

1 **EU - TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres  
Directive 2014/34/EU**

3 EU - Type Examination Certificate Number: **SGS23ATEX0156X**

4 Product: **L-TEK P100 Laser Methane Gas Detector**

5 Manufacturer: **Crowcon Detection Instruments (Beijing) Ltd.**

6 Address: **Floor 3, Building 7, No.156 4th Jinghai Rd, BDA, Beijing, 101111 China**

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

8 SGS Fimko Oy, Notified Body number 0598, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report No. **GB/SGS/ExTR23.0123/00**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN IEC 60079-0:2018 EN 60079-11:2012 EN 60079-28:2015**

except in respect of those requirements listed at item 18 of the Schedule.

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

11 This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the product shall include the following :

**⊕ II 2 G Ex ib op is IIB T4 Gb (-20 °C ≤ Ta ≤ +50 °C)**

SGS Fimko Oy Customer Reference No. **8195**

Project File No. **23/0443**

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13

## Schedule

14

### Certificate Number SGS23ATEX0156X

#### 15 Description of Product

The mini open-path laser methane gas detector L-TEK P100 uses TDLAS (Laser Spectroscopy) technology to quantitatively measure the concentration of methane in the target area by absorbing the specific wavelength.

The dimensions of the L-TEK P100 is about 138mm×49mm×34.5mm, it consists of a enclosure, one rechargeable battery packs ZP-1S3P-001 for supply power, 1 screen display, 1 buzzer for sound alarm, six multi-function button, Laser module, and PCBAs. The enclosure is composed of the front and back metal AL6061 housing covers, the upper glass cover, a transparent acrylic display window cover, six silica gel buttons. Charger connector is provided to charge the battery packs in a non-hazardous area, refer to “Specific Conditions of Use” for more information.

The circuits are designed as “Ex ib”, the indicating green laser module and the detecting laser diode are designed as “Ex op is”.

#### 16 Report Number

GB/SGS/ExTR23.0123/00

#### 17 Specific Conditions of Use

1. Do not open when an explosive atmosphere is present.
2. The battery is not replaceable in hazardous areas.
3. Do not charge the battery in hazardous location.
4. Maximum output voltage from charger shall not exceed 5.0V (Um).

#### 18 Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
1.2.7	Protection against other hazards (LVD type requirements, etc.)
1.2.8	Overloading of equipment (protection relays, etc.)
1.4.1	External effects
1.4.2	Aggressive substances, etc.

#### 19 Drawings and Documents

Number	Sheet	Issue	Date	Description
PGC50-PM-SCH01	1 of 1	V0.2	2023-04-02	Screen Control Board Schematic
PGC50-PM-SCH02	1 of 1	V0.2	2023-04-02	Screen Flex Board Schematic
PGC50-EQ-SCH01	1 of 1	V0.1	2023-04-02	Equivalent Circuit
PGC50-MK-SCH01	1 of 1	V0.2	2023-04-02	Main Control Board of Methane Sensor
PGC50-MK-SCH02	1 of 1	V0.2	2023-04-02	LD Driver Board of Methane Sensor
PGC50-MK-SCH03	1 of 1	V0.2	2023-04-02	Front-end Amplifier Board of Methane Sensor
PGC50-BT-SCH01	1 of 1	V0.1	2023-04-02	Lithium battery protection board

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Number	Sheet	Issue	Date	Description
PGC50-PM-BOM01	1 to 5	V0.2	2023-04-02	Screen control board BOM
PGC50-PM-BOM02	1 of 1	V0.2	2023-04-02	Screen Flex Board BOM
PGC50-MK-BOM01	1 to 2	V0.2	2023-04-02	Methane sensor main control board BOM
PGC50-MK-BOM02	1 to 2	V0.2	2023-04-02	Methane sensor LD driver board BOM
PGC50-MK-BOM03	1 of 1	V0.2	2023-04-02	Methane sensor front-end amplifier board BOM
PGC50-BT-BOM01	1 of 1	V0.1	2023-04-02	Lithium battery protection board BOM
PGC50-PM-PCB01	1 to 12	V0.1	2023-04-02	Screen control board PCB
PGC50-MK-PCB01	1 to 10	V0.1	2023-04-02	Methane sensor main control board PCB
PGC50-MK-PCB02	1 to 12	V0.1	2023-04-02	Methane sensor LD driver board PCB
PGC50-MK-PCB03	1 to 10	V0.1	2023-04-02	Methane sensor front-end amplifier board PCB
PGC50-BT-PCB01	1 to 10	V0.1	2023-04-02	Lithium battery protection board PCB
PGC50-00-JG00	1 of 1	V0.1	2023-04-02	Handheld laser methane telemetry final assembly drawing
PGC50-00-BAT	1 of 1	V0.1	2023-04-02	Handheld laser methane battery assembly drawing
PGC50-00-MU	1 to 28	V0.1	2023-04-02	Product User Manual
PGC50-00-CCP	1 to 9	V0.1	2023-04-02	Conformal Coating Process Document
PGC50-00-DP	1 to 7	V0.1	2023-04-02	Dispensing Process Document
PGC50-00-NP	1 of 1	V0.1	2023-04-02	Product Nameplate
PGC50-00-TAG	1 of 1	V0.1	2023-04-02	Product Label
PGC50-00-BL	1 of 1	V0.1	2023-04-02	Battery Label Drawing

The above drawings are common to IECEx SGS 23.0078X