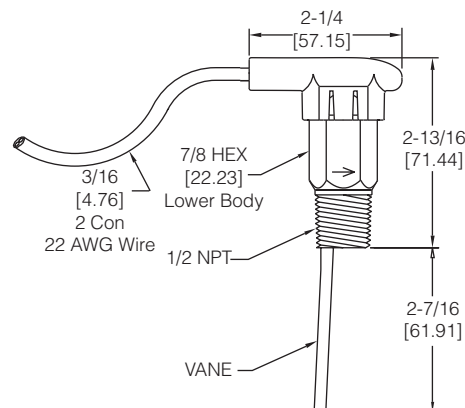




MODEL V11 FLOTECT® MINI-SIZE FLOW SWITCH

Specifications – Installation and Operating Instructions



INSTALLATION

1. Carefully unpack switch and remove any packing material from lower housing. Trim the vane at the appropriate mark for the size of pipe being used. See actuation/deactuation chart. **CAUTION:** Mechanical shock or vibration can cause permanent damage to the reed switch. Take care to avoid dropping the unit on hard surfaces or impacting the switch assembly.

2. Apply Teflon® thread tape or sealant to the 1/2" male NPT mounting threads and install switch in the system piping with the arrow on side pointing in the direction of flow.

3. Connect wiring in accordance with local electrical codes. A red cap indicates NC (normally closed) contacts, while a black cap indicates NO (normally open) contacts. Normally closed contacts open and normally open contacts close when increasing flow actuates the reed switch.

4. Inductive, capacitive and lamp loads can all create conditions harmful to the reed switch.

A) *Inductive loads* can be caused by electromagnetic relays, electromagnetic solenoids and electromagnetic counters, all with inductive components as the circuit load.

B) *Capacitive loads* can be caused by capacitors connected in series with or parallel to the reed switch. In a closed circuit the cable length (150 ft. (45.72 m) or more) to the switch can introduce a capacitance.

C) *Lamp loads* can be caused by switching lamp filaments which have low cold resistance.

In addition to these causes, exceeding any of the maximum electrical ratings can lead to premature or immediate failure. This includes inrush and surge currents greater than the maximum switching current. Use caution when evaluating system loads and current. To accommodate these conditions, see diagrams on the reverse which depict possible solutions.

MAINTENANCE

Following final installation of the Model V11 Flow Switch, no routine maintenance is required. A periodic check to confirm proper actuation/deactuation is recommended. These units are not field repairable and switches in need of service should be returned, freight prepaid, to the address below. Please include an explanation of the problem plus any available application information.

W.E. Anderson Division,
Dwyer Instruments, Inc.
250 Highgrove Road
Grandview, MO 64030

SPECIFICATIONS

Temperature Limits: 250°F (121°C) maximum.

Pressure Limits: Brass Body 1000 psig (69 bar), Stainless Steel Body 2000 psig (138 bar).

Process Connection: 1/2" NPT standard.

Switch Type: One hermetically sealed single pole single throw reed switch.

Electrical Rating: 1.5A @ 24VDC resistive, 0.001A @ 200VDC resistive, 0.5A @ 120VAC.

Electrical Connections: 22 AWG, 6 ft, rated 392°F (200°C), 300V. Flame retardant extruded FEP insulation with flame retardant extruded FEP overall shield.

Switch Body: Lower housing; choice of standard brass or optional 303 stainless steel. Switch housing; polybutylene, terephthalate (PBT).

Wetted Materials: 301, 302, 316 stainless steel, Ceramic 8 magnet. Brass or optional 303 stainless steel body.

Vane: 301 stainless steel standard, 7/16" (11 mm) wide by .187" (4.75 mm) deep.

Mounting Orientation: Install with index arrow pointing in direction of flow. Can be mounted in any position.

Weight: 5.8 ounces (128 g).

Approvals: NEMA 4X.

Cold Water Flow Rates				Air Flow Rates			
Approximate actuation/deactuation				Approximate actuation/deactuation			
GPM upper, LPM lower				SCFM upper, LPM lower			
Pipe	Trim	N.O.	N.C.	Pipe	Trim	N.O.	N.C.
1/2"	L	2.6/2.3 9.8/8.7	2.6/2.5 9.8/9.5	1/2"	L	10.3/8.8 291.7/250	10.2/9.2 288/260
3/4"	J	3.1/2.7 11.7/10.2	3.1/2.8 11.7/10.6	3/4"	J	13/11.6 368.3/328	12.9/11.6 365/328
1"	H	4.8/4.5 18.2/17	4.8/4.4 18.2/16.7	1"	H	19.2/17.6 543.3/498	18.9/17.6 535/498
1 1/4"	E	6.2/5.6 23.5/21.2	6.1/5.6 23.1/21.2	1 1/4"	E	24.8/22.2 701.7/628	24.5/22.5 693/637
1 1/2"	C	8.2/7.7 31/29.1	8.2/7.7 31/29.1	1 1/2"	C	33.4/31.2 946.7/883	33/30.6 935/867
2"	Full	9.5/9.1 36/34.4	9.5/9 36/34.1	2"	Full	50.2/48.4 1422/1370	50.2/47.7 1422/1352

REED SWITCH PROTECTION CIRCUIT INFORMATION BULLETIN

READ INFORMATION BELOW BEFORE INSTALLING YOUR NEW REED SWITCH CONTROL!

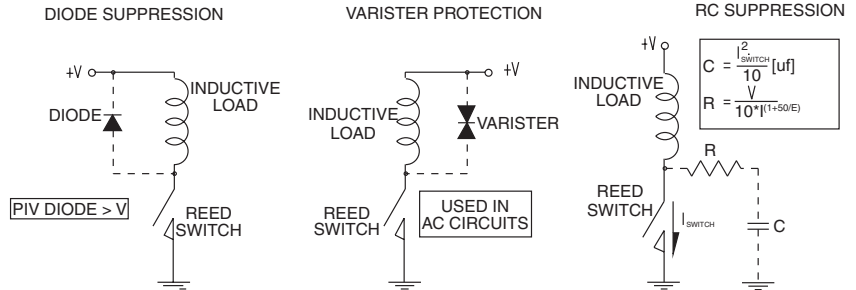
Exceeding the current capacity of this reed switch control may cause **FAULTY OPERATION!** Be aware of the inductive, capacitive or lamp loads you may be placing on the reed switch control. The circuits below outline possible solutions to preventing overloads due to inrush or surge currents exceeding maximum or when the switch current and product of the inductive back EMF exceed the switch's power rating. Also the circuit for prevention of overload when switching filament lamps (low "cold" resistance) is outlined below. Failure to follow these measures to protect reed switch contacts may cause the contacts to weld together or result in premature wear.

Possible Circuit Solutions Indicated by Dashed Lines

Inductive Loads

Possible causes –

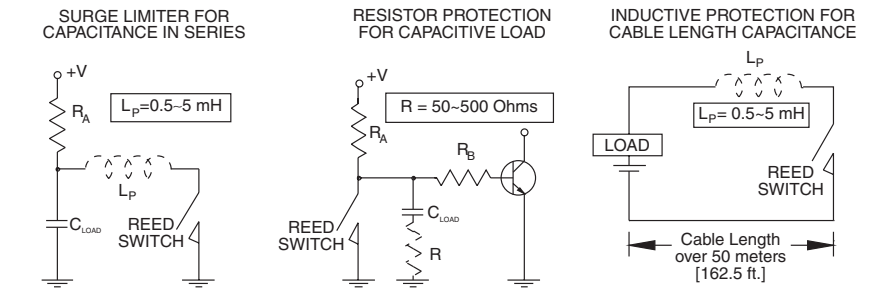
An electromagnetic relay, electromagnetic solenoid, or electromagnetic counter with inductive component as circuit load.



Capacitive Loads

Possible causes –

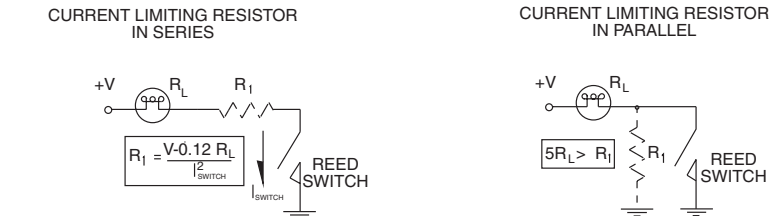
A capacitor connected in series or parallel with reed switch control. In a closed circuit, a cable length (usually greater than 150 ft (45.72 m) used to connect reed switch may also introduce static capacitance.



Lamp Loads

Possible causes –

A tungsten filament lamp load.



Do not subject reed switch control to excessive shock and vibration, including:

- Bending or placing force loads on reed switch housing
- Placing pull-out force on lead wires

NOMENCLATURE:

V11 - S NO A - X - BUSH

1 2 3 4 5 6

- 1 = Basic Model Number
V11 - Flow Actuated
- 2 = Housing Material
B - Brass
S - Stainless Steel
- 3 = Electrical State
NO - Normally Open, contacts close with flow increase.
NC - Normally Closed, contacts open with flow increase.
- 4 = Vane Type
A - V11 Vane Assembly
B - V6 Vane Assembly
C - V6 Reinforced Vane Assembly
- 5 = Lead Wire Length
X - Wire Length in feet. (6 would be 6 feet. 6 feet is the standard).
- 6 = Options (optional)
BUSH - 1/2 to 1 inch flush bushing.
SST - Stainless Steel Tag

Example: V11-SNOA-6-BUSH

