Generating Confidence

Mavili Elektronik Tic. ve San. A.S., one of the leading companies in the field of fire and gas detection systems, continues “generating confidence” with the administration mentality of “customer deserves the best quality and service”. Since 1987, Mavili has been following the developing technology in the first row. Principally, Mavili actualizes its unwavering customer satisfaction policy not only by its high qualified production process, but also by novelties in design as well as sales and after services. Mavili has continued working in its new factory, which is 5000 square meters, since 2005. The company which is improving continuously its service network infrastructure, has offices in Ankara, İzmir, Antalya and Moscow. Export to more then 53 countries and different regions including Russia, Kazakhstan, Turkmenistan, Oman, Bahrain, Central Africa.

Mavili continues on manufacturing high quality products, and maintaining services by its dynamic staff. More than 100 people composed of technicians, and engineers are working hard for customers satisfaction. As a proof of Mavili’s effort on satisfying customer, Mavili is the first company in the world, who received the certificate of ISO 9001:2008 from LPCB (Loss Prevention Certification Board), world’s most prestigious organization. Mavili’s investments on quality are rewarded with certificates, approvals and user licences; intelligent analog addressable system fire detectors received EN 54-5 and EN 54-7 certificate from LPCB. Most of the products of Mavili have TS EN 54, TSE, SSPB (Russian Fire Security Certification System), GOST (Russian Governmental Standard) certificates and CE sign according to 89/336/EEC EMC directive. Besides, products have Kazakhstan, Oman, and Bahrain Civil Defence approval. Also, Mavigard series gas detectors are approved by Russia Ecology, Technology, and Atom Energy Department. Within the scope of ISO 9001:2008 quality management system, Mavili provides free technical training for its distributors and clients about installation of products, maintenance, easy fix methods and system design. Participants, who accomplish the training, receive training certificate. Mavili maintains services like project design, technical specification or interpretation of already existing technical specification. Furthermore, engaging the installed system, test, technical and maintenance services are provided.

As a result of more than 30000 worldwide applications including schools, hospitals, dormitories, trade centers, factories, depots, residents, military establishments, petrochemical plants, dwellings, public buildings; Mavili is proud of “Generating Confidence”. 

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www.mavili.com.tr
Certificates and Approvals

Certificates: The ISO 9001:2008 Quality Management System that Mavili Elektronik Ticaret Ve Sanayi A.S. has been audited and conformed by LPCB. Mavili Elektronik is the first company who has received the first ISO:9001:2008 certificate from LPCB in all over the world. * Mavigard intelligent analogue addressable detectors have passed the tests and inspections conducted by LPCB (Loss Prevention Certification Board) and proved that Mavigard intelligent analogue addressable detectors are eligible to receive EN 54-5 and EN 54-7 certificates. * Mavili Elektronik has been approved EN ISO 9001:2000 Standard by SWEDAC (Swedish Board for Accreditation and Conformity Assessment) accredited TURK LOYDU. * Mavigard Harezmic series analogue addressable fire alarm control panels, fire detectors and manual call points; SD64+ series conventional fire alarm control panels, MG/MGR-2000 series fire detectors (standard and with relay output) and manual call points are EN 54 certified. * All Mavigard analogue addressable and conventional fire detectors are EMC-CE (Electromagnetic Compatibility) certified by KEMA Quality B.V. (The Netherlands) * All Mavigard products have Russian SSPB (Fire Safety Certification System) certificates given by ANO Normatest. * All Mavigard products are GOST R (Russian State Standard) certified. * Mavigard Marine series fire alarm and extinguishing systems are tested according to SOLAS 74 and FSS (Fire Safety System) and have TURK LOYDU certificate.

Approvals: All Mavigard products are approved by DGPS (State Fire Prevention Service Department of Ministry for Emergency Situations) of Kazakhstan. * All Mavigard products are approved by Directorate General of Civil Defence of Sultanate of Oman. * Conventional fire alarm control panels, fire detectors and Harezmic series analogue addressable fire alarm control system are approved by General Directorate of Civil Defence of Kingdom of Bahrain. * Mavigard series gas detectors are approved by Russian Federal Department of Ecological, Technological and Atomic Energy Supervision. * Mavili Elektronik is a member of NFPA (National Fire Protection Association).
More than 30,000 sites around the world are protected by Mavigard fire and gas alarm systems.
Maxlogic ML-125XX series intelligent analogue addressable fire alarm control panels

Maxlogic series fire alarm control panels, offering high performance by the VIP communication protocol, provide 2032 address capacity with its expandable modular structure up to 16 loops.

Fire alarm control panel features

01. Designed and manufactured according to EN 54-2 and EN 54-4
02. Compatible with Mavigard Harezmic series addressable devices
03. Up to 64 panels and/or repeater panels can be assembled with CAN protocol into a network
04. Extendable loops up to 16 loops, max. 2032 address capacity for each panel
05. Printer, public announce and telephone modules options
06. Interaction with touchscreen display modules
07. Interaction to building management systems with Modbus protocols
08. 1000 automation (action-reaction) scenario
09. 1000 user-defined zones and 1000 event log memory
10. Top priority of fire alarm indication, different buttons for fire and other events, categorical classification due to events
11. Real time clock
12. Communication interrupt for fast fire alarm detection in 1.5 sec
13. Loop polling in 7.5 sec
14. 4 programmable supervised remote control inputs
15. Protection from electromagnetic interference
16. Supervised peripheral devices, extension cards (power supply, loop extensions, printer...)
17. Day and night mode, pre-alarm, contamination warning
18. Virtual panel, supervisor applications
19. Input/output modules can be connected directly to panel
20. Advanced controlling and monitoring features
21. Updating software on the site by the help of Boot Loader Software
22. Advanced parametric arrangement options for input/output devices
23. User-defined event types creation

- Maxlogic series intelligent analogue addressable fire alarm control panels use advanced microprocessor technology for high level security.
- LCD with 240x64 adjustable blue backlight indicates fire alarm, fault and other information detaily.
- Panel menu, serigraphy and Loop Manager software have 3 language options as Turkish, English and Russian.
- Addressable detectors, buttons, loop-powered addressable sounders, 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.
- Availability of adding optional products into the fire alarm control panel i.e. telephone, public announce and printer modules.

Panel models

<table>
<thead>
<tr>
<th>Panel code</th>
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<td>ML-1258.NPTA</td>
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</table>

ML-125XX.NPTA
Intelligent analogue addressable fire alarm control panel including network, printer, fire telephone and public announce modules

Mockup: Maxlogic analogue addressable system firefighter telephone can be applied in a different location from the panel and can be integrated into communication with the system.

ML-5011
Firefighter telephone
ML-1203 Printer module
Event logs can be printed instantaneously or collectively by the printer module

ML-1204 Telephone module
ML-1204 Telephone module realizes the communication with the firefighter telephones and the telephone modules in other panels by using ML-501XX Firefighter’s telephone control unit

ML-1205 Public announce module
The current announcement system of the building can be dealt with using ML-50216 Alarm matrix module

Touchscreen display module integration on panel with graphical controlling and monitoring software application.
- Unauthorized people are not allowed to use the system by the help of key control structure.
- All outputs have latching / non-latching and interruptible options.
- Possibility to select event type for all input/output devices.
- User-defined event type creation.
- 0-loop fire alarm control panel models are used as repeater panels.

ML-125XX
Fire alarm control panel

ML-125XX.D
Fire alarm control panel, Touchscreen display module included
Maxlogic series fire alarm control panels, offering high performance by the VIP communication protocol, provide 1016 address capacity with its expandable modular structure up to 8 loops.

**Fire alarm control panel features**

01. Compatible with EN54-2 and EN54-4
02. Compatible with Mavigard Harezmic series addressable devices
03. Up to 64 panels and/or repeater panels can be assembled with CAN protocol into a network
04. Extensible loops up to 8 loops, max. 1016 address capacity for each panel
05. Interaction to building management systems with Modbus protocols
06. 1000 automation (action-reaction) scenario
07. 1000 user-defined zones and 1000 event log memory
08. Top priority of fire alarm indication, different buttons for fire and other events, categorical classification due to events
09. Real time clock
10. Communication interrupt for fast fire alarm detection in 1.5 sec
11. Loop polling in 7.5 sec
12. 4 programmable supervised remote control inputs
13. Protection from electromagnetic interference
14. Supervised peripheral devices, extension cards (power supply, loop extensions, printer...)
15. Day and night mode, pre-alarm, contamination warning
16. Virtual panel, supervisor applications
17. Input/output modules can be connected to panel directly
18. Advanced controlling and monitoring features
19. Updating software on the site by the help of Boot Loader software
20. Advanced parametric arrangement options for input/output devices
21. User-defined event types creation

Maxlogic series intelligent analogue addressable fire alarm control panels use advanced microprocessor technology for high level security.
- Addressable detectors, buttons, loop-powered addressable sounders, 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 performed in this manner.
- Unauthorised people are not allowed to use the system by the help of key control structure.
- All outputs have latching/non-latching and interruptible options.
- Possibility to select event type for all input/output devices as well as user-defined event type creation.

ML-121X
Fire alarm control panel

0, 1, and 2-loop models of ML-121X series intelligent analogue addressable fire alarm panels are available.
- ML-121X series panels can be expanded up to 2 loops in the same cabinet as advantages of modular structure.
- ML-121X series intelligent analogue addressable fire alarm control panels have exactly the same technical specifications with ML-123X series except of the loop capacity.
ML-124X.P series intelligent analogue addressable fire alarm control panels have exactly the same technical specifications with ML-123X series except of the loop capacity.

- Printer module is mounted into the steel front cover as standard.
- Event log can be printed as both instantaneously or collectively. Filtering according to the event type is possible.
- Panel menu, serigraphy and Loop Manager software have 3 language options as Turkish, English and Russian.
- 0-loop fire alarm control panel models are used as repeater panels.

<table>
<thead>
<tr>
<th>PANEL MODELS</th>
<th>Loop capacity</th>
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<td>1016</td>
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**OPTIONAL PRODUCTS**

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<th>Description</th>
<th>Description</th>
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<tr>
<td>ML-1201</td>
<td>Maxlogic intelligent analogue addressable system network module</td>
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<td>ML-1201.MX</td>
<td>Maxlogic intelligent analogue addressable system modbus module</td>
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<tr>
<td>ML-1200.MX</td>
<td>Maxlogic intelligent analogue addressable system SLOU modbus module (*)</td>
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<tr>
<td>ML-1203</td>
<td>Maxlogic intelligent analogue addressable system printer module</td>
<td></td>
</tr>
</tbody>
</table>

(*) Used on cable sensor applications.
Maxlogic intelligent analogue addressable system GCU (Gateway Control Unit) module

GCU modules, offering high performance with the VIP communication protocols, provides communication with building management systems with supervisor application.

- GCU module provides communication with Maxlogic intelligent analogue addressable fire detection system’s supervisor and/or building management systems.
- GCU module provides communication with supervisor application and/or building management systems with RS-232/RS-485, GPRS, TCP/IP and Modbus communication modules.
- At the communication with supervisor, GCU module uses RS-232, RS-485 for close access; IP based communication like GPRS and TCP/IP communication modules for longer distance.
- GCU module uses communication module to interact with building management system.
- GCU module has a modular structure. This module has a capacity up to 16 expandable communication modules. Communication modules in GCU contain either same communication modules or different communication modules.
Backup line automatically set in and prevented to block the communication at backup working structure when primary communication line broken. Primary communication lines backup with more than one backup lines to provide the continuity of the communication.

A GCU module and Maxlogic intelligent analogue addressable fire detection system graphically monitoring and managed with 16 different monitoring centers.

The software communication between intelligent analogue addressable system and other automation systems is provided via Modbus communication module.

Modbus communication module directly exchange information with building control and automation systems on the facility.
Intelligent analogue addressable fire detectors, offering high performance by the VIP communication protocol, provide a high level of reliability as a result of stable detection feature.

**Features**

01. Compatible with EN 54-2 and EN 54-4
02. Twin fire alarm indicators for 360° viewing
03. "Soft" addressable by use of address programmer
04. Remote indicator output
05. Communication interrupt for fast fire alarm detection in 1.5 sec
06. Stable sensitivity
07. PCB protected by metal case
08. Protection from electromagnetic interference
09. MG-3510 series mounting base compatible
10. MG-3600 series recessed mounting base compatible
11. MG-3700 series surface mounting back box compatible
12. Microprocessor controlled
13. Clamp terminals to ensure firm contact with the base
14. Produced by use of surface mount technology

**MG-9100 Intelligent analogue addressable photo-electric smoke detector**

Photo-electric smoke detector utilizes the light scatter sensing principle. It has an infrared light source, which emits signals and a photo-diode, which senses the scattering light with the effect of smoke entering the chamber. The chamber is designed for protection from dust, insects and other external interferences.

**MG-9200 Intelligent analogue addressable ionisation smoke detector**

Ionization smoke detector has twin room ionization chamber to prevent the interference of excessive humidity and heat. One of the rooms functions as reference and the other as the sampling one. The chamber is designed for protection from dust, insects and other external interferences.

**MG-9300 Intelligent analogue addressable heat detector**

Heat detector detects temperature change by temperature-sensitive thermistors. The detector can work either as a fixed heat or rate of rise heat detector. The design of the chamber provides sensitive ambient temperature measurement.

**MG-93XX Intelligent analogue addressable fixed heat detector**

Fixed heat detectors detect heat using thermistor. There are fixed heat detector models with alarm threshold levels of 30°C, 45°C, 60°C, 75°C, and 90°C. Fire alarm signal is generated when heat reaches these threshold levels. The design of the chamber provides sensitive ambient temperature measurement.

**MG-9400 Intelligent analogue addressable multisensor detector (photo-electric smoke + heat)**

The multi-sensor has a photo-electric smoke detection chamber and a temperature-sensitive thermistor. The chamber is designed for protection from dust, insects and other external interferences. The design of the chambers provides maximum sensitivity to smoke and temperature change.

**MG-3700 Weatherproof surface mounting back box**

MG-3700 Surface mounting back box is used in harsh weather conditions. Back box is surface mounted.
MG-3510 Addressable mounting base

Latest MG-3510 Analogue addressable mounting bases are compatible with MG-9000 series analogue addressable detectors. Remote indicator output is standard for MG series detectors. Addressable mounting base has Ni-Cd coated corrosion-proof clamp type contacts. It is used for wall and ceiling mounted applications.

MG-3600 Recessed mounting base

Recessed mounting base is used for mounting conventional as well as analogue addressable detectors on false ceilings of various types (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 flush-mounted into ceiling with two clamps and stainless steel screws.

The smoke effect results in the accumulation of smoke at the ceiling. When detectors are zeroed at the exact level of ceiling, it is more difficult to detect the accumulated smoke. In order to prevent this result, MG-3600 recessed mounting base has been designed, after fire simulations and precise tests.

DETECTOR MODELS

<table>
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<tr>
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<tbody>
<tr>
<td>MG-9100</td>
<td>Photo-electric smoke detector</td>
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<tr>
<td>MG-9200</td>
<td>Ionisation smoke detector</td>
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<tr>
<td>MG-9330</td>
<td>Heat detector</td>
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<td>MG-9330</td>
<td>Fixed-heat detector, 30°C</td>
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<td>MG-9345</td>
<td>Fixed-heat detector, 45°C</td>
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<tr>
<td>MG-9360</td>
<td>Fixed-heat detector, 60°C</td>
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<tr>
<td>MG-9375</td>
<td>Fixed-heat detector, 75°C</td>
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<tr>
<td>MG-9390</td>
<td>Fixed-heat detector, 90°C</td>
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<tr>
<td>MG-9400</td>
<td>Multisensor detector (photo-electric smoke + heat)</td>
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ACCESSORIES

<table>
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<tr>
<th>Product code</th>
<th>Description</th>
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<tbody>
<tr>
<td>MG-3510</td>
<td>Addressable mounting base</td>
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<tr>
<td>MG-3600</td>
<td>Recessed mounting base</td>
</tr>
<tr>
<td>MG-3700</td>
<td>Weatherproof surface mounting back box</td>
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AGD series addressable gas detectors

An addressable solution for gas leakage detection. AGD series gas detectors are connected to loops of analogue addressable fire alarm control panels and operate on VIP communication protocol.

Features

01. Compatible with TS EN 50194 and TS EN 50291
02. Compatible with intelligent analogue addressable fire alarm control panels
03. Power on, gas alarm and fault LED indicators
04. Control of LEDs and buzzer operations with test button
05. Built-in buzzer
06. 5 years sensor life under normal operating conditions
07. Stable sensitivity and high operating performance
08. Requires 12V DC/220V AC external power supply
09. Max. 127 gas detectors per loop
10. Can be included in cause-effect configurations
11. Identified as input devices in cause-effect scenarios of Loop Manager software
12. Relay output feature
13. Microprocessor controlled
14. Aesthetic design
15. Produced by use of surface mount technology

LPG Detectors (butane propane)

LPG is an explosive hydrocarbon gas consisting of butane and propane. It is heavier than air and sinks to floor in case of leakage. Therefore, an LPG detector must be mounted 15-25 cm above floor and 1-2 m horizontally away from the range of possible gas leakage. The Mavigard LPG detectors respond audible and visually before the leakage reaches 10% LEL (lower explosive limit).

Methane Detectors (natural gas)

Methane is an explosive hydrocarbon gas. It is lighter than air and rises to ceiling in case of leakage. Therefore, a natural gas detector must be mounted 5-15 cm below ceiling and 1-2 m horizontally away from the range of possible gas leakage. The Mavigard natural gas detectors respond audible and visually before the leakage reaches 10% LEL (lower explosive limit).

Carbon-monoxide Detectors

Carbon-monoxide is a toxic gas with density nearly equal to air. Therefore, a carbon-monoxide detector must be mounted 140-150 cm above floor and 1-2 m horizontally away from the range of possible gas leakage. Carbon-monoxide detectors should not be mounted outside buildings, behind or inside cupboards, where air circulation is low, in damp or humid places, above fuel burning appliances and places with low or high temperatures. The Mavigard carbon-monoxide detectors respond audible and visually when the gas concentration reaches 50 ppm (parts of gas per million parts of air).

<table>
<thead>
<tr>
<th>GAS DETECTORS</th>
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<tbody>
<tr>
<td>AGD-1224L/VIP</td>
<td>Intelligent Addressable gas detector for LPG (propane-butane), 24V DC</td>
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<tr>
<td>AGD-1224M/VIP</td>
<td>Intelligent Addressable gas detector for methane (natural gas), 24V DC</td>
</tr>
<tr>
<td>AGD-1224EC/VIP</td>
<td>Intelligent Addressable gas detector for carbon monoxide, 24V DC, electrochemical sensor</td>
</tr>
<tr>
<td>AGD-220L/VIP</td>
<td>Intelligent Addressable gas detector for LPG, 220V AC</td>
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<td>AGD-220M/VIP</td>
<td>Intelligent Addressable gas detector for methane (natural gas), 220V AC</td>
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<td>AGD-220EC/VIP</td>
<td>Intelligent Addressable gas detector for carbon monoxide, 220V AC, electrochemical sensor</td>
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<thead>
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<th>COMBINED GAS DETECTORS</th>
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<td>Intelligent Addressable combined LPG and carbon monoxide detector 24V DC, electrochemical sensor</td>
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<td>AGD-1224MEC/VIP</td>
<td>Intelligent Addressable combined methane (natural gas) and carbon monoxide detector 24V DC, electrochemical</td>
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<tr>
<td>AGD-220LEC/VIP</td>
<td>Intelligent Addressable combined LPG and carbon monoxide detector 220V AC, electrochemical sensor</td>
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<tr>
<td>AGD-220MEC/VIP</td>
<td>Intelligent Addressable combined methane (natural gas) and carbon monoxide detector 24V DC, electrochemical</td>
</tr>
</tbody>
</table>
Monitor and control modules can cooperate with peripheral systems by making the related identifications in fire scenario. As well as monitoring peripheral systems, the control can be realized by control modules.

**Features**

01. Compatible with EN 54-18
02. Microprocessor-controlled
03. ‘Soft’ addressable by use of address programmer
04. Easily programmable by Loop Manager
05. LED-indicated activation and fault conditions
06. Loop-powered switch monitors and relay controllers
07. Sounder controller and zone monitor module operating with external power supply
08. Power supply fault monitoring by volt-free changeover contact
09. 8-way input and output module models
10. Aesthetic design
11. Produced by use of surface mount technology

**MODULE TYPES**

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
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<tbody>
<tr>
<td>MG-6100</td>
<td>Relay controller, 1-way output</td>
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<tr>
<td>MG-6108</td>
<td>Relay controller, 8-way output</td>
</tr>
<tr>
<td>MG-6200</td>
<td>Switch monitor, 1-way input</td>
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<tr>
<td>MG-6208</td>
<td>Switch monitor, 8-way input</td>
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<tr>
<td>MG-6300</td>
<td>Sounder controller, 1-way output</td>
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<tr>
<td>MG-6308</td>
<td>Sounder controller, 8-way output</td>
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<tr>
<td>MG-6400</td>
<td>Zone monitor, 1-way input</td>
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<td>MG-6408</td>
<td>Zone monitor, 8-way input</td>
</tr>
<tr>
<td>MG-6700</td>
<td>Mains relay controller, 1-way output, 250 V AC 8 A</td>
</tr>
</tbody>
</table>

**MG-6600 Relay controller, 1-way output**

The modules having volt-free change over normally open and normally close contacts are loop-powered and do not require external power supply.

**MG-6700 Mains relay controller, 1-way output, 250 V AC 8 A**

The module has one relay output with volt-free, unipolar contacts with max. load of 8 A 250 V AC. The relay can operate as normally open or normally close.

**MG-6200 Switch monitor, 1-way input**

The modules can monitor both volt-free change over normally open and normally close contacts and do not require external power supply.

**MG-6300 Sounder controller, 1-way output**

The modules continuously monitor the audio-visual warning devices for open and short circuits and require external power supply.

**MG-6400 Zone monitor, 1-way input**

The modules continuously monitor the detection devices for open and short circuits and require external power supply.
Intelligent analogue addressable system accessories

The accessories, designed for intelligent analogue addressable system and which offer high performance, are composed of audio-visual warning devices, manual call points and address programmer.

Features

01. Warning devices are compatible with EN 54-3, manual call points are compatible with EN 54-11
02. Microprocessor controlled
03. "Soft" addressable by use of address programmer
04. Easily programmable by Loop Manager
05. Able to integrate into the cause effect scenarios
06. LED indicated activation
07. Monitoring analogue value
08. Measuring contamination level
09. Aesthetic design
10. Production by surface mount technology

MG-6500 Short circuit isolator
The module is used for isolation of the loop sector affected by short circuit, thus preserving the healthy operating of the rest of the loop. Connecting one short circuit isolator module per 20 addressable devices is recommended. The module deactivates automatically as soon as short circuit condition ends. The module does not require to be addressed.

ML-1180 Intelligent Analogue Addressable Water Leakage Detector
Water leakage detectors are mounted at areas where water leakage could be risky. Detectors contains 1,5 meters cable and sensible probe on its end. Water leakage detectors mounted the position which sensible probe mounts 1 - 3 mm above the floor. Water leakage detectors cover max. 20m² for successfull detection the distance between the water leakage detectors should not exceed 3 meters. Water leakage detectors’ power supplied from loop line.

MG-6600 Symphoni SY/C intelligent analogue addressable loop powered sounder (VIP communication module included)
MG-6610 SY/AV/C/CL Symphoni AV intelligent analogue addressable loop powered sounder strobe (VIP communication module included)
The sounder is designed for indoor use and gives 95 db(A) output at 1m with full VIP communication protocol compatibility. The devices are loop-powered and can be included in fire scenarios. MG-6610 has 1 Hz flashing frequency.

MG-8110 Addressable manual call point, resettable
MG-8120 Addressable manual call point, weatherproof (IP67)
The manual call point is activated by breaking film-coated glass. When the glass is broken, the switch, normally resting on glass edge, changes its position and retains till new glass is mounted. The manual call point is equipped with a red LED, which blinks on polling and illuminates continuously on activation. The MG-8120 Addressable manual call points are weather-proof and placed in the IP67 ingress protection class.

MG-8130 Addressable manual call point with isolator module, resettable
MG-8130 Addressable manual call points has 2 LEDs on it. The red LED illuminates on activation of manual call point and the yellow LED illuminates on short circuit condition on loop. MG-8130 contains the features of both MG-8110 (addressable manual call point, resettable) and MG-6500 (short circuit isolator).

MG-8200 Address programmer
Analogue addressable detectors, manual call points, modules and addressable sounders are microprocessor-controlled, which allows 'soft' addressing from 1 to 127. The address programmer is used for both address setting and displaying the measured analogue value; this feature allows detecting the pollution level in the smoke detector chamber.

ACCESSORIES

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG-6500</td>
<td>Short circuit isolator</td>
</tr>
<tr>
<td>ML-1180</td>
<td>Water leakage detector</td>
</tr>
<tr>
<td>MG-6500</td>
<td>Loop powered addressable sounder</td>
</tr>
<tr>
<td>MG-6610</td>
<td>Loop powered addressable sounder strobe (VIP communication module included)</td>
</tr>
<tr>
<td>MG-8110</td>
<td>Manual call point, resettable</td>
</tr>
<tr>
<td>MG-8120</td>
<td>Manual call point, weatherproof (IP67)</td>
</tr>
<tr>
<td>MG-8130</td>
<td>Manual call point with isolator module, resettable</td>
</tr>
<tr>
<td>MG-8200</td>
<td>Address programmer</td>
</tr>
</tbody>
</table>
Announce / Alarm matrix panel

Announce / Alarm matrix panel provides the integration with announcement system. This panel is 19" and 3U rack structure.

- **Features**
  1. Compatible with the structure of 19", 3U rack
  2. Compatible with Maxlogic series analogue addressable fire alarm panels
  3. Up to 32 units of announce module connection inputs
  4. Up to 64 units of programmable alarm/alert output
  5. LED indicators for communication and fault situations
  6. LED indicators for active announce modules and active relay outputs
  7. Internal power supply

- **Description**
  - Announce / Alarm matrix panel provides the integration of an audible system of fire alarm system.
  - There are one unit of "announce power module" as internal power supply and one unit of "announce output module" to provide sound signal output as a standard. Besides them, there are up to 16 units of module input sockets to use "announce input module" and "programmable Alarm / Alert output module" on Announce / Alarm matrix panel. Up to 4 units of announce modules can be connected to each announce input module. 8 units of programmable alarm/alert outputs received from each programmable Alarm / Alert output module.
  - Compatible with Maxlogic series analogue addressable fire alarm panel. It is able to activate whole of the desired relay outputs with using programmable Alarm / Alert output modules included on Cause / Effect scenarios at event (fire, fault etc.) situation.
  - Live announcement feature via present announce system to the determined areas by authorized people is provided with using internal announce module on ML-1255XX.A Maxlogic series analogue addressable fire alarm panel at fire and/or emergency situation.
  - When fire and/or emergency situation occurs; with using Alarm / Alert output modules, it is provided that an automatic announce with pre-recorded messages or sound records via present announce system to the determined areas.

---

**ANNOUNCE / ALARM MATRIX PANEL AND MODULE MODELS**

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ML-5020</td>
<td>Maxlogic Announce/Alarm Matrix Panel, 19&quot;, 3U rack structure, Announce Power Module and Announce Power Output are included, base model</td>
</tr>
<tr>
<td>ML-5020.AI</td>
<td>Maxlogic Announce Input Module</td>
</tr>
<tr>
<td>ML-Y100.XP</td>
<td>Maxlogic Programmable Alarm/Alert Output Module</td>
</tr>
<tr>
<td>ML-Y5001</td>
<td>Maxlogic Announce/Alarm Matrix Blank Panel</td>
</tr>
</tbody>
</table>

(*) Announce input capacity can be expanded up to 60 units depend on the programmable alarm/alert output module. Programmable output capacity can be expanded up to 126 units depend on the announce input module.

These capacities are expandable with using more than one announce/alarm matrix panel.
Maxlogic

Supervisor graphic software for monitoring and managing analogue addressable system

Up to 64 panels and/or repeaters operating in a network can be graphically monitored and managed on PC.

- 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.
- 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.
- By downloading Supervisor patch file into other computers, it is possible to send fire and fault messages automatically and/or manually via Internet, LAN and WAN.
- The contamination levels of whole detectors on the intelligent analogue addressable fire detection system can be monitored one by one, also restored a report for determined periods.

Features

01. By integrating CCTV system, monitoring both CCTV and graphical monitoring of the system simultaneously in the same functional screen
02. Up to 64 panels and/or repeaters operating in a network can be graphically monitored and managed on PC
03. Automatic program start-up with the PC operating system and disabling windows shortcuts
04. Integration of building projects into the monitoring program as maps
05. Fire alarm system configuration based on files created in the loop manager
06. 10 different users can be defined
07. Audible warning according to event type
08. Adjustable event effects on user request
09. Event logging
10. Sending alarm messages to remote PCs in LAN/WAN by use of TCP/IP protocol
11. Three language options: English, Turkish and Russian

Fire, error, and the other events can be grouped on event profile. By the help of this feature e-mail and/or sms report can be sent to the authorized people at determined periods.
Integration with CCTV system cameras can be monitored remotely.

Arhitectural site plans of the building are defined to the Supervisor graphic software program as maps and all the fire alarm system devices are figured 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.

1000 different intelligent addressable fire detection system can be monitored and managed with a single supervisor.

Event logging for every fire, fault, information and program start-up, user login etc. event. Back-up, sort by date and event type, print out options are available for event logs which are encolour listed.

The communication (i.e. conference call) with firefighter and other telephones is provided by the integrated VOIP (Voice over IP) System.

SUPERVISOR AND ACCESSORIES

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHS-1001</td>
<td>Supervisor graphic software for monitoring and managing of 1 panel</td>
</tr>
<tr>
<td>MHS-1004</td>
<td>Supervisor graphic software for monitoring and managing of 4 panel</td>
</tr>
<tr>
<td>MHS-1008</td>
<td>Supervisor graphic software for monitoring and managing of 8 panel</td>
</tr>
<tr>
<td>MHS-1016</td>
<td>Supervisor graphic software for monitoring and managing of 16 panel</td>
</tr>
<tr>
<td>MHS-1032</td>
<td>Supervisor graphic software for monitoring and managing of 32 panel</td>
</tr>
<tr>
<td>MHS-1064</td>
<td>Supervisor graphic software for monitoring and managing of 64 panel</td>
</tr>
<tr>
<td>MHS-2100</td>
<td>USB dongle for supervisor software</td>
</tr>
<tr>
<td>MHS-2200</td>
<td>Network alarm software for 10 users</td>
</tr>
<tr>
<td>MHS-2300</td>
<td>Network alarm software for 25 users</td>
</tr>
<tr>
<td>MHS-2400</td>
<td>Network alarm software for 50 users</td>
</tr>
<tr>
<td>MHS-2500</td>
<td>RS-232/USB converter</td>
</tr>
<tr>
<td>MHS-2700</td>
<td>RS-485USB converter</td>
</tr>
<tr>
<td>MHS-2800</td>
<td>Supervisor SMS Module (SIM card not included), 3A Power Supply included</td>
</tr>
</tbody>
</table>

www.mavili.com.tr
Mavigard and Maxlogic provide reliable and user-friendly fire alarm control system for most complex sites which is likely to respond all requirements of protected area.

Features

01. Modular structure which is able to set up and expand the fire alarm system from 1 loop to 16 loops
02. Up to 64 control panels/repeaters can be assembled with CAN protocol into a network.
03. 16 loops x 127 addresses x 64 panels makes overall 130,048 devices to be able to integrate into the fire alarm system and work under same network
04. Integration with other security systems
05. Integration of conventional systems and zones to the analogue addressable system
06. Loop Manager software can run under Windows
07. Graphical system monitoring on PC by Supervisor software Program
08. Programmable panel inputs and outputs
09. Device-based and event-based cause-effects
10. Polling data parity check
SD64+ series conventional fire alarm control panel and TP64+ series conventional repeater panels

Programmable and microprocessor-controlled fire alarm control panels and repeater panels.

Fire alarm control panel features

01. Compatible with EN 54-2 and EN 54-4
02. 8, 16, 32 or 64 zone capacity
03. Microprocessor-controlled
04. 2 sounder outputs, fire and fault relay outputs
05. Each sounder output can host max. 16 pieces of MG-5000 sounders or 8 pieces of MG-5200 sounder strobes
06. Protection from electromagnetic interference
07. Soft touch buttons
08. Zonal Fire and Fault LED indicators
09. Button control key to prevent unauthorized access
10. Piezoelectric buzzer and 16 fault indicators
11. Zone Test and Zone Disable functions
12. Delayable sounder output activation

Repeater panel features

01. Compatible with EN 54-2 and EN 54-4
02. Controlling fire alarm control panels in a network
03. Switched mode power supply (SMPS)
04. Microprocessor-controlled
05. Zonal fire and fault LED indicators
06. Microprocessor-controlled

Control panel

- Zones can be disabled in SD64+ series depending on the user choice and/or system can be switched to Test Mode. Test Mode allows the system to be tested single-handed. On the Test Mode, fire alarm signal automatically resets after few seconds to eliminate the need for returning to the panel to reset the system.
- SD64+ series fire alarm control panels are supplied with microprocessor-controlled switched mode power supply. Panels have an electronic charger circuit limiting the ampere level, providing continuous monitoring of the charge level and automatic cut facility, when charging is finished. If the battery voltage falls under operating level, panel automatically switches off.
- A relay output can be assigned to every zone by installing an optional relay module.

Repeater panel

- If “Ftp Cat6” Network cable are used, network cable length between two panels can be up to 500m.
- RS-485 Communication protocol is used for network communication.
- Up to 8 TP64+ Conventional repeater panels can be assembled into a network with a SD64+ series fire alarm control panel.
- Repeater panel buttons provide complete control of repeater as well as fire alarm control panels.

### RELAY MODULE TYPES

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGY-2300</td>
<td>8-way relay output module for SD64+ series panels</td>
</tr>
<tr>
<td>MGY-2301</td>
<td>16-way relay output module for SD64+ series panels</td>
</tr>
</tbody>
</table>

### PANEL MODELS

<table>
<thead>
<tr>
<th>Product capacity</th>
<th>Zone capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD64+/082</td>
<td>8</td>
</tr>
<tr>
<td>SD64+/162</td>
<td>16</td>
</tr>
<tr>
<td>SD64+/322</td>
<td>32</td>
</tr>
<tr>
<td>SD64+/642</td>
<td>64</td>
</tr>
</tbody>
</table>

### REPEATER PANEL MODELS

<table>
<thead>
<tr>
<th>Product capacity</th>
<th>Zone capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>TP64+/083</td>
<td>8</td>
</tr>
<tr>
<td>TP64+/163</td>
<td>16</td>
</tr>
<tr>
<td>TP64+/322</td>
<td>32</td>
</tr>
<tr>
<td>TP64+/643</td>
<td>64</td>
</tr>
</tbody>
</table>
MC series conventional fire alarm control panels

Designed for providing economical solutions for small site applications. The MC series conventional fire alarm control panels contain both stylish exterior design and SMT (Surface Mount Technology) production techniques.

The MC series panels offer 2 or 4 zone options which can operate with either 220 V AC 50Hz or 24 V DC 1.5A external power supply models.

For each fire alarm zone; up to 32 units of standard conventional fire detector and unlimited manual call points can be connected.

The MC panel has supervised fire zones and sounder output which make easy to tracked some faults such as open circuit and short circuit faults.

The desired zones of the panel can be set to Disable and/or Test Mode so that the panel is to be tested by single person.

By using “lamp test” button it is easy to check all the LEDs whether they are working properly or not.

<table>
<thead>
<tr>
<th>PANEL MODELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
</tr>
<tr>
<td>MC-2</td>
</tr>
<tr>
<td>MC-4</td>
</tr>
<tr>
<td>MC-2M</td>
</tr>
<tr>
<td>MC-4M</td>
</tr>
</tbody>
</table>
MP-8 series conventional fire alarm control panels

Designed for providing economical solutions for small site applications. The MP-8 series conventional fire alarm control panels contains both stylish exterior design and SMT (Surface Mount Technology) production techniques.

- Each fire zone can host max. 20 fire detectors and unlimited number of manual call points.
- Fire zones and sounder output are supervised and monitored for open and short circuits, indicated on the front panel.
- Panels have a microprocessor controlled electronic charger circuit limiting the ampere level, providing continuous monitoring of the charge level and automatic cut facility, when charging is finished.
- Optional repeater panel can be connected.
- By use of optional MS-MP relay modules, a different relay output can be assigned to each zone.

<table>
<thead>
<tr>
<th>PANEL MODELS</th>
<th>Zone capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>Zone capacity</td>
</tr>
<tr>
<td>MP-82</td>
<td>2</td>
</tr>
<tr>
<td>MP-84</td>
<td>4</td>
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<tr>
<td>MP-88</td>
<td>8</td>
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</table>

<table>
<thead>
<tr>
<th>MODULE TYPES</th>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGY-2302</td>
<td>Mavigard Spares for MS/MP series conventional panels, 6-way conventional relay output module</td>
<td></td>
</tr>
<tr>
<td>MGY-2305</td>
<td>Spares panel drive board</td>
<td></td>
</tr>
</tbody>
</table>
MS-64 series conventional fire alarm control panel

Designed for providing economical solutions for small site applications. The MS-64 series conventional fire alarm control panels contain both stylish exterior design and SMT (Surface Mount Technology) production techniques.

- Fire alarm and fault events can be seen easily by user with the LED indicators and seven segment display.
- Each fire zone can host max. 20 fire detectors and unlimited number of manual call points.
- Conventional zones and sounder lines are continuously monitored for open and short circuits, indicated on the front panel.
- Zones can be set to Disable and Test Modes. On the Test Mode, manually initiated fire alarm is reset automatically after a few seconds; this allows testing zones by one person without need for returning to the panel for reset.
- Optional repeater panel can be connected.
- By use of optional MS-MP Relay modules, a different relay output can be assigned to each zone.

<table>
<thead>
<tr>
<th>PANEL MODELS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product code</strong></td>
<td><strong>Zone capacity</strong></td>
</tr>
<tr>
<td>MS-6408</td>
<td>8</td>
</tr>
<tr>
<td>MS-6416</td>
<td>16</td>
</tr>
<tr>
<td>MS-6432</td>
<td>32</td>
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<tr>
<td>MS-6464</td>
<td>64</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MODULE TYPES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product code</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>MGY-2302</td>
<td>Mavigard Spares for MS/MP series conventional panels, 8-way conventional relay output module</td>
</tr>
<tr>
<td>MGY-2303</td>
<td>Mavigard Spares for MS/MP series conventional panels, 16-way conventional relay output module</td>
</tr>
<tr>
<td>MGY-2305</td>
<td>Repeater panel driver board</td>
</tr>
</tbody>
</table>

Fire alarm control panel features

01. Compatible with EN 54-2 and EN 54-4
02. High and stable operation performance
03. 8, 16, 32 or 64 zone models
04. 2 sounder outputs, fire and fault relay outputs
05. Each sounder output can host max. 16 pieces of MG-5000 sounders or 8 pieces of MG-5200 sounder strobes
06. PCBs produced using surface mount technology
07. Stylish exterior design
08. Microprocessor controlled design
09. Compatible with all popular conventional fire detectors
10. Optional repeater panels
11. Zone Test and Zone Disable Modes
12. Detailed information on fault events by LED indicators and seven segment display
13. LED test by use of single button
14. Button control key to prevent unauthorized access
Using at least one MGRP-64 Repeater Panel enables to configure up to 32 fire alarm control panels and/or repeater panels in large size conventional fire alarm applications. MGRP-64 series repeater panels have a stylish exterior appearance and produced by using surface mount technology.

**Repeater panel features**

01. Compatible with EN 54-2 and EN 54-4
02. High and stable operation performance
03. 64 repeater zone capacity
04. PCB produced using surface mount technology
05. Stylish exterior design
06. Microprocessor controlled
07. Compatible with MP-8 and MS-64 model conventional fire alarm control panels
08. Polling entire network in every 0.5 seconds
09. RS-485 communication protocol
10. Network cable length up to 1200 meters
11. Storage of latest 50 events in the memory and display priority to fire events
12. Single-button test of LEDs and LCD
13. Button enable/disable key to prevent unauthorized access

Using at least one MGRP-64 Repeater panel, 32 conventional fire alarm control panels/repeater panels can be assembled in one system.

Fire alarm control panels require MGY-2305 Repeater panel driver board to communicate with each other in the network.

LCD (2 x 16 character) and LEDs in front of the repeater panel enable easy identification of fire and fault alarm status from other fire alarm control panels in the network.

Using MGRP-64 Repeater panel, all fire alarm control panels can be reset, put to alarm and silenced alarm condition by use of the repeater panel buttons.

A control panel newly added to the network is automatically detected and included in network structure. If any control panel is removed from the network, repeater panel displays "Disconnected Panel" fault.

All fire and/or fault events of panels in the network structure are displayed as "Panel Number" and "Zone Number" format. While creating the network, panel names and zone names are saved by a software program specially developed and these records are sent separately, in addition to the Panel Number and Zone Number information.
MGY-2305 Repeater panel driver board must be used for each fire alarm control panel in the network structure. MGY-2305 Repeater panel driver boards are produced by use of surface mount technology.

**REPEATER PANEL MODELS**

<table>
<thead>
<tr>
<th>Product code</th>
<th>Zone capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGRP-64</td>
<td>64</td>
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</tbody>
</table>

**MODULE TYPES**

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGY-2305</td>
<td>Repeater panel driver board</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ftp Cat6</th>
<th>(max. 1,2km)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>MGRP-64</th>
<th>Conventional repeater panel address number: 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS-64</td>
<td>Address number: 2</td>
</tr>
<tr>
<td>MP-8</td>
<td>Address number: 32</td>
</tr>
</tbody>
</table>

Repeater panel configuration program
MG / MGR-2000 series conventional fire detectors

Features

01. Compatible with EN 54-5 and EN 54-7
02. Stable sensitivity
03. MGR models with relay output
04. Twin fire alarm indicators for 360° viewing
05. Protection from electromagnetic interference
06. Clamps terminals to ensure firm contact with the base
07. PCB protected by metal case
08. MG-3500 Conventional mounting base compatible
09. MG-3600 Recessed mounting base compatible
10. MG-3700 series surface mounting back box compatible
11. Remote indicator output
12. In MGR series normally close relay output as standard (normally open relay is also available)

The chamber is protected from dust, insects and other external interferences.

MG-2100 Photo-electric smoke detector
MG-2100 Photo-electric smoke detector with relay output
Photo-electric smoke detector has an infrared photoelectric smoke detection chamber which utilizes the infrared light scatter sensing principle.

MG-2200 Ionisation smoke detector
MG-2200 Ionisation smoke detector with relay output
Ionisation smoke detector has twin room ionisation chamber to prevent the interference of excessive humidity and heat.

Heat detectors detect temperature change by temperature-sensitive thermistors. Design of the detector provides fast response to heat rise.

MG-2300 Combined heat (rate of rise) detector
MG-2300 Combined heat (rate of rise) detector with relay output
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.

MG-2400 Fixed heat detector
MG-2400 Fixed heat detector with relay output
The fire alarm signal is generated on reaching the threshold of 60°C. For special orders, fixed heat detectors with a threshold level of 90°C can be manufactured.

MG-2500 Multi-sensor detector
MG-2500 Multi-sensor detector with relay output
(Photo-electric smoke detector + heat 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. Design of the detector provides fast response to smoke and heat rise.

MG-3500 Universal mounting base
The bases are compatible with MG/MGR-2000 series conventional detectors. Remote indicator output is standard for MG series detectors. MG-3500 Conventional mounting bases has Ni-Cd coated corrosion-proof clamp type contacts and clamp terminals ensure firm contact with the base.
### Standard Conventional Fire Detector Models

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG-2100</td>
<td>Photo-electric smoke detector</td>
</tr>
<tr>
<td>MG-2200</td>
<td>Ionisation smoke detector</td>
</tr>
<tr>
<td>MG-2300</td>
<td>Combined heat (rate of rise) detector</td>
</tr>
<tr>
<td>MG-2400</td>
<td>Fixed heat detector</td>
</tr>
<tr>
<td>MG-2500</td>
<td>Multi-sensor detector (photo-electric smoke detector + fixed heat detector)</td>
</tr>
</tbody>
</table>

### Conventional Fire Detector Models with Relay Output

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGR-2100</td>
<td>Photo-electric smoke detector with relay output</td>
</tr>
<tr>
<td>MGR-2200</td>
<td>Ionisation smoke detector with relay output</td>
</tr>
<tr>
<td>MGR-2300</td>
<td>Combined heat (rate of rise) detector with relay output</td>
</tr>
<tr>
<td>MGR-2400</td>
<td>Fixed heat detector with relay output</td>
</tr>
<tr>
<td>RGR-2500</td>
<td>Multi-sensor detector (photo-electric smoke detector + fixed heat detector + fixed heat detector) with relay output</td>
</tr>
</tbody>
</table>

### Accessories

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG-3500</td>
<td>Universal mounting base</td>
</tr>
<tr>
<td>MG-3600</td>
<td>Recessed mounting base</td>
</tr>
<tr>
<td>MG-3700</td>
<td>Weatherproof surface mounting back box</td>
</tr>
</tbody>
</table>

**MG-3600 Recessed mounting base**

Recessed mounting base is used for mounting conventional as well as analogue addressable detectors on false ceilings of various types (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 flush-mounted into ceiling with two clamps and stainless steel screws.

**MG-3700 Weatherproof surface mounting back box**

MG-3700 Surface mounting back box is used in harsh weather conditions, especially at marine usage, for surface mounting applications.

MG-3600 Recessed mounting base is compatible with the use on false ceilings of various types and creates much more aesthetic view in applications.
ML-322 series conventional fire extinguishant control panel

ML-322 series operates on cross-zone principle, has 4 detection zones and one extinguishant release output which is programmable according to the site needs. Conventional extinguishant control panel is microprocessor controlled, offers high performance and can easily be integrated into all extinguishing projects.

Extinguishant control panel features

01. Compatible with EN 12094
02. 4 zones, 1 extinguishant release output
03. Detects warnings from two devices on detection zones, and indicates it with fire zone LED
04. Programmable 1st stage sounder output delay
05. Delay can be assigned for detection zones
06. Adjustable delay and extinguishant times
07. Non-latching zone option
08. Extinguishant release countdown timer
09. Zonal fire and fault LED indicators for each detecting zones
10. Supervised zone monitor, low pressure, extinguishant delay, release and abort inputs
11. Supervised extinguishant output, 2nd stage sounder, 1st stage sounders, and gas extraction output
12. Possibility to change extinguishant modes remotely with extinguishant condition switch output
13. Fire and fault relay
14. Volt free change buzzer over contact outputs option for fire and faults
15. Energy or volt free change over contact option for outputs
16. Possibility to work with 8 input and 8 output with extension card
17. Possibility to select Cross Zone active or passive using software
18. Real time clock
19. 1000 event log memory
20. Monitoring event log with software
21. Sending event log via RS-232 port

- Extinguishant output is controlled based on cross-zone principle.
- The panel can be set to manual or automatic/manual extinguishant modes.
- Extinguishant-related front panel LEDs and LCD screen provide full information on extinguishant control status.
- Each output of the system can be set to delay.
- Extinguishant control output activation duration is configurable.
- The panel is equipped with two 1st stage sounder outputs and one 2nd stage sounder output.
- Sounder outputs are monitored for open circuit and short circuit faults.
- The extinguishant release output can control valves and actuators. Extinguishant release duration is configurable.
- Extinguishant gas status is monitored by supervised low pressure and gas release inputs.
- Zones are latching by default. Zones can be set to non-latching on user demand.
- Zones can be set to disable and test modes. 1st and 2nd stage relay outputs, gas extraction output and extinguishant release button can be disabled.
- Energy or volt free change over contact option for expansion card output.
- Updating software to main card of panel and inputs/outputs of expansion card to assigning different functions.
- Possibility to select 1 to 4 detections of fire extinguishing zones with software.
- Starting up the extinguishing when two devices on extinguishing zones alarms.
Inputs and Outputs on the expansion module can be programmed with special PC software. Active gas, remote alarm, and remote reset features can be assigned for Inputs.

Extinguishing disable, fan output, and zonal fire output features can be assigned for Outputs. Outputs can be worked as volt-free change over relay output or sounder output with energy if required.

If the number of the relay outputs is too many on the project, outputs can be used as relay outputs. If number of the sounder outputs is too many on the project, outputs can be used as sounder outputs.
Marine approved fire alarm control systems

All marine products are Lloyd certified and can be used in all sea vehicles.

**Analogue addressable system features**

01. Modular structure which is able to set up and expand 1 loop to 8 loops  
02. Thermal printer option  
03. Microprocessor controlled  
04. 1000 event log memory  
05. Communication interrupt for fast fire alarm identification in 1.5 sec.  
06. Cause-effect programming

**Conventional system features**

01. 8, 16, 32 or 64 zone capacity  
02. Microprocessor controlled  
03. Stable-sensitivity  
04. Able to work with network

**Extinguishant control panel features**

01. 4 extinguishant zones, 1 extinguishant output  
02. Extinguishant-related front panel LEDs and LCD screen provide full system information  
03. Programmable extinguishant release duration  
04. The Extinguishant release output can control valves and actuators

---

Mavigard marine series analogue addressable fire alarm systems have been tested according to SOLAS 74 and FSS (Fire Safety System) for compliance with marine conditions. The marine systems are TURK LOYDU certified.

**LOYD CERTIFIED, MARINE TYPE ADDRESSABLE FIRE ALARM CONTROL SYSTEM**

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ML-1230.N/M</td>
<td>Fire alarm panel, 0 loop (*)</td>
</tr>
<tr>
<td>ML-1232/M</td>
<td>Fire alarm panel, 2 loops, 254 address</td>
</tr>
<tr>
<td>ML-1234/M</td>
<td>Fire alarm panel, 4 loops, 508 address</td>
</tr>
<tr>
<td>ML-1236/M</td>
<td>Fire alarm panel, 6 loops, 762 address</td>
</tr>
<tr>
<td>ML-1238/M</td>
<td>Fire alarm panel, 8 loops, 1016 address</td>
</tr>
<tr>
<td>ML-1240.NP/M</td>
<td>Fire alarm panel, 0 loop, printer (*)</td>
</tr>
<tr>
<td>ML-1242/P/M</td>
<td>Fire alarm panel, 2 loops, 254 address, printer</td>
</tr>
<tr>
<td>ML-1244/P/M</td>
<td>Fire alarm panel, 4 loops, 508 address, printer</td>
</tr>
<tr>
<td>ML-1246/P/M</td>
<td>Fire alarm panel, 6 loops, 762 address, printer</td>
</tr>
<tr>
<td>ML-1248/P/M</td>
<td>Fire alarm panel, 8 loops, 1016 address, printer</td>
</tr>
</tbody>
</table>

(*) "0" (zero) loop models of fire alarm panels works as repeater.

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<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG-9100/M</td>
<td>Photo-electric smoke detector</td>
</tr>
<tr>
<td>MG-9200/M</td>
<td>Ionization smoke detector</td>
</tr>
<tr>
<td>MG-9300/M</td>
<td>Heat detector</td>
</tr>
<tr>
<td>MG-9400/M</td>
<td>Multi-sensor</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG-6100/M</td>
<td>Relay controller</td>
</tr>
<tr>
<td>MG-6200/M</td>
<td>Switch monitor</td>
</tr>
<tr>
<td>MG-6300/M</td>
<td>Sounder controller</td>
</tr>
<tr>
<td>MG-6400/M</td>
<td>Zone monitor</td>
</tr>
<tr>
<td>MG-6700/M</td>
<td>Mains relay controller, 250 V AC, 8A</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG-6500/M</td>
<td>Short circuit isolator</td>
</tr>
<tr>
<td>MG-6600/M</td>
<td>Loop-powered addressable sounder</td>
</tr>
<tr>
<td>MG-7080/M</td>
<td>MSM-4 (SMPS) switched mode power supply</td>
</tr>
<tr>
<td>MG-7090/M</td>
<td>Network interface card</td>
</tr>
<tr>
<td>MG-8110/M</td>
<td>Addressable manual call point, (resetable)</td>
</tr>
<tr>
<td>MG-8120/M</td>
<td>Addressable manual call point, weatherproof (IP67)</td>
</tr>
</tbody>
</table>
MG-3700/M Marine back box
Specially designed for marine applications, marine back box is used in harsh weather conditions. The box is compatible with all Mavigard marine conventional and analogue addressable fire detectors.

MARINE CONVENTIONAL FIRE ALARM CONTROL SYSTEM

**SD64+ SERIES FIRE ALARM CONTROL PANEL & REPEATERS**

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD64+/082/M</td>
<td>FACP, 8 zones, 24 V DC</td>
</tr>
<tr>
<td>SD64+/162/M</td>
<td>FACP, 16 zones, 24 V DC</td>
</tr>
<tr>
<td>SD64+/322/M</td>
<td>FACP, 32 zones, 24 V DC</td>
</tr>
<tr>
<td>SD64+/642/M</td>
<td>FACP, 64 zones, 24 V DC</td>
</tr>
<tr>
<td>TP64+/083/M</td>
<td>Repeater panel, 8 zones, 24 V DC</td>
</tr>
<tr>
<td>TP64+/163/M</td>
<td>Repeater panel, 16 zones, 24 V DC</td>
</tr>
<tr>
<td>TP64+/323/M</td>
<td>Repeater panel, 32 zones, 24 V DC</td>
</tr>
<tr>
<td>TP64+/643/M</td>
<td>Repeater panel, 64 zones, 24 V DC</td>
</tr>
</tbody>
</table>

**CONVENTIONAL MANUAL CALL POINT**

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG-5100/M</td>
<td>Manual call point with break-glass</td>
</tr>
<tr>
<td>MG-5120/M</td>
<td>Manual call point, resettable</td>
</tr>
</tbody>
</table>

**LOYD CERTIFIED, MARINE TYPE FIRE EXTINGUISHANT SYSTEM**

**FIRE EXTINGUISHANT CONTROL PANEL & ACCESSORIES**

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG-104/M</td>
<td>Fire extinguishant control panel, 4 detection zone, 1 extinguishant zone</td>
</tr>
<tr>
<td>MG-5300/M</td>
<td>Extinguishant abort button (latching)</td>
</tr>
<tr>
<td>MG-5310/M</td>
<td>Extinguishant release button</td>
</tr>
</tbody>
</table>

**LOYD CERTIFIED, MARINE TYPE ACCESSORIES**

**MARINE ACCESSORIES**

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG-3500/M</td>
<td>Conventional mounting base</td>
</tr>
<tr>
<td>MG-3600/M</td>
<td>Recessed mounting base</td>
</tr>
<tr>
<td>MG-3700/M</td>
<td>Marine back box</td>
</tr>
<tr>
<td>MG-4000/M</td>
<td>Remote indicator</td>
</tr>
<tr>
<td>MG-5000/M</td>
<td>Electronic sounder, red, 12/24 V DC</td>
</tr>
<tr>
<td>MG-5200/M</td>
<td>Sounder strobe, red, 12/24 V DC</td>
</tr>
<tr>
<td>MG-5400/M</td>
<td>Electronic alarm bell (6 inch)</td>
</tr>
</tbody>
</table>

www.mavigard.com
MG-400 series industrial type combined gas and fire alarm control panel

Advanced programmability and high performance make the panel widely applicable for both industrial and home use. MG-400 series panels offer high performance with use in automations.

Combined gas and fire alarm control panel features

01. 4 channels inputs
02. Industrial gas detectors compatible
03. 4-20 mA converter compatible
04. Adjustable high and low alarm thresholds
05. Sending signals to different systems by high alarm relay, low alarm relay and fault relays.
06. Remote control
07. Configurable latching/non-latching relays
08. Relays can be set as NO or NC
09. Configurable latching/non-latching sounder outputs
10. Compatible with two and three wired detectors
11. Sink and Source option for channels
12. Password-protected access levels

- The panel has 4 channels, each capable of hosting max. 1 gas detector or 20 conventional fire detectors.
- Large graphic 240 x 64 pixel LCD with adjustable blue backlight facilitates displaying system information, including gas detector measurements, alarm conditions and faults.
- Channels can be disabled on user request, sounder outputs and relays can be tested, gas detectors can be zeroed and calibrated from the panel menu.
- It is possible to enter zone location text for panels and detectors.
- Channel measurement unit can be set to ‘%LEL’, ‘PPB’, ‘PPM’, ‘%VOL’ or ‘FIRE’.
- Panels can be set to ignore channel measurements made just after energizing of the panel for certain time. The time is adjustable from the panel menu. This feature prevents false alarms during the first minutes of panel operation, when gas detectors do not make stable measurements yet.
- High and low alarm dependence on either rise or decrease of gas density and threshold levels are adjustable from the panel menu.
DB5
Intrinsically Safe sounder
(weatherproof)
ATEX, ExII 1G, EExia, IIC, T4

DBS
Intrinsically Safe sounder
(ATEX, ExII 1G, EExia, IIC, T4)

Z 728.F
Zener barrier

MSB124/DB/R
Sounder strobe

IR² Flame Detector
ATEX ExII 2G, EExd IIB T5, FM/CSA

Xgard Type 5
(Sensitive for flammable gases)

Xgard Type 1
(Sensitive for toxic gases
and oxygen gas)
ATEX Ex II 2G, EExd IIC T6

BG3
(Intrinsically safe manual call point)
ATEX Ex II 1G, EExia IIC T4

Z 728.F
Zener barrier

HAZARDOUS AREA

MG-400
Combined gas and fire alarm control panel

PRODUCT MODELS

<table>
<thead>
<tr>
<th>Product model</th>
<th>Channel capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG-400</td>
<td>4</td>
</tr>
</tbody>
</table>

www.mavili.com.tr
Gas alarm control panel

features

01. Adjustable delay time for sounder outputs
02. Zonal gas and fault LED indicators
03. Supervised conventional zone inputs and sounder outputs
04. Password-protected access levels
05. Remoto control
06. Configurable latching gas alarm option
07. Zone test and disable function
08. Possibility of assigning delay time to zones

Gas alarm control panel indicates both of the 2-level alarm output of the gas detectors. Zone LEDs illuminate blink for 1st level alarm and illuminate continuously for 2nd level alarm.

A different relay output is available for each alarm stage. For 8 zones, 16 relay outputs are available in total.

2 x 16 character LCD with backlight and LED indicators for faults and system conditions allow comprehensive presentation of information on operating of the system.

Volt free change over contact outputs are available in gas alarm control panel in order to control other devices and to send signal to other systems.

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.

GD2R series gas detectors

New GD2R series gas detectors presents more sensitive ELECTROCHEMICAL sensor and having 2-stage alarm outputs make easy to create flexible automation according to the gas concentration in the medium.

GD2R series electrochemical sensor, 2-alarm level output gas detectors

Gas detector which incorporates electrochemical sensor have 5 year sensor life under normal operating conditions. When gas concentration reaches to alarm threshold in the site, gas detector gives visual and audial warnings. Gas detectors have 2-level alarm output. When the gas in the ambient reaches 50 ppm (parts per million), gas detector gets into 1st level alarm level. If gas concentration reaches 200 ppm, then gas detector gets into 2nd level alarm. If gas concentration in the ambient descends to 50 ppm, CO gas detector automatically turns back to its normal operating condition.

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GD2R-12EC</td>
<td>Carbon monoxide gas detector (CO), 12 V DC, 2-level alarm output, electrochemical sensor</td>
</tr>
<tr>
<td>GD2R-24EC</td>
<td>Carbon monoxide gas detector (CO), 24 V DC, 2-level alarm output, electrochemical sensor</td>
</tr>
<tr>
<td>GD2R-220EC</td>
<td>Combined methane (natural gas) and carbon monoxide detector 220 V AC, 2-level alarm output, electrochemical sensor</td>
</tr>
<tr>
<td>GD2R-220LEC</td>
<td>Combined LPG (butane-propane) and carbon monoxide detector 220 V AC, 2-level alarm output, electrochemical sensor</td>
</tr>
</tbody>
</table>
GD / GDR / TGDR series gas detectors

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

Features

01. Compatible with EN 50194 and EN 50291
02. Power on, gas alarm and fault LED indicators
03. LED and buzzer test button
04. Built-in buzzer
05. 5 year sensor life under normal operating conditions
06. Stable sensitivity and high functioning performance
07. Compatible with Mavigard conventional fire and gas alarm control panels
08. Models with relay output are compatible with most of the fire alarm and security control panels
09. Microprocessor controlled

LPG and methane detectors

LPG (butane + propane) and methane (natural gas) are explosive hydrocarbon gases. The LPG and methane detectors respond audibly and visually before the leakage reaches 10% LEL (lower explosive limit).

Ceiling type methane (natural gas) detectors

TGDR-1224M Ceiling type gas detectors have the same appearance and dimensions of Mavigard fire detectors. Detector base also required for the ceiling type gas detectors that is used for mounting.
Accessories for fire and gas alarm control systems

These accessories are common products for all intelligent analogue addressable fire alarm systems and conventional fire alarm systems with Mavigard and Maxlogic brands.

**Features**

01. Electronic sounders and electronic sounder strobes are compatible with EN 54-3, manual call points are compatible with EN 54-11 and power supply units are compatible with EN 54-4.
02. Water leakage detectors for water flood risk.
03. Electronic sounders and sounder strobes provide 105dB(A) @ 24 V DC max. audible signal power.
04. Electronic fire alarm bells having 150 mm diameter provide strong audio power.

**MG-5100 Conventional manual call point with break-glass**
The MG-5100 MCP is activated by manual breaking of the film-coated glass which does not harm fingers. When the glass is broken, the switch, normally resting on glass edge, changes position.

**MG-5120 Conventional manual call point, resettable**
**MG-5130 Conventional manual call point, weather-proof (IP67)**
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. MG-5130 MCP is weather-proof (IP67) and can be used in outdoor applications.

**ML-2180 Conventional water leakage detector**
ML-2181 Conventional water leakage detector with relay
Water leakage detectors are mounted at areas where water leakage could be risky. Detector contains 1,5 meters cable and sensible probe on its end. Water leakage detectors mounted the position which sensible probe mounts 1 – 3 mm above the floor. Water leakage detectors cover max. 20m2. Conventional water leakage detectors with relay output is also available.

**MG-4000 Remote indicator**
Remote indicators facilitate identifying the alarm location by matching the triggered detector placed above false ceiling or rooms. It is compatible with all conventional and analogue addressable fire alarm detectors. It is used with MG-4100 mounting box.

**MG-5000 Electronic sounder**
**MG-5200 Electronic sounder strobe**
The maximum audible signal power of the sounder is 110 dB(A) 24 V DC at 1 m. and the sounders are for indoor use. The strobe has 3 W power and a flash rate of 150/min.

**MG-5400 Fire alarm bell (6 inches)**
The bell is designed to meet requirements of superior performance with low current consumption. A built-in varistor suppression element is incorporated to micro-motor unit of the bell to reduce EMI and RFI effects.

**Power supply units**
Switched mode power supplies have models with 24 V DC, 2.5A, 4A, 5A, 7A and 10A output currents. The power supplies are microprocessor controlled and perform continuous fault monitoring (ground, batteries, 24 V DC, 220 V mains fail etc.).
The MG-1110 is an advanced high sensitivity smoke detector designed to ensure that installation and commissioning is as simple as possible, while optimizing performance. It allows the detector to configure itself to the optimum sensitivity for any environment.

Aspirating smoke detection is a very advanced method of production. Detectors can be configured to operate at very high levels of sensitivity for clean areas or it is likely to reduce sensitivity in dirtier areas.

### Features

01. High sensitivity provided by laser based forward light scatter for reliable early warning
02. Up to 100 m of sampling pipe with 10 sampling hole
03. Undesired alarms from dust are avoided using the laser dust elimination system technology
04. Easy commissioning without using PC
05. Special design of laser smoke sensor chamber for aspirating detection

### Product Code

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG-1110</td>
<td>High sensitivity smoke detector</td>
</tr>
</tbody>
</table>

### Mavigard Superflow Models

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG-1110.A</td>
<td>Mavigard superflow air duct sampling unit, with 60cm venturi pipe and addressable photo-electric smoke detector</td>
</tr>
<tr>
<td>MG-1910.K</td>
<td>Mavigard superflow air duct sampling unit, with 60cm venturi pipe and conventional photo-electric smoke detector</td>
</tr>
</tbody>
</table>

### ML-0130 Maxlogic smoke detector tester

ML-0130 is used to test photo-electric and ionization smoke detectors, and ML-0131 is used to clean these detectors.

### Features

01. UL listed
02. Non-flammable
03. Non-toxic
04. No silicon content; ozone friendly with no CFCs
05. Sensor safe; does not damage plastic casing or internal components
06. High speed draft
07. Cleans dust and any other solid contaminants
08. Easy to use

### ML-0130 Maxlogic smoke detector duster

Smoke detector duster is a functional cleaning product for ionization and optical smoke detectors.