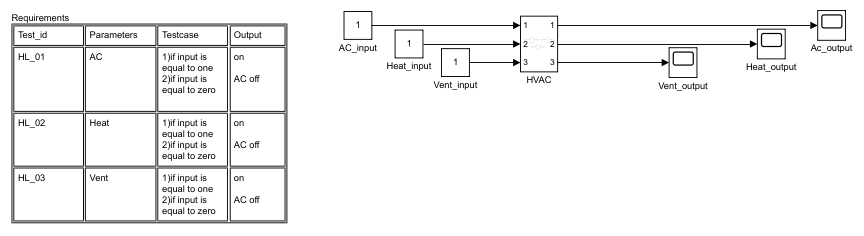
**SIMPLEAC**



**99003197**

21-Dec-2020 09:25:48

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**Model - SIMPLEAC**

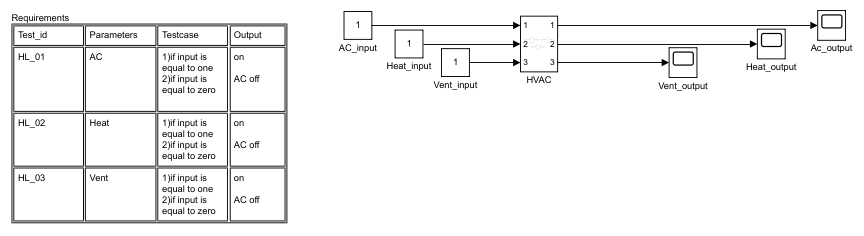
**Full Model Hierarchy**

1. [SIMPLEAC](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_7b9125f52ad55af9763d2e434db418a9)
   1. [HVAC](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_7cdc7f60ec2342c78e822de3e6bda820)
      1. [Vent](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_4b5dfc9c91b52ae2fc04d8c951d9279a)
      2. [ac](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_3aff3554ca3f4445708b42f7d07275ec)
      3. [heat](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_f158ffd02cf7cc3dcc81ed9d9726af3f)

| **Simulation Parameter** | **Value** |
| --- | --- |
| Solver | VariableStepAuto |
| RelTol | 1e-3 |
| Refine | 1 |
| MaxOrder | 5 |
| ZeroCross | on |

[*[more info]*](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#appendix-sl)

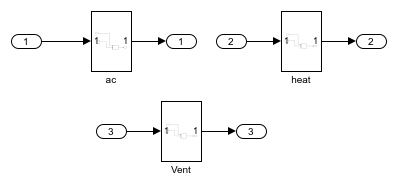
**System - SIMPLEAC**



**Table 1. Constant Block Properties**

| **Name** | **Value** | **Out Data Type Str** | **Lock Scale** | **Sample Time** | **Frame Period** |
| --- | --- | --- | --- | --- | --- |
| AC\_input | 1 | Inherit: Inherit from 'Constant value' | off | inf | inf |
| Heat\_input | 1 | Inherit: Inherit from 'Constant value' | off | inf | inf |
| Vent\_input | 1 | Inherit: Inherit from 'Constant value' | off | inf | inf |

**System -**[**SIMPLEAC**](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_7b9125f52ad55af9763d2e434db418a9)**/HVAC**



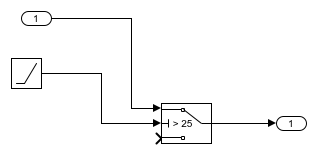
**Table 2. Inport Block Properties**

| **Name** | **Port** | **Defined In Blk** |
| --- | --- | --- |
| Input | 1 | [AC\_input](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_d864576736b3f7fe5aeb92d520508022) |
| Input1 | 2 | [Heat\_input](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_bd2327d7e62a53df68f3edadab060f91) |
| Input2 | 3 | [Vent\_input](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_cf781f3657cea62b77fe6b9d8a74a724) |

**Table 3. Outport Block Properties**

| **Name** | **Port** | **Storage Class** | **Icon Display** | **Lock Scale** | **Unit** | **Var Size Sig** | **Signal Type** | **Ensure Outport Is Virtual** | **Source Of Initial Output Value** | **Output When Disabled** | **Must Resolve To Signal Object** | **Output When Un Connected** | **Output When Unconnected Value** | **Vector Params As 1DFor Out When Unconnected** | **Used By Blk** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Output | 1 | Auto | Port number | off | inherit | Inherit | auto | off | Dialog | held | off | off | 0 | on | Ac\_output |
| Output1 | 2 | Auto | Port number | off | inherit | Inherit | auto | off | Dialog | held | off | off | 0 | on | Heat\_output |
| Output2 | 3 | Auto | Port number | off | inherit | Inherit | auto | off | Dialog | held | off | off | 0 | on | Vent\_output |

**System -**[**SIMPLEAC**](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_7b9125f52ad55af9763d2e434db418a9)**/**[**HVAC**](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_7cdc7f60ec2342c78e822de3e6bda820)**/Vent**



**Table 4. Inport Block Properties**

| **Name** | **Port** | **Defined In Blk** |
| --- | --- | --- |
| Input | 1 | [Vent\_input](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_cf781f3657cea62b77fe6b9d8a74a724) |

**Table 5. Outport Block Properties**

| **Name** | **Port** | **Storage Class** | **Icon Display** | **Lock Scale** | **Unit** | **Var Size Sig** | **Signal Type** | **Ensure Outport Is Virtual** | **Source Of Initial Output Value** | **Output When Disabled** | **Must Resolve To Signal Object** | **Output When Un Connected** | **Output When Unconnected Value** | **Vector Params As 1DFor Out When Unconnected** | **Used By Blk** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Output | 1 | Auto | Port number | off | inherit | Inherit | auto | off | Dialog | held | off | off | 0 | on | Vent\_output |

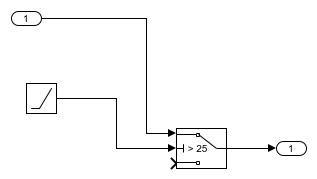
**Table 6. Ramp Block Properties**

| **Name** | **Slope** | **Start** | **Initial Output** |
| --- | --- | --- | --- |
| Ramp | -0.0069 | 0 | 50 |

**Table 7. Switch Block Properties**

| **Name** | **Criteria** | **Threshold** | **Input Same DT** | **Out Data Type Str** | **Lock Scale** | **Rnd Meth** | **Saturate On Integer Overflow** | **Zero Cross** | **Allow Diff Input Sizes** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Switch | u2 > Threshold | 25 | off | Inherit: Inherit via internal rule | off | Floor | off | on | off |

**System -**[**SIMPLEAC**](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_7b9125f52ad55af9763d2e434db418a9)**/**[**HVAC**](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_7cdc7f60ec2342c78e822de3e6bda820)**/ac**



**Table 8. Inport Block Properties**

| **Name** | **Port** | **Defined In Blk** |
| --- | --- | --- |
| Input | 1 | [AC\_input](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_d864576736b3f7fe5aeb92d520508022) |

**Table 9. Outport Block Properties**

| **Name** | **Port** | **Storage Class** | **Icon Display** | **Lock Scale** | **Unit** | **Var Size Sig** | **Signal Type** | **Ensure Outport Is Virtual** | **Source Of Initial Output Value** | **Output When Disabled** | **Must Resolve To Signal Object** | **Output When Un Connected** | **Output When Unconnected Value** | **Vector Params As 1DFor Out When Unconnected** | **Used By Blk** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Output | 1 | Auto | Port number | off | inherit | Inherit | auto | off | Dialog | held | off | off | 0 | on | Ac\_output |

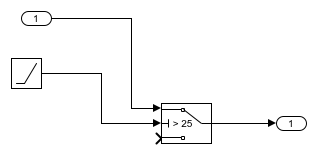
**Table 10. Ramp Block Properties**

| **Name** | **Slope** | **Start** | **Initial Output** |
| --- | --- | --- | --- |
| Ramp | .0069 | 0 | 0 |

**Table 11. Switch Block Properties**

| **Name** | **Criteria** | **Threshold** | **Input Same DT** | **Out Data Type Str** | **Lock Scale** | **Rnd Meth** | **Saturate On Integer Overflow** | **Zero Cross** | **Allow Diff Input Sizes** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Switch | u2 > Threshold | 25 | off | Inherit: Inherit via internal rule | off | Floor | off | on | off |

**System -**[**SIMPLEAC**](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_7b9125f52ad55af9763d2e434db418a9)**/**[**HVAC**](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_7cdc7f60ec2342c78e822de3e6bda820)**/heat**



**Table 12. Inport Block Properties**

| **Name** | **Port** | **Defined In Blk** |
| --- | --- | --- |
| Input | 1 | [Heat\_input](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_bd2327d7e62a53df68f3edadab060f91) |

**Table 13. Outport Block Properties**

| **Name** | **Port** | **Storage Class** | **Icon Display** | **Lock Scale** | **Unit** | **Var Size Sig** | **Signal Type** | **Ensure Outport Is Virtual** | **Source Of Initial Output Value** | **Output When Disabled** | **Must Resolve To Signal Object** | **Output When Un Connected** | **Output When Unconnected Value** | **Vector Params As 1DFor Out When Unconnected** | **Used By Blk** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Output | 1 | Auto | Port number | off | inherit | Inherit | auto | off | Dialog | held | off | off | 0 | on | Heat\_output |

**Table 14. Ramp Block Properties**

| **Name** | **Slope** | **Start** | **Initial Output** |
| --- | --- | --- | --- |
| Ramp | -0.0069 | 0 | 50 |

**Table 15. Switch Block Properties**

| **Name** | **Criteria** | **Threshold** | **Input Same DT** | **Out Data Type Str** | **Lock Scale** | **Rnd Meth** | **Saturate On Integer Overflow** | **Zero Cross** | **Allow Diff Input Sizes** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Switch | u2 > Threshold | 25 | off | Inherit: Inherit via internal rule | off | Floor | off | on | off |

**Appendix**

**Table 16. Block Type Count**

| **BlockType** | **Count** | **Block Names** |
| --- | --- | --- |
| Outport | 6 | [Output](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_df289618c551e551096fc86c1085d2ee), [Output1](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_933f208635aace025d66f79c37d25726), [Output2](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_41a6750ddb57daf20fdeda9ad6441213), [Output](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_39886c1434e8b5e21b5120f29e039f59), [Output](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_1791c1b94949182e74d6487ccaeaf912), [Output](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_91b3a89a13af9505cfeded4cbcb5071b) |
| Inport | 6 | [Input](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_909271f6cdb51be7b1a5aa3e71023ae4), [Input1](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_87d08c2bd48b32a66080348303aef3e8), [Input2](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_d23832c21298ae9be5f1b22417656067), [Input](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_8cc3a2f6dd4dfb738ff46191f9450850), [Input](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_4cbac49169a0a1fc29b690db17187e45), [Input](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_713054c15e839600af47fe69d915f8c6) |
| SubSystem | 4 | [HVAC](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_7cdc7f60ec2342c78e822de3e6bda820), [Vent](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_4b5dfc9c91b52ae2fc04d8c951d9279a), [ac](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_3aff3554ca3f4445708b42f7d07275ec), [heat](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_f158ffd02cf7cc3dcc81ed9d9726af3f) |
| Switch | 3 | [Switch](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_a9bd54d104baed2c645bc75273680b6f), [Switch](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_308ce77ffdb93195eb9b56f430e156fc), [Switch](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_6414e466e0c861a9b4b4973fa9976ed7) |
| Scope | 3 | Ac\_output, Heat\_output, Vent\_output |
| Ramp (m) | 3 | [Ramp](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_2c73c1aa5a8b8f698061d13f66c68dae), [Ramp](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_5f2e9d44fea3c0bad43074b936c6c880), [Ramp](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_525d09e64b12aa150bc560f90ac709f0) |
| Constant | 3 | [AC\_input](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_d864576736b3f7fe5aeb92d520508022), [Heat\_input](file:///C:\\Users\\99003197\\AppData\\Local\\Temp\\SIMPLEAC.html" \l "mw_bd2327d7e62a53df68f3edadab060f91), [Vent\_input](file:///C:\\Users\\99003197\\AppData\\Local\\Temp\\SIMPLEAC.html" \l "mw_cf781f3657cea62b77fe6b9d8a74a724) |

**Table 17. Model Functions**

| **Function Name** | **Parent Blocks** | **Calling character vector** |
| --- | --- | --- |
| start | |  | | --- | | [Ramp](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_2c73c1aa5a8b8f698061d13f66c68dae) | | [Ramp](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_5f2e9d44fea3c0bad43074b936c6c880) | | [Ramp](file:///C:\Users\99003197\AppData\Local\Temp\SIMPLEAC.html#mw_525d09e64b12aa150bc560f90ac709f0) | | |  | | --- | | start | | start | | start | |