

## EC-FX High-Range Technical Specifications Ammonia Gas Sensor

MEASUREMENT	
OPERATING PRINCIPLE	3-electrode electrochemical
MEASUREMENT RANGE	0-500 and 0-1000 PPM NH <sub>3</sub>
MAXIMUM OVERLOAD	5000 PPM
LOWER DETECTION LIMIT	< 37.5 PPM
FILTER	None
SENSITIVITY	19 ± 3 nA/PPM
RESPONSE TIME (T90)	< 75 s
BASELINE OFFSET (CLEAN AIR)	-37.5 ppm ≤ I0/S ≤ 12.5 ppm
ZERO SHIFT (T = [-40°C; +20°C (OR) +20°C; +50°C])	-37.5 ppm ≤ I0/S ≤ 31.25 ppm
ACCURACY	± 5% full scale*
REPEATABILITY	< 10% of full scale
MECHANICAL	
HOUSING MATERIAL	Polyphenylene Oxide (PPO) Noryl
WEIGHT	4.5 g
ORIENTATION	Vertical only
ENVIRONMENTAL	
TYPICAL APPLICATIONS	Industrial refrigeration, cold storage, and engine rooms
OPERATING TEMPERATURE RANGE	Continuous: -4° to 122°F (sensor only) Storage: -58° to 122°F (sensor only)
OPERATING PRESSURE RANGE	Atmospheric ± 10%
OPERATING HUMIDITY RANGE	5% to 95% RH non-condensing
INTRINSIC SAFETY DATA	
MAXIMUM AT 1000 PPM	< 0.14 mA
MAXIMUM O/C VOLTAGE	< 1.2 V
MAXIMUM S/C CURRENT	< 100 mA
LIFETIME	
LONG TERM OUTPUT DRIFT	< 5% per 6 months
EXPECTED OPERATING LIFE	Cold Storage: 4-5 years in average conditions Engine Room: 3-4 years in average conditions
STORAGE LIFE	6 months in sealed container
STANDARD WARRANTY	Three years from date of shipment

\* ±5% of full scale range at temperature of calibration. Contact HA for additional details.

**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.

**PLEASE NOTE:** Connection should be made via PCB sockets only. Soldering to pins will render your warranty void.

While every 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.

### For more information:

[www.honeywellanalytics.com](http://www.honeywellanalytics.com)

### Honeywell Analytics:

Toll free: 800.444.9935

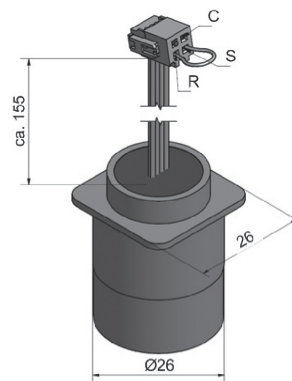
[www.honeywell.com](http://www.honeywell.com)

SS01162\_V4 03/16

© 2016 Honeywell Analytics

### Product Dimensions

All dimension in mm, all tolerances ± 0.15 mm unless otherwise stated.



### Cross-sensitivity Data

While Honeywell cells are designed to be highly specific to the gas they are intended to measure, they will still respond to some degree to certain gases. The table below is not exclusive and other gases not included in the table may still cause a sensor to react.

Gas	Concentration Used (PPM)	Reading (PPM)
Carbon Dioxide CO <sub>2</sub>	5000	0
Ethylene C <sub>2</sub> H <sub>4</sub>	200	4
Carbon Monoxide CO	50	53
Hydrogen Sulfide H <sub>2</sub> S	10	28
Sulfur Dioxide SO <sub>2</sub>	20	6
Iso-Propanol C <sub>3</sub> H <sub>7</sub> OH	11000	110
Hydrogen H <sub>2</sub>	3000	1343
Methane CH <sub>4</sub>	18500	0
Ozone O <sub>3</sub>	0.25	0
Chlorine Cl <sub>2</sub>	10	-4

The cross-sensitivity values quoted are based on tests conducted on a small number of sensors. They are intended to indicate sensor response to gases other than the target gas. Sensors may behave differently with changes in ambient conditions and may show some variation from the values quoted.