# M-64 Series

## Fixed Set Point Flow Switches


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Extreme accuracy is a highlight of Malema M-64 Fixed Set Point Flow Switches models. When triggered, the models will be within 10% of the desired set point, all while offering repeatability of 2%.

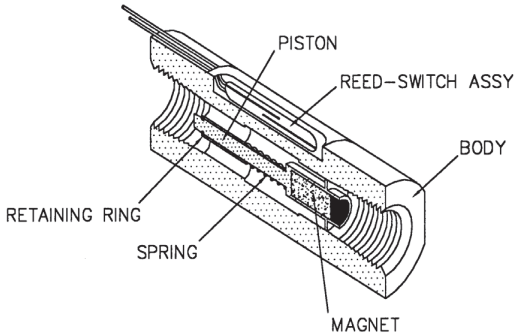
Available in 3/8”,1/2” and 3/4” sizes with stainless steel and PVC material options, the M-64 Flow Switches offer a water flow range of 400 to 26,000 CCM and air flow range of 28,500 to 1,980,000 SCCM*.

## 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 pres-sures. 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.

Malema M-64 Fixed Set Point Flow Switch models offer a custom set point calibration option that can be programmed at our Malema facility before shipping. Standard pre-calibrated set point ranges on Malema Flow Switches are also available for immediate use and distribution.

* with applications featuring gases, ranges may vary.




## Applications

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

## 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


M-64 in PVC

M-64 in 316 Stainless Steel

## Specifications

| | |
|---|---|
| Set Point Accu- | ± 10% maximum |
| Repeatability | 2% |
| Hysteresis | ± 15-30% |
| Body Material | • 316 Stainless Steel<br>• PVC |
| Piston Material | 316 Stainless Steel |
| Retaining Ring | Stainless Steel |
| Spring | Stainless Steel |
| Port Sizes | 3/8" FNPT<br>1/2" FNPT<br>3/4" FNPT |
| Reed Switch Data (Electrical Ratings) Reed Switch | 3 Watts SPDT (Hermetically Sealed) UL Recognized. File E47258.<br>Operating Temperature -40°C to 125°C |
| Switching Voltage | 170 VDC |
| Breakdown Voltage | 200 VDC |
| DC Resistive | 3 Watts |
| AC Resistive | 3VA |
| Switching Current | 0.25 A<br>0.5 A |

## Electrical

| | | |
|---|---|---|
| SPDT | 120 V ac<br>10 V dc<br>24 V dc | 0.1 A general purpose<br>0.25 A resistive<br>0.1 A resistive |

## Pressure and Temperature Rating

| Body Material | Max. Pressure (psi) | Max. Temperature °C/ °F | Wetted Parts |
|---|---|---|---|
| 316SS | 2,500 | 149/300 | 316SS |
| PVC | 200 | 60/140 | PVC, 316SS |

## Certifications

***UL and Canadian UL***
UL and Canadian UL Recognized for ordinary locations.
File E138467

***CE Compliance***
As per LVD Directive

## Cv at typical set points

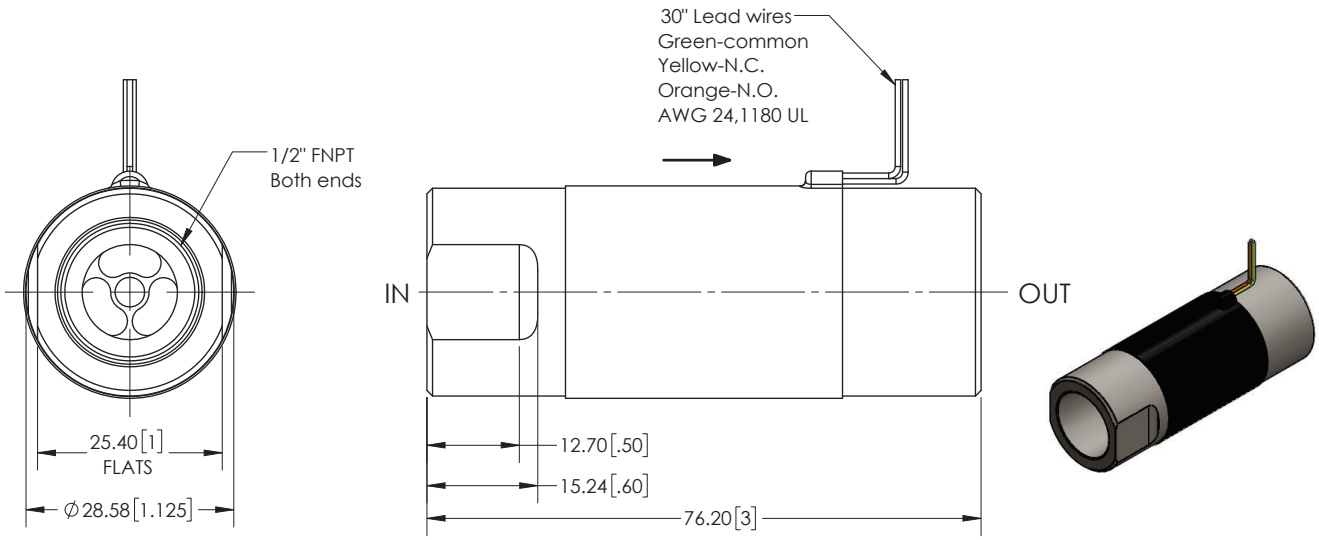
Contact factory for pressure drop and Cv data.

## Installation

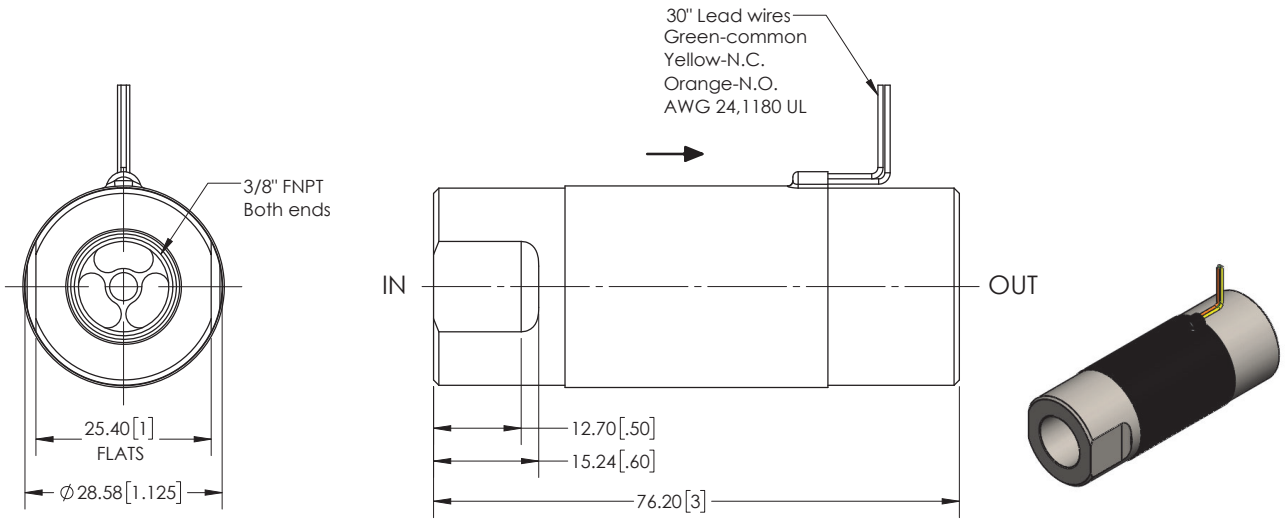
For proper operation fluid flow must follow the inlet and outlet port as shown on label. Switch may be universally mounted in any orientation. It is recommended to have adequate filtration in the system prior to operating the device. The device functioning may get adversely affected in presence of large particles interfering with the travel of the piston

## Dimensional Drawings

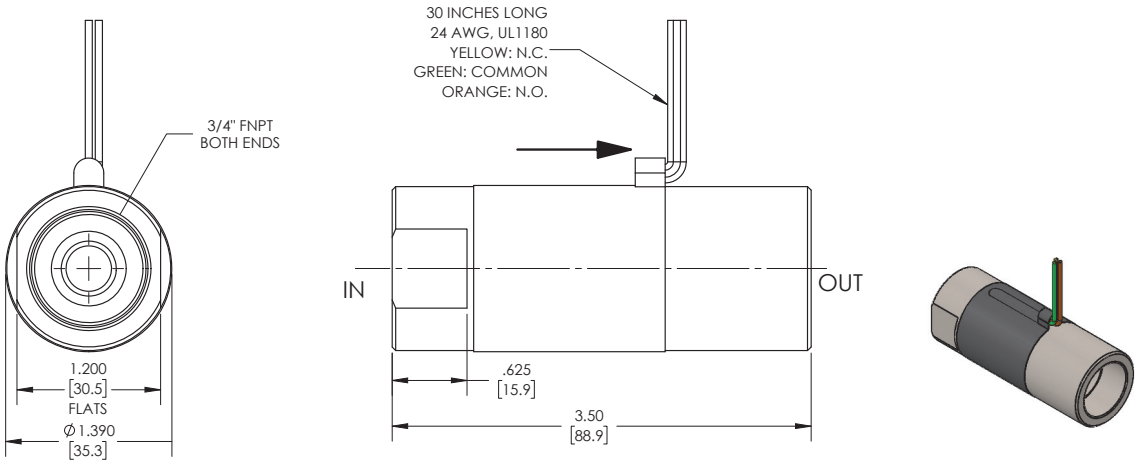
Illustrated is the M-64 316SS with 1/2" ports



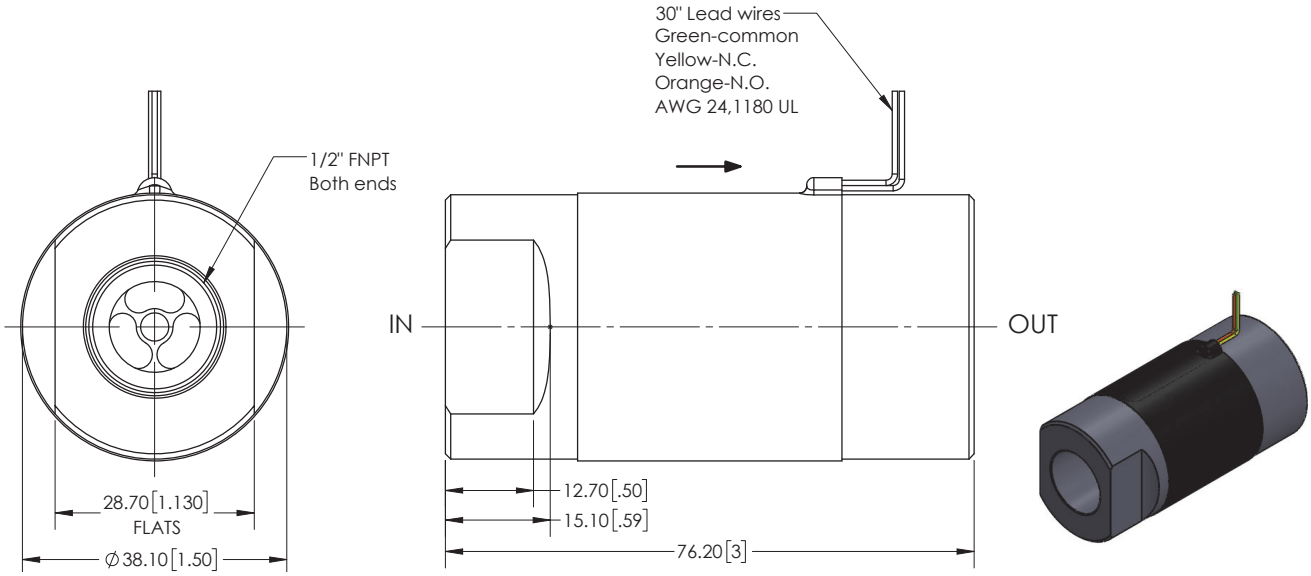
Illustrated is the M-64 316SS Model with 3/8” ports



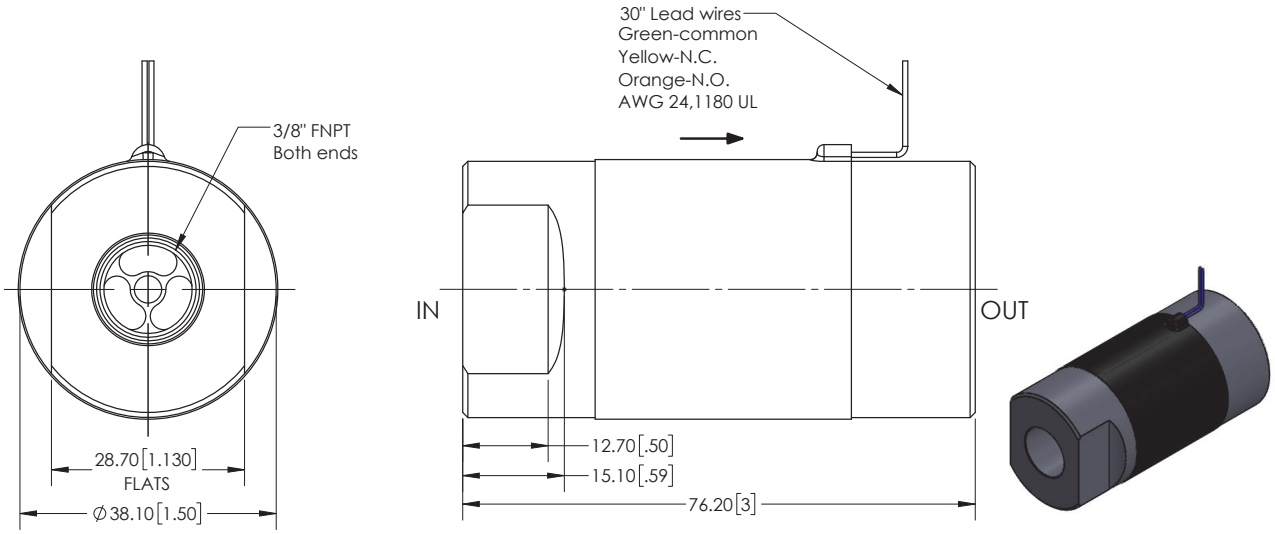

Illustrated is the M-64 316SS with 3/4” ports




Illustrated is the M-64 PVC with 1/2” ports



Illustrated is the M-64 PVC with 3/8” ports




# Ordering Information

| Standard Part Numbers | | | | |
|---|---|---|---|---|
| Model | Port Size, Connection type | Set Point (Water) | SS 316 Body | PVC Body |
| **M-64** | 3/8” FNPT | 500 ml/min | M-64-S33-010-S001 | M-64-V33-010-S001 |
| | | 750 ml/min | M-64-S33-010-S002 | M-64-V33-010-S002 |
| | | 1000 ml/min | M-64-S33-010-S003 | M-64-V33-010-S003 |
| | | 1500 ml/min | M-64-S33-010-S004 | M-64-V33-010-S004 |
| | | 2500 ml/min | M-64-S33-010-S005 | M-64-V33-010-S005 |
| | | 4000 ml/min | M-64-S33-010-S006 | M-64-V33-010-S006 |
| | | 6000 ml/min | M-64-S33-010-S007 | M-64-V33-010-S007 |
| | 1/2” FNPT | 1000 ml/min | M-64-S43-010-S001 | M-64-V43-010-S001 |
| | | 1500 ml/min | M-64-S43-010-S002 | M-64-V43-010-S002 |
| | | 2500 ml/min | M-64-S43-010-S003 | M-64-V43-010-S003 |
| | | 4000 ml/min | M-64-S43-010-S004 | M-64-V43-010-S004 |
| | | 6000 ml/min | M-64-S43-010-S005 | M-64-V43-010-S005 |
| | | 8000 ml/min | M-64-S43-010-S006 | M-64-V43-010-S006 |
| | | 10000 ml/min | M-64-S43-010-S007 | M-64-V43-010-S007 |
| | 3/4” FNPT | 4000 ml/min | M-64-S63-010-S001 | M-64-V63-010-S001 |
| | | 6000 ml/min | M-64-S63-010-S002 | M-64-V63-010-S002 |
| | | 8000 ml/min | M-64-S63-010-S003 | M-64-V63-010-S003 |
| | | 10000 ml/min | M-64-S63-010-S004 | M-64-V63-010-S004 |
| | | 15000 ml/min | M-64-S63-010-S005 | M-64-V63-010-S005 |
| | | 20000 ml/min | M-64-S63-010-S006 | M-64-V63-010-S006 |
| | | 26000 ml/min | M-64-S63-010-S007 | M-64-V63-010-S007 |

**Note:**
- Flow switches are calibrated using water @ +70°F on increasing flow.
- Material compatibility choices are solely the responsibility of the end user.
- Specifications are subject to change without notice.
- **For flow switches with custom set points for liquid as well as for gas flow applications, please contact the factory with the application information as needed in the Malema flow application questionnaire.**

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