

## FLT93L FlexSwitch Provides Relief Valve Leak Monitoring For Natural Gas Fractionation Process Facilities

*Highly Reliable Solution Prevents False Alarms To Keep Process Lines Running*



San Marcos, CA - Process and plant engineers responsible for the safety of natural gas fractionation processes will find the advanced [FLT93 Series Flow Switch](#) from [Fluid Components International \(FCI\)](#) provides a reliable solution to relief valve leak monitoring that keeps their facilities safe without the inconvenience of false alarms that interrupt operations, upset plant employees and require

additional paperwork and meetings to report and resolve.

NGL fractionation process facilities separate ethane, propane, butane and other heavier hydrocarbons from mixed NGL streams. Multiple trains and columns are typically used in a fractional distillation process, with relief valves installed as critical safety protection devices that release when needed to prevent pressure from building within the process.

A flow switch is typically installed after the pressure relief valve and alarms if there is flow. For the NGL fractionation process to work efficiently and safely, the operation requires early and reliable indication when a relief valve leaks or lifts during an overpressure situation.

Should the flow switch alarm due to gas being released through the relief valve, it indicates via a dry contact that there is an event in progress. The facility's staff then responds by taking the appropriate corrective action to resolve the event.

FCI's highly accurate and dependable inline FLT93L Flow Switch is ideal for relief valve leak monitoring in natural gas fractionation applications. It is a heavy duty thermal dispersion flow/level/temperature switch that was designed based on FCI's more than 50 years of flow/level/temperature switch applications experience.

Designed with an all-welded thermal sensing element, the FLT93L Switch includes an advanced electronic control circuit, which is field configurable to satisfy any combination of application requirements. Unlike other flow switch technologies, the thermal sensor in this switch is suitable for both gases and hydrocarbon-based liquids.

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The FLT93L Switch's voltage output allows the user to "see" into the process and accurately set the desired trip point. The delta range between the switch's two RTDs provides a span for setting the switch trip points. These flexible dual relays are settable by the plant technician for any combination of flow, level and/or temperature alarms.

With a standard flow accuracy of  $\pm 2\%$  of the setpoint velocity over a  $\pm 50^{\circ}\text{F}$  [ $\pm 28^{\circ}\text{C}$ ] temperature range, the new switch meets the needs of this application. Its repeatability of  $\pm 0.5\%$  reading also is satisfactory for dependable, reliable operation in natural gas fractionation relief valve leak monitoring. All FLT93 Series Switches are temperature compensated to ensure accuracy under rugged petrochemical plant operating conditions.

Thermal flow switches are exceptionally safe because there are no moving parts to break free. For this reason, instrument life also is long (190 years MTBF) with a low life-cycle cost over what can be many decades of service. The low maintenance and long life qualities of the FLT93L thermal switch offer a lowest lifecycle cost solution.

The FLT93L Switch also is SIL 2 rated for ultra-reliability. The complete instrument offers Ex agency approvals: FM, FMc, ATEX, IECEx, Inmetro and TR CU. Integrated with the FLT93 Switch's thermal flow sensor is a fail-safe, dual alarm (SPDT) control circuit for field flexibility and user friendliness. This unique control circuit offers a variety of field-selectable features for many different applications.

The control circuit's dual independent heavy duty 6A SPDT relays provide the multiple alarm combinations. They can be set for flow rate and temperature, high flow and low flow, point level and temperature, flow rate and low liquid level, three-phase interface or fail-safe flow, level or temperature.

Fluid Components International is a global company committed to meeting the needs of its customers through innovative solutions to the most challenging requirements for sensing, measuring and controlling flow and level of air, gases and liquids.

Contact: FCI: 1755 La Costa Meadows Dr, San Marcos, CA 92078  
Web: [www.fluidcomponents.com](http://www.fluidcomponents.com) Tel: 800-854-1993 Tel: 760-744-6950 Fax: 760-736-6250  
Email: [FCImarcom@fluidcomponents.com](mailto:FCImarcom@fluidcomponents.com)