1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 05ATEX2043X** Issue: **2**

4 Equipment: **GT-XX**

5 Applicant: **Gas Measurement Instruments Ltd**

6 Address: Inchinnan Business Park
Renfrew
PA4 9RG
UK

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Netherlands B.V., Notified Body Number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 50014:1997 (amendments A1 to A2) EN 50018:2000 EN 50020:2002

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

II 2G
EEx ia d IIB T3 (Tamb = -20°C to +40°C)

Project Number 2886

Signed:

Title: Director of Operations

CSA Group Netherlands B.V.
Utrechseweg 310,
6812 AR, Arnhem,
Netherlands

SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE **Sira 05ATEX2043X**
Issue 2

13 **DESCRIPTION OF EQUIPMENT**

The **GT-XX** is a battery powered unit designed for measuring and displaying the concentrations of combustible and non-combustible gases in a sample. It is also capable of measuring Oxygen deficiency. The "XX" defines such things as the gas types, calibration range and readout units.

The unit comprises electronic components mounted on several printed circuit boards, a liquid crystal display, a backup battery for memory retention purposes, a buzzer, a gas measuring chamber containing up to 2 sensors plus a third sensor mounted externally at the end of a hand-held probe, a combustible gas measuring chamber containing 2 pellistors, a pump and a battery compartment containing three C size (LR14) cells, these are all housed in a plastic enclosure. Mounted on the front of the enclosure is a keypad to interrogate the measurements displayed on the liquid crystal display.
Additional features include an LED torch light and an infra-red data (IRDA) communications port.

The hand-held probe is in the form of a short wand mechanically attached and connected both electrically and pneumatically to the GT-XX by a plug and socket arrangement.

The GT-XX is NOT designed for use in oxygen levels above 21%.

The permitted cells are: Energizer No. E93, Alkaline, (Zn/MnO_2) Cell
Duracell Procell, Alkaline, (Zn/MnO_2) Cell
Duracell Plus, Alkaline, (Zn/MnO_2) Cell
Duracell, Alkaline (Zn/MnO_2) Cell

As an option, the three cells may be replaced by three nickel-metal hydride re-chargeable cells.

The permitted cells are: Panasonic 3000mAh Sub-C size, Nickel Metal Hydride cells type HHR300SCP

For the charging contacts (J7, J8)

U_i = 9 V ± 5% The battery pack must only be charged in
I_i = 1.9 A a non-hazardous (safe) area

For the charging connector J6

U_i = 9 V ± 5% The battery pack must only be charged in
I_i = 400 mA a non-hazardous (safe) area

The GT-XX is available in different configurations equipped to detect the following combinations of gas:

Model ID	Description
GT-40	Flammable gas / CO
GT-41	Flammable gas / O_2
GT-42	Flammable gas / CO / O_2

Model ID	Description
GT-43	Flammable gas / CO / O_2 / H_2S
GT-44	Flammable gas

Variation 1 - This variation introduced the following changes:

i. The main PCB was re-laid to accommodate the following modifications:
   - D3 and D4 (BAT54) were replaced by 2 new diodes D3 and D4 (BAT54C).
   - The package type of U4 on the main PCB was changed from a DIP18/SOL to a TSOP-20-2.
   - The addition of a ground to pin 5 on U9.

ii. More land was added to connector J6 pin 28 on the main PCB.

CSA Group Netherlands B.V.
Utrechseweg 310,
6812 AR, Arnhem Netherlands

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Issue 2

14 **DESCRIPTIVE DOCUMENTS**

14.1 **Drawings**

Refer to Certificate Annexe.

14.2 **Associated Sira Reports and Certificate History**

Issue	Date	Report number	Comment
0	8 March 2007	R52L11678B	The release of the prime certificate.
1	9 November 2009	R52L20421A	This Issue covers the following changes: • All previously issued certification was rationalised into a single certificate, Issue, Issue 0 referenced above is only intended to reflect the history of the previous certification and has not been issued as a document in this format. • The introduction of Variation 1.
2	15th October 2019	2886	• Transfer of certificate **Sira 05ATEX2043X** from Sira Certification Service to CSA Group Netherlands B.V.. • EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. *(In accordance with Article 41 of Directive 2014/34/EU, EC Type-Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)*

15 **SPECIAL CONDITIONS FOR SAFE USE** (denoted by X after the certificate number)

15.1 When the batteries are replaced, only the following non-rechargeable cells are permitted:

Energizer No. E93, Alkaline, (Zn/MnO_2), LR14 Size 'C' cell
Duracell Procell, Alkaline, (Zn/MnO_2), LR14 Size 'C' cell
Duracell Plus, Alkaline, (Zn/MnO_2), LR14 Size 'C' cell
Duracell, Alkaline (Zn/MnO_2), LR14 Size 'C' cell

15.2 When the batteries are replaced, only the following rechargeable cells are permitted

Panasonic 3000mAh Sub-C size, Nickel Metal Hydride cells type HHR300SCP

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

CSA Group Netherlands B.V.
Utrechseweg 310,
6812 AR, Arnhem Netherlands

Certificate Annexe

Certificate Number: **Sira 05ATEX2043X**

Equipment: **GT-XX**

Applicant: **Gas Measurement Instruments Ltd**

Issue 0

Drawing No.	Sheet	Rev.	Date	Title
67000IEC	1 of 2	1	06 Jun 06	GA Certification Drawing
67000IEC	2 of 2	1	06 Jun 06	GA
67003A IEC	1 of 1	1	23 Feb 07	TGT Main PCB, Potting detail
67019IEC	1 of 2	2	19 Jan 06	Gastex PSU PCB
67019IEC	2 of 2	2	19 Jan 06	Gastex PSU PCB
67023IEC	1 of 4	2	06 Jun 06	Main PCB
67023IEC	2 of 4	2	06 Jun 06	Main PCB
67023IEC	3 of 4	2	06 Jun 06	Main PCB
67023IEC	4 of 4	2	06 Jun 06	Main PCB
67024IEC	1 of 2	2	06 Jun 06	Feedthrough PCB
67024IEC	2 of 2	2	06 Jun 06	Feedthrough PCB
67059IEC	1 of 2	A	15 Mar 04	Probe PCB
67059IEC	2 of 2	A	15 Mar 04	Probe PCB
67033ATEX	1 of 1	1	26 Jan 06	Certification label, Rear cover
67043ATEX	1 of 1	1	26 Jan 06	Serial number label

Issue 1

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title
67023IEC	1 to 4	3	22 Oct 09	GT Series Main PCB

CSA Group Netherlands B.V.
Utrechseweg 310,
6812 AR, Arnhem,
Netherlands