Manning EC-F3

Honeywell



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

dramatic changes in relative humidity.

response to common interference gases and

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.

In the past, oxygen sensors have been prone to

The standard O_2 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) ATMOS™ 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





Single or multi-gas Lumidor and other

simple alarm only units to advanced,

premium detectors with compact,

lightweight designs ranging from

fully configurable and serviceable

» Applications: underground utility

plants, industrial hygiene, first responder teams, remote fleets

and electricity ducts, boiler rooms,

post-fire sites, sewers, industrial

Portables

instruments

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



High Tech/Government

A complete portfolio of gas and chemical detection instrumentation including infrared spectroscopy (MST) with no cross interference, to Chemcassette paperbased 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

www.honeywell.com

Honeywell Analytics

4006 Matte Blvd., Unit G

Brossard, QC, Canada

Toll-free: 800.563.2967

detectgas@honeywell.com

Tel: 450.619.2450

Fax: 888.967.9938

Canada

JAY 2P4

ha.service@honeywell.com

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

Technical Services

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

Europe and the rest of the world

Life Safety Distribution AG Weiherallee 11a CH-8610 Uster Switzerland Tel: +41 (0)44.943.4300 Fax: +41 (0)44.943.4398 gasdetection@honeywell.com



Please Note:

While ever effort has been made to ensure accuracy in this publication, no responsibility can be accepted for errors or omissions. Data may change, as well as legislation, and you are strongly advised to obtain copies of the most recently issued regulations, standards, and guidelines. This publication is not intended to form the basis of a contract.

Find out more

www.honeywellanalytics.com

Contact Honeywell Analytics:

USA, Central and South America

Honeywell Analytics, Inc. 23500 W. 105th Street, MD 400 Olathe, KS 66061 USA Toll-free: 800.444.9935 Fax: 913.712.5580 Toll-free fax: 888.328.2417 detectgas@honeywell.com

H_EC-F3_DS01025_V3 6/10 © 2010 Honeywell Analytics