

PRODUCT DATA SHEET

www.internationalgasdetectors.com

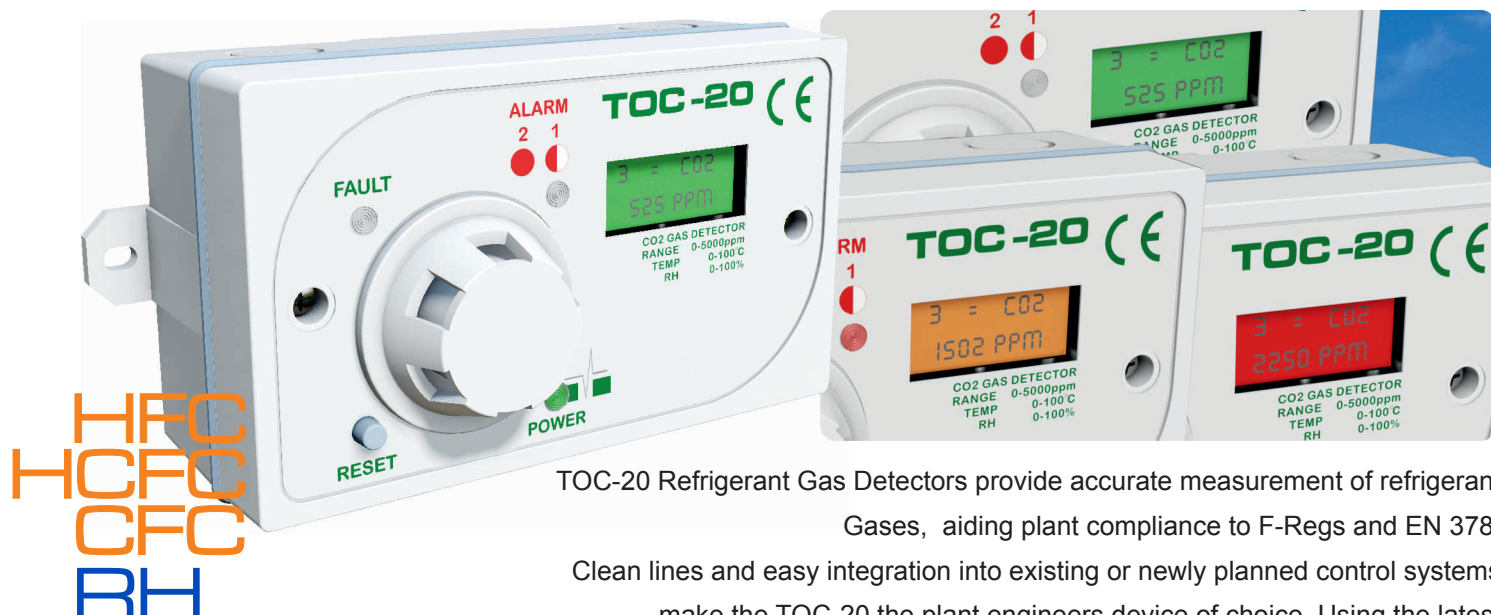
OLIVER IGD

Control Systems

Transmitters

Sensors

Accessories



TOC-20 Refrigerant Gas Detectors provide accurate measurement of refrigerant Gases, aiding plant compliance to F-Regs and EN 378.

Clean lines and easy integration into existing or newly planned control systems make the TOC-20 the plant engineers device of choice. Using the latest microprocessor technology and software TOC-20 is a reliable long term monitoring solution. TOC-20 is supplied pre-calibrated ready to use.

Standard Specifications

Power	18-28V DC (230V AC Adaptor Supplied)
Construction	ABS
Outputs	3 off 4-20mA or 0-10V Linear Outputs for Refrigerant, Modbus RTU Interface 2 off SPCO Relays Rated 4A Non Inductive 85dB Alarm Sounder

Operating Environment	-5 to 55 Deg C
Sealing	5-95% RH Non-Condensing IP64 (Excluding Sensor)

Measuring Ranges	Refrigerants Typically 0-1000ppm, Resolution 10ppm, Accuracy +/-5% of Range
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Package Size	180mm X 100mm X 75mm (See Dimension Drawing)
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Weight	375g
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Features

- Multi-Colour RGB LCD Display Backlight
- Industry Standard 4-20mA/0-10V Outputs
- Two Alarm Relay Outputs
- Modbus Interface
- User Configurable Alarms
- Wall Mount
- Supplied Pre-calibrated
- In-Service Calibration Possible
- Sensors are Dust & Splash Resistant
- Case Sealed to IP64

TOC-20 is commonly deployed into:

- Refrigeration Plant Rooms
- Cold Storage Depots
- Supermarket Cold Storage
- Air Conditioning



FS646773
REF: T20R-V6

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EC Declaration of Conformity

Issuers name and address:

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



Declares that the product listed as:

TOC-20

4-20mA or Addressable Output Gas Detector with display

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**
2006/95/EC **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.

EN 61779-1:2000 Electrical apparatus for the detection and measurement of flammable gases, general requirements and test methods.

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.
Excluding requirements for SIL

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 Reference T20-TF9

Product Markings



TOC-20

SI-serial number

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

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

Testing Agency:

Quality Assurance Certificate Number
ExVeritas 16PQAN0014

Quality Assurance Notification Number:
2585

Quality Management Certificate Number
FS 646773

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



Mehr Sicherheit.
Mehr Wert.

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

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

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

Issued on: June 2016

At 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: June 2016

Declaration Ref: TOC-20DEC-3



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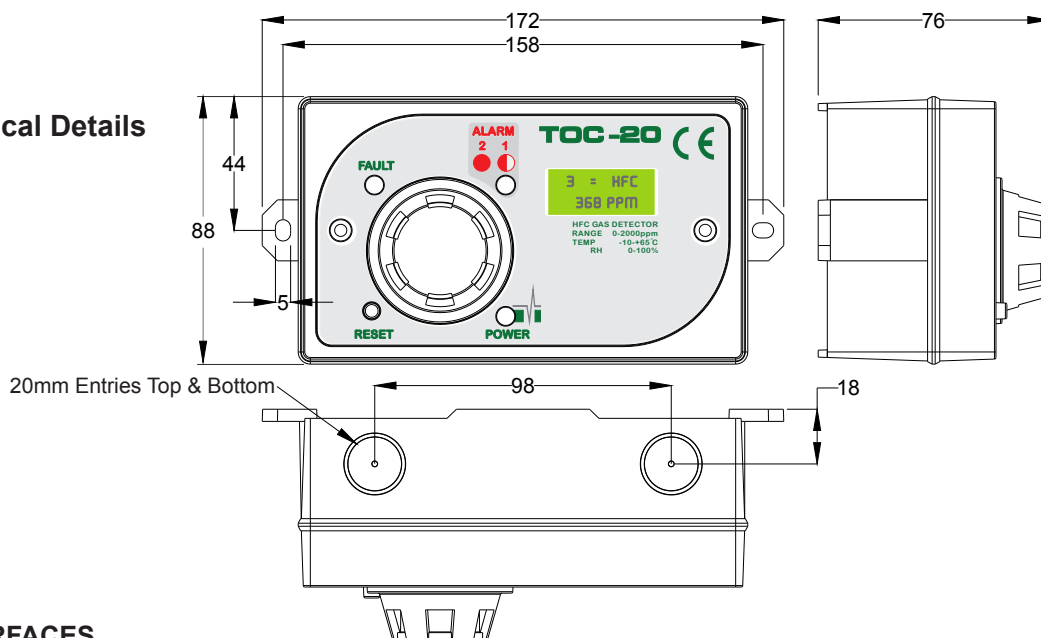
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Physical Details



BUILDING SERVICES



STORAGE



BREWERIES



HVAC

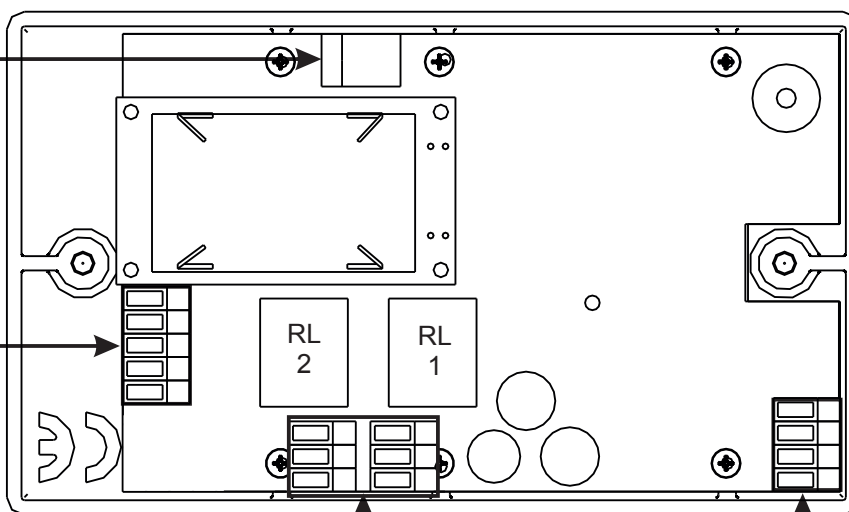
INTERFACES

Jack Plug Power Connection Using Supplied Adaptor (24V DC)

Analogue Output Interfaces

+24V DC
- 24V DC
mA Sig 1
mA Sig 2
mA Sig 3

Note as standard mA outputs are set. These can be re-configured as 0-10V signals

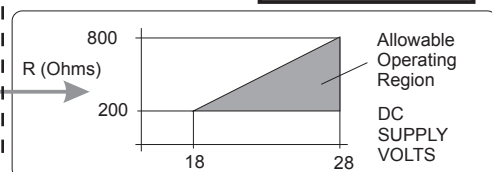
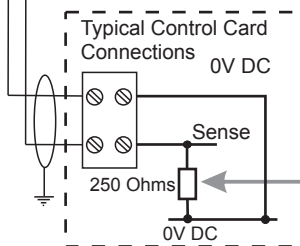


Normally Closed
Common
Normally Open

Connections common to each of the two relay outputs

0V DC
A
B
24V DC

RS485 Modbus Comms Port



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Notes

To comply with the requirements of EN378 and the F GAS regulation sensors must be tested annually.

Local regulations may specify the nature and frequency of this test. If not contact IGD for details

After exposure to a substantial gas leak, sensor should be checked and replaced if necessary.



Summary of Refrigerants and Suitable Gas Detector Models

HFC
HCFC
CFC
RH

Refrigerant	Group/Name	Heavier or Lighter Than Air	Gas Detector Model
R 717	Ammonia NH3	Lighter	TOC-30-NH3 or TOC-30A-NH3
R 290	Propane C3H8	Heavier	TOC-31A-PHC
R 600	Propane C3H8	Heavier	TOC-31A-PHC
R 22	HCFC	Heavier	T20-HCFC-2000
R 401A	HCFC	Heavier	T20-HCFC-2000
R 401B	HCFC	Heavier	T20-HCFC-2000
R 408A	HCFC	Heavier	T20-HCFC-2000
R 409A	HCFC	Heavier	T20-HCFC-2000
R 134A	HFC	Heavier	T20-HFC-2000
R 404A	HFC	=	T20-HFC-2000
R 416A	HFC	Heavier	T20-HFC-2000
R 507	HFC	Heavier	T20-HFC-2000
R 410A	HFC	Heavier	T20-HFC-2000
R 411A	HFC	Heavier	T20-HFC-2000

ATEX Version Gas Detectors, Gas Sampling Units, System Controllers and Bespoke Solutions Are Available. See our Website at www.internationalgasdetectors.com for more details or call for advice.



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