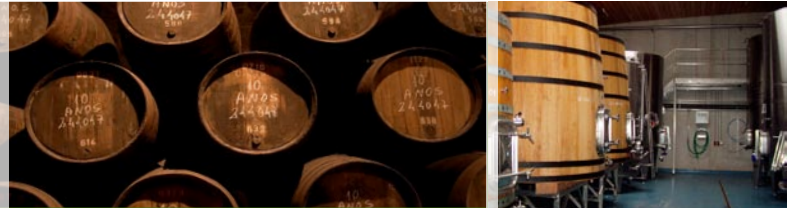




**A galvanic cell type oxygen sensor that exhibits exceptionally long life plus excellent chemical durability**

# Manning EC-F3 extended life oxygen sensor/ transmitter



## User Friendly

- No moving parts or filters to replace
- Factory calibrated
- Requires minimal adjustments after installation

## Oxygen Specific

- Rapid response to oxygen

## Reliable

- Very long life (10 years at 20.9% O<sub>2</sub>)
- Not influenced by carbon dioxide, carbon monoxide, hydrogen sulfide, nitrous oxide, sulfur dioxide or hydrogen
- Automatic temperature compensation
- Fast response (90% in 60 seconds)
- Sealed disposable cell

## Easy Maintenance

- Sealed disposable cell
- Quick and easy calibration

## Versatile

- Can be used with any Honeywell Analytics readout

## Housing

- NEMA 1 #16 gauge heavy-duty steel enclosure
- NEMA 4 packaging available
- Explosion-proof design available

**The Manning EC-F3 exhibits excellent accuracy and precision, with negligible response to common interference gases and dramatic changes in relative humidity.**

In the past, oxygen sensors have been prone to be short lived and, at times, erratic. The Manning EC-F3 oxygen sensor utilizes a larger supply of electrolyte that is formulated to be minimally affected by interference gases, even carbon dioxide (CO<sub>2</sub>). The sensor is also temperature compensated.

The standard O<sub>2</sub> sensor is housed in a rugged #16 gauge, NEMA 1 design steel enclosure. An optional bargraph readout, which will provide a downscale alarm, can be mounted inside the enclosure. The transmitter/ pre-amp provides a linear 4/20 mA current signal out in two ranges: 0-25% or 15-25%.

The oxygen sensor is boardmounted and easily replaceable. The transmitter/pre-amp has been designed with EMI and RFI filtering and shielding.

## Applications

- Boiler Rooms
- Breweries
- Confined Space Entry
- Food Processing
- Fruit, Vegetable Processing
- Greenhouses
- Oxygen Depletion Alarms
- Poultry, Meat, Fish Processing
- Refrigeration Systems



# Technical summary



General Specification	
<b>Use</b>	The Manning EC-F3 Oxygen sensor is designed for the down scale and up scale monitoring of oxygen (O <sub>2</sub> ) as a percentage of the overall compensation of air in the environment being monitored.
Common Operation	
<b>Ranges</b>	0-25% 15-25%
<b>Output</b>	4/20 mA output, 250 ohms maximum at 24 VDC
<b>Accuracy</b>	±3%
Operational	
<b>Humidity</b>	5-100% RH (condensing) ATMOSTM enviro-adaptive technology option required for condensing conditions or refrigerated areas (contact Manning)
<b>Temperatures</b>	0°F to 125°F (-19°C to 53°C) ATMOSTM enviro-adaptive technology option required for refrigerated areas or outdoors (contact Manning) Storage, 10°F to 140°F (-13°C to 60°C)
<b>Pressure Limits</b>	Can operate from 0.5 Atm to 1.5 Atm Output signal is directly proportional to ambient pressure changes
<b>Mounting</b>	NEMA 1, gasketed, #16 gauge steel box Unit must always be mounted with sensor pointed down – keep away from vibration NOTE: This oxygen sensor is for use in non-classified areas only.
<b>Power</b>	24 VDC, 30 mA maximum, regulated
<b>Gas Sampling</b>	Diffusion method is standard
<b>Weight</b>	3 lbs. (1.4 kg)
<b>Dimensions</b>	6 in. H x 4 in. W x 3.5 in. D (15.2 cm x 10.2 cm x 8.9 cm)
<b>Cable Recommendations</b>	#18/3 shielded Belden #8770 or equal (cable length, up to 1500' to sensor)
<b>Options</b>	Internally mounted GM-JR readout Sample draw connections
<b>Interferences</b>	Not influenced by carbon dioxide, carbon monoxide, hydrogen sulfide, hydrogen, chlorine, CFCs, HFCs, HCFCs or cigarette smoke No influence to 50% volume of methane Not affected by ammonia concentrations up to 25 ppm (higher concentrations of ammonia will shorten cell life)



# 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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## 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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