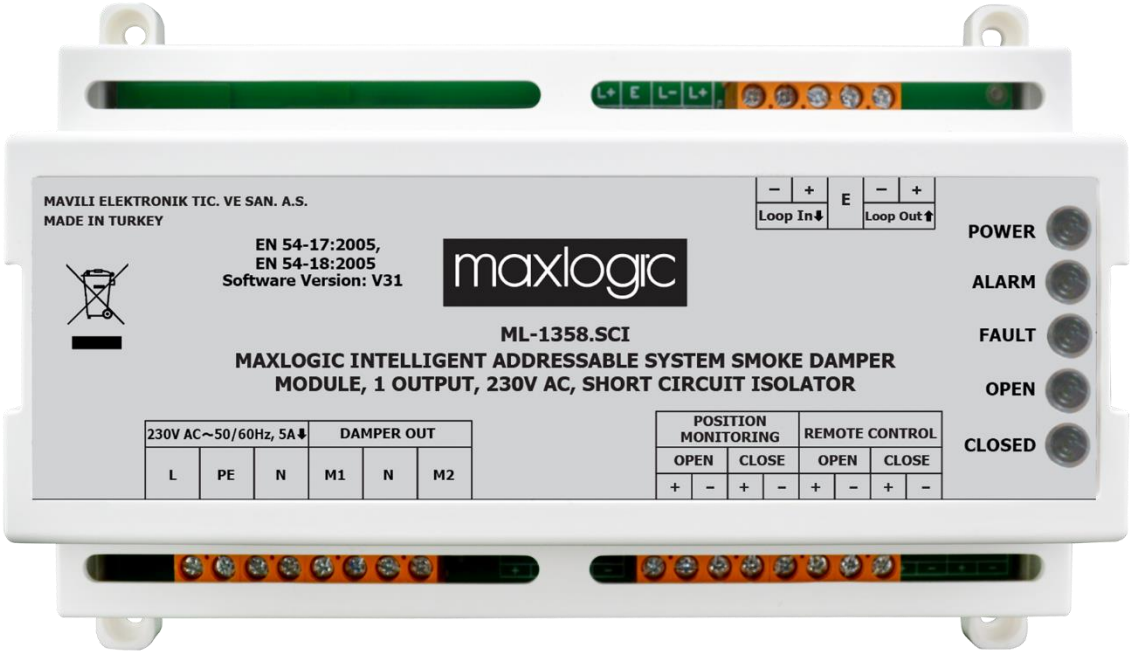
maxlogic & mavigard
fire and gas detection systems

SALES SUPPORT DOCUMENT

ML-1356 & ML-1356.SCI / ML-1357 & ML-1357.SCI / ML-1358 & ML-1358.SCI

MAXLOGIC INTELLIGENT ADDRESSABLE SYSTEM SMOKE DAMPER MODULE



Maxlogic Intelligent Addressable System **Smoke Damper Modules** have 2 damper **Position Monitoring Inputs** and 1 **Damper Output**. The **On**, **Off** and **Fault** status of the dampers can be monitored and controlled. It also provides the possibility to manually control the dampers with the **Remote Control** inputs on it. It can be programmable according to the cause-effect scenarios. Thanks to its **Short Circuit Isolator**, it provides protection against short circuit situations that may occur in the loop line.

Product Features

- Comply to **EN 54-18** standard
- Models with **short circuit isolators** comply with **EN 54-17** standards.
- **Green Power** LED indicating that module supply is active.
- **Yellow Fault** LED, indicating all error conditions
- **Red Alarm** LED indicating that the module is activated by the Adressable Panel
- Green Open LED indicating that damper is OPEN by lighting up continuously or damper position changing by flashing
- It is the Green CLOSED LED indicating that damper is CLOSED by lighting up continuously or damper position changing by flashing
- **OPEN** and **CLOSE** buttons for opening and closing damper manually

• **OPEN** and **CLOSE** inputs for opening and closing damper remotely by remote control
• Indicating of opening **Damper Module Cover** as **Damper Fault**
• If any fault occurs in the damper module, the general fault led lights up in the panel and the point and shows the fault from which loop and from which address
• Detection of **"Open / Short"** circuit faults on the **Damper Output** line
• Detection of **"Open / Short"** circuit faults in the damper **Remote Control** inputs
• Detection of **"Open / Short"** circuit faults in the Damper **Position Monitoring** inputs
• **Open**, **Closed** and **Damper Fault** positions of the dampers can be seen from the panel event logs and the screen of the panel
• Damper opening and closing times can be set to **60, 90, 150, 270 (Tolerance: ±30s) seconds**, for **Position Monitoring** inputs
• **Damper Fault** can be seen on the screen if the damper that does not change position within the delay time
• **Damper Position Monitoring** inputs can be **activated** or **deactivated**
• Model option **with Short Circuit Isolator** which monitors the Loop Line Short Circuit conditions and opens the line in case of fault
• **Loop Manager +** software to give the module **Zone Number** and **Location Information**
• **Damper Module** can be included in scenarios to be written on addressable panel
• Inclusion of scenarios to enable **Smoke Dampers** to be opened and provides smoke evacuation in case of a fire. Also, the **Smoke Damper** can be turned off in other rooms connected to the channel to prevent smoke from entering the other rooms.
• Scenario to prevent the entry of smoke into escape routes such as stairs by operating the **Pressurized Dampers** in case of fire.
• If required for safety reasons, **1st Level** and **2nd Level Delay** assignments can be made to enable **Smoke Dampers** to be opened and closed in a delayed way.
• **Supervisor Enterprise** software can be given to **On / Off** commands to Dampers
• **Supervisor Enterprise** software can monitor Damper **Open, Closed and Fault** locations
• **Supervisor Enterprise** software to monitor **Dumper Fault** status

INDICATORS/LEDS

There are 5 LED indicators on the module.

• **POWER LED:** Indicates that the module's power is ON, it's colour is green.
• **ALARM LED:** Flashes when starts VIP communication, lights up continuously when the module is active, it's colour is red.
• **FAULT LED:** Lights up when there is an fault in the module, it's colour is yellow.
• **OPEN LED:** Lights up when the damper position is OPEN, flashes when damper position start changing, its's colour is green.
• **CLOSED LED:** Lights up when the damper position is CLOSED, flashes when damper position start changing, its's colour is green.

MODELS

ML-1356	Maxlogic Intelligent Addressable System Smoke Damper Module, 1 Output, 24V DC
ML-1356.SCI	Maxlogic Intelligent Addressable System Smoke Damper Module, 1 Output, 24V DC, Short Circuit Isolator
ML-1357	Maxlogic Intelligent Addressable System Smoke Damper Module, 1 Output, 24V AC
ML-1357.SCI	Maxlogic Intelligent Addressable System Smoke Damper Module, 1 Output, 24V AC, Short Circuit Isolator
ML-1358	Maxlogic Intelligent Addressable System Smoke Damper Module, 1 Output, 230V AC
ML-1358.SCI	Maxlogic Intelligent Addressable System Smoke Damper Module, 1 Output, 230V AC, Short Circuit Isolator

TECHNICAL SPECIFICATION

Operating Voltage		18-33V DC (Loop Powered)
Damper Operating Voltage	**ML-1356 / ML-1356.SCI**	24V DC (19V-30V DC)
	ML-1357 / ML-1357.SCI	24V AC (+%10, -%15)
	ML-1358 / ML-1358.SCI	230V AC (+%10, -%15)
Damper Control Output Capacity		5 A
Operating, Storage Temp		(-30°C) - (+60°C)
Relative Humidity		%95 (without condensation at 40°C)
Height/Width/Depth		86mm / 158mm / 60mm
Comm. Protocol		VIP / ~1000 baud
Cable Type	**Loop & Position Monitoring**	1x2x0,8+0,8JH(st)H 1x2x1,0+0,8JH(st)H 1x2x1,5+0,8JH(st)H
	Module & Damper Supply Voltage	**Spring-Return Actuator:** 2x0,75 mm² (Halogen Free) **Non-Spring-Return Actuator:** 3x0,75 mm² (Halogen Free) **Elektromagnetic System:** 3x0,75 mm² (Halogen Free)

TECHNICAL SPECIFICATION FOR WITH SHORT CIRCUIT MODEL

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

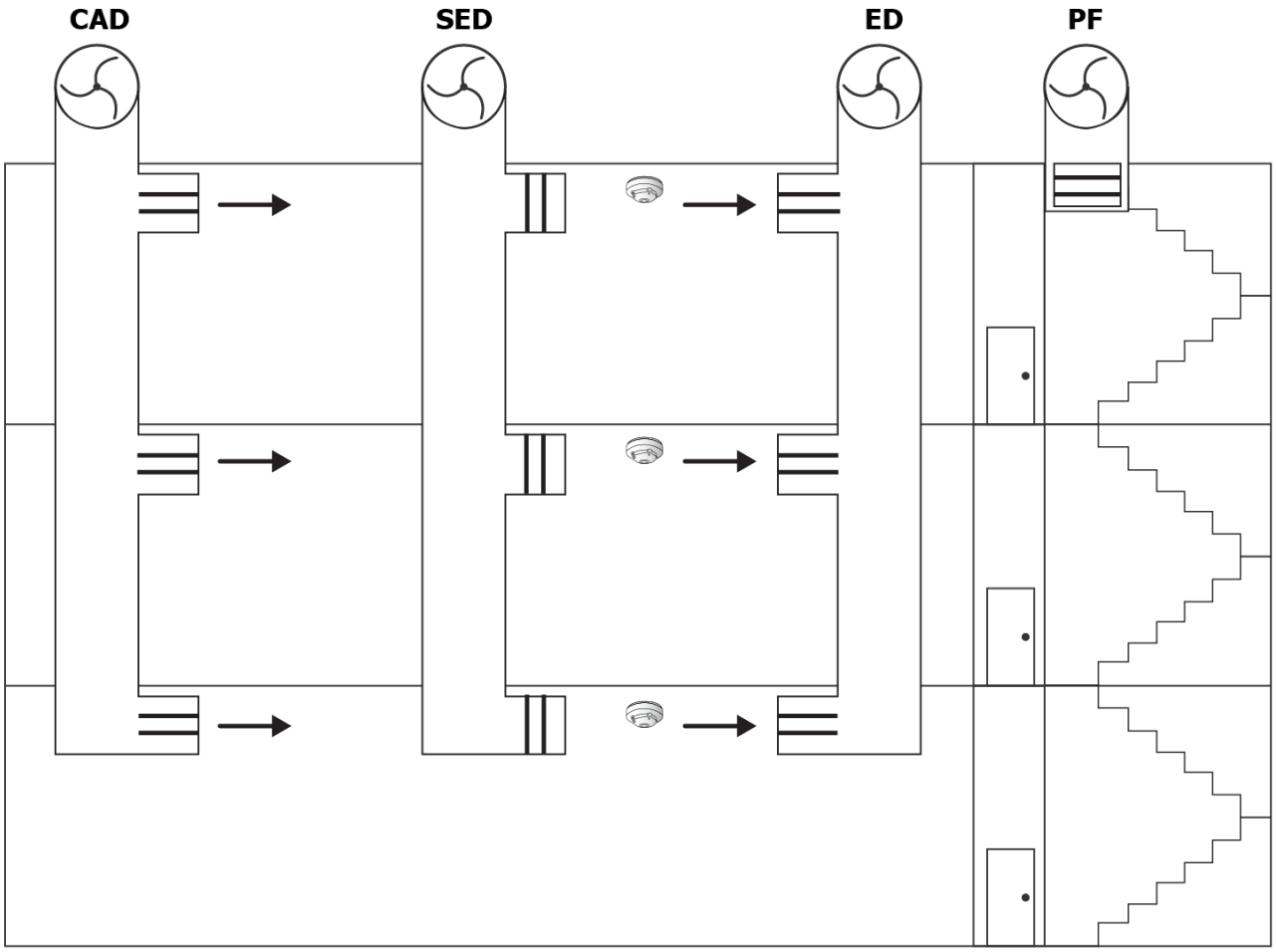
Clean Air Ducts (CAD), Smoke Exhaust Ducts (SED) and Exhaust Ducts (ED) in buildings are used for the circulation of fresh air in the building.

The majority of deaths caused by fires are caused by smoke poisoning. For this reason, it is necessary to evacuate the smoke in case of fire or extinguish the fire without air.

NORMAL STATUS

In buildings, fresh air is supplied to the environment through **Clean Air Ducts (CAD).** The dirty air is discharged through the **Exhaust Ducts (ED).**

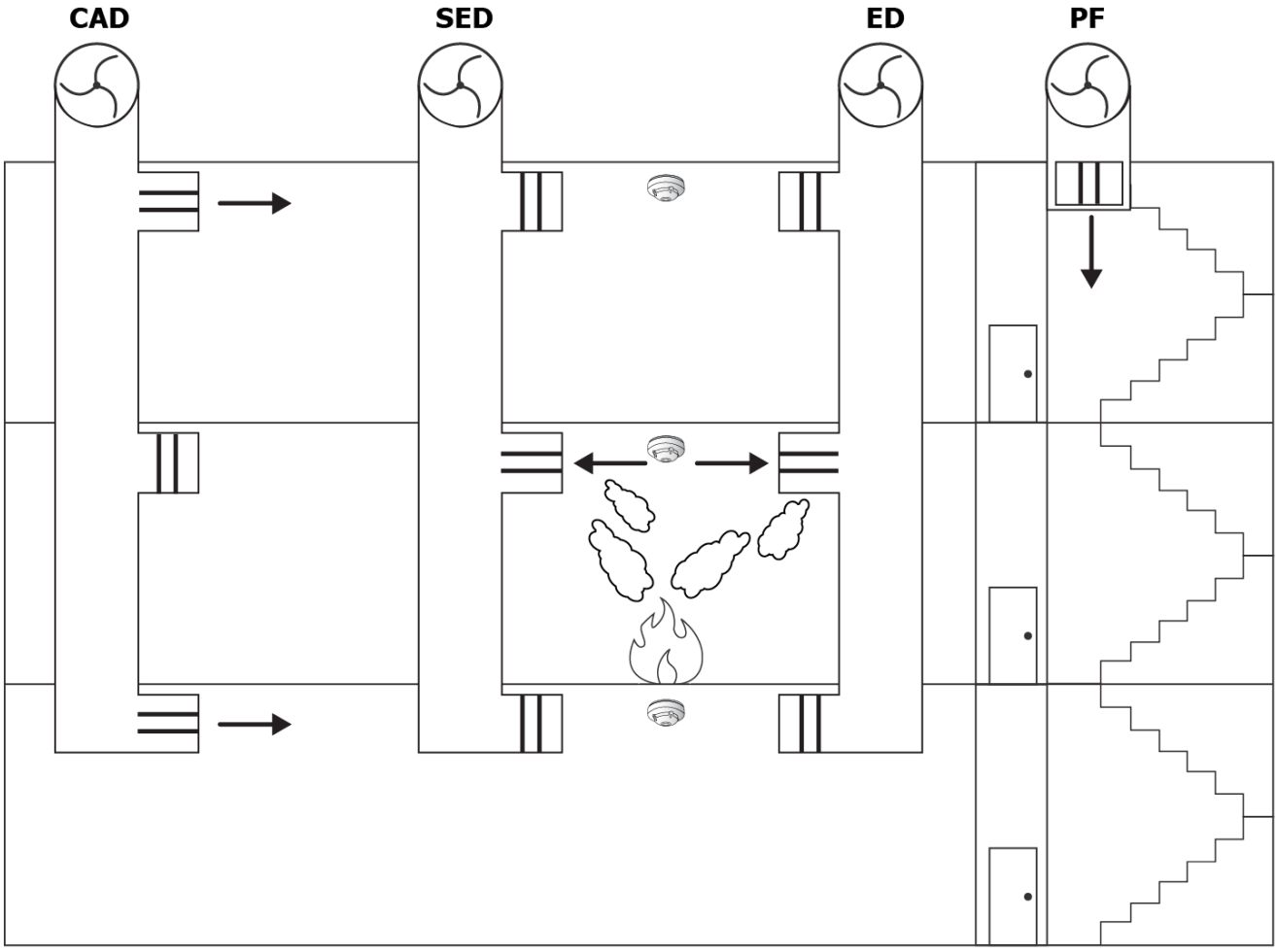
CHANNEL	DESCRIPTION	NORMAL STATUS
CAD	Clean Air Ducts	All OPEN
SED	Smoke Exhaust Ducts	All CLOSED
ED	Exhaust Ducts	All OPEN
PF	Pressurization Fans	CLOSED



FIRE STATUS

In case of fire in the buildings, the **Clean Air Ducts (CAD)** in the area they are located are closed to extinguish the fire. **Smoke Exhaust Ducts (SED)** and **Exhaust Ducts (ED)** are used to discharge smoke from the environment. To ensure the use of the stairs, compressed air is supplied to the stairs using the **Pressurization Fans (PF)**, thus limiting the passage of smoke.

CHANNEL	DESCRIPTION	FIRE ZONE STATUS	STATUS OF OTHER ZONES
CAD	Clean Air Ducts	CLOSED	OPEN
SED	Smoke Exhaust Ducts	OPEN	CLOSED
ED	Exhaust Ducts	OPEN	CLOSED
PF	Pressurization Fans	OPEN	-



PANEL STATUS INDICATORS

• When any error occurs in the **Damper Module,** the general fault LED lights up in the panel and the point and indication of the fault from which zone and from which address the fault occurred.

• **"Damper Fault"** warning is shown on the panel screen as soon as an **"Open / Short"** circuit occurs on the **Damper Output** line.

• As soon as an **"Open / Short"** circuit occurs in the **Damper Remote Control** inputs, a **"Damper Remote Input Fault"** warning is shown to the panel display.

• **Damper Position Monitoring Fault** warning is shown on the panel screen as soon as **"Open / Short"** circuit occurs on **Damper Position Monitoring** inputs

• **Open, Closed** and **Damper Fault** positions of the **Smoke Dampers** can be seen from the panel event logs and the screen of the panel

Damper Fault Conditions	Messages Displayed on Fire Panel Screen
Damper Module Cover - Open	Damper Fault
Damper Output - Open Circuit	Damper Fault
Damper Output - Short Circuit	Damper Fault
Damper Position Monitoring Input– Open Circuit	Damper Control Monitoring Fault
Damper Position Monitoring Input– Short Circuit	Damper Control Monitoring Fault
Damper Remote Control Input - Open Circuit	Damper Remote Input Fault
Damper Remote Control Input - Short Circuit	Damper Remote Input Fault

CONFIGURATION WITH LOOP MANAGER +

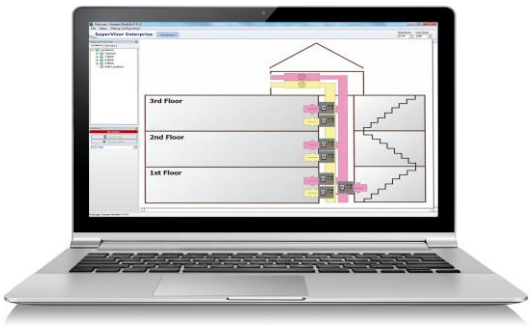
• **Loop Manager +** software configuration can provide module **Zone Numbers** and **Location Information**

• Inclusion of scenarios to enable **Smoke Dampers** to be opened and smoke evacuation at the location of a fire. Also, the **Smoke Dampers** can be turned off in other rooms connected to the channel to prevent smoke from entering other rooms.

• Scenario to prevent the entry of smoke into escape routes such as stairs by operating the **Pressurized Damper** in case of fire

• If required for security reasons, **1st Level** and **2nd Level Delay** assignments can be made to enable **Smoke Dampers** to be opened and closed in a delayed mode.

MONITORING AND CONTROLLING WITH SUPERVISOR ENTERPRISE



- Monitoring of **Open, Closed and Damper Fault** positions of **Smoke Dampers**
- **Open / Closed** commands can be send to **Smoke Dampers**
- **Smoke Dampers** can be monitored for fault conditions