

Service Bulletin 072

Oct. 24, 2012

Flame Safeguard Controls Incompatible with Converter 005

There has been inconsistent operation detected with the Converter 005 when used with boilers incorporating power burners. These boilers are equipped with a modulating flame safeguard control and gas valve with a 0-135 Ohm actuator.

The inconsistent operation can cause the flame safeguard control to not prove the low fire position during its start-up sequence. During the start-up sequence, the flame safeguard control must hold the gas valve in the low fire position for a minimum amount of time before releasing to external modulation. If the flame safeguard control cannot prove the low fire position, it will lock out in failure mode. The failure condition is a result of signal back-feed to the actuating motor on the gas valve. While the flame safeguard control is preventing the modulating signal from the tekmar modulating control (e.g. 265, 263) from passing through to the actuating motor via the Converter 005, signal back-feed from the Converter 005 directly to the actuating motor on the gas valve is occurring. The signal back-feed is causing the gas valve to be in a position above the low fire position during the start-up sequence, resulting in a failure condition to occur on the flame safeguard control. Due to the inconsistent operation with Converter 005 in this special case, tekmar is recommending to not use the Converter 005 with a boiler incorporating a power burner with the following accessories:

Flame Safeguard Control

- Honeywell RM7800 and RM7840 series
- Fireye E110

Gas Valve Actuating Motor

- Honeywell Series 90 Modutrol IV Motors

The inconsistent operation has only been reported with the above indicated accessories and only occurs when both the flame safeguard control and gas valve actuating motor are used together. There may be other accessories, either from the same manufacturer or from a different manufacturer, which provide the same inconsistent results.

The existing Converter 005 cannot be upgraded to prevent the inconsistent operation and a new device will not be created. An alternative converter DRN4 manufactured by Automation Components, Inc. has proved to provide consistent operation when used with the above mentioned devices. Information about the DRN4 can be found on the Automation Components, Inc. web site at <http://workaci.com>.