



## Control Points Summary

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|--|----|
| 1. OA damper command                       | DO |
| 2. Filter differential pressure switch     | DI |
| 3. Filter differential pressure switch     | DI |
| 4. Cooling coil valve commanded position   | AO |
| 5. Heating coil valve commanded position   | AO |
| 6. Fan safety differential pressure switch | DI |
| 7. Fan VFD signal                          | AO |
| 8. ...                                     |    |

## Control Logic Description

The time rate of change of the damper signals is limited by a first order hold, using the sample time [samplePeriod](#). This prevents a quick opening of the outdoor air damper, for example when the outdoor airflow setpoint has a step change. Slowing down the opening of the outdoor air damper allows the freeze protection to compensate with its dynamics that is faster than the opening of the outdoor air damper. To avoid that all dampers are closed, the return air damper has the same time rate of change limitation.

The control charts below show the input-output structure and an economizer damper modulation sequence assuming a well configured controller.  
Control diagram:

