



generating confidence

maxlogic & mavigard  
fire and gas detection systems



# MISSION

## MANUFACTURING

### INNOVATION

#### CONFIDENCE

##### DEVELOPMENT

###### QUALITY



**M**avili Elektronik A.S. has been **GENERATING CONFIDENCE** since 1987 with Mavili, Mavigard, Maxlogic, Maxlogic & Mavigard brand names.

The company which is improving continuously its service network infrastructure; has offices in Ankara, Izmir, Antalya, Diyarbakir, Samsun, Bursa, Istanbul (European side), Russian central office in Moscow and Factory showroom in Istanbul Perpa Trade Center.

Mavili products are exported to more than 60 countries in different regions of the world, in addition we always provide pre-sales and after sales support for our **CUSTOMERS AND DISTRIBUTORS**.

Mavili continues manufacturing high quality products and maintaining services with its dynamic staff of more than 250 people, composed of technicians and engineers, working hard for **CUSTOMER SATISFACTION**.

**mavili**  
ELEKTRONİK TİCARET VE SANAYİ A.Ş.

## Our Mission

Being a “high technology” company which is respectful to society, environment, ethical values; which researches, learns and improves itself continuously; which realizes the market realities and gets the right decisions.

## Our Vision

Effective and professional global manufacturing of high technology products.



## Certificates and Licenses

- \* The **ISO 9001:2015** Quality Management System of Mavili Elektronik A.S has been audited and conformed by LPCB (Loss Prevention Certification Board) / ENGLAND.
- \* Our Fire Detection and Alarm System products were **EN 54** and **CPR** certified by **LPCB** and **Dedal**, thus approving our quality by internationally accredited institutions.
- \* TSE / TURKEY (Turkish Standards Institute) entitled us to get **TS EN 54** certificates for Intelligent Addressable and Conventional Fire Alarm System products, **TS EN 50194** certificate for our gas detectors.
- \* OUR SERVICES are awarded with **TS 12849** for Place of Service and Sales Service Qualification certificate.
- \* All marine products have, **TURK LLOYD** (SOLAS 74 ve FSS) and **IACS** (International Association of Classification Societies Ltd.) member **"Russian Maritime Register of Shipping"** type approval certificate.
- \* Our products have Licenses for Usage from Ministries of many countries.



Company Presentation  
Certificates and Licenses



References



Intelligent Addressable  
Fire Detection and Alarm Systems



Beam Type Smoke Detectors



Conventional Fire Detection  
and Alarm Systems



GD2R Series Gas Detector,  
Conventional Gas Alarm  
Control Panel



Gas Alarm Control Panel,  
4 Channel



Conventional Fire  
Extinguishing Control Panel



LOYD Certified Marine Type  
Fire Alarm Control System



# References

Porta Batumi / Georgia



Claremont Group  
Apartments  
Erbil / Iraq



Somali Mogadishu  
Airport



Wagagen Bank  
Headquarter  
Ethiopia



Novotel Next  
Almaty / Kazakhstan



Azadi Tower / Iran



Caves Beach  
Resort / Egypt



Primorskiy Hotel  
Sochi / Russia



More than **70.000** sites around the world  
are protected By **Mavigard & Maxlogic**  
fire and gas alarm systems.





## Smart Solutions for Buildings...

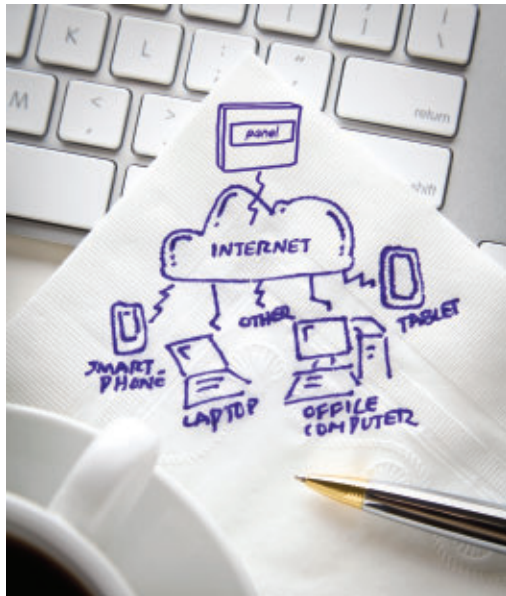
# Intelligent Addressable Fire Detection And Fire Systems

MAXLOGIC series fire alarm control panels, offering high performance by the VIP communication protocol, provide solutions to projects.

- ▶ Protection from electromagnetic interference
- ▶ 'Soft' addressable by use of address programmer
- ▶ User Friendly
- ▶ Programmable remote control inputs
- ▶ Addressable detectors, call points, loop-powered addressable sounder interface modules (monitor and control modules) and analogue addressable gas detectors can be programmed, in order to operate in cause-effect scenarios and the fire automation can be built in this manner.
- ▶ LCD with 260x 64 adjustable blue backlight indicates fire alarm, fault and other information in details
- ▶ Day and night mode, pre alarm, contamination warning
- ▶ Top priority of fire alarm indication, different buttons for fire and other events, categorical classification of events
- ▶ All outputs have silenceable/non-silenceable and latching/non-latching and options
- ▶ Supervised sounder, fire relay, alarm relay and fault relay outputs
- ▶ Possibility to select event type for all input/output devices
- ▶ Panel and input-outputs can be programmed with the loop manager software
- ▶ Panels can be monitored and controlled remotely via Supervisor for short distance with cable, for long distance as wireless
- ▶ Four language options for menu , software and silkscreen: Turkish, English, Russian and French
- ▶ Communication interrupt for fast fire alarm detection in 1.5 seconds

In **cause-effect scenario**, below functions etc. are done completely by the system

- ▶ Stopping ventilation panels in related zones,
- ▶ Operating emergency announce system,
- ▶ Operating smoke evacuation system,
- ▶ Commanding fire / smoke dampers,
- ▶ Closing protective doors that between various zones,
- ▶ Operating pressurization fans that located in main ladder hall and fire ladder,
- ▶ Routing elevator to related floors,
- ▶ Activation of emergency lighting systems



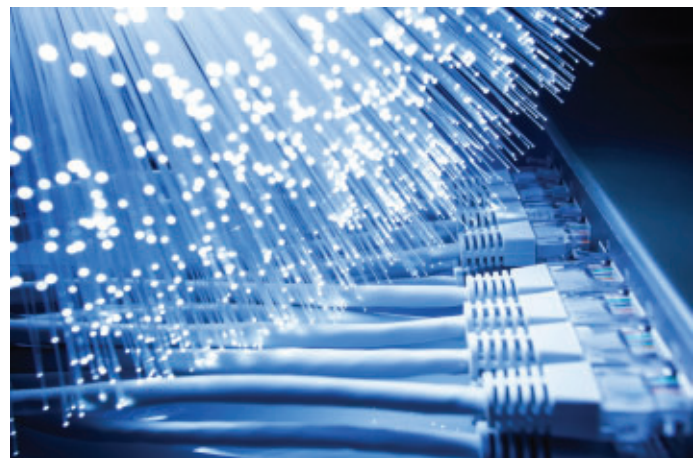
Maxlogic series intelligent analogue addressable fire alarm panels may operate as network via **fiber optic** cable infrastructure.

Compatible with **Modbus** or **BACnet** protocols that provide direct information exchange with other building control and automation systems.



- ▶ Activation of gas cutting system,
- ▶ Activation of extinguishing systems,
- ▶ Sending voice mail, SMS or e-mail, alarm and fault signals to the nearest fire fighter panel and other authorized units
- ▶ Graphical monitoring and remote control with RS-232/485, TCP/IP, GPRS protocols

Intelligent addressable detectors, call points and control modules that create the system to be programmable according to cause/effect logics and they are able to respond to comprehensive fire scenarios. According to cause/effect logics between panels that operate as network; for each panel at up to 1000, within the network up to **64.000** scenarios can be defined.



In fire detection and alarm system; **linear type cable** is used for tunnels, cable galleries, cable trays and shafts which have humidity, smoke, dust, vibration, icing and corrosion. Linear cable type heat detectors are integrated to main system with control modules via Modbus and occurred fire and fault information are reported with details as software.



## Smart Solutions for Buildings...

Four different methods are used for remote access of fire detection and alarm system:

- For short distance with cable, RS-232
- For long distance with cable, RS-485 communication module
- Via LAN, WAN and internet for remote access **TCP/IP** communication module
- Using GPRS via internet, GPRS communication module is used for remote access



Up to 64 panels can be operated within network and thus occurred fire alarms, fault etc. in any panels can be monitored and can be controlled (alarm silence, buzzer silence, reset etc.) from each panel.

Network communication between fire panels is provided via **CAN** communication protocol that prevents loss of data.

Maxlogic intelligent analogue addressable fire detection system is graphically monitored and managed from 16 different monitoring centers.

With **Mobile Supervisor** software fire detection system can be monitored and controlled via Android telephones.



In case of fire or an emergency, a competent person's live **announcements** are provided through public announcement module integrated in intelligent fire alarm system.

The pre-recorded message of voice evacuation of the available announcement system found in the building in which fire detection system will be installed are activated on fire scenario of the building.

In case of fire or emergency situation, safe and uninterrupted communication can be made between authorized people, security center, intelligent addressable fire panels and portable or fixed firefighter **telephones**.

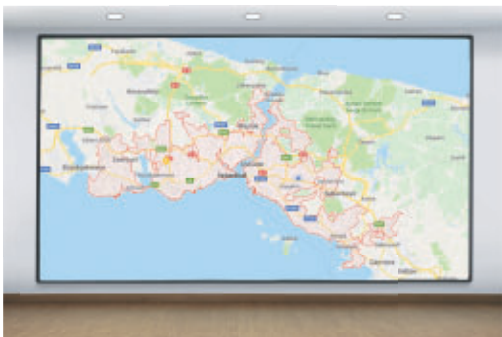




Each fire alarm control panel; working as one or as network can be accessed and monitored from 16 different locations from the same or different communication modules.



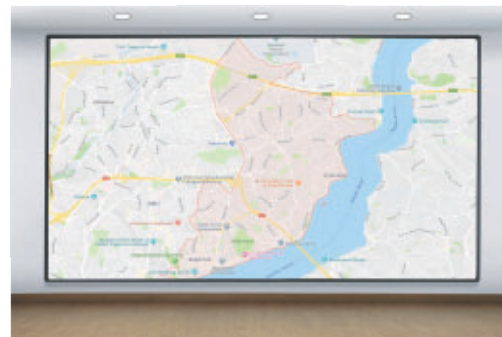
To city information...



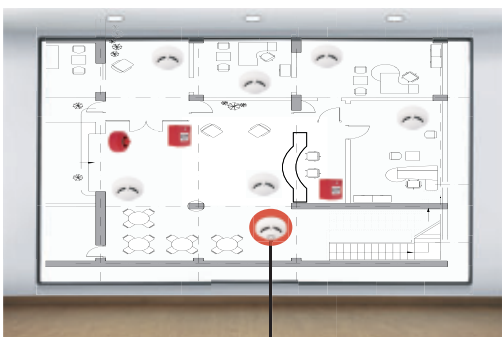
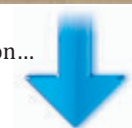
In case of fire and fault; geographical location where the event occurred, building and floor information, floor plans and device details can be monitored easily.



City details to address information...



Address details to building information...



Building details to floor plans and the devices in alarm are monitored.



The control and monitoring operations related fire detection system can be performed remotely via Supervisor.



| Device Properties |                        |
|-------------------|------------------------|
| Type              | ML-1140 Multisensor    |
| Network           | 1                      |
| Panel             | 23                     |
| Loop              | 14                     |
| Address           | 58                     |
| Zone              | 38                     |
| Local Text        | Neurology ground floor |
| The Map           | Ground floor           |
| Analog Value      | 08                     |



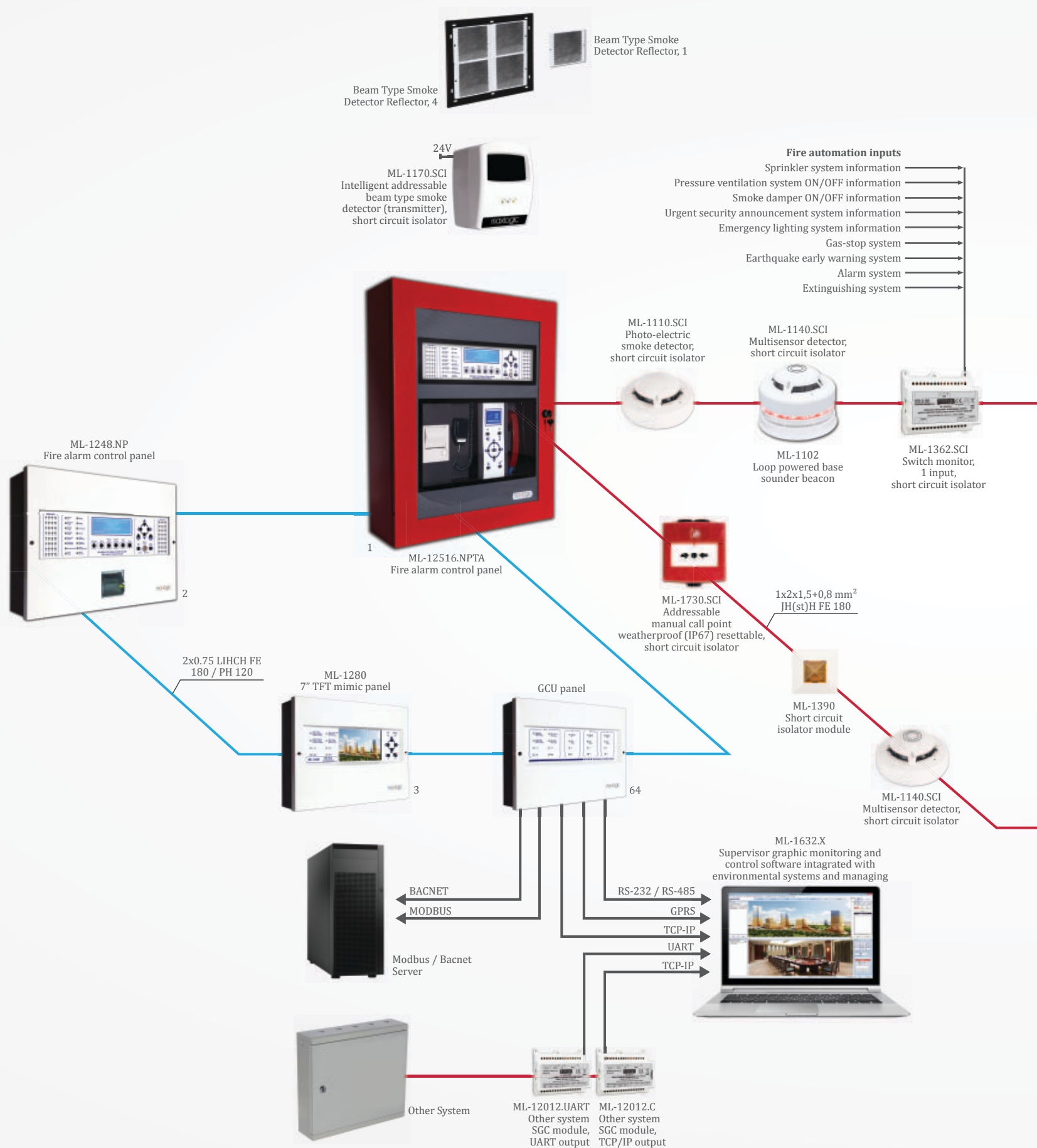
Fire, error and the other events can be grouped based on event profile. By the help of this feature e-mail can be sent to the predetermined **e-mail** addresses.

[illegible]

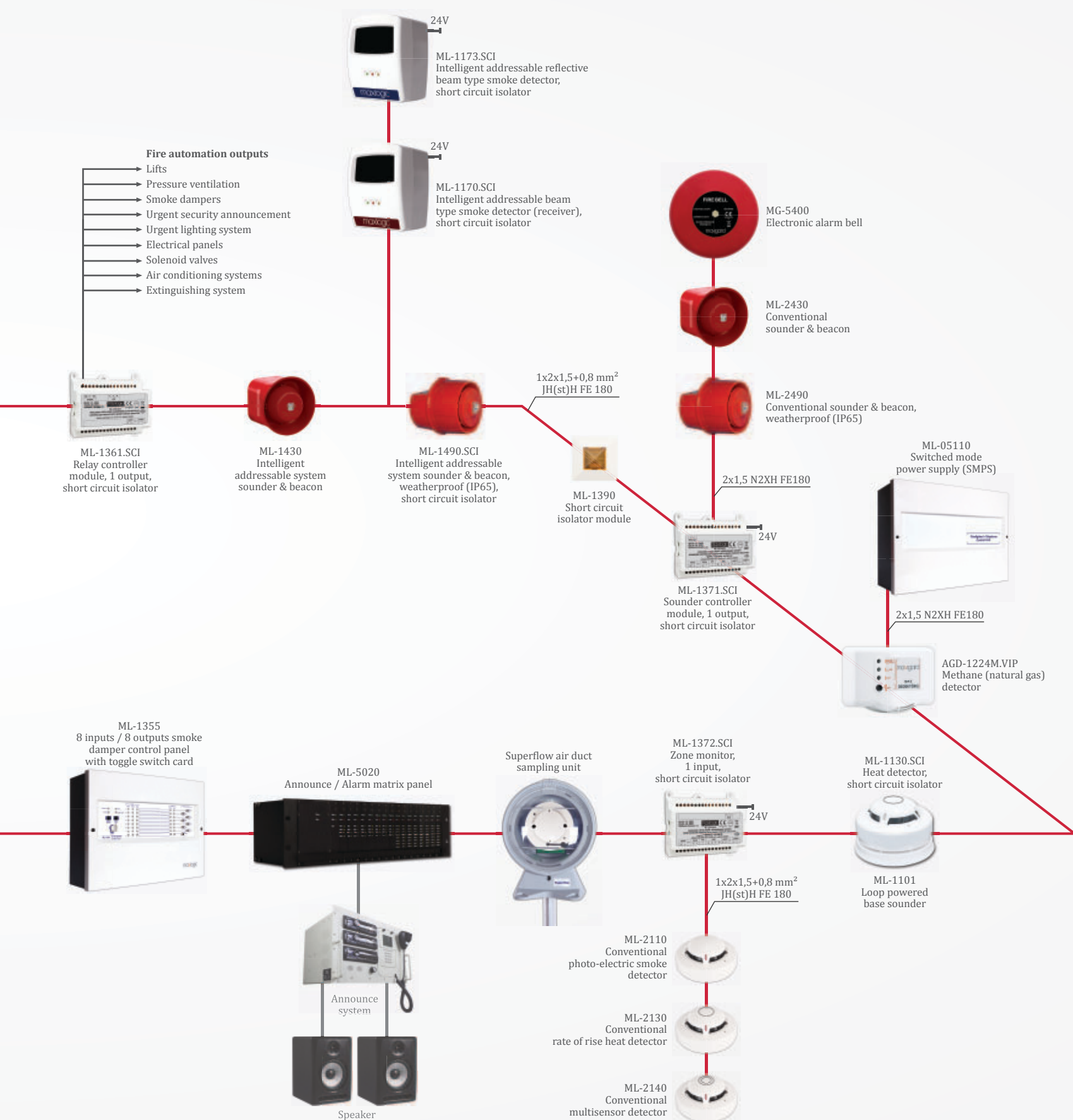
Up to 1000 events can be stored.



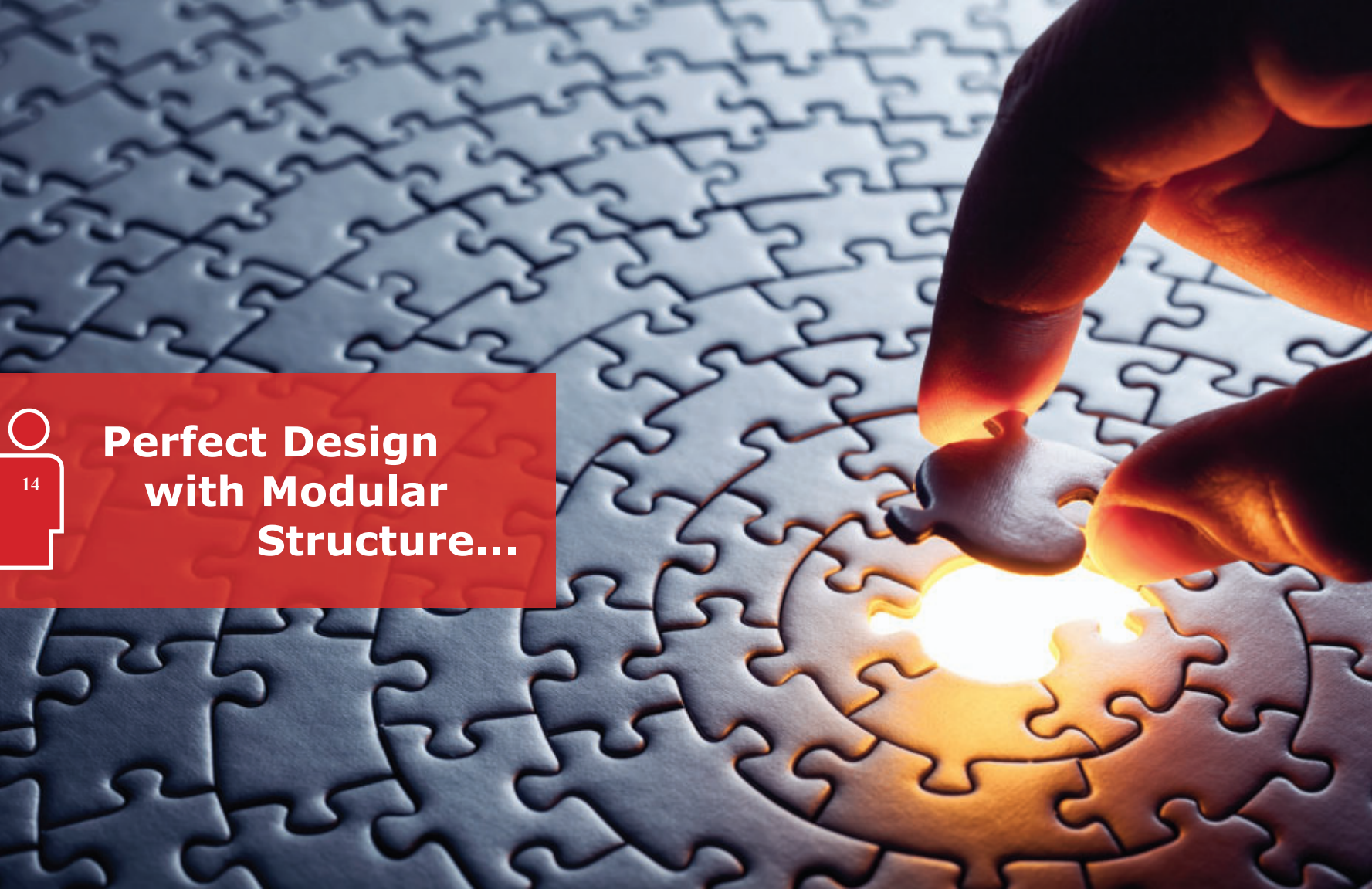
With **ONVIF** integration, fire detection system can be software integrated and operates with all **ONVIF** based security systems.



- Up to 64 panels and/or repeater panels can be assembled with CAN protocol into a network.
- By the help of this feature, Maxlogic & Mavigard system is used easily in big buildings, hospitals, universities etc. projects.
- Max. 130.048 devices can be used in Maxlogic Addressable Fire Detection System.



- Events can be monitored from any panel in Network.
- Controlling all other panels from any panel.
- Creating cause-effect scenarios between devices that is connected to panels in network.



**Perfect Design  
with Modular  
Structure...**

# Intelligent Addressable Fire Alarm Panels



ML-12516  
Fire Alarm Control Panel

- ▶ Surface mount technology
- ▶ Protection from electromagnetic interference
- ▶ Real time clock

Maxlogic series fire alarm control panels which have aesthetic design and user friendly features, offering high performance by the VIP communication protocol.



ML-12516.NPTA  
Fire Alarm Control Panel  
Network, Printer, Telephone  
/Announce Control Unit

- ▶ Compatible with EN 54-2 and EN 54-4
- ▶ Expandable loops up to 16 loops, max. 2032 address capacity for each panel

**Printer Module**

Event logs can be printed instantaneously or collectively by the printer module. Since the printer is thermal type, running out of ink is no longer a problem.

**Telephone Module**

In case of fire or emergency events, communication can be provided between security center, firefighter’s telephones and telephones on the other panels via firefighter’s telephone control unit.

**Announce Module**

In case of fire and emergency events, Announce module can be integrated to all kinds of present announce systems (all brands and models) via alarm announce matrix panel, it provides to live announcement to determined areas via panel.

**Telephone / Announce Control Unit**

The use of telephone module and public announce module Over the panel is realized with the LCD designed control unit.

**PANEL MODELS**

| Product code | Loop | Address | Product code | Loop | Address |
|--------------|------|---------|--------------|------|---------|
| ML-1250.N    | 0    | 0       | ML-1259      | 9    | 1143    |
| ML-1251      | 1    | 127     | ML-12510     | 10   | 1270    |
| ML-1252      | 2    | 254     | ML-12511     | 11   | 1397    |
| ML-1253      | 3    | 381     | ML-12512     | 12   | 1524    |
| ML-1254      | 4    | 508     | ML-12513     | 13   | 1651    |
| ML-1255      | 5    | 635     | ML-12514     | 14   | 1778    |
| ML-1256      | 6    | 762     | ML-12515     | 15   | 1905    |
| ML-1257      | 7    | 889     | ML-12516     | 16   | 2032    |
| ML-1258      | 8    | 1016    |              |      |         |

**PANEL MODELS**

| Product code | Loop | Address | Product code  | Loop | Address |
|--------------|------|---------|---------------|------|---------|
| ML-1250.NPTA | 0    | 0       | ML-1259.NPTA  | 9    | 1143    |
| ML-1251.NPTA | 1    | 127     | ML-12510.NPTA | 10   | 1270    |
| ML-1252.NPTA | 2    | 254     | ML-12511.NPTA | 11   | 1397    |
| ML-1253.NPTA | 3    | 381     | ML-12512.NPTA | 12   | 1524    |
| ML-1254.NPTA | 4    | 508     | ML-12513.NPTA | 13   | 1651    |
| ML-1255.NPTA | 5    | 635     | ML-12514.NPTA | 14   | 1778    |
| ML-1256.NPTA | 6    | 762     | ML-12515.NPTA | 15   | 1905    |
| ML-1257.NPTA | 7    | 889     | ML-12516.NPTA | 16   | 2032    |
| ML-1258.NPTA | 8    | 1016    |               |      |         |

## Simple and Functional...

# Intelligent Addressable Fire Alarm Control Panels

Maxlogic series fire alarm control panels which have aesthetic design and user friendly features, offering high performance by the VIP communication protocol.



ML-1248.P  
Fire Alarm Control Panel

- Compatible with EN 54-2 and EN 54-4
- Expandable up to 8 loops, max. 1016 addresses capacity for each panel.
- Event logs can be printed instantly or collectively by the printer module.



- Compatible with EN 54-2 and EN 54-4
- Expandable up to 8 loops, max 1016 address capacity of each panels
- Real time clock

- |                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>▶ Surface mount technology</li> <li>▶ The key is needed for entry to panel menu</li> <li>▶ Protection from electromagnetic interference</li> <li>▶ Supervised peripheral devices, extension cards (power supply, loop extensions, printer..)</li> <li>▶ 4 programmable supervised remote control inputs</li> <li>▶ Input/output modules can be connected to panel</li> </ul> | <ul style="list-style-type: none"> <li>▶ 1000 event log and programmable zones memory</li> <li>▶ User friendly and aesthetic design and easy installation</li> <li>▶ Advanced parametric arrangement options for input/output devices</li> <li>▶ Top priority of fire alarm indication, different buttons for fire and other events, categorical classification due to events</li> </ul> | <ul style="list-style-type: none"> <li>▶ Communication interrupt for fast fire detection in 1.5 sec</li> <li>▶ 1000 automation scenarios can be created for each panel</li> <li>▶ Up to 64 panels and/or repeater panels can be assembled with CAN protocol</li> <li>▶ Day and night mode, pre-alarm, contamination warning into a network</li> </ul> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## PANEL MODELS

| Product code | Loop | Address |
|--------------|------|---------|
| ML-1230.N    | 0    | 0       |
| ML-1231      | 1    | 127     |
| ML-1232      | 2    | 254     |
| ML-1233      | 3    | 381     |
| ML-1234      | 4    | 508     |
| ML-1235      | 5    | 635     |
| ML-1236      | 6    | 762     |
| ML-1237      | 7    | 889     |
| ML-1238      | 8    | 1016    |

## PANEL MODELS

| Product code | Loop | Address |
|--------------|------|---------|
| ML-1240.N    | 0    | 0       |
| ML-1241.P    | 1    | 127     |
| ML-1242.P    | 2    | 254     |
| ML-1243.P    | 3    | 381     |
| ML-1244.P    | 4    | 508     |
| ML-1245.P    | 5    | 635     |
| ML-1246.P    | 6    | 762     |
| ML-1247.P    | 7    | 889     |
| ML-1248.P    | 8    | 1016    |

## Graphic Monitoring and Control...



## 7" TFT Mimic Panel

Maxlogic Intelligent Addressable System Mimic Panel is connected as a repeater panel to a network created from the Maxlogic panels, shows graphically the location of fire incidents on the maps previously uploaded by user and send commands, such as "reset", "alarm", "cancel alarm" to networked panels. It is easy to use and has an aesthetic design.

- ▶ Mimic Manager Software for easy programming via PC
- ▶ Integration of building projects into the ML-1280 7" TFT Mimic Panel via SD card
- ▶ Possible monitoring fire events graphically via Mimic Manager software
- ▶ Layered monitoring for each device
- ▶ Several display data for each device



Ability to monitor graphically for all Maxlogic fire alarm system small site and big site applications. 7" TFT Mimic Panel contains stylish exterior design and Surface Mount Technology (SMT) production techniques.

- ▶ Automatic or manual navigation between the maps in case of fire
- ▶ Possible sending information Alarm / Alarm Silence / Reset to all panels in network
- ▶ Visual fire location information via 7" TFT screen
- ▶ Intervention to right place
- ▶ Quick intervention

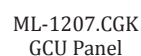
#### PANEL MODELS

| Product Code | Description                                          |
|--------------|------------------------------------------------------|
| ML-1280      | Intelligent Addressable System<br>7" TFT Mimic Panel |

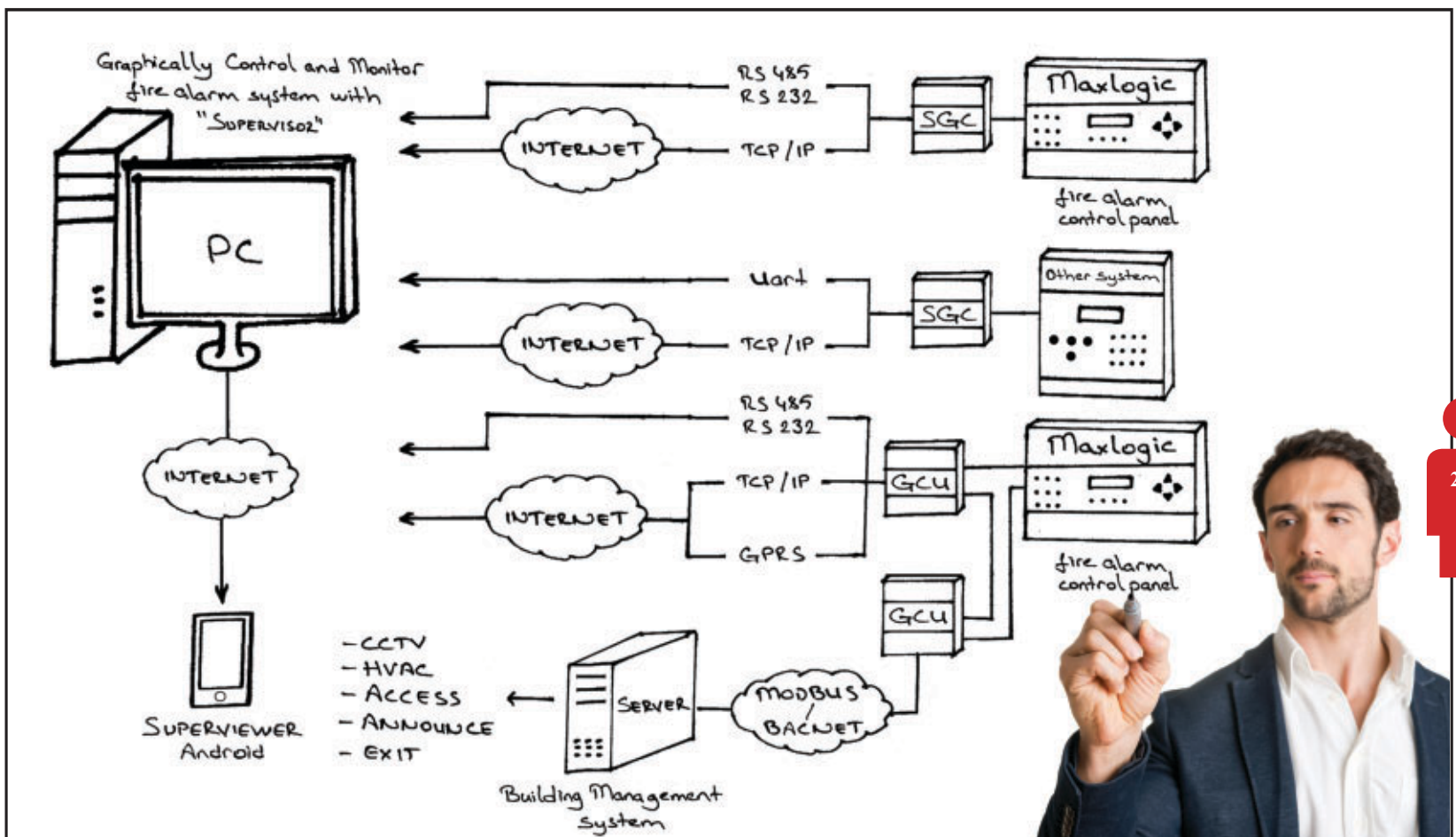
#### ACCESSORIES AND OPTIONS

| Product Code | Description                         |
|--------------|-------------------------------------|
| ML-1621      | ML-1280 7" TFT Mimic Panel Software |

GCU panel provides communication between Maxlogic intelligent addressable fire detection system and supervisor and/or building management systems.



- ▶ For the communication with supervisor, GCU panel uses RS-232, RS-485 for close access, IP based communication like GPRS and TCP/IP communication modules for longer distance.
- ▶ Interaction to building management systems via Modbus/Bacnet protocol.
- ▶ Connecting options of advanced modular structure with up to 16 expandable communication modules.
- ▶ GCU uses the same network with up to 63 panels.
- ▶ Through back-up working based structure, uninterrupted communication is provided.



# Intelligent Addressable System Communication

- SGC Module is designed to monitor and control other systems (Maxlogic series intelligent addressable systems are excluded).
- 4 inputs ("System Fault", "Alert", "Fault", "Fire") and 4 outputs ("Alarm Silence", "Reset", "Alarm", "Evacuation") for monitoring and controlling via Supervisor
- With UART connection cable for short distance access, with TCP/IP via internet for long distance TCP/IP can be connected to Supervisor
- Through advanced redundancy structure ensure reliable and continuous communication
- Superviewer Android software enables monitoring and control of fire alarm system without the user's need to be at the computer



ML-12012.UART  
Other System SGC  
Module, UART Output

ML-12012.C  
Other System SGC Module,  
TCP/IP Output

## GCU MODELS

| Product Code | Description                                                           |
|--------------|-----------------------------------------------------------------------|
| ML-1207.K    | Intelligent Addressable System GCU Panel, RS232/RS485 module included |
| ML-1207.C    | Intelligent Addressable System GCU Panel, TCP/IP module included      |
| ML-1207.G    | Intelligent Addressable System GCU Panel, GPRS module included        |

## GCU MODELS

| Product Code | Description                                                                              |
|--------------|------------------------------------------------------------------------------------------|
| ML-1207.MX   | Intelligent Addressable System GCU Panel, Modbus module included                         |
| ML-1207.B    | Intelligent Addressable System GCU Panel, BACnet module included                         |
| ML-1207.CGK  | Intelligent Addressable System GCU Panel, TCP/IP, GPRS, RS-232 / RS-485 modules included |

## SGC MODELS

| Product Code  | Description                                              |
|---------------|----------------------------------------------------------|
| ML-12011.KU   | Intelligent Addressable System SGC module, RS-232 output |
| ML-12011.KB   | Intelligent Addressable System SGC module, RS-485 output |
| ML-12011.C    | Intelligent Addressable System SGC module, TCP/IP output |
| ML-12012.UART | Other systems SGC module, UART output                    |
| ML-12012.C    | Other systems SGC module, TCP/IP output                  |

# Supervisor Graphic Monitoring and Control Software Integrated with Environmental Systems and Managing

Supervisor; is a specially designed software which shows fire and fault events and makes possible to monitor and control the fire alarm system as in architectural and graphical way.

IP cameras at the point where the fire alarm is activated in case of fire within the scenario can be automatically turned on or manually controlled with IP camera systems working with ONVIF protocol via software integration.

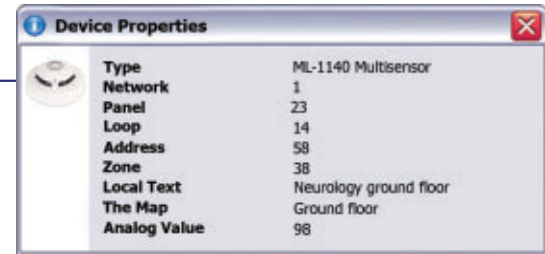
- ▶ 1000 different intelligent addressable fire detection system can be monitored and managed with single supervisor.
- ▶ Projects on computer can be transferred to system as maps (all picture formats).
- ▶ Determined areas can be monitored graphical and it provides to exchange between maps in case of fire and fault events.
- ▶ Remote commands can be sent in situations that require intervention.
- ▶ Animations, device types and event voices can be changed by users.
- ▶ In case of fire and fault events; e-mail and/or sms report can be sent to the authorized people at determined periods or instantly.
- ▶ The communication between PC and fire alarm system can be done via RS-232 or RS-485 and for longer distance GPRS or TCP-IP ports can be used.
- ▶ All events records can be monitored, filtered, printed, back-up with date/time information by Supervisor.
- ▶ 10 different users can be defined.
- ▶ With Mobile Supervisor software fire detection system can be monitored and controlled via Android telephones.





Architectural site plans of the building are defined to the Supervisor graphic software program as maps and all the fire alarm system devices are shown on these maps.

In case of any event, the event location map is shown on screen and detailed alarm information is provided to the user for exact determination.



Can be integrated to all kinds of CCTV systems, (all brands and models) with remote monitoring software.

In determined areas present CCTV cameras can be monitored manually or automatically through automation ability.

With ONVIF integration, fire detection system can be software integrated and operate with all ONVIF based security systems.



Possibility to communicate with other panels telephone modules and firefighter's telephone units. Also, conference call can be done all telephones within network.

## MODELS

| Product code | Description                                                                                                        |
|--------------|--------------------------------------------------------------------------------------------------------------------|
| ML-1632.1    | Supervisor graphic monitoring and control software integrated with environmental systems and managing of 1 panel   |
| ML-1632.4    | Supervisor graphic monitoring and control software integrated with environmental systems and managing of 4 panels  |
| ML-1632.8    | Supervisor graphic monitoring and control software integrated with environmental systems and managing of 8 panels  |
| ML-1632.16   | Supervisor graphic monitoring and control software integrated with environmental systems and managing of 16 panels |
| ML-1632.32   | Supervisor graphic monitoring and control software integrated with environmental systems and managing of 32 panels |
| ML-1632.64   | Supervisor graphic monitoring and control software integrated with environmental systems and managing of 64 panels |

## MODELS

| Product code | Description                                                                                                          |
|--------------|----------------------------------------------------------------------------------------------------------------------|
| ML-1632.128  | Supervisor graphic monitoring and control software integrated with environmental systems and managing of 128 panels  |
| ML-1632.256  | Supervisor graphic monitoring and control software integrated with environmental systems and managing of 256 panels  |
| ML-1632.512  | Supervisor graphic monitoring and control software integrated with environmental systems and managing of 512 panels  |
| ML-1632.1024 | Supervisor graphic monitoring and control software integrated with environmental systems and managing of 1024 panels |
| ML-1660      | USB dongle for supervisor software (USB Dongle)                                                                      |
| ML-1641      | Superviewer desktop for 1 user                                                                                       |
| ML-1641.10   | Superviewer desktop for 10 users                                                                                     |
| ML-1641.25   | Superviewer desktop for 25 users                                                                                     |
| ML-1641.50   | Superviewer desktop for 50 users                                                                                     |
| ML-1643      | Superviewer Android software 1 user                                                                                  |
| ML-1643.10   | Superviewer Android software 10 users                                                                                |

## MODELS

| Product code | Description                           |
|--------------|---------------------------------------|
| ML-1643.25   | Superviewer Android software 25 users |
| ML-1643.50   | Superviewer Android software 50 users |
| ML-1646      | Superviewer Graph desktop 1 user      |
| ML-1646.10   | Superviewer Graph desktop 10 users    |
| ML-1646.25   | Superviewer Graph desktop 25 users    |
| ML-1646.50   | Superviewer Graph desktop 50 users    |

## Automatic or Manual Control Abilities...

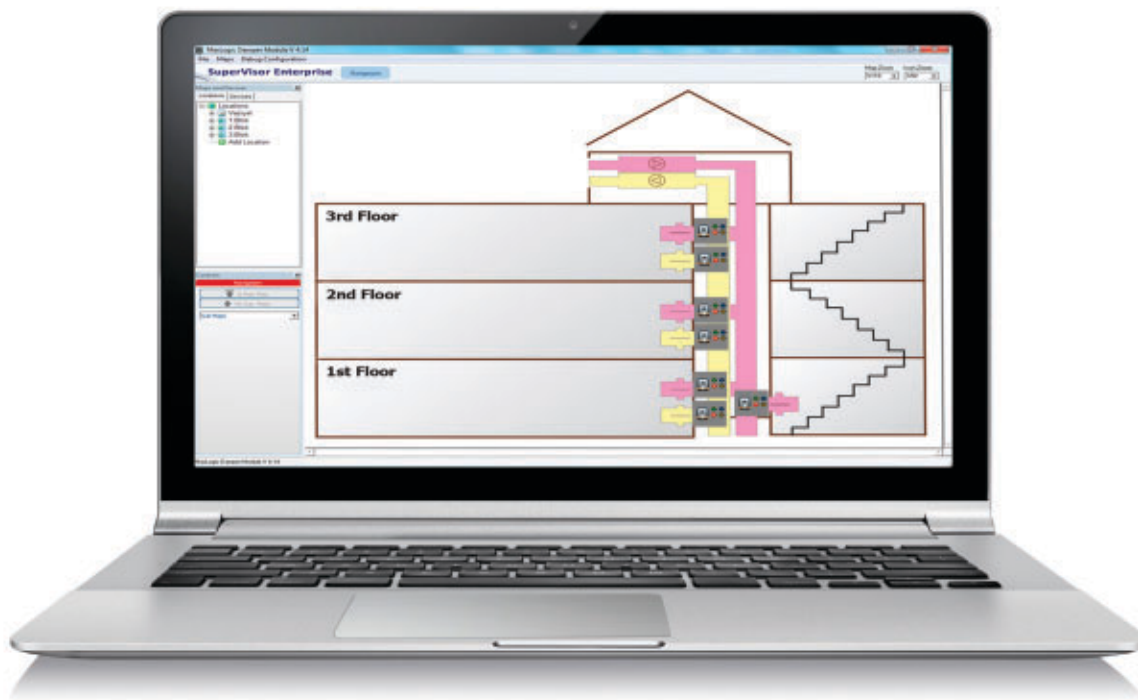
# Smoke Damper Control Panels

Smoke damper control panels, offering high performance with the VIP communication protocols, can be programmed to operate in cause-affect scenarios, can be used to achieve fire automation.



ML-1355  
Intelligent addressable (8 inputs / 8 outputs)  
smoke damper control panel with toggle  
switch card

- ▶ Compatible with EN-54-18
- ▶ Smoke dampers position information, ON/OFF/FAULT status can be displayed by LED indicators
- ▶ 5 degree position of the status switch shows 'OFF' and 85 degree shows 'ON'
- ▶ Easy programing by Loop manager
- ▶ Dampers positions that closed and open situations are excluded, Fault messaged can be sent by LED indicators end of the determined timeout
- ▶ Intelligent addressable smoke damper control panel can be controlled via Enterprise automatically or manually



# Supervisor Enterprise Software For Monitoring and Managing

Supervisor Enterprise; is a specially designed software which shows fire, fault and damper control panel events and makes possible to monitor and control and also can be operated via windows operating PC.

- ▶ 1000 different intelligent addressable fire detection system can be monitored and managed with a single supervisor.
- ▶ Projects on computer can transfer to system as maps (all picture formats).
- ▶ Determined areas can be monitored graphical and it provides to exchange between maps in case of fire and fault events.
- ▶ All events records can be monitored, filtered, printed, back-up with date/time information by Supervisor.
- ▶ Supervisor can integrate to All CCTV systems (all brands and models) with remote monitoring software.
- ▶ Present CCTV camera images can be monitored automatically or manually through Automation abilities.
- ▶ In case of fire and fault events; e-mail and/or sms report can be sent to the authorized people at determined periods or instantly.
- ▶ The communication between PC and fire alarm system can be done via RS-232 or RS-485 and for longer distance GPRS or TCP-IP ports can be used.
- ▶ Remote commands can be sent in situations that require intervention.

## SOFTWARE MODELS

| Product code | Description                                                                      |
|--------------|----------------------------------------------------------------------------------|
| ML-1631      | Supervisor Enterprise graphic monitoring and managing software, for single panel |
| ML-1631.4    | Supervisor Enterprise graphic monitoring and managing software, for 4 panels     |
| ML-1631.8    | Supervisor Enterprise graphic monitoring and managing software, for 8 panels     |
| ML-1631.16   | Supervisor Enterprise graphic monitoring and managing software, for 16 panels    |
| ML-1631.32   | Supervisor Enterprise graphic monitoring and managing software, for 32 panels    |
| ML-1631.64   | Supervisor Enterprise graphic monitoring and managing software, for 64 panels    |

## SOFTWARE MODELS

| Product code | Description                                    |
|--------------|------------------------------------------------|
| ML-1642      | Superviewer Enterprise desktop, 1 user         |
| ML-1642.10   | Superviewer Enterprise desktop, 10 users       |
| ML-1642.25   | Superviewer Enterprise desktop, 25 users       |
| ML-1642.50   | Superviewer Enterprise desktop, 50 users       |
| ML-1647      | Superviewer Enterprise Graph desktop, 1 user   |
| ML-1647.10   | Superviewer Enterprise Graph desktop, 10 users |
| ML-1647.25   | Superviewer Enterprise Graph desktop, 25 users |
| ML-1647.50   | Superviewer Enterprise Graph desktop, 50 users |

## SMOKE DAMPER MODELS

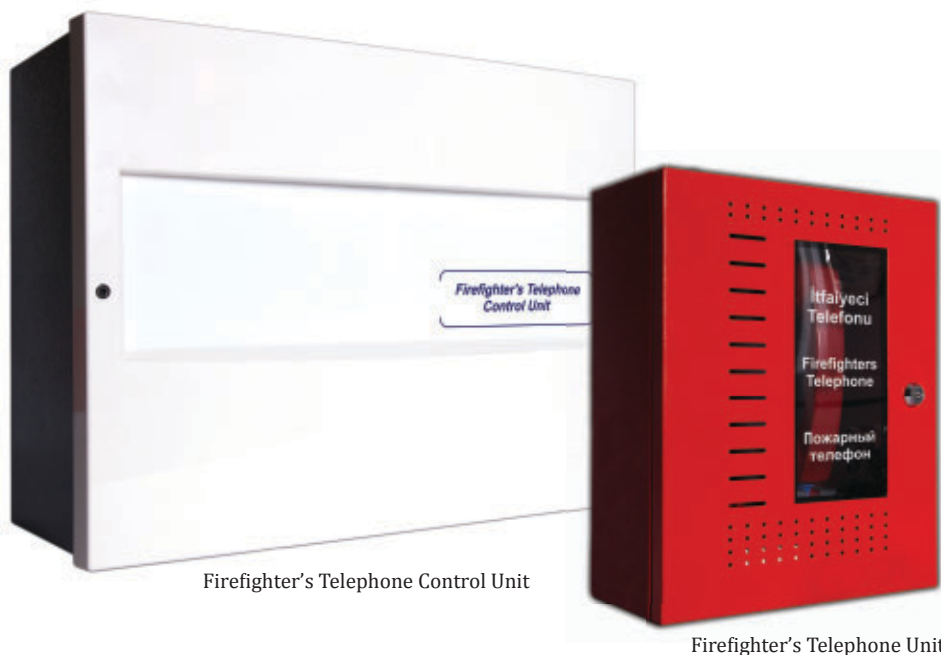
| Product code | Description                                                                                     |
|--------------|-------------------------------------------------------------------------------------------------|
| ML-1353      | 16 Way I/O Panel (8 input / 8 output)                                                           |
| ML-1354      | Intelligent Addressable System Smoke Damper Control Panel, 16 Way I/O Module                    |
| ML-1355      | Intelligent Addressable System Smoke Damper Control Panel with Toggle Switch, 16 Way I/O Module |



## Safe and Fast Communication...

# Firefighter's Telephone Control Unit

Firefighter's telephone control unit; in case of an emergency, allows the communication of authorized people with the security center or other of firefighter's telephone units.

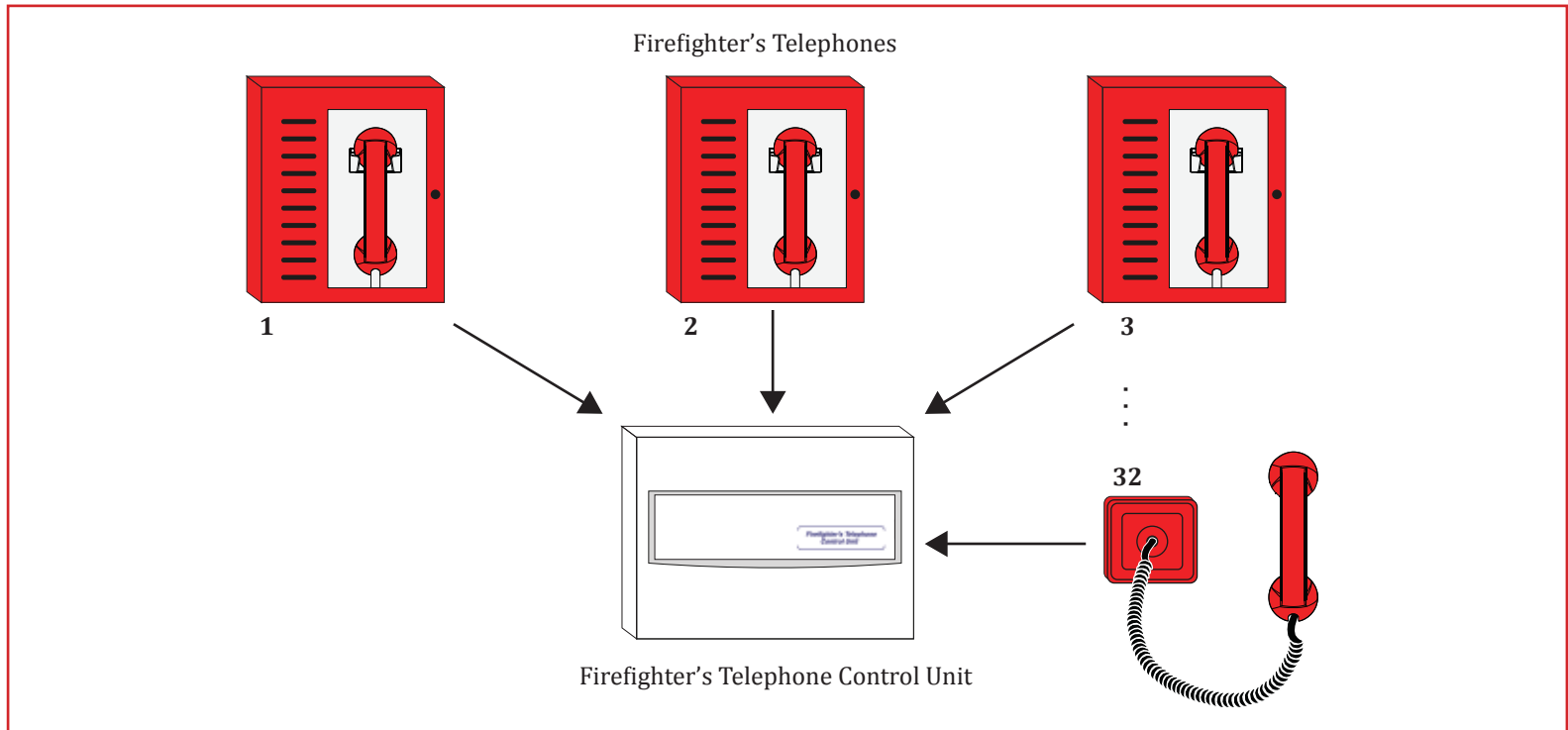


### Firefighter's Telephone Control Unit

Through Firefighter's telephone unit, no need to dial for calling the fire telephones on panels and security center of firefighter's telephones. When any user call the security center, other users can be involved automatically by picking-up the handset and conference call can be done without any intervention of operator.

### Firefighter's Telephone Unit

Firefighter's Telephone Unit can be applied in a different location from the panel and can be integrated into communication with the system.



In case of an emergency, lifting a handset of firefighter's telephone or inserting a portable firefighter's telephone handset in the socket and without the need of dialing any number automatically calls the security center by "hot line" feature.





## Announce / Alarm Matrix Panel

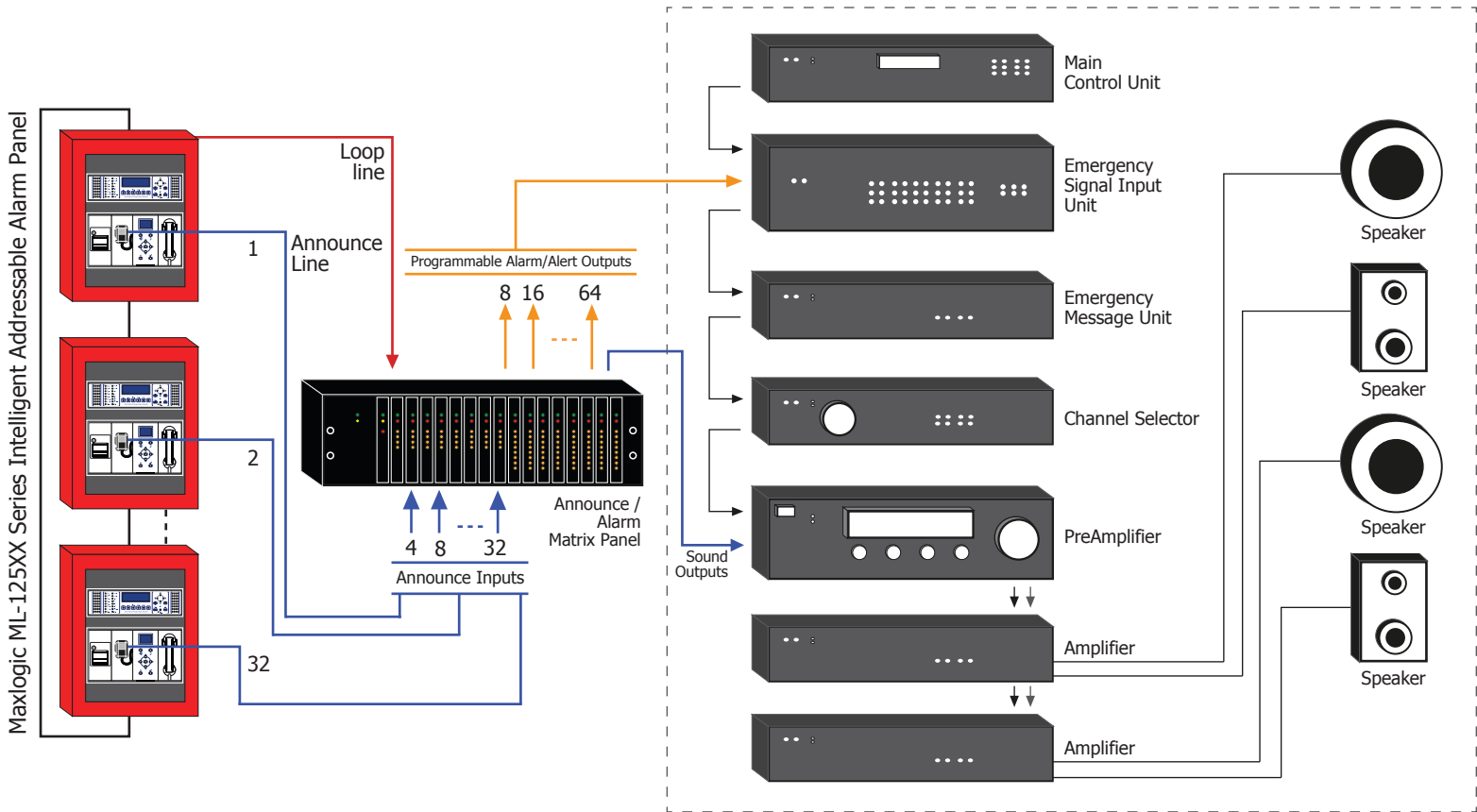
Announce / Alarm matrix panel provides the integration with announcement system.



ML-5020  
Maxlogic Announce / Alarm Matrix Panel,  
19", 3U Rack Structure

- ▶ Compatible with 19", 3U rack
- ▶ Modular structure expandable up to 16 modules
- ▶ Modules can be selected as announce microphone input and / or programmable alarm / warning output
- ▶ Up to 32 units of announce module connection inputs
- ▶ Ability perform announcement in 8 zone with the help of 60 announce microphone
- ▶ Possibility to perform announcement with pre-recorded messages in required zones
- ▶ Led indicators for communication and fault events
- ▶ LED indicators for active announce modules and active relay outputs
- ▶ Internal power supply

# Announce System



- ▶ Live announcement feature via present announce system to the determined areas by authorized people is provided with using internal announce module on Intelligent addressable fire panels.
- ▶ When fire and/or emergency situation occurs; with using Alarm/Alert output modules,it provides an automatic announce with pre-recorded messages or sound records via present announce system to the determined areas.

## MODELS

| Product code | Description                                                                                         |
|--------------|-----------------------------------------------------------------------------------------------------|
| ML-5020      | Maxlogic announce/alarm matrix panel, 19", 3U Rack, announce power module and internal power output |
| ML-5020.AI   | Maxlogic announce input module                                                                      |
| ML-5020.PO   | Maxlogic programmable alarm/alert output module                                                     |
| MLY-5001     | Maxlogic announce/alarm matrix blank panel                                                          |

## Managing and Control in Your Hands...

# Intelligent Addressable System Input / Output Modules

Monitor and control modules, offering high performance by the VIP communication protocol, can be configured to operate in cause-effect scenario and fire automation can be performed.



ML-1373.SCI  
Intelligent Addressable System  
2/1 I/O Module  
(2 Inputs / 1 Output),  
with Short Circuit Isolator

ML-1366.SCI  
Intelligent Addressable System  
4/2 I/O Module (4 Inputs / 2 Outputs),  
with short circuit isolator

- ▶ Compatible with EN 54-17 and EN 54-18
- ▶ Optional short circuit isolator models
- ▶ LED-indicated activation, fault, and communication status
- ▶ Easy mounting with rail system
- ▶ 2/1 I/O module with 2 zone monitoring inputs  
1 sounder output option or 2 dry contact monitoring inputs  
1 dry contact relay output option
- ▶ 4/2 I/O module with 4 dry contact monitoring inputs  
2 dry contact relay outputs option

# Dry Contact Input / Output Modules

Modules are loop-powered and can be programmed to operate in cause-effect scenarios. External systems can be monitored by switch monitor inputs and can be controlled by relay outputs within fire automation.

Switch monitor inputs are used for monitoring external dry switch relay output. Switches have normally open and normally close operate features. In case of changing of switch position, event type that is detected by panels can be determined by users.

The module has one relay output with voltage-free, bipolar contact max. load of 30V DC, 1A. The relay can operate as normally open or normally close.

The models have SCI, internal short circuit isolator, in case of short circuit events, isolates the line.

# Energy Input / Output Modules

Energy Input/Output needs 18V-30V DC external power supply and that can be monitored in case of fault event and programmable for cause-effect scenarios.

Zone monitoring Inputs are used to monitor the conventional type detectors and manual call points. In case of change of Input status, events type that are detected by panel can be determined by users.

24V DC 500mA sounder output can be activated within fire automation as required. 24V DC 500mA sounder output can be arranged according to event type that is determined by users.

With SCI models, internal short circuit isolator, in case of short circuit events, isolates the line.

## MODELS

| Product Code | Description                                                                                                |
|--------------|------------------------------------------------------------------------------------------------------------|
| ML-1361      | Maxlogic intelligent addressable system relay control module, 1-way output                                 |
| ML-1361.SCI  | Maxlogic intelligent addressable system relay control module, 1-way output, with short circuit isolator    |
| ML-1362      | Maxlogic intelligent addressable system switch monitor module, 1-way input                                 |
| ML-1362.SCI  | Maxlogic intelligent addressable system switch monitor module, 1-way input, with short circuit isolator    |
| ML-1363      | Maxlogic intelligent addressable system 2/1 I/O module (2 inputs / 1 output)                               |
| ML-1363.SCI  | Maxlogic intelligent addressable system 2/1 I/O module (2 inputs / 1 output), with short circuit isolator  |
| ML-1366      | Maxlogic intelligent addressable system 4/2 I/O module (4 inputs / 2 outputs)                              |
| ML-1366.SCI  | Maxlogic intelligent addressable system 4/2 I/O module (4 inputs / 2 outputs), with short circuit isolator |
| ML-0320      | Maxlogic intelligent addressable system 2-I/O module protection box                                        |

## MODELS

| Product Code | Description                                                                                               |
|--------------|-----------------------------------------------------------------------------------------------------------|
| ML-1371      | Maxlogic intelligent addressable system sounder control module, 1-way output                              |
| ML-1371.SCI  | Maxlogic intelligent addressable system sounder control module, 1-way output, with short circuit isolator |
| ML-1372      | Maxlogic intelligent addressable system zone monitor module, 1-way input                                  |
| ML-1372.SCI  | Maxlogic intelligent addressable system zone monitor module, 1-way input, with short circuit isolator     |
| ML-1373      | Maxlogic intelligent addressable system 2/1 I/O module (2 inputs / 1 output)                              |
| ML-1373.SCI  | Maxlogic intelligent addressable system 2/1 I/O module (2 inputs / 1 output), with short circuit isolator |
| ML-1380      | Maxlogic intelligent addressable system short circuit isolator module                                     |
| ML-1390      | Maxlogic intelligent addressable system short circuit isolator module                                     |
| ML-0320      | Maxlogic intelligent addressable system 2-I/O module protection box                                       |

## Aesthetic and Technologic Genius...



# Intelligent Addressable Loop-powered Base Sounder / Sounder Beacon / Mounting Base c/w Buzzer

Maxlogic Intelligent addressable loop-powered base sounder is designed for indoor use, in case of fire, user is warned by audible and visible warnings. Sounders are microprocessor controlled and outputs can be programmed to work within cause-effect scenarios. Mounting base c/w buzzer, in case of detector alarm, the internal buzzer of mounting base is activated.

ML-1101  
Addressable loop powered  
base sounder

ML-1102  
Addressable loop-powered  
base sounder beacon

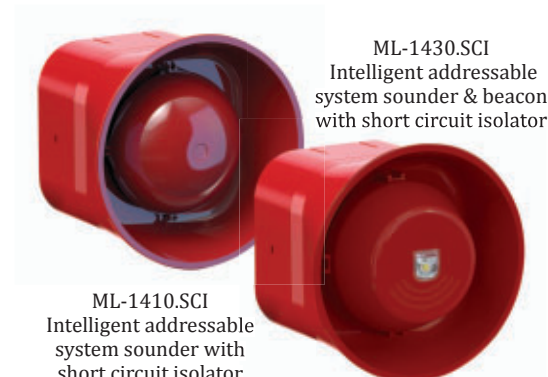


ML-0141  
Mounting base c/w Buzzer

- Compatible with EN 54-3 and EN 54-23
- Specially designed for indoor use
- Loop-powered
- 85 dB sound output, 8 tones and volume control
- It can be used as a stand alone sounder/sounder beacon
- Its primary application is to be installed under intelligent analogue addressable smoke and heat detectors to provide both detection and alarm at the same point, reducing wiring and installation costs

# Intelligent Addressable System Sounder / Beacon / Sounder & Beacon / Weatherproof

Intelligent addressable sounder, beacon, sounder & beacon / weatherproof; designed for intelligent addressable system, with full VIP communication protocol compatibility.



- Compatible with EN 54-3 / EN 54-23
- Short circuit isolator models compatible with EN 54-17
- 'Soft' addressable by use of address programmer
- Easily programmable by Loop Manager
- Able to integrate into the cause effect scenarios
- Stable sensitivity
- Suitable for outdoor use
- Compatible with all addressable fire alarm control panels
- PCB protected by metal case
- Aesthetic design
- Production by surface mount technology
- Adjustable different 32 voice tone options
- IP33 / IP65 high protection class options

## MODELS

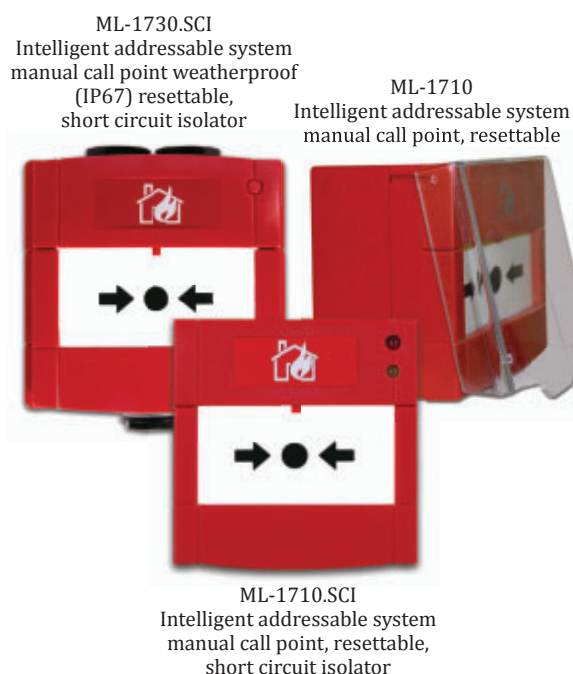
| Product Code | Description                                                                         |
|--------------|-------------------------------------------------------------------------------------|
| ML-1410      | Intelligent addressable system sounder                                              |
| ML-1410.SCI  | Intelligent addressable system sounder with short circuit isolator                  |
| ML-1420      | Intelligent addressable system beacon                                               |
| ML-1420.SCI  | Intelligent addressable system beacon with short circuit isolator                   |
| ML-1430      | Intelligent addressable system sounder & beacon                                     |
| ML-1430.SCI  | Intelligent addressable system sounder & beacon with short circuit isolator         |
| ML-1440      | Intelligent addressable system sounder, weatherproof (IP33)                         |
| ML-1440.SCI  | Intelligent addressable system sounder, weatherproof (IP33), short circuit isolator |
| ML-1450      | Intelligent addressable system beacon, weatherproof (IP33)                          |
| ML-1450.SCI  | Intelligent addressable system beacon, weatherproof (IP33), short circuit isolator  |

## MODELS

| Product Code | Description                                                                                  |
|--------------|----------------------------------------------------------------------------------------------|
| ML-1460      | Intelligent addressable system sounder & beacon, weatherproof (IP33)                         |
| ML-1460.SCI  | Intelligent addressable system sounder & beacon, weatherproof (IP33), short circuit isolator |
| ML-1470      | Intelligent addressable system sounder, weatherproof (IP65)                                  |
| ML-1470.SCI  | Intelligent addressable system sounder, weatherproof (IP65), short circuit isolator          |
| ML-1480      | Intelligent addressable system beacon, weatherproof (IP65)                                   |
| ML-1480.SCI  | Intelligent addressable system beacon, weatherproof (IP65), short circuit isolator           |
| ML-1490      | Intelligent addressable system sounder & beacon, weatherproof (IP65)                         |
| ML-1490.SCI  | Intelligent addressable system sounder & beacon, weatherproof (IP65), short circuit isolator |

# Intelligent Addressable Manual Call Point

Design according to the EN 54-11 standards, with easy to install and easy to use features and useful accessories, the addressable fire alarm manual call points offer advanced and stable working performance.



- Compatible with EN 54-11 / EN 54-17
- Surface mount or flush mount
- Compatible with all addressable fire alarm control panels
- Microprocessor controlled
- Short circuit isolator models
- Transparent protection cover
- Easy resettable
- Stable sensitivity
- Communication interrupt for fast fire alarm detection in 1.5 sec.
- Production by surface mount technology

## MODELS

| Product Code | Description                                  |
|--------------|----------------------------------------------|
| ML-1101      | Addressable loop powered base sounder        |
| ML-1102      | Addressable loop-powered base sounder beacon |
| ML-0141      | Mounting base c/w buzzer                     |

## MODELS

| Product Code | Description                                                                                               |
|--------------|-----------------------------------------------------------------------------------------------------------|
| ML-1710      | Intelligent addressable system manual call point, resettable                                              |
| ML-1710.SCI  | Intelligent addressable system manual call point, resettable, short circuit isolator                      |
| ML-1730      | Intelligent addressable system manual call point, weatherproof (IP67), resettable                         |
| ML-1730.SCI  | Intelligent addressable system manual call point, weatherproof (IP67), resettable, short circuit isolator |
| ML-0710      | Transparent protection cover                                                                              |

## Intelligent and Powerful...

# SMPS Power Supply

SMPS power supplies have a stable sensitivity, produced by using surface mount technology and compatible with all Maxlogic & Mavigard series products.



ML-05110  
SMPS Power Supply

- ▶ Compatible with EN 54-4
- ▶ In the case of electrical failure, power is supplied from battery, which are automatically recharged
- ▶ Automatic battery charge circuit  
Battery charge voltage according to ambient temp.
- ▶ Dry contact relay output for faults
- ▶ Earth fault, battery fault (charge fault, low voltage fault, no battery connection fault), power and fuse faults are monitored on the power supply unit
- ▶ In case of electrical failure, supply from battery and protected from short circuit and over current
- ▶ Battery temperature measurement and automatically arrangement for battery charge voltage

### MODELS

#### Product Code Description

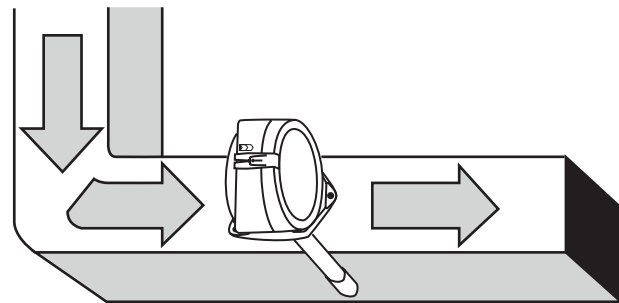
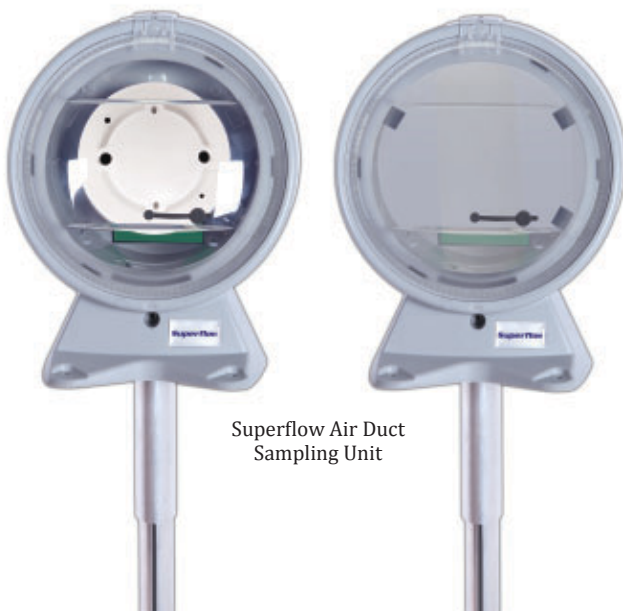
|          |                        |
|----------|------------------------|
| ML-0515  | SMPS Power Supply, 5A  |
| ML-05110 | SMPS Power Supply, 10A |

**Fast  
and Stable  
Detection...**

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## Superflow Air Duct Sampling Unit

Superflow air duct sampling unit is used to detect smoke in ventilation ducts and combines a smoke detector and an adaptor system where both venturi pipe and housing are specially designed for optimum airflow through the smoke detector.



- ▶ The system fulfills all the requirements for safe fire detection with airflow speeds from 0.2 m/s to 20 m/s
- ▶ Air sampling tube: Material aluminum and the length is 0.6 m (dia)
- ▶ Foolproof pipe mounting, cannot be fitted incorrectly
- ▶ Test hole in cover
- ▶ ABS constructed with IP 54 rating

## Excellent Compatibility of Hardware and Software...

# Intelligent Addressable Fire Detectors

Intelligent addressable fire detectors, offering high performance by the VIP communication protocol, provide a high level of reliability as a result of stable detection feature.

- ▶ Compatible with EN 54-5, EN 54-7 and EN 54-17
- ▶ Microprocessor controlled
- ▶ Twin fire alarm indicators for 360° viewing
- ▶ Remote indicator output
- ▶ Optional short circuit isolator module
- ▶ Easy mounting and dismounting
- ▶ RY LED glows Red in case of fire, Yellow in case of pollution and fault conditions
- ▶ Compatible with ML-0121 series surface mounting back box
- ▶ Compatible with ML-0150 series recessed mounting base





#### Intelligent Addressable Heat Detector, with short circuit isolator

Heat detector detects temperature change by temperature-sensitive thermistors. The detector can work either as a fixed heat or rate of rise heat detector. Through Short circuit isolator, the line is isolated in case of short circuit.



#### Intelligent Addressable Optical Smoke Detector, with short circuit isolator

Photo electric smoke detectors utilize the IR light scatter principle. The chamber is designed for protection from dust, insects and other external interferences.

Through short circuit isolator, the line is isolated in case of short circuit.



#### Intelligent Addressable Multisensor Detector, With Short circuit isolator

The multi-sensor detectors have a photo-electric smoke detection chamber and a temperature-sensitive thermistor.

The chamber is designed for protection from dust, insects and other external interferences. Through short circuit isolator, the line is isolated in case of short circuit.

#### MODELS

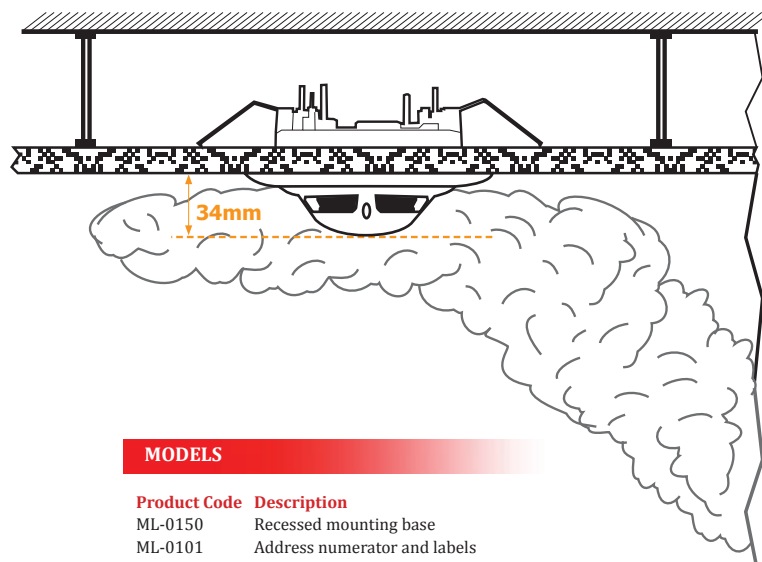
| Product Code | Description                                         |
|--------------|-----------------------------------------------------|
| ML-1110      | Optical smoke detector                              |
| ML-1130      | Heat detector                                       |
| ML-1130BS    | Class BS heat detector with mounting base           |
| ML-1140      | Multi-sensor detector                               |
| ML-1110.SCI  | Optical smoke detector, with short circuit isolator |
| ML-1130.SCI  | Heat detector, with short circuit isolator          |
| ML-1140.SCI  | Multi-sensor detector, with short circuit isolator  |
| ML-0140      | Detector mounting base                              |
| ML-0141      | Mounting base c/w buzzer                            |
| ML-0144      | Detector mounting base (B class)                    |
| ML-0150      | Recessed mounting base                              |
| ML-0121      | Weatherproof surface mounting back box              |

## Stable Detection and Architectural Integrity...

# Recessed Mounting Base & Address Numerators

Recessed mounting base is used for mounting conventional and addressable detectors on false ceilings of various types (like metal, plaster etc.). The base allows creating more aesthetic architectural applications. Bases are produced from ABS and have the same color as detectors. Bases are mounted into ceiling material with minimum two clamps and stainless steel screws.

They have an ergonomic design and easy in implementing. In usual ceilings where placed addressable devices, they can be installed directly under the mounting bases of the detectors, and in false ceilings - under the false ceiling unit. Address numerators are designed to provide great convenience in finding the right device, in case of fault, malfunction, contamination, etc. Compatible with all mounting bases of MaxLogic / MaviGuard detectors and ceiling additions.



### MODELS

| Product Code | Description                                       |
|--------------|---------------------------------------------------|
| ML-0150      | Recessed mounting base                            |
| ML-0101      | Address numerator and labels<br>(for 127 devices) |
| MLY-0102     | Address numerator and label<br>(for 1 device)     |

**Designed  
for Harsh  
Environment  
Conditions...**

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## Surface Mounting Back Box



ML-0121  
Surface Mounting  
Back Box

Surface mounting back box is designed for Protection from harsh weather conditions.

### MODELS

| Product Code | Description               |
|--------------|---------------------------|
| ML-0121      | Surface mounting back box |

# No More Explosion and Poisoning...



## Gas Detectors

User-friendly Mavigard gas detectors provide wide applicability and reliable gas detection.



Gas Detectors

- ▶ Compatible with EN 50194-1
- ▶ System normal operation condition, faults on detector and gas alarm events can be followed via LEDs
- ▶ LEDs and buzzer can be tested via test button
- ▶ 5 years sensor life under normal operating conditions
- ▶ Max. 127 gas detectors per loop
- ▶ Relay output models that work with fire and security alarm control panels
- ▶ Models with external 24V DC / 230V AC power supply
- ▶ Can be directly connected to loop
- ▶ Built-in buzzer



### LPG and Natural-gas detectors

LPG (buthane + propane) and natural-gas (methane) are hidrocarbon derivative explosive gases. The detectors respond audible and visually, before the leakage reaches %10 LEL (lower explosive limit).

### Carbon-Monoxide Detectors

Carbon-monoxide is a toxic gas with explosion risk. The detectors respond audible and visual, when the gas concentration reaches to 50 ppm (parts per million).



### Surface mounting back box

Surface mounting back box is compatible with all Maxlogic and Mavigard single field control modules and gas detectors.



### TGDR Series Ceiling Type Natural-Gas Detectors

Ceiling type gas detectors have same size and appearance with smoke detectors. Ceiling type gas detectors require mounting base.

#### ADDRESSABLE GAS DETECTORS

| Product code   | Description                                                                |
|----------------|----------------------------------------------------------------------------|
| AGD-1224L.VIP  | Intelligent addressable LPG detector, 24V DC                               |
| AGD-1224M.VIP  | Intelligent addressable natural-gas (methane) detector, 24V DC             |
| AGD-1224EC.VIP | Intelligent addressable carbon-monoxide detector, 24V DC, electrochemical  |
| AGD-220L.VIP   | Intelligent addressable LPG detector, 230V AC                              |
| AGD-220M.VIP   | Intelligent addressable natural-gas (methane) detector, 230V AC            |
| AGD-220EC.VIP  | Intelligent addressable carbon-monoxide detector, 230V DC, electrochemical |
| ML-0120        | Surface mounting back box                                                  |

#### CONVENTIONAL GAS DETECTORS

| Product code | Description                                                                       |
|--------------|-----------------------------------------------------------------------------------|
| GDR-1224L    | LPG (buthane+propane) detector, 12/24V DC with relay                              |
| GDR-1224M    | Methane (natural gas) detector, 12/24V DC with relay                              |
| GDR-220L     | LPG (buthane+propane) detector, 230V AC with relay                                |
| GDR-220M     | Methane (natural gas) detector, 230V AC with relay                                |
| GD2R-12EC    | Carbon monoxide gas detector (CO), 12V DC, 2-level alarm output, electrochemical  |
| GD2R-24EC    | Carbon monoxide gas detector (CO), 24V DC, 2-level alarm output, electrochemical  |
| GD2R-220EC   | Carbon monoxide gas detector (CO), 230V AC, 2-level alarm output, electrochemical |
| TGDR-1224M   | Methane (natural gas) detector, 12/24V DC with relay                              |



**Keep Your  
Eyes On The  
Heights...**

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## Intelligent Addressable Beam Type Smoke Detectors

Designed with surface mounting Technologies to detect smoke through infrared beams in places that have high and wide areas (warehouse, malls, etc.)



Beam Type Smoke Detector  
Receiver



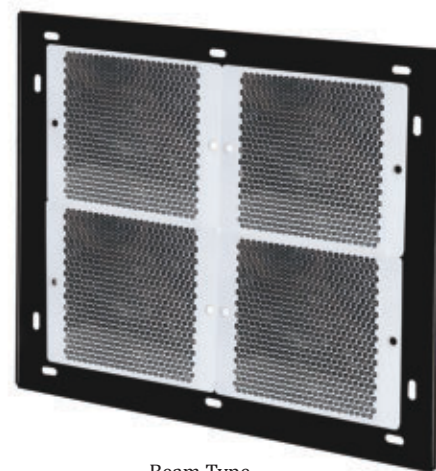
Beam Type Smoke Detector  
Transmitter



Reflective Beam Type Smoke Detector



Beam Type  
Smoke Detector Reflector  
with 1 reflector



Beam Type  
Smoke Detector Reflector  
with 4 reflector

Maxlogic beam type smoke detector consists of 2 parts; receiver and transmitter. They should be installed as facing each other between the distance of 5-100m.

Reflective beam type smoke detector consists 2 parts as a receiver/transmitter unit and reflector. Unit and reflector should be mounted as facing each other, distance is 5-35 meters with 1 reflector and 5-50 meters with using 4 reflectors.

Detectors detect the light obstruction percentage caused by the smoke created by fire.

- ▶ Intelligent addressable and conventional models
- ▶ Short circuit isolator models
- ▶ Receiver-Transmitter or reflective models
- ▶ 2 digit numerical screen for easy commissioning and setup

- ▶ With beam type smoke detector 1500 m<sup>2</sup>, with reflective beam type smoke detector 750 m<sup>2</sup> protection area
- ▶ Easy programming buttons
- ▶ LED indicators for power, fire and fault conditions

- ▶ Ability to adjust itself to polluted and dirty environment
- ▶ Three sensitivity levels can be easily adjusted
- ▶ Continuous control of communication against the faults

#### DETECTOR MODELS

| Product code | Description                                                                                                  |
|--------------|--------------------------------------------------------------------------------------------------------------|
| ML-1170      | Intelligent addressable beam type smoke detector (included receiver-transmitter)                             |
| ML-1170.SCI  | Intelligent addressable beam type smoke detector (included receiver-transmitter) with short circuit isolator |
| ML-1173      | Intelligent addressable reflective beam type smoke detector                                                  |
| ML-1173.SCI  | Intelligent addressable reflective beam type smoke detector, with short circuit isolator                     |
| ML-2170      | Conventional beam type smoke detector (receiver and transmitter is included)                                 |
| ML-2173      | Conventional reflector beam type smoke detector                                                              |
| ML-0171      | Beam type smoke detector reflector, with 1 reflector                                                         |
| ML-0174      | Beam type smoke detector reflector, with 4 reflector                                                         |

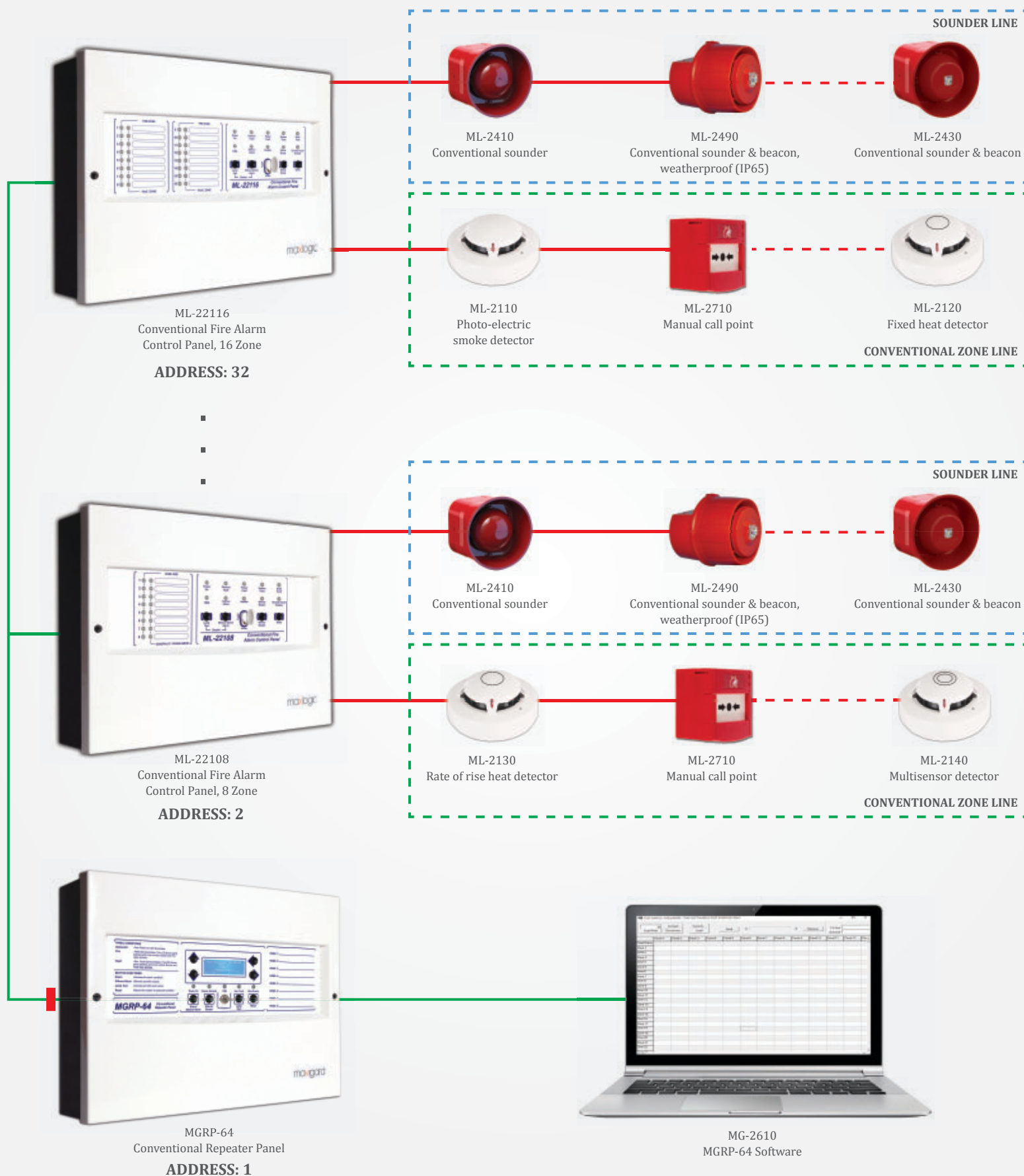


## Conventional System That Can Work In a Network...

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# Conventional Fire Detection and Alarm System

- ▶ Ability to monitor multi panels with single repeater panel through Network
- ▶ Compatible with standard all conventional fire detectors and call points
- ▶ Optional zone capacity according to application
- ▶ 32 detectors or MCP capacity for each zone
- ▶ Supervised zone and sounder lines controlled against short circuit and open circuit
- ▶ Application specific solutions via optional modules
- ▶ Easy to use with few buttons on the front panel
- ▶ All LED indicators can be tested with one button
- ▶ Aesthetic design
- ▶ PCB protection against to humidity and corrosion
- ▶ Easy to install and user friendly
- ▶ Microprocessor control
- ▶ Surface mount production technology



- Fire and fault are monitored through zone LEDs and piezoelectric buzzer
- Sounder, fault and fire relay outputs
- Zones can be tested with one-man, through zone test feature
- Specific zones and/or sounder outputs can be disabled through zone disable and sounder disable features
- Stable sensitivity
- Protection from electromagnetic interferences

## Reliable and Expandable Structure...

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# Conventional Fire Alarm Control Panels

Designed to provide economical solutions for small and medium applications with modern exterior design and SMT (Surface Mount Technology) production technology.



ML-2228  
Conventional  
Fire Alarm Panel, 8 Zone

- Compatible with EN 54-2 and EN 54-4
- 2, 4 and 8 zones
- 1 sounder output, fire and fault relay outputs
- Fire and fault events can be monitored via zone fire LEDs, zone fault LEDs and piezoelectric buzzer
- User friendly with few button on front of the panel
- Stable sensitivity
- All LEDs can be tested via one button
- Zonal testing feature with one person
- Determined zones and/or sounder output can be disabled via Disable zone and disable sounder function
- Easy entrance for cable from up and back of panel
- Surface mounting technology
- Aesthetic design

# Conventional Fire Alarm Control Panels

The ML-221XX series conventional fire alarm control panels are designed to provide economical solutions for medium and big applications with modern exterior design and Surface mount technology production technology.



ML-22116  
Conventional  
Fire Alarm Panel, 16 Zone

- Compatible with EN 54-2 and EN 54-4
- 2, 4, 8 and 16 zones
- Up to 32 repeater panels and/or fire panels assembled into a network with using repeater panel
- 230V AC 50 Hz power supply input
- Delay can be assigned to zones and sounders
- Up to 1000 events log memory
- Relay module 8-way (provides zonal relay output)
- Sounder module 8-way (provides zonal sounder output)
- Panel status can be monitored via PC. reset, alarm,alarm silence commands can be sent to panel, zone test and disable features can be performed
- Easy event log transfer by RS-485 port with computer program
- 2 sounder outputs, fire alarm and fault relay

| MODELS       |                                                |
|--------------|------------------------------------------------|
| Product code | Description                                    |
| ML-22102     | Conventional fire alarm control panel, 2 zone  |
| ML-22104     | Conventional fire alarm control panel, 4 zone  |
| ML-22108     | Conventional fire alarm control panel, 8 zone  |
| ML-22116     | Conventional fire alarm control panel, 16 zone |

| MODELS       |                                               |
|--------------|-----------------------------------------------|
| Product code | Description                                   |
| ML-2222      | Conventional fire alarm control panel, 2 zone |
| ML-2224      | Conventional fire alarm control panel, 4 zone |
| ML-2228      | Conventional fire alarm control panel, 8 zone |

| MODELS       |                             |
|--------------|-----------------------------|
| Product code | Description                 |
| MGRP-64      | Conventional repeater panel |
| MG-2610      | MGRP-64 software            |

## New Perspective at Detection Technology...

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# Conventional Fire Alarm Detectors

Ergonomic and user friendly conventional fire alarm detectors are designed for maximum protection with their stability and sensitivity.

- ▶ Compatible with EN 54-5 and EN 54-7 standards
- ▶ Twin LED indicators for 360° view
- ▶ Microprocessor controlled
- ▶ Compatible with ML-0140 series mounting base c/w relay
- ▶ Compatible with ML-0141 series mounting base c/w buzzer
- ▶ Remote indicator output
- ▶ Compatible with ML-0150 series recessed ceiling mounting back box
- ▶ Compatible with ML-0121 series surface mounting back box
- ▶ 2 pcs red LEDs (the light flashes continuously in case of fire-situation, the light flashes once per 8 second in case of normal-status, the light flashes twice per 8 second in case of fault-status)



### Detector Mounting Base

Compatible with Maxlogic conventional fire detectors.

Contact metals of ML-0140 mounting base have 301 quality and stainless type metals. These contacts are with clips in order to prevent intermittent contact.



### Detector Mounting Base c/w Buzzer

When the detector alarms, at the same time internal buzzer is activated. Compatible with all conventional system detectors.

The mounting base c/w Buzzer is powered from detector line.



#### Conventional Photo-Electric Smoke Detector

Photo-electric smoke detector has an infrared photoelectric smoke detection chamber which utilizes the infrared light scatter sensing principle. The detection chamber is protected from dust, insects and other external interferences.

#### Conventional combined heat detector

The detector can work either as a fixed heat or rate of rise heat detector. Fire alarm signal is generated in case of 30°C/min or higher heat rise and/or on reaching the threshold of 60°C.

#### Conventional Fixed Heat Detector

The fire alarm signal generated on reaching the threshold of 60°C. For special orders, fixed heat detectors with different threshold levels can also be manufactured.



#### Conventional Multi-sensor Detector

Multi-sensor has an infrared photoelectric smoke detection chamber utilizing the infrared light scatter sensing principle and a temperature-sensitive thermistor. The detection chamber is protected from dust, insects and other external interferences.

#### MODELS

| Product Code | Description                               |
|--------------|-------------------------------------------|
| ML-2110      | Optical smoke detector                    |
| ML-2120      | Fixed heat detector                       |
| ML-2130      | Rate of rise heat detector                |
| ML-2130BS    | Class BS heat detector with mounting base |
| ML-2140      | Multi-Sensor detector                     |
| ML-0140      | Detector mounting base                    |
| ML-0141      | Mounting base c/w buzzer                  |
| ML-0144      | Detector mounting base (B class)          |
| ML-0150      | Recessed mounting base                    |
| ML-0121      | Surface mounting back box                 |

**Perfect  
Compatibility  
between System  
and Accessories...**

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## Conventional Sounder / Sounder & Beacon, Conventional Sounder / Beacon / Sounder & Beacon, Weatherproof



### Conventional Sounder

Maxlogic series conventional sounders provide stable performance in indoor applications and are compatible with all conventional panels.

- ▶ Compatible with EN 54-3
- ▶ Surface mount or flush mount
- ▶ Adjustable different 32 voice tone options
- ▶ Low or high voice power control
- ▶ Microprocessor controlled



### Conventional Sounder & Beacon

Maxlogic series conventional sounder beacon generates audible and visual signal, in addition to these features.

- ▶ Compatible with EN 54-3 and EN 54-23
- ▶ Adjustable different 32 voice tone options
- ▶ Adjustable flash frequency and coverage area
- ▶ White, strong LED flasher



### Conventional Sounder, Beacon, Sounder & Beacon, Weatherproof

Maxlogic series conventional sounders are weather-proof audible warning devices and suitable for outdoor use.

- ▶ Compatible with EN 54-3 and EN 54-23
- ▶ Adjustable different 32 voice tone options
- ▶ Adjustable flash frequency and coverage area
- ▶ IP33 / IP65 high protection class options
- ▶ Suitable for outdoor use
- ▶ White, strong LED flasher

# Sounder Expansion Panel

Compatible with all Intelligent addressable and conventional panels.



ML-0314  
Sounder expansion panel

- Compatible with EN 54-18 and EN 54-4 standards
- 4 supervised sounder output, each are 1A, 24 V DC
- Sounder outputs are supervised and continuously monitor for open and short circuit
- Direct connection to addressable and conventional systems
- Continuous control against power supply failure
- Direct supply from the batteries when the power supply is cut
- Battery charge voltage is automatically adjusted according to ambient temperature

# Conventional Manual Call Points

Designed according to the EN 54-11 standards, with easy to install and easy to use features and useful accessories, the conventional fire alarm manual call points offer superior and stable working performance.



### Conventional Manual Call Point, Resettable

The MCP is activated by manual pressing on the flexible plastic cover. The switch, normally resting on flexible plastic cover, changes position and retains it until it is brought into its initial position.

- Easy resettable
- LED indicated activation
- Compatible with EN 54-11 standards
- Surface mount or flush mount
- Compatible with all conventional fire alarm panels
- Transparent protection cover



### Smoke Detector Tester / Sabre

Smoke detector tester is a functional testing product for ionization and optical smoke detectors.

- UL listed
- Non-flammable
- Non-toxic
- Easy to use
- Does not damage the detector
- High speed draft
- Doesn't damage plastic surface and internal structure
- No silicon content, ozone friendly with no CFCs

| MODELS       |                               |
|--------------|-------------------------------|
| Product code | Description                   |
| ML-2710      | Manual call point, resettable |
| ML-0710      | Transparent protection cover  |
| ML-0314      | Sounder expansion panel       |
| SMOKE        | Smoke detector tester / sabre |
| SABRE 01-001 |                               |

| MODELS       |                                                    |
|--------------|----------------------------------------------------|
| Product code | Description                                        |
| ML-2410      | Conventional sounder                               |
| ML-2420      | Conventional beacon                                |
| ML-2430      | Conventional sounder & beacon                      |
| ML-2440      | Conventional sounder, weatherproof (IP33)          |
| ML-2450      | Conventional beacon, weatherproof (IP33)           |
| ML-2460      | Conventional sounder & beacon, weatherproof (IP33) |
| ML-2470      | Conventional sounder, weatherproof (IP65)          |
| ML-2480      | Conventional beacon, weatherproof (IP65)           |
| ML-2490      | Conventional sounder & beacon, weatherproof (IP65) |

## The Right Choice for CO Detection and Automation...

### GD2R Series Gas Detector

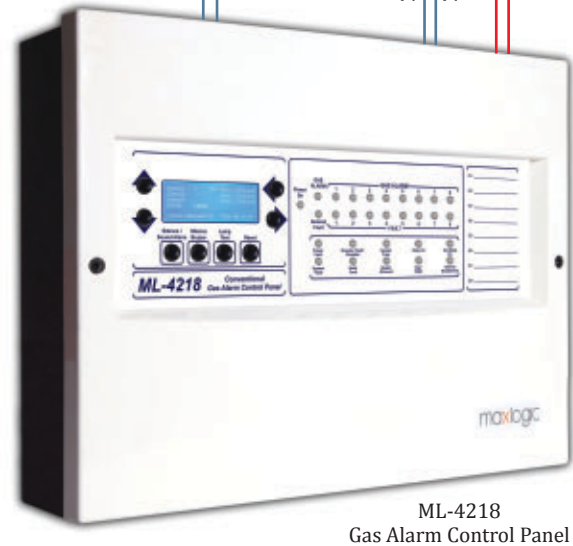
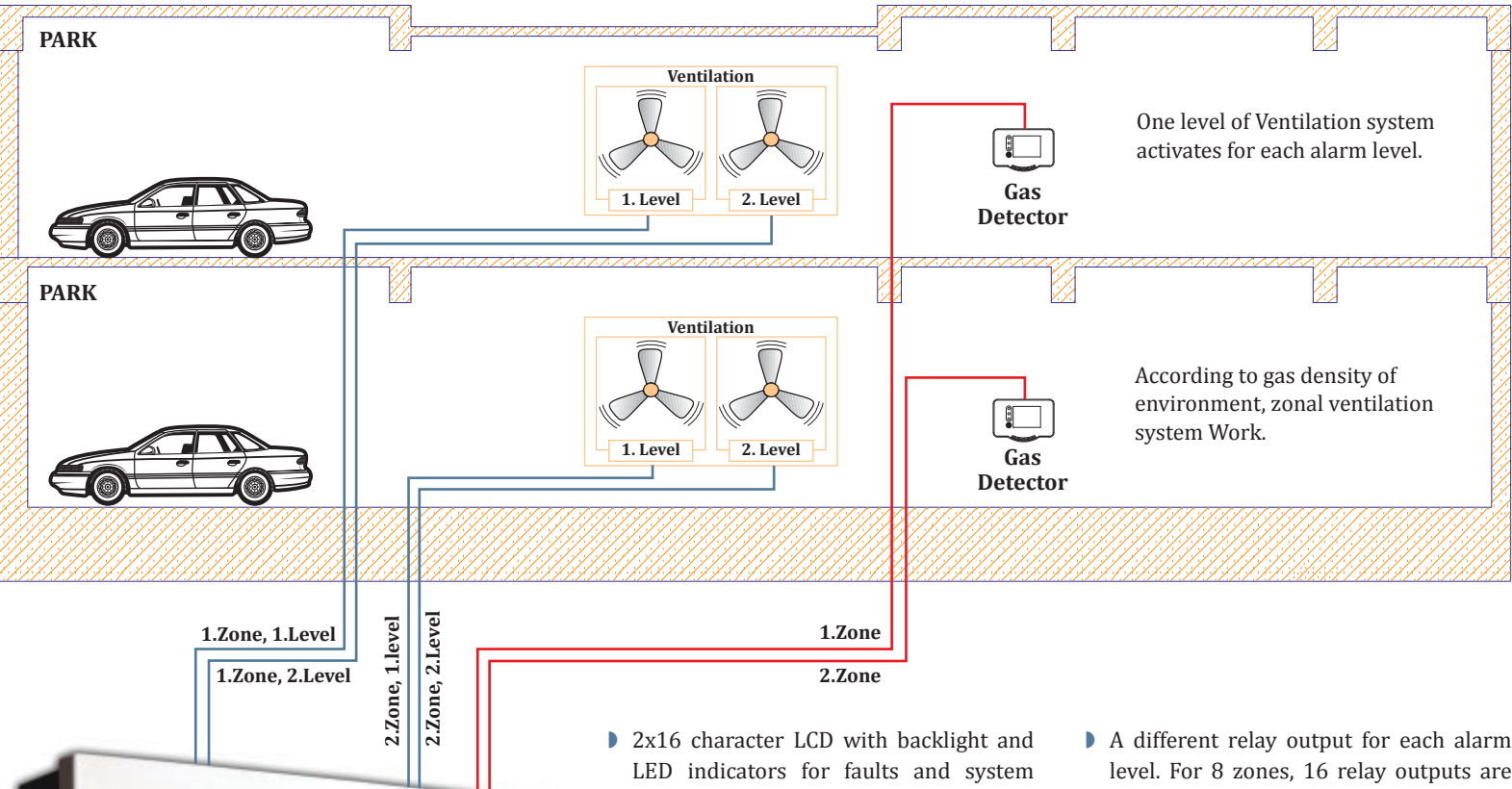


Conventional carbon-monoxide gas detectors detect gas leakage in closed areas like home, garage etc. Gas detectors with electrochemical sensor have stable sensitivity and high performance.

Gas detectors have 2 level threshold. When the gas in the ambient reaches 50ppm, the gas detector goes into 1st level alarm. If gas concentration reaches 200ppm, the gas detector goes into 2nd level alarm. When the gas concentration in the ambient reaches below 50 ppm, the gas detector automatically turns back to its normal operating condition.

# Conventional Gas Alarm Control Panel

Conventional Gas Alarm Control Panels, offering stable performance are produced by use of surface mount technology with modern exterior design and programmability.



ML-4218  
Gas Alarm Control Panel

- 2x16 character LCD with backlight and LED indicators for faults and system conditions.
- Possibility to easily use via few buttons on the panel
- Supervised conventional zone inputs and sounder outputs
- 2-level alarm that gas detectors detect can be shown
- 2 alarm relays (for alarm level 1 and 2) and 1 fault relay output for controlling other devices and sending signal to other systems
- Zones can be tested and disabled.
- Input delay can be assigned to zones
- A different relay output for each alarm level. For 8 zones, 16 relay outputs are available in total.
- The panel has two sounder outputs, each rated 24V DC 500 mA
- Adjustable sounder delay
- Password-protected Access levels
- Some features of panel can be controlled by remote control inputs. System can be switched into alarm and fault mode, alarm mode can be deactivated and system can be reset by using the remote control inputs.
- 8 zone inputs
- Configurable latching gas alarm outputs

| DETECTOR MODELS |                                                                                   |
|-----------------|-----------------------------------------------------------------------------------|
| Product Code    | Description                                                                       |
| GD2R-12EC       | Carbon monoxide gas detector (CO), 12V DC, 2-level alarm output, electrochemical  |
| GD2R-24EC       | Carbon monoxide gas detector (CO), 24V DC, 2-level alarm output, electrochemical  |
| GD2R-220EC      | Carbon monoxide gas detector (CO), 230V AC, 2-level alarm output, electrochemical |

| PANEL MODELS |               |
|--------------|---------------|
| Product Code | Zone Capacity |
| ML-4218      | 8             |

**Reliable Choice  
for Industrial  
Applications...**



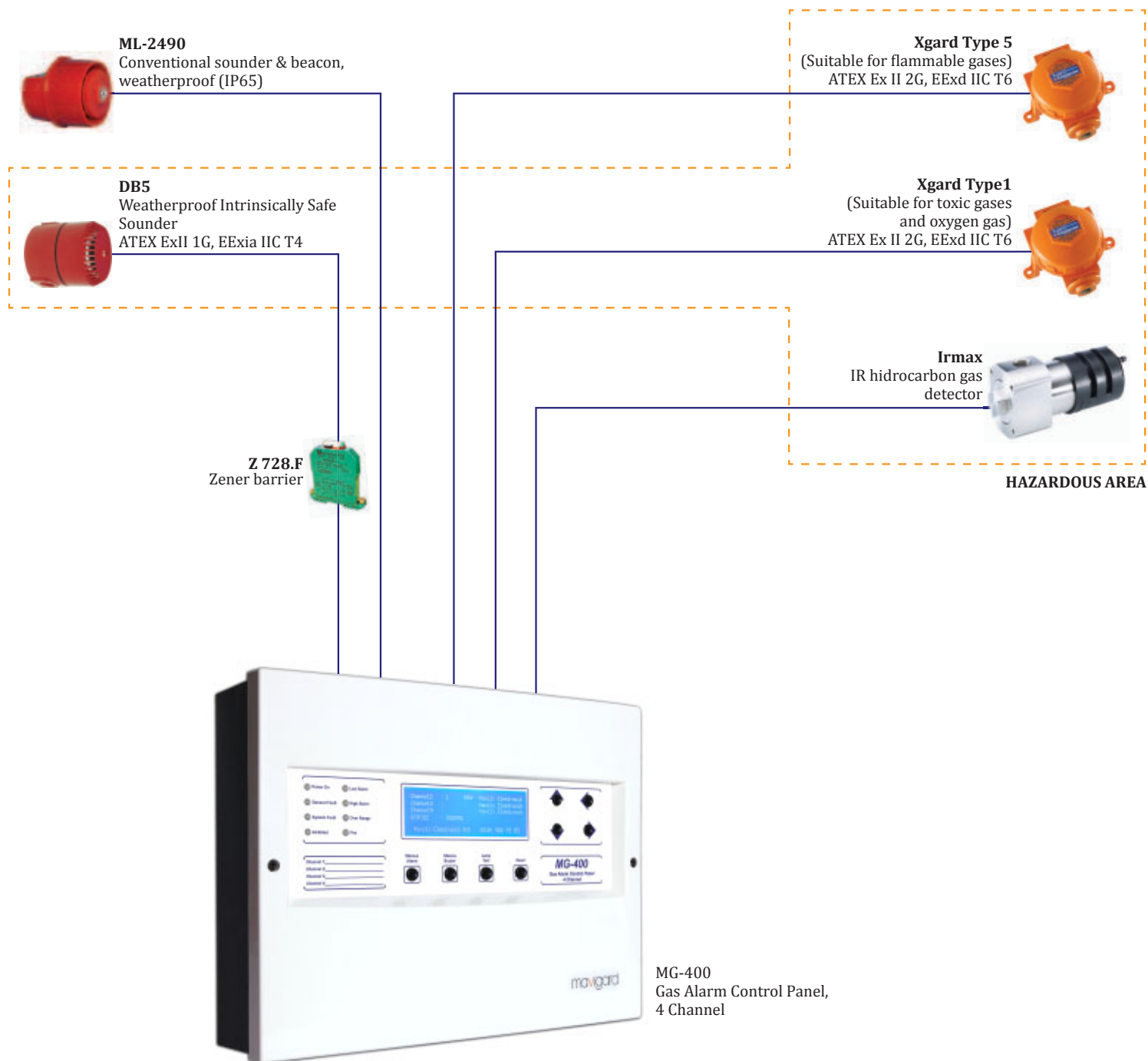
## Gas Alarm Control Panel, 4 Channel

The modern design panel, offering advanced programmability and high performance with its 4 channels, is widely applicable for industrial use. Panels offer many features to integrate to automations applications.



MG-400  
Gas Alarm Control Panel,  
4 Channel

- ▶ The panel has 4 channels, each capable of hosting 1 industrial type gas detector or 20 conventional fire detectors.
- ▶ Large graphic 240x64 pixels LCD with adjustable backlight displays system information, including gas detector measurements, alarms and faults.
- ▶ Adjustable high and low alarm thresholds
- ▶ Sending signals to different systems via high and low alarm relays, high level fault relay, and general fault relay



- Compatible with Industrial gas detectors and 4-20 mA converter
- Desired channels can be disabled, sounder outputs and relays can be tested, gas detectors can be zeroed and calibration can be done via panel.
- It is possible to enter zone location names for panels and detectors
- Channel measurement unit can be chosen from "%LEL", "PPB", "PPM", "%VOL" or "GAS"
- High and low alarm warnings can be selected according to ambient gas density.
- Latching/non-latching relay outputs
- Relays can be set as NO or NC
- Latching/non-latching sounder outputs
- Compatible with two and three wire detectors
- Sink and source operating selection for channels
- Password access and remote control for protection against unauthorized intervention

#### MODELS

| Product Code | Channel Capacity |
|--------------|------------------|
| MG-400       | 4                |

## Perfect Extinguishing Automation...

# Conventional Fire Extinguishing Control Panel

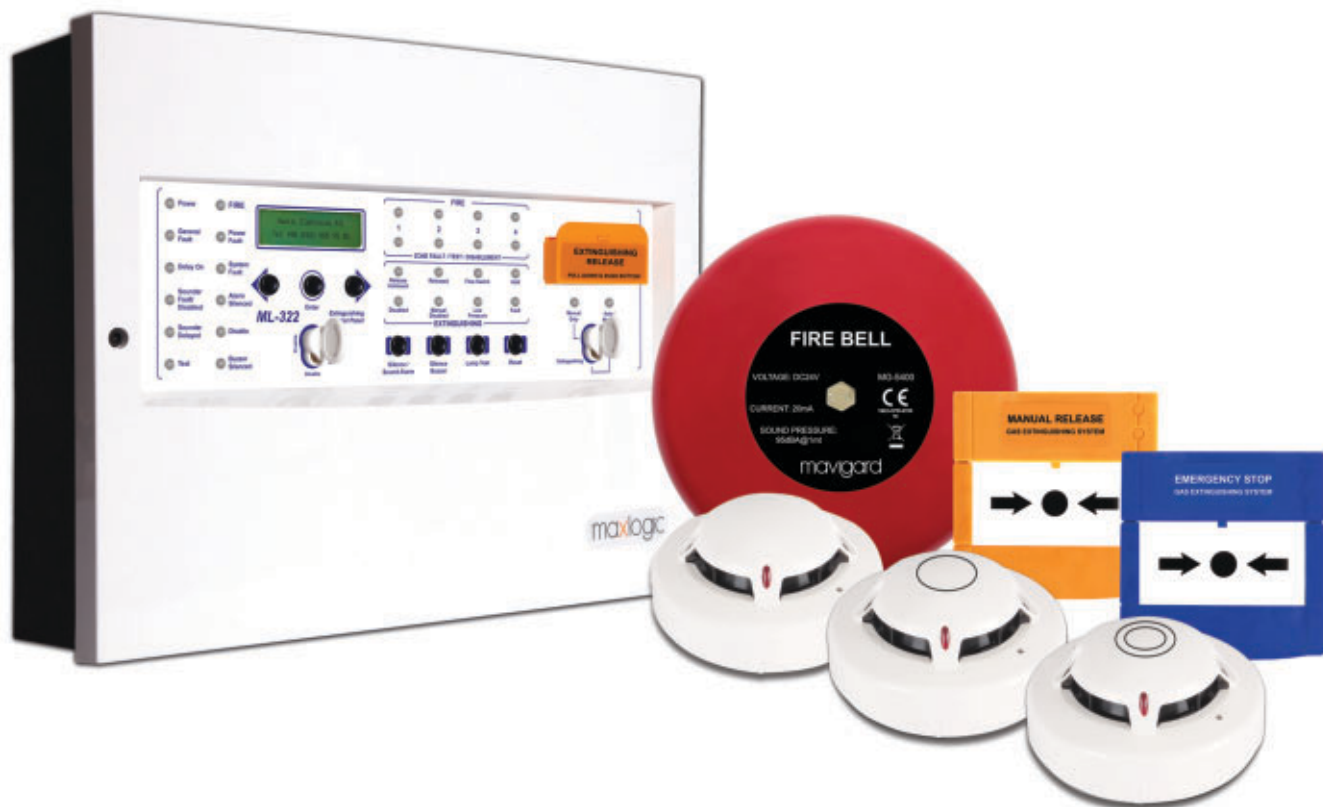
Conventional series fire extinguishing control panel operates on cross-zone principle, has 4 detection zones and one extinguishing release output which is programmable according to the zone requirements. Conventional extinguishing control panel is microprocessor controlled, offers high performance and can easily be integrated into all extinguishing projects.



ML-322  
Fire extinguishing control panel

ML-3313  
Extinguishing status indicator unit,  
with extinguishing status switch  
and releasing button

- Compatible with EN 12094-1, EN 54-2 and EN 54-4 standards
- 4 detection zones, 1 extinguishing zone
- Extinguishing-related front panel LEDs and LCD screen provide full system information
- Display of two warnings from two devices on the detection zones with fire zone LED
- Up to 8 pcs extinguishant condition indicator units can be connected to one pcs fire extinguishing panel



- ▶ Adjustable first level delay time to sounders
- ▶ Adjustable delay time to detection zones
- ▶ Configurable delay and extinguishing time
- ▶ Non-latching zone option
- ▶ Countdown clock until the starting of extinguishing
- ▶ Fire and fault LEDs for each detection zone
- ▶ Supervised zone detection inputs, extinguishing hold input, extinguishing abort input, extinguishing activation input, low pressure input.
- ▶ Real time clock
- ▶ Supervized extinguishing output, second level sounders, gas release output
- ▶ Extinguishing mode can be changed remotely with extinguishing status key input
- ▶ Fire and fault relays
- ▶ Dry contact relay output for fire and fault
- ▶ Dry or energized contact options for outputs
- ▶ Favorable structure for integration with mechanical systems
- ▶ Cross-zone operation can be selected to be active/passive via PC software
- ▶ Up to 1000 events log memory
- ▶ Event log can be monitored via PC software
- ▶ Sending event log via RS-232 to PC or printer
- ▶ There are two extinguishing operating types; automatic and manual or manual only
- ▶ Detection zones can be tested or disabled, 1. and 2. Level relay output, extinguishing output and extinguishing abort button can be disabled
- ▶ Inputs and outputs of panel, inputs and outputs of expansion module can be programmed via special PC software. Possibility of assigning gas active, remote alarm, remote reset and many more features to the inputs

#### PANEL MODELS

| Product code | Detection zone | Extinguishing zone |
|--------------|----------------|--------------------|
| ML-322       | 4              | 1                  |

#### ACCESSORIES

| Product code | Description                                                                                |
|--------------|--------------------------------------------------------------------------------------------|
| ML-3313      | Extinguishing status indicator unit, with extinguishing status switch and releasing button |
| ML-3610      | Ex Manager software for ML-322                                                             |
| ML-2110      | Conventional photo-electric smoke detector                                                 |
| ML-2120      | Conventional fixed heat detector                                                           |
| ML-2130      | Conventional rate of rise heat detector                                                    |
| ML-2140      | Conventional multisensor detector                                                          |
| MG-5400      | Electronic alarm bell                                                                      |
| ML-2710.MR   | Extinguishant manual release button                                                        |
| ML-2710.ES   | Extinguishant emergency stop button                                                        |



# Our Marine Type Systems in International Waters...

## LOYD Certified Marine Type Fire Alarm Control System

All marine products have, **TURK LLOYD** (SOLAS 74 and FSS) and **IACS** (International Association of Classification Societies Ltd.) member “Russian Maritime Register of Shipping” type approval certificate.

### Intelligent Addressable System Features

- ▶ Modular structure from 1 loop to 8 loops
- ▶ Model option with thermal printer
- ▶ Microprocessor controlled
- ▶ 1000 event log memory
- ▶ Loop polling in 7.5 sec
- ▶ Communication interrupt for fast fire alarm detection in 1.5 sec
- ▶ Up to 1000 cause-effect scenarios can be created for each panel

### Conventional System Features

- ▶ 2, 4, 8 and 16 zone capacity
- ▶ Microprocessor controlled
- ▶ Stable sensitivity
- ▶ PCB protection against to humidity and corrosion

### Fire Extinguishing Control Panel

- ▶ 4 detection zones, 1 extinguishing zone
- ▶ Extinguishing-related front panel LEDs and LCD screen provide full system information
- ▶ Delay and extinguishing time can be adjusted
- ▶ Solenoid valve or actuator can be connected to the extinguishing output

## Marine Series Products

The products in this section have the Russian or / and Turkish Loyd type approval certificate.

“Russian Maritime Register of Shipping / Type Approval Certificate” is acceptable for all of IACS members’ vessels.

\* Marked products have the Turkish Loyd certificate as well.

### INTELLIGENT ADDRESSABLE FIRE ALARM CONTROL PANELS AND REPEATER PANELS

| Product code | Description                                          |
|--------------|------------------------------------------------------|
| ML-1230.N/M  | Fire Alarm panel, 0 loop (*)(**)                     |
| ML-1231/M    | Fire alarm panel, 1 loops, 127 address               |
| ML-1232/M    | Fire alarm panel, 2 loops, 254 address (*)           |
| ML-1233/M    | Fire alarm panel, 3 loops, 381 address               |
| ML-1234/M    | Fire alarm panel, 4 loops, 508 address (*)           |
| ML-1235/M    | Fire alarm panel, 5 loops, 635 address               |
| ML-1236/M    | Fire alarm panel, 6 loops, 762 address (*)           |
| ML-1237/M    | Fire alarm panel, 7 loops, 889 address               |
| ML-1238/M    | Fire alarm panel, 8 loops, 1016 address (*)          |
| ML-1241.P/M  | Fire alarm panel, 1 loops, 127 address, printer      |
| ML-1242.P/M  | Fire alarm panel, 2 loops, 254 address, printer (*)  |
| ML-1243.P/M  | Fire alarm panel, 3 loops, 381 address, printer      |
| ML-1244.P/M  | Fire alarm panel, 4 loops, 508 address, printer (*)  |
| ML-1245.P/M  | Fire alarm panel, 5 loops, 635 address, printer      |
| ML-1246.P/M  | Fire alarm panel, 6 loops, 762 address, printer (*)  |
| ML-1247.P/M  | Fire alarm panel, 7 loops, 889 address, printer      |
| ML-1248.P/M  | Fire alarm panel, 8 loops, 1016 address, printer (*) |

(\*\*) “0” (zero) loop models of fire alarm panels work as repeater.

### INTELLIGENT ADDRESSABLE SYSTEM FIRE DETECTORS

| Product code  | Description                                               |
|---------------|-----------------------------------------------------------|
| MG-9100/M     | Photo-electric smoke detector (*)                         |
| MG-9300/M     | Heat detector (*)                                         |
| MG-9400/M     | Multisensor detector (*)                                  |
| ML-1110/M     | Photo-electric smoke detector (*)                         |
| ML-1130/M     | Heat detector (*)                                         |
| ML-1130BS/M   | Class BS heat detector with mounting base                 |
| ML-1140/M     | Multisensor detector (*)                                  |
| ML-1110.SCI/M | Photo-electric smoke detector, short circuit isolator (*) |
| ML-1130.SCI/M | Heat detector, short circuit isolator (*)                 |
| ML-1140.SCI/M | Multisensor detector, short circuit isolator (*)          |

### CONVENTIONAL SYSTEM SPMS POWER SUPPLIES

| Product code | Description                |
|--------------|----------------------------|
| ML-0515/M    | SMPS power supply, 5A (*)  |
| ML-05110/M   | SMPS power supply, 10A (*) |

### INTELLIGENT ADDRESSABLE SYSTEM ACCESSORIES

| Product code | Description                                                                                |
|--------------|--------------------------------------------------------------------------------------------|
| MG-3510/M    | Mounting base for detectors, white                                                         |
| MG-3600/M    | Accessories for fire detectors recessed mounting base, white (excl. detector and base) (*) |
| ML-1101/M    | Loop powered base sounder (*)                                                              |
| ML-1102/M    | Loop powered base sounder & beacon (*)                                                     |
| ML-0140/M    | Mounting base (*)                                                                          |
| ML-0141/M    | Mounting base c/w Buzzer                                                                   |
| ML-0144/M    | Mounting base (B class) (*)                                                                |
| MG-3700/M    | Weatherproof back box for fire detectors (*)                                               |
| ML-0121/M    | Weatherproof surface mounting back box (*)                                                 |
| ML-0120/M    | Surface mounting back box                                                                  |

### ANNOUNCE / ALARM MATRIX PANEL AND 7” TFT MIMIC PANEL

| Product code | Description                                           |
|--------------|-------------------------------------------------------|
| ML-5020/M    | Announce / Alarm matrix panel, 19", 3U rack structure |
| ML-1280/M    | 7" TFT mimic panel                                    |

### INTELLIGENT ADDRESSABLE SYSTEM INPUT/OUTPUT MODULES

| Product code  | Description                                                            |
|---------------|------------------------------------------------------------------------|
| ML-1361/M     | Relay control module, 1-way output (*)                                 |
| ML-1361.SCI/M | Relay control module, 1-way output with short circuit isolator (*)     |
| ML-1362/M     | Switch monitor module, 1-way input (*)                                 |
| ML-1362.SCI/M | Switch monitor module, 1-way input with short circuit isolator (*)     |
| ML-1363/M     | 2/1 I/O module (2 inputs / 1 output) (*)                               |
| ML-1363.SCI/M | 2/1 I/O module (2 inputs / 1 output) with short circuit isolator (*)   |
| ML-1366/M     | 4/2 I/O module (4 inputs / 2 outputs) (*)                              |
| ML-1366.SCI/M | 4/2 I/O module (4 inputs / 2 outputs) with short circuit isolator (*)  |
| ML-1371/M     | Sounder control module, 1-way output (*)                               |
| ML-1371.SCI/M | Sounder control module, 1-way output with short circuit isolator (*)   |
| ML-1372/M     | Zone monitor module, 1-way input (*)                                   |
| ML-1372.SCI/M | Zone monitor module, 1-way input with short circuit isolator (*)       |
| ML-1373/M     | 3-way I/O Module (2 inputs / 1 output) (*)                             |
| ML-1373.SCI/M | 3-way I/O Module (2 inputs / 1 output) with short circuit isolator (*) |
| ML-1380/M     | Short circuit isolator (*)                                             |
| ML-1390/M     | Short circuit isolator (*)                                             |
| MG-6700/M     | Relay control module, 250V, 8A (*)                                     |

### CONVENTIONAL SYSTEM FIRE DETECTORS

| Product code | Description                                                          |
|--------------|----------------------------------------------------------------------|
| MGR-2100/M   | Photo-electric smoke detector, with relay output, 12V DC (*)         |
| MGR-2300/M   | Combined heat (rate of rise) detector, with relay output, 12V DC (*) |
| MGR-2400/M   | Fixed heat detector, with relay output, 12V DC (*)                   |
| MGR-2500/M   | Multisensor detector, with relay output, 12V DC (*)                  |
| ML-2110/M    | Photo-electric smoke detector (*)                                    |
| ML-2120/M    | Fixed heat detector (*)                                              |
| ML-2130/M    | Rate of rise heat detector (*)                                       |
| ML-2130BS/M  | Class BS heat detector with mounting base                            |
| ML-2140/M    | Multisensor detector (*)                                             |

### CONVENTIONAL SYSTEM ACCESSORIES

| Product code | Description                                                              |
|--------------|--------------------------------------------------------------------------|
| MG-3550/M    | Detector mounting base (for MGR series) (*)                              |
| MG-3600/M    | Recessed mounting base for detector, white (excl. Detector and base) (*) |
| ML-0140/M    | Detector mounting base (*)                                               |
| ML-0144/M    | Detector mounting base (B class) (*)                                     |
| MG-3700/M    | Weatherproof back box for fire detectors (*)                             |
| ML-0121/M    | Surface mounting back box (*)                                            |

### INTELLIGENT ADDRESSABLE SYSTEM SMOKE DAMPER CONTROL PANEL

| Product code | Description                                                          |
|--------------|----------------------------------------------------------------------|
| ML-1353/M    | 16 way I/O Panel (*)                                                 |
| ML-1354/M    | Smoke damper control panel, 16 way I/O module (*)                    |
| ML-1355/M    | Smoke damper control panel with toggle switch, 16 way I/O module (*) |

### INTELLIGENT ADDRESSABLE SYSTEM GCU (GATEWAY CONTROL UNIT) PANEL

| Product code | Description                            |
|--------------|----------------------------------------|
| ML-1207.C/M  | GCU Panel, TCP/IP module included      |
| ML-1207.G/M  | GCU Panel, GPRS module included        |
| ML-1207.K/M  | GCU Panel, RS232/RS485 module included |

### INTELLIGENT ADDRESSABLE SYSTEM BEAM TYPE SMOKE DETECTORS

| Product code  | Description                                                                               |
|---------------|-------------------------------------------------------------------------------------------|
| ML-1170/M     | Beam type smoke detector (included receiver-transmitter) (*)                              |
| ML-1170.SCI/M | Beam type smoke detector, with short circuit isolator (included receiver-transmitter) (*) |
| ML-1173/M     | Reflective beam type smoke detector (*)                                                   |
| ML-1173.SCI/M | Reflective beam type smoke detector, with short circuit isolator (*)                      |

### CONVENTIONAL SYSTEM ACCESSORIES

| Product code | Description                                            |
|--------------|--------------------------------------------------------|
| ML-2410/M    | Conventional sounder (*)                               |
| ML-2420/M    | Conventional beacon (*)                                |
| ML-2430/M    | Conventional sounder & beacon (*)                      |
| ML-2440/M    | Conventional sounder, weatherproof (IP33) (*)          |
| ML-2450/M    | Conventional beacon, weatherproof (IP33) (*)           |
| ML-2460/M    | Conventional sounder & beacon, weatherproof (IP33) (*) |
| ML-2470/M    | Conventional sounder, weatherproof (IP65) (*)          |
| ML-2480/M    | Conventional beacon, weatherproof (IP65) (*)           |
| ML-2490/M    | Conventional sounder & beacon, weatherproof (IP65) (*) |
| MG-5400/M    | Electronic alarm bell (*)                              |
| ML-2710/M    | Conventional manual call point, resettable (*)         |

### CONVENTIONAL SYSTEM BEAM TYPE SMOKE DETECTORS

| Product code | Description                                                         |
|--------------|---------------------------------------------------------------------|
| ML-2170/M    | Beam type smoke detector (receiver and transmitter is included) (*) |
| ML-2173/M    | Reflector beam type smoke detector (*)                              |

### INTELLIGENT ADDRESSABLE SYSTEM ACCESSORIES

| Product code  | Description                                                                                      |
|---------------|--------------------------------------------------------------------------------------------------|
| ML-1410/M     | Intelligent addressable system sounder (*)                                                       |
| ML-1410.SCI/M | Intelligent addressable system sounder with short circuit isolator (*)                           |
| ML-1420/M     | Intelligent addressable system beacon (*)                                                        |
| ML-1420.SCI/M | Intelligent addressable system beacon with short circuit isolator (*)                            |
| ML-1430/M     | Intelligent addressable system sounder & beacon (*)                                              |
| ML-1430.SCI/M | Intelligent addressable system sounder & beacon with short circuit isolator (*)                  |
| ML-1440/M     | Intelligent addressable system sounder, weatherproof (IP33) (*)                                  |
| ML-1440.SCI/M | Intelligent addressable system sounder, weatherproof (IP33), short circuit isolator (*)          |
| ML-1450/M     | Intelligent addressable system beacon, weatherproof (IP33) (*)                                   |
| ML-1450.SCI/M | Intelligent addressable system beacon, weatherproof (IP33), short circuit isolator (*)           |
| ML-1460/M     | Intelligent addressable system sounder & beacon, weatherproof (IP33) (*)                         |
| ML-1460.SCI/M | Intelligent addressable system sounder & beacon, weatherproof (IP33), short circuit isolator (*) |
| ML-1470/M     | Intelligent addressable system sounder, weatherproof (IP65) (*)                                  |
| ML-1470.SCI/M | Intelligent addressable system sounder, weatherproof (IP65), short circuit isolator (*)          |
| ML-1480/M     | Intelligent addressable system beacon, weatherproof (IP65) (*)                                   |
| ML-1480.SCI/M | Intelligent addressable system beacon, weatherproof (IP65), short circuit isolator (*)           |
| ML-1490/M     | Intelligent addressable system sounder & beacon, weatherproof (IP65) (*)                         |
| ML-1490.SCI/M | Intelligent addressable system sounder & beacon, weatherproof (IP65), short circuit isolator (*) |
| ML-1710/M     | Manual call point, resettable (*)                                                                |
| ML-1730/M     | Manual call point weatherproof (IP67), resettable (*)                                            |
| ML-1710.SCI/M | Manual call point, resettable, short circuit isolator (*)                                        |
| ML-1730.SCI/M | Manual call point weatherproof (IP67), resettable, short circuit isolator (*)                    |

### CONVENTIONAL SYSTEM FIRE ALARM CONTROL PANEL

| Product code | Description                                |
|--------------|--------------------------------------------|
| ML-22102/M   | Conventional fire alarm panel, 2 zone (*)  |
| ML-22104/M   | Conventional fire alarm panel, 4 zone (*)  |
| ML-22108/M   | Conventional fire alarm panel, 8 zone (*)  |
| ML-22116/M   | Conventional fire alarm panel, 16 zone (*) |
| MGRP-64/M    | Conventional repeater panel (*)            |
| ML-0314/M    | Sounder expansion panel                    |

### FIRE EXTINGUISHING CONTROL PANEL

| Product code | Description                                                                                                    |
|--------------|----------------------------------------------------------------------------------------------------------------|
| ML-322/M     | Conventional fire extinguishing control panel 4 detection zones, 1 extinguishing area, manual release inc. (*) |
| ML-3313/M    | Extinguishing status indicator unit, with extinguishing status switch and releasing button (*)                 |
| MG-400/M     | Gas alarm control panel, 4 channel                                                                             |
| ML-2710.MR/M | Extinguishant manual release button (*)                                                                        |
| ML-2710.ES/M | Extinguishant emergency stop button (*)                                                                        |
| MG-5400/M    | Electronic alarm bell (*)                                                                                      |

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