



AREA ALARM

MICROPROCESSOR BASED

General Descriptions

The MA-37 medical area gas alarm systems are microprocessor-based electronic systems designed to monitor up to a maximum of 6 gas services and medical vacuum. Each alarm system generally monitors the line pressures of the medical gas or vacuum pipelines using pressure sensors, which detect deviations from the normal operating limits of either pressure or vacuum.

The condition of each gas or vacuum service shall be monitored and displayed by coloured LED's to indicate their 'Normal', 'Low' or 'High' pressure conditions. A normal or muted condition shall be displayed as steady LED while failure condition shall be displayed as flashing LED, and simultaneously with an audible alarm, which can be silenced by a 'Mute' facility.

The mute condition shall reset, that is, the audible alarm shall sound, and after approximately 15 minutes if the failure condition is not remedied or should a new alarm condition occurs. An internal maintenance 'Mute' facility is provided for use during maintenance to provide for prolonged pipeline or plant shutdown. This facility shall automatically reset when the gas services return to normal.

The 'Test' facility is provided to constantly monitor the integrity of the input sensors and interconnecting wiring.



Features

- ❖ Microprocessor based design
- ❖ Comply with HTM 2022/02-01.
- ❖ Suitable for concealed or surface mounting or incorporation into panels provided by others.
- ❖ Sheet metal enclosure to IP41 design with polycarbonate abrasion resistance facial.
- ❖ Self-diagnostic and watchdog software design for added reliability.
- ❖ RS485 communication function or repeater display or for connection to master alarm system.
- ❖ Unused channel easily de-activated or re-activated on-site for future upgrading.



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Overall Dimensions

Description	W	H	D
Alarm Back Box	280	170	70
Facial	330	220	N/a

All dimensions in mm \pm 3 mm

Environmental Storage & Operating Conditions

Ambient temperature: 0° – 40° C
RH: 10% - 95% non - condensing
Altitude: max 1000 meters
IP protection: IP41
Area Classification: Non-explosive
Condition: Non-corrosive

Additional Storage Environmental Conditions

Storage area: Secured, stable and well-Ventilated
Battery: Stored separately and recharge every three months

Environmental Protections

Handle and/or discard the units in accordance with the environmental protection laws and regulations for electronic PCB boards.

Handle and/or discard the SLA battery in accordance with environmental protection laws and regulations for SLA battery.

Cleaning

Use moist lintless cloth only to clean the panel to remove any stain, dust or foreign objects.

Do not use any cleaning chemical or detergents or compressed air.

Electrical

Supply voltage: 240 Vac +5%, -10%
Supply current: 0.5 A
Supply frequency: 50 Hz \pm 1%
Earth leakage protection: 5 mA

Pressure Switches

Contact Type: Normally closed
Contact voltage: volt free
Contact rating: 0.1Adc
Insulation resistance: 1 M Ω @500Vac
Electrical cabling: 1 pair AWG 24 wire
in protective conduit.
Termination: 1 mm cable lug

Operating Instructions

During normal operation, the green (normal) LED's will illuminated. When a sensor detects a fault condition, the relevant green (normal) LED will turn-off and the appropriate red alarm LED will flash together with an audible alarm. The audible alarm will silence if the fault condition returns to normal or the 'Mute' function is activated, which will re-sound if the fault condition does not return to normal after approximately 15 minutes. The audible alarm will re-activate if a new fault condition is detected.

Maintenance

There are no serviceable parts in the alarm system. The operator is recommended to activate the 'Test' facility once a month to activate the self-diagnostic programme of the system to self-test to ensure the system is functional and to change the SLA battery every three (3) years.