

EC-FX-NH3 Technical Specifications Ammonia Sensor/Transmitter



GENERAL SPECIFICATION	
USE	Ammonia sensor/transmitter designed for use in industrial refrigeration applications. The EC-FX-NH3 can provide a linear 4/20 mA or Modbus RS-485 signal input into PLC's or SCADA systems. Can also be used with Honeywell controllers to create a complete gas detection system that includes visual/audible notification and relay outputs to activate ventilation.
COMMON OPERATION	
OPERATION	In units without the optional LCD module, status is indicated by LEDs installed on the PCB. In units 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 8 alpha numeric characters and continuous backlight
OUTPUT	2 Isolated 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 protocol.
ACCURACY	±5% full scale*
ENVIRONMENTAL IP RATING	Indoor use, IP 44 in accordance with EN60529:1992
OPERATIONAL	
HUMIDITY	5-100% RH (condensing)
TEMPERATURE	-50°F to +120°F (-45°C to +49°C), ATMOS equipped enviro-adaptive technology required for refrigerated areas or outdoors
SENSOR PRESSURE LIMIT	0-10 PSIG
STORAGE	40°F to +120°F (-40°C to +49°C), 20 to 80%RH (non condensing)
COMMON MODULE	
COMMUNICATION	4/20 mA output: #18/3 shielded cable (Belden 8770 or equal), cable runs < 1,500 ft. RS-485: for communication cable, use 24 AWG twisted pair, shielded (Belden #9841 or equal), cable runs up to 2,000 ft. For power cable use 14 AWG (Belden #5100UE or equal), cable runs up to 1,000 feet.
POWER SOURCE	24 VDC, 0.5 amp max.
ENCLOSURE	NEMA 1, gasketed, #16 gauge steel (standard). Stainless steel, including modified enclosures for low temperatures, ventilation ducts, etc. are available. Weight: 3 lbs.
SENSOR SPECIFICATIONS	
SENSOR PRESSURE LIMIT	Atmospheric ±10%
REPEATABILITY	<10% of full scale
RESPONSE TIME (T90)	<30 s Low Range; <75s High Range
RANGES	Low Range 0-100 ppm (standard), 0-200 ppm, 0-250 ppm, High Range 0-500 ppm, 0-1000 ppm
SENSOR WARRANTY	Three years from date of shipment
SENSOR VIABILITY TEST	SensorCheck: an internal microprocessor determines the sensor's electrical viability every 24 hours. If the viability test fails, a 0.5 mA signal will indicate a fault. An internal LED will indicate if the sensor is at the end of its operational life or disconnected.

CAUTION: EC-FX is designed for operation in a wide range of environments and harsh conditions. However, it is important that exposure to high concentrations of solvent vapors is avoided, both during storage, fitting into instruments, and operation. EC-FX is designed to be used in safety critical applications. To ensure that the sensor and/or instrument in which it is used, are operating properly, it is a requirement that the function of the device is confirmed by exposure to target gas (bump check). Failure to carry out such tests on a regular basis may jeopardize the safety of people and property.

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