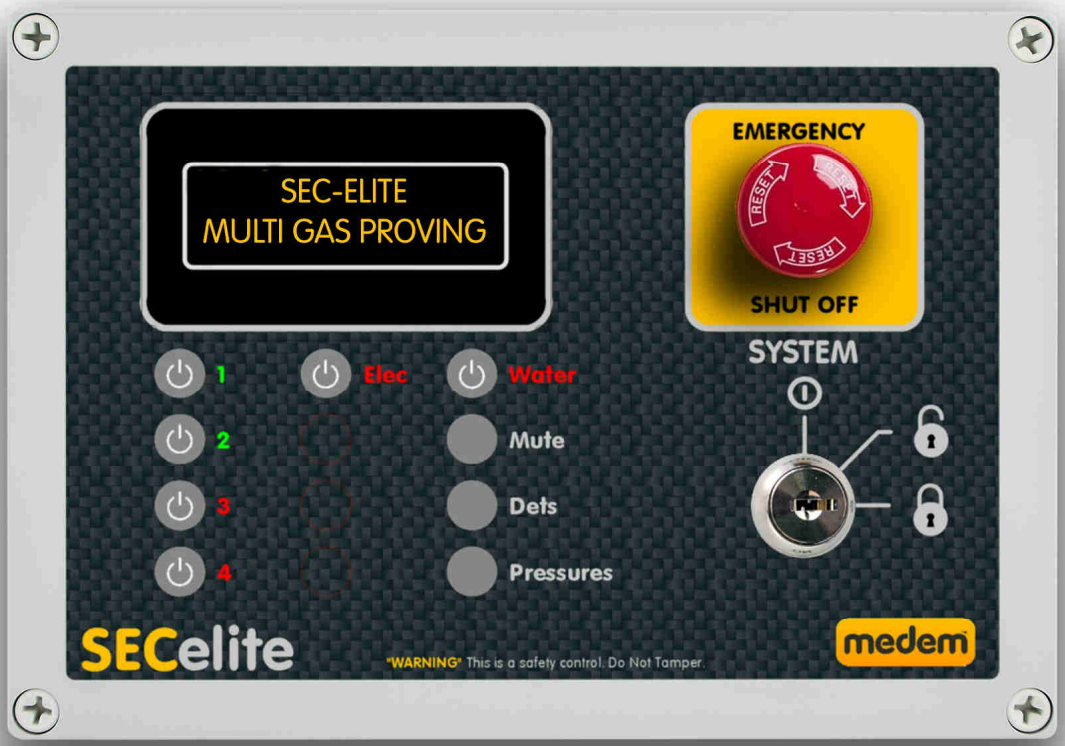
04/01/2018

SEC-Elite

Product and Installation Guide



Gas Proving System

- Multi– gas line gas pressure proving
- CO2 based ventilation control
- Engineer functions
- Fan interlocking
- Fire test isolation mode
- Over pressure alert
- 10 year Warranty
- Multi-service isolation

SEC-ELITE features

Have a question or need some help?

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System description

The SEC-Elite multi service system has been designed to pressure prove and control up to four separate gas lines.

With additional control for electric and water, up to eight gas detectors and ventilation interlock it covers almost every imaginal scenario.

SEC-ELITE Main Panel

The SEC-elite is a multi gas proving system, with ventilation interlock and gas detection system capable of accepting up to 8 detectors

The system will be preconfigured before supply but still require fully commissioning by Medem engineers before use.

Description

The system comprises of a main control panel and sender unit which can pressure prove one gas line it also provides control an electrical contactor and water valve.

Gas detection

In addition the system also has connections for ventilation interlock and up to eight gas detectors of various types.

Multi Proving

The system can have up to three extension panels (SEN-EXT#) connected to provided multi gas proving.

Each extension panel allows for the proving of an additional gas line for a maximum of four lines .
(main panel, plus three extensions) these are all controlled form the main panel.

Each extension panel requires a 3amp fused spur and a low voltage connection back to the main panel, in turn each extension panel will then proved connections for gas valve and the pressure sender unit (ELITE-SEN-41W).

The extension panels can also be used without gas proving, allowing addition "services" (electrical, oil, water etc) to be controlled from the main panel.

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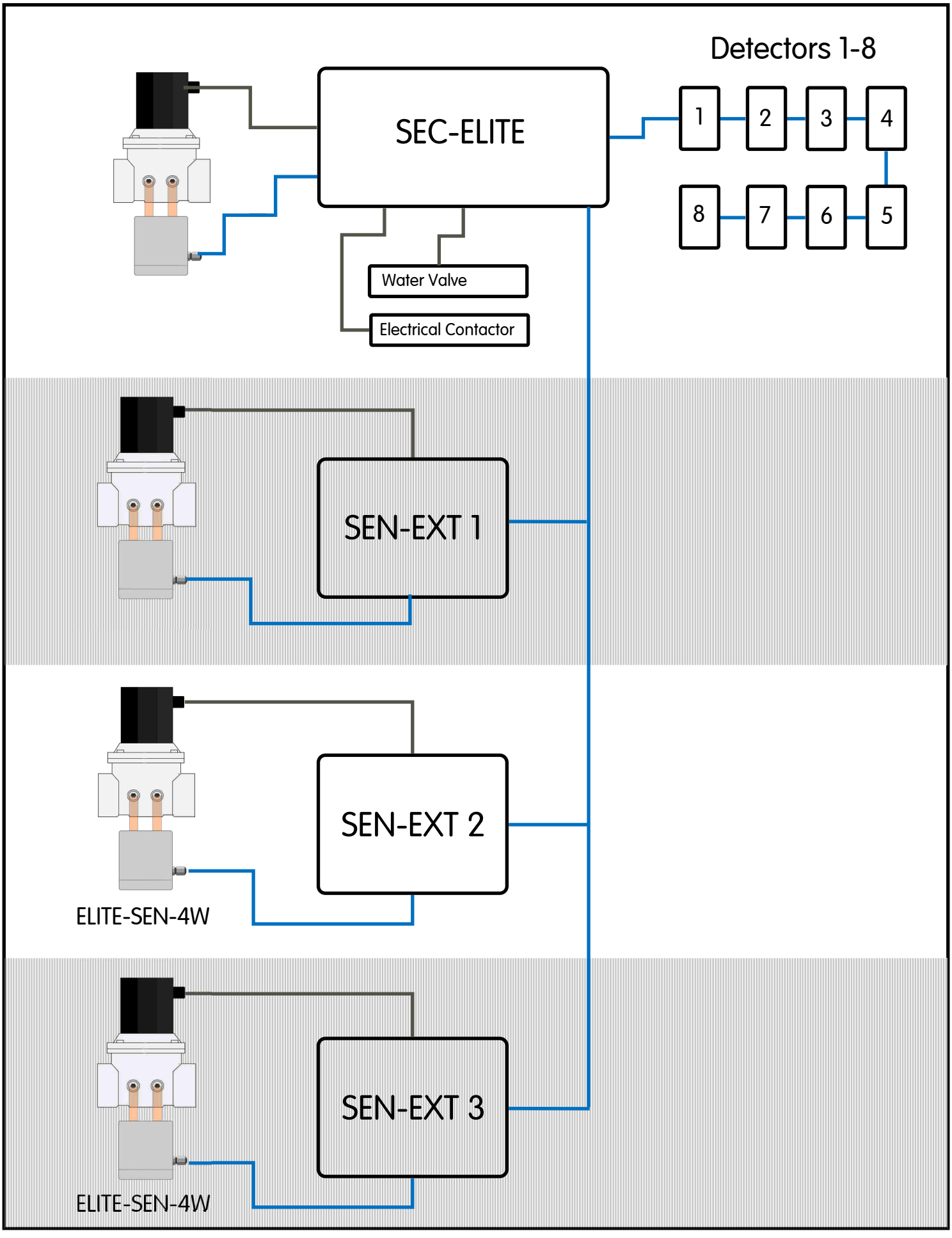
Multi-prove Overview

Low voltage — Mains voltage



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Detector Information

Detector Programmable Alarms Levels & Types

Each individual detector can have its own alarm levels and alarm type set.

The alarm levels for each individual detector are programmable at the main panel during setup/ commissioning to any value within that given detector types sensor range.

Detectors can also be set to a "Peak" alarm (P) and (or) up to three different "Time Weighted Average" (TWA) alarms.

All detectors are set to their default values for there given type unless otherwise requested, and a printed record of all detectors alarm levels, types and timings will be provided with the commissioning report and kept on record by Medem (UK) Ltd.

These setting are only adjustable by Medem engineers.

Example:

Det 1 : Carbon Monoxide Peak: 300 PPM TWA 1: 100PPM over 1 minutes TWA 2: 80 PPM over 10 minutes TWA 3: 30 PPM over eight hours (Max time period of 24 hours)	**Det 2** :Carbon Monoxide Peak: 100 PPM	**Det 3** : Methane Peak: 50,000 PPM TWA 1: 25,000 PPM over 5 minutes

A list of currently available detectors and setting is on the back page. We are adding new detector types to the range all the time, if you require something not listed please check the website or call us for an updated listing.

NOTE:
You must perform your own risk assessment to ensure alarms are set to appropriate levels for your application.

HSE Sheet EH40/2005 and the risk assessment process available on the HSE website may be used as a guide to assess your risk.

Latching/Non-latching Alarm State

Each detector can be set to latch on alarm or auto-reset as the detected level drops below the alarm level.

The time to latch can also be set for each detector for Peak Alarms from 01 to 59 seconds.
TWA alarms latch immediately once the time period at the given alarm level has been reached.

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Relay Panel Information

Detector Calibration and Servicing

All detectors will be checked and calibrated during the commissioning by the Medem engineer.

All detectors will require servicing and calibration check every 12 months.
Medem engineers will be in contact to schedule a convenient time to carry this out . Certain installation environments will required more frequent checks.

A copy of the report will be provided to site and placed on record with Medem (UK) Ltd.

Gas Detectors

Gas Detectors

IMPORTANT - Gas Detectors should not be installed until all building, construction or painting work etc.. Is completed, as these works can effect the sensitivity and longevity of the detectors.

Ensure that the protective cover labels (RED) are removed only after the completion of all building work and the system has been commissioned by the Medem engineer.

The labels are required to be removed for the detectors to operate, but removal before the completion of works risks contaminating the sensor element.

System Status and Detector Logging

System status interaction (system access, setting changes etc) are recorded and available to review on screen.

In addition a Medem engineer can download a 90 history of all detector readings, these can be plotted on to a graph and displayed as levels over time.

This can be extremely useful in understanding and diagnosing issues caused by environmental factors.

Ventilation Interlock

The system has connections for the interlocking of supply and extract air, this is done using either a current monitoring unit (CM2M-K) or air flow pressure switches. Multiple CM2M-K or pressure switches can be used for interlocking several fans with one system.

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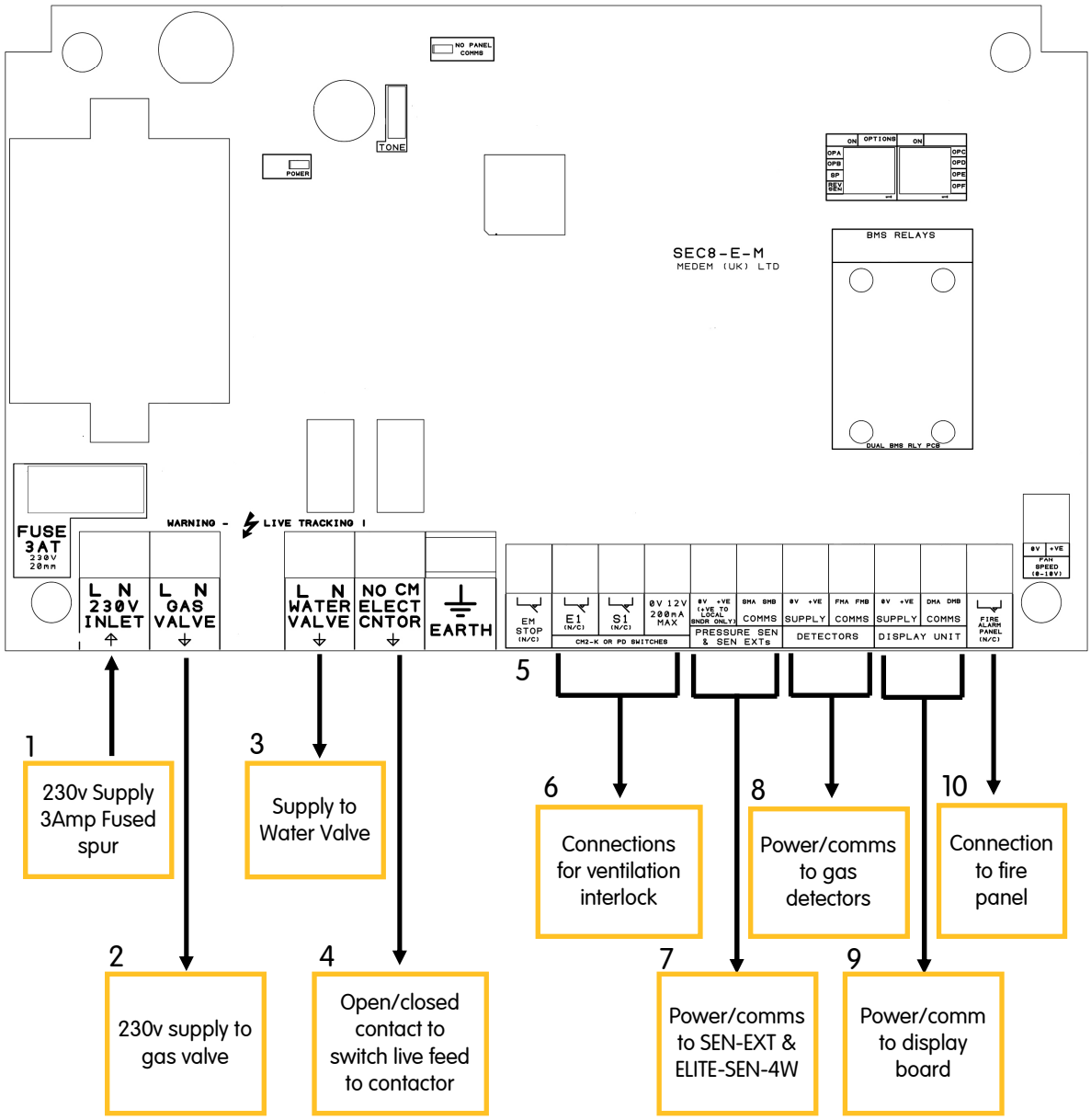
Wiring guide

SEC-Elite Main Panel Connections



1. All Main and Extension panels require 230v supply via a 3amp fused spur.
2. 230v supply to the gas valve (the system must be directly powering the valve in order to preform the pressure test.
3. 230c supply to control a water valve (optional).
4. Open/Closed contact used to switch a live feed to an electrical contactor (optional).
5. Connection for remote emergency stop buttons (optional).
6. Connections for interlocking ventilation via PD switches or current monitoring device (optional.
7. Local Sender unit (ELITE-SEN-4W) connection, and any Extenders (SEN-EXT) as required.
8. Power and comm's to gas detectors, max eight detectors wired in parallel (optional).
9. Connection to the front display
10. Connection for a fire panel, requires a closed contact (optional).

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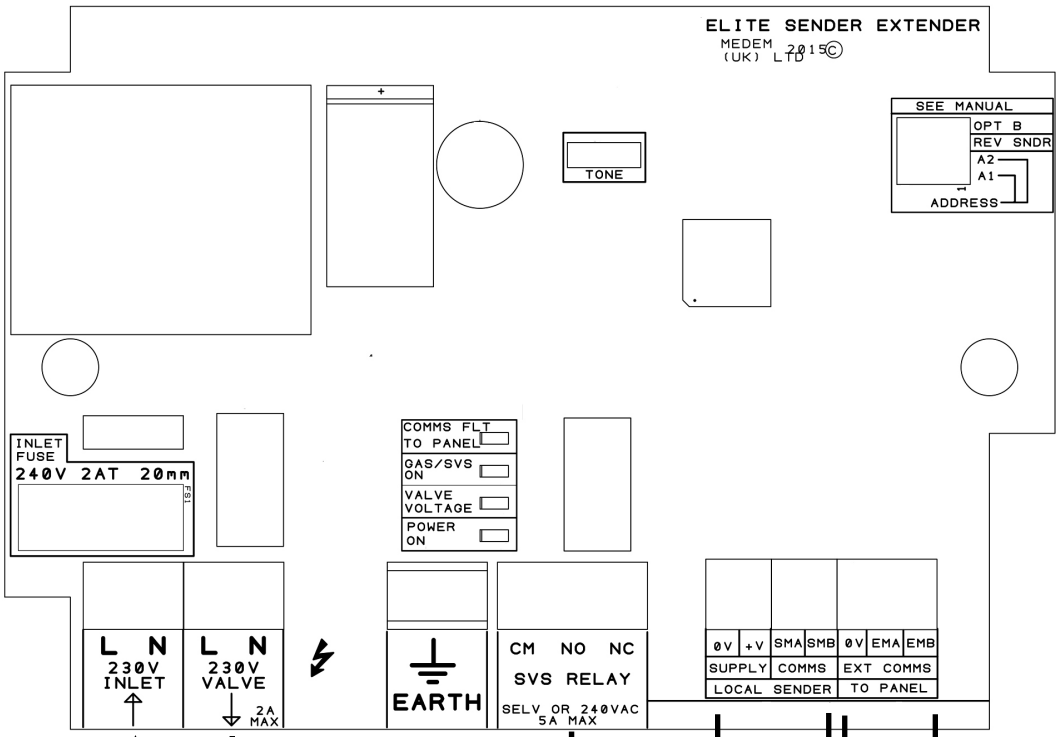
Wiring guide

SEC-Elite Extension Panel Connections



230v Supply 3Amp Fused spur

230v supply to gas valve

Service relay. Optional relay used to switch contactors etc.

Power/comms to local sender

Comms to main panel

All Detectors, Extension & Relay panels require a four core screened Belden type security cable or 600v rated BMS cable (max cable length of 100meters.)

Warranty will be void if Fire Protection Cable or cable over 1mm dia. is used on the SELV side.

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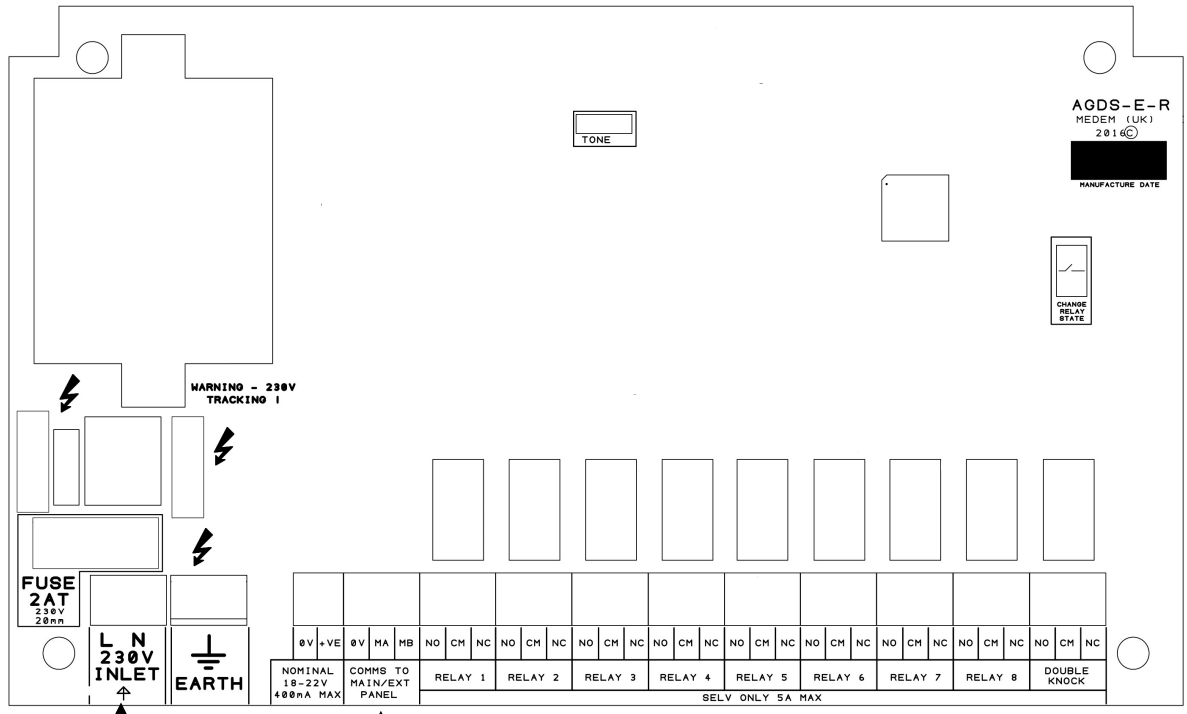
Wiring guide

AGDS-Elite Relay Panel Connections



230v Supply
3Amp Fused

Low voltage parallel connection between the relay panel and its corresponding main/extension panel

Mains rated (5amp)
Potential Free Relays for remote

Mains rated (5amp)
Double Knock Relay for remote Indication
Require two or more detectors to reach high alarm.

After wiring setup and configuration of the relay panels will be completed during commissioning.

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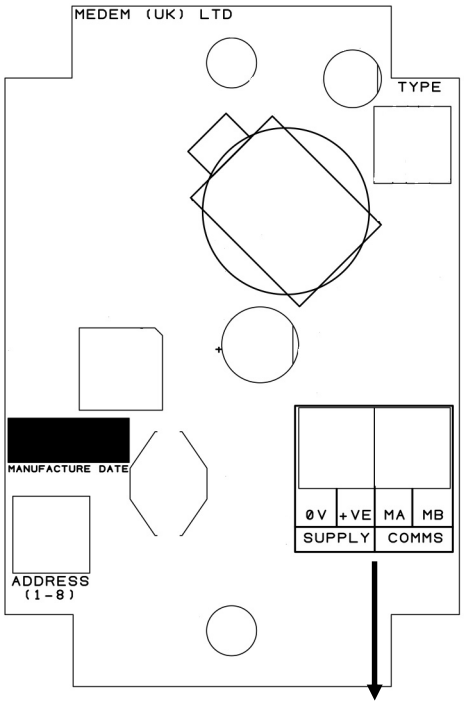
Wiring guide

AGDS-Elite Detector Connections



+VE supply & Comm's
From either the main panel or an extender.

Detectors are wired in parallel and can be connected to one another daisy chain

When connected you will receive one of the following LED indications

Unlit :	Not connected/Incorrectly wired.
Green Flashing Slow :	Detector not learnt.
Green Flashing Fast :	Invalid address.
Green Solid :	Detector learnt and ready.
Yellow Solid :	Low alarm.
Red Flashing Slow :	High alarm (unlatched).
Red Solid :	High alarm (latched).

All further setup will be completed during commissioning.

After installation is complete the system will require setup and commissioning to take place be a Medem engineer.

AGDS-Elite Gas Detection Panels

Main Panel	Supports up to eight gas detectors with High, Low, Fault BMS indications Downloadable log file
Extension Panel	Each extension panel expands the systems capacity by eight more detectors (max three panels for thirty two detectors)
Relay Panel	The main panel and each extension panel can have their own optional relay panel allowing indication of individual detector status

AGDS-Elite Gas Detectors

Detector Types		**Default Alarm levels**	**Sensor Range**
Methane/Natural Gas	CH4	50,000 PPM (10%LEL)	0-100% LEL
Propane	C3H8	21,000 PPM (10%LEL)	0-100% LEL
Carbon Monoxide	CO	100 PPM	1000 PPM
Carbon Dioxide	CO2	5000 PPM	9000 PPM
Oxygen – enrichment and depletion.	O2	-18 % or + 24%	
Ammonia	NH3	25 PPM	0-100 PPM
Hydrogen	H	20,000 PPM (2%vol)	0-100% LEL
Nitric Oxide	NO	25 PPM	0-250 PPM
Nitrogen Dioxide	NO2	5 PPM	0-30 PPM

We are adding new detector types to the range all the time, if you require something not listed contact us.

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