

# FLUID FLOW SWITCH

# Model Q-4E

4 to 70 GPM

## Detects and Signals Flow Change

- Superior Long Term Performance
- Line Pressure to 300 Psig
- Continuous Adjustment While Operating
- Temperature 180°F Continuous
- Four individual Drag Disk options plus continuous adjustment provides wide operating range
- For use in particle contaminated fluids
- SPDT 15 amp switching capacity model or Dry Circuit Computer/PLC Interface model
- Intrinsically Safe Relay Allows Model Q-4E to be used in Hazardous Areas (see page 46).
- Maintains Calibration Limits When Subjected to Reasonable Line Hydraulic Hammer or Surge Pulses
- Maintenance and checkout is a snap for your present personnel using an uncomplicated standard test meter.

Non-Magnetic



## Typical Working Fluids

- Alcohols
- Glycols
- Hydrocarbons
- Oils
- Pure Water
- Sea Water
- Sewage
- Soap Solutions
- Tap Water
- Waste Water

## Typical Uses:

Monitoring flow of coolant water and fluids supplied to:

- Air Condition Systems
- Brakes and Clutches
- Computer Systems
- Diffusion Vacuum Pumps
- Diodes, SCR's, Triacs, etc.
- Electro Magnets
- Fluids for Ceramic Cutting & Grinding Wheels
- Grinding and Polishing Fluids
- High Power Transistors
- Marine & Stationary Engines
- Plastic Molding Equipment
- Pressurized Oil for Floating Bearings & Ways
- Refrigeration Systems
- RF and Radar Transmitter
- Spot welders
- Transformers
- Vacuum Systems
- Water & Oil Based Cutting Fluids

## In Chemical Processing

- Contaminated Groundwater
- Fire Sprinkler Flow Alarms
- Fluid Blending Systems
- Heat Transfer Fluids
- Liquid Scrubbers
- Liquid Transfer
- Monitor Filter Clogging
- On/Off Control of Chemical Feed Pumps
- Starting Back-up Pumps
- Water Treatment

CONTINUOUS SWITCH POINT ADJUSTMENT

SPDT 15A SWITCH MODEL OR DRY CIRCUIT COMPUTER/PLC INTERFACE MODEL

NEMA 4 COVER

RUGGED NORYL® COVER

H2O/OIL RESISTANT PORON® COVER SEAL

H2O/OIL RESISTANT ELECTRICAL CABLE STRAIN RELIEF OPTION 1 OR 2

O-RING SEAL

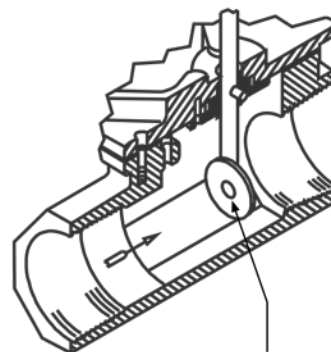
ORIFICE

DRAG DISK

REMOVE COVER AND LID ONLY FOR QUICK ORIFICE CHANGE W/O OUT REMOVING BODY FROM LINE

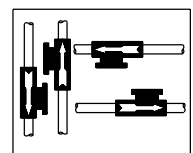
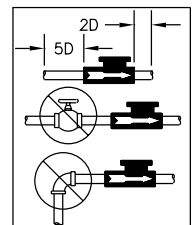
STAINLESS ADJ. SPRING (NOT SHOWN)

PATENTED, MOLDED ELASTOMER FEEDTHRU SEAL



DRAG DISK

## TURBULENT FLOW REDUCTION



MOUNT IN ANY POSITION

**MODEL Q-4E/1**  
(USES ORIFICE & DRAG DISK)

**MODELS Q-4E/2, 3 & 4**  
(USE DRAG DISK ONLY)



Limited Warranty Page 7

**Specifications:**

Flow Range - Water Calibrated @ 70°F

# Model Q-4E

Model #	Continuous Switch Point Adjustment Range GPM	Note
Q-4E/1	4-8	Orifice/Drag Disk
Q-4E/2	6-20	Drag Disk Only
Q-4E/3	15-35	Drag Disk Only
Q-4E/4	25-70	Drag Disk Only

**Hysteresis (% Flow Change to Activate/Deactivate Switch)**

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

**Differential pressure drops across unit (Normal Operating Conditions)**

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

**Working Line Pressure**

300 psig max. @ 180°F Max  
(Proof tested to 1200 psig @ 180°F)

**Materials**

Brass body, Noryl®, stainless steel, and plastic hardware. Working fluid “sees” red brass, 316 stainless steel, phosphor bronze and EPDM elastomer seal. (Hypalon® and Viton® Elastomer Seals are available on special order.)

**Electrical Switch Characteristics**

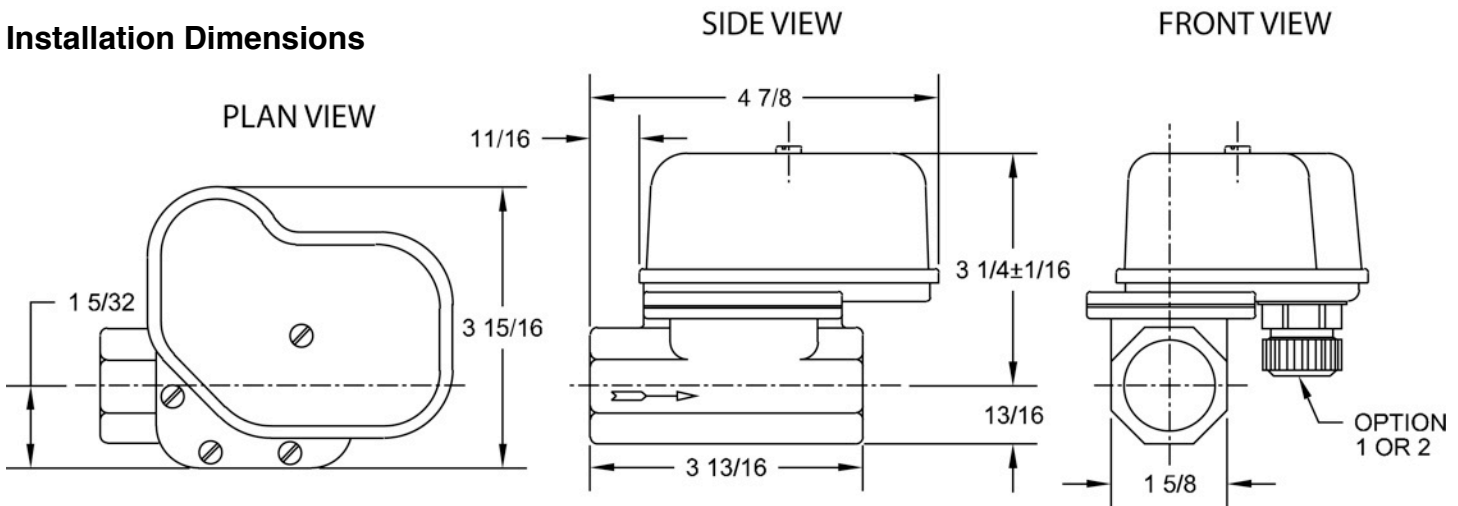
SPDT  
15 amp, 1/2 hp @ 125 or 250 VAC  
1/2 amp @ 125 VDC, 1/4 amp @ 250 VDC  
5 amp @ 125 VAC (tungsten lamp load)  
UL and CSA Listed  
10,000,000 Operations Median

**Model Q-4E can also be fitted with a SPDT Gold Cross Bar Switch for computer/PLC interface.**

**Maximum Continuous Temperature: 180°F (may be extended to 200°F for short periods.)**

**Weight: 5 lb.**

**Installation Dimensions**



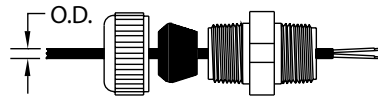
**Input Power Cable Interface Options**

**Option No. 1**

Basic Model #      Sample Part #  
Grommet Size      Grommet Size

**Q - 4E / 1 / B**

Orifice/Drag Disk #



Grommet Size	Cable OD	Grommet Size	Cable OD
A	0.25"	B	0.37"
AA	0.30"	C	0.50"

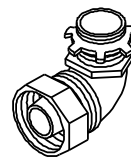
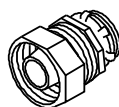
**Option No. 2**

Basic Model #      Sample Part #  
1/2" Flexible Conduit Fitting

**Q - 4E / 3 / F**

Orifice/Drag Disk #

1/2" STRAIGHT F



1/2" 90° F90°

- Installation drawing and a numbered parts list is supplied with each unit.
- Current Price Information is Listed on Separate Sheet.
- Special One Day Delivery Available.