IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx CML 21.0002X**

Page 1 of 4

Certificate history:

Issue 3 (2022-06-06)
Issue 2 (2022-03-24)
Issue 1 (2022-01-21)
Issue 0 (2021-04-14)

Status: **Current**

Issue No: 4

Date of Issue: 2023-01-17

Applicant: **Detectronic Limited**
Whitewalls Industrial Estate
Regent Street
Colne
Lancs
BB8 8LJ
United Kingdom

Equipment: **LIDoTT Smart, External battery pack and LIDoTT Alarm**

Optional accessory:

Type of Protection: **Intrinsic Safety "ia"**

Marking: Ex ia IIB T4 Ga

Ta = -20°C to +60°C

Approved for issue on behalf of the IECEx Certification Body: **A Snowdon**

Position: **Certification Manager**

Signature: (for printed version)

Date: (for printed version) 2023-01-17

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Eurofins E&E CML Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom

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Manufacturer: **Detectronic Limited**
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Regent Street
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Manufacturing locations: **Detectronic Limited**
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This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

GB/CML/ExTR21.0003/00
GB/CML/ExTR22.0008/00
GB/CML/ExTR22.0069/00
GB/CML/ExTR22.0109/00
GB/CML/ExTR22.0250/00

Quality Assessment Report:

GB/SIR/QAR08.0019/13

IECEx Certificate of Conformity

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The LIDoTT Smart and LIDoTT Alarm is a flow monitoring device (data logging Global System for Mobile Communications (GSM) with optional sensors) for use within sewer networks.

Refer to Certificate Annex for full description and Conditions of Manufacture.

SPECIFIC CONDITIONS OF USE: YES as shown below:
Refer to Certificate Annex for Specific Conditions of Use.

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1

This issue introduced the following modifications:

1. Changes to non-safety critical components.
2. Change to circuit capacitance.

Issue 2

This issue introduced the following modification:

1. To introduce an alternative potting compounds.

Issue 3

This issue introduced the following modifications:

1. The introduction of alternative IC's.
2. New PCB layout to accommodate the new IC's.
3. Change to the label to allow for non-certification related changes.
4. Removal of the LIDoTT Alarm.

Issue 4

This issue introduced the following modifications:

1. Introduction of the LIDoTT Alarm.
2. Alternative battery Pack for the LIDoTT Alarm.
3. Defining the Antenna port parameters.

Annex:

IECEx CML 21.0002X Annex Iss 4.pdf

Annexe to:	**IECEx CML 21.0002X, Issue 4**
Applicant:	**Detectronic Ltd**
Apparatus:	**LIDoTT Smart, External battery pack and LIDoTT Alarm**

Description

The LIDoTT Smart is a flow monitoring device (data logging Global System for Mobile Communications (GSM)) for use within sewer networks. It is housed in a plastic moulded case and designed for connection to suitably certified associated equipment.

The LIDoTT Smart will be fastened to the sewer wall by means of a bracket and bolts. It is powered from a battery pack. The battery pack is either internal (contained within the enclosure) or externally connected by a plug and short length of cable. Only the external battery pack is replaceable.

LIDoTT Smart comprises a Data Logger / GSM Modem board which may be connected to suitably certified equipment such as the LIDoTT Sensor. There is an option for the datalogger/GSM board to be fitted with an internal antenna or through a socket in the base.

The data Logging GSM board has two output sensor connections with the following parameters:

Uo	=	7.14V
Io	=	150 mA
Po	=	0.65W
Co	=	10 nF
Lo	=	0

There is an external antenna connection for suitable certified antennas or simple apparatus, with the following port parameters:

Uo	=	7.14V
Io	=	0.7 mA
Po	=	0.001 W
Co	=	0
Lo	=	47 nH

The internal or external battery pack is fully encapsulated, the internal battery pack has three cells, and the external battery pack comprises of four cells.

An optional LIDoTT Alarm model comprises the main board within the LIDoTT Smart and a radar sensor board. This has an internal battery pack that consists of two cells.

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Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components, the manufacturer of the product defined on this certificate shall continually monitor these parts/components for any modifications introduced by the manufacturer(s) of these constituent parts. If the manufacturer of any constituent part introduces any changes which affect the compliance of the certified product that is the subject of this certificate, the manufacturer is required to have this certificate updated.

Specific Conditions of Use

The following conditions relate to safe installation and/or use of the equipment.

i. Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore, the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth. This is particularly important if the equipment is installed in a zone 0 location.

ii. Only an approved LIDoTT Battery Pack may be used for either internal or external use.

iii. Only suitably certified Antennas that meet (or are less than) the following port parameters can be connected to the Antenna port or Antennas that have been defined as Simple Apparatus:

Ui	=	7.14V
Ii	=	0.7 mA
Pi	=	0.001 W
Ci	=	13.5 µF
Li	=	1 mH