[1]

UNITED KINGDOM CONFORMITY ASSESSMENT
UK-TYPE EXAMINATION CERTIFICATE

[2]

Product or Protective System Intended for use in Potentially Explosive Atmospheres
UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1

[3]   UK-Type Examination Certificate No.:   **UL21UKEX2261 Rev. 1**

[4]   Product: **Type T4 Portable Gas Detector**

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

[6]   Address: **172 Brook Drive, Milton Park, Abingdon, Oxfordshire, OX 14 4SD United Kingdom**

[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 (UK) Ltd, Approved Body number 0843, in accordance with Regulation 44 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended by UKSI 2019:696), 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 Schedule 1 of the Regulations.
The examination and test results are recorded in the confidential report **UKRCC-4790404151.1**.

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

EN IEC 60079-0:2018   EN 60079-1:2014   EN 60079-11:2012

Except in respect of those requirements listed at section 19 of the schedule to this certificate.

[10]   If the sign "X" is placed after the certificate number, it indicates that the product is subject to specific conditions of use specified in the schedule to this certificate.

[11]   This UK-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations 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:

⟨Ex⟩ **II 1 G   Ex ia IIC T4 Ga   (T4 Type 1)**

⟨Ex⟩ **II 2 G   Ex db ia IIC T4 Gb   (T4 Type 2)**

Certification Manager
Andrew Moffat

Date of issue: 2022-02-18

Re-issued: 2022-05-23

Approved Body   UL International (UK) Ltd Unit 1-3 Horizon Kingsland Business Park Wade Road, Basingstoke RG24 8AH, UK
Phone : +44 (0)1256 312100

Form-ULID-006123.1 – Issue 3.0   A UKAS accredited certification body No. 4705
Page 1 of 3
This certificate may only be reproduced in its entirety and without any change, schedule included.

[15]   Description of Product
'T4' is a portable gas detector designed to measure concentration of gases and to indicate excessive levels to the user by means of audible/visual/vibrating alarms.

The enclosure consists of a 2 piece casing secured by 6 self-tapping screws. The case material is a clear polycarbonate over-moulded with static dissipative TPE (orange, black or red). Openings are provided in the top part of the case to allow gas access to the sensors within the equipment.

There are 2 PCBs within the enclosure – the Main PCB (containing the majority of the electronics) and the Sensor PCB. These PCBs connect by means of PCB mounted plug/socket which are mechanically secured together.

Power is provided by a single, rechargeable Li-ion battery (types Sanyo UF103450P or E-One Moli Energy ICP103450CA) which is permanently fitted inside the equipment enclosure and connected to the Main PCB, which is not user-replaceable.

The equipment is designed to be used with a defined selection of toxic/O2 electrochemical gas sensors and flammable/pellistor gas sensors. The flammable/pellistor gas sensors intended for use in 'T4' are either 'Ex db' or 'Ex ia' certified components. Therefore, there are 2 variants of 'T4' with either 'Ex db ia' or 'Ex ia' protection concepts.

External connections are provided for use in the non-hazardous area for battery charging and communications to computers.

The equipment is supplied with an optional filter plate accessory, which is an entirely non-metallic fitting that clips over the sensor openings.

Nomenclature for type:

	T4 Type 1	Intrinsically Safe
	T4 Type 2	Intrinsically safe with flameproof sensor

Performance testing
The measuring function of the product for explosion protection, according to Schedule 1 clause 24 of the Regulation 2016 No. 1107 (as amended by UKSI 2019:696) is not covered in this certificate.

The optical radiation output of the product with respect to explosion protection, according to Schedule 1 clause 16 of the Regulation 2016 No. 1107 (as amended by UKSI 2019:696) is covered in this certificate based on Exception 1) to the scope of EN 60079-28:2015.

Temperature range
The ambient temperature ranges are:
   Hazardous area: -20 °C to +55 °C
   Safe area: 0 °C to +40 °C (battery charging/communications)

Electrical data
3.8 V (nominal battery)

Intrinsically safe specifications:
Um : 9.1 V

Routine tests
None

[16]   Test Report No. (associated with this certificate issue)
ExTR Number DK/ULD/ExTR15.0003/09.

[17]   Specific conditions of use:
None

[18]   Conditions of certification:
Where ATEX certified Ex Components or Ex Equipment are used, it is the responsibility of the manufacturer to ensure that only Ex Components or Ex Equipment having equivalent UKEx certification are used after the permission to accept such ATEX certified Ex Component or Ex Equipment is withdrawn.

[19]   Essential Health and Safety Requirements (Regulations Schedule 1)
In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the relevant reports.

Additional information:

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

The manufacturer shall inform the approved body concerning all modifications to the technical documentation as described in Annex III to UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1.

[20]   Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
T4 Sensors – Certification Control Document	ENG-000600	06	17/03/2022
T4 Battery Assembly	MCAD-002035	01	10/10/2014
T4 Front Case	MCAD-002498	01	26/09/2014
T4 Certification GA	MCAD-002500	03	16/03/2022
T4 Clip On Sensor Filter Plate	MCAD-002511	01	30/01/2015
T4 Sensor Filter Plate Assembly	MCAD-002512	01	05/08/2014
T4 Sensor Insulator	MCAD-002548	01	05/08/2014
T4 Sensor Insulator	MCAD-004057	01	14/09/2021
T4 Main PCB Potting Details	MCAD-002554	01	13/03/2015
T4 Potting Box	MCAD-002563	01	02/09/2014
LCD Module	MCAD-002879	02	07/12/2021
Grip Clip	3072	10	21/02/2011
Grip Clip	3072	11	21/02/2011
T4 Main PCB Circuit Diagram (4 pages)	ECAD-000143-CD-CERT	12	25/03/2015
T4 Main PCB Parts List	ECAD-000143-PL-CERT	14	15/09/2021
T4 Main PCB (8 pages)	ECAD-000143-PCB-CERT	11	27/09/2021
T4 Sensor PCB Circuit Diagram	ECAD-000144-CD-CERT	9	26/02/2015
T4 Sensor PCB Parts List	ECAD-000144-PL-CERT	10	25/03/2015
T4 Sensor PCB (10 pages)	ECAD-000144-PCB-CERT	8	26/01/2015
T4 Sensor PCB Circuit Diagram	ECAD-000227-CD-CERT	1	21/01/2022
T4 Sensor PCB Parts List	ECAD-000227-PL-CERT	1	21/01/2022
T4 Sensor PCB (10 pages)	ECAD-000227-PCB-CERT	1	20/01/2022
T4 Rear Case	MCAD-002499	01	30/01/2015
T4 Rear Case	MCAD-002499	02	30/09/201
T4 Instrument Serial Number Label	MCAD-002521	02	30/09/2015
T4 Vibrator	MCAD-002553	03	31/01/2018
T4 Clip on Aspirator Plate	MCAD-003207	01	23/09/2015
T4 Clip on Aspirator Plate	MCAD-003214	01	23/09/2015
Minimum Manual Content T4 – Certification Control Document	ENG-000656	07	11/02/2022
RFI Rear Case Shielding	MCAD-004059	01	16/11/2021
RFI Front Case Shielding	MCAD-004060	02	19/11/2021
UKCA Type 2 Label	MCAD-004024	01	23/08/2021
UKCA Type 1 Label	MCAD-004027	01	23/08/2021
UK MCA Type 1 Label	MCAD-004041	02	2022-02-14
UK MCA Type 2 Label	MCAD-004044	01	2021-08-26