

AUTROVU AV10 – EXPLOSION-PROOF UNIVERSAL DISPLAY UNIT

Gas detectors Product datasheet

Features

- Universal design supports multiple Autronica 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.

Application/Description

The AutoVu AV10 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 AV10 Universal Display Unit is designed for use with Autronica gas detectors such as GT3000, PIR9400, HC200, HC600, 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 AV10, or remotely located using a sensor termination box. The AV10 features non-intrusive calibration. A magnet is used to perform calibration as well as to navigate the AV10's internal menu.

The AV10 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 AV10 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.

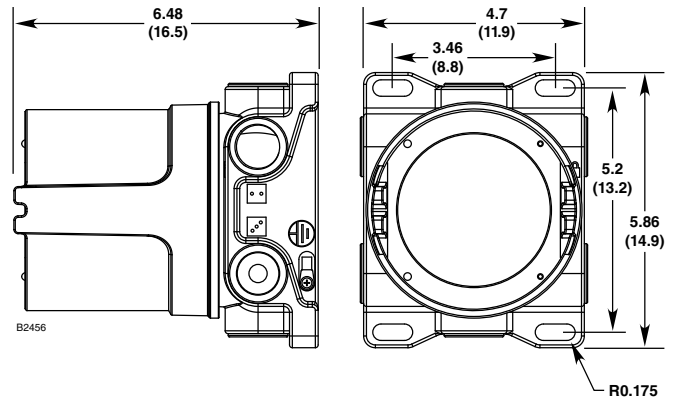
Specifications

Operating Voltage	24 Vdc nominal, operating range is 18 to 30 Vdc.
Operating Power	<p>Standard model, with heater and backlight off:</p> <p>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.</p> <p>Maximum power in alarm, with heater and backlight on: 7 watts @ 30 Vdc (Standard model) 11 watts @ 30 Vdc (CGS model)</p> <p>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.</p>
Current Output	<p>Linear isolated 4-20 mA output with HART. Maximum loop resistance 600 ohms at 18 to 30 Vdc.</p>
Relay Contacts	<p>Three Alarm Relays: Form C, 5 amperes at 30 Vdc. Selectable energized/de-energized. Selectable latching/non-latching.</p> <p>One Fault Relay: Form C, 5 amperes at 30 Vdc. Normally energized for no fault condition with power applied.</p>
Operating Temperature	–55°C to +75°C.
Storage Temperature	–55°C to +75°C.
Humidity Range	5 to 95% RH (Autronica 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	<p>Aluminum: 4.15 pounds (1.88 kilograms). Stainless Steel: 10.5 pounds (4.76 kilograms).</p>
Warranty	12 months from date of installation or 18 months from date of shipment, whichever occurs first.
Electro-Magnetic Compatibility	<p>EMC Directive 2004/108/EC EN55011 (Emissions) EN50270 (Immunity).</p>

Refer to Instruction Manual 116-P-AV10/IGB for in-depth information regarding the AutroVu AV10 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.
 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-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.
 (Tamb = –55°C to +75°C)
 Type 4X
 Conduit seal not required.
 Performance verified in accordance with:
 CSA C22.2 #152.



ATEX: **CE** 0470 **Ex** II 2 G
 Ex d IIC T5
 Tamb –55°C to +75°C
 FM13ATEX0100X
 IP66

Performance verified in accordance with:
 EN 60079-29-1 and EN 50241-1/-2.



IECEx: Ex d IIC T5 Gb
 Tamb –55°C to +75°C
 IECEx FMG 13.0042X
 IP66

Performance verified in accordance with:
 IEC 60079-29-1.

DNV: Cert. no. A-12359