



# EXPLOSION PROOF WIRED POWERED AMBIENT AIR HAZARDOUS GAS DETECTOR

## LEADERS IN GAS DETECTION

Since 1977

## OI-6000



### Features:

- Electrochemical, Infrared, Catalytic Bead or PID Sensor Element
- Wired Powered (3-Wire), 12 to 35 VDC Operating Voltage
- Operating Temperature Range of -40°C to + 54°C
- Graphical LCD with LED Backlight
- 3 Push-Button Interface (ADD, MENU, SUB) with 3 Corresponding Magnetic, Non-Intrusive Switches
- 2 Individually Configurable Alarm Set-Points: Two Front Panel LED Indicators (Amber and Red); Optional 2 Dry-Contact Relays
- Output Options: 4-20 mA (3-Wire) Analog, RS-485 Modbus, Optional GEN II 900 MHz or GEN II 2.4 GHz Radio
- Sensor Element Warranty Subject to Verification
- 1-Year Limited Hardware Warranty

### Applications:

- Blast Mining
- Petrochemical plants
- Refineries
- Water & wastewater treatment plants
- Gas, telephone & electric utilities
- Manufacturing facilities
- Laboratories

The OI-6000 Series Ambient Air Hazardous Gas Detector is a versatile assembly that uses an electrochemical, infrared, catalytic bead or PID sensor element to detect a variety of gases. Wired powered (12 to 35 VDC) with 4-20 mA analog and RS-485 Modbus outputs standard. Magnetic switches allow for non-intrusive calibration while in the field as well as full system settings and diagnostics.

| Gas Type                           | Range                   | T <sub>90</sub> | Warranty            |
|------------------------------------|-------------------------|-----------------|---------------------|
| EC-AsH <sub>3</sub>                | 0-1 ppm                 | < 30 sec.       | 10 months           |
| EC-CH <sub>2</sub> O               | 0-10 ppm                | < 30 sec.       | 12 months           |
| EC-CH <sub>3</sub> SH              | 0-10 ppm                | < 100 sec.      | 12 months           |
| IR-CH <sub>4</sub>                 | 0-100% vol.             | < 30 sec.       | 60 months           |
| EC-CL <sub>2</sub>                 | 0-10 ppm                | < 60 sec.       | 12 months           |
| EC-CL <sub>2</sub> O               | 0-1 ppm                 | < 120 sec.      | 12 months           |
| EC-CO                              | 0-1000 ppm              | < 30 sec.       | 24 months           |
| IR-CO <sub>2</sub>                 | 0-5%vol.                | < 30 sec.       | 60 months           |
| EC-ETO                             | 0-10 ppm                | < 80 sec.       | 12 months           |
| EC-F <sub>2</sub>                  | 0-1 ppm                 | < 80 sec.       | 12 months           |
| EC-H <sub>2</sub> S                | 0-100 ppm               | < 30 sec.       | 24 months           |
| EC-H <sub>2</sub> S <sub>2</sub> K | 0-2000 ppm              | < 25 sec.       | 24 months           |
| EC-HBr                             | 0-30 ppm                | < 40 sec.       | 12 months           |
| EC-HCL                             | 0-30 ppm                | < 300 sec.      | 12 months           |
| EC-HCN                             | 0-50 ppm                | < 70 sec.       | 12 months           |
| EC-HF                              | 0-10 ppm                | < 90 sec.       | 12 months           |
| CB <sub>2</sub> -LEL               | 0-100% LEL (0-5 % vol.) | < 90 sec.       | 24 months           |
| IR-LEL                             | 0-100% LEL (0-5 % vol.) | < 30 sec.       | 60 months           |
| EC-NH <sub>3</sub>                 | 0-100 ppm               | < 90 sec.       | 12 months           |
| EC-NH <sub>3</sub> 300             | 0-300 ppm               | < 120 sec.      | 12 months           |
| EC-NH <sub>3</sub> A               | 0-1000 ppm              | < 120 sec.      | 12 months           |
| EC-NO                              | 0-250 ppm               | < 40 sec.       | 12 months           |
| EC-NO <sub>2</sub>                 | 0-20 ppm                | < 25 sec.       | 12 months           |
| EC-O <sub>2</sub>                  | 0-25%vol.               | < 15 sec.       | 24 months           |
| EC-O <sub>3</sub>                  | 0-5 ppm                 | < 60 sec.       | 12 months           |
| EC-O <sub>3</sub> H                | 0-100 ppm               | < 60 sec.       | 12 months           |
| EC-PH <sub>3</sub>                 | 0-5 ppm                 | < 30 sec.       | 12 months           |
| EC-SO <sub>2</sub>                 | 0-20 ppm                | < 35 sec.       | 24 months           |
| PID-VOC <sub>10</sub>              | 0-10 ppm                | < 3 sec.        | 6 months/ 24 months |
| PID-VOC <sub>20</sub>              | 0-20 ppm                | < 3 sec.        | 6 months/ 24 months |
| PID-VOC <sub>50</sub>              | 0-50 ppm                | < 3 sec.        | 6 months/ 24 months |
| PID-VOC <sub>1K</sub>              | 0-1000 ppm              | < 3 sec.        | 6 months/ 24 months |
| PID-VOC <sub>2K</sub>              | 0-2000 ppm              | < 3 sec.        | 6 months/ 24 months |

**Head Office:**  
Unit 1 / 3 Deakin Street  
(PO Box 5904)  
Brendale QLD 4500 Australia  
Ph: +61 (0) 7 3481 9000

**Perth Office:**  
Unit 5 / 30 Enterprise Crescent  
Malaga WA 6090 Australia  
Ph: +61 (0) 8 6184 7840  
[sales@controlequipment.com.au](mailto:sales@controlequipment.com.au)

**Representatives/Offices in:**  
Sydney Melbourne  
Hobart Adelaide  
Auckland Wellington  
[www.controlequipment.com.au](http://www.controlequipment.com.au)

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|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sensor Type                                        | Eletrochemical, Infrared, Catalytic Bead or PID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Operating Voltage                                  | Wired Powered (3-Wire) 12 to 35 VDC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Power Draw                                         | 2 Watts Maximum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Protection                                         | Power Eletromagnetic Interference (EMI) Filter 4-20 mA Surge Suppression<br>RS-485 Surge Suppression                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Display Screen                                     | 102x64 Resolution Graphical LCD Screen<br>Transflective (Sunlight Readable) with White LED Backlight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Interface                                          | 3 Push-Buttons (MENU, ADD and SUB)<br>3 Magnetic, Non-Intrusive Switches for Calibration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Customizable Settings                              | 2 Individually-Configurable Alarm LED/Relay Set-Points                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Tamb Temperature Range                             | -40°C to +54°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Output (Digital)                                   | RS-485 Modbus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Wired (Analog) Output                              | 4-20 mA (3-Wire)<br>Fault Terminal<br>Optional 2 Dry-Contact Relays with Replaceable 4 Amp Fuses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Remote Sensor Kit<br>(Optional Additional Feature) | OI-501-5 Remote Sensor Kit with Enclosure (5 Pin)<br><ul style="list-style-type: none"><li>• Electrochemical Sensor Max. Length: 250 Feet</li><li>• Infrared Sensor Max. Length: 40 Feet</li><li>• PID Sensor Max. Length: 35 Feet</li><li>• Catalytic Bead Sensor Max. Length: 15 Feet</li></ul>                                                                                                                                                                                                                                                                                                                                                     |
| Product Dimensions                                 | 5.5 in. T x 6 in. W x 7 in. H (8 in. W x 17 in. H Max. with Attachments)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Total Weight                                       | 6 lbs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Hazardous Location<br>Certifications and Approvals | <div><div><b>CSA</b><br/>Class I, Division 1, Groups C &amp; D Ex d IIB T6 Gb<br/>Class I, Zone 1, AEx db IIB T6 Gb Tamb -40°C to +54oc</div><div><b>ATEX</b><br/>Models w/ Radio Option<br/><div><div>II 2 (1) G</div><div>Ex db mb ia [ia Ga] IIB T6 Gb</div><div>Ta= -40°C to +54°C</div></div><div><b>IECEX</b><br/>Models w/ Antenna Fitting Ex db mb ia [ia Ga] IIB T6 Gb<br/>-40°C ≤ Ta ≤ +54°C</div></div><div><div>Models w/out Radio Option<br/><div><div>II2G</div><div>Ex db mb IIB T6 Gb</div><div>Ta= -40°C to +54°C</div></div><div>Models w/out Antenna<br/>Fitting Ex db mb IIB T6 Gb<br/>-40°C ≤ Ta ≤ +54°C</div></div></div></div> |
| Hardware Warranty                                  | 1-Year, Limited                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Sensor Element Warranty                            | Varies with Gas Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Part Number Formula                                | OI-6000-[Sensor Type]-[Gas]-[Radio Option]-[Relay Option]-<br>OI-6000-X-X-X-X-O                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |