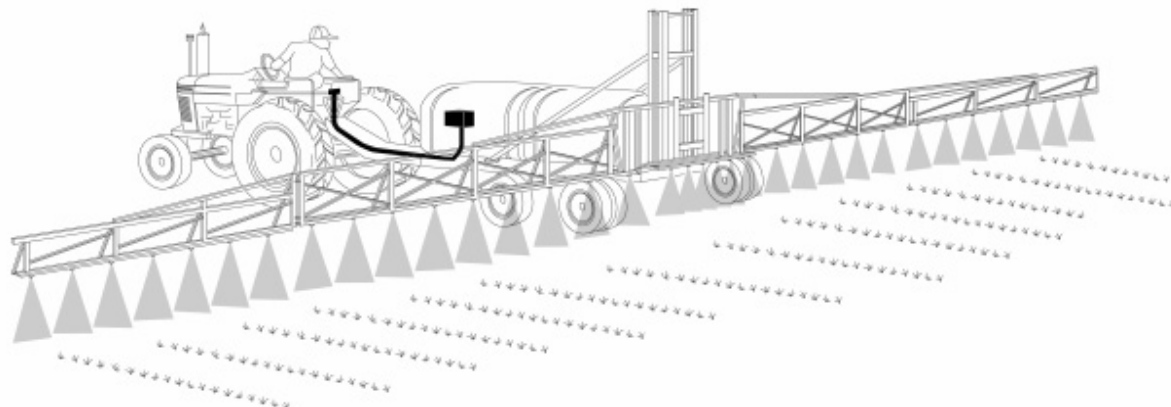


## Crop Spraying Flow Regulation for Liquid Fertilizers/Insecticides

*Application Note*



### **PROBLEM:**

Fertilizer, insecticides and herbicides all represent a major expense in today's agriculture business. Misapplication, putting on too little or too much, can be additionally expensive in terms of reduced effectiveness, lower crop yields, or wasted materials. It is to the farmer's advantage to be able to apply materials to his acreage at known and uniform rates. Most crop treatment material is applied by spraying a liquid or slurry from a powered implement which is usually pulled by a tractor. The implement consists of a tank, pump (centrifugal or positive displacement), and associated valves and instrumentation. It also consists of a number of 'booms,' pipes which receive the liquid and spray it from a series of nozzles spaced at equal intervals. Tabular data has been prepared relating nozzle size, liquid pressure, and tractor speed to the gallons/acre. This data is used to program a microprocessor which automatically controls pressure at varying levels as tractor speed is changed. A pressure sensor and rotary encoder are used to sense nozzle pressure and tractor speed.

### **SOLUTION:**

An MLH Series pressure sensor is mounted at the end of a short length of hose filled with kerosene. The other end of the hose is connected to the bottom of the tank. The sensor is in the cab of the tractor and is connected to a microprocessor. The kerosene-filled hose damps pressure spikes and keeps corrosive (and clogging) slurries away from the sensor.

### **⚠ WARNING**

#### **PERSONAL INJURY**

DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

**Failure to comply with these instructions could result in death or serious injury.**

# Crop Spraying Flow Regulation for Liquid Fertilizers/Insecticide

*Application Note*

## **ENVIRONMENT:**

There are a number of factors, which make this a difficult application for the typical pressure sensor in spite of being located in the cab.

1. Many of the materials being sprayed are intensely corrosive and abrasive.
2. There is a possibility that the system will have severe overpressures or "spikes".
3. Adverse environmental conditions such as, rain, dust, Radio Frequency Interference, shock and vibration.

The MLH series sensors are protected from these types of environmental conditions by a housing designed to meet IP65 standard

## **SUMMARY:**

The rugged and highly dependable Honeywell MLH Series pressure sensors are a perfect choice for this type of application. The thru-wall mounting capability, broad range of pressures, along with a variety of pressure ports and connector styles to choose from make this a very versatile product that can be readily adapted to a variety of applications.

## **WARRANTY/REMEDY**

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Contact your local sales office for warranty information. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace without charge those items it finds defective. **The foregoing is Buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose.**

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

For application assistance, current specifications, or name of the nearest Authorized Distributor, contact a nearby sales office. Or call:

1-800-537-6945 USA/Canada

1-815-235-6847 International

### **FAX**

1-815-235-6545 USA

### **INTERNET**

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

[info.sc@honeywell.com](mailto:info.sc@honeywell.com)

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## **Sensing and Control**

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