



**McDonnell & Miller**  
*boiler controls, liquid level  
 controls and flow switches*



**McDonnell & Miller**



*Delivering reliable performance  
 for over 75 years.*

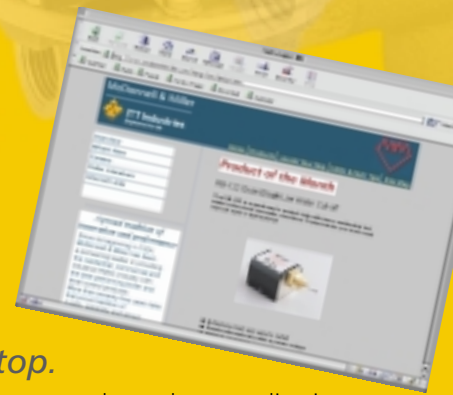
*Since our beginning in 1924, McDonnell & Miller has been providing the residential, commercial and industrial HVAC industry with the best-performing boiler controls, liquid level controls and flow switches. Today, that proud tradition of quality, reliability and strong customer service continues to be the solid foundation of the company. As representatives of a full line of products, McDonnell & Miller offers the best engineered solutions, along with proven system application knowledge, from one reliable and convenient source.*

*Dedicated to quality.*

At McDonnell & Miller, we take pride in designing, producing and marketing the highest-quality products available. Our efforts have earned us the internationally renowned ISO 9001 certification given only by the International Standards Organization. Its worldwide standards provide a uniform measure of quality procedures in manufacturing and service organizations. Our continued participation in the rigid and demanding ISO 9000 certification process is one of our most important activities. Not just for us, but for our customers.



*Get the answers  
 you need  
 right at  
 your desktop.*



For expert system and product application assistance, check out McDonnell & Miller online at [www.mcdonnellmiller.com](http://www.mcdonnellmiller.com). Here, you'll find everything you need to do the job right, including high-quality McDonnell & Miller components for optimum performance from our wide product inventory.

*Experts in the field, McDonnell & Miller representatives have the answers you need to your toughest boiler control questions.*

**McDonnell & Miller**



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## Flow Switches

Flow switch options may include alternate materials, BSPT threads and connections, flow rate adjustment, enclosure types, CE conformance and more. Please consult catalog or call factory for details.

### Series FS1/FS6

The Series FS1 and FS6 are designed for general and heavy-duty applications where high sensitivity is required. The FS1 is used for moderate or low flow-rate systems such as air conditioning, heating and hydronic systems, water, fuel oil, some viscous liquids and oils in process work. The FS6 is used for such things as treatment systems, cooling systems for electronic circuits, compressors, booster pumps and bearings and other applications that need instant switching.



### Series FS4-3

Universal design serves the widest variety of applications. The Series FS4-3 is designed to start or stop electronically operated equipment such as signal lights, alarms, motors, automatic burners, metering devices and others.



### Series FS5

Designed for general applications requiring low flow-rate sensitivity. Its in-line configuration eliminates need for pipe tee. Single pole, double-throw snap switch. Sensitivity adjusting screw makes flow adjustment easy.



### Series FS7-4

The Series FS7-4 features a universal design that serves the widest variety of large pipe applications, including heating and hydronic systems, air conditioning, refrigeration and process work.



### Series FS8-W

The Series FS8-W is designed for general-purpose applications with environmental exposure, or those requiring a water-tight, dust-tight or a NEMA 4X-rated flow switch. Optional features include BSPT threads and gold-plated contacts.



### Series AF

The Series AF provides a positive and economical way to detect change or loss of air-flow velocity caused by a closed damper or fan inlet, a loose fan wheel, a slipped or broken fanbelt, a dirty or clogged filter or an overload on a fan motor switch. The Series AF1 flow switches are designed for medium and higher velocity systems. Models AF2 and AF3 are for systems with lower air-flow velocities.



## Need help scheduling maintenance or repairs?

*For information about recommended replacement and inspection intervals for boiler controls, liquid level controls and flow switches, visit our Web site at [www.mcdonnellmiller.com](http://www.mcdonnellmiller.com) to get the answers about the replacement parts you need, with just a click of the mouse.*

## Boiler Controls – Electronic

### Series RB

The Series RB-24, RB-120 and RB-122 low water cut-offs guard against the dangers of low water conditions in residential hot water boilers. These UL®-listed, conductive-type water detection controls feature a quick-mount probe for easy installation, inspection or replacement. Totally electronic operation, no blow down required.



### Series PS-800

The Series PS-800 low water cut-offs (24v or 120v) are designed for steam boilers up to 15 psi or hot-water boilers up to 160 psi, 250°F (121°C).



### Series PS-850

The Series PS-850 is designed for residential, commercial and industrial applications on hot water boilers. Totally electronic operation; no blow down required. No lock-out with loss of power (if probe is in water). Model PS-852 meets ANSI specification Z21.13a. Maximum water pressure 250°F (121°C).



### Series 750

Designed for commercial and industrial applications, the Series 750 features electronic circuitry with remote conductance probe level sensing. Model 750-MT-120 meets ASME Code CSD-1 requirements. Probe lengths 4-1/2"-36" (11.4 - 91.4cm). Maximum ambient temperature 120°F. Voltage across probe to ground 14 VAC.



## Boiler Controls – Mechanical

### Series 42 & 42S – Low Water Cut-Offs for Steam Boilers

The Series 42 is designed for residential, commercial and industrial low- and medium-pressure steam boilers with a separate water column. For boilers of any steam capacity. Maximum pressure 50 psi (3.5kg/cm<sup>2</sup>).



### Series 47 – Mechanical Water Feeders

Designed for steam and hot water boilers with cold water feed, the Series 47 can be used as a mechanical or electronic low water cut-off. Can be field upgraded with a No. 2 switch to add water cut-off function. Maximum water supply 150 psi (10.5 kg/cm<sup>2</sup>).



### Series 51 – Water Feeder

The Series 51 Water Feeder is designed for low-pressure steam and water boilers larger than 5,000 sq. ft. (465m<sup>2</sup>) capacity with cold water feed. Can be upgraded with a No. 2 switch to add low water cut-off function. Maximum water supply pressure 150 psi (10.5 kg/cm<sup>2</sup>).



### Series 67 – Low Water Cut-Offs for Steam Boilers

Designed for gas and oil-fired steam boilers (24v or 120v) of any size up to 20 psi (1.4 kg/cm<sup>2</sup>), the Series 67 Float-Type Low Water Cut-Off Control provides proven performance and easy blow down.

- For residential and commercial applications
- For boilers of any steaming capacity
- Quick hook-up fittings
- Adjustable BX outlet for easy installation



### Series 93 & 94 – Low Water Cut-Offs for Steam Boilers

The Series 93 is designed to maintain consistent water level, regardless of pressure, for commercial and industrial low- or high-pressure steam boilers of any capacity. Maximum pressure 150 psi (10.5 kg/cm<sup>2</sup>). No. 5 switch included.



### Series 150 & 150S – Low Water Cut-Offs for Steam Boilers

The Series 150 Float-Type Low Water Cut-Off Control is designed for boiler applications up to 150 psi (10.5 kg/cm<sup>2</sup>).



## Liquid Level Controls – Electronic

### Series LPC 2000

The Series LPC 2000 is designed for industrial and commercial level sensing and pump control of cooling towers, tanks, water fountains, condensate units and others. Features include digital technology using micro-controller. Directly switches to 1 HP motor. Compact size. Time-delay feature prevents process disturbances from water level surges.



### Series PCH & PCL

The Series PCH and PCL are designed for sophisticated multilevel control in tanks, boilers and hydronic systems. Features Teflon®-coated probes to provide protection from false signals (available on 24"-72" [610-1829mm] probes). No blow down required. Control enclosures are NEMA 1-rated and remote sensors are NEMA 4-rated. Optional features include manual reset switch, alternate pump switch and 28-volt probe.



## Liquid Level Controls – Mechanical

### Series 21 – Make-Up Water Feeder

Feeder designed for boiler receiver tanks. Its direct mount eliminates need for equalizing connections. Soft seat provides positive seal. Maximum water supply pressure 150 psi (10.5 kg/cm<sup>2</sup>).



### Series PFC

The Series PFC is designed for proportional control of pneumatic valves or relays in heating, air conditioning and process systems in hazardous or non-hazardous locations. Provides an air pressure signal proportional to the liquid level. Available as Direct Acting or Reverse Acting. Maximum water temperature 406°F (208°C).



### Series VFS

The Series VFS is a general-purpose NEMA 1-rated liquid level control for a variety of industrial and commercial applications such as boilers and tanks, high and low alarms and pumps. Can be used in pairs to start and stop auxiliary equipment between any desired levels.

