



Simplex 4100U

*Step up to the next generation
in fire protection*

4100U Addressable c.i.e.

Based on the established power and flexibility of the 4100 Series products, the new 4100U Series offers additional operator, installation and service features, including new hardware and software that provides higher performance and convenient operation, installation and maintenance.

Features

- Easy expansion with addressable loop and collective zone cards
- On-site line programmable for a wide variety of applications with upload/download facility
- Supports collective detector inputs and MAPNET and IDNet analogue addressable loops
- 127 devices per MAPNET loop, 250 devices per IDNet loop
- Up to 30 loops per 4100U, 2,000 points in total
- Wide range of addressable devices - detectors, sounder bases, input/output modules and 4-20mA analogue input module
- Networkable into large systems (4 networks of 99 panels)
- Network Display Unit available for annunciation and control of up to 12,000 devices for large network systems

General

The Simplex 4100U is an analogue addressable fire alarm system that provides extensive and powerful features to satisfy a wide variety of applications and site requirements.

On-site programmability allows mapping logic for inputs and outputs, custom labelling, and later revisions. Detector and control point expansion is available up to 2,000 points.

For quantities exceeding this, multiple panels can be networked together to form a 4100U network system, with a 4100U configured as a Network Display Unit to provide annunciation and control of up to 12,000 points.

System Overview

Based on the established power and flexibility of the 4100 Series products, the new 4100U Series offers additional operator, installation and service features, including new hardware and software that provides higher performance and convenient operation, installation and maintenance.

Point capacity has doubled to 2,000 points. IDNet (addressable loop) cards support 250 devices, without restrictions on the quantities of point types.

New panel mounted cards & modules are smaller, have enhanced capabilities (including earth fault search) and power limiting. The card firmware is upgraded via download – no more changing EPROMS. Built in diagnostics have been enhanced.

New addressable modules include loop powered 4 input/2 output, input/output with current limited sensing, addressable line isolator, power isolator and multi-sensor with selectable (patented) detection algorithms. Each module occupies one IDNet address.

New 4100U programming software has additional features including panel upload and download, import and export panel data with Microsoft Excel, Custom Control wizards, generation of panel label

inserts and a checklist that warns when not all programming steps are completed.

Configurable

Starting with a minimal 4100U, consisting of an addressable loop with 250 device capacity, 3 supervised outputs, an ASE interface, power supply and 8 zones of AS 4428 compliant indication and control, the 4100U can be configured as the project's needs change. Increasing the panel's capacity to 500 addressable devices and 32 zones only requires an IDNet card and 3 8 Zone LED/Switch modules that can all be fitted on site in less than 10 minutes.

Scalable

The 4100U can be configured to be a zone based collective panel or a 2,000 analogue point addressable panel, with up to 30 loops (or combination of conventional zones and addressable loops). Mimic panels, fire fan controls, VESDA and graphics are only a few of the many additions the 4100U can support. All expansion cards and modules can be in a central FIP or distributed around the site in Remote Miniplex Transponder Units (RTU).

For larger or multi-building projects, the 4100U can be networked with up to 99 panels on a network, with a capacity of 50,000 points per network.

Compatible

Backwards compatibility has always been a feature of all Simplex panels. Even a 20 year old Simplex 2120 can be interfaced with the 4100U, using factory tested & documented procedures. Existing 4100 panels can be upgraded to 4100U point & processing capabilities & still use the old 4100 expansion cards in the existing cabinet. The 4100U is compatible with existing 4120 networks.

Connectable

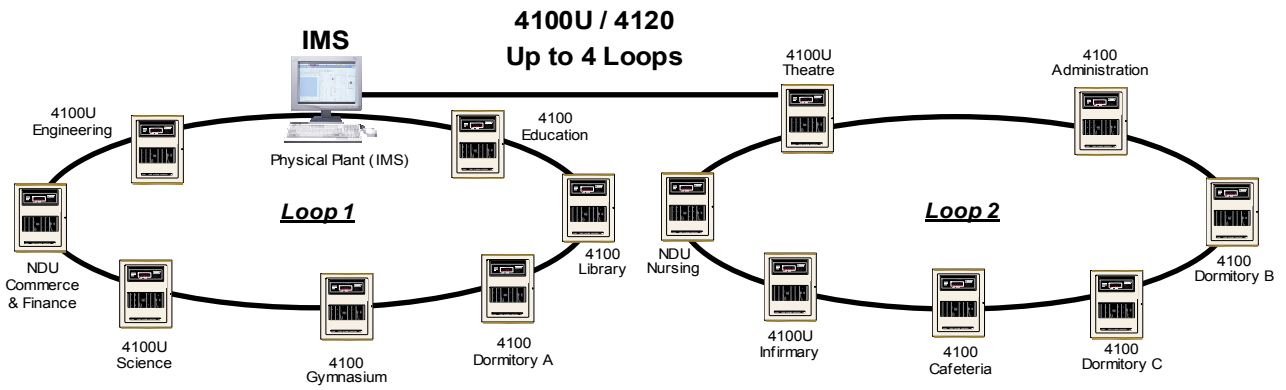
The trend towards computer based building services has exploded and the 4100U can communicate with most systems, including VESDAnet, BACnet, Intranet/Internet (with panel generated emailing of alarms, faults & isolations), GPS based time & date, Interface to QE90 EWIS, most makes of BMS, PC Annunciator (with LAN support). Due to the worldwide popularity of the 4100U, applications interfacing information is widely available, from Simplex, third party equipment makers & the internet.

Features

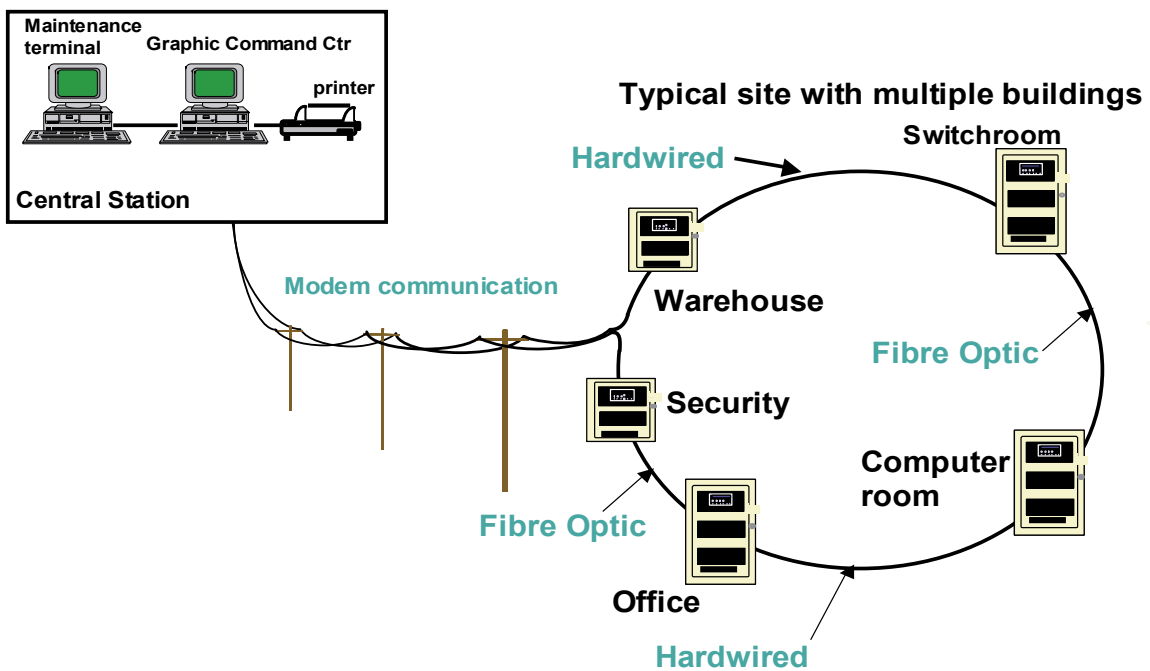
- Easy expansion with addressable loop and conventional zone cards
- On-site programmable for a wide variety of applications
- Supports on-site upload & download of panel program
- Supports conventional detector inputs and MAPNET and IDNet analogue addressable loops
- 127 devices per MAPNET loop, 250 devices per IDNet loop
- Up to 30 loops per 4100U, 2,000 points in total
- Wide range of addressable devices - detectors, sounder bases, input/output modules and 4-20mA analogue input module
- AS 1668 Fan Control module (4 fans) with rotary switches and fan status LEDs
- 9A System Power Supply (SPS) module includes built-in IDNet analogue loop driver
- Remote MINIPLEX Transponders and serial annunciators
- Networkable into large systems (4 networks of 99 panels)
- Dial-in service modem (option)
- RS232 interfaces for PC annunciators and remote printers (option)
- Panel mount printer (option)
- Four operator access levels
- 1200 event historical log (separate alarm/fault logs)
- Walk test and individual point disconnect/disable
- Programmable alarm verification, output logic control, alarm thresholds, network operation and annunciation
- SafeLinc Internet Interface Card available for remote access via client LAN
- High level links to EWIS, BMS and BACnet
- 19" rack compatible cabinet range - 18U, 21U, 28U & 40U cabinet configuration



4100U Operator Keypad



4100/4120 Network Multi-Loop Expansion



Flexible Network Communications

- Communicates information along remote Fire Alarm Control Panel locations (defined as Network Nodes)
- Initiates Alarm Silence, Acknowledge and Reset
- Displays status of selected circuit points, point lists and network nodes
- Investigate specific point status details
- Annunciate system alarm from Control Panels Network Nodes including:-
 - 4100 series Fire Alarm Control Panels
 - 4120 series Network Processing Units (NDU), Network Display Units (2500NDU) and MINIPLEX® and Universal Transponders (UT)
 - 4190 series Information Management Systems (IMS)
- Retrofit into existing 4100 and 2120 systems
- TrueAlarm Sensor Operation:-
 - Read status of TrueAlarm Analogue detection sensors at multiple locations
 - Remote or local sensitivity selection
- Style 7 wired communications:-
 - Single wire pair between nodes
 - Up to 5km between nodes with twisted shielded wire
- Optional Fibre Optics communications
- Full Network communication supervision:-
 - Network level diagnostics
 - LED Status indications on interface board
- Set host function accesses remote node data
- Remote dial-in modem for off-site data access

Specifications

System Capacity

Panel Capacity	2,000 points of Addressable input / output devices or collective zones.
Networked System Capacity	99 networked panels (2,000 points/ panel)

Mechanical

Cabinet Size(mm)	Dependant on system configuration. Wall mounted.
Cabinet Material	1.6mm mild steel
Cabinet Finish	Powder coated
Cabinet Colour	Cream Wrinkle BFF998CW

Electrical

Mains Input	240V AC @ 2A +6%,-10%,50/60Hz
Power Supply Output	28.5Vdc @ 9A
Standby Battery	24V sealed lead acid up to 80Ah
Battery Charger	28.5Vdc (nominal)
PSU Supervision	Charger high/low,Battery low/fail

Environmental

Temperature	0°C to +45°C
Humidity	10% to 90% RH (non-condensing)

Expansion Modules

Maximum Number	119 modules
4100 - 5002/5004	Collective zone module; 8 zone circuits/module; Supports standard 20V detectors plus normally open contact devices
4100 - 3003	8 Point Auxiliary Relay Module; 8 CPU controlled auxiliary relays/module SPDT contacts rated for 3 amps @ 24Vdc or 30VAC
4100 - 4322	6 Circuit Supervised Signal Module; 6 Style Y (class B) circuits per module
4100 - 0113	RS-232/2120 Communications Module; Provides two RS-232-C outputs for remote printers and/or CRT; 5x RS-232-C ports max. per 4100U system; Can be configured for communication with a host 2120 system; Can be configured as a Computer Port for communications to a remote system ie BMS or BAS Systems
4100 - 6011	4120 Network Interface Module; RS485 Communications; Optional Fibre Optics Media Card
4100 - 0110	MAPNET® TRUEALARM™ Addressable Loop Module; Up to 127 MAPNET Addressable devices or TrueAlarm Analogue Sensors; Up to 30 MAPNET/IDNet Loop Cards per system; Supports MAPNET Short Circuit Line Isolator Modules
4100 - 3101	IDNet Addressable Loop Module; up to 250 IDNet Addressable devices or TrueAlarm Analogue sensors; up to 30 IDNet/MAPNET cards per 4100U system
4100 - 0304	Remote Unit Interface Module; Provides a supervised serial communications channel to remotely located distributed Miniplex® Transponders and LCD Annunciators; Up to 32 distributed Miniplex® Transponders and/or LCD Annunciators per 4100U system
4100 - 3024	24 Relay Input/Output Relay Motherboard; 24 CPU controlled relays; Each of the 24 relays can be individually configured as either an input or an output. SPST contacts rated for 0.5A @ 24Vdc or 30VAC
4100 - 0301	64/64 LED / SWITCH Controller Interfaces up to 64 LEDs and 64 switches to the master controller for front panel annunciation
4100 - 0154	High Level Interface (HLI) to VESDA® LaserPLUS and LaserSCANNER

Operator Controls and Indications

Zone Status and Control	Individual Zone Alarm and Isolate LED with individual zone isolate/de-isolate control
Additional Zone Status	2 line by 40 character backlight LCD with adjustable contrast control
LED Status and Control Indicators	Common Alarm, Fault & Isolate External Bell Isolated, Warning System Isolated, Mains Power ON
Audible Buzzers (2 sounders)	Panel sounder for Alarm, Fault, Isolate Conditions, CPU Piezo for keypad feedback

Keypad Controls

Operator Controls	Ext. Bell & Warning System Isolate, Ack, System Reset, Isolate, Previous, Next, Display Keys, Action Keys, Fault/Isolate Keys and Entry Keys, some with programmable functions and labels for marking the function of each key
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Software Features

- WALK TEST System Test
- 4 Operator Access Levels
- 1200 Event Historical Logging (separate alarm/fault logs)
- Zone selectable Alarm Verification
- Individual Circuit Disconnect / Disable
- Nonvolatile Flash EPROM for field editable program changes
- Dual database configurations for reduced service programming time
- Upload/Download facility for greater service flexibility
- AS 4428 Compliance

The Simplex® 4100U Fire Detection and Alarm Platform is a high-end, next-generation distributed network system that combines superior fire protection and information management with lower costs of installation, maintenance and ownership. Designed to meet the needs of engineers, facility managers, building owners and electrical contractors, the 4100U builds upon the field-proven performance of the industry-leading Simplex 4100 Series fire systems. The 4100U adds new technology, expanded point capacity, advanced built-in diagnostics, dual operating software and other enhancements. Moreover, it has been specifically designed to allow existing 4100 and 4120 network systems to be upgraded rather than replaced.

When combined with an IMS graphic workstation, the Simplex Fire Alarm Network is capable of supporting 392 networked panels. The 4100U platform links multiple 4100/4100U control panels in a seamless, highly survivable fire alarm network. Its advanced peer-to-peer, token ring network provides a communications platform for master annunciation, control and information sharing that does not require centralised processing. This ensures unparalleled survivability compared to conventional systems that rely on central control. The system offers true interactive, two-way communications between the 4100U control panels, TrueAlarm® smoke detectors and TrueAlert™ notification appliances, with intelligent communications extending all the way to each individual point on the system for total addressability.

Approved

The 4100U is certified to Australian Standard AS 4428.1-1998: "Fire detection, warning, control and intercom systems - Control and Indicating Equipment, Part 1: Fire".

CSIRO ActivFire Listing No. afp-1682



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