

APPLICATION DATA SHEET

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OLIVER IGD

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
- Ingress Protection IP66
- Digital Display, Concentration, Alarms and Fault Status
- Easy Calibration One Man Calibration
- Now Available with HART option

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 900 series controllers or optionally as a HART device. The unit is fully compatible with Tocsin 700 and Tocsin 900 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
Electrical Outputs	12 to 32V DC Without Relay Option (Catalytic Only)
Temperature	3 Wire 4-20mA (4 Wire Addressable Capability)
Humidity	-10°C to +55°C
Ingress Protection	15 to 90% RH non-condensing
JB Housing Material	IP66
Sensor Housing Material	Junction Box, Copper Free Aluminium Alloy Epoxy Coated
Explosion Protection	Option for 316 Stainless Steel and Marine Paint Finishes
Explosion Protection Sensor	Sensor, Stainless Steel 316 S16
Housing Dimensions (mm)	Junction Box, EExd IIC T6 II 2 D G
Cable Entry	2 x M20, NPT Options
Weight (Std Al Housing)	1 x M20 Detector Entry
	1.5Kg



Ex d IIC T6

CE 0518

Ex II 2 D G

Epsilon07ATEX2287x

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



International Gas Detectors

CH₄ H₂S CO₂
N₂ SO₂ NO_x O₂



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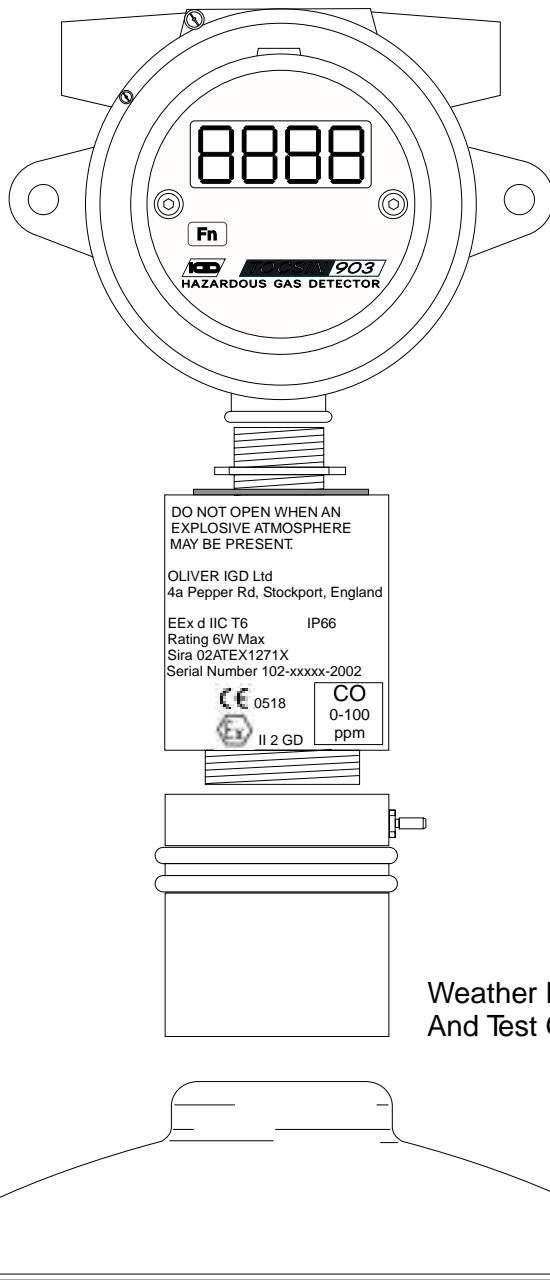


02M174
Ref ROS44D

TOCSIN 903

SENSOR OPTIONS & ACCESSORIES

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



Available Tocsin 903 Gas Detector Options

Tocsin 903 with Pellistor (flammable)	5104401
Tocsin 903 Without Detector	5104501
<i>Combine with one of the following Tocsin 102 series gas detectors</i>	
Add on Relay Output Card 3 SPCO Relays as AL1, AL2, Fault	5114301

Tocsin 102 Part Numbers:

Flammable Gases Infra-Red Point	5112501
Carbon Dioxide Infra-Red Point	5112601
Carbon Monoxide	5111701
Nitric Oxide	5111901
Nitrogen Dioxide	5112701
Hydrogen Cyanide	5112101
Chlorine (Safe Area)	5112401
Hydrogen Sulphide	5112001
Ammonia	5112301
Oxygen	5111801
Sulphur Dioxide	5112201
Hydrogen Chloride	5112801

For Requirements Not Listed Above Contact Sales

Weather Protection Assembly
And Test Gas Applicator P/N 401451

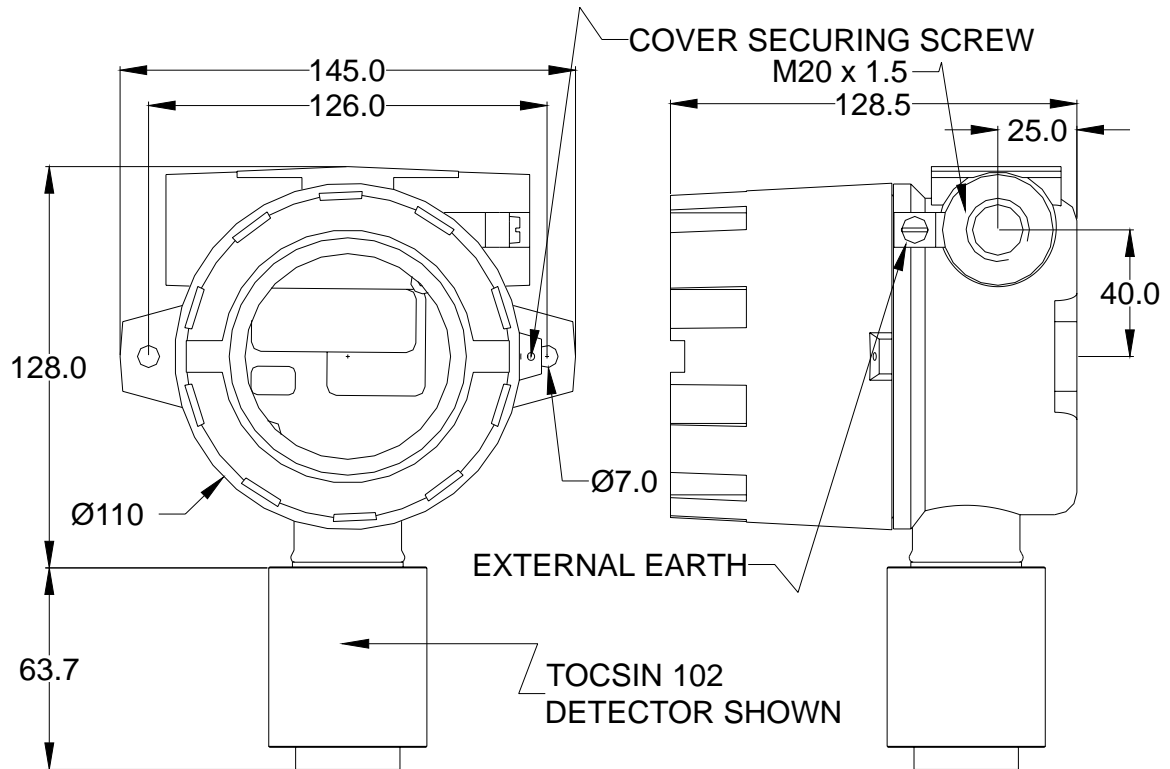
Collector Cone P/N 401061

For Compatible Oliver IGD Control Panels See:

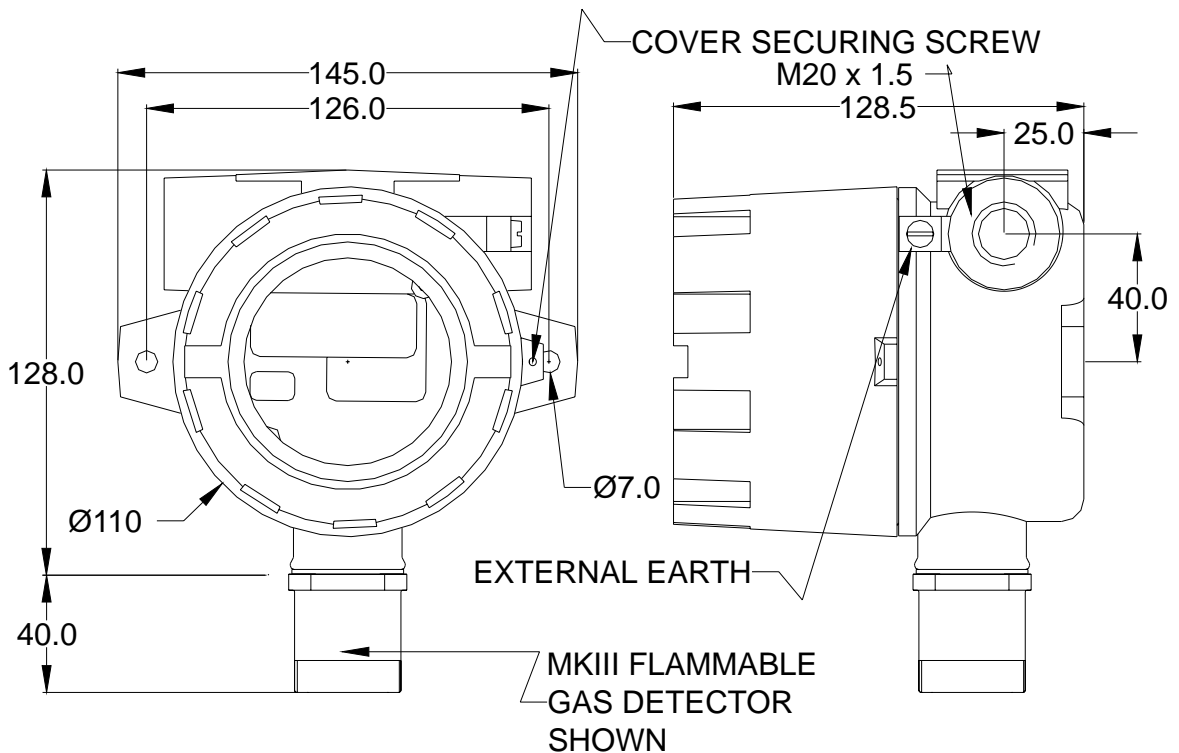
The Tocsin 700 One to Sixteen Channel Controller
The Tocsin 900 Addressable System Controller
The Tocsin 800 19" Rack System

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

OPTIONAL HART INTERFACE



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 900 Series

or

Tocsin 700 Series

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)

HART Interface (option)

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 (HART Option)
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



EEx d IIC T6

CE 0518

Ex II 2 D G

Sira 02ATEX1271X



International Gas Detectors

CH₄ H₂S CO₂
 N₂ SO₂ NO₂ O₂



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