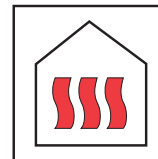


tekmar® - Data Brochure Addendum

House Control 370 - Addition of Boiler Return/Supply DIP Switch



D 370A

03/97



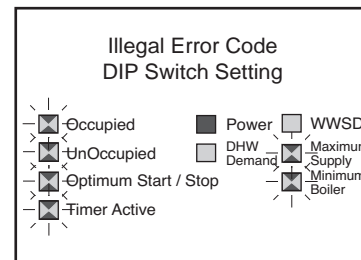
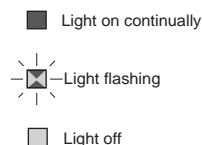
The tekmar House Control 370 has been modified in order to provide boiler protection in systems where the 370 is not directly controlling the boiler temperature, or in multiple mixed temperature applications. The changes are included in controls starting with date codes of Feb. 97 and S/N 31071265.

The changes consist of the addition of a DIP switch to select whether the boiler sensor is installed on the boiler supply pipe or boiler return pipe. An additional Universal Sensor 071 is now included with the 370 control.

Sequence of Operation

BOILER OPERATION

When the 370 control is used in the boiler mode (DIP switch set to *Boiler*), the boiler sensor must be installed on the supply pipe of the boiler, and the new boiler sensor DIP switch must be set to *Boiler Supply*. If the boiler sensor DIP switch is set to *Boiler Return*, a combination of LEDs will flash, as shown in the adjacent diagram, to indicate an illegal DIP switch setting. To eliminate the error message, simply set the boiler sensor DIP switch to *Boiler Supply*.



MIXING OPERATION

Boiler Control

Boiler Sensor on the Boiler Supply (Boiler Control)

When the boiler sensor is installed on the supply side of the boiler loop, the DIP switch must be set to *Boiler Supply*. The boiler aquastat should be set at least 20°F (11°C) higher than the required design boiler water temperature. The boiler is controlled as described on page 6 in the 370 Data Brochure.

Boiler Sensor on the Boiler Return (Boiler Enable)

In heating systems that require multiple mixed supply water temperatures, multiple 370 controls may be used. The boiler sensor of each control must be installed on the boiler return pipe. See the Application Brochure A 370-7 for location of boiler return sensors.

For systems where the 370 provides a heat demand to an external multiple boiler control, the boiler sensor should also be installed on the return side of the boiler loop. The DIP switch for these applications must be set to the *Boiler Return* position.

When the sensor is installed on the return pipe to the boiler, the 370 only enables the boiler whenever there is a call for heat or DHW demand. The boiler operating temperature must be controlled by its aquastat or an external Boiler Reset Control.

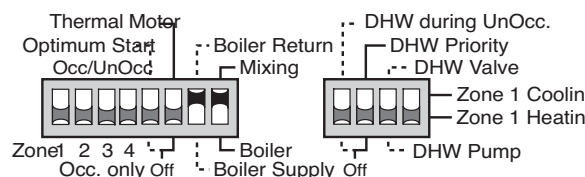
No Boiler Sensor

If no boiler sensor is installed, the control operates the boiler contacts on the 370 in a similar manner as with the sensor located on the boiler return. Since no boiler water temperature feedback is available, the 370 cannot provide any boiler protection.

Boiler Protection

When the boiler sensor is installed on the supply side of the boiler, the control can provide boiler protection as described in the 370 Data Brochure on page 7.

When the boiler sensor is installed on the return side of the boiler, the 370 ensures a minimum boiler return water temperature equal to the *Min. Boiler Return* dial setting. If the boiler return water temperature drops near the dialled temperature, the 370 turns on the *Minimum Boiler* light and decreases the speed of the variable speed driven injection pump.



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