

FLUID FLOW SWITCH Model Q-8N (PPO)

8 to 1900 GPM & Up
for pipes 1" - 10" & Up

Noryl® Engineering Plastic (PPO) Polyphenylene Oxide

During normal operations flow switches increase efficiency, save time and money by the continuous monitoring of deviations from optimum flow rates. During emergency conditions flow switches signal system malfunctions such as line breakage, pump failure, incorrect valve opening or closing, pipe, valve or filter clogging, etc.

COMPONENT RECOGNIZED  /  (E85349)

Typical Working Fluids

- For use in corrosive liquids such as mild acid and base solutions and related fluids.
- Extensive chemical list is available (see page 49).

For use in highly particle-contaminated liquids such as:

- Contaminated Groundwater
- Medium Slurries
- Rusty Coolant Water
- Sea Water
- Sewage
- Waste Water

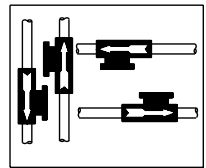
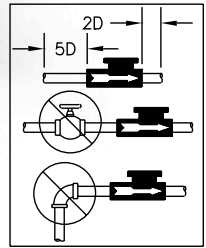
Special Features

- Particle contamination resistance is provided by a single convolute elastomeric seal which is continually flushed by working fluid flow.
- Wetted surfaces of Noryl®, 316 Stainless Steel, EPDM Elastomeric Standard (Viton® Special Order.)
- Continuous adjustment while operating
- Responds to flow only, independent of line pressure, temperature, environment
- Temperature to 150°F continuous
- Line pressure to 50 psig operating - 100 psig non-operating
- SPDT 15 amp switching capacity model or Dry Computer/PLC Interface model
- Maintenance and checkout is a snap for your present personnel using an uncomplicated standard test meter.
- Maximum flow range flexibility is provided by three adjustment options:
 - Option 1 - Continuous adjustment while operating via FORCE/BALANCE spring
 - Option 2 - Step incremental adjustment via drag disk size change
 - Option 3 - Continuous adjustment via drag disk moment arm change

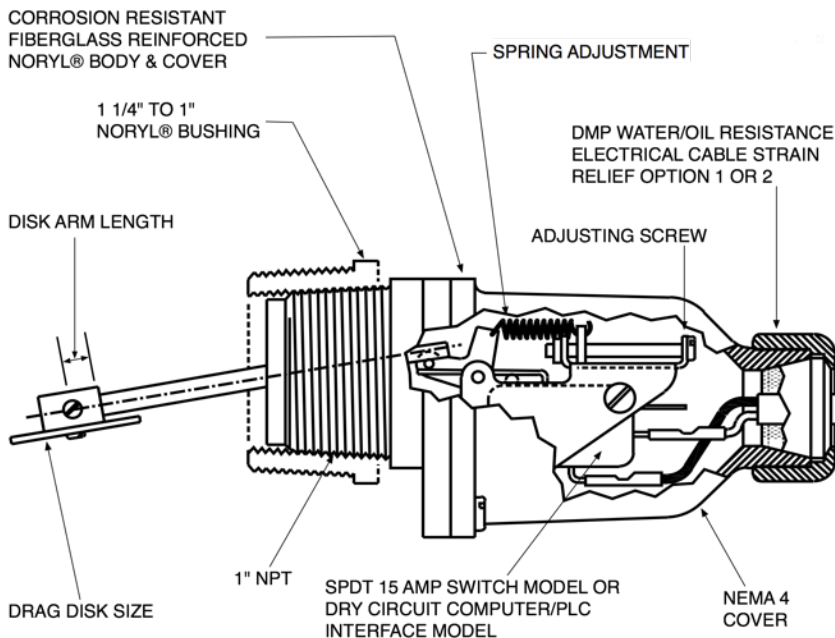
Reliable, Inexpensive



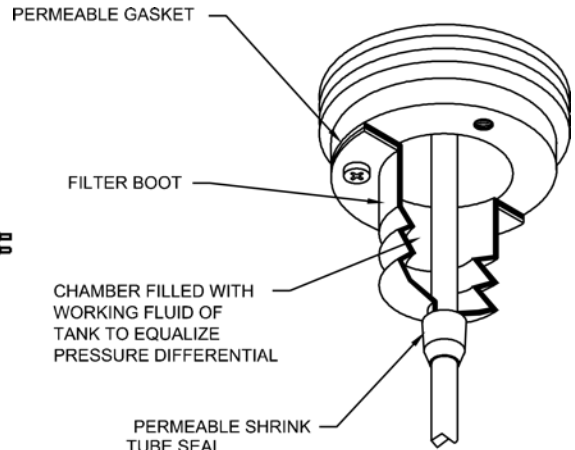
TURBULENT FLOW REDUCTION



MOUNT IN ANY POSITION



Available with Optional Filter Boot For Use In Highly Particle Contaminated Liquids



Limited Warranty Page 7

541 Kinetic Drive, Oxnard, CA 93030
Tel: (805) 988-6800 Fax: (805) 988-6804
Email: harwil@harwil.com

Flow Range Water Calibrated @ 70°F

Model Selection Chart

Pipe Size	Flow Limits Between Which Switch Point May Be Set GPM	Model Part Number (Power Cable Interface Option 1 or 2)
1	8-13	Q-8N / 1 / 2 / ---
	18-28	Q-8N / 1 / 1 / ---
1 1/2	15-30	Q-8N / 2 / 3 / ---
	25-50	Q-8N / 2 / 1 / ---
2	25-50	Q-8N / 2 / 3 / ---
	50-105	Q-8N / 2 / 1 / ---
2 1/2	35-80	Q-8N / 2 / 3 / ---
	80-155	Q-8N / 2 / 1 / ---
3	50-90	Q-8N / 3 / 3 / ---
	90-180	Q-8N / 3 / 1 / ---
4	75-155	Q-8N / 3 / 3 / ---
	155-310	Q-8N / 3 / 1 / ---
5	120-245	Q-8N / 3 / 3 / ---
	245-480	Q-8N / 3 / 1 / ---
6	180-350	Q-8N / 3 / 3 / ---
	350-700	Q-8N / 3 / 1 / ---
8	300-600	Q-8N / 3 / 3 / ---
	600-1200	Q-8N / 3 / 1 / ---
10	500-950	Q-8N / 3 / 3 / ---
	950-1900	Q-8N / 3 / 1 / ---

LARGE PIPE SIZE INFORMATION AVAILABLE BY REQUEST.

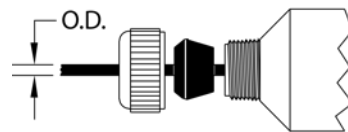
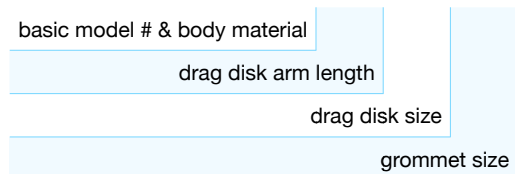
A Four Part Model # Completely Defines Each Unit

Basic Model #	Drag Disk Arm Length (See X)	Drag Disk Size	Input Power Cable Interface Option
Q-8N	1 or 2 or 3	1 or 2 or 3	1 or 2
	1=1.15"	1=0.5" dia.	SEE BELOW
	2=1.85"	2=0.83" dia.	
	3=3.31"	3=1.0" dia.	
Q-8N	/	/	/

Input Power Cable Interface Options

Option No. 1

Q-8N / 1 / 1 / B



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

Option No. 2

Sample Part #

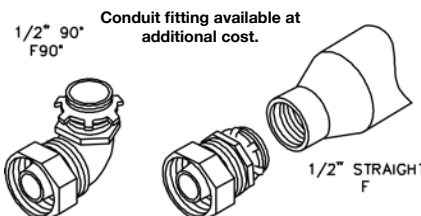
Basic Model # & Body Material

1/2" NPT Female Thread

Q - 8N / 1 / 1 / F

Drag Disk Arm Length

Drag Disk Size



Conduit fitting available at additional cost.

Model Q-8N

Hysteresis (% Flow Change to Activate/Deactivate Switch)

- ≈ 10% @ upper end of range
- ≈ 30% @ lower end of range

Differential pressure drops across unit

(Normal Operating Conditions)

- 1" - 3" pipe - less than 0.5 psi
- 4 - 10" pipe - negligible

Working Line Pressure

- 50 psig max. @ 180°F Max operating
- 100 psig @ 180°F Max non-operating

Wetted Surfaces

- Noryl® - (10% glass fibers)
- 316 Stainless Steel Standard
- EPDM Elastomer (Viton® Special Order)

Electrical Switch Characteristics

SPDT UL and CSA listed
 15 amp, 1/2 HP @ 125 or 250 VAC
 1/2 amp @ 125 VDC (Tungsten lamp load)
 10,000,000 operations median

Model Q-8N can also be fitted with a SPDT Gold Cross Bar Switch for computer/PLC interface.

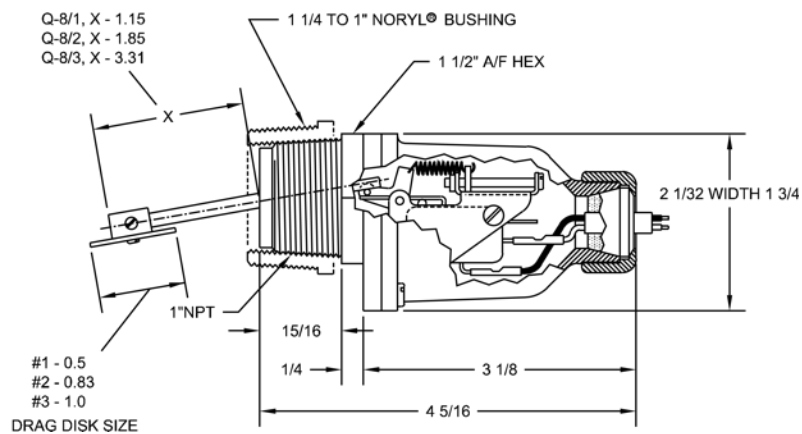
Maximum Continuous Temperature: 180°F

Optional Filter Boot Available in EPDM, (Viton® Special Order)

Weight: 1/2 lb.

DRAG DISK ARM LENGTH

- Q-8/1, X - 1.15
- Q-8/2, X - 1.85
- Q-8/3, X - 3.31



- 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.