ALARMAS
Sistemas Electrónicos de Seguridad SRL

1.0 – GENERAL

AAA Sistemas Electrónicos de Seguridad SRL se complace en presentar esta propuesta, reafirmando nuestro compromiso con la provisión de soluciones integrales en seguridad electrónica, detección y supresión de incendios. Con más de 35 años de trayectoria en el mercado dominicano, hemos consolidado una posición de liderazgo basada en la calidad, la innovación y la excelencia operativa.

Somos pioneros en la implementación de tecnologías avanzadas para la protección de instalaciones comerciales, industriales e institucionales. Todos los equipos que suministramos cuentan con certificaciones internacionales y cumplen con los estándares más recientes de la industria. Nuestro enfoque se centra en diseñar soluciones a la medida, integrando plataformas de última generación que garantizan confiabilidad, eficiencia y continuidad operativa.

Nuestro equipo técnico y de ingeniería posee formación nacional e internacional, y somos miembros activos de la National Fire Protection Association (NFPA) y de la National Burglar & Fire Alarm Association (NBFAA). Aplicamos rigurosamente las normas, buenas prácticas y lineamientos establecidos por estas organizaciones en cada proyecto que ejecutamos.

En AAA Sistemas promovemos la participación activa del cliente en la selección de las tecnologías más adecuadas, asegurando que cada solución responda de manera precisa a sus necesidades de seguridad, automatización y protección contra incendios.

2.0 – CAPACIDAD TÉCNICA

2.1 Capacidad Operativa

AAA Sistemas cuenta con los recursos, herramientas y equipos necesarios para ejecutar proyectos de seguridad electrónica y sistemas contra incendios bajo los más altos estándares de calidad, seguridad y eficiencia. Entre nuestros recursos operativos se destacan:

- Taladros para metal y concreto
- Escaleras extensibles
- Escaleras tipo tijera de 6, 8, 10 y 12 pies
- Flota de vehículos tipo pick-up y furgonetas cerradas
- Pinzas y herramientas de corte aisladas
- Martillos y destornilladores aislados
- Testers y voltímetros
- Generador de tonos

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- Extensiones eléctricas
- Planta eléctrica
- Planta de soldar
- Doblatubos de varios diámetros
- Bomba hidrostática para pruebas de presión y certificación
- Terrajas manuales y eléctricas
- Trípode
- Ranuradoras eléctricas
- Lámparas de trabajo nocturno
- 14 técnicos especializados en sistemas contra incendios
- 2 supervisores de proyectos
- Baúles de herramientas
- Material gastable general
- Extintores para trabajos en sitio
- Flotilla operativa de 22 vehículos

2.2 Recursos Humanos

Equipos de Protección Personal (EPP)

Garantizamos el cumplimiento de las normas de seguridad industrial mediante la provisión de:

- Arnés de seguridad
- Cascos
- Líneas de vida
- Chalecos fluorescentes
- Botas de seguridad
- Herramientas aisladas
- Gafas de protección
- Extintores

Entrenamientos y Certificaciones del Personal

Nuestro personal técnico y de supervisión cuenta con formación especializada en:

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- NFPA – Congreso de Protección Contra Incendios
- ALAS – Instalación de Sistemas Contra Incendios
- FIKE – Carbon Dioxide and Fire Extinguishing Design
- NFPA – Fire Alarm System Workshop
- NFPA – Automatic Sprinkler System Workshop
- NFPA – Membresía activa
- NOTIFIER – Instalación y programación de sistemas contra incendios

2.3 Certificaciones

FENWAL
Protection Systems

Certificate of Completion

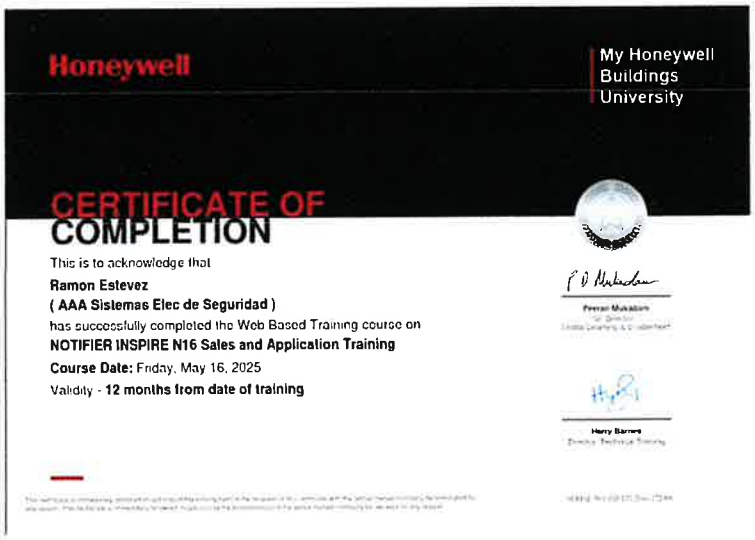
This is to certify that
Juan Carlos Perez
An employee of
AAA SISTEMAS DE SEGURIDAD, SANTO DOMINGO, , DO
an AUTHORIZED FENWAL DISTRIBUTOR

has successfully completed a certification training session covering design, installation, operation and maintenance and has demonstrated a practical knowledge of following Fenwal systems products:

Clean Agent Systems (Int'l)

Chris M. Hopwood
Chris M. Hopwood, Technical Training Manager

Credit
Issue Date: 07/26/2024
Expiration Date: 07/26/2027
Certificate No: 53470



Honeywell

My Honeywell
Buildings
University

CERTIFICATE OF
COMPLETION

This is to acknowledge that
Ramon Estevez
(AAA Sistemas Elec de Seguridad)
has successfully completed the Web Based Training course on
NOTIFIER INSPIRE N16 Sales and Application Training
Course Date: Friday, May 16, 2025
Validity - **12 months from date of training**

Fenwal Mukadam
Director

Harry Barnes
Director, Technical Training

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Santo Domingo, D.N.
Rep. Dom.

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NATIONAL FIRE PROTECTION ASSOCIATION

CERTIFICADO DE FINALIZACIÓN

DE CAPACITACIÓN

Este certificado se presenta a

Winston Liriano

2022 NFPA 72®, Código Nacional de Alarmas de Incendio y Señalización

ID #: 2144152968
Fecha de Finalización: 06/21/2025
CEUs: 2,1

IACET

NATIONAL FIRE PROTECTION ASSOCIATION

CERTIFICADO DE FINALIZACIÓN

DE CAPACITACIÓN

Este certificado se presenta a

Winston Liriano

2015 NFPA 2001 & NFPA 750, Sistemas de Extinción Especiales

ID #: 2144162008
Fecha de Finalización: 09/03/2025
CEUs: 1,6

IACET

Honeywell

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CERTIFICATE OF PARTICIPATION

This is to acknowledge that
Juan Carlos Perez
(AAA Sistemas Electronico de Seguridad)
has attended the training course on
Notifier ONYX University - Complementary courses - Latin America
Course Date: Tuesday, January 28, 2025
Validity - **36 months from date of training**

Peeran Mukadam
Sr Director
Global Learning & Enablement

Harry Barnes
Director Technical Training

Certificate of Factory Training

JUAN TRINIDAD
AAA Sistemas Electronicos De Seguridad SRL

NOTIFIER UL RECERTIFICATION

Issued:
Expires:
Certificate #:
Continuing Professional Development Credits:

Peeran Mukadam
Sr Director
Global Learning & Enablement

NOTIFIER
by Honeywell

Harry Barnes
Director Technical Training

AAA SISTEMAS ELECTRONICOS DE SEGURIDAD, S.R.L.
Santo Domingo, D.N.
Rep. Dom.

AAA Sistemas Electrónicos de Seguridad, S.R.L. **RNC-101-56374-5**
C/ 30 de marzo #56 Gazcue Santo Domingo, Rep. Dom.
Telefs: 809-985-1000 E-mail: venta@alarmas-aaa.com

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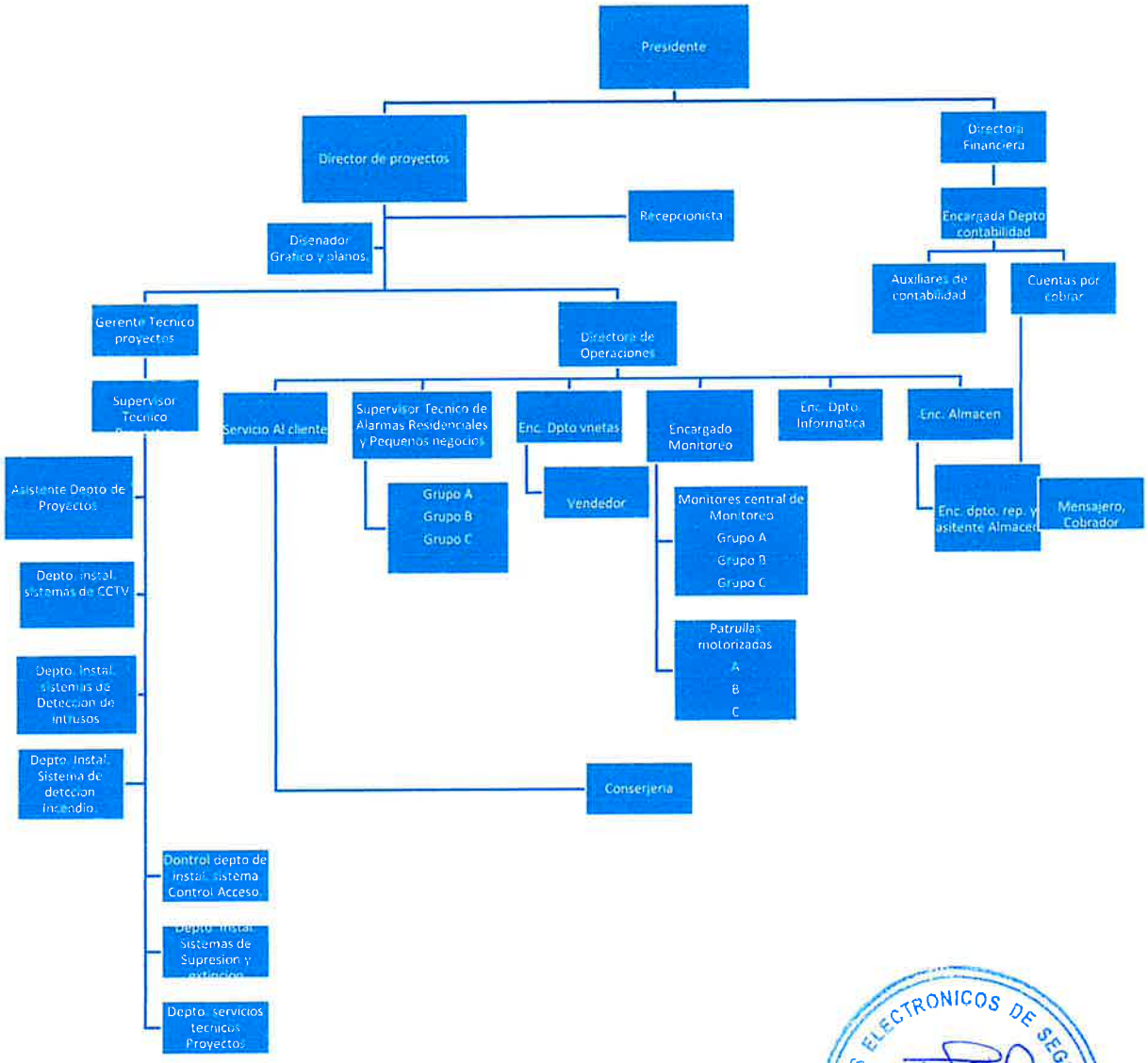
2.4 Organigrama del Equipo de Proyecto



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3.0 – ALCANCE Y OBJETIVOS DEL PROYECTO

El presente proyecto tiene como objetivo suministrar, instalar, programar, integrar y poner en marcha un sistema de detección y alarma contra incendios inteligente, completamente direccionable, con notificación audible/visual, anunciación remota, integración con la plataforma HikCentral y un sistema de supresión por agente limpio para el área de almacén del edificio de la JCE – Centro de Servicios Extranjería / Cédulas para Extranjeros Residentes.

Nuestra solución está diseñada para garantizar una protección integral, cumpliendo con los estándares internacionales aplicables (NFPA 70, NFPA 72, NFPA 2001) y las mejores prácticas de ingeniería, instalación y puesta en servicio.

3.1 Sistema de Detección y Alarma Contra Incendios

Suministraremos e instalaremos un sistema direccionable inteligente que incluye detectores, módulos, estaciones manuales, panel de control, anunciadores remotos y dispositivos de notificación audible/visual.

El alcance contempla:

- Programación completa del sistema, incluyendo configuración de lazos, puntos, zonas, lógicas de control y secuencias de evacuación.
- Integración de todos los dispositivos conforme a NFPA 72, NEC y normativas locales aplicables.
- Pruebas funcionales, verificación de comunicación, supervisión y operación de todos los elementos instalados.

3.2 Integración y Supervisión mediante BACnet/IP

El sistema será integrado con la plataforma HikCentral Professional mediante el protocolo BACnet/IP, permitiendo una supervisión centralizada, segura y estandarizada.

El alcance incluye:

- Instalación y configuración del **Gateway Notifier BACNET CGW (CLSS Gateway Feature)**, enlazado al bus NOTI•FIRE•NET y conectado a la red del cliente mediante RJ-45.
- Activación y configuración de la licencia **HikCentral 401000558 – BACnet/Module** para descubrimiento, mapeo y supervisión de puntos.
- Validación de la integración conforme a lineamientos de Hikvision y compatibilidad certificada del Gateway Notifier.

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- Pruebas de latencia, confiabilidad y recepción de eventos en tiempo real (alarmas, supervisiones y fallos).

3.3 Notificación y Evacuación

Se instalarán dispositivos de notificación audible/visual System Sensor L Series P2RL-SP, sincronizados mediante módulos MDL3, garantizando uniformidad visual y cumplimiento con NFPA 72.

El alcance incluye:

- Configuración de candela seleccionable, tonos según los requerimientos del proyecto.
- Pruebas de sincronización, visibilidad y audibilidad conforme a NFPA 72.
- Verificación de cobertura y cumplimiento de criterios de evacuación en áreas ocupadas.

3.4 Sistema de Supresión por Agente Limpio

Se suministrará e instalará un sistema de supresión ECS 500 (Fluoro-K™ / NOVEC™ 1230) para el área de almacén (≈ 90 m^3), diseñado conforme a NFPA 2001 y utilizando software oficial del fabricante.

El alcance contempla:

- Diseño, cálculos de concentración, tuberías, pérdidas de presión y tiempos de descarga.
- Integración con el panel de incendio para disparo eléctrico, disparo manual, abort, señalización y supervisión.
- Pruebas funcionales, verificación de interlocks y, si aplica, prueba de estanqueidad (door fan test).
- Señalización de seguridad, enclavamientos de puerta y avisos previos a descarga.

3.5 Documentación Técnica y Entregables

Como parte del proyecto, entregaremos:

- Planos As Built del sistema instalado.
- Manuales de operación y mantenimiento.
- Lista de puntos (point list) y matriz de pruebas (cause & effect).
- Certificados, fichas técnicas y documentación del fabricante.

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- Capacitación al personal designado en operación, mantenimiento básico y procedimientos de emergencia.

4.0 – COMPONENTES DEL SISTEMA

A continuación, se describen los componentes principales que conforman el sistema de detección, alarma, notificación e integración propuesto. Cada elemento ha sido seleccionado por su desempeño comprobado, compatibilidad con la plataforma NOTIFIER y cumplimiento con los estándares internacionales aplicables.

4.1 Panel de Incendio – NOTIFIER INSPIRE N16E

El panel de control de incendios NOTIFIER INSPIRE N16E constituye el núcleo del sistema. Es una plataforma escalable, diseñada para optimizar la instalación, operación y mantenimiento, incorporando tecnologías avanzadas que mejoran la eficiencia del técnico y la confiabilidad del sistema además cuentan con una pantalla táctil a color intuitiva de 10"

El N16E se suministra en gabinete estándar preconfigurado e incluye un módulo de línea de señalización (SLM) con capacidad para 318 dispositivos direccionables inteligentes. Puede ampliarse mediante la incorporación de hasta dos SLM adicionales, alcanzando una capacidad total de 954 dispositivos distribuidos SLC.

El sistema admite integración en red mediante NOTI•FIRE•NET, conectividad con servicios en la nube a través de CLSS Gateway, y compatibilidad con estaciones de trabajo, aplicaciones móviles y plataformas de supervisión remota.

Características y Beneficios Principales

- Pantalla táctil a color con interfaz gráfica intuitiva.
- Tecnología de auto prueba de detectores (Self-Test).
- Prueba con imán para dispositivos A/V.
- Capacidad de red hasta 200 nodos mediante NOTI•FIRE•NET.
- Compatibilidad con Connected Life Safety Services (CLSS).
- Múltiples opciones de comunicadores fuera del sitio.
- Compatibilidad con módulos de liberación (FCM-1 REL) y sistemas de agente limpio.
- Soporte para dispositivos VESDA direccionables.

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- Certificación sísmica y cumplimiento ULC.
- Funciones programables de DRILL y PAS.
- Soporte para Display and Control Center (DCC).

El N16E garantiza una operación robusta, segura y totalmente alineada con NFPA 72.

4.2 Integración con HikCentral mediante BACnet/IP

El sistema de detección será integrado con la plataforma HikCentral Professional utilizando el protocolo BACnet/IP, permitiendo supervisión centralizada, visualización de eventos en tiempo real y gestión operativa desde el centro de control del cliente.

Gateway de Integración

Se utilizará el Notifier BACNET CGW (CLSS Gateway Feature), el cual proporciona:

- Interfaz NOTI•FIRE•NET ↔ BACnet/IP.
- Representación de dispositivos, estados y eventos como objetos BACnet estándar.
- Conexión a la red del cliente mediante RJ-45.
- Compatibilidad certificada con plataformas de terceros, incluyendo HikCentral.
- Configuración mediante interfaz web segura.

Esta integración garantiza interoperabilidad, estabilidad y cumplimiento con los lineamientos de Hikvision y Honeywell.

4.3 Anunciador Remoto con Pantalla Táctil de 5”

Se instalará un (1) **anunciador remoto táctil de 5 pulgadas**, diseñado para proporcionar una interfaz adicional de operación y supervisión del sistema desde un punto estratégico del edificio.

El anunciador permite:

- Visualización en tiempo real de alarmas, averías, supervisiones y estados del sistema.
- Navegación intuitiva mediante interfaz táctil.
- Indicadores visuales y menús simplificados.
- Comunicación totalmente compatible con el panel N16E.

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Su ubicación será definida en coordinación con el cliente para garantizar accesibilidad al personal autorizado.

4.4 Detectores Fotoeléctricos de Humo – NOTIFIER FSP-951 (77 uds.)

Se suministrarán e instalarán setenta y siete (77) detectores fotoeléctricos de humo modelo FSP-951, diseñados para detección temprana de partículas de combustión mediante tecnología óptica de dispersión de luz.

Características principales

- Tecnología fotoeléctrica de alta sensibilidad.
- Perfil bajo para montaje en techo.
- LED indicador de estado y activación.
- Cámara óptica diseñada para minimizar entrada de polvo.
- Calibración de fábrica para estabilidad y reducción de falsas alarmas.
- Cumplimiento con UL 268 (7ª edición).

Estos detectores ofrecen desempeño confiable en incendios de desarrollo lento o con presencia de humo visible.

4.5 Detectores Automáticos de Calor – NOTIFIER FST-951 (13 uds.)

Se instalarán trece (13) detectores automáticos de calor modelo FST-951, los cuales operan mediante razón de aumento (Rate-of-Rise) y temperatura fija.

Características principales

- Temperatura fija:
  - 135 °F para áreas ≤ 100 °F.
  - 200 °F para áreas ≤ 150 °F.
- Elemento Rate-of-Rise activado por incrementos > 15 °F/min.
- Perfil bajo para montaje en techo.
- Indicador visual de activación.
- Cámara de aire con diafragma metálico resistente a humedad.

Estos dispositivos son ideales para áreas donde el humo no es un indicador confiable.

4.6 Bases para Detectores – NOTIFIER B300-6

Las bases **B300-6** ofrecen:

- Diámetro de 6.1".
- Terminales SEMS para conexión segura.
- Sellado anti contrapresión.
- Montaje en superficie o caja eléctrica.

4.7 Módulos del Sistema

1. Módulos Aisladores de Cortocircuito – NOTIFIER ISO-X (5 uds.)

Se instalarán **cinco (5)** módulos ISO-X para proteger el lazo SLC ante fallas eléctricas.

Funciones

- Aislamiento automático de la sección afectada por cortocircuito.
- Restablecimiento automático al corregirse la falla.
- Indicador LED de estado.
- Instalación en caja estándar.

Garantizan continuidad operativa del lazo y cumplimiento con NFPA 72.

2. Módulos de Control – NOTIFIER FCM-1 (6 uds.)

Se instalarán **seis (6)** módulos FCM-1 para activación y supervisión de circuitos NAC y otros dispositivos controlados.

Funciones

- Control independiente de sirenas, estrobos y dispositivos combinados.
- Salida supervisada compatible con protocolos direccionables NOTIFIER.
- Indicador LED de estado.
- Instalación en caja estándar.

4.8 Dispositivos de Notificación – P2RL-SP (30 uds.) y Módulos MDL3 (5 uds.)

Se instalarán treinta (30) dispositivos de notificación audible/visual System Sensor P2RL-SP, montados en pared y ubicados según planos del proyecto.

Características principales

- Candela seleccionable: 15 a 185 cd.
- Montaje en pared, color rojo, leyenda "FUEGO".
- Tecnología de distribución uniforme de luz y sonido.
- Sistema plug-in con shorting spring para pre-pruebas de cableado.
- Cumplimiento con NFPA 72.

Para garantizar sincronización uniforme de estrobos, se instalarán cinco (5) módulos MDL3, compatibles con la serie L.

5.0 – SISTEMA DE SUPRESIÓN DE INCENDIOS CON AGENTE LIMPIO

Se instalará un sistema de supresión de incendios por agente limpio para la protección del área de almacén, con un volumen aproximado de 90 m^3 (30 m^2 × 3 m de altura). La solución propuesta utiliza el agente 3M™ Novec™ 1230, implementado mediante el sistema Kidde Fenwall Fire Systems ECS 500, reconocido por su alta eficiencia, seguridad para ocupantes y mínima afectación a los equipos protegidos.

El agente Novec™ 1230 es un líquido transparente, incoloro y prácticamente inodoro, ideal para áreas donde la limpieza posterior es crítica, donde se requiere un agente no conductor y donde la continuidad operativa es prioritaria. Su rápida extinción y bajo impacto ambiental lo convierten en la opción preferida para espacios de misión crítica.

5.1 Componentes del Sistema

El sistema estará compuesto por los siguientes elementos principales:

1. Componentes de Almacenamiento del Agente

- Cilindro contenedor del agente Novec™ 1230.
- Soporte estructural certificado para montaje seguro.
- Válvula de descarga compatible con actuador eléctrico y manual.

Estos componentes garantizan almacenamiento seguro, supervisión continua y descarga confiable del agente.

2. Componentes de Distribución del Agente

- Boquillas de descarga diseñadas según cálculos hidráulicos.

- Sistema de tuberías dimensionado conforme a NFPA 2001 y software del fabricante.
- Accesorios hidráulicos certificados.

El diseño asegura una distribución uniforme del agente en el área protegida, cumpliendo con los tiempos de descarga requeridos.

3. Accesorios del Sistema

Incluyen los elementos necesarios para la supervisión y operación segura:

- Conexiones y accesorios hidráulicos.
- Manómetro para verificación de presión.
- Actuador eléctrico de válvula.
- Actuador manual de emergencia.

4. Componentes Complementarios

- Presostato de descarga.
- Válvula de retención del colector (para configuraciones con múltiples cilindros).

Estos elementos permiten supervisión adicional y flexibilidad en configuraciones ampliadas.

5.2 Integración con el Panel de Incendio – NOTIFIER N16E

El sistema de supresión será supervisado y controlado por el panel NOTIFIER N16E, el cual gestionará:

- Estado del actuador eléctrico.
- Detectores automáticos asociados al sistema de supresión.
- Dispositivos de advertencia (sirenas y estrobos).
- Disparos manuales.
- Dispositivos de aborto (abort switch).

Todos los dispositivos eléctricos y electrónicos estarán integrados al panel para garantizar operación segura, confiable y conforme a NFPA 72 y NFPA 2001.

5.3 Dispositivos de Detección y Alarma

El sistema contará con:

- Detectores automáticos (humo/térmico) para activación del sistema.
- Estaciones manuales de disparo.
- Dispositivo de aborto para inhibir la descarga cuando sea necesario.

Notificación Audible y Visual

Se instalarán dos (2) sirenas con luz estroboscópica blancas modelo P2WLED:

- Una en la entrada del almacén.
- Una dentro del almacén.

El control de estos dispositivos se realizará mediante dos (2) módulos FCM-1, garantizando supervisión y activación independiente.

5.4 Programación y Funciones de Control

El sistema incluirá:

- **Retraso de descarga programado** (ej. 30 segundos) con cuenta regresiva local.
- **Abort sostenido**, permitiendo inhibir la descarga mientras el botón permanezca presionado.
- **Módulo FRM (relay)** para:
  - Señal de cierre de HVAC / dampers.
  - Corte selectivo de fuerza / UPS.

Señalización de Seguridad

Se instalarán:

- Avisos previos a descarga.
- Enclavamientos de puerta.
- Letreros "NO ENTRE – AGENTE LIMPIO".

Estas medidas garantizan seguridad del personal y cumplimiento normativo.

5.5 Ingeniería y Cálculos

Los cálculos del sistema serán desarrollados conforme a NFPA 2001 y utilizando el software oficial del fabricante. El paquete de ingeniería incluirá:

- Cálculo de concentración del agente.
- Cálculo de tuberías y pérdidas de presión.
- Tiempos de descarga.
- Reporte de diseño completo.
- Planos isométricos del sistema.
- Documentación para aprobación de Kidde Fire Systems.

6.0 – LUCES DE EMERGENCIA

Como parte del sistema de seguridad y evacuación del edificio, se suministrarán e instalarán treinta y cinco (35) luces de emergencia autónomas, diseñadas para proporcionar iluminación continua durante eventos de pérdida de energía eléctrica o situaciones de evacuación.

Cada unidad cuenta con una autonomía mínima de 90 minutos, conforme a los requisitos de seguridad establecidos para rutas de evacuación y áreas críticas. Estas luminarias están equipadas con batería interna recargable, indicadores de estado y sistema automático de transferencia, garantizando operación inmediata ante fallas de suministro.

Características principales

- Autonomía mínima: 90 minutos.
- Batería interna sellada, libre de mantenimiento.
- Encendido automático ante pérdida de energía.
- Indicadores LED de carga y estado operativo.
- Montaje en pared o techo según diseño arquitectónico.
- Cumplimiento con normas de seguridad aplicables para iluminación de emergencia.

Ubicación y Criterios de Instalación

Las luces de emergencia serán instaladas en:

- Rutas de evacuación.
- Pasillos principales.
- Entradas y salidas del edificio.
- Áreas estratégicas definidas en los planos del proyecto.

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7.0 – TUBERÍA, CANALIZACIONES, CABLEADO Y CRITERIOS DE DISEÑO

Todas las canalizaciones, tuberías y cableados del sistema serán instalados conforme a las normas de certificación NEC (NFPA 70), NFPA 72, y las mejores prácticas reconocidas para sistemas de seguridad electrónica y detección de incendios. Nuestro enfoque garantiza instalaciones seguras, ordenadas, duraderas y plenamente compatibles con los equipos suministrados.

7.1 Tubería y Canalizaciones

Las canalizaciones serán realizadas utilizando tubería metálica, seleccionada según el tipo de señal, el entorno y los requerimientos del proyecto. Se emplearán los siguientes tipos de tubería:

Tubería Flexible BX (Acero Galvanizado)

Se utilizará entre los cajetines y los dispositivos, o en puntos donde se requiera flexibilidad para facilitar la instalación y el mantenimiento.

Criterios Generales de Instalación

- Las canalizaciones y cableados se instalarán separados por tipo de señal, evitando interferencias electromagnéticas.
- Se evitará ubicar tuberías cerca de fuentes de interferencia como cables de potencia, pararrayos o equipos de alta corriente.
- Cuando sea necesario cruzar líneas de potencia, el cruce se realizará perpendicularmente y manteniendo la mayor distancia posible.
- Las tuberías instaladas a la vista serán fijadas mediante abrazaderas metálicas de calidad certificada.
- La distancia entre abrazaderas será:
    - Máximo: 2.5 metros
    - Mínimo: 15 cm de acoplamientos y cajas
- Los soportes de canalizaciones de seguridad serán exclusivos, sin permitir que otros sistemas se cuelguen de ellos.

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- En ductos verticales, los tubos estarán anclados en cada nivel, utilizando abrazaderas en "U" fijadas a canales estructurales.
- Se instalarán todas las cajas y cajetines necesarios para completar la canalización de forma segura y conforme a planos.

7.2 Cableado del Sistema

El cableado será realizado utilizando conductores aprobados, certificados y compatibles con los equipos del fabricante. Todas las conexiones se realizarán exclusivamente dentro de cajetines, utilizando regletas de terminales resistentes a la corrosión.

Requisitos Generales

- Las uniones y conectores serán cubiertos con material aislante adecuado.
- En cada cajetín se dejará un mínimo de 15 cm de conductor libre para facilitar conexiones y mantenimiento.
- Se utilizarán conductores aprobados conforme a las especificaciones del fabricante en cuanto a calibre, tipo y certificación.

Tipos de Cable

- Cable SLC (lazo de detección):
  - 16–18 AWG
  - Tipo FPLR (plenum/riser según ruta)
  - Certificación UL
- Cable NAC (*notificación*):
  - 16-18 AWG
  - Dimensionado según caída de tensión
- Canalización:
  - Tubería metálica MT y accesorios metálicos
  - Sellos corta fuego donde corresponda
- Separación de circuitos:
  - Baja tensión separada de alta potencia conforme a NEC/NFPA 70

- Respeto de radios de curvatura y percentiles de llenado

7.3 Criterios de Diseño del Sistema

El diseño del sistema se realizará conforme a NFPA 72, considerando las características arquitectónicas del edificio y los requerimientos operativos del cliente.

Detectores

- Ubicación conforme a NFPA 72, considerando:
  - Obstáculos
  - Retornos de aire
  - Techos especiales
  - Alturas y geometrías del recinto
- Cobertura adecuada según tipo de detector (humo/térmico).

Audibilidad y Notificación

- Tonos temporales T3 para señal de incendio.
- Verificación de niveles de audibilidad en áreas ocupadas.
- Selección de candela según geometría del espacio y niveles de iluminación ambiental (tablas L-Series).
- Sincronización de estrobos para evitar flicker antagónico.
- Compatibilidad garantizada con System Sensor mediante el panel N16E.

Circuitos NAC

- Selección de candela y tono según requerimientos del área.
- Sincronización mediante módulos MDL3.
- Cálculo de caída de tensión conforme a carga total del circuito.

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8.0 – PROGRAMACIÓN, PRUEBAS Y PUESTA EN MARCHA (FAT / SAT)

El proceso de programación, pruebas y puesta en marcha se ejecutará conforme a las mejores prácticas de la industria y a los lineamientos establecidos por NFPA 72, garantizando que todos los dispositivos, módulos, lazos, circuitos y funciones de control operen de manera correcta, segura y verificable.

Nuestro enfoque incluye pruebas en taller (FAT), pruebas en sitio (SAT), validación de integración, verificación de notificación y confirmación de todos los eventos críticos del sistema.

8.1 Programación del Panel NOTIFIER N16E

La programación del sistema se realizará utilizando herramientas oficiales de NOTIFIER, asegurando compatibilidad total con los dispositivos instalados y con la lógica operativa requerida por el cliente.

Alcance de la Programación

- Carga completa de la base de datos del sistema, incluyendo:
  - Nombres descriptivos de puntos
  - Ubicaciones
  - Tipos de dispositivo
  - Zonas y grupos lógicos
- Configuración de sensibilidades de detectores según el entorno protegido.
- Definición de lógicas de control, dependencias y secuencias de evacuación.
- Programación de patrones de notificación:
  - Temp 3 para señal de incendio
  - Selective Silence cuando aplique
- Configuración de supervisión, fallos, restauraciones y eventos especiales.
- Verificación de comunicación en todos los lazos SLC y circuitos NAC.

8.2 Integración con HikCentral (BACnet/IP)

La integración con la plataforma **HikCentral Professional** será validada mediante pruebas de comunicación, mapeo de puntos y verificación de eventos en tiempo real.

Pruebas de Integración

- Descubrimiento de puntos mediante la licencia BACnet/Module.
- Validación de estados:
  - Alarm
  - Supervisory

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- Trouble
- Restorations

- Pruebas de latencia y confiabilidad en la transmisión de eventos.
- Confirmación de que los objetos BACnet representan correctamente los dispositivos del sistema.
- Validación de la interoperabilidad entre el Gateway BACnet CGW y la plataforma HikCentral.

8.3 Pruebas FAT (Factory Acceptance Test)

Las pruebas FAT se realizarán en taller antes de la instalación en sitio, con el objetivo de validar la programación, la base de datos y la lógica del sistema.

Alcance FAT

- Revisión completa de la base de datos del panel.
- Simulación de puntos (humo, calor, módulos, estaciones manuales).
- Verificación de lógicas de control y secuencias de notificación.
- Pruebas de integración mediante simulación (table-top).
- Validación de comunicación entre panel, módulos y anunciadores.

Estas pruebas permiten detectar y corregir cualquier inconsistencia antes de la instalación en campo.

8.4 Pruebas SAT (Site Acceptance Test)

Las pruebas SAT se realizarán en sitio, verificando el 100% de los dispositivos instalados y confirmando el funcionamiento integral del sistema.

Alcance SAT

- Pruebas funcionales de todos los detectores (humo y térmicos).
- Pruebas de estaciones manuales.
- Activación y supervisión de módulos (control, monitoreo, aisladores).
- Verificación de notificación audible y visual.
- Pruebas de fallos, restauraciones y supervisiones.

- Confirmación de comunicación en lazos SLC y circuitos NAC.
- Validación de integración con HikCentral en condiciones reales.
- Generación del Reporte de Pruebas Funcionales, firmado por ambas partes.

8.5 Pruebas del Sistema de Supresión

Las pruebas del sistema de supresión se realizarán sin descarga del agente, conforme a NFPA 2001 y a los lineamientos del fabricante.

Incluye:

- Verificación de interlocks (HVAC, dampers, UPS).
- Prueba del dispositivo de abort.
- Prueba de estaciones manuales de disparo.
- Confirmación de señalización previa a descarga.
- Verificación del presostato de baja presión y presostato de descarga.
- Confirmación de comunicación con el panel N16E.

9.0 – ENTREGABLES, DOCUMENTACIÓN Y CAPACITACIÓN

Como parte integral del proyecto, AAA Sistemas entregará toda la documentación técnica, planos, registros y materiales necesarios para garantizar la correcta operación, mantenimiento y trazabilidad del sistema instalado. Todos los entregables serán preparados conforme a las mejores prácticas de la industria y a los lineamientos establecidos por **NFPA 72**, **NFPA 2001**, el fabricante y los requisitos del cliente.

9.1 Planos y Documentación As-Built

Al finalizar la instalación y puesta en marcha, se entregarán los planos As Built, reflejando con precisión la instalación final ejecutada. Estos incluirán:

- Planos arquitectónicos con ubicación de dispositivos.
- Planos de canalización y rutas de tubería.
- Diagramas unifilares del sistema.
- Diagramas de lazos SLC y NAC.
- Planos isométricos del sistema de supresión.

Todos los planos serán entregados en formato PDF, según los requerimientos del cliente.

9.2 Listas de Materiales y Matrices Técnicas

Se entregarán los siguientes documentos técnicos:

- **Lista de materiales (BOM)** completa, con cantidades, modelos y descripciones.
- **Matriz de puntos (Point List)** en formato CSV/Excel, incluyendo:
  - Número de punto
  - Tipo de dispositivo
  - Ubicación
  - Zona / Grupo
  - Descripción operativa
- **Matriz de pruebas (Cause & Effect)** detallando las secuencias de operación, interlocks, notificación y lógica de control.

Estos documentos permiten trazabilidad, auditoría y mantenimiento eficiente del sistema.

9.3 Manuales y Fichas Técnicas

Se entregará un paquete completo de documentación del fabricante, incluyendo:

- Manuales de instalación, operación y mantenimiento del panel N16E.
- Fichas técnicas de detectores FSP-951, FST-951 y bases B300-6.
- Fichas técnicas de dispositivos de notificación P2RL-SP y módulos MDL3.
- Documentación del Gateway BACnet CGW.
- Manuales del sistema de supresión ECS 500 / Novec 1230.

Toda la documentación será entregada en formato digital, organizada por carpetas y clasificada por sistema.

9.4 Protocolos de Prueba y Acta de Puesta en Servicio

Al concluir las pruebas SAT, se entregará:

- **Protocolo de pruebas funcionales**, firmado por ambas partes.

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- Registro de pruebas de detectores, módulos, estaciones manuales y dispositivos de notificación.
- Registro de pruebas de integración BACnet/HikCentral.
- Registro de pruebas del sistema de supresión (interlocks, abort, señalización).
- Acta de puesta en servicio, certificando que el sistema ha sido instalado y probado conforme a las normas aplicables.

9.5 Capacitación al Personal del Cliente

AAA Sistemas impartirá capacitación al personal designado por el cliente, cubriendo:

Operación del Sistema

- Uso del panel N16E.
- Interpretación de alarmas, supervisiones y fallos.
- Procedimientos de reseteo y reconocimiento.
- Navegación en anunciadores remotos.

Mantenimiento Básico

- Pruebas periódicas recomendadas.
- Verificación de baterías.
- Limpieza y cuidado de detectores.
- Revisión de dispositivos de notificación.

Procedimientos de Emergencia

- Respuesta ante alarmas reales.
- Activación manual del sistema de supresión.
- Uso del dispositivo de abort.
- Protocolos de evacuación.

La capacitación se realizará en sitio, con demostraciones prácticas y entrega de material de apoyo.

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10.0 – MANTENIMIENTO, GARANTÍAS Y SLA

AAA Sistemas garantiza que todos los equipos suministrados e instalados cumplen con los estándares internacionales aplicables y con las especificaciones del fabricante. Nuestro compromiso incluye soporte técnico, mantenimiento preventivo y correctivo, así como garantías sobre equipos e instalación, asegurando la continuidad operativa del sistema a lo largo de su vida útil.

10.1 Garantías

Garantía de Fábrica

Todos los equipos suministrados cuentan con 24 meses de garantía del fabricante, la cual cubre defectos de fabricación y funcionamiento conforme a los términos establecidos por cada marca (Notifier, System Sensor, Kidde, entre otros).

Garantía de Instalación

AAA Sistemas ofrece 12 meses de garantía sobre la instalación realizada, cubriendo:

- Mano de obra
- Conexiones
- Canalizaciones
- Configuración y programación

Esta garantía asegura que el sistema ha sido instalado conforme a las mejores prácticas y a las normas NFPA aplicables.

10.2 Plan de Mantenimiento

El mantenimiento del sistema se realizará conforme a los lineamientos de **NFPA 72** y **NFPA 2001**, garantizando la confiabilidad del sistema y la detección temprana de fallos.

Mantenimiento Mensual

- Inspección visual general del sistema.
- Verificación de fallos, supervisiones y estado de baterías.
- Revisión de registros y eventos recientes.

Mantenimiento Trimestral / Semestral

- Pruebas por muestreo de detectores.

- Verificación de sincronización de circuitos NAC.
- Revisión de módulos, estaciones manuales y dispositivos de notificación.
- Confirmación de comunicación en lazos SLC.

Mantenimiento Anual

- Prueba del **100% de los dispositivos** del sistema.
- Prueba completa de notificación audible y visual.
- Verificación de programación, lógicas y secuencias de evacuación.
- Revisión de integraciones BACnet/HikCentral.
- Pruebas del sistema de supresión conforme a NFPA 2001 (sin descarga).

10.3 Acuerdos de Nivel de Servicio (SLA)

AAA Sistemas ofrece acuerdos de servicio adaptados a las necesidades del cliente, que pueden incluir:

- Tiempos de respuesta garantizados.
- Soporte técnico remoto y presencial.
- Visitas programadas de mantenimiento preventivo.
- Atención prioritaria en caso de fallos críticos.
- Reportes periódicos de estado del sistema.

Los SLA se definen en conjunto con el cliente para asegurar continuidad operativa y cumplimiento normativo.

11.0 – CUMPLIMIENTO NORMATIVO

Todos los sistemas, equipos, materiales y procedimientos contemplados en este proyecto cumplen con los estándares internacionales aplicables y con las mejores prácticas de la industria para sistemas de detección, alarma y supresión de incendios.

AAA Sistemas garantiza que el diseño, instalación, programación, pruebas y puesta en marcha se ejecutarán conforme a las siguientes normativas:

Normas Internacionales

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- **NFPA 70 (NEC)** – Código Eléctrico Nacional para canalizaciones, cableado, protecciones y prácticas de instalación.
- **NFPA 72** – Norma para Sistemas de Alarmas de Incendio y Señalización.
- **NFPA 2001** – Norma para Sistemas de Extinción con Agentes Limpios.

Certificaciones de Equipos

Todos los equipos suministrados cuentan con certificaciones reconocidas internacionalmente, tales como:

- **UL / ULC**
- **FM Approved**
- **EN54** (según aplique por componente)

Los dispositivos NOTIFIER, System Sensor y Kidde Fire Systems incluidos en esta propuesta cumplen con los requisitos de desempeño, compatibilidad y seguridad establecidos por estas certificaciones.

Buenas Prácticas de Ingeniería

Además de las normas formales, AAA Sistemas aplica:

- Criterios de instalación recomendados por los fabricantes.
- Prácticas de cableado seguro y separación de señales.
- Protocolos de pruebas y verificación conforme a NFPA 72.
- Documentación técnica estructurada para auditorías y revisiones AHJ.

Este cumplimiento garantiza que el sistema instalado será seguro, confiable, verificable y apto para inspecciones presentes y futuras.

12.0 – INGENIERÍA DE DETALLE: DIRECCIONAMIENTO, TOPOLOGÍAS, CANALIZACIÓN Y CABLEADO

La ingeniería de detalle del sistema será desarrollada por el equipo técnico de AAA Sistemas, asegurando que cada dispositivo, lazo, módulo y circuito esté correctamente direccionado, documentado y representado en los planos finales.

12.1 Direccionamiento de Dispositivos

- Todos los dispositivos direccionables serán programados con un ID único, siguiendo una estructura lógica por área, nivel y tipo de dispositivo.
- Se generará una matriz de puntos (Point List) con ubicación exacta, descripción operativa y tipo de dispositivo.
- El direccionamiento será verificado durante FAT y confirmado en SAT.

12.2 Topologías del Sistema

- Los lazos SLC se diseñarán en topología Clase A o Clase B, según los requerimientos del proyecto y la disponibilidad de rutas.
- Los circuitos NAC se dimensionarán conforme a caída de tensión, carga total y distancia máxima permitida.
- Los módulos de control, monitoreo y aisladores se ubicarán estratégicamente para optimizar supervisión y continuidad operativa.

12.3 Canalización

- Todas las canalizaciones serán realizadas en tubería metálica certificada, cumpliendo con NEC.
- Se respetarán radios de curvatura, distancias máximas entre abrazaderas y percentiles de llenado.
- Se instalarán sellos corta fuego donde corresponda, conforme a las rutas aprobadas.
- Se garantizará separación física entre circuitos de potencia y circuitos de baja tensión.

12.4 Cableado

- Cable SLC: 16 o 18 AWG FPLR, certificado UL.
- Cable NAC: 16 o 18 AWG, dimensionado por caída de tensión.
- Cableado de supresión: conforme a especificaciones Kidde Fire Systems.
- Todas las conexiones se realizarán en cajetines, utilizando terminales certificados y dejando 15 cm mínimos de conductor libre.

12.5 Documentación de Ingeniería

La ingeniería de detalle incluirá:

- Diagramas unifilares.

- Diagramas de lazos SLC y NAC.
- Planos de canalización y rutas.
- Planos isométricos del sistema de supresión.
- Matriz de puntos y matriz de pruebas (Cause & Effect).

Esta documentación será entregada en formato digital y físico según los requerimientos del cliente.

13.0 – PROGRAMACIÓN, PRUEBAS Y PUESTA EN MARCHA (FAT / SAT)

El proceso de programación, pruebas y puesta en marcha se ejecutará conforme a los lineamientos establecidos por NFPA 72, las recomendaciones del fabricante y las mejores prácticas de la industria. Nuestro objetivo es garantizar que todos los dispositivos, módulos, lazos, circuitos y funciones de control operen de manera correcta, segura y verificable antes de la entrega final del sistema.

El proceso se divide en tres fases principales:

1. Programación del sistema
2. Pruebas FAT (Factory Acceptance Test)
3. Pruebas SAT (Site Acceptance Test)

13.1 Programación del Panel NOTIFIER N16E

La programación del sistema se realizará utilizando herramientas oficiales de NOTIFIER, asegurando compatibilidad total con los dispositivos instalados y con la lógica operativa requerida por el cliente.

Alcance de la Programación

- Carga completa de la base de datos del sistema, incluyendo:
  - Nombres descriptivos de puntos
  - Ubicaciones
  - Tipos de dispositivo
  - Zonas y grupos lógicos
- Configuración de sensibilidades de detectores según el entorno protegido.
- Definición de lógicas de control, dependencias y secuencias de evacuación.

- Programación de patrones de notificación:
    - Temp 3 para señal de incendio
    - Selective Silence cuando aplique
- Configuración de supervisión, fallos, restauraciones y eventos especiales.
- Verificación de comunicación en todos los lazos SLC y circuitos NAC.

13.2 Integración con HikCentral (BACnet/IP)

La integración con la plataforma **HikCentral Professional** será validada mediante pruebas de comunicación, mapeo de puntos y verificación de eventos en tiempo real.

Pruebas de Integración

- Descubrimiento de puntos mediante la licencia BACnet/Module.
- Validación de estados:
    - Alarm
    - Supervisory
    - *Trouble*
    - Restorations
- Pruebas de latencia y confiabilidad en la transmisión de eventos.
- Confirmación de que los objetos BACnet representan correctamente los dispositivos del sistema.
- Validación de la interoperabilidad entre el Gateway BACnet CGW y la plataforma HikCentral.

13.3 Pruebas FAT (Factory Acceptance Test)

Las pruebas FAT se realizarán en taller antes de la instalación en sitio, con el objetivo de validar la programación, la base de datos y la lógica del sistema.

Alcance FAT

- Revisión completa de la base de datos del panel.
- Simulación de puntos (humo, calor, módulos, estaciones manuales).
- Verificación de lógicas de control y secuencias de notificación.

- Pruebas de integración mediante simulación (table-top).
- Validación de comunicación entre panel, módulos y anunciadores.

Estas pruebas permiten detectar y corregir cualquier inconsistencia antes de la instalación en campo.

13.4 Pruebas SAT (Site Acceptance Test)

Las pruebas SAT se realizarán en sitio, verificando el 100% de los dispositivos instalados y confirmando el funcionamiento integral del sistema.

Alcance SAT

- Pruebas funcionales de todos los detectores (humo y térmicos).
- Pruebas de estaciones manuales.
- Activación y supervisión de módulos (control, monitoreo, aisladores).
- Verificación de notificación audible y visual.
- Pruebas de fallos, restauraciones y supervisiones.
- Confirmación de comunicación en lazos SLC y circuitos NAC.
- Validación de integración con HikCentral en condiciones reales.
- Generación del Reporte de Pruebas Funcionales, firmado por ambas partes.

13.5 Pruebas del Sistema de Supresión

Las pruebas del sistema de supresión se realizarán sin descarga del agente, conforme a NFPA 2001 y a los lineamientos del fabricante.

Incluye:

- Verificación de interlocks (HVAC, dampers, UPS).
- Prueba del dispositivo de abort.
- Prueba de estaciones manuales de disparo.
- Confirmación de señalización previa a descarga.
- Verificación del presostato de baja presión y presostato de descarga.
- Confirmación de comunicación con el panel N16E.

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14. Anexos Técnicos

14. 1 Cuadro de Cantidades Sistema de Detección de Incendio

Ítem No.	Modelo	Descripción / Colocar Marca del Producto	Unidad de Medida	Cantidad
SISTEMA DE DETECCION DE INCENDIO PANEL N16LD				
1	N16E	Panel de Control de Alarma Contra Incendio Inteligente; incluye un módulo de lazo de señalización (318 dispositivos), ampliar la capacidad a 954 dispositivos con pantalla táctil de 10", 4 NAC (circuitos de notificación), fuente de alimentación universal de entrada AC y gabinete.	Und	1
2	RLD	Pantalla táctil a color de 5" con anunciador remoto	Und	1
3	BAT-12120-BP	Batería: 12 V: 12 AH	Und	2
Integracion de Sistema de Monitoreo de Hikvision				
4	NCM-W	Módulo de comunicaciones de red: 32F a 120F: 24 V CC: 110 mA: Medio de cable de par trenzado	Und	1
5	BACNET-CGW	Funcion de servicio BACNET	Und	1
6	401000558	HikCentral-P – Módulo de Integración BACnet	Und	1
7	401000490	Servicio de Instalación Remota	Und	1
Detectores				
8	FSP-951	Detector fotográfico direccionable inteligente; con Flashscan; blanco	Und	77
9	FST-951	Detector térmico direccionable inteligente de 135 grados con Flashscan; blanco	Und	13
10	B300-6	Base de montaje: 6 pulgadas: Brida: Perfil bajo: Blanco	Und	90
Módulos				
11	FMM-1	Módulo de monitor direccionable; con Flashscan; supervisa un circuito de dispositivos de entrada de contacto seco de clase A o clase B.	Und	1
12	FCM-1	Módulo de control direccionable con Flashscan; configurado para un NAC de clase A o clase B.	Und	4
13	ISO-X	Módulo aislador de bucle SLC; aísla contra cortocircuitos en el SLC.	Und	5
Estacion Manuales				
14	NBG-12LXSP	Estación manual direccionable NBG-12L; con Flashscan. Español Stopper II, sin bocina, empotrable.	Und	18
15	STI1200	Portectores de estacion manual Stopper II, sin bocina, empotrado.	Und	18
Dispositivos de Notificación				
16	P2RL-SP	Bocina estroboscópica de 2 W para pared roja, color Fuego	Und	30
17	DGPR-1027604	Lampara de Emergencia	Und	35
18	MDL3W	Módulo de sincronización		5
Cableados				
19	43061104	Cable de alarma contra incendios AWG 18/2 sólido, FPLR, Rojo	Cajas	5
20	43111004	Cable de alarma contra incendios AWG 16/2 sólido, FPLR, Rojo	Cajas	4

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14. 2 Cuadro de Cantidades Sistema de Supresión

Ítem No.	Modelo	Descripción / Colocar Marca del Producto	Unidad de Medida	Cantidad
SISTEMA DE SUPRESION DE INCENDIO				
1	45-550201-901	Cilindro ECS-500 Fluoro-K de 200 lb (90.7 kg) de capacidad; válvula de 2", con LLI; certificaciones UL y FM.	Und	1
2	06-235317-001	Correa para cilindros de agente limpio de 125 / 200 / 225 lb	Und	1
3	45-194716-XXX	Boquillas de descarga ECS-500 Fluoro-K y 3M NOVEC 1230, de latón, 180°, 1-1/4" NPT, perforadas a medida según el software de cálculo.	Und	2
4	47-194000-001	Agente Fluoro-K™ en cilindros llenados en fábrica.	LIBRAS	132
5	85-486500-010	Cabezal de control eléctrico, apilable, 24 VDC (a prueba de explosión). El kit incluye: cabezal de control eléctrico, monitor del cabezal de control y cabezal de control operado por palanca. No es apto para cilindros ECS de 600/900/1100 lb, cilindros ADS ni para impulsores de nitrógeno o cilindros piloto de nitrógeno.	Und	1
6	WK-283905-000	Adaptador de salida de válvula, 2" (uso con cilindros de 200 a 450 lb).	Und	1
7	FCM-1	Módulo de control direccionable con Flashscan; configurado para un NAC de clase A o clase B.	Und	2
8	FDM-1	Módulo de monitor inteligente dual direccionable con flashScan	Und	1
9	FCM-1-REL	Módulo de control de liberación	Und	1
10	FRM-1	Módulo de control de relé	Und	1
11	NBG-12LR	Estación de liberación de agente: Interruptor	Und	1
12	STI1200	Protector de Estaciona Manual, sin bocina, empotrado.	Und	1
13	84-878752-010	Estación de aborto tipo push Botton.	Und	1
14	SSM24-6	Campana motorizada, 24 VDC, 6 pulgadas, color rojo,	Und	1
15	P2WLED	Luz estroboscópica LED LF Serie L: Pared: Blanco:	Und	1

SISTEMAS ELECTRONICOS DE SEGURIDAD, S.R.L. AAA Santo Domingo, D.N. Rep. Dom.

14.3 Cronograma de Trabajo

El cronograma de trabajo contempla todas las fases del proyecto, desde la ingeniería inicial hasta la entrega final de documentación. Cada actividad se presenta con su duración estimada en días laborables, siguiendo una secuencia lógica de ejecución y considerando las dependencias entre tareas.

A continuación, se detallan las actividades principales:

- Ingeniería y planificación: 6 días laborables
- Suministro de equipos: 20 días laborables
- Instalación de canalizaciones y cableado por pisos: 20 días laborables
- Instalación del sistema de supresión en el almacén: 5 días laborables
- Montaje de dispositivos: 10 días laborables
- Programación del sistema: 4 días laborables
- Integración BACnet/IP: 3 días laborables
- Pruebas FAT y SAT: 1 día laborable
- Puesta en servicio: 1 día laborable
- Capacitación al personal del cliente: 1 día laborable
- Entrega de documentación final: 1 día laborable

14.4 Fichas Técnicas

Este anexo incluye las fichas técnicas oficiales de todos los equipos suministrados e instalados en el proyecto, organizadas por sistema y fabricante. Las fichas proporcionan información detallada sobre:

- Panel de incendio
- Detectores (fotoeléctricos y térmicos)
- Bases y módulos direccionables
- Dispositivos de notificación
- Equipos del sistema de supresión
- Gateway BACnet/IP
- Accesorios y componentes complementarios

ALARMAS
Sistemas Electrónicos de Seguridad SRL

- Toda la documentación proviene directamente del fabricante y cuenta con certificaciones UL, ULC, FM y/o EN54 según corresponda.
- Sistema de Agente Limpio (Novec 1230 / FK-5-1-12)
- Cilindros presurizados
- Válvulas de descarga
- Manifold
- Boquillas de distribución
- Estación manual de disparo
- Dispositivo de abort

Anexo a continuación.

AAA SISTEMAS ELECTRONICOS DE SEGURIDAD, S.R.L. Santo Domingo, D.N. Rep. Dom.

ALARMAS
Sistemas Electrónicos de Seguridad SRL

11. FICHAS TÉCNICAS DE EQUIPOS






NOTIFIER®
by Honeywell

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.

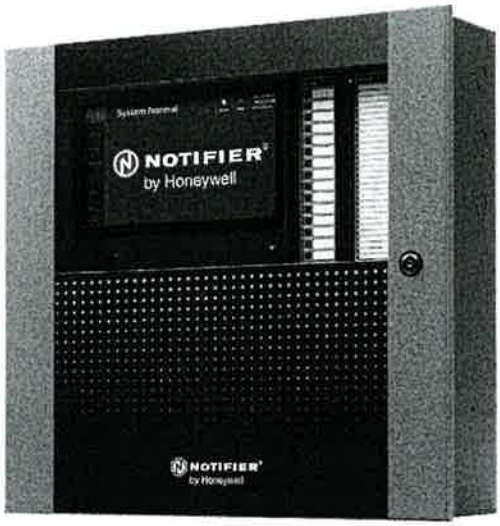
Offered in a standard preconfigured enclosure, the N16e comes with one Signaling Line Module (SLM) to support 318 intelligent addressable devices and a power supply (PMB) to support four NACs and two auxiliary outputs. Panels can be configured with just a few devices for small building applications or 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 sidecar 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 programing 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 (UZC)
- 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

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-95RA-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 DN61029.* 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 DN61034.* 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 DN60390.*

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

NOTIFIER by Honeywell

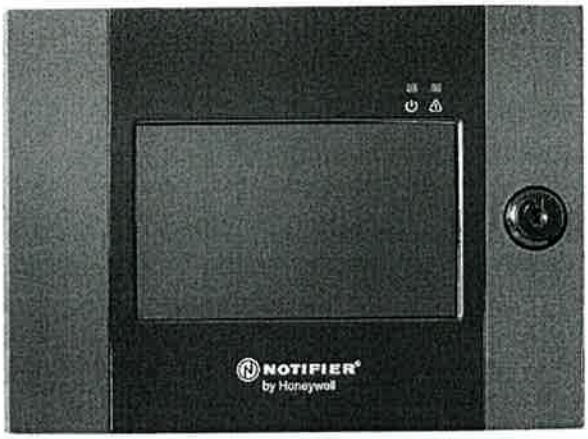
RLD Remote Display

General

The RLD is a mimic annunciator for the NOTIFIER INSPIRE™ Series fire alarm control panels (FACP) or NCD (Network Control Display). This provides the FACP or NCD with remote, serially-connected display. A five inch touchscreen display provides system status, point information, and event counters. The display shows two events simultaneously, and pages through up to 50 of the highest priority events in the system. The RLD also provides system control with six programmable softtouch buttons as well as Acknowledge, Silence, Reset and Drill.

NOTE: The RLD display can be configured to support Drill or Alarm Signal ON. Drill and Alarm Signal ON are mutually exclusive on the RLD due to the limited space on the display.

The N16 FACP supports a maximum of 10 RLDs, configured as a router. These take up one of the 10 available router addresses. The "router" annunciators may be a mix of ACM-30 and RLD units. Each RLD will occupy one "router" address. The RLD does not support peripheral annunciators.



RLD Remote Display

Features

- Five inch high-definition touchscreen display
- Programmer key switch for user authentication, providing the ability to enable the control inputs for acknowledge, silence, reset, and drill.
- Configurable control buttons that are operational only when keyswitch is unlocked
  - Acknowledge
  - Silence
  - Reset
  - Drill
- Six programmable buttons, each with a descriptor/label, status indicator and configurable action (on/off, disable.enable)
- Supervision of remote power supply
- Field programmable using VeriFire® Tools and interactive touchscreen controls
- USB C Connection
- Ability to filter events displayed on the RLD by zone
- Ability to map the RLD dedicated to a releasing zone where the label, state of the releasing zone and the countdown timer (where applicable) is displayed
- RLD mounts in a standard 3 gang electrical box
- Certified for seismic applications when used with the appropriate seismic mounting kit.
- Positive Alarm Sequence (PAS) Presignal. Participation in network or local PAS as programmed in the panel or NCD.
- Presignal participation
- 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 (ULC Specific) support
- Option to display events by zone with event count per zone (ULC Specific)
- Support for Display and Control Center (DCC) functionality (ULC Specific)
- Follows the language selection on the panel English, Canadian French, Spanish, and Portuguese

Panel Compatibility

- N16 Series
- NCD

Network Options

- AIO power-limited, two-wire serial communication with N16 or NCD control panels

Installation

The RLD mounts in a standard 3 gang electrical box. External connections are the AIO serial communications, 24 VDC power input, and earth ground.

Communication between the RLD and control panels occurs over a power-limited 2-wire AIO serial interface. This communication is supervised by the fire alarm control panel. Each RLD also requires a power-limited 24 VDC power connection. Loss of power to the RLD registers as a communication failure at the control panel. The RLD can also be powered from a power-limited and regulated remote power supply listed for fire-protective signaling use.

Enclosure

ABB-2. Annunciator backbox for mounting an RLD (Requires DP-ADP). UL/ULC Listed

ABS-2D(C) Annunciator Surface Box. Requires DP-ADP to mount an RLD. UL/ULC Listed.

ELECTRICAL SPECIFICATIONS

Primary Input Power:

24 VDC, 200 mA

SHIPPING WEIGHT

• 2 lbs (0.91 kg)

DIMENSIONS

- 7 in. (17.8 cm) W
- 5.75 in. (14.6 cm) H
- 1 In. (2.54 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 (noncondensing) at 32°C ± 2°C (90°F ± 3°F). However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and its peripherals be installed in an environment with a normal room temperature of 15 – 27°C/60 – 80°F.

AGENCY LISTINGS AND APPROVALS

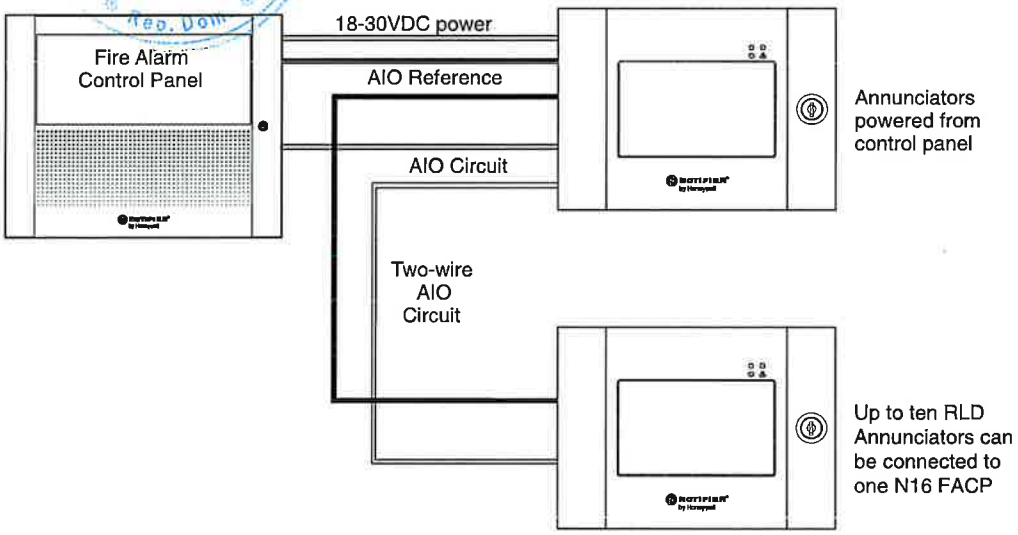
The file number(s) below reference the specific listings for the modules in this document. In some cases, certain modules or applications may not be listed by certain approval agencies, or listing may be in process. Consult NOTIFIER for latest listing status.

- **UL/ULC Listed:** S635
- **FM Approved:** FM23FPUS0095
- **CSFM:** 7165-0028:0516
- **FDNY:** COA#001761
- **Certified for Seismic applications in accordance with IBC 2024:** VMA-45894-01C
- **OSHPD Approved:** OSP-0072

STANDARDS

These listings and approvals below apply to the RLD. 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 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)
- Should be installed as per NFPA 72 National Fire Protection Association



Typical Configuration

ISO 9001 CERTIFIED
ENGINEERING & MANUFACTURING QUALITY SYSTEMS

Country of Origin: USA

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

NOTIFIER® by Honeywell

BAT Series Batteries

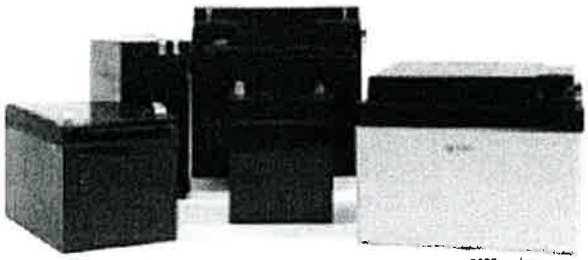
Sealed Lead-Acid

NOTIFIER® by Honeywell

Power Supplies

General

BAT Series Batteries are Power-Sonic brand batteries. BAT Series (or Power-Sonic brand) batteries are recommended for secondary power or backup power for all NOTIFIER fire alarm control equipment.



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Features

- Provide secondary power for control panels.
- Sealed and maintenance-free.
- Overcharge protected.
- Easy handling with leak-proof construction.
- Ruggedly constructed, high-impact case (ABS).
- Long service life.
- Compact design.

Agency Listings and Approvals

The listings and approvals below apply to BAT Series Batteries. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- **UL Recognized Components**: MH20845 *(Power-Sonic)*.

Ordering Information

BAT-1250-BP: 10-unit bulk pack of BAT-1250 (12 V 5 AH).

BAT-1270-BP: 5-unit bulk pack of BAT-1270 (12 V 7 AH).

BAT-12120-BP: 4-unit bulk pack of BAT-12120 (12V 12 AH).

BAT-12180-BP: 2-unit bulk pack of BAT-12180 (12 V 18 AH).

BAT-12260-BP: 2-unit bulk pack of BAT-12260 (12 V 26 AH).

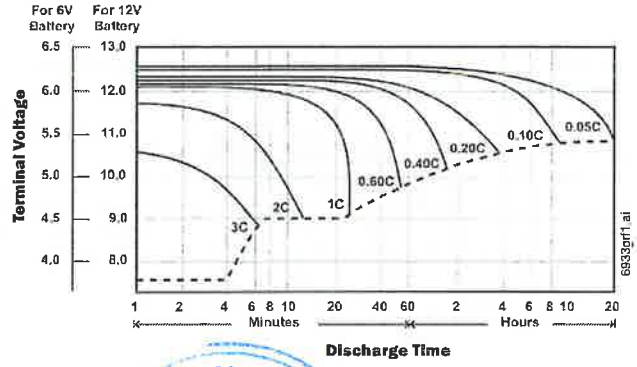
BAT-12550: single battery (12 V 55 AH).

BAT-121000: single battery (12 V 100 AH).

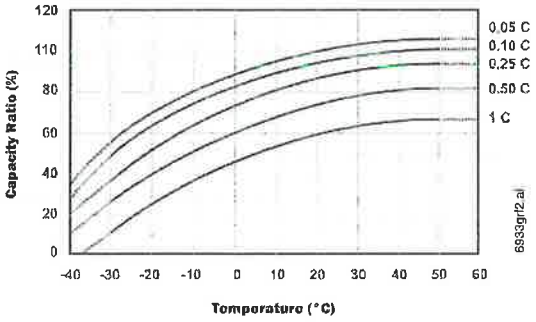
Part Number Reference & Specifications

Part Number	Power-Sonic Part Number	Battery Description			DIMENSIONS									
		Nominal Voltage V	Nominal Capacity @ 20 hr. rate A.H.		Width		Depth		Height		Height over terminal		Weight	
					in.	mm	in.	mm	in.	mm	in.	mm	lb.	kg.
BAT-1250	PS-1250	12	5	sealed	3.54	90	2.76	70	3.98	101	4.21	107	3.50	1.59
BAT-1270	PS-1270	12	7	sealed	5.95	151	2.56	65	3.7	94	3.86	98	4.8	2.18
BAT-12120	PS-12120	12	12	sealed	5.95	151	3.86	98	3.7	94	3.94	100	7.92	3.59
BAT-12180	PS-12180	12	18	sealed	7.13	181	3.00	76	6.59	167	6.59	167	12.6	5.72
BAT-12260	PS-12260	12	26	sealed	6.5	167	6.97	177	4.92	125	4.92	125	17	7.71
BAT-12550	PS-12550	12	55	sealed	9.04	230	5.45	138	8.15	207	8.98	228	36	16.33
BAT-121000	PS-121000	12	100	sealed	12	305	6.6	168	8.15	207	8.98	228	68	30.84

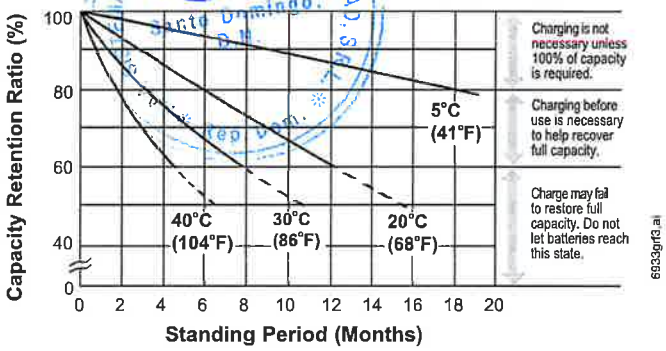
Discharge Characteristic Curves at 20°C (68°F)



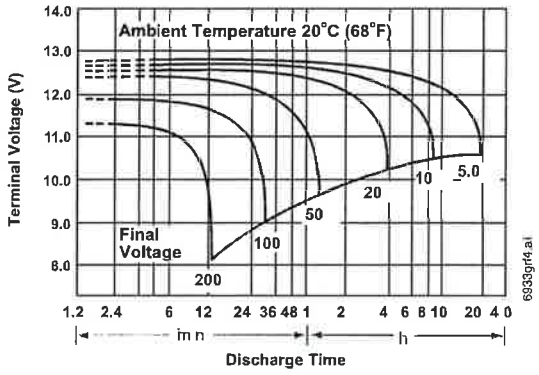
Effect of Temperature on Capacity



PS-121000 Shelf-Life and Storage



PS-121000 Discharge Characteristics



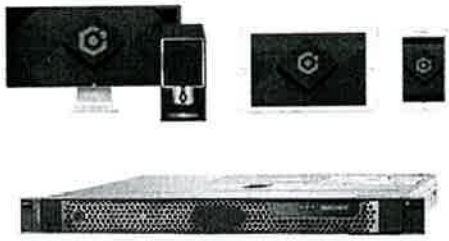
ISO 9001 CERTIFIED
ENGINEERING & MANUFACTURING QUALITY SYSTEMS

This document is not intended to be used for installation purposes.
We try to keep our product information up-to-date and accurate.
We cannot cover all specific applications or anticipate all requirements.
All specifications are subject to change without notice.

For more information, contact Notifier. Phone: (203) 484-7161, FAX: (203) 484-7118.
www.notifier.com

HIKVISION

HikCentral Professional



HikCentral Professional is a software platform provided by Hikvision for integrating and managing security systems. It is designed to meet a variety of security challenges on a single platform. With HikCentral Professional, you can manage multiple individual systems with ease, such as video security, access control, security alarms, and more, as well as explore cross-system functionalities.
Daily operations become more efficient while protection of people and property improve all around. Users of all kinds are making smarter decisions.

Key Feature

Light and Efficient

- Lightweight architecture features reduced consumption of system resources
- Capable of managing multiple systems of varying sizes with consistent efficiency

Unified and Flexible

- Supports combining various application plug-ins under a unified, on-demand architecture for collaboration across business segments
- New plug-ins can be continuously developed to meet new business needs

Integrated and Open

- Compatible with virtually all Hikvision products and their abundance of applications, including deep-learning-based analytics and statistics
- Open architecture permits easy integration with third-party systems and hardware

SISTEMAS ELECTRONICOS DE SEGURIDAD, S.R.L.
Santo Domingo, D.N.
Rep. Dom.

• Features of Main Modules

Module	Features
Video	● Efficient and comprehensive video security ● Quick incident search and location, convenient event search, and quick run-through of video ● Video export as evidence ● Low bandwidth network adaptability ● Reliable and flexible storage
Access Control	● Comprehensive and flexible access management methods ● Advanced access strategies for sensitive areas ● Convenient employee badge design and printing ● Clear step-by-step guidance ● Remote personnel registration ● Automatically lock or unlock doors ● Keep doors in a remain unlocked status during an emergency ● Easily count and verify everyone's safety ● Opening door via Bluetooth and NFC
Visitor	● Digitalized visitor management ● Visitor registration in advance ● Pre-defined access permissions and traceable records ● A Watchlist function along with personalized design and printing of badges
Vehicle	● Flexible and efficient entrance & exit management ● Improved parking experience for drivers ● Self-service parking query ● Flexible billing ● Intuitive and efficient parking operation analysis and transaction analysis reports
On-Board Monitoring	● Efficient vehicle monitoring for quick response ● Reliable archive management ● Customized reports for enhanced operational efficiency
Alarm Detection	● Centrally manage various alarm sources ● Real-time display of all kinds of alarms ● Flexible linkage ● Automatic audio alarms
Intelligent Analysis	● The video-based intelligent analysis dashboard enables flexible and extensible digital applications ● Smart commercial analyses
Digital Signage	● Manage and configure content for digital signage in an intuitive manner ● Pre-installed program templates ● All programs are created visually
Time & Attendance	● Flexible attendance rule-setting ● Diverse attendance reports and customizable templates ● Easy integration with third-party payroll systems ● Supports employees searching for attendance results and submitting applications for correction
Maintenance	● Visualized network and device topology and alarm notifications ● Logs are available for event trackback and evidence

Software Specification

The following table shows the maximum performance of the SYS (System Management Server). For other detailed data and performance, refer to *Software Requirements and Performance*.

Features		Maximum Performance
General		
Manageable Resource	Managed Devices **Including Encoding Devices, Access Control Devices, Elevator Control Devices, Security Control Devices, Digital Signage Terminals, Interactive Flat Panels, Remote Sites, Guidance Terminals, and IP Speakers*	2,048
	Encoding Devices Supporting ONVIF Protocol	2,048
	Video Intercom Devices	5,000
	Guidance Screens	512
	Visitor Terminals	32
	Dock Stations	1,500
	Network Transmission Devices	128
	On-Board Devices	1,000
	Fire Protection Devices	2,048
	Entrance/Exit Stations	40
	Query Terminals	16
	DeepinMind Server	64
	Recording Servers	64
	Streaming Servers	64
	Cameras	10,000 With RSM: 100,000
	Maximum Number of Fisheye Cameras	10,000
	Maximum Number of Cameras for People Counting	
	Alarm Inputs (excluding security control panels and panic alarm devices)	5,000
	Alarm Inputs of Security Control Devices	10,000
	Security Control Partitions (Areas)	2,048
	Alarm Outputs	3,000
	Security Radars and Radar PTZ Cameras	30
	DS-5600 Series Face Recognition Terminals When Applied with Hikvision Turnstiles	32
	ANPR Cameras	3,000
	People Counting Cameras	Recommended: 3,000
	Heat Map Cameras	Recommended: 1,024
	Queue Management Cameras	Recommended: 3,000
	Thermal Cameras	Recommended: 20①
	Cameras per Area	256
	Alarm Inputs per Area	
	Alarm Outputs per Area	
Event & Alarm	Event and Alarm Rules	10,000
	Storage of Events or Alarms Without Pictures	1,000/s
	Storage of Events or Alarms with Pictures	20/s (Stored in SYS) 80/s (Stored in Recording Server)
	Events or Alarms Sent to Clients **The clients include Web Client, Control Clients and Mobile Clients.*	● **Web Client**: 20 events or alarms with picture per second; 40 events or alarms without picture per second; 100 access events/s. ● **Control Client**: 120 events or

		alarm/s. ● 100 Clients/s
	Combined Alarm	10/s
	User-Defined Events	10,000
User and Role	Concurrent Accesses via Web Clients and Control Clients	100
	Concurrent Accesses via Mobile Clients	100
	Users	3,000
	Roles	3,000
	Users for Double Authentications	50
Person	Departments	3,000
	Department Hierarchies	10
	Size of a Profile Picture	300 KB
	Total Size of Profile Pictures	300 GB
	Resigned Persons	100,000
	Resignation Types	100
Data Storage	Data Retention Period	Stored for 3 Years
	People Counting	5 million each year
	Heat Map	0.25 million each year
	ANPR Records	60 million each year
	Events	
	Alarms	
	Access Records	1.4 billion each year
	Attendance Records	55 million each year
	Visitor Records	10 million each year
	Operation Logs	5 million each year
	Service Information Logs	
	Service Error Logs	
	Recording Tags	60 million each year
Report	Scheduled Report Rules of Event and Alarm	100
	Event or Alarm Rules in One Event/Alarm Report Rule	32
	Records in One Sent Report	10,000 or 10 MB
	Resources Selected in One Report **With this limitation, you can generate a neat and clear report via the Control Client and it costs less time.*	32
	Maximum Number of Stores	1,000
Video & Intelligent Analysis		
Recording	Recording Schedule	30,000
	Recording Schedule Template	200
Face Comparison	Face Pictures for Comparison	1,000,000
	Face Comparison Groups	64
	Persons in One Face Comparison Group	1,000,000
	Storage of Face Comparison Events Without Pictures	1,000/s
	Storage of Face Comparison Events with Pictures	100/s (Stored in Recording Server)
Intelligent Recognition	Intelligent Analysis Groups	1,000
	Resources in One Group	64
	Persons for Intelligent Recognition	1000,000
BI	Total Stores	1,000
	Total Analysis Group	1000
AR Monitoring	AR Scenes	100
	Plans	512 ***Note:** Up to 100 scenes are allowed for each plan.*
	Tags for Each Scene	200
	Tag Groups for Each Scene	100

	Evidence Files	5,000,000
Smart Wall	Decoding Devices	32
	Smart Walls	32
	Network Keyboard	8
	Views	1,000
	View Groups	100
	Views in One View Group	10
	Cameras in One View	256
	Cameras in One Window of Auto-Switch	20
	Windows of an Auto-Switch	16
	View Group of an Auto-Switch	1
Streaming Server	Video Input Bandwidth per Streaming Server	200 × 2 Mbps
	Video Output Bandwidth per Streaming Server	200 × 2 Mbps
Access Control & Time and Attendance & Visitor		
Access Control	Persons with Credentials for Access Control	50,000
	Total Credentials (Card + Fingerprint)	250,000
	Cards	250,000
	Fingerprints	200,000
	Irises	100,000
	Profiles	50,000
	Access Points (Doors + Floors)	1,024
	Access Levels	512
	Access Schedules	32
	Templates for Card Printing	32
Time and Attendance	Persons for Time and Attendance	50,000
	Schedules	128
	Holidays	32
	Break Timetable	128
	Custom Rules for T&A Status on Device	128
	Overtime Types	128
	Leave Types	
	Approval Roles	100
	Approval Flows	1,000
	Concurrent Login of Employees via Client	500
Visitor Management	Visitors	100,000
	Visitor Check-In or Reservation Records	100,000
	Visitor Email Templates	20
	Entities in Watch List	10,000
	Card Template	20
Vehicle and Parking Management		
Vehicles per List		5,000
Vehicles		500,000
Custom Vehicle Types		10
UVSSs		4
Vehicle Undercarriage Pictures		3,000
Storage of ANPR Alarm Without Pictures		1,000/s
Storage of ANPR Alarm with Picture		20/s (Stored in SYS) 100/s (Stored in Recording Server)
Parking Lots		10
Lanes		Total: 40 In One Parking Lot: 32
Parking Spaces		Total: 3,000 In One Floor: 1,024
Floors in All Parking Lots		128
Cards Linked with Vehicles		250,000

Vehicle Passing Frequency in Each Lane	1 Vehicle/s
On-Board Monitoring	
Fence Rules for One Vehicle	4
Vehicles Can Be Located in One Client	64
Retention Period of GPS Data	1 Year
Retention Period of Statistics Data	3 Years
Maximum Number of Drivers	10,000
Maximum Number of Driving Routes	1,000
Digital Signage	
Materials	10,000
Programs	2,000
Schedules	1,000
Release Records	1,000
Video Walls	512
Applications for Interactive Flat Panel	1,000
Security Inspection	
Analyzers	8
Walk-Through Metal Detectors	64
Security Inspection Channels	1,000
Broadcast	
IP Speakers	2048
Speaker Unit	128
Broadcast Group	128
Media Libraries	100
Patrol	
Maximum Number of Shifts of a Single Route	8
Dock Management	
Docks	500
Retention Period of Dock Data	2 Years
Parcel Tracking	
Check Points	1000
Scanning Devices (Accessed via CodePlatform)	50
Scanning Devices (Accessed directly)	45
Scanning Devices (Accessed via NVR)	1000
Retention Period of Parking Tracking Records	3 Months
Canteen Consumption	
Canteen Payment Terminals	100
Number of Merchants	100
Merchant Levels	5
Payment Groups	512
Payment Rules	128
Meal Types	8
Number of Payment Persons	50000
Speed of Applying Person Permissions	Card: 50 Milliseconds Per Card Profile Picture: 1 Second Per Profile Picture
Payment Record Retention Period	3 Years
Traffic	
Devices for Toll Verification	10
Devices for Traffic Event Detection	50
Retention Period of Toll Verification Records	3 Years
Retention Period of Traffic Data	3 Years
Public Order Management	
Municipal Enforcement PTZ Cameras	500
Water Level Detection PTZ Cameras	500

Retention Period of Urban Management Data	3 Years
Retention Period of Water Level Data	3 Years
Store Audit	
Stores	1,000
Auditors of Each Store	1
Rectification Personnel of Each Store	1
Rating Items	3,000
Max. Deducted Points of Each Rating Item	100
Rating Categories	200
Rating Templates	100
Rating Items Linked to Each Rating Template	100
Audit Schedules	150
Audit Schedules Linked to Each Store	10
Max. Validity Period of Each Audit Schedule	3 Years
Stores Linked to Each Audit Schedule	1,000
Pictures Uploaded During Each Audit	4
Size of Each Picture Uploaded During an Audit	8 MB
Pictures Uploaded for Each Rectification	4
Size of Each Picture Uploaded for a Rectification	8 MB
Retention Period of Task List	3 Years
Retention Period of Deficiency List	3 Years
Industrial Inspection	
Device Types	1,000
Parts of Each Device Type	20
Sub-Parts of Each Part	10
Inspection Points of Each Device Type	50
Production Equipment	2,000
Inspection Schedules	150
Inspection Schedules Linked to Each Area	10
Max. Validity Period of Each Inspection Schedule	3 Years
Task Execution Cycle	Supports performing an inspection task for one time by day/week/month.
Areas Linked to Each Inspection Schedule	100
Retention Period of Task & Issue List	3 Years
Education Management	
Classes	120
Sections in Each Course Schedule	84
Retention Period of Course Records	3 Years
Retention Period of Class Attendance Data	3 Years
Retention Period of To-Be-Corrected Attendance Data	1 Month
Time Range of Displayed To-Be-Corrected Attendance Data	7 Days
Retention Period of School Arrival Records	3 Years
Time Range for Searching School Arrival Records	31 Days
Retention Period of Course Inspection Records	3 Years
Time Range for Searching Completed Courses	7 Days
Time Range for Searching Course Inspection Records	7 Days

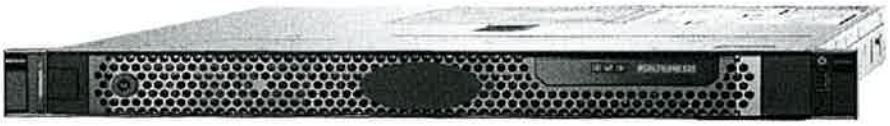
①: This recommended value refers to the number of thermal cameras connected to the system directly. It depends on the maximum performance (data processing and storage) in the situation when the managed thermal cameras uploading temperature data to the system. For thermal cameras connected to the system via NVR, there is no such limitation.

System Requirement

** For high stability and good performance, the following system requirements must be met.*

OS for HikCentral Professional Server	Microsoft® Windows 11 64-bit Microsoft® Windows 10 64-bit Microsoft® Windows 8.1 64-bit Microsoft® Windows 7 SP1 64-bit Microsoft® Windows Server 2019 64-bit Microsoft® Windows Server 2016 64-bit Microsoft® Windows Server 2012 R2 64-bit Microsoft® Windows Server 2012 64-bit Microsoft® Windows Server 2008 R2 SP1 64-bit Microsoft® Windows Server 2022 **For Windows 8.1 and Windows Server 2012 R2, make sure it is installed with the rollup (KB2919355) updated in April, 2014.*
OS for Control Client	Microsoft® Windows 11 64-bit Microsoft® Windows 10 64-bit Microsoft® Windows 8.1 64-bit Microsoft® Windows 7 SP1 64-bit Microsoft® Windows Server 2019 64-bit Microsoft® Windows Server 2016 64-bit Microsoft® Windows Server 2012 R2 64-bit Microsoft® Windows Server 2012 64-bit Microsoft® Windows Server 2008 R2 SP1 64-bit **For Windows 8.1 and Windows Server 2012 R2, make sure it is installed with the rollup (KB2919355) updated in April, 2014.*
Browser Version	Google Chrome® 100 and above Firefox® 100 and above Safari® 13 and above Microsoft® Edge 100 and above Internet Explorer® 11 and above
Database	PostgreSQL V11.8
OS for Mobile Client	iOS 10.0 and above Android 6.0 and above
Virtual Machine	VMware® ESXi™ 6.x, ESXi™ 7.x Microsoft® Hyper-V with Windows Server 2012/2012 R2/2016 (64-bit) **The Control Client cannot run on the virtual machine.* **Refer to the Deployment Guide of HikCentral Professional on VMware Virtual Machines for how the streaming server running on the virtual machine.* **Virtual server migration is not supported.*

Recommended Hardware Specification



Processor	Intel® Xeon® E-2314 @ 2.80 GHz	
Memory	16G DDR4 DIMM slots, Supports UDIMM, up to 2666 MT/s, 64GB Max. Supports registered ECC	
Storage Controllers	Internal Controllers: SAS_H330 Software RAID: PERC S140 External HBAs: 12Gbps SAS HBA (non-RAID) Boot Optimized Storage Subsystem: 2x M.2 240GB (RAID 1 or No RAID), 1x M.2 240GB (No RAID Only)	
Drive Bays	1T 7.2K SATA×2	
Power Supplies	Single 250W (Bronze) power supply	
Dimensions	Form Factor: Rack (1U) Chassis Width: 434.00mm (17.08 in) Chassis Depth: 595.63mm (23.45 in) (3.5"HHD) *Note:* These dimensions do not include: bezel, redundant PSU	
Dimensions with Package (W × D × H)	750 mm × 614 mm × 259 mm (29.53" × 24.17" × 10.2")	
Net Weight	12.2 kg	
Weight with Package	18.5 kg	
Embedded NIC	2 x 1GbE LOM Network Interface Controller (NIC) ports	
Device Access	Front Ports: 1x USB 2.0, 1 x IDRAC micro USB 2.0 management port Rear Ports: 2 x USB 3.0, VGA, serial connector	
Embedded Management	iDRAC9 with Lifecycle Controller iDRAC Direct DRAC RESTful API with Redfish	
Integrations and Connections	Integrations: Microsoft® System Center VMware® vCenter™ BMC Truesight (available from BMC) Red Hat Ansible	Connections: Nagios Core & Nagios XI Micro Focus Operations Manager i (OMi) IBM Tivoli Netcool/OMNIbus
Operating Systems	Certify XenServer Citrix® XenServer® Microsoft Windows Server® with Hyper-V *Note:* This model is installed with Microsoft Windows Server® 2016 multilingual operating system.	
Virtual Machines	VMware® ESXi	

HIKVISION

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NOTIFIER®
by Honeywell

NCM-W, NCM-F ONYX® Series Network Communications Modules

General

The Network Communications Module (NCM) provides NOTIFIER Intelligent Fire Alarm Control Panels, and NCA and NCA-2 Network Control Annunciators with a means to connect to NOTI•FIRE•NET™. Two types of NCM are available: NCM-W for connecting nodes with twisted-pair wire, and NCM-F for connecting nodes with fiber-optic cable.

NOTE: *Do not mix NCM and High Speed (HS) NCM on the same system.*

NCM-W Features

- Supports twisted-pair wire medium.
- NFPA Style 4 (Class B) operation or NFPA Style 7 (Class A) operation.
- Two programmable data thresholds.
- Transformer coupling provides electrical isolation between nodes.
- Pluggable terminal wiring with strain relief.
- Pluggable service connector (feeds signal directly through) in the event that power must be removed from a node.
- 312.5 Kbaud transmission rate.
- Data is regenerated at each node.
- Two network ports to allow simultaneous connection to fire alarm control panel and to programming computer.
- Enables software and database upload/download over NOTI•FIRE•NET™.
- Repeaters are available to increase signal.
- Repeaters may be utilized to switch media type.
- Up to 3,000 feet (914.4 m) between nodes in a point-to-point fashion (actual distance varies with wire quality).

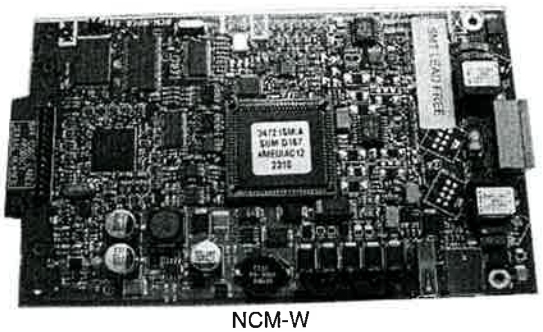
NCM-W Interconnections: When wiring consecutive NCM-W boards, wiring may enter or exit at Port A or Port B. NCM-W port-to-port wiring is not polarity sensitive; use of Port A or Port B is arbitrary. An NCM-W may be connected to any of the following devices: MIB-W, MIB-WF, NAM-232W, NCM-W (in another panel), NCS-W network connection, RPT-W, RPT-WF.

NCM-W Switch Functions: The NCM-W provides two sets of switches to simplify network setup. Enable ground fault detection by setting "ON" switch SW103 (Channel A); switch SW101 (Channel B). Activate on-board end-of-line resistors by setting "ON" switch SW100 (Channel A); switch 102 (Channel B). NOTE: Correct configuration is dependent on network design; refer to the NOTI•FIRE•NET™ Network manual.

For further information and diagrams, refer to the NCM Installation Document, 51533.

NCM-F Features

- Supports fiber-optic medium.
- NFPA Style 4 (Class B) or Style 7 (Class A) operation.
- Data is immune to all environmental noise.
- Optical isolation prevents ground loops.
- NOTI•FIRE•NET™ Network fiber-optic medium.
- Fiber type: 62.5/125 micrometers (multimode); or 50/125 micrometers (multimode).
- Maximum attenuation is 8 dB with 62.5/125 µm fiber and 4.2 dB with 50/125 µm fiber.
- Wavelength (1): 820 nanometers (use standard 850 nm fiber).
- Connectors: ST® style.



NCM-W

- 312.5 Kbaud transmission rate.
- Data is regenerated at each node.
- Two network ports to allow simultaneous connection to fire alarm control panel and to programming computer.
- Enables software and database upload/download over NOTI•FIRE•NET™.
- Repeaters are available to increase signal.
- Repeaters may be utilized to switch media type.

NCM-F Interconnections: When wiring consecutive nodes/repeaters, fiber cable must exit one board on Transmit (TX) and enter the next node/repeater on Receive (RX). The fiber-optic pair (RX, TX) from Port A of one node/repeater may be connected to either Port A or Port B of another node/repeater. An NCM-F may be connected to any of the following devices: MIB-F, MIB-WF, NAM-232F, another NCM-F, NCS-Fnetwork connection, RPT-F, RPT-WF.

Common Specifications

Temperature and humidity ranges: This system meets NFPA requirements for operation at 0°C to 49°C (32°F to 120°F); and at a relative humidity (noncondensing) of 85% at 30°C (86°F) per NFPA, and 93% ± 2% at 32°C ± 2°C (89.6°F ± 1.1°F) per ULC. 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 all peripherals be installed in an environment with a nominal room temperature of 15°C to 27°C (60°F to 80°F).

Power supply: 24 VDC @ 110 mA.

MIXING WIRE AND FIBER ON THE SAME NETWORK

In some networks, it may be necessary to mix twisted-pair wire and fiber-optic cable. There are two solutions:

- In any network, an RPT-WF may be used as an interface between wire and fiber.

In a network that uses an AFP1010 or AM2020, a MIB-WF may be used as the interface between wire and fiber.

MOUNTING

Both NCM-W and NCM-F can be installed in any standard chassis such as the CHS-4L, CHS-M2, CHS-M3 or CHS-4N (see panel sheets). Additionally, the NCM-W can be door-mounted on the ADP-4B dress panel on a single-space blank plate (BMP-1) for mounting in an CAB-4 Series cabinet.

Agency Listings and Approvals

The following listings and approvals apply to the NCM. 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
- CSFM: 7165-0028:0224 (NFS2-3030), 7165-0028:0243 (NFS-320, NFS2-640)
- FM approved
- MEA approved
- FDNY: COA#6306, COA#6212

Product Line Information

NCM-W: Network Communications Module, twisted-pair wire interface.

NCM-F: Network Communications Module, fiber-optic cable interface.

Diagnostic LED Indicators

A HI (green): Illuminates to indicate the NCM-W Port A is set for high threshold (NCM-W only).

B HI (green): Illuminates to indicate the NCM-W Port B is set for high threshold (NCM-W only).

RCD A (green): Illuminates when the NCM is receiving data from NOTI•FIRE•NET™ on Port A.

RCD B (green): Illuminates when the NCM is receiving data from NOTI•FIRE•NET™ on Port B.

STATA (yellow): Illuminates when the NCM has not received valid data from NOTI•FIRE•NET™ on Port A for at least 16 seconds.

STATB (yellow): Illuminates when the NCM has not received valid data from NOTI•FIRE•NET™ on Port B for at least 16 seconds.

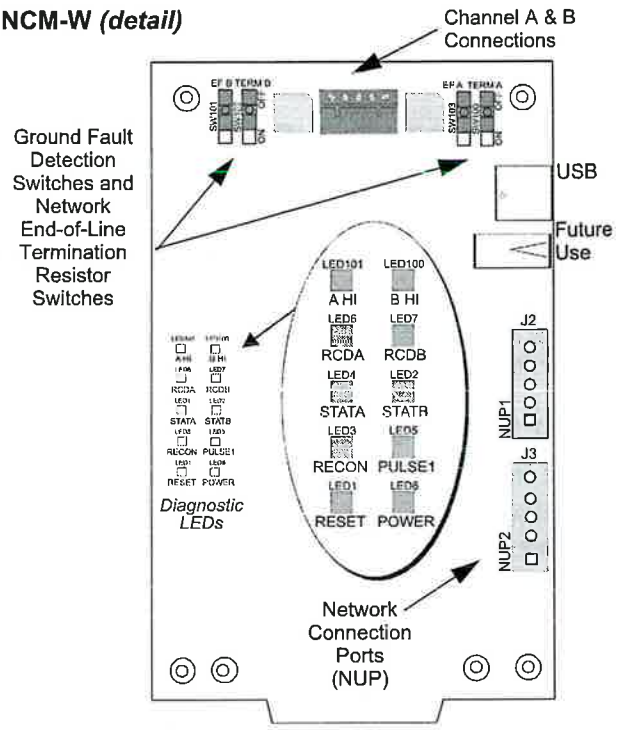
RECON (yellow): Illuminates when a reconfiguration on NOTI•FIRE•NET™ is in progress.

PULSE (green): Illuminates when the NCM is transmitting NOTI•FIRE•NET™ is in progress.

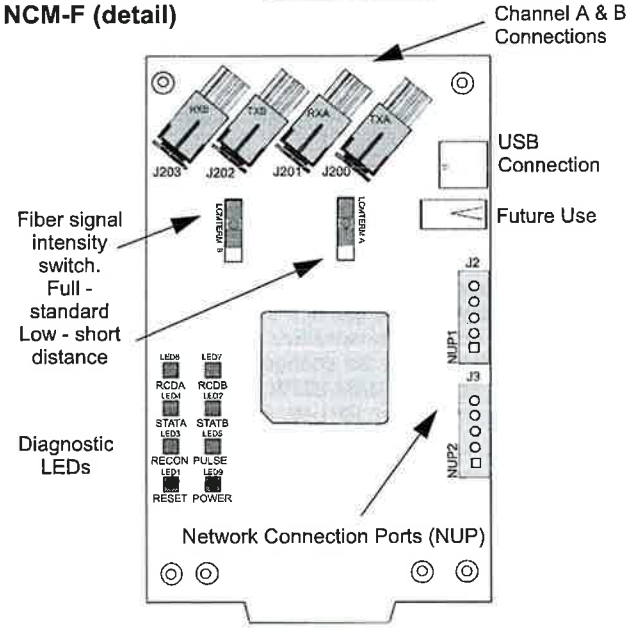
RESET (yellow): Illuminates when the microcontroller fails.

POWER (green): Illuminates when +5 VDC is available.

NCM-W *(detail)*



NCM-F (detail)



ISO 9001 CERTIFIED ENGINEERING & MANUFACTURING QUALITY SYSTEMS

Country of Origin: USA

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NOTIFIER® by Honeywell

BACNET FEATURE - CLSS GATEWAY

Connected Life Safety Services (CLSS) Gateway Feature for BACnet™ Protocol Network Communication

The BACnet Feature - CLSS Gateway (HON-CGW-MBB-ANZ) provides a communication link between networks that use the BACnet/IP communication protocol and Fire Alarm Control Panels (FACPs) on a NOTI•FIRE•NET™ (NFN) network.

CLSS Gateway with Enclosure

The CLSS BACnet Feature provides an interface between the (NFN) fire panel network and a network using the BACnet/IP communication protocol. BACnet protocol is an American National Standard (ANSI/ASHRAE 135-2012).

With the CLSS BACnet Feature, devices on fire alarm control panels are represented as BACnet objects to the BACnet client.

Connected to the NFN, the CLSS BACnet Feature can support up to 16 NFN nodes with a maximum combined object count of 15,000 (object count includes all detectors, monitor modules, notification appliance circuits, etc.). Multiple CLSS Gateways can be used to interface with larger networks.

The CLSS BACnet Feature is designed to require very little configuration; no separate configuration utility is required. In most applications, you only need to enter the TCP/IP network settings and the nodes to be monitored. The CLSS BACnet Feature automatically maps all the configured points.

For additional information on the CLSS Gateway, refer to the user manual of the gateway or contact tech support at 1800 220 345.

HONEYWELL CONNECTED LIFE SAFETY SERVICES (CLSS)

Honeywell CLSS is an innovative, all-in-one cloud platform that enables systems integrators and facilities managers to deliver an enhanced fire safety service, while maximizing the performance efficiencies offered by Honeywell's trusted detection and alarm systems. The CLSS platform enables users to:

- Get a "bird's eye" view of all accounts
- Obtain real-time information on event generation, enabling diagnosis before dispatch
- Conduct tests and inspections using a mobile app (available in select markets)
- Provide end users with multi-site asset information and event alerts

FEATURES AND BENEFITS

- Monitors up to 16 NFN nodes (not including the CLSS Gateway node itself) with 15,000 maximum combined object count per node
- Multiple CLSS Gateways can be used for large networks.
- Provides a built-in configuration tool for simple browser configuration.
- Behaves as a foreign device when communicating with a third-party BACnet Broadcast Management Device (BBMD)
- Designed to be compatible with standard BACnet clients/devices
- Web-based software and smartphone app for CLSS BACnet Feature configuration and administration
- Meets UL 864, 10th edition requirements
- Compatible with standard and high-speed NFN
- Reduces configuration time by auto-discovering and mapping

Honeywell

CLSS BACNET FEATURE TECHNICAL SPECIFICATIONS

SPECIFICATIONS

Refer to the detailed HON-CGW-MBB-ANZ datasheet for specifications.

SYSTEM ARCHITECTURE & REQUIREMENTS

An Internet or Intranet IP network connection is required to configure the BACnet Feature, and to connect it with BACnet clients. The Internet or Intranet IP network connection must meet the following requirements:

- Private or Business LAN
- Static IP address
- Standard 100Base-T connection
- BACnet Standard Ports

REQUIRED EQUIPMENT

- HON-CGW-MBB CLSS Gateway
- Network Communication Module (NCM)
- NFN Network - Version 5.0 or above

NETWORK COMPONENTS

- RJ45 to RJ45 standard Ethernet network cable-customer's Internet or intranet connection to the CLSS Gateway
- NFN network version 5.0 or above (sold separately)
- One of the following:
  - High Speed Network Communication Module: HS-NCMW/ SF/MF board-used to facilitate network communication between the CLSS Gateway and a High Speed NFN network or Network Communication Module
  - NCM-W/F board-used to facilitate network communication between the CLSS Gateway and an NFN network

AGENCY LISTINGS AND APPROVALS

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

For listings and approvals for the HON-CGW-MBB, refer to datasheet HON-62034.

STANDARDS AND CODES

The CLSS BACnet Feature is designed to comply with the following standards:

- UL 864, Tenth Edition*
- CAN/ULC S527-19, Fourth Edition**
- BACnet Standard Annex J for IP and Support Device Objects, Binary Output Objects, Life Safety Points/ Zones, and Multi-State Inputs
- Meets Australian ACMA RCM Requirements

* Supplementary Only
**Ancillary Only

APPROVALS

- ETL Listed: 104270338NYM-001
- CSFM: 7300-1637:0504
- FDNY: COA# 000121, COA# 000122

PIC STATEMENT

Contact Honeywell for the BACnet Protocol Implementation Conformance (PIC) statement.

ORDERING INFORMATION

- **HON-CGW-MBB-ANZ:** CLSS Gateway with Enclosure
- **BACnet Feature** can be purchased through the CLSS portal or through Customer Service

CUSTOMER SUPPLIED EQUIPMENT

- Windows 10 Professional
- Google Chrome™ Browser
- JAVA® version higher than version 6

Honeywell International, Inc.
www.fire.honeywell.com

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THE FUTURE IS WHAT WE MAKE IT

Honeywell

NOTIFIER®
by Honeywell

FSP-951 Series Addressable Photoelectric Smoke Detectors

The NOTIFIER® FSP-951 Series intelligent plug-in smoke detectors are designed for both performance and aesthetics, and are direct replacements for the FSP-851 Series. A new modern, sleek, contemporary design and enhanced optical sensing chamber is engineered to sense smoke produced by a wide range of combustion sources in accordance with more stringent code standards.

The FSP-951 Series detector sensitivity can be programmed in the control panel software. Sensitivity is continuously monitored and reported to the panel. Point ID capability allows each detector's address to be set with rotary, decimal address switches, providing exact detector location for selective maintenance when chamber contamination reaches an unacceptable level. Dual electronic thermistors add 135°F (57°C) fixed temperature thermal sensing on the FSP-951T. The FSP-951R is a remote test capable detector for use with DNR Series duct detector housings. FSP-951 series detectors are available for both FlashScan® and CLIP applications as designated.

Features

SLC LOOP:

- Two-wire SLC loop connection
- Unit uses base for wiring
- Compatible with FlashScan® and CLIP protocol systems
- Stable communication technique with noise immunity

ADDRESSING:

- Addressable by device
- Rotary, decimal addressing
  (Refer to the *NOTIFIER panel manuals* for device capacity.)

ARCHITECTURE:

- Sleek, low-profile, stylish design
- Unique single-source design to respond quickly and dependably to a broad range of fires
- Integral communications and built-in device-type identification
- Built-in tamper resistant feature
- Remote test feature from the panel
- Walk test with address display (an address on 121 will blink the detector LED: 12-[pause]-1 *(FlashScan systems only)*
- Built-in functional test switch activated by external magnet
- Removable cover and insect-resistant screen for simple field cleaning
- Expanded color options

OPERATION:

- Designed to meet UL 268 7th Edition
- Factory preset at 1.5% nominal sensitivity for panel alarm threshold level
- LED "blinks" when the unit is polled (communicating with the fire panel) and latches in alarm.
- Low standby current

MECHANICALS:

- Sealed against back pressure
- SEMS screws for wiring of the separate base
- Designed for direct-surface or electrical-box mounting
- Plugs into separate base for ease of installation and maintenance
- Separate base allows interchange of photoelectric, ionization and thermal sensors

OPTIONS:

- Optional relay, isolator, and sounder bases

Installation

FSP-951 Series plug-in intelligent smoke detectors use a detachable base to simplify installation, service and maintenance. Installation instructions are shipped with each detector.

Mount detector base (all base types) on an electrical backbox which is at least 1.5" (3.81 cm) deep. For a chart of compatible junction boxes, see *DN-60054.*

NOTE: *Because of the inherent supervision provided by the SLC loop, end-of-line resistors are not required. Wiring "T-taps" or branches are permitted for Class "B" wiring only.*
When using relay or sounder bases, consult the ISO-X(A) installation sheet I56-1380 for device limitations between isolator modules and isolator bases.

Construction

These detectors are constructed of fire-resistant plastic. The FSP-951 Series plug-in intelligent smoke detectors are designed to commercial standards and offer an attractive appearance.

Operation

Each FSP-951 Series detector uses one of the panel's addresses (total limit is panel dependent) on the NOTIFIER Signaling Line Circuit (SLC). It responds to regular polls from the control panel and reports its type and the status. If it receives a test command from the panel (or a local magnet test), it stimulates its electronics and reports an alarm. It blinks its LEDs when polled and turns the LEDs on when commanded by the panel. The FSP-951 Series offers features and performance that represent the latest in smoke detector technology.

Product Line Information

NOTE: *"-IV" suffix indicates CLIP and FlashScan device.*

FSP-951: White, low-profile intelligent photoelectric sensor, FlashScan only

FSP-951A: Same as FSP-951 but with ULC listing

FSP-951-IV: Ivory, low-profile intelligent photoelectric sensor

FSP-951A-IV: Same as FSP-951-IV but with ULC listing

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

FSP-951TA: Same as FSP-951T but with ULC listing

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

FSP-951TA-IV: Same as FSP-951T-IV but with ULC listing

FSP-951R: White, low-profile intelligent photoelectric sensor, remote test capable, for use with DNR/DNRW, FlashScan only

FSP-951RA: Same as FSP-951R but with ULC listing, for use with DNRA

FSP-951R-IV: Ivory, low-profile intelligent photoelectric sensor, remote test capable, for use with DNR/DNRW

FSP-951RA-IV: Same as FSP-951R-IV but with ULC listing, for use with DNRA

INTELLIGENT BASES

NOTE: *For details on intelligent bases, see DN-60981.*

B300-6: White, 6" base, standard flanged low-profile mounting base *(CSFM: 7300-1653:0109)*

B300-6-IV: Ivory,6" base, standard flanged low-profile mounting base *(CSFM: 7300-1653:0109)*

B300A-6: Same as B300-6, ULC listed

B300A-6-IV: Ivory, 6" standard flanged low-profile mounting base, ULC listed

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

B501-WHITE: White, 4" standard European flangeless mounting base. UL/ULC listed *(CSFM: 7300-1653:0109)*

B501-BL: Black, 4" standard European flangeless mounting base. UL/ULC listed *(CSFM: 7300-1653:0109)*

B501-IV: Ivory color, 4" standard European flangeless mounting base. UL/ULC listed *(CSFM: 7300-1653:0109)*

B501-WHITE-BP: Bulk pack of B501-WHITE contains 10

B224RB-WH: White, relay base (*CSFM: 7300-1653:0216)*

B224RB-IV: Ivory, relay base (*CSFM: 7300-1653:0216)*

B224RBA-WH: White, relay base, ULC listing

B224RBA-IV: Ivory, relay base, ULC listing

B224BI-WH: White, isolator detector base (CSFM: 7300-1653:0216)

B224BI-IV: Ivory isolator detector base (CSFM: 7300-1653:0216)

B224BIA-WH: White, isolator detector base, ULC listing

B224BIA-IV: Ivory isolator detector base, ULC listing

B200S-WH: White, Intelligent addressable sounder base capable of producing sound output in high or low volume with ANSI Temporal 3, ANSI Temporal 4, continuous tone, marching tone, and custom tone. Uses FlashScan protocol. *(CSFM: 7300-1653:0213)*

B200S-IV: Ivory, Intelligent addressable sounder base capable of producing sound output in high or low volume with ANSI Temporal 3, ANSI Temporal 4, continuous tone, marching tone, and custom tone. Uses FlashScan protocol. *(CSFM: 7300-1653:0213)*

B200SA-WH: Same as B200S-WH, ULC listing

B200SA-IV: Same as B200S-IV, ULC listing

B200SCOA-WH: White, Intelligent, programmable sounder base in English/French (required in Canada for ULC applications with CO Series detector applications

B200SCOA-IV: Ivory Intelligent, programmable sounder base in English/French (required in Canada for ULC applications with CO Series detector applications, ULC listing

B200S-LF-WH: White, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. (*CSFM: 7300-1653:0238)*

B200S-LF-IV: Ivory, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. (*CSFM: 7300-1653:0238)*

B200SR-WH: White, Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Intended for retrofit applications. *(CSFM: 7300-1653:0213)*

B200SR-IV: Ivory, Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Intended for retrofit applications. *(CSFM: 7300-1653:0213)*

B200SRA-WH: Same as B200SR-WH with, ULC listing

B200SRA-IV: Same as B200SR-IV in Ivory color, ULC listing

B200SR-LF-WH: White, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. Intended for retrofit applications. (*CSFM: 7300-1653:0238)*

B200SR-LF-IV: Ivory, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. Intended for retrofit applications. (*CSFM: 7300-1653:0238)*

MOUNTING KITS AND ACCESSORIES

TR300: White, replacement flange for B210LP(A) base

TR300-IV: Ivory, replacement flange for B210LP(A) base

RA100Z(A): Remote LED annunciator. 3-32 VDC. Mounts to a U.S. single-gang electrical box. For use with B501(A) and B300-6(A).

M02-04-00: Test magnet

M02-09-00: Test magnet with telescoping handle

CK300: Color Kit (includes cover and trim ring), white, 10-pack

CK300-IV: Color Kit (includes cover and trim ring), ivory, 10-pack

CK300-BL: Color Kit (includes cover and trim ring), black, 10-pack

FST-951 Series

Intelligent Thermal (Heat) Detectors

NOTIFIER® by Honeywell

Intelligent / Addressable Devices

General

The NOTIFIER FST-951 Series intelligent thermal detectors are designed for both performance and aesthetics. A new modern, sleek, contemporary design and advanced thermal technologies make the FST-951 Series ideal for both system operation and building design. The point ID address, set using rotary decimal switches, provide specific detector locations. The series includes a 135°F/57°C fixed-temperature, rate-of-rise and a 180°F/88°C fixed high-temperature detectors. These thermal detectors provide effective, intelligent property protection in a variety of applications. Detectors are available for both FlashScan® and CLIP applications as designated.

Features

- Sleek and stylish contemporary design.
- Advanced thermal technology for fast response.
- Fixed temperature model (FST-951) factory preset to 135°F (57°C).
- Rate-of-rise model (FST-951R), 15°F (8.3°C) per minute.
- High temperature model (FST-951H) factory preset to 190°F (88°C).
- Addressable by device.
- Compatible with FlashScan® and CLIP protocol systems.
- Rotary, decimal addressing (1-99 on CLIP systems, 1-159 on FlashScan systems).
- Two-wire SLC connection.
- Visible LEDs "blink" every time the unit is addressed.
- 360°-field viewing angle of the visual alarm indicators (two bi-color LEDs). LEDs blink green in Normal condition and turn on steady red in Alarm.
- Integral communications and built-in device-type identification.
- Remote test feature from the panel.
- Built-in functional test switch activated by external magnet.
- Walk test with address display (an address of 121 will blink the detector LED 12-(pause)-1).
- Low standby current.
- Built-in tamper-resistant feature.
- Designed for direct-surface or electrical-box mounting.
- Sealed against back pressure.
- Plugs into separate base for ease of installation and maintenance.
- SEMS screws for wiring of the separate base.
- Optional remote, single-gang LED accessory.
- Optional sounder, relay, and isolator bases.

Specifications

Size: 2.0" (5.3 cm) high; base determines diameter.

- B300-6: 6.1" (15.6 cm) diameter.
- B501: 4" (10.2 cm) diameter.

For a complete list of detector bases, see DN-60981

Shipping weight: 3.4oz (96.4g)

Operating temperature range:

- FST-951, FST-951R Series: –20°C to 38°C (–4°F to 100°F);
- FST-951H Series: –20°C to 66°C (–4°F to 150°F).

FST-951R in B300-6 Base

Detector spacing: UL approved for 50 ft. (15.24 m) center to center. FM approved for 25 x 25 ft. (7.62 x 7.62 m) spacing.

Relative humidity: 10% – 93% non-condensing.

Thermal ratings: Fixed-temperature set point 57°C (135°F), rate-of-rise detection 8.3°C (15°F) per minute, high temperature heat 88°C (190°F).

ELECTRICAL SPECIFICATIONS

Voltage range: 15 - 32 volts DC peak.

Standby current (max. avg.): 200uA @ 24 VDC (one communication every 5 seconds with LED enabled).

LED current (max.): 4.5mA @ 24 VDC ("ON").

Applications

Use thermal detectors for protection of property. For further information, refer to I56-6522, Applications Manual for System Smoke Detectors, which provides detailed information on detector spacing, placement, zoning, wiring, and special applications.

Installation

The FST-951 Series plug-in intelligent thermal detectors use a separate base to simplify installation, service, and maintenance. Installation instructions are shipped with each detector.

Mount base (all base types) on an electrical backbox which is at least 1.5" (3.81 cm) deep. For a chart of compatible junction boxes, see *DN-60054*.

NOTE: 1) *Because of the inherent supervision provided by the SLC loop, end-of-line resistors are not required. Wiring "T-taps" or branches are permitted for Style 4 (Class "B") wiring.* ***2)*** *When using relay or sounder bases, consult the ISO-X(A) installation sheet I56-1380 for device limitations between isolator modules and isolator bases.*

Agency Listings and Approvals

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

- UL/ULC Listing: S2101
- FM Approved
- CSFM: 7270-0028:0502

Product Line Information

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

***NOTE:** "-IV" suffix indicates FlashScan® and CLIP device.*

FST-951: White, low-profile intelligent 135°F fixed thermal sensor, FlashScan only.

FST-951A: Same as FST-951 but with ULC listing.

FST-951-IV: Ivory, low-profile intelligent 135°F fixed thermal sensor, FlashScan and CLIP.

FST-951A-IV: Same as FST-951-IV but with ULC listing.

FST-951R: White, low-profile intelligent rate-of-rise thermal sensor, FlashScan only.

FST-951RA: Same as FST-951R but with ULC listing.

FST-951R-IV: Ivory, low-profile intelligent rate-of-rise fixed thermal sensor, FlashScan and CLIP.

FST-951RA-IV: Same as FST-951R-IV but with ULC listing.

FST-951H: White, low-profile intelligent 190°F fixed thermal sensor, FlashScan only.

FST-951HA: Same as FST-951H but with ULC listing.

FST-951H-IV: Ivory, low-profile intelligent 190°F thermal sensor, FlashScan and CLIP.

FST-951HA-IV: Same as FST-951H-IV but with ULC listing.

INTELLIGENT BASES

***NOTE:** For details on intelligent bases, see DN-60981*

B300-6: White, 6" base, standard flanged low-profile mounting base.

B300-6-IV: Ivory,6" base, standard flanged low-profile mounting base.

B300A-6: Same as B300-6, ULC listed.

B300A-6-IV: Ivory, 6" standard flanged low-profile mounting base, ULC listed.

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

B501-WHITE: White, 4" standard European flangeless mounting base. 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.

B501-WHITE-BP: Bulk pack of B501-WHITE contains 10.

B224RB-WH: White, relay base.

B224RB-IV: Ivory, relay base.

B224RBA-WH: White, relay base, ULC listing.

B224RBA-IV: Ivory, relay base, ULC listing.

B224BI-WH: White, ***isolator*** detector base.

B224BI-IV: Ivory ***isolator*** detector base.

B224BIA-WH: White, ***isolator*** detector base, ULC listing.

B224BIA-IV: Ivory ***isolator*** detector base, ULC listing.

B200S-WH: White, Intelligent addressable sounder base capable of producing sound output in high or low volume with ANSI Temporal 3, ANSI Temporal 4, continuous tone, marching tone, and custom tone. Uses FlashScan protocol.

B200S-IV: Ivory, Intelligent addressable sounder base capable of producing sound output in high or low volume with ANSI Temporal 3, ANSI Temporal 4, continuous tone, marching tone, and custom tone. Uses FlashScan protocol.

B200SA-WH: Same as B200S-WH, ULC listing.

B200SA-IV: Same as B200S-IV, ULC listing.

B200SCOA-WH: White, Intelligent, programmable sounder base in English/French (required in Canada for ULC applications with SO Series detector applications.

B200SCOA-IV: Ivory Intelligent, programmable sounder base in English/French (required in Canada for ULC applications with SO Series detector applications, ULC listing.

B200S-LF-WH: White, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement.

B200S-LF-IV: Ivory, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement.

B200SR-WH: White, Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Intended for retrofit applications.

B200SR-IV: Ivory, Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone. Intended for retrofit applications.

B200SRA-WH: Same as B200SR-WH with, ULC listing.

B200SRA-IV: Same as B200SR-IV in Ivory color, ULC listing.

B200SR-LF-WH: White, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. Intended for retrofit applications.

B200SR-LF-IV: Ivory, Low Frequency Intelligent, programmable sounder base. Produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. Intended for retrofit applications.

MOUNTING KITS AND ACCESSORIES

TR300: White, replacement flange for B210LP(A) base.

TR300-IV: Ivory, replacement flange for B210LP(A) base.

RA100Z(A): Remote LED annunciator. 3 – 32 VDC. Mounts to a U.S. single-gang electrical box. For use with B501(A) and B3006(A)-6.

M02-04-00: Test magnet.

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

Sensitivity:

- UL Applications: 0.5% to 4.0% per foot obscuration.
- ULC Applications: 0.5% to 3.5% per foot obscuration

Size: 2.0" (51mm) high; base determines diameter

- **B300-6 series:** 6.1" (15.6 cm) diameter
- **B501 series:** 4" (10.2 cm) diameter

For a complete list of detector bases see DN-60981

Shipping weight: 3.4 oz. (95 g)

Operating temperature range:

- FSP-951 Series: 32°F to 122°F (0°C to 50°C)
- FSP-951T Series: 32°F to 100°F(0°C to 38°C)
- FSP-951R Series installed in DNR/DNRA/DNRW, -4°F to 158°F (-20°C to 70°C)

UL/ULC Listed Velocity Range: 0-4000 ft/min. (1219.2 m/min.), suitable for installation in ducts

Relative humidity: 10% – 93% non-condensing

Thermal ratings: fixed-temperature set point 135°F (57°C), rate-of-rise detection 15°F (8.3°C) per minute, high temperature heat 190°F (88°C)

ELECTRICAL SPECIFICATIONS

Voltage range: 15 - 32 volts DC peak

Standby current (max. avg.): 200µA @ 24 VDC (one communication every 5 seconds with LED enabled)

Max current: 4.5 mA @ 24 VDC ("ON")

DETECTOR SPACING AND APPLICATIONS

NOTIFIER recommends spacing detectors in compliance with NFPA 72. In low airflow applications with smooth ceiling, space detectors 30 feet (9.1m). For specific information regarding detector spacing, placement, and special applications refer to NFPA 72. A *System Smoke Detector Application Guide*, document SPAG91, is available at **www.systemsensor.com.**

Listings and Approvals

Listings and approvals below apply to the FSP-951 Series detectors. In some cases, certain modules may not be listed by certain approval agencies, or listing may be in process. Consult factory for latest listing status.

- UL/ULC Listing: S1115
- FM Approved
- CSFM: 7272-0028:0503

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ISO 9001 CERTIFIED
ENGINEERING & MANUFACTURING QUALITY SYSTEMS

INTELLIGENT BASES

Standard, Relay, Isolator, Sounder, and Low Frequency Sounder Bases

To meet local code and application requirements, Silent Knight® offers standard 4" and 6" bases, as well as specialty base designs including relay, isolator, sounder and low frequency sounder bases that are UL listed for low frequency operation and comply with NFPA 72 requirements for sleeping spaces for the new SK-W Series of addressable detectors as well as previous generations.

The standard 4" and 6" bases offer a plug-in detector base intended for use in intelligent systems, with screw terminals provided for power (+ and –), and remote annunciator connections. Communication takes place over the power (+ and –) lines. The 4" base offers a compact design while the 6" base provides compatibility with a wider range of junction boxes.

The specialty bases support application driven requirements. These bases employ a separate mounting plate that installs on various junction box sizes to eliminate unsightly surface-mount boxes. The mounting plate enables pre-wiring of all connections to speed and simplify installation.

Relay bases (B224RB-WH/B224RB-IV) provide one form-C contact relay for control of auxiliary functions, such as door closure and elevator recall. The relay can operate in two different modes (short and long delay). The activation time for the short delay is 60-100 milliseconds, while the activation time for the long delay is 6-10 seconds. A shunt with pin headers, located on the base PC board, is used to set the delay timing.

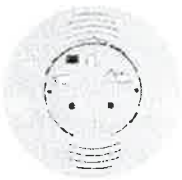
Isolator bases (B224BI-WH/B224BI-IV) allow the Signaling Line Circuit (SLC) loop to operate under fault conditions created from a short circuit preventing an entire communication loop from being disabled. The base isolates the section of the loop containing the short circuit from the remainder of the circuit and automatically restores when the fault is corrected.

Sounder and low frequency (-LF) sounder bases are designed for new and existing dwelling unit applications. They offer maximum flexibility in installation, configuration, and operation to meet or exceed UL 268 and UL 464 requirements. The low frequency sounder bases are designed to meet the NFPA 72 sleeping space requirement to produce a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent. Studies show that a lower frequency, centered around 520 Hz, is the most ideal to wake sleeping occupants, even those with mild to severe hearing loss.

B300-6 Standard 6" Base (White)

B300-6-IV Standard 6" Base (Ivory)

B200S-WH Sounder Base (White)



B200S-LF-WH Low Frequency Sounder Base (White)

B501-WHITE Flangeless 4" Base (White)

B501-BL Flangeless 4" Base (Black)

FEATURES AND BENEFITS

- Bases enable quick and secure detector plug-in
- SEMS Screws provide easy wiring connection
- UL 268 compliant
- Support for 12-24 AWG provides installation flexibility
- Multiple base formats meet application requirements
- Standard white color with ivory and black options
- Mechanical locking feature restricts removal of attached sensor head
- Specialty Base Features:
- Pre-wired mounting plate simplifies installation
- Application driven feature sets
- Sounder bases both UL268 and UL464 compliant

Honeywell

SILENT KNIGHT

The B200S sounder and LF sounder bases (B200S-WH/B200S-IV/B200S-LF-WH/B200S-LF-IV) adopt the same address as the detector, but use a unique device type on the loop. The Fire Alarm Control Panel (FACP) can use that address to command an individual sounder — or a group of sounders — to activate. The command set from the FACP can be tailored to multiple event-driven tone outputs allowing selection of volume (75 or 85 dBA), tone (ANSI Temporal 3, ANSI Temporal 4, or March Time) and group. In addition, some FACPs will enable custom tone patterns. The B200S series sounder bases recognize the System Sensor synchronization protocol. This enables them to be used as a component of the general evacuation signal — along with other System Sensor AV appliances — when connected to a power supply or FACP output capable of generating the System Sensor synchronization pulses.

The B200SR sounder and LF sounder bases (B200SR-WH/B200SR-IV/B200SR-LF-WH/B200SR-LF-IV) are fully compatible with existing B501BH Series sounder base installations. The device enables users to select one of two B501-supported tones (ANSI Temporal 3 or Continuous) through a jumper.

PRODUCT LINE INFORMATION

INTELLIGENT BASES

"-IV" suffix indicates Ivory color model.

"-BL" suffix indicates Black color model.

"-WH" and "-WHITE" suffix indicates White color model.

B300-6: White, 6" base, standard flanged low-profile mounting base; replacement base for the B210LP.

B300-6-BP: Bulk pack of B300-6, package contains 10; replacement for the B210LPBP.

B300-6-IV: Ivory,6" base, standard flanged low-profile mounting base.

B501-WHITE: White, 4" standard European flangeless mounting base. UL/ULC listed

B501-WHITE-BP: Bulk pack of B501-WHITE, contains 10

B501-BL: Black, 4" standard European flangeless mounting base

B501-IV: Ivory color, 4" standard European flangeless mounting base

B224RB-WH: White, relay base

B224RB-iV: Ivory, relay base

B224BI-WH: White, isolator detector base

B224BI-IV: Ivory isolator detector base

B200S-WH: White, Intelligent addressable sounder base capable of producing sound output in high or low volume with ANSI Temporal 3, ANSI Temporal 4, continuous tone, marching tone, and custom tone; Uses SK protocol

B200S-IV: Ivory, Intelligent addressable sounder base capable of producing sound output in high or low volume with ANSI Temporal 3, ANSI Temporal 4, continuous tone, marching tone, and custom tone; Uses SK protocol

B200S-LF-WH: White, Low Frequency Intelligent, programmable sounder base, produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement

B200S-LF-IV: Ivory, Low Frequency Intelligent, programmable sounder base, produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement

B200SR-WH: White, Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone; Intended for retrofit applications

B200SR-IV: Ivory, Intelligent sounder base capable of producing sound output with ANSI Temporal 3 or continuous tone; Intended for retrofit applications

B200SR-LF-WH: White, Low Frequency Intelligent, programmable sounder base, produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement; intended for retrofit applications

B200SR-LF-IV: Ivory, Low Frequency Intelligent, programmable sounder base, produces a fundamental frequency of 520 Hz +/- 10% with a square wave or its equivalent; designed to meet the NFPA 72 sleeping space requirement. Intended for retrofit applications.

MOUNTING KITS AND ACCESSORIES

TR300: White, replacement flange for B300-6 base

TR300-IV: Ivory, replacement flange for B300-6-IV base

RA100Z: Remote LED annunciator, 3 – 32 VDC, mounts to a U.S. single-gang electrical box; For use with B501 and B300-6

M02-04-00: Test magnet

M02-09-00: Test magnet with telescoping handle

CK300: White, detector color kit, pack of 10

CK300-IV: Ivory, detector color kit, pack of 10

CK300-BL: Black, detector color kit, pack of 10

JUNCTION BOX SELECTION GUIDE

Base Models	Single Gang	Double Gang	3.5" Oct.	4.0" Oct.	4.0" Square	4.0" Square with 3.0" mud ring	50 mm	60 mm	70 mm	75 mm
B200S,B200SR	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
B501	No	No	Yes	No	No	Yes	Yes	Yes	Yes	No
B300-6	Yes	No	Yes	Yes	Yes	Yes	No	No	No	No
B224BI, B224RB	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No

Box depth contingent on base and wire size.
Refer to National Electric Code or applicable local codes for appropriate recommendations.
Applies to all model variants "BL", "-LF", "-IV", "-WH", and "-WHITE". See Product Line Information for detailed model description.

INTELLIGENT BASES TECHNICAL SPECIFICATIONS

ELECTRICAL

For B300-6 Series bases:
- **Operating voltage:** 15 to 32 VDC
- **Standby current:** 170 µA maximum

For B501 Series bases:
- **Operating voltage:** 15 to 32 VDC
- **Standby current:** 150 µA maximum

For B200 Series bases:
- **External supply voltage:** 16 to 33 VDC (FWR)
- **Standby current:** 500 µA maximum
- **Alarm current for B200S(-IV)(-WH):**
  35 mA maximum at high-volume setting
  15 mA maximum at low-volume setting
- **Alarm current for B200S-LF(-IV)(-WH)** High-volume setting:
  70 mA maximum @ 33.0 VDC
  90 mA maximum @ 24.0 VDC
  140 mA maximum @16.0 VDC
- **Alarm current for B200S-LF(-IV)(-WH)** Low-volume setting:
  15 mA maximum @ 33.0 VDC
  20 mA maximum @ 24.0 VDC
  25 mA maximum @ 16.0 VDC
- **Alarm current for B200SR(-IV)(-WH):** 35 mA maximum
- **Alarm current for B200SR-LF(-IV)(-WH):**
  65 mA maximum @ 33.0 VDC
  90 mA maximum @ 24.0 VDC
  125 mA maximum @16.0 VDC

SLC operating voltage: 15 to 32 VDC

SLC standby current: See applicable sensor specification

Sound output: Greater than 85 dBA minimum; measured in a UL reverberant room at 10 feet, 24 Volts (continuous tone)

For B224BI, B224RB (-IV) (-WH) bases:
- **Operating voltage:** 15 to 32 VDC (powered by SLC)
- **Standby ratings:** <450 µA maximum @ 24 VDC
- **Set time: (B224RB(-IV)(-WH) only):** short delay 60-100 msec; long delay 6-10 seconds
- **Reset time: (B224RB/-IV/-WH only):** 20 milliseconds maximum
- **Relay characteristics: (B224RB/-IV/-WH only):** two-coil latching relay; one Form-C contact; ratings (UL/CSA): 0.9 A @ 125 VAC, 0.9 A @ 110 VDC, and 3.0 A @ 30 VDC

PHYSICAL

Note: Specifications applies to all model variants "-BL", "-LF", "-IV", -WH, -WHITE. See Product Line Information for detailed model description.

Diameter:
- **B501-WHITE:** 4" (10.16 cm)
- **B300-6, :** 6.1" (15.49 cm)
- **B224BI, B224RB:** 6.2" (15.748 cm)
- **B200S, B200SR:** 6.875" (17.46 cm)

Wire gauge:
- **B224BI, B224RB:** 14 to 24 AWG
- **B300-6, B501, B200S, B200SR**12 to 24 AWG

Temperature range:
- **B224BI, B224RB, B200S, B200SR:** 32°F to 120°F (0°C to 49°C)
- **B300-6, B501:** -4°F to 150°F (-20°C to 66°C)

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

System temperature and humidity ranges: This system meets NFPA requirements for operation at 0°C to 49°C (32°F to 120°F); and at a relative humidity (non-condensing) of 85% at 30°C (86°F) per NFPA, and 93% ± 2% at 32°C ± 2°C (89.6°F ± 1.1°F) per ULC. 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 all peripherals be installed in an environment with a nominal room temperature of 15°C to 27°C (60°F to 80°F).

AGENCY LISTINGS AND APPROVALS

The listings and approvals below apply to intelligent bases as noted. 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 Listed: S911

FM Approved

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

Country of origin: Mexico

Honeywell Silent Knight
12 Clintonville Road
Northford, CT 06472-1610
203.484.7161
www.silentknight.com

SK-61045 | B | 07/19

NOTIFIER®
by Honeywell

FMM-1, FMM-101, FZM-1, FCM-1, FRM-1 Series
Monitor, Interface Control & Relay Modules

FMM-1 Monitor Module

General

Three different monitor modules are available for Notifier's intelligent control panels for a variety of applications. Monitor modules supervise a circuit of dry-contact input devices, such as Sprinkler Valves or Manual Call Points, or monitor and power a circuit of two-wire smoke detectors (FZM-1).

FMM-1 Monitor Module is a standard-sized module (typically mounts to a 10.16 cm square box) that supervises a circuit of dry-contact input devices.

FMM-101 Mini Monitor Module is a miniature monitor module a mere 3.302 cm H x 6.985 cm W x 1.651 cm D that supervises a circuit of dry-contact input devices. Its compact design allows the FMM-101 to be mounted in a single-gang box behind the device it monitors.

FZM-1 Interface Module is a standard-sized module that monitors and supervises compatible two-wire, 24 volt, smoke detectors on a circuit.

FCM-1 Addressable Control Module provides Notifier intelligent fire alarm control panels a circuit for Notification Appliances (horns, strobes, speakers, etc.). Addressability allows the FCM-1 to be activated, either manually or through panel programming, on a select (zone or area of coverage) basis.

FRM-1 Addressable Relay Module provides the system with a dry-contact output for activating a variety of auxiliary devices, such as fans, dampers, control equipment, etc. Addressability allows the dry contact to be activated, either manually or through panel programming, on a select basis.

FlashScan® (U.S. Patent 5,539,389) is a communication protocol developed by NOTIFIER that greatly increases the speed of communication between analog intelligent devices. Intelligent devices communicate in a grouped fashion. If one of the devices within the group has new information, the panel CPU stops the group poll and concentrates on single points. The net effect is response speed

Features

- Built-in type identification automatically identifies this device as a monitor module to the control panel.
- Powered directly by two-wire SLC loop. No additional power required.
- High noise (EMF/RFI) immunity.
- SEMS screws with clamping plates for ease of wiring.
- Direct-dial entry of address: 01 – 159 on FlashScan loops; 01 – 99 on CLIP loops.
- LED flashes green during normal operation (programmable option) and latches on steady red to indicate alarm

FMM-1 Monitor Module

The FMM-1 Monitor Module is intended for use in intelligent, two-wire systems, where the individual address of each module is selected using the built-in rotary switches. It provides either a two-wire or four-wire fault-tolerant Initiating Device Circuit (IDC) for normally-open-contact fire alarm and supervisory devices. The module has a panel-controlled LED indicator. The FMM-1 can be used to replace MMX-1 modules

FMM-1 Applications

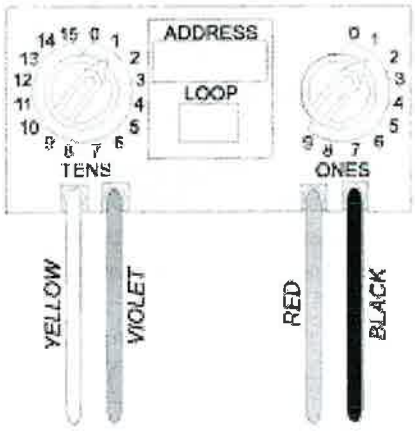
Use to monitor a zone of four-wire smoke detectors, manual normally open dry-contact alarm activation devices. May also be used to monitor normally-open supervisory devices with special supervisory indication at the control panel. Monitored circuit may be wired as an typical 2-wire initiating circuit configuration or 4-wire fault tolerant initiating circuit configuration. A 47K Ohm End-of-Line Resistor (provided) terminates the circuit. No resistor is required for supervision of the circuit.

FMM-1 Operation

Each FMM-1 uses one of the available module addresses on an SLC loop. It responds to regular polls from the control panel and reports its type and the status (open/normal/short) of its Initiating Device Circuit (IDC). A flashing LED indicates that the module is in communication with the control panel. The LED latches steady on alarm (subject to current limitations on the loop).

FMM-1 Specifications

NOMRAL OPERATING VOLTAGE	15- 32 VDC
MAXIMUM CURRENT DRAW	5.0 mA (LED on)
AVERAGE OPERATING CURRENT	375 A (LED flashing), 1 communication every 5 seconds, 47k EOL
MAXIMUM IDC WIRING RESISTANCE	1500 Ohms
MAXIMUM IDC VOLTAGE	11 Volts
EOL RESISTANCE	47k Ohms
TEMPERATURE RANGE	0 C to 49 C
HUMIDITY RANGE	10% to 93% non-condensing



FMM-101 Mini Monitor Module

The FMM-101 Mini Monitor Module can be installed in a single-gang junction directly behind the monitored unit. Its small size and light weight allow it to be installed without rigid mounting. The FMM-101 is intended for use in intelligent, two-wire systems where the individual address of each module is selected using rotary switches. It provides a two-wire initiating device circuit for normally-open-contact fire alarm and security devices. The FMM-101 can be used to replace MMX-101 modules in existing systems.

FMM-101 Applications

Use to monitor a single device or a zone of four-wire smoke detectors, manual fire alarm pull stations, waterflow devices, or other normally-open dry-contact devices. May also be used to monitor normally-open supervisory devices with special supervisory indication at the control panel. Monitored circuit/device is wired as an 2-wire initiating device circuit configuration. A 47k Ohm End-of-Line Resistor (provided) terminates the circuit.

FMM-101 Operation

Each FMM-101 uses one of the available module addresses on an SLC loop. It responds to regular polls from the control panel and reports its type and the status (open/normal/short) of its Initiating Device Circuit (IDC).

FMM-101 Specifications

NOMRAL OPERATING VOLTAGE	15- 32 VDC
AVERAGE OPERATING CURRENT	350 A, 1 communication every 5 seconds, 47k EOL; 600 A Max. (Communicating, IDC Shorted)
MAXIMUM IDC WIRING RESISTANCE	1500 Ohms
MAXIMUM IDC VOLTAGE	11 Volts
EOL RESISTANCE	47k Ohms
TEMPERATURE RANGE	0 C to 49 C
HUMIDITY RANGE	10% to 93% non-condensing
DIMENSIONS	3.302 cm high x 6.985 cm wide x 1.651 cm deep.

FZM-1 Interface Module

The FZM-1 Interface Module is intended for use in intelligent, addressable systems, where the individual address of each module is selected using built-in rotary switches. This module allows intelligent panels to interface and monitor two wire conventional smoke detectors. It transmits the status (normal, open, or alarm) of one full zone of conventional detectors back to the control panel. All two-wire detectors being monitored must be compatible with the module.

FZM-1 Applications

Use the FZM-1 to monitor a zone of two-wire smoke detectors. The monitored circuit may be wired as an typical 2-wire initiating circuit configuration or 4-wire fault tolerant initiating circuit configuration. A 3.9 k Ohm End-of-Line Resistor (provided) terminates the end of the S circuit (maximum IDC loop resistance is 25 Ohms). Install End-of-Line Resistor across terminals 8 and 9 for application.

FZM-1 Operation

Each FZM-1 uses one of the available module addresses on an SLC loop. It responds to regular polls from the control panel and reports its type and the status (open/normal/short) of its Initiating Device Circuit (IDC). A flashing LED indicates that the module is in communication with the control panel. The LED latches steady on alarm (subject to current limitations on the loop).

FZM-1 Specifications

NOMRAL OPERATING VOLTAGE	15- 32 VDC
MAXIMUM CURRENT DRAW	5.1 mA (LED on)
MAXIMUM IFC WIRING RESISTNACE	25 Ohms
AVERAGE OPERATING CURRENT	270 A, 1 communication and 1 LED flash every 5 seconds, 3.9k EOL

FZM-1 Specifications

EOL RESISTANCE	3.9k Ohms
EXTERNAL SUPPLY VOLTAGE (BETWEEN TERMINAL T10 AND T11)	• DC voltage: 24 volts power limited. • Ripple voltage: 0.1 Vrms maximum. • Current: 90 mA per module maximum.
TEMPERATURE RANGE	0 C to 49 C
HUMIDITY RANGE	10% to 93% non-condensing
DIMENSIONS	11.43 cm high x 10.16 cm wide x 3.175 cm deep. Mount to a 10.16 cm square x 5.398 cm deep box.

FCM-1 & FRM-1 Control and Relay Module

- Built-in type identification automatically identifies these devices to the control panel.
- Internal circuitry and relay powered directly by two-wire SLC loop. The FCM-1 module requires power (for horns, strobes, etc.), or audio (for speakers).
- Integral LED "blinks" green each time a communication is received from the control panel and turns on in steady red when activated.
- LED blink may be deselected globally (affects all devices).
- High noise immunity (EMF/RFI).
- The FCM-1 may be used to switch 24-volt NAC power, audio (up to 70.7 Vrms).
- Wide viewing angle of LED.
- SEMS screws with clamping plates for wiring ease.
- Direct-dial entry of address 01– 159 for FlashScan loops, 01 – 99 for CLIP mode loops.
- Speaker, and audible/visual applications may be wired for typical 2-wire or 4-wire fault tolerant configuration

FCM-1, FRM-1 Applications

FCM-1 is used to switch 24 VDC audible/visual power, high-level audio (speakers). FRM-1 may be programmed to operate dry contacts for applications such as door holders or Air Handling Unit shutdown, and to reset four-wire smoke detector power.

FCM-1, FRM-1 Construction

- The face plate is made of off-white heat-resistant plastic.
- Controls include two rotary switches for direct-dial entry of address (01-159).
- FCM-1 is configured for a single 2-wire or 4-wire fault tolerant Notification Appliance Circuit.
- FRM-1 provides two Form-C dry contacts that switch together.

FCM-1, FRM-1 Operation

Each FCM-1 or FRM-1 uses one of 159 possible module addresses on a SLC loop (99 on CLIP loops). It responds to regular polls from the control panel and reports its type and status, including the open/normal/short status of its Notification Appliance Circuit (NAC). The LED blinks with each poll received. On command, it activates its internal relay. The FCM-1 supervises 2-wire or 4-wire notification or control circuits.

Upon code command from the panel, the FCM-1will disconnect the supervision and connect the external power supply in the proper polarity across the load device. The disconnection of the supervision provides a positive indication to the panel that the control relay actually turned ON. The external power supply is always relay isolated from the communication loop so that a trouble condition on the external power supply will never interfere with the rest of the system.

Rotary switches set a unique address for each module. The address may be set before or after mounting. The built-in TYPE CODE (not settable) will identify the module to the control panel, so as to differentiate between a module and a sensor address.

FCM-1 Specifications

NOMRAL OPERATING VOLTAGE	15- 32 VDC
MAXIMUM CURRENT DRAW	6.5 mA (LED on)
AVERAGE OPERATING CURRENT	350 A direct poll, 375 A group poll with LED flashing, 485 A Max. (LED flashing, NAC shorted.)
MAXIMUM NAC LINE LOSS	4 VDC
EXTERNAL SUPPLY VOLTAGE (BETWEEN TERMINAL T10 AND T11)	Maximum (NAC): Regulated 24 VDC; Maximum (Speakers): 70.7 V RMS, 50W.
DRAIN ON EXTERNAL SUPPLY	1.7 mA maximum using 24 VDC supply; 2.2 mA Maximum using 80 VRMS supply
MAX NAC CURRENT RATINGS:	For class B wiring system, the current rating is 3A; For class A wiring system, the current rating is 2A.
TEMPERATURE RANGE	0 C - 49 C
HUMIDITY RANGE	10% to 93% non-condensing
DIMENSIONS	114.3 mm high x101.6 mm wide x 31.75 mm deep. Mounts to a 101.6 mm square x 53.975 mm deep box.

FRM-1 Specifications

NOMRAL OPERATING VOLTAGE	15- 32 VDC
MAXIMUM CURRENT DRAW	6.5 mA (LED on)
AVERAGE OPERATING CURRENT	230 A direct poll; 255 A group poll.
EOL RESISTANCE	not used
TEMPERATURE RANGE	0 C - 49 C
HUMIDITY RANGE	10% to 93% non-condensing

FRM-1 Contact Ratings

CURRENT RATING	MAXIMUM VOLTAGE	LOAD DESCRIPTION	APPLICATION
3A	30 VDC	Resistive	Non-Coded
2A	30 VDC	Resistive	Coded
0.9A	110 VDC	Resistive	Non-Coded
0.9A	125 VDC	Resistive	Non-Coded
0.5A	30 VDC	Inductive (L/R= 5ms)	Coded
1A	30 VDC	Inductive (L/R= 2ms)	Coded
0.3A	125 VAC	Inductive (PF= 0.35)	Non-Coded
1.5A	25 VAC	Inductive (PF= 0.35)	Non-Coded
0.7A	70.7 VAC	Inductive (PF= 0.35)	Non-Coded
2A	25 VAC	Inductive (PF= 0.35)	Non-Coded

Note: Maximum (Speakers): 70.7 V RMS, 50W

Installation

FMM-1 and FZM-1modules mount directly to a standard 10.16 cm square, 5.398 cm deep, electrical box. They may also be mounted to the SMB500 surface-mount box. Mounting hardware and installation instructions are provided with each module. All wiring must conform to applicable local codes, ordinances, and regulations. These modules are intended for power-limited wiring only.

The FMM-101 module is intended to be wired and ounted without rigid connections inside a standard electrical box. All wiring must conform to applicable local codes, ordinances, and regulations.

Agency Listings and Approvals

The listings and approvals below apply to the module 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.

SAI Global : License SMKH25312

Ordering Information

FMM-1-AUS	Monitor module
FMM-101-AUS	Monitor module, miniature
FZM-1-AUS	Monitor module, two-wire detectors
FCM-1-AUS	Intelligent Addressable Control Module
FRM-1-AUS	Intelligent Addressable Relay Module
SMB500	Optional surface-mount backbox.

NOTE: For installation instructions, see the following documents:

- FCM-1 - Installation Manual I56_3500_003
- FRM -1 - Installation Manual I56-3502-002
- FMM-1 - Installation Manual I56-3506-001
- FMM101 - Installation Manual I56-3508-001
- FZM-1 - Installation Manual I56-3504-002

For more information, contact Notifier:
Phone (Australia): 1800 220 345 (Toll Free)
Phone (New Zealand): 800 220 345 (Toll Free)

www.notifier.com.au

DOC-02-040 / 10/21 | Rev B

I56-3624-001

NOTIFIER by Honeywell

12 Clintonville Road
Northford, CT 06472-1653
Phone: 203.484.7161

ISO-X FAULT ISOLATOR MODULE

SPECIFICATIONS

Normal Operating Voltage:	15-32 VDC
Stand-By Current:	450µA (not isolating)
Maximum Current Draw:	17mA (device in isolation)
Temperature Range:	32°F to 120°F (0°C to 49°C)
Humidity:	10% to 93% Non-condensing
Dimensions:	4 1/2" H × 4" W × 1/4" D (Mounts to a 4" square by 2 1/8" deep box)

This information is included as a quick reference installation guide. Refer to the appropriate Notifier Installation Manual for detailed system information. If the modules will be installed in an existing operational system, inform the operator and local authority that the system will be temporarily out of service. Disconnect power to the control panel before installing the modules.

NOTICE: This manual should be left with the owner/user of this equipment.

GENERAL DESCRIPTION

ISO-X FAULT ISOLATOR MODULES enable part of the communications loop to continue operating when a short circuit occurs on it. An LED indicator blinks in the normal condition and turns on during a short circuit condition. The module will automatically restore the entire communications loop to the normal condition when the short circuit is removed.

COMPATIBILITY REQUIREMENTS

To ensure proper operation, these modules shall be connected to addressable, compatible Notifier control panels only.

NOTE: The number of devices that may be installed between fault isolator modules will vary based on the types of devices being isolated. Contact the fire alarm control panel manufacturer for the isolator load ratings of individual devices.

MOUNTING

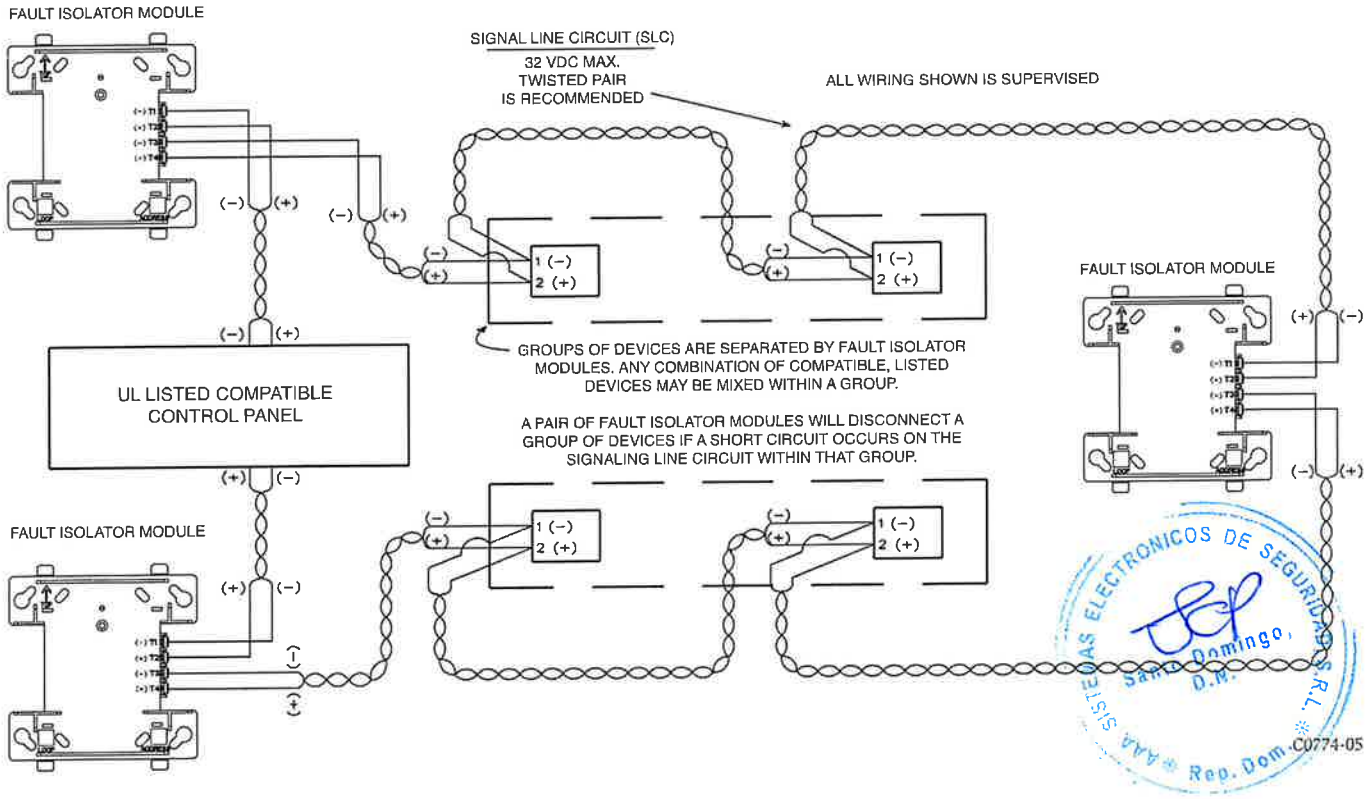
ISO-X modules mount directly to a 4 inch square electrical boxes. The box must have a minimum depth of 2 1/8 inches.

WIRING

NOTE: All wiring must conform to applicable local codes, ordinances, and regulations.

1. Install module wiring in accordance with the job drawings and the wiring diagrams in Figure 1.
2. Secure module to electrical box (supplied by installer).
3. Terminal wire gage: 12-18 AWG

FIGURE 1. FAULT ISOLATOR MODULE WIRING:



NOTIFIER
by Honeywell

NBG-12LX Addressable Pull Station

Document 52131 I56-3511-002

Description

The NBG-12LX Addressable pull station is a non-coded, dual-action manual pull station with a key-lock reset feature. It provides NOTIFIER intelligent fire alarm control panels (FACP) with one addressable alarm initiating input. The addressable module is housed inside the pull station. The NBG-12LX is compatible with all Notifier intelligent panels and will automatically operate in either FlashScan™ or CLIP (Classic Loop Interface Protocol) mode. FlashScan™ is a patented High Speed Communications Protocol. Refer to the FACP Installation Manual to determine if FlashScan™ protocol is supported. FlashScan™ or CLIP operating mode must be selected in the FACP. (This selection is not available or required in FACPs that do not support FlashScan™, therefore CLIP mode is enabled by default.) No selection is required in the Pull Station. The NBG-12LX meets the ADAAG controls and operating mechanisms guidelines (section 4.1.3[13]), and the ADA requirement for a 5 lb. maximum pull force to activate the pull station. Operating instructions are molded into the pull station handle along with Braille text. Molded Terminal numbers are also present. Conforms to ANSI/UL Standard 38 and ULC Standard S528.

Ratings

Normal Operating Voltage: 24 VDC.
Average Operating Current (LED Flash): 375 μA.
Maximum Operating Current (LED On): 5 mA.
Temperature Range: 32° F – 120° F (0° C – 49° C).
Relative Humidity Range: 10% - 93% non-condensing.

Installation

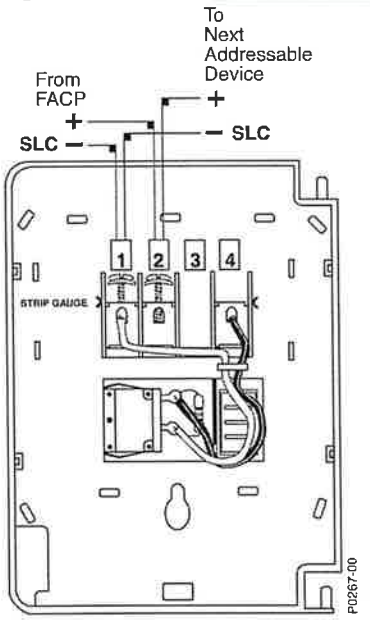
The NBG-12LX Addressable pull station can be surface mounted to an SB-10 or SB-I/O surface backbox or semi-flush mounted on a standard single-gang, double-gang or 4″ (10.16 cm) square electrical box. The optional BG-TR trim ring can be used if the NBG-12LX is to be semi-flush mounted.

Operation

To activate the dual-action pull station, push in and pull down on the handle. The word 'ACTIVATED' appears after the handle is pulled down. This will remain until the pull station is reset.

The pull station includes one Single Pole, Single Throw (SPST) Normally Open (N/O) switch which closes upon activation of the pull station.

Wiring



NBG-12LX
Addressable Pull Station

Document 52131 I56-3511-002

Resetting the Pull Station

1. Insert the key into the lock and rotate 1/4 turn counterclockwise.
2. Open the door until the handle returns to normal.
3. Close and lock the door.

NOTE: Closing the door automatically resets the switch to the 'Normal' position. Opening the door will not activate or deactivate the alarm switch.

CAUTION! Do not detach the door of the pull station during installation. The door of the pull station cannot be reattached to the backplate after the backplate has already been installed onto an electrical box.

CAUTION!

Install the Notifier NBG-12LX addressable pull station in accordance with these instructions, applicable NFPA standards, national and local Fire and Electrical codes and the requirements of the AHJ (Authority Having Jurisdiction). Regular testing of the devices should be conducted in accordance with the appropriate NFPA standards. Failure to follow these directions may result in failure of the device to report an alarm condition. Notifier is not responsible for devices that have been improperly installed, tested or maintained.

ADA Compliance

For ADA compliance, if the clear floor space only allows forward approach to an object, the maximum forward reach height allowed is 48 inches (121.92 cm). If the clear floor space allows parallel approach by a person in a wheelchair, the maximum side reach allowed is 54 inches (137.16 cm).

(over for Programming information)

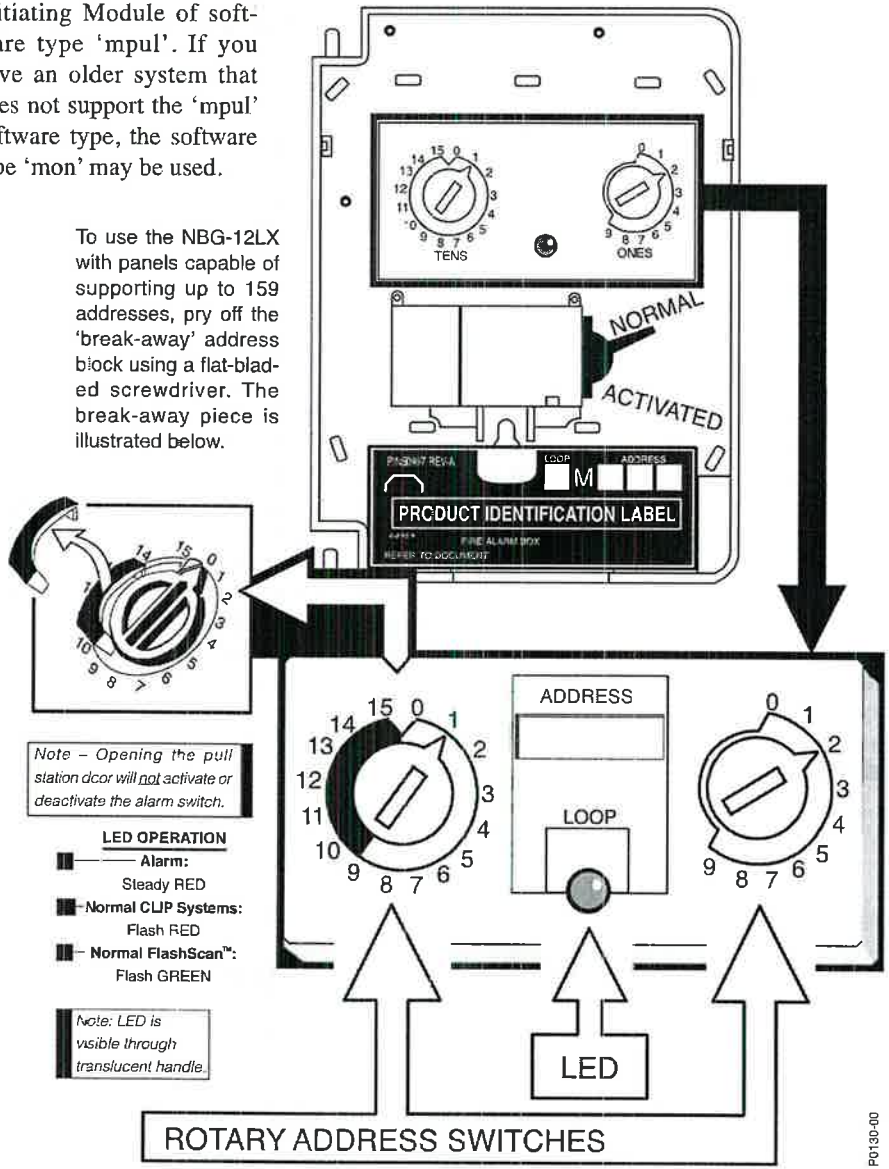
Setting the NBG-12LX Address

The NBG-12LX Addressable pull station is factory preset with address '00.' Set the address for the pull station by turning the rotary address switches on the addressable module mounted inside the pull station. Only one device per address is allowed. Multiple modules may not be set to the same address on the Signaling Line Circuit. Once the address is set, record it in the space provided on the product ID label located inside the pull station.

Software Note for AM2020/AFP1010 Programming

The NBG-12LX is an Alarm Initiating Module of software type 'mpul'. If you have an older system that does not support the 'mpul' software type, the software type 'mon' may be used.

To use the NBG-12LX with panels capable of supporting up to 159 addresses, pry off the 'break-away' address block using a flat-bladed screwdriver. The break-away piece is illustrated below.



Farenhyt

SILENT KNIGHT
by Honeywell

Miscellaneous

STI Stopper® II and Weather Stopper® II

Covers for Manual Pull Stations

General

The Safety Technology International, Inc. Stopper® II cover for manual pull stations helps deter unwanted activation and is also an effective guard against physical damage. It has been proven by use in thousands of installations throughout the world, including schools, hospitals, hotels and stores. The Stopper® II has also been tested and approved by fire prevention and testing authorities.

Features

- Window made of clear and durable plastic.
- Optional warning horn powered by 9 VDC battery.
- Provides weatherproofing for outdoor pull stations when equipped with optional gasket (Weather Stopper II).
- Fits pull stations from 5-1/2" to 6-3/4".
- Unconditional lifetime guarantee against cover breakage and damage.
- ADA Compliant
- UL Listed

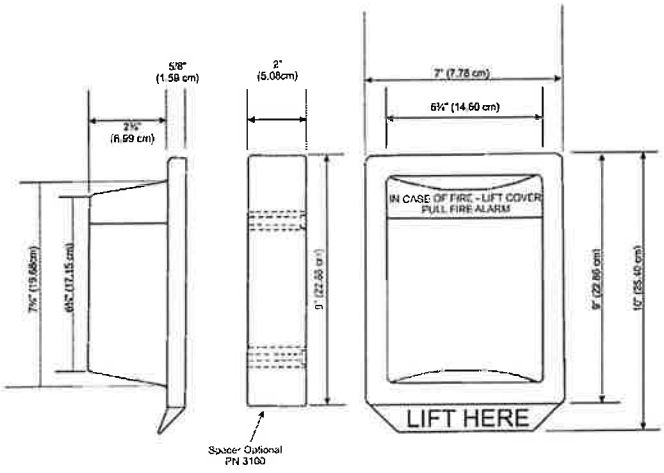
Applications

The Stopper® II can be used in almost any pull station environment.

Spacer Installation

(SURFACE MOUNT MODELS ONLY)

The spacer is used for surface-mounted or oversized manual stations. Longer screws are provided for use with tap-in anchors. Remove knock-out at top or bottom of spacer as necessary.



Agency Listings

Gasket Installation

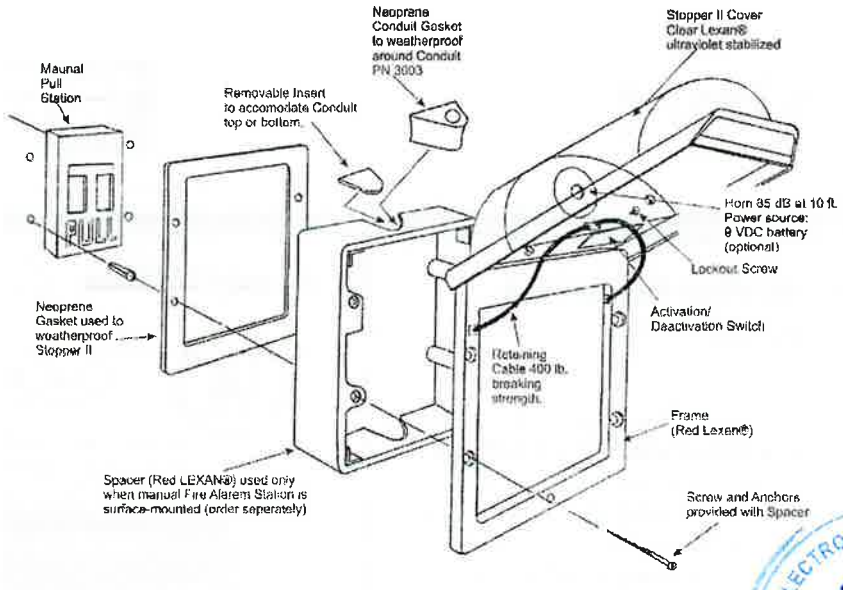
(WEATHER STOPPER® II MODELS ONLY)

Installing Neoprene gaskets behind the spacer and/or Stopper® II frame will provide additional weatherproofing. A conduit gasket may be used to seal the top or bottom of the spacer.

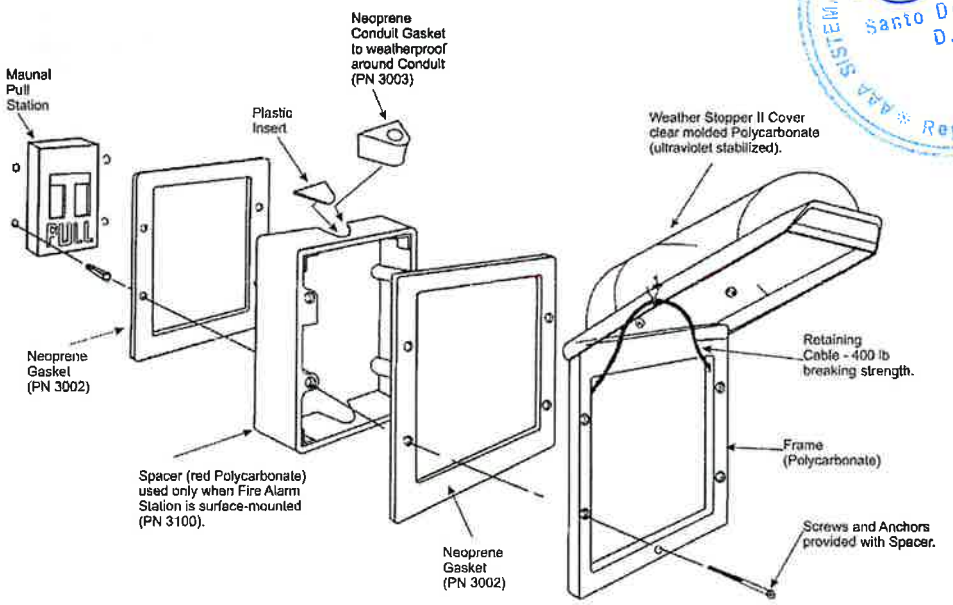
Size Of Pull Station Accommodated

The Stopper® II and Weather Stopper® II can be installed over a flush-mounted station up to 5-1/2" wide and 6-3/4" high. However, the pull station's maximum dimensions will decrease as its depth (distance from the wall) increases, i.e.: a 3/4" deep pull station may be 5-1/2" wide x 6" high; a 1-5/8" deep pull station may be 5" wide x 6" high; a 2-3/8" deep pull station may be 4" wide x 5-3/4" high; a 2-3/4" deep pull station may be 3" wide x 5-1/2" high. See sections "Spacer Installation" and "Gasket Installation".

P/N 351532 Rev A



Weather Stopper® II



Stopper® II

Ordering Information

STI1100 Stopper® II, flush mount, with horn.
STI1130 Stopper® II, surface mount, with horn.
STI1200 Stopper® II, flush mount, without horn.
STI1230 Stopper® II, surface mount, without horn.
STI1250 Weather Stopper® II, flush mount.
STI3150 Weather Stopper® II, surface mount.

STI3002 Weather Gasket
STI3003 Conduit Gasket
STI3100 Conduit Spacer, surface mount

SILENT KNIGHT
by Honeywell

Honeywell
THE POWER OF CONNECTED

Farenhyt™ Series

L-Series Indoor Horns, Strobes, and Horn Strobes

The L-Series audible visible notification products offers the most versatile and easy-to-use line of horns, strobes, and horn strobes in the industry with lower current draws and modern aesthetics. With white and red plastic housings, standard and compact devices, and plain, FIRE, and FUEGO-printed devices, System Sensor L-Series can meet virtually any application requirement.

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

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

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

INDOOR SELECTABLE-OUTPUT HORNS, STROBES, AND HORN STROBES FOR WALL APPLICATIONS

FEATURES & BENEFITS

- Updated Modern Aesthetics
- Offers small profile devices for horns and horn strobes
- Color lens attachments for use with clear lens wall or ceiling strobe
- Designed with tamper-resistant construction
- Meets DoD specification requirements
- Features a plug-in design with minimal intrusion into the back box
- Horn rated at 88+ dBA at 16 volts
- Supports rotary switch for horn tone and two volume selections
- Automatic selection of 12- or 24-volt operation at 15 and 30 candela
- Uses field-selectable candela settings on wall units: 15, 30, 75, 95, 110, 135, 185
- Mounting plate for all standard and all compact wall units
- Mounting plate shorting spring checks wiring continuity before device installation
- Supports electrically compatible with existing SpectrAlert and SpectAlert Advance devices
- Compatible with System Sensor synchronization protocol
- Listed for wall mounting only

L-SERIES SPECIFICATIONS ARCHITECT/ENGINEER SPECIFICATIONS

GENERAL

L-Series standard horns, strobes, and horn strobes shall mount to a standard 2 x 4 x 1 7/8-inch back box, 4 × 4 × 1½-inch back box, 4-inch octagon back box, or double-gang back box. L-Series compact products shall mount to a single-gang 2 × 4 × 1 7/8-inch back box. A universal mounting plate shall be used for mounting ceiling and wall products for all standard models and a separate universal mounting plate shall be used for mounting wall compact models. The notification appliance circuit wiring shall terminate at the universal mounting plate. Also, L-Series products, when used with the Sync•Circuit™ Module accessory, shall be powered from a non-coded notification appliance circuit output and shall operate on a nominal 12 or 24 volts. When used with the Sync•Circuit Module, 12-volt-rated notification appliance circuit outputs shall operate between 8.5 and 17.5 volts; 24-volt-rated notification appliance circuit outputs shall operate between 16.5 and 33 volts. Indoor L-Series products shall operate between 32 and 120 degrees Fahrenheit from a regulated DC or full-wave rectified unfiltered power supply. Strobes and horn strobes shall have field-selectable candela settings including 15, 30, 75, 95, 110, 135, and 185.

STROBE

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

HORN STROBE COMBINATION

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

SYNCHRONIZATION MODULE

The module shall be a System Sensor Sync•Circuit model MD L3 listed to UL 464 and shall be approved for fire protective service. The module shall synchronize L-Series strobes at 1 Hz and horns at temporal three. Also, while operating the strobes, the module shall silence the horns on horn strobe models over a single pair of wires. The module shall mount to a 4 11/16 × 4 11/16 × 2 1/8-inch back box. The module shall also control two Style Y (class B) circuits or one Style Z (class A) circuit. The module shall synchronize multiple zones. Daisy chaining two or more synchronization modules together will synchronize all the zones they control. The module shall not operate on a coded power supply.

PHYSICAL

Wall-Mount Dimensions (including lens): 5.6˝ L × 4.7˝ W × 1.25˝ D (143 mm L × 119 mm W × 32 mm D)

Compact Wall-Mount Dimensions (including lens): 5.26" L x 3.46" W x 1.93" D (133 mm L x 88 mm W x 49 mm D)

Horn Dimensions: 5.6˝ L × 4.7˝ W × 1.25˝ D (143 mm L × 119 mm W × 32 mm D)

Compact Horn Dimensions: 5.25" L x 3.45" W x 1.25" D (133mm L x 88mm W x 32mm D)

ELECTRICAL SPECIFICATIONS

Strobe Flash Rate: 1 flash per second

Nominal Voltage Regulated: 12VDC or regulated 24DC/FWR1

Operating Voltage Range[2]: 8 to 17.5 V (12 V nominal) or 16 to 33 V (24 V nominal)

Operating Voltage Range (MDL3) Sync Module: 8.5 to 17.5V (12 V nominal) or 16.5 to 33 V (24V nominal)

Input Terminal Wire Gauge: 12 to 18 AWG

ENVIRONMENTAL

Standard Operating Temperature: 32°F to 120°F (0°C to 49°C)

Humidity Range: 10 to 93% non-condensing

AGENCY LISTINGS AND APPROVALS

UL: Listed

FM: Approved

CSFM: Listed

Notes:

1. Full Wave Rectified (FWR) voltage is a non-regulated, time-varying power source that is used on some power supply and panel outputs.
2. P, S, PC, and SC products will operate at 12 V nominal only for 15 and 30 cd.

UL MAX HORN CURRENT DRAW (mA RMS)

SOUND PATTERN	DB	8-17.5V	16-33V	
		DC	DC	FWR
Temporal	High	39	44	54
Temporal	Low	28	32	54
Non-Temporal	High	43	47	54
Non-Temporal	Low	29	32	54
Non-Temporal	Low	29	32	54
3.1 KHz Temporal	High	39	41	54
3.1 KHz Temporal	Low	29	32	54
3.1 KHz Non-Temporal	High	42	43	54
3.1 KHz Non-Temporal	Low	28	29	54
Coded	High	43	47	54
3.1 KHz Coded	High	42	43	54

UL MAX STROBE CURRENT DRAW (mA RMS)

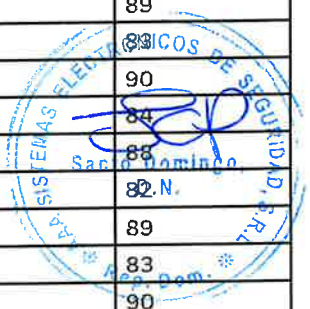
	CANDELA	8-17.5V		16-33V
		DC	DC	FWR
CANDELA RANGE	15	88	43	60
	30	143	63	83
	75	N/A	107	136
	95	N/A	121	155
	110	N/A	148	179
	135	N/A	172	209
	185	N/A	222	257

UL MAX CURRENT DRAW (mA RMS), 2-WIRE HORN STROBE, CANDELA RANGE (15-115 CD)

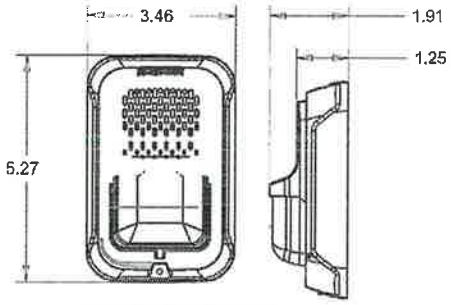
	8-17.5V		16-33V						
DC INPUT	15CD	30CD	15CD	30CD	75CD	95CD	110CD	135CD	185CD
EM Temp Hi	98	158	54	74	121	142	162	196	245
EM Temp Low	93	154	44	65	111	133	157	184	235
EM Cont Hi	106	166	73	94	139	160	182	211	262
EM Cont Low	93	156	51	71	119	139	162	190	239
3.1K Temp Hi	93	156	53	73	119	140	164	190	242
3.1K Temp Low	91	154	45	66	112	133	160	185	235
3.1K Cont Hi	99	162	69	90	135	157	175	208	261
3.1K Cont Low	93	156	52	72	119	138	162	192	242
	16VFWR								
SWITCH POSITION	15CD	30CD	75CD	95CD	110CD	135CD	185CD		
EM Temp Hi	83	107	156	177	198	234	287		
EM Temp Low	68	91	145	165	185	223	271		
EM Cont Hi	111	135	185	207	230	264	316		
EM Cont Low	79	104	157	175	197	235	283		
3.1K Temp Hi	81	105	155	177	196	234	284		
3.1K Temp Low	68	90	145	166	186	222	276		
3.1K Cont Hi	104	131	177	204	230	264	326		
3.1K Cont Low	77	102	156	177	199	234	291		

HORN AND HORN STROBE OUTPUT (DBA)

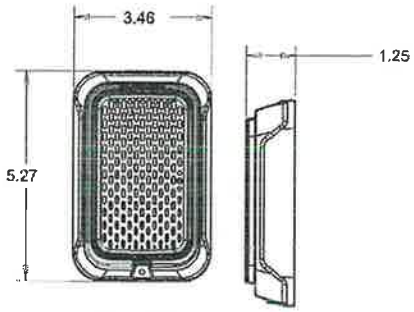
			8-17.5V	16-33V	FWR
SWITCH POSITION	SOUND PATTERN	DB	DC	DC	
1	Temporal	High	84	89	89
2	Temporal	Low	75	83	83
3	Non-Temporal	High	85	90	90
4	Non-Temporal	Low	76	84	84
5	3.1 KHz Temporal	High	83	88	88
6	3.1 KHz Temporal	Low	76	82	82
7	3.1 KHz Non-Temporal	High	84	89	89
8	3.1 KHz Non-Temporal	Low	77	83	83
9	Coded	High	85	90	90
10	3.1 KHz Coded	High	84	89	89



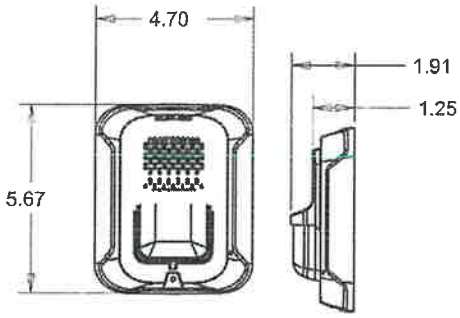
L-SERIES DIMENSIONS



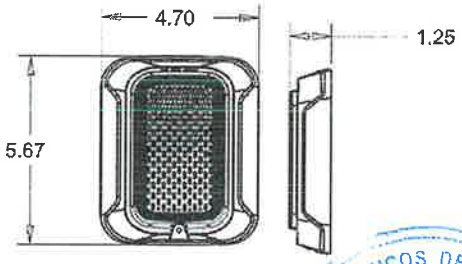
Compact Strobe / Horn Strobe



Compact Horn



Strobe / Horn Strobe



Horn

For a complete listing of all compliance approvals and certifications, please visit www.farenhyt.com.

This document is not intended to be used for installation purposes. We try to keep our product information up-to date and accurate. We cannot cover all specific applications or anticipate all requirements. All specifications are subject to change without notice.

For Technical Support, Please call 800-446-6444.

L-SERIES ORDERING INFORMATION

WALL HORN STROBES

P2RL: 2-Wire, Horn Strobe, Red
P2WL: 2-Wire, Horn Strobe, White
P2GRL: 2-Wire, Compact Horn Strobe, Red
P2GWL: 2-Wire, Compact Horn Strobe, White
P2RL-P: 2-Wire, Horn Strobe, Red, Plain
P2WL-P: 2-Wire, Horn Strobe, White. Plain
P2RL-SP: 2-Wire, Horn Strobe, Red, FUEGO
P2WL-SP: 2-Wire, Horn Strobe, White, FUEGO

WALL STROBES

SRL: Strobe, Red
SWL: Strobe, White
SGRL: Compact Strobe, Red
SGWL: Compact Strobe, White
SRL-P: Strobe, Red, Plain
SWL-P: Strobe, White, Plain
SRL-SP: Strobe, Red, FUEGO
SWL-CLR-ALERT: Strobe, White, ALERT

HORNS

HRL: Horn, Red
HWL: Horn, White
HGRL: Compact Horn, Red
HGWL: Compact Horn, White

ACCESSORIES

TR-2: Universal Wall Trim Ring Red
TR-2W: Universal Wall Trim Ring, wht
SBBRL: Wall Surface Mount Back Box, Red
SBBWL: Wall Surface Mount Back Box, White
SBBGRL: Compact Wall Surface Mount Back Box, Red
SBBGWL: Compact Wall Surface Mount Back Box, White

Note:

All - P models having a plain housing (no"FIRE marking on cover.
All-SP models have "FUEGO" marking on cover
All -ALERT models have "ALERT" marking on cover

For more information

Learn more about Honeywell's Farenhyt Series and other products available by visiting www.farenhyt.com

Honeywell Security & Fire
12 Clintonville Road
Northford, CT 06472
800-328-0103

Doc 351574 | Rev B | 02/18

Honeywell

MDL3

Sync Modules for the SpectrAlert® and SpectrAlert® Advance Series

NOTIFIER® by Honeywell

Audio/Visual Devices

General

The Sync•Circuit module synchronizes SpectrAlert® strobes at 1 Hz and horns at temporal 3 over a single pair of wires. Patented module technology also allows the silencing of horns and chimes on horn/strobe and chime/strobe models over a pair of wires.

Application Flexibility. The Sync•Circuit module is designed to power and synchronize either two 3-amp circuits wired in Class B or one 3-amp circuit powered as Class A. Should more than two zones require synchronization, additional modules can be added by interconnecting the "slave" input and output terminals between modules.

Module Configuration

Each MDL3 module has the capability of connecting two Style Y (Class B) circuits or one Style Z (Class A) circuit.

The NAC output(s) from the panel are connected to the zone input(s) of the MDL3 module and the zone output(s) from the MDL3 module are connected to the notification loop(s). Supervision is accomplished in the module by a direct connection between the zone input and the zone output of each of the two zone circuits connected to the normal end-of-line device. The FACP "sees" the EOL device through the MDL3 module. When either or both outputs (zones 1 & 2) from the module are wired to the SpectrAlert and SpectrAlert Advance products, the horns and strobes in both zones will be synchronized.

The MDL3 module can be configured so that more than two zones can be synchronized by the interconnection of the slave input and output (see Application Examples).

Electrical Specifications

Voltage range: Regulated: 12 VDC/FWR (8.0 V to 17.5 V) or 24 VDC/FWR (16.0 V to 33.0 V)

Maximum load on loop: 3 amps.

Current draw: See chart.

Operating temperature: 0°C to 49°C (32°F to 120°F).

Physical Specifications

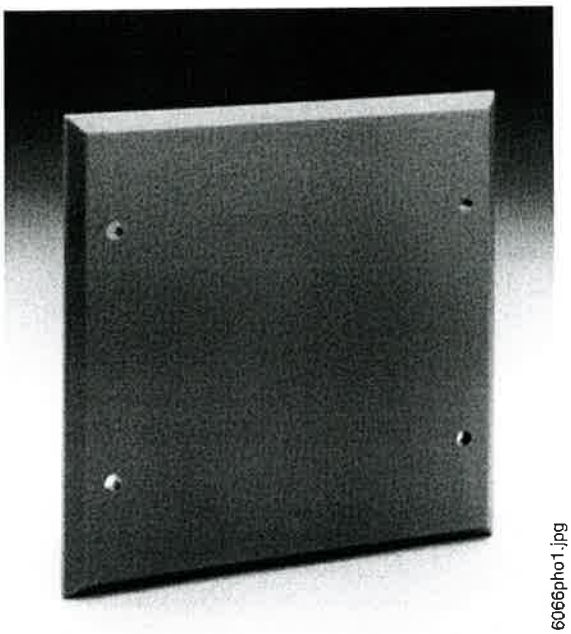
Dimensions: 5.25 in L x 5.25 in W (13.3 cm L x 13.3 cm W)

Mounting: 4.69" x 4.69" x 2.125" (11.9 cm x 11.9 cm x 5.4 cm)

Indoor Operating Temperature: 32ºF to 120ºF (0ºC to 49ºC)

Synchronize SpectrAlert Horns and Strobes

- Each module can power two three-amp circuits wired in Class B, or one three-amp circuit powered as Class A.
- Each module will synchronize two zones.



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- Additional modules can be added and may be synchronized to all other modules by interconnecting the "slave" input and output terminals between modules.

PRODUCT LINE INFORMATION

MDL3R - Sync module for use with SpectrAlert and SpectrAlert Advance Series, red.

MDL3RA - Sync module for use with SpectrAlert and SpectrAlert Advance Series, red, *for Canada*

MDL3W - Sync module for use with SpectrAlert and SpectrAlert Advance Series, white.

MDL3WA - Sync module for use with SpectrAlert and SpectrAlert Advance Series, white, *for Canada*

Agency Listings and Approvals

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

- **UL:** S4011
- **ULC:** S5512
- **CSFM:** 7300-1653:202
- **FM Approved**

Current Draw

Voltage	Average Current (mA)		Peak Current (mA)		In-rush Current (mA)		NAC Slave Input (mA)	
	DC	FWR	DC	FWR	DC	FWR	DC	FWR
12	10	12	50	60	100	120	3.5	4
24	12	15	60	75	120	150	4.5	5

ISO 9001 CERTIFIED
ENGINEERING & MANUFACTURING
QUALITY SYSTEMS

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Made in the U.S. A.

For more information, contact Notifier. Phone: (203) 484-7161, FAX: (203) 484-7118.
www.notifier.com

inway

¿Por qué la iluminación de emergencia?

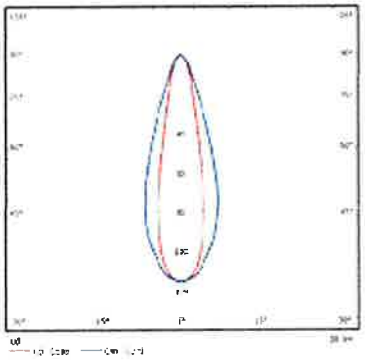
En solos segundos un entorno para usted tranquilo y seguro se puede convertir en un lugar lleno de confusión y pánico. Las luminarias con respaldo de emergencia son la ayuda idónea para mantener un clima de seguridad en momentos cortes de electricidad.

Luminaria de respaldo de emergencia para aplicación comercial, institucional y doméstica

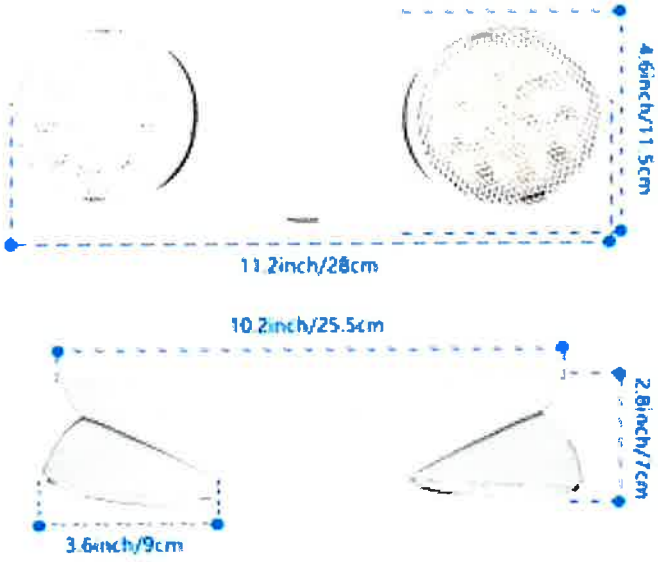
INFORMACIÓN TECNICA

Potencia	3W
Grado de Hermeticidad	IP20
Voltaje de entrada	AC 100V – 277V
Batería	3.6V, 1000 mAh
Autonomía	90 minutos
Foco dirigible	Sí
Amplitud de la luz	80m²
Aplicación principal	Comercial-Institucional

FOTOMETRÍA



DIMENSIONES



-GENESIS-

Riser Rated Power Limited Fire Alarm Cable
Part Number: 4306

18 AWG 2 Solid Conductors

Ratings	FPLR, CL3R, FT4, Sunlight Resistant
Approvals	UL Listed

Construction

Conductor	18 AWG Solid Bare Copper
Conductor Count	2
Insulation	Polypropylene (0.006" nom.)
Insulation Colors	Black, Red
Lay Length	2.00" nom.
Shielding	N/A
Rip Cord	Yes
Jacket	PVC (0.015 " nom.)
Overall Diameter	0.144" nom.
Print Legend	GENESIS P/N 4306 2C 18AWG E175105 (UL) FPLR OR CL3R FT4 SUN RES 75C (RoHS) W/O# XXXXXX-XXXXXXX XXXXFT A B C D E F 1 2 3 4 5 6 7 8 9

Properties

Operating Voltage	300 Volts max.
DC Resistance	6.52 Ohms/1000' at 20°C
Capacitance	22.8 pF/ft. nom.
Impedance	66 Ohms nom.
Temperature	-20°C to 75°C
Flame Rating	UL 1666 (Riser); CSA C22.2 No. 2556 (FT4)
RoHS Compliant	Yes
Country of Origin	USA

Published: 2019-08-24

-GENESIS-

Riser Rated Power Limited Fire Alarm Cable
Part Number: 4311

16 AWG 2 Solid Conductors

Ratings	FPLR, CL3R, FT4, Sunlight Resistant
Approvals	UL Listed

Construction

Conductor	16 AWG Solid Bare Copper
Conductor Count	2
Insulation	Polypropylene (0.008" nom.)
Insulation Colors	Black, Red
Lay Length	24" nom.
Shielding	N/A
Rip Cord	Yes
Jacket	PVC (0.017" nom.)
Overall Diameter	0.162" nom.
Print Legend	GENESIS P/N 4311 2C 16AWG E175105 (UL) FPLR OR CL3R FT4 SUN RES 75C (RoHS) W/O# XXXXXX-XXXXXXX XXXXFT A B C D E F 1 2 3 4 5 6 7 8 9

Properties

Operating Voltage	300 Volts max.
DC Resistance	4.1 Ohms/1000' at 20°C
Capacitance	22.3 pF/ft. nom.
Impedance	68 Ohms nom.
Temperature	-20°C to 75°C
Flame Rating	UL 1666 (Riser); CSA C22.2 No. 2556 (FT4)
RoHS Compliant	Yes
Country of Origin	USA

Published: 2020-08-11