

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

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

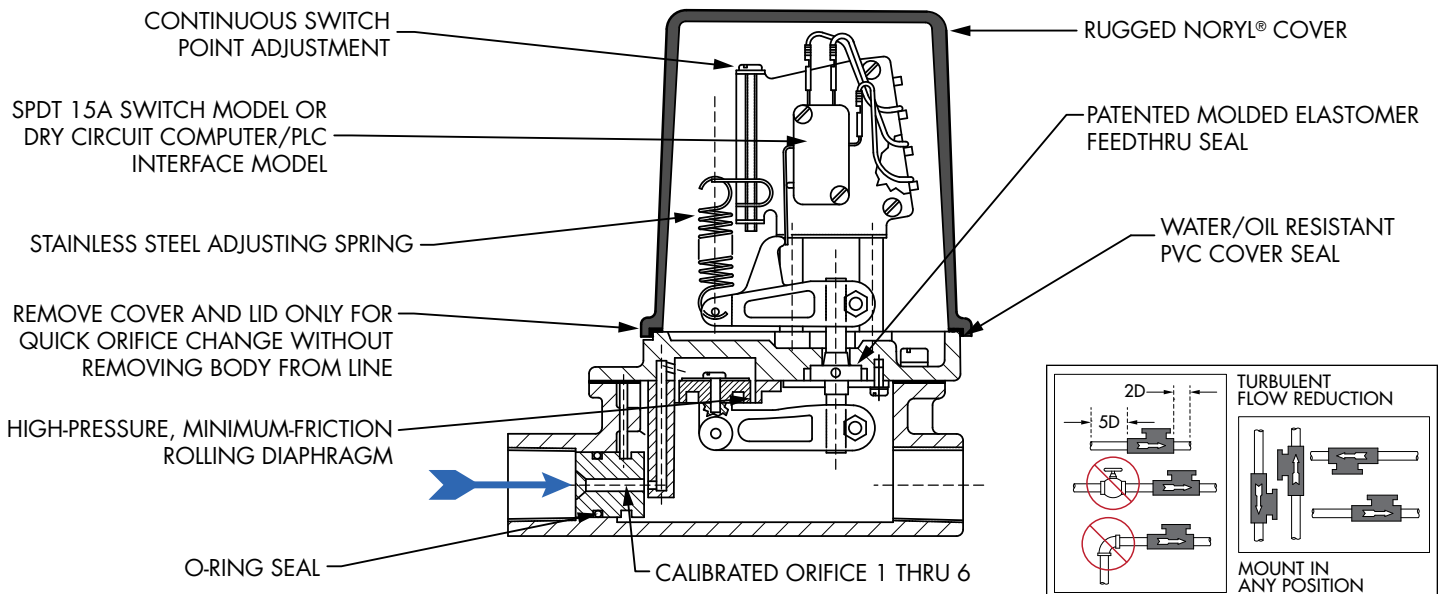
Other Uses:

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



541 Kinetic Drive
Oxnard, CA 93030
www.harwil.com

v8.01

Phone: (805) 988-6800
Fax: (805) 988-6804
Email: harwil@harwil.com

MODEL Q-1

MODEL SELECTION CHART

Flow Range (Water calibrated at 70°F / 21°C) Accuracy ±10%

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(STR) - 0.5" straight		F90° - (0.5" 90°)	
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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)

Q-1 MATERIALS:

Body: Brass (working fluid "sees" red brass, 316 stainless steel, phosphor bronze, Noryl® (PPO) (10% glass fibers) and EPDM elastomer seal
 Gasket: Cork/Buna blend
 Optional Seal: Viton®

ELECTRICAL SWITCH CHARACTERISTICS

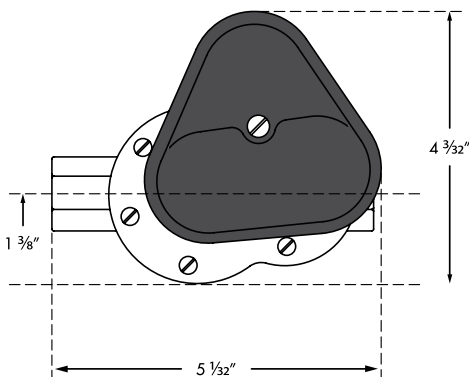
SPDT

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

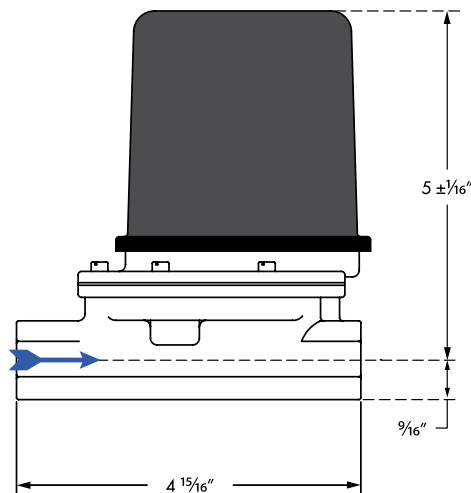
10,000,000 operations, median
 (Switch may be overloaded to 20A @ 125 or 250VAC for a minimum of 20,000 operations.)

INSTALLATION DIMENSIONS

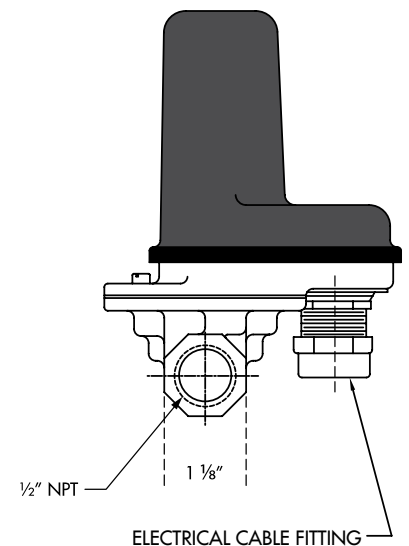
TOP VIEW



SIDE VIEW



FRONT VIEW



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