

CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** FM16US0254
3. **Equipment:** Model FlexVu® Universal Display UD20
(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 3610:2021, FM Class 3611:2018, FM Class 3615:2018,
FM Class 3810:2018, FM Class 6320:2018, ANSI/FM/UL 60079-29-1: 2019,
ANSI/ISA-92.00.01:2011, ANSI/UL 60079-0:2013, ANSI/ISA 60079-1:2013, ANSI/ISA-60079-11
(12.02.01):2007, ANSI/NEMA 250:2003, 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

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SCHEDULE

US Certificate Of Conformity No: FM16US0254

10. Equipment Ratings:

UD20 - Suitable for installation in Class I, Division 1 and 2, Groups A, B, C, and D; Class I, Zone 1 and 2 Group IIC Hazardous (Classified) Locations, indoor and outdoor (Type 4X / IP66) and may provide intrinsically safe connections to Class I, Division 1, Groups A, B, C, and D; Class I, Zone 1, Group IIC Hazardous (Classified) Locations in accordance with Entity requirements and Control Drawing 009803-001.

11. The marking of the equipment shall include:

UD20 (Explosionproof):

CL I, DIV 1/2, GRPS B,C,D; CL II/III, DIV 1/2, GRPS E,F,G

CLASS I, ZONE 1, AEx d IIC T6

(Tamb = -20°C to +70°C) NEMA TYPE 4X, IP66

UD20 (Intrinsically Safe):

IS CL I, DIV 1, GRPS A,B,C,D; CL I, DIV 2, GRPS A,B,C,D

CLASS I, ZONE 0, AEx ia IIC T4

CL II/III, DIV 1/2, GRPS E,F,G

(Tamb = -20°C to +70°C) NEMA TYPE 4X, IP66

CONDUIT SEAL NOT REQUIRED

12. **Description of Equipment:**

General - Stationary Single Channel 4-20 mA Combustible or Toxic Gas Detector Display. The Universal Display UD20 is suitable for installation in Class I, Division 1 and 2, Groups A, B, C, and D; Class I, Zone 1 and 2 Group IIC Hazardous (Classified) Locations, indoor and outdoor (Type 4X / IP66) and may provide intrinsically safe connections to Class I, Division 1, Groups A, B, C, and D; Class I, Zone 1, Group IIC Hazardous (Classified) Locations in accordance with Entity requirements and Control Drawing 009803-001. The FlexVu® Model UD20 Universal Display unit is designed to be used with the GT3000 Toxic Gas Detector or PIRECL Combustible Gas Detector. The UD20/AV20 function 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 operating temperature range of the apparatus is -20°C to +70°C In addition, the apparatus complies with ANSI/FM/UL -60079-29-1:2019 Performance requirements of detectors for flammable gases, ANSI/ISA-92.00.01-2011 Performance Requirements for Toxic Gas Detectors.

UD20abc26de, FlexVu® 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

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d = Approval: A, F, T or W
e = Classification: 2 or 4

Entity Parameters

Ui = 30VDC, Ii = 200mA, Ci = 29.1 nF, Li = 0, Pi = 1W
Uo = 30VDC, Io = 200mA, Ca = (See Control Drawing), La = (See Control Drawing), Po = 1W

Specifications - The manufacturer's specifications are as follow;

Operating Temperature: -20°C to +70°C
Storage Temperature: -40°C to +70°C
Relative Humidity: 5 to 99% RH
Supply Parameters: 12.5-30 VDC 1 Watt maximum for Source and detector
Measurement Signal: 4-20mA
Calibration: magnetic or Hart
Firmware: Rev E

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	<u>Supplement 6:</u> Report Reference: – 3057039 dated 30 th August 2016. Revised to new certificate format.
14 th November 2022	<u>Supplement 7:</u> Report Reference: PR455397 dated 14 th November 2022. Description of the Change: Update of standards.

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