



## Description

The all new Matrix product range of fire alarm control equipment combines the very latest hardware and software to produce a control and indication system, which is powerful and sophisticated, yet simple to use and understand. The flexibility of the Matrix platform is such that it can be re-configured to realize many other control and indication applications, with direct integration into intelligent buildings.

Moving away from the simple, price driven competitive model used by most manufacturers today, the Matrix concept is designed to add value to System Designers, Integrators, Service Providers, and end users. Developed from the "ground up" and using some of the most advanced technology available, Matrix is designed as one of the most powerful, intelligent, and technically robust fire alarm products available.

Not only do the products and services offered under the Matrix brand provide solutions to the most technically challenging applications in life safety, Matrix will deliver added value, market advantage, and a competitive edge to your business.

## Features

- UL Listed (10th Edition)
- FM Approved (Under Process)
- 2 to 8 loop or 2 to 16 loop versions
- 400mA loop current
- Programmable NACs; 4 Class B or 2 Class A, all with internal synchronization
- 5.25 A or 10.25 A power supply options
- 3 programmable inputs and 5 programmable relay outputs
- 7 inch, full-color resistive touch screen with intuitive user interface
- Up to 24 programmable soft "function keys"
- Up to 64 user login accounts
- Hard-wired fire and trouble routing inputs and outputs
- Modular and expandable electronics
- 400 subaddress points per loop (800 per loop module)
- Option to "invert" inputs and outputs
- 5,000 programmable cause and effects; over 50,000 inputs and outputs
- Can be networked with programmable functionality
- Programming via USB port to PC or memory stick
- View Graphical PC User Interface - coming soon!

## Optional Panel Peripherals

### Dual Loop Panel Module (LF-M-S758)

The Dual Loop Panel Module monitors loop device status and provides status to the panel processor. It holds device configurations and operates in a standalone manner when catastrophic failures occur.

### 16 Channel I/O Interface Card (LF-M-K1171-00)

The 16 Channel I/O Interface enhances the versatility of the alarm system by providing additional input and output capabilities to the Matrix Fire Alarm Control Panel. Inputs or outputs can be selected for up to 16 individual channels, and are configured in the same way as devices connected to addressable loops of the panel. The 16 Channel I/O Interface can be configured to contribute or act upon cause and effect logic.

### Media Gateway™ Panel Module (LF-M-S788)

The Media Gateway Panel Module provides connectivity to monitoring centers using IP (Sur-Gard), or dial-up connectivity. The Media Gateway may also be used to meet integration application requirements.

### 8 Channel Relay Panel Module (LF-M-S791)

The 8 Channel Relay Panel Module has 8 voltage-free changeover relay contacts, each of which can be individually programmed. All outputs are configurable in the same way as devices connected to the loops and all may be acted upon by cause and effect logic. These boards are typically used in applications which require more than the five standard relay outputs, such as signaling to other systems or plant control.

### Network Module (LF-M-S723)

The Matrix Network Module provides enhanced highspeed communication for networking fire control panels. The network provided by this module can support combinations of Matrix Fire Alarm Control Panels and Matrix Vision units. Matrix Fire Alarm Control Panels can receive events from other panels in the network. The Class X networking used in conjunction with the Network Module provides tolerance against open and short circuit trouble conditions.

### Printer (S768)

The Matrix Printer is an optional feature for printing fire system events as they occur. The printer is located on the fascia, below the Zone LEDs (if present). It is a thermal printer and never requires replacement ink. Printing is performed on heat-sensitive paper rolls. A trouble message is reported when the paper runs out. The printer includes a front-loading feature for replacing paper rolls.

### Zone LED Module (S771)

The Zone LED module contains 48 LEDs and is connected to the LCD Main Processor Board of the Matrix Fire Alarm Control Panel. A maximum of three Zone LED modules can be connected to provide the fascia with 144 Zone LED indicators

## Technical Specifications

Power supply voltage	120 V AC or 240 V AC
Power supply rating at 24V DC	5.25 A (charges up to 60 Ah) 10.25 A (charges up to 100Ah)
Display	Full color 800 x 480 LCD with resistive touch screen and automatic backlight dimming
Software zones	2,000
Software groups	5,000
Cause and Effects	5,000
Event log	10,000 events, 1 second resolution. Filterable and printable
Detection loops	2 to 16 added 2 at a time (LF-M-S758 dual loop cards)
Detection loop current	400 milliamps each
AUX 24V Output	2; each rated at 900 mA
NACs	4; each rated at 2.5A. Class B or 2 Class A (1.3A For System Sensor Devices)
Programmable Relay Outputs	5; 30 V DC 1 Amp
Programmable Inputs	3; designed to be activated by voltage-free contacts
Network Connections	Optional network card provides communication for networking 127 fire control panels
NAC Synchronization	Internal Support of System Sensor, Wheelock, Gentex and Amseco protocols
Printer (OPTIONAL)	40 column, front-loading thermal
Zone LED Indicators (OPTIONAL)	Up to 3 banks of 48 (144) as standard

## Cabinet Housing

Housing	Description
Dimensions	4 Slot Standard Cabinet - 420mm (W) x 590mm (H) x 153mm (D), approximately 16.5in (W) x 23.2in (H) x 6in (D)
	8 Slot Standard Cabinet - 540mm (W) x 720mm (H) x 160mm (D), approximately 21.3in (W) x 28.3in (H) x 6.3in (D)
	4 Slot Deep Cabinet - 420mm (W) x 590mm (H) x 203mm (D), approximately 16.5in (W) x 23.2in (H) x 8in (D)
	8 Slot Deep Cabinet - 540mm (W) x 720mm (H) x 212mm (D), approximately 21.3in (W) x 28.3in (H) x 8.3in (D)
Construction	Standard and Deep Cabinet Models
	These models include: <ul style="list-style-type: none"> <li>▪ Mild sheet steel enclosure, 1.2 mm</li> <li>▪ Removable equipment chassis</li> <li>▪ All epoxy powder coated</li> <li>▪ Knockouts top and back, one on each side</li> <li>▪ Hinged lid with single locks</li> <li>▪ Hinged bridge plates containing fascia indications</li> <li>▪ Optional printer</li> </ul>
Finish	Epoxy powder coated
Color	Lid & Box - Red Control Plate - RAL7016
Cable Entry	Standard and Deep Cabinet Models - 28 knockouts top, 19 knockouts back, 1 knockout each side
Mounting	Minimum size #12, Maximum size #14. 40mm (1.5in.) length
Battery Capacity	2 to 8 Loop (4 slot) enclosure: Standard Cabinet - Up to 28 Ah (Power Sonic PS-12280) Deep Cabinet - Up to 40 Ah (Power Sonic PS-12400)
	2 to 16 Loop (8 slot) enclosure: Standard Cabinet - Up to 28 Ah (Power Sonic PS-12280) Deep Cabinet - Up to 40 Ah (Power Sonic PS-12400)

This following figures illustrate the Matrix Fire Alarm Control Panel Cabinet housing options. All Cabinets can be ordered with an optional second aperture to accommodate a printer or Fire In Zone LED indicators.

\*See Panel Model Numbers for ordering Information.

## Electrical Specifications

Model	Description	Standby Current	Alarm Current
See Below	Matrix Fire Alarm Control Panel	350 mA max	450 mA max
LF-MC00NC-10	Matrix Network Vision Annunciator	341 mA	341 mA
LF-M-S406	5.25 A Power Supply	78 mA	78 mA
LF-M-S408	10.25 A Power Supply	80 mA	80 mA
LF-M-S723	Matrix Network Module	80 mA	80 mA
LF-M-S758	Dual Loop Panel Module	115 mA	115 mA (figures exclude SLC devices)
LF-M-S788	Media Gateway Module	114 mA	114 mA
LF-M-S791	Matrix 8 Channel Relay Module	10 mA	160 mA (alarm)
S771	Zone LED Module	5 mA	5 mA + 3 mA per LED
S768	Matrix Printer	0 mA	1500 mA (only during printing)

\*LCD Main Processor Board, Main Back Board, System A Panel Module, System B Panel Module

## Panel Model Numbers

Housing	Description
LF-M101H1-10	Matrix, 4 slot, Standard Enclosure, English, 5.25A, 115V, 2 Loop, Red, No Printer, UL listed
LF-M101H1-14	Matrix, 4 slot, Standard Enclosure, English, 5.25A, 115V, 2 Loop, Red, Printer, 48 LEDs, UL listed
LF-M101H1-15	Matrix, 4 slot, Standard Enclosure, English, 5.25A, 115V, 2 Loop, Red, No Printer, 48 LEDs, UL listed
LF-M101H1-16	Matrix, 4 slot, Standard Enclosure, English, 5.25A, 115V, 2 Loop, Red, No Printer, 96 LEDs, UL listed
LF-M101H1-17	Matrix, 4 slot, Standard Enclosure, English, 5.25A, 115V, 2 Loop, Red, No Printer, 144 LEDs, UL listed
LF-M102H1-10	Matrix, 4 slot, Standard Enclosure, English, 5.25A 230V, 2 Loop, Red, No Printer, UL listed
LF-M102H1-14	Matrix, 4 slot, Standard Enclosure, English, 5.25A 230V, 2 Loop, Red, No Printer, 48 LEDs, UL listed
LF-M102H1-15	Matrix, 4 slot, Standard Enclosure, English, 5.25A 230V, 2 Loop, Red, Printer, 48 LEDs, UL listed
LF-M102H1-16	Matrix, 4 slot, Standard Enclosure, English, 5.25A 230V, 2 Loop, Red, No Printer, 96 LEDs, UL listed
LF-M102H1-17	Matrix, 4 slot, Standard Enclosure, English, 5.25A 230V, 2 Loop, Red, No Printer, 144 LEDs, UL listed
LF-M103H1-10	Matrix, 4 slot, Standard Enclosure, English, 10.25A , 2 Loop, Red, No Printer, No LEDs, UL listed
LF-M103H1-15	Matrix, 4 slot, Standard Enclosure, English, 10.25A, 2 Loop, Red, No Printer, 48 LEDs, UL listed
LF-M103H1-14	Matrix, 4 slot, Standard Enclosure, English, 10.25A , 2 Loop, Red, Printer, 48 LEDs, UL listed
LF-M103H1-16	Matrix, 4 slot, Standard Enclosure, English, 10.25A, 2 Loop, Red, No Printer, 96 LEDs, UL listed
LF-M103H1-17	Matrix, 4 slot, Standard Enclosure, English, 10.25A, 2 Loop, Red, No Printer, 144 LEDs, UL listed
LF-M303H1-10	Matrix, 4 slot, Deep Enclosure, English, 10.25A , 2 Loop, Red, No Printer, No LEDs, UL listed
LF-M303H1-15	Matrix, 4 slot, Deep Enclosure, English, 10.25A, 2 Loop, Red, No Printer, 48 LEDs, UL listed
LF-M303H1-14	Matrix, 4 slot, Deep Enclosure, English, 10.25A , 2 Loop, Red, Printer, 48 LEDs, UL listed
LF-M303H1-16	Matrix, 4 slot, Deep Enclosure, English, 10.25A, 2 Loop, Red, No Printer, 96 LEDs, UL listed
LF-M303H1-17	Matrix, 4 slot, Deep Enclosure, English, 10.25A, 2 Loop, Red, No Printer, 144 LEDs, UL listed
LF-M903H1-10	Matrix, 8 slot, Deep Enclosure, English, 10.25A, 2 Loop, Red, No Printer, No LEDs, UL listed
LF-M903H1-15	Matrix, 8 slot, Deep Enclosure, English, 10.25A, 2 Loop, Red, No Printer, 48 LEDs, UL listed
LF-M903H1-14	Matrix, 8 slot, Deep Enclosure, English, 10.25A, 2 Loop, Red, Printer, 48 LEDs, UL listed
LF-M903H1-16	Matrix, 8 slot, Deep Enclosure, English, 10.25A, 2 Loop, Red, No Printer, 96 LEDs, UL listed
LF-M903H1-17	Matrix, 8 slot, Deep Enclosure, English, 10.25A, 2 Loop, Red, No Printer, 144 LEDs, UL listed
LF-MC00NC-10	Matrix Network Vision Annunciator – Surface Mount, Red