

FlexVu™ Explosion-Proof Universal Display Unit Model UD10



DESCRIPTION

The FlexVu™ Model UD10 is recommended for applications that require a gas detector with digital readout of detected gas levels as well as analog 4-20 mA output, relay contacts, and/or Modbus RS485. The UD10 Universal Display Unit is designed for use with Det-Tronics gas detectors such as GT3000, PIR9400, PIRECL, OPECL, C706x*, Model 505/CGS, or NTMOS. The display unit is designed and approved as a 'stand alone' device and performs all the functions of a gas controller.

Gas concentration and unit of measurement are displayed on an alpha-numeric display. The display unit provides a linear isolated/non-isolated 4-20 mA DC output signal (with HART) that corresponds to the detected gas concentration.

All electronics are enclosed in an explosion-proof aluminum or stainless steel housing. The display unit is used with a single detector that may be either coupled directly to the UD10, or remotely located using a sensor termination box. The UD10 features non-intrusive calibration. A magnet is used to perform calibration as well as to navigate the UD10's internal menu.

The UD10 Universal Display can be used with various 4-20 mA gas detection devices, with or without HART. The unit provides display, output and control capabilities for the gas detector.

The UD10 utilizes the following I/O:

Signal Inputs:	4-20 mA loop from the sensing device
User Inputs:	Magnetic switches (4) on the display panel HART Communicator (requires 375 or AMS)
Signal Outputs:	4-20 mA output loop with HART Modbus RS485 Three alarm relays and one fault relay
Visible Outputs:	Backlit LCD display HART slave interface.

FEATURES AND BENEFITS

- Universal design supports multiple Det-Tronics sensors.
- Local 160 x 100 alpha-numeric LCD display, which continuously displays the gas level, gas type, and units measured.
- Backlit and heated display.
- Non-intrusive calibration quickly performed by one person.
- Rugged construction approved for use in classified hazardous areas.
- Linear isolated/non-isolated 4-20 mA output with HART.
- Non-intrusive menu allows device configuration without de-classifying the hazardous area.
- Internal magnetic switches provide a non-intrusive user interface.
- Smart capabilities with access to sensor information and measurement range.
- Event logs: Calibration with date and time stamp.
- Fault logs: Detector fault, Low power and General fault.
- Alarm logs: High gas alarm, Low gas alarm and Aux alarm.

*C7065E O₂ detector is not supported.

SPECIFICATIONS

Operating Voltage	24 Vdc nominal, operating range is 18 to 30 Vdc.
Operating Power	7 watts maximum. Heater off: 2 watts @ 24 Vdc with alarm relays off and 4 mA output. Heater off: 4 watts @ 24 Vdc with alarm relays on and 20 mA output. Heater on: 5.5 watts @ 24 Vdc with alarm relays off and 4 mA output. Heater on: 7 watts @ 24 Vdc with alarm relays on and 20 mA output.

NOTES: – Heater function is not user configurable. Heater turns on when the internal temperature drops below -10°C.
 – Appropriate relays will be activated when a fault or alarm occurs.

Current Output	Linear isolated 4-20 mA output with HART. Maximum loop resistance 600 ohms at 18 to 30 Vdc.
-----------------------	--

Relay Contacts	Three Alarm Relays: Form C, 5 amperes at 30 Vdc. Selectable latching or non-latching. One Fault Relay: Form C, 5 amperes at 30 Vdc. Normally energized for no fault condition with power applied.
-----------------------	--

Operating Temperature	-55°C to +75°C.
------------------------------	-----------------

Storage Temperature	-55°C to +75°C.
----------------------------	-----------------

Humidity Range	15 to 90% RH.
-----------------------	---------------

Wiring Terminals	14 to 18 AWG wire can be used.
-------------------------	--------------------------------

Conduit Entries	3/4" NPT or M25.
------------------------	------------------

Enclosure Material	Epoxy coated aluminum or 316 stainless steel.
---------------------------	---

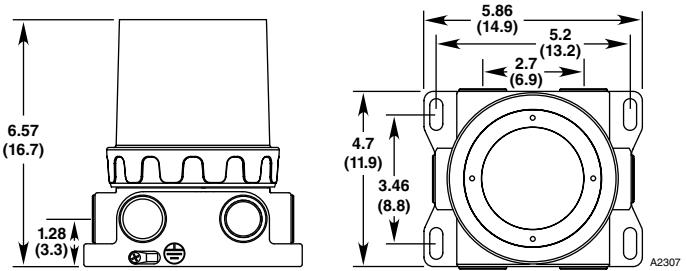
Shipping Weight	Aluminum: 4.15 pounds (1.88 kilograms). Stainless Steel: 10.5 pounds (4.76 kilograms).
------------------------	---

Warranty	12 months from date of installation or 18 months from date of shipment, whichever occurs first.
-----------------	---

Electro-Magnetic Compatibility	EMC Directive 2004/108/EC EN55011 (Emissions) EN50270 (Immunity).
---------------------------------------	---

Refer to Instruction Manual 95-8618 for in-depth information regarding the FlexVu UD10 Universal Display Unit.

Dimensions Dimensions shown in inches (centimeters).



Certification



FM: Class I, Div. 1, Groups A, B, C & D;
Class I, Div. 2, Groups A, B, C & D (T4);
Class I, Zone 1/2 AEx d IIC T6;
Class II/III, Div. 1/2, Groups E, F & G.
Tamb -55°C to +75°C
NEMA/Type 4X, IP66
Conduit seal not required.

Performance verified in accordance with:
ANSI/ISA-92.00.01
ANSI/ISA-92.02.01
FM 6341 (Draft)
ANSI/ISA-12.13.01
ANSI/ISA-12.13.04/FM 6325
FM 6310/6320

CSA: CSA 08 2029512.
Class I, Div. 1, Groups A, B, C & D;
Class I, Div. 2, Groups A, B, C & D (T4);
Class II/III, Div. 1/2, Groups E, F & G.
(Tamb = -55°C to +75°C)
NEMA/Type 4X, IP66
Conduit seal not required.
Performance verified in accordance with:
CSA C22.2 #152.



ATEX: CE 0539 Ex II 2 G
Ex d IIC T6
Tamb -55°C to +75°C
FM08ATEX0042X
IP66
Performance verified in accordance with:
EN 61779-1/-4 and EN 50241-1/-2.



IECEX: Ex d IIC T6
Tamb -55°C to +75°C
IECEX FMG 08.0010X
IP66
Performance verified in accordance with:
IEC 61779-1, -4.

Consideration must be given to overall Combustible Gas System Performance Requirements.

Specifications subject to change without notice.

Det-Tronics, the DET-TRONICS logo, and FlexVu are registered trademarks or trademarks of Detector Electronics Corporation in the United States, other countries, or both. Other company, product, or service names may be trademarks or service marks of others.

©Copyright Detector Electronics Corporation 2008. All rights reserved.



Detector Electronics Corporation

6901 West 110th Street • Minneapolis, Minnesota 55438 USA
Operator: (952) 941-5665 or (800) 765-FIRE
Customer Service: (952) 946-6491 • Fax (952) 829-8750
http://www.det-tronics.com • E-mail: detronics@detronics.com



(248) 524-2211 • Fax (248) 524-1758

Web Site: www.grpeters.com