

PRODUCT DATA SHEET

www.internationalgasdetectors.com



Control Systems

Transmitters

Sensors

Accessories



TOCSIN 903 EExd Local Gas Detector Control and Display Unit

- 4-20mA Output
- Alarm Relay Output Option
- Digital Addressable I/O Option
- Exd Certified
- ATEX Certified
- IECEX Certified
- Ingress Protection IP66
- Digital Display, Concentration, Alarms and Fault Status
- Easy Calibration One Man Calibration

The Tocsin 903 provides a local display and control facility for the Tocsin 102 series or pellistor gas detectors in Zone 1 and 2 hazardous areas. In addition to being equipped as a 4-20mA process transmitter the Tocsin 903 can also be fitted with serial addressable capability either using the Oliver IGD data highway to integrate to 700 or 920 series controllers. The unit is fully compatible with Tocsin 700 and Tocsin 920 Control Panels which offer both addressable and analogue inputs as well as Modbus serial outputs. More conventionally the Tocsin 903 can be interfaced directly into DCS/BMS systems using its 4-20mA Process output. An alarm relay output card is available.

General Specification

Power supply	18 to 32V DC With Relay Option Typically 4 W 12 to 32V DC Without Relay Option
Electrical Outputs	3 Wire 4-20mA (4 Wire Addressable Capability)
Temperature	-10°C to +55°C
Ingress Protection	IP66
JB Housing Material	Junction Box, Copper Free Aluminium Alloy Epoxy Coated Option for 316 Stainless Steel and Marine Paint Finishes
Sensor Housing Material	Sensor, Stainless Steel 316 S16
Explosion Protection	Junction Box, EExd IIC T6 II 2 D G
Explosion Protection Sensor	EEx d IIC T6 II 2 D G
Housing Dimensions (mm)	110 Diameter x 127 High Plus detector option
Cable Entry	2 x M20, NPT Options 1 x M20 Detector Entry
Weight (Std Al Housing)	1.5Kg



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



See Tocsin 102 series Gas Detector data sheet for sensor specification and type

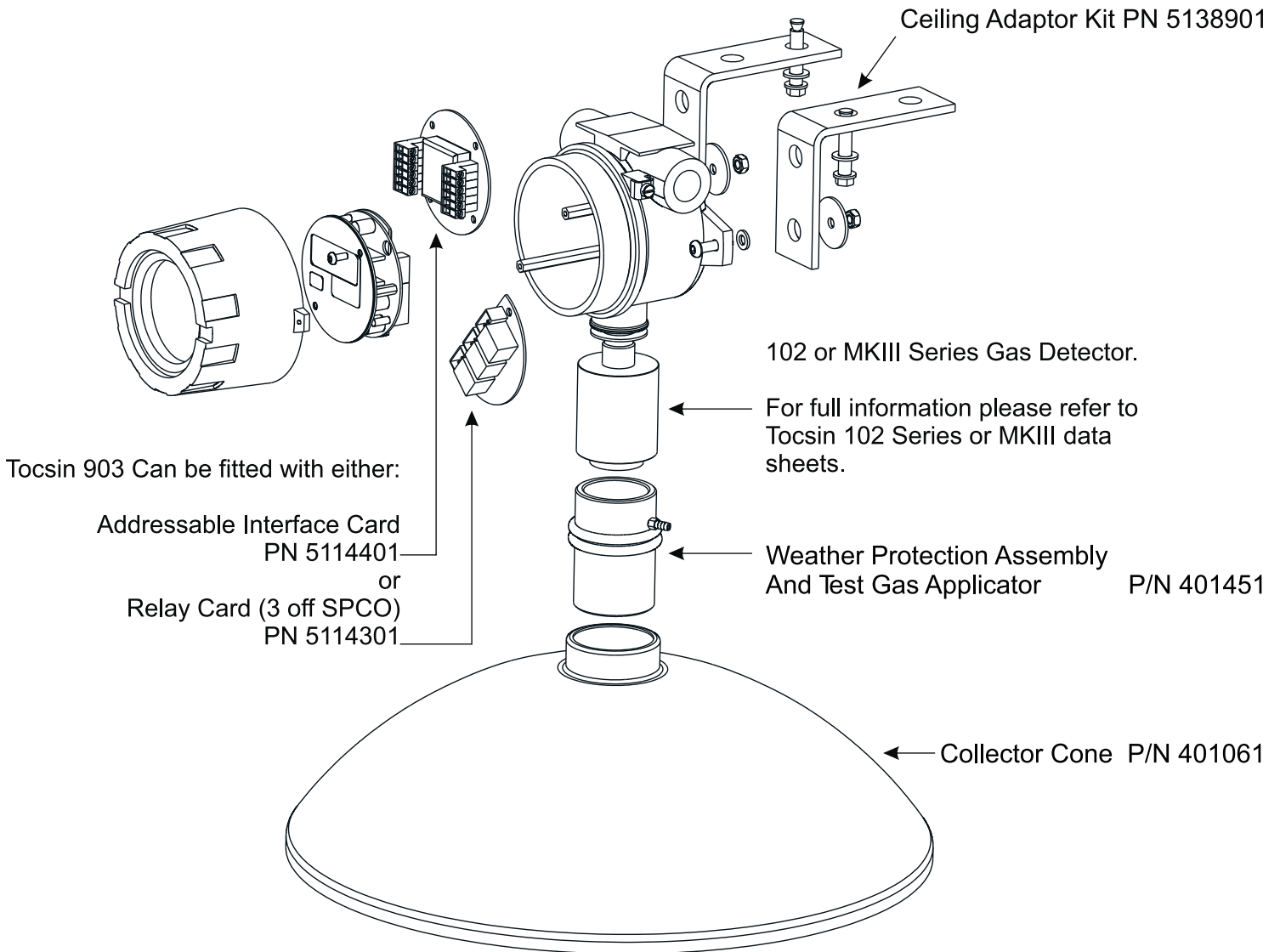


Tel: +44 (0)161 483 1415
Fax: +44 (0) 161 484 2345
Email: sales@internationalgasdetectors.com
Website: www.internationalgasdetectors.com



FS646773
Ref ROS44J

TOCSIN 903 ACCESSORIES



Tocsin 903 Can be fitted with either:

Addressable Interface Card
PN 5114401
or
Relay Card (3 off SPCO)
PN 5114301

102 or MKIII Series Gas Detector.

For full information please refer to
Tocsin 102 Series or MKIII data
sheets.

Weather Protection Assembly
And Test Gas Applicator P/N 401451

Collector Cone P/N 401061

Test Gas Applicator 401101A



Note this can be used as a flow cell in
which case combine with locking ring

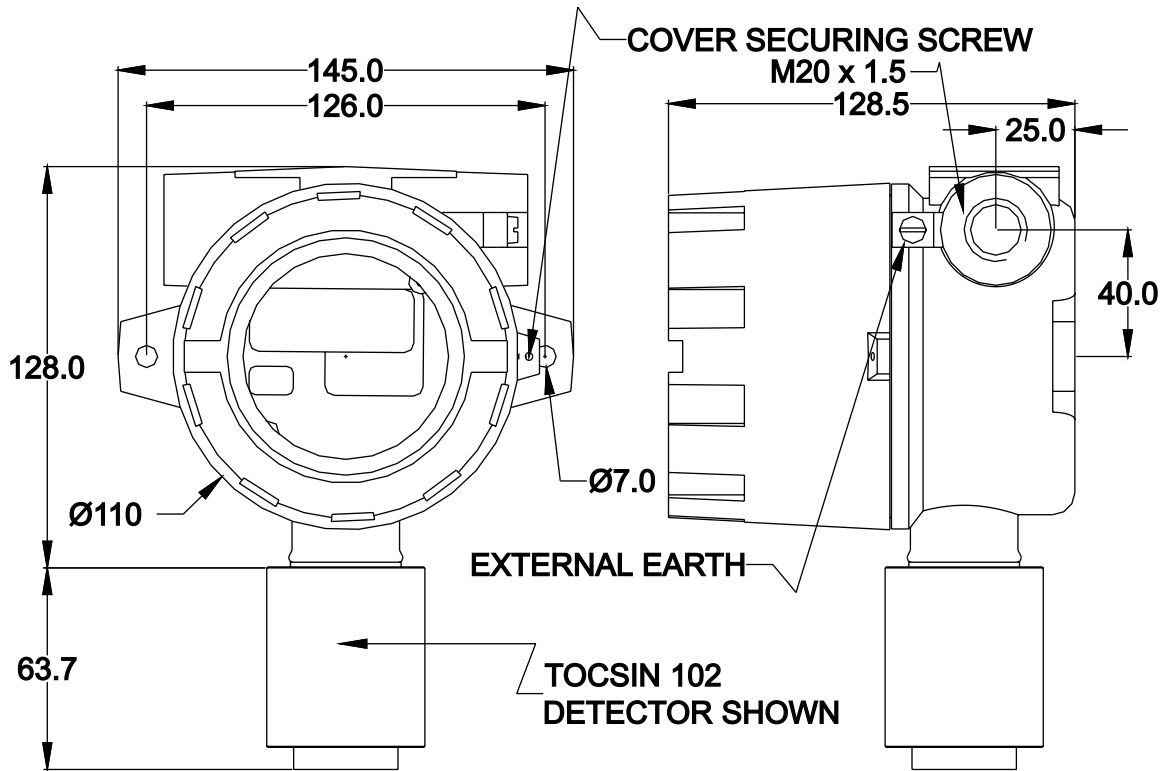
For Compatible Controllers Refer To:

Tocsin 625	1 to 8	Channel Controller
Tocsin 640	1 to 24	Channel Controller
Tocsin 700	1 to 64	Channel Controller
Tocsin 920	1 to 250	Channel Controller
Tocsin 6/750	1 to 250	Channel Controller

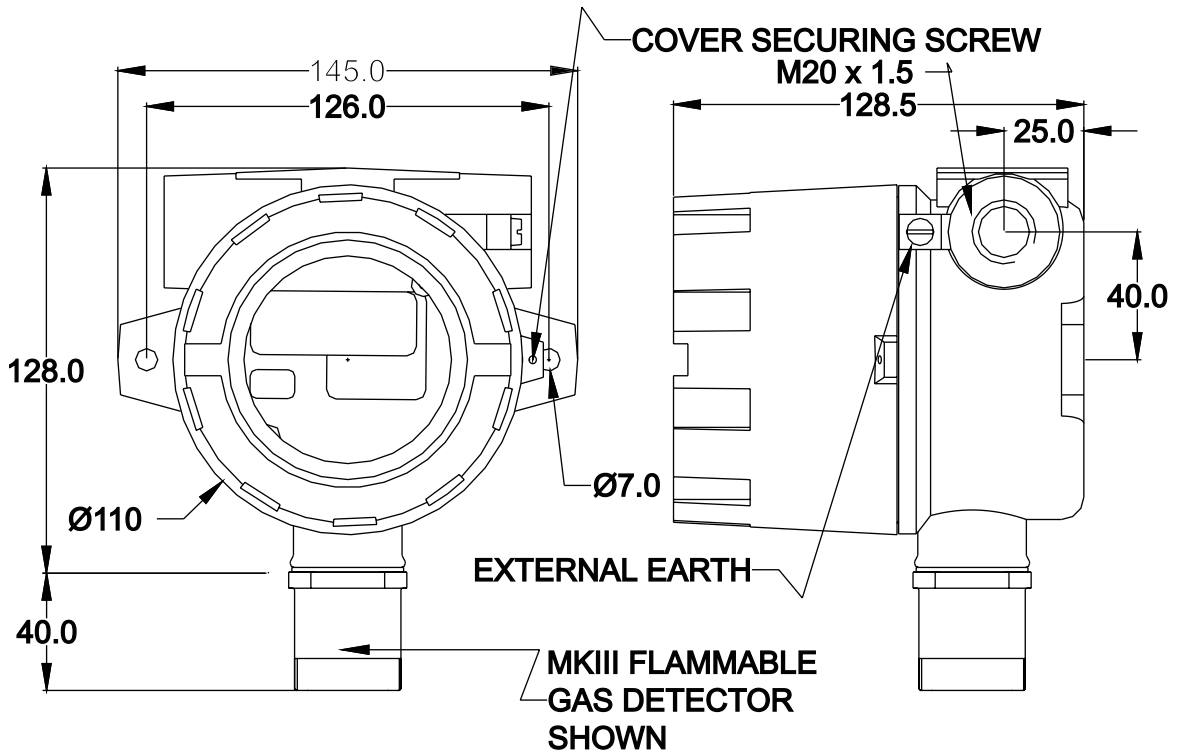
TOCSIN 903

OUTLINE DRAWINGS

MOUNTING DETAILS AND DIMENSIONS FOR COMBINED TOCSIN 903 AND TOCSIN 102 DETECTOR



MOUNTING DETAILS AND DIMENSIONS FOR COMBINED TOCSIN 903 AND MKIII DETECTOR



TOCSIN 903

FLEXIBLE CONFIGURATION OPTIONS

Note in all cases the detector can be removed from the Tocsin 903 controlled.

This can be up to 5M for a pellistor flammable detector or up to 25M for a Tocsin 102 series detector.



Standard Version

3 Wire 4-20mA

Options for Monitoring Oxygen, Toxic or Flammable gases

Alarm 1 SPCO

Alarm 2 SPCO

Fault Detected SPCO

Note alarm outputs can be set as Rising Alarms, Falling Alarms Latching or Non Latching.



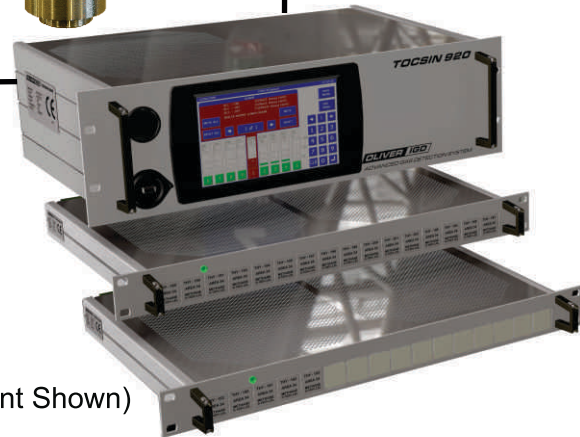
With Relay Alarm Output Option

3 Wire 4-20mA



Digital Addressable Option

Up to 32 Detectors Per Loop Serially Addressed With Full Data Access For Gas Levels, Diagnostics, Calibration etc



Control Panel
(Tocsin 920 Rack Mount Shown)

TOCSIN 903

Direct Pellistor Connection

The Tocsin 903 series controller has, as standard an in-built interface to drive an Oliver IGD MK3 or Type B series pellistor.

In this configuration all set up and on-going calibration and maintenance can be undertaken from the Tocsin 903 software menu system.

All system configurations are still available as:

4-20mA Output (as standard)

Relay Output (option)

Addressable Highway Interface (option)

EXCELLENT STABILITY AND POISON RESISTANCE

ALL STAINLESS STEEL CONSTRUCTION

ADDRESSABLE SERIAL PORT

CAN BE FIELD CALIBRATED

LINEAR 4-20mA OUTPUT

AVAILABLE FOR A WIDE RANGE OF FLAMMABLE GASES.

Performance	
Accuracy	+/-2% FSD
Linearity	Better Than 3%FSD
Warm up time to final zero	< 10 minutes
Warm up time to specification	< 30 minutes
Response time to target gas T90	Typically < 7 s (CH4)
MTBF	> 5 years
Long Term Zero Drift Per Year	< +/-4% LEL
Zero Repeatability During Operation	+/-0.2% LEL
Span (5%) Repeatability During Operation	+/- 2% LEL
Environmental:	
Operating Temperature	-10 to +55 Deg C
Storage Temperature	-20 to +60 Deg C
Relative humidity (non-condensing)	0 to 100%
Connections	
Outputs	3 Wire 4-20mA
Power Input	18 to 32V DC
Power Consumption (with Tocsin 903)	6W
Physical	
Ingress Protection	IP66
Housing Material	Stainless Steel 316 S16
Protection Concept	Flameproof
Dimensions (mm)	33 Diameter x 52 Length
Mounting Thread	M20 x 1.75
Weight	550 grams



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



TOCSIN 903

Part Numbers For 903 Controller With 4-20mA Output

Part Number	Description	Range	Power and Output
TOC-903-BCL3	TOCSIN 903 FOR BCL3	STANDARD RANGE 0-10PPM	18-28V DC 4-20mA OUTPUT
TOC-903-CO	TOCSIN 903 FOR CO	STANDARD RANGE 0-100 PPM	18-28V DC 4-20mA OUTPUT
TOC-903-CO2	TOCSIN 903 FOR CO2	STANDARD RANGE 0-5% VOL	18-28V DC 4-20mA OUTPUT
TOC-903-H2	TOCSIN 903 FOR H2	STANDARD RANGE 0-1000PPM	18-28V DC 4-20mA OUTPUT
TOC-903-H2S	TOCSIN 903 FOR H2S	STANDARD RANGE 0-50PPM	18-28V DC 4-20mA OUTPUT
TOC-903-HCL	TOCSIN 903 FOR HCL	STANDARD RANGE 0-10PPM	18-28V DC 4-20mA OUTPUT
TOC-903-HCO	TOCSIN 903 FOR CO	STANDARD RANGE 0-2000PPM	18-28V DC 4-20mA OUTPUT
TOC-903-HCO2	TOCSIN 903 FOR CO2	STANDARD RANGE 0-100% VOL	18-28V DC 4-20mA OUTPUT
TOC-903-HIRF	TOCSIN 903 FOR METHANE	RANGE 0-100% VOL METHANE	18-28V DC 4-20mA OUTPUT
TOC-903-IRF	TOCSIN 903 FOR FLAM (IR)	STANDARD RANGE 0-100% LEL	18-28V DC 4-20mA OUTPUT
TOC-903-NH3	TOCSIN 903 FOR NH3	STANDARD RANGE 0-5000PPM	18-28V DC 4-20mA OUTPUT
TOC-903-NO	TOCSIN 903 FOR NO	STANDARD RANGE 0-100PPM	18-28V DC 4-20mA OUTPUT
TOC-903-NO2	TOCSIN 903 FOR NO2	STANDARD RANGE 0-20PPM	18-28V DC 4-20mA OUTPUT
TOC-903-O2	TOCSIN 903 FOR O2	STANDARD RANGE 0-25% VOL	18-28V DC 4-20mA OUTPUT
TOC-903-PHC	TOCSIN 903 FLAM (PEL)	STANDARD RANGE 0-100 % LEL	18-28V DC 4-20mA OUTPUT
TOC-903-PIDH	TOCSIN 903 FOR VOC	STANDARD RANGE 0-6000PPM	18-28V DC 4-20mA OUTPUT
TOC-903-PIDL	TOCSIN 903 VOC	STANDARD RANGE 0-50PPM	18-28V DC 4-20mA OUTPUT
TOC-903-SIH4	TOCSIN 903 FOR SIH4	STANDARD RANGE 0-10PPM	18-28V DC 4-20mA OUTPUT
TOC-903-SO2	TOCSIN 903 FOR SO2	STANDARD RANGE 0-5PPM	18-28V DC 4-20mA OUTPUT
TOC-903A-PIDH	ATEX 903 CONTROLLER & PID	ADDRESSABLE I/O 0-6000PPM	18-28V DC

** Above controllers include ATEX Detector & ATEX Display

** For marine and 316 SS versions, contact IGD for part numbers and pricing

TOCSIN 903

Part Numbers For 903 Controller With Relay 4-20mA Output

Part Number	Description	Range	Power and Output
TOC-903R-BCL3	TOCSIN 903 FOR BCL3	STANDARD RANGE 0-10PPM	18-28V DC 4-20mA OUTPUT
TOC-903R-CO	TOCSIN 903 FOR CO	STANDARD RANGE 0-100 PPM	18-28V DC 4-20mA OUTPUT
TOC-903R-CO2	TOCSIN 903 FOR CO2	STANDARD RANGE 0-5% VOL	18-28V DC 4-20mA OUTPUT
TOC-903R-H2	TOCSIN 903 FOR H2	STANDARD RANGE 0-1000PPM	18-28V DC 4-20mA OUTPUT
TOC-903R-H2S	TOCSIN 903 FOR H2S	STANDARD RANGE 0-50PPM	18-28V DC 4-20mA OUTPUT
TOC-903R-HCL	TOCSIN 903 FOR HCL	STANDARD RANGE 0-10PPM	18-28V DC 4-20mA OUTPUT
TOC-903R-HCO	TOCSIN 903 FOR CO	STANDARD RANGE 0-2000PPM	18-28V DC 4-20mA OUTPUT
TOC-903R-HCO2	TOCSIN 903 FOR CO2	STANDARD RANGE 0-100% VOL	18-28V DC 4-20mA OUTPUT
TOC-903R-HIRF	TOCSIN 903 FOR METHANE	RANGE 0-100% VOL METHANE	18-28V DC 4-20mA OUTPUT
TOC-903R-IRF	TOCSIN 903 FOR FLAM (IR)	STANDARD RANGE 0-100% LEL	18-28V DC 4-20mA OUTPUT
TOC-903R-NH3	TOCSIN 903 FOR NH3	STANDARD RANGE 0-5000PPM	18-28V DC 4-20mA OUTPUT
TOC-903R-NO	TOCSIN 903 FOR NO	STANDARD RANGE 0-100PPM	18-28V DC 4-20mA OUTPUT
TOC-903R-NO2	TOCSIN 903 FOR NO2	STANDARD RANGE 0-20PPM	18-28V DC 4-20mA OUTPUT
TOC-903R-O2	TOCSIN 903 FOR O2	STANDARD RANGE 0-25% VOL	18-28V DC 4-20mA OUTPUT
TOC-903R-PHC	TOCSIN 903 FLAM (PEL)	STANDARD RANGE 0-100 % LEL	18-28V DC 4-20mA OUTPUT
TOC-903R-PIDH	TOCSIN 903 FOR VOC	STANDARD RANGE 0-6000PPM	18-28V DC 4-20mA OUTPUT
TOC-903R-PIDL	TOCSIN 903 VOC	STANDARD RANGE 0-50PPM	18-28V DC 4-20mA OUTPUT
TOC-903-SIH4	TOCSIN 903 FOR SIH4	STANDARD RANGE 0-10PPM	18-28V DC 4-20mA OUTPUT
TOC-903R-SO2	TOCSIN 903 FOR SO2	STANDARD RANGE 0-5PPM	18-28V DC 4-20mA OUTPUT

** Above controllers include ATEX Detector, ATEX Display and Relay O/P

** For marine and 316 SS versions, contact IGD for part numbers and pricing

EC Declaration of Conformity

Issuers name and address:

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



TOCSIN 903

Single channel gas detector controller with display certified for use in potentially explosive atmospheres Can be combined with 102 or MK3 series detectors. Interfaces for alarm relay outputs, 4-20mA signal or Addressable.

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**

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 60079-1:2014	Equipment for use in explosive atmospheres. Flameproof enclosures 'd'
EN 60079-31:2014	Equipment for use in explosive atmospheres. Housing Markings
EN 60079-29-1:2016	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	T903-TF9 Technical construction File AD199 ATEX Approval Document File

Product Markings

Serial Number- xxxxxxx

ATEX Approved
IECEX Approved



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



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

IECEX Certificate can be checked on-line at

<http://iecex.iec.ch/iecex/iecexweb.nsf/421ce8815c53a3afc1257a1e00576486/edf48860d8d8c16fc1257f480050cb78?OpenDocument>

TUV Certificates and reports can be checked on-line at https://www.tuev-sued.de/industry_and_consumer_products/certificates

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.

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: 903-DEC-10



International Gas Detectors

CH₄ H₂S CO₂
NO₂ SO₂ NO_x CO



Triton House
Crosby Street
Stockport
SK2 6SH
England

Tel: +44 (0)161 483 1415

Fax: +44 (0) 161 484 2345

Email: sales@internationalgasdetectors.com

Website: www.internationalgasdetectors.com



FS646773
Ref ROS44J