

APPLICATION DATA SHEET



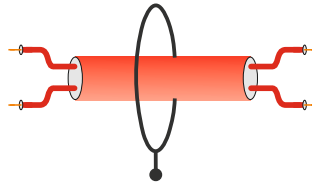
Control Systems

Transmitters

Sensors

Accessories

TOCSIN 750 SERIES SAFE AREA GAS DETECTORS 2-Wire Addressable Systems



2 Core Cable
Unscreened

Addressable Interface to Controller.
Network up to 32 Annunciators or
other Addressable Devices per
Highway.

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.



International Gas Detectors

CH₄ H₂S CO₂
NH₃ SO₂ NO₂ CO



Triton House
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Stockport
SK2 6SH
England

Ref T750DEU-3

Tel: +44 (0)161 483 1415
Fax: +44 (0) 161 484 2345

Email: sales@internationalgasdetectors.com
Website: www.internationalgasdetectors.com



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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

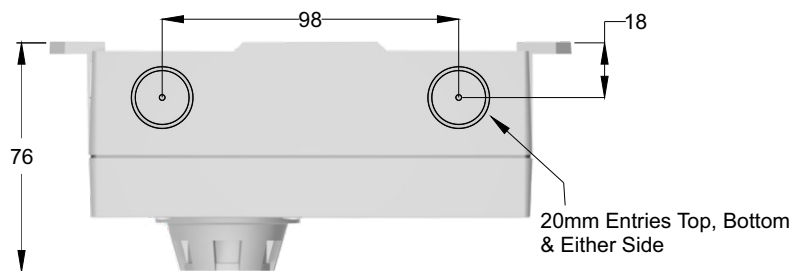
2-Wire Addressable Technology
 Detector Technology to Suit the Application
 Available as:
 Infra red (Flammables and CO₂)
 Pellistor (Flammables)
 Electrochemical (Toxic's and Oxygen)
 Standard 2 Gang Pattress
 Dado Mount or Wall Mount
 Pre-calibrated
 In-Service Calibration Possible
 Replaceable Sensor
 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, H ₂ S, SO ₂	<30s	+/-2% of Range
as O ₂	<15s	
as NO ₂ , CL, NH ₃	<50s	

Physical



International Gas Detectors
 CH₄ H₂S CO₂
 NO₂ SO₂ NO



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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
2006/95/EC 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 61779-1:2000	Electrical apparatus for the detection and measurement of flammable gases, general requirements and test methods.
EN 50271:2010	Electrical apparatus for the detection and measurement of combustible gases, toxic gases or Oxygen: requirements and tests for apparatus using software and or digital technologies. Excluding requirements for SIL
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** *SI*-serial number

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

Oliver IGD Limited operate an independently assessed ISO9001:2008 Quality Management System.

Testing Agency:

Quality Assurance Certificate Number
ExVeritas 16PQAN0014

Quality Management Certificate Number
FS 646773

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



Quality Assurance Notification Number:
2585

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

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

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 17050-1:2004

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

Position: Managing Director Date: 1.June 2015 Declaration Ref: T750DET-DEC-1



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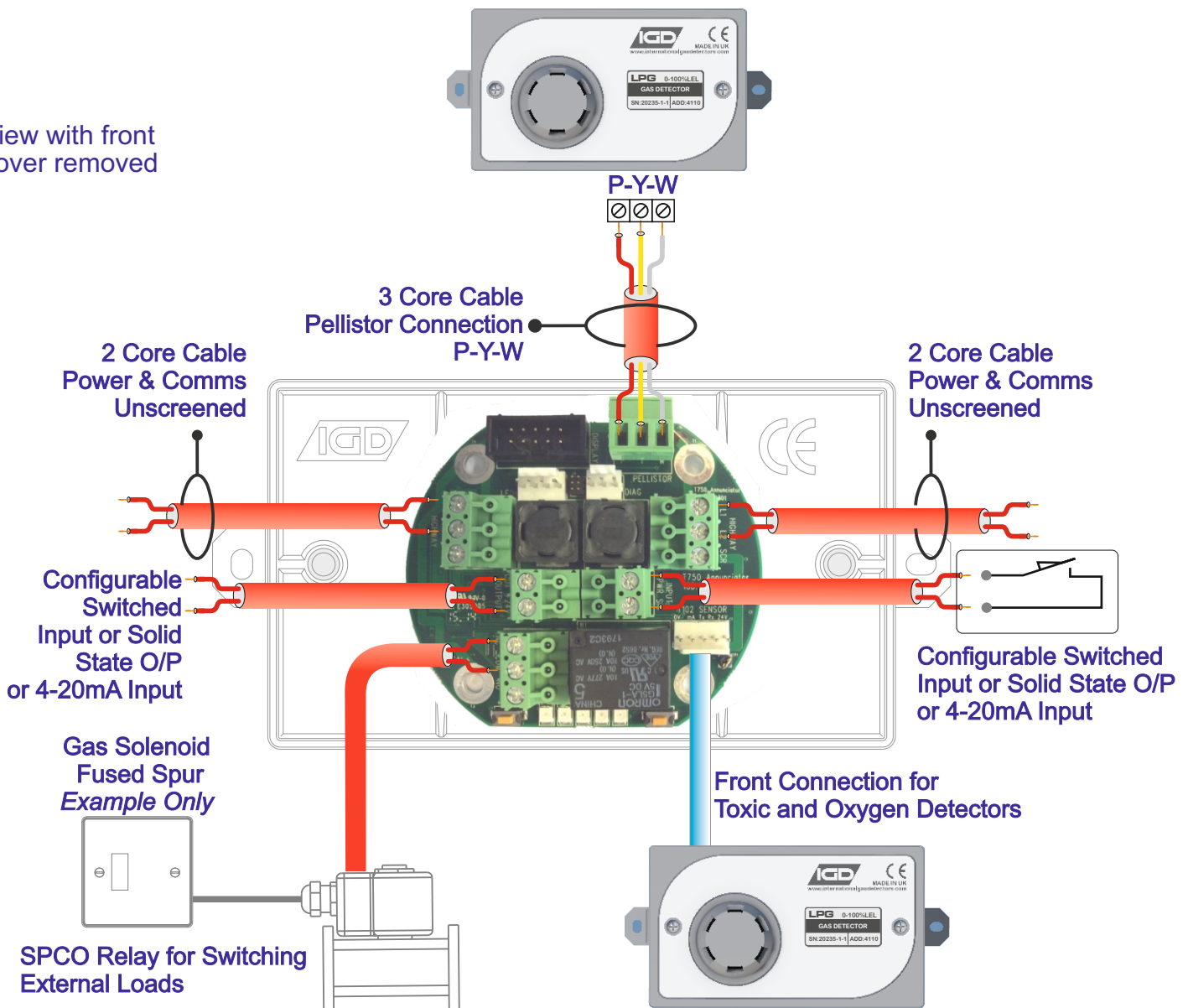
Sensors

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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.

View with front cover removed



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Order Codes TOC-750 Series Detectors

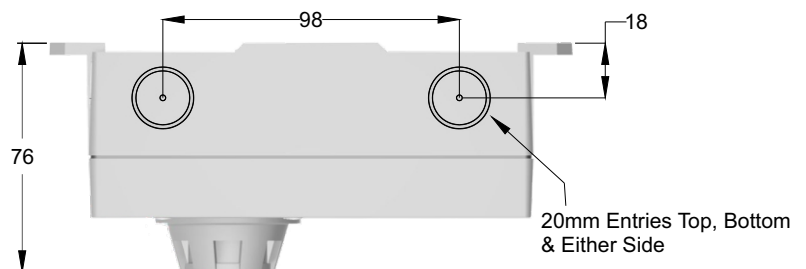
Gas	Order Code	Standard Range*	Typical Cell Life **
Carbon Monoxide (Lo)	TOC-750-CO	0-100 ppm	5+ Years
Carbon Monoxide (Hi)	TOC-750-HCO	0-2000 ppm	5+ Years
Flammable Gases (Pel)	TOC-750-MK7	0-100% LEL	4+ Years
Flammable Gases (Pel)	TOC-750R-MK7	0-100% LEL	4+ Years
Flammable Gases (Pel)	TOC-750-PHA	0-100% 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
Nitrous Oxide	TOC-750-N2O	0-1000 ppm	3+ 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

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



ATEX Zoned Area

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

Use Annunciators For Door Entry Control.



Use Annunciators with Gas Detector Interfaces to Detect & Alarm in Specific Areas

Laboratory



Gas Bottle Store



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

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