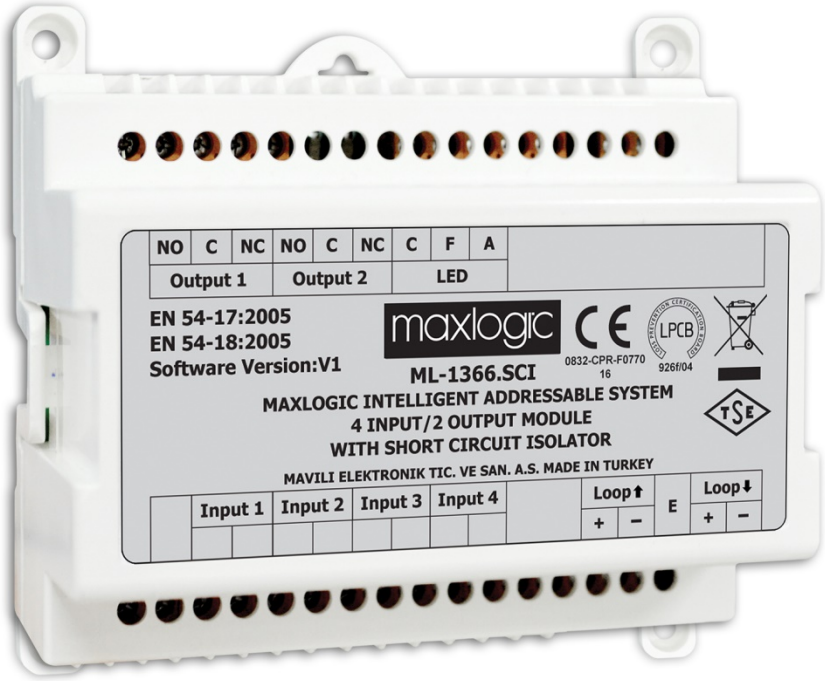
maxlogic & mavigard
fire and gas detection systems

SALES SUPPORT DOCUMENT

ML-136X / ML-136X.SCI
MAXLOGIC INTELLIGENT ADDRESSABLE SYSTEM 2/1 I/O MODULE (2 INPUT/1 OUTPUT) / SHORT CIRCUIT ISOLATOR
MAXLOGIC INTELLIGENT ADDRESSABLE SYSTEM 4/2 I/O MODULE (4 INPUT/2 OUTPUT) / SHORT CIRCUIT ISOLATOR
MAXLOGIC INTELLIGENT ADDRESSABLE SYSTEM RELAY CONTROL MODULE (1 OUTPUT) / SHORT CIRCUIT ISOLATOR
MAXLOGIC INTELLIGENT ADDRESSABLE SYSTEM SWITCH MONITOR MODULE (1 INPUT) / SHORT CIRCUIT ISOLATOR



ML-1366 and ML-1366.SCI (c/w short circuit isolator) I/O Module is included with 4 pcs contact (volt free) monitor input and 2 pcs dry contact (volt free) relay output, ML-1363 and ML-1363.SCI (c/w short circuit isolator) I/O Module is included with 2 pcs contact (volt free) monitor input and 1 pc dry contact (volt free) relay output, ML-1361 and ML-1361.SCI (c/w short circuit isolator) relay module is included with 1 pc dry contact (volt free) relay output, ML-1362 and ML-1362.SCI (c/w short circuit isolator) switch monitor module is included with 1 pc contact (volt free) monitor input. The device is loop powered. It can be programmed to operate in cause-effect scenarios. Within fire automation scenario with the help of switch monitor inputs any other system can be monitored and with the help of relay control outputs any other system can be controlled. Switch monitor inputs are used to monitor the outputs of dry (volt-free) contacts of relay output.

It can be chosen either as normally open or as normally closed. The needed type should be determined before energizing the panel. The event type that will be after the contact change can be determined by the user. Inputs can be adjusted as any of the 13 different event types (fire, evacuation, fault, pre-alarm, technical alarm, technical fault, warning, security, announce system active, telephone active, analog event, internal event, information).. User defines this setting through the computer program (loop manager). If not defined by the user, switch monitor inputs are set to be “fire”. Switch monitor lines are supervised for short-circuit and open-circuit conditions.

Fire automation inputs:

- Sprinkler system information
- Pressure ventilation system ON/OFF information
- Smoke dampers ON/OFF information

- Emergency security announcement system information
- Emergency lighting system information
- Gas-stop system information
- Earthquake early warning system
- Alarm system
- Extinguishing system

The module uses 30V DC, 1A bipolar (volt-free) contact relay output. It can be normally open and normally close. It can be programmed via computer program (loop manager) to create outputs according to the user defined event type. The output can be any of the 13 different event types (fire, evacuation, fault, pre-alarm, technical alarm, technical fault, warning, security, announce system active, telephone active, analog event, internal event, information) and delay of up to 250 seconds. If no programming is made, the delay is 0 second; event type is “fire” and “fault”.

Fire automation outputs:

- Lifts
- Pressure ventilation
- Smoke dampers
- Emergency security announcement
- Emergency lighting system
- Electrical panels
- Solenoid valves
- Air conditioning systems
- Extinguishing System
-

INDICATORS

3pcs LED indicators are available on Module as mentioned below:

• **COMMUNICATION LED (C):** Red color. It flashes during question module address when it communicates with panel.
• **FAULT LED (F):** Yellow color. It lights up if available any faults in module or power supply.
• **ACTIVATION LED (A):** Red color. It lights up same period with COMM. LED when input or output is activated.

ADDRESSING PROCESS

Module can get address by addressing device as software. This information is important while addressing; the module can get only one address. Addressing process is done automatically from inputs to outputs. The address is given to first input of the switch monitor, which is given to module, other inputs and outputs take the addresses respectively.
For Example: If the 1st address is given to first input of “the switch monitor”. 2^{nd}, 3^{rd} and 4^{th} addresses are forwarded to other 3 input of the switch monitor. 2 pcs relay outputs take the 5^{th} and 6^{th} number address respectively.

PRODUCT FEATURES

- Complies to EN 54-18 standard
- ML-1366 4/2 I/O module with 4 pcs dry contact monitoring input and 2 pcs dry contact relay output option
- ML-1363 2/1 I/O module with 2 pcs dry contact monitoring input and 1 pcs dry contact relay output option
- ML-1361 relay control module with 1 pcs relay output option
- ML-1362 contact monitoring module with 1 pcs contact monitoring input option
- Available also with SCI (short circuit isolator)
- Microprocessor controlled
- Easy addressing by software through addressing device
- Easy programming with the loop manager software
- Communication, Fault and Activation LEDs
- Loop powered
- Aesthetic design
- Manufactured with surface mount technology
- Interrupt feature that cuts the loop communication and enables the panel to receive fire alarm in just 1,5 seconds.
- Normally open (NO) or normally closed (NC) contact operating feature

TECHNICAL SPECIFICATIONS

Power Supply	18-33V DC Loop Powered
Quiescent / Alarm Current	@NO switch monitor - 1,9mA / 2,2mA @NC switch monitor – 2,2mA / 1,5mA
Output Contact Capacity	1A @ 30V DC
Communication Protocol	VIP / ~1000 baud
Cable Type	1x2x0,8+0,8JH(st)H / 1x2x1,0+1,0JH(st)H / 1x2x1,5+1,5JH(st)H
Maximum Cable Distance	1500m @ 1x2x0,8+0,8JH(st)H
Weight	135 gr
Dimensions (LxWxD)	52 x 100 x 100
Storing Temperature	(-30°C) - (+60°C)
Working Temperature	(-10°C) - (+55°C)
Color	White
Relative Humidity	%95 (+40°C non-condensing)

TECHNICAL SPECIFICATION FOR MODELS WITH SHORT CIRCUIT ISOLATOR

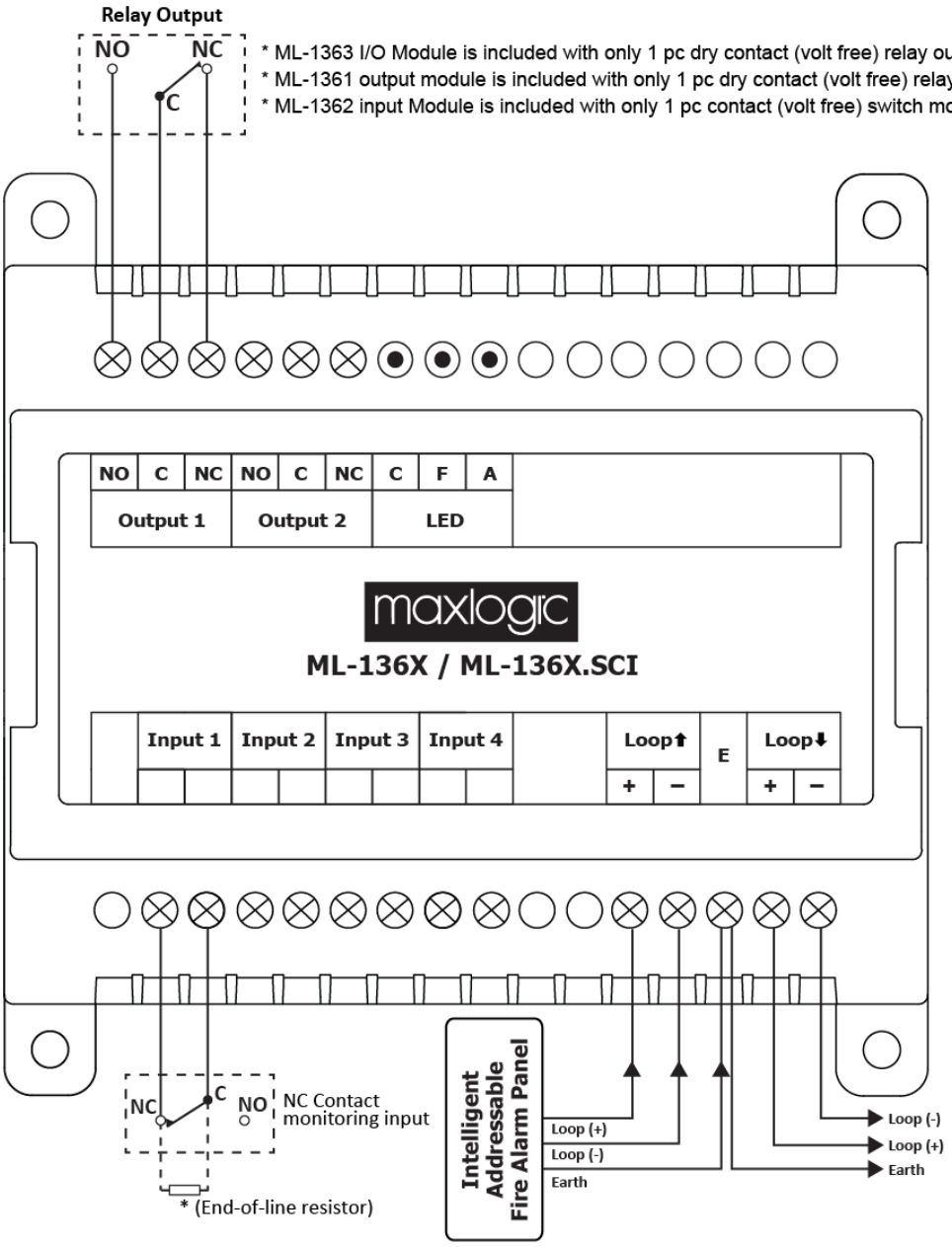
Maximum Supply Voltage (Vmax):	33V
Nominal Supply Voltage (Vnom):	26V
Minimum Supply Voltage (Vmin):	18V
Maximum Switching Current (ISmax):	1A
Maximum Working Current (ICmax):	1A

Short Circuit Current (ILmax):	<45 mA
Maximum Contact Resistance (ZCmax):	500 mΩ
Isolating Voltage (VSOmin - VSOmax)	8V – 13V
Reconnect Voltage (VSCmin - VSCmax)	8V – 13V

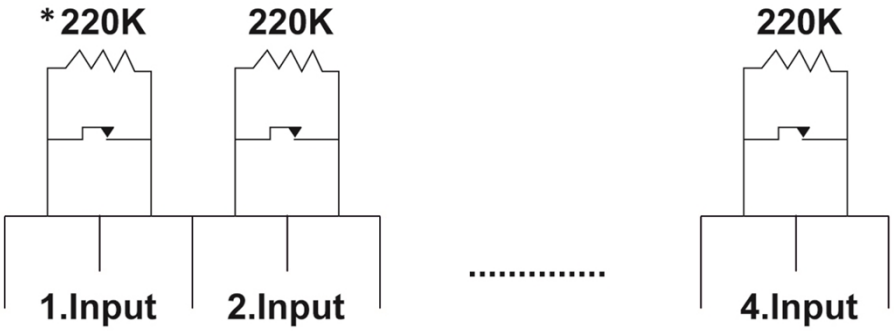
MODELS

Product	Description
ML-1361	Maxlogic Intelligent Addressable System Relay Control Module, 1 Output
ML-1361.SCI	Maxlogic Intelligent Addressable System Relay Control Module, 1 Output, Short Circuit Isolator
ML-1362	Maxlogic Intelligent Addressable System Switch Monitor Module, 1 Input
ML-1362.SCI	Maxlogic Intelligent Addressable System Switch Monitor Module, 1 Input, Short Circuit Isolator
ML-1363	Maxlogic Intelligent Addressable System 2/1 I/O Module (2 Input / 1 Output)
ML-1363.SCI	Maxlogic Intelligent Addressable System 2/1 I/O Module (2 Input / 1 Output), Short Circuit Isolator
ML-1366	Maxlogic Intelligent Addressable System 4/2 I/O Module (4 Input / 2 Output)
ML-1366.SCI	Maxlogic Intelligent Addressable System 4/2 I/O Module (4 Input / 2 Output), Short Circuit Isolator

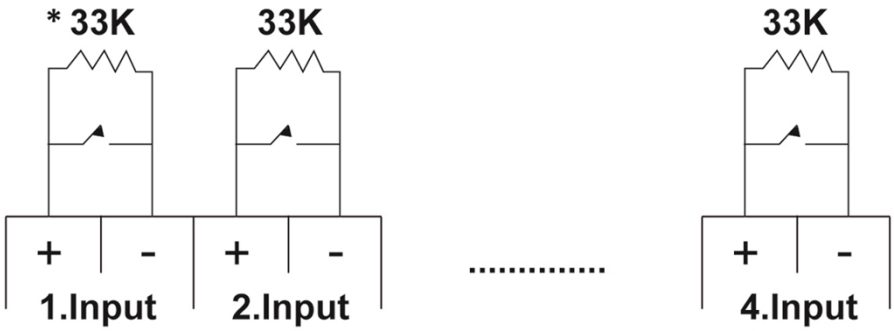
CONNECTION DIAGRAM



CONTACT SELECTION

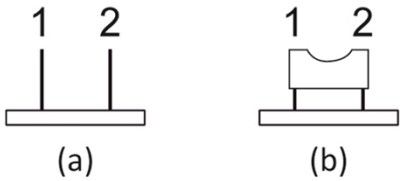


NC Contact



NO Contact

*** End of line resistor**



Type Selection

NO/NC Jumper Condition

(a) → NO Contact

(b) → NC Contact

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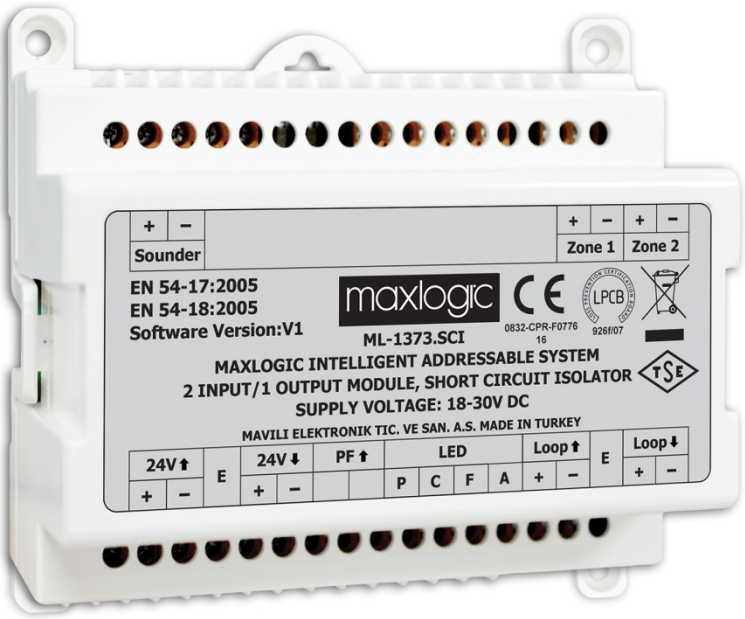
SALES SUPPORT DOCUMENT

ML-137X / ML-137X.SCI
MAXLOGIC INTELLIGENT ADDRESSABLE SYSTEM 2/1 I/O MODULE(2 INPUT/1 OUTPUT) / SHORT CIRCUIT ISOLATOR
MAXLOGIC INTELLIGENT ADDRESSABLE SYSTEM SOUNDER CONTROL MODULE (1 OUTPUT) / SHORT CIRCUIT ISOLATOR
MAXLOGİC INTELLIGENT ADDRESSABLE SYSTEM ZONE CONTROL MODULE (1 INPUT) / SHORT CIRCUIT ISOLATOR

ML-1373 and ML-1373.SCI (c/w short circuit isolator) I/O module is included with 2 input for zone monitor and 1 output for sounder. ML-1371 and ML-1371.SCI (c/w short circuit isolator) sounder module is included with 1 output for sounder. ML-1372 and ML-1372.SCI (c/w short circuit isolator) zone monitor module is included with 1 zone input. ML-137X / ML-137X.SCI need 18V - 33V DC external power supply, and this supply is supervised for faults and are compatible with MAXLOGIC series addressable panels. I/O module that works with VIP communication protocol can be programmed to operate at cause-effect scenarios.



Zone monitoring inputs are used to monitor conventional type detectors and call points. Maximum 20 conventional detectors and unlimited number of call points can be connected. The event type that the panel will detect once the input status changes can be defined by the user. Zone monitoring inputs can be adjusted as any of the 13 different event types (fire, evacuation, fault, pre-alarm, technical alarm, technical fault, warning, security, announce system active, telephone active, analog event, internal event, information). User defines this setting through the computer program (loop manager). If it is not defined by the user, zone inputs are set to be “fire”. Zone lines are supervised for short-circuit and open-circuit conditions.

The sounder output of 24V DC 500mA can be activated according to the fire automation. It can be programmed via computer program (loop manager) to create outputs according to the user defined event type. The output can be any of the 13 different event types (fire, evacuation, fault, pre-alarm, technical alarm, technical fault, warning, security, announce system active, telephone active, analog event, internal event, information) and delay of up to 250 seconds. If no programming is made, the delay is 0 second, event type is “fire”, “evacuation” and “warning”. The sounder lines are supervised for short-circuit and open-circuit conditions.

INDICATORS

There are 4 LEDs on the module. These are;

• **POWER ON LED (P):** Green color. It lights up continuously when supplies externally.
• **COMMUNICATION LED (C):** Red color. It flashes during question module address when it communicates with panel via VIP protocol.
• **FAULT LED (F):** Yellow color. It lights up if available any faults in module or power supply.
• **ACTİVATION LED (A):** Red color. It lights up continuously when input or output is activated.

ADDRESSING PROCESS

Module can get address by addressing device as software. This information is important while addressing; the module can get only one address. Addressing process is done automatically from inputs to outputs. The address is given to first input of the zone monitor, which is given to module, other inputs and outputs take the addresses respectively.
For Example: If the 1st address is given to first input of "the zone monitor", the 2nd address is forwarded to other input of the zone monitor. 1 pc sounder output takes the 3rd number address respectively.

PRODUCT FEATURES

- Complies to EN 54-18 standard
- ML-1373 2/1 I/O modules with 2 pcs zone montiroing input and 1 pcs sounder output option
- ML-1371 siren control module with 1 pcs sounder output option
- ML-1372 zone controlling module with 1 pcs zone controlling input option
- Available also with SCI (short circuit isolator)
- Microprocessor controlled
- Easy addressing by software through addressing device
- Easy programming with the loop manager software
- Power On, Communication, Fault and Activation LEDs
- Requires external power supply
- Fault tracking of the power supply
- Aesthetic design
- Manufactured with surface mount technology
- Interrupt feature that cuts the loop communication and enables the panel to receive fire alarm in just 1,5 seconds.

TECHNICAL SPECIFICATIONS

Power Supply	External Power Supply Unit PSU 18-33V DC
Quiescent / Alarm Current (If both 2 zones goes to alarm)	Loop: 900µA/900µA PSU: 25mA/72mA@30V DC 21mA/57mA@24V DC 18,5mA/46mA@18V DC
Sounder Output Current	500mA, 1 pcs.
Zone Input Capacity	20 pieces conventional detector / unlimited call points
Communication Protocol	VIP / ~1000 baud
Cable Type	1x2x0,8+0,8JH(st)H / 1x2x1,0+1,0JH(st)H / 1x2x1,5+1,5JH(st)H
Maximum Cable Distance	1500m @ 1x2x0,8+0,8JH(st)H

Weight	135 gr
Dimensions (LxWxD)	52 x 100 x 100
Storing Temperature	(-30°C) - (+60°C)
Working Temperature	(-10°C) - (+55°C)
Humidity	%95 (+40°C non-condensing)
Color	White

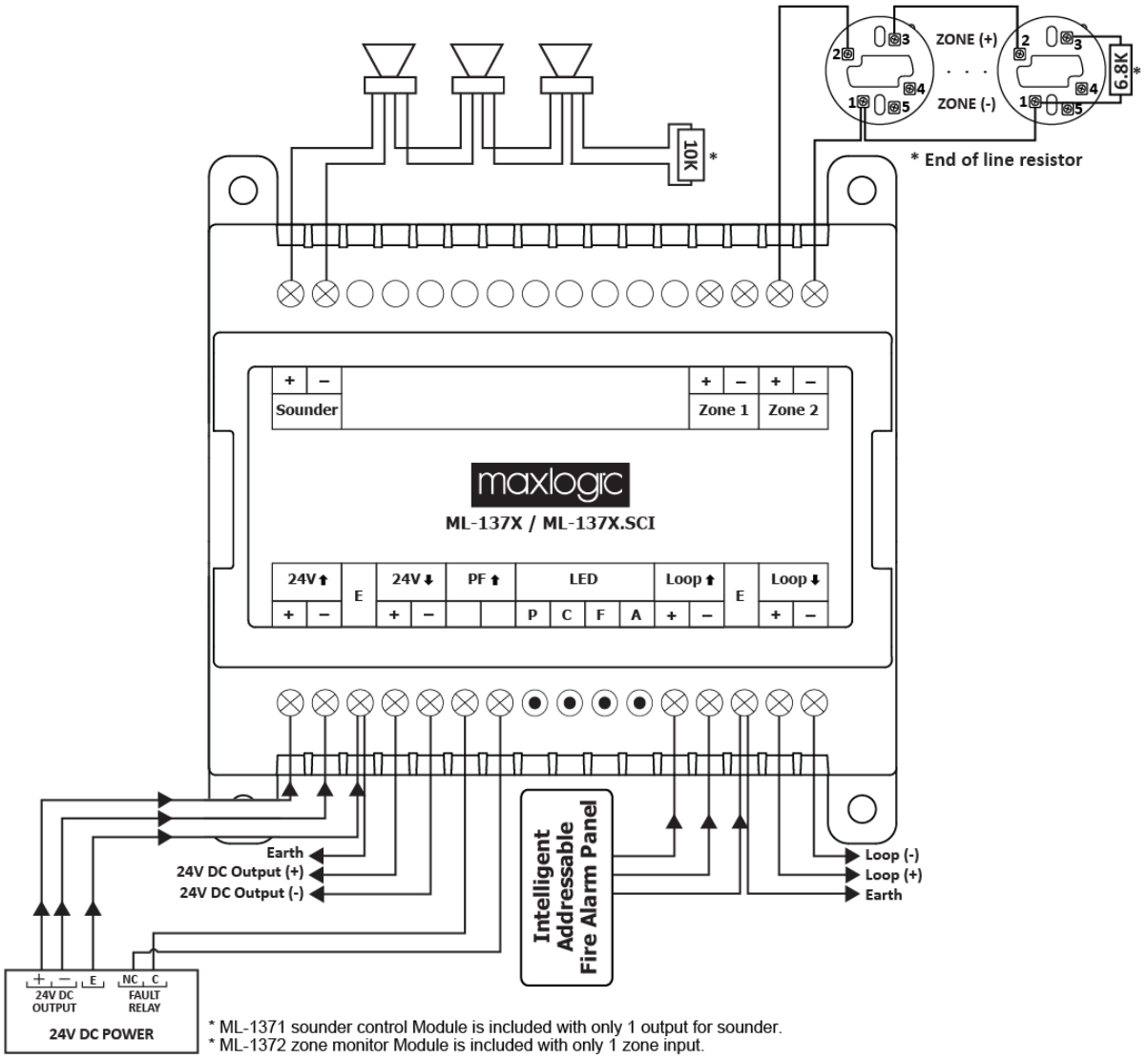
TECHNICAL SPECIFICATIONS FOR MODELS WITH SHORT CIRCUIT ISOLATOR

Maximum Supply Voltage (Vmax):	33V
Nominal Supply Voltage (Vnom):	26V
Minimum Supply Voltage (Vmin):	18V
Maximum Switching Current (ISmax):	1A
Maximum Working Current (ICmax):	1A
Short Circuit Current (ILmax):	<45 mA
Maximum Contact Resistence (ZCmax):	500 mΩ
Isolating Voltage (VSOmin - VSOmax)	8V – 13V
Reconnect Voltage (VSCmin - VSCmax)	8V – 13V

MODELS

Product	**Explanation**
ML-1371	Maxlogic Intelligent Addressable Sounder Control Module, 1 Output
ML-1371.SCI	Maxlogic Intelligent Addressable Sounder Control Module, 1 Output, Short circuit isolator
ML-1372	Maxlogic Intelligent Addressable Zone Control Module, 1 Input
ML-1372.SCI	Maxlogic Intelligent Addressable Zone Control Module, 1 Input, Short circuit isolator
ML-1373	Maxlogic Intelligent Addressable System 2/1 I/O Module (2 Input / 1 Output)
ML-1373.SCI	Maxlogic Intelligent Addressable System 2/1 I/O Module (2 Input / 1 Output), Short Circuit Isolator

CONNECTION DIAGRAM



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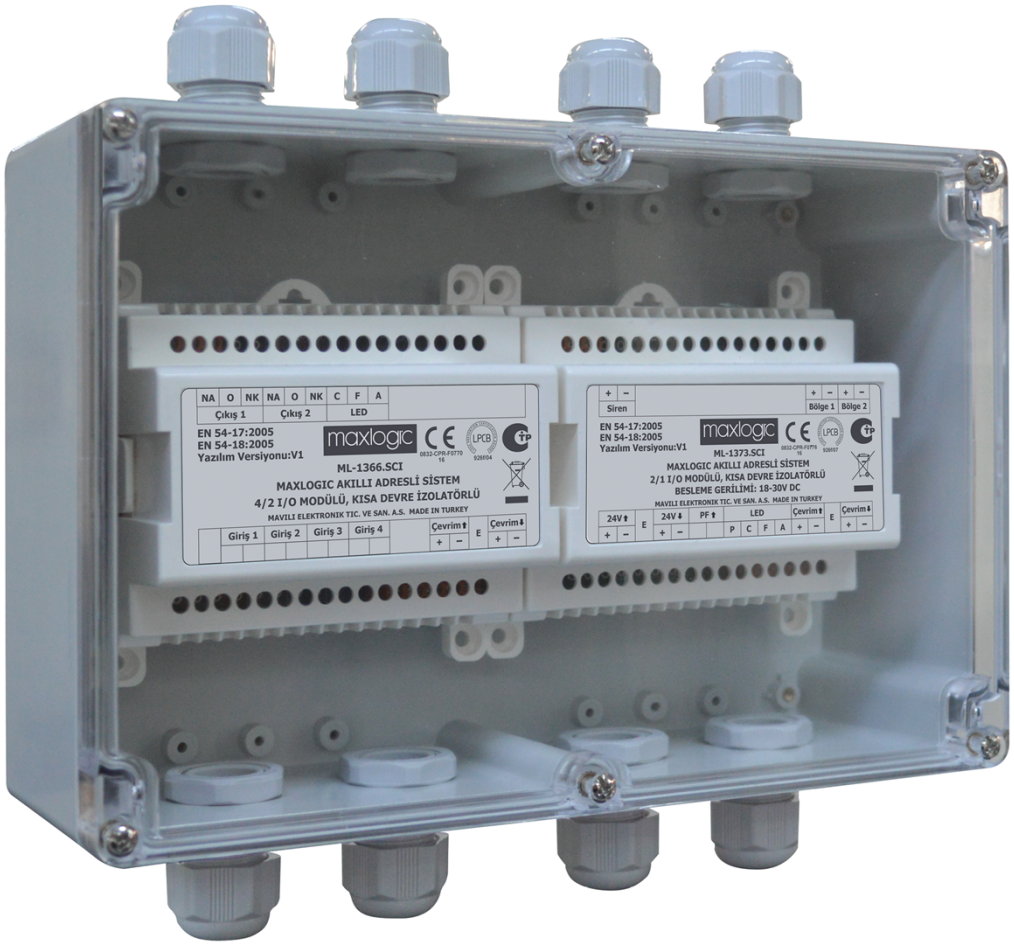
MAXLOGIC ML-0320
MAXLOGIC 2-I/O MODULE PROTECTION BOX

Aesthetic design, easy installation and use...



FEATURES

The ML-0320 2-Channel I/O Module Protective Enclosure is used to protect Maxlogic series field modules against dust, moisture and liquids.

- Suitable for surface mounting
- Capacity of 2 modules
- Easy installation and operation
- Cable entry holes at the top and bottom for easy wiring

MODELS

Product	Description
ML-0320	2-channel I/O Module Protective Enclosure

TECHNICAL SPECIFICATION

Product	Description
Dimensions	240 x 160 mm