

BUILDING *performance* LAB

Fan Schedule

Measure Description

The supply fan status in an air handling unit (AHU) or roof top unit (RTU) is measured to confirm that the fan(s) is OFF when it should not be operating. In most equipment, supply and return fans run simultaneously, thus diagnosing issues for the supply fan is an indication of the same situation for the associated return fan. This measure may also be used to verify the scheduling of other fans, e.g., exhaust fans.

Note: This measure applies to fans that are not controlled by a variable frequency drive (VFD). This limitation is due to the motor on/off logger's inability to detect motors controlled by VFDs running at less than 50 Hz.

Kit Contents

- HOBO® motor on/off data logger: UX90-004 or UX90-004M – one per fan
- PC-based device with USB port (e.g. laptop or Surface Pro)
- HOBOWare® software
- Microsoft Excel

HOBO® motor on/off data logger

1. Configure: https://youtu.be/M3z_qH1c_mY
 - a. Best practice: Configure to “Wrap” recording
2. Calibrate and install: <https://youtu.be/zQBLq7Wongw>
3. Extract data: https://youtu.be/M_ky5IMORBk
4. Use the HOBOWare® software to visualize data



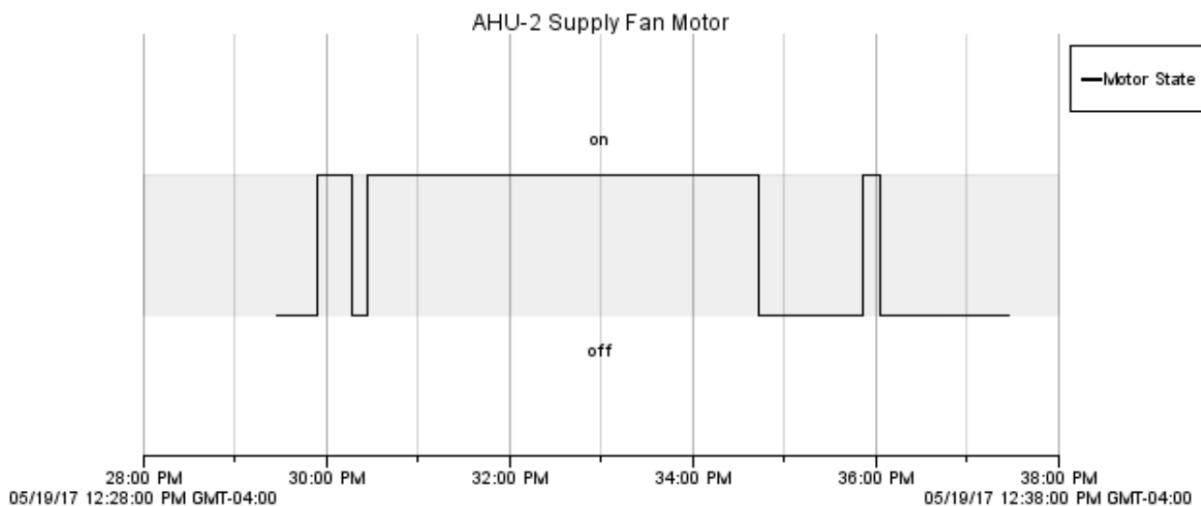
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Trend Chart Example



Analysis

Looking at the trend chart above, use the following Q&A to analyze the data for opportunities for energy savings.

1. Are the fans on during unoccupied hours?
 - a. If NO, then this is a good operation.
 - b. If YES, then:
 - i. Check if they need to be on for any reason, such as meeting a zone temperature setback. If they do, then this is a good operation.
 - ii. If not needed for meeting setbacks, then turn off the fans during unoccupied hours, preferably with automated scheduling. ([1425.04](#))



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