

# MACURCO

GAS DETECTION



**USA Made Since 1972**

MANUFACTURED BY  
**AERIONICS**

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## Residential, Commercial and Industrial Applications

Loading Docks - Grocery Stores - Storage Facilities - Waste Disposal - Ambulance Bays - Food Processing  
Hotels - Offices - Homes - Forklifts - Schools - Landfills - Kitchens - Hospitals - Vehicle Repair Facilities  
Firehouses - Bus Depots - Restaurants - Warehouses - Laundromats - Hockey Rinks - Parking Garages  
Breweries - Conference Rooms - Battery Charging Stations - Wastewater Treatment Plants - Laboratories  
Mines - Boiler Rooms - Furnaces - Generators - Vehicle Exhaust - Oil & Gas Drilling - Chemical Plants  
Sewer/Swamp Gas - Pulp and Paper Mills - Maintenance Facilities - Industrial Refrigeration - Refineries  
Airport Hangars - Factories - Pharmaceuticals - Data Centers - Cable Vaults - Confined Spaces



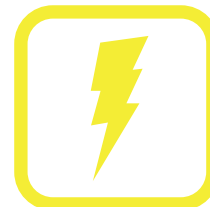
Fire



Security



HVAC



Electrical



Safety

## Detectors for use with Fire and Security Systems

The Macurco CM-E1, GD-2B, GD-2A and HD-11 are low voltage detectors designed for use with Fire and Security Systems. The CM-E1 and GD-2A are UL 2075 Listed for use in residential and commercial applications and are also approved by the California State Fire Marshal.

### CM-E1 Carbon Monoxide Detector



Provides carbon monoxide detection in residential, multi-family and commercial office environments. UL Listed, CSFM Approved

- 9-32 VDC input
- Flush or Surface Mount Enclosure
- Coverage Area: 900 sq. ft.
- Sensor Life: 10 Years with End of Life Indication
- Alarm Setting: Time Weighted Average per UL 2034
- N.O. or N.C. Alarm Relay, N.C. Trouble/Supervisory relay



### GD-2B Combustible Gas Detector



Provides combustible/heating gas detection (propane and natural gas) in residential, multi-family and commercial office environments.

- 9-32 VDC or 12-24 VAC input
- Flush or Surface Mount Enclosure
- Coverage Area: 900 sq. ft.
- Sensor Life: 10 Years with End of Life Indication
- Alarm Setting: 25% of LEL per UL 2075
- N.O. or N.C. Alarm Relay, N.C. Trouble/Supervisory relay

### GD-2A Combustible Gas Detector



Provides combustible/heating gas detection (propane and natural gas) in residential, multi-family and commercial office environments. UL Listed, CSFM Approved

- 12-24 VAC or VDC input
- Flush or Surface Mount Enclosure
- Coverage Area: 900 sq. ft.
- Sensor Life: 7-10 Years
- Alarm Setting: 25% of LEL per UL 2075
- SPDT Alarm Relay, N.C. Trouble/Supervisory relay



### HD-11 Hydrogen Gas Detector



Provides hydrogen gas detection in battery charging rooms including: golf courses, warehouses, auto maintenance facilities and renewable energy applications.

- 12-24 VAC or VDC input
- Flush or Surface Mount Enclosure
- Coverage Area: 900 sq. ft.
- Sensor Life: 7-10 Years
- Alarm Setting: 10% of LEL H<sub>2</sub>
- SPDT Alarm Relay, N.C. Trouble/Supervisory relay

## Macurco 6-Series Detectors



The Macurco 6-Series are low voltage, dual relay gas detector, controller and transducers. The 6-Series have selectable 4-20mA output, buzzer and digital display options. It is an electronic detection system used to measure the concentration of various gases and provide feedback and automatic control to help reduce gas concentrations in parking garages, warehouses, boiler rooms, vehicle maintenance facilities, battery rooms, kitchens or other commercial applications.

### Features

- 12-24 VAC and 12-32 VDC input
- 5 A SPDT relay controls valves, louvers or exhaust fans
- 0.5 A N.O. or N.C alarm relay connects to warning devices or control panels
- 4-20 mA current loop - compatible with the Macurco DVP-120 Control Panel
- Compatible with the Macurco MRS-485 Modbus Adapter
- ETL Listed to UL 61010-1, CAN/CSA C22.2 No 61010-1



## Gas Options

CM-6 Carbon Monoxide (CO)	Range: 0-200 ppm, Default Relay Settings: Fan - 35 ppm, Alarm - 200 ppm
GD-6 Combustibles (LEL)	Range: 0-50% LEL, Default Relay Settings: Fan - 10% LEL, Alarm - 20% LEL
TX-6-ND Nitrogen Dioxide (NO <sub>2</sub> )	Range: 0-20 ppm, Default Relay Settings: Fan - 2.5 ppm, Alarm - 5.0 ppm
TX-6-AM Ammonia (NH <sub>3</sub> )	Range: 0-100 ppm, Default Relay Settings: Fan - 25 ppm, Alarm - 75 ppm
TX-6-HS Hydrogen Sulfide (H <sub>2</sub> S)	Range: 0-50 ppm, Default Relay Settings: Fan - 8 ppm, Alarm - 20 ppm
RD-6 Refrigerants (REF)	Range: 0-1,000 ppm, Default Relay Settings: Fan - 100 ppm, Alarm - 300 ppm
CD-6 Carbon Dioxide (CO <sub>2</sub> )	Range: 0-2,000 ppm, Default Relay Settings: Fan - 1,000 ppm, Alarm - 2,000 ppm
OX-6 Oxygen (O <sub>2</sub> )	Range: 0-25% by volume, Default Relay Settings: Fan - 20.2%, Alarm - 19.5%

## Specifications

- Power: 3 W (max) from 12 to 24 VAC or 12 to 32 VDC
- Current @ 24 VDC: 75 mA in alarm, 50 mA fan relay on and 23 mA stand by
- Shipping Weight: 1 pound (0.45 kg)
- Size: 4 1/2 x 4 x 2 1/8 in. (11.4 X 10.2 X 5.4 cm)
- Color: Dark Gray (Standard) or White Housing
- Connections: plugs/terminals
- Mounting box: (not included) 4x4 electric
- Fan relay: 5 A, 240 VAC, pilot duty, SPDT, latching or non-latching
- Fan relay actuation: Selectable within sensor range
- Fan Delay Settings of 0, 1, 3 (default), 5 and 10 minutes
- Fan Minimum Runtime settings are OFF (default), 3, 5, 10 or 15 minutes
- Alarm relay: 0.5 A 120 V, 60 VA
- Alarm relay actuation: selectable N.O. default or N.C.
- Alarm relay settings: Selectable within sensor range
- Current Loop, 4-20 mA
- Operating Environment: 0°F to 125° F (-18°C to 52°C), 10 to 90% RH non-condensing



### White Housing Cover

- Available for all 6-Series units
- Completely hides mud ring
- Comes standard on CD-6



**6-Series Rear View**

## Macurco 12-Series Detectors



The Macurco 12-Series are line voltage powered (100-240VAC), dual relay gas detector, controller and transducers. The 12-Series utilizes an internal switching power supply that is capable of using line voltage between 100 and 240VAC and 50-60Hz. The 12-Series have selectable 4-20mA output, buzzer and digital display options. It is an electronic detection system used to measure the concentration of various gases and provide feedback and automatic control to help reduce gas concentrations in parking garages, warehouses or other commercial applications.

### Features

- Mounts on a standard 4" x 4" electrical box
- 5 A SPDT relay controls valves, louvers or exhaust fans
- 0.5 A N.O. or N.C alarm relay connects to warning devices or control panels
- 4-20mA current loop - compatible with the Macurco DVP-120 Control Panel
- ETL Listed to UL 61010-1, CAN/CSA C22.2 No 61010-1



## Gas Options

CM-12 Carbon Monoxide (CO)	Range: 0-200 ppm, Default Relay Settings: Fan - 35 ppm, Alarm - 200 ppm
GD-12 Combustibles (LEL)	Range: 0-50% LEL, Default Relay Settings: Fan - 10% LEL, Alarm - 20% LEL
TX-12-ND Nitrogen Dioxide (NO <sub>2</sub> )	Range: 0-20 ppm, Default Relay Settings: Fan - 2.5 ppm, Alarm - 5.0 ppm
TX-12-AM Ammonia (NH <sub>3</sub> )	Range: 0-100 ppm, Default Relay Settings: Fan - 25 ppm, Alarm - 75 ppm
TX-12-HS Hydrogen Sulfide (H <sub>2</sub> S)	Range: 0-50 ppm, Default Relay Settings: Fan - 8 ppm, Alarm - 20 ppm
RD-12 Refrigerants (REF)	Range: 0-1,000 ppm, Default Relay Settings: Fan - 100 ppm, Alarm - 300 ppm
CD-12 Carbon Dioxide (CO <sub>2</sub> )	Range: 0-2,000 ppm, Default Relay Settings: Fan - 1,000 ppm, Alarm - 2,000 ppm
OX-12 Oxygen (O <sub>2</sub> )	Range: 0-25% by volume, Default Relay Settings: Fan - 20.2%, Alarm - 19.5%

## Specifications

- Power: 100-240 VAC (50 TO 60 HZ)
- Current: 1 A MAX
- Shipping Weight: 1 pound (0.45 kg)
- Size: 4 1/2 x 4 x 2 1/8 in. (11.4 X 10.2 X 5.4 cm)
- Color: Dark Gray (Standard) or White Housing
- Connections: plugs/terminals
- Mounting box: (not included) 4x4 electric
- Fan relay: 5 A, 240 VAC, pilot duty, SPDT, latching or non-latching
- Fan relay actuation: Selectable within sensor range
- Fan Delay Settings of 0, 1, 3 (default), 5 and 10 minutes
- Fan Minimum Runtime settings are OFF (default), 3, 5, 10 or 15 minutes
- Alarm relay: 0.5 A 120 V, 60 VA
- Alarm relay actuation: selectable N.O. default or N.C.
- Alarm relay settings: Selectable within sensor range
- Current Loop, 4-20 mA
- Operating Environment: 0°F to 125° F (-18°C to 52°C), 10 to 90% RH non-condensing



### White Housing Cover

- Available for all 12-Series units
- Completely hides mud ring
- Comes standard on CD-12



12-Series Rear View

## DVP-120 Detection and Ventilation Panel

The DVP-120 exhaust fan controller, in conjunction with Macurco gas transducers, provides automatic controls to help maintain an acceptable environment in parking garages or other facilities. The DVP-120 system is designed to meet specifications for safety in enclosed parking garages, including the Uniform Building Code and OSHA 50 ppm CO requirements. The DVP-120 can control up to twelve gas sensors in any combination.



### Features

- External keypad for selection of the transducer/alarm display and configuration
- Externally visible LCD display showing the status of each transducer and relay
- Externally visible system, alarm and relay status indicators
- Compatible with all Macurco 6-Series and 12-Series gas sensors
- Twelve analog (current loop) input channels
- Three 10 A, 240 VAC SPDT fan/alarm relays
- Drivers for external Horn and Strobe
- Fail-safe operation can be implemented
- Lockable NEMA 1 type enclosure
- Modular input and output connectors
- ETL Listed to UL 508A, CAN/CSA-C22.2 No. 14-13, LADBS Approved
- Up to three ventilation control zones can be defined
- Each zone can be controlled based on transducer signals and/or time of day
- Each relay is configurable for delay before activation and minimum on time



### Specifications

- Power Input: 90-250 VAC, 1 A, 47-63 Hz, single phase
- Size: 10.5 x 12.5 x 2 in. (26.7 x 31.8 x 5.1 cm)
- Weight: 6 ½ lbs. (2.9 kg)
- Enclosure: NEMA 1 Type
- Operating Temperature: 32° to 104°F (0° to 40°C)
- Operating Humidity: 0% to 95% RH non-condensing
- Relay Rating (3): SPDT, 120/240 VAC, 10 A resistive
- LCD Display: 2 rows of 16 characters with backlight
- Audible indicator: Internal buzzer, 90 dBA at 1ft
- External Drivers (2): 24 VDC, maximum 250 mA
- Relay On Delay: 0-15 minutes in 1 second increments
- Relay Off Delay: 0-15 minutes in 1 second increments
- Status Indicators (LED): Power, ALARM/warning, Hush, Relay 1, Relay 2 & Relay 3



## DVP-120M Addressable Detection and Ventilation Panel



The DVP-120M is a Modbus-Enabled Detection and Ventilation Panel with up to 87 Modbus addressable sensors on three channels of 29 sensors per channel, plus the original 12 analog 4-20 mA sensor channels. The DVP-120M increases the capacity of the DVP-120 from 12 detectors to 99. System wiring includes 4-20 mA current loop and RS-485 serial interface.

### Features

- Same features as the DVP-120
- Coverage Area: Up to 495,000 sq. ft.
- 12 analog (4-20 mA) input channels.
- 87 addressable sensors on three channels of 29 sensors per channel
- External power supply is required for addressable sensors



## Installation & Connection

System wiring includes main power connection for the DVP-120M, 4-20 mA current loop, RS-485 serial interface and 24 VDC power connections between the remote detectors and the DVP-120M and the fan control and alarm connections from the DVP-120M to the building ventilation and automation systems. The DVP-120M control panel has three relays which can be used for ventilation fan control or alarm signaling. The ventilation control function operates independently from the alarm function. It provides the ability to configure the DVP-120M for control of one to three zones. Each zone can respond to gas levels at one or more of the sensors, with configurable rising and falling concentrations for each gas type. Each zone can also be controlled based on the time of day.



## MRS-485 Modbus RS-485 Adapter

The Macurco MRS-485 adapter is an accessory used to convert the 4-20 mA analog signal from Macurco 6-Series type detectors to a digital signal for use with multipoint addressable systems. The Macurco MRS-485 simply plugs into the back of the detector and a single screw fastens it in place. The MRS-485 accepts the 4-20 mA output and is powered from the same connection as the detector. The MRS-485 has the ability to interface with the Macurco DVP-120M Modbus Enabled Detection and Ventilation Control Panel as well as Building Automation Systems or other control devices that accept Modbus communications.



The Macurco MRS-485 simply plugs into the back of the detector and a single screw fastens it in place.



## Portable Single-Gas Monitors

The Macurco Single-Gas Monitor Series is designed to continuously monitor the ambient environment and notify the user if the level of the target gas reaches the alarm set point for the monitor. The device is designed to operate for two years and then be disposed of according to local regulations. The Macurco Single-Gas Monitor is available in three versions CM-1, HS-1 and OX-1 to monitor either Carbon Monoxide (CO), Hydrogen Sulfide (H<sub>2</sub>S) or Oxygen (O<sub>2</sub>). When activated, it continuously monitors the ambient air that enters the sensor through the sensor inlet opening by the process of passive diffusion for two years. Macurco Single-Gas Monitors are uniquely suitable for monitoring specific gases in potentially hazardous atmospheric conditions and are suitable for most industrial applications. They are light and intuitive in design, and the large glove-friendly buttons allow for easy use in the field.

### CM-1 Carbon Monoxide Portable Single-Gas Monitor



Carbon Monoxide (CO) is a colorless, odorless, and tasteless gas that is produced by incomplete combustion of carbon-based fuels such as natural gas, propane (LP) gas, kerosene, oil, gasoline, wood, or coal. Sources of carbon monoxide include automobile, truck or forklift exhaust and worn or poorly adjusted boilers or furnaces.

- Size: 3.2 x 2.0 x 1.2 in. (8.1 x 5.1 x 3.1 cm), Weight: 4.1 oz. (115 g)
- Intrinsic Safety: UL (US) - Class I, Div. I, Group A, B, C, D, T4A
- Range: 0-995 ppm (CO)
- Alarm Settings: CO 35 ppm (low), 200 ppm (high)
- Reading Resolution: 5 ppm – Carbon Monoxide (Readings start at 20 ppm or greater)



### OX-1 Oxygen Portable Single-Gas Monitor



Oxygen (O<sub>2</sub>) has a normal concentration in the atmosphere of 20.9% volume. Oxygen can be reduced quickly by breathing and combustion. Oxygen may also be depleted due to dilution by other gases and by chemical absorption. Increased levels of oxygen (i.e. from storage tanks leaks) increases the flammability of any combustible matter.

- Size: 3.2 x 2.0 x 1.2 in. (8.1 x 5.1 x 3.1 cm), Weight: 4.1 oz. (115 g)
- Intrinsic Safety: UL (US) - Class I, Div. I, Group A, B, C, D, T4A
- Range: 0-25% v/v (O<sub>2</sub>)
- Alarm Settings: O<sub>2</sub> 19.5% (low), 23% (high)
- Reading Resolution: 0.5% v/v – Oxygen (Increments from 21.0%)



### HS-1 Hydrogen Sulfide Portable Single-Gas Monitor



Hydrogen Sulfide (H<sub>2</sub>S) is a colorless, flammable, extremely hazardous gas. It occurs naturally in crude petroleum, and natural gas, and is produced by breakdown of organic materials and sewage. Industrial activities that produce the gas include natural gas/petroleum drilling and refining, wastewater treatment, tanneries and paper mills.

- Size: 3.2 x 2.0 x 1.2 in. (8.1 x 5.1 x 3.1 cm), Weight: 4.1 oz. (115 g)
- Intrinsic Safety: UL (US) - Class I, Div. I, Group A, B, C, D, T4A
- Range: 0-200 ppm (H<sub>2</sub>S)
- Alarm Settings: H<sub>2</sub>S 10 ppm (low), 15 ppm (high)
- Reading Resolution: 5 ppm – Hydrogen Sulfide (Readings start at 10 ppm or greater)





## XL Single-Gas Monitors

The Macurco Single-Gas XL monitor offers all the simplicity, reliability and ease-of-use of our standard portable Single-Gas monitor with lower resolution and more flexibility and lifespan features. The Macurco Single-Gas XL monitor features a factory replaceable battery and sensor to help reduce total cost of ownership: instead of replacing your Macurco Single-Gas XL monitor in a few years, you can replace batteries or sensors – and that helps better predict future capital costs. The Macurco Single-Gas XL monitor also allows you to measure at a lower resolution. The Macurco Single-Gas XL monitor allows the choice of two additional alarm set points: Short Term Exposure Limit (STEL) and Time Weighted Average (TWA) exposure (H<sub>2</sub>S and CO). With its 2-year warranty on electronics, battery and H<sub>2</sub>S and CO sensors, the Macurco Single-Gas XL monitor is designed to deliver for the long term.

## XLS Single-Gas Monitors

The Macurco Single-Gas XLS monitor takes all the advances packed into the Macurco Single-Gas XL monitor and adds another: four different user selectable alarm settings. The Macurco Single-Gas XLS monitor gives you the flexibility to adjust the alarm to suit your specific needs in a variety of working environments. Its combination of the STEL alarm, TWA alarm and adjustable CO sensor alarm settings you can change in the field, allowing you to focus on the job at hand.

Macurco Model	Single Gas	Single Gas XL/XLS Series
Type of Detector	Single Gas	Single Gas
Available Sensors	3	2 (XL), 1 (XLS)
Compatible Sensors	CO, H <sub>2</sub> S, O <sub>2</sub>	CO & H <sub>2</sub> S (XL), CO (XLS)
Sensors Replaceable	No	Yes (factory replaceable only)
Alarms	Vibrating, Audible & Visual Alarm	Vibrating, Audible & Visual Alarm
Audio Alarm Level	85 dBA @ 1 ft (30.5 cm)	85 dBA @ 1 ft (30.5 cm)
Battery	Lithium	Lithium
Replaceable Battery	No	Factory Replaceable Only
Rechargeable	No	No
Operate on Charger	NA	NA
Approximate Battery Life	24 Months	24 Months
Readings	Real Time, [5 ppm increments, readings start at 20 ppm (CO) and 10 ppm (H <sub>2</sub> S)] [0.5% increments from 21% (O <sub>2</sub> )] Peaks	Real Time, (1 ppm increments, readings start at 1 ppm) Peaks, STEL, TWA
Calibration	No (CO & H <sub>2</sub> S), Yes (O <sub>2</sub> )	Yes
Pump	No	No
Data Logging	No	No
Intrinsic Safety	UL (US) – Class 1, Groups A, B, C, D; T4A	UL (US) – Class 1, Groups A, B, C, D; T4A
RF/EMF Shielded	RF/EMF	RF/EMF
Ingress Protection	IP64	IP64
Operating Temperature	-4°F-122°F (-20°C-50°C)	-4°F-122°F (-20°C-50°C)
Operating Humidity	15 - 90% (non-condensing)	15-90% (non-condensing)
Weight	4.1 oz (115 g)	4.1 oz (115 g)
Dimensions	3.2 x 2.0 x 1.2 in (8.1 x 5.1 x 3.1 cm)	3.2 x 2.0 x 1.2 in (8.1 x 5.1 x 3.1 cm)
Warranty	2 Year Sensor & Hardware	2 Year Sensor & Hardware

## NEW Portable Multi-Gas & LEL Monitors



**Macurco GS-1**

### GS-1 Combustible Gas (LEL) Portable Monitor

With rugged impact resistant construction and compliance to IP65, the GS-1 gives an unbeatable combination of powerful loud and bright alarms for combustible gas detection. Its stunningly compact and lightweight design makes it ideal for use in industries such as oil and gas, chemical, steel works and waste and water works.

- Size: 3.5 x 1.9 x .95 in. (9.0 x 4.8 x 2.4 cm), Weight: 4.9 oz. (138 g)
- Optional Data Logging: 900 hours of data at 1 minute intervals (adjustable)
- Approvals
  - CSA: Class I, Div. I, Group A, B, C, D; C22.2, 152
  - ATEX: Ex II 2 G Ex d ia IIC T4 Gb Tamb -20°C to +65°C
- Alarm Settings: 10% LEL (low), 20% LEL (high)
- Reading Resolution: 1% LEL
- Range: 0-100% LEL



### MG-1 Portable Multi-Gas Monitor (CO, H<sub>2</sub>S, LEL, O<sub>2</sub>)

The Macurco MG-1 integrates innovative safety features and an intuitive, rugged design to provide advanced protection for those working in harsh environments. This portable multigas detector, which is exceptionally easy to use and service, protects against the four most prevalent gas hazards: carbon monoxide (CO), hydrogen sulfide (H<sub>2</sub>S), combustible gases (LEL) and oxygen (O<sub>2</sub>) depletion.

- Size: 5.3 x 3.1 x 1.4 in. (13.5 x 8.0 x 3.5 cm), Weight: 9.9 oz. (282 g)
- Data Logging: 130 hours of data at 10 second intervals
- Approvals
  - UL (Intrinsic Safety): Class I, Div. I, Group A, B, C, D
  - ATEX: Ex II 2 G Ex d ia IIC T4 Gb Tamb -20°C to +55°C
- Alarm Settings: low and high alarms; STEL & TWA (CO & H<sub>2</sub>S gases only)
- Reading Resolution: 1 ppm (CO & H<sub>2</sub>S), 1% LEL (combustibles), .1% vol. (O<sub>2</sub>)
- Ranges: 0-1000 ppm (CO), 0-100 ppm (H<sub>2</sub>S), 0-100% LEL (combustibles), 0-30% vol. (O<sub>2</sub>)



**Macurco MG-1**  
(CO, H<sub>2</sub>S, LEL, O<sub>2</sub>)

## Explosion Proof Gas Detection for Hazardous Locations

Equipment used in areas where explosive concentrations of vapors may exist must be equipped with special enclosures, wiring and other electrical apparatus for safety purposes. Hazardous (classified) locations such as these might exist in petroleum refineries, gasoline storage and dispensing areas, spray finishing areas, aircraft hangars or fuel servicing areas, utility gas plants and operations involving storage and handling of liquified petroleum gas or natural gas. In order to make sure the correct equipment is used, these environments are broken down into classes, divisions and groups to more specifically identify the hazards; for example Class 1 for Gases, Vapors and Liquids - Division 1 for Normally explosive and hazardous - Groups A, B, C and D (A - acetylene, B - hydrogen..., C - ether..., D - hydrocarbons, fuels... ).

### 5100-02-IT Combustible Gas Detector (Catalytic Bead Sensor)



The 5100-02-IT Combustible Gas Sensor Module utilizes catalytic bead sensor technology to monitor for a wide array of combustible gases. Output range is 0-100% of Lower Explosive Limit (LEL). Explosion proof, Class 1 Div. 1 Groups B, C, D

- Serial RS-485 Modbus RTU interface
- Analog 4-20 mA output (3- or 4-wire)
- FM Approval (3600 & 6320)
- SIL-2 Certified
- Optional integral Alarm and Warning/Trouble relays
- Nema 4X Enclosure (Aluminum or 316 Stainless Steel)
- Used standalone or with Macurco DVP-120 Control Panel



### 5100-XX-IT Series Toxic Gas Detector (Electrochemical Sensor)



The 5100-XX-IT Toxic Gas Sensor Modules utilize electrochemical sensors to monitor for a variety of gases. Oxygen, Chlorine, Chlorine Dioxide, Sulfur Dioxide, Hydrogen Chloride, Hydrogen Fluoride, Hydrogen Sulfide, Carbon Monoxide, Ammonia, Nitrogen Dioxide and Carbon Dioxide. Explosion proof, Class 1 Div. 1 Groups B, C, D

- Serial RS-485 Modbus RTU interface
- Analog 4-20 mA output (3- or 4-wire)
- FM Performance Approval (5100-05-IT)
- SIL-2 Certified (5100-04-IT, 5100-05-IT, 5100-06-IT)
- Optional integral Alarm and Warning/Trouble relays
- Nema 4X Enclosure (Aluminum or 316 Stainless Steel)
- Used standalone or with Macurco DVP-120 Control Panel



### 5100-28-IT Combustible Gas Detector (Infrared Sensor)



The 5100-28-IT Combustible Gas Sensor Module utilizes infrared sensor technology to monitor for combustible gases (methane and others). Output - Lower Explosive Limit (LEL) or % volume. Explosion proof, Class 1 Div. 1 Groups C, D

- Serial RS-485 Modbus RTU interface
- Analog 4-20 mA output (3- or 4-wire)
- FM Approval (3600 & 6320)
- SIL-2 Certified (IEC 61508)
- Optional integral Alarm and Warning/Trouble relays
- Nema 4X Enclosure (Aluminum or 316 Stainless Steel)
- Used standalone or with Macurco DVP-120 Control Panel



## Macurco Parts and Accessories

Macurco offers calibration and test kits, calibration gas, service, parts and accessories for the Macurco Security Series, 6-Series, 12-Series, Portable Single-Gas Series and IT Series products. For a full list of accessories, specifications and instructions please visit our website at [www.macurco.com](http://www.macurco.com).

### DMK-1 Duct Mount Kit



The Macurco DMK-1 is an air tight enclosure that provides a means to mount any Macurco 6-Series or 12-Series gas detectors to an air duct. By duct mounting a Macurco gas detector it is able to monitor the air inside of the duct and provide early detection of various gases moving through the HVAC system. The DMK-1 used with Macurco gas detectors can provide automatic control to prevent recirculation of these gases into additional areas by the air handling systems in commercial and residential applications - UL outdoor exposure listed, flame retardant, UV stabilized polycarbonate housing, clear cover.

### WHK-1 Weatherproof Housing Kit



The Macurco WHK-1 is a weatherproof enclosure that provides a means to protection-mount any Macurco 6-Series or 12-Series gas detectors in locations exposed to problematic environments. By weatherproofing a gas detector, the unit is able to monitor ambient gas concentrations while being protected from falling debris and indirect water spray. The Macurco WHK-1 is designed with sufficient airflow through multiple vent plugs for effective gas detection. The polycarbonate housing is flame retardant, UV stabilized and UL outdoor exposure listed. A clear cover allows users to view the detector, display and status lights.

### Calibration and Test Kits



All Macurco gas detectors are factory calibrated. Each detector's performance should be tested regularly by using gas as detailed in the field testing and field calibration sections of the user instructions. Macurco offers gas calibration and test kits with certified gas of a concentration and content listed for the detector when conducting a calibration or calibration verification test (bump test). Calibration kits include gas cylinders, gas regulator, plastic tubing, humidifier, calibration hood and a deluxe Macurco carrying case.

### CME1-FTG Field Test Gas



The CME1-FTG is an 11 liter 500ppm aerosol carbon monoxide field test gas that can be used with the Macurco carbon monoxide detectors. This field test gas allows users to do a quick functionality test of the CO sensor. The flow rate of the CME1-FTG is 10 liters per minute so there is about a minute of gas or enough to test 20-30 units. With the cover in place, the gas is injected directly into the housing by placing the nozzle of the aerosol can onto the sensor grate area and pressing the trigger for 2 to 3 seconds.

## 2017 Expositions & Conferences

**AHR - Air-Conditioning, Heating & Refrigerating Expo**  
Las Vegas, NV – January 30-February 1, 2017



**NDSC - North Dakota Safety & Health Conference**  
Bismarck, ND – February 21-22, 2017

**BuildingsNY**  
New York, NY – March 21-22, 2017



**ISC West - International Security Conference**  
Las Vegas, NV – April 5-7, 2017

**NFPA - National Fire Protection Association**  
Boston, MA – June 4-6, 2017



**ASSE Safety Conference & Expo**  
Denver, CO – June 19-21, 2017



**NSC - National Safety Council Congress & Expo**  
Indianapolis, IN – September 25-27, 2017

**SDSC - South Dakota Safety & Health Conference**  
Sioux Falls, SD – October 4, 2017

**NECA - National Electrical Contractors Association**  
Seattle, WA – October 8-10, 2017



**CANASA Security Canada Central Conference & Expo**  
Toronto, ON – October 18-19, 2017

**ISC East - International Security Conference**  
New York, NY – November 15-16, 2017



## Industry Affiliations



Fixed Gas Detection				
Item ID	Model	Description	QTY	UOM
70-0715-1778-6	CM-E1	Carbon Monoxide CO Detector for use with fire alarm/burglary control panels	1	EA
70-0715-6468-9	GD-2A	Combustible Gas Detector for use with fire alarm/burglary control panels	1	EA
70-2900-0005-3	GD-2B	Combustible Gas Detector for use with fire alarm/burglary control panels	1	EA
70-0714-0334-2	HD-11	Hydrogen H2 Detector for use with fire alarm/burglary control panels	1	EA
70-0715-6500-9	CM-6	Carbon Monoxide CO (Low Voltage) Fixed Gas Detector Controller Transducer (LADBS available)	1	EA
70-2900-0035-6	CM-6 WHITE	Carbon Monoxide CO (Low Voltage) Fixed Gas Detector Controller Transducer w/ White Housing	1	EA
70-2900-0020-0	CM-12	Carbon Monoxide CO (Line Voltage) Fixed Gas Detector Controller Transducer	1	EA
70-2900-0036-7	CM-12 WHITE	Carbon Monoxide CO (Line Voltage) Fixed Gas Detector Controller Transducer w/ White Housing	1	EA
70-0716-0802-3	GD-6	Combustible (Low Voltage) Fixed Gas Detector Controller Transducer	1	EA
70-2900-0037-8	GD-6 WHITE	Combustible (Low Voltage) Fixed Gas Detector Controller Transducer w/ White Housing	1	EA
70-2900-0021-1	GD-12	Combustible (Line Voltage) Fixed Gas Detector Controller Transducer	1	EA
70-2900-0038-9	GD-12 WHITE	Combustible (Line Voltage) Fixed Gas Detector Controller Transducer w/ White Housing	1	EA
70-2900-0004-2	TX-6-ND	Nitrogen Dioxide NO2 (Low Voltage) Fixed Gas Detector Controller Transducer	1	EA
70-2900-0039-0	TX-6-ND WHITE	Nitrogen Dioxide NO2 (Low Voltage) Fixed Gas Detector Controller Transducer w/ White Housing	1	EA
70-2900-0022-2	TX-12-ND	Nitrogen Dioxide NO2 (Line Voltage) Fixed Gas Detector Controller Transducer	1	EA
70-2900-0040-1	TX-12-ND WHITE	Nitrogen Dioxide NO2 (Line Voltage) Fixed Gas Detector Controller Transducer w/ White Housing	1	EA
70-2900-0008-6	TX-6-HS	Hydrogen Sulfide H2S (Low Voltage) Fixed Gas Detector Controller Transducer	1	EA
70-2900-0042-3	TX-6-HS WHITE	Hydrogen Sulfide H2S (Low Voltage) Fixed Gas Detector Controller Transducer w/ White Housing	1	EA
70-2900-0024-4	TX-12-HS	Hydrogen Sulfide H2S (Line Voltage) Fixed Gas Detector Controller Transducer	1	EA
70-2900-0045-6	TX-12-HS WHITE	Hydrogen Sulfide H2S (Line Voltage) Fixed Gas Detector Controller Transducer w/ White Housing	1	EA
70-2900-0007-5	TX-6-AM	Ammonia NH3 (Low Voltage) Fixed Gas Detector Controller Transducer	1	EA
70-2900-0044-5	TX-6-AM WHITE	Ammonia NH3 (Low Voltage) Fixed Gas Detector Controller Transducer w/ White Housing	1	EA
70-2900-0023-3	TX-12-AM	Ammonia NH3 (Line Voltage) Fixed Gas Detector Controller Transducer	1	EA
70-2900-0041-2	TX-12-AM WHITE	Ammonia NH3 (Line Voltage) Fixed Gas Detector Controller Transducer w/ White Housing	1	EA
70-2900-0009-7	OX-6	Oxygen O2 (Low Voltage) Fixed Gas Detector Controller Transducer	1	EA
70-2900-0048-9	OX-6 WHITE	Oxygen O2 (Low Voltage) Fixed Gas Detector Controller Transducer w/ White Housing	1	EA
70-2900-0033-4	OX-12	Oxygen O2 (Line Voltage) Fixed Gas Detector Controller Transducer	1	EA
70-2900-0049-0	OX-12 WHITE	Oxygen O2 (Line Voltage) Fixed Gas Detector Controller Transducer w/ White Housing	1	EA
70-2900-0011-1	RD-6	Refrigerant REF (Low Voltage) Fixed Gas Detector Controller Transducer	1	EA
70-2900-0046-7	RD-6 WHITE	Refrigerant REF (Low Voltage) Fixed Gas Detector Controller Transducer w/ White Housing	1	EA
70-2900-0034-5	RD-12	Refrigerant REF (Line Voltage) Fixed Gas Detector Controller Transducer	1	EA
70-2900-0047-8	RD-12 WHITE	Refrigerant REF (Line Voltage) Fixed Gas Detector Controller Transducer w/ White Housing	1	EA
70-2900-0011-9	CD-6	Carbon Dioxide CO2 (Low Voltage) Fixed Gas Detector Controller Transducer w/ White Housing	1	EA
70-2900-0032-3	CD-12	Carbon Dioxide CO2 (Line Voltage) Fixed Gas Detector Controller Transducer w/ White Housing	1	EA
<b>Control Panel Products</b>				
70-0714-0315-1	DVP-120	Control Panel, 120V, 12 Analog Sensor Inputs, 3 Relays (LADBS available)	1	EA
70-2900-0032-1	DVP-120M	Control Panel, 120V, 12 Analog Sensor Inputs, 87 Addressable Modbus Sensor Inputs, 3 Relays	1	EA
70-2900-0012-1	MRS-485	Modbus RS-485 Adapter for use with Macurco 6-Series Detectors	1	EA
<b>Portable Gas Detection</b>				
70-0714-0204-7	CM-1	Carbon Monoxide CO Single-Gas Monitor	1	EA
70-0714-0207-0	CM-1XL	Carbon Monoxide CO Single-Gas Monitor with STEL, TWA, Replaceable Battery & Sensor	1	EA
70-0714-0209-6	CM-1XLS	Carbon Monoxide CO Single-Gas Monitor XL Monitor plus 4 user adjustable alarms	1	EA
70-0714-0205-4	HS-1	Hydrogen Sulfide H2S Single-Gas Monitor	1	EA
70-0714-0208-8	HS-1XL	Hydrogen Sulfide H2S Single-Gas Monitor with STEL, TWA, Replaceable Battery & Sensor	1	EA
70-0714-0203-9	OX-1	Oxygen O2 Single-Gas Monitor	1	EA
70-2900-0151-8	GS-1	Combustible LEL Single-Gas Monitor	1	EA
70-2900-0150-7	MG-1	CO / H2S / LEL / O2 Multi-Gas Monitor	1	EA
<b>Calibration Kits (Includes specified gas, regulator and case)</b>				
70-0714-0457-1	CMP-FCK	CM-1XL / CM-1XLS Carbon Monoxide CO Calibration Kit, 17L 35 ppm, 0.2 LPM Regulator	1	EA
70-0714-0453-0	HSP-FCK	HS-1XL Hydrogen Sulfide H2S Calibration Kit, 58L 10 ppm, 0.2 LPM Regulator	1	EA
<b>Calibration Replacement Gas</b>				
70-0714-0441-5	CANN35PPM	Carbon Monoxide CO Calibration Gas Canister, 17L 35 ppm	1	EA
70-0714-0433-2	CANN10PPM	Hydrogen Sulfide H2S Calibration Gas Canister, 58L 10 ppm	1	EA
<b>Portable Monitor Replacement Parts</b>				
26-1017-4941-9	Portable Battery	Replacement Battery for CM-1XL, CM-1XLS and HS-1XL	1	EA
26-2900-0037-9	H2S Portable Sensor	Replacement Hydrogen Sulfide H2S Sensor for HS-1XL	1	EA
26-2900-0036-8	CO Portable Sensor	Replacement Carbon Monoxide CO Sensor for CM-1XL and CM-1XLS	1	EA

**Explosion Proof Detectors** \*Denotes Remote Sensor Option Available

Item ID	Model	Description	QTY	UOM
5100-02-IT*	ExPrf- EX, Cat Bead, 0-100% LEL	Sensor Module, Combustibles, 0-100% LEL, LED Display, Catalytic Bead, AL, 3/4" NPT entry	1	EA
5100-03-IT*	ExPrf- OX, EletroChem, 5-25% Vol	Sensor Module, Oxygen, 5-25% Vol, LED Display, Electrochemical, AL, 3/4" NPT entry	1	EA
5100-04-IT*	ExPrf- CO, EletroChem, 0-500ppm	Sensor Module, Carbon Monoxide, 0-500 ppm, LED Display, Electrochemical, AL, 3/4" NPT entry	1	EA
5100-05-IT*	ExPrf- H2S, EletroChem, 0-100ppm	Sensor Module, Hydrogen Sulfide, 0-100 ppm, LED Display, Electrochemical, AL, 3/4" NPT entry	1	EA
5100-06-IT	ExPrf- Cl, EletroChem, 0-10ppm	Sensor Module, Chlorine, 0-10 ppm, LED Display, Electrochemical, AL, 3/4" NPT entry	1	EA
5100-08-IT	ExPrf- ClO2, EletroChem, 0-3ppm	Sensor Module, Chlorine Dioxide, 0-3 ppm, LED Display, Electrochemical, AL, 3/4" NPT entry	1	EA
5100-10-IT	ExPrf- SO2, EletroChem, 0-100ppm	Sensor Module, Sulfur Dioxide, 0-100 ppm, LED Display, Electrochemical, AL, 3/4" NPT entry	1	EA
5100-12-IT	ExPrf- NO2, EletroChem, 0-20ppm	Sensor Module, Nitrogen Dioxide, 0-20 ppm, LED Display, Electrochemical, AL, 3/4" NPT entry	1	EA
5100-21-IT	ExPrf- HCl, EletroChem, 0-20ppm	Sensor Module, Hydrogen Chloride, 0-20 ppm, LED Display, Electrochemical, AL, 3/4" NPT entry	1	EA
5100-25-IT	ExPrf- NH3, EletroChem, 0-100ppm	Sensor Module, Ammonia, 0-100 ppm, LED Display, Electrochemical, AL, 3/4" NPT entry	1	EA
5100-26-IT	ExPrf- HF, EletroChem, 0-10ppm	Sensor Module, Hydrogen Fluoride, 0-10 ppm, LED Display, Electrochemical, AL, 3/4" NPT entry	1	EA
5100-28-IT*	ExPrf- EX, IR, 0-100% LEL	Sensor Module, Methane, 0-100% LEL, LED Display, Infrared, AL, 3/4" NPT entry	1	EA
5100-88-IT	ExPrf- CO2, IR, 0-5000ppm	Sensor Module, Carbon Dioxide, 0-5000 ppm, LED Display, Infrared, AL, 3/4" NPT entry	1	EA
Add Ons	Options Available - Contact Us	Enclosure Type (Aluminum or Stainless Steel), Relays, HART, Remote Sensor	1	EA
<b>Fixed Gas Detection Accessories</b>				
<b>Carbon Monoxide (CO)</b>				
70-0714-8630-5	CM6-FCK	CM-6 / CM-12 Carbon Monoxide CO Field Calibration Kit, 17L 50 ppm, 17L 200 ppm, 0.2 LPM Regulator	1	EA
70-0715-4465-7	CM-E1-FTG	Carbon Monoxide CO Field Test Gas, 11L 500 ppm Aerosol	1	EA
70-0715-6411-2	CM-E1-IAK	CM-E1 / GD-2B Installation Adapter Kit	1	EA
70-0714-8640-4	CANN50PPM	Carbon Monoxide CO Calibration Gas Canister, 17L 50 ppm	1	EA
70-0714-0348-2	CANN200PPM	Carbon Monoxide CO Calibration Gas Canister, 17L 200 ppm	1	EA
<b>Combustible Gas (H2, CH4, C3H8)</b>				
70-0716-1753-7	GDH-FCK	GD-6 / GD-12 Hydrogen H2 Field Calibration Kit, 34L 10% LEL, 34L 20% LEL, 0.2 LPM Regulator	1	EA
70-0716-1751-1	GDM-FCK	GD-6 / GD-12 Methane CH4 Field Calibration Kit, 34L 10% LEL, 34L 20% LEL, 0.2 LPM Regulator	1	EA
70-0716-1752-9	GDP-FCK	GD-6 / GD-12 Propane C3H8 Field Calibration Kit, 34L 10% LEL, 34L 20% LEL, 0.2 LPM Regulator	1	EA
70-0716-1758-6	CANN10H	Hydrogen H2 Calibration Gas Canister, 34L 10% LEL	1	EA
70-0716-1759-4	CANN20H	Hydrogen H2 Calibration Gas Canister, 34L 20% LEL	1	EA
70-0716-1754-5	CANN10M	Methane CH4 Calibration Gas Canister, 34L 10% LEL	1	EA
70-0716-1755-2	CANN20M	Methane CH4 Calibration Gas Canister, 34L 20% LEL	1	EA
70-0716-1756-0	CANN10P	Propane C3H8 Calibration Gas Canister, 34L 10% LEL	1	EA
70-0716-1757-8	CANN20P	Propane C3H8 Calibration Gas Canister, 34L 20% LEL	1	EA
<b>Nitrogen Dioxide (NO2)</b>				
70-0714-0346-6	ND1-FCK	TX-6-ND / TX-12-ND Nitrogen Dioxide NO2 Field Calibration Kit, 34L 5 ppm, 0.2 LPM Regulator	1	EA
26-1017-5342-9	ND Sensor	TX-6-ND / TX-12-ND Nitrogen Dioxide NO2 Replacement Sensor	1	EA
70-0714-0531-3	ND Gas Cylinder	Nitrogen Dioxide NO2 Calibration Gas Canister, 34L 5 ppm	1	EA
<b>Ammonia (NH3)</b>				
70-0714-8437-5	AM1-FCK	TX-6-AM / TX-12-AM Ammonia NH3 Field Calibration Kit, 34L 25 ppm, 0.5 LPM Regulator	1	EA
26-2900-0005-4	AM Sensor	TX-6-AM / TX-12-AM Ammonia NH3 Replacement Sensor	1	EA
26-2900-0013-3	AM Gas Cylinder	Ammonia NH3 Calibration Gas Canister, 34L 25 ppm	1	EA
<b>Hydrogen Sulfide (H2S)</b>				
70-2900-0011-0	HS1-FCK	TX-6-HS / TX-12-HS Hydrogen Sulfide H2S Field Calibration Kit, 34L 25 ppm, 0.2 LPM Regulator	1	EA
26-2900-0006-5	H2S Sensor	TX-6-HS / TX-12-HS Hydrogen Sulfide H2S Replacement Sensor	1	EA
70-2900-0010-9	H2S Gas Cylinder	Hydrogen Sulfide H2S Calibration Gas Canister, 34L 25 ppm	1	EA
<b>Oxygen (O2)</b>				
70-2900-0062-8	OX-FTK	OX-6 / OX-12 Oxygen O2 Field Test Kit, 34L 17% v/v, 0.2 LPM Regulator	1	EA
26-1017-4969-0	OX Sensor	OX-6 / OX-12 Oxygen O2 Replacement Sensor	1	EA
70-2900-0061-7	O2 Gas Cylinder	Oxygen O2 Test Gas Canister, 34L 17% v/v	1	EA
<b>Refrigerant (REF)</b>				
70-2900-0131-3	RD-FTK	RD-6 / RD-12 Refrigerant Field Test Kit, 34L 300 ppm R-134A, 0.2 LPM Regulator	1	EA
70-2900-0132-4	RD Gas Cylinder	Refrigerant Test Gas Canister, 34L 300 ppm R-134A	1	EA
<b>Carbon Dioxide (CO2)</b>				
70-2900-0128-0	CD6-FTK	CD-6 / CD-12 Carbon Dioxide CO2 Field Test Kit, 17L 2000 ppm, 0.2 LPM Regulator	1	EA
70-2900-0129-1	CO2 Gas Cylinder	Carbon Dioxide CO2 Test Gas Canister, 17L 2000 ppm	1	EA
<b>MISC</b>				
70-0714-8484-7	PS-12	Plug-In Transformer, 120VAC To 12VDC, .6A	1	EA
70-0714-0339-1	DMK-1	Duct Mount Kit, Standard 4X4 Size Detectors	1	EA
70-2900-0019-8	WHK-1	Weatherproof Housing Kit, Standard 4X4 Size Detectors	1	EA

# MACURCO

## GAS DETECTION



MANUFACTURED BY  
**AERIONICS**



**Made in the USA**

Celebrating over 45 years of gas detection, the Macurco product line offers equipment for residential, commercial and industrial applications. Since 1972 Macurco has been providing detection options for a number of different gases including carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), hydrogen (H<sub>2</sub>), propane (LP), methane (natural gas), hydrogen sulfide (H<sub>2</sub>S), ammonia (NH<sub>3</sub>), oxygen (O<sub>2</sub>), carbon dioxide (CO<sub>2</sub>) and refrigerants. Headquartered in Sioux Falls, South Dakota, Aerionics manufactures Macurco Gas Detection products. Aerionics strives to provide the highest quality detection, safety and security solutions to customers worldwide. Whether you are looking for gas detection for a security system, building automation or HVAC system, for personal safety or for monitoring specific gases in potentially hazardous environments, Macurco has a gas detector to meet your needs.

Visit [www.macurco.com](http://www.macurco.com) for additional product information and training



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