

3. Operation



Caution: The control circuit contains electrostatic discharge (ESD) sensitive devices. Use standard ESD precautions when handling the control circuit. See Chapter 2, Installation for ESD details.

Factory Calibrations

The 12-64 Basic Flow Switch and 8-66 Basic Level/Interface Switches are delivered in their standard factory set point form. The standard factory setting is mid-range between no flow (dry) and full flow (wet). See Figures 3-1.

12-64 Alarm Set Point Procedure

1. Flow the pipeline at the desired rate of flow.
2. Apply power to the instrument and allow 10 minutes for the sensing element to become active and stabilize.
3. Locate the potentiometer (R5) and the red LED on the control circuit. (See Figure 3-2.)
4. Choose procedure A or B below.

A. Detecting No Flow or Decreasing Flow Rate

If the LED is off, turn the potentiometer clockwise until the LED turns on. If the LED is on, turn the potentiometer counterclockwise until the LED turns off, then turn the potentiometer clockwise until the LED just turns on. With the LED on, turn the potentiometer slowly counterclockwise until the LED just turns off. Turn the potentiometer one-half turn past the point at which the LED just turns off. Be aware that the potentiometer may have up to one quarter turn of hysteresis. If the mark is overshoot, the procedure should be repeated. (See Figure 3-1.)

B. Detecting Maximum Flow or Increasing Flow Rate

If the LED is on, turn the potentiometer counterclockwise until the LED turns off. If the LED is off, turn the potentiometer clockwise until the LED turns on, then turn the potentiometer counter clockwise until the LED just turns off. With the LED off, turn the potentiometer slowly, clockwise until the LED just turns on. Turn the potentiometer one-half turn past the point at which the LED just turns on. Be aware that the potentiometer may have up to one quarter turn of hysteresis. If the mark is overshoot, the procedure should be repeated. (See Figure 3-1.)

8-66 Alarm Set Point Procedure

Adjustment With The Sensing Element Wet

1. Determine that the sensing element is wet
2. Apply power to the instrument and allow 10 minutes for the sensing element to become active and stabilize.
3. Locate the potentiometer (R5) and the red LED on the control circuit. (See Figure 3-2.)
4. If the LED is off, turn the potentiometer clockwise until the LED turns on. With the LED on, turn the potentiometer slowly, counterclockwise one quarter turn past the point at which the LED just turns off. The potentiometer may have up to a quarter turn of hysteresis in either direction. If the mark is overshoot, repeat the procedure.



Note: Consideration should be given to the fact that air or gas flowing over the sensing element may lower the sensor dry signal, resulting in a false indication of wet at the sensing element. In cases where the sensing element is exposed to air flow in the dry condition, or where the service product is highly viscous, switch adjustments should be made in the wet condition only.

Adjustment With The Sensing Element Dry

1. Determine that the sensing element is dry.
2. Apply power to the instrument and allow 10 minutes for the sensing element to become active and stabilize.
3. Locate the potentiometer (R5) and the red LED on the control circuit. (See Figure 3-2.)
4. If the LED is on, turn the potentiometer slowly, clockwise until the LED goes off.



Note: If the LED does not turn off set the switch in the wet condition.

With the LED off, turn the potentiometer slowly, clockwise one quarter turn past the point at which the LED just goes on. The potentiometer may have up to a quarter turn of hysteresis in either direction. If the mark is overshoot, repeat the procedure.

8-66 Interface Applications Adjustment

Alarm switch point adjustments are conducted in the same manner as liquid level/interface applications with the exception that better thermal conducting media should be considered as in a dry condition.

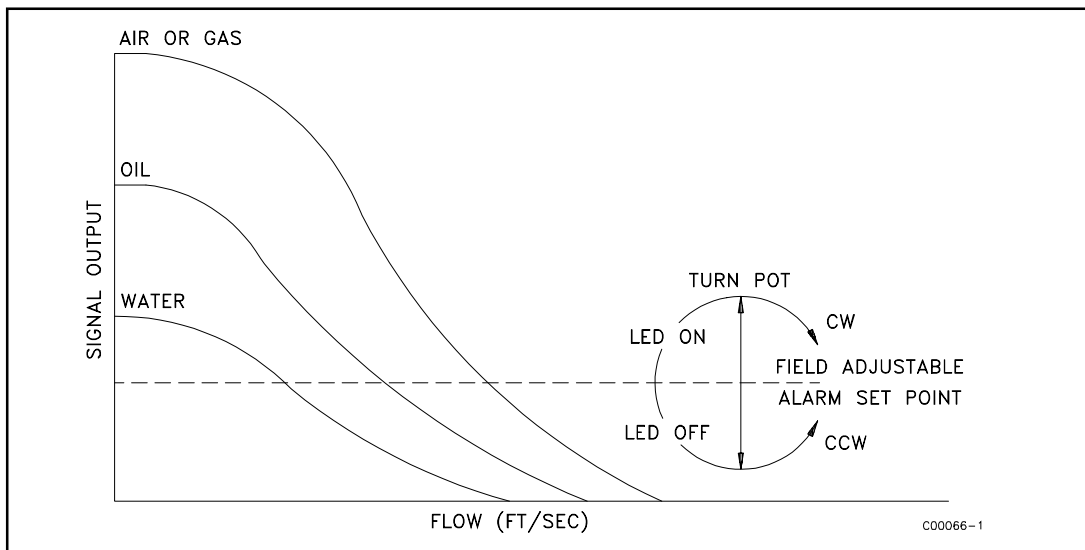


Figure 3-1. Setting Alarm Switch Point

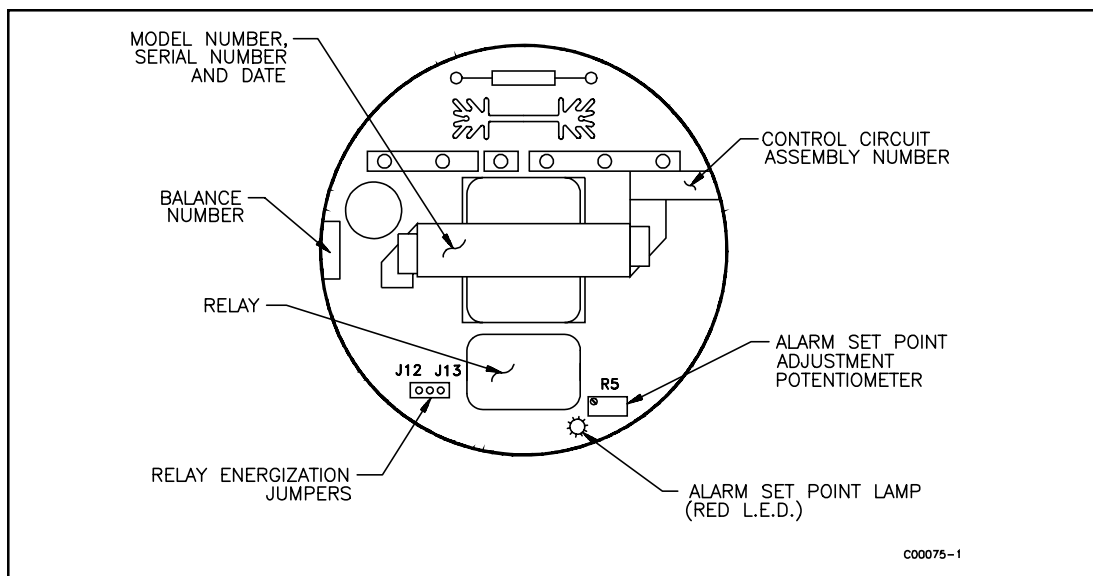


Figure 3-2. Control Circuit Outline Drawing