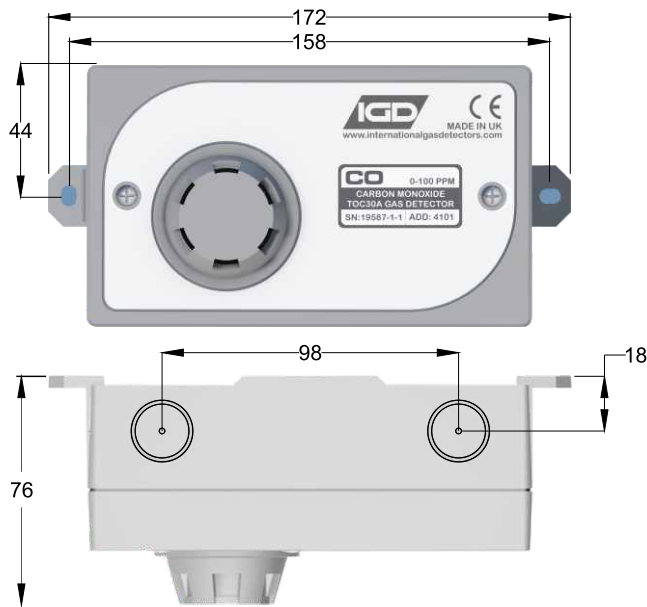


TOC-750BAV Gas detector With Audible Visual Alarms



International Gas Detectors  
Stockport SK2 6SH UK

Physical



Typical Detector Mounting  
Heights

- CH4 Ceiling Height
- CO  
CO2  
O2 ] 1000 - 1200 from Floor Level
- LPG 300mm From Floor Level

| Model ID       | Nominal Alarm Point | Type          |
|----------------|---------------------|---------------|
| TOC-750BAV-O2  | 19.5%               | Falling Level |
| TOC-750BAV-CO2 | 4500ppm             | Rising Level  |
| TOC-750BAV-CO  | 20ppm               | Rising Level  |
| TOC-750BAV-FL  | 10% LEL             | Rising Level  |

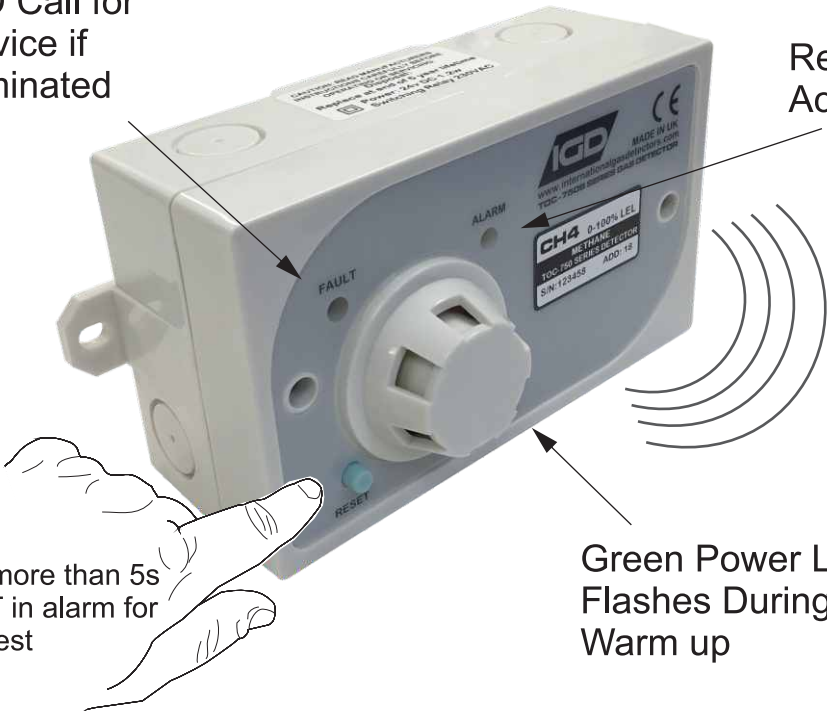
All Alarms Auto-Reset

Amber Fault  
LED Call for  
Service if  
illuminated

Red Alarm LED  
Active on Alarm


Press for more than 5s  
when NOT in alarm for  
an alarm test

Green Power LED  
Flashes During  
Warm up





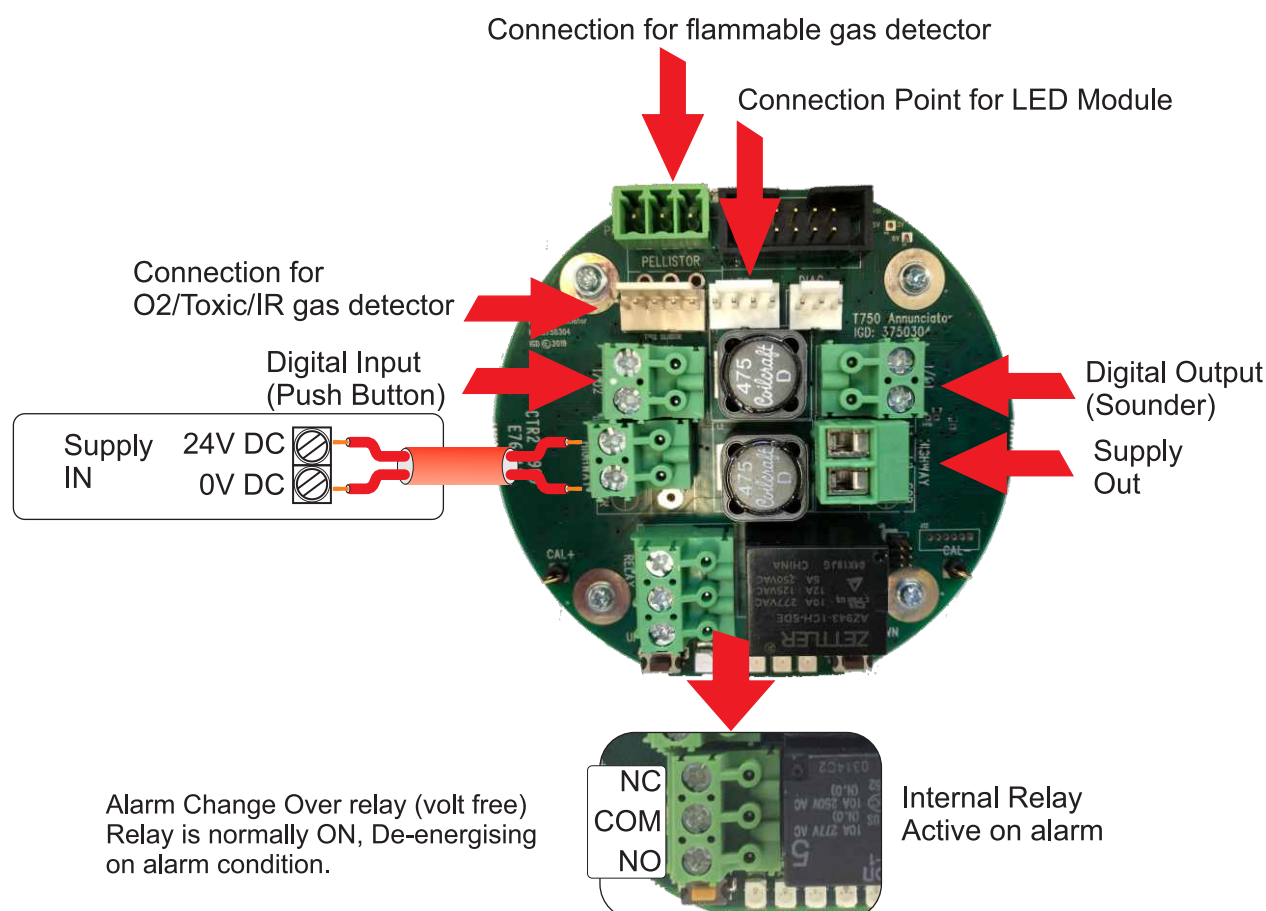
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|                       |  |
|-----------------------|--|
| Power Supply:         | 12 to 28V DC 4W   |
| Environmental:        | -10 to +55 Degrees Centigrade<br>0-95%RH Non-condensing<br>Terminal Enclosure IP54 Cable Glands Must be used   |
| Response Time:        | <30 Seconds  |
| Nominal Alarm Levels: | See preset alarm levels Relay Active SPCO 5A @ 230V AC Non inductive   |
| Expected Life:        | 5 Years, no user replaceable parts   |
| Target Gas:           | See cover markings as CO, CO2, O2, LPG, CH4  |
| Service:              | This equipment must only be serviced by competent persons and checked periodically using traceable calibration gases. Do not test using lighter fuel or similar fuel gases as this can give misleading results. In extreme cases this can result in sensor damage. |
| Standards Applied:    | EN50194-1:2009 Type A Equipment (Flammable Gas Detectors)<br>EN60335-1:2002 EN50270  |
| Cabling:              | When using stranded cable fit bootlace ferrules to<br>Prevent stray wire strands shorting  |

Installation of this device when connecting to a mains power supply should only be made by a competent person. The unit is supplied pre-calibrated. Clean only using a damp cloth, DO NOT USE CLEANING PRODUCTS.

Do not tamper with this equipment. To do so may cause incorrect operation or risk electric shock.

### Internal Terminal Functions



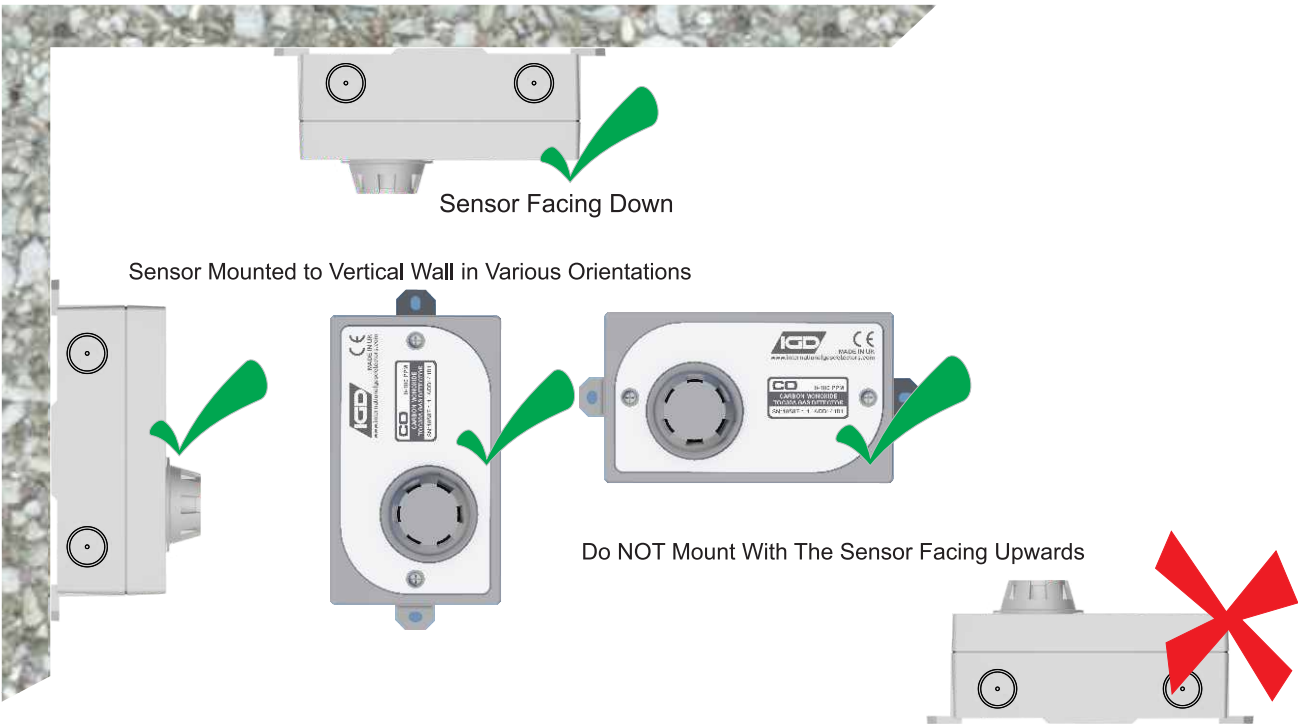
NOTE: The unit is shipped configured and Pre-Calibrated for its detector and options and alarm levels

Detectors in Airflows Mounting Positions Safe Area (BS EN 50194)

Air Flows up to 1M/S Are Allowable Without Any Performance Issue

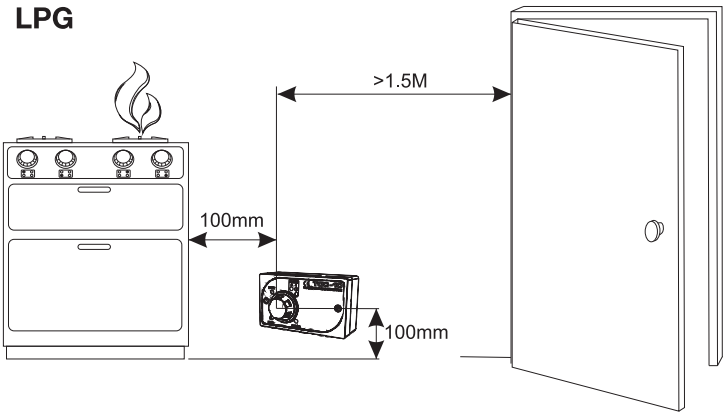


General Detector Mounting Positions Safe Area (BS EN 50194)

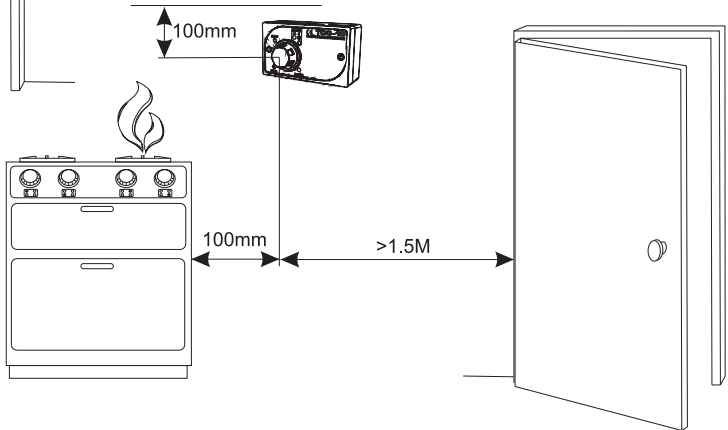


Mounting Locations For Flammable Gas Detectors

LPG



CH4 (Natural Gas/Methane)

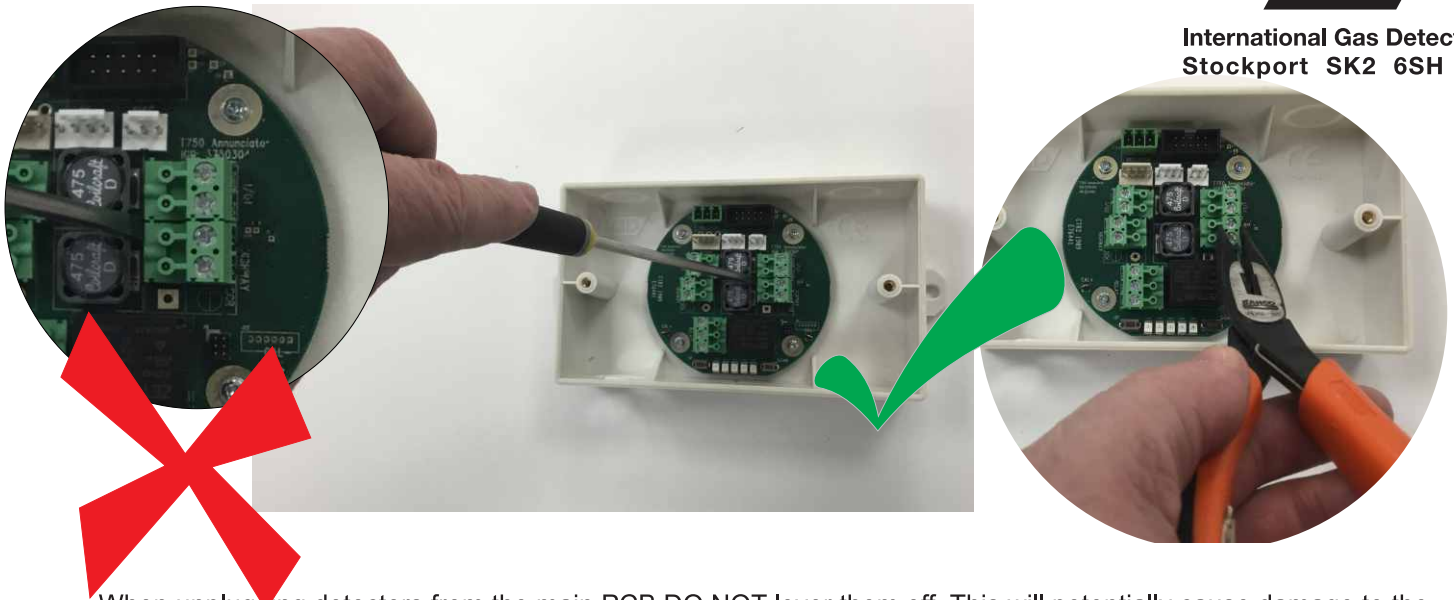


## Main Base PCB Connectors

### Toxic or Oxygen Gas Detector Connection

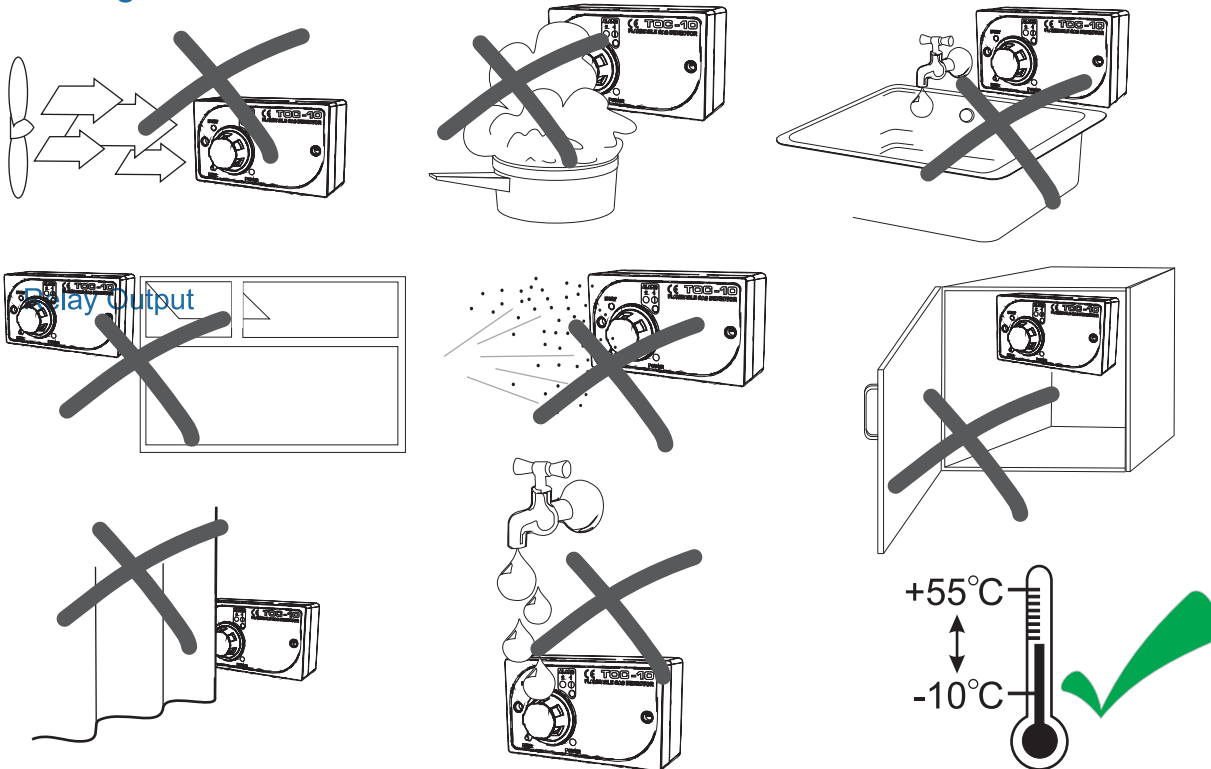


International Gas Detectors  
Stockport SK2 6SH UK



When unplugging detectors from the main PCB DO NOT lever them off. This will potentially cause damage to the PCB and/or connector mating parts and invalidate any warranty. If it is necessary to remove the PCB connectors use long nose pliers.

### Locating the Detector



The TOC-750 © is factory calibrated for its target gas. The target gas is indicated on the product (i.e CH<sub>4</sub>, LPG etc). The TOC-750 will respond to any flammable gas but can only be calibrated to be correct response to one. The following list indicates common materials that may also cause a response in operation:

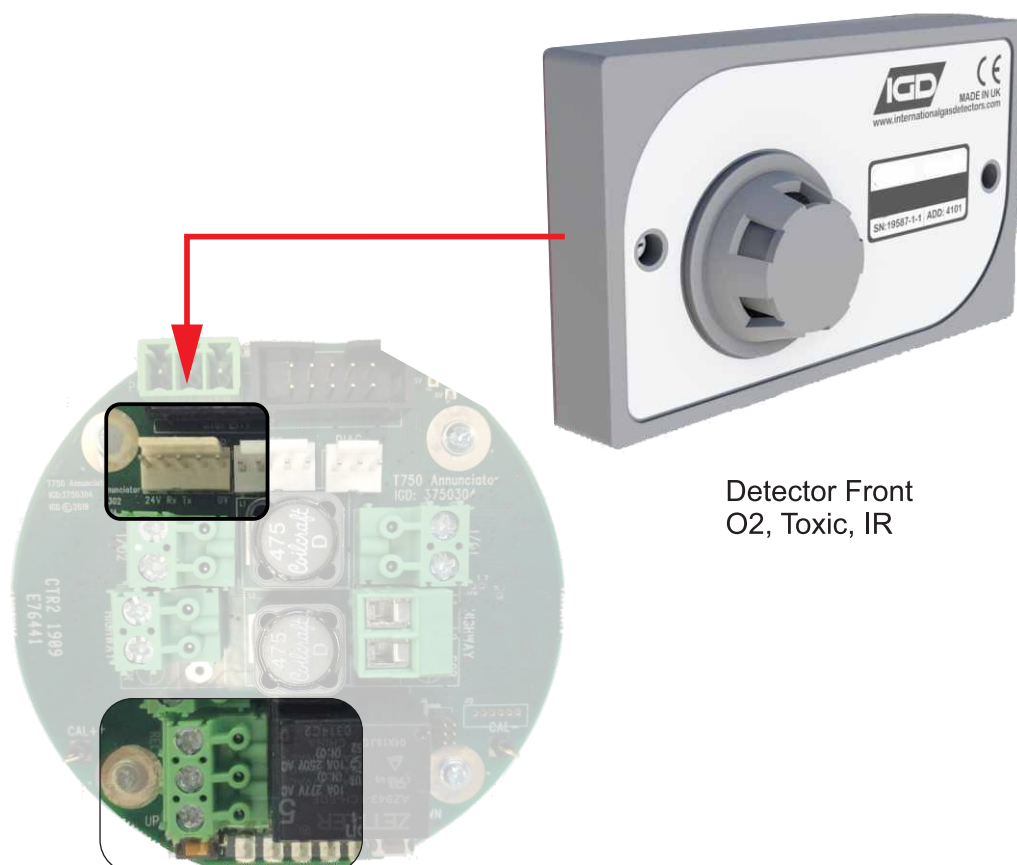
- Aerosol propellants (Butane)
- Paint solvents (VOC's)
- Hot vaporised cooking oils
- Solvent based adhesives (VOC's)

Some commonly occurring substances may cause long term detector damage, typically:

- Silicones (furniture polishes etc)
- Hair sprays (silicones, VOC's etc)
- Chlorinated cleaning agents

The detector (front) assembly simply plugs onto the indicated connector. Alarm actions are indicated on the following page for each detector type. This makes service replacement very simple as the toxic and IR detector assembly is pre-calibrated and can just be plugged in to enable operation.

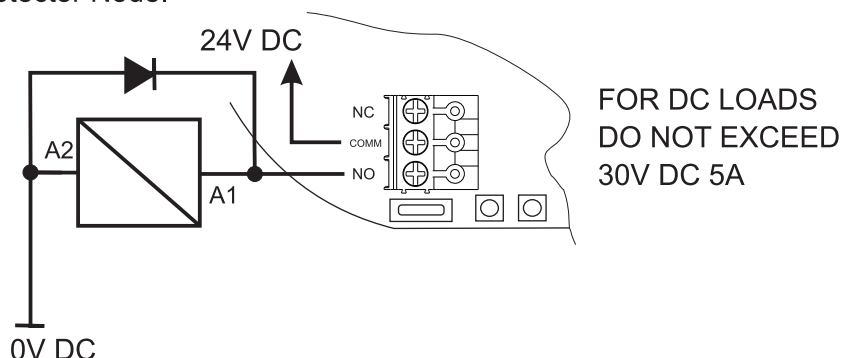
Note that flammable gas detector types supplied as pellistors are supplied as a pre-calibrated 'set'. Replacing a pellistor front will require re-calibration.



The Detector Node relay output can be used as an alarm interface to external systems, run additional audio visual alarms or directly control other devices. Typical applications could be gas solenoid valves, boiler shut down interfaces or similar. When switching external loads it is important to consider the nature of the load being switched. For inductive loads suitable protection from induced back EMF must be fitted. Many modern devices conforming to the European EMC Directive may already have devices fitted as part of their design to limit in-rush currents and back EMF. Where these are not fitted the following two diagrams provide guidance. Failure to observe this may result in damage to the Detector Node.

Example fit protection diodes when switching external DC loads.  
1N4004 Diodes.

For Diode Packs  
IGD PN: TOC-750-DIO





| Model ID       | Detection Range | Nominal Alarm Point | Type          |
|----------------|-----------------|---------------------|---------------|
| TOC-750BAV-O2  | 0-25% Vol       | 19.5%               | Falling Level |
| TOC-750BAV-CO2 | 0-5000ppm       | 4500ppm             | Rising Level  |
| TOC-750BAV-CO  | 0-100ppm        | 20ppm               | Rising Level  |
| TOC-750BAV-FL  | 0-100% LEL      | 10% LEL             | Rising Level  |

All Alarms Auto-Reset

Note alarms sounds and relay is active on alarm level. Push button can be used to test alarms when alarms are inactive. Note the relay if used is normally energised and turns off on alarm

## Pellistor (Catalytic) Flammable Gas Detector Interface

The Detector Node PCB is equipped with a Pellistor or Catalytic flammable gas detector interface.

The Pellistor can be mounted remotely from the PCB by using an additional enclosure 'kit' PN TOC-PEL-KIT. When doing so do not exceed the indicated cable length.

