



**Environmental Sensors Co.**

## **Formaldehyde Meter**

Model Z-300XP

### **FEATURES**

- Portable
- Internal Pump
- Rechargeable Battery
- Remote Sampling
- Simple to Use
- TWA, STEL and Peak
- Audible Adjustable Alarm
- Data Logging



### **INTRODUCTION**

#### **Z-300XP Formaldehyde Meter**

Environmental Sensors Co.'s Formaldehyde Meter is a portable desktop instrument that measures formaldehyde concentration in a range of 0-30 ppm and a resolution of 0.01 ppm

The instrument makes it possible to monitor formaldehyde vapor in air. The instrument has a LCD display giving concentrations in ppm every 10 seconds, a low battery indicator, and an audible alarm that can be set at any level from 0-30 ppm.

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

The internal pump makes it possible to sample from hard-to-reach areas or confined spaces by attaching a flexible tube to the meter.

### **Data Logging**

The Z-300XP meter stores all of the exposure points for up to 14,400 at 10 sec. interval in 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.



# Formaldehyde Meter

Model Z-300XP

## SPECIFICATIONS

Sensor Type	Electrochemical
Measuring Range	0-30 ppm
Maximum Overload	34 ppm
Resolution	0.01 ppm
Sensor Life	2 years
Response Time	< 60 sec.
Operating Temp.	-20 C° to +40 C°
Relative Humidity Range	15-90% non-condensing
Alarm	Audible, 80 db
Dimensions: HxDxW	7.5"x5.75"x2.75"
Weight	900 gms
Power Source	Internal Rechargeable Battery or AC Adaptor
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 formaldehyde in air.

## ELIMINATES INTERFERENCES

The Z-300XP Formaldehyde meter uses two filters to eliminate many of the common interferences. Measurements are first made with a filter that permits determination of the background or baseline. Insertion of a second filter then permits the measurement of formaldehyde. The instrument prompts the user for all required actions.

The procedure is simple. Insert one filter, remove it, and insert another. With the use of the filter system, interferences are virtually completely removed. Only certain aldehydes and ketones need to be considered. The filters do not permit separations of these classes of compounds

### Cross-Sensitivity Data

The actual concentration of interfering gases and the corresponding signals they give are shown below.

<b>Gas</b>	<b>as formaldehyde without filters (ppm)</b>	<b>as formaldehyde after use of filters (ppm)</b>
Acetone	2	2
Methylethyl Ketone	2	0
Diethyl Ketone	2	2
Acetaldehyde	12	0
Acetic Acid	0	0
Ethylene	67	0
Methanol	125	0
Ethanol	55	0
I-propanol	44	0
Carbon Monoxide	40	0

