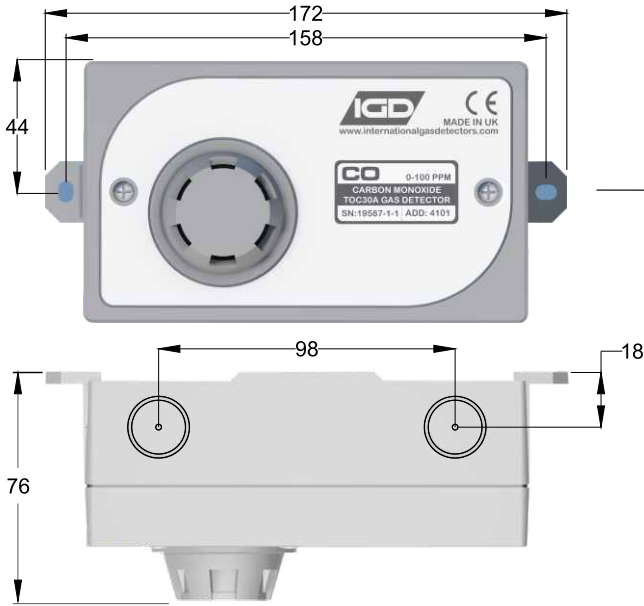


# TOC-750B Gas detector



International Gas Detectors  
Stockport SK2 6SH UK

## Physical



Typical Detector Mounting Heights

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

Model ID	Nominal Alarm Point	Type
TOC-750B-O2	19.5%	Falling Level Auto Reset
TOC-750B-CO2	4500ppm	Rising Level Auto Reset
TOC-750B-CO	20ppm	Rising Level Auto Reset
TOC-750B-FL	10% LEL	Rising Level Latching (Requires Push Button Reset)

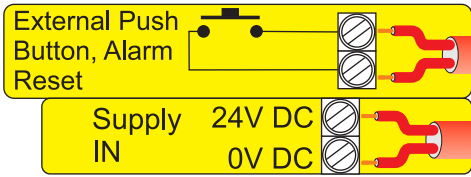
## Internal Terminal Functions

Connection for flammable gas detector

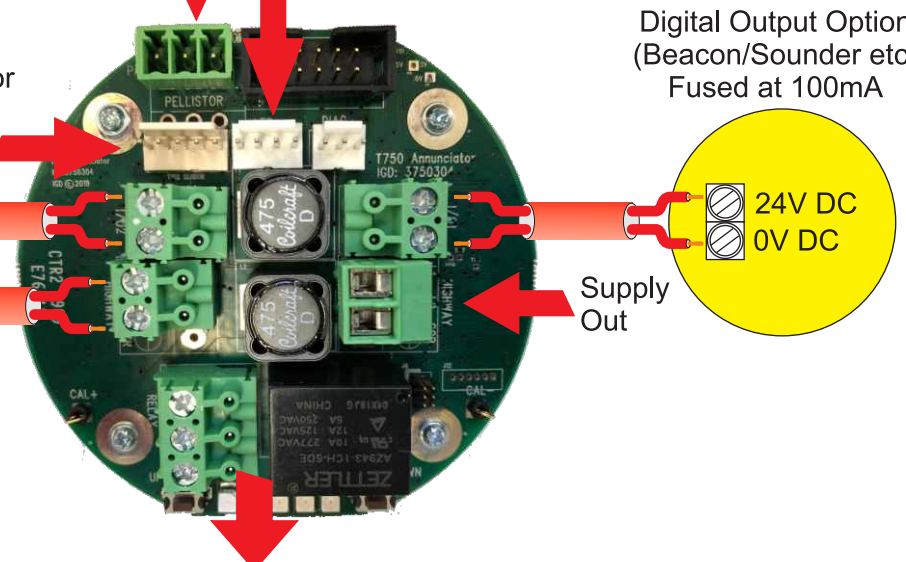
Connection Point for LED Module

Connection for O2/Toxic/IR gas detector

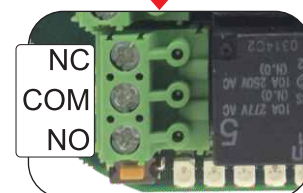
Digital Output Option (Beacon/Sounder etc) Fused at 100mA



Items in Yellow Not Supplied



Alarm Change Over relay (volt free) Relay is normally ON, De-energising on alarm condition.




Internal Relay Active on alarm

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



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Power Supply:	12 to 28V DC 4W 
Environmental:	-10 to +55 Degrees Centigrade 0-95%RH Non-condensing 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) EN60335-1:2002 EN50270
Cabling:	When using stranded cable fit bootlace ferrules to Prevent stray wire strands shorting

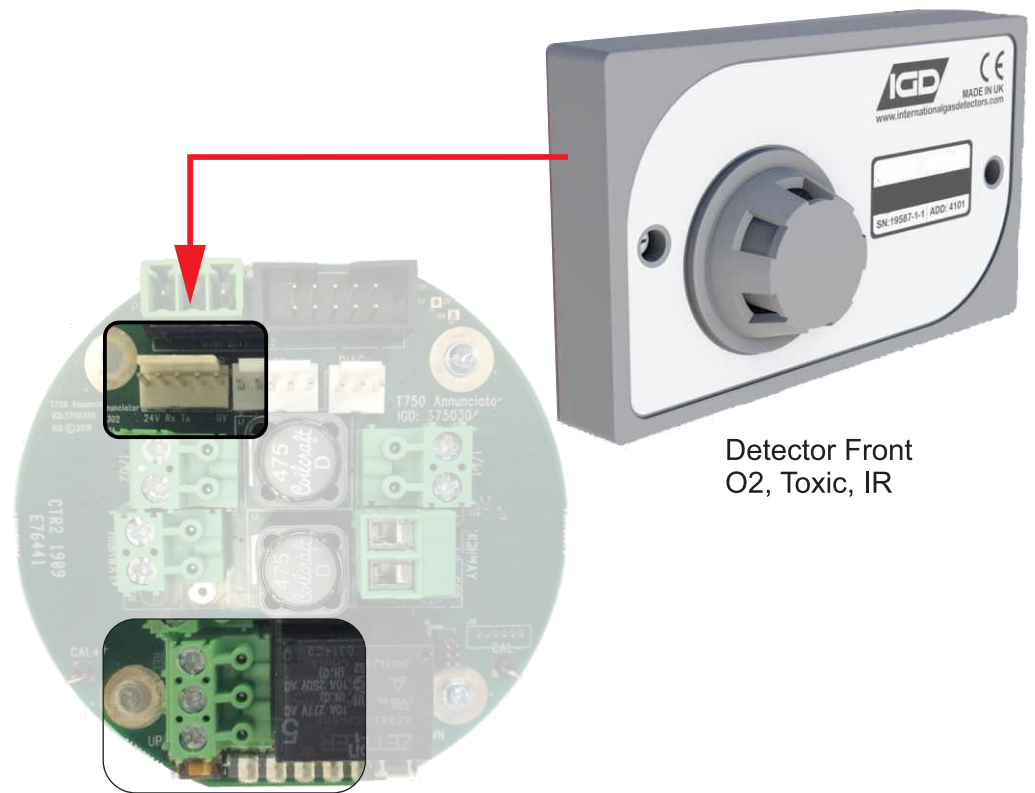
Installation of this device when connecting to a mains power supply should only be made by a competent person. The unit is supplied pre-calibrated. Clean only using a damp cloth, DO NOT USE CLEANING PRODUCTS.

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



## Toxic or Oxygen Gas Detector Connection

The detector (front) assembly simply plugs onto the indicated connector. This makes changing detector types a simple plug and play operation. This makes service replacement very simple as the detector assembly is pre-calibrated and can just be plugged in to enable operation. Make sure connected systems are inhibited whilst the detector stabilises (5 minutes). Alarm actions are indicated for each detector type.

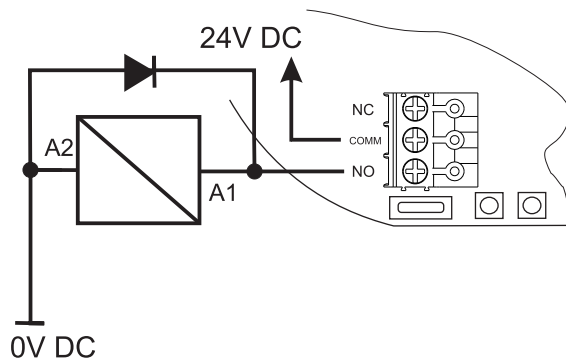


## Relay Output

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 diagram provides guidance. Failure to observe this may result in damage to the Detector Node.

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

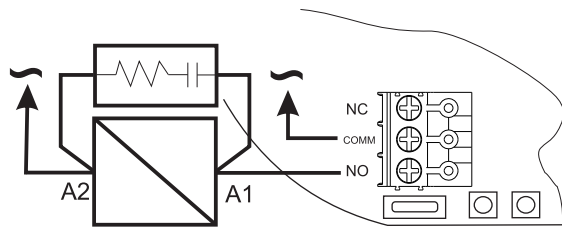
For Diode Packs  
IGD PN: TOC-750-DIO



FOR DC LOADS  
DO NOT EXCEED  
30V DC 5A

## Relay Output

Example fit protection suppressors when switching external AC loads typical device provided with each module 47R 1uF



FOR DC LOADS  
DO NOT EXCEED  
250V AC 5A

For Additional Units  
IGD PN: TOC-750-SNB

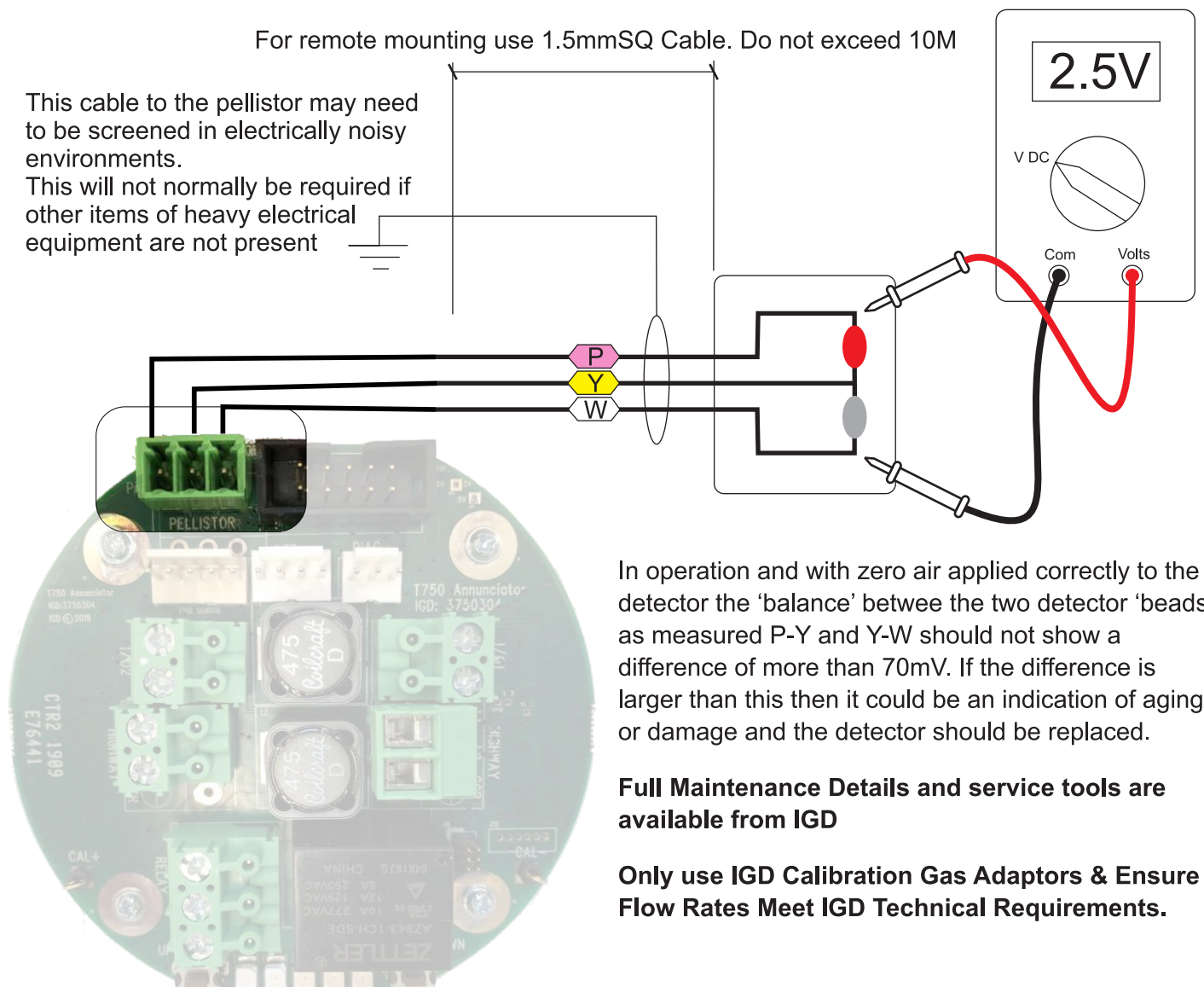
## Pellistor (Catalytic) Flammable Gas Detector Interface

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-750R-MK7. When doing so do not exceed the indicated cable length.

For remote mounting use 1.5mmSQ Cable. Do not exceed 10M

This cable to the pellistor may need to be screened in electrically noisy environments. This will not normally be required if other items of heavy electrical equipment are not present

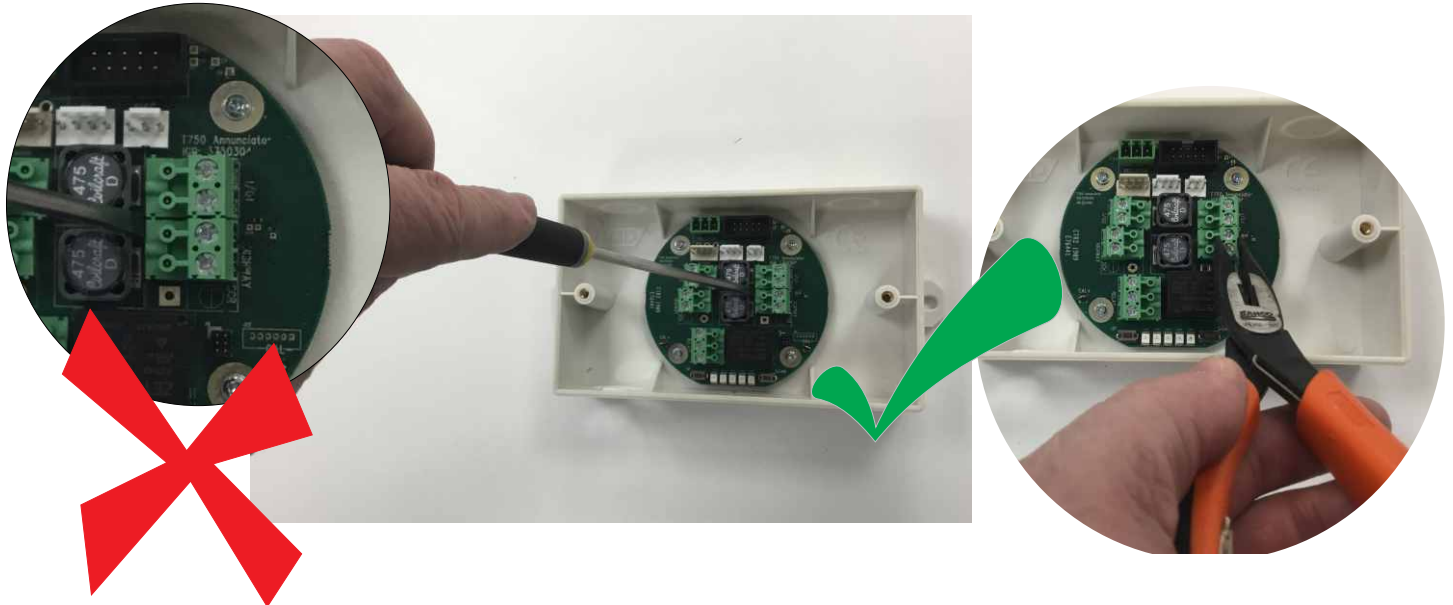


In operation and with zero air applied correctly to the detector the 'balance' between the two detector 'beads' as measured P-Y and Y-W should not show a difference of more than 70mV. If the difference is larger than this then it could be an indication of aging or damage and the detector should be replaced.

**Full Maintenance Details and service tools are available from IGD**

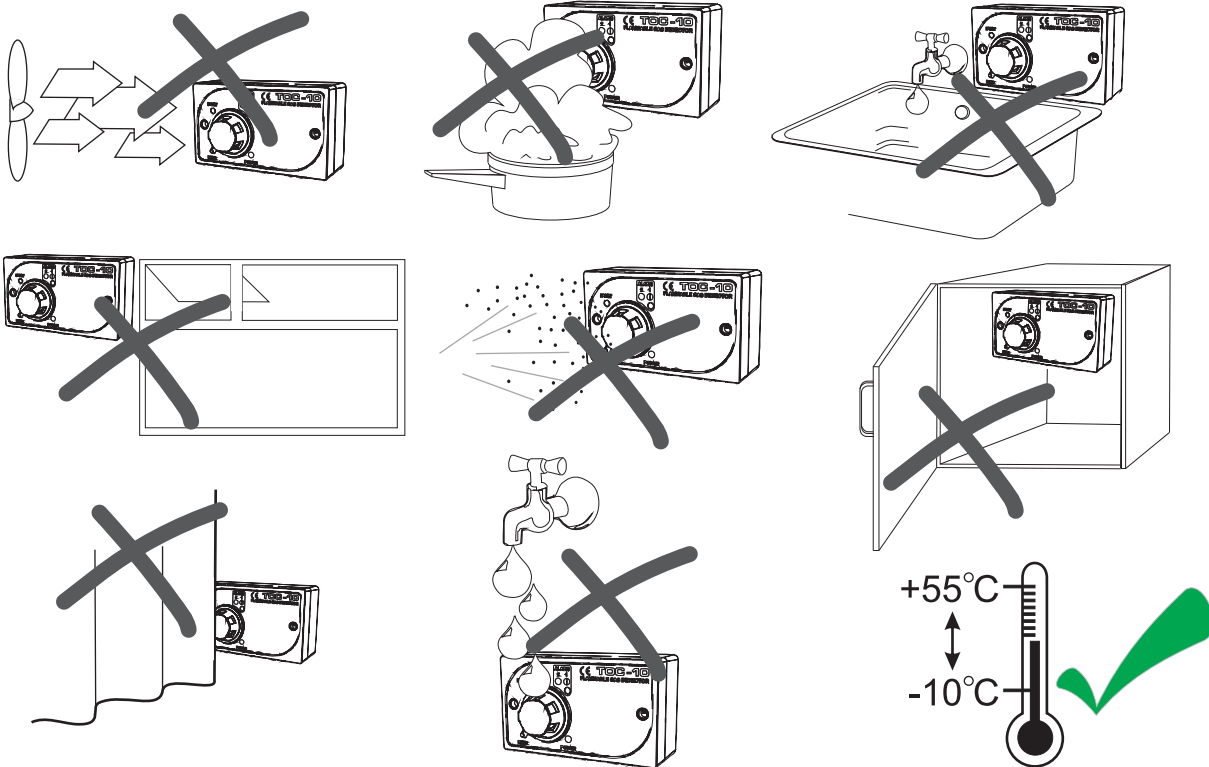
**Only use IGD Calibration Gas Adaptors & Ensure Flow Rates Meet IGD Technical Requirements.**

## Main Base PCB Connectors



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:

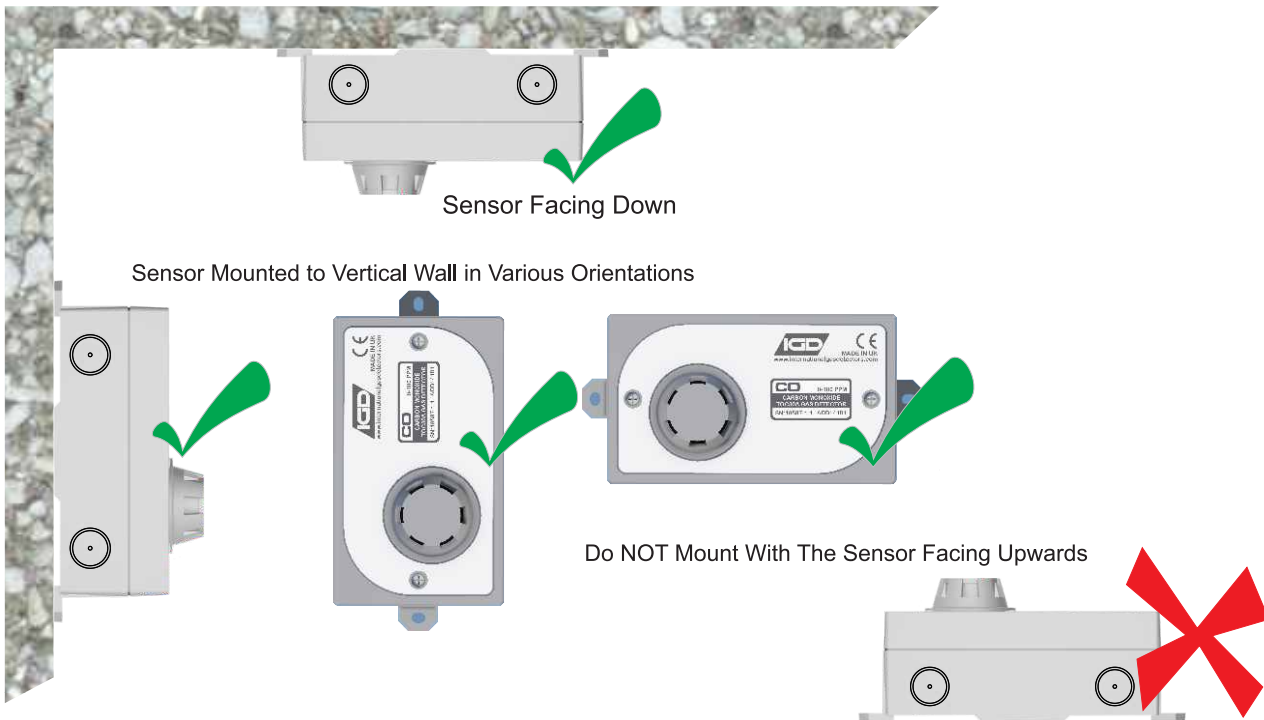
- Silicones (furniture polishes etc)
- Hair sprays (silicones, VOC's etc)
- Chlorinated cleaning agents

## 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

