BASE Buildings HVAC Characteristics: Primary HVAC Control Response Strategy

Primary HVAC Control Response Strategy	Number of Buildings Reporting[1]
Two-Position	9
Proportional	79
Floating Point	3
Proportional-Integral	5
Proportional-Integral-Derivative	22
Total Number of Buildings Reporting	98

Notes:

[1]Number of buildings based on those buildings reporting a primary HVAC control response strategy (n=98). Column total adds up to greater than the total number of buildings reporting as some buildings used a combination of these methods.

Variable Descriptions:

Primary HVAC Control Response Strategy refers to the primary control response strategy for the building HVAC systems.

The following categories apply:

Two-Position refers to a control system in which the device being controlled is either full on or full off, with no intermediate operating positions available.

Proportional refers to a control algorithm or method in which the final control device (e.g. damper or valve) moves to a position proportional to the deviation from the setpoint value of the controlled variable such as a temperature setpoint.

Floating Point refers to a system where the controlled device is still operated by a two position controller, but the device moves gradually between full open and full closed. There is a neutral zone where no signal is transmitted and the controlled device "floats" in an intermediate position until a new signal is received.

Proportional-Integral also known as "proportional plus reset" refers to a proportional control system where the control point is changed automatically back toward the setpoint when an offset occurs.

Proportional-Integral-Derivative offers the same features as proportional-integral, but also controls the rate at which the control point is moved back to the setpoint.