

## **New General Purpose Liquid Flow Switch, Series FS250**

McDonnell & Miller announces new General-Purpose, Liquid Flow Switches, the Series FS250 - FS251 (NEMA1 version), and FS254 (NEMA4 version). These flow switches incorporate key changes to address customer expressed needs of greater reliability and lower flow sensing capabilities in a general purpose flow switch.



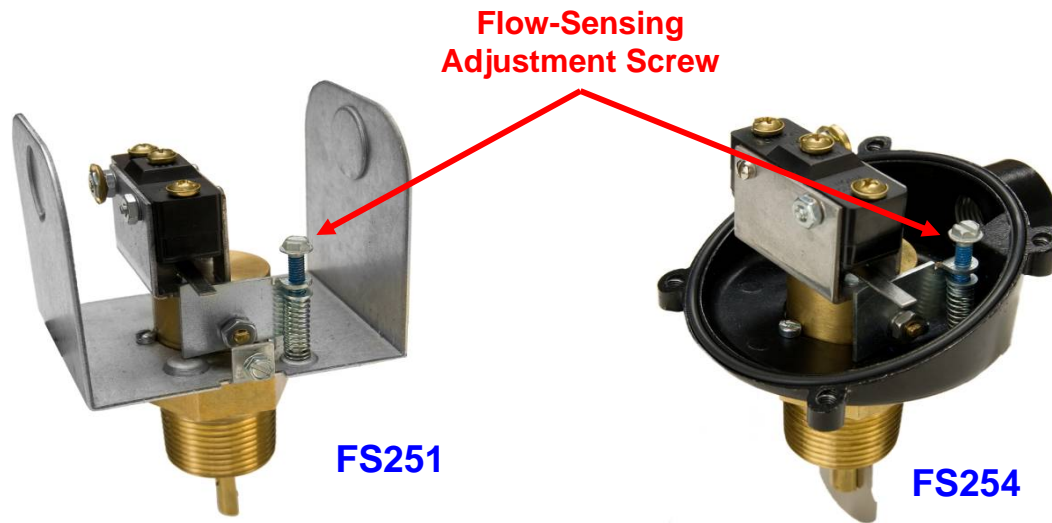
**FS251 Flow Switch  
(NEMA-1)**



**FS254 Flow Switch  
(NEMA-4)**

Key features of these patent pending flow switches include:

- Common switching mechanism for both the FS251 and FS254
  - Flow detection via stainless steel paddles inserted into flow stream piping
  - Brass body, paddle arm and pivot shaft
  - EPDM O-ring seals on the pivot shaft for long-life and durability in multiple chemical environments
  - Cam actuation of electrical switch
  - Easily accessible electrical connections and flow sensing adjustment screws



- Measured flow-rate sensing of 5.8 gpm in 1" pipe (2.2 fps) in horizontal pipe installations, which is **18%** lower than measured flow of comparable general purpose flow switches from major competitors. (Refer to submittal [MM-627](#) for flow rates.)
- 1-inch NPTM brass pipe connection
- 1", 2", 3" and 6" Stainless steel paddles standard
- Section IV boiler ratings of 250° F and 160 psig
- No lead construction
- Housing materials:
  - FS251 – stamped sheet steel base with glass reinforced polycarbonate cover
  - FS254 – Cast aluminum base and cover

### **EXTENSIVE LAB AND FIELD TESTING**

The Series FS250 switches were field tested for over 18 months in numerous applications – copper tube boilers, chillers, and commercial pools. They were also laboratory tested, at full rated pressure and temperature, achieving over 240,000 cycles with no failures.

### **5-YEAR WARRANTY**

As a result of our test experience, we are pleased to offer a **FIVE-year limited warranty**, from date of manufacture, on the Series FS250 flow switches. You can have confidence that they meet the reliability requirements you demand.

### **FLOW RATE SENSING**

The flow rate at which the FS250 switches prove flow and the differentials between flow and no-flow actuation, is more consistent from switch to switch than flow switches that use a bellows as the sealing technique. Consistency in flow rate sensing provides closer equipment protection control for critical applications such as turning off boiler burners and chiller compressors when liquid flow is below required minimums.

### **REPLACEMENTS FOR OTHER FLOW SWITCHES**

FS250 Flow Switches are designed to be direct replacements for not only the McDonnell & Miller FS4-3 and FS8-W Flow Switches, but they can replace Taco/Potter IFS01BR and IFSWSBR and Penn/Johnson Control FS61-KB, FS61-LB and FS61-MB and Watts FS10-C and FS20 flow switches.

## **APPLICATIONS**

The Series FS250 Flow Switches were designed for many flow sensing applications. They can be used in applications to:

- Provide equipment protection by
  - Stopping burners, compressors or pump motors
  - Triggering alarms or warning lights
- Help control metering devices
- Monitor system/pump flow performance in critical applications