

# FLOW SWITCH

# MODEL Q-1

## Designed for extreme, long-term reliability.

Detects and signals flow change.

Continuously adjustable while in operation.

6 interchangeable orifices plus 2:1 continuous switch adjustment with each orifice.

Calibrated independent of line pressure and temperature.

Maintains calibration limits when subjected to reasonable line hydraulic hammer or surge pulses.

Super-simple maintenance and checkout for personnel using a standard test meter.

Model Q-1 can also be fitted with a SPDT gold cross-bar switch for computer/PLC interface.

DPDT model available per request.



## KEY FEATURES

Flow Range	<b>0.12–8 GPM (0.45– 30.4 L/m)</b>
Working Temp	<b>180°F (82°C) Maximum</b>
Working Pressure	<b>300 psig (2,068 kPa)</b>
Process Connection	<b>½" NPT</b>
Electrical Switch	<b>SPDT 15A or Dry Circuit</b>
Enclosure	<b>NEMA 4 / IP 66</b>

## TYPICAL USES

Monitoring flow of coolants and fluids supplied to:

Air Conditioning Systems	Plastic Molding Equipment
Cooling in Data Centers	Scrubbers
Diodes, SCRs, Triacs, etc.	Spot Welders
High Power Transistors	Transformers
Fluid Blending Systems	Vacuum Systems

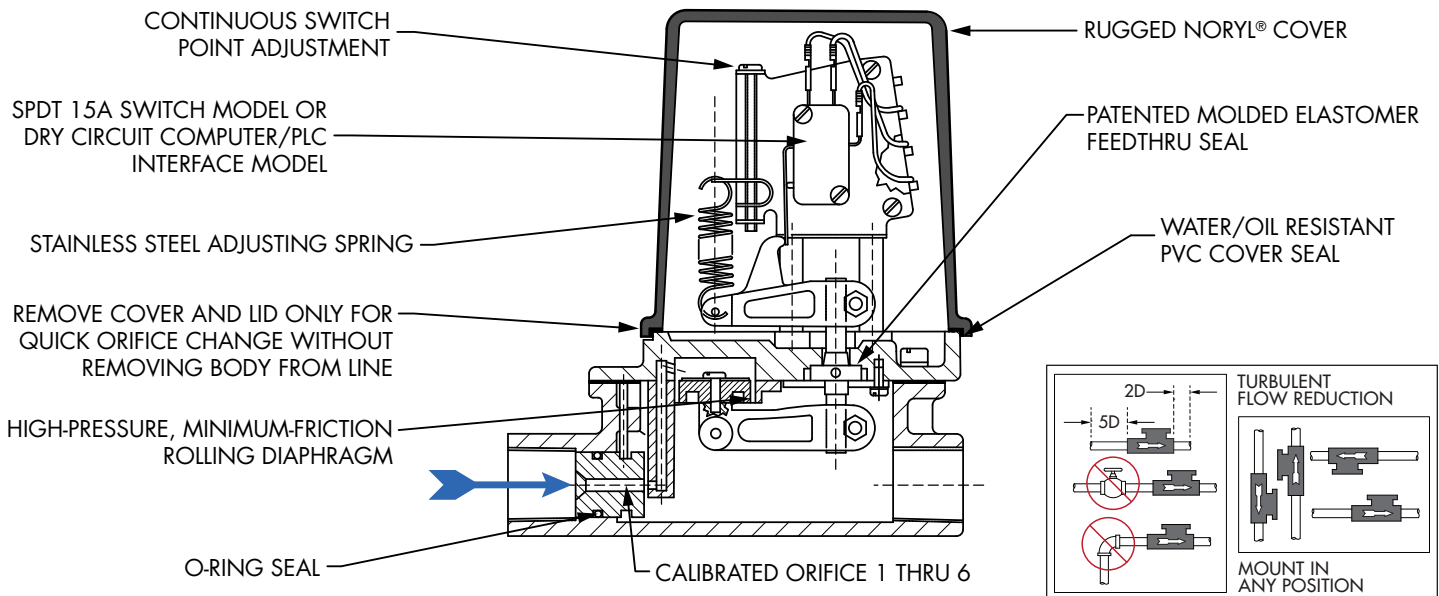
Other Uses:

Starting Back-up Pumps	Oil Supply to Bearing & Gear Systems
Monitor Filter Clogging	Metal Fabrication Systems

## ≈ TYPICAL WORKING FLUIDS

Filtered Sewage Water	Oils
Glycols	Potable Water
Hydrocarbons	

## PRODUCT DIAGRAM



**WEIGHT: 3.5 lb  
1.59 kg**



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# MODEL Q-1

## MODEL SELECTION CHART

Flow Range (Water calibrated at 70°F / 21°C)

ORIFICE #	CONTINUOUS SWITCH POINT ADJUSTMENT RANGE
1	0.12 to 0.25 GPM
2	0.25 to 0.50 GPM
3	0.50 to 1 GPM
4	1 to 2 GPM
5	2 to 4 GPM
6	4 to 8 GPM

Note: Maximum recommended flow rate for each orifice is four (4) times the upper-end of the adjustment range.

## ELECTRICAL CONNECTION

GROMMET	CABLE O.D.	DIAGRAM
A	0.25"	
AA	0.30"	
B	0.37"	
C	0.50"	

## CONDUIT FITTINGS

F	0.5" straight		F90°	0.5" 90°	

## SAMPLE PART NUMBERS

OPTION 1: Q-1 / 3 / A			OPTION 2: Q-1 / 6 / F		
BASE MODEL	↑	↑	BASE MODEL	↑	↑
ORIFICE			ORIFICE		
GROMMET SIZE			½" FLEXIBLE CONDUIT FITTING		

## TECHNICAL SPECIFICATIONS

### HYSTERESIS (Δ FLOW RATE TO ACTIVATE/DEACTIVATE SWITCH)

≈ 5% at upper end of flow range  
 ≈ 25% at lower end of flow range

### DIFFERENTIAL PRESSURE DROPS ACROSS UNIT

Under normal operating conditions:

≈ 1.0 psig at upper end of flow range  
 ≈ 5.0 psig at lower end of flow range

### WORKING LINE PRESSURE

300 psi max.

### WORKING TEMPERATURE

180°F max.  
 (250°F model available)

### WETTED MATERIALS

Body: Red brass  
 Hardware: Noryl® (PPO) (10% glass fibers), 316 stainless steel, Plastic  
 Working fluid "sees" red brass,

316 stainless steel, phosphor bronze, and EPDM elastomer seal  
 Gasket: Cork/Nitrile blend  
*Optional Seal:* Hypalon, Viton® or FKM

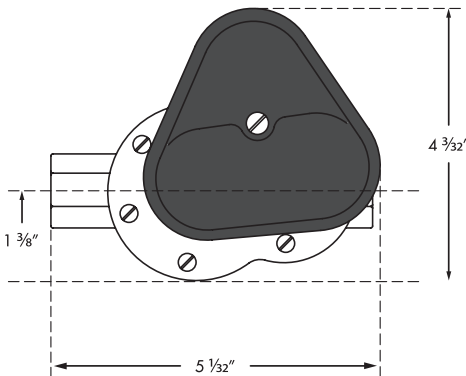
### ELECTRICAL SWITCH CHARACTERISTICS

SPDT  
 15A, ½ hp @ 125 or 250VAC  
 ½A @ 125VDC, ¼A @ 250VDC  
 5A @ 125VAC (tungsten lamp load)

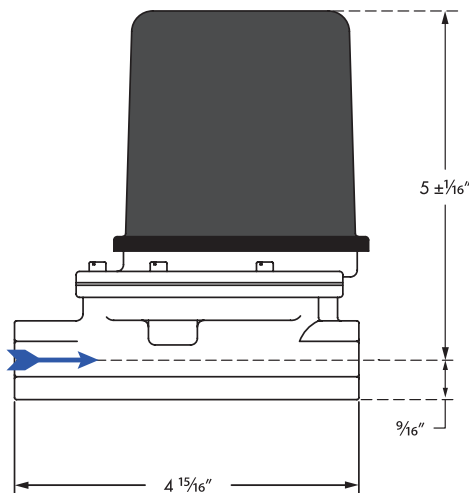
10,000,000 operations, median  
 (Switch may be overloaded to 20A @ 125 or 250VAC for a minimum of 20,000 operations.)

## INSTALLATION DIMENSIONS

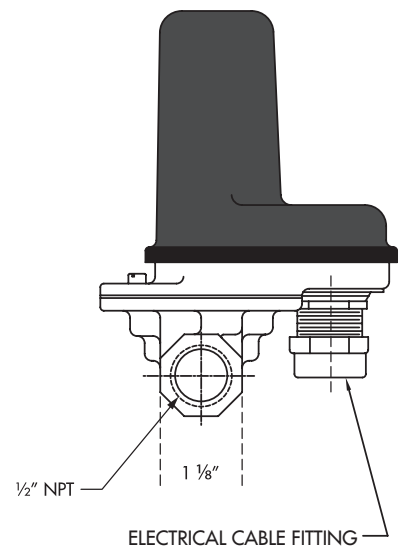
TOP VIEW



SIDE VIEW



FRONT VIEW



- Installation drawing and a numbered parts list is supplied with each unit.
- Special one-day delivery is available.