



# M-64 Series

## Fixed setting flow switch with in-line flow

### Features

- In-line flow switch with Low PD features.
- Low pressure drop features.
- Senses increasing or decreasing flow.
- Very accurate custom flow settings.
- Hermetically sealed.
- Universal mounting.

### Operation

The operating principle is based on a magnetic piston which responds only to the motion of fluids within the line, not to static or system pressures. In the presence of fluid flow, controlled movement of the piston actuates an external hermetically sealed reed switch. This switch can be used to actuate audible or visual alarms, as well as relays, or other controls.

### Custom Versions Available

Malema welcomes the opportunity to apply its flow sensor experience to work for its customers. Please contact the factory for any special requirements; such as ports, extreme temperature and pressure capabilities, etc.

### Applications

- Sample flow monitoring.
- Alarm actuation.
- Purge flows.
- Loss of flow protection.
- Semiconductor etch tools.
- Laser cooling equipment.

### More Product Information

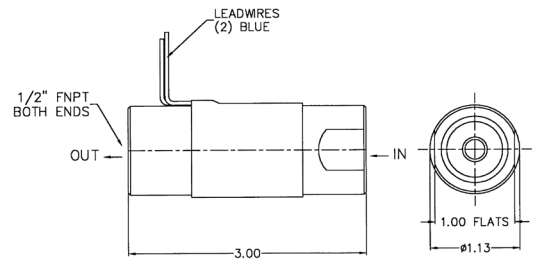
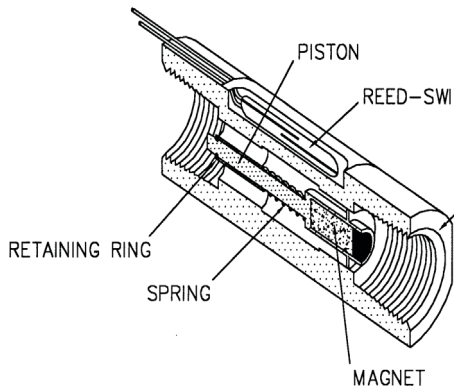
To receive additional information about the M-64 non-adjustable flow switch, please call Malema at 1-800-637-6418. Detailed information can also be downloaded from the company's web site at <http://www.malema.com>.

## Measurement Specifications

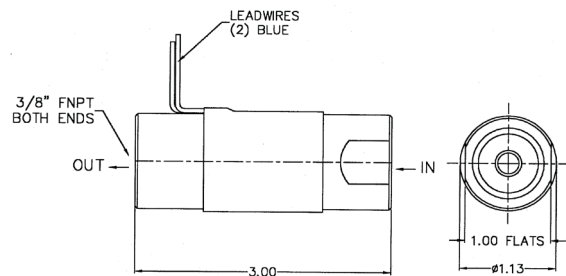
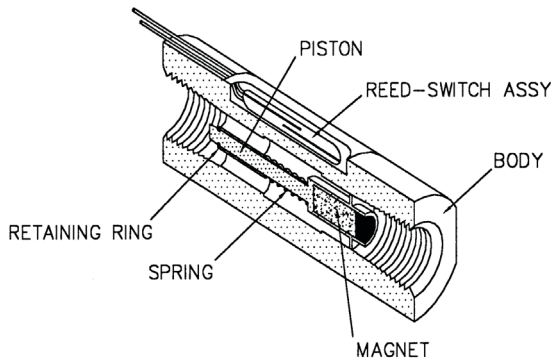
|                     |   |
|---------------------|---|
| Calibration Range * | <b>Model M-64:</b><br>Air: 1.0 to 70 scfm<br>Water: 0.1 to 7.0 gpm<br>* For lower and higher trip points contact factory.<br>Maximum flows through switch are higher. |
| Set Point Accuracy  | ± 10% maximum   |
| Repeatability       | ± 2%  |
| Hysteresis          | ± 15%   |
| Material Versions * | <ul style="list-style-type: none"> <li>• Brass</li> <li>• 316 Stainless Steel</li> <li>• PVC</li> <li>• PTFE</li> </ul> * Other materials available on request.       |
| Port Sizes          | <ul style="list-style-type: none"> <li>• 3/8" FNPT</li> <li>• 1/2" FNPT</li> </ul>  |

## Cut Away and Dimensional Drawings

Illustrated is the M-64 Model with 1/2" FNPT.\*



Illustrated is the M-64 Model with 3/8" FNPT.\*



\* These dimensions apply to Brass and 316SS Units.

IMPORTANT NOTE: OD for PVC and TEFLON Units is 1.5" OD

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## Electrical

|      |  |
|------|--|
| SPST | DC Resistive : 10 Watts.<br>AC Resistive : 10 VA.<br>Switching Current : 0.5A.<br>Carrying Current : 1.2A. |
| SPDT | DC Resistive : 3 Watts.<br>AC Resistive : 3 VA.<br>Switching Current : 0.25A.<br>Carrying Current : 0.5A.  |

## Cv at typical set points

Contact factory for pressure drop and Cv data.

## Fixed Flow Setting Information

This model is a FIXED flow switch. The flow set point is fixed at the factory and is NOT field adjustable. Proper calibration of the set point requires the following information. When purchasing a flow switch, use the "Set Point Calibration" form, provide this information on the purchase order.

- Calibration set point,
- Increasing or decreasing flow,
- Fluid type (i.e. liquid or gas),
- Density or specific gravity,
- Viscosity,
- System pressure and temperature,
- Flow direction (i.e. upward or downward), and
- Mounting orientation (i.e. horizontal or vertical)..

## Installation

For proper operation fluid flow must be in the inlet port and out the outlet port. Switch may be universally mounted in any orientation.

## Standard Specifications

| Material | Max. Pressure (psi) | Max. Temperature (C/oF) | Wetted Parts                       |
|----------|---------------------|-------------------------|------------------------------------|
| Brass    | 1,500               | 149/300                 | Brass, 316SS, Epoxy                |
| 316SS    | 2,500               | 149/300                 | 316SS, Epoxy                       |
| PVC      | 200                 | 60/140                  | PVC, 316SS                         |
| PTFE     | 200                 | 60/140                  | PTFE, PTFE Coated Stainless Spring |

## Ordering Information

| Standard Part Numbering |   |       |   |   |                      |  |   |               |  |   |               |  |
|-------------------------|---|-------|---|---|----------------------|--|---|---------------|--|---|---------------|--|
| M                       | - | Model | - | Material                                      | Port                 | Switch                                     | - |               | Piston type                                  |   | -             |  |
| M                       | - | 64    | - | S   | 3                    | 1  | - | 0             | 0  | 0 | -             | XXX  |
|                         |   | 64    |   | B - Brass<br>S - 316SS<br>V - PVC<br>T - PTFE | 3 - 3/8"<br>4 - 1/2" | 1 - SPST N.O.<br>2 - SPST N.C.<br>3 - SPDT |   | Future option | 0 - 316SS/Epoxy<br>1 - PTFE<br>2 - all 316SS |   | Future option | Unique numbering from 001 to 999 to identify settings and other custom requirements. |

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