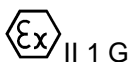# EU Type Examination Certificate   CML 21ATEX2097X   Issue 0

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

2   Equipment   **LIDoTT Smart, LIDoTT Alarm, Dual PTI and External battery pack**

3   Manufacturer   **Detectronic Ltd**

4   Address   **Regent St,**

   Whitewalls Industrial Estate,

   Colne,

   Lancashire, BB8 8LJ, UK

5   The equipment is specified in the description of this certificate and the documents to which it refers.

6   CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout The Netherlands, Notified Body Number 2776, 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 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 12.

7   If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8   This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9   Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

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

10   The equipment shall be marked with the following:

   ⟨Ex⟩ II 1 G

   Ex ia IIB T4 Ga

   Ta=-20°C to +60°C

This certificate shall only be copied   1 of 3   S. Roumbedakis
in its entirety and without change   Technical Manager
www.CMLEx.com

11 Description

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. It is housed in a plastic moulded case and designed for connection to suitably certified associated equipment. The main PCB is identical with both the LIDoTT Smart and LIDoTT Alarm, the pressure sensors connections through the Dual PTI (Pressure Transducer Interface).

The LIDoTT Smart and LIDoTT Alarm 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 external connected by a plug and short length of cable. Only the external battery pack is replaceable.

The LIDoTT Smart/Alarm comprises two PCBs: a data logging GSM board and a Dual PTI board (with single pressure sensor), both boards are encapsulated. The Dual PTI board achieves intrinsic safety through limited voltage and current available from the logger/GSM board. Optional sensors are fitted at manufacture. Data and configuration are accessed via GSM or Bluetooth.

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

U_o = 7.14V

I_o = 150 mA

P_o = 0.65W

C_o = 10 nF

L_o = 0

Two versions of the LIDoTT are available:

1. LIDoTT Alarm comprising a Data Logger / GSM Modem board together with a Dual PTI board for measuring one or two pressure sensors
2. LIDoTT Smart comprising a Data Logger / GSM Modem board which may be connected to a suitably certified equipment such as the LIDoTT Sensor This may also have an optional Dual PTI board fitted to measure one or two pressure sensors.

Both configurations can have an antenna option of a data logger/GSM board that is either fitted internally or to a socket on the base.

The Dual PTI is always fitted within the enclosure by the manufacturer.

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.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	14 Apr 2021	R13811A/00	Issue of Prime Certificate

Note: Drawings that describe the equipment or component are listed in the Annex.

13   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 shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.

14   Specific Conditions of Use (Special Conditions)

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.

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Certificate Annex

Certificate Number   CML 21ATEX2097X

Equipment   LIDoTT Smart, LIDoTT Alarm, Dual PTI and External battery pack

Manufacturer   Detectronic Ltd

The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
C126-PN001-SCH-1.2	1 of 8	1.2	14 Apr 2021	MCU
C126-PN001-SCH-1.2	2 of 8	1.2	14 Apr 2021	Bluetooth
C126-PN001-SCH-1.2	3 of 8	1.2	14 Apr 2021	Cellular
C126-PN001-SCH-1.2	4 of 8	1.2	14 Apr 2021	Antenna Protection
C126-PN001-SCH-1.2	5 of 8	1.2	14 Apr 2021	Magnet Detect
C126-PN001-SCH-1.2	6 of 8	1.2	14 Apr 2021	Power Supplies
C126-PN001-SCH-1.2	7 of 8	1.2	14 Apr 2021	LIDoTT & RS485
C126-PN001-SCH-1.2	8 of 8	1.2	14 Apr 2021	ATEX Protection
C131-PN001-1-SCH	1 of 1	2	14 Apr 2021	LIDoTT Battery Pack
C130-PN001-2	1 of 1	1	14 Apr 2021	Dual PTI ATEX Schematic
P130-PN001-2-BOM-1	1 of 1	1	14 Apr 2021	Dual PTI ATEX BoM
C131-DRW003-1	1 of 1	1	14 Apr 2021	LIDoTT Smart Front Face Label
C127-DRW003-1	1 of 1	1	14 Apr 2021	LIDoTT Alarm Front Face Label
C127-DRW004-1	1 of 1	1	14 Apr 2021	LIDoTT Alarm Int. Battery and Int. Antenna
C131-DRW002-2	1 of 1	2	14 Apr 2021	LIDoTT Smart Ext. Battery & Ext. Antenna
C131-DRW001-2	1 of 1	2	14 Apr 2021	LIDoTT Smart Int. Battery & Int. Antenna
C126-PN001-1-PCB-1_3	1 to 6	1.3	14 Apr 2021	Detectronic – Obadiah V1.3
C126-1-DRW001-4	1 of 1	4	14 Apr 2021	Obadiah ATEX sector
C131-PN001-2-DRW	1 to 2	2	14 Apr 2021	LIDoTT Smart – Ext. Battery Pack
C131-PN002-2-DRW	1 to 2	2	14 Apr 2021	LIDoTT Smart – Int. Battery Pack
C131-PN004-2-DRW	1 of 1	2	14 Apr 2021	LIDoTT Smart Ext. Battery Pack Label
C126-PN001-1-BOM-1_2	1 of 13	2	14 Apr 2021	LIDoTT Smart Obadiah Board

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