



# International Gas Detectors

## TOCSIN 650 & 750 SERIES

### Advanced Addressable 2-Wire Gas Detection System

Introducing Tocsin 650 and 750 Series gas detection systems from IGD. These systems utilise ground-breaking Sentinel+™ intelligent addressable technology. More flexible than existing systems with better reporting and connectivity this technology ensures safety without compromise at reduced cost. Enhanced detector nodes with their own I/O capability provide distributed control and data just where needed.



TOCSIN 650

TOCSIN 750

- ▶ **EASY TO INSTALL**  
Typical system is 40% faster to install with fewer connections
- ▶ **ALARM REPORTING & RECORDING**  
Full event monitoring, time & date stamped with email and SMS alerts available.  
Cloud based data acquisition, see your data anywhere!
- ▶ **FLEXIBLE**  
Only uses 2-Core cable for power and communication.  
Allows up to 128 Detector Nodes and 350 Devices.
- ▶ **COST EFFECTIVE**  
New installs only use 2-Core cable minimising install costs.
- ▶ **REASSURINGLY COMPETENT**  
Designed and manufactured in the UK by IGD Backup by 10-year Warranty\*  
All compliance supported by a third-party certification



\* Terms and Conditions Apply

Always use latest version data sheets from IGD website



internationalgasdetectors.com  
+44 (0)161 483 1415  
sales@internationalgasdetectors.com  
/international-gas-detectors-ltd

Triton House  
Crosby Street  
Stockport  
SK2 6SH

# THE POWER OF 2

One 2-Core Cable - Everything Connected

## TOCSIN 650 & 750 SERIES Advanced Addressable 2-Wire Gas Detection System

The Sentinel +™ 2-Wire technology is an advanced digitally communicating gas detection system from IGD. The system provides fast efficient error free performance specifically designed to meet the unique requirements posed by gas detection hazards. The system provides ultimate flexibility to link your gas detection system to provide alarms, interface to plant shut down hardware and communicate clearly to BMS and similar systems. 2 Core cabling for both power and communication with no polarity requirement means cabling is minimised, reducing system costs with no compromise.

### FEATURES



TOCSIN 750 Shown

### OPTIONS

- ATEX Detectors
- Safe Area (Non ATEX) Detectors
- I/O Cards
- Room Status Indicators
- Sampling Gas Detectors
- Audible Visual Alarms
- Illuminated Signs

4 Detector Highways  
with up to 32 Detectors  
per a Highway

One 2-Core Cable Run  
Many Possibilities



Full 7" Colour Touch  
Screen Interface. Or 2x8  
Colour RGB Display and  
Jog Wheel

Clear Audible and Visual  
Alarms

Assignable LED's Clearly  
Show Where the Alarm is.



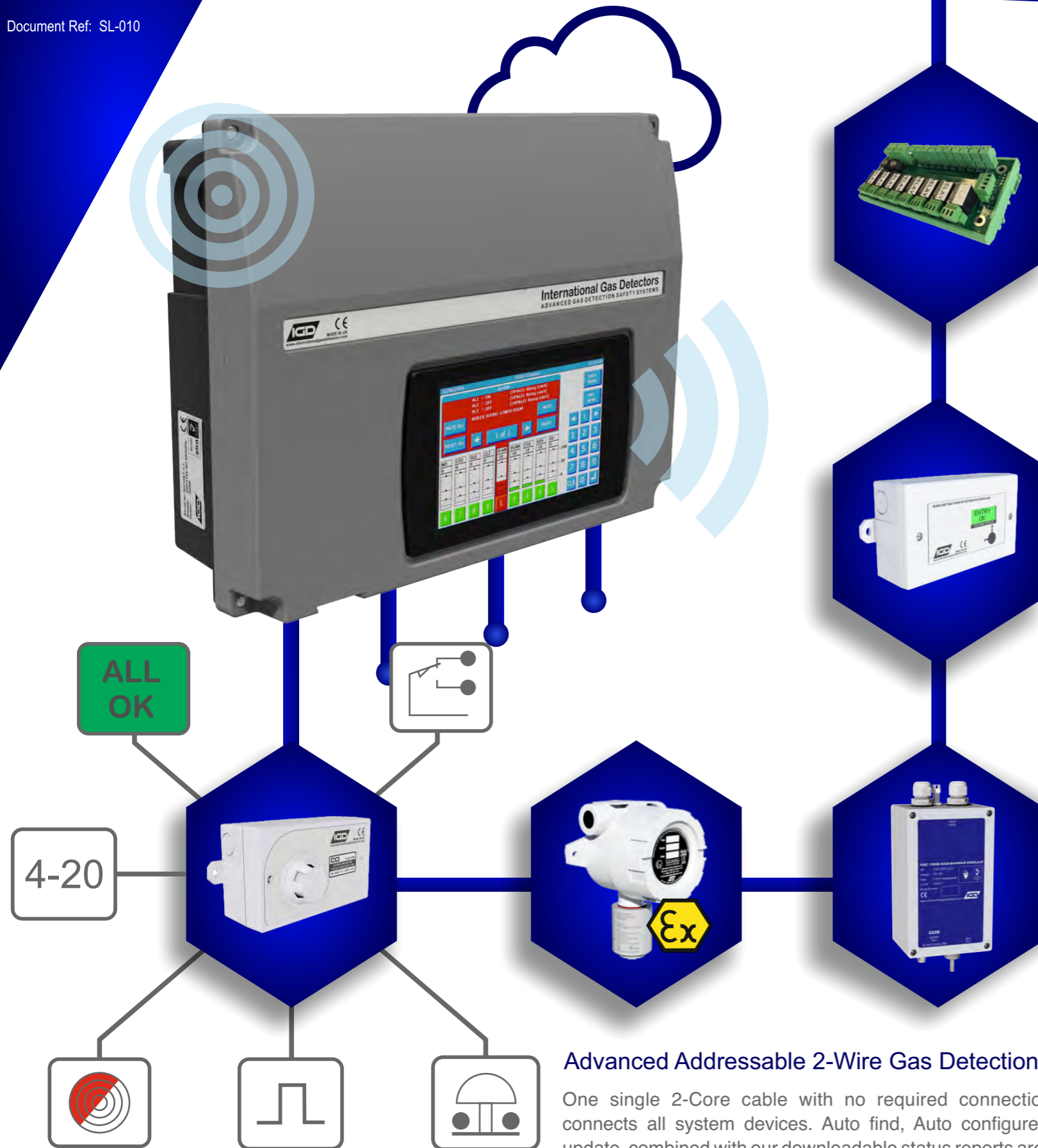
Flush or Rear Mount  
Top or Bottom or Rear  
Cable entries



Cloud and GSM Options

# THE POWER OF

One 2-Core Cable - Everything Connected



## Advanced Addressable 2-Wire Gas Detection System

One single 2-Core cable with no required connection polarity connects all system devices. Auto find, Auto configure and Auto update, combined with our downloadable status reports are just some of the key features of the system. This gives you the peace of mind that you have the right gas detection system doing the right job. Protecting both your plant and personnel.

OPTIONS	SAFE AREA	ATEX	SAMPLER	RSI
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Sensor I/P Toxic, IR, PID	①	①	②	Ⓝ
Sensor I/P Pellistor	①	①	①	①
4-20mA I/P *	②	② <sup>†</sup>	Ⓝ	②
Digital I/P *	②	② <sup>†</sup>	Ⓝ	②
Counter I/P *	②	② <sup>†</sup>	Ⓝ	②
Relay O/P *	②	② <sup>†</sup>	Ⓝ	①
Digital O/P *	②	② <sup>†</sup>	④	②
2 x 8 Display	Ⓝ	①	Ⓝ	①
Sounder	① <sup>††</sup>	Ⓝ	Ⓝ	①
Estop	Ⓝ	Ⓝ	Ⓝ	①
Key Switch	Ⓝ	Ⓝ	①	①

### KEY

- Room Status Indicator
- Control Relay
- mA Input Signal
- Beacon - Sounder
- Digital Input
- E-Stop / Break Glass / Call Point

<sup>†</sup> In order to utilise this option a break out junction box is required.

\* 2 Multi-Function I/O Ports. Option Selectable in Any Combination

<sup>††</sup> 750B Version With Audible and Visual Alarms

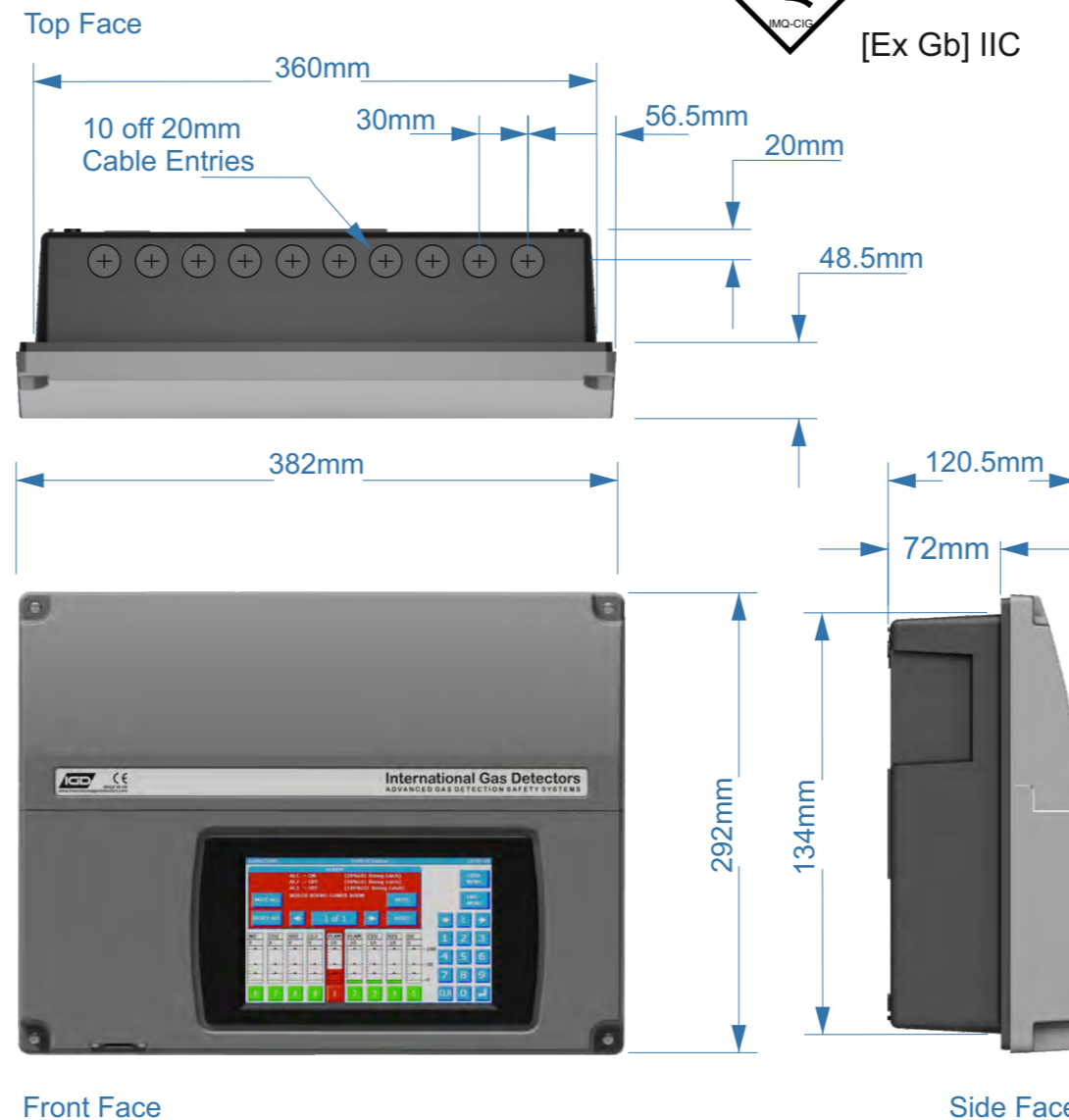
① Number available per a detector.

## SPECIFICATIONS

Power	175W PSU @ 110V AC Nominal (88 to 127 V AC 50/60Hz by selection) 175W PSU @ 230VAC Nominal (190 to 260V AC 50/60Hz by selection) 340W PSU (88 to 260V AC 50/60Hz by selection)	Other I/O	Sounder 85dB @ 100mm (Mutable) 2 off RS485 Ports Modbus Dedicated E-Stop/Slam Switch Input Dedicated Fire System Interlock
Construction	ABS	Inputs	Up to 128 off Addressable Series Detectors or I/O Modules Over 4 Addressable Highways <i>Additional Highways Possible With Additional Hub Cards</i> <i>Note external Booster PSU may be required</i>
Display	2 Lines x 8 Digit LCD Display Multi-Colour Backlight (Red-Alarm, Yellow-Fault, Blue-Normal) or 7" Touch Screen	Temperature	-5 to 40 Deg C Full Specification. To 55 Deg C De-Rate PSU Output by 30%
User	T650 - IGD Jog Wheel Option Select T750 - Full Touch Interface	Humidity	0-95% RH Non-Condensing
Outputs (see table for differences)	3 off SPCO Relays 4A Non-Inductive User Configurable 1 off Fault Relay SPCO Relays 4A Non-Inductive 1 off Solid State Beacon Sounder Output <i>Additional Digital Inputs/Relay Outputs Can Be Added To Highways if Required</i>	Sealing	IP54
		Mounting	Wall Mount
		Weight	1.75Kg

## DIMENSIONS

Please Note: These dimensions apply to both the T650 Controller and T750 Controller.



## FEATURES

- Full Colour HMI Touch Screen or Jog Wheel & LCD Display
- HMI Touch Screen can be Remote Mounted
- Top, Bottom or Rear Cable Entries
- Alarms and Events recorded Time and Date Stamped, easily downloaded as a report
- Intelligent Sensor Check Function
- Independently Tested to IEC 60079-29-1
- Automatically detects sensor changes and updates channels, no need to manually update when changing gas types and or ranges.
- Available with built in battery backup module
- GSM module available to text/email alarms and system reports
- Cloud link enables view of controller from any cloud connected



## ORDER CODES

Part Number	Description
TOC-650-24	24V DC Control Panel No Internal PSU Standard Features including 2 x 8 RGB Display and Jog Wheel 4 Relays, 4 Highways
TOC-650-150	110/230V AC Control Panel 150W PSU Standard Features including 2 x 8 RGB Display and Jog Wheel 4 Relays, 4 Highways
TOC-650-150BB	110/230V AC Control Panel 150W PSU Standard Features including 2 x 8 RGB Display and Jog Wheel 4 Relays, 4 Highways Built in 1.2AH Battery Backup
TOC-650-150B1	110/230V AC Control Panel 150W PSU Standard Features including 2 x 8 RGB Display and Jog Wheel 4 Relays, 4 Highways Built in 5AH Battery Backup
TOC-650-300	110/230V AC Control Panel 300W PSU Standard Features including 2 x 8 RGB Display and Jog Wheel 4 Relays, 4 Highways
TOC-650-300B1	110/230V AC Control Panel 300W PSU Standard Features including 2 x 8 RGB Display and Jog Wheel 4 Relays, 4 Highways Built in 5AH Battery Backup
TOC-750-BAT1	110/230V AC Power Module 300W PSU 5AH Battery Backup NOTE: Use with 24V DC Version Tocsin 650/750
TOC-750-BAT2	110/230V AC Power Module 300W PSU 17AH Battery Backup NOTE: Use with 24V DC Version Tocsin 650/750
TOC-750-BAT3	Booster Module With Battery Backup 5AH Battery Capacity 24V DC PSU at 150W
TOC-750-BAT4	Booster Module 24V DC PSU at 150W

## CABLES

### Installation Cables

Supported Installation Cables 2 Core 1.5mmSQ or 2.5mmSQ See IGD Cable System Calculator

Typically SWA, FP200, CY Screened



International Gas Detectors

# Declaration of Conformity

Declares that the product listed as:

**TOC-650**  
**TOC-750**

Addressable Gas Detection Control Panel

Issuers name and address:

Oliver IGD Limited of  
Triton House  
Crosby St,  
Stockport,  
SK2 6SH  
United Kingdom

Are in conformity with the provisions of the following United Kingdom and European Directive(s) when installed, operated, serviced and maintained in accordance with the installation and operating instructions contained in the product documentation.

**United Kingdom**

**Electromagnetic Compatibility Regulations 2016**  
**Electrical Equipment (Safety) Regulations 2016**

**European Union**

**2004/108/EC**

**EMC Directive**

**2014/35/EU**

**Low Voltage Equipment Directive** (note not applicable to 24V DC Powered Versions)

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 Detectors for Flammable Gases.
IEC 50270	Electromagnetic compatibility - Electrical Equipment for the Detection and Measurement of Combustible Gases, toxic Gases or Oxygen
IEC 60529	Degree of Protection to IP54
IEC 60068-2-6	Vibration
IEC 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
IEC 60335:2012+A11:2014	Electrical Safety

Technical File Reference T750-TF9/T650-TF9

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

Quality Assurance Certificate Number  
**16PQAN0014**

Quality Assurance Notification Number:  
**2804**



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



FS646773 EMS696504

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

Certificate Numbers  
**FS0646773 & EMS696504**

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



IMQ S.p.A con Socio Unico  
Via Quintiliano 43  
Italia 20138 Milano  
www.imq.it



[Ex Gb] IIC

Report Ref AT19-0036585-01

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: 23 November 2020

Declaration Ref: T750-DEC-8



internationalgasdetectors.com

+44 (0)161 483 1415

sales@internationalgasdetectors.com

/international-gas-detectors-ltd

Triton House  
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Stockport