



**An ammonia sensor that exhibits excellent accuracy and precision**

# Manning EC-F2 ammonia sensor



## Ammonia Specific

- Immediate response to ammonia

## User Friendly

- No moving parts
- Factory calibrated
- Requires minimal adjustments after installation

## Reliable

- Highly resistant to EMI/RFI
- Available in three ranges
- Minor response to common interference gases
- Negligible response to extreme changes in relative humidity

## ATMOS™ Technology

- Allows for operation down to -50°F and in condensing humidity environments or during washdown
- Automatically adapts to its environment and provides accurate and reliable performance under the harshest conditions

## Housing

- NEMA 1 #16 gauge heavy-duty steel enclosure
- NEMA 4 available

**The Manning EC-F2 Sensor is a three-wire, 4/20 mA sensor for ammonia available in ranges of 0-100 ppm, 0-250 ppm, 0-500 ppm and 0-1,000 ppm.**

The Manning EC-F2 exhibits excellent accuracy and precision, with negligible response to common interference gases and dramatic changes in relative humidity. Reliable trip levels as low as 25 ppm can be expected with the 0-100 ppm sensor. The unit exhibits extremely high reliability with no moving parts.

Monitoring equipment must be configured to indicate a fault if the signal is less than 1.5 mA. All signals over 20 mA must be considered a high gas concentration.

## Applications

- Meat, poultry, and fish processing facilities
- Dairy and ice cream plants,
- Wineries and breweries
- Fruit juice, vegetable juice, and soft drink processing facilities
- Cold storage warehouses
- Other food processing facilities
- Seafood processing facilities aboard ships
- Petrochemical facilities.



# Technical summary



General Specification	
<b>Use</b>	Simple and reliable "gas specific" system that is useful in detecting low ppm levels
<b>Method</b>	Electrochemical (diffusion)
<b>Ranges</b>	0-100 ppm (standard) 0-250 ppm 0-500 ppm 0-1,000 ppm
Common Operation	
<b>Output</b>	Isolated 4/20 mA, 700 ohms max at 24 VDC
<b>Accuracy</b>	± 5% generally, but limited by available calibration gas accuracy
<b>Repeatability</b>	± 2% full scale
Operational	
<b>Humidity</b>	5-100% RH (condensing). ATMOS equipped® enviro-adaptive technology option required for condensing conditions or refrigerated areas, and all outdoor applications.
<b>Temperatures</b>	-50° F to +120° F (-46° C to 49° C) ATMOS equipped® enviro-adaptive technology option required for refrigerated areas or outdoors
Common Module	
<b>Sensor Pressure Limits</b>	0-10 PSIG
<b>Power Source</b>	24 VDC, 0.5 amp max
<b>Gas Sampling</b>	Diffusion method is standard
<b>Weight</b>	3 lbs. (1.4 kg)
<b>Dimensions</b>	6 in. high x 4 in. wide x 3.5 in. deep (15.2 cm x 10.2 cm x 8.9 cm)
<b>Cable Recommendations</b>	#18/3 shielded cable (Belden #8770 or equal), cable runs <1,500 ft. (457 m)
<b>Enclosure</b>	NEMA 1, gasketed, #16-gauge steel (standard). Stainless steel or explosion-proof designs, including modified enclosures for low temperatures, ventilation ducts, etc., are available (contact Manning Systems). Note: The standard EC is for use in non-classified areas only.
Sensor Specifications	
<b>Sensor Pressure</b>	Limits 0-10 PSIG
<b>Response Time</b>	T50 = 10 seconds T100 < 1 second for concentration > 1% NH3
<b>Ranges</b>	0-100 ppm (standard) 0-250 ppm 0-500 ppm 0-1000 ppm
<b>Enclosure</b>	NEMA 1, gasketed, #16 gauge steel (standard). Stainless steel or explosion-proof designs, including modified enclosures for low temperatures, ventilation ducts, etc. are available.
<b>Weight</b>	3 lbs.

# Honeywell Analytics Lines of Business



## Commercial

Vulcain-brand gas detection from stand-alone units to fully engineered, multi-point systems, all offering cost-effective regulatory compliance

- » Applications: parking structures, chillers, mechanical rooms, office towers, commercial buildings, shopping centers, swimming pools, golf courses, schools and universities, laboratories

### Find out more

[www.honeywellanalytics.com](http://www.honeywellanalytics.com)

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## Industrial

Renowned Sieger and Manning gas detection systems with advanced electrochemical, infrared and open path sensing technologies

- » Applications: oil and gas, cold storage, water/wastewater treatment, chemicals, engine rooms, plastics and fibers, agriculture, printing and light industrial



## High Tech/Government

A complete portfolio of gas and chemical detection instrumentation including infrared spectroscopy (MST) with no cross interference, to Chemcassette paper-based solutions (MDA Scientific) offering detection down to parts per billion

- » Applications: semiconductor manufacturing and nanotechnology, aerospace propulsion and safety, specialty chemicals industry, research laboratories, emergency response

#### Europe, Middle East, Africa

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[gasdetection@honeywell.com](mailto:gasdetection@honeywell.com)

## Portables

Single or multi-gas Lumidor and other premium detectors with compact, lightweight designs ranging from simple alarm only units to advanced, fully configurable and serviceable instruments

- » Applications: underground utility and electricity ducts, boiler rooms, post-fire sites, sewers, industrial plants, industrial hygiene, first responder teams, remote fleets



## Technical Services

24/7 global network includes post-sales service and Systems Integration teams

- » Emergency call out, service contracts, on/off-site repair, training and commissioning
- » Complete range of spares, consumables and accessories

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