



**EU-TYPE EXAMINATION CERTIFICATE**

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

Certificate Number: **Sira 14ATEX2120**

Issue: **3**

Equipment: **Portable Gas Detector, Multi Gas Clip, Models, MGC-P- Pump and MGC-IR-Pump**

Applicant: **Gas Clip Technologies**

Address: 610 Uptown Blvd Suite 4100  
Cedar Hill  
Texas 75104, USA

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

Sira Certification Service, notified body number 0518 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.

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 60079-0:2012/A11    EN 60079-11:2012    EN 60079-26:2007    EN 60079-1:2014

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

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.

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.

The marking of the equipment shall include the following:

**MGC-IR-Pump** (with MIPEX LEL sensor);



II 1 G  
Ex ia IIC T4 Ga  
Ta = -20°C to +50°C

**MGC-P- Pump** (with KNC LEL sensor)



II 2 G  
Ex d ia IIC T4 Gb  
Ta = -20°C to +50°C

Project Number 70107553

  
N Jones  
Certification Manager

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## SCHEDULE

### EU-TYPE EXAMINATION CERTIFICATE

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#### 13 DESCRIPTION OF EQUIPMENT

The Gas Clip Technologies Multi Gas Clip Pump instrument is a gas detection device. The MGC Pump is worn by an individual and monitors concentrations of hydrogen sulfide (H<sub>2</sub>S), carbon monoxide (CO), oxygen (O<sub>2</sub>) and flammable/explosive gases (LEL) in real time. Any levels of gas that are measured above the alarm thresholds programmed into the instrument will trigger audio, visual and vibration alarms.

The detector is worn on the person and does not require regular interaction to perform its function.

The product is intrinsically safe and comprised of a main enclosure containing, a display, three gas sensors, two printed circuit boards (one as main and one for battery protection), and a re-chargeable battery pack module. The main printed circuit board is secured to the front half of the enclosure with screws.

The only external connections on the equipment are two contacts for the charger input on the back of the equipment. The equipment is only to be charged outside the hazardous area.

The battery pack is comprised of two parallel lithium ion cells at 3.8 V nominal, each with capacity of 2030 mAh.

The Gas Clip Technologies Multi Gas Clip Pump instrument comes in two designs:

MGC-IR-Pump: 4 gas detector with MIPEX LEL, H<sub>2</sub>S, CO and O<sub>2</sub> Sensors.

MGC-P-Pump: 4 gas detector with KNC LEL, H<sub>2</sub>S, CO and O<sub>2</sub> Sensors.

**Variation 1** - This variation introduced the following changes:

- i. The label drawing has been revised to reflect a change in the number of the notification body responsible for the Quality Assessment Notification from 0359 to 0518.
- ii. A new IR sensor, MIPEX-02-1-II-3.1X, has been introduced as an alternative to the previously approved MIPEX-02-1-II-1.1X, the Conditions of Certification were amended to reflect this sensor.

**Variation 2** - This variation introduced the following changes:

- i. The assessment employed to justify the use of the KNC LEL, H<sub>2</sub>S, CO and O<sub>2</sub> Sensors in the MGC-P-Pump was modified to recognise that the sensor is 'flameproof' certified, as a result, the marking was changed and EN 60079-1:2014 was added to the list of assessment standards.
- ii. An obsolete PTC was replaced.
- iii. The Applicant's name and address was changed:  
From: Seetron Inc., 201 – 403 Bucheon Techno-Park, 192 Yakdae-Dong, Wonmi-Gu, Bucheon- Si, Gyeonggi-Do, 420-733 South Korea  
To: Gas Clip Technologies, 610 Uptown blvd Suite 4100, Cedar Hill, TX 75104, USA

**Variation 3** - This variation introduced the following changes:

- i. The introduction of of an alternative O<sub>2</sub> sensor, Model S+4OX, was recognised.
- ii. The label drawing, DWG GC003-016, was updated to recognise the new manufacturing location.



## SCHEDULE

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**Issue 3**

#### 14 DESCRIPTIVE DOCUMENTS

##### 14.1 Drawings

Refer to Certificate Annexe.

##### 14.2 Associated Sira Reports and Certificate History

| Issue | Date             | Report no. | Comment  |
|-------|------------------|------------|--|
| 0     | 08 July 2014     | R70006509A | The release of the prime certificate.  |
| 1     | 16 December 2014 | R70009213A | The introduction of Variation 1.   |
| 2     | 08 June 2016     | R70015234A | This Issue covers the following changes: <ul style="list-style-type: none"><li>• EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. <i>(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.)</i></li><li>• The introduction of Variation 2.</li></ul> |
| 3     | 23 January 2017  | R70107553A | The introduction of Variation 3.   |

#### 15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

None

#### 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.

#### 17 CONDITIONS OF MANUFACTURE

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.

17.3 The products covered by this certificate incorporate previously certified devices, it is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with these devices, and the manufacturer shall inform Sira of any modifications of the devices that may impinge upon the explosion safety design of their products.

| Item 1                                     | Item 2                                     | Item 3                                     |
|--|--|--|
| KNC, Model KGS-701<br>LEL pellistor sensor | Optosense LLC,<br>Model MIPEX-02-1-II-1.1X | Optosense LLC,<br>Model MIPEX-02-1-II-3.1X |
| EPS 12 ATEX 1410U                          | ITS 11ATEX27418U                           | ITS 11ATEX27418U                           |

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# Certificate Annexe



**Certificate Number:** Sira 14ATEX2120

**Equipment:** Portable Gas Detector, Multi Gas Clip,  
Models, MGC-P- Pump and MGC-IR-Pump

**Applicant:** Gas Clip Technologies

## Issue 0

| Drawing no.                              | Sheets  | Rev   | Date (Sira stamp) | Title                                      |
|--|---------|-------|-------------------|--|
| GC003-000                                | 1 to 2  | 4.0   | 08 Jul 14         | MGC-PUMP-GENERAL ASSEMBLY                  |
| GC003-001                                | 1 of 1  | 3.0   | 08 Jul 14         | MGC-PUMP-CASE-TOP                          |
| GC003-002                                | 1 of 1  | 3.0   | 08 Jul 14         | MGC-PUMP-CASE-BOTTOM                       |
| GC003-003                                | 1 of 1  | 2.0   | 08 Jul 14         | MGC-PUMP-LCD BRACKET                       |
| GC003-004                                | 1 of 1  | 2.0   | 08 Jul 14         | MGC-PUMP-Cushion-Pad                       |
| GC003-005                                | 1 of 1  | 3.0   | 08 Jul 14         | MGC-PUMP-Battery-Case                      |
| GC003-009                                | 1 of 1  | 2.0   | 08 Jul 14         | MGC-PUMP-PCB-Assembly                      |
| GC003-010                                | 1 of 1  | 2.0   | 08 Jul 14         | MGC-PUMP-Pump-Housing                      |
| GC003-012                                | 1 of 1  | 2.0   | 08 Jul 14         | MGC-PUMP-Sensor-Pad                        |
| GC003-013                                | 1 of 1  | 2.0   | 08 Jul 14         | MGC-PUMP-Chamber                           |
| GC003-014                                | 1 of 1  | 2.0   | 08 Jul 14         | MGC-PUMP-Gas-Inlet                         |
| GC003-015/016/017                        | 1 of 1  | 2.0   | 08 Jul 14         | Labels                                     |
| GC003-015                                | 1 of 1  | 0.3   | 08 Jul 14         | MGC-PUMP-Label-Bubble                      |
| GC003-016                                | 1 of 1  | 5     | 08 Jul 14         | MGC-PUMP-Label-Back-Model                  |
| GC003-017                                | 1 of 1  | 0.4.1 | 08 Jul 14         | Label-Back-Serial (MGC-P/IR-Pump)          |
| GC003-018/019                            | 1 of 1  | 2.0   | 08 Jul 14         | MGC-PUMP-Donaldson-Filter                  |
| GC003-020                                | 1 of 1  | 1.0   | 08 Jul 14         | MGC-PUMP-Pellet-Filter                     |
| GC003-021                                | 1 of 1  | 2.0   | 08 Jul 14         | MGC-PUMP-Insert-Molding-Part               |
| Gc003-023                                | 1 of 1  | 4.0   | 08 Jul 14         | MGC-PUMP-Battery Pack Assembly             |
| GC003-023-005                            | 1 of 1  | 2.0   | 08 Jul 14         | PTC  |
| GC003-023-006                            | 1 of 1  | 1.0   | 08 Jul 14         | Ni-Plate                                   |
| GC003-023-007                            | 1 of 1  | 1.0   | 08 Jul 14         | Ni-Plate                                   |
| GC003-023-008                            | 1 of 1  | 1.0   | 08 Jul 14         | Ni-Plate                                   |
| GC003-023-009                            | 1 of 1  | 3.0   | 08 Jul 14         | Nomex-TAPE                                 |
| GC003-023-012                            | 1 of 1  | 1.0   | 08 Jul 14         | ECO-FILM                                   |
| GC003-023-013                            | 1 of 1  | 1.0   | 08 Jul 14         | ECO-FILM                                   |
| GC003-904                                | 1 of 1  | 2.0   | 08 Jul 14         | MGC-PUMP-Bolt                              |
| PCM SCHEMATIC                            | 1 of 1  | 0.1   | 08 Jul 14         | MGC Pump battery pack protection schematic |
| MGC PUMP Schematic                       | 1 of 1  | 3.0.3 | 08 Jul 14         | MGC PUMP main schematic                    |
| Multi Gas Clip Pump<br>Bill of Materials | 1 of 9  | 3.3   | 08 Jul 14         | 00176 (MGC-IR-Pump-Boxed Unit)             |
|  | 2 of 9  | 3.3   | 08 Jul 14         | 00177 (MGC-P-Pump-Boxed Unit)              |
|  | 3 of 9  | 3.3   | 08 Jul 14         | 00488(MGC-Charger-Selection)               |
|  | 4 of 9  | 3.3   | 08 Jul 14         | 00174(MGC-IR-Pump-Unit)                    |
|  | 5 of 9  | 3.3   | 08 Jul 14         | 00175(MGC-P-Pump-Unit)                     |
|  | 6 to 7  | 3.3.1 | 08 Jul 14         | 00171(MGC-Pump-PCB)                        |
|  | 8 of 9  | 3.3.1 | 08 Jul 14         | 00173(MGC-Pump-Battery Pack)               |
|  | 9 of 9  | 3.3   | 08 Jul 14         | 00172(MGC-Pump-Battery PCB)                |
| MGC Pump PCB Layers                      | 1 to 13 | 3.1   | 08 Jul 14         | MGC Pump PCB Layers v3.0 (CAM350)          |
| MGC Pump PCM PCB<br>Layers               | 1 to 8  | B     | 08 Jul 14         | MGC Pump PCM PCB Layers (CAM350)           |

## Issue 1

| Drawing no. | Sheets | Rev   | Date (Sira stamp) | Title                     |
|-------------|--------|-------|-------------------|---------------------------|
| GC003-016   | 1 of 1 | 4.3.1 | 28 Nov 14         | MGC-PUMP-Label-Back-Model |

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## Certificate Annexe



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**Equipment:** Portable Gas Detector, Multi Gas Clip,  
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### Issue 2

| Drawing no.                           | Sheets | Rev   | Date (Sira stamp) | Title                        |
|---------------------------------------|--------|-------|-------------------|------------------------------|
| Multi Gas Clip Pump Bill of Materials | 8 of 9 | 3.4.0 | 12 May 16         | 00173(MGC-Pump-Battery Pack) |
| GC003-016                             | 1 of 1 | 4.5.0 | 12 May 16         | MGC-PUMP-Label-Back-Model    |

### Issue 3

| Drawing no.                           | Sheets | Rev   | Date (Sira stamp) | Title                     |
|---------------------------------------|--------|-------|-------------------|---------------------------|
| Multi Gas Clip Pump Bill of Materials | 1 of 1 | 3.3.2 | 09 Jan 17         | 00174(MGC-IR -Pump-Unit)  |
|                                       | 1 of 1 | 3.3.2 | 09 Jan 17         | 00175(MGC-P-Pump-Unit)    |
| GC003-016                             | 1 of 1 | 4.6.0 | 09 Jan 17         | MGC-PUMP-Label-Back-Model |

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