| **Variable Name** | **Description** | **Default Value** |
| --- | --- | --- |
| **ATSF** | Temperature rise across the supply fan | 1°C (2°F) |
| **ATmin** | Minimum difference between OAT and RAT to evaluate economizer error conditions | 6°C (10°F) |
| **ESAT** | Temperature error threshold for SAT sensor | 1°C (2°F) |
| **ERAT** | Temperature error threshold for RAT sensor | 1°C (2°F) |
| **EMAT** | Temperature error threshold for MAT sensor | 3°C (5°F) |
| **EOAT** | Temperature error threshold for OAT sensor: 1°C (2°F) if local sensor @ unit, 3°C (5°F) if global OAT sensor |  |
| **F** | Airflow error threshold | 30% |
| **EVFDSPD** | Variable-speed drive (VSD) speed error threshold | 5% |
| **£DSP** | Duct static pressure (DSP) error threshold | 25 Pa (0.17 inH2O) |
| Delta OSmax | Maximum number of changes in operating state (OS) during the previous 60 minutes (moving window) to flag PID hunting issues | 7 state changes |

**Five-minute Rolling Averages with 1-Minute Sampling Time**

* **SATavg**: Rolling average of supply air temperature.
* **MATavg**: Rolling average of mixed air temperature.
* **RATavg**: Rolling average of return air temperature.
* **OATavg**: Rolling average of outdoor air temperature.
* **DSPavg**: Rolling average of duct static pressure.
* **CCETavg**: Rolling average of cooling-coil entering temperature.
* **CCLTavg**: Rolling average of cooling-coil leaving temperature.
* **HCETavg**: Rolling average of heating-coil entering temperature.
* **HCLTavg**: Rolling average of heating-coil leaving temperature.
* **%OA**: Actual outdoor air fraction as a percentage, calculated as **(MAT - RAT)/(OAT - RAT)**, or per airflow measurement station if available.
* **%OAmin**: Active minimum outdoor air set point (**MinOAsp**) divided by actual total airflow (from sum of VAV box flows or by airflow measurement station) as a percentage.
* **0s**: Number of changes in operating state during the previous 60 minutes (moving window) for an AHU (Air Handling Unit) in heating, economizing, economizing plus mechanical cooling, or mechanical cooling modes.

五分钟滚动平均值与一分钟采样时间

• SATavg: 供应空气温度的滚动平均值。

• MATavg: 混合空气温度的滚动平均值。

• RATavg: 回风温度的滚动平均值。

• OATavg: 室外空气温度的滚动平均值。

• DSPavg: 风管静压的滚动平均值。

• CCETavg: 冷却盘管入口温度的滚动平均值。

• CCLTavg: 冷却盘管出口温度的滚动平均值。

• HCETavg: 加热盘管入口温度的滚动平均值。

• HCLTavg: 加热盘管出口温度的滚动平均值。

• %OA：实际室外空气比例的百分比，计算公式为 (MAT - RAT) / (OAT - RAT)，或者如果可用，根据气流测量站进行计算。

• %OAmin：活动最小室外空气设定点（MinOAsp）除以实际总气流（来自VAV箱流量之和或气流测量站）的百分比。

• 0s：在前60分钟内（移动窗口）对于AHU（空气处理单元）在加热、经济运行、经济运行加机械制冷或机械制冷模式下操作状态变化的次数。

**AHU operating states defined by ASHRAE G36**

A picture containing line, diagram, plot, text

Description automatically generated