

FLOW SWITCH ADJUSTABLE

MODEL Q-8N Q-8CR



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.

Designed for long-term reliability and chemical resistance.

Detects and signals flow change.

Particle contamination resistance is provided by a single convolute elastomeric seal which is continually flushed by working fluid flow.

Continuously adjustable while in operation.

Responds to flow only, independent of line pressure, temperature, environment

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

KEY FEATURES

Flow Range	8-1,900+ GPM (30-7,192 L/m)
Working Temp	200°F (93°C) Maximum
Working Pressure	50 psig (690 kPa) @ 180°F (N) 50 psig (690 kPa) @ 200°F (CR)
Process Connection	1" NPT
Electrical Switch	SPDT, ½hp 15A or Dry Circuit
Enclosure	NEMA 6P / IP 67

TYPICAL USES

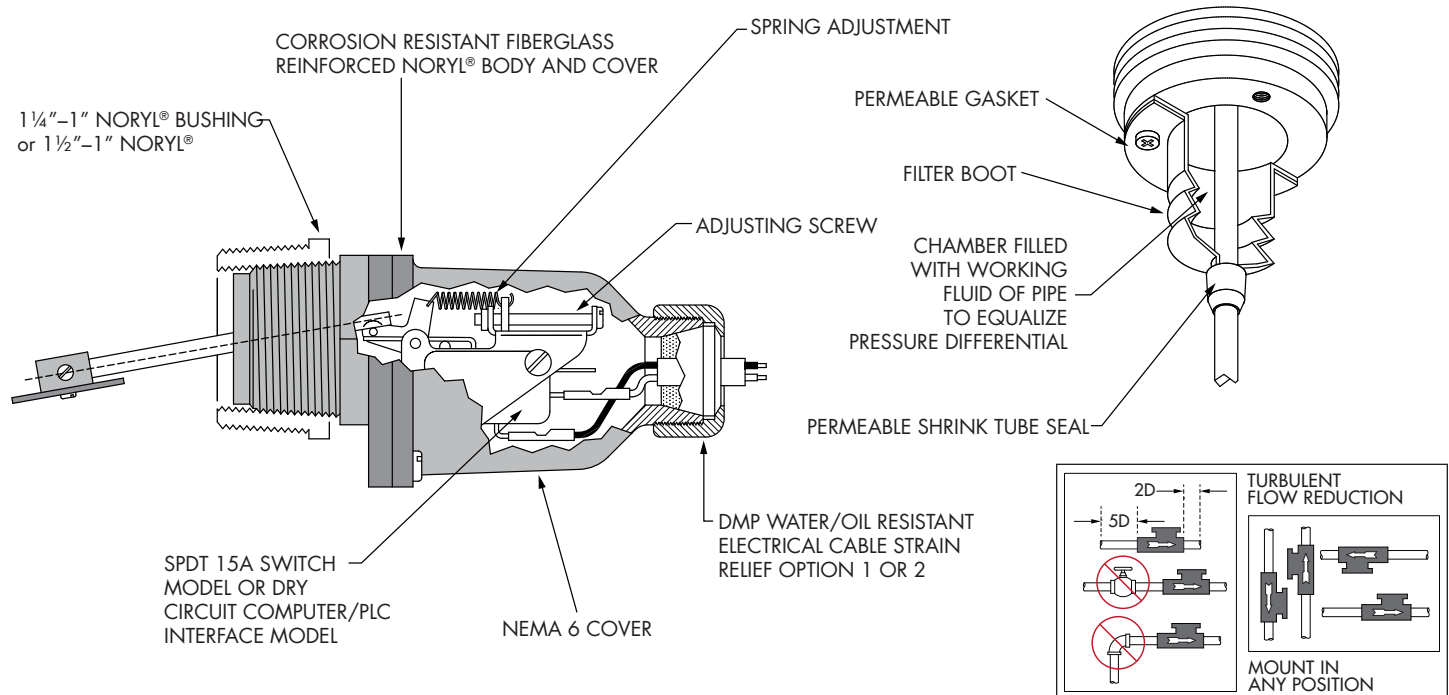
Monitoring fluid flow in:

Air Conditioning Systems	Industrial Refrigeration Systems
Cooling in Data Centers	Pools and Spas
Chillers	Scrubbers
Fluid Blending Systems	Water Treatment Systems
Natural Gas	

TYPICAL WORKING FLUIDS

Filtered Sewage Water	Contaminated Ground Water
Mild Acids	Sulfolane
Rusty Coolant Water	Sea Water
Waste Water	Pool Water (low ppm Chlorine)

PRODUCT DIAGRAM



**WEIGHT: 0.5 lb.
0.23 kg**



541 Kinetic Drive
Oxnard, CA 93030
www.harwil.com
16.285

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

MODEL Q-8N Q-8CR

MODEL SELECTION CHART

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

PIPE SIZE NPT	CONTINUOUS SWITCH POINT ADJUSTMENT RANGE	SHAFT LENGTH	PADDLE SIZE
1"	12 to 20 GPM	1	2
	24 to 34 GPM	1	1
1½"	16 to 28 GPM	2	3
	25 to 37 GPM	2	2
	38 to 70 GPM	2	1
2"	30 to 50 GPM	2	3
	44 to 65 GPM	2	2
	67 to 90 GPM	2	1
3"	45 to 140 GPM	3	3
	100 to 145 GPM	3	2
	152 to 200 GPM	3	1
4"	80 to 170 GPM	3	3
	175 to 240 GPM	3	2
	160 to 290 GPM	3	1

Call our customer support for a wider range of pipe sizes. (805) 988-6800

ELECTRICAL CONNECTION

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

CONDUIT FITTINGS (AVAILABLE AT EXTRA COST)

F	0.5" straight		F90°	0.5" 90°	

SAMPLE PART NUMBERS

OPTION 1: Q-8N			/ 1	/ 1	/ B	OPTION 2: Q-8N			/ 1	/ 1	/ F
BASE MODEL	↑	↑	↑			BASE MODEL	↑	↑	↑		
SHAFT LENGTH						SHAFT LENGTH					
PADDLE SIZE						PADDLE SIZE					
GROMMET SIZE						½" FLEXIBLE CONDUIT FITTING					

TECHNICAL SPECIFICATIONS

HYSTERESIS (Δ FLOW RATE TO ACTIVATE/DEACTIVATE SWITCH)

- ≈ 10% at upper end of flow range
- ≈ 30% at lower end of flow range

DIFFERENTIAL PRESSURE DROPS ACROSS UNIT

Under normal operating conditions:

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

WORKING LINE PRESSURE:

50 psi max., operating @ 180°F
100 psi max. non-operating @ 180°F
Pressure over 50 psi can affect the switch point range

ELECTRICAL SWITCH CHARACTERISTICS

SPDT
10,000,000 Operations Median
15A, ½ hp @ 125 or 250VAC
½A @ 125VDC

(tungsten lamp load)

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

Q-8N (NORYL®)

WORKING TEMPERATURE: 180°F @ ambient pressure

WETTED MATERIALS:

Body, Cover, and Bushing: Noryl® (PPO) (10% glass fibers)
Shaft: 316 stainless steel
Elastomer Seal: EPDM
Optional Filter Boot: EPDM (Viton® available by special order)

Q-8CR (FORTRON®)

WORKING TEMPERATURE: 200°F max. continuous

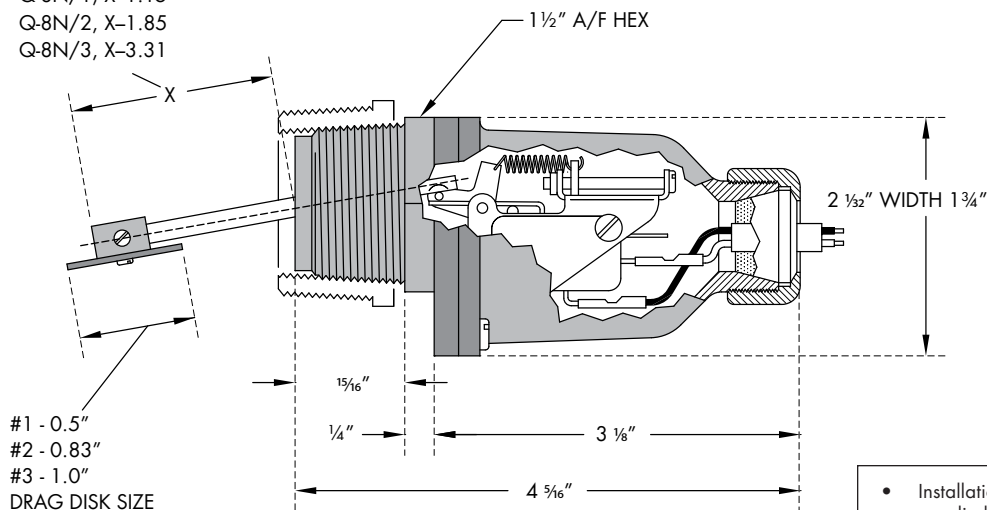
WETTED MATERIALS:

Body and Cover: Fortron® (PPS) (40% glass fibers)
Shaft: HASTELLOY® C
Elastomer Seal: EPDM
Optional Filter Boot: EPDM (Viton® or FKM available by special order)

INSTALLATION DIMENSIONS

DRAG DISK ARM LENGTH

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



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