



## CIT Relays and Switches for Fluid Control Equipment

Relays and switches are essential components in fluid control systems, playing crucial roles in managing and regulating the flow, pressure, and level of fluids in various applications. These systems can be found in industries such as water treatment, chemical processing, HVAC (heating, ventilation, and air conditioning), and more. Here's how relays and switches are typically used:

### 1. Control of Pumps and Valves

- **Relays:** Relays are used to control the operation of pumps and valves in fluid control systems. They act as intermediaries between low-power control circuits and high-power devices, enabling the safe and efficient operation of pumps and valves. For example, a relay can turn a pump on or off based on signals from a control system.
- **Switches:** Manual switches can be used to start or stop pumps and open or close valves. In some systems, automatic switches are used to regulate flow or pressure based on sensor inputs, providing more precise control.

### 2. Level and Flow Monitoring; Pressure Control

- **Snap-Action Switches:** These switches are designed to respond to changes in pressure within a system. When the pressure reaches a set point, the switch activates a relay to start or stop a pump, open or close a valve, or trigger an alarm. This helps maintain safe operating conditions and prevents damage to equipment.

### 3. Automation and Process Control

- **Control Relays:** In automated fluid control systems, relays are used in conjunction with programmable logic controllers (PLCs) or other control systems to execute complex control strategies. This includes starting or stopping multiple pumps, opening or closing valves in sequence, and responding to various sensor inputs.
- **Time-Delay Relays:** These relays can introduce delays in the operation of pumps or valves, providing time for certain processes to complete or for safety measures to take effect.

### 4. Safety and Emergency Systems

- **Overload Relays:** These protect electrical equipment like motors from overcurrent conditions. If a pump motor draws too much current, the overload relay will disconnect it from the power supply to prevent damage.

### 5. User Interface and Manual Control

- **Switch Panels:** Control panels in fluid control systems often feature various switches that allow operators to manually control the system. This includes turning pumps and valves on or off, selecting operating modes, and overriding automatic controls when necessary.



In summary, relays and switches are integral to fluid control systems, providing control, monitoring, safety, and automation capabilities. They ensure that the system operates efficiently, safely, and reliably, whether in industrial, commercial, or residential applications.

**CIT Relays used in Fluid Control Equipment:**

- [J104D Series](#)
- [J107F Series](#)
- [J115F1 Series](#)

**CIT Switches used in Fluid Control Equipment:**

- [RA Series](#)
- [RC Series](#)
- [Snap Action Switches](#)
- [Tactile Switches](#)