Manning EC-F9-NH3

Industry leading performance in ammonia detection technology
Manning EC-F9-NH3 sensor / transmitter

Ammonia Specific
- Rapid response to ammonia
- Internal monitoring of 400 ppm leak circuits continuously

Versatility
- Can be used with any Honeywell Analytics readout
- Standard range of 100 ppm can be increased to higher ranges
- Provides an output of 420 mA as a function of refrigerant concentration

Easy Maintenance
- Quick and easy calibration
- Readable calibration information on maintenance downtime
- Long sensor life
  - Quick and easy calibration

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

SensorCheck™ Technology
- Checks operating parameters of sensor and sends a notification output signal if an anomaly is identified
- Tests the sensor every 24 hours for electrical viability
- Indication can be tied to a Manning gas monitor or PLC

Housing
- NEMA 1 IP 65 heavy-duty steel enclosure
- Explosion proof design available

Applications
- Bakeries
- Beverage, Distilling Plants
- Blast, Spiral Freezers
- Chemical Manufacturing
- Gas Filling Plants
- Coolers
- Duck Mounting Sensors
- Equipment Airlocks
- Food Processing
- Fruit, Vegetable Processing
- Ice Cream Storage
- Peroximeters
- Perimeter Monitoring
- Purified Water Plants
- Poultry, Meat, Fish Processing
- NOx Reduction (power plants)
- Refrigeration Systems
- Storage Freezers
- Turbine Inlet Cooling
- Wineries

The Manning EC-F9-NH3 with SensorCheck™ features industry-leading performance gas detection technology and adds a built-in system to monitor and predict the sensor’s electrical viability.

Available with an optional LCD that allows real time display of gas concentration. The easy-to-read display allows for quick visual error events upon startup and troubleshooting and can be calibrated without a calibrator. The Manning EC-F9-NH3 with LCD is designed to work in the harshest environments including chemical washdown.

General Description
The Manning EC-F9-NH3 sensor consists of a pair of polarized electrodes isolated from the environment by a gas permeable membrane. As ammonia diffuses into the sensor, a redox reaction occurs, generating a current linearly proportional to ammonia gas concentration. Unlike many other ammonia sensors, this gas diffusion detector exhibits excellent zero and calibration stability over long periods of time. EC cells often last 3-4 years in the refrigerated environments of food processing and storage warehouses. This sensor can provide direct input into PLC’s and computer control systems that accept a linear 4/20 mA signal either from the sensor or from any Manning multi-channel stand-alone alarm consoles with relay or analog output.

General Specification
- Use: Electrochemical (diffusion) type sensor that works in conjunction with any Honeywell Analytics readout or alarm unit. Readouts have built in visual and audible alarms, as well as relay output for ventilator for audible alarm can be, etc. The Manning EC-F9-NH3 can provide a linear 4/20 mA signal input into PLC’s.

Common Operation
- Operation: In cells without the optional LCD module, a group of LEDs are installed to the P/N. In order with the optional LCD, two external push buttons, “Accept” and “Scroll” are used to navigate test functions and operating modes.
- LCD display (optional): 2 line by 16 character alphanumeric and continuous backlight
- Output: 4-20 mA, 700 ohms max. at 24 VDC. Signal output reduces to 0.5 mA to indicate a fault condition. RS-485, Modbus RTU supported
- Accuracy: +/- 5% generally, but limited by available calibration gas accuracy. Indicate sensor contains moving parts, contributing to accuracy in field

Environmental IP rating: Indicate IP 44 in accordance with ANSI/UL 501

Operational
- Humidity: 5-95% RH (condensing)
- Temperature: -20°C to +80°C / -40°F to +176°F, ATMOS equipped enviro-adaptive technology required for refrigerated areas or outdoors
- Sensor Pressure Limit: 0-10 PSIG
- Storage: -40°C to +60°C / -40°F to +140°F, ATMOS equipped enviro-adaptive technology

Technical summary

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Weight
- 3 lbs.