



Ammonia Meter

Model Z-800

FEATURES

- Meets OSHA Accuracy Requirements
- Time Weighted Average (TWA)
- Short Term Exposure Limit (STEL)
- Compact, Light Weight, Durable
- Battery Status LED
- Data Logging Available (Model: ZDL-800)

INTRODUCTION

Environmental Sensors Co.'s Ammonia Meter is a handheld instrument that measures ammonia concentration in a range of 0-100 ppm and a resolution of 0.1 ppm

The instrument makes it possible to monitor ammonia vapor in air. The instrument has a LCD display giving concentrations in ppm, a low battery indicator, and an audible alarm that can be set at any level from 0-100 ppm.

With the touch of a button, the meter displays STEL (average of every 15 min.), TWA (average of every hour) and Peak.

Data Logging (Model ZD-800)

The ZDL-800 Ammonia hand-held data logging meter stores all of the exposure points for up to 5 logs (a log is created in the instrument's internal memory each time it is used). A log contains: date, time, number of exposure points. All of the log files can be easily uploaded to PC using components available within the Microsoft Windows Operating System or the terminal software included with the instrument.



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SPECIFICATIONS

Sensor Type	Electrochemical
Measuring Range	0-100 ppm
Resolution	0.1 ppm
Response Time	< 60 sec.
Long Term Sensitivity Drift	< 5% per 6 months
Operating Temp.	-20 C° to +40 C°
Relative Humidity Range	15-90% non-condensing
Alarm	Audible, 80 db
Dimensions : HxDxW	4.75"x2.5"x1.5"
Weight	170 gms
Power Source	9-V Alkaline Battery
Warranty	1 year

THEORY OF OPERATION

The sensing element of the instrument is an electrochemical cell. The cell is a four-electrode type, which contains a working and an active auxiliary electrode. The signal from the auxiliary electrode is used for temperature compensation and to improve the selectivity of the entire sensor. The sensor response is linear with the concentration of ammonia in air.

INTERFERENCES

Some representative examples of the common compounds and the corresponding signals they are shown below. Care needs to be exercised when using this instrument in the presence of large concentrations of interfering gases. Contact the manufacturer if difficulties are suspected with other gases, or with other usage problems. In addition variations in the baseline, as a result of variations in concentrations of compounds other than ammonia, during the course of the measurement, can impact the reading.

Cross-Sensitivity Data

The actual concentration of interfering gases and the corresponding signals they give are shown below. For example, the signal given from the Z-800 for 5000ppm of carbon dioxide is 0ppm.

Gas	Concentration	Z-800 (ppm)
Alcohols	1000 ppm	0
Carbon Dioxide	5000 ppm	0
Hydrocarbons	% range	0
Hydrogen	10000 ppm	0
Hydrogen Sulfide	20 ppm	2

SAFETY

The instrument is designed to be an intrinsically safe device when the recommended low discharge rate 9-volt battery is used. There is insufficient energy to ignite a combustible gas mixture.

