

# 1 EU-TYPE EXAMINATION CERTIFICATE



2 **Equipment or Protective systems intended for use in Potentially Explosive Atmospheres - Directive 2014/34/EU**

3 **EU-Type Examination Certificate No: FM08ATEX0044X**

4 **Equipment or protective system: FlexVu® UD20 Universal Display Unit (Type Reference and Name)**

5 **Name of Applicant: Detector Electronics Corporation**

6 **Address of Applicant: 6901 West 110<sup>th</sup> Street  
Minneapolis, MN 55438  
United States of America**

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

8 FM Approvals Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of 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 confidential report number:

3031089EC dated 24<sup>th</sup> October 2008

9 Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN 60079-0:2018, EN 60079-1:2014, EN 60079-29-1:2016, EN 60079-11:2012  
and EN 60529:1991+A1:2000+A2:2013

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

11 This EU-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include:



II 2 G Ex db IIC T6 Ta = -20°C to +70°C; IP66

II 1 G Ex ia IIC T4 Ga Ta = -20°C to +70°C; IP66

EN 60079-29-1

**Richard Zammitt**  
**Certification Manager, FM Approvals Europe Ltd.**

Issue date: 18<sup>th</sup> January 2023

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

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# SCHEDULE



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to EU-Type Examination Certificate No. FM08ATEX0044X

## 13 Description of Equipment or Protective System:

The FlexVu® Model UD20 Universal Display units is designed to be used with the GT3000 Toxic Gas Detector or PIRECL Combustible Gas Detector. The UD20 functions as a pass through device, reading the linear 4-20 mA dc output signal from the gas detector. The detected gas concentration is indicated on an alpha-numeric display. The UD20 automatically detects the gas type and operating range of the sensor to which it is connected via the HART signal.

The UD20 Instrument Housing is of stainless steel or aluminium. There are five entries tapped for either ½ inch NPT, ¾ inch NPT, M20 or M25. The cover screws directly to the base of the enclosure and has a cemented window on the face of the cover.

The operating temperature range of the equipment is -20°C to +70°C.  
Firmware: 009850-001 Rev. E

Electrical parameters:  
U = 18-30 Vdc, P = 1 W maximum

### **FlexVu® UD20abc26de. Universal Display Unit.**

- a = Enclosure Type: A or S.
- b = Number of Ports: 2, 3, 4, or 5.
- c = Thread Type: E, F, N or M.
- d = Approval: E, T or W
- e = Classification: 2 (Ex ia) or 4 (Ex db)

Energy limitation parameters  
U<sub>i</sub> = 30 V, I<sub>i</sub> = 200 mA, P<sub>i</sub> = 1.0 W, C<sub>i</sub> = 29.1 nF, L<sub>i</sub> = 0  
U<sub>o</sub> = 30 V, I<sub>o</sub> = 200 mA, P<sub>o</sub> = 1.0 W, C<sub>o</sub> = \*, L<sub>o</sub> = \*  
\*see Control Drawing 009803-001

## 14 Specific Conditions of Use:

1. The UD20 control unit complies with EN 60079-29-1 only when connected to a Detector head that also has been evaluated to EN 60079-29-1.
2. Flameproof joints are not user serviceable; contact Det-Tronics Service.
3. The enclosure contains aluminum and is considered a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.

## 15 Essential Health and Safety Requirements:

The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

## 16 Test and Assessment Procedure and Conditions:

This EU-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Europe Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

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This Certificate has been issued in accordance with FM Approvals Europe Ltd's ATEX Certification Scheme.

## 17 **Schedule Drawings**

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

## 18 **Certificate History**

Details of the supplements to this certificate are described below:

<b>Date</b>	<b>Description</b>
29 <sup>th</sup> October 2008	Original Issue.
11 <sup>th</sup> June 2009	<u>Supplement 1:</u> Report Reference: Supplement 3 to 3031089EC dated 5 <sup>th</sup> June 2009 Description of the Change: Improvements to firmware.
8 <sup>th</sup> February 2010	<u>Supplement 2:</u> Report Reference: Supplement 4 to 3031089ED dated 2 <sup>nd</sup> February 2010 Description of the Change: Improvements to firmware.
26 <sup>th</sup> March 2013	<u>Supplement 3:</u> Report Reference: 3031089rev120326 Description of the Change: Verification of compliance to EN 60079-0:2009 and EN 60079-1:2007. Revision to markings to comply with EN 60079-0:2009.
5 <sup>th</sup> November 2015	<u>Supplement 4:</u> Report Reference: 3056081 dated 4 <sup>th</sup> November 2015 Description of the Change: 1. Addition of Model PIRECL for use with the Model UD20. 2. Update standards. 3. Updated documentation
16 <sup>th</sup> January 2017	<u>Supplement 5:</u> Report Reference: 3057413 dated 15 <sup>th</sup> January 2017 Description of the Change: Updated documentation.
1 <sup>st</sup> February 2017	<u>Supplement 6:</u> Report Reference: RR207850 dated 25 <sup>th</sup> January 2017 Description of the Change: Updated documentation.
22 <sup>nd</sup> August 2018	<u>Supplement 7:</u> Report Reference: PR450340 dated 10 <sup>th</sup> August 2018 Description of the Change: Updated documentation. Verification of compliance to EN 60079-1:2014. Added firmware version to the certificate.
21 <sup>st</sup> March 2019	<u>Supplement 8:</u> Description of the Change: Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809.
18 <sup>th</sup> January 2023	<u>Supplement 9:</u> Report Reference: PR455397 dated 14 <sup>th</sup> November 2022. Description of the Change: Update of standards and merger with FM08ATEX0043X for UD20 (where EN 60079-11 :2012 was)

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# Blueprint Report

**Detector Electronics Corp (1000000065)**

**Class No 6320**

**Original Project I.D. 3031089**

**Certificate I.D. FM08ATEX0044X**

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>
009778-001	M	DWG, Design Reference UD20, "FM/ATEX" Page 1 to 6	PR455397
95-8620	5.2	FlexVu® Explosion-Proof Universal Display Unit Model UD20 Instructions	PR455397
95-8646	3.3	FlexVu Intrinsically Safe Universal Display Unit Model UD20	PR455397
95-8678	5.2	AV20 installation Manual	PR455397