



MSA Gas Detection System

[For L.E.L. Monitoring of Solvent
Drying Oven Atmospheres]

Applications

Organic solvents, such as, methyl ethyl ketone (MEK), toluene, xylene, ethyl acetate and iso-propanol are often used in the coatings, laminating and printing industry. Unfortunately, these compounds are highly flammable and must be handled with extreme care. This system is designed to monitor L.E.L. (lower explosive limit) levels within the solvent drying ovens often used in this industry. It provides early warning detection for personnel protection and equipment shutdown to prevent fires and explosions.

In this application, the primary function of these solvents is to transfer pigments or coatings onto the surface of the paper, plastic, metallic or fabric sheet. The pigments and coatings are dissolved in the solvents, and the solution is then applied to the receiving material. Labels, containers, papers and furnishings are some of the resulting end products.

To complete the transfer process the solvents are removed, leaving the pigments and coatings behind. This requires time for the drying, or vaporizing process. To expedite this process the receiving material is often passed through a drying oven where hot air is passed over its surface. Rapidly drying significant amounts of solvents in a background of air with elevated temperature presents a serious fire/explosion risk. The NFPA (National Fire Protection Association, www.nfpa.org) is very specific concerning the requirement for monitoring levels of combustible vapors within drying ovens. Please reference NFPA-86, *Standard for Ovens and Furnaces*.



Product Description

System Contents:

- MSA Ultima X Series Gas Monitor with internal relays
- Rugged long-life infrared sensors require less frequent calibration, are immune to silicone poisoning and can operate in oxygen-free atmospheres
- Flowmeter
- Sample/calibration valve
- Air/nitrogen aspirator eliminates the need for electric sample pumps
- LED option provides remote status check of Normal, Fault or Alarm operation
- Stainless steel construction
- 4-20 mADC output available for proportional control of air dampers
- LO/HI relays are provided for users preferring on/off control
- Explosion-Proof, Intrinsically-Safe and NEMA-4 versions also available.

This system also offers a large number of user-specific options including flowswitch. All components arrive pre-mounted and pre-plumbed for the customer.

Note: *This is a representative description of this product and its possible applications. Contact MSA Custom Products at customproducts@MSAnet.com for information on customizing this unit to fit a specific need.*

Specifications

Temperature Range:	-40° to +90° C, -40° to +194° F
Response Time:	T90 < 2 sec.
Power Supply:	7-30 VDC
Signal Output:	4-20 mA
Relay Contacts:	5 amp @ 125 VAC; 5 amp @ 30 VDC
Enclosure:	NEMA 1
Hazardous Area Rating:	General Purpose
Dimensions:	12" w x 15" h x 8.5" d

Note: This Data Sheet contains only a general description of the product shown. While uses and performance capabilities are described, under no circumstances should the product be used except by qualified, trained personnel, and not until the instructions, labels or other literature accompanying the product have been carefully read and understood and the precautions therein set forth followed. Only they contain the complete and detailed information concerning this product.

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