Ejecución del Proyecto:

INPROTEC estará encargado de las siguientes fases del Proyecto:

- **Suministro de los Dispositivos del Sistema:** Determinación de los dispositivos, compra, transporte y entrega de todos los equipos necesarios basado en el diseño suministrado.

- **Implementación del Sistema**: Realización de las instalaciones mecánicas y Cableado e instalación de los dispositivos del sistema cumpliendo con la NFPA que aplique para cada caso particular.

- **Programación del Sistema:** Calibración y programación del sistema de acuerdo a las especificaciones del diseño.

- **Prueba de Aceptación**: Participación en las Pruebas de funcionamiento del sistema y las pruebas finales de aceptación por el cliente.
- **Documentación**: Entrega de documentación física y digital (USB) con: planos As Built, pruebas de aceptación, documentación de entrega NFPA, Especificaciones técnicas, Manual de operación y mantenimiento del fabricante.

- **Entrenamiento de los Operadores**: Entrenar operadores designados por el **cliente,** así como proveer toda la documentación necesaria para la operación y mantenimiento del sistema.

ITEM	DESCRIPCION /ESPECIFICACIONES TECNICAS	Unidad de Medida	CANTIDAD
1	[MRP-2002] PANEL DE CONTROL DE LIBERACIÓN DE AGENTES FIRE-LITE	UNIDAD	1
2	[2W-B] DETECTOR DE HUMO FOTOELECTRICO CONVENCIONAL	UNIDAD	2
3	[BG-12LRA] ESTACIÓN DE LIBERACIÓN DE AGENTE DE DOBLE ACCIÓN	UNIDAD	1
4	[SBA-10] REGISTRO PARA PULSADOR MANUAL RBG-12LRA, METALICO	UNIDAD	1
5	[STI-1130] PROTECTOR PARA PULSADOR, CON SIRENA Y ESPACIADOR-Safety Technology International	UNIDAD	1
6	[P2RLED-SP] SIRENA DE PARED ROJA CON LUZ EXTROBOSCOPICA LED 2W 4X4 FUEGO EN ESPAÑOL	UNIDAD	1
7	[SSM24-6] CAMPANA DE ALARMA DE 24 VOLTIO PARA INTERIOR/EXTERIOR DE 6"	UNIDAD	1
8	[BAT-12V/7AH] BATERIA 12V/7AH	UNIDAD	2
9	[DTK-120HW] PROTECTOR CONTRA SOBRETENSIONES PARALELO 120VCA/20A	UNIDAD	1
10	[CAB-18/2-FPL] CABLE 18/2 FPL	PIE	1000
11	[CAB-18/2-STR] CABLE 18/2 STR BLANCO	PIE	1000
12	[FMM-1] MODULO DE MONITOREO INTELIGENTE	UNIDAD	1
13	[LET-NOT-NOENTRAR] LETRERO [NO ENTRAR EN CASO DE NOTIFICACION ACTIVADA]	UNIDAD	1

14	[LET-NOTI-DESCARGA] LETRERO [ESTACION MANUAL DE DESCARGA].	UNIDAD	1
15	[LET-NOTI-ABORTO] LETRERO [ESTACION MANUAL DE ABORTO].	UNIDAD	1
16	[LET-NOTI-PRECAUCION] LETRERO [TOMAR PRECAUCION EN CASO DE NOTIFICACION ACTIVADA].	UNIDAD	1
17	[LET-NOTI-SALIDA] LETRERO [SALIDA EN CASO DE NOTIFICACION ACTIVADA].	UNIDAD	1
18	[45-550201-901] CILINDRO DE 200LB (90.7KG) PARA AGENTE LIMPIO FLUORO-K, CAPACIDAD PARA VALVULA DE 2", UL/FM	UNIDAD	1
19	[06-235317-001] CORREA PARA CILINDRO DE AGENTE LIMPIO DE 125/200/225LB	UNIDAD	1
20	[47-194000-001] AGENTE LIMPIO, FLUORO-K ECS-500	UNIDAD	145
21	[85-486500-010] CABEZAL DE CONTROL ELECTRICO, APLICABLE, KIT DE 24VCC, A PRUEBA DE EXPLOCIONES	UNIDAD	1
22	[WK-283899-000] MANGUERA DE DESCARGA, 2X31". USADA PARA CILINDROS DE 200, 225 y 350LB	UNIDAD	1
23	[81-486536-000] INTERRUPTOR DE PRESION, TIRO DOBLE DE 3 POLOS	UNIDAD	1
24	[45-118500-001] INTERRUPTOR DE PRESION DE SUPERVISION DE CILINDRO PARA VALVULAS DE TODOS LOS TAMAÑOS PARA SISTEMAS ECS-500	UNIDAD	1
25	[45-194725-XXX] BOQUILLA DE DESCARGA DE NOVEC 1230, 360°, NPT 1", BRONCE	UNIDAD	1

1	N16E- Panel de Incendio Serie INSPIRE de NOTIFIER / Direccionable / 318 Dispositivos en 1 Lazo	UNIDAD	1
2	[BAT-12V/18AH] BATERIA 12V/18AH	UNIDAD	2
3	[DTK-120HW] PROTECTOR CONTRA SOBRETENSIONES PARALELO 120VCA/20A	UNIDAD	1
4	[LRD] Anunciador Remoto con Pantalla Táctil de 5 Pulgadas / a Color / para Panel N16X / Serie INSPIRE de NOTIFIER	UNIDAD	2
5	[ABB-2] Caja para Anunciador	UNIDAD	2
6	[FSP-951] DETECTOR DE HUMO FOTOELECTRICO INTELIGENTE	UNIDAD	77
7	[FST-951] DETECTOR DE TEMPERATURA, 135°F, INTELIGENTE, DIRECCIONABLE, FLASHSCAN-NOTIFER	UNIDAD	13
8	[B300-6] BASE P/ DETECTOR INTELIGENTE	UNIDAD	90
9	[NBG-12LXSP] PULSADOR MANUAL DIRECCIONABLE ESPAÑOL/ENGLISH	UNIDAD	18
10	[ISO-X] MODULO AISLADOR INTELIGENTE	UNIDAD	4
11	[P2RLED] SIRENA CON LUZ LED ESTROBOSCOPICA	UNIDAD	30
12	LAMPARA LED EMERGENCIA 3W/BLANCA	UNIDAD	35

13	[CAB-18/2-FPL] CABLE 18/2 FPL	PIE	5500
14	[CAB-16/2-STR] CABLE 16/2 STR	PIE	5000
15	[CAB-18/4-STR] CABLE 18/4-STR	PIE	500
16	[HON-CGW-MBB] PUERTA DE ENLACE CLSS CON CARCASA	UNIDAD	1
17	[50160636-001] KIT DE PUERTA DE ENLACE CLSS. INCLUYE CABLE NUP DE 30" Y JUEGO DE LLAVES Y CERRADURA. NOTIFIER	UNIDAD	1
18	[BACNET-GW-3] TARJETA DE INTERFASE INTELIGENTE PARA PROTOCOLO BACNET, PROVEE UN ENLACE DE COMUNICACION ENTRE DISPOSITIVOS BMS	UNIDAD	1
19	Licencia HIK CENTRAL	UNIDAD	1

INPROTEC
INGENIERIA DE PROTECCION, S.R.L.
RNC
Santo Domingo
D.N. Rep. Dom.

Generalidades:

En estos presupuestos se incluyen materiales y mano de obra para la instalación de los equipo requeridos para la solución propuesta en base al diseño suministrado.

Se proveerá la totalidad de la documentación conforme a los planos por nivel y la documentación requerida por NFPA 72-Código Nacional de Alarmas de Incendios y Señalización y NFPA 2001- Estándar sobre Sistemas de Extinción mediante Agentes Limpios.

Se proveerá los manuales de operación y mantenimiento.

Se dictará un curso de capacitación para los operadores del sistema.

Nota:
*- Presupuesto no contempla Obra Civil.
*- Presupuesto no contempla Trabajo Nocturno.
*- Cualquier cambio del diseño suministrado por el cliente que represente un impacto económico sera evaluado y sera contemplado como adicional.

ENTREGA FINAL: Se contempla tiempo de 12 meses propuesto por cliente.

FORMA DE PAGO
La forma de pago es:
50% Con la orden de compra
20% Contra entrega de equipos de importación
30% Cubicación de facturación mensual

GARANTÍA LIMITADA
Todos los equipos poseen una garantía limitada de Doce (12) meses a partir de su instalación o aceptación, siempre y cuando se mantengan según los requerimientos del fabricante, el instalador y el programa de Inspección, Prueba y mantenimiento especificado en la NFPA.

NOTAS
Estos presupuestos se mantendrán vigentes por un período de Treinta (60) días, a partir de la fecha de esta propuesta. El alcance de este presupuesto se limita a las partidas descritas en él, cualquier partida no especificada deberá ser considerada como adicional.

INPROTEC
INGENIERIA DE PROTECCION, S.R.L.
RNC [illegible]-9
Santo Domingo
D.N., Rep. Dom.

INPROTEC®
INGENIERÍA DE PROTECCIÓN

20 de Febrero del 2026

Señores :
JUNTA CENTRAL ELECTORAL

Por la presente les hacemos llegar nuestra oferta correspondiente al Sistemas de Detección y Agente Limpio para JCE Kennedy.

OFERTA ECONÓMICA

Hemos realizado un estudio de sus necesidades, y de igual manera verificado la forma más eficiente en que nuestras recomendaciones reflejen la flexibilidad de adaptación a futuras modificaciones, basadas en conjunción a los requerimientos de las normas internacionales y locales así como al avance de la tecnología.

En la siguiente le hacemos la propuesta de un sistema de protección contra incendios con agente limpio y sistema de detección, según sus especificaciones recomendadas. Esperando que todos los requerimientos tantos técnicos, como financieros, sean satisfechos en la siguiente propuesta. Si requiere información adicional sírvase contactarnos directamente.

Agradecemos nuevamente su interés y la oportunidad que nos brindan de servirles.

Muy atentamente,

INPROTEC
INGENIERÍA DE PROTECCIÓN, S.R.L.
RNC 101
Santo Domingo,
D.N., Rep. Dom.

Juan Thomás Pérez
Gerente General

Calle Francisco Carias Lavandier
No. 3-B, Ens. Paraíso,
Santo Domingo,
República Dominicana.

Tel.: 809-562-5501
Fax: 809-563-2401

RNC 1-01-70840-9

info@inprotec.do
www.inprotec.do

INPROTEC®
INGENIERÍA DE PROTECCIÓN

INPROTEC®
INGENIERÍA DE PROTECCIÓN

ESPECIFICACIONES TÉCNICAS SISTEMA DE DETECCIÓN DE INCENDIO

INPROTEC®
INGENIERÍA DE PROTECCIÓN

NFS-320(E)

Sistema de alarma contra incendios inteligente y direccionable

NOTIFIER® by Honeywell

Paneles inteligentes de control de alarma

General

El Panel de control de alarma de incendios Inteligente NFS2-320 forma parte de los Controles de alarma de incendios serie ONYX® de NOTIFIER.

En configuraciones autónomas o de red, los productos de la serie ONYX cumplen con prácticamente todos los requisitos de las aplicaciones.

El diseño modular del NFS-320 facilita la planificación del sistema. El panel se puede configurar con solo unos pocos dispositivos para aplicaciones en edificios pequeños, o en red con muchos dispositivos para proteger un gran campus o un bloque de edificios de oficinas de gran altura. Simplemente incorpore equipo periférico adicional para satisfacer la aplicación.

Para las instalaciones que usan NFS-320C, se puede montar un anunciador adicional de serie ACM en el mismo gabinete (hasta 48 zonas/puntos, se deben pedir por separado; *consulte DN-60085*).

Los módulos de monitoreo de Internet de la serie FireWatch IPDACT-2 e IPDACT-2UD permiten el monitoreo de señales de alarma en Internet, lo que ahorra el costo mensual de dos líneas telefónicas comerciales dedicadas. Aunque no es obligatoria, la segunda línea telefónica se puede conservar brindando comunicación de respaldo en la línea telefónica de conmutación pública.

NOTA: *Salvo que se marque con una R", "C" o "E" especifica para la versión al final del número de pieza, "NFS-320" se refiere a los modelos NFS-320, NFS-320R, NFS-320C, y NFS-320E.*

NFS-320

Características

- Certificado para aplicaciones sísmicas cuando se utiliza con el conjunto de montaje antisísmico adecuado.
- Aprobado para aplicaciones marítimas cuando se utiliza con equipos compatibles calificados (véase *DN-60688).*
- Un circuito de línea de señalización (SLC) inteligente aislado Estilo 4, 6 o 7.
- Hasta 159 detectores (cualquier combinación de iónico, fotoeléctrico, térmico o multisensor) y 159 módulos (estaciones de accionamiento direccionables, dispositivos de contacto normalmente abiertos, de humo de dos cables, de notificación o relé). 318 dispositivos como máximo.
- Pantalla estándar de 80 caracteres.
- Opciones de red:
  - Red de alta velocidad para hasta 200 nodos (NFS2-3030, NFS2-640, NFS-320(C), NFS-320SYS, NCA-2, DVC, ONYXWorks, NFS-3030, NFS-640, y NCA).
  - Red estándar para hasta 103 nodos (NFS2-3030, NFS2-640, NFS-320(C), NFS-320SYS, NCA-2, DVC, ONYXWorks, NCS, NFS-3030, NFS-640, NCA, AFP-200, AFP-300/400, AFP-1010, y AM2020). Hasta 54 nodos cuando se utiliza DVC en la localización de red.
- Fuente de energía de 6.0 A con cuatro circuitos de dispositivos de notificación (NAC) Clase A/B incorporados. Sensor del sistema seleccionable, sincronización estroboscópica Wheelock o Gentex.
- Relés de alarma, problema, seguridad y supervisión incorporados.
- Utilidad de programación en línea o fuera de línea VeriFire® Tools. Bases de datos de panel de cargar/descargar, guardar, almacenar, verificar, comparar y simular. Firmware del panel de actualización.
- Informes de programación automática y Prueba de recorrido.
- DACT opcional universal de 318 puntos.
- Anunciadores remotos de 80 caracteres (hasta 32).
- Anunciadores EIA-485, incluyendo gráficos personalizados.
- Interfaz de impresoras (impresoras de 80 y 40 columnas).
- Archivo de historial con capacidad para 800 eventos en la memoria no volátil, además del archivo separado de sólo alarma para 200 eventos.
- Selección de verificación de alarma por punto, con conteo.
- Secuencia de alarma preseñal/positiva (PAS).
- Opciones de temporizador Inhibidor de silencio y Silencio automático.
- Funciones de codificación de NAC:
  - Tiempo de marcha.
  - Temporal.
  - Código de dos etapas de California.
  - Dos etapas canadiense.
  - Sincronización estroboscópica.
- Programable en campo en el panel o en la PC, con verificación, comparación y simulación de programa a través de VeriFire® Tools.
- Teclado QWERTY completo.
- El cargador de baterías admite baterías de 18 a 200 AH.
- Puntos sin alarma para funciones de prioridad inferior.
- Confirmación remota/Silenciar señal/Reinicializar sistema/Simulacro por medio de los módulos de monitoreo.
- Funciones de control de tiempo automático, con excepciones de días festivos.
- Protección contra transitorios amplia e incorporada.
- Ecuaciones lógicas booleanas eficaces.

FUNCIONES INTELIGENTES FLASHSCAN®

- Sondeo de hasta 318 dispositivos en menos de dos segundos.
- Activación de hasta 159 salidas en menos de cinco segundos.

- Localización de los dispositivos intermitentes de LED multicolores durante la Prueba de recorrido.
- Protocolo de alta precisión totalmente digital (Patente de EE. UU. 5.539.389).
- Ajuste de sensibilidad manual: nueve niveles.
- Detección inteligente de prealarma ONYX : nueve niveles.
- Ajuste de sensibilidad automática diurna/nocturna.
- Rangos de sensibilidad:
  - **Iones**: oscurecimiento de 0.5 a 2.5 %/pie.
  - **Foto**: oscurecimiento de 0.5 a 2.35 %/pie.
  - **Láser (VIEW®)**: oscurecimiento de 0.02 a 2.0 %/pie.
  - **Acclimate® Plus™**: oscurecimiento de 0.5 a 4.0 %/pie.
  - **IntelliQuad**: oscurecimiento de 1.0 a 4.0 %/pie.
  - **IntelliQuad™ PLUS:** oscurecimiento de 1.0 a 4.0 %/pie.
- Compensación de deriva (Patente de EE.UU. 5,764,142).
- Modo degradado: en el caso poco probable de que falle el microprocesador primario de NFS-320, los detectores FlashScan pasan a la operación degradada y pueden activar los circuitos NAC del panel de control y el relé de alarmas. Cada uno de los cuatro circuitos del panel incorporados incluye un interruptor de desactivación/activación para esta característica.
- El algoritmo de detectores múltiples incluye a los detectores cercanos en las decisiones de alarma (Patente de EE. UU. 5,627,515).
- Prueba automática de sensibilidad del detector (conforme a NFPA-72).
- Alerta de mantenimiento (dos niveles).
- Prealarma de optimización automática.

FSL-751 VIEW (ADVERTENCIA TEMPRANA MUY INTELIGENTE) TECNOLOGÍA DE DETECCIÓN DE HUMO

- Diseño revolucionario de láser de haz.
- Los algoritmos de detección inteligente ONYX de avanzada distinguen entre señales de humo y no humo (Patente de EE.UU. 5,831,524).
- El funcionamiento direccionable identifica con precisión la ubicación del incendio.
- Sin piezas móviles que fallen ni filtros que reemplazar.
- Desempeño de advertencia temprana comparable a los mejores sistemas de aspiración a una fracción del costo durante la vida útil.

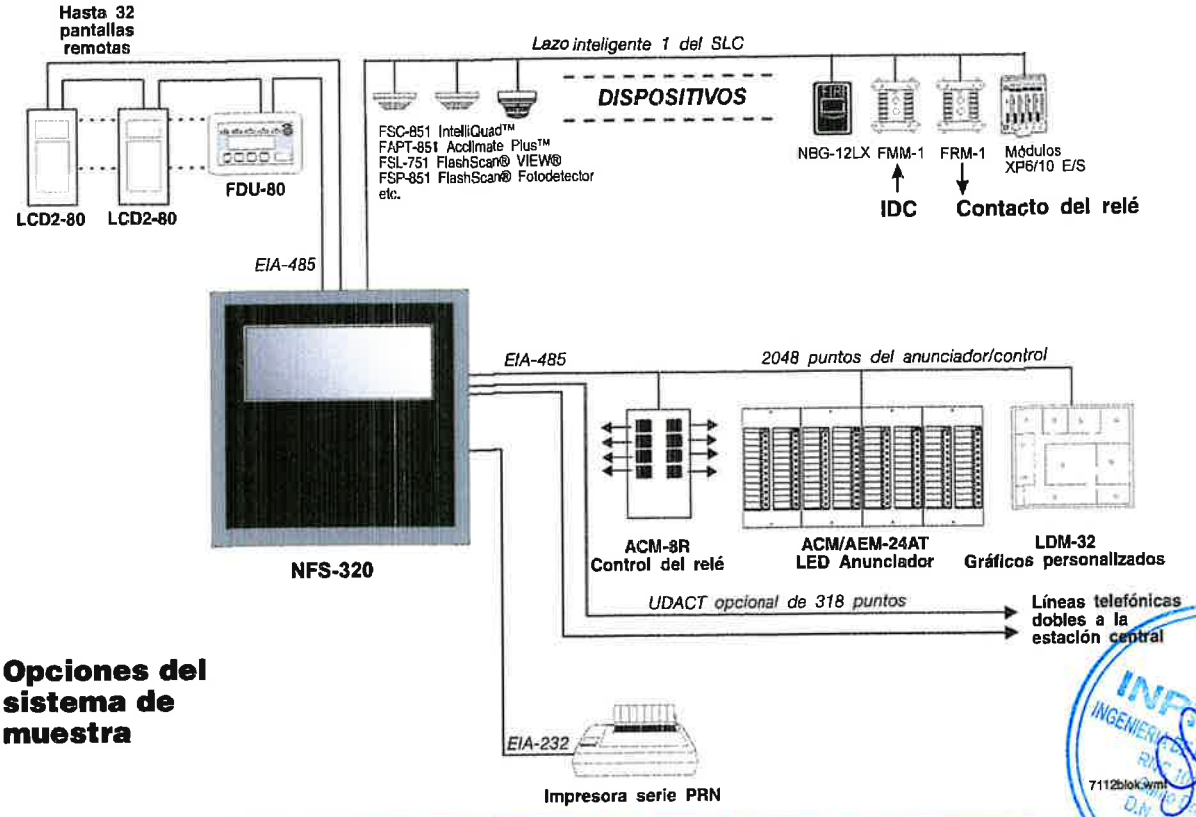
FAPT-851 ACCLIMATE® PLUS™ MULTISENSOR INTELIGENTE DE BAJO PERFIL

- El detector ajusta automáticamente los niveles de sensibilidad sin intervención o programación por parte del operador. La sensibilidad aumenta con el calor.
- Tecnología basada en microprocesador; combinación de tecnología fotoeléctrica y térmica.
- Compatible con el modo FlashScan o CLIP ("clásico").
- Señal de advertencia de baja temperatura a 40°F ± 5°F (4.44°C ± 2.77°C).

FSC-851 INTELLIQUAD DETECTOR AVANZADO EN BASE A CRITERIOS MÚLTIPLES

- Detecta los cuatro elementos principales de un incendio (humo, calor, CO y llama).
- Compensación de deriva automática del sensor de humo y la celda de CO.
- Alta inmunidad contra falsas alarmas.
- Seis niveles de sensibilidad.

Opciones del sistema de muestra



FCO-851 INTELLIQUAD™ PLUS DETECTOR DE INCENDIOS/CO AVANZADO EN BASE A CRITERIOS MÚLTIPLES

- Detecta los cuatro principales elementos de un incendio.
- Señal separada para detección de CO con medidas de seguridad
- Base de resonador direccionable opcional para el tono de Temp-3 (incendio) o Temp-4 (CO).
- Compensación de deriva automática del sensor de humo y la celda de CO.
- Alta inmunidad contra falsas alarmas.
- Seis niveles de sensibilidad.

FUNCIONES DE DESCARGA

- Diez peligros independientes.
- Zona de cruce compleja (tres opciones).
- Temporizador de retardo y temporizadores de descarga (ajustables).
- Cancelar (cuatro opciones).
- Calificado para baja presión de CO_2.

FUNCIONES DE VOZ

- Se integra con la serie FireVoice-25/50 *(consulte DN-7004)*.
- Se integra mediante conexión en serie con la serie FireVoice-25/50ZS (*consulte DN-7003*).

CONMUTACIÓN FUERA DE LÍNEA DE ALTA EFICIENCIA FUENTE DE ALIMENTACIÓN DE 3.0 A (6.0 A EN ALARMA)

- 120 VCA (NFS-320/NFS-320C); 240 VCA (NFS-320E).
- Muestra la corriente/el voltaje de las baterías en el panel (con pantalla).

FlashScan, Exclusivo Protocolo exclusivo de detector de liderazgo mundial

En el centro del NFS-320 hay un conjunto de dispositivos de detección y protocolo de dispositivos: FlashScan (Patente de EE.UU. 5,539,389). FlashScan es un protocolo totalmente digital que brinda precisión superior y alta inmunidad a los ruidos.

Además de proporcionar la identificación rápida de un dispositivo de entrada activo, este nuevo protocolo también puede activar muchos dispositivos de salida en una fracción del tiempo que requieren los protocolos de la competencia. Esta velocidad alta también permite que el NFS-320 tenga el dispositivo más grande por capacidad de lazo en la industria (318 puntos), no obstante, cada dispositivo de entrada y salida se prueba en menos de dos segundos. Los detectores FlashScan basados en microprocesador tienen LED bicolores que pueden codificarse para proporcionar información de diagnóstico, como la localización de dispositivos durante la Prueba de recorrido.

Detección inteligente ONYX

La detección inteligente es un conjunto de algoritmos de software que equipa al NFS-320 con funciones de detección de humo líderes en la industria. Estos algoritmos complejos requieren de muchos cálculos en cada lectura de cada detector, lo que es posible gracias a la microcomputadora de alta velocidad utilizada por el NFS-320.

Compensación de deriva y suavizado: La compensación de deriva permite que el detector conserve su habilidad original de detectar humo real y resistir las falsas alarmas, incluso mientras se acumula suciedad. Reduce los requisitos de mantenimiento, lo que permite que el sistema realice automáticamente las mediciones periódicas de sensibilidad requeridas por la NFPA 72. El software también proporciona filtros de suavizado para eliminar las señales de ruidos transitorios, como las causadas por las interferencias eléctricas.

Advertencias de mantenimiento: Cuando la compensación de deriva realizada por un detector alcanza un nivel determinado, se puede ver afectado el desempeño del detector, y se otorgan advertencias especiales. Hay tres niveles de advertencia: (1) Valor de cámara bajo; (2) Alerta de mantenimiento, que indica una acumulación de polvo que se acerca, aunque no llega, al límite permitido; (3) Mantenimiento urgente, que indica una acumulación de polvo por encima del límite permitido.

Ajuste de sensibilidad: Se proporcionan nueve niveles de sensibilidad para la detección de las alarmas. Estos niveles se pueden fijar manualmente, o pueden variar en forma automática entre día y noche. También pueden seleccionarse nueve niveles de sensibilidad de prealarma, según los niveles de alarma predeterminados. El funcionamiento de prealarma puede bloquearse o restaurarse automáticamente, y puede utilizarse para activar funciones de control especiales.

Prealarma de optimización automática: Cada detector debe ser configurado para prealarma de "Optimización automática". En este modo especial, el detector "aprende" su entorno normal, al medir las lecturas analógicas máximas durante un período prolongado, y al configurar el nivel de prealarma que se encuentra justo por encima de estos valores máximos normales.

Detección cooperativa de detectores múltiples: Una característica patentada de la detección inteligente ONYX es la habilidad de un sensor de humo de considerar las lecturas de los sensores cercanos al tomar decisiones de alarma o prealarma. Sin sacrificios estadísticos en la capacidad de resistencia a las falsas alarmas, permite que un sensor aumente su sensibilidad al humo real por un factor de casi dos a uno.

Opciones de programación de campo

Autoprogramar. Esta función es una rutina de software especial que permite ahorrar tiempo. El FACP "aprende" qué dispositivos están conectados físicamente y los carga de manera automática en el programa con los valores predeterminados para todos los parámetros. Al requerir menos de un minuto para ejecutarse, esta rutina permite que el usuario tenga protección contra incendios casi inmediata en una nueva instalación, incluso si se instala sólo una parte de los detectores.

Edición de programa del teclado (con KDM-R2). El NFS-320, como todos los paneles inteligentes de NOTIFIER, tiene la característica exclusiva de capacidad de creación y edición del programa del teclado numérico del panel frontal, mientras continúa brindando protección contra incendios. La arquitectura del software de NFS-320 es tal que cada entrada de punto lleva su propio programa, lo que incluye los vínculos de control por evento a otros puntos. Esto permite que el programa se ingrese con segmentos por punto independientes, mientras el NFS-320 supervisa simultáneamente otros puntos (ya instalados) de condiciones de alarma.

VeriFire® Tools es una utilidad de programación y prueba fuera de línea que puede reducir considerablemente el tiempo de programación de la instalación y aumentar la confianza en el software específico del sitio. Se basa en Windows® y proporciona funciones de tecnología avanzada para asistir al instalador. El instalador puede crear el programa completo para el NFS-320 en la comodidad de la oficina, probarlo, guardarlo en un archivo de respaldo y luego llevarlo al sitio y descargarlo desde una computadora portátil al panel.

Instalación del equipo en chasis y gabinete

Las siguientes pautas describen el diseño del sistema flexible del NFS-320.

Cableado: Cuando diseñe la disposición del gabinete, considere la separación del cableado con limitación de energía y sin limitación de energía según lo mencionado en el Manual de instalación de *NFS-320*.

Es fundamental asegurar todos los orificios de montaje del NFS-320 con un tornillo o separador para garantizar la continuidad de la conexión a tierra.

Conexión de red: Si conectan en red dos o más paneles de control, cada unidad requiere un Módulo de control de red o un Módulo de control de red de alta velocidad (HS-NCM admite dos nodos; consulte "Opciones de red" en la página 4). Estos módulos pueden instalarse en cualquier posición de tarjeta opcional (consulte el manual), y las tarjetas opcionales adicionales pueden montarse en la parte frontal.

Controles e indicadores de KDM-R2

Teclado programado: Tipo QWERTY (diseño del teclado).

12 indicadores LED: Energía; Alarma de incendio; Prealarma; Seguridad; Supervisión; Problema de sistema; Señales silenciadas; Puntos desactivados; Control activo; Cancelar; Predescarga; Descarga.

Controles de interruptores del teclado: Aceptar/Desplazar pantalla; Silenciar señal; Simulacro; Reiniciar sistema; Prueba de lámpara.

Pantalla LCD: 80 caracteres (2 x 40) con retroiluminación LED larga vida.

Información de la línea de productos

LINEAMIENTOS DE CONFIGURACIÓN

El sistema NFS-320 se envía ensamblado; a continuación se presenta la descripción con algunas opciones. Consulte "Gabinetes, chasis y placas de revestimiento" en la página 6 para obtener información acerca del montaje de periféricos.

***NOTA:** Los sistemas autónomos y de red requieren una pantalla principal. En los sistemas autónomos, el teclado del panel proporciona la pantalla necesaria. En los sistemas de red (dos o más nodos del panel de incendio conectados en red), se requiere por lo menos un dispositivo de anunciación NCA-2, NCS, u ONYXWorks .*

NFS-320: El sistema ensamblado de fábrica NFS-320 estándar incluye los siguientes componentes: un panel de control montado en el chasis (operación a 120 VCA; se envía con cable de conexión a tierra, cables de interconexión de baterías y kit de documentación); incluye una fuente de energía integral montada en la placa de circuitos principal; un teclado/pantalla KDM-R2 de visualización principal y un gabinete para el montaje en superficie o semiempotrado. *Se deben comprar las baterías por separado. Se pueden montar tarjetas de una o dos opciones dentro del gabinete NFS-320; se pueden usar tarjetas de opciones adicionales en gabinetes remotos.*

NFS-320R: Igual que para NFS-320, arriba, pero en gabinete rojo.

NFS-320C: En base a NFS-320, arriba. NFS-320C admite la instalación de un anunciador serie ACM opcional en el mismo gabinete. Calificación UL y ULC.

NFS-320CR: Igual que para NFS-320C, pero en gabinete rojo.

***NOTA:** Para información adicional sobre NFS-320C, consulte DN-60085.*

NFS-320E: Igual que para NFS-320 arriba, pero con funcionamiento a 240 V.

TR-320: Anillo de ajuste para el gabinete de NFS-320.

OPCIONES DE RED

NCM-W, NCM-F: Módulos de comunicaciones de red estándar. Hay versiones de fibra con cable y multimodo. *Consulte DN-6861.*

HS-NCM-W/MF/SF/WMF/WSF/MFSF: Módulo de comunicación en red de alta velocidad. Hay modelos disponibles con cable, fibra unimodo, fibra multimodo y conversión de medios. *Consulte DN-60454.*

RPT-W, RPT-F, RPT-WF: Tablero de repetidor de red estándar repetidor con conexión con cable (RPT-W), conexión de fibra (RPT-F), o que permite un cambio de tipo de medio entre cable y fibra (RPT-WF). No se usa con redes de alta velocidad. *Consulte DN-6971.*

ONYXWorks: Estación de trabajo de PC con gráficos compatibles con UL, software y hardware informático. *Consulte DN-7048 para conocer los números de pieza específicos.*

NFN-GW-EM-3: NFN Gateway, integrada.

SUMINISTROS DE ENERGÍA AUXILIAR Y BATERÍAS

ACPS-610: Fuente de energía de carga direccionable de 6.0 A o 10 A. *Consulte DN-60244.*

APS2-6R: Fuente de energía auxiliar. Aporta hasta 6.0 amperios de potencia para los dispositivos periféricos. Incluye entrada de batería y relé de transferencia, y protección contra sobrecorriente. Se monta en dos de cuatro posiciones en un chasis CHS-4L o CHS-4. *Consulte DN-5952.*

FCPS-24S6/S8: Fuentes de energía remotas 6 A y 8 A con cargador de batería. Consulte *DN-6927.*

Serie BAT: Baterías. NFS-320 utiliza dos baterías de 12 voltios de 18 a 200 AH. *Consulte DN-6933.*

OPCIONES DE AUDIO

NFV-25/50: Panel de control de evacuación por voz de emergencia (VECP) de 25 vatios, 25 VRMS, con micrófono comercial integral, generador de mensaje digital y circuitos de altavoces de Clase A o Clase B de canal simple/doble. *Consulte DN-7004.*

NFV-25/50DA: Panel de evacuación por voz de emergencia de canal simple, de 25 vatios, 25 VRMS. *Consulte DN-60048.*

NFV-25/50DAZS: Panel de evacuación por voz de emergencia de canal simple, de 25 vatios, 25 VRMS. Se puede activar automáticamente mediante el vínculo de comunicación en serie del sistema de zonas desde el NFV-25/50ZS. *Consulte DN-60049.*

NFV-25/50ZS: Panel de control de evacuación por voz de emergencia (VECP) de 25 vatios, 25 VRMS, con micrófono comercial integral, generador de mensaje digital, módulo separador de zonas (ACC-ZSM) módulo de localización de zona con teclado (ACC-ZPMK). *Consulte DN-7003.*

NFV-25/50ZST: Panel de control de evacuación por voz de emergencia (VECP) de 25 vatios, 25 VRMS, con micrófono comercial integral, generador de mensaje digital, módulo separador de zonas (ACC-ZSM) módulo de localización de zona con teclado (ACC-ZPMK). *Consulte DN-60337.*

DISPOSITIVOS COMPATIBLES, PUERTOS EIA-232

PRN-6: Impresora de 80 columnas. *Consulte DN-6956.*

VS4095/5: Impresora, 40 columnas, 24 V. Montada en caja trasera externa. *Consulte DN-3260.*

DPI-232: Interfaz directa con el panel, módem especializado para extender los vínculos de datos en serie a FACP de ubicación remota y/o periféricos; montaje en chasis de NFS-320. *Consulte DN-6870.*

DISPOSITIVOS COMPATIBLES, PUERTOS EIA-485

ACM-24AT: Anunciador ACS serie ONYX: hasta 96 puntos de anunciación con LED de alarma o activo, LED de problema y conmutación por circuito. Los LED activos/de alarma pueden programarse (por medio de la selección de interruptor activado) por punto para que sean rojos, verdes o amarillos; el LED de problema siempre es amarillo. *Consulte DN-6862.*

AEM-24AT: Las mismas capacidades de LED e interruptor que ACM-24AT, amplía el ACM-24AT a 48, 72 o 96 puntos. *Consulte DN-6862.*

ACM-48A: Anunciador ACS serie ONYX: hasta 96 puntos de anunciación con LED de alarma o activo por circuito. Los LED activos/de alarma pueden programarse (por medio de la selección de interruptor activado) en grupos de 24 para que sean rojos, verdes o amarillos. Pueden ampliarse a 96 puntos con un AEM-48A. *Consulte DN-6862.*

AEM-48A: Las mismas capacidades de LED que ACM-48A, amplía el ACM-48A a 96 puntos. *Consulte DN-6862.*

ACM-8R: Módulo de relé remoto con ocho contactos forma C. Se puede ubicar hasta a 6.000 pies (1828.8 m) del panel en cuatro cables. *Consulte DN-3558.*

LCD-80: Modo ACS. Pantalla LCD retroiluminada de 80 caracteres. Se monta hasta a 6.000 pies (1828.8 m) del panel. Hasta 32 por FACP. *Consulte LCD-80/-80TM (DN-3198).*

FDU-80: Modo terminal. Pantalla LCD retroiluminada de 80 caracteres. Se monta hasta a 6.000 pies (1828.8 m) del panel. Hasta 32 por FACP. *Consulte DN-6820.*

LCD2-80: Modo terminal. Pantalla LCD retroiluminada de 80 caracteres. Se monta hasta a 6.000 pies (1828.8 m) del panel. Hasta 32 por FACP. *Consulte DN-60548.*

LDM: Módulos de impulsor de lámpara LDM-32, LDM-E32 y LDM-R32; módulos de impulsor personalizados remotos. *Consulte DN-0551.*

SCS: Estaciones de control de humo SCS-8, SCE-8, con impulsores de lámpara SCS-8L, SCE-8L; ocho circuitos (expandibles a 16). *Consulte DN-4818.*

TM-4: Módulo de transmisor Incluye tres circuitos de polaridad inversa y un circuito de caja municipal; montaje en chasis de NFS-320 o remotamente. *Consulte DN-6860.*

UDACT: Transmisor comunicador de alarma digital universal, 636 canales. *Consulte DN-4867.*

UDACT-2: Transmisor comunicador de alarma digital universal, 636 canales. *Consulte DN-60686.*

UZC-256: El Codificador de zonas universal programable proporciona codificación de zonas sucesiva y positiva sin interferencia. Controlado por microprocesador, programable desde el campo a través de PC compatibles con IBM® (requiere de kit de programación opcional). Se monta en **BB-UZC**. *Consulte DN-3404.*

DISPOSITIVOS INTELIGENTES COMPATIBLES

BEAMHK: Conjunto de calentamiento para unidad de transmisor/receptor de FSB-200(S) a continuación. *Consulte DN-6985.*

BEAMHRK: Conjunto de calentamiento para utilizar con el reflector de FSB-200(S) a continuación. *Consulte DN-6985.*

BEAMLRK: Conjunto de accesorios de largo alcance, FSB-200(S) a continuación. *Consulte DN-6985.*

BEAMMRK: Conjunto de montaje múltiple, FSB-200(S) a continuación. *Consulte DN-6985.*

BEAMSMK: Conjunto de montaje de superficie, FSB-200(S) a continuación. *Consulte DN-6985.*

FSB-200: Detector inteligente de humo de haz. *Consulte DN-6985.*

FSB-200S: Detector de humo de haz inteligente con prueba de sensibilidad integral. *Consulte DN-6985.*

FSC-851: Detector avanzado basado en múltiples criterios FlashScan IntelliQuad. *Consulte DN-60412.*

FCO-851: Detector de incendios/CO avanzado basado en múltiples criterios FlashScan IntelliQuad PLUS. *Consulte DN-60689.*

FSI-851: Detector de ionización FlashScan de bajo perfil. *Consulte DN-6934.*

FSP-851: Detector fotoeléctrico FlashScan de bajo perfil. *Consulte DN-6935.*

FSP-851T: Detector fotoeléctrico FlashScan de bajo perfil con térmico de 135°F (57°C). *Consulte DN-6935.*

FSP-851R: Detector fotoeléctrico con capacidad de prueba remota para usar con cubierta de detector para conductos DNR(W). *Consulte DN-6935.*

FST-851: Detector térmico FlashScan de 135° F (57° C). *Consulte DN-6936.*

FST-851R: Detector térmico FlashScan de 135°F (57°C) con factor termovelocimétrico. *Consulte DN-6936.*

FST-851H: Detector térmico de altas temperaturas FlashScan de 190°F (88°C). *Consulte DN-6936.*

FAPT-851: Detector multisensor de bajo perfil FlashScan Acclimate Plus. *Consulte DN-6937.*

FSL-751: Detector fotoeléctrico láser FlashScan VIEW. *Consulte DN-6886.*

DNR: Cubierta de detector de conducto sin relé de bajo flujo InnovairFlex (pida FSP-851R por separado). Reemplaza FSD-751PL/FSD-751RPL. *Consulte DN-60429.*

DNRW: Igual que el caso anterior, con la calificación NEMA-4, hermético. *Consulte DN-60429.*

B224RB: Base de relé de bajo perfil. *Consulte DN-60054.*

B224BI: Base de aislante para detectores de bajo perfil. *Consulte DN-60054.*

B210LP: Base de bajo perfil. Estilo estadounidense estándar. Reemplaza a B710LP. *Consulte DN-60054.*

B501: Estilo europeo, base de 4" (10.16 cm). *Consulte DN-60054.*

B200S: Base de resonador programable inteligente, capaz de producir una variedad de patrones de tono que incluyen el Temporal 3 de ANSI. Compatible con el protocolo de sincronización. *Consulte DN-60054.*

B200SR: Base de resonador, Temporal 3 o tono continuo. *Consulte DN-60054.*

FMM-1: Módulo de monitoreo FlashScan. *Consulte DN-6720.*

FDM-1: Módulo de monitoreo doble FlashScan. *Consulte DN-6720.*

FZM-1: Módulo de monitoreo de detectores de dos cables FlashScan. *Consulte DN-6720.*

FMM-101: Módulo de monitoreo miniatura FlashScan. *Consulte DN-6720.*

FCM-1: Módulo de control de NAC FlashScan. *Consulte DN-6724.*

FCM-1-REL: Módulo de control de descarga FlashScan. *Consulte DN-60390.*

FRM-1: Módulo de relé FlashScan. *Consulte DN-6724.*

FDRM-1: Módulo de relé doble/monitoreo doble FlashScan. *Consulte DN-60709.*

NBG-12LX: Estación de activación manual direccionable. *Consulte DN-6726.*

Serie ISO-X: Módulo de aislante. *Consulte DN-2243.*

XP6-C: Módulo de control supervisado de seis circuitos FlashScan. *Consulte DN-6924.*

XP6-MA: Módulo de interfaz de seis zonas FlashScan; conecta el sistema de alarma inteligente a la zona de detección convencional de dos cables. *Consulte DN-6925.*

XP6-R: Módulo de control (forma C) de seis relés FlashScan. *Consulte DN-6926.*

XP10-M: Módulo de monitoreo de diez entradas FlashScan. *Consulte DN-6923.*

GABINETES, CHASIS Y PLACAS DE REVESTIMIENTO

Sistema marítimo CAB-BM: Protege los equipos en aplicaciones abordo y junto al agua. Para obtener una lista completa de equipos requeridos y opcionales, consulte *DN-60688.*

BB-UZC: Caja trasera para alojar el UZC-256. Se requiere para las aplicaciones NFS-320. Negro. Para rojo, pida BB-UZC-R.

NFS-LBB: Caja de baterías (se requiere para las baterías mayores a 26 AH).

NFS-LBBR: Igual que el anterior, pero rojo.

SEISKIT-320/B26: Kit de montaje sísmico. Es necesario para aplicaciones que tengan certificación sísmica con NFS-320 y BB-26. Incluye soporte de batería para baterías de 26 AH.

SEISKIT-BB25: Kit de montaje sísmico para BB-25. Incluye soporte de batería para dos baterías de 26 AH.

SEISKIT-LBB: Kit sísmico del NFS-LBB. Incluye soporte para dos baterías de 55 AH.

SEISKIT-PS/2/4: Kit de montaje sísmico para el FCPS-24S6/S8 y CAB-PS1. Incluye soporte para dos baterías de 7 AH o 12 AH.

OTRAS OPCIONES

411: Comunicador de alarma digital esclavo. *Consulte DN-6619.*

411UDAC: Comunicador de alarma digital. *Consulte DN-6746.*

IPDACT-2/2UD, IPDACT Módulo de monitoreo de Internet: Se conecta a los puertos de salida de teléfono DACT primarios y secundarios para las comunicaciones por Internet mediante la conexión a Ethernet suministrada por el cliente. Requiere de un receptor de estación central Teldat VisorALARM compatible. Puede usar DHCP o IP estática. *Consulte DN-60408.*

IPSPLT: La opción de adaptador en Y permite la conexión de ambas salidas del marcador del panel a una entrada de cable IPACT-2/2UD.

IPENC: Gabinete externo de IPDACT, incluye soporte de montaje IPBRKT; Rojo. Para pedirlo en negro, pida **IPENC-B.**

IPGSM-DP: Comunicador de alarma de incendios de Internet y celular digital. Proporciona rutas configurables seleccionables: celular solamente, IP solamente, o IP primaria con respaldo de celular. Se conecta al puerto primario y al secundario de un DACT. Reemplaza IPGSM-COM. *Consulte DH-60695.*

NFS-320-RB: CPU de reemplazo. *NOTA: Se debe quitar el teclado antes de enviar la unidad antigua a reparación.*

- NFS-320-RBE: CPU de reemplazo, exportación.
- NFS-320-RBC-FR: CPU de reemplazo, francés canadiense.
- NFS-320-RB-PO: CPU de reemplazo, portugués.
- NFS-320-RB-POE: CPU de reemplazo, exportación, portugués.
- NFS-320-RB-SP: CPU de reemplazo, español.
- NFS-320-RB-SPE: CPU de reemplazo, exportación, español.

***NOTA:** Para otras opciones que incluyen compatibilidad con el equipo de actualización retroactiva, consulte el manual de instalación del panel, el manual de SLC y el Documento de compatibilidad de dispositivos.*

ESPECIFICACIONES DE SISTEMA

Capacidad del sistema

- Circuitos de línea de señalización inteligentes 1
- Detectores inteligentes 159
- Módulos de monitoreo/control direccionables 159
- Hardware interno y circuitos de salida programables 4
- Zonas de software programables 99
- Zonas de programación especiales..... 14
- Anunciadores LED por NFS-320/-320E 32
- Anunciadores ACS por NFS-320/-320E .....32 direcciones x 64 puntos

Especificaciones

- Potencia de entrada primaria:
  – NFS-320: 120 VCA, 50/60 Hz, 5.0 A.
  – NFS-320E: 220/240 VCA, 50/60 Hz, 2.5 A.
- Potencia de salida total de 24 V: 6.0 en alarma.

NOTA: *La fuente de alimentación tiene un total de 6.0 A de energía disponible. Lo comparten todos los circuitos internos.*

- Circuitos de notificación estándar (4): 1.5 A cada uno.
- Potencia de 24 V reajustable regulada: 1.25 A.
- Dos salidas de potencia de 24 V no reajustables reguladas:
  – 1.25 A.
  – 0.50 A.
- Potencia no reajustable de 5 V: 0.15 A.
- Rango del cargador de batería: 18 AH – 200 AH. Utilice gabinetes separados para baterías de más de 26 AH.
- Tasa flotante: 27.6 V.

Especificaciones del gabinete

Dimensiones del gabinete de NFS-320:

- Caja trasera: 18.12 pulgadas (46.025 cm) ancho; 18.12 pulgadas (46.025 cm) alto; 5.81 pulgadas (14.76 cm) profundidad.
- Puerta: 18,187 pulgadas (46.195 cm) ancho; 18,40 pulgadas (46,736 cm) alto; 0,75 pulgadas (1,905 cm) profundidad.
- Anillo de ajuste: El ancho de moldura es 0,905 pulgadas (2,299 cm).
- Peso de envío (sin baterías): 36,15 libras (16,4 kg).

Rangos de temperatura y humedad

Este sistema cumple con los requisitos de la NFPA para operar a 0 – 49 °C/32 – 120 °F y a una humedad relativa del 93% ± 2% HR (sin condensación) a 32 °C ± 2 °C (90 °F ± 3 °F). Sin embargo, la vida útil de las baterías de reserva del sistema y de los componentes electrónicos puede verse afectada desfavorablemente por rangos de temperatura y humedad extremos. Por lo tanto, se recomienda instalar este sistema y los dispositivos periféricos correspondientes en un lugar con una temperatura ambiente normal de 15 °C a 27 °C/de 60 °F a 80 °F.

Clasificaciones y aprobaciones de organismos

Los listados y las autorizaciones debajo se aplican al panel de control básico NFS-320. En algunos casos, puede ser que determinados organismos reguladores no incluyan ciertos módulos o que los listados estén en proceso. Consulte a la fábrica para conocer el estado reciente de las clasificaciones.

- **Clasificación UL:** S635.
- **Aprobado por ULC:** S635 (sólo NFS-320C, excluye IPDACT.
- **Aprobado por FM.**
- **CSFM:** 7165-0028:0243.
- **MEA:** 128-07-E.
- **FDNY:** COA#6085.
- **Ciudad de Chicago.**

Cuando se usan con el sistema marítimo CAB-BM, el soporte sísmico apropiado y dispositivos aprobados para aplicaciones marítimas, estos paneles de control de alarma de incendios ONYX cuentan con la aprobación de los siguientes organismos:

- **Guardia costera de EE.UU.:** 161.002/50/0 (Estándar 46 CFR).
- **Registro de Lloyd:** 11/600013 (Categoría ENV 3).
- **American Bureau of Shipping.**

NOTA: *Para obtener información adicional sobre el modelo NFS-320C con clasificación UL y ULC, consulte DN-60085. Para obtener información sobre NFS-320SYS, consulte DN-60637. Para obtener información sobre el sistema marítimo CAB-BM, consulte DN-60688.*

Estándares

El NFS-320 cumple con los siguientes estándares UL y con los requisitos de NFPA 72, IBC y CBC para sistemas de alarma contra incendios:

- **UL 864** (incendio).
- **UL 1076** (robo).
- **LOCAL** (supervisión automática, manual, flujo de agua y rociador).
- **AUXILIAR** (automática, manual y flujo de agua) (requiere TM-4).
- **ESTACIÓN REMOTA** (supervisión automática, manual, flujo de agua y rociador) (requiere TM-4).
- **PATENTADO** (supervisión automática, manual, flujo de agua y rociador). *No se aplica a FM.*
- **ESTACIÓN CENTRAL** (supervisión automática, manual, flujo de agua y rociador) (requiere UDACT).
- **ALARMA/VOZ DE EMERGENCIA.**
- **OT, PSDN** (Otras tecnologías, Red de conmutación de paquetes).
- **IBC 2000, IBC 2003, IBC 2006, IBC2009** (sísmico).
- **CBC 2007** (sísmico).

ISO 9001 CERTIFIED ENGINEERING & MANUFACTURING QUALITY SYSTEMS

Este documento no debe utilizarse para la instalación.
Intentamos mantener la información de nuestro producto actualizada y precisa.
No podemos cubrir todas las aplicaciones específicas ni anticipar todos los requisitos.
Todas las especificaciones están sujetas a cambio sin previo aviso.

Hecho en EE. UU.

Para obtener más información, comuníquese con Notifier. Teléfono: (203) 484-7161, FAX: (203) 484-7118.
www.notifier.com

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

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

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

ISO 9001 CERTIFIED ENGINEERING & MANUFACTURING QUALITY SYSTEMS

Country of Origin: Mexico

NOTIFIER®
by Honeywell

NOTIFIER®
by Honeywell

FSV-951R Very Intelligent Early Warning (VIEW®)

General

The NOTIFIER FSV-951R VIEW is a high-sensitivity photoelectric smoke detector designed for Very Early Warning Fire Detection and will protect valuable assets and operations where systems must remain functioning at all times.

FSV-951R VIEW detector features a smoke-sensing chamber and patented optic block designed to amplify signals from smoke, but diminish stray internal reflections that can cause false alarms. New LED technology allows this detector to achieve sensitivity levels from 0.02 percent-per-foot to 2 percent-per-foot obscuration – up to 25 times greater than a standard photoelectric detector. The extensive software processing includes multi-alert drift compensation, internal self-diagnostics, and superior transient signal rejection algorithms to produce unprecedented stability at ultra-high sensitivities across the full temperature range. This system provides point identification of the fire location through addressability and offers complete supervision of both the wiring and detector.

The VIEW detector is UL-listed and complies with the following UL standards; Canadian models comply with CAN/ULC S529:

- UL 268 listed for Open Air Protection (0.5%/ft. to 2.0%/ft. obscuration)
- UL 268 listed for Special Applications (0.02%/ft. to 0.5%/ft. obscuration)
- UL 268A listed for Duct Applications allowing both in duct and within System Sensor models DNR and DNRW duct smoke detectors

In addition, the new modern profile blends seamlessly with other 900 series detectors, which offer expanded color options to meet contemporary aesthetic demands.

VIEW is the ideal detection solution for sensitive environments that cannot tolerate even small amounts of smoke:

- Telecommunications switching facilities
- Cellular telephone infrastructure
- Integrated circuit fabrication facilities
- Computer rooms
- Traffic control centers
- Data Centers

Features

- Superior EMI protection
- Very Early Warning Fire Detection capability
- Analog communications
- Low standby current
- Rotary address switches
- 360° visibility of device status with dual LEDs
- On-board drift compensation
- Transient rejection algorithms
- Microprocessor design
- FlashScan® or CLIP protocol communications
- New modern profile with expanded color options

FSV-951R in B300-6 Base

Specifications

PHYSICAL/OPERATING SPECIFICATIONS

- Dimensions:
  Height: 2.0 inches (51 mm) installed in B300-6/-IV base
  Diameter: 6.2 inches (156 mm) installed in B300-6/-IV base; 4.1 inches (104 mm) installed in B501-WHITE/-IV/-BL base
- Weight: 3.4 oz (95 g)
- Operating Temperature Range: 14 °F to 140 °F (-10 °C to 60 °C)
- Operating Humidity Range: 10% to 93% relative humidity, non-condensing
- Air Velocity: 0 to 4,000 fpm (0 to 1219 m/minute)
- Isolator Load Rating: 0.0063*
- Self Diagnostics: Initiated by control panel; activated by test magnet
- Smoke Sensitivity:
  9 levels: 0.02, 0.03, 0.05, 0.10, 0.20, 0.50, 1.00, 1.50, 2.00%/ft. obscuration (0.06, 0.10, 0.16, 0.33, 0.66, 1.65, 3.24, 4.85, 6.41%/m obscuration)
- Drift Compensation:
  High sensitivity maintenance alert signal
  Low sensitivity maintenance alert signal
  Maintenance urgent signal

ELECTRICAL SPECIFICATIONS

- Operating Voltage Range: 15 to 32 VDC
- Operating Current @ 24 VDC: 300 µA (one communication every 5 seconds with green LED blink on communication)
- Maximum Current: 4.5 mA @ 24 VDC (one communication every 5 seconds with amber LED solid on)
- Maximum Alarm Current: 2 mA @ 24 VDC (one communication every 5 seconds with red LED solid on)

Ordering Information

Part Number			Description
White	Ivory	Black	
FSV-951R	FSV-951R-IV		High sensitivity photoelectric smoke detector (laser replacement), UL
FSV-951RA	FSV-951RA-IV		High sensitivity photoelectric smoke detector (laser replacement), ULC
Bases			
B501-WHITE	B501-IV	B501-BL	4" Mounting base, UL/ULC
B501-WHITE-BP			4" Mounting base, bulk pack
B300-6	B300-6-IV		6" Flanged mounting base, UL
B300-6-BP			6" Flanged mounting base, bulk pack
B300A-6	B300A-6-IV		6" Flanged mounting base, ULC
B200S-WH	B200S-IV		Intelligent addressable sounder base, UL
B200SA-WH	B200SA-IV		Intelligent addressable sounder base, ULC
B200S-LF-WH	B200S-LF-IV		Intelligent addressable sounder base, low-frequency, UL
B200SR-WH	B200SR-IV		Intelligent sounder base, UL
B200SRA-WH	B200SRA-IV		Intelligent sounder base, ULC
B200SR-LF-WH	B200SR-LF-IV		Intelligent sounder base, low frequency, UL
B224RB-WH	B224RB-IV		Relay base, UL
B224RBA-WH	B224RBA-IV		Relay base, ULC
B224BI-WH	B224BI-IV		Isolator base, UL
B224BIA-WH	B224BIA-IV		Isolator base, ULC
Accessories			
	SMB600		Surface Mounting Kit (flanged)
TR300	TR300-IV		Trim ring
CK300	CK300-IV	CK300-BL	Color Kit (includes cover and trim ring)
	RA100Z		Remote LED annunciator, UL
	RA100ZA		Remote LED annunciator, ULC
M02-04-00			Detector test magnet
M02-09-00			Telescoping test magnet

ACCESSORIES

RA100Z(A)
Remote LED Annunciator

CK300-BL
Color Kit

TR300
Trim Ring

Standards

FSV-951R high-sensitivity photoelectric smoke detectors are designed to comply with the following standards:

- UL Standard
- UL 864 9th Edition
- UL 268 6th Edition
- ULC Standard
- CAN/ULC S529

Agency Listings and Approvals

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

- **UL/ULC Listed:** S911, S1115
- **FM Approved:** 450568
- **CSFM:** 7272-0028:0506

ISO 9001 CERTIFIED
ENGINEERING & MANUFACTURING QUALITY SYSTEMS

Country of Origin: Mexico

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

INPROTEC INGENIERIA EN PROTECCION, S.R.L. Santo Domingo D.N. Rep. Dom.

NOTIFIER® by Honeywell

BG-12LR and BG-12LRA

Dual-Action Agent Release Stations

FIRE-LITE ALARMS by Honeywell

Releasing Panels

General

The BG-12LR and BG-12LRA are Agent Release Stations designed for use with Fire-lite Fire Alarm Control Panels with releasing capabilities and RP Series Releasing Systems.

Features

- Non-coded, dual-action operation.
- Made with durable polycarbonate.
- Optional surface backbox.

BG-12LRA INCLUDES:

- Abort switch.
- Power-on indication.
- Released indication.
- Manual release (dual-action).

BG-12LR INCLUDES:

- Dual-action release only.

Applications

The BG-12LRA and BG-12LR are ideal for areas such as clean rooms and computer rooms where a chemical agent is used to extinguish a fire.

Product Line Information

BG-12LRA: Agent release station with abort switch, Release LED, Normal LED.

BG-12LR: Dual-action agent release station.

SBA-10: Surface backbox for BG-12LRA, metal. Dimensions 4.5" (11.43 cm) W x 8.188" (20.8 cm) L x 1.375" (3.49 cm) D.

SB-10: Surface backbox for BG-12LR, metal. Dimensions 4.125" (10.48 cm) W x 5.5" (13.97 cm) L x 1.375" (3.49 cm) D.

SB-I/O: Surface backbox for BG-12LR, plastic.

BG12TR: Optional trim ring for semi-flush mounting.

Agency Listings and Approvals

In some cases, certain modules may not be listed by certain approval agencies, or listing may be in progress. *Consult factory for latest listing status.*

UL/ULC Listed: S711

MEA Listed: 67-20-E

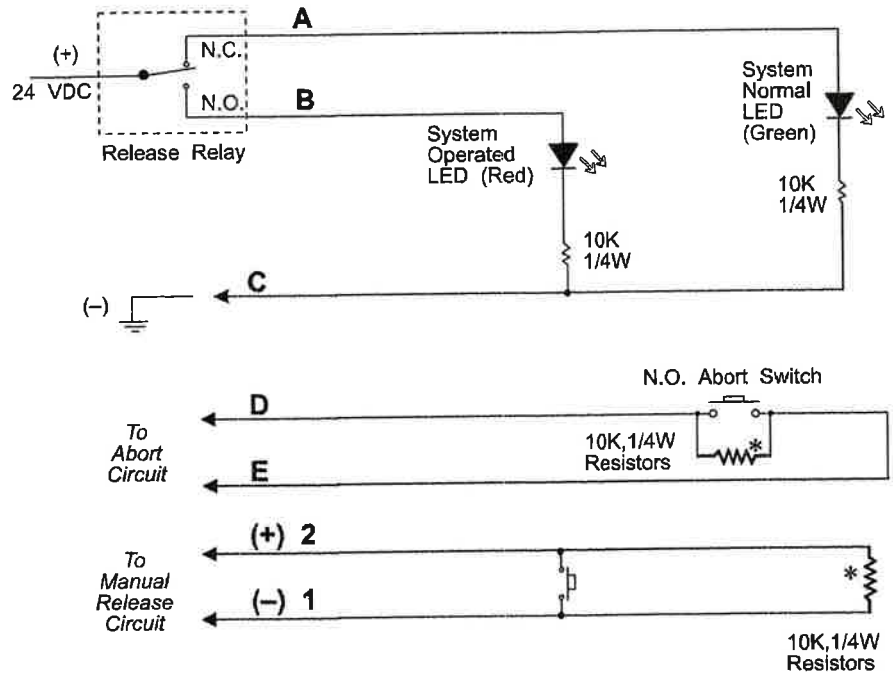
FM Approved

CSFM: 7150-0075:184

Dual Action BG-12LR

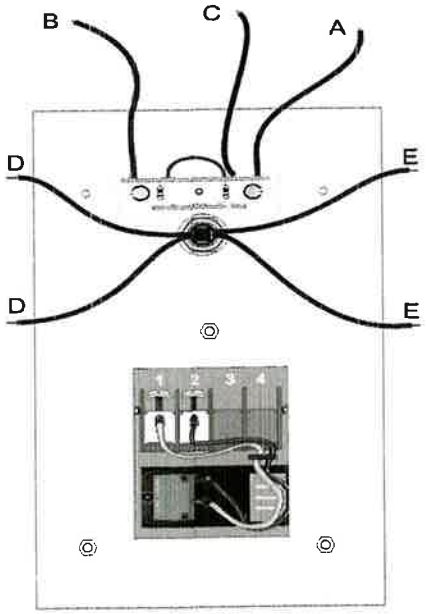
Dual Action BG-12LRA (shown activated)

Wiring



Mount End-of-Line Resistor on the last unit.

Mount 4.7K ELR on the last unit when abort switch and manual release switch are connected to control panel circuits. Mount 47K resistor on last unit when abort switch and manual release switch are connected to monitor module or control module. Refer to control panel manual for the listed ELR. Refer to the product installation documentation for connection to the control panel



BG-12LRA (Rear view) Agent Release Pull Station

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 Fire•Lite Alarms. Phone: (800) 627-3473, FAX: (877) 699-4105.
www.firelite.com

Made in the U.S.A.

Model 878752 Suppression System Abort Station

Kidde Fire Systems
A UTC Fire & Security Company

Effective: May 2007
K-84-10

FEATURES

- **UL Listed, File # S3743**
- **Flush or Surface Mount**
- **One Normally Open Contact**
- **Sized for Double Gang Box**
- **Large Yellow Push Button Switch**

DESCRIPTION

The Kidde Model 878752 Abort Station features a large, easy-to-operate abort push button. The momentary type switch is very easy to see due to its highly visible yellow color. The abort station stainless steel faceplate is clearly labelled with operation procedures—eliminating indecision and hesitation.

The Backbox is painted with red enamel and is provided with four 1/2-inch knockouts. The pre-drilled and tapped mounting tabs allow for easy attachment of the abort station.

TECHNICAL SPECIFICATIONS

Electrical Ratings:
One normally open momentary contact rated 2.5 Amps @ 120 Vdc

Ambient Temperature:
-13°F to 158°F (-25°C to 70°C)

Terminals:
Captive screws and saddle clamps accept 14 AWG to 24 AWG wire

Mounting:
Four 6-32 x 1/2-inch mounting screws included

ORDERING INFORMATION

Part Number	Description	Shipping Weight
84-878752-010	Abort Station	2 lb. (.9 kg)
84-878752-020	Abort Station with Backbox	3 lb. (1.4 kg)
84-296105-000	Backbox	1 lb. (.45 kg)

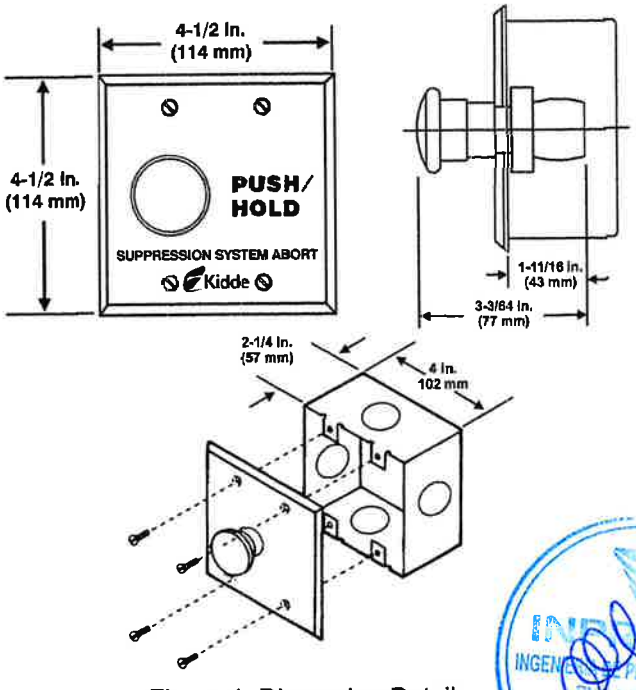


Figure 1. Dimension Details

Printed in USA

Kidde Fire Systems
A UTC Fire & Security Company
400 Main Street
Ashland, MA 01721
Ph: 508.881.2000
Fax: 508.881.8920
www.kiddefiresystems.com

FIRE PRODUCTS

STI Stopper II®

KEY FEATURES

General Information

- Larger cover helps prevent malicious or accidental false fire alarms.
- Three year guarantee against breakage of polycarbonate in normal use (one year on electromechanical and electronic components).

Design

- Prevents false fire alarms without hindering legitimate operation of a manual call point in the event of an emergency.

Construction

- Tough polycarbonate housing can withstand the severest of knocks.

Installation

- A simple 4 fixing installation can retrofit over existing device.
- Can accommodate flush or surface mounted applications.
- Polycarbonate tested -40°C (-40°F) to 49°C (120°F).

Electronics

- Available with or without a 95 dB integral sounder, powered by a 9V PP3 battery (included).
- Optional 12-24 VDC powered units.

Options

- Break seal facility option for added security.
- Available in a range of colours.
- Custom labelling available.

PRODUCT OVERVIEW

Larger cover helps prevent malicious or accidental false fire alarms. The Stopper II is a unique device which has helped prevent false fire alarms around the world for more than 30 years, without restricting legitimate operation of devices such as fire alarm break glass call points. It is ideal for schools, colleges, hospitals, nursing homes, hotels and all public buildings where there is a history or a threat of false fire alarms.

HOW IT WORKS

The Stopper II consists of a clear, tamperproof, tough polycarbonate cover and frame that retrofits over the break glass call point. When lifted to gain access to the break glass, its optional battery powered integral sounder emits a piercing 95 dB or 105 dB (at 1 metre). Immediate attention is drawn to the area and the prankster will either run or be caught.

STI Stopper II®

Dimensions and Technical Information

MODELS AVAILABLE

STI-1200 Stopper II flush mounted without integral sounder
STI-1230 Stopper II surface mounted without integral sounder (includes 50mm spacer)
STI-1100 Stopper II flush mounted with integral sounder
STI-1130 Stopper II surface mounted with integral sounder (includes 50mm spacer)
STI-1200A Stopper II with 4 inch deep enclosed back box
STI-1200A-HTR Stopper II Heated Enclosure with 4" Deep Back Box 110 VAC
STI-1200A-HTR240 Stopper II Heated Enclosure with 4" Deep Back Box 240 VAC

Accessories:

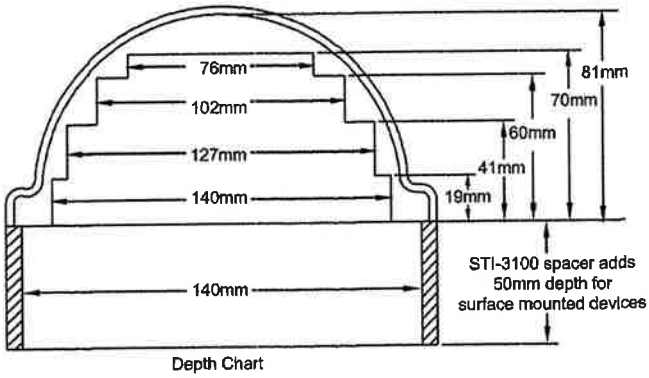
STI-3100 50mm spacer (supplied with STI-1130 & STI-1230)
STI-1280 Backplate (for irregular surfaces)
STI-BS Break Seals (quantity 10)
STI-HK3 Replacement heater

Options:

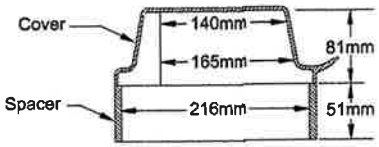
COLOURS AVAILABLE For green, blue or yellow add -G, -B or -Y (e.g. STI-1200-G for Stopper II flush mounted without integral sounder in green)
SECURITY Break Seal facility, add -BS

NB:

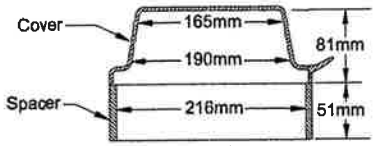
The Stopper II is supplied in red with operating instructions: 'IN CASE OF FIRE - LIFT COVER BREAK GLASS'.
Alternative and custom markings available.



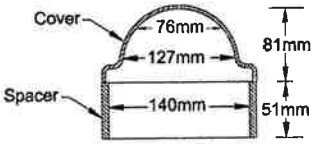
Depth Chart



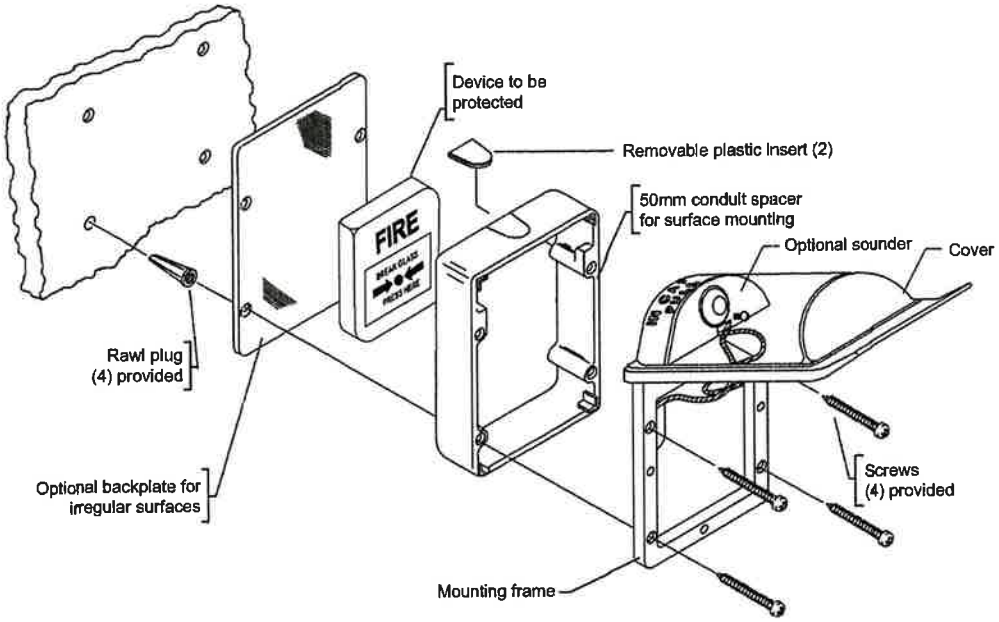
Side View (with sounder)



Side View (without sounder)



End View



Safety Technology International (Europe) Ltd

UK Office
Unit 49G Pipers Road
Park Farm Industrial Estate
Redditch, Worcestershire
B98 0HU, England
Tel: +44 (0)1527 520 999
Fax: +44 (0)1527 501 999
info@sti-europe.com
www.sti-europe.com

USA Head Office
2306 Airport Road
Waterford, Michigan
48327 - 1209
Tel: +248-673-9896
Fax: +248-673-1246
Toll-free:0800-888-4STI
info@sti-usa.com
www.sti-usa.com

SSM/SSV Series Alarm Bells

System Sensor's SSM and SSV series alarm bells are low current, high decibel notification appliances for use in fire and burglary systems or other signaling applications.

Features

- Approved for indoor and outdoor use
- Low current draw
- High dB output
- Available in six-inch, eight-inch, and ten-inch sizes
- AC and DC models
- DC models polarized for use with supervision circuitry
- Mount directly to standard four-inch square electrical box indoors
- SSM and SSV series come pre-wired

Reliable Performance. The SSM and SSV series provide loud resonant tones. The SSM series operates on 24VDC and are motor driven, while the SSV series operates on 120VAC utilizing a vibrating mechanism.

Simplified Installation. For indoor use, the SSM and SSV series mount to a standard four-inch square electrical box. For outdoor applications, weatherproof back box, model number WBB, is used.

The SSM and SSV series come pre-wired, to reduce installation time. The SSM series incorporates a polarized electrical design for use with supervision circuitry.

Agency Listings

UL LISTED S4011 | ULC CS549 | FM APPROVED 3005255 | 7135-1653:0217 | MEA approved 331-01-E

SSM/SSV Specifications

Architectural/Engineering Specifications

Model shall be a SSM or SSV Series alarm bell. Bells shall have underdome strikers and operating mechanisms. Gongs on said bells shall be no smaller than nominal 6˝/8˝/10˝ (specify size) with an operating voltage of 24VDC or 120VAC (specify by part number). Bells shall be suitable for surface or semi-flush mounting. Outdoor surface mounted installations shall be weatherproof (using optional WBB weatherproof electrical box). Otherwise bells shall mount to a standard 4˝ square electrical box having a maximum projection of 2½˝. Bells shall be located as shown on the drawings or as determined by the Authority Having Jurisdiction. Bells shall be listed for indoor/outdoor use by Underwriters Laboratories and the California State Fire Marshal, and approved by Factory Mutual and MEA.

Physical/Operating Specifications

Operating Temperature Range	-31°F to 140°F
Operating Voltage	SSM series: 24 VDC SSV series: 120 VAC
Termination	Provided with 2 sets of leads for in/out wiring
Service Use	Fire Alarm, General Signaling, Burglar Alarm
Warranty	3 years

Electrical Specifications

Model	Gong Diameter (inches)	Nominal Voltage	Operating Voltage Limit	Maximum Current	Sound Output (dBA)
SSM24-6	6	Regulated 24VDC	16 to 33VDC	DC-31.1mA/ FWR-53.5mA	82
SSM24-8	8	Regulated 24VDC	16 to 33VDC	DC-31.1mA/ FWR-53.5mA	80
SSM24-10	10	Regulated 24VDC	16 to 33VDC	DC-31.1mA/ FWR-53.5mA	81
SSV120-6	6	Regulated 120VAC	96 to 132VAC	53mA	85
SSV120-8	8	Regulated 120VAC	96 to 132VAC	53mA	82
SSV120-10	10	Regulated 120VAC	96 to 132VAC	53mA	82

* Sound output measured at Underwriter Laboratories, as specified in UL464

Ordering Information

UL/FM Model No.	ULC/Canadian Model No.	Description
SSM24-6	SSM24-6A	Bell, 6˝, 24VDC, Polarized, 82dBA
SSM24-8	SSM24-8A	Bell, 8˝, 24VDC, Polarized, 80dBA
SSM24-10	SSM24-10A	Bell, 10˝, 24VDC, Polarized, 81dBA
SSV120-6	SSV120-6A	Bell, 6˝, 120VAC, 85dBA
SSV120-8	SSV120-8A	Bell, 8˝, 120VAC, 82dBA
SSV120-10	SSV120-10A	Bell, 10˝, 120VAC, 82dBA
WBB		Weatherproof back box for SSM and SSV series, when installed outdoors

SYSTEM SENSOR

3825 Ohio Avenue • St. Charles, IL 60174
Phone: 800-SENSOR2 • Fax: 630-377-6495

A05-0260-010 • 08/11 • #2870

FMM-1(A), FMM-101(A), FZM-1(A) & FDM-1(A)

Monitor Modules with FlashScan®

NOTIFIER® by Honeywell

Intelligent/Addressable Devices

General

Four 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 conventional heat detectors and pull stations, or monitor and power a circuit of two-wire smoke detectors (FZM-1(A)).

FMM-1(A) is a standard-sized module (typically mounts to a 4" [10.16 cm] square box) that supervises either a Style D (Class A) or Style B (Class B) circuit of dry-contact input devices.

FMM-101(A) is a miniature monitor module a mere 1.3" (3.302 cm) H x 2.75" (6.985 cm) W x 0.5" (1.270 cm) D that supervises a Style B (Class B) circuit of dry-contact input devices. Its compact design allows the FMM-101(A) to be mounted in a single-gang box behind the device it monitors.

FZM-1(A) is a standard-sized module that monitors and supervises compatible two-wire, 24 volt, smoke detectors on a Style D (Class A) or Style B (Class B) circuit.

FDM-1(A) is a standard-sized dual monitor module that monitors and supervises two independent two-wire Style B (Class B) dry-contact initiating device circuits (IDCs) at two separate, consecutive addresses in intelligent, two-wire systems.

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 greater than five times that of other designs.

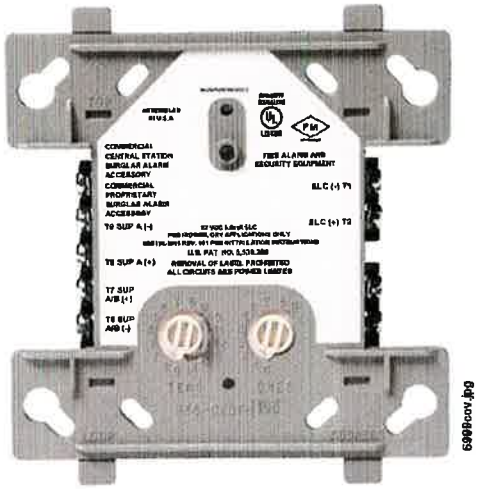
FMM-1(A) Monitor Module

- 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 (this is a programmable option) and latches on steady red to indicate alarm.

The FMM-1(A) 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(A) can be used to replace MMX-1(A) modules in existing systems.

FMM-1(A) APPLICATIONS

Use to monitor a zone of four-wire smoke detectors, manual fire alarm pull stations, waterflow devices, or other 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 NFPA Style B (Class B) or Style D (Class A) Initiating Device Circuit. A 47K ohm End-of-Line Resistor (provided) terminates the Style B circuit. No resistor is required for supervision of the Style D circuit.



FMM-1(A) (Type H)

FMM-1(A) OPERATION

Each FMM-1(A) 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(A) SPECIFICATIONS

Nominal operating voltage: 15 to 32 VDC.

Maximum current draw: 5.0 mA (LED on).

Average operating current: 350 µA (LED flashing), 1 communication every 5 seconds, 47k EOL.

Maximum IDC wiring resistance: 40 ohms.

EOL resistance: 47K ohms.

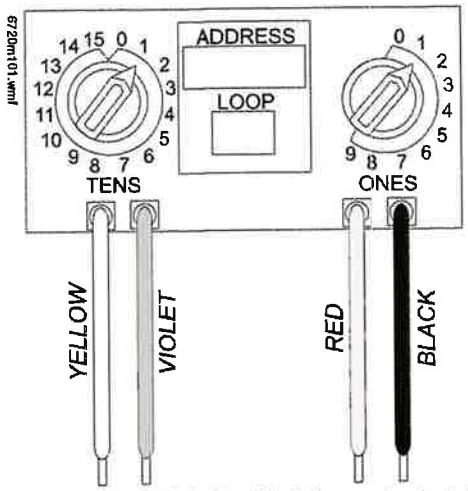
Temperature range: 32°F to 120°F (0°C to 49°C).

Humidity range: 10% to 93% noncondensing.

Dimensions: 4.5" (11.43 cm) high x 4" (10.16 cm) wide x 1.25" (3.175 cm) deep. Mounts to a 4" (10.16 cm) square x 2.125" (5.398 cm) deep box.

FMM-101(A) Mini Monitor Module

- Built-in type identification automatically identifies this device as a monitor module to the panel.
- Powered directly by two-wire SLC loop. No additional power required.
- High noise (EMF/RFI) immunity.
- Tinned, stripped leads for ease of wiring.
- Direct-dial entry of address: 01 – 159 on FlashScan loops; 01 – 99 on CLIP loops.



The FMM-101(A) 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(A) 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(A) can be used to replace MMX-101(A) modules in existing systems.

FMM-101(A) 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 NFPA Style B (Class B) Initiating Device Circuit. A 47K ohm End-of-Line Resistor (provided) terminates the circuit.

FMM-101(A) OPERATION

Each FMM-101(A) 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(A) SPECIFICATIONS

Nominal operating voltage: 15 to 32 VDC.

Average operating current: 350 µA, 1 communication every 5 seconds, 47k EOL; 600 µA Max. (Communicating, IDC Shorted).

Maximum IDC wiring resistance: 40 ohms.

Maximum IDC Voltage: 11 Volts.

Maximum IDC Current: 400 µA.

EOL resistance: 47K ohms.

Temperature range: 32°F to 120°F (0°C to 49°C).

Humidity range: 10% to 93% noncondensing.

Dimensions: 1.3" (3.302 cm) high x 2.75" (6.985 cm) wide x 0.65" (1.651 cm) deep.

Wire length: 6" (15.24 cm) minimum.

FZM-1(A) Interface Module

- Supports compatible two-wire smoke detectors.
- Supervises IDC wiring and connection of external power source.
- 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 during normal operation; this is a programmable option.
- LED latches steady to indicate alarm on command from control panel.

The FZM-1(A) 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 UL compatible with the module. The FZM-1(A) can be used to replace MMX-2(A) modules in existing systems.

FZM-1(A) APPLICATIONS

Use the FZM-1(A) to monitor a zone of two-wire smoke detectors. The monitored circuit may be wired as an NFPA Style B (Class B) or Style D (Class A) Initiating Device Circuit. A 3.9 K ohm End-of-Line Resistor (provided) terminates the end of the Style B or D (class B or A) circuit (maximum IDC loop resistance is 25 ohms). Install ELR across terminals 8 and 9 for Style D application.

FZM-1(A) OPERATION

Each FZM-1(A) 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(A) SPECIFICATIONS

Nominal operating voltage: 15 to 32 VDC.

Maximum current draw: 5.1 mA (LED on).

Maximum IDC wiring resistance: 25 ohms.

Average operating current: 300 µA, 1 communication and 1 LED flash every 5 seconds, 3.9k eol.

EOL resistance: 3.9K ohms.

External supply voltage (between Terminals T3 and T4): DC voltage: 24 volts power limited. Ripple voltage: 0.1 Vrms maximum. Current: 90 mA per module maximum.

Temperature range: 32°F to 120°F (0°C to 49°C).

Humidity range: 10% to 93% noncondensing.

Dimensions: 4.5" (11.43 cm) high x 4" (10.16 cm) wide x 1.25" (3.175 cm) deep. Mounts to a 4" (10.16 cm) square x 2.125" (5.398 cm) deep box.

FDM1(A) Dual Monitor Module

The FDM-1(A) Dual Monitor Module is intended for use in intelligent, two-wire systems. It provides two independent two-wire initiating device circuits (IDCs) at two separate, consecutive addresses. It is capable of monitoring normally open contact fire alarm and supervisory devices; or either normally open or normally closed security devices. The module has a single panel-controlled LED.

***NOTE:** The FDM-1(A) provides two Style B (Class B) IDC circuits ONLY. Style D (Class A) IDC circuits are NOT supported in any application.*

FDM-1(A) SPECIFICATIONS

Normal operating voltage range: 15 to 32 VDC.

Maximum current draw: 6.4 mA (LED on).

Average operating current: 750 µA (LED flashing).

Maximum IDC wiring resistance: 1,500 ohms.

Maximum IDC Voltage: 11 Volts.

Maximum IDC Current: 240 µA

EOL resistance: 47K ohms.

Maximum SLC Wiring resistance: 40 Ohms.

Temperature range: 32° to 120°F (0° to 49°C).

Humidity range: 10% to 93% (non-condensing).

Dimensions: 4.5" (11.43 cm) high x 4" (10.16 cm) wide x 2.125" (5.398 cm) deep.

FDM-1(A) AUTOMATIC ADDRESSING

The FDM-1(A) automatically assigns itself to two addressable points, starting with the original address. For example, if the FDM-1(A) is set to address "26", then it will automatically assign itself to addresses "26" and "27".

***NOTE:** "Ones" addresses on the FDM-1(A) are 0, 2, 4, 6, or 8 only. Terminals 6 and 7 use the first address, and terminals 8 and 9 use the second address.*

CAUTION:
Avoid duplicating addresses on the system.

Installation

FMM-1(A), FZM-1(A), and FDM-1(A) modules mount directly to a standard 4" (10.16 cm) square, 2.125" (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(A) module is intended to be wired and mounted without rigid connections inside a standard electrical box. All wiring must conform to applicable local codes, ordinances, and regulations.

Agency Listings and Approvals

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:** S635
- **ULC:** S635
- **FM Approved**
- **CSFM:** 7300-0028:0219
- **MEA:** 457-99-E
- **U.S. Coast Guard:**
  - 161.002/23/3 *(AFP-200: FMM-1/-101, FZM-1)*
  - 161.002/42/1 *(NFS-640: FMM-1/-101)*
- **Lloyd's Register:**
  - 03/60011/E1 *(FMM-1/-101, FZM-1)*
  - 94/60004/E2 *(AFP-200: except FDM-1)*
  - 02/60007 *(NFS-640: FDM-1)*
- **FDNY:** COA #6038 (NFS2-640, NFS-320), COA# 6058 (NFS2-3030)

Product Line Information

***NOTE:** "A" suffix indicates ULC-listed model.*

FMM-1(A): Monitor module.

FMM-101(A): Monitor module, miniature.

FZM-1(A): Monitor module, two-wire detectors.

FDM-1(A): Monitor module, dual, two independent Class B circuits.

SMB500: Optional surface-mount backbox.

***NOTE:** See installation instructions and refer to the SLC Wiring Manual, PN 51253.*

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

Made in the U.S.A.

FCM-1-REL(A)

Releasing Control Module

NOTIFIER® by Honeywell

Intelligent/Addressable Devices

General

The FCM-1-REL Releasing Control Module is specifically designed for fire suppression releasing applications in FlashScan® systems. Power to the release agent solenoid(s) runs through the module for full-time monitoring and supervision.

The FCM-1-REL Releasing Control Module uses a redundant protocol; the module must be armed with a pair of signals in order to activate. It will then enter a 3-second window awaiting a pair of confirmation signals. If no confirmation is received, the module will automatically reset. It also supervises the wiring to the connected load and reports the status to the panel as NORMAL, OPEN, or SHORT CIRCUIT. The module has two pairs of output termination points available for fault-tolerant wiring and a panel-controlled LED indicator. The module may be connected to either one 24VDC solenoid or up to two 12VDC solenoids (in series). To ensure proper operation, this module shall be connected to a compatible Notifier system control panel only (list available from Notifier). In addition, please refer to Notifier *Device Compatibility Document* PN 15378 for the list of compatible solenoids.

NOTE: *FCM-1-REL is required for all new FlashScan-mode releasing applications with NFS2-3030 (version 14.0 or higher), NFS2-640 (version 12.0 or higher) and NFS-320(E)(C) (version 12.0 or higher) panels. Use FCM-1 for releasing applications on NFS-640, NFS-3030, and all CLIP mode panels.*

Features

- Redundant protocol for added protection
- Configurable for Class A or Class B operation
- External supply voltage monitoring
- Can power one 24V or two 12V solenoids
- SEMS screws for easing wiring
- Panel controlled status LED
- Analog communications
- Rotary address switches
- Low standby current
- Mounts in standard 4" (10.16 cm) junction box
- FlashScan operation

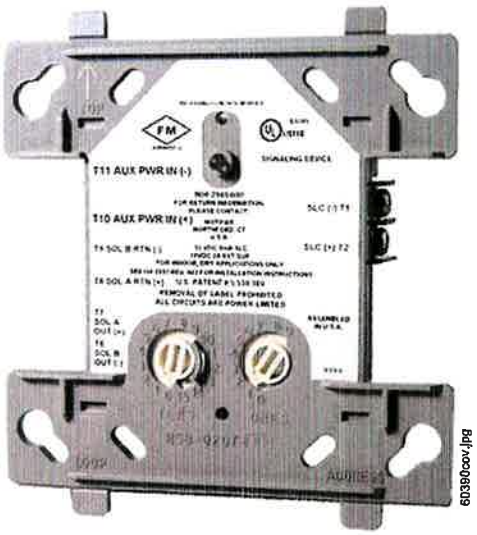
Specifications

GENERAL SPECIFICATIONS

- **Operating Voltage:** 15 to 32 VDC
- **Communication Line Loop Impedance:** 40 Ohm max.
- **Temperature Range:** 14°F to 140°F (-10° to 60°C)
- **Relative Humidity:** 10% to 95% noncondensing
- **Shipping Weight:** 5.5 oz (156 g)
- **Dimensions:** 4.275" W x 4.675" H x 1.400" D (10.86 cm W x 11.87 cm H x 3.56 cm D)

SLC

- **Average Operating Current:** 700 µA max @ 24 VDC (one communication every 5 sec. with LED enabled)
- **Maximum Activation Current:** 9.0 mA (LED on)



FCM-1-REL

EXTERNAL SUPPLY

- **Normal Operating Voltage:** 24 VDC Nominal
- **Maximum Line Loss:** 2.3 VDC (total allowable loss from power supply to module and from module to solenoid)
- **Minimum Operating Voltage to Activate Solenoid:** 18 VDC (at solenoid)
- **Standby Current:** 6.4 mA
- **Activation Current:** 10 mA

SOLENOID

- **Supervisory Loop Voltage:** 3.3 V
- **Supervisory Loop Current (Normal):** 30 mA
- **Maximum Activation Current:** 2 A

Product Line Information

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

FCM-1-REL(A): Releasing Control Module.

SMB500: Optional Surface-Mount Backbox.

CB500: Control Module Barrier — required by UL for separating power-limited and non-power limited wiring in the same junction box as **FCM-1-REL.**

Agency Listings and Approvals

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

- **UL Listed:** S635
- **ULC Listed:** (FCM-1-RELA)
- **FM Approved**
- **CSFM:** 7300-0028:249

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

Made in the U.S.A.

NCM-W, NCM-F

ONYX® Series
Network Communications Modules

NOTIFIER® by Honeywell

Network Systems

General

The **Network Communications Module (NCM)** provides NOTIFIER's 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.**

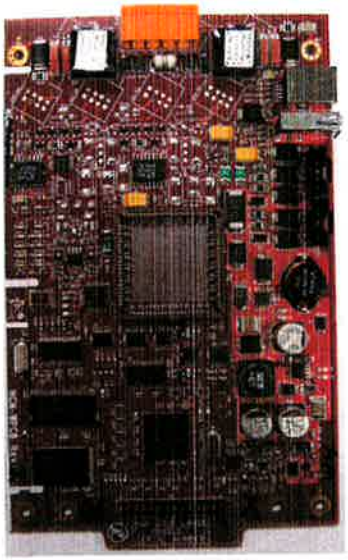
NCM-W Switch Functions: The NCM-W provides two sets of switches to simplify network setup. Enable ***ground fault detection*** by setting "ON" switch SW103 (Channel A); switch SW101 (Channel B). Activate ***on-board end-of-line resistors*** by setting "ON" switch SW100 (Channel A); switch 102 (Channel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

6861ncmb.jpg



NCM-W

- Wavelength (1): 820 nanometers (use standard 850 nm fiber).
- Connectors: ST® style.
- 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-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-F** network 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).

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** Listed: file S635.
- **ULC** Listed: file CS118.
- **CSFM** approved: files 7165-0028:214, 7165-0028:224, 7170-0028:216, 7170-0028:223, 7165-0028:243.
- **FM** approved.
- **MEA** approved.
- **FDNY:** COA #6026, COA #6038

Product Line Information

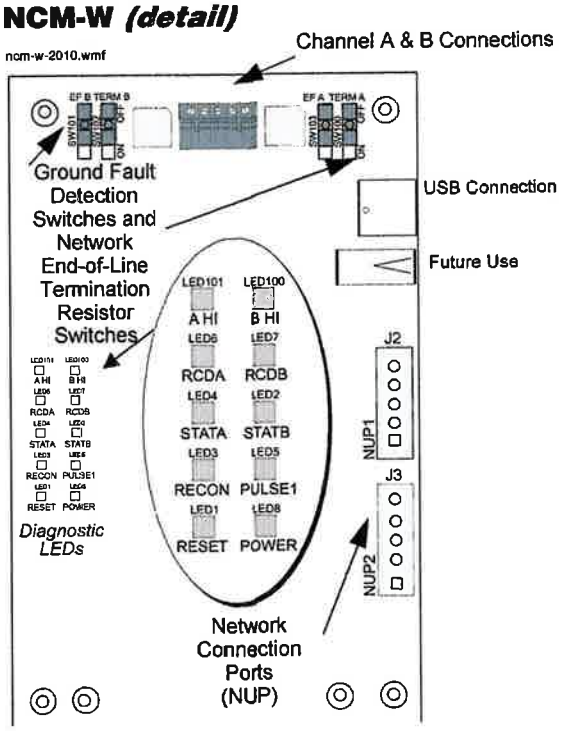
NCM-W: Network Communications Module, twisted-pair wire interface.

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

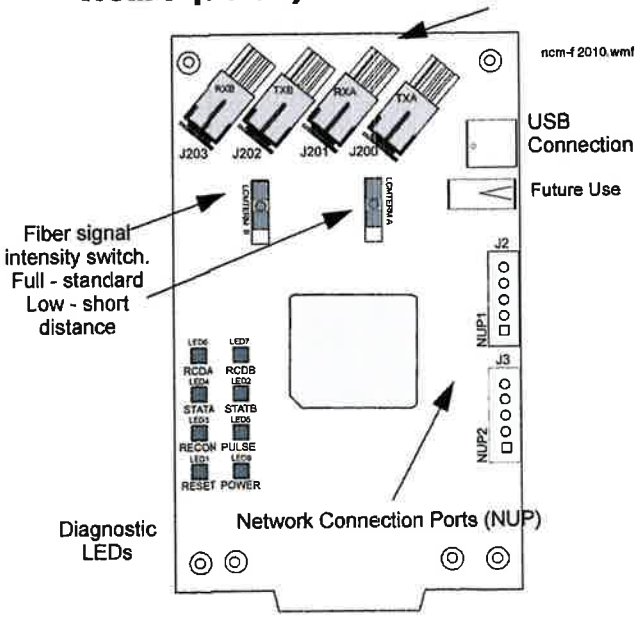
Diagnostic LED Indicators

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)* Channel A & B Connections



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

NOTIFIER®
by Honeywell

NCA-2 ONYX® Series Network Control Annunciator

General

The NOTIFIER **NCA-2** is a second-generation Network Control Annunciator for the **NOTI•FIRE•NET™** network, compatible for use with ONYX® Series nodes such as the NFS2-3030, NFS-3030, NFS-320, NFS-640 and NFS2-640 fire alarm control panels, and first-generation NCA Network Control Annunciators. Additionally, the NCA-2 may be configured with DVC Series products to create one or more Digital Audio Command Centers on NOTI•FIRE•NET. The NCA-2 provides system control and display capabilities for all, or for selected network nodes.

The NCA-2 display consists of a 640-character backlit LCD display, and a control interface consisting of "soft" keys used to navigate screen menus, "hard" keys with fixed control functions, and a QWERTY keypad.

When connected to one or more networked panels the NCA-2 provides network control and status/history display capabilities. It may also be configured as the Primary Display for displayless nodes on the network.

Hardware Features

- Certified for seismic applications when used with the appropriate seismic mounting kit.
- Approved for Marine applications when a marine-listed version is used with marine-listed compatible equipment. *See DN-60688.*
- Full supervision of all inputs and network integrity.
- Enhanced-format 640-character LCD display with backlighting.
- ACS bus for LED or graphic annunciators (EIA-485).
- Optically isolated printer interface (EIA-232).
- 11 LED status indicators: Power, Controls Active, Fire Alarm, Pre-Alarm, Security, Alert, Supervisory, Trouble, Signal, Silence, CPU Failure, Point Disabled, Other Event.
- Alphanumeric QWERTY rubber keypad.
- Four status relays: Alarm, Trouble, Supervisory, Security (Form-C).
- Nonvolatile real-time clock can be synchronized with network by master node.
- Optional Security Keyswitch enables keypad functions.
- Optional Security Tamper switch.
- Supports up to 32 remote ACS annunciators and modules.
- Requires 24 VDC, and a network connection.
- RDP port for LCD-160 or terminal mode LCD2-80.

***NOTE:** NCA-2 Firmware version 14.0 (and higher) can support LCD-160 on the RDP port, or LCD2-80 in terminal mode, but not both at the same time.*

Function Features

- Individual Enable/Disable or Group Enable/Disable local for networked ONYX series panels.
- Control ON/OFF networked ONYX series panel control points.
- Read Status networked ONYX series panel points and zones.
- Network paging control/HVAC control (requires SCS series).
- Network-wide: Acknowledge, Silence, Reset.
- Lamp Test (local to NCA-2).
- History Buffer (1000 Alarm events; 4000 System events).
- Print NCA-2 programming and history reports.
- Report status of networked panels and their respective field devices to a central station via a single UDACT-2 *(see data sheet DN-60686).*
- One Master level, nine User level passwords. The Master can assign each User access levels (programming, alter status).
- Interactive Summary Event Count display, event handling package.
- Online programming and alter-status programs.
- Intuitive user guidance program including interactive soft keys.
- Enhanced Read Status/Alter Status displays.
- New history filters for report displaying and printing: All Events, Only Alarms, Only Troubles, Only Supervisory, Only, Security, Time Interval, Point Range.
- Fully programmable node-mapping subsystem.
- Advanced/Basic Walk-Test program.
- Timer control for Auto Silence, AC Fail Delay.
- Meets Canadian ULC display requirements (with ONYX panels).
- Environmental adjustment controls to maximize LCD legibility.
- Meets NFPA requirements for Firefighter Smoke Control Station (FSCS) and HVAC (requires SCS series)
- NCA-2 version 20 and higher complies with UL 2572 Mass Notification Systems (with ONYX panels).

NCA-2 Indicators and Controls

LED INDICATORS

- POWER (green) illuminates when 24 VDC power is applied; LED goes out if power is removed and NCA-2 is using a battery.
- CONTROLS ACTIVE (green) illuminates to indicate that the NCA-2 control functions are active.
- FIRE ALARM (red) illuminates when at least one fire alarm event exists; flashes when any of these events remain unacknowledged.
- PRE-ALARM (red) illuminates when at least one pre-alarm event exists; flashes when any of these events remain unacknowledged.

- SECURITY (blue) illuminates when at least one security event exists; flashes when any of these events remain unacknowledged.
- SUPERVISORY (yellow) illuminates when at least one supervisory event exists (i.e., sprinkler valve off normal, low pressure, fire pump running, guard's tour, etc.); flashes when any of these events remain unacknowledged.
- SYSTEM TROUBLE (yellow) illuminates when at least one trouble event exists; flashes when any of these events remain unacknowledged.
- OTHER EVENT (yellow) illuminates for any category of event not listed above; flashes when any of these events remain unacknowledged.
- SIGNALS SILENCED (yellow) illuminates if the NCA-2 Silence key has been pressed or if any other node sent a Network Silence command; flashes if only some points on a node are silenced.
- POINT DISABLED (yellow) illuminates when at least one disable exists on the network or in the system.
- CPU FAILURE (yellow) activated by the watchdog timer hardware, indicates an abnormal hardware or software condition. Contact technical support.

FIXED FUNCTION KEYS

- Acknowledge
- Signal Silence
- System Reset
- Drill/Alarm Signal
- Fire Alarm Scroll/Display
- Security Scroll/Display
- Supervisory Scroll/Display
- Trouble Scroll/Display
- Other Event Scroll/Display

The five keys labeled SCROLL/DISPLAY allow the user to scroll through messages for the particular event type. For example, pressing the FIRE ALARM SCROLL/DISPLAY key will scroll through all fire alarm events, as details of each are shown in the display area of the NCA-2.

NOTE: *The OTHER EVENT SCROLL/DISPLAY key also scrolls between Pre-Alarm and Disabled events.*

- **ACKNOWLEDGE** – press this key to acknowledge off all active events.
- **SIGNAL SILENCE** – press this key to turn off all control modules, notification appliance circuits, and panel output circuits that have been programmed as Silenceable.
- **SYSTEM RESET** – press this key to clear all latched alarms and other events and turn off event LEDs.
- **DRILL HOLD 2 SEC** – press this key, holding it down for two seconds, to activate all silenceable output circuits.

SPECIAL FUNCTION KEYS

- **PRINT SCREEN** – press this key to print what is currently on the LCD screen.
- **LAMP TEST** – press this key to test the LED indicators on the left of the keypad and to check firmware revision numbers.
- **NEXT SELECTION/PREVIOUS SELECTION** – these keys are used when setting parameters in NCA-2 data fields; for example, choosing a device type as a filter for requesting a Node History.
- **BATTERY LEVEL** – press this key to display voltage and charging current level for system batteries. Displays levels for local AMPS-24(E) or AMPS-24(E) connected to associated NFS2-3030 or NFS-3030 node.

Product Line Information

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

NCA-2: Network Control Annunciator. Requires a network communications module for networking. In direct connect applications NCM not required. NCA-2-C is for ULC applications. Non-English versions are available: NCA-2-FR, NCA-2-HE, NCA-2-KO, NCA-2-PO, NCA-2-SC, NCA-2-SP, NCA-2-TC, NCA-2-TH. For English marine applications, order NCA-2-M; for non-English Marine applications, order NCA-2-M and the appropriate KP-KIT-XX. (See DN-60688.)

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. Wire, single-mode fiber, multi-mode fiber, and media conversion models are available. *See DN-60454*

ABS-2D(C): Annunciator Backbox, Surface, black. Mounts one NCA-2 and one NCM.

ABS-2DR: Same as above, but red.

ABS-4D(C) Annunciator Surface Box.

ABS-1TB Annunciator Surface Box.

ABS-1B(C) Annunciator Surface Box.

ABS-1TB(C) Annunciator Surface Box.

ABS-2B Annunciator Surface Box.

CHS-2D: Chassis, required whenever the NCA-2 is mounted in an ABS-2D(R).

CHS-M3: Chassis, mounts an NCA-2 in a single row of a CAB-4 Series cabinet.

CA-2: Chassis, Audio, 2 rows. Mounts an NCA-2 and the DVC Digital Voice Command in two rows of a CAB-4 Series cabinet.

CAB-4 Series Enclosure: Available in four sizes, "A" through "D". Backbox and door ordered separately; requires BP2-4 battery plate. *See DN-6857.*

CAB-BM Marine System: Protects equipment in shipboard and waterfront applications. Order NCA-2-M; for non-English order NCA-2-M and the appropriate KP-KIT-XX. (See DN-60688.) Also order **BB-MB** for systems using 100 AH batteries. For a full list of required and optional equipment, see *DN-60688.*

DP-DISP: Annunciator Dress Plate. Dress plate is used when NCA-2 is mounted in the top row of a CAB-4 Series cabinet with a CHS-M3 chassis.

NCA-2RETRO: Kit for retrofit mounting the NCA-2 to a DP-DISP dress plate.

NCA/640-2-KIT: Mounting kit for directly mounting the NCA-2 to CPU2-640 chassis.

LCD-160: 160 character LCD annunciator. *See DN-66940*

LCD2-80: 80 character LCD annunciator. *See DN-60548*

TR-ABS2D: Trim ring for semi-flush mounting of ABS-2D.

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). Product weight is 3 lbs (1.36 kilograms).

Electrical Requirements

The NCA-2 may be powered from a Main Power Supply AMPS-24(E) (see data sheet DN-6883) mounted in a separate cabinet (see specifications below); or from any UL Listed non-resettable 24 VDC source from a compatible NOTIFIER fire panel (see panel data sheets). The battery on the **NCA-2** motherboard is for RTC and SRAM; holds the history memory through power failure. Replacements are available (P/N 31004). Power source: 1) ***AMPS-24*** (120 VAC, 50/60 Hz, 4.5 A maximum) or ***AMPS-24E*** (240 VAC, 50/60 Hz, 2.25 A maximum) power supply; 2) the NFS-640, NFS2-640 and NFS-320 on-board power supply; or 3) a ***supervised +24 VDC power supply*** that is UL/ULC-listed for fire protective service. The current of the **NCA-2 is 400** mA with backlight and 200 mA with the backlight off.

Agency Listings and Approvals

These listings and approvals apply to the NCA-2 and NCA-2-C. 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: file S635.
- ULC Listed: S527-11.
- FM approved.
- CSFM: 7165-0028:0224, 7165-0028:0243.
- FDNY: COA#6211, COA#6212.

Marine Applications: Marine approved systems must be configured using components itemized in the Marine ONYX Systems data sheet DN-60688. Specific connections and requirements for those components are described in the Marine-EQ installation document, PN 54756. When these requirements are followed, systems are approved by the following agencies:

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

NOTE: *For information on the CAB-BM marine system, see DN-60688.*

Standards

The NCA-2 has been designed to comply with standards set forth by the following regulatory agencies:

- Underwriters Laboratories Standard UL 864, 10th edition
- Underwriters Laboratories Standard UL 2017 for General-Purpose Signaling Devices and Systems
- Underwriters Laboratories Standard UL 2572 for Mass Notification Systems
- NFPA 72 National Fire Alarm Code
- ULC-S527-11 Standard for Control Units for Fire Alarm Systems
- ULC S524 Standard for the Installation of Fire Alarm Systems

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

PS SERIES

6 Amp and 10 Amp, 24 Volt Power Supplies

The PS Series are independently configurable power supplies, allowing you to pair any input with any output, and feature LED diagnostics for troubleshooting.

The PS Series is a remote power supply line from Gamewell-FCI. The HPF-PS6 is a 6 amp and the HPF-PS10 is a 10 amp, remote power supply with battery charger that may be connected to any 12 or 24 volt fire alarm control panel (FACP) or used as a standalone power supply. The PS Series provides 24 VDC power for NACs (notification appliance circuits) configured as either Class B or Class A (requires the ZNAC-PS option card) with multiple sync protocol options. The PS Series also provides auxiliary power, constant or resettable, suited for detectors, annunciators, door holders, and other fire alarm system peripherals. The PS Series cabinet can hold two 7 AH or 18 AH batteries and can charge up to 33 AH batteries in a separate cabinet.

HPF-PS6/10

HPF-PS6/10B

FEATURES AND BENEFITS

- Up to five (6 amp model) or seven (10 amp model) independently-configurable, power-limited output circuits for:
  –Class B and/or Class A NACs
  –Class B and/or Class A resettable or non-resettable 24V auxiliary power
  –door holder power
- Converts from Class B to Class A wiring without losing any outputs using the ZNAC-PS converter card (sold separately)
- Optimal for powering four-wire smoke detectors, annunciators, and other system peripherals requiring regulated power
- Optional addressable control, monitor, and relay modules and power-supervision relay (EOLR-1)
- Configurable for ANSI® Temporal 3 or Temporal 4 coded output
- UL-Listed NAC synchronization using System Sensor®, Wheelock®, Gentex®, or AMSECO® appliances
- Synchronization can be triggered from FACP NAC/remote sync outputs, cascaded power supply, or a control module, single or multi, which may be housed within the power supply cabinet
- Ability to cascade up to four power supplies
- Two (6 amp model) or three (10 amp model) fully-isolated input/control circuits which can be programmed to any output
- Two Form C normally-closed trouble relays for AC Trouble and General Trouble
- 6 or 10 amp full load output, respectively, with 3 A maximum/circuit
- Individual NAC power and trouble LEDs for diagnostic efficiency
- Trouble history mode for diagnostic support
- Wide range end-of-line supervision value (normal: 2-27K ohms)
- Selectable earth fault detection (enable or disable)
- AC trouble report delay timer
- Completely configurable via onboard DIP switches, no extra software required
- Self-contained in compact, locking cabinet constructed of heavy gauge steel with a corrosion-resistant powder coat chip and scratch-resistant finish
- Cabinet designed with ten double knockouts and a removable door for ease of installation and wiring
- Includes integral battery charger capable of charging up to 33 AH batteries
- Cabinet can house two 7 AH or 18 AH batteries
- Battery charger may be disabled via DIP switch for applications requiring larger batteries and external battery charger
- Removable terminal blocks accommodate up to 12 AWG (3.1mm^2) wire
- Works with any UL 864 FACP which utilizes an industry-standard reverse-polarity notification circuit
- HPF-PS6/10 include the Honeywell Power Products lock set (PN: 17059) and key (PN: 17051)

Honeywell

Gamewell FCI

ORDERING INFORMATION

HPF-PS6: 6.0 A, 120 VAC remote charger power supply in a lockable, metal enclosure, red

HPF-PS6B: 6.0 A, 120 VAC remote charger power supply in a lockable, metal enclosure, black

HPF-PS10: 10.0 A, 120 VAC remote charger power supply in a lockable, metal enclosure, red

HPF-PS10B: 10.0 A, 120 VAC remote charger power supply in a lockable, metal enclosure, black

ZNAC-PS: Optional Class A converter card, sold separately

AOM-2SF: Addressable Control Module for one Class B or Class A zone of supervised, polarized Notification Appliances. Notification Appliance Circuit option requires external 24 VDC to power notification appliances.

AOM-2RF: Addressable relay module containing two isolated sets of Form-C contacts, which operate as a DPDT switch

AMM-4F: Addressable Monitor Module for one zone of normally open dry-contact initiating devices. Includes plastic cover plate and end-of-line resistor. Module may be configured for either a Class B or Class A

AMM-2IF: Dual Monitor Module. Same as AMM-4F except it provides two inputs for Class B wiring only

AMM-2RIF: Provides two monitored inputs and two Form-C relays. Functions in Class B wiring only

MMO-6SF: Six-circuit supervised control module

MMO-6RF: Six Form-C relay control module

EOLR-1: 12/24 VDC end-of-line relay for monitoring four-wire smoke detector power

BAT-1270-BP: Battery, 12 volt, 7.0 AH, 5-pack (two required)

BAT-12180-BP: Battery, 12 volt, 18AH, 2-pack

BAT-12330: Battery, 12 volt, 33AH

SEISKIT-MULTI-1: Seismic kit for the PS Series. Includes bracket and hardware for two 7AH or two 18AH batteries.

17070: Alternate Honeywell Gamewell-FCI lock set, PK-625, 3/8" cam

HPS SERIES TECHNICAL SPECIFICATIONS

PRIMARY (AC) POWER

HPF-PS6(B): 120 VAC, 50/60 Hz, 5.0A maximum

HPF-PS10(B): 120VAC, 50/60 Hz, 6.2 A maximum

Wire Size: #12-14 AWG with 600 V insulation

COMMAND INPUT CIRCUIT

Trigger Input Voltage: 9 to 32 VDC

Trigger Current: 2.0 mA (16 - 32 V); Per Input: 1.0 mA (9 - 16 V)

RELAY CIRCUITS

Trouble Contact Rating: 4 A at 24 VDC

OUTPUT CIRCUITS

- 24 VDC filtered
- HPF-PS6B: TB8-TB9 – 1A Regulated, 3A special applications; TB10-TB12 – 0.3A Regulated, 3A special applications
- HPF-PS10B: TB8-TB11 – 1.5A Regulated, 3A special applications; TB12-TB14 – 0.3A Regulated, 3A special applications
- 6.0 A (HPF-PS6B) or 10.0 (HPF-PS10B) maximum total continuous current for all outputs

SECONDARY POWER (BATTERY) CHARGING CIRCUIT

- Supports lead-acid batteries only
- Float-charge voltage: 27.6 VDC
- Maximum current charge: 1.5 A
- Maximum battery capacity: 18 AH (inside cabinet)
- Maximum battery charging capacity: 33 AH (external cabinet)

PHYSICAL

Dimensions: 20.0"H x 14.5"W x 3.5"D (cm: 50.8H x 36.83W x 8.9D)

Weight: with two 7Ah batteries is 24 pounds (10.9 kg), with two 18 AH batteries is 39 pounds (17.7 kg)

STANDARDS AND CODES

The HPF-PS complies with the following standards:

NFPA 72: National Fire Alarm Code

UL 864: Standard for Control Units for Fire Alarm Systems (NAC expander mode)

UL 1481: Power Supplies for Fire Alarm Systems

AGENCY LISTINGS AND APPROVALS

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

UL Listed: S24562

CSFM: 7315-1637:0505

FDNY Approved

FM Approved

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

9021-61096 | B | 01/21

Honeywell

Gamewell FCI

MODBUS FEATURE - CLSS GATEWAY

Connected Life Safety Services (CLSS) Gateway Feature for Modbus® Protocol Network Communication

The MODBUS Feature - CLSS Gateway (HON-CGW-MBB-ANZ) provides a communication link between networks that use the Modbus/TCP communication protocol and the Honeywell® Fire System.

CLSS Gateway with Enclosure

The Modbus Feature-CLSS Gateway communicates with compatible Honeywell Fire Alarm Control Panels (FACPs) resident on an NFN network. The Modbus communication protocol is consistent with Modbus Application Protocol Specification V1.1b.

The Modbus 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 Gateway automatically maps all the configured points and provides a user-friendly, comma separated value report that defines the mapping.

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

- Designed to be compatible with standard Modbus/TCP masters
- Supports one-byte Unit IDs
- Supports two Modbus masters
- Web-based software and smartphone app for Modbus Feature configuration and administration
- Logs diagnostic information
- Connects to compatible Honeywell fire alarm control panels (FACPs) or panel networks
- Monitors ten compatible nodes not including the CLSS Gateway node itself
- Provides data such as event type, active/ inactive, enabled/ disabled, acknowledged/ unacknowledged, device type, and system troubles
- Supports reads of up to 100 registers at a time
- Sends standard Modbus exception responses
- Reduces configuration time by auto-discovering and mapping

Honeywell

MODBUS 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 Modbus Gateway, and to connect it with Modbus clients. The Internet or Intranet IP network connection must meet the following requirements.

- Private or Business LAN
- Static IP address
- Standard 100Base-T connection
- TCP Port 502

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.

STANDARDS AND CODES

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

- UL 864, Tenth Edition*
- CAN/ULC S527-19, Fourth Edition*
- Meets Australian ACMA RCM Requirements

*Supplementary Only

APPROVALS

- UL/ULC Listed: S35608
- **CSFM:** 7300-1637:0504
- **FDNY:**
  - COA#000121
  - COA#000122

ORDERING INFORMATION

- **HON-CGW-MBB-ANZ:** CLSS Gateway with Enclosure.
- **MODBUS 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

14-030 | A | 01-23

THE FUTURE IS WHAT WE MAKE IT

Honeywell

INPROTEC®
INGENIERÍA DE PROTECCIÓN

ESPECIFICACIONES TÉCNICAS
ROCIADORES AUTOMÁTICO

INPROTEC®
INGENIERÍA DE PROTECCIÓN