WEIL-McLAIN®

Outdoor Temperature Sensor Installation Instructions Part Number 381-356-586

Outdoor Temperature Sensor Instructions

Installation

1. Install on the North side or a shaded side of the building. Locate a minimum of 3 feet above anticipated maximum snow level and not near any place where internal heat could affect the sensor reading, such as windows, doors, exhaust vents or fans.
2. Orient sensor so that wire outlet faces down to prevent water entry.
3. Connect the sensor leads to the open positions of the two-position terminal block on the supplied harness. Thermostat wire can be used to connect the sensor; shielded wire should be used when routing near other wires for more than 10 feet.
4. Plug the harness connector into the OUTDOOR receptacle of the control module.

Operation

As outdoor temperature drops, heat loss from a space becomes greater, and the heating system supply water temperature must be increased to maintain a constant room temperature. This control uses a simplified method of adjusting Boiler Supply Target Temperature based on measured outdoor temperature. Reference the Outdoor Temperature Reset Curves for example adjusted boiler supply target temperatures.

The control automatically senses when an outdoor temperature sensor is connected to the OUTDOOR receptacle and uses measured outdoor temperature to adjust boiler supply temperature. The boiler supply temperature is automatically adjusted between a maximum of the boiler supply setpoint and a minimum of 160°F.

Adjust BOILER TEMP (used to set the maximum boiler supply temperature) and ECONOMY ADJUST (used to set the minimum reset temperature) knobs based on system type and desired performance.

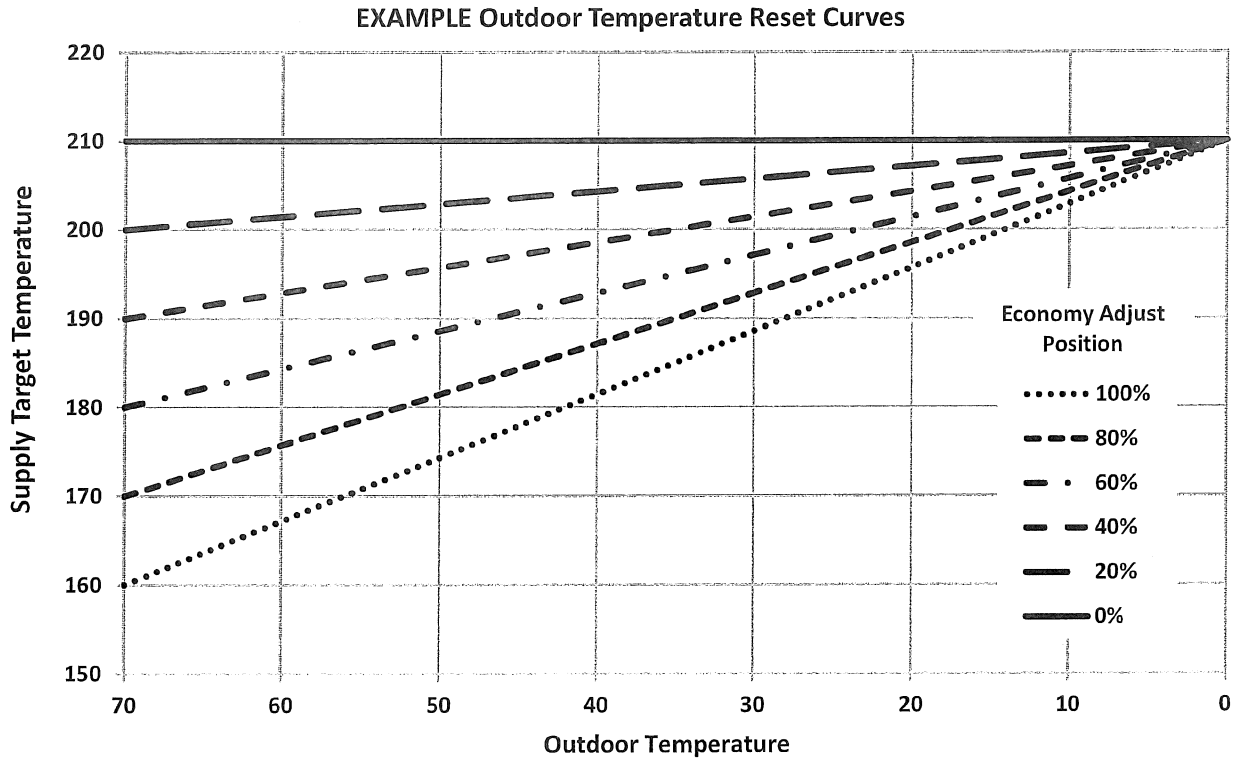
Typical minimum reset supply temperatures

- Fan coils 180°F to 210°F
- Baseboard convectors 160°F to 190°F

Example setup shown below:

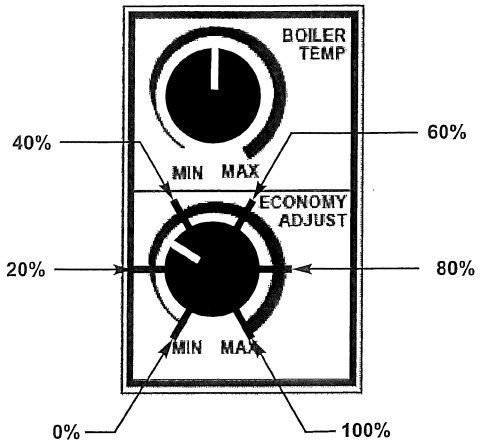
- Boiler supply temperature is set to 210°F using the BOILER TEMP adjustment knob.
- The supply temperature is 210°F while outdoor temperature is at or below 0°F.
- The supply temperature is automatically reduced as the outdoor temperature increases from 0°F to 70°F.
- The amount the supply temperature is automatically reduced is scaled by the position of the ECONOMY ADJUST knob; fully clockwise is maximum supply temperature, fully counterclockwise is no reduction in supply temperature, and reduction in supply temperature is proportionally scaled by the position of the ECONOMY ADJUST knob between the fully clockwise and fully counterclockwise positions.

NOTE: For outdoor temperatures above 70°F, the Minimum reset temperature will be maintained.
For outdoor temperatures below 0°F, the Maximum reset temperature will be maintained.



Setup

1. Determine desired range of temperature reset operation.
2. Adjust maximum boiler supply temperature using BOILER TEMP knob on control module.
3. Use Range Adjustment Table to select ECONOMY ADJUST knob position that most closely matches desired minimum reset temperature. Graphics below will assist with knob position.
4. Adjust minimum reset temperature using ECONOMY ADJUST knob on control module.



Maximum	Minimum	Economy Adjust	Maximum	Minimum	Economy Adjust
210	160	100%	190	160	100%
210	170	80%	190	170	66%
210	180	60%	190	180	33%
210	190	40%			
210	200	20%	180	160	100%
			180	170	50%
200	160	100%			
200	170	75%	170	160	100%
200	180	50%			
200	190	25%			

Range Adjustment Table