

Why *all* boilers need low water cut-off protection.

McDonnell & Miller GuardDog® low water cut-offs are uniquely designed to protect hot water boilers from the condition of low water. They provide burner cut-off if the water level drops below safe levels due to:

- Interrupted water supply
- System leaks
- Potential problems in above radiation applications:
 - Perimeter heat
 - Snow melt
 - Slab on grade
 - Indirect water heaters

Experts agree:

- 2000 International Mechanical Code Sec. 1007 "All steam and hot water boilers shall be protected with a low water cut-off control."
- More and more states require low water cut-offs.

Radiant floor systems require low water cut-off protection:

- ANSI Z21.13a "A hot water boiler installed above radiation level must be protected with a low water cut-off device..."
- Major boiler manufacturers recommend a low water cut-off in their installation instructions.

Why take chances?

McDonnell & Miller has your safety concerns and needs protected.

- The industry leader in boiler controls for nearly 80 years.
- Full product line availability – one stop shopping for electronic controls, flow switches, liquid level controls.
- ISO 9001 and 14001 certified
- 100% product inspection
- Best industry technical knowledge and support.
- Homeowner selling and presentation materials for your use.
- Strong local service.

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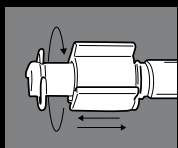
McDonnell & Miller

McDonnell & Miller is a leader in engineering and manufacturing boiler controls, flow switches and liquid level controls for commercial, industrial and residential applications.

Engineered for life

Self-cleaning probes help prevent lime build-up

All McDonnell & Miller electronic low water cut-offs are now equipped with unique Self-Cleaning Probes. This new feature cleans the probe tip while in the boiler during normal operation - no probe maintenance is required for five years. The self-cleaning design prevents excessive lime build-up on the probe surface, which can lead to nuisance boiler shutdowns and the potential for water overflow.



The movement of water around the probe causes the cleaning element to oscillate, constantly removing lime build-up.



problem

no problem

lime build-up on ordinary probe

McDonnell & Miller self-cleaning probe

Get Control

Series RB-24



- For residential applications.
- Compact size.
- Easy to install and wire.
- Maintenance-free operation – no field adjustments needed, saving you time and potential problems.
- Automatic reset feature resumes operation after a power outage when water is on probe.
- Green power-on indicating LED.
- Red low water indicating LED.
- Solid-state operation.
- 15,000 ohms probe sensitivity.
- Maximum ambient temperature 120°F (49°C).
- Maximum water temperature 250°F (121°C).
- Maximum water pressure 50 psi (3.5 kg/cm2).

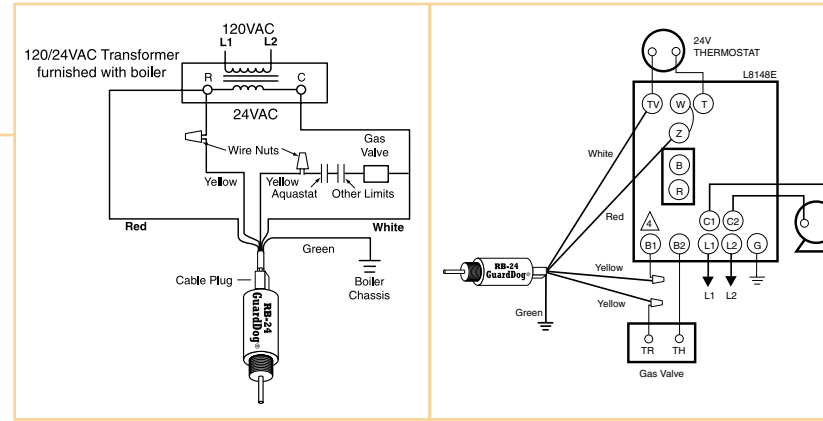
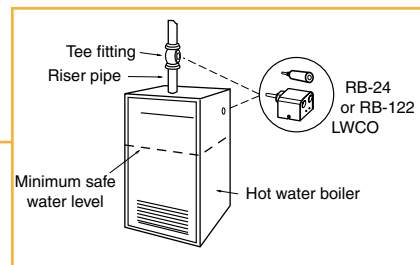
Series RB-122



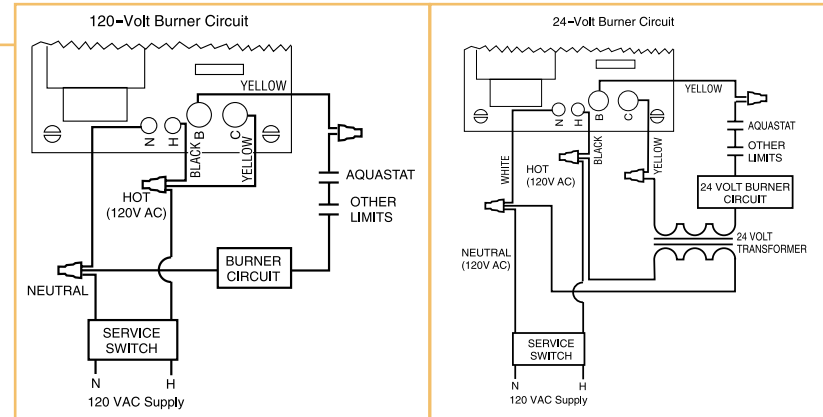
- For residential and commercial applications (where codes allow).
- Electronic operation.
- Easy to install and wire.
- Maintenance-free operation – no field adjustments needed, saving you time and potential problems.
- Red low water indicating LED.
- Green power-on indicating LED.
- Automatic reset.
- No blow down required.
- 15,000 ohms probe sensitivity.
- Maximum ambient temperature 120°F (49°C).
- Maximum water temperature 250°F (121°C).
- Maximum water pressure 160 psi (11.2 kg/cm2).

Installation

in boiler shell or riser fee.



The RB-24 can be used on gas- and oil-fired boilers with 24-volt control circuit, including boilers with spark ignition. The wiring diagrams show connecting the RB-24 on typical burner circuits. Note that the control requires a constant source of power with the red (hot) and white (neutral) wires connected directly to the transformer.



The RB-122 can be used on gas- and oil-fired boilers. It should be wired first-in-line when the control is installed on a new boiler. The control will require a constant source of 120-volt power, which should be from the same circuit as the existing boiler's power source, which is typically the service switch.

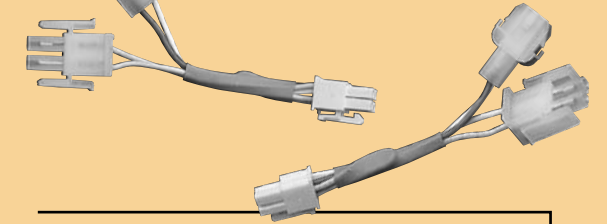
The diagrams above show how to wire an RB-122 for 120-volt and 24-volt burner circuits.

Electronic GuardDog low water cut-offs from McDonnell & Miller can help you avoid trouble and protect your reputation.

The new RB-24 Universal Wire Harness Kits make installation easier than ever before.

The new Universal Wire Harness Kits for RB-24 GuardDog® low water cut-offs allow you to quickly and easily install plug-in wiring without cutting into the OEM's wiring harness. Simply choose the kit for your standard gas boiler application, either with control modules or with vent dampers.

For more information, contact your local McDonnell & Miller representative.



Wiring Diagrams

