McDonnell & Miller

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McDonnell & Miller™ General Catalog

Series 150S (Auto reset)
Low Water Cut-Off/Pump Controllers

Features and Benefits

- For commercial and industrial low or high pressure boiler applications
- For boilers of any steaming capacity
- Monel bellows provides corrosion resistance
- Snap action switches for high temperature service
  - 1 Single pole, single throw switch for pump control
  - 1 Single pole, double throw switch for low water cut-off and alarm actuation

Optional features

- 2 Single pole, single throw switches
- 2 Single pole, double throw switches
- Float block
- BSPT threads
- Maximum pressure 150 psi (10.5 kg/cm2)

Series 150S-M (Manual reset)
Low Water Cut-Off/Pump Controllers

Features and Benefits

- For commercial and industrial low or high pressure boiler applications
- For boilers of any steaming capacity
- Monel bellows provides corrosion resistance
- Snap action switches for high temperature service
  - 1 Single pole, single throw switch for pump control
  - 1 Single pole, double throw switch for low water cut-off and alarm actuation

Optional features

- 2 Single pole, single throw switches
- 2 Single pole, double throw switches
- Float block
- BSPT threads
- Maximum pressure 150 psi (10.5 kg/cm2)

Series 193 / 193M (Auto reset/ Manual reset)
Low Water Cut-Off/Pump Controllers

Features and Benefits
- For commercial and industrial low or high pressure steam boilers
- Maintains consistent water level regardless of pressure
- Water column with integral tappings for gauge glass and tri-cock installations
- For boilers of any steaming capacity
- No. 5 Switch included
- Magnetic repulsion eliminates need for bellows

Optional features
- Manual reset
- 7B switch (135ohm proportional control signal) to maintain constant boiler water level
- 1 " NPT connections
- Maximum pressure 150 psi (10.5 kg/cm2)

electrical Ratings
345 VA at 120 or 240 VAC

Series 194 / 194M (Auto reset/ Manual reset)
Low Water Cut-Off/Pump Controllers

Features and Benefits
- For commercial and industrial low or high pressure steam boilers
- Maintains consistent water level regardless of pressure
- Water column with integral tappings for gauge glass and tri-cock installations
- For boilers of any steaming capacity
- No. 5 Switch included
- Magnetic repulsion eliminates need for bellows

Optional features
- Manual reset
- 7B switch (135ohm proportional control signal) to maintain constant boiler water level
- 1 1/4" NPT connections
- Maximum pressure 250 psi (17.6 kg/cm2)
- Ten bolt flange

electrical Ratings
345 VA at 120 or 240 VAC

Series 93 / 93M (Auto reset/ Manual reset) Low Water Cut-Off/Pump Controllers

Features and Benefits

- For commercial and industrial low or high pressure steam boilers
- Maintains consistent water level regardless of pressure
- For boilers of any steaming capacity
- No. 5 Switch included
- Magnetic repulsion eliminates need for bellows

Optional features

- 7B switch (135ohm proportional control signal) to maintain constant boiler water level
- 1 1/4" NPT connections
- Maximum pressure 150 psi (10.5 kg/cm2)

electrical Ratings

345 VA at 120 or 240 VAC

Series 94 / 94M (Auto reset/ Manual reset) Low Water Cut-Off/Pump Controllers

Features and Benefits

- For commercial and industrial low or high pressure steam boilers
- Maintains consistent water level regardless of pressure
- For boilers of any steaming capacity
- No. 5 Switch included
- Magnetic repulsion eliminates need for bellows

Optional features

- 7B switch (135ohm proportional control signal) to maintain constant boiler water level
- 1 1/4" NPT connections
- Maximum pressure 250 psi i (17.6 kg/cm2)
- Ten bolt flange

electrical Ratings

345 VA at 120 or 240 VAC

Series AF1
Air Flow Switches

Features and Benefits

- For general purpose applications with medium and high velocity requirements
- Paddle fits 8" (203mm) minimum duct size, or 6" (152mm) if trimmed
- Brass, steel and aluminum construction
- Single pole, double throw snap switch
- Sensitivity adjusting screw makes flow adjustment easy
- Two electrical knock-outs allow connection from either end
- Can be equipped with a time delay relay

Optional features

- Stainless steel
- Minimum ambient temperature 32°F (0°C)
- Maximum duct temperature 300°F (149°C)

Series FS1
High Sensitivity Liquid Flow Switches

Features and Benefits

- For general purpose applications where high sensitivity is required and moderate or low flow rates are encountered such as air conditioning, heating and hydronic systems, water, fuel oil, some viscous liquids and oils in process work
- In-line configuration eliminates need for a pipe tee
- High flow capacity
- 1/2" NPT
- Single pole, double throw snap switch
- Switch compartment is completely sealed to protect it from the liquid
- Sensitivity adjusting screw makes flow adjustment easy

Optional features

- BSPT threads
- Minimum temperature (fluid or ambient) 32°F (0°C)
- Maximum temperature 225°F (107°C)
- Maximum operating pressure 100 psi (7 kg/cm2)°C)

Series FS6
High Sensitivity Liquid Flow Switches

Features and Benefits

- For heavy duty applications where high sensitivity is required, such as water treatment systems, cooling systems for electronic circuits, compressors, booster pumps, and bearings, and other applications that need instant switching
- In-line configuration eliminates need for a pipe tee
- Very high flow capacity
- Actuates at extremely low flow rate
- Sizes available – 3/4" NPT – 1" NPT
- Single pole, double throw snap switch
- Switch compartment is completely sealed to protect itfrom the liquid
- Sensitivity adjusting screw makes flow adjustment easy

Optional features

- BSPT threads
- Minimum temperature (fluid or ambient) 32°F (0°C)
- Maximum temperature 225°F (107°C)
- Maximum operating pressure 100 psi (7 kg/cm2)

Series FS8-W
General Purpose Liquid Flow Switches

Features and Benefits

- For general purpose applications with environmental exposure, or those requiring a water-tight, dust tight, or a NEMA 4X rated flow switch
- 1" NPT
- Sealed Monel bellows
- Single pole, double throw snap switch
- Four stainless steel paddles included -1", 2", 3" and 6" (25, 50, 80 and 150mm)
- Sensitivity adjusting screw makes flow adjustment easy

Optional features

- BSPT threads
- Minimum temperature (fluid or ambient) 32°F (0°C)
- Maximum temperature 225°F (107°C)
- Maximum operating pressure 160 psi (11.3 kg/cm2)
- Replacement for NEMA 4X-style flow switches from Potter/Taco, Watts, Penn and other manufacturers

Series FS4-3
General Purpose Liquid Flow Switches

Features and Benefits

- Universal design serves the widest variety of applications
- For starting or stopping electrically operated equipment such as signal lights, alarms, motors, automatic burners,metering devices and others
- Replacement for common flow switches from Johnson/Penn, Potter/Taco, Watts, Hydrolevel andother manufacturers
- 1" NPT
- Two electrical knock-outs allows connection fromeither end
- Sensitivity adjusting screw makes flow adjustment easy
- Single pole, double throw snap switch
- Hardened stainless steel bearings minimize friction
- Sealed Monel bellows
- Four stainless steel paddles included - 1", 2", 3" & 6" (25, 50, 80, & 150mm)

Optional features

- Two SPDT switches to make or break two separatecircuits
- Materials of construction suitable for corrosive liquids
- BSPT threads
- Minimum temperature (fluid or ambient) 32°F (0°C)
- Maximum temperature 300°F (149°C)
- Maximum pressure 160 psi (11.3 kg/cm2)

Series FS5
General Purpose Liquid Flow Switches

Features and Benefits

- For general purpose applications requiring low flowrate sensitivity
- In-line configuration eliminates need for a pipe tee
- Sizes available- 3/4" NPT - 1" NPT
- Materials of construction
- Brass, carbon & EPDM elastomer (for water): Models FS5 & FS5-D
- Stainless steel, carbon & Buna N (for water or water and petroleum base compounds) Models FS5-S & FS5-DS
- Single pole, double throw snap switch
- Sensitivity adjusting screw makes flow adjustment easy

Optional features

- BSPT threads
- Minimum temperature (fluid or ambient) 32°F (0°C)
- Maximum temperature
225ฐF (107°C) - Stainless Steel models
250ฐF (121°C) - Brass
- Maximum operating pressure 150 psi (10.5 kg/cm2)

Series FS7-4
Industrial Liquid Flow Switches

Features and Benefits

- Universal design serves the widest variety of large pipe applications, including heating and hydronic systems, air conditioning, refrigeration and process work
- 1 1/4" NPT
- Brass with sealed tube construction
- Single pole, double throw snap switch
- Magnetic switching mechanism eliminates needfor bellows
- Sensitivity adjusting screw makes flow adjustment easy
- Paddles can be trimmed to suit application needs

Optional features

- Extended paddle arm - Model FS7-4L
- Two SPDT switches to make or break two separatecircuits
- Stainless steel body and paddles
- BSPT threads
- Minimum temperature (fluid or ambient) 32°F (0°C)
- Maximum temperature 300°F (149°C)
- Maximum operating pressure
  300 psi (21 kg/cm2)
  1000 psi (70 kg/cm2) - Stainless Steel models

Series FS7-4W
Industrial Liquid Flow Switches

Features and Benefits

- For applications requiring a water-tight, dust-tight or a NEMA 4X rated flow switch
- 1 1/4" NPT
- Brass with sealed tube construction
- Single pole, double throw snap switch
- Magnetic switching mechanism eliminates needfor bellows
- Sensitivity adjusting screw makes flow adjustment easy
- Paddles can be trimmed to suit application needs

Optional features

- BSPT threads
- Minimum temperature (fluid or ambient) -65°F (-54°C)
- Maximum temperature 300°F (149°C)
- Maximum operating pressure
  300 psi (21 kg/cm2)
  1000 psi (70 kg/cm2) - Stainless Steel models