TOC-750 Safe Area

2-Wire Addressable Gas Detector

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.











IP54 Rated seals effective Sensor sealed from protection from moisture terminal enclosure and dust ingress preventing gas ingress External mountings Gas type, address, allow first fit without serial number and range clearly labelled opening housing Unique labyrinth seal protects 6× Standard 20mm sensor from debris and moisture **Gland Entry Knockouts** 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.

Туре	T90 Response	Accuracy	
Pellistors	<10s	+/-2% LEL	
Semiconductor	<15s	+/-5% of Range	
Infrared	<15s	+/-2% of Range	
Electrochemical as O2	<15s	1 / 2% of Banga	
as CO,H2S, SO2	<30s	+/-2% of Range	
as NO2, CL2, NH3	<50s		



Advanced 2-Wire Addressable Gas Detection

Advanced 2-Wire Addressable Gas Detector

Our Sentinel+[™] 2-Wire technology is an IGDexclusive, 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 Gas Range Order Code TOC-750 Safe Area Hydrogen Cyanide 0-10ppm TOC-750-HCN Gas Range Order Code Hydrogen Fluoride 0-10ppm TOC-750-HF Long-Life Pellistor (Refer to Data Sheet SL-034) Hydrogen Sulphide 0-50ppm TOC-750-H2S General Flammable Gases 0-100% LEL TOC-750-MK8 Methanethiol 0-10ppm TOC-750-CH3SH H2/CH4 0-100% LEL TOC-750-MK8+ Nitrogen Dioxide TOC-750-NO2 0-5ppm Infrared Nitric Oxide 0-5ppm TOC-750-NO Carbon Dioxide 0-5% VOL TOC-750-CO2 Ozone 0-1ppm TOC-750-03 Carbon Dioxide 0-100% VOL TOC-750-HCO2 Ozone 0-5ppm TOC-750-HO3 Carbon Dioxide 0-5,000ppm TOC-750-LCO2 Phosphine 0-5ppm TOC-750-PH3 0-40,000ppm Silane 0-10ppm TOC-750-SIH4 Carbon Dioxide TOC-750-iCO2 (0-4% Vol) Sulphur Dioxide 0-5ppm TOC-750-SO2 General Flammable Gases 0-100% LEL TOC-750-IRF Sulphur Dioxide 0-10ppm TOC-750-HSO2 Sulphur Hexafluoride 0-1,000ppm TOC-750-SF6-10 IPA, Methanol, Ethanol 0-200ppm TOC-750-VOC200 Electrochemical (Refer to Data Sheet SL-029) IPA. Methanol. Ethanol TOC-750-VOC2 0-20ppm Acetylene 0-200ppm TOC-750-C2H2 Photolonisation (Refer to Data Sheet SL-029) Boron Tri-Chloride TOC-750-BCL3 VOCs 0-50ppm TOC-750-PID05 0-10ppm VOCs Carbon Monoxide 0-100ppm TOC-750-CO 0-100ppm TOC-750-PID01 Carbon Monoxide 0-2,000ppm TOC-750-HCO VOCs 0-200ppm TOC-750-PID02 TOC-750-CL2 VOCs Chlorine 0-2,000ppm TOC-750-PID20 0-5ppm VOCs Chlorine Dioxide 0-1ppm TOC-750-CLO2 0-5,000ppm TOC-750-PID50 TOC-750-LC2H4 Ionic Ammonia (Refer to Data Sheet SL-029) Ethylene 0-10ppm TOC-750-NH3-L Ethylene 0-200ppm TOC-750-C2H4 Ammonia 0-100ppm Ethylene Oxide TOC-750-ETO 0-500ppm TOC-750-HNH3-L 0-10ppm Ammonia Ethvlene Oxide 0-100ppm TOC-750-HETO Ammonia 0-5,000ppm TOC-750-HHNH3 Long-Life Oxygen Ethylene Oxide 0-500ppm TOC-750-ETO20 TOC-750-F2 0-25% VOL TOC-750-02 Fluorine Oxygen (Lead Free) 0-1ppm TOC-750-CH20 Refrigerant Gas Detectors (Contact IGD for full list) Formaldehyde 0-5ppm IR Based Refrigerant Gases Hydrogen 0-1,000ppm TOC-750-H2 0-2,000ppm TOC-750-IRR Hydrogen 0-2,000ppm TOC-750-2H2 Group 1 Refrigerants 0-1,000ppm TOC-750-R1 Hydrogen 0-40,000ppm TOC-750-HH2 Group 2 Refrigerants 1,000-10,000ppm TOC-750-R2 Hydrogen Bromide 0-20ppm TOC-750-HBR Spare Sensor Fronts TOC-SP-XXX Hydrogen Chloride 0-10ppm TOC-750-HCL Spare Sensors (Replace XXX with Gas)



Specifications

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

Installation Cables

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

Communication

IGD Sentinel+™

Protocol, 2-Wire

Connection L1,L2

Specifications

TOC-750	Safe A	Area	Detector

Power	Weight	Dimensions (w×d×h)	Temperature Range
12 to 26V DC	300 g	See Diagram	0° to +55°C (+32° to +131°F)
Humidity	Ingress Protection	Housing Material	Mounting
0% to 95% RH Non-Condensing	IP54	ABS	Wall Mount

Specifications

Power	Weight	Dimensions (w×d×h)	Temperature Range
12 to 30V DC	1.2 Kg	See Diagram	-20° to +85°C (-4° to +185°F)
Humidity	Ingress Protection	Housing Material	Mounting
15% to 95% RH Non-Condensing	IP66	Powder Coated Steel and Stainless Steel	Wall Mount



Dimensions



Dimensions





Product Spotlight

Sensor Technologies for over 700 Gases and Vapours

Wide Range Detectors

Traditionally, detecting CO_2 involves a compromise between low-level early detection warnings and high-level evacuation alarms. IGD's CO_2 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.







Declares the product listed as:

TOC-750

C-750B

EC Declaration of Conformity

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 EMC Directive 2004/108/EC Low Voltage Equipment Directive (note not applicable to 24V DC Powered Versions) 2014/35/EU

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 <u>UK</u>



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

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

Position:

Name:

Signature: 🥂 🛶 🎊

Managing Director

Andrew J Collier M.I.O.D

Date: 03 April 2024

Declaration Ref: DEC-6