

CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** FM16US0249
3. **Equipment:** Model FlexVu® Universal Display UD10 Universal Display Unit
(Type Reference and Name)
4. **Name of Listing Company:** Detector Electronics Corp
5. **Address of Listing Company:** 6901 W 110th St
Minneapolis MN 55438
United States
6. The examination and test results are recorded in confidential report number:

3031089 dated 29th January 2009
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM Class 3600:2018, FM Class 3611:2018, FM Class 3615:2018, FM Class 3810:2018,
FM Class 6320:2018, FM 6325:2005, ANSI/ISA 92.0.01:2011, ANSI/ISA-92.00.01:2011, UL 60079-0:2013,
ANSI/ISA 60079-1:2013, ANSI/FM/UL 60079-29-1: 2019, ANSI/NEMA 250:1991,
ANSI/IEC 60529:2004
8. 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.
9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

Certificate issued by:

J.E. Marquedant
VP, Manager - Electrical Systems

14 November 2022

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

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

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
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SCHEDULE

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10. Equipment Ratings:

UD10 - Suitable for installation in Class I, Division 1 and 2, Groups B, C, and D; Class I, Zone 1 and 2 Group IIC; Class II/III Division 1 and 2 Groups E, F, G Hazardous (Classified) Locations, indoor and outdoor (Type 4X / IP66).

11. The marking of the equipment shall include:

UD10:

Class I Division 1, Groups B, C, D; Class I Division 2, Groups B, C, D; T4

Class I, Zone 1, AEx d IIC T5

Class II/III, Division 1/2, Groups E, F, G

NEMA TYPE 4X, IP66

$-50^{\circ}\text{C} \leq \text{Tamb} \leq +75^{\circ}\text{C}$ ($-40^{\circ}\text{C} \leq \text{Tamb} \leq +75^{\circ}\text{C}$ for LON model option)

12. **Description of Equipment:**

Stationary Single Channel 4-20 mA or HART standalone Combustible or Toxic Gas Detector Control Unit. The FlexVu® Universal Display UD10 is suitable for installation in Class I, Division 1 and 2, Groups B, C, and D; Class I, Zone 1 and 2 Group IIC; Class II/III Division 1 and 2 Groups E, F, G Hazardous (Classified) Locations, indoor and outdoor (Type 4X / IP66). The UD/AV10 Universal Display monitors FM Approved combustible gas detectors and sensors which monitor 0-100% LFL or 0 - 5 LFL-m gas-in-air atmospheres, FM Approved toxic gas sensors which monitor up to 9999 PPM gas-in-air atmospheres and 0-25 percent oxygen concentration. The control unit communicates with the detector head via a 4-20 mA signal with or without HART. The control unit provides a Relay, 4-20mA, and HART output with either Modbus or Foundation Fieldbus (FFB) communication; or a LON signal output proportional to the detected gas concentration. Outputs include four relays for alarm and trouble signals. The operating temperature range of the apparatus is -50°C to $+75^{\circ}\text{C}$ (-40°C to $+75^{\circ}\text{C}$ for LON model option) and operating voltage range for the entire system is 18-30 VDC, 7 watts maximum (6 watts maximum for LON model option). In addition, the apparatus complies with FM6320:2018, Approval Standard for Combustible Gas Detectors; ANSI/FM/UL -60079-29-1:2019, Explosive Atmospheres – Part 29-1: Gas detectors – Performance requirements of detectors for flammable gases; ANSI/ISA-92.00.01:2010, Performance Requirements for Toxic Gas Detectors; FM6325:2005, Performance Requirements for Combustible Open Path Gas Monitors; ANSI/ISA-12.13.04:2007, Performance Requirements for Open Path Combustible Gas Detectors. The UD10 with NTMOS complies with the requirements of ISA-92.0.01, Part I-1998.

UD10abcde2f, FlexVu® Universal Display Unit

a = Enclosure Type: A or S

b = Number of ports: 2, 3, 4, or 5

c = Thread Type: E, F, M or N

d = Output: 25, 27 or 28

e = Approval: A, F, S, T or W (one or more letters may be used)

f = Optional Conditioning board: N or blank

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Specifications - The manufacturer's specifications are as follows:

Operating Temperature: -50°C to +75°C (-40°C to +75°C for LON model option)
 Storage Temperature: -55°C to +75°C
 Relative Humidity: 5 to 95% RH
 Supply Parameters: 18-30 VDC, 7 watts maximum (6 watts maximum for LON model option)
 Measurement Signal: 4-20mA
 Calibration: magnet or HART
 Firmware version: Rev 7.03

13. Specific Conditions of Use:

None.

14. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

15. Schedule Drawings

A copy of the technical documentation has been kept by FM Approvals.

16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
29 th January 2009	Original Issue.
30 th August 2016	Supplement 6: Report Reference: 3057039 dated 30 th August 2016 Description of the Change: 1) Firmware update. 2) ANSI/ISA 60079-0:2005 was updated to UL 60079-0:2013. 3) ANSI/ISA 60079-1:2005 was updated to ANSI/ISA 60079-1:2013. 4) FM 6325 and ANSI/ISA 12.13.04:2007 were added (incorrectly omitted on previous versions). 5) Updated to the new certificate format.
23 rd October 2018	Supplement 7: Report Reference: PR451665 dated 23 rd October 2018 Description of the Change: Firmware update for the UD10 also updated FM3600, FM3611, FM3615, FM3810 and FM6320 to the latest editions.

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XX rd April 2022	<u>Supplement 8:</u> Report Reference: PR455397 dated 14 th November 2022 and PR464221 dated 11 th November 2022. Description of the Change: Firmware update and minor hardware change and update of standards
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