trouble', 'switch open' and 'switch closed' levels.
- Visible LED.
- Loop-powered.

S-A4051

Isolator Module

- Detects wiring short-circuits using patented technology.
- Minimizes disruption from short-circuits.
- Automatic de-isolation on short-circuit removal.
- Up to 20 devices may be installed between isolators.

S-A4047

Mini Priority Switch Monitor Module

- Loop-powered and three input states - 'normal', 'trouble' & 'alarm'.
- Visible LED with remote LED connection option.
- Designed to fit into equipment with limited space.

S-A4049

120V AC Input/Output Module

- Loop powered device which incorporates a monitored input circuit for connection to dry contacts, as well as a 4A rated dry contact relay output.
- Visible LEDs.
- 4A rated dry contact.

Beacons & Sounders

S-A4021 / S-A4022

Open Area Sounder

- Loop-powered.
- Self-test trouble monitoring.
- Two volume settings 92 dB(A) and 100 dB(A).
- Synchronization of tones.
- Individual and group addressing.
- Available in red or white.
- Integral self-check feature
- IP65 rated.

S-A4048

Mini Switch Monitor Module

- Loop-powered and three input states - 'normal', 'trouble', and 'alarm'.
- Visible LED with remote LED connection option.
- Designed to fit into equipment with limited space.

S-A4050

Relay Output Module

- Relay Output Module provides a single 2-pole change over relay.
- Loop-powered.
- Can be placed anywhere on loop.

S-A4025

Open Area Sounder/Beacon

- Loop-powered.
- 15 tone pairs.
- Sounder and beacon are independently configurable.
- Volume and tone settings are independently selectable from the control panel.
- Tones can be used for other purposes in addition to warning of fire, making the device ideal for use in schools etc.
- Soft start option, ideal for hospitals and nursing homes.
- Group and individual control for increased response time.

Note: Specifications are subject to change without notice.

Integrated Audio and Firefighter Telephones

NEO comes ready for complete audio configuration with the addition of an audio module (NX-AMP-80), any control panel or Command Center of this series becomes fully audio capable.

NX-VB

Audio Nodes

- Choose from four models that support either 1,2,4 or 8 amplifiers in a single enclosure.
- Easy and fast configuration.
- Designed to operate as a node on the NEO network.
- Provides increased digital audio signaling during an emergency situation.
- Each amplifier has two independent 40W, 25Vrms outputs.
- Each amplifier contains an independent 16 channel digital message/tone generator.
- Unique amplifier booster/ cascading option.
- Superb sound quality.
- Simple programming via USB.
- Two (2) Class "A" or "B" speaker circuits.
- External AC Power and Trouble LEDs.
- Internal service diagnostic and status indicators.
- Each amplifier may be programed for 1 to 1 backup.
- Powerful CBE logic programming.
- All amplifier audio output signals are synchronized across the NEO network.

NX-V70

70 Volt Converter Module

- Compatible with NEO Audio Booster, Audio Panel, Integrated Audio panels and Command Centers.
- Converts single or dual 25 Vrms audio output to 70 Vrms audio signal.
- All wiring is fully supervised.
- Ideal for retrofit applications.

NX-VBM

Audio Panel

- Fully featured NEO Audio panel.
- Built-in live voice paging microphone.
- Manual message activate switches.
- Two (2) Class "A" or "B" speaker circuits.
- AC power on, amplifier and PSU and Trouble LEDs.
- Internal service diagnostic and status indicators.
- USB interface for message/ tone programming.
- Optional one-to-one amplifier backup capability.
- Three prioritized relay trigger inputs.

Telephone Node

- When operating as independent network node:
  - Separate AC power and battery backup.
  - Does not require NEO Fire Panel to operate.
- When dependent network node:
  - Phones may be wired to any NEO panel or Telephone Node.
- Can function as standalone emergency telephone system.
- LCD annunciation of telephone events.
- Ack, Hold, Scroll 'paging patch' control buttons.

NX-TEL2-MCCS

Command Center Firefighter Phone

- Compatible with NEO Command Centers.
- Standard or push-to-talk handset.
- Class A or B Riser.
- Background noise cancellation module (optional).
- Easy installation.
- Supports up to 500 field phones.

Zone Splitter NX-ZS

- Fits NEO Command Center or Audio Panel.
- Used with Audio Module.
- 2 input/output options.
- 1 input split into 4 outputs (total 40W).
- 2 inputs split in 2x2 outputs (total 80W).

Telephone Riser Module NX-TEL2-RISE

- Each riser supports up to 250 master phones, (two risers NEO).
- Live analog audio, no digitization.
- Up to 5 telephones per riser may be active simultaneously.
- Easy to configure with Dynamix Tools telephone wizard.
- May be located remotely in separate enclosure or integrated into Command Center enclosure.
- Supports Fire Warden remote paging feature.
- Class A or B.

NX-JACK/NX-CJACK

Telephone Jack

- Phone active LED indicator.
- Telephone riser supervision.
- Supervises against opens, shorts and grounds.
- Class A or B configuration.
- Mounts to single gang electrical box.
- Field programmable buzzer and LED indicators.
- Five phone 'party line' communications.
- Slide in label.

NX-Phone Node

Portable Fire Fighter Phone Handset

- Used with any NEO Addressable Telephone Jack.
- Tip and sleeve connection.
- Built-in noise filter.
- Standard or push-to-talk.
- Background noise cancellation module (optional).

Fire Fighter/Warden Page Telephone

- Each master supports up to four secondary telephones and/or jacks.
- Standard or push-to-talk handset.
- Magnetic, keylock or glass break door options.
- Standard or coil cord phone cable.
- Background noise cancellation module (option).
- Integrated 'dial', 'ring', 'busy' and 'hold' tones with 'connected' LED indication.

Note: Specifications are subject to change without notice.

Ceiling / Wall Speakers

Shield's 4" Speakers are designed for broadcasting high quality tone signals and are ideal for alarm signaling in hotels, malls, apartments and other areas where attractive appearance and dependable performance are prime concerns.

These 4" Speakers consist of a loudspeaker, 6 oz. magnet, a low profile constant voltage line matching transformer, a D.C. blocking capacitor and an all steel speaker baffle finished in an off white colour. The 25 and 70 volt transformers are of the matching type and include output power taps of ¼, ½, 1 and 2 watt(s). Tap selection is made by wiring into the appropriate slot on the speaker's terminal block. The Shield speakers install easily using the surface or flush backboxes.

SSPK-C2000

These voice evacuation speakers are specially designed for high quality emergency fire alarm signals and voice communication. These units must be used with Voice Evacuation System approved by Underwriters Laboratories (UL).
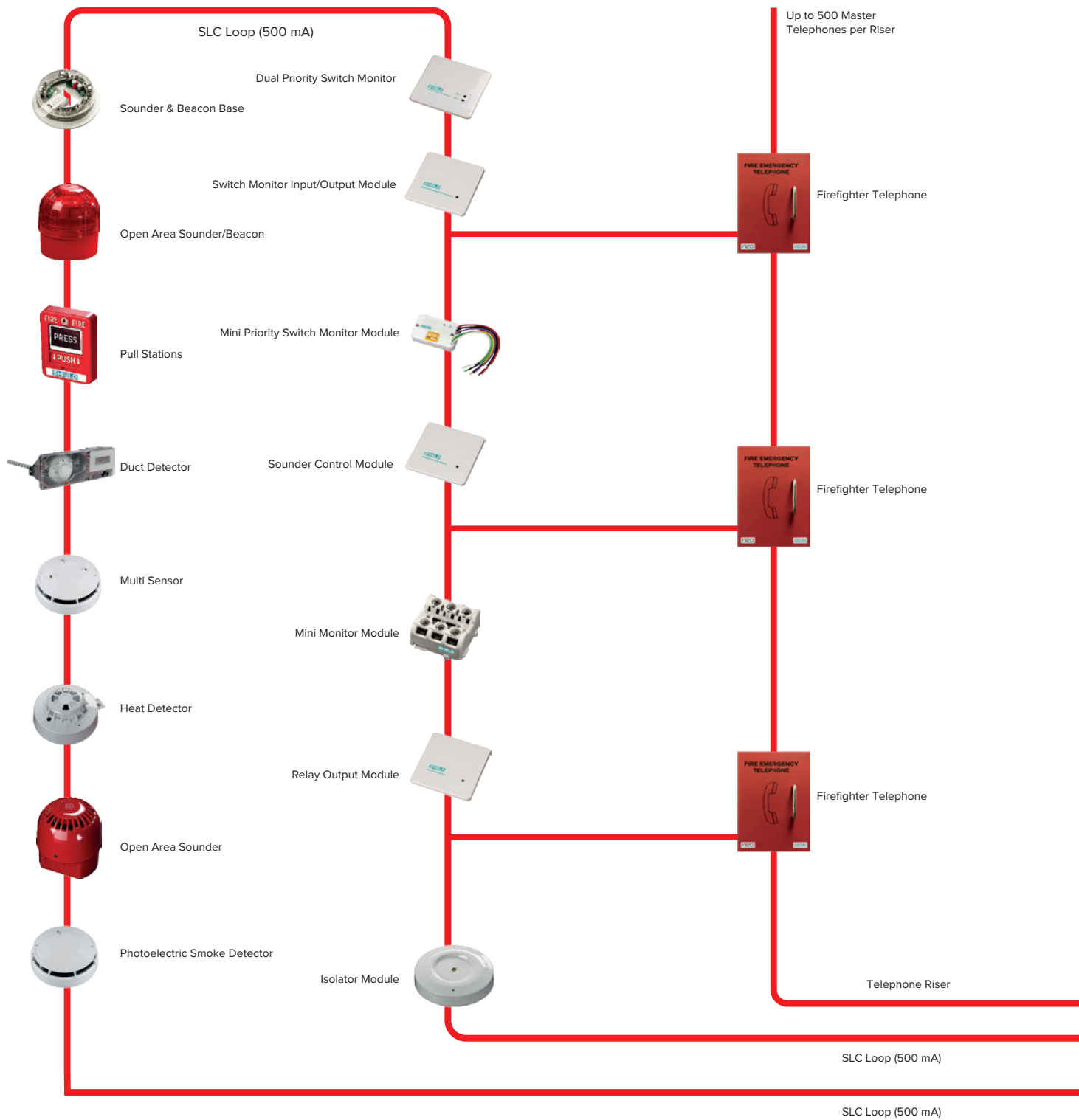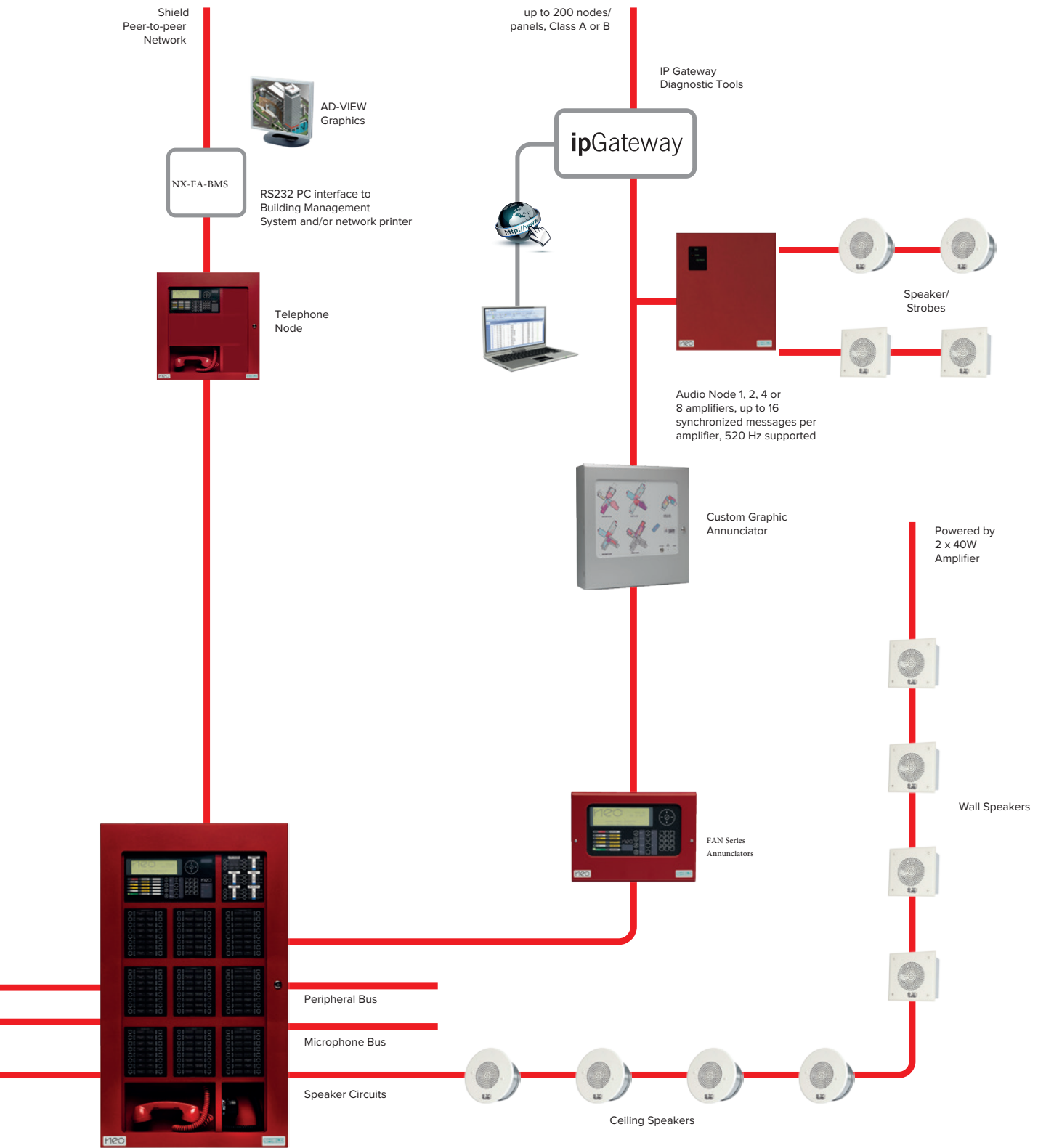
Standard Features

- 25 & 70 volt line matching transformers.
- High dBA output (over 90 dBA at 10 feet @ 2 watts).
- D.C. blocking capacitor for line supervision.
- Terminal block connection for speaker tap/output selection.
- Multiple output taps. Selection for ¼, ½, 1 or 2 watts.
- Moisture resistant.
- Fire retardant cone material.
- Factory assembled and tested.
- Each speaker is equipped with a ground wire.
- Off white speaker baffle.
- Round or square baffles.

SSPK-W2000

Specifications

Model Number	Voltage	SPEAKER dBA 10 FT.				Mounting Configurations		Baffle Shape
		WATT TAP				Flush	Surface	
		¼ WATT	½ WATT	1 WATT	2 WATT			
SSPK-C2000	70	85	86	89	91	SSPK-C2050	N/A	ROUND
SSPK-W2000	70	85	86	89	91	SSPK-W2050	N/A	SQUARE

Note: Specifications are subject to change without notice.

System Schematic

SLC Loop (500 mA)

Up to 500 Master
Telephones per Riser

Sounder & Beacon Base

Dual Priority Switch Monitor

Switch Monitor Input/Output Module

Firefighter Telephone

Open Area Sounder/Beacon

Mini Priority Switch Monitor Module

Pull Stations

Duct Detector

Sounder Control Module

Firefighter Telephone

Multi Sensor

Mini Monitor Module

Heat Detector

Relay Output Module

Firefighter Telephone

Open Area Sounder

Photoelectric Smoke Detector

Isolator Module

Telephone Riser

SLC Loop (500 mA)

SLC Loop (500 mA)

Note: Specifications are subject to change without notice.

Shield Peer-to-peer Network

AD-VIEW Graphics

NX-FA-BMS

RS232 PC interface to Building Management System and/or network printer

Telephone Node

up to 200 nodes/ panels, Class A or B

IP Gateway Diagnostic Tools

ipGateway

http://www.

Speaker/ Strobes

Audio Node 1, 2, 4 or 8 amplifiers, up to 16 synchronized messages per amplifier, 520 Hz supported

Custom Graphic Annunciator

Powered by 2 x 40W Amplifier

FAN Series Annunciators

Wall Speakers

Peripheral Bus

Microphone Bus

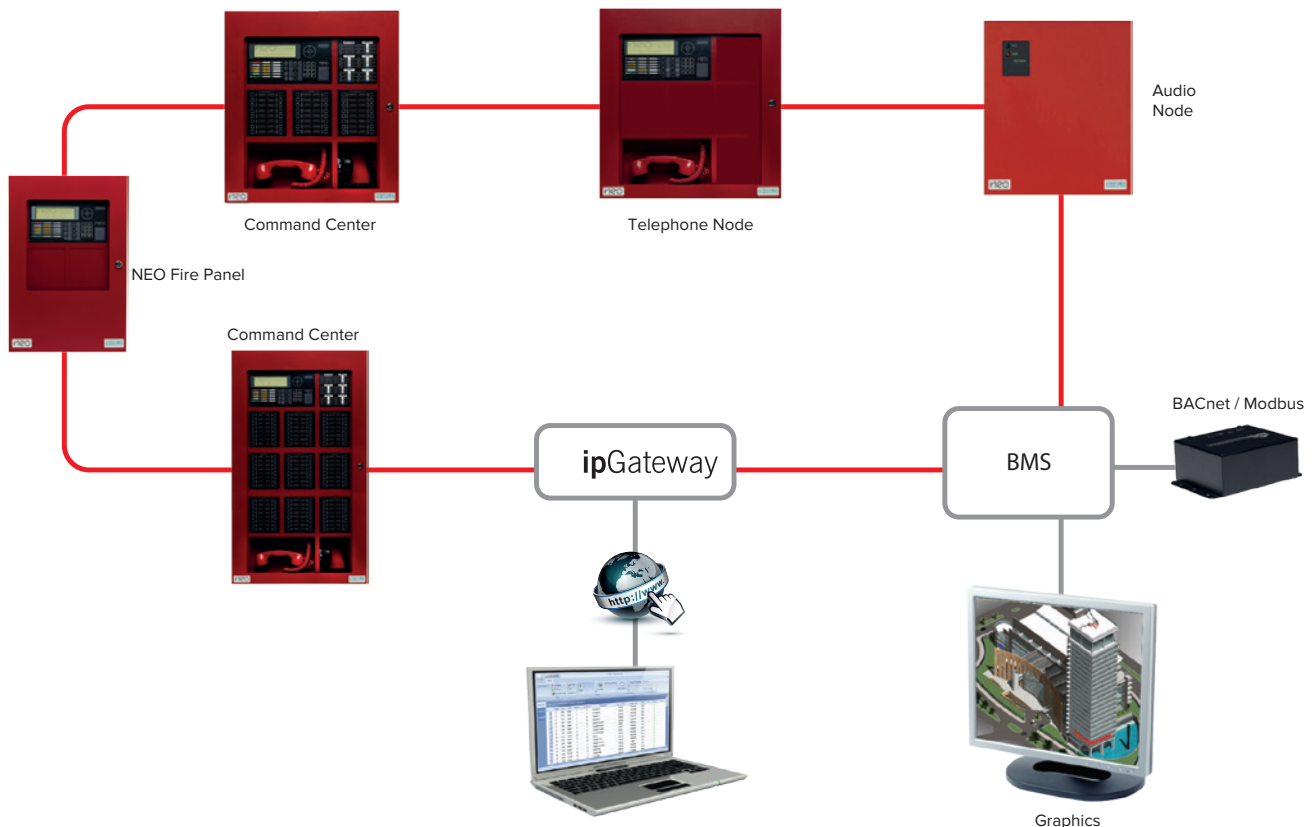Speaker Circuits

Ceiling Speakers

Note: Specifications are subject to change without notice.

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System Network

Neo delivers fast, reliable, peer to peer communications from the smallest two panel network up to a large 200 node network.

Neo network systems are fully scalable to suit virtually any application including "campus" style and "high rise" style configurations. Built-in diagnostics and test facilities make installation and ongoing maintenance simple. Performance in excess of multiple international standards.

- Peer to Peer performance for optimum distributed intelligence.
- Consistent system performance independent of the number of nodes.
- Synchronization of audio and strobes across entire 200 node network.
- Fail Safe operation if loss of master Command Center.
- Supports multiple true peer-to-peer Command Center operations.
- Sectoring feature allows customized operations per node.
- Integrated or Isolated high rise telephone network option.
- Single or multiple DACT, radio and/or City Tie options.

- Offline test option isolates panels from network during testing without fear of false alarms.
- Class B cable wiring - 32 Nodes, 5,000ft maximum.
- Class A cable wiring - 200 Nodes, 5,000ft between nodes, 66,000ft maximum.
- Fiber cable - 16,404ft maximum between nodes.
- ipGateway transmits emails and text messages via a secure internet connection while also allowing viewing of system status and controls capability remotely.
- NX-FA-BMS interfaces to 3rd party Building Automation and Controls solutions via standard BACnet or Modbus communications.

- Supports Mass Notification.
- One configuration tool is required to program NEO panels. Diagnostic features prevent erroneous actions that may be detected prior to on site installation and test.
- Each intelligent audio node contains up to 16 digital messages which are synchronized across the entire 200 node network.
- Loop power technology built into each panel provides tremendous application options.
- Nodes may be customized to suit any application, reducing installation costs and maximizing performance. Nodes may (or may not) include SLC loops, displays, microphones, telephones, amplifiers, power supplies, switch modules, and any Neo peripheral device.

Command Center

Telephone Node

Audio Node

NEO Fire Panel

Command Center

Command Center

ipGateway

BMS

BACnet / Modbus

Graphics

Note: Specifications are subject to change without notice.

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CAT.NO.SH/FA-NEO /06/22