

# FLOW SWITCH

# MODEL Q-10N Q-10VCR

## FLEXIBLE DESIGN:

Model Q-10 is provided with three factory adjustable parameters which provide performance flexibility to meet a multitude of applications:

- Paddle Area
- Paddle Length
- Paddle Stiffness

Responds to fluid flow only, independent of line pressure and temperature.

Max. flow may be five times normal flow.

Positive stop eliminates fatigue effects of turbulence, vibration and flow surge on flow detecting element.

Small size and low profile provides easy mounting in crowded installations.

Very low pressure drop - typically less than 1.0 psig at normal flow rate.

Quick response.

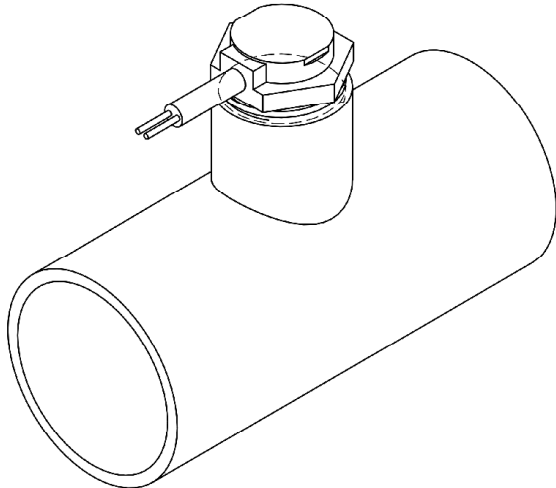
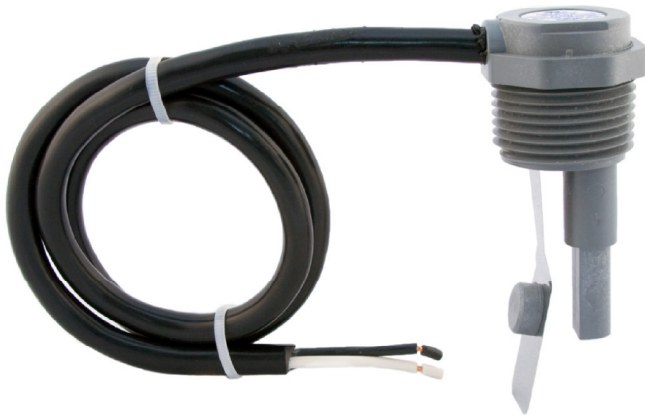
Available with NO, NC or SPDT Reed Switch

Switches 5VDC to 240VAC.

Switches resistive and light inductive loads.

Switch employs magnetic coupling.

Send us your special requirements. We will quote a special unit to meet those requirements.



## KEY FEATURES

Flow Range	<b>0.7-1,025 GPM (2.6-3,880 L/m)</b>
Working Temp	<b>200°F (93°C) Maximum</b>
Working Pressure	<b>250 psig (1.724 kPa)</b>
Process Connection	<b>1" NPT</b>
Electrical (Reed) Switch	<b>SPNO 0.5A</b>

## TYPICAL USES

Monitoring flow of coolant supplied to:

Brakes and Clutches	Emergency Wash-Down Showers
Computer Systems	Marine and Stationary Engines
Diodes, SCRs, Triacs, etc.	RF and Radar Transmitters
Electromagnets	Spot welders
Fire Sprinkler Flow Alarms	Transformers
Lasers	Vacuum Systems

In Chemical Processing:

Fluid Blending Systems	Liquid Transfer
Heat Transfer Fluids	Monitor Filter Clogging
Liquid Scrubbers	Starting back-up pumps
Monitoring pump output, valve position, systems flow status	

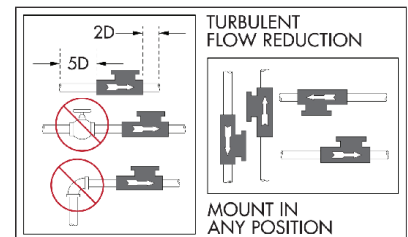
In Water Treatment:

Irrigation Systems	Municipal Water Supply Systems
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## ≈ TYPICAL WORKING FLUIDS

For use in concentrated acids, bases, ketones, esters, alcohols, phenols, etc.

Mild Acids	Hydrocarbons
Mild Bases	Ketones
Plating Solutions	Lubricating Oils
Gasoline	Cooling Tower Water
Glycol Solutions	Water (saltwater, pure, tap, etc.)
JP-4	



# MODEL Q-10N Q-10VCR

## MODEL SELECTION CHART

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

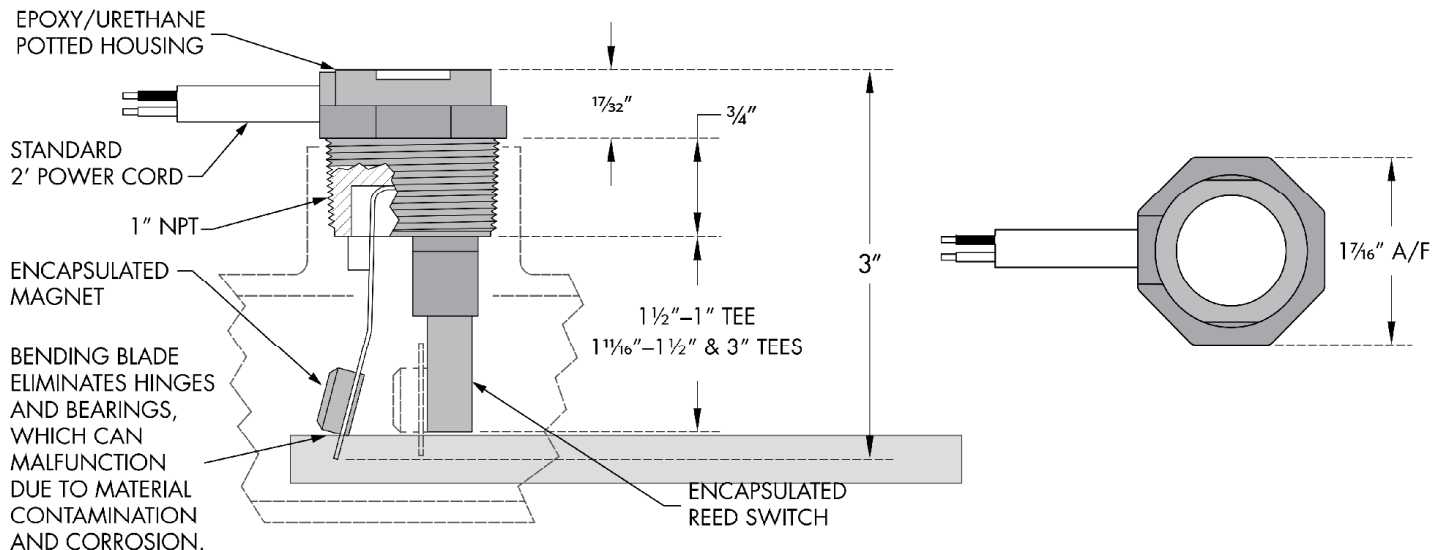
PIPE SIZE NPT	NOMINAL ON/OFF SWITCH POINT RANGE (GPM)		PADDLE NUMBER
	ON	OFF	
1"	1.3	0.9	1
	4	2	2
1½"	3	2	10691A
	8	4	3
	17	14	4
2"	5	4	10691A
	10	7	5
	16	11	6
3"	12	8	10691A
	22	15	7
	36	25	8
4"	21	14	10691A
	39	27	9
	64	45	10
5"	33	25	10691A
	61	43	11
	100	70	12
6"	48	35	10691A
	88	62	13
	144	101	14

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

## SAMPLE PART NUMBER

	OPTION 1: Q-10N	/ 13	/ NO	/ 4'
BASE MODEL	↑	↑	↑	↑
PADDLE #				
SWITCH OPERATION (NO, NC, OR SPDT)				
POWER CORD LENGTH				

## INSTALLATION DIMENSIONS



## TECHNICAL SPECIFICATIONS

### ELECTRICAL (REED) SWITCH CHARACTERISTICS

SPNO

Contact Ratings:

AC Voltage (max. switching)	300VAC
DC Voltage (max. switching)	350VDC
Current (max. switching)	0.5A
Current (max. carrying)	2.5A
Power (max) (VA, W)	50 watts
Contact resistance (max. initial)	0.15 ohms
Insulation resistance	10 <sup>10</sup> ohms
Operating temperature	-40°F-240°F (-40°C-115°C)

OPTIONAL: SPNC or SPDT, 3 watt, 100VAC/VDC.

### Q-10N (NORYL®)

**WORKING PRESSURE:** 200 psig max. @ 70°F

**WORKING TEMPERATURE:** 180°F @ ambient pressure

**WETTED MATERIALS:** Body and Cover: Noryl® (PPO) (10% glass fibers) Shaft: 316 stainless steel

### Q-10VCR (FORTRON®)

**WORKING PRESSURE:** 250 psig max. @ 70°F

**WORKING TEMPERATURE:** 200°F @ ambient pressure

**WETTED MATERIALS:** Body and Cover: Noryl® (PPS) (40% glass fibers) Shaft: 316 HASTELLOY® C

### INDUCTIVE LOADS

Switch contacts have been tested with small relays and 30A J-C relay inductive driving coils at 120/240VAC to 500,000 operations without failure.

Model Q-10N can also be fitted with a SPDT Gold Cross Bar Switch for computer/PLC interface.

NOTE: Model Q-10N employs magnetic coupling between bending blade and switch body. Magnetic particles can accumulate on and around magnetic housing which may affect proper operation. Please conduct appropriate fluid magnetic particle evaluation and operational tests prior to and during installation and use.

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