

# Tocsin-103

## PRODUCT DATASHEET

**IGD**



## TOCSIN 103 Series Gas Detectors

**4-20mA Device 2 and 3 Wire**  
**Addressable Versions**  
**Compact Size**  
**Ingress Protection IP66**  
**Safe Area Use**

**Available as:**

**2 Wire Toxic Gas Detector**  
**2 Wire Oxygen Sensor**  
**3 Wire 'Pellistor' Flammable Gas Detector.**  
**3 Wire 'Infra Red' Flammable Gas Detector**  
**3 Wire 'Infra Red' CO2 Gas Detector**  
**4 Wire Addressable**

The Tocsin 103 series of gas detectors are designed for cost effective safe area gas detection solutions. They incorporate micro processor technology to give a stable 4-20mA process signal output. The addressable option allows extensive reductions in cost of installation through material and labour savings. The in built processor can be used to pre-calibrate the sensor prior to installation. Alternatively calibration can be achieved on site via the Oliver IGD control panel or locally using a handheld PC device or laptop. A range of sensing technologies can be incorporated into the housing to provide the most appropriate detection method. Available sensor types include IGD's own MKIII, MK6 and Type B Pellistors, Infra Red and Electrochemical devices.

## General Specification

Power supply	12 to 30V DC
Electrical Outputs	2 and 3 Wire 4-20mA, 4 Wire Addressable
Temperature	Toxic Gases 0°C to +55°C
Pellistors	-20°C to +85°C
Humidity	15 to 90% RH non-condensing
Ingress Protection	Enclosure IP66 With Correct Glands Fitted (NA to Sensor)
Housing Material	Powder Coated Mild Steel, Colour RAL 7035 Mounting Plate 304/316 Stainless Steel
Protection Concept	Safe Area
Dimensions (mm)	See Diagrams
Cable Entry	25mm, Top, Bottom and Rear
Weight	Detector Dependant Nominal 1.2Kg

**Flammable Gases**  
**Carbon Dioxide**  
**Carbon Monoxide**  
**Nitric Oxide**  
**Nitrogen Dioxide**  
**Ammonia**  
**Oxygen**  
**and many more**

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## EC Declaration of Conformity

Issuers name and address:

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



### TOCSIN 103

Toxic, flammable or Oxygen point gas detector  
dependant on fitted measurement cell for use in 'safe'  
non-zoned areas only.

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**  
**94/9/EC**

**EMC Directive**  
**ATEX Directive**

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

EN 61779-1:2000  
EN 50271:2010

Electrical apparatus for the detection and measurement of flammable gases  
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  
EN 61000-6-4:2007  
EN 61000-3-2/A2:2009  
EN 61000-3-3: 2008

EMC Generic standards. Immunity for industrial environments  
EMC Generic standards. Emission standard for industrial environments  
EMC Limits. Limits for harmonic current emissions (equipment input current  $\leq 16$  A per phase)  
EMC Limits. Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current  $\leq 16$  A per phase  
T103-TF9 Technical construction File Toxic gases, Oxygen and Infra Red  
T106-TF9 Technical construction File Flammable Gases Pellistors

Technical File  
references

Product Markings



**TOCSIN 103**

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](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: 10.June 2016

Declaration Ref: 103-DEC-4



[www.respoproducts.com](http://www.respoproducts.com)

[info@respoproducts.com](mailto:info@respoproducts.com)

# 1800 180 73776

Sensor type	Number Basic Part	Suffix 'A' For Addressable Sensor	Min Range	Max Range	Housing Style
Flammable Gas MK6 Sensor 4-20mA All Flammable Gases Typically: Methane Ethanol Propane Iso Propyl Alcohol n-Butane Acetone n-Pentane Methyl Ethyl Ketone n-Hexane Benzene N-Heptane Toluene n-Octane Cyclohexane Hydrogen Ammonia Methanol	5137001			0-100%LEL	1
	Note pellistors have both analogue and addressable interfaces.				
Flammable Gases Infra-Red Point Methane Propane n-Butane n-Pentane n-Hexane	5130001	A		0-100%LEL	2
Carbon Dioxide Infra-Red Point	5130101	A	0-3000ppm 0-5000ppm	0-2% 0-5% 0-100%	2
Carbon Monoxide	5130201	A	0-100ppm	0-1000ppm	3
Nitric Oxide	5130301	A	0-50ppm	0-500ppm	3
Nitrogen Dioxide	5130401	A	0-20ppm	0-50ppm	3
Chlorine	5130501	A	0-5ppm	0-50ppm	3
Hydrogen	5224601	A	0-100ppm	0-2000ppm	3
Hydrogen Sulphide	5130601	A	0-50ppm	0-200ppm	3
Ammonia	5130701	A	0-100ppm	0-500ppm	3
Oxygen	5130902***	A	0-5%	0-25%	3
Ozone	5137401	A	0-5ppm	NA	3
Sulphur Dioxide	5131001	A	0-5ppm	0-100ppm	3
Sulphur Hexafluoride **	5132001	A	0-5000ppm	NA	NA
Hydrogen Cyanide	5132501	A	0-10ppm	0-20ppm	3
Fomaldehyde	5137301	A	0-5ppm	0-25ppm	3
Ethanol	5224701	A	0-500ppm	0-2000ppm	3
Hydrogen Fluoride	5101601	A	0-10ppm		3
Hydrogen Chloride	5131201	A	0-30ppm		3
Silane	5880701	A	0-2ppm		3
Methanol	5112901	A	0-200ppm	0-200ppm	3



**IGD Manufactured Pellistors**

**MKIII & Type B**

**Poison Resistant**

**High Reliability**

**Field Proven**



**Infra Red Gas Detectors**

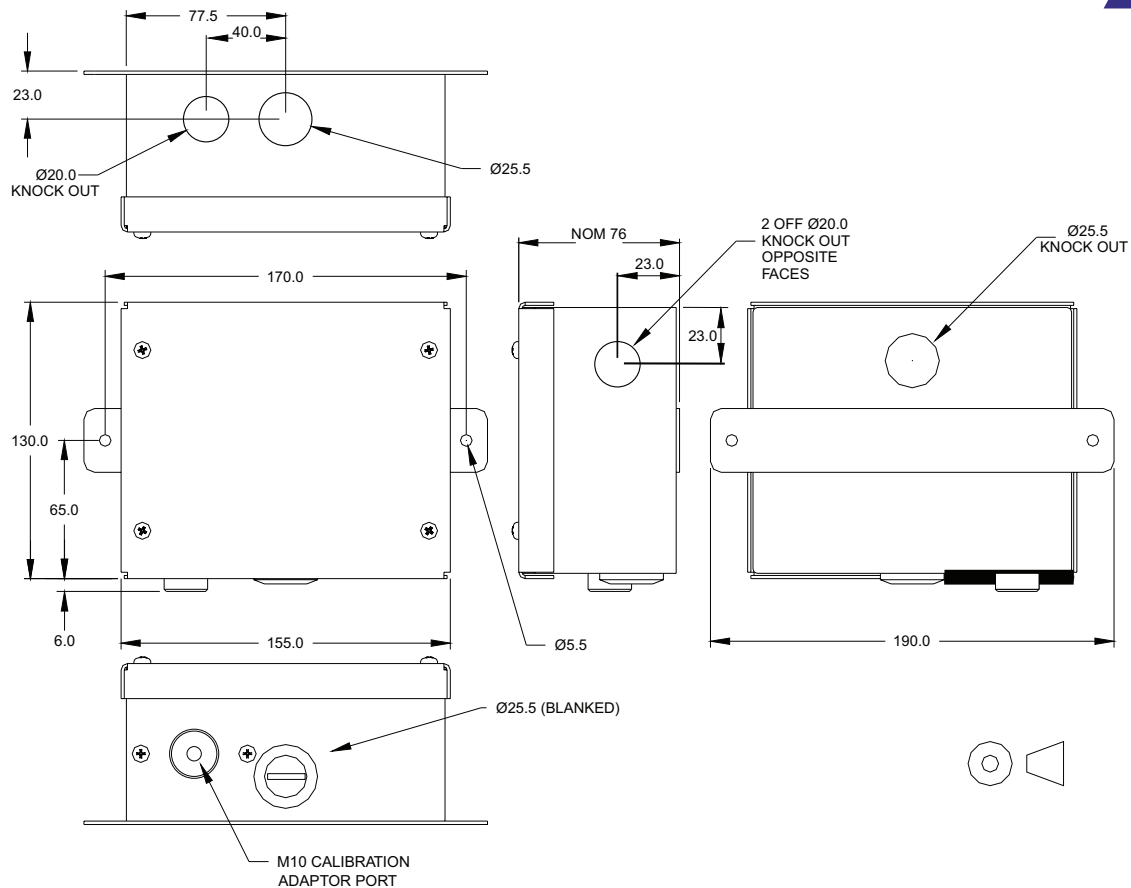


**Electrochemical Gas Detectors**

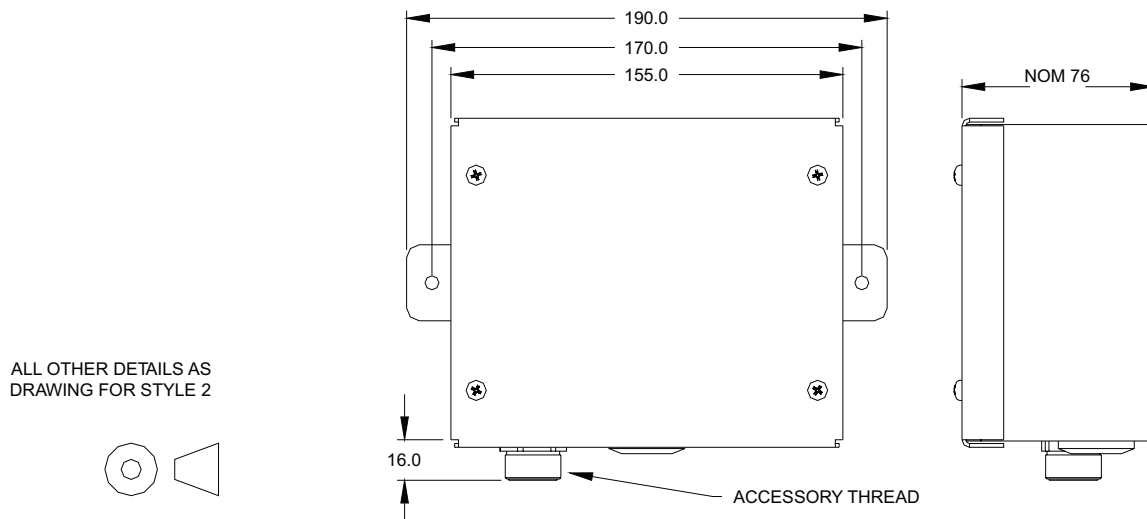
\*\* Note SF6 detectors are built to special order and are application specific. Contact Oliver IGD Ltd for specific details.

Oxygen detection, typical life when used inside rated limits in excess of 3 years.

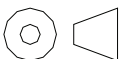
## Toxic, Flammable & Oxygen Gas Detectors Outline Drawing Styles 2 and 3



## Tocsin 103/103A Flammable Detector Series Outline Drawing, Housing Style 1



ALL OTHER DETAILS AS  
DRAWING FOR STYLE 2



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## Toxic, Flammable & Oxygen Gas Detectors

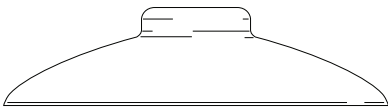
### Accessories



Splash Guards

Use to protect detectors from liquid splashes

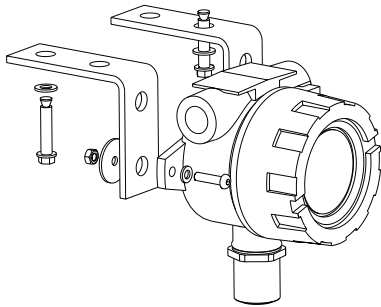
P/N 401452 (TOXICS & IR)  
P/N 401455 (PELLISTORS)



Collector Cones

Typically used with natural gas (methane) detectors when mounting over boilers or valve assemblies

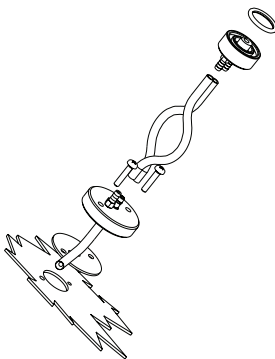
P/N 5138801



Ceiling Mount Adaptor Kit

Use to adapt for ceiling mounting of detectors and allow the detector to face down. Note this kit can be used with all series of detectors (102 Series Indicated)

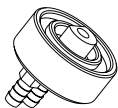
P/N 5138901



Duct Adaptor

Use this kit in conjunction with a 103 series detector to sample gas to the detector from a gas flow. Typically used in ventilation ducting.

P/N 5139001



Calibration Gas Adaptors

Use in conjunction with calibration gas when zeroing and calibrating detectors.

Toxic Gases P/N 401101B  
Pellistors P/N 401101E