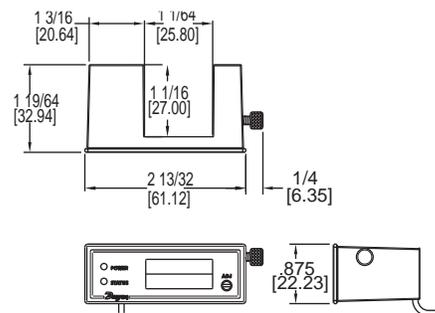
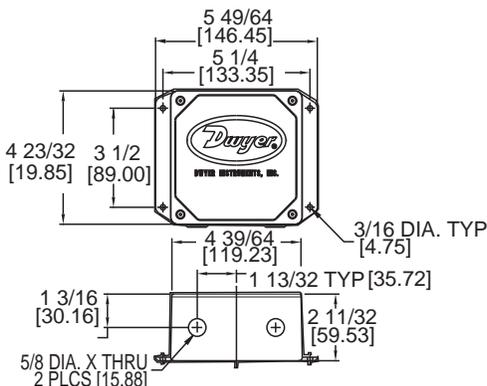




# Series VASP Visi-Float® Flowmeter Flowswitch with Power Converter Pak

## Specifications — Installation and Operating Instructions



The Series VASP is an infrared adjustable set point monitor that is used in conjunction with the VFA series of flowmeters. The VASP unit contains a set of relay contacts for indication of flow above or below the preset level. A latching circuit is included to hold the output relay in the actuated state until manually reset. The flowswitch and power pak are equipped with LED indicators to notify the user: 1) if the main power to the unit has been interrupted and 2) the flowmeter float status.

### MECHANICAL INSTALLATION

The flowswitch is mounted directly on the VFA flow-meter body and held in place by the unit thumbscrew. **Do not over-tighten.** The flowswitch should be mounted so the red line on the unit is lined up with the specific flow at which it should trigger to indicate an over or underflow condition. The power converter pak should be mounted in a vertical position with the cable openings facing down but, it can be mounted in a horizontal position when necessary.

### ELECTRICAL INSTALLATION

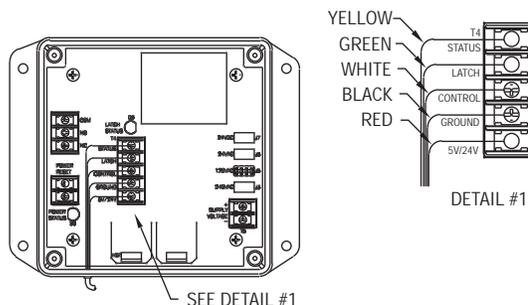
The flowswitch wire should be routed through the lower left bushing on the case. The flowswitch is wired to terminal T4 in the power pak in the following configuration. The flowswitch wire can be shortened to any length that still allows adjustment up or down on the flowmeter body.

### SPECIFICATIONS

- Indicators:** Two sets of power and output status LED's.
- Switch Type:** SPDT relay.
- Supply Voltage:** User selectable: 24 VDC or 24/120/240 VAC @ 50/60 Hz.
- Current Consumption:** 105 mA max. (DC), 230 mA max. (AC).
- Ambient Temperature Range:** 0 to 140°F (-18 to 60°C).
- Power Pak Connections:** Screw type terminal block.
- Material:** ABS and polycarbonate.
- Finish:** Light gray.
- Wiring:** 6 ft. shielded cable with color-coded leads.
- Mounting:** Vertical or Horizontal with 4 mounting holes.
- Dimensions:** 4.7 H 3 5.8 W 3 2.3 D (12 3 15 3 6 cm).
- Weight:** 20 oz (.57 kg).

### Series VASP Models & Relay Specifications

Model	VASP-10	VASP-5	VASP-1
Relay Contact Rating	10Amp	5Amp	1Amp
Rated Load at 120VAC	10A	5A	.5A
Rated Load at 30VDC	5A	5A	1A
Max. Switching Capacity	1250VA, 150W	600VA, 150W	62.5VA, 33W



### Latch Circuit Wiring

To enable and use the latching capabilities of the unit any variety of switch with normally closed contacts can be used. A momentary SPST switch with normally closed contacts is recommended (Dwyer Instruments, Inc. part number A-601). The switch should be wired to T4 terminals 5V/24V and Latch. Momentarily opening the switch contacts will reset the circuit to a pre-triggered condition. To disable the latching feature no wiring of the circuit is required.

### Power Reset Wiring

To enable and use the power reset feature of the power pak, any momentary SPST switch with normally open contacts is recommended (Dwyer Instruments, Inc. part number A-601). The switch should be wired to the T2 (power reset) terminal connections. Momentarily closing the contacts resets the circuit and allows normal operation of the unit. To disable this feature simply install a wire jumper between the two T2 (power reset) terminals.

### Relay Wiring

The T3 terminal labeled COM, NO, and NC is where the relay contacts are wired. They are used to switch the customer equipment as required. The relay contacts are rated as outlined in the Specifications section.

### Line Voltage Wiring

The T5 (supply voltage) terminals are for supplying the input voltage to the unit. The unit will run on any of the input voltages outlined in the Specifications section.

## OPERATION

**1. Read the following before supplying power to the unit power pak. The supply voltage jumper should be installed on the correct set of pins corresponding to the input voltage. Failure to correctly set this jumper will cause unit damage. Default setting is 120VAC.**

2. Turn on supply voltage to the power pak. The power converter pak's green power status and flowswitch's green power LED's will begin flashing. If the power reset circuit was disabled they will both turn on. See power reset wiring above.

3. Toggle the switch wired to the power reset terminals to close its contacts. The indicator LED's will stop flashing and turn on completely. The unit at this point is fully functional. The relay K3 has energized and will now stay in a self-latching mode until the power is interrupted. When the power has been interrupted and then restored the unit will once again power up and begin flashing the LED's.

**After power is restored the unit will function and indicate status but the current flow status should be visually checked and the circuit reset.**

4. As the float in the flowmeter travels between the infrared LED and phototransistor it will break the beam of the infrared LED. The red flowswitch status and power pak latch status LED's will turn on and the relay contacts will switch. When the float passes beyond the beam of the infrared LED the red flowswitch status and power pak latch status LED's will turn off and the relay contacts will switch back to their original position.

5. If the latching circuit is being utilized the relay will remain energized until the latch circuit is reset.

Note: If fluids are used with the flowmeter, air must be purged from the system since air bubbles could produce false activation of the circuit. If a dark fluid medium is used this may also produce false activation of the flowswitch.

## CALIBRATION

The unit is set at the factory for use with any of our VFA series flowmeters and no adjustment should be required. If it becomes necessary to increase the sensitivity of the unit to your specific flowmeter the ADJ. screw in the flowswitch can be adjusted. Adjusting this screw will move the infrared LED source board in the unit. This will line up the infrared source and detector so the flowmeter float will pass more directly between them. One or two full turns in either direction is all that should be required for maximum performance. Do not adjust the screw more than five full turns in either direction from the factory set position since this may move the source out of the usable limit of the device and possibly damage the flowswitch.

## Testing Flowswitch

The unit can be tested by varying the flow so the flowmeter float passes the flowswitch and verifying the status indicator turns on and off. It can also be checked by removing the unit from the flowmeter and passing a solid object (pen or finger) between the sensors and verifying the status indicator turns on and off.

## MAINTENANCE

Upon final installation of the Series VASP Visi-Float® Flowmeter Flowswitch. No routine maintenance is required. The Series VASP is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty). Be sure to include a brief description of the problem plus any relevant application notes. Contact customer service to receive a return goods authorization number before shipping.