



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% O₂)
- 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 (CO₂). The sensor is also temperature compensated.

The standard O₂ 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	
Use	The Manning EC-F3 Oxygen sensor is designed for the down scale and up scale monitoring of oxygen (O ₂) as a percentage of the overall compensation of air in the environment being monitored.
Common Operation	
Ranges	0-25% 15-25%
Output	4/20 mA output, 250 ohms maximum at 24 VDC
Accuracy	±3%
Operational	
Humidity	5-100% RH (condensing) ATMOSTM enviro-adaptive technology option required for condensing conditions or refrigerated areas (contact Manning)
Temperatures	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)
Pressure Limits	Can operate from 0.5 Atm to 1.5 Atm Output signal is directly proportional to ambient pressure changes
Mounting	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.
Power	24 VDC, 30 mA maximum, regulated
Gas Sampling	Diffusion method is standard
Weight	3 lbs. (1.4 kg)
Dimensions	6 in. H x 4 in. W x 3.5 in. D (15.2 cm x 10.2 cm x 8.9 cm)
Cable Recommendations	#18/3 shielded Belden #8770 or equal (cable length, up to 1500' to sensor)
Options	Internally mounted GM-JR readout Sample draw connections
Interferences	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

Gas detection from standalone 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

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

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



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

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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