# A complete portable electrochemical datalogging gas leak detector

# Manning EC-P2
## portable electrochemical gas detector

**The Manning EC-P2 is a portable, battery operated gas measuring and datalogging instrument with interchangegable sensors for the measurement of gas concentrations in ambient air.**

### Easy to Use
- Datalogging capability can import into Excel spreadsheet
- Sampling mode for capturing readings in a controlled, readable manner
- RS-232 output of stored gas values
- Optional analog output 0 to 1.0 VDC
- 12,000 data points of memory

### Durable and Reliable
- Rugged internal pump
- Excellent accuracy and repeatability

### Safety
- Two adjustable concentration alarms, zero drift caution
- Low flow and low battery alarms

### Enhanced Technology
- Electrochemical sensors provide maximum sensitivity with minimal interference
- Smart-Cell gas data retention

### Long Battery Life
- Primary power source is "C" alkaline battery has approximately 45 hours of runtime
- Standby power source is a rechargeable NiCad battery that provides approximately 6 hours of additional runtime

### Fully Portable Unit
- Includes interchangeable target gas selective electrochemical sensors
- Includes charger, storage case, and datalogging software
- Includes RS-232 output cable

The Manning EC-P2 is a complete portable gas measuring and data logging instrument including an interchangeable target gas selective electrochemical sensor, primary and secondary batteries, charger, storage case, data logging software and RS-232 output cable. The backlit LCD display shows gas concentration reading in real time.

Gas concentrations are measured by an electrochemical Smart-Cell which has internally stored gas calibration data. The sensors can be exchanged quickly and easily without the need for calibration.

### Applications
- Confined space entry
- Fugitive emissions testing
- Equipment and piping leak detection
- Ambient air measurement
- OSHA compliance measurements
- Emergency HAZMAT response
- Safety datalogging requirements

# Technical summary

## General Specification

| | |
|---|---|
| **Use** | Portable, battery powered instrument that uses interchangeable cells to measure a range of gases that has datalogging capability |
| **Primary Power** | Alkaline C cell battery, approximately 45 hours continuous operation |
| **Standby Power** | Internal rechargeable NiCad battery, 6 hours operation |
| **Charger** | 120 VAC plug-in charger for internal standby battery (Optional 220 VAC charger available) |
| **Display** | Backlit LCD |
| **Pump** | Miniature internal diaphragm type, flow rate 0.5 SCFH |
| **Alarms** | Two Concentration alarms, Zero Drift caution, Low Flow and Low Battery alarms |
| **Standard Accessories** | Storage case, 10 in. (25 cm) extension wand, battery charger, filter material, datalogging software, RS-232 output cable (DB9 connector) |
| **Optional Accessories** | Analog output cable, Cell Keeper for storage of additional SMART-CELLs |
| **Sensor Type** | Target gas selective electrochemical SMART-CELL |
| **Accuracy** | Sensor dependent, but generally ± 5% of reading |
| **Repeatability** | ± 1% full scale |
| **Operating Ambient Temperature Range** | 0° to 120° F (-18° C to 49° C) (can operate for short periods at sub-zero temperatures) |
| **Storage Temperature** | Recommend storing on the charger in an air-conditioned office |
| **Weight** | 1.8 lbs. (0.8 kg) (detector only), 5 lbs. (2.3 kg) (shipping weight) |
| **Dimensions** | Approximately 3.5 in. x 5 in. x 8.5 in. (8.9 cm x 12.7 cm x 21.6 cm) |
| **Outputs** | RS-232 output of stored gas values<br>Analog output 0 to 1.0 VDC (requires optional analog output cable) |
| **Memory** | 12,000 data points, storage interval between points programmable at 1, 5, 10 or 15 minutes |
| **Typical Memory Capacity** | 8 days at 1 minute storage intervals |

## Single gases that can be monitored by the interchangeable SMART-CELLs:

| Gas | Standard Range |
|---|---|
| Alcohol | 0-500 ppm |
| Ammonia | 0-500 ppm |
| Ammonia | 0-2,000 ppm |
| Bromine | 0-5 ppm |
| Carbon Monoxide | 0-1,000 ppm |
| Chlorine | 0-5 ppm |
| Chlorine | 0-200 ppm |
| Fluorine | 0-5 ppm |
| Formaldehyde | 0-200 ppm |
| Hydrogen | 0-2,000 ppm |
| Hydrogen Chloride | 0-200 ppm |
| Hydrogen Peroxide | 0-200 ppm |
| Hydrogen Sulfide | 0-200 ppm |
| Nitric Oxide | 0-500 ppm |
| Nitrogen Dioxide | 0-200 ppm |
| Oxygen | 0-25 % |
| Ozone | 0-5 ppm |
| Sulfur Dioxide | 0-500 ppm |

As world leaders in gas detection solutions, Honeywell Analytics' Manning range of gas detection systems has been designed to provide efficient, practical and cost-effective equipment to protect people from a variety of forms of hazardous gas and to efficiently monitor and control indoor air quality. The equipment is also simple to install and easy to operate and maintain.

# The Manning range of fixed gas detection and accessories

**Manning EC-F9-NH3**  **Manning Vent Line**  **Manning AirScan iR**  **Manning GM-10**  **Manning GM-4000**

## Manning Line of Sensors

Designed for both industrial and commercial environments, the Manning line of sensors are produced to withstand the harshest of environments. The electrochemical and infrared sensors can be configured with the optional ATMOS® equipped technology that allows them to meet all of their performance specifications down to -50° F and in condensing humidity environments or during washdown.

## Find out more

For more information on Honeywell Analytic's Manning line of products, visit www.honeywellanalytics.com or contact us at 800 323 2000

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## Manning Controllers

Regardless of the number of sensors that need to be monitored, there is a Honeywell Analytics Manning controller system that will suit your needs. These multi-channel stand-alone monitoring/safety systems support up to ten (10) Honeywell Analytics gas detection sensors each and can interface with the plant central safety controls. Modular construction allows easy addition of up to forty (40) extra relay outputs and individual 4/20 mA signal output from each channel. The 'at-a-glance' status displays give instant feedback on potential gas hazards.

**Manning AirAlert™ 96d**

## Multi-Channel Readouts

The Manning AirAlert 96d is designed for installation and operational simplicity for continuous monitoring and control of toxic gases, combustible gases and oxygen hazards. With a total of 96 gas sensors and relay modules linked to one controller, the Manning AirAlert 96d detection system represents the most affordable protection for your gas monitoring requirements.

**Calibration Kit**

The do-it-yourself solution for recommended calibration of Manning fixed line of gas detection products enables the product to be recertified for the required sensor recalibration. This easy to use kit contains everything needed for simple calibration    including gas cylinders containing applicable gas, a calibration adaptor, flow meter, valve assembly, and tubing housed in a durable carrying case.

**Honeywell**