



## Model 8058 General Purpose Gas Detector



### Description

The Model 8058 General Purpose Gas Detector effectively monitors the workplace air for potentially dangerous gas leaks from tubing, equipment, containers, reaction vessels, cylinder valves, and pressurized systems.

Weighing only 7-1/2 ounces, this truly portable and personal detector can be conveniently carried.

The unit continuously samples the air for hazardous gases and vapors. It sounds an audible alarm and flashes an LED when a potentially dangerous concentration of gas is detected.

The Model 8058 sensor design is sensitive to a wide variety of gases and vapors.

### Applications

The Model 8058 functions as a personal gas leak detector for production, QC, maintenance, and engineering personnel in a wide variety of process and laboratory locations and environments. Personnel no longer need be within the "sphere of influence" of a large multipoint gas detection system. They can now take their personal gas leak detectors with them, on site where needed. Since personal protection is only as good as the sampling procedure used, different areas should be checked for gas leaks that could lead to potential worker exposure.

### Leak Detection

The Model 8058 also functions as a point source leak detector for process and instrumentation gases. With the accessory probe attached, it can give an early warning indication of small leaks in cylinder or piping connections, or other gas handling hardware before they become large, potentially dangerous leaks. A comprehensive floor-to-ceiling scan procedure should be used for maximum effectiveness in leak detection.

### Gas Cabinet Cylinder Changeover

The Model 8058 has applications in leak detection of valves, fittings, purge assemblies and other hardware during cylinder changes in gas cabinets.

### Process Vessels and Enclosures

The Model 8058 can be used to detect leaks from process vessels, storage tanks, reaction vessels, and associated piping. It is good practice to periodically check process and associated equipment and materials for leakage before serious, potentially dangerous leaks have developed.

### Remote Enclosed Areas/Ductwork Leak Detection

It is also good practice to check the workplace air in remote and/or enclosed unmonitored areas before workers enter them. The same holds for large ductwork and ventilation systems that, during shutdown for maintenance and engineering work, can contain trapped pockets of hazardous gases. The Model 8058 can be used to sample these and other areas for leaks of potentially hazardous gases to help ensure a safe environment both before and during work tasks. Proper oxygen concentration should also be determined in remote or enclosed areas before workers enter.

### Cylinder Storage Areas

It is also good practice to screen incoming gas cylinders (both on receipt and return shipments) for possible leakage around cylinder valves. The Model 8058 with probe simplifies this process because of its small size and weight. The probe can be inserted into the slots in the cylinder cap for fast leak detection. Because gas leaks can stratify, a comprehensive floor-to-ceiling scan procedure should be used to detect accumulations of potentially hazardous gas leaks in cylinder storage areas.

### Specifications

Detection Principle:	Hot-wire semiconductor
Gas Alarm Type:	Gas concentration reaches or exceeds the alarm setpoint value
Fault Alarm Type:	Sensor connection/disconnection, low battery, low flow rate, circuit abnormality, calibration range abnormality, clock abnormality and pump abnormality
Gas Alarm Operation:	Lamp blinking and intermittent buzzer sounding
Fault Alarm Operation:	Lamp blinking, intermittent buzzer sounding and fault detail display
Detection Method:	Pump suction type
Response Time:	Within ten seconds of 0.1 ppm alarm by contact with PH3: 0.3 ppm)
LCD Display:	Display contents: Gas name, gas concentration (scale + bar display), time, battery level, drawing, operation and mode
Power Supply:	AA alkaline battery: 2 (included)
Continuous Operating Time:	12 hours or more (normal temperature, without alarms or lighting)
Operating Environment:	Temperature range: -20 - +55°C Humidity range: 95%RH or less (Non-condensing)
External Dimensions:	External dimensions: 43 (W) x 200 (H) x 39 (D) mm (projection portions excluded)
Weight:	Approx. 7-1/2 oz
Ingress Protection:	Equivalent to IP-55
Functions:	Target gas selection LCD backlight (automatically lights up in response to an alarm) Peak hold Data logger Clock display
Standard Accessories:	Tapered nozzle (1 pc) Rubber protection cover (1 pc) Hand strap (1 pc) Spare filters (5 pcs)
Warranty	12 months limited warranty. See MATHESON terms and conditions for details



## Model 8058

### General Purpose Gas Detector (continued)

Gas Detected				
Gas name (standard name)	Display	Range 1 (ppm)	Range 2 (ppm)	Remarks
Acetone	C <sub>3</sub> H <sub>6</sub> O	1	10	
Ammonia	NH <sub>3</sub>	10	-	
Arsine	AsH <sub>3</sub>	0.2	-	
Benzene	C <sub>6</sub> H <sub>6</sub>	0.5	10	
Carbon monoxide	CO	10	30	
1,2-Dichloroethane	EDC	1	10	Chloride (See the below NOTE)
Diborane	B <sub>2</sub> H <sub>6</sub>	0.1	-	
Ethyl alcohol	C <sub>2</sub> H <sub>5</sub> OH	1	10	
Ethylene	C <sub>2</sub> H <sub>4</sub>	1	10	
Ethylene oxide	EO	1	10	
Formaldehyde (HCHO)	HCHO	10	50	
Germane	GeH <sub>4</sub>	0.2	-	
HFO-1234yf	CH <sub>2</sub> C <sub>2</sub> F <sub>4</sub>	10	30	
Hydrogen	H <sub>2</sub>	1	10	
Hydrogen bromide	HBr	10	-	
Hydrogen chloride	HCL	10	-	Chloride (See the below NOTE)
Hydrogen selenide	H <sub>2</sub> Se	0.5	-	
Hydrogen sulfide	H <sub>2</sub> S	0.1	-	Sulfur compound (See the below NOTE)
Isobutane	i-C <sub>4</sub> H <sub>10</sub>	1	10	
Isopropyl alcohol	IPA	1	10	
Methane	CH <sub>4</sub>	1	20	
Methyl alcohol	CH <sub>3</sub> OH	1	10	
Methyl bromide	CH <sub>3</sub> Br	1	20	
Methyl chloride	CH <sub>3</sub> CL	1	10	Chloride (See the below NOTE)
Methyl ethyl ketone	MEK	1	10	
Normal hexane	n-C <sub>6</sub> H <sub>14</sub>	10	50	
Phosphine	PH <sub>3</sub>	0.1	2	
Propane	C <sub>3</sub> H <sub>8</sub>	5	20	
R-134a	R-134a	50	250	
R-22	R-22	10	50	Chloride (See the below NOTE)
R-32	R-32	10	50	
R-404A	R-404A	10	50	
R-407C	R-407C	10	50	
R-410A	R-410A	10	50	
Silane	SiH <sub>4</sub>	0.5	-	Si compound (See the below NOTE)
Sulfur dioxide	SO <sub>2</sub>	1	-	Sulfur compound (See the below NOTE)
Toluene	C <sub>7</sub> H <sub>8</sub>	1	10	
Trichloroethylene	C <sub>2</sub> HCL <sub>3</sub>	10	-	Chloride (See the below NOTE)
Vinyl chloride	VCM	1	-	Chloride (See the below NOTE)
Xylene	C <sub>8</sub> H <sub>10</sub>	1	10	

#### NOTE

- High-concentration or continuous contact with a chloride or sulfur compound will shorten the sensor life or cause larger errors.
- If a Si compound is detected, the sensitivity will decrease.
- Even for a gas shown only with the bar meter display but no scales, the meter reads Scale 2. Use it as an indication of concentration increase.
- If a high-concentration solvent gas is drawn, the rubber seal used in the detector will deteriorate.

#### Ordering Information

Model Number	Description
SEQ8058	General Purpose Gas Detector, comes complete with detector, heavy duty cover, probe, batteries.