

TOC-750 Safe Area

2-Wire Addressable Gas Detector

IGD



▶ Easy Installation

2-Wire Addressable system minimises installation time and costs.
Ready to use with 1-click auto setup and self-check.
Polarity independent cable.



▶ Simple Servicing

Intuitive plug-and-play pre-calibrated detectors.
Auto-detect sensor change for automatic updates on ranges, gases, and alarms.



▶ Unparalleled Versatility

I/O points put you in control of valves, beacon sounders and other external devices.
Accommodates 4-20mA signal inputs for system integration.



▶ Peace of Mind

Designed and manufactured in the UK.
Backed up by more than a century of expertise and our 10-year guarantee.
All compliance is supported by third-party certification.

TOC-750 Series

Advanced 2-Wire Addressable Gas Detector

The TOC-750 series redefines gas safety with our cutting-edge Sentinel+™ technology providing addressable, streamlined gas detection. This revolutionary system uses our 2-Wire system to connect all detectors and provide both power and communication.

It offers uncompromised safety at a lower cost, with each detector node boasting individual I/O capabilities for precise distributed control, and data management wherever it's needed. Plug-and-Play sensor options for over 700 gases, and modular functionality, combine to make the TOC-750 the most versatile sensor on the market.

Unique Housing

TOC-750 Safe Area Detectors

IP54 Rated seals effective protection from moisture and dust ingress

Sensor sealed from terminal enclosure preventing gas ingress

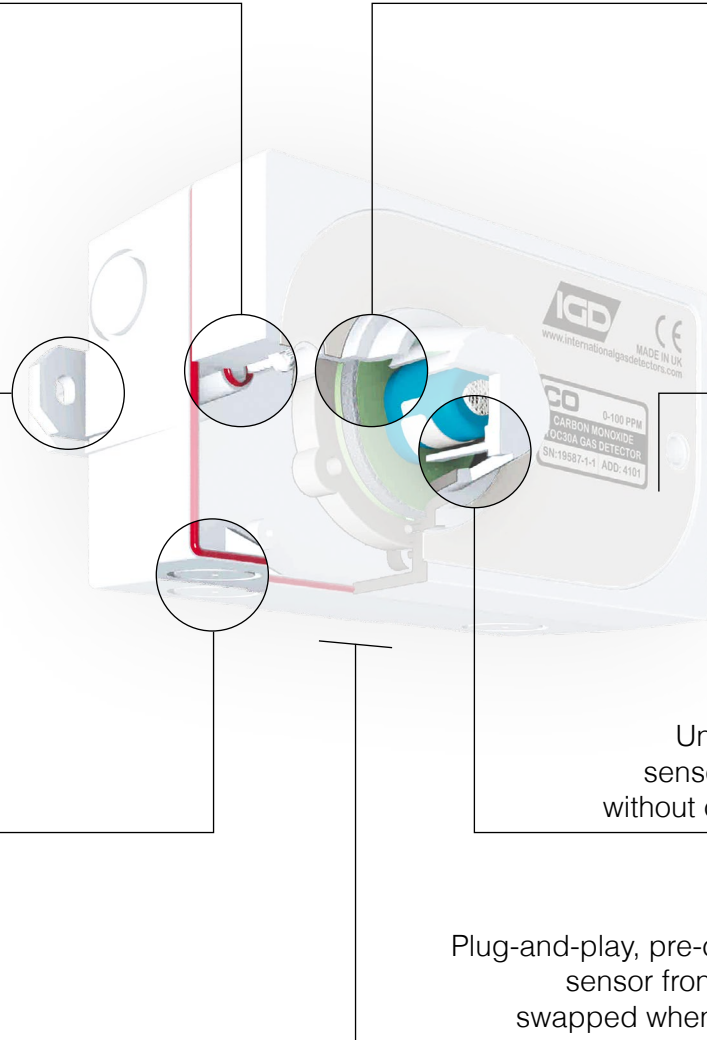
External mountings allow first fit without opening housing

Gas type, address, serial number and range clearly labelled

6x Standard 20mm Gland Entry Knockouts

Unique labyrinth seal protects sensor from debris and moisture without compromising performance

Plug-and-play, pre-calibrated sensor fronts can be swapped when required



Response Times

Sensor Technology

Sensor response times and accuracies are determined by the type of sensor used. The following table provides general guidance for tests carried out by IGD at standard conditions.

Type	T90 Response	Accuracy
Pellistors	<10s	+/-2% LEL
Semiconductor	<15s	+/-5% of Range
Infrared	<15s	+/-2% of Range
Electrochemical as O ₂	<15s	+/-2% of Range
as CO, H ₂ S, SO ₂	<30s	
as NO ₂ , CL ₂ , NH ₃	<50s	

Advanced 2-Wire Addressable Gas Detection

Advanced 2-Wire Addressable Gas Detector

Our Sentinel+™ 2-Wire technology is an IGD-exclusive, advanced digital gas detection system designed to provide fast, efficient, and error-free performance and tackle the unique issues presented by gas hazards. Our 2-Wire Addressable system also enables you to daisy chain up to 32 detectors on our single 2-Core cable providing unparalleled versatility, and allowing for seamless integration into your setup.

Sentinel+™ accommodates the addition of alarms, interfacing with your safety systems, and communication with all hardware and BMS systems. Our 2-Wire Addressable solutions have no polarity requirements, which means we can minimise cabling and system costs without compromising on safety.

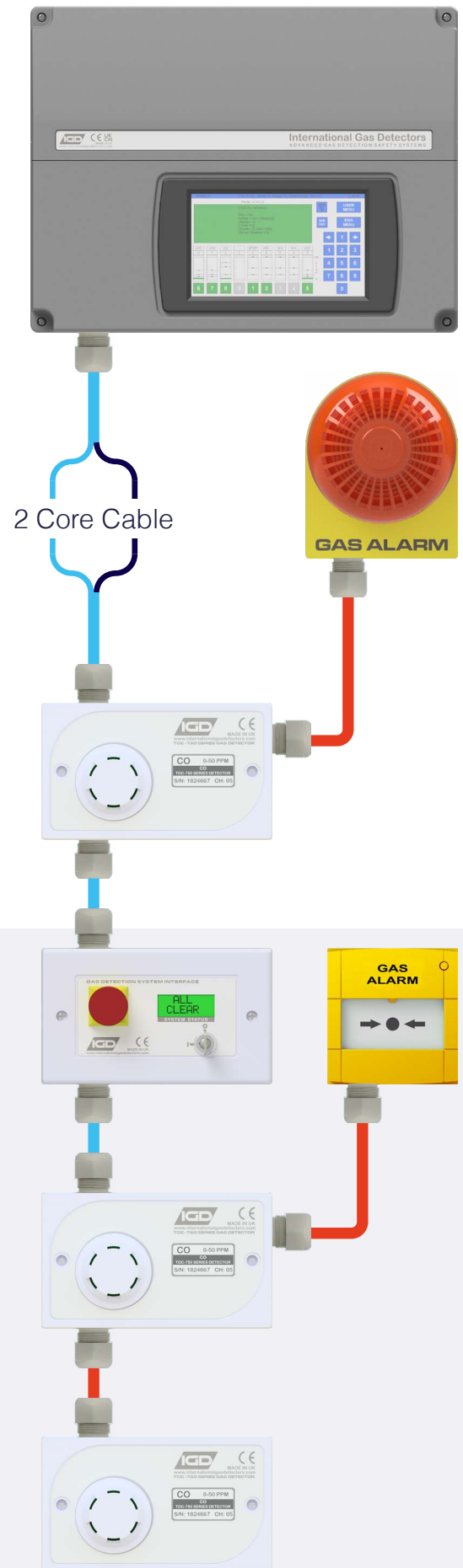
I/O Options

Advanced 2-Wire Addressable Gas Detector

The multiple built-in I/O options mean one detector can control up to 7 other devices, including but not limited to:

- + Slam switches
- + Beacon sounders
- + Gas supply valves
- + Analogue devices (including third-party)
- + Displays
- + Other gas detectors

Boasting reduced installation and cabling requirements, distributed control without the need for expensive I/O cards or miles of cabling and limitless integration options, you'll soon realise why we dubbed the TOC-750 the world's most versatile sensor.



Order Codes

TOC-750 Safe Area

Gas	Range	Order Code
Long-Life Pellistor (Refer to Data Sheet SL-034)		
General Flammable Gases	0-100% LEL	TOC-750-MK8
H2/CH4	0-100% LEL	TOC-750-MK8+
Infrared		
Carbon Dioxide	0-5% VOL	TOC-750-CO2
Carbon Dioxide	0-100% VOL	TOC-750-HCO2
Carbon Dioxide	0-5,000ppm	TOC-750-LCO2
Carbon Dioxide	0-40,000ppm (0-4% Vol)	TOC-750-iCO2
General Flammable Gases	0-100% LEL	TOC-750-IRF
Electrochemical (Refer to Data Sheet SL-029)		
Acetylene	0-200ppm	TOC-750-C2H2
Boron Tri-Chloride	0-10ppm	TOC-750-BCL3
Carbon Monoxide	0-100ppm	TOC-750-CO
Carbon Monoxide	0-2,000ppm	TOC-750-HCO
Chlorine	0-10ppm	TOC-750-CL2
Chlorine Dioxide	0-1ppm	TOC-750-CLO2
Ethylene	0-10ppm	TOC-750-LC2H4
Ethylene	0-200ppm	TOC-750-C2H4
Ethylene Oxide	0-10ppm	TOC-750-ETO
Ethylene Oxide	0-100ppm	TOC-750-HETO
Ethylene Oxide	0-500ppm	TOC-750-ETO20
Fluorine	0-1ppm	TOC-750-F2
Formaldehyde	0-5ppm	TOC-750-CH2O
Hydrogen	0-1,000ppm	TOC-750-H2
Hydrogen	0-2,000ppm	TOC-750-2H2
Hydrogen	0-40,000ppm	TOC-750-HH2
Hydrogen Bromide	0-20ppm	TOC-750-HBR
Hydrogen Chloride	0-10ppm	TOC-750-HCL
Hydrogen Cyanide	0-10ppm	TOC-750-HCN

Gas	Range	Order Code
Hydrogen Fluoride	0-10ppm	TOC-750-HF
Hydrogen Sulphide	0-50ppm	TOC-750-H2S
Methanethiol	0-10ppm	TOC-750-CH3SH
Nitrogen Dioxide	0-5ppm	TOC-750-NO2
Nitric Oxide	0-5ppm	TOC-750-NO
Ozone	0-1ppm	TOC-750-O3
Ozone	0-5ppm	TOC-750-HO3
Phosphine	0-5ppm	TOC-750-PH3
Silane	0-10ppm	TOC-750-SIH4
Sulphur Dioxide	0-5ppm	TOC-750-SO2
Sulphur Dioxide	0-10ppm	TOC-750-HSO2
Sulphur Hexafluoride	0-1,000ppm	TOC-750-SF6-10
Photolonisation (Refer to Data Sheet SL-029)		
VOCs	0-50ppm	TOC-750-PID05
VOCs	0-100ppm	TOC-750-PID01
VOCs	0-200ppm	TOC-750-PID02
VOCs	0-2,000ppm	TOC-750-PID20
VOCs	0-5,000ppm	TOC-750-PID50
Ionic Ammonia (Refer to Data Sheet SL-029)		
Ammonia	0-100ppm	TOC-750-NH3-L
Ammonia	0-500ppm	TOC-750-HNH3-L
Ammonia	0-5,000ppm	TOC-750-HH3H3
Long-Life Oxygen		
Oxygen (Lead Free)	0-25% VOL	TOC-750-O2
Refrigerant Gas Detectors (Contact IGD for full list)		
IR Based Refrigerant Gases	0-2,000ppm	TOC-750-IRR
Group 1 Refrigerants	0-1,000ppm	TOC-750-R1
Group 2 Refrigerants	1,000-10,000ppm	TOC-750-R2
Spare Sensor Fronts		
Spare Sensors (Replace XXX with Gas)	-	TOC-SP-XXX

Specifications

For Both Detectors

I/O

1 off SPCO Relays 4A/230V AC Non-Inductive User Configurable from 650/750 Controllers
2 multifunction ports as:
Digital Input Max 0.2Hz
Digital Input 0-3V Max 0.2Hz
4-20mA input or
Solid State Output 24V DC Max 300mA shared Across both Ports

Sensor

Semi-Conductor, Pellistor, Toxic, PID Oxygen, Infrared

Communication

IGD Sentinel+™ Protocol, 2-Wire Connection L1,L2

Installation Cables

Supported Installation Cables 2 Core 1.5mmSQ or 2.5mmSQ See IGD Cable System Calculator Typically SWA, FP200, CY Screened or Similar

Specifications

TOC-750 Safe Area Detector

Power

12 to 26V DC

Weight

300 g

Dimensions (wxdxh)

See Diagram

Temperature Range

0° to +55°C
(+32° to +131°F)

Humidity

0% to 95%
RH Non-Condensing

Ingress Protection

IP54

Housing Material

ABS

Mounting

Wall Mount

Specifications

TOC-750 SF6 Safe Area Detector

Power

12 to 30V DC

Weight

1.2 Kg

Dimensions (wxdxh)

See Diagram

Temperature Range

-20° to +85°C
(-4° to +185°F)

Humidity

15% to 95%
RH Non-Condensing

Ingress Protection

IP66

Housing Material

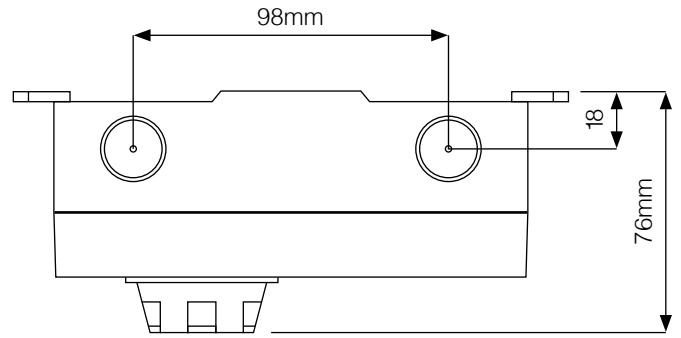
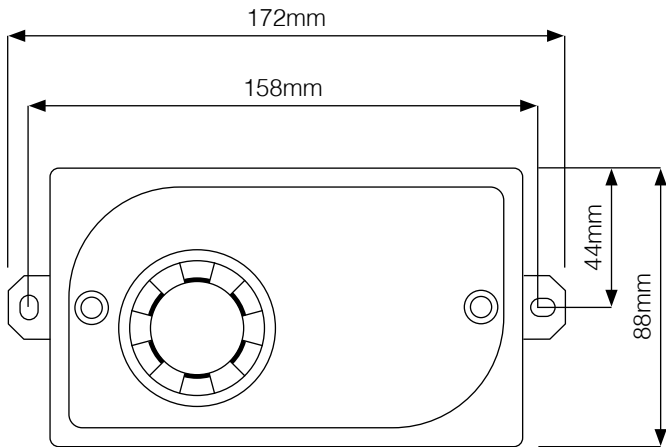
Powder Coated Steel and Stainless Steel

Mounting

Wall Mount

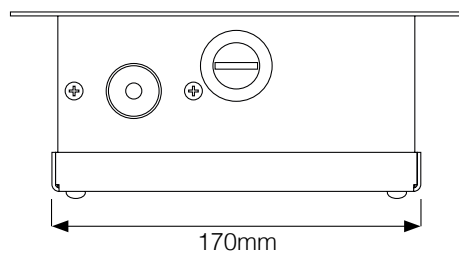
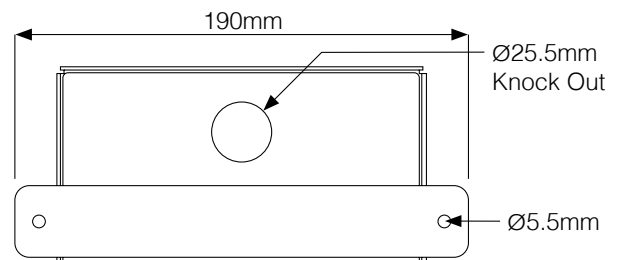
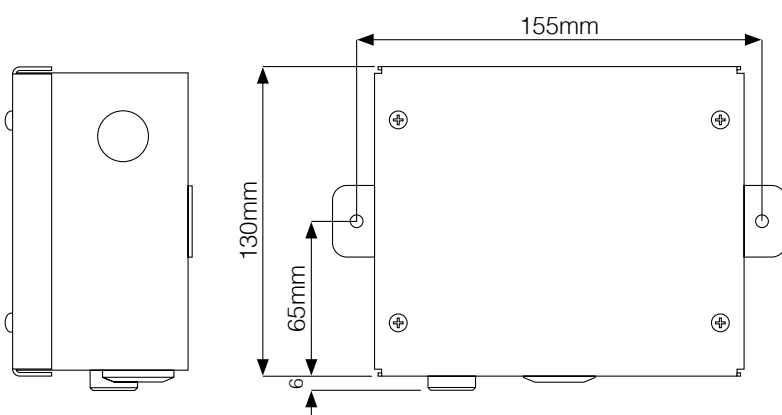
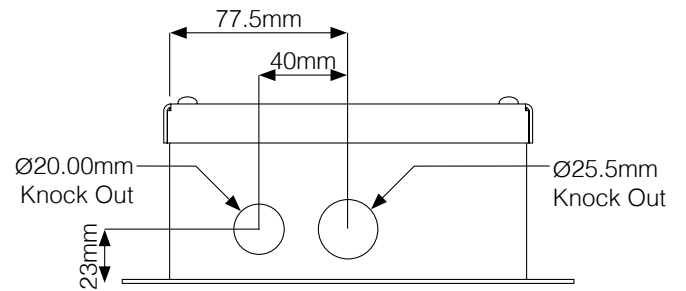
Dimensions

TOC-750 Safe Area Housing



Dimensions

TOC-750 SF6 Safe Area Housing



Product Spotlight

Sensor Technologies for over 700 Gases and Vapours

Wide Range Detectors

Traditionally, detecting CO₂ involves a compromise between low-level early detection warnings and high-level evacuation alarms. IGD's CO₂ detector tackles these issues through multi-ranging. The basic detection range is 0-40,000ppm (or 0-4% VOL).

Using our detectors in combination with IGD's Sentinel+™ technology allows the detection system to automatically range from ppm to % level alarms based on the gas level. You can now set pre-alarms at ppm levels allowing for early intervention and shutdown, or evacuation alarms at STEL levels. Maximised safety performance, without compromise.



Ionic Ammonia Detectors

Traditional electrochemical ammonia detectors struggle in environments where there is a continuous background level of Ammonia. In such environments, their electrolyte can be quickly consumed rendering them useless. This can also be the case when a large leak of Ammonia occurs.

While IGD's ionic ammonia detectors are still electrochemical, they use a different ionic technology for ammonia detection which is protected against consumption. They do not deplete providing a longer service life and a high level of security in demanding environments.



Polymer Oxygen Detectors

Our oxygen sensors are lead free, ROHS compliant, highly reliable and cost-efficient, and our non-depleting polymer technology typically provides a 5-year sensor lifespan.



EC Declaration of Conformity

Declares the product listed as:

TOC-750
TOC-750B

Addressable Safe
Area Gas Detector

Issuers name and address:

Oliver IGD Limited of
Triton House
Crosby St
Stockport, SK2 6SH
United Kingdom

Are in conformity with the provisions of the following European Directive(s) when installed, operated, serviced and maintained in accordance with the installation and operating instructions contained in the product documentation.

United Kingdom

Electromagnetic Compatibility Regulations 2016

Electrical Equipment (Safety) Regulations 2016

European Union

2004/108/EC

EMC Directive

2014/35/EU

Low Voltage Equipment Directive (note not applicable to 24V DC Powered Versions)

And that the standards and/or technical specifications referenced below have been applied or considered.

IEC 50194

IECUL/CSA 61010-1

Electrical apparatus for the detection of combustible gases
Safety requirements for electrical equipment for measurement, control,
and laboratory use.

General requirements

IEC 50270

Electromagnetic compatibility - Electrical Equipment for the Detection
and Measurement of Combustible Gases, toxic Gases or Oxygen

IEC 60529

Degree of Protection to IP54

IEC 60068-2-6

Vibration

IEC 60335:2012+A11:2014

Electrical Safety

Technical File Reference

T750B-TF9

Quality Management
Certificate Number

FS 646773

EMS 696504

Oliver IGD Limited operate an
independently assessed ISO 9001:2015
Quality Management System & ISO 14001
Environmental Management

BSI Assurance UK LTD,
Chiswick High Road,
London
W4 4AL
UK

CE

UK
CA



Issued by: Oliver IGD Limited, Stockport, SK2 6SH , United Kingdom

Signature:

A handwritten signature in black ink, appearing to read 'Andrew J Collier'.

Declaration of Conformity in accordance with EN ISO/ IEC 17050-1:2010

Name: Andrew J Collier M.I.O.D

Date: 03 April 2024

Declaration Ref: DEC-6

Position: Managing Director