

### ATEX JB3/903 SERIES

#### ADDRESSABLE TOCSIN 750X(D) VERSIONS

ATEX Gas Detector for Advanced Addressable Gas Detection Systems

TOC-750X Series gas detectors based on JB3-903 Series product are both ATEX and IECEx approved for use in potentially flammable atmospheres. TOC-750X uses IGD's Sentinel+™ addressable technology, specifically designed for gas detection, fast, secure digital communication. TOC-750X has sensor options using MK3 or 102 series detectors for over 300 gases. Gas types include toxics, flammables, VOC's and oxygen monitoring.

#### ▶ EASY TO INSTALL

ATEX Exd, no barriers to install Just one **2-Core** No cable polarity for fast & easy install cable minimising costs.  
One-click auto-setup & self check at the controller, ready to use.

#### ▶ SIMPLE SERVICING

Swap a detector and the system automatically register the change.  
Swap to a different type or range and the controller will automatically update, type, range and alarm levels.  
750XD version available with local display and non-intrusive calibration.

#### ▶ FLEXIBLE

Single cable interconnection to other devices  
Add or remove devices with a simple Find function to update controller.  
Install ancillaries locally to the nearest detector using break out enclosures.

#### ▶ COST EFFECTIVE

Single cable can save you 70-80% install costs  
Auto setup removes commissioning costs.

#### ▶ REASSURINGLY COMPETENT

Designed and manufactured in the UK by IGD  
Backup by 10-year Warranty\*.  
All compliance supported by a third-party certification.



TOC-750X



TOC-750XD

\* Terms and Conditions Apply

Always use latest version data sheets from IGD website

# THE POWER OF 2

One 2-Core Cable - Everything Connected



**T750**



**T650**



**T635**

**COMPATIBLE CONTROL PANELS**



JB3/903

II 2 D G Ex db IIC T6 Gb  
IECEX EXV16.0002X  
ExVeritas 16ATEX0140X  
Ex tb IIIC Db. M20 Entries



With MK3 Series Detector

IP66  
II 2 GD  
-20°C < Ta < +55°C  
Ex db IIC T5 Gb  
Ex tb IIIC T100 C Db  
-20°C < Ta < +40°C  
Ex db IIC T6 Gb  
Ex tb IIIC T85°C Db  
ExVeritas 16ATEX0142X  
IECEX EXV16.0004x



With 102 Series Detector

ATEX Approved  
IECEX Approved

Ex db IIC T6 Gb Ta = -20° to +40°C  
Ex tb IIIC T85°C Db IP66  
Ex db IIC T5 Gb Ta = -20°to +55°C  
Ex tb IIIC T100°C Db IP66  
IECEX EXV16.0003X Rating 2W  
ExVeritas 16ATEX 0141X



One 2-Core Cable Run. Many Possibilities.  
Up to 32 Detectors per a Cable Run.

## TOCSIN 750X SERIES

### Advanced Addressable 2-Wire Gas Detection System

Using our Sentinel+™ 2-Wire protocol, the 750 series detectors communicate over the 2-Core power cable. This drastically reduces cabling costs. This can be by as much as 70-80% compared to current systems on the market. The number of terminations is also reduced improving reliability. Sentinel+™ protocol continuously monitors data between connected detectors and the system controller. Thus, ensuring maximum system integrity and availability. With only two wires for power and communication existing systems can be easily upgraded, using their original cabling, with the option to easily add more detectors and devices required.

### 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	

Table is for indication and is not a complete listing

### COMPARISION

OPTIONS	T750X	T750XD
Pellistor I/P	Y	Y
IR,PID,Toxic,O2,I/P	Y	Y
mA I/P*	2	2
Digital I/P*	2	2
SSR O/P*	2	2
Relay	1	1
2x RGB LCD Display	N	Y
Non-Intrusive Calibration	N	Y

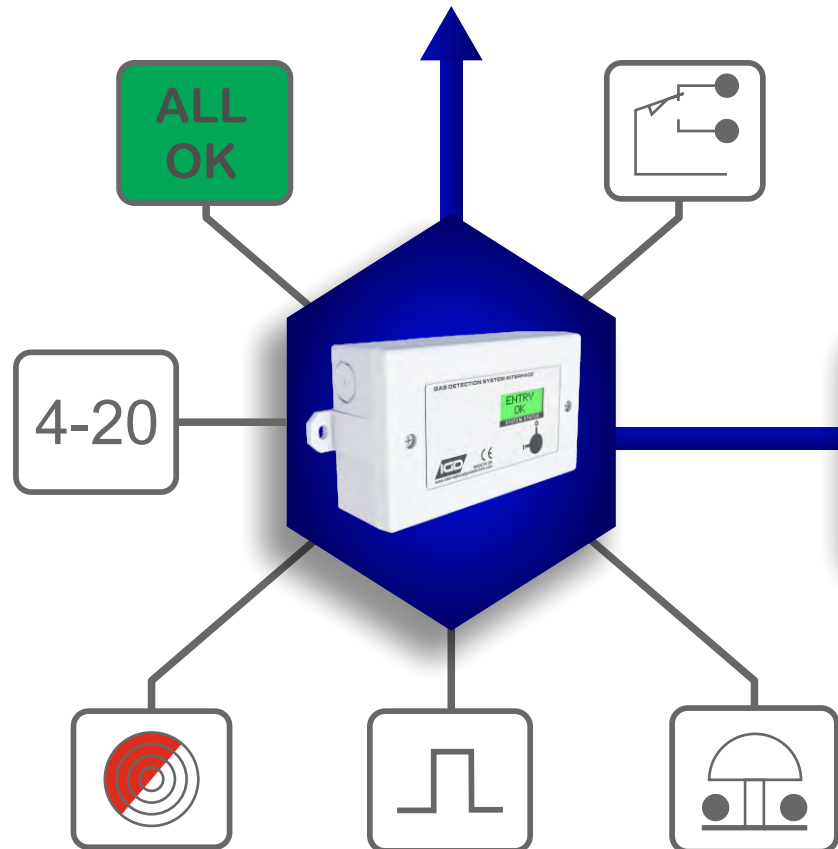


Advanced Addressable 2-Wire Gas Detection System

TOC-750X and TOC-750XD have been tested to be used in Zone 1 and 2 ATEX hazardous environments and zone 21 and 22 ATEX dust environments. Approvals include both European ATEX and International IECEx. This allows our 750X addressable ATEX gas detector to be used in ATEX zoned applications such as, petrochemical sites, onshore/offshore drilling platforms, spray booths, on-shore DSEAR applications to name a few.



TOC-750X and TOC-750XD ATEX Gas Detectors can be addressably connected to:  
 TOC-635, TOC-650 or TOC-750 Controllers.  
 Up to 32 detector nodes or I/O devices can be interfaced on each addressable cable run.



Room status Indicators.  
 ATEX Gas Detectors.  
 Sampling Gas Detectors.  
 I/O Cards.  
 One System, Ultimate Flexibility, No Compromises.

THE POWER OF 2  
 One 2-Core Cable - Everything Connected



OPTIONS	SAFE AREA	ATEX	SAMPLER	RSI
Sensor I/P Toxic, IR, PID	1	1	2	N
Sensor I/P Pellistor	1	1	1	1
4-20mA I/P *	2	2 <sup>†</sup>	N	2
Digital I/P *	2	2 <sup>†</sup>	N	2
Counter I/P *	2	2 <sup>†</sup>	N	2
Relay O/P *	2	2 <sup>†</sup>	N	1
Digital O/P *	2	2 <sup>†</sup>	4	2
2 x 8 Display	N	1	N	1
Sounder	1 <sup>††</sup>	N	N	1
Estop	N	N	N	1
Key Switch	N	N	1	1

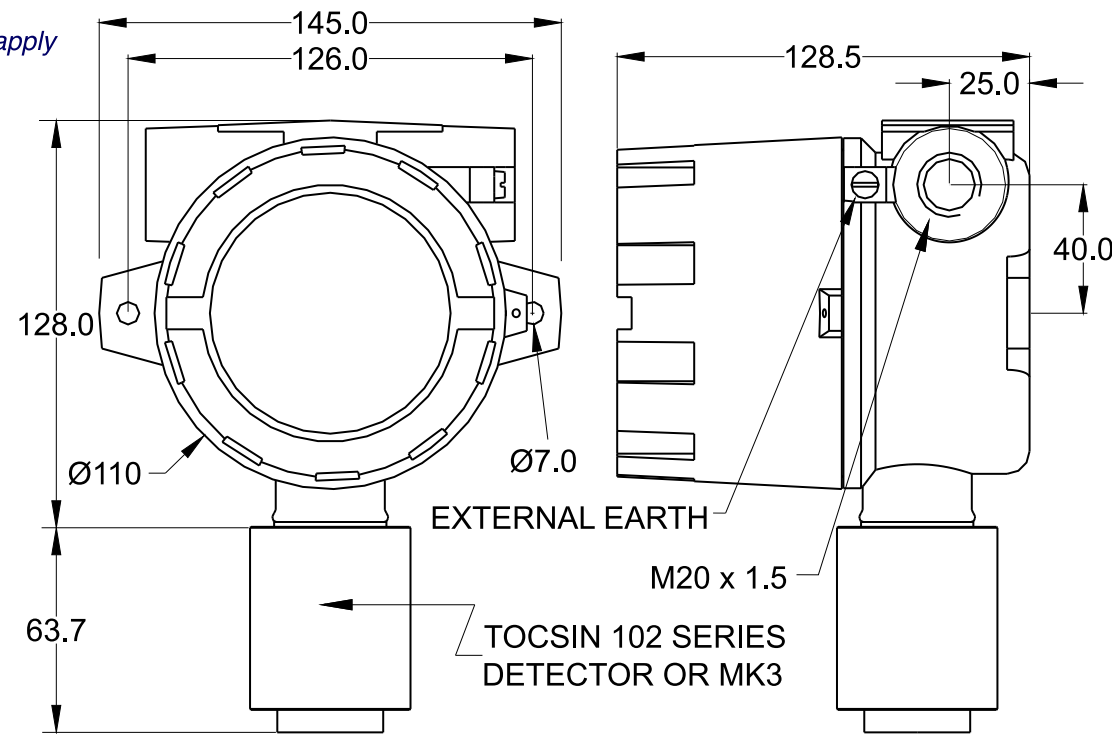
KEY

- Room Status Indicator
- Control Relay
- mA Input Signal
- Beacon - Sounder
- Digital Input
- E-Stop / Break Glass / Call Point

- <sup>†</sup> In order to utilise this option a break out junction box is required.
- <sup>\*</sup> 2 Multi-Function I/O Ports. Option Selectable in Any Combination
- <sup>††</sup> 750B Version With Audible and Visual Alarms
- 1** Number available per a detector.

## DIMENSIONS

PLEASE NOTE: The dimensions below apply to the Tocsin 750X and Tocsin 750XD



## SPECIFICATIONS

Power	12 to 26V DC
Construction	Junction Box: Aluminium Alloy, Powder Coated (Stainless Steel Option) Detector: 316 Stainless Steel
Communication	IGD Sentinel+ Protocol, 2-Wire Connection L1,L2
Temperature	-20 to 55 Deg C**
Humidity	0-95% RH Non-Condensing
Sealing	Junction Box: IP68 Sensor:IP65
Mounting	Wall Mount
Weight	1.35Kg

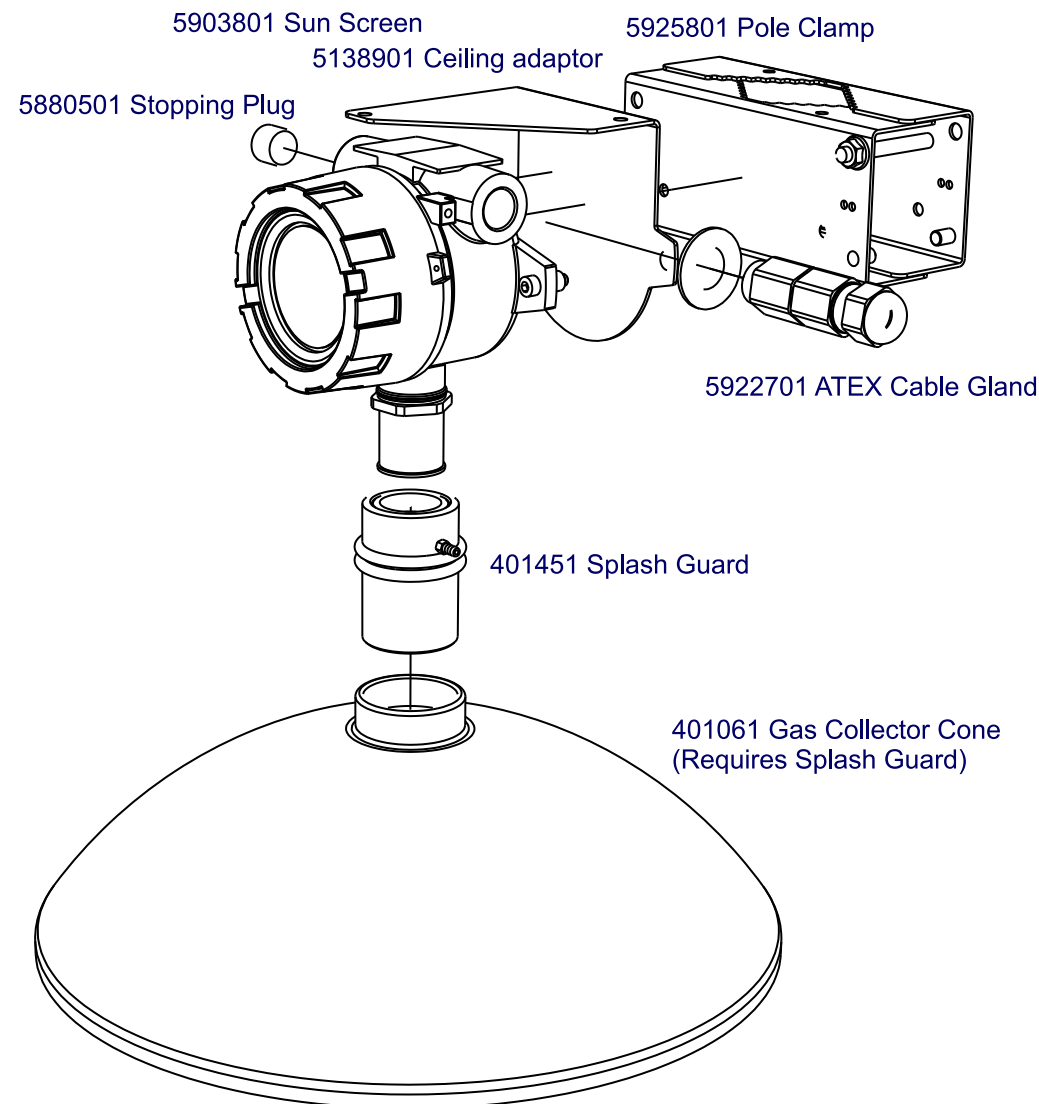
\*\* Temperature performance for transmitter, see separate sensor data.

IGD advise use of EMS sampler module for harsh applications where it may be difficult or unadvisable to directly mount a detector.

In all cases where detectors may be subject to condensation or wash down fit splash guards.

## FEATURES

- ATEX and IECEx Approved
- EXd Approval, no need to use Zener Barriers
- Available models for over 400 gases and vapours
- Extreme Poison Resistant MK8 Pellistor Option
- Infra Red Options for Flammables and CO2
- Non Depleting long life Oxygen Sensors
- Non Depleting Long Life Ionic Ammonia Sensors
- Photo-Ionisation Option for VOC's
- Automatic Update on Sensor Change, Range, Type, Units and Alarms
- Add on Sampler Available
- Range of Accessories Available to Complete Installations:
  - Splash Guards
  - Collector Cones
  - Sun Guards
  - Ceiling Mount Kits
  - Remote Gassing Kits
  - Pole Clamps



## ORDER CODES

Part Number	Description
<b>Pellistors</b>	
TOC-750X-MK8	Flammable Gases MK8 'Extreme' Pellistor 0-100% LEL
TOC-750X-PHC	Flammable Gases MK3 Pellistor 0-100% LEL
<b>Infra Red</b>	
TOC-750X-IRF	Flammable Gases Infra Red Point 0-100% LEL
TOC-750X-HIRF	Flammable Gases Infra Red Point 0-100% VOL
TOC-750X-LCO2	Carbon Dioxide Infra Red Point 0-5000ppm
TOC-750X-CO2	Carbon Dioxide Infra Red Point 0-5% VOL
TOC-750X-HCO2	Carbon Dioxide Infra Red Point 0-100% VOL
<b>Photo-Ionisation</b>	
TOC-750X-LVOC	VOC's (PID) 0-200ppm
TOC-750X-HVOC	VOC's (PID) 0-2000ppm
<b>Long Life Electro-Chemical</b>	
TOC-750X-O2	Oxygen (EC) 0-25% VOL
TOC-750X-NH3-L	Ionic Ammonia (EC) 0-100ppm
TOC-750X-HNH3-L	Ionic Ammonia (EC) 0-500ppm
TOC-750X-HHNH3-L	Ionic Ammonia (EC) 0-5000ppm
<b>Standard Electrochemical</b>	
TOC-750X-CO	Carbon Monoxide (EC) 0-100ppm
TOC-750X-HCO	Carbon Monoxide (EC) 0-2000ppm
TOC-750X-NO	Nitric Oxide (EC) 0-25ppm
TOC-750X-NO2	Nitrogen Dioxide (EC) 0-5ppm
TOC-750X-HCN	Hydrogen Cyanide (EC) 0-10ppm
TOC-750X-H2S	Hydrogen Sulphide (EC) 0-50ppm
TOC-750X-HH2S	Hydrogen Sulphide (EC) 0-500ppm
TOC-750X-VH2S	Hydrogen Sulphide (EC) 0-5000ppm
TOC-750X-SO2	Sulphur Dioxide (EC) 0-5ppm
TOC-750X-HCL	Hydrogen Chloride (EC) 0-10ppm
TOC-750X-H2	Hydrogen (EC) 0-1000ppm
TOC-750X-BLC3	Boron Trichloride (EC) 0-10ppm
TOC-750X-SIH4	Silane (EC) 0-10ppm
TOC-750X-CS2	Carbon Disulphide (EC) 0-100ppm
<b>Non-ATEX Housings Used for Higher IP/Impact Ratings</b>	
TOC-750X-CL2	Chloride (EC) 0-5ppm
TOC-750X-O3	Ozone (EC) 0-5ppm

**Part Numbers for Display Versions 750XD add Suffix D to Part Numbers: TOC-750XD-MK8, Flammable Gas Detector With Display.**

## CABLES

### Installation Cables

Supported Installation Cables 2 Core 1.5mmSQ or 2.5mmSQ See IGD Cable System Calculator

Typically SWA, FP200, CY Screened or Similar







International Gas Detectors

# EC Declaration of Conformity

Declares that the product listed as:

**TOC-750X**  
**TOC 750-XD**

Addressable Gas Detection Control Panel

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**  
**2014/34/EU**      **ATEX Directive** (note not applicable to 24V DC Powered Versions)

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

Issuers name and address:

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

IEC 60079-0:2017 7th Ed	Explosive Atmospheres Equipment General Requirements
IEC 60079-29-1:2016 2nd Ed	Explosive Atmospheres. Gas Detectors. Performance Requirements of Defectors for Flammable Gases.
IEC 60079-1	Equipment protection by flameproof enclosures 'd'
EN 50270	Electromagnetic compatibility - Electrical Equipment for the Detection and Measurement of Combustible Gases, toxic Gases or Oxygen
IEC 60529	Degree of Protection to IP54
EN 60068-2-6	Vibration
EN 50271	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
EN 60335:2012+A11:2014	Electrical Safety
Technical File Reference	T750-TF9

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

Quality Assurance Certificate Number  
**16PQAN0014**

Quality Assurance Notification Number:  
**2585**

Product Certificates

**16ATEX0140X**  
**16ATEX0141X**  
**16ATEX0142X**



Units 16-18 Abenbury Way,  
Wrexham Industrial Estate,  
Wrexham, LL13 9UZ  
United Kingdom



FS646773      EMS696504

Oliver IGD Limited operate an independently assessed ISO9001:2015 Quality Management and ISO14001:2015 Environmental Management System

Certificate Numbers

**FS0646773 & EMS696504**

BSI Assurance UK LTD,  
London, W4 4AL  
United Kingdom



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[Ex Gb] IIC

**Report Ref AT19-0036585-01**

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: 17 Feb 2020

Declaration Ref: T750-DEC-7



FS646773

EMS696504



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