



STATE OF WISCONSIN  
Department of Agriculture,  
Trade and Consumer Protection

Approval # 20160006  
(Replaces 20130005)

Bureau of Weights and Measures  
Storage Tank Regulation  
P.O. Box 7837  
Madison, WI 53707-7837

## Wisconsin ATCP 93 Material Approval

Equipment: Model S404 Float Switch with 404-4  
Controller

Manufacturer: Franklin Fueling Systems  
3760 Marsh Rd.  
Madison, WI 53718

Expiration of Approval: December 31, 2019

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### SCOPE OF EVALUATION

The Model S404 Float Switch for use with the 404-4 Controller as manufactured by Franklin Fueling Systems, for leak detection of sumps and double-wall pipe systems, has been evaluated for use as a method of sump monitoring complying with **ss. ATCP 93.500(5)** and interstitial monitoring complying with **ss. ATCP 93.515(7)** of the current edition of the Wisconsin Flammable and Combustible Liquids Code.

This evaluation summary is condensed to provide the specific installation, application and operation parameters necessary to maintain the subject systems in compliance with the Wisconsin Administrative Code – ATCP 93.

## DESCRIPTION AND USE

The Model S404 Float Switch for use with the 404-4 Controller is part of Franklin Fueling's DC400 Dispensing Cutoff System. This is a stand-alone, two-part solid state system which includes a controller and sensor, designed to automatically shut down product flow or signal an alarm if liquid is detected inside containment spaces.

The DC400 can be mounted inside any turbine sump, providing complete pump shut down; or mounted directly into dispenser sumps, allowing only the effected dispenser to be shut down as liquid is detected. Automatic reset of the system occurs once liquid has been removed from the effected sump.

The S404 is a float switch sensor designed to alarm and cut-off power when the internal float rises in the liquid.

The 404-4 Controller can be mounted inside any containment sump and connected to the existing turbine or dispenser wiring. To provide leak detection liquid sensing, the S404 liquid sensor can be connected to the end of the controller and placed in the bottom of the containment sump.

The S404 sensor may be used on systems that contain gasoline, diesel, biodiesel up to B20, B100, alcohol mixtures up to 100% and with manufacturer's approval, other liquids with a known density.

## TESTS AND RESULTS

All sensors are intrinsically safe and are listed for Class I, Division 1 hazardous (classified) locations. The 404-4 controller is of an explosion proof design and Listed for Class I, Division 1 hazardous (classified) locations.

Third-party testing of the liquid sensor was conducted in accordance with the Alternative EPA Test procedures for Liquid Level Sensors protocol.

## LIMITATIONS / CONDITIONS OF APPROVAL

- All monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer instructions, and verified every 12 months in accordance with **ss. ATCP 93.510(2)** for operability, proper operating condition, and proper calibration if required. Records of sampling, testing, or monitoring shall be maintained in accordance with **ATCP 93.500(9)**.
- The manufacturer shall submit for a revision to this Wisconsin Material Approval application if any of the functional performance capabilities of this equipment are revised. This would include, but not be limited to changes in software, hardware, or methodology.
- The liquid sensors shall be placed in the lowest point in the sump such that a release from the submersible pump, dispenser, or sump piping will be detected.

- For monitoring of double-wall piping, the liquid sensors shall be placed such that a release from any portion of the piping will be detected.

This approval will be valid through December 31, 2019, unless manufacturing modifications are made to the product or a re-examination is deemed necessary by the department. The Wisconsin Material Approval Number must be provided when plans that include this product are submitted for review.

**DISCLAIMER**

The Department is in no way endorsing or advertising this product. This approval addresses only the specified applications for the product and does not waive any code requirement unless specified in this document.

Effective Date: December 2, 2016

Reviewed by:  Date: 12/7/16

Erik Otterson  
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Storage Tank Regulation  
Bureau of Weights and Measures

Approved by:  Date: 12/7/16

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