DET-TRONICS®

A UTC Fire & Security Company

SPECIFICATION DATA

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 with HART, relay contacts, and Modbus RS485 (FOUNDATION™ Fieldbus option available). The UD10 Universal Display Unit is designed for use with Det-Tronics gas detectors such as GT3000, PIR9400, PIRECL, OPECL, C706x*, Model 505/CGS, CGS** or NTMOS, as well as generic linear 4-20 mA sensors. 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 indicated on a digital 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 communication (handheld field communicator or AMS) FOUNDATION™ Fieldbus (if selected)
Signal Outputs:	4-20 mA output loop with HART Modbus RS485 or FOUNDATION™ Fieldbus Three alarm relays and one fault relay
Visible Outputs:	Backlit LCD display HART slave interface via HART communicator.

FEATURES AND BENEFITS

- Universal design supports multiple Det-Tronics sensors or generic linear 4-20 mA sensors.
- Local digital LCD display continuously indicates 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 O_2 detector is not supported.

** Requires the use of a CGS Interface Board. See Instruction Manual 95-8661 for details.

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SPECIFICATIONS

Operating Voltage 24 Vdc nominal, operating range is 18 to 30 Vdc.

Operating Power Standard model, with heater and backlight off:

No alarm: 1.5 watts @ 24 Vdc.
Alarm: 3 watts @ 24 Vdc (20 mA current output, and all 3 alarm relays energized.)
Backlight on: 0.5 watt additional.
Heater on: 3.5 watts additional.
CGS model: Add 4 watts with CGS interface board and CGS sensor installed.

Maximum power in alarm, with heater and backlight on:
7 watts @ 30 Vdc (Standard model)
11 watts @ 30 Vdc (CGS model)

NOTES: – Heater turns on when the internal temperature drops below –10°C. Heater function can be disabled to save power.
– 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 energized/de-energized.
Selectable latching/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 5 to 95% RH (Det-Tronics verified).

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.

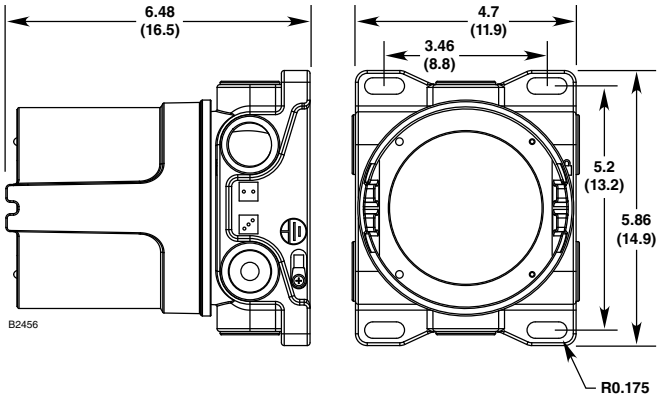
Shipping Weight Aluminum: 4.15 pounds (1.88 kilograms).
Stainless Steel: 10.5 pounds (4.76 kilograms).

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 95-8661 for in-depth information regarding the FlexVu UD10 Universal Display Unit.

Dimensions Dimensions shown in inches (centimeters).



Certification

FM: Class I, Div. 1, Groups B, C & D (T5);
Class I, Div. 2, Groups B, C & D (T4);
Class I, Zone 1/2 AEx d IIC (T5);
Class II/III, Div. 1/2, Groups E, F & G.
T_{amb} –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-12.13.01 (CGS excluded)
FM 6310/6320
ANSI/ISA-12.13.04/FM 6325

CSA: CSA 08 2029512.
Class I, Div. 1, Groups B, C & D (T5);
Class I, Div. 2, Groups B, C & D (T4);
Class II/III, Div. 1/2, Groups E, F & G.
(T_{amb} = –55°C to +75°C)
Type 4X
Conduit seal not required.
Performance verified in accordance with:
CSA C22.2 #152.

ATEX: CE 0539 Ex II 2 G
Ex d IIC T5
T_{amb} –55°C to +75°C
FM08ATEX0042X
IP66
Performance verified in accordance with:
EN 60079-29-1 and EN 50241-1/-2.

IECEx: Ex d IIC T5 Gb
T_{amb} –55°C to +75°C
IECEx FMG 08.0010X
IP66
Performance verified in accordance with:
IEC 60079-29-1.