Safe Area Gas Detector

Product Data

Document Ref: SL-005 V4.0

International Gas Detectors

TOCSIN 750B SERIES
SAFE AREA GAS DETECTORS

Advanced Addressable 2-Wire Gas Detection System

Tocsin 750 series addressable safe area gas detectors are next generation technology in gas safety. Utilising our ground breaking Sentinel+™ communication, all detectors are connected on a single 2-Core cable for both power and communication. The system ensures safety without compromise at reduced cost. Detector nodes have their own I/O capability provide distributed control and data just where needed.

Our 750 safe area gas detectors have sensor options for over 400 gases and vapours, making it the most versatile sensor on the market.

EASY TO INSTALL

Just one **2-Core** cable minimising costs
No cable polarity for fast & easy install
One-click auto-setup on controllers & self check, ready to use

SIMPLE SERVICING

Hot-swap detectors for exchange without engineer cost
Auto-detect on sensor change, automatically updates:
Ranges
Gas Type and
Alarms.

FLEXIBLE

I/O Points included on each detector, easily control external devices; valves, beacon-sounders or input 4-20mA signals with minimal extra wiring.

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

INVESTORS IN PEOPLE

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

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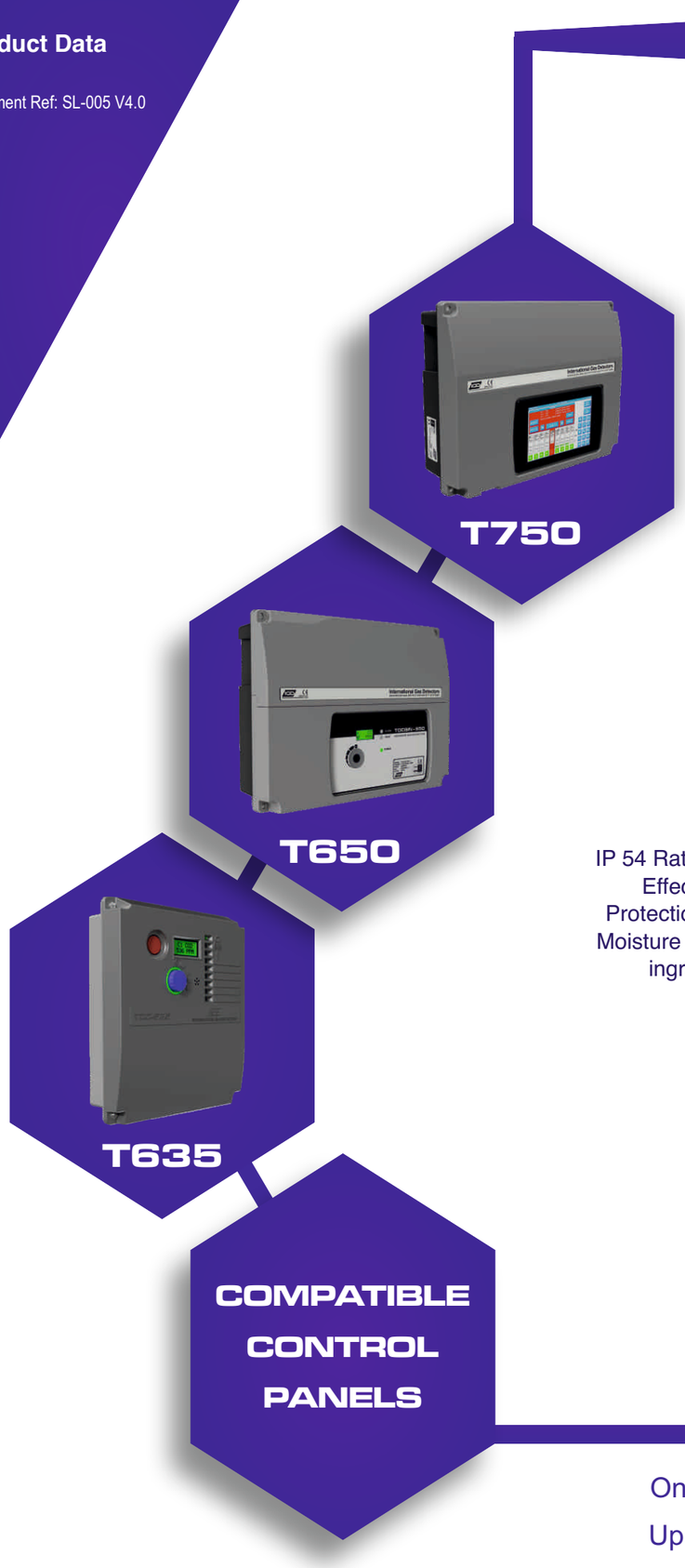
THE POWER OF 2

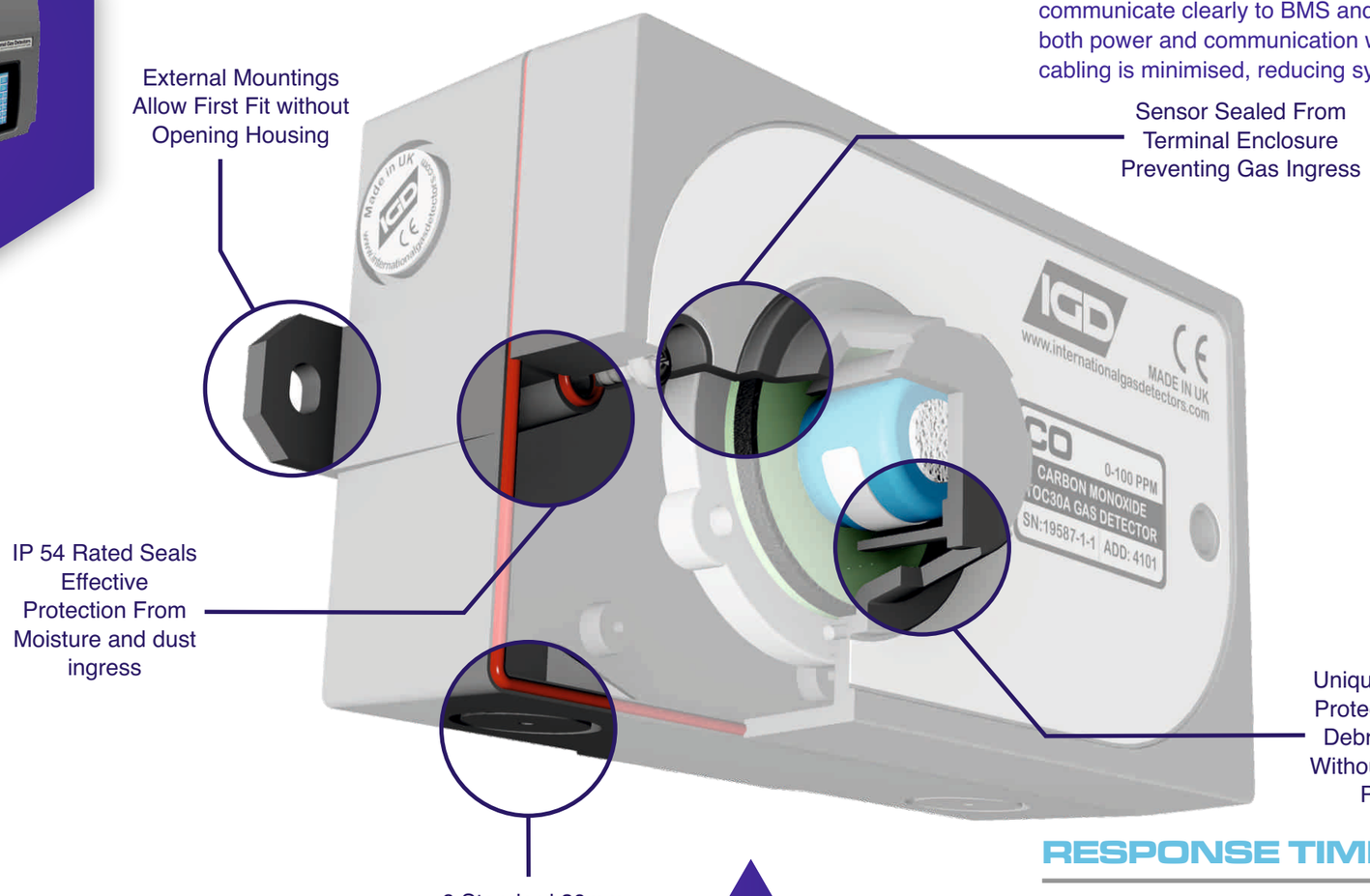
One 2-Core Cable - Everything Connected

TOCSIN 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.





One 2-Core Cable Run. Many Possibilities

Up to 32 Detectors per a Cable Run.

RESPONSE TIMES

Sensor Response times and accuracies are determined by the type of sensor used. The following table provides general guidance for tests carried out by IGD at standard conditions.

Type	T90 Response	Accuracy
Pellistors	<10s	+/-2% LEL
Infra Red	<15s	+/-2% of Range
Electrochemical as CO,H2S,SO2	<30s	+/-2% of Range
as O2	<15s	
as NO2,CL,NH3	<50s	

Table is for indication and is not a

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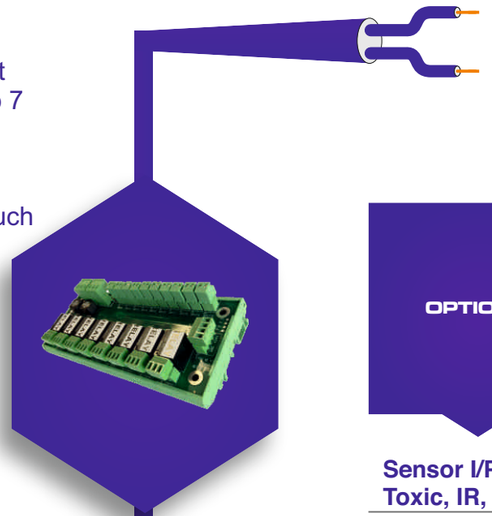
Advanced Addressable 2-Wire Gas Detection System

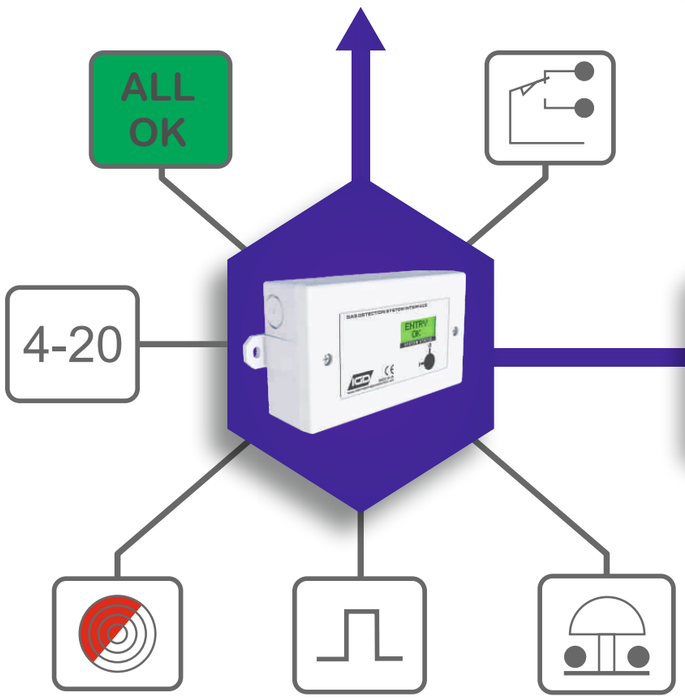
Our 750 addressable safe area detectors have multiple input and output options on the actual sensor. This means one detector can control up to 7 other devices including but not limited to: other gas detectors, slam switches, beacon sounders, gas supply valves, analogue devices (third party included), displays and much more. Thus, providing you with a versatile detector, reduced installation and cabling requirements and much needed distributed control without the need for expensive I/O cards.



TOC-750B Safe Area Gas Detectors can be addressably connected to:

TOC-635, TOC-650 or T0C-750 Controllers.

Up to 32 detector nodes or I/O devices can be interfaced on each addressable cable run.



Room status Indicators
ATEX Gas Detectors
Sampling Gas Detectors
I/O Cards
One System, Ultimate Flexibility, No Compromises

THE POWER OF 2

One 2-Core Cable - Everything Connected

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

KEY

- ALL OK — Room Status Indicator
- Control Relay
- 4-20 — mA Input Signal
- Beacon - Sounder
- Digital Input
- E-Stop / Break Glass / Call Point

† In order to utilise this option a break out junction box is required.

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

†† 750B Version With Audible and Visual Alarms

1 Number available per a detector.

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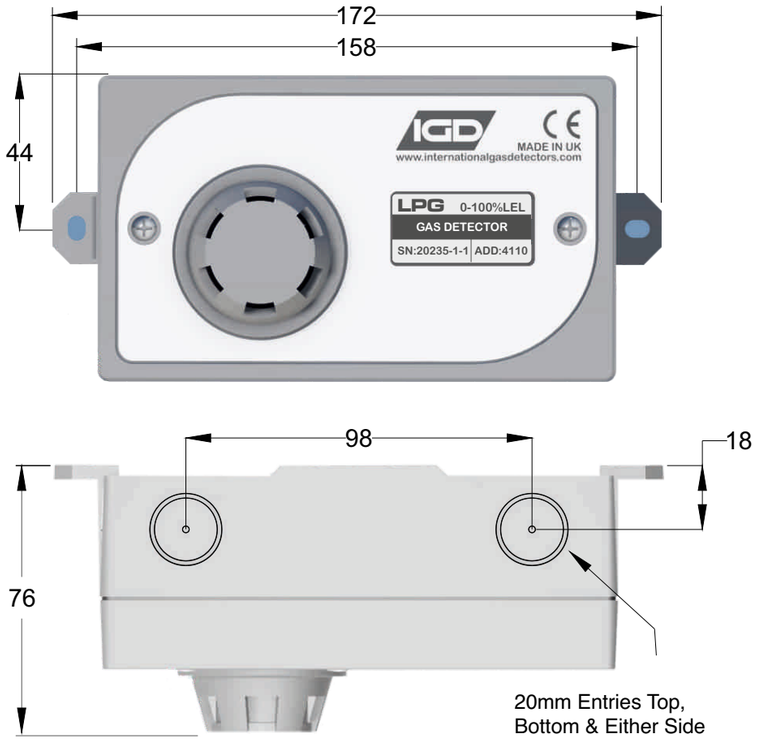
SPECIFICATIONS

Power	12 to 26V DC
Construction	ABS
Sensor	Direct Pellistor Interface
	Input for IGD Toxic,Oxygen, Infra red and PID detectors
Communication	IGD Sentinel+ Protocol, 2-Wire Connection L1,L2
I/O	1 off SPCO Relays 4A/230V AC Non-Inductive User Configurable from 650/750 Controllers 2 multifunction ports as: Digital Input Max 0.2Hz Digital Input 0-3V Max 0.2Hz 4-20mA input or Solid State Output 24V DC Max 300mA shared Across both Ports
Temperature	0 to 55 Deg C
Humidity	0-95% RH Non-Condensing
Sealing	IP54
Mounting	Wall Mount
Weight	300 g

DIMENSIONS



FEATURES

IR,PID, Toxic,O2 Detector Ports	1
Catalytic (Flamm) Detector Ports	1
Possible SSR Outputs*	1
Possible Digital Inputs*	2
Possible 4-20mA Inputs	2
Display Port**	1
Audio Visual Alarm Option (750B)	YES

CABLES

Installation Cables

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

Typically SWA, FP200, CY Screened or Similar

ORDER CODES

Part Number	Description
Pellistors (Refer to data sheet SL-034)	
TOC-750-MK8	General Flammable Gases Pellistor 0-100% LEL
TOC-750-MK8+	Flammable Gases Pellistor 0-100% LEL, H2/CH4
Infra Red	
TOC-750-IRF	Flammable Gases Infra Red 0-100% LEL
TOC-750-LCO2	Carbon Dioxide Infra Red 0-5000ppm
TOC-750-CO2	Carbon Dioxide Infra Red 0-5% VOL
TOC-750-iCO2	Carbon Dioxide Infra red 0-40000ppm (0-4% Vol)
TOC-750-HCO2	Carbon Dioxide Infra Red 0-100% VOL
TOC-750-SF6	Sulphur Hexafluoride 0-1000ppm
Photo-Ionisation (Refer to data sheet SL-029)	
TOC-750-PID05	VOC/PID Detector 0-50ppm
TOC-750-PID01	VOC/PID Detector 0-100ppm
TOC-750-PID02	VOC/PID Detector 0-200ppm
TOC-750-PID20	VOC/PID Detector 0-2000ppm
TOC-750-PID50	VOC/PID Detector 0-5000ppm
Long Life Electrochemical	
TOC-750-CO	Carbon Monoxide 0-100ppm
TOC-750-HCO	Carbon Monoxide 0-2000ppm
TOC-750-O2	Oxygen (Lead Free) 0-25% VOL
TOC-750-NH3-L	Ionic Ammonia 0-100ppm
TOC-750-HNH3-L	Ionic Ammonia 0-500ppm
TOC-750-HHNH3	Ionic Ammonia 0-5000ppm
Standard Electrochemical	
TOC-750-H2S	Hydrogen Sulphide 0-50ppm
TOC-750-NO	Nitric Oxide 0-25ppm
TOC-750-NO2	Nitrogen Dioxide 0-5ppm
TOC-750-CL2	Chlorine 0-10ppm
TOC-750-BCL3	Boron Tri-Chloride 0-10ppm
TOC-750-H2	Hydrogen 0-1000ppm
TOC-750-HCL	Hydrogen Chloride 0-10ppm
TOC-750-SIH4	Silane 0-10ppm
TOC-750-HBR	Hydrogen Bromide 0-20ppm
TOC-750-HCN	Hydrogen Cyanide 0-10ppm
TOC-750-CH20	Formaldehyde 0-5ppm
TOC-750-ETO	Ethylene Oxide 0-10ppm
TOC-750-HH2	Hydrogen 0-40000ppm
TOC-750-HCL	Hydrogen Chloride 0-10ppm
TOC-750-HF	Hydrogen Fluoride 0-10ppm
TOC-750-O3	Ozone 0-5ppm
TOC-750-SO2	Sulphur Dioxide 0-5ppm
TOC-750-F2	Fluorine 0-1ppm
TOC-750-PH3	Phosphine 0-5ppm

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International Gas Detectors

Spot Light

Long Life
Ionic Ammonia Detectors

Wide Range CO2 Detectors

Polymer Oxygen Detectors

Ionic Ammonia Detectors

TOC-750-NH3-L	Ionic Ammonia 0-100ppm
TOC-750-HNH3-L	Ionic Ammonia 0-500ppm
TOC-750-HHNH3	Ionic Ammonia 0-5000ppm

Traditional electrochemical Ammonia detectors struggle in environments where there is a continuous background level of Ammonia. In such environments their electrolyte can be quickly consumed rendering them useless. This can also be the case where a large leak of Ammonia occurs. IGD's IONIC Ammonia detectors, whilst still electrochemical use a different ionic technology for Ammonia detection which is not consumed. IGD's ionic detectors do not deplete providing long life and a high level of security in demanding Ammonia detection environments.

Wide Range Detectors

TOC-750-iCO2	Carbon Dioxide Infra red 0-40000ppm (0-4% Vol)

Traditionally when detecting CO2 there is a compromise between low level early detection warnings and high level evacuation alarms. IGD's iCO2 detector overcomes these issues by multi-ranging. The basic detection range is 0-40,000ppm (or 0-4% Volume). Allied to IGD's intelligent Sentinel+ ™ technology this allows the detection system to automatically range from ppm to % level alarms based on the gas level. You can now set pre-alarms at ppm levels allowing early intervention and shut down or evacuation alarms at STEL levels. Maximum safety performance without compromise.

Polymer Oxygen Detectors

TOC-750-O2	Oxygen Detector 0-25% Vol

Lead free ROHS compliant long life Non-depleting Oxygen sensors from IGD. Typically 5 year life using non depleting Polymer technology providing high reliability and low cost of ownership.

International Gas Detectors

Declaration of Conformity

Declares that the product listed as:

TOC-750

TOC-750B

Addressable Safe Area Gas Detector

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 50194	Electrical apparatus for the detection of combustible gases
IECUL/CSA 61010-1	Safety requirements for electrical equipment for measurement, control, and laboratory use. General requirements
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 60335:2012+A11:2014	Electrical Safety
Technical File Reference	T750B-TF9

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

Quality Assurance Certificate Number
16PQAN0014
Quality Assurance Notification Number:
2804

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

IMQ

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

Report Ref CA06.00322

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: 1 December 2022

Declaration Ref: T750B-DEC-6

INVESTORS IN PEOPLE

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

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