

Zeus 6 Area Alarm

Description

Each medical gas area alarm panel shall be capable of monitoring up to 6 gas services by means of pressure sensors that detect deviations from the normal operating limits. The medical gas area alarm shall fully comply with the requirements of HTM2022, HTM 02-01, C11, BS EN 60601-1 and BS EN 60601-1-2 and BS EN ISO 7396-1. Zeus 6 Area Alarms shall be CE marked 0088 (Lloyd's Register Quality Assurance).

The cover, backbox and bezel (if required) shall be polyester powder. A single tamperproof fastener shall be used to gain access to the hinged door. The hinge shall operate through a minimum of 120° to provide adequate access.

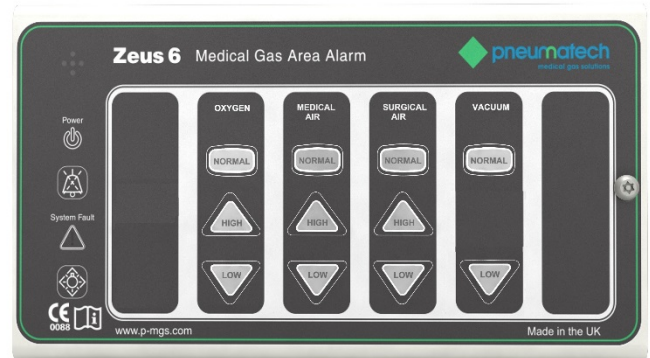
System Operation

Each gas service shall be displayed by coloured LED's to show 'Normal' (green), 'Low' and 'High' pressure (red) conditions. Medical vacuum systems shall be displayed in the 'Normal' (green) and 'Low' vacuum (red) conditions. Failure indicators shall be displayed by flashing lights and normal indications shall be steady. Each LED block indicator shall be a plug-in component with individual long life LED's connected in parallel in two banks to provide duplex circuits.

An audible warning shall sound simultaneously with any failure indication and a mute facility shall be provided. Following a mute selection the audible will resound after approximately 15 minutes, or shall operate simultaneously should a further alarm condition occur. A "Mute" switch shall be provided inside the panel for use during any maintenance resulting in prolonged pipeline or plant shutdown. This facility shall automatically reset when the gas service returns to normal.

The alarm panel shall have a 'Test' facility to prove the integrity of the internal circuits, LED's and audible warning. The alarm panel shall incorporate a volt free normally closed relay to allow for interconnection to either a medical gas central alarm system or an event recording circuit of a building management system.

Each alarm shall provide a green LED to indicate that electrical power is available at the panel and a red LED to indicate 'System Alarm'. In the event of an electrical power supply failure the 'System Alarm' LED shall illuminate (flashing) and the audible warning shall be delayed for 30 seconds to enable standby generator tests.



Line continuity monitoring circuits shall be provided to constantly monitor the integrity of the input sensors and interconnecting wiring. In the event of any fault the line continuity monitoring circuits shall initiate the specific gas service failure indication, a 'System Alarm' indication and an audible warning. Further aids to fault diagnosis shall be provided by means of varying flashing rates whilst operating the 'Test' switch.

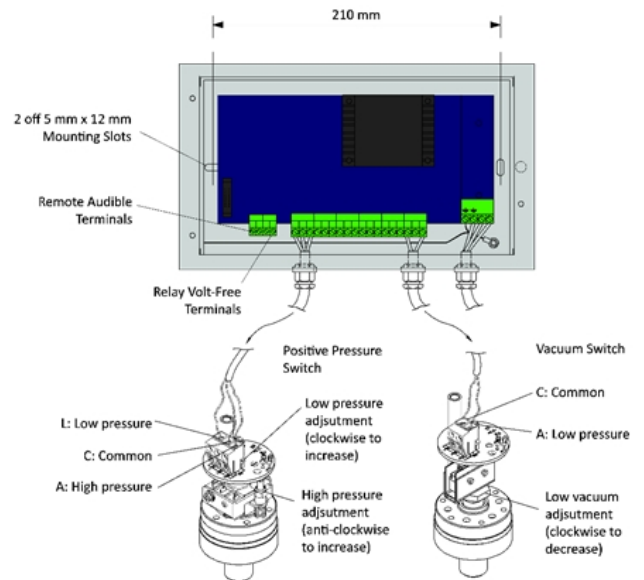
A simple data connection shall be provided to allow connection of up to 5 repeater panels, enabling the visual and audible alarm signals to be repeated at other locations within a department.

Pressure and Vacuum Switches

Pressure and vacuum switches shall be manufactured with brass wetted parts and house a PCBA with line continuity monitoring resistors. Electrical connectors shall be designed for frequent disassembly. Spade connectors are not acceptable. Pressure switches shall include both high and low pressure settings in the same switch, using only a single ¼" BSPP threaded pipeline connection to minimise the number of sealed joints. The body and housing of the pressure switch shall be manufactured from impact resistance, rigid and inherently corrosion proof materials. Coating or plating of mild steel is not acceptable. Pressure switches shall connect directly to the area alarm panel. It is not acceptable to fit a separate connection box to convert switch signals to a data signal.



| Condition | Condition Alarm Panel Display |
|-----------------------|---|
| Normal | 'NORMAL' indicator (steady) |
| Alarm Condition | Alarm condition either: 'HIGH PRESSURE' indicator (flashing) 'LOW PRESSURE' indicator (flashing) All accompanied by audible alarm. |
| Line Continuity Fault | 'NORMAL' indicator (steady) Respective alarm indicator (steady) 'SYSTEM ALARM' (flashing) Audible alarm. Note: Press 'TEST' switch; Alarm indicator flashes slower than other LED's to indicate an open circuit or faster to indicate a short circuit. |
| Data Cable Fault | All indicators on slave panel(s) flash. Audible alarm. |
| Power Failure | Power failure to panel SYSTEM ALARM (flashing) Audible 'POWER ON' indicator extinguished |



Installation Detail

