

Service Bulletin 081
August 22, 2014

Update to Boiler Control 284

The Boiler Control 284 has been updated with the following improvements and notices:

- Boiler Isolation Valve Feature Addition
- EMS Boiler Output Change
- Stage Relay Rating Change
- Flow Sensor Compatibility Change
- Pressure Sensor Compatibility Change
- Condensing Priority Setting Change
- Primary Pump Flow Proving Notice

Boiler Isolation Valves

The application capabilities have been upgraded to support boiler isolation valves. This application is typical of systems incorporating a variable frequency drive (VFD) for the boiler plant. This, together with isolation of the non-firing boilers, allows for increased pump electrical energy savings. The following Setup Menu item has been added for selection of this feature:

1. Plant Flow. The range is VALV and PUMP. VALV is for boiler isolation valves and PUMP is for boiler pumps.

EMS Boiler Output

The EMS output for boiler operation has been updated in order to be compatible with a wider range of boilers. The following Source (#) menu items have modified / added:

1. Boiler Type. EMS1 and EMS2 have been replaced with EMS.
2. EMS Temperature Minimum. This sets the lowest boiler target temperature. The range is 50°F to 210°F.
3. EMS Temperature Maximum. This sets the highest boiler target temperature. The range is 50°F to 210°F.
4. EMS Signal Minimum. This sets the starting voltage when using a 0 to 10 V (dc) signal. The range is 0.5 to 10.

Stage Relay Rating

The stage relay ratings have been upgraded from 24 V (ac) to 230 V (ac) in order to support a wider range of boilers.

Flow Sensor Compatibility

The flow and pressure sensors have swapped locations and the control is now compatible with 4-20 mA flow sensors. In addition, two settings have been added to the Setup Menu including:

1. Flow Rate 4mA. This sets the flow rate when the signal is 4 mA.
2. Flow Rate 20mA. This sets the flow rate when the signal is 20 mA.

This improvement allows the 284 to be compatible with a number of 4-20 mA flow sensors available from 3rd party vendors such as:

- Kele SDI Series, 200 Series with 310 Transmitter, 2200 and 3100 Series
- Omega FV100 Series, FV-500C Series, FTD-40 Series with FTD-47 Transducer

Pressure Sensor Compatibility

The pressure and flow sensors have swapped locations and the control is now compatible with a style V (dc) pressure sensor with a signal range of 0.5 to 4.5 V (dc). Compatible pressure sensors are available from 3rd party vendors such as:

- Measurement Specialties M7100 Series
- Honeywell PX2 (AA) Series

Condensing Priority

The Condensing Priority setting has been removed. When operating high-efficient condensing and mid-efficient non-condensing boiler groups, the 284 always operates the high-efficiency condensing boilers first.

Primary Pump Flow Proving

The description and application illustration of primary pump flow proving was incorrect and has been updated. This feature is only available when the primary pump is configured to operate for all loads. If there are multiple loads (e.g. Heat Call and DHW Call) and the primary pump is disabled for DHW operation, then the control cannot provide proving of flow and the feature must be disabled. In this case, proving of primary pump flow must be obtained through an additional control such as the Pump Sequencer 132.

To address further questions, please contact our customer service team at 250-545-7749 or tekmar.CustomerService@WattsWater.com.