[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: **DEMKO 11 ATEX 1031772X Rev. 7**

[4] Product: **Gas-Pro Portable Hand-held Gas Detector**

[5] Manufacturer: **Crowcon Detection Instruments Ltd.**

[6] Address: **172 Brook Drive, Milton Park, Abingdon, Oxfordshire, OX14 4SD, UK**

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

[8] UL International Demko A/S, notified body number 0539 in accordance with Article 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to 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. **DK/ULD/ExTR11.0005/07**

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

EN 60079-0:2012+A11:2013 EN 60079-1:2014 EN 60079-11:2012

[10] If the sign "**X**" is placed after the certificate number, it indicates that the product is subject to special conditions for safe 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 the certificate.

[12] The marking of the product shall include the following:

II 1 G Ex ia IIC T4 Ga -20°C ≤ Ta ≤ +55°C

II 2 G Ex db ia IIC T4 Gb -20°C ≤ Ta ≤ +55°C

Certification Manager
Jan-Erik Storgaard

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2011-06-01
Re-issued: 2021-03-10

Notified Body UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
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[15] Description of Product

Gas-Pro is a portable, hand-held, re-chargeable battery operated Gas Detector used for the detection of Combustible and Toxic gases, and Oxygen depletion. The unit functions as an alarm and data-logger. The circuitry is housed within a polymeric enclosure manufactured from clear polycarbonate over-moulded with static-dissipative TPE in orange, red, or black with openings in the TPE providing display windows. Battery charging and data transfer to the equipment is by the use of an optional charging and communications cables, for use in a safe area only. An optional pump is available to facilitate gas sampling.

The Main PCB is divided into separate power limiting nets to distribute power to processor, gas sensors, vibrator, sounder and pump drive circuitry. It interfaces to a charging and communications Interface and to the separate Display PCB. Up to 4 Gas Sensors are fitted of the infrared, pellistor, PID, toxic and oxygen types. The infrared, pellistor and PID type are suitably certified components. All sensors are located within energy limited circuitry

The equipment is designed to be used with a defined selection of toxic/O2 electrochemical gas sensors and one or more flammable/pellistor gas sensor. The flammable/pellistor gas sensors are 'Ex db' certified components or certified equipment. Alternatively, one or more of the permitted flammable/pellistor gas sensors are certified to the intrinsically safe protection concept only.

The certification type is assigned at the time of manufacture based on the sensors fitted to the equipment. Adding or removing sensors from an instrument configuration is forbidden as it can change the certification type. If any of the following sensors in Table 1 are fitted to the equipment, then the certification type is "Ex db ia".

Table 1 – Sensors leading to Certification Type "Ex db ia"

Sensor Part No	Detector Type
SS0151	Pellistor
SS0101	Pellistor
SS0280	Infrared CO2
SS0201	Infrared flammable

If none of the sensors in Table 1 are fitted to the equipment, then the certification type is "Ex ia".

The Main PCB types determine the type of sensors fitted as follows:

Main PCB Assy No. (Crowcon Part Number)	Sensors Configuration
1004-1080 (S013005)	Toxic (Universal)
	Toxic (Single)
	Combustible (IR)
	Oxygen
1004-1047 (S013001)	Toxic (Universal)
	Pellistor or PID (5V max)
	Toxic (Single)
	Oxygen
1004-1047-01 (S013021)	Toxic (Universal)
	Pellistor or PID (4.25V max)
	Toxic (Single)
	Oxygen
1004-1042 (S013002)	Toxic (Universal)
	Pellistor or PID (5V max)
	Combustible (IR)
	Oxygen
1004-1042-01 (S013022)	Toxic (Universal)
	Pellistor or PID (4.25V max)
	Combustible (IR)
	Oxygen
ECAD-000106 (S013004)	Toxic (Universal)
	Pellistor or PID (5V max)
	Pellistor or PID (5V max)
	Oxygen
ECAD-000106-01 (S013024)	Toxic (Universal)
	Pellistor or PID (4.25V max)
	Pellistor or PID (4.25V max)
	Oxygen

The Display PCB consists of LCD Module, Display Processor, LED backlight, interface circuits to Main PCB and LED lights for displaying status of the unit. The Battery is a re-chargeable Li-Ion battery wired to the Main PCB. A flow plate used to facilitate the flow of gases over the sensor heads is screwed to the front of the Gas-Pro enclosure.

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Performance testing
The measuring function of the Gas-Pro for explosion protection, according to Annex II clause 1.5.5, 1.5.6 and 1.5.7 of the Directive 2014/34/EU, is not covered in this certificate.

The optical radiation output of the product with respect to explosion protection, according to Annex II clause 1.3.1 of the Directive 2014/34/EU is covered in this certificate based on Exception 1) to the scope of EN 60079-28:2015.

Temperature range:
Safe Area: 0 °C to +40 °C. (Charging and communication)
Hazardous Area: -20 °C to +55 °C.

Electrical data
Intrinsically safe specifications:
U_m : 9.1 V

Routine tests
None.

[16] Descriptive Documents
The scheduled drawings are listed in the report no. provided under item no. [8] on page 1 of this EU-Type Examination Certificate.

[17] Specific conditions of use:
- Only connect to Gas-Pro in a safe area for charging or communications.
- Gas-Pro must not be charged or have communication to the device, at ambient temperatures outside of the temperature range 0°C to 40°C.

[18] Essential Health and Safety Requirements
The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

Additional information
The Gas-Pro has been assessed as meeting the requirements for Ingress Protection to IP 20 in accordance with EN60529:1991+A1:2000+A2:2013.

The trademark CROWCON will be used as the company identifier on the marking label.

The certified Gas Sensors used in the Gas-Pro have been assessed based on their rated parameters. These devices are separately certified equipment or components that are controlled outside the scope of this certification. The manufacturer shall monitor the certification of these equipment/components to ensure that the use of these devices remains within certification of this equipment and shall notify the certification authority of any changes to these devices that may affect this certification.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in Annex III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.