Lochinvar®
High Efficiency Water Heaters, Boilers and Pool Heaters

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TECHNICAL SERVICE BULLETIN

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TO: Manufacturers' Representatives, District Sales Managers, Regional Managers, Technical & Customer Service Personnel, Service Agents, Sales & Marketing Personnel

SUBJECT: Power-Fin Pump Operation

Lochinvar Corporation has become aware of a limited number of installations that have encountered conflict with the operation of the pump delay feature as it is designed on the PB/PF 502-2001 when operating with a BMS controlled enable/disable signal across the R and W terminals . In rare situations the building management system (BMS) is enabling and disabling the boilers through the use of dry contacts across the R and W terminals. The intention of this configuration is to seasonally enable and disable. The units will then operate based upon their internal set-point so long as the BMS has the boilers enabled. The control conflict occurs when a closure between R and W is present; the internal pump relay will be engages and the pump operates continuously.

** **It is important to remember this issue is isolated to installations using a stand alone unit, with a BMS performing an enable/disable function, using dry contacts across R and W.** **

If you have a system set up in this fashion there are a couple options you can consider in order to prevent the pump from running continuously.

Option Number One:
The Lochinvar Power-Fin has the ability to handle a 0-10vdc signal in order to control a call for heat. If the unit is controlled by 0-10vdc the R and W contacts can be disabled. The 0-10vdc control scheme comes equipped with an option for power on and power off. One can consistently control the temperature (or firing rate) of the heater while maintaining proper pump delay that only allows the pump to run when the minimum power is reached. If this option is used one would have the desired ability to turn the pump off when the temperature of the system obtains set-point. The trade off with this option is that the boiler would have to receive a 0-10vdc signal from the BMS. This is the intended design for this type of a system

Option Number Two:
The Lochinvar Power-Fin comes equipped with a louver contact relay that can be used in dire circumstances to act as a pump relay. If the pump is wired to the louver contactor instead of the boiler pump relay the pump will shut down when the set point is satisfied. Although this should work for this type of system, option number one is preferred. The draw back for using the Louver Contact Relay in this way is that it has a maximum of 10 amp capacity. If the pump being used draws more than 10 amps the louver contact relay could only be used as a coil relay and a secondary pump relay would have to be installed. This procedure can be confusing and should only be attempted by a qualified technician.

There are ways around any set up problem, but the main thing is that the unit operates in a safe and consistent condition. If you have any questions concerning your set up please do not hesitate to contact our Technical Support Staff toll free at 1-800-722-2101.