

## COVID-19 Vaccine Production Lines Rely on FCI FLT93C Sanitary Thermal Flow Switch

*Helps Assure Rinsing With High Quality Water for Injection (WFI)*

**San Marcos, CA** — The highly reliable, precision FLT93C sanitary thermal flow switch from Fluid Components International (FCI) is today helping a major pharmaceutical company assure the necessary high quality of its rinse water for injection (WFI) is maintained on its batch lines during the production of COVID-19 vaccine.

“We are extremely proud of the role our sanitary flow switch products are now playing in fighting corona virus disease,” said Dan McQueen, President of FCI. “Our dedicated, innovative employees have been exceptional in assuring that we can continue to produce and deliver our flow instruments to customers in the pharmaceutical, food/beverage, energy and other essential industries around the globe.”

The FLT93C sanitary thermal mass flow switches are utilized to confirm the minimum flow rate of the measured WFI within the specified temperature range during production. A minimum flow at the correct temperature and time are required to rinse the COVID-19 vaccine production lines to assure that these lines are clean and free from bacteria or left over ingredients from the previous batch.

In the pharmaceutical industry, WFI is high quality water used to produce a wide variety of injectable medicines, including the COVID-19 vaccine. On the COVID-19 vaccine production lines, WFI is used for rinsing after batch production, and it must be maintained at a temperature of 20°C to 85°C [68°F to 185°F].

After a batch of vaccine is complete, the cleaning process begins and the FLT93C switch then issues a liquid low flow alarm to indicate the line can be released to start the next batch of vaccine production. The sanitary flanges designed for the FLT93C switch support a clean and safe installation of the instrument in the production process, which is critical to produce safe, effective COVID-19 vaccine.

With its stainless steel wetted materials and standard 20Ra finish, the FLT93C switch is available in either mechanical polish or electro-polish finishing. Operating over a wide liquid flow range of 0,003 Nm/s to 0,9 Nm/s [0.01 SFPS to 3.0 SFPS], the FLT93C flow switch offers excellent repeatability of  $\pm 0.5\%$  reading or  $\pm 0,012$  Nm/s [ $\pm 0.04$  SFPS].

Designed with unique temperature compensation technology, the FLT93C flow switch is the industry’s only thermal switch that ensures set point accuracy for process temperatures that can vary up



to 177 °C [350 °F]. The FLT93C is easily field-configured or factory preset, providing unparalleled flexibility, accuracy and stability for all multiple process sensing and switching requirements.

The FLT93C flow switch is suitable for 19,05 mm to 101,6 mm [0.75 inch to 4 inch] sanitary tubing process lines, and it connects with a secure tri-clamp fitting for easy removal for inspection and servicing. The 316L stainless steel wetted materials are available in both mechanical polish (SF0 to SF3) and electro-polish (SF5 and SF6) surface finishes with 20 Ra maximum ( $\mu\text{in}$ ) finish; 10 Ra maximum ( $\mu\text{in}$ ) electro-polish finish (SF 4) is available upon request. The FLT93C construction complies with ASME BPE requirements.

In addition to CIP systems, other pharmaceutical uses of the FLT93C flow switch include compendial water systems (WFI, PW and HPW) and solution preparation systems (buffer solution). Options are available for applications requiring more corrosion resistant, wetted materials such as Hastelloy-C and Zone 1/21 (Class 1, Div 1 and 2) hazardous areas.

The FLT93 series switch is a dual-function instrument that indicates both flow and temperature, and/or level sensing in a single device. Dual 6A relay outputs are standard and are independently configurable to flow, level or temperature. Based on FCI's thermal dispersion expertise, the unique sensor technology of the FLT93 switches, combined with FlexSwitch™ temperature-compensation circuitry, introduces unparalleled performance capabilities:

- Liquid level resolution of  $\pm 2.5$  mm [ $\pm 0.1$  inch], repeatability of  $\pm 1,3$  mm [ $\pm 0.05$  inch]
- Standard temperature accuracy  $\pm 1$  °C [ $\pm 2.0$  °F]; repeatability is  $\pm 0,6$  °C [ $\pm 1.0$  °F]; improved

temperature accuracy is available with factory calibration

One standardized, field-configurable FLT93 FlexSwitch control circuit satisfies virtually any combination of application requirements. FCI's advanced FlexSwitch technology can be packaged in integral or remote configurations for installation flexibility.

The FLT93C switch beats the heat, too. It is available with a choice of sensors including one that is suitable for process temperatures up to 177 °C [350 °F] and one that is suitable for temperatures up to 260 °C [500 °F]. Hazardous approvals are available for the FLT93C switch including ATEX, IECEx Zone 1/21; IP66 and EAC/TRCU 12 & 20.

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