

CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** FM16US0253
3. **Equipment:** Model FlexVu® UD10/CGS Gas Detector 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, 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
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmaprovals.com www.fmaprovals.com

SCHEDULE

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10. Equipment Ratings:

UD10/CGS:- Suitable for installation in Class I, Division 1 and 2, Groups B, C, and D Hazardous (Classified) Locations. With a remote CGS sensor the UD10 display/control unit maintains Class II/III Division 1 and 2 Groups E, F, G and (Type 4X / IP66).

11. The marking of the equipment shall include:

UD10/CGS:

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

-40°C ≤ Tamb ≤ +75

CGS (sensor only):

EXPLOSIONPROOF FOR CL 1, DIV 1, GRPS B,C,D

Tamb = -40°C to +75°C

CONDUIT SEAL NOT REQUIRED.

ACIDIC ATMOSPHERES EXCLUDED.

12. **Description of Equipment:**

Stationary Single Channel 4-20 mA or HART standalone Combustible Gas Detector. The FlexVu® UD10/CGS gas detector is suitable for installation in Class I, Division 1 and 2, Groups B, C, and D Hazardous (Classified) Locations. With a remote CGS sensor the UD10/AV10 display/control unit maintains Class II/III Division 1 and 2 Groups E, F, G and (Type 4X / IP66). The UD10/CGS gas detectors monitors 0-100% LFL methane-in-air atmospheres and can be installed with an integral or remote sensor with a maximum distance from the controller to the sensor of 500 feet. The control unit communicates with the sensor via a proprietary signal. 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 -40°C to +75°C and operating voltage range for the entire system is 18-30 VDC, 11 watts maximum. In addition, they comply with FM 6320:2018 Approval Standard for Combustible Gas Detectors and ANSI/FM/UL 60079-29-1: 2019, Explosive Atmospheres – Part 29-1: Gas detectors – Performance requirements of detectors for flammable gases.

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UD10abcde2C, FlexVu® Universal Display Unit with CGS

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)

AV10abc25d2C, AutoVu® Universal Display Unit with CGS

a = Enclosure Type: A or S
b = Number of ports: 2, 3, 4, or 5
c = Thread Type: E, F, M or N
d = Approval: A, F, S, T or W (one or more letters may be used)

Specifications - The manufacturer's specifications are as follows:

Operating Temperature: -40°C to +75°C
Storage Temperature: -55°C to +75°C
Relative Humidity: 5 to 95% RH
Supply Parameters: 18-30 VDC, 11 watts maximum (10 watts maximum for LON model option)
Measurement Signal: 4-20mA
Calibration: magnet or HART
Firmware version: 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:

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	<ol style="list-style-type: none">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) Updated to the new certificate format.
23 rd October 2018	<p>Supplement 7: Report Reference: PR451665 dated 23rd October 2018 Description of the Change: Firmware update for the UD10 also updated FM3600, FM3611, FM3615, FM3810 and FM6320 to the latest editions.</p>
14 th November 2022	<p>Supplement 8: Report Reference: PR455397 dated 14th November 2022 and PR464221 dated 11th November 2022. Description of the Change: Firmware update and minor hardware change and update of standards.</p>

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