

# FLUID FLOW SWITCH

# Model Q-10N & Q-10VCR

## Extremely Wide Operating Range:

- Down to 0.9 GPM in 1.0 inch pipes
- Up to 1025 GPM in 16 inch pipes

## FLEXIBLE Design:

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

- Target Area
- Target Length
- Target Stiffness

## Two Standard Models are Available

Model Q-10N for mild acids, bases

Model Q-10CR for concentrated acids, bases, ketones, esters, alcohols, phenols, etc.

Extensive Chemical Corrosive List On Page 49.

## Low Cost

Available with NO, NC or SPDT Reed Switch

Send Us Your Special Requirements

We Will Quote A Special Unit To Meet Those Requirements

- Designed for a broad spectrum of industrial fluids - pure water, tap water, sea water, cooling tower water, glycol solutions, acids, bases, hydrocarbons, ketones, lubricating oils, gasoline, JP-4, plating solutions.
- 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.
- Quick response.
- 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.
- Line pressure to 250 psig at room temperature.
- Temperature to 200°F continuous.
- Switches 5 VDC to 240 VAC.
- Switches resistive and light inductive loads.
- Switches Dry Circuit Computer/PLC inputs.
- Switch employs magnetic coupling.



## Typical Uses

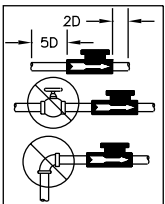
Monitoring flow of coolant water supplied to:

- RF and Radar transmitters
- High power transistors, SCR's etc.
- Computer systems
- Electromagnets
- Transformers
- Brakes and clutches
- Lasers
- Spot welders
- Vacuum systems
- Marine and stationary engines
- Emergency washdown showers
- Fire sprinkler flow alarms

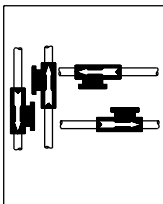
## In Chemical Processing

- Liquid transfer
- Water treatment
- Sewage systems (filtered)
- Fluid blending systems
- Monitoring pump output, valve position, systems flow status
- Liquid scrubbers
- Starting back-up pumps
- Monitor filter clogging
- Heat transfer fluids
- Contaminated groundwater

### TURBULENT FLOW REDUCTION



### MOUNT IN ANY POSITION



Limited Warranty Page 7

**Flow Range Water Calibrated @ 70°F**

**Model Selection Chart**

Pipe Size	Nominal ON/OFF Switch Point Range (GPM)	Model Number (N or VCR)	Target Blade Number	Switch Oper. Norm. Open or Norm Closed	Power Chord Length
1	1.3-0.9	Q-10 -- /	1 /	---	---
	4-2	Q-10 -- /	2 /	---	---
1 1/2	8-4	Q-10 -- /	3 /	---	---
	17-14	Q-10 -- /	4 /	---	---
2	10-7	Q-10 -- /	5 /	---	---
	16-11	Q-10 -- /	6 /	---	---
3	22-15	Q-10 -- /	7 /	---	---
	36-25	Q-10 -- /	8 /	---	---
4	39-27	Q-10 -- /	9 /	---	---
	64-45	Q-10 -- /	10 /	---	---
5	61-43	Q-10 -- /	11 /	---	---
	100-70	Q-10 -- /	12 /	---	---
6	88-62	Q-10 -- /	13 /	---	---
	144-101	Q-10 -- /	14 /	---	---
8	156-109	Q-10 -- /	15 /	---	---
	256-179	Q-10 -- /	16 /	---	---
10	244-171	Q-10 -- /	17 /	---	---
	400-280	Q-10 -- /	18 /	---	---
12	351-246	Q-10 -- /	19 /	---	---
	576-403	Q-10 -- /	20 /	---	---
16	625-438	Q-10 -- /	21 /	---	---
	1025-718	Q-10 -- /	22 /	---	---

**CONSULT THE FACTORY FOR LARGER PIPE SIZES.**

# Model Q-10N & Q-10VCR

**Reed Switch Electrical Characteristics:**

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

**SPNC or SPDT, 3 Watt, 100VAC/VDC optional**

**Computer/PLC Dry Circuit Operation**

**Inductive Loads**

Switch contacts have been tested with small relay and J-C 30 amp motor contactor inductive drive coils at 120 VAC and 240 VAC to 500,000 operations without failure. (Volt Amp approximately 6VA. Steady State/Transient surge approximately 34 VA).

**Nominal Working Temperature/Pressure**

<b>Q-10N</b>	<b>Q-10VCR</b>
180°F	180°F @ ambient pressure
250 Psig	200 Psig @ room temperature

**Wetted Surfaces**

**Model Q-10N**

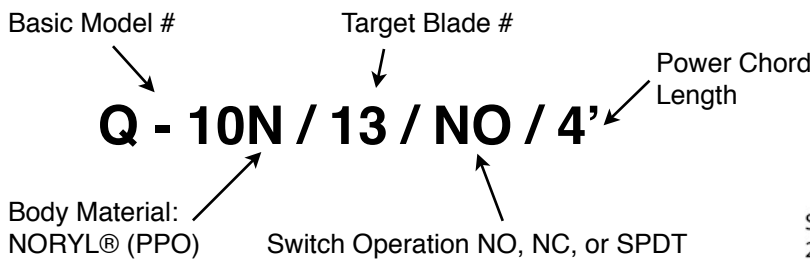
G.E. NORYL® (PPO)  
(10% glass fibers)  
316 Stainless steel

**Model Q-10VCR**

Tycona Fortron® (PPS)  
(40% glass fibers)  
Hastelloy® C.

**Option No. 1 - NORYL® (PPO)**

Sample Part #

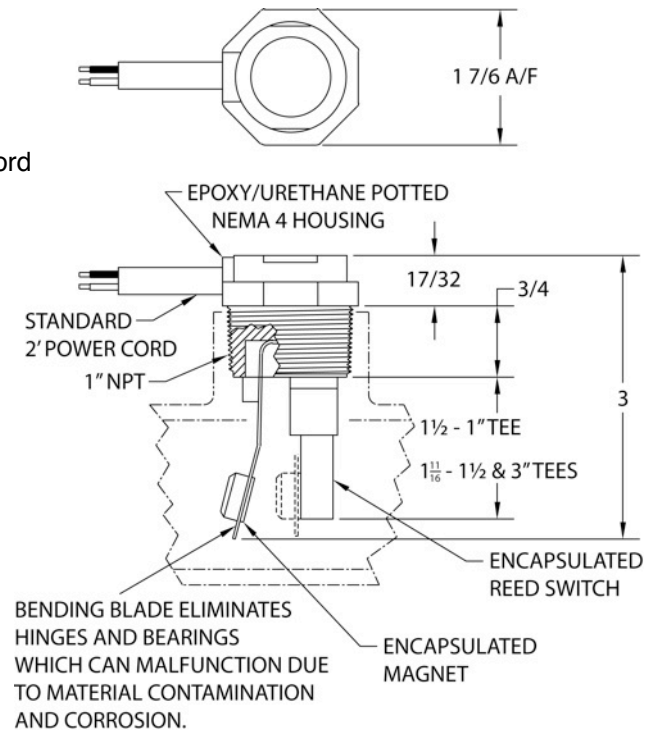


**Option No. 2 - Fortron® (PPS)**

Plastic and Hast. C. metal surfaces

**Q - 10VCR / 1 / NC / 2'**

NOTE: Model Q-10 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.
- Current Price Information is Listed on Separate Sheet.
- Special One Day Delivery Available.

