

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



COMPATIBLE CONTROL PANELS



102 Series Detector

- II 2G Ex db IIC T6 Gb
- II 2D Ex tb IIIC T85°C Db
- Ta = -20°C to +40°C
- II 2G Ex db IIC T5 Gb
- II 2D Ex tb IIIC T100°C Db
- Ta = -20°C to +55°C
- Rating 12-32VDC 2W
- IECEX EXV16.0003X
- ExVeritas 16ATEX0141X
- ExVeritas 21UKEX0914X



JB3/903

- II 2G Ex db IIC T6/T5 Gb
- II 2D Ex tb IIIC T85°C/ T100°C Db
- Ta = -20°C to +40°C/+55°C
- IECEX EXV 16.0002X
- ExVeritas 16 ATEX 0140X
- ExVeritas 21UKEX0913X
- IP66 M20 x 1.5 Entries 12-32V DC
- Compliant to IEC 60079-29-1



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	Table is for indication and is not a complete listing
as NO2,CL,NH3	<50s	

COMPARISION

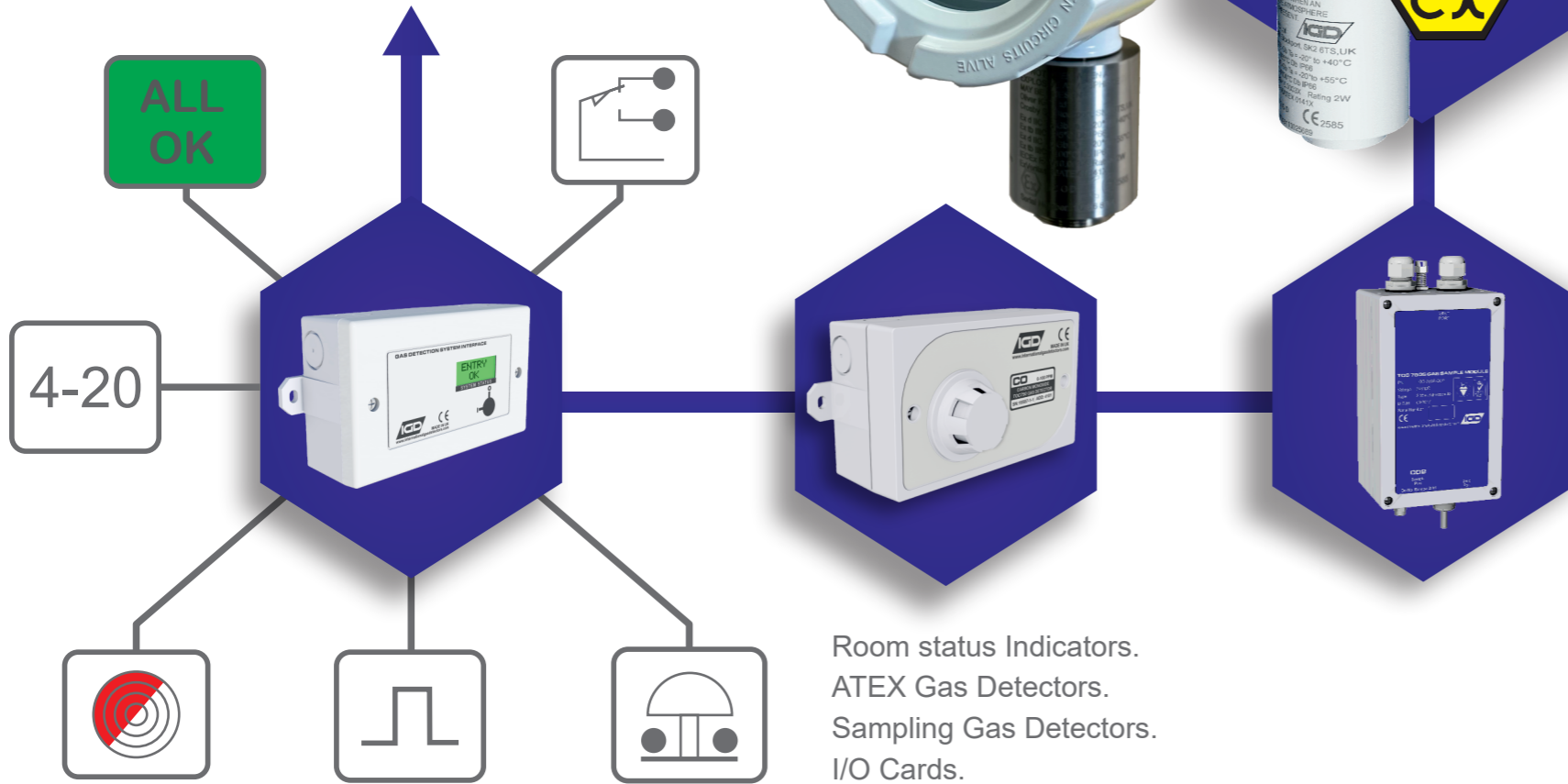
OPTIONS	T750X	T750XD
Pellistor I/P	Y	Y
IR,PID,Toxic,O2,I/P	Y	Y
mA I/P*	2	2
Digital I/P*	2	2
SSR O/P*	2	2
Relay	1	1
2x RGB LCD Display	N	Y
Non-Intrusive Calibration	N	Y

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 [†]	N	2
Digital I/P *	2	2 [†]	N	2
Counter I/P *	2	2 [†]	N	2
Relay O/P *	2	2 [†]	N	1
Digital O/P *	2	2 [†]	4	2
2 x 8 Display	N	1	N	1
Sounder	1 ^{††}	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
- [†] In order to utilise this option a break out junction box is required.
- ^{*} 2 Multi-Function I/O Ports. Option Selectable in Any Combination
- ^{††} 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: IP66 Sensor:IP66
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

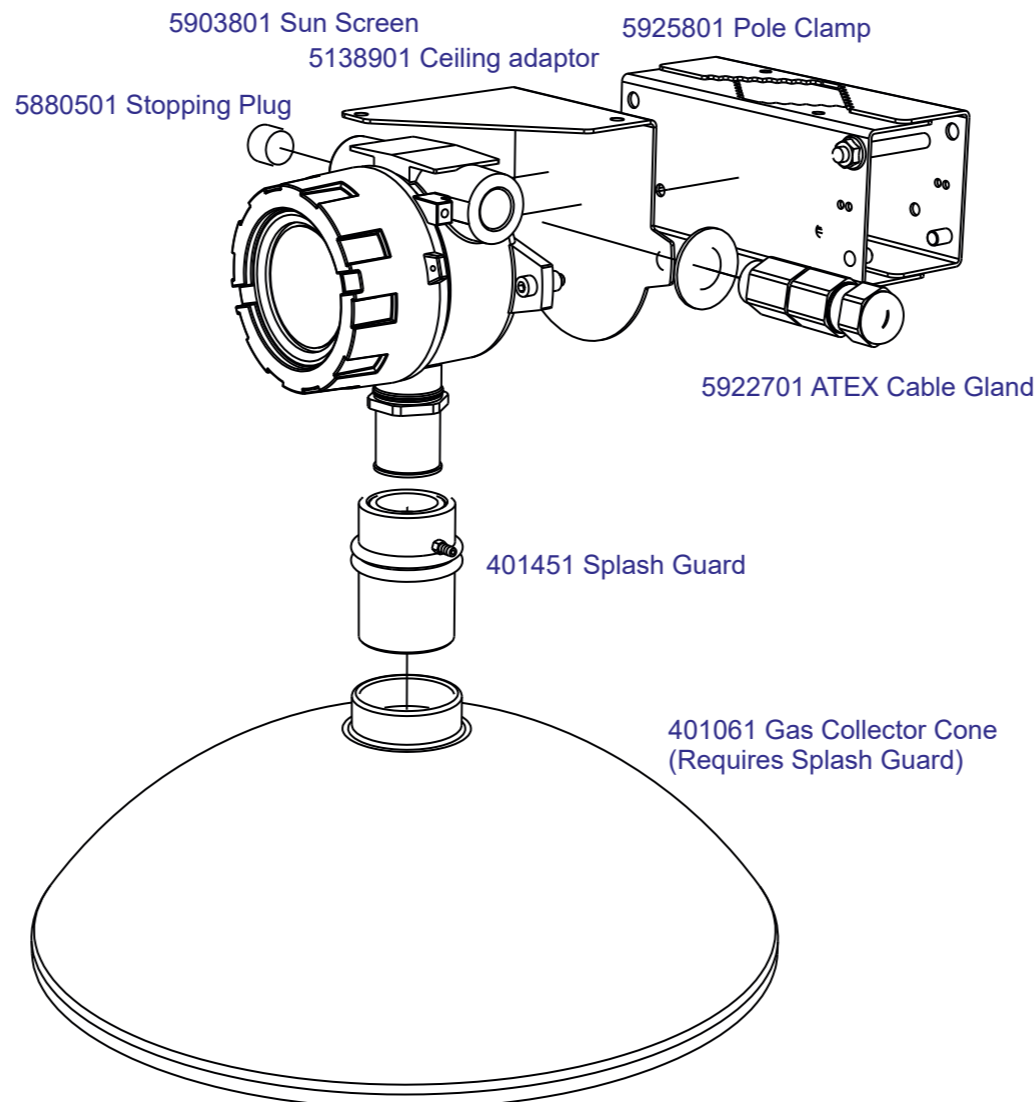
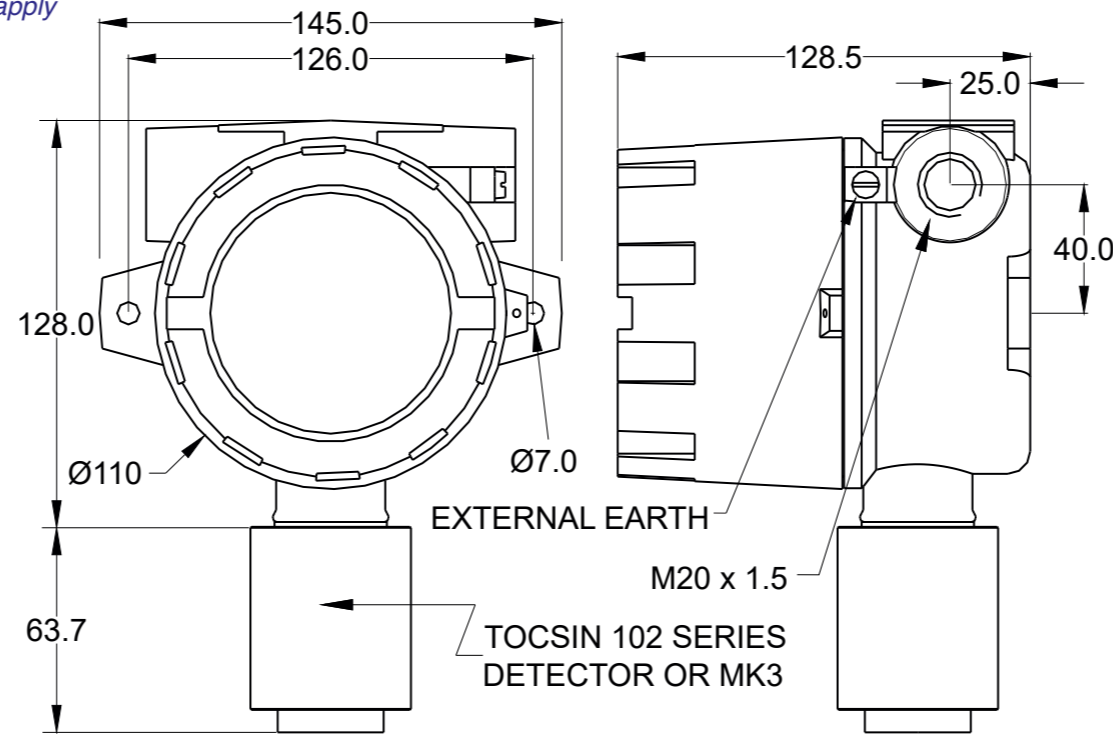
Collector Cones

Sun Guards

Ceiling Mount Kits

Remote Gassing Kits

Pole Clamps



ORDER CODES

Part Number	Description
Pellistors	
TOC-750X-MK8	Flammable Gases MK8 'Extreme' Pellistor 0-100% LEL
TOC-750X-PHC	Flammable Gases MK3 Pellistor 0-100% LEL
Infra Red	
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
Photo-Ionisation	
TOC-750X-LVOC	VOC's (PID) 0-200ppm
TOC-750X-HVOC	VOC's (PID) 0-2000ppm
Long Life Electro-Chemical	
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-HH3-L	Ionic Ammonia (EC) 0-5000ppm
Standard Electrochemical	
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
Non-ATEX Housings Used for Higher IP/Impact Ratings	
TOC-750X-CL2	Chloride (EC) 0-5ppm
TOC-750X-O3	Ozone (EC) 0-5ppm

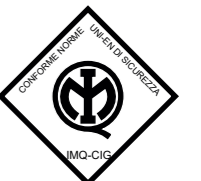
Part Numbers for Display Versions 750XD add Suffix D to Part Numbers: TOC-750XD-MK8, Flammable Gas Detector With Display.

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



EC Declaration of Conformity

Document Ref: SL-006

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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**

Issuers name and address:

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

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

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 IP66
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
IEC 61010-1:2010 +A1:2016	Safety requirements for electrical equipment for measurement, control, and laboratory use
EN 61010-1: 2010 +A1:2019	
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

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