Flammable Gas Detectors
Product Data MK8 PELLISTOR
Document Ref: SL-034-2

International Gas Detectors
FLAMMABLE GAS DETECTORS
TOC-750X-MK8 SERIES

IGD have been designing and manufacturing pellistor based catalytic flammable gas detectors for over 65 years. The IGD MK8 is our latest development using our EXD approved JB3/903 and Tocsin 102 series housings. The MK8 is performance approved and independently tested to 60079-29-1. Reliability and low cost of ownership make our MK8 the most advanced , poison resistant flammable gas detector on the market.

EXTREME STABILITY
Minimal Zero drift over long periods

RESPONDS TO ANY FLAMMABLE GAS
Pellistors respond to any flammable gas or vapour and can be calibrated for a specific target gas

HIGH RELIABILITY
Proven design backed by third party approvals. ATEX/IECEx Zoned 1 and 2 flammable atmopsheres and Zone 21, 22 dust environments.

EXTREME RESISTANCE TO POISONING
A badly designed Pellistor (catalytic) gas detector can be susceptible to having its catalyst poisoned or inhibited from operation when exposed to lead or silicone compounds. Our MK8 has been specifically designed to deal with this problem exhibiting excellent performance in all conditions.

LONG LIFE LOW COST OF OWNERSHIP
The MK8 has a long service life, typically 5 years. The sensor is plug replaceable allowing the stainless steel housing to be retained. This is part of IGD's green initiative to reduce environmental impact and cost to our clients.

INVESTORS IN PEOPLE

bsi. ISO 9001 Quality Management FS646773 | ISO 14001 Environmental Management EMS696504

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Triton House
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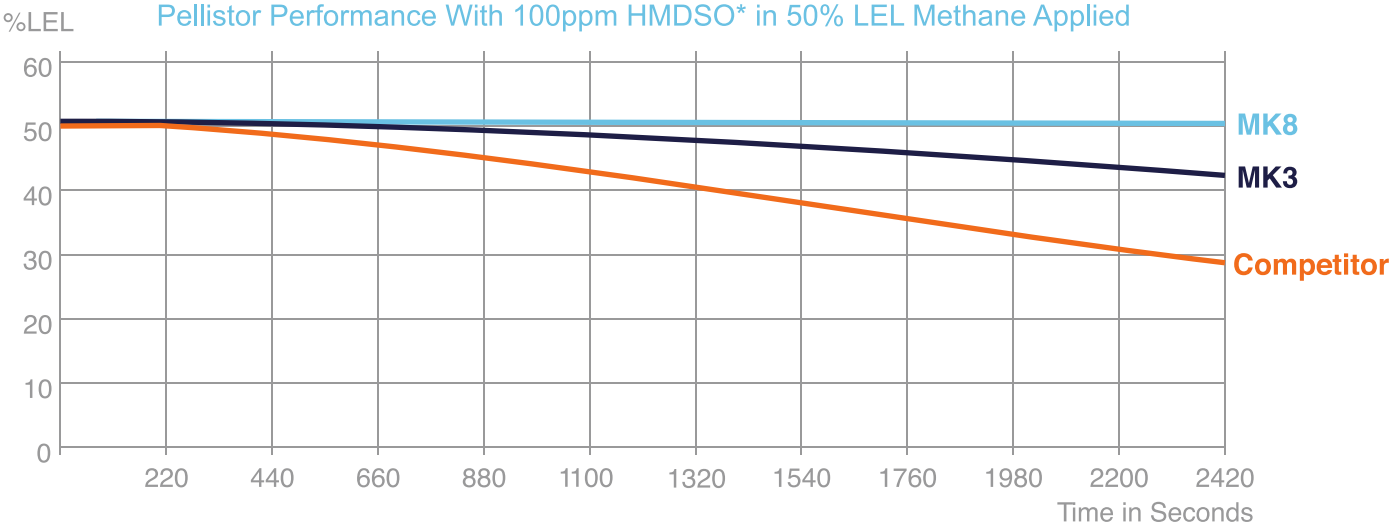
SK2 6SH

* Terms and Conditions Apply

Always use latest version data sheets from IGD website

Extreme Poison Resistance

Pellistors can be affected by 'poisons' and inhibitors. IGD's best in class MK3 pellistor has lead the way for poison resistance since the 1980's significantly out performing all others. We didnt think we could make it better but we have. The new MK8 shows extreme resistance to poisoning agents. The graph below shows results from our standard poisoning test MK8 vs MK3 vs our nearest competitor. Industry standard tests only apply 10ppm poisoning agent for 40 minutes. IGD's standard test requires 100ppm for 40 minutes to simulate real world conditions. IGD's new MK8 exhibits extreme poison resistance.



Extreme Sensor Performance from the MK8

- Extreme poison resistance exceeding industry standards IEC EN 50194 / IEC/EN 60079-29-1.
- Extreme stability less than 2% LEL drift per year.
- Resistant to shock and vibration meeting or exceeding the requirements of IEC/EN 60079-29-1.
- Only responds to flammable gases.
- Operates over a wide temperature range.
- Unaffected by humidity.
- Calibrations for a wide range of target gases (see following table indicating some common gases). If you dont see your gas listed, contact our team of gas detection experts: sales@internationalgasdetectors.com

Gas	LEL Europe (IEC80079-20-1)	Relative Response %
Methane	4.4	100
Acetone	2.5	22
Ethanol	3.1	27
Ethyl acetate	2	22
Ethylene	2.3	56
Hydrogen	4	97
Iso-propanol	2	19
Methanol	6	46
n-Butane	1.4	47
n-Heptane	0.85	40
n-Hexane	1	42
n-Pentane	1.1	41

Gas	LEL Europe (IEC80079-20-1)	Relative Response %
Propane	1.7	54
Toluene	1	24
Propylene	2	74
Cyclo-hexane	1	44
Cyclo-pentane	1.4	63
Iso-butane	1.3	46
Iso-octane	0.7	36
n-octane	0.8	40
Styrene	1	14
Xylene	1	26
Carbon monoxide	10.9	42
Ammonia	15	68

Table represents a small extract of typical gases
* HMDSO - Hexamethyldisiloxane

CERTIFICATION & SPECIFICATIONS

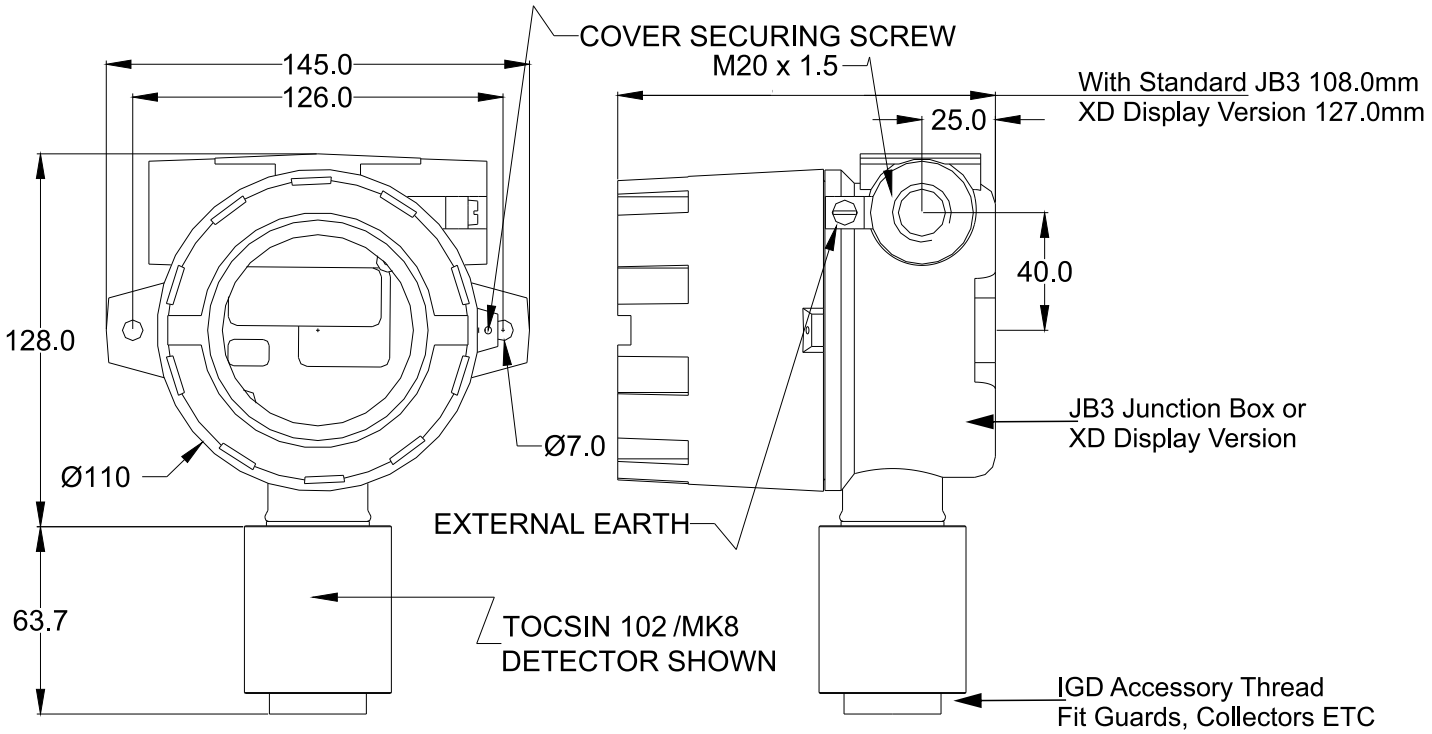
2804 2585

JB3/903

II 2G Ex db IIC T6/T5 Gb
II 2D Ex tb IIIC T85ºC/ T100ºC Db
Ta = -20ºC to +40ºC/+55ºC
IECEx EXV 16.0002X
ExVeritas 16 ATEX 0140X
ExVeritas 21UKEX0913X
IP66 M20 x 1.5 Entries 12-32V DC
Compliant to IEC 60079-29-1

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



Power	12 to 32V DC without Relay Option Typically 4W
Electrical Outputs	2 Wire Sentinel+™ Addressable I/O Digital Communication Linear over Detector Range.
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, Ex d IIC T6 I I2 D G
Explosion Protection Sensor	Ex d IIC T6 I I2 D G
Housing Dimensions (mm)	110 Diameter x 127 High Plus Detector Option
Cable Entry	2 x M20 x 1.5 Cable Entries 1 x M20 x 1.5 Detector Entry

Storage Temperature	-20 Deg Celsius to +55 Deg C
Storage Humidity	20-90% RH Non-Condensing
Shelf Life	5 Years
Sealing	IP66*
Mounting	Wall Mount
Weight	1.5Kg
Measured Range	0-100% LEL (see gas list)
T90 Time	<60 seconds
T50 Time	<20 seconds
Pressure	80 to 120kPa
Humidity	0 to 90% RH non condensing
Temperature T5 Temperature T6	-20 to +55 Deg C -20 to +40 Deg C
Warm up Time	Set by controller, 15 minutes

* IP ratings do not imply that the equipment will detect gas during and after exposure to these conditions. Calibration and maintenance may be required more frequently and should be assessed based upon exposure.

International Gas Detectors

EC Declaration of Conformity

Declares that the product listed as:

TOC-750X
TOC 750-XD

Addressable ATEX Gas Detector using JB3/903 & Tocsin 102 series Housings

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 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** *(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 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 EN 61010-1: 2010 +A1:2019	Safety requirements for electrical equipment for measurement, control, and laboratory use
UL61010-1/CSA C22.2 No. 61010-1	Electrical Equipment for Measurement, Control and Lab Use.
Technical File Reference	T750-TF9

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

Quality Assurance Certificate Number
16PQAN0014
Quality Assurance Notification Number:
2585
Product Certificates
16A**TEX0140X**
16ATEX0141X
16ATEX0142X

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

bsi. ISO 9001 Quality Management ISO 14001 Environmental Management
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

MET C US
UL61010-1
CSA C22.2
Cert Nr E115382

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Issued by: Oliver IGD Limited, Stockport, SK2 6SH , United Kingdom

Report Ref AT19-0036585-01

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: 17 May 2021

Declaration Ref: MK8-DEC-1