

## Eye Wash Station and Shower Flow Assurance In Hazardous Areas With SIL-2 Rated FLT93 Switches

### *Water Flow Assurance and Temperature Monitoring To Protect Worker Safety*

**San Marcos, CA** — Plant operations and safety staff in the petrochemical, refineries, chemical, and other industries required to meet U.S. Occupational Health & Safety (OSHA) regulations for emergency eye wash stations and showers in hazardous areas will find the SIL-2 rated [FLT93 Flow Switch](#) from [Fluid Components International \(FCI\)](#) helps them to ensure water flow and alert staff to station-in-use events.



Hazardous areas in the petrochemical and other process industry plants fall under OSHA 29 CFR 1910.151(c). This regulation requires emergency eye wash stations and showers be available that enable workers to flush themselves of corrosive materials. These emergency stations are to be located within the work area for immediate use.

These OSHA requirements apply to many different hazardous industry processes, including chemical refineries. They cover, for example, facilities with open tanks, which must have an emergency safety shower (or an alternative) within easy reach. Other process industries with dipping and coating applications must also comply. The pulp and paper industry, for example, must be concerned about worker lime or acid burns.

While the OSHA emergency eye wash station and shower regulations are definitive, there are equipment installation requirements also covered by the American National Standards Institute (ANSI) Z358:1 that must be met. Water temperature requirements are included in this checklist, amongst others. Eye wash stations and showers are to provide water over a temperature range of 60 to 100°F (16 to 38°C). Temperature control is important to prevent hypothermic shock (cold water) or scalding at higher temperatures.

FCI's SIL-2 rated FLT93 Water Flow Switches feature global agency safety approvals for installation in hazardous areas. They are dual-function to alarm on both flow and temperature. When placed in an emergency eye wash station and shower water supply alarm system, they provide immediate detection of a station being used and is sensitive enough to signal operators of even a small leak.

FCI flow switches are electronic flow switches. They apply thermal dispersion flow measurement technology to provide highly accurate and repeatable flow rate detection and provide equally reliable and repeatable relay trip points.

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When the flow rate or temperature is above (high) or below (low) the setpoint, FCI's electronic flow switches trigger a 6 amp relay to change state. The change in state can be applied to signal an alarm, to suspend, or to shut-down the process, etc.

The unique sensor technology of the FLT93 Series Switches and superior temperature compensation circuitry introduces unparalleled repeatability and reliable trip point performance. Trip point accuracy on flow is as precise as  $\pm 2\%$  of the flow rate velocity over a  $\pm 50^{\circ}\text{F}$  ( $\pm 28^{\circ}\text{C}$ ) temperature range; repeatability is  $\pm 0.5\%$  of reading. Temperature accuracy is  $\pm 2.0^{\circ}\text{F}$  ( $\pm 1^{\circ}\text{C}$ ), and trip point repeatability is  $\pm 1.0^{\circ}\text{F}$  ( $\pm 0.6^{\circ}\text{C}$ ).

Dual 6A relay outputs are standard and are user assignable to flow or temperature with the FLT93 Series Switches. A universal power supply supports powering by 115 Vac, 230 Vac, or 24 Vdc. The switch relay trip point/alarm is easily field-configured or can be factory pre-set for ease of initial installation or changes later on.

Featuring an all-welded, no-moving parts design, the FLT93 Switches require virtually no maintenance. There is nothing to break, clog or foul requiring continuous maintenance. They are available in 316L stainless steel. In addition, these switches offer an exceptionally long life and a low lifecycle cost for superior value.

FCI's FLT93 Series are the most popularly installed heavy duty thermal dispersion flow switches in the world. The reasons are simple; FLT93's were developed from decades of flow switch engineering and application installation experience to deliver the most reliable, repeatable, rugged and longest life industrial grade switch products found anywhere.

FCI solves flow and level measurement applications with advanced thermal dispersion technologies. With almost 60 years' experience and the largest installed base of thermal flow meters, flow switches and level switches, you can count on FCI to know your application and have the right solutions.