

Fire Detection and Alarm

Overview of Products

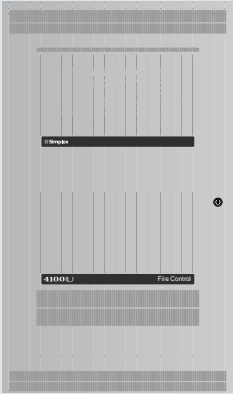
Our fire systems are designed and manufactured to provide the highest levels of reliability, survivability, and flexibility to meet or exceed local regulatory requirements. From single-story structures to large campuses and office towers, we have the life safety solutions to meet your needs.

The table below contains an overview of each of our fire alarm system platforms. Fire alarm control panels (FACPs) along with peripherals and accessories for each platform are included in the pages that follow.

4100U/4100U Voice	Ideal for high schools, hospitals, universities and other large industrial, commercial, and government facilities. Ideal for buildings requiring protection of up to 300 discrete areas. Addressable.
4100U Distributed Network	The definitive fire protection platform for high-rise office towers and multi-building facilities such as airports, hospitals, colleges, sports stadiums and other industrial campuses.
Graphic (mimic) IMS Information Management System	This Microsoft Windows®-based graphical interface provides annunciation, status display, and control for networks and makes it possible to network multiple alarm systems.
4100U MINIPLEX®	The perfect solution for small high-rise facilities, office buildings, and dormitories.
4010-Series	For small and mid-size buildings with more than 16 zones, the addressable 4010 is more economical than conventional zoned systems.
4005-Series	For small to mid-size facilities that require a slightly larger scope of coverage than the 4004 provides such as department stores, warehouses, bulk merchandise stores, small office buildings, inns, and motels. Non-Addressable.
4004-Series	Reasonably priced for small facilities that wish to meet codes at the lowest possible cost such as restaurants, small stores, churches, nursing homes, and small board and care facilities. Non-Addressable.
4009-Series	A family of “smart” extenders – an excellent low-cost option for expanding notification for both addressable and non-addressable systems. Ideal for new construction, upgrades, and facilities that require compliance with ADA.
Control Panel Accessories	Includes the products that complement your fire alarm control panels by making them more versatile and/or easier to use.

Peripheral Devices*	Initiating Devices	Robust addressable detection and control devices including analog smoke and heat sensors with intelligent sensing, pull stations, and monitor modules that convert non-addressable devices to addressable functionality. Control modules are also available. Non-addressable devices, including smoke and heat detectors that incorporate advanced technology and pull stations are also available.
	Notification Appliances	Our TrueAlert family of notification appliances includes both addressable and non-addressable horns, visuals, speakers, and combination (audible/visible) units.

*We also offer products such as door holders and waterflow and tamper switches from other well-known manufacturers of peripheral devices.



Features

- Master controller assembly with operator interface and 4100 Software, revision 10
- Enhanced CPU with dual configuration programs, convenient service port access, and capacity for up to 2000 points
- System power supply (SPS) and charger (9 A total) with on-board NACs, ID Net™ addressable device interface, programmable auxiliary output, and programmable alarm relay
- Operator interface that is conveniently color-coded with raised switches providing high confidence feedback
- Construction that is optimized for easy installation, upgrade, and maintenance
- Glass door that provides view of available operator controls behind locked door
- Available with redundant CPU
- Available with digital or analog emergency voice/alarm
- Compatible with Simplex® remotely located True Alert Addressable Controllers and both addressable and conventional NAC extenders as well as 4003-Series Voice Control Panels
- Ground Fault Search (reduces installation time)
- Available in 120 VAC and 220-240 VAC models
- Listed to:
 - UL std. 864, Fire Detection and Control (UOJZ), and Smoke Control Service (UUKL)
 - UL std. 2017, Process Management Equipment (QVAX)
 - UL std. 1076, Proprietary Alarm Units-Burglar (APOU)

Description

4100U Control Panels provide point and module capacities that are suitable for a wide range of small to medium-sized applications. They accept a variety of interface modules and can be configured for either stand-alone or networked fire control panel operation.

The revision 10 software allows the CPU to provide two on-board configuration programs. The two programs allow for reduced service programming time with one active program and one reserve. Downtime is reduced because the system stays running during download.

Also included:

- True Alarm individual analog sensing with front panel information and selection access
- “Dirty” and “Excessively Dirty” True Alarm sensor maintenance alerts, service and status reports including “almost dirty”
- True Alarm magnet test indication appears as distinct “test abnormal” message on display
- True Alarm Sensor peak value performance report Duplicate address error detection
- Convenient PC programming using a Microsoft® Windows® user interface-based program

True Alarm System Operation

Addressable device communications include operation True Alarm smoke and temperature sensors. Smoke

sensors transmit an output value based on their smoke chamber condition and the CPU maintains a current value, peak value, and an average value for each sensor so they can be “fine-tuned” to provide maximum sensitivity without the incidence of unnecessary alarms. Status is determined by comparing the current sensor value to its average value.

- UL std. 1730, Smoke Detector Monitor (UULH)
- ULC std. S527-99

Tracking this average value as a continuously shifting reference point filters out environmental factors that cause shifts in sensitivity.

Programmable Sensitivity of each sensor can be field selected at the control panel for different levels of smoke obscuration (shown directly in percent) or for specific heat detection levels. To evaluate whether the sensitivity should be revised, the peak value is stored in memory and can be easily read and compared to the alarm threshold directly in percent.

Sensor Status. True Alarm operation allows the control panel to automatically indicate when a sensor is almost dirty, dirty, and excessively dirty. The NFPA (National Fire Alarm Code) 72 requirement for a test of the sensitivity range of the sensors is fulfilled by the ability of True Alarm operation to maintain the sensitivity level of each sensor and output the results to a printer.

Relay IAM with T-Sense Input



Features

- Dual point operation provides a supervised multi-state input and a relay output in a single package using only one address
- Typical applications are for damper motor control with dual damper position feedback monitoring (open and closed)
- For use with Simplex® 4100U Fire Alarm Control Panels operating with software revision 11 or higher and providing ID Net™ communications
- Input operation is “T-Sense” and provides supervised monitoring of normally open, dry contacts and can differentiate between a short circuit contact closure and a current limited contact closure
- Status conditions are Normal, Open Circuit, Current Limited, and Short, which allows differentiation between two different contact

Description

The Relay IAM with T-Sense allows a Simplex 4100U ID Net communication channel to monitor two input contact closures with one point and control an output relay with the other point, both from a compact module requiring a single address. The input circuit and relay operation are controlled independently and may be disabled separately. At the 4100U host display, the device address is designated as a single hardware location. The individual points are considered “sub-points”.

For smoke control applications, this module provides an efficient package for fan damper control with position feedback. The monitor point can be connected to two separate status indicator switches allowing the host panel to track the fan damper status with respect to the requested fan control operation.

types due to their wiring location, and reporting as a single ID Net addressable point to a 4100U fire alarm control panel.

- Both data and power are provided by the ID Net communications link over a single wire pair
- Mounts in standard 4" square electrical box
- Visible LED flashes to indicate communications
- Optional covers are available to allow LED to be viewed after installation
- UL Listed to Standard 864

Relay IAM with Unsupervised Input



Features

- Dual point operation provides an unsupervised input and a relay output in a single package using only one address.
- Typical applications are for fan control with single unsupervised status feedback monitoring
- For use with Simplex® 4100U Fire Alarm Control Panels operating with software revision 11 or higher and providing ID Net™ communications
- Input provides unsupervised monitoring of normally open, dry contacts
- Total wiring distance to supervised contacts is up to 500ft (152 m); for indoor wiring applications
- Both data and power are provided by the ID Net communications link over a single wire pair
- Form C relay output is rated 2 A @ 30 VDC, and ½ A @ 120 VAC (resistive ratings)
- UL listed to Standard 864

Description

The Relay IAM allows a Simplex 4100 ID Net communication channel to monitor an unsupervised input contact closure with one point and control an output relay with the other point, both from a compact module requiring a single address. Module power is supplied from the ID Net communications channel eliminating the need for separate power wiring.

For smoke control applications, this module provides an efficient package for fan control with single status feedback. The monitor point provides feedback from a single set of unsupervised contacts (such as a sail switch or pressure switch) allowing the host panel to track the result of the requested relay control operation.

Six Point Module with T-Sense Inputs and Relay Outputs

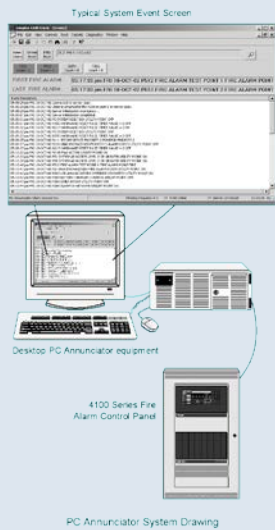


Features

- Six point operation provides four supervised multi-state inputs and two relay outputs in a single package using only one address
- For use with Simplex 4100U Fire Alarm Control Panels operating with software revision 11 or higher and providing ID Net™ communications
- Typical applications include fan motor control centers, monitoring fire pump motor running status, low pressure fuel warnings, and for multiple dual damper position feedback monitoring
- Four “T-Sense” inputs provide supervised monitoring of normally open, dry contacts
- Status conditions are Normal, Open Circuit (trouble condition), Current Limited (position input 1), and Short (position input 2)
- Total wiring distance to supervised contacts is up to 500ft (152 m); for indoor wiring applications
- Two relay outputs with Form C contacts rated 2 A @ 30 VDC, and ½ A @ 120 VAC (resistive ratings)
- UL Listed to Standard 864

Description

The Six Point Module allows a Simplex 4100 ID Net communication channel to monitor four T-sense input circuits and control two output relays from a single compact module requiring a single address. Power is supplied by a 24 VDC connection to a listed fire alarm power supply. Each of the four input circuits monitors for continuity to an end-of-line resistor and can differentiate between a short circuit contact closure and a current limited contact closure. For smoke control applications, this module provides an efficient package for fan damper control with position feedback. Monitor points can be connected to two separate status indicator switches per circuit, allowing the host panel to track fan damper status with respect to the requested fan control operation.



Features

- Personal computer based annunciator provides a convenient and intuitive maintenance service interface to display system activity
- Compatible with Simplex® 4100/4100U series fire alarm control panels
- Computer does not have to be dedicated to annunciation and can be used for other functions when access to the fire control panel is not required
- Login/logout password protection with time duration selectable automatic logout
- Displays Alarm, Supervisory, Priority 2, and Trouble conditions with numerical tallies for each
- Displays first and last alarms; different event types have separate visible indicators with a common audible indicator
- Event logs can be searched and printed
- View and/or print True Alarm status reports and service reports
- Alarm Silence; System Reset; and Priority 2 Reset
- Global and individual point acknowledge
- Set system time and date; and clear event log

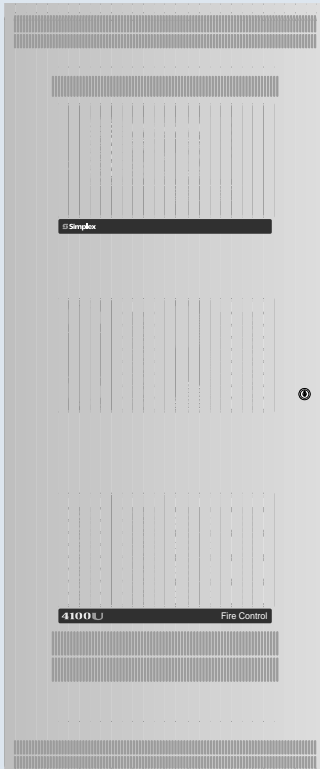
Features (cont.)

- Individual point access for control or parameter revisions
- WALKTEST™ system test is supported for service convenience
- Desktop or rack mount enclosures for both computers and monitors
- Desktop monitors are available as 17" or 19" (483 mm) diagonal monitors
- Monitors are high resolution SVGA operation
- Computers includes keyboard and mouse
- UL Listed to Standard 864

Description

4100/4100U Simplex Fire Alarm Control Panels process extensive system and individual point information for the connected devices. This information is available at the panel LCD, however, with a PC Annunciator, this information is more conveniently available for authorized service access.

The PC Annunciator provides status annunciation and limited system control for a single Simplex Fire Alarm Control Panel using a convenient and familiar Microsoft® Windows® 2000 operating system based interface.



Features

- Integral to the 4100
- Alarm/evacuation signal generation with multiple built-in tones
- Standard or customized digital message storage and message generation
- Automatic or manual operation
- Digital audio system provides up to eight channels over a single wire pair
- Multiple digitally recorded human voice messages
- Spoken WALKTEST system testing
- Microphone operator interface
- Ready-to-talk microphone indicator on audio control module prevents “clipped” spoken messages
- Local panel speaker for message broadcast verification
- MINIPLEX Voice Transponders available for distributed audio
- Available Flex- 35 & 50 amplifiers provide a dual-channel design with configurable operation modes.
- Amplifiers provide outputs at 25 VRMS or 70.7 VRMS (only one voltage choice per system)
- Available master telephone can simultaneously talk with up to 6 remote telephones and can be connected as an audio input for broadcast messages
- Ring signal on available remote firefighters telephone indicates that a call request is initiated and a hold signal indicates that a connected line has been deselected

Features (cont.)

- Telephone circuits are supervised for open and short circuits and too many telephones connected; the master telephone is supervised for cord integrity
- Degraded mode allows remote telephones to remain connected to each other in the event of a communications loss
- Listed to:
 - UL std. 864, Fire Detection and Control (UOJZ) and Smoke Control Services (UUKL)
 - UL std. 2017, Process Management Equipment (QVAX)
 - UL std. 1076, Proprietary Alarm Units-Burglar (APOU)
 - UL std. 1730, Smoke Detector Monitor (UULH)

Description

4100U audio systems provide voice communication, alarm tones, and/or digitally prerecorded voice messages to alert occupants of fire or other emergency situations. Evacuation signaling may be automatically generated via alarm-initiated event programs or by firefighting personnel using the operator controls.

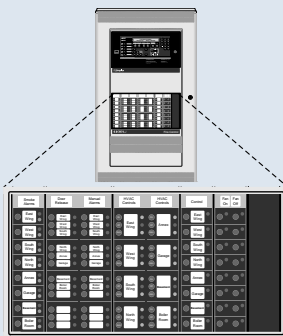
Firefighter's Telephone System

Available firefighter's telephone systems provide two-way communications for facilities where radio communications may not be available or are unreliable.

Operation. Connections are made using a common talk line (party line) that includes a Master Telephone and up to six remote telephones.

Remote telephones call into the Master by either being taken off-hook or by being plugged into a telephone jack. The Master Telephone location receives a ring-in tone with a visible LED indicator for each telephone circuit.

LED/Switch Modules and Controllers



Features

- Panel monitors switches for user input and controls LED indicators to annunciate function status
- LED/switch modules mount on front of panel bay providing convenient access and high visibility (8, 16, and 24-LED and switch models available)
- Compact 64-LED/64-switch controller modules mount on back of LED/switch modules
- Raised momentary switches provide tactile feedback
- Alternate action operation provides on/off functions
- High-intensity LEDs provide clear

Features (cont.)

- Listed to:
 - UL std. 864, Fire Detection and Control (UOJZ) and Smoke Control Services (UUKL)
 - UL std. 2017, Process Management Equipment (QVAX)
 - UL std. 1076, Proprietary Alarm Units-Burglar (APOU)
 - UL std. 1730, Smoke Detector Monitor (UULH)
 - ULC std. S527-99

Description

Annunciation Options. 4100U fire alarm panels support a variety of switch input and LED status indicators to

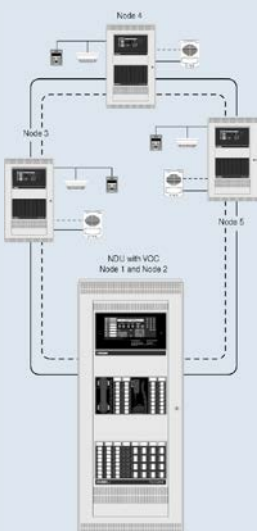
status annunciation

- Slide-in labels provide custom on-site labeling

complement the information and controls available at the operator interface. These LED/switch modules and controllers provide a convenient interface efficiently packaged onto the front panel space of the 4100U cabinet bay. The modules can be used with the 4100U Fire Alarm Control Panels, Remote Annunciators, and Network Display Units (NDUs).

*Additionally, an available panel-mounted printer can conveniently record system status.

Network Display Unit (NDU)



Features

- The Network Display Unit (NDU) provides annunciation for up to 12,000 network points:
 - The basic NDU is a special purpose master controller that includes a network interface module
 - Combining a basic NDU with a Voice Command Center (VCC) provides an additional separate network node within the same cabinet for control of network-level emergency voice/alarm communications equipment
- Enhanced CPU with dual-configuration programs, convenient service port access, and capacity for up to 12,000 points
- System power supply (SPS) and charger (9 A total) with on-board programmable auxiliary output
- Operator interface that is conveniently color-coded with raised switches providing high-confidence feedback

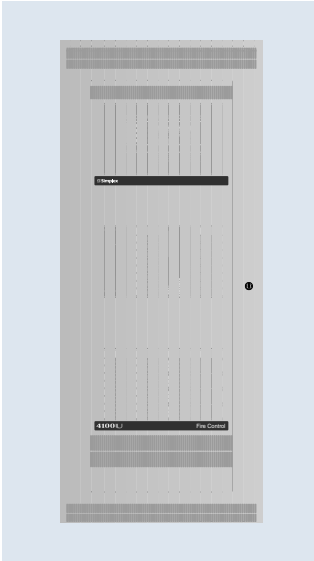
Features (cont.)

- Listed to:
 - UL std. 864, Fire Detection and Control (UOJZ), and Smoke Control Service (UUKL)
 - UL std. 2017, Process Management Equipment (QVAX)
 - UL std. 1076, Proprietary Alarm Units-Burglar (APOU)
 - UL std. 1730, Smoke Detector Monitoring (UULH)

Description

The 4100 Network Display Unit is a network-level annunciator and manual system/point controller. It provides alphanumeric annunciation for up to 12,000 network points and/or point lists and can be programmed to function as the network master controller for Alarm Silence, Trouble Acknowledge, and System Reset.

Remote Annunciator Panels



Supported Functions

- Remote status LED indicators and dedicated switch input controls located on LED/switch modules (refer to LED/Switch Modules and Controllers entry)
- Remote microphones and operator interfaces for access to the emergency voice/alarm communications system (refer to Emergency Voice/Alarm Communications Equipment entry)
- Remote master telephones for communicating to the firefighter's telephone system (refer to Emergency Voice/Alarm Communications Equipment entry)
- Listed to:
 - UL std. 864, Fire Detection and Control (UOJZ), and Smoke Control Service (UUKL)
 - UL std. 2017, Process Management Equipment (QVAX)
 - UL std. 1076, Proprietary Alarm Units-Burglar (APOU)
 - UL std. 1730, Smoke Detector Monitoring (UULH)

Available Options

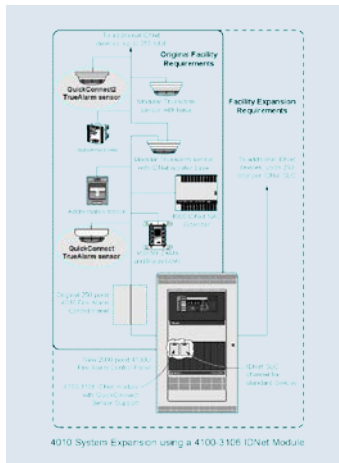
- Remote Command Center module for LCD status readout and key switch-controlled functions
- RS-232 ports for remote printer or terminal connections
- Panel-mounted printer for system status recording

Description

Remote Annunciator Panels provide fire alarm control panel status information at locations distant from the fire alarm control panel. They are dedicated transponders that support fire alarm system status information. Typical use is when the host fire alarm control panel is located away from the area where those responding to a fire situation would need status information.

Status and Control. Controls are suitable for firefighter or other fire brigade responders to access particular information and to control the system. When equipped with a remote microphone and emergency voice/alarm communications system control, an authorized user can take command of the system and either play selected pre-recorded messages, select specific tones, or initiate live broadcast information -- either globally into the system or to selected areas.

IDNet Expansion Module with Quick Connect Sensor Compatibility



Features

ID Net expansion module for 4100U fire alarm control panels:

- Provides 250 ID Net device point control including both Quick Connect and Quick Connect 2 sensors
- Single block (4" x 5") module size

Intended for upgrade of Simplex® 4010 fire alarm control panels:

- Allows for system expansion beyond 250 addressable points, up to the 2000 point capacity of the 4100U control panel
- Systems can retain the installed Quick Connect and/or QuickConnect2 sensors
- Additional ID Net SLC (Signaling Line Circuit) channels are available from 4100U standard or expansion ID Net modules
- UL listed to Standard 864

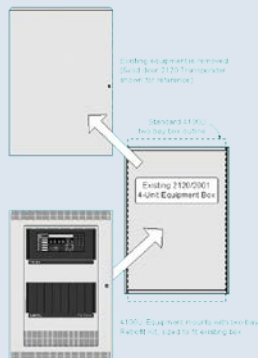
Description

The Simplex model 4010 fire alarm control panel provides for up to 250 addressable points using ID Net communications. One of the 4010 unique devices is the Quick Connect sensor.

Quick Connect sensors provide True Alarm analog sensing in a feature-

optimized package, primarily suited to smaller systems. The original Quick Connect sensor has been replaced with the Quick Connect 2 sensor.

When a facility expands beyond the capacity of the 4010 control panel, the preferred upgrade is the 4100U fire alarm control panel. Standard 4100U ID Net SLCs are not compatible with Quick Connect sensors. However, with the 4100-3106, all of the 4100U compatible ID Net devices and the Quick Connect and QuickConnect2 sensors can be connected to the same fire alarm control panel.



Typical Application: 4-Unit 2120 Backbox
Retrofitted with Two-Bay 4100U

Supported Functions

Replace existing Simplex® 2120 Series or 2001 Series fire alarm control panel equipment with 4100U Series products using the existing back box

- Retrofit kits include either a solid or glass door, retainer panels for glass door applications, and box extension hardware
- Kits are available for 1, 2, or 3 bay 4100U equipment
- Colors are available to coordinate with existing beige, red, or black boxes, or to convert to red or beige
- **With the retrofit kits in place, standard 4100U equipment can be easily installed:**
- Existing cabinets accommodate internal battery mounting up to 33 Ah; 50 Ah or higher battery sizes require external cabinets
- Established 4100U module placement rules apply

Compatible existing back boxes include:

- Solid or louvered boxes in 2-Unit, 4-Unit, or 6-Unit sizes
- Shallow boxes that are 6-1/2" deep, used for 2001 Series equipment and early 2120 Series equipment
- Deep boxes that are 6-3/4" deep, used for later versions of 2120 Series equipment
- UL listed to Standard 864

Description

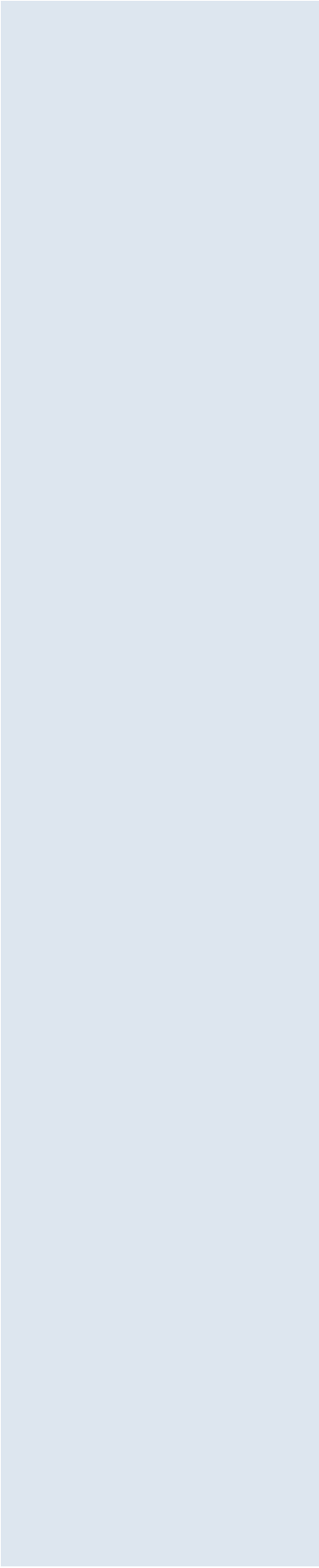
When the 4100U Series of Simplex fire alarm control panel products was developed, the cabinet dimensions were optimized to accept newer generations of equipment design. 4100U cabinets are narrower, taller, and deeper than those of the 2120 and 2001 Series products.

When existing fire alarm control systems require capacity or performance increases, it is an opportunity to consider new product solutions. When updating existing Simplex 2120 or 2001 Series equipment to 4100U equipment, these retrofit kits allow the update to use the existing back boxes. Retaining the existing boxes allows mechanical and electrical impact to be reduced, often significantly.

Examples for these retrofit kits include back boxes installed on surfaces that would be costly to modify or where installed into a custom enclosure. Whether surface mounted or semi-flush mounted, these retrofit kits can expedite the equipment retrofit process.

Compatible boxes may be available for retrofit from other applications such as some 2100 Series Multiplex equipment.

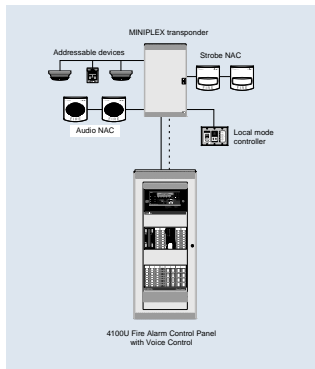
4100U fire alarm control panel equipment typically mounts in new 2 or 3 bay 4100U boxes. Some



4100U equipment combinations are available for mounting in a single bay size. Retrofit kits are available to convert the 2120/2100-2Unit/No. 2 boxes to accommodate 4100U single bay equipment.

Proper retrofitting of existing equipment requires that the desired fire alarm functions be understood to specify the necessary 4100U equipment.

4100U MINIPLEX® Transponders



Features

- Transponder operation is available as standard or with local mode operation
- Communications with the host fire alarm control panel use the Remote Unit Interface (RUI) format
- Initiating functions include:
 - Conventional initiating device circuit (IDC) support
 - Addressable device support including True Alarm® analog sensor compatibility
- Notification functions include:
 - Conventional DC notification appliance circuits
 - Emergency voice/alarm communications
 - True Alert™ addressable strobe and horn notification
- Local mode operation provides:
 - Default local initiating and notification operation in the event of a communications loss with the host control panel
 - Enabling of an optional Local Mode Controller with a local alarm sounder, LED status indicators, and key switch-enabled control switches
 - Support of ID Net addressable devices, conventional and True Alert™ addressable notification appliances, and default output tones from local amplifiers

Features (cont.)

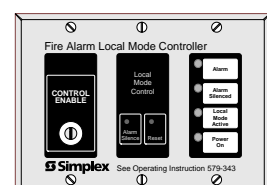
- Listed to:
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 - UL std. 1076, Proprietary Alarm Units-Burglar (APOU)
 - UL std. 1730, Smoke Detector Monitor (UULH)

Description

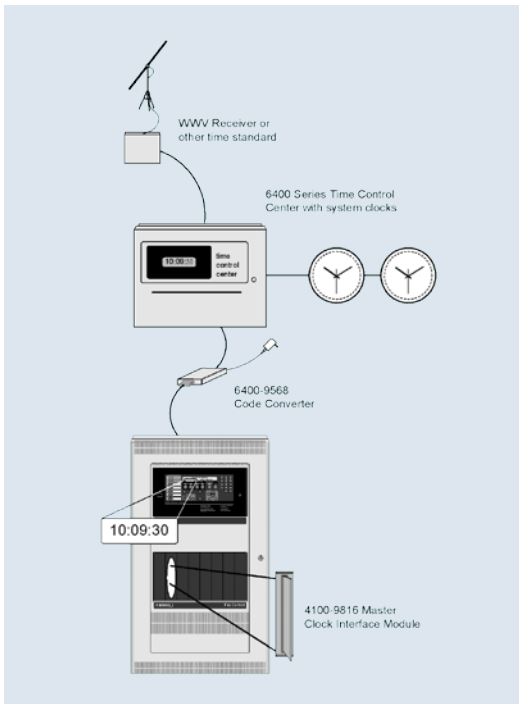
4100U Series MINIPLEX transponders allow remotely located initiating and notification functions. 4100U MINIPLEX transponders connect to a host 4100U Fire Alarm Control Panel using Simplex® Remote Unit Interface (RUI) communications. At the transponder, RUI communications are received by the transponder interface module and translated into the same internal communications format that is used in the host control panel.

Remotely located modules. With RUI communications, the transponder can remotely provide the same initiating and notification functions that occur at the host control panel without requiring multiple long-distance wiring runs.

Local Mode Controller. During local mode operation, an optional Local Mode Controller (see illustration below) will indicate status and can be enabled using a key switch to perform local alarm silence or reset.



Dual Port RS-232 Module with Master Clock Interface



Features

- Dual RS-232 port module with port B dedicated for master clock/master time interface
- RS-232 port A is available for connection to printers, terminals, or other compatible peripherals
- Allows the 4100U Fire Control Panel system time to be synchronized with the building master time or other desired compatible time reference

Master Clock Interface compatibility:

- Connects to master time controls that provide Simplex BCD (binary coded decimal) time signals using the BCD Code Converter. Refer to data sheet S6400-0002.
- Directly interfaces to the WWV/WWVH Clock/Receiver Interface. Refer to data sheet S6800-0001.
- Compatible with other RS-232 interfaces that accept and respond to query time and query date requests.
- Motherboard/daughter card format requires a single slot and mounts in an expansion bay.

Description

Simplex fire alarm control panels maintain time and date for reference in the history logs. For applications where a master time control exists in the facility, the 4100-9816 Master Clock Interface Module provides an interface for coordinating the fire alarm control panel time to that of the master reference. Additional compatibility includes the ability to directly connect to time standard broadcasts from radio station WWV or WWVH using the 6800-9501 Clock/Receiver Interface with antenna.

XA Loop Interface to 4100U Fire Alarm Control Panel

Features

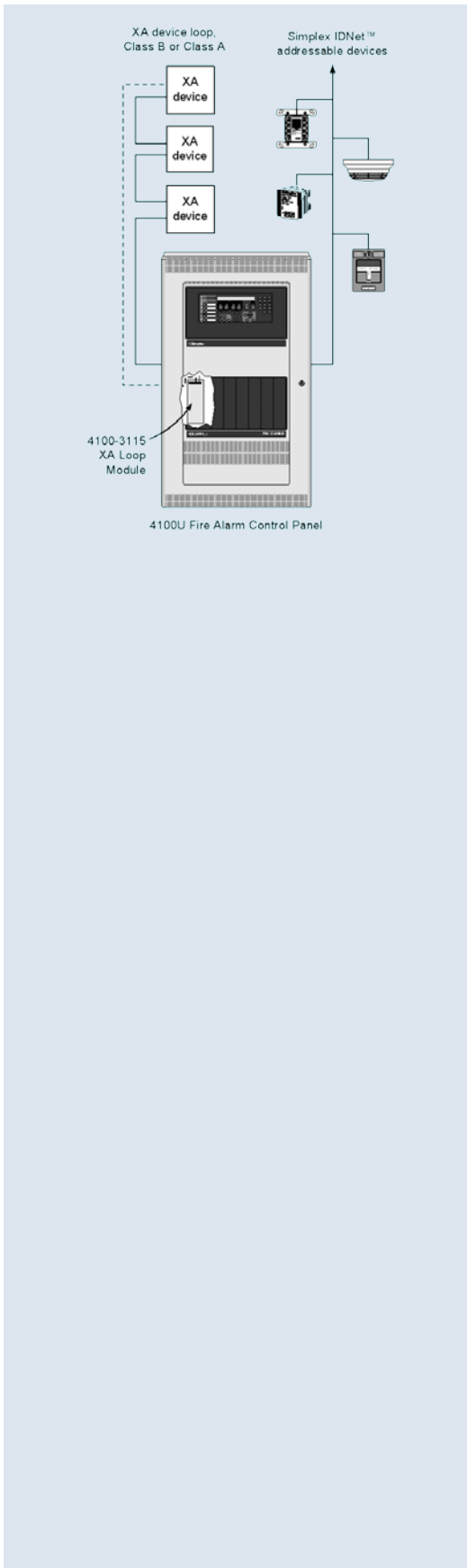
- Allows the Simplex 4100U to operate as either an XA Loop Master Panel or an XA Loop Data Gathering Panel

When operating as an XA Loop Master Panel:

- Connects to up to 255 input devices and up to 255 output devices on a single XA loop to monitor, supervise, and control
- Monitoring status includes Normal, Trouble, or Alarm
- XA loop devices can be 4-wire if command output

Description

System Flexibility. When a fire alarm system using existing XA loop devices requires expansion, use of the 4100-3115 XA Loop Interface Module allows the expansion to include the capabilities of the 4100U fire alarm



functions are used, or 3-wire if used for monitoring only

- XA loop devices appear to the 4100U similar to ID Net™ addressable devices including custom labels with up to 40 characters

When operating as an XA Loop Data Gathering Panel:

- Communicates status and receives control from the XA Loop's Auto call compatible Master Panel
- Control includes Acknowledge, Silence, Reset, and device level commands
- 4100U operates as a standalone fire alarm control panel for its connected devices and appliances
- 4100U panels equipped with Simplex Network communications can send XA loop device information to other network nodes

control panel. This module can allow the 4100U to be selected to function as either the XA loop master controller (head end) or as a Data Gathering Panel as an intelligent device on the XA loop reporting to a remote master controller.

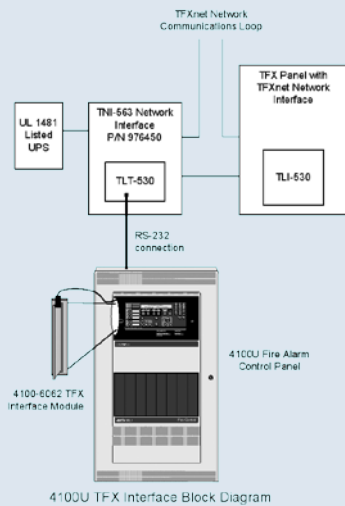
Multiple XA Loop Interface Modules can

be installed in the 4100U allowing a variety of system expansion situations to be satisfied. The 4100U accepts up to a total of 30 modules of this type, which also includes ID Net modules, MAPNET II® modules, and VESDA® modules.

On-Board LEDs are provided for service diagnostics to indicate XA loop status, internal 4100U communications status, and supervision status when functioning as a master controller for the XA loop.

TFX Loop Interface to 4100U Fire Alarm Control Panel

Features	Description
Allows the 4100U fire alarm control panel to exchange information with Auto call TFX networked fire alarm	When a fire alarm system using existing TFX Network fire alarm



4100U TFX Interface Block Diagram

control panels:

- Customized information mapping allows status data to be communicated between the 4100U fire alarm control panel and the TFX Network loop control panels
- With the 4100-6062 module, the 4100U operates as a TFX network peer-to-peer member node

Point information is mapped between the 4100U and the Auto call TFX on a point basis per the following:

- Alarm, Trouble, Supervisory, and Utility information up to a total of 1000 points
- Up to 61 total TFX Interface Modules can be on a single TFX network (only one per 4100U)

Interface information:

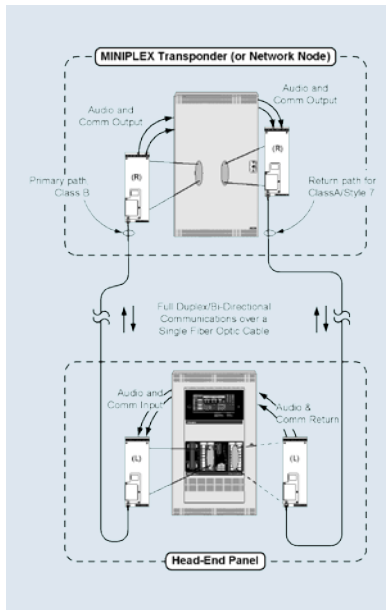
- Connections are made to an Auto call TLT-530 Network Interface Board in a TNI-563 Network Interface Enclosure
- Wiring uses a supplied harness with DB-25 connector for the 4100U connection and an RJ11 connector for the TLT-530 connection
- Backup power for the TNI-563 Network Interface is supplied by UPS, ordered separately
- UL Listed to Standard 864

control panels requires

expansion, use of the 4100-6062 TFX Interface Module allows the expansion to include the capabilities of the 4100U fire alarm control panel. This module allows the 4100U to be configured either as a peer-to-peer member node on the TFX net Network loop or, depending on total point requirements, to be the master control panel. When configured as the master control panel, the 4100U can provide Acknowledgement, Signal Silence, System Reset, and Fire Drill operations for the TFX Network.

TFX Network point groupings and general information is formatted differently from the 4100U. With the TFX Interface Module, events are mapped via programming a table of 4100U-to-TFX point status associations. Point statuses may be sent to the TFX Network from the 4100U, or to the 4100U from the TFX Network. Point statuses from the TFX network are mapped to 4100U pseudo points. 4100U custom control equations can reference these pseudo points and perform various functions. The TFX Interface Module is a unique card type whose function consumes one computer port protocol resource.

Multiple Signal Fiber Optic Modems



Features

Converts multiple fire alarm communications signals into a single fiber optic link to:

- Multiplex audio signals (analog and/or digital) and digital communications into full-duplex transmission over a single fiber optic cable
- Improve noise rejection due to the inherent nature of fiber optic communications
- Communicate from a Fire Alarm Control Panel to a transponder, or provide network communications
- Provide network communication support for Ring, Hub and Star Topologies and their combinations, by performing the function of a physical bridge without slowing data rates

Laser optical transmitters provide:

- Increased transmission distances compared to copper wiring
- Compatibility with both single and multi-mode fiber

Enhanced Analog Audio (EAA) feature:

- Provides a decoded analog audio signal at the receiving modem for local use; and also provides the original digitally encoded signal for connection to the next modem in the communications link
- With EEA, total system distance is essentially unlimited

Communication combinations include:

- Digital Audio Riser and Analog Audio Riser #2 and Network Communications
- Digital Audio Rise and Analog Audio Riser#2 and RUI Communications
- Both Analog Audio Risers and Network Communications

Description

The 4100U fiber optic modems combine multiple system communications signals and converts them to fiber optic communications for transmission via a single, full duplex fiber optic cable connection that simplifies field wiring and increases transmission distances.

Communications can be sent individually or combined.

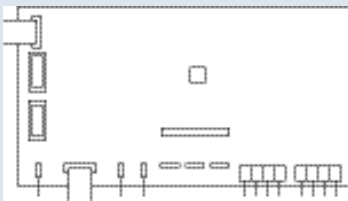
Fiber optic communications are accomplished by transmitting and receiving over two different light wavelengths. In order to complete a fiber optic link, complementary receive/transmit modem pairs are required.

Each modem has field wiring connections for the Digital Audio Riser,

- Both Analog Audio Risers and RUI Communications
- Panel mounted standard two-slot module for 4100U Fire Alarm Control Panel or 4100U MINIPLEX® Transponder mounting
- A separate mounting plate is available for 4100/4120 panel mount or utility cabinet mounting
- Fiber modem remote cabinet mounting is compatible with Simplex® control panel model Series 4010, 4100, 4120, and 4190 series IMS or GCC; and RUI compatible equipment
- Optional audio expansion modules provide an interface to 25 VRMS and 70.7 VRMS audio levels from 4100/4120 fire alarm control panels

Analog Audio Risers, RUI, and Network communications. Configurations are determined by on-board switch and jumper selections. Modem operation is essentially transparent to the connected equipment. Fiber modems are entered into the system programmer for current calculations and mounting allocations.

Serial Digital Alarm Communicating Transmitter (SDACT)

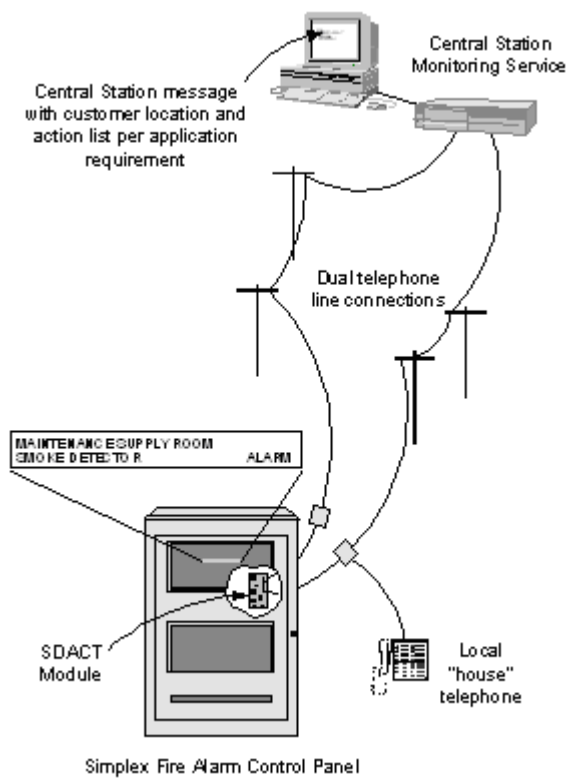


Features

- UL 864 listed per NFPA 72 for Central Station Service
 - Listed to UL 1459
 - Registered to FCC part 68
- Dual-telephone line interface
- Mounts internally to Simplex 4100U Fire Alarm Control Panels
- Provides specific, per point information:
 - Communicates point status changes, phone line status, and other off-normal information
 - Reports up to ten events per phone call
- Provides programmable:
 - Automatic 24-hour test
 - Power fail report delay
- SDACT status indicators:
 - Panel LCD indicates off-normal status
 - Module LEDs provide service diagnostics
- Operates with Simplex Expanded Interface Software, version 8

Description

The Simplex Serial Digital Alarm Communicating Transmitter (SDACT) monitors the status of the host fire alarm control panel and its connections to the Central Station monitoring location. When status changes require information to be reported, the SDACT can provide a per point message that can assist the Central Station in more accurately implementing the required response. Typical information reports would include alarms, troubles,



SDACT Application Diagram

and supervisory conditions with specific point identification.

The SDACT module directly communicates with the fire alarm control panel CPU and is custom programmed for the specific requirements of the Central Station and the connected fire alarm control panel.

Available Reporting Formats

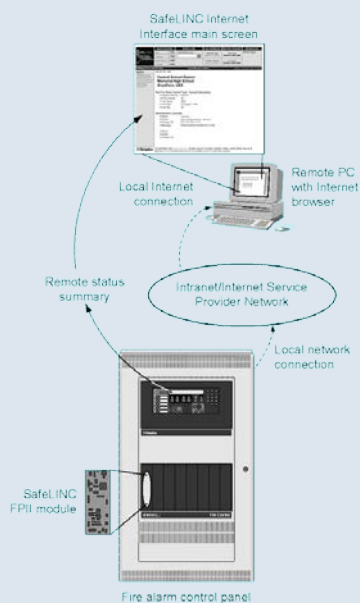
Contact ID (CID). CID is the preferred format for SDACT operation. It provides a four-digit account code followed by a three digit event code, a two digit (hex) group number, and a three digit (hex) contact number -- all of which are used to encode specific point identification.

3/1 Pulse. A three-digit account code followed by a one digit reporting code. Transmissions are sent as a double round at a rate of 20 PPS (pulses per second). Reporting codes are programmable.

4/2 Pulse. Similar to 3/1 except for a four-digit account code and a two-digit reporting code. Transmission is sent as a double round at 20 PPS. Report codes are programmable.

BFSK. Three digits of account code and two

SafeLINC Fire Panel Internet Interface



Data Sheet: **S4100-0028**

Product Series: 4100

Features

SafeLINC Fire Panel Internet Interface (FPII) enables investigation of fire alarm control panel status using the familiar interface of an Internet browser:

- Provides single user access for up to 20 different user accounts (access is one-at-a-time)
- Compatible with Internet Explorer (version 5.0 or higher)
- Intuitive menu screens
- UL Listed to Standard 864

Automatic or scheduled e-mail feature provides selectable notification to user accounts:

- Built-in e-mail feature will notify user accounts of individually selected status changes either automatically or as scheduled
- Compatible pagers, cell phones, or Personal Digital Assistants can receive direct e-mail messages or messages forwarded from a user account
- Compatible with fire alarm control panel model series 4100, 4120, and 4020
- Alarm, Priority 2 Alarm, Supervisory, and Trouble counts and status messages

Features

- Detailed point information accessible similar to that available at the panel
- True Alarm® sensor status including both status reports and service reports
- Alarm and Trouble log information

Description

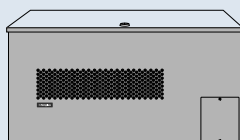
Simplex® fire alarm control panels monitor their connected devices and gather system information to describe the status of the protected buildings. This information is available at the panel and via accessory devices such as remote terminals or dial-in modems, all requiring special equipment connections.

The SafeLINC Internet interface provides an alternative access to system information using the familiar interface of a standard Internet browser. A remotely located fire professional can use

this access to analyze control panel status during non-alarm conditions and can also use this information to assist local fire responders during alarm conditions.

(NOTE: Secure access requires proper installation behind network firewalls consistent with local network security requirements.)

4100U External Battery Cabinet with Charger



Battery Cabinet

Features

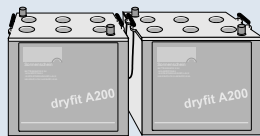
- Remote battery cabinet with charger for use with Simplex model 4100U addressable fire alarm control panels
- For mounting and charging of batteries up to 110 Ah (batteries are ordered separately)
- Enclosure is a surface-mounted red cabinet that mounts close-nipped to the 4100U control panel cabinet (within 20 ft [6 m] and connected with conduit)
- Models are available for operation at 120 VAC or 220/230/240 VAC
- Charger provides dual-rate operation with temperature compensation and dynamic battery testing to detect low voltage or missing battery

features (continued)

- Battery voltage, charger voltage/current, and charger status are all communicated to the control panel and available for display
- Earth fault detection and depleted battery cutout are selectable (depleted battery cutout is required for ULC listing)
- UL listed to std. 864

Description

Simplex 4100 fire alarm control panels accept batteries of up to 50 Ah

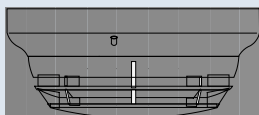


Compatible Batteries (ordered separately)

mounted within their enclosures. For system applications requiring battery backup greater than 50 Ah, these battery cabinets with battery charger can accommodate up to 110 Ah batteries.

Initiating and Control Devices – Addressable

TrueAlarm® Analog Sensors



Sensor Mounted in Base

Features

- True Alarm® analog sensing provides digital transmission of analog sensor values via MAPNET II® or ID Net™ two-wire communications
- Fire alarm control panel provides:
 - Individual sensitivity selection for each sensor
 - Sensitivity monitoring that satisfies NFPA 72 sensitivity testing requirements
 - Peak value logging for accurate analysis of sensitivity selection
 - Automatic, once-per-minute individual sensor calibration check that verifies sensor integrity
 - Automatic environmental compensation
 - Display of sensitivity directly in percent per foot
 - Multi-stage alarm operation

True Alarm Sensor Bases:

Sensor Base Features

- Base-mounted address selection
- Address remains with its programmed location
- Accessible from front of unit (dipswitch under sensor)
- Automatic identification provides default sensitivity when substituting sensor types
- Also available with wired connections for remote LED alarm indicator or relay, or with supervised relay driver output (relay operation is programmable and can be manually operated from control panel)

- Ability to display and print detailed sensor information in plain English language
- For use with:
 - 4010, 4100, 4100U, and 4120-series control panels
 - Universal Transponders and 2120 True Alarm CDTs equipped for MAPNET II operation

• **Options**

- Remote alarm LED indicator
- Output relays

Photoelectric smoke sensors

- Seven levels of sensitivity from 0.2% to 3.7%

Ionization smoke sensors

- Three levels of sensitivity: 0.5%, 0.9% and 1.3%

Heat sensors

- Fixed-temperature sensing
- Rate-of-rise temperature sensing
- Utility-temperature sensing for monitoring of ambient temperature by the fire panel

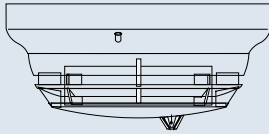
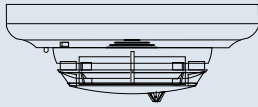
Sounder Base Features

- Piezoelectric sounder provides high output (88 dBA) with low current requirements (20mA)
- Sounder operation can be:
 - Powered from 24 VDC or from a compatible Notification Appliance Circuit (NAC)
 - Synchronized via communications or by the NAC, if NAC-powered
 - Manually activated from the control panel
- Sounder operation listed to UL standard 464 as an audible notification appliance

Isolator Base Features

- Isolator base for True Alarm® analog sensors using ID Net addressable communications
- Short Circuit Isolation: An internal isolation relay allows a compatible fire alarm control panel to separate shorted communications wiring from

TrueAlarm® Multi-Sensor



Features

- True Alarm photoelectric sensing *and* True Alarm thermal sensing combined in one housing
- True Alarm photoelectric technology monitors for smoke activity
- True Alarm thermal sensing monitors for fixed and rate-of-rise temperatures, selected or combined as required per sensor
- Connections for remote LED or LED tracking relay for remote alarm status indication
- Built-in magnetic test feature alarms both addresses when activated
 - A second model also includes:
 - Built-in piezoelectric sounder with high output (88 dBA) and low current requirements (20 mA)
 - Sounder power from 24 VDC or a compatible Notification Appliance Circuit (NAC)
 - The ability to independently activate sounder operation from the host control panel
 - The ability to synchronize sounder output via communications or by the NAC, if NAC-powered
 - UL listed to std. 464 as an audible notification appliance

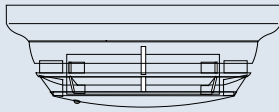
Description

The True Alarm multi-sensor combines the established performances of a True Alarm photoelectric smoke sensor with a fast-acting and accurate True Alarm thermal sensor to provide both features in a single sensor/base assembly.

Flexibility in the 4100U programming makes it possible to enable either the heat or smoke sensor only. This feature allows the heat element to remain active during construction, for instance, when there is a heavy concentration of dust. The smoke element could be activated only after the building is completed and occupied. Dual-stage operation where the smoke element is pre-alert and the heat element is used for general alarm is also possible.

Base-mounted address selection allows the addresses of the multi-sensor base to remain with its programmed location when the sensor is removed for service.

QuickConnect2, TrueAlarm® Analog Photoelectric Sensor



Sensor Mounted in Base

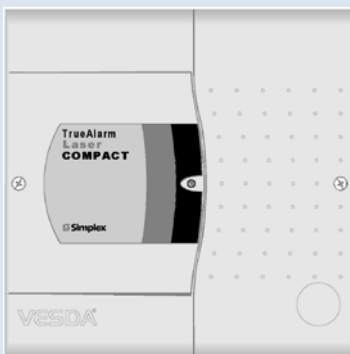
Features

- For use with Simplex model 4010 Addressable Fire Alarm Control Panel
- Smoke sensitivity that is accurately maintained at a selected level of 2.5, 3.0, or 3.7%/ft obscuration
- Sensitivity monitoring that satisfies NFPA 72 sensitivity testing requirements
- Automatic environmental compensation
- Automatic, once-per-minute individual sensor calibration check to verify sensor integrity
- Ability to display and print detailed sensor information in plain English language
- Tracking of excessive dirt accumulation
- Compatible base (ordered separately) provides stationary wiring terminals and quick snap-in sensor connections

Description

For applications that only require basic True Alarm features, the 4010 supports the QuickConnect2 sensor to provide addressable analog sensing in a compact and cost-effective package.

TrueAlarm LaserCOMPACT



VLC-600 TrueAlarm LaserCOMPACT

Features

Model VLC-600 addressable, analog output air aspiration smoke sensor provides:

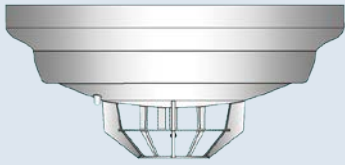
- VESDA® Laser COMPACT operation communicating with the established True Alarm analog sensing process for area coverage up to 5000 ft² (500 m²)

Description

The Model VLC-600 True Alarm Laser COMPACT smoke detector uses the latest in VESDA sampling technology including a highly efficient laser light source and a dual stage dust filter. The True Alarm Laser

- Obscuration measurements communicated to the fire alarm control panel for status determination
 - Three threshold levels are programmable from the fire alarm control panel
 - Panel selected sensitivity from 0.016%/ft to 4.08%/ft
 - Single LED indicates local status information
 - Capability of driving a remote LED (ordered separately)
 - Compatible with Simplex® 4100/4120/4100U fire alarm control panels
 - Communicates via either MAPNET II or 4100U ID Net addressable formats
 - Connects to the same SLC (signaling line circuit) with other devices such as addressable manual stations, True Alarm area smoke sensors, addressable control modules, etc.
 - Communicates as a single device; connection is direct to the SLC without requiring a dedicated interface.
- COMPACT sensor communicates smoke chamber information to the connected fire alarm control panel. The panel evaluates the smoke sensor information against three programmed thresholds and declares an alarm or pre-alarm condition depending on smoke chamber activity.
- In addition to smoke chamber information, the True Alarm Laser COMPACT also advises the fire alarm control panel of local trouble conditions. Troubles may include dirty filter, airflow restriction or failure, etc. Specific details are stored in memory at the sensor location.

E-Series Electronic Heat Detectors



Features

- Accurate and reliable heat detection for protection of property
- UL listed to Standard 521 as a rate compensated heat detector

Fixed temperature operation is suitable for most applications:

- Thermistor based design is inherently rate compensated due to minimal thermal lag
- Available for 135° F (57° C) or 200° F (93° C)
- UL spacing distance is 70 ft (21.3 m)

Available with rate-of-rise temperature detection:

- Dual thermistor rate-of-rise operation
- For use where anticipated ambient temperature changes are less than 6° F/minute (3.33° C/minute)

E-Series provides:

- Epoxy encapsulated electronic detector design with gold plated contacts, high humidity thermistor, and stainless steel screws
- Easily tested, self-restoring operation with repeatable accuracy
- Alarm indicating LED located on detector
- Current limited alarm that is compatible with two wire initiating device circuits (IDCs)
- Operational remote alarm indicating LED

Description

Simplex® electronic heat detectors use a fast response, thermistor based design to provide temperature sensing that quickly, accurately, and consistently identifies when fixed temperatures are exceeded. The fixed temperature sensing thermistor readily tracks the local ambient temperature. Rate-of-rise detection is determined by comparing two thermistor responses. By combining accurate thermistors with proper physical placement, this patented rate-of-rise detection design achieves a high level of performance not normally available with mechanical detection.

E-Series electronic heat detectors are similar to standard Simplex indoor electronic heat detectors but are equipped with gold plated contacts, a high humidity thermistor, and stainless steel screws.

The heat detector LED turns ON continuously when in alarm. During normal conditions the LED is OFF.



Base Options:

- Bases for 2-wire or 4-wire operation
- Auxiliary relay output
- Remote alarm indicating LED output

E-Series Analog Heat Sensor and Bases for High Humidity



Heat Sensor Mounted in Sounder Base



Heat Sensor Mounted in Standard Base

Data Sheet: **S4098-0038**

Product Series: 4098

Features

E-Series heat sensors provide analog thermal information to the sensor base and feature:

- Epoxy encapsulated electronic thermal sensor design with gold plated contacts, high humidity thermistor, and stainless steel screws
- A fast response thermistor that is inherently rate compensated

E-Series sensor bases features:

- Digital transmission of analog sensor values via MAPNETII® or ID Net™, two-wire communications
- Base mounted address remains with its location
- Integral red LED for power-on (pulsing) or alarm or trouble (steady on)
- Locking anti-tamper design mounts on standard box
- Magnetically operated functional test

Fire Alarm Control Panel provides:

- Fixed temperature sensing, rate-of-rise temperature sensing, or both
- Utility temperature sensing
- Automatic, once per minute individual sensor calibration check that verifies sensor integrity
- Ability to display and print detailed sensor information in plain English language

For use with the following Simplex Fire

Description

Heat Sensors are self-restoring and provide rate compensated, fixed temperature sensing, selectable with or without rate-of-rise temperature sensing. Due to its small thermal mass, the sensor's thermistor accurately and quickly measures the local temperature for analysis at the fire alarm control panel.

Sensor bases contain integral addressable electronics that monitor analog information from the detachable heat sensor. Each sensor's information is digitized and transmitted to the system fire alarm control panel approximately every four seconds using Simplex addressable communications. The panel processes the information to evaluate for pre-selected alarm levels or other off-normal conditions.

Each sensor base's LED pulses to indicate communications with the panel. If the control panel determines that a sensor is in alarm or has some other type of trouble, the details are announced at the control panel and that sensor base's LED will be turned on steadily.

Alarm Control Panels:

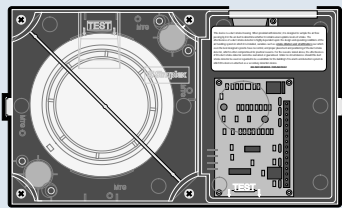
- Model series 4010, 4020, 4100, 4100U, and 4120
- Universal Transponders and 2120 CDT's equipped for MAPNET II operation

During a system alarm, the control panel will control the LEDs such that an LED indicating trouble will return to pulsing to help identify the alarmed sensors.

UL Listed to Standard 521 for:

- 60 ft (18.3 m) spacing for 135° F (57.2° C) alarm
- 40 ft (12.2 m) spacing for 155° F (68 ° C) alarm
- Sounder operation is also listed to UL Standard 464 as an audible notification appliance

Duct Sensor Housing with TrueAlarm® Photoelectric Sensors



Duct Sensor Housing, Front View

Features

- Includes factory-installed True Alarm photoelectric smoke detector
- Mounts to rectangular ducts or round ducts (minimum size 8" (203 mm) square or 18" (305 mm) diameter)
- Magnetic test feature for alarm initiation at housing
- Programmable sensitivity, consistent accuracy, environmental compensation, status testing, and monitoring of sensor dirt accumulation
- Available in two models:
 - Basic duct sensor housing (no relay output) powered by MAPNET II/IDNET communications
 - Duct sensor housing with supervised output for multiple remote relays. This model requires separate 24 VDC. Relay

Description

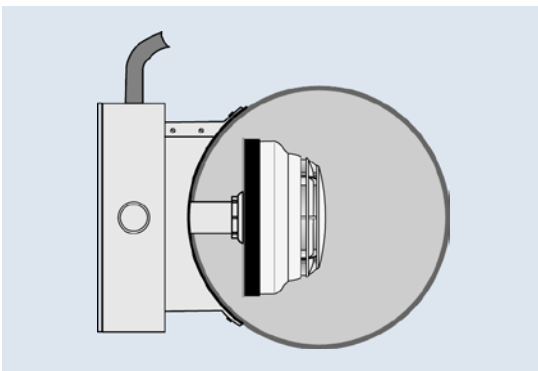
Simplex compact air duct smoke sensor housings provide True Alarm operation for the detection of smoke in air conditioning or ventilating ducts. They contain a factory installed True Alarm Photoelectric Smoke Sensor and are outfitted with a clear cover. Sampling tubes are installed into the duct to allow air to be directed to the smoke sensor mounted in the housing.

output is under panel control. At the panel, relay output can be activated manually or in response to a separate alarm or other input.

Options

- Remote test station
- Remote LED alarm indicators
- Relays
- Weatherproof enclosure

In-Duct Housing for Photoelectric Sensors



Features

- Allows True Alarm Analog Photoelectric Sensors to be installed directly inside air ducts
- Accommodates airflow down to 35 fpm, providing HVAC duct smoke sensing where sampling tube designs are not appropriate
- For applications with controlled dust and humidity
- For rectangular ducts from 6" (152.4 mm) square to 36" (914.4 mm) square
- For round ducts of 6" (152.4 mm) or 8" (203.2 mm) in diameter (requires optional adapter)
- Red alarm LED indicator visible through transparent housing cover
- Available with two-wire operation or a local relay

Options

- Adapters for 6" (152.4 mm) or 8" (203.2 mm) round ducts
- Remote test station
- Remote LED alarm indicator

Description

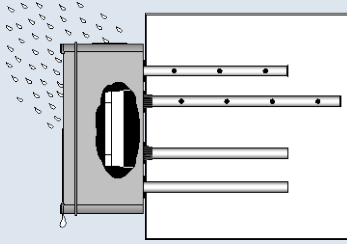
For applications where sampling tube-type duct detection is not appropriate due to low air velocity or small duct size, these housings can be used to install True Alarm analog sensors directly into the duct airflow.

True Alarm Operation.

Placing a sensor in an air duct provides the high reliability performance of True Alarm analog sensing featuring: programmable sensitivity, consistent accuracy, environmental compensation, status testing, and monitoring of sensor dirt accumulation.

Relay Model. A model is available that provides a relay that can be programmed to track the local sensor's operation or can be independently controlled by the fire alarm control panel to perform fire response actions.

Weatherproof Duct Housing



Weatherproof Duct Housing, Side View

Features

- Circulation of conditioned air from the air duct helps maintain the sensor housing at its rated temperature range
- Nonmetallic material does not require painting
- Captive cover screws
- Intake and exhaust tubes for weatherproof duct housing enclosure are supplied
- UL listed to std. 268A
- NEMA 4X rating

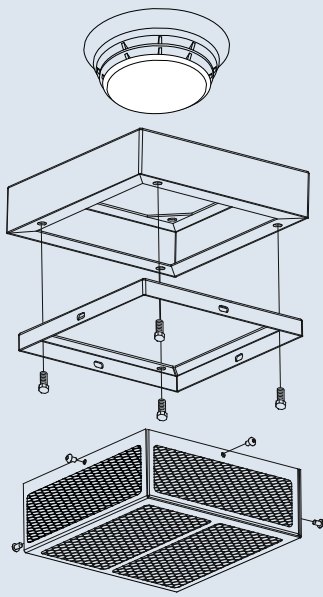
Description

Smoke detection system designs that require smoke detection monitoring of an HVAC duct that is exposed to environmental extremes must provide protection against the anticipated temperatures and total weather conditions. The Weatherproof Duct Housing Enclosure provides for the circulation of conditioned air around the internally-mounted addressable duct sensor housing to maintain the sensor housing at its rated temperature range and provide protection from ambient environmental extremes.

For use with the following True Alarm Addressable Duct Sensor Housings (ordered separately):

- Standard Duct Sensor Housing
- Duct Sensor Housing with Relay Output

Vandal Guard for Photoelectric Sensors



Shown with Optional Surface-Mount Extension

Features

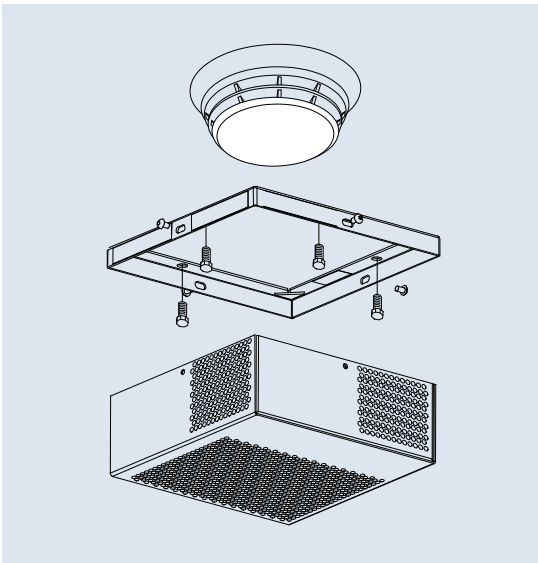
- For use with the Simplex True Alarm Photoelectric Sensor and compatible base (ordered separately)
- Combines accurate, individually addressable analog smoke sensing with physical protection
- True Alarm analog sensing provides compensation for air flow restriction by providing maintained high sensitivity
- Selectable from 0.5 to 1.5%/ft at the fire alarm control panel
- For ceiling or wall-mounted sensor applications
- Tamper-resistant design:
 - Heavy-duty steel construction
 - Tamper-resistant grill mounting screws
 - Mounting options:
 - Standard mounting option for use with a flush-mounted electrical boxes
 - Requires an extension box for mounting to a surface-mounted electrical box
 - UL listed to std. 268 (URRQ)

Description

The Sensor Vandal Guard combines the sensitivity and maintained accuracy of the Simplex True Alarm Photoelectric Sensor with a rugged, tamper-resistant enclosure. Typical applications are: correctional/detention facilities, mental health facilities, industrial areas, educational facilities, dormitories, and many other locations where the smoke sensor may be intentionally or accidentally subjected to abuse.

With the guard, the sensor can be located directly in the ceiling of a detention cell or similar area and can provide accurate and quick sensing of smoke conditions. Additionally, after removing the tamper-resistant hardware, the sensor is readily accessible for cleaning when the True Alarm system automatically identifies the need for maintenance.

Guard for Ceiling-Mounted Photoelectric Sensors



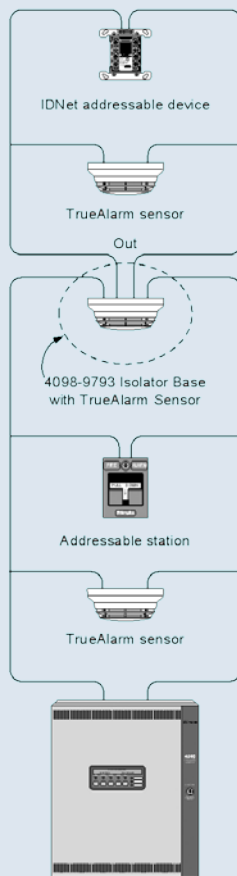
Features

- Combines accurate, individually addressable analog smoke sensing with physical protection
- True Alarm analog sensing provides compensation for air flow restriction by providing maintained high sensitivity selectable from 0.5 to 1.5%/ft at the fire alarm control panel
- Tamper-resistant design
 - Heavy-duty steel construction
 - Tamper-resistant grill mounting screws
 - Low-profile design
 - UL listed to std. 268 (URRQ)
 - For ceiling-mounted sensor applications only

Description

The Sensor Guard combines the sensitivity and maintained accuracy of the Simplex True Alarm Photoelectric Sensor with a rugged, tamper-resistant enclosure. Typical applications are: correctional/detention facilities, mental hospitals, industrial areas, educational facilities, dormitories, and many other locations where the smoke sensor may be intentionally or accidentally subjected to abuse.

With the guard, the sensor can be located directly in the ceiling of a detention cell or similar area and can provide accurate and quick sensing of smoke conditions. Additionally, after removing the tamper-resistant hardware, the sensor is readily accessible for cleaning when the True Alarm system automatically identifies the need for maintenance.



Features

- Isolator base for True Alarm® analog sensors using ID Net addressable communications
- Compatible with Simplex® fire alarm control panel models 4010 and 4100U
- Input is automatically separated from output when an output communications short circuit occurs
- Built-in control panel diagnostics can activate individual isolators to assist in locating earth fault conditions
- Isolator base is compatible with:
 - Photoelectric sensor model
 - Heat sensor model
 - Multi-sensor model
 - Ionization sensor model
- For Class B (Style 4) or Class A (Style 6) wiring, communications are received from either input or output allowing bases with Class A wiring to isolate short circuits while still operating their sensors
- Can be installed up to 250 total, allowing isolation directly to the device level
- Base mounted LED indicates sensor status
- UL listed to Standard 268

Description

The ID Net Communications Isolator Base provides Simplex True Alarm analog sensor operation and also provides ID Net communications isolation to improve installation convenience and increase system integrity. Isolation is automatically activated at the base when an output short circuit is detected and isolation can also be selected per base manually from the control panel to assist with troubleshooting wiring problems.

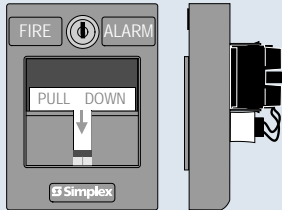
Isolator bases power-up in isolation mode and are directed to connect by the control panel. If the output wiring is acceptable, the isolator base will connect to the rest of the circuit. If the output wiring is shorted, the isolator remains isolated.

The isolator reports back to the panel when it is in isolator mode and the extent of shorted wiring is reported back to the panel by identifying device addresses that are not communicating.

During installation, earth faults often occur and finding these faults normally requires extensive wiring disconnection. With the isolator base, wiring

suspected to have earth faults can be isolated to assist in their discovery and repair.

Manual Stations



Addressable Manual Station, Front and Side View

Features

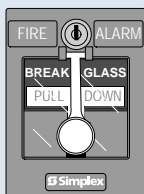
- Power and data supplied via MAPNET II or ID Net addressable communications using a single wire pair
- Operation that complies with ADA requirements
- Pull lever that protrudes when alarmed
- Break rod is supplied (use is optional)
- Models are available with single or double action (break glass or push) operation
- Optional institutional cover kit (ordered separately) shown below

Description

The Simplex Addressable Station combines the familiar Simplex Manual Station housing with a compact communication module that is easily installed to satisfy demanding applications. Its integral individual addressable module (IAM) constantly monitors status and communicates changes to the connected control panel via MAPNET II or ID Net communications wiring.



Institutional Cover Kit

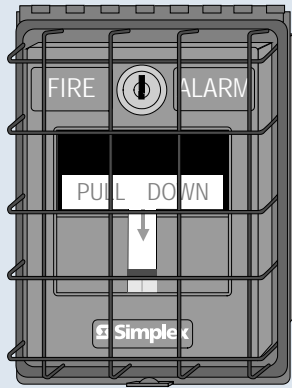


Breakglass



Push

Non-Coded Manual Station Wire Guard



(manual station and mounting box not included)

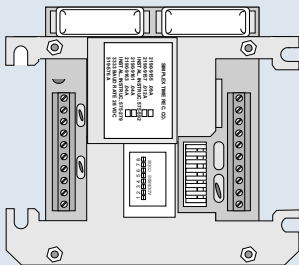
Features

- Compatible with ID Net™ addressable and conventional manual stations

Description

The wire guard protects manual stations from damage due to accidental contact while providing easy access when actual alarm conditions occur. Retention of the guard in the closed position is provided by a protrusion of the guard-mounting bracket. Simply lifting up from the bottom allows the guard to pivot on its top-mounted hinge and provides access to the station activation handle.

MAPNET II® Monitor Zone Adapter Modules (ZAMs)



Features

- Provides addressable interface to conventional zoned circuits
- MAPNET II communications

Description

Monitor ZAMs are used when the fire detecting devices or supervisory switches are mounted separately from the addressable electronics. It

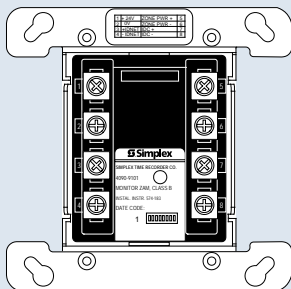
provides status monitoring and supervision to the device circuit zone and is used for circuits with non-addressable detectors and for other contact closures such as water flow and tamper switches or non-addressable manual stations.

Monitor ZAM models are available for monitoring as:

- Style B (Class B)
- Style D (Class A)

Style B with separate detector power output (4-wire detector operation)

Zone Adapter Modules (ZAMs)



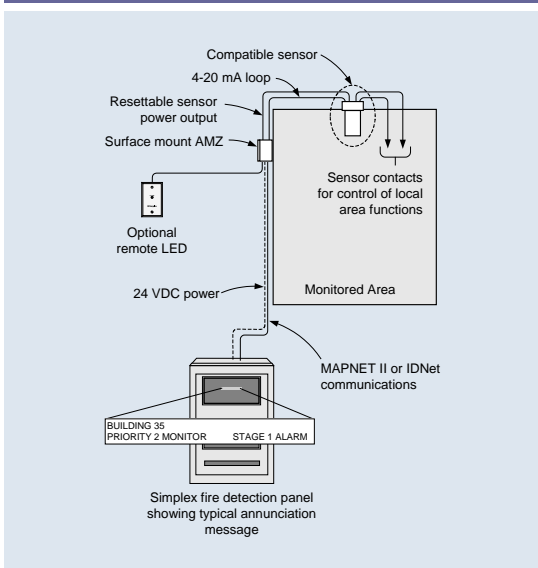
Features

- These MAPNET II or ID Net communications-compatible Monitor ZAMs provide an addressable interface to a conventional initiating device circuit (IDC)
- Class B (Style B) monitoring for two-wire or four-wire initiating devices, with power reset connections for four-wire devices
- Class A (Style D) monitoring for two-wire initiating devices
- Visible LED flashes to indicate communications
- Optional covers to allow LED to be viewed after installation

Description

MAPNET II/ID Net ZAMs allow a single addressable point to monitor a conventional initiating device circuit (IDC) populated with two-wire or four-wire initiating devices.

4-20 mA Analog Monitor Zone Adapter Module (AMZs)



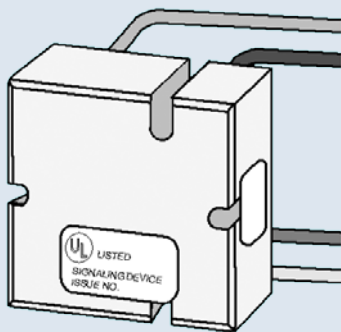
Features

- Monitors compatible 4-20 mA output sensors
- Interfaces linear analog sensor data to Simplex® fire panel models 4100/4100U/4120
- Fire detection panel monitoring and annunciation:
 - Provides up to three threshold levels, each with custom action message
 - Displays and archives actual sensor analog levels
 - Allows sensor calibration date recording
 - Automatic and manual AMZ self-test
 - On-board manual test switch provides Simplex® WALKTEST™ system test feature
 - Resettable sensor power output
 - Supervised sensor trouble input
 - Local LED alarm annunciator output

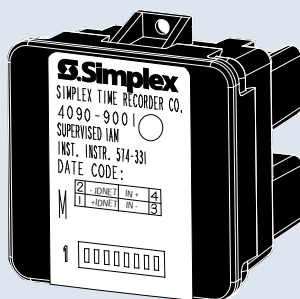
Description

Simplex® 4-20 mA Analog Monitor ZAMs (AMZs) provide an accurate, multi-featured interface for connecting analog sensors to Simplex® addressable fire detection panels. The panel monitors the sensor and annunciates whenever a selected threshold level or trouble condition is observed. Typical applications include: air quality for demand control ventilation, air and liquid temperature, humidity, air velocity, and toxic gas monitoring.

Individual Addressable Module (IAM)



4090-9051 Supervised IAM



4090-9001 Supervised IAM

Features

- MAPNET II or IDNet addressable communications supply both data and power over a single wire pair
- Supervised Class B monitoring of normally open, dry contacts
- Total wiring distance from IAM to supervision resistor(s) of up to 500 ft. (152 m)
- Monitored connection is compatible with Simplex Overvoltage Protectors for outdoor or electrically noisy applications
- Visible LED flashes to indicate communications
- Optional covers to allow LED to be viewed after installation
- Provides current limited monitoring (for use with ID Net communications) to monitor tamper switch (trouble) and water flow switch (alarm) on same circuit using one point
- Multiple operation modes are selectable at the control panel:
 - Contact closure status can be tracked
 - Momentary contact closure conditions can be latched

Description

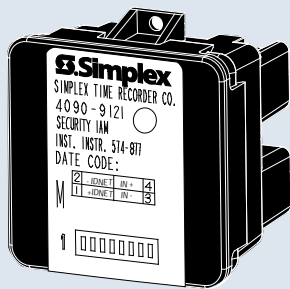
The individual addressable module (IAM) provides location-specific addressability to a single initiating device or multiple devices at the same location by monitoring normally open dry contacts and the wiring to an end-of-line resistor.

Selections can be made at the control panel to maintain the alarm condition if the initiating device contacts are momentary or to track the device contact status.

Current-Limited Operation

Applications. For use with ID Net communications only, the IAM can sense normal, open circuit, short circuit, and current-limited conditions. With the proper end-of-line and current-limiting resistors, dual functions such as tamper switch and water flow switch monitoring can be determined and communicated by a single addressable point.

Security Monitor Individual Addressable Module (IAM)



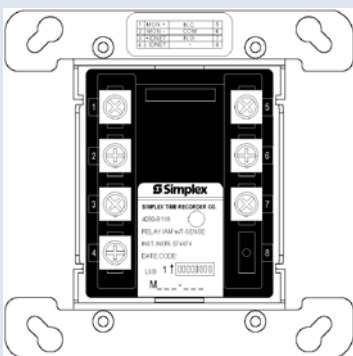
Features

- For use with Simplex 4100U Fire Alarm Control Panels providing ID Net™ communications
- Supervised Class B monitoring of normally closed or normally open, dry contact security devices
- Monitored conditions are open, normal, abnormal, and short
- Abnormal occurs with $\pm 50\%$ of monitor loop current change
- Total wiring distance from Security IAM to supervised contacts up to 500 ft (152 m)
- Visible LED flashes to indicate communications and stays on steady to indicate an abnormal condition
- Optional covers to allow LED to be viewed after installation

Description

The Security Monitor IAM has both power and communications supplied by a two-wire, 4100U ID Net circuit. It provides location-specific addressability for up to five initiating devices (such as window or door magnet switch contacts or other similar security devices) by monitoring the circuit wiring connections to either normally closed or normally open dry contacts (one type per IAM).

Relay IAM with T-Sense Input



Features

- Dual point operation provides a supervised multi-state input and a relay output in a single package using only one address
- For use with Simplex® 4100U Fire Alarm Control Panels operating with software revision

Description

The 4090-9118 Relay IAM with T-Sense allows a Simplex 4100U ID Net communication channel to monitor two input contact closures with one point and control on output relay with the other point, both from

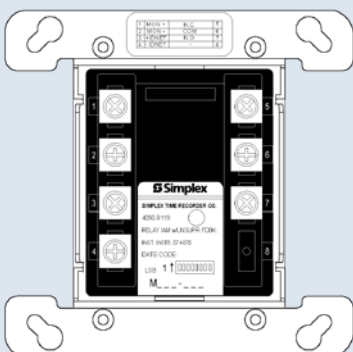
11 or higher and providing ID Net™ communications

- Input operation is "T-Sense" and provides supervised monitoring of normally open, dry contacts and can differentiate between a short circuit contact closure and a current limited contact closure
- Status conditions are Normal, Open Circuit, Current Limited, and Short. This operation allows differentiation between two different contact types due to their wiring location, and reporting as a single ID Net addressable point to a 4100U fire alarm control panel.
- Both data and power are provided by the ID Net communications link over a single wire pair
- Mounts in standard 4" square electrical box
- Visible LED flashes to indicate communications
- Optional covers are available to allow LED to be viewed after installation

a compact module requiring a single address.

The input circuit and relay operation are controlled independently and may be disabled separately. At the 4100U host display, the device address is designated as a single hardware location. The individual points are considered "sub-points". For smoke control applications, this module provides an efficient package for fan damper control with position feedback. The monitor point can be connected to two separate status indicator switches allowing the host panel to track the fan damper status with respect to the requested fan control operation.

Relay IAM with Unsupervised Input



Features

- Dual point operation provides an unsupervised input and relay output in a single package using only one address
- For use with Simplex® 4100U Fire Alarm Control Panels

Description

The Relay IAM allows a Simplex 4100U ID Net communication channel to monitor an unsupervised input contact closure with one point and control an output relay

operating with software revision 11 or higher and providing ID Net™ communications

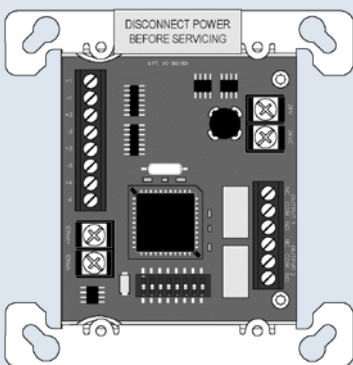
- Typical applications are for fan control with single unsupervised status feedback monitoring
- Input provides unsupervised monitoring of normally open, dry contacts
- Both data and power are provided by the ID Net communications link over a single wire pair
- Mounts in standard 4" square electrical box
- Visible LED flashes to indicate communications
- Optional covers are available to allow LED to be viewed after installation

with the other point, both from a compact module requiring a single address.

The input circuit and relay operation are controlled independently and may be disabled separately. At the 4100U host display, the device address is designated as a single hardware location. The individual points are considered "sub-points".

For smoke control applications, this module provides an efficient package for fan control with single status feedback. The monitor points provides feedback from a single set of supervised contacts (such as a sail switch or pressure switch) allowing the host panel to track the result of the requested relay control operation.

Six Point I/O Module with T-Sense Inputs and Relay Outputs



Features

- Six point operation provides four supervised multi-state inputs and two relay outputs in a single package using only one address.
- For use with Simplex® 4100U Fire Alarm Control Panels

Description

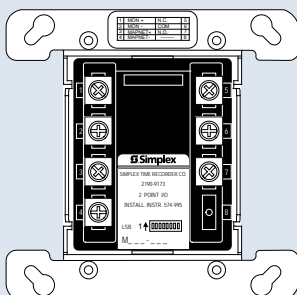
The Six Point Module allows a Simplex 4100U ID Net communication channel to monitor four T-Sense input circuits and control two output relays from a single compact

operating with software revision 11 or higher and providing ID Net™ communications

- Typical applications include fan motor control centers, monitoring fire pump motor running status, low pressure fuel warnings, and for multiple dual damper position feedback monitoring
- Four "T-Sense" inputs provide supervised monitoring of normally open, dry contacts and can differentiate between a short circuit contact closure and a current limited contact closure
- Status conditions are Normal, Open Circuit, Current Limited, and Short. This operations allows differentiation between two different contact types due to their wiring location, and reporting as a single ID Net addressable point to a 4100U fire alarm control panel
- Mounts in standard 4" square electrical box
- Visible LED flashes to indicate communications
- Optional covers are available to allow LED to be viewed after installation

module requiring a single address. Power is supplied by a 24VDC connection to a listed fire alarm power supply. The input circuits and output relay operation are controlled independently and may be disabled separately. At the 4100U host display, the device address is designated as a single hardware location. Each of the six individual points appear as "sub-points". For smoke control applications, this module provides an efficient package for fan damper control with position feedback. Monitor points can be connected to two separate status indicator switches per circuit, allowing the host panel to track fan damper status with respect to the requested fan control operation.

Two-Point I/O Module



Features

- MAPNET II addressable module providing a supervised input and a control relay output in one compact package
- For use with Simplex Fire Alarm

Description

The Two-Point I/O module allows a Simplex MAPNET II communication channel to monitor an input contact closure and control an output

Control Panels that provide MAPNET II addressable communications

- Supervised input point monitors status of normally open, dry contacts for normal, open, and contact closure
- Output control relay:

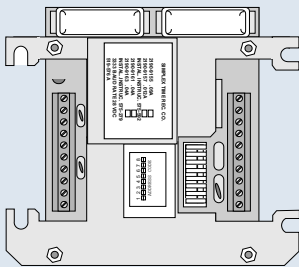
- Power-limited rating: 2A @ 30 VDC, resistive; 1A @ 30 VDC, inductive

- Non-power-limited rating: 1/2A @ 120 VAC, resistive; 1/4A @ 120 VAC, inductive

relay from a single compact module. Module power is supplied from the MAPNET II communications channel, eliminating the need for separate power wiring.

The input and output are independent, and operation is controlled by host panel programming.

MAPNET II® Signal and Control Zone Adapter Modules (ZAMs)



Features

- Provides addressable interface to conventional zoned circuits
- MAPNET II communications

Signal ZAM

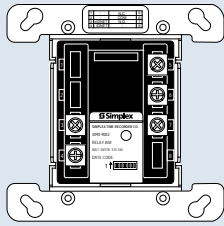
Signal ZAMs are used to supervise and operate 24 VDC notification appliances, speakers, and telephone circuits. Output capacity is up to 2 A @ 24 VDC (50 W of 25 VRMS speakers) or up to three simultaneously activated firefighter phones.

The signal ZAM is available for either Style Y/Class B or Style Z/Class A operation for notification appliance circuits.

Control ZAM

Control ZAMs are used to provide addressable control functions such as elevator capture, HVAC control, pressurization fan control, damper control, etc.

Relay Individual Addressable Module (IAM)



Features

- A single addressable point provides control and status tracking of a Form “C” contact
- Visible LED flashes to indicate communications
- Optional covers to allow LED to be viewed after installation

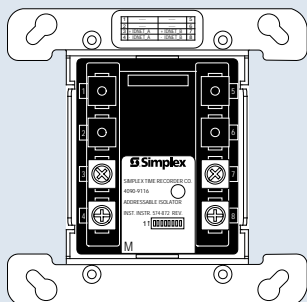
Description

ID Net Relay IAMs allow the Simplex 4010 Fire Alarm Control Panel to control a remotely located Form “C” contact using ID Net addressable communications for both data and module power.

Typical applications would be for switching local power for control functions such as elevator capture, or control of HVAC components, pressurization fans, dampers, etc.

Relay status is also communicated requiring only one device address.

IDNet™ Isolator



Features

- Dual-port, bi-directional communications isolator for use with 4100U-Series Fire Alarm Control Panel providing ID Net communications
- Either port can serve as an input or output; ports are automatically separated when a communications short circuit occurs
- Allows isolation activation from the 4100U control panel for system diagnostics

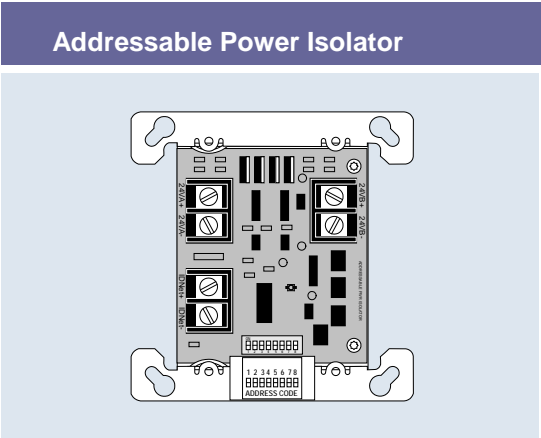
Description

The ID Net Communications Isolator provides communications isolation to improve installation convenience and increase system integrity.

An internal isolation relay allows a compatible fire alarm control panel to separate shorted communications wiring from functioning wiring to optimize the available sensors or other ID Net addressable

- Earth fault isolation reduces time to fix wiring problems:
 - Built-in control panel diagnostics assist in locating earth fault conditions — the most common installation wiring problem
- Class A-wired SLCs can optimize operation by maintaining communications with devices outside of the isolated wiring section

devices.
Earth faults on the ID Net communications lines can be quickly located to assist in their repair and to restore the system wiring to normal.



Addressable Power Isolator

Features

- Dual-port, bi-directional power isolator for use with 4100U-Series Fire Alarm Control Panels
- For use with fire alarm control panel system power, rated for up to 2 A @ 32 VDC
- Either port can serve as an input or output; ports are automatically separated when a power wiring short circuit occurs
- Allows isolation activation from the 4100U control panel for system diagnostics
- Built-in control panel diagnostics can activate the addressable power isolator to assist in locating earth fault conditions — the most common installation wiring problem
- Allows two isolators to be connected to produce Class A power wiring that can optimize operation by maintaining connection with devices outside of the isolated wiring section

Description

Under normal conditions, the Addressable Power Isolator provides continuity between ports. In the event of a short circuit, or if requested from the 4100U control panel, the isolator opens a two-pole electronic switch, providing isolation of both power circuit conductors. With the short-circuited section isolated, devices located outside of the isolated section remain powered. Isolator status is communicated to the control panel along with a location-specific address. With this information, short circuits can be more easily located. With the Addressable Power Isolator, earth faults on fire alarm system power wiring can be more quickly located to expedite repair.

