Zeus 15 Central Alarm

Description
The Zeus 15 Central Alarm is a flexible, customisable medical gas central alarm system, capable of carrying up to fifteen gas services and can consist of up to thirty-two panels, including any BMS alarm interfaces. The medical gas central alarm shall fully comply with the requirements of HTM 2022, HTM 02-01, C11, BS EN 60601-1, BS EN 60601-1-2 and BS EN ISO 7396-1. Zeus 15 Central Alarms shall be CE marked 0088 (Lloyd's Register Quality Assurance).

The cover, back box and bezel (if required) shall be finished in a polyester powder coat. 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
Configuration of the Zeus 15 Medical Gas Central Alarm panels shall be done via switches within the panel, allowing easy and flexible configuration. Each panel shall display and/or input up to five gas services or up to twenty point alarms.

Each gas service shall consist of a bank of five dual-circuit LED indicators, one green (for a 'Normal' indication) and three yellow and one red (for four input conditions) as standard, although panels shall be customisable for individual requirements. The gas service inputs shall be connected to a five way connector block.

The alarm shall monitor the cable connection from the source equipment, and provide a fault alarm in the event of a short circuit or open circuit fault. This shall be distinguishable from a source equipment fault.

There shall be a test facility to check the integrity of all the LED indicators on the panel, and the audible alarm. The test facility shall also provide diagnostic information to aid in fault finding.

An adjustable volume audible alarm shall be fitted to the panel to allow installation in all environments, and there shall be a facility to connect the alarm to a remote sounding unit to repeat the audible alarm at other locations, for example a nurse base at the other end of a ward.

There shall be a mute facility which silences the audible alarm for a period of fifteen minutes, or until another alarm condition occurs. There shall be a selectable option to indicate to other repeater panels around the system that an alarm condition has been acknowledged and appropriate action is being taken.
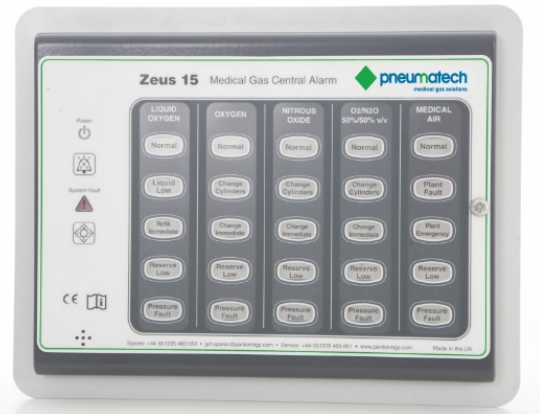
A volt-free contact shall be provided to output normal/fault status for the panel.

Panel Operation
Each panel shall be wired on to a dedicated data transmission cable and shall be permanently connected to the "Essential Supply" within the hospital via a 3A fused spur.

Each gas service will display a green 'Normal' indication when all four conditions are not in a fault condition. When an input condition faults, the respective LED shall indicate the type of failure.

Any data communication errors shall cause a 'System Fault' alarm.

A rechargeable battery shall provide a 'System Fault' alarm in the event of a power failure.

Source equipment shall connect directly to the input alarm panel. It is not acceptable to install a separate connection box to convert switch signals to a data signal

BMS Alarm Interface
The Zeus BMS Alarm Interface is an optional add-on accessory for the Zeus 15 Medical Gas Alarm System. The Zeus BMS Alarm interface provides relay outputs to allow connection of alarm conditions to a Building Management System (BMS), paging system, or an auto dialler. The medical gas area alarm shall fully comply with the requirements of HTM 2022, HTM 02-01, C11, BS EN 60601-1, BS EN 60601-1-2 and BS EN ISO 7396-1.

The cover, backbox and bezel (if required) shall be finished in a polyester powder coat. 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 consist of a bank of four relays. The gas service outputs shall be presented on a five way connector block. A rechargeable

battery shall provide a 'System Alarm' indication in the event of a power failure.

Configuration of the Zeus BMS Alarm Interface shall be done via switches on the panel, allowing easy and flexible configuration
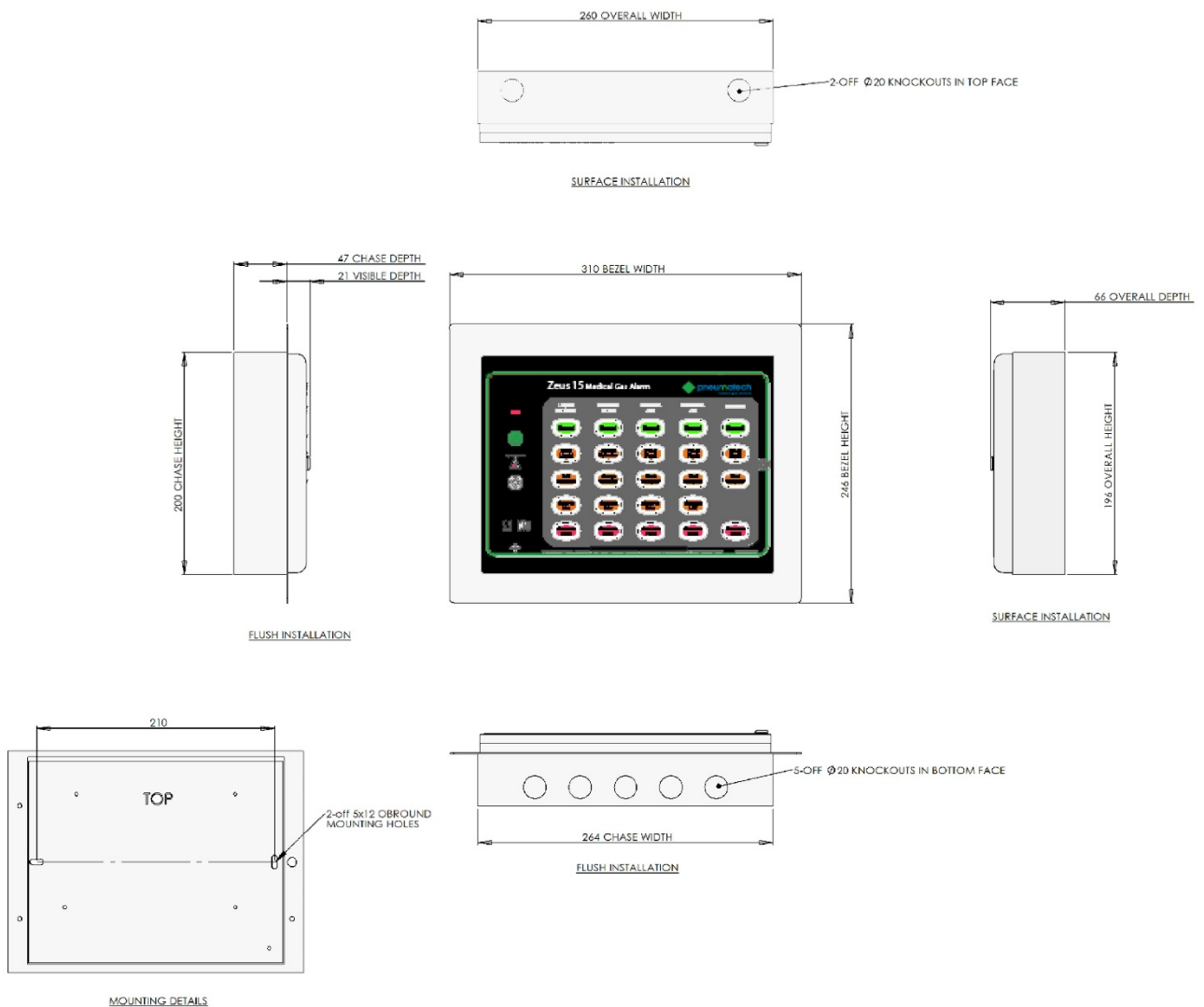
Panel Operation
Each panel shall be wired into the data cable for the alarm system and shall be permanently connected to the Essential Supply within the hospital via a 3A fused spur.

Each relay is energised when the respective condition is 'Normal', and de-energises on an alarm condition.
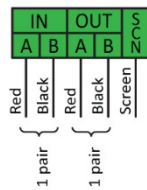
A failure of a relay will cause an alarm condition to present on the connected system.

Any data communication errors shall cause an alarm condition and a 'System Fault' alarm.
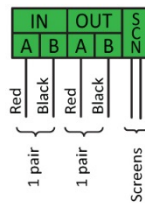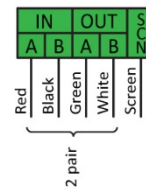
Installation Detail
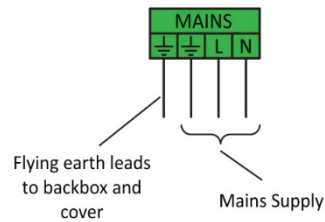
End of Network Installation

IN		OUT		S C N
A	B	A	B	

Red — Black — Red — Black — Screen

1 pair — 1 pair

Inline Network Installation

IN		OUT		S C N
A	B	A	B	

Red — Black — Red — Black — Screen

1 pair — 1 pair — Screens

Inline Network Installation
(using 2 pair data cable and junction box)

IN		OUT		S C N
A	B	A	B	

Red — Black — Green — White — Screen

2 pair

Electrical Power Supply

MAINS			
⏚	⏚	L	N

Flying earth leads to backbox and cover

Mains Supply

Remote Audible and Output Relay Connections

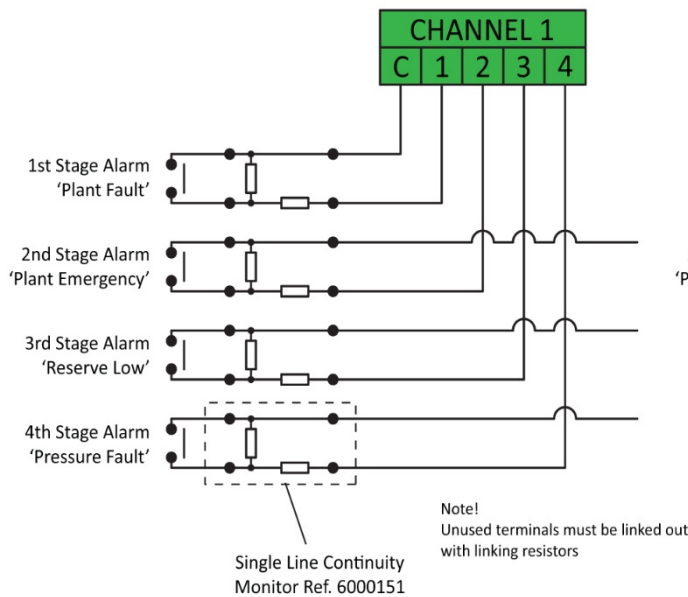| IN		OUT	
+	AL	C	N/O

Remote Audible + / −
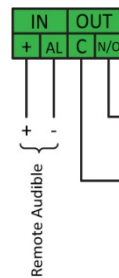
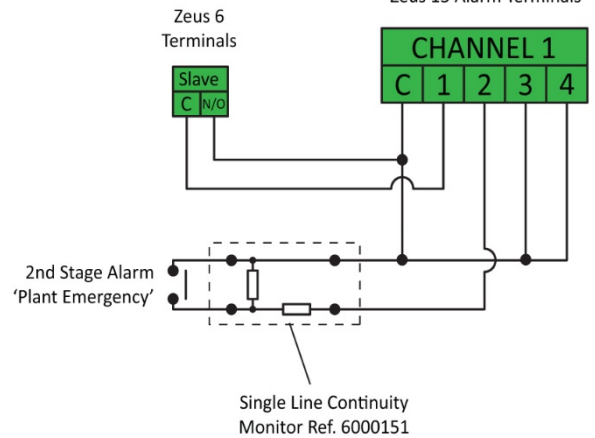When all gases are 'Normal' relay contacts are closed and open in the event of a single alarm condition. Incorporates a line continuity monitor.

Output relay

Connection for onward transmission of a single event alarm

Gas Service Alarm Inputs
Zeus 15 Alarm Terminals

CHANNEL 1

C	1	2	3	4

1st Stage Alarm 'Plant Fault'

2nd Stage Alarm 'Plant Emergency'

3rd Stage Alarm 'Reserve Low'

4th Stage Alarm 'Pressure Fault'

Single Line Continuity Monitor Ref. 6000151

Note!
Unused terminals must be linked out with linking resistors

Gas Service Alarm Inputs
Zeus 15 Alarm Terminals

Zeus 6 Terminals

Slave

C	N/O

CHANNEL 1

C	1	2	3	4

2nd Stage Alarm 'Plant Emergency'

Single Line Continuity Monitor Ref. 6000151

Notes!
1. A maximum of four point alarms may be connected to any channel.
2. Unused terminals must be linked out with linking resistors