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Casella VOCpro Volatile Organic Compound PID Monitor

Introduction

The Casella **VOCpro** uses proven photo-ionization technology for detecting volatile organic compounds (VOC's). It has a 10.6 eV lamp as standard, with an optional 11.3 eV version for ionizing chlorinated compounds. The UV lamp is easy to maintain and keep clean. The TWA, STEL and Average values are displayed on a large display and the integral pump provides a rapid sampling response. An audible alarm feature is available to warn the user that the current instantaneous level or the STEL or TWA levels have been exceeded.



Casella VOCpro PID monitor

Key benefits

- ❑ 10.6 eV lamp as standard
- ❑ optional 11.3 eV lamp
- ❑ easy to use even with gloves
- ❑ range 0.1 to 2,000 ppm
- ❑ extended range up to 20,000 with optional dilution probe
- ❑ intrinsically safe for use in hazardous areas
- ❑ memory for up to 15,000 data logging points
- ❑ menu driven operation with just 3 large buttons
- ❑ dedicated calibration control key
- ❑ wide range of accessories
- ❑ backlight for use in low light areas
- ❑ 3 stage alarm for peak, STEL and TWA values with buzzer

Applications

- ❑ Health and safety monitoring
- ❑ OSHA and NIOSH compliance
- ❑ Ambient air monitoring
- ❑ Source appointment
- ❑ Boundary and fence line monitoring
- ❑ Forensic investigations
- ❑ Contaminated land surveys
- ❑ Emergency and incident response
- ❑ Anesthetic gas surveys
- ❑ Chemical storage and transportation surveys

The *non logging* mode is the simplest mode of operation and when selected it will show the total concentration level that is being detected by the Casella **VOCpro** unit.

The *tag* mode allows the user to make measurements of the background concentration level plus the sample separately and to "tag" the readings with a site code for ease of identification later. Results may be data-logged during this mode of operation.

The *interval* mode displays the TWA, STEL, Average and current readings on the display with results logged to memory at a user selectable interval. The instant reading is updated every second while the STEL is updated at 1 minute intervals and shows the last 15 minutes average value on screen. The TWA is continuously updated and normalizes the total accumulated concentration to the standard 8 hour exposure duration.

Operation and use

Simply switch on the Casella **VOCpro** and the unit will power up to the last used operating mode ready to go. The pump can be temporarily turned off to save power when not needed for a measurement and the lamp will be switched off too to prevent it from being damaged.

The span of the **VOCpro** can be checked by introducing a sample gas of known concentration to calibrate the unit. Normally a gas such as isobutylene is used since the unit responds with medium sensitivity to it and it is therefore a good indicator of the total ionizable compounds present.

The Casella **VOCpro** pc software package G202034 and cable G202028 is available to download the stored values to a computer. Once downloaded these data results can be printed, archived or exported to a spreadsheet for further manipulation or calculations.

Technical Specification	
Detection method	UV photo ionization of compounds with 10.6 eV lamp (optional 11.3 eV lamp for chlorinated compounds)
Response time	Less than 3 seconds to 90%
Measurement range	0.1 to 2,000 parts per million (Isobutylene) as standard
(Measurement range optional)	100 to 20,000 ppm with dilution probe G202023
Accuracy of measurement	± 10% or ± 2 ppm whichever is greater
Inlet connector	1/8" (3.175 mm) compression fitting
Display	High clarity monochromatic LCD display (192 by 64 pixels with backlight)
Displayed results	TWA, STEL, Average and current values updated once per second
Memory	15,000 data logged results with date and time
Memory modes	Last used mode remembered at switch on for instant reuse
Non logging	Continuous readings for survey and site testing applications
Tag	Data logging with an identification name or number, ideal for large numbers of sites
Interval	Logging at preset intervals as well as displaying real time TWA, STEL and Peak readings
Interval times	15 seconds, 1, 2, 5 and 10 minutes for data logging mode
Alarm function	Warning with audible buzzer 80 dB at 2048 Hz
Detectable compounds	
Aromatics	– benzene, toluene, naphthalene
Unsaturated hydrocarbons	– acetylene, ethylene, 1.3 butadiene
Chlorinated hydrocarbons	– vinyl chloride, chloroform, trichloroethylene, methylene chloride
Ketones	– acetone, methyl ethyl ketone, methyl isobutyl ketone
Alcohols	– methanol, ethanol, isopropanol, n-butanol
Organic fuels	- gasoline and jet fuels
Physical	
weight	1.9 lb (0.86 kg)
size	9.1 x 3 x 4 in (228 x 76 x 107 mm)
Power supply	Rechargeable battery pack sufficient for at least 8 hours operation
Recharge time	4 hours to full charge (unit can be operated normally during battery charging procedure)
Environmental conditions	
Temperature range	32 ° F to 104 ° F (0 ° C to 40 ° C)
Humidity range	0 – 95% RH non-condensing
Intrinsically Safe Classifications	UL: Class 1, Div 1, Groups A, B, C & D ATEX: EEx ib IIC T4 II 2 G

Ordering information	
G201005	VOCpro instrument with standard accessories including 10.6 eV UV lamp, 10 hour rechargeable battery pack, 120/240 Vac adaptor, 7" Teflon sample probe with spring relief, 10 Fluoropore membrane sample inlet filters, adjustable wrist strap, multi tool, user reference card, operator manual
G202020	Carrying case for VOCpro and accessories
G202006	Calibration gas for setting instrument span (requires regulator)
G202019	Gas flow regulator for calibration
G202023	Dilution probe for measurement range up to 20,000 ppm
G202021	DC power cord for charging battery pack or for operating VOCpro from a 12 Vdc cigarette lighter socket 6 ft (2 m) cable supplied