

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

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

CE 2585

Ex II 2 GD

ExVeritas 16 ATEX 0141X

IGD

International Gas Detectors

CH₄ H₂S CO₂
NO₂ SO₂ NO₂ SO

OLIVER IGD

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England

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Fax: +44 (0) 161 484 2345

Email: sales@internationalgasdetectors.com

Website: www.internationalgasdetectors.com



FS646773
Ref ROS265B

EC Declaration of Conformity

Issuers name and address:

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



TOCSIN 102H2S

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.

EN 60079-0:2012	Equipment for use in explosive atmospheres. General requirements
EN 60079-1:202014	Equipment for use in explosive atmospheres. Flameproof enclosures 'd'
EN 60079-31:2014	Equipment for use in explosive atmospheres. Housing Markings
EN 61241-0:2006	Electrical apparatus for use in the presence of combustible dust. General Requirements
EN 61241-1:2004	Electrical apparatus for use in the presence of combustible dust. Protection by enclosures "tD"
EN 61779-1:2000	Electrical apparatus for the detection and measurement of flammable gases
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. <i>Excluding requirements for SIL</i>
EN 61000-6-2: 2005	EMC Generic standards. Immunity for industrial environments
EN 61000-6-4: 2007	EMC Generic standards. Emission standard for industrial environments
EN 61000-3-2/A2: 2009	EMC Limits. Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)
EN 61000-3-3: 2008	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 references	T102A-TF9 Technical construction File AD197 ATEX Approval Document File

Product Markings

Serial Number- xxxxxxYear

ATEX Approved
IECEX Approved



Ex db IIC T6 Gb Ta = -20° to +40°C
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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



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

Quality Assurance Certificate Number
ExVeritas 16PQAN0014

Quality Assurance Notification Number:
2585

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

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

Quality Management Certificate Number
FS 646773

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

Testing Agency:

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



Mehr Sicherheit.
Mehr Wert.

IECEX Certificate can be checked on-line at

<http://iecex.iec.ch/iecex/iecexweb.nsf/421ce8815c53a3afc1257a1e00576486/9486b8f805dc1047c1257f48005165c0?OpenDocument>

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 6TS , United Kingdom

Signature:

Name

Declaration of Conformity in accordance with EN ISO/IEC 17050-1:2010

Andrew J Collier M.I.O.D

Position: Managing Director

Date: 10.June 2016

Declaration Ref: 102H2SCE-4



International Gas Detectors

CH₄ H₂S CO₂
NO₂ SO₂



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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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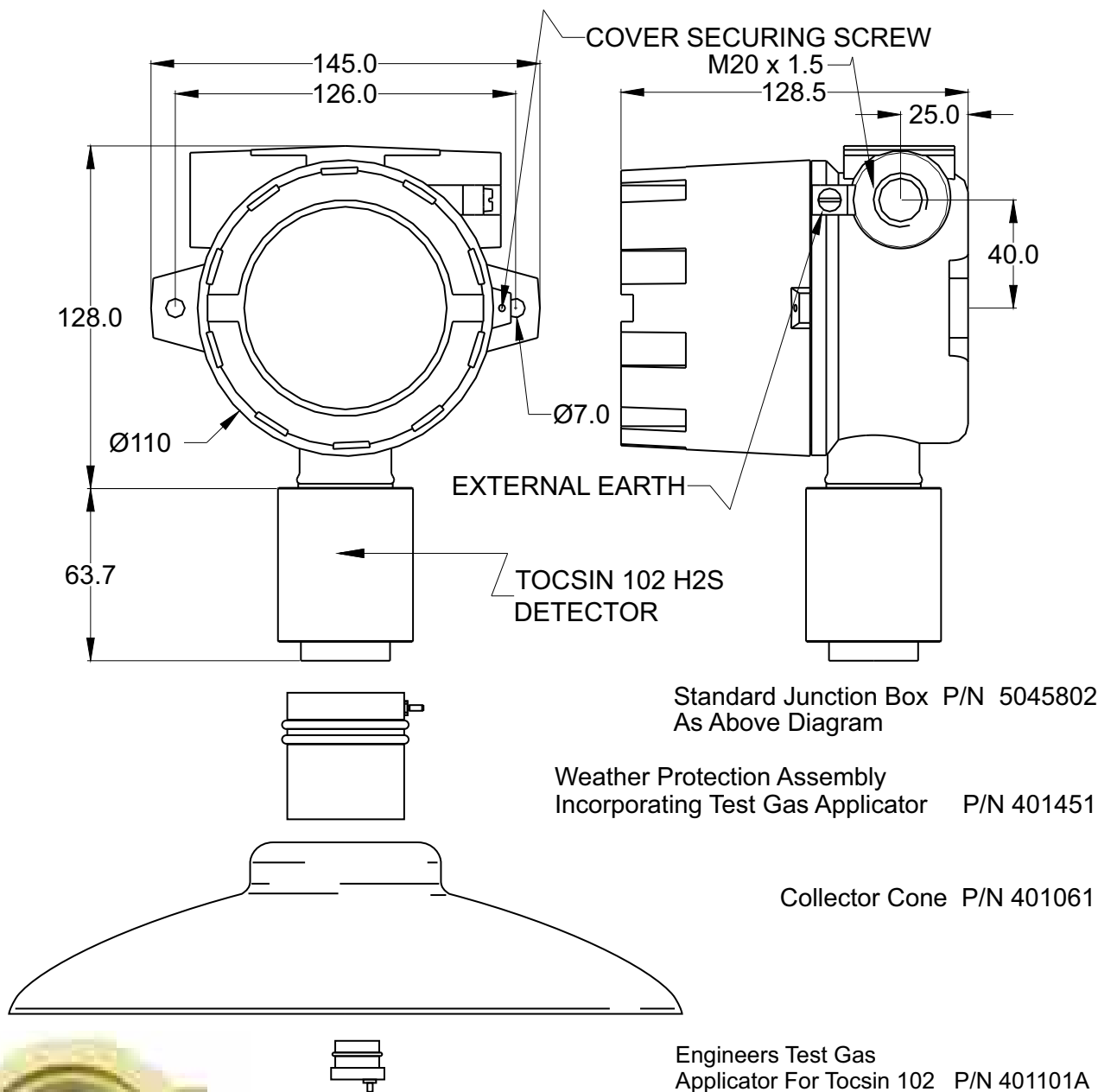


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TOCSIN 102

SENSOR OPTIONS & ACCESSORIES

TOCSIN 102 SHOWN WITH EExd JUNCTION BOX



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

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