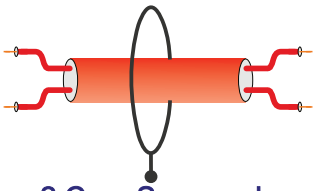
APPLICATION DATA SHEET

Control Systems | Transmitters | **Sensors** | Accessories

TOCSIN 750 SERIES SAFE AREA GAS DETECTORS

2-Wire Addressable Systems

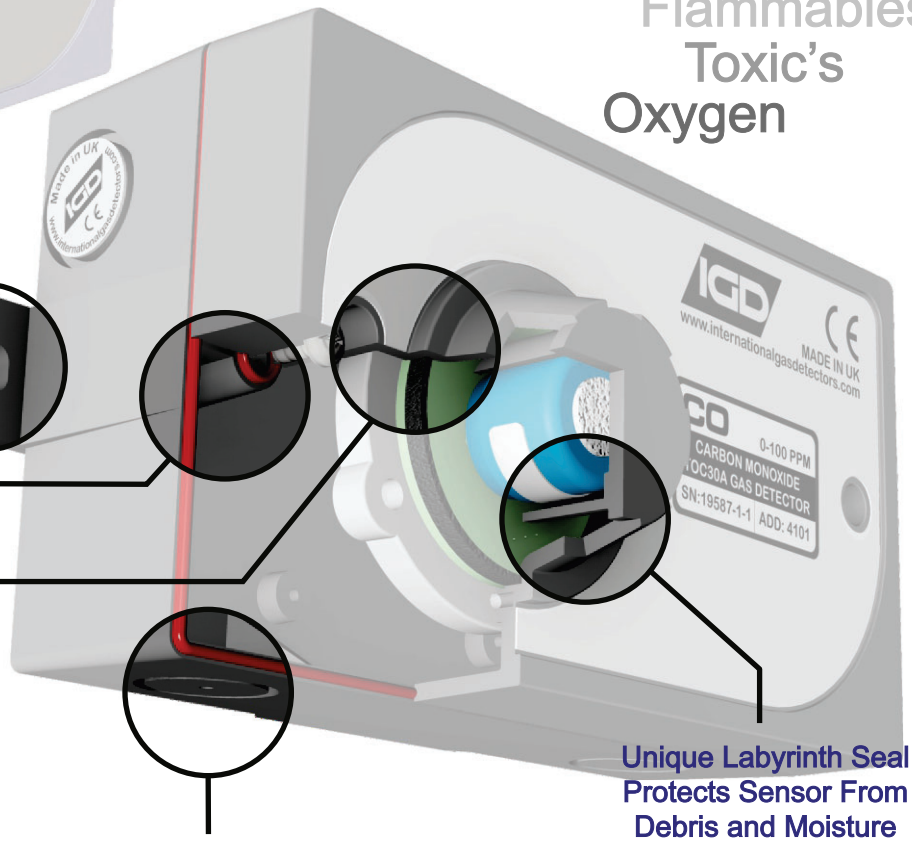
2-Wire Addressable



2 Core Screened Cable

Addressable Interface to Controller. Network up to 32 Annunciators or other Addressable Devices per Highway. Up to 7 I/O points off one detector.

Flammables
Toxic's
Oxygen



External Mountings Allow First Fit without Opening Housing

IP Rated Seals Effective Protection From Moisture and dust ingress

Sensor Sealed From Terminal Enclosure Preventing Gas Ingress

Pellistors
Electrochemical
Infra-Red

6 Standard 20mm Gland Entry Knockouts

Unique Labyrinth Seal Protects Sensor From Debris and Moisture Without Compromising Performance

Building on IGD's existing Addressable Gas Detectors, the 750 Series add 2-Wire addressable technology. Using IGD's Sentinel+ 2-Wire protocol the 750 Series communicate over the detector power cables. This reduces cabling and terminations whilst improving reliability. Sentinel+ protocol continuously monitors data between connected detectors and the system controller ensuring maximum system availability. With only two wires for power and communication existing systems can be easily upgraded using existing cables with the option to easily add more detectors where required.

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bsi. ISO 9001 Quality Management FS646773 ISO 14001 Environmental Management EMS696504

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Control Systems | Transmitters | **Sensors** | Accessories

Standard Specifications

Power	12 to 26V DC
Construction	ABS
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 Input From TOC-10 Link Function
Sensor	Direct Pellistor Interface Input for IGD Toxic,Oxygen, Infra red and PID detectors
Communication	IGD Sentinel+ Protocol, 2-Wire Connection A,B
Temperature	0 to 55 Deg C
Humidity	0-95% RH Non-Condensing
Sealing	IP55
Mounting	Wall Mount
Weight	1.75Kg

Standard Features

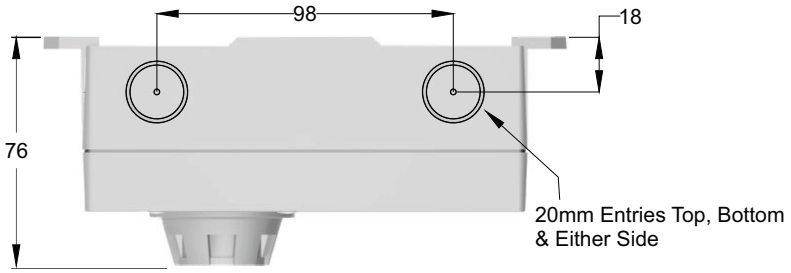
2-Wire Addressable Technology
Detector Technology to Suit the Application
Available as:
Infra red (Flammables and CO2)
Pellistor (Flammables)
Electrochemical (Toxic's and Oxygen)
Standard 2 Gang Pattress
Dado Mount or Wall Mount
Pre-calibrated
In-Service Calibration Possible
Replaceable Sensor
Uses Existing TOC-30A Series Detectors
Ensuring Maximum Compatibility.
Accessories for Duct Mounting, Sampling, bulkhead Mounting etc
Excellent Stability and Repeatability.
Compensated for Temperature and Drift

Sensor Accuracies & Response Times

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
Infra Red	<15s	+/-2% of Range
Electrochemical as CO,H2S,SO2	<30s	+/-2% of Range
as O2	<15s	
as NO2,CL,NH3	<50s	

Physical



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Control Systems Transmitters **Sensors** Accessories

EC Declaration of Conformity

Issuers name and address:

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

Declares that the product listed as:

TOCSIN 750 SERIES SAFE AREA GAS DETECTOR

Addressable 2-Wire Gas Detector - Interface Node

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.

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.

EN 60079-29-1:2016	*Explosive atmospheres. Gas detectors. Performance Requirements Of Detectors For Flammable Gases. **Conforms to***
EN 61000-6-2: 2005	EMC Generic standards. Immunity for industrial environments
EN 61000-6-4: 2007/A1: 2011	EMC Generic standards. Emission standard for industrial environments
EN 61000-3-2: 2014	EMC Limits. Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)
EN 61000-3-3: 2013	EMC Limits. Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase
Technical File Reference	T750ANN-TF9

Product Markings CE **TOC-750-DET** *S/-serial number*

Oliver IGD Limited Operate and Independently assessed ATEX/IECEX QAN.

Quality Assurance Certificate Number
ExVeritas 16PQAN0014

Quality Assurance Notification Number:
2585

ExVeritas,
Units 16-18,
Abenbury Way,
Wrexham Industrial Estate,
Wrexham, UK, LL13 9UZ

Oliver IGD Limited operate an independently assessed ISO9001:2015 Quality Management System.

Quality Management Certificate Number
FS 646773

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

Testing Agency:

TUV - SUD
Octagon House
Concorde Way
PO 15 5RL
Fareham

Mehr Sicherheit. Mehr Wert.

TUV Certificates and reports can be checked on-line at https://www.tuev-sued.de/industry_and_consumer_products/certificates

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

Signature:

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

Name Andrew J Collier M.I.O.D

Position: Managing Director

Date: 28th Nov 2018

Declaration Ref: T750DET-DEC-2

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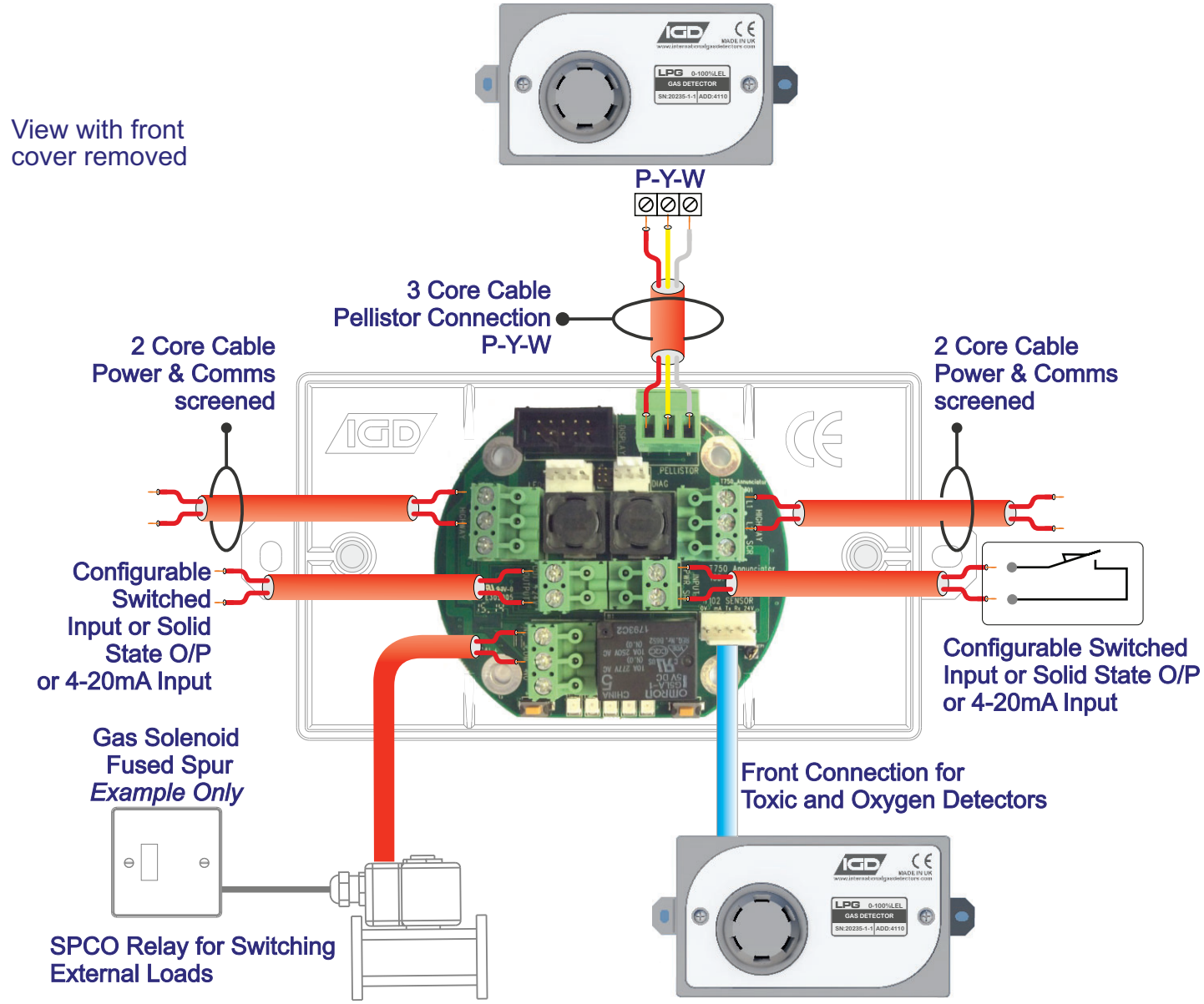
Interface Locations

Tocsin 750 Series detector systems have a number of standard interfaces available on-board each unit. The standard PCB set allows interface either Toxic, Oxygen or Flammable Detectors. Communication to the system controller uses IGD's latest Sentinel+ 2-Wire protocol for speed of installation and increased reliability. Existing analogue systems can be quickly updated to 2-Wire addressable systems. In addition each module has a flexible range of additional interfaces to easily add slam switches, beacon-sounders and other readings to the system.



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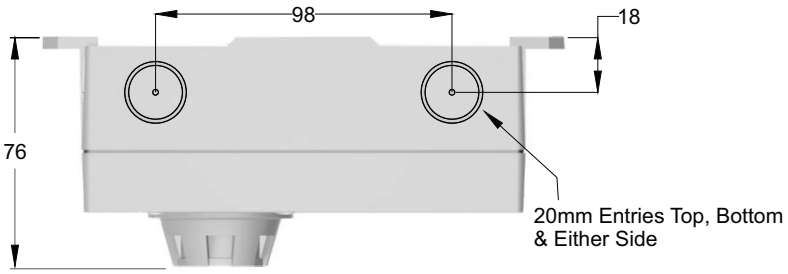
Example Order Codes TOC-750 Series Detectors *note IGD can offer sensors for over 400 gases*

Gas	Order Code	Standard Range*	Typical Cell Life **
Carbon Monoxide (Lo)	TOC-750-CO	0-100 ppm	5+ Years
Carbon Monoxide (Hi)	TOC-750-HCO	0-2000 ppm	5+ Years
Flammable Gases (Pel)	TOC-750-MK7	0-100% LEL	4+ Years
Flammable Gases (Pel)	TOC-750R-MK7	0-100% LEL	4+ Years
Flammable Gases (Pel)	TOC-750-PHA	0-100% LEL	4+ Years
Flammable Gases (IR)	TOC-750-IRF	0-100% LEL	5+ Years
Carbon Dioxide (Lo)	TOC-750-CO2	0-5000ppm to 5% Vol	5+ Years
Carbon Dioxide (Hi)	TOC-750-HCO2	0-100% Vol	5+ Years
Hydrogen Sulphide	TOC-750-H2S	0-50 ppm	5+ Years
Oxygen	TOC-750-O2	0-25% Vol	5+ Years
Ammonia	TOC-750-NH3	0-500 ppm	3+ Years
Nitric Oxide	TOC-750-NO	0-100 ppm	3+ Years
Nitrogen Dioxide	TOC-750-NO2	0-20 ppm	3+ Years
VOCs	TOC-750-LVOC	0-200 ppm	2+ Years
Chlorine	TOC-750-CL2	0-10 ppm	3+ Years
Boron Tri-Chloride	TOC-750-BCL3	0-10 ppm	3+ Years
Hydrogen	TOC-750-H2	0-1000 ppm	3+ Years
Hydrogen Chloride	TOC-750-HCL	0-10 ppm	3+ Years
Silane	TOC-750-SIH4	0-10 ppm	3+ Years

Order Codes Accessories

Gas	Order Code
Calibration Gas Adaptor	4011109
Gas Collector Cone	TOC-CNE
Splash Guard	TOC-30-GD
Cable Gland, Quick Fit M20	TOC-CAB
Pitot Adaptor For Ducts	TOC-30-DCT
Unistrut Adaptor	TOC-ADA
Ceiling Mount	50006601

Mounting details and dimensions Toc-750 Safe Area Detectors



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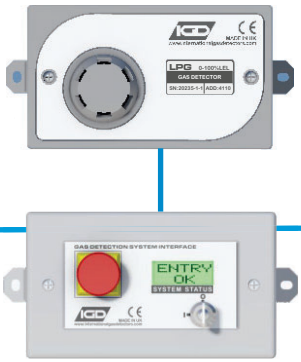
System Example

Controller in Supervisors Office

Use *Room Status Indicators* For Door Entry Control.



Use *Room Status Indicators* with Gas Detector Interfaces to Detect & Alarm in Specific Areas

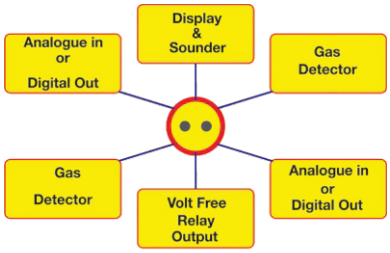
Laboratory

Where Required For Longer Cable Runs or Where Device and Accessory Density is High add Power Boosters or Cascade Hubs to Increase Distance Capability to up to 3KM

2 Core Highway as:
24V L1,L2
Typically 1.5mmSQ screened Cable

Gas Bottle Store

ATEX Zoned Area



Each Detector Node Has Multiple I/O

Use the Detector or Annunciator I/O Capability to Control Gas Supply Valves, Beacon-Sounders or other devices

Mix Annunciators With Other Addressable Devices Such as TOC-750 Series Detectors. Use ATEX Rated detectors where required

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