

PRODUCT DATA SHEET

www.internationalgasdetectors.com

OLIVER IGD

Control Systems

Transmitters

Sensors

Accessories

TOCSIN 102 Series Gas Detectors For H₂S

4-20mA Device 2 Wire

- Addressable Versions
- Compact Size
- EExd Certified
- ATEX Certified
- Ingress Protection IP66

Available Ranges (state when ordering) :

- 0- 5ppm
- 0- 25ppm
- 0- 50ppm
- 0- 100ppm
- 0- 500ppm
- 0- 1000ppm
- 0- 5000ppm



Hydrogen Sulphide presents an extremely toxic gas problem in many industries such as; oil and gas, water treatment and sewage processing and biogas power generation. The Tocsin 102 Series Toxic gas detector for H₂S provides a reliable solution to monitoring applications. Tocsin 102 series H₂S detectors utilise the latest technology to provide small format high reliability gas detection in an ATEX package. Stability and reliability are ensured by matching the detection cell to the required range and application. Temperature compensation and linearity correction are built in giving a fully linearised output. The basic detector is available as a two wire 4-20mA transmitter with the option for a fully digitally addressable version for use with the latest IGD systems. Detectors are supplied pre-calibrated for the chosen range. Local 903 series displays are also available as an option.

General Specification

Power supply	18 to 28V DC
Electrical Outputs	2 Wire 4-20mA (4 Wire Addressable Option)
Temperature	-10°C to +55°C
Humidity	15 to 90% RH non-condensing
Accuracy	All Ranges Better Than +/-2% of Range
Ingress Protection	IP66
Housing Material	Stainless Steel 316 S16
Protection Concept	Flameproof
Dimensions (mm)	50 Diameter x 80 Length
Mounting Thread	M20 x 1.75
Weight	514 grams



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

Ref ROS265D



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Triton House
Crosby Street
Stockport
SK2 6SH

* Terms and Conditions Apply

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EC Declaration of Conformity

Issuers name and address:

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



TOCSIN 102 H2S

Infra Red point flammable hydrocarbon gas detector
certified for use in potentially explosive atmospheres

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**
94/9/EC **ATEX Directive**

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	T102A-TF9 and AD197 ATEX/IECEX Approval Document File

Product Markings



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



Serial Number- XXXXXXXX



Quality Assurance Certificate Number
16PQAN0014
Quality Assurance Notification Number:
2585

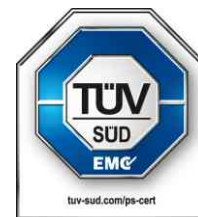


Oliver IGD Limited operate an independently assessed ISO9001:2015 Quality Management and ISO14001:2015 Environmental Management System

Certificate Numbers
FS0646773 & EMS696504

EMC Tested by:

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



Certificate Number
E8N 15 02 91327 002



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

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

TUV Certificates and reports can be checked on-line at
https://www.tuev-sued.de/industry_and_consumer_products/certificates
Select Oliver IGD when prompted on the website to view 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 2021 Declaration Ref: 102H2SCE-5

Ref ROS265D



FS646773

EMS696504

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TOCSIN 102

Series Gas Detectors For H₂S

Order Codes and Performance Data

H2S Range	Part Number 4-20mA Transmitter	Part Number Addressable Transmitter	Notes	Typical On Screen Resolution	Repeatability as Percent of Range	Zero/Cal Drift per Month as percent of Range	Zero/Cal Drift per Year as percent of Range	Zero Temperature Stability -10 to +55°C
0-5ppm	5105500	5105500A	High Sensitivity Option	0.05ppm	+/-2%	<2%	<5%	<1%
0-25ppm 0-50ppm 0-100ppm	5105501	5105501A	General Gas Detection	0.25ppm 0.5ppm 1 ppm	+/-2%	<2%	<5%	<1%
0-500ppm 0-1000ppm 0-5000ppm	5105502 5105505	5105502A 5105505A	Typical For Biogas Applications Additional Cell Protection	1 ppm 5 ppm 10 ppm 50 ppm	+/-2% +/-2%	<2% <2%	<5% <5%	<1% <1%

Addressable Versions are supplied complete with EXd rated junction boxes.

Part numbers for 4-20mA versions are detector head only and require the addition of either an EXe or EXd junction box.

Repeatability and accuracy data is taken at standard temperature and pressure. Data relates to Oliver IGD standard cell types and ranges. Data is based on performance taken and observed from electrochemical cells from suppliers and is typical of type.

It is important to use IGD calibration gas adaptors and observe Oliver IGD instructions to correctly set up and operate.

H₂S Information*

CAS Number	7763-06-4
Short Term Exposure Limit (15 Minute TWA)	15ppm
Long Term Exposure Limit (8 Hour TWA)	10ppm
Vapour Density (15°C) (Air =1)	1.18 Suggested to mount detectors close to source or at normal operator head height
Odour	Distinctive rotten egg smell detectable typically down to 0.1ppm. Note do not rely on odour as a detection method.
Recommended Alarm Level 1	10ppm
Recommended Alarm Level 2	20ppm

* This information is provided for general guidance only, specific applications should be individually risk assessed. Data is provided with reference to UK Health and Safety Executive document EH40 available from the HSE website. For latest revision refer to www.hse.gov.uk/pubns/books/eh40.htm.

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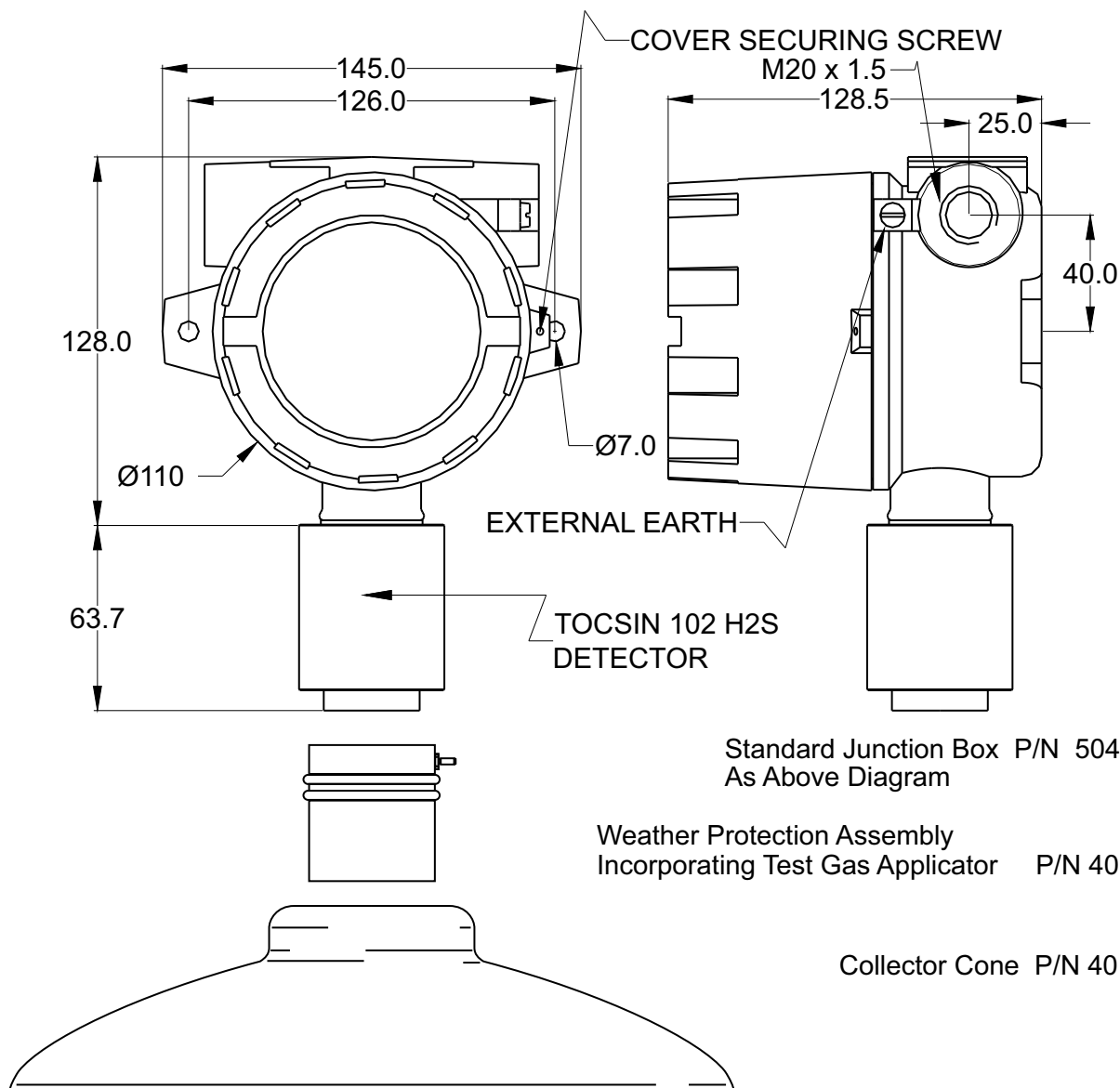
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TOCSIN 102

SENSOR OPTIONS & ACCESSORIES

TOCSIN 102 SHOWN WITH EExd JUNCTION BOX



Standard Junction Box P/N 5045802
As Above Diagram

Weather Protection Assembly
Incorporating Test Gas Applicator P/N 401451

Collector Cone P/N 401061

Engineers Test Gas
Applicator For Tocsin 102 P/N 401101A

For Compatible Oliver IGD Control Panels See:

- The Tocsin 625 Small System controller
- The Tocsin 700 One to 64 Channel Controller
- The Tocsin 920 Addressable System Controller
- The Tocsin 903 EEx Single Channel Controller



Tocsin 102 Series H2S Detector
Fitted With 903 Series EXd
Single Channel Controller

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